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INTERVENTO

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

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

LOTTO **3053/PN_2**

PROGETTO ESECUTIVO

TAV.	OGGETTO	DATA
TAB_04	TABULATI DI CALCOLO CIVICO 33 STATO DI PROGETTO	Settembre 2022
SCALA		N. DISEGNO

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

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SIDEL
INGEGNERIA

TABULATI DI CALCOLO
CIVICO 33
STATO DI PROGETTO

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1 Risultati numerici

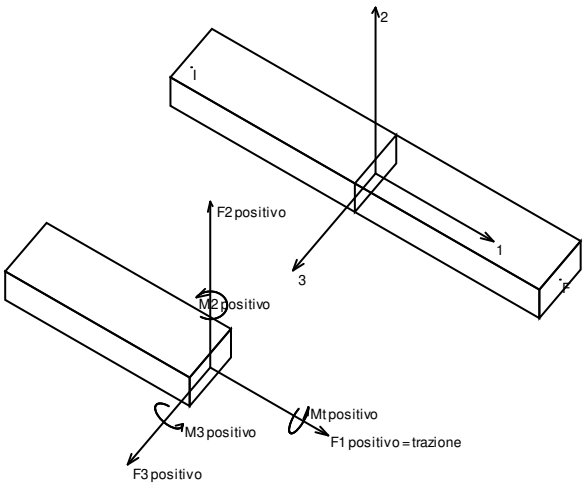
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

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

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



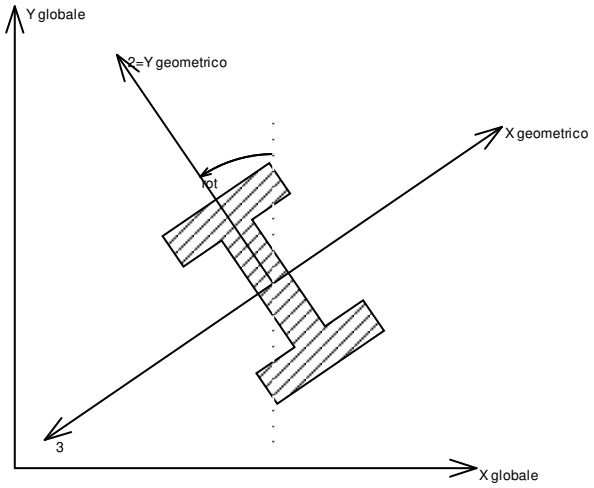
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

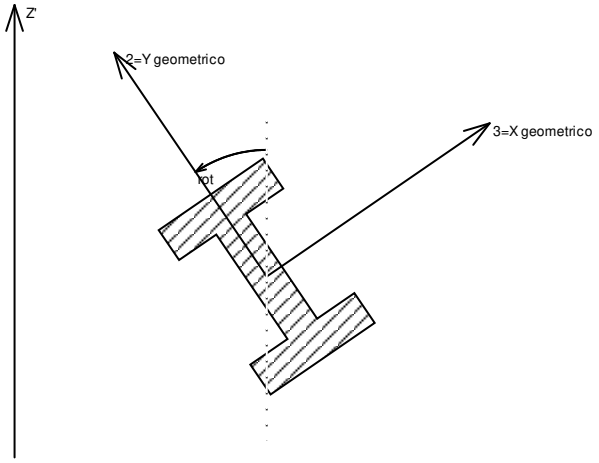
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

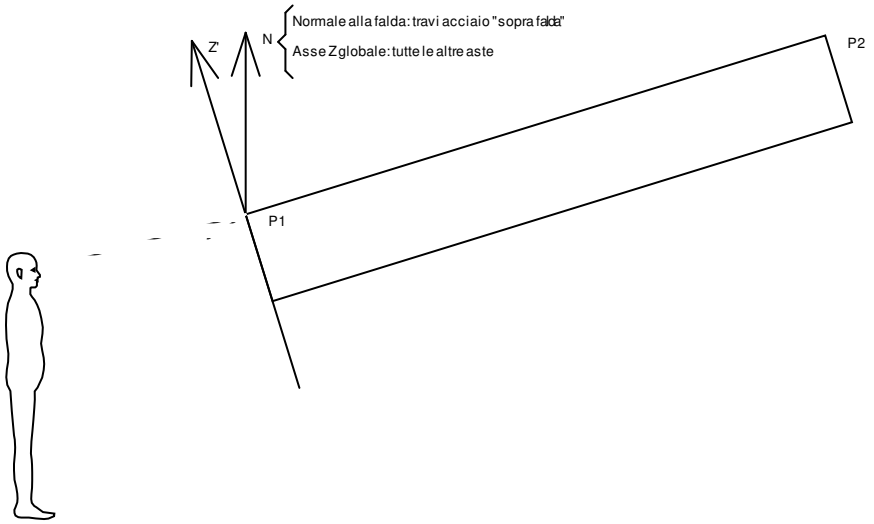
Sistema locale aste non verticali



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

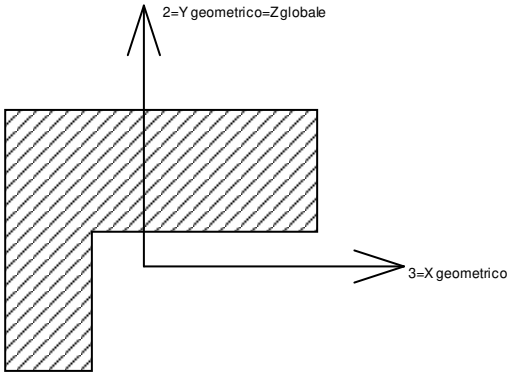
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.1.1.2 Sollecitazioni estreme aste

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

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

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

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
429	SLV 13	31	-6.52	-3.28	-0.98	-385.55	-9.37	-75.9	0.0298	-41.4615	-47.3885
428	SLV 13	31	-6.52	-2.89	-0.98	-328.86	-16.67	-67.86	0.0269	-30.1502	-33.1605
568	SLV 16	1	-10.14	6.23	-0.98	-324.19	-103.15	-45.64	5.0426	-16.0159	44.1076
635	SLV 15	31	-6.02	0.65	-0.98	-305.19	-20.44	-8.18	0.009	10.9875	-16.0008
723	SLV 4	31	-18.25	-3.28	-0.98	-297.26	-14.61	60.84	-0.0208	32.0593	-46.1574

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
723	SLV X	31	-18.25	-3.28	-0.98	222.28	-12.85	-56.92	-0.0911	-27.1938	14.6522
429	SLV 4	31	-6.52	-3.28	-0.98	222.01	-86.33	62.81	0.1795	29.3666	-2.7947
645	SLV 15	1	-6.02	-2.89	-0.98	199.26	74.3	-70.12	-0.0155	-14.0881	-33.4205
942	SLV 1	1	-5.09	6.34	15.66	192.91	37.83	-20.61	-1.1026	1.2023	-7.4269
722	SLV X	31	-18.25	-2.89	-0.98	174.5	-9.69	-49.34	-0.069	-18.5926	9.9419

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
313	SLV 16	1	-5.41	6.58	-0.98	-46.82	76.9	210.81	3.505	-127.9306	-53.1092
702	SLV 13	31	-14.11	-3.28	-0.98	14.92	-121.73	-116.59	-1.8106	-121.8828	12.327
699	SLV 2	31	-18.5	-2.93	-0.98	-178.16	-119.96	-204.96	1.2143	-107.1149	101.4452
443	SLV 15	1	-5.16	0.8	-0.98	-257.68	-43.77	234.86	0.1797	-93.5285	-68.1286
680	SLV 13	31	-11.36	-4.78	-0.98	-97.96	-26.81	-252.68	-0.1252	-93.1268	5.7763

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
696	SLV 2	1	-17.05	-2.93	-0.98	-64.78	31.1	-207.96	-0.4653	138.4825	39.3922
675	SLV 2	31	-11.36	-3.28	-0.98	-62.32	-78.42	120.45	6.0679	130.0623	-1.8632
655	SLV 13	31	-7.72	-2.93	-0.98	-76.48	-18.42	220.5	0.3971	123.0134	37.5846
443	SLV 15	31	-6.02	0.8	-0.98	-269.02	-122.13	239.03	0.2479	110.2604	4.2538
701	SLV 13	1	-14.11	-0.71	-0.98	6.39	130.62	-59.34	-0.2422	99.8723	32.669

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
847	SLU 81	1	-11.81	-3.58	0.44	0	-84.45	0	0	0	-154.2949
846	SLU 83	31	-11.81	-3.58	0.44	7.55	95.1	-13.87	-0.7721	-15.3856	-150.4412
383	SLU 83	1	-15.31	6.58	-0.98	-43.23	-176.79	10.86	-0.1512	-6.7189	-135.3591
288	SLV 4	31	-24.4	5.48	-0.98	-45.94	15.66	-38.36	9.9687	25.6006	-125.8149
841	SLU 81	31	-13.11	-3.58	0.44	0	67.78	0	0	0	-120.375

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
611	SLV 15	1	-0.47	1.05	-0.98	-116.66	315.56	41.58	-4.1362	6.5175	232.7041
598	SLV 14	31	-0.47	1.05	-0.98	-156.78	-293	-55.09	4.4623	-38.2823	225.8648
546	SLU 83	31	-15.06	6.23	-0.98	-238.68	-245.05	-9.12	3.8058	11.4604	186.0884
297	SLV 4	31	-24.4	1.05	-0.98	-94.31	-232.46	26.42	-1.5051	8.6381	161.0785
845	SLU 81	1	-11.81	-3.58	0.44	-0.69	174.9	-1.91	3.6862	1.6619	143.4253

1.1.2 Sollecitazioni gusci

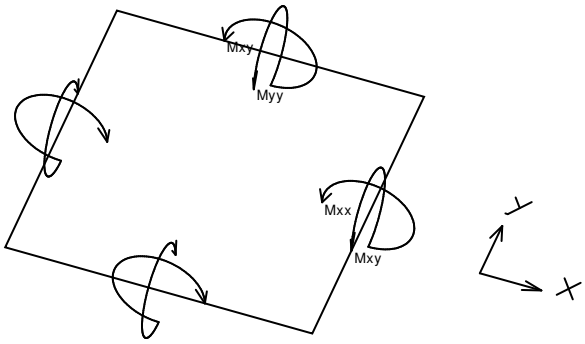
1.1.2.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

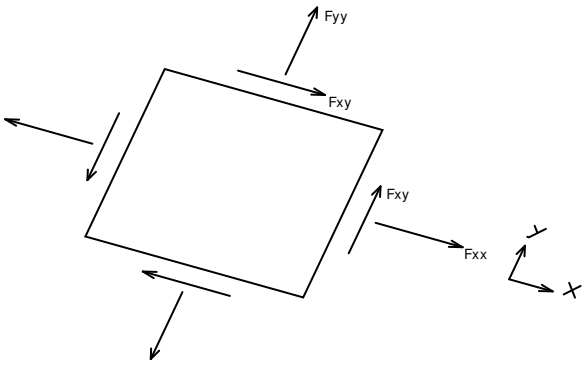
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

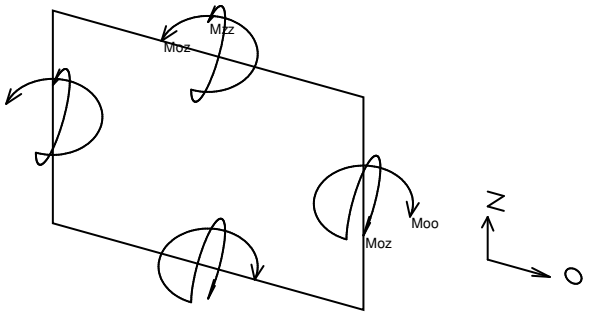
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

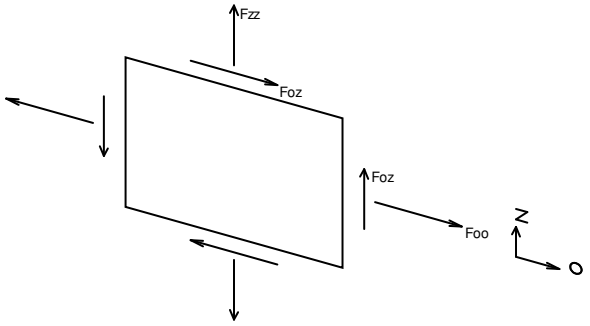
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.2.2 Sollecitazioni estreme gusci

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

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16077	SLV 13	156	-231.18	69.32	330.82	-173	269	564	-441	782

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16228	SLV 4	660	-200.35	-42.37	17.32	-288	-56	113	-520	-49
16232	SLV 4	503	-133.45	40.6	12.15	-132	131	-93	-359	38
16233	SLV 4	503	-129.76	-20.23	37.94	-47	-68	-18	-286	52
16049	SLU 84	230	-113.09	-24.43	17.8	42	35	-77	661	-23

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16101	SLU 84	316	259.64	38.17	-8.9	46	-56	-64	-486	464
16108	SLU 83	307	217.19	49.71	182.31	-483	-133	-388	-372	-645
16228	SLV 13	660	210.27	51.14	3.36	-674	-90	274	519	121
16068	SLU 83	329	159.82	-44.96	221.81	-624	124	-318	-295	1435
16232	SLV 13	503	146.83	-42.91	-29.54	-107	162	-64	385	3

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16068	SLU 84	328	100.78	-21.2	-145.92	-43	112	-264	-207	1475
16073	SLV 14	323	-8.21	-24.79	-136.72	24	33	16	37	397
16103	SLU 84	313	15.57	28.16	-131.03	-42	11	-54	51	-130
16101	SLU 83	314	79.35	17.13	-126.14	11	-19	-60	60	513
16072	SLV 14	324	-7.41	-13.99	-125.34	33	27	5	31	309

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16077	SLV 13	156	-231.18	69.32	330.82	-173	269	564	-441	782
16068	SLU 84	329	159.73	-44.99	221.89	-624	123	-317	-295	1436
16108	SLU 84	307	217.14	49.72	182.4	-484	-133	-387	-371	-646
16076	SLV 14	321	62.67	-31.25	145.95	-1	31	23	-338	597
16069	SLU 84	328	132.26	-14.74	129.81	-59	109	-244	-347	846

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16892	SLV 6	18451	-9.42	0.2	-4.98	-4753	116	-462	-53	-13
16893	SLV 11	18451	10.73	0.34	4.55	-4685	-14	-472	-52	10
16868	SLV 9	18460	-10.26	0.34	-2.77	-4371	1178	1219	54	-14
16869	SLV 8	18444	10.18	0.15	2.12	-3986	-1097	1159	52	8
16228	SLU 84	1136	12.29	1.38	-3.43	-1954	-1164	-1033	2	-1

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16893	SLV 6	18451	-10.9	-0.19	-5.02	4769	189	353	53	-12
16892	SLV 11	18451	9.23	-0.21	4.5	4653	31	116	52	11
16869	SLV 9	18444	-10.18	-0.33	-2.31	4030	905	-699	-52	-8
16868	SLV 8	18460	10.28	-0.33	2.6	4029	-1486	-1544	-55	14
17212	SLV 4	18858	0	0	-0.17	1399	0	458	0	0

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
3003	SLU 84	983	-0.21	-0.26	-0.69	-69	-635	-1561	-3	-1
16868	SLV 8	18460	10.28	-0.33	2.6	4029	-1486	-1544	-55	14
16863	SLV 8	18961	0.4	-0.27	0.39	-239	-61	-1434	18	4
825	SLU 84	502	0.24	-0.15	0.78	-544	294	-1383	-1	2
2969	SLU 84	984	-0.04	0.3	-0.14	159	-799	-1285	1	-1

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16863	SLV 8	18959	-0.02	0.06	0.25	571	76	1884	18	4
16868	SLV 9	18713	5.05	-0.44	1.71	1569	-564	1325	-54	-9
17216	SLV 14	19047	0.11	0	0.04	-275	1	1279	-1	1
16228	SLU 84	561	-1.49	3.13	1.07	1231	952	1210	5	54
16869	SLV 8	18444	10.18	0.15	2.12	-3986	-1097	1159	52	8

1.1.2.3 Sollecitazioni estreme gusci non verticali

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

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

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16068	SLU 84	328	-143.19	33.38	98.05	-274	-100	-32	-1483	-133
16073	SLV 14	323	-135.21	28.38	-9.71	14	-33	26	-396	48
16103	SLU 84	313	-134.5	-16.54	19.03	-56	-10	-41	133	40
16101	SLU 83	314	-127.39	-5.95	80.6	-57	22	9	-509	87
16104	SLU 84	312	-126.58	-8.72	1.72	-77	-14	-22	68	38

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16077	SLV 13	156	328.74	-77.24	-229.11	557	-279	-165	-788	-430
16068	SLU 84	329	226.21	41.67	155.4	-330	-138	-611	-1448	-223
16108	SLU 84	307	173.01	-45.37	226.53	-362	121	-509	606	-433
16076	SLV 14	321	142.65	35.22	65.97	26	-30	-4	-580	-368
16069	SLU 84	328	134.81	14.3	127.25	-275	-72	-28	-893	-198

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16077	SLV 13	156	328.74	-77.24	-229.11	557	-279	-165	-788	-430
16049	SLU 84	230	17.81	24.38	-113.11	-77	-35	42	23	661
16040	SLU 84	200	-0.3	21.32	-95.42	-127	17	157	-4	550
16058	SLV 6	253	30.04	19.7	-92.94	-17	-19	-26	35	590
16076	SLV 10	320	-18.61	14.51	-61.31	30	9	-87	-521	433

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16101	SLU 84	316	-12.24	-23.46	262.98	-58	62	40	-489	-460
16108	SLU 83	307	172.93	-45.33	226.58	-363	122	-509	606	-433
16068	SLU 83	329	226.14	41.64	155.5	-331	-138	-611	-1448	-223
16069	SLU 83	328	134.72	14.28	127.3	-276	-72	-28	-892	-198
16058	SLU 84	230	39.17	24.26	100.49	-73	-39	-30	110	619

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16068	SLV 13	329	165.23	30.1	96.84	-671	-300	-1427	-1107	-139
16108	SLV 2	307	128.94	-34.39	153.61	-628	228	-1112	482	-285
16069	SLV 13	328	95.91	10.97	75.65	-511	-149	-164	-719	-116
16077	SLV 2	156	92.35	-50.48	-28.53	-504	267	204	-310	13
15961	SLU 83	493	1.25	3.71	2.03	-384	147	-428	4	-11

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16077	SLV 15	156	309.84	-74.88	-207.07	596	-266	-144	-743	-382
16078	SLV 15	154	10.67	-23.64	-8.82	427	-137	117	33	-26
16108	SLV X	307	-17.99	5.68	-4.87	342	-129	697	-89	1
5426	SLV 2	4183	0.52	0	2.41	286	2	-526	-8	18
4949	SLV 13	2291	-0.78	-0.08	-0.72	269	-8	20	-4	3

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16068	SLV 13	284	-37.41	18.44	60.79	-147	-417	-1458	184	-163
16108	SLV 2	271	-28.76	-13.7	57.51	-153	341	-1197	11	-284
25	SLU 84	1116	0.38	-0.22	4.93	22	71	-841	3	24
23	SLU 84	1116	-0.62	0.71	-4.88	54	-46	-801	-1	-24
6830	SLU 84	1389	-0.31	0.08	0.04	39	-15	-783	-2	-1

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
15961	SLV 2	134	2.47	-0.62	-2.81	196	-258	841	-6	40

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16108	SLV X	271	4.54	4.64	1.66	82	-192	744	-8	10
16068	SLV 4	284	-31.28	15.83	71.91	44	147	586	180	-183
5426	SLV X	3616	0.01	0	0.54	124	-1	454	0	-2
16040	SLV 13	174	-49.44	17.34	36.27	-193	76	342	-68	270

1.1.2.4 Sollecitazioni estreme gusci verticali

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

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16233	SLV X	503	-34.86	-31.27	132.77	3	14	25	31	303
16892	SLV 3	18451	-34.82	0.89	-15.01	1180	48	-83	-168	-37
16893	SLV 1	18451	-34.82	-1.02	-15.33	1265	93	48	170	-35
16868	SLV 3	18452	-34.39	2.19	-13.48	434	-80	27	-167	-9
16869	SLV 3	18452	-34.21	0.67	-12.89	-633	7	0	169	-31

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16233	SLV 1	503	40.02	27.53	-123.73	-19	68	-56	-50	-279
16893	SLV 16	18451	34.65	1.18	14.86	-1181	81	-167	-169	33
16892	SLV 14	18451	34.63	-0.9	14.52	-1280	99	-263	167	36
16868	SLV 14	18452	34.4	-2.16	13.76	-1227	358	-334	167	10
16869	SLV 14	18452	34.25	-0.81	13.24	1124	260	-16	-169	32

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16228	SLV 4	660	16.93	43.37	-199.96	112	58	-287	52	-520
16232	SLV 4	503	16.21	-32.26	-137.51	-79	-128	-146	-18	-360
16233	SLV 4	503	35.17	29.42	-127	-26	69	-39	-36	-289
16258	SLU 84	2345	0.17	-10.3	-69.81	267	-178	-312	27	242
16229	SLV 3	1134	7.53	4.74	-45.08	122	-334	408	-24	202

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16228	SLV 13	660	3.84	-52.1	209.79	273	95	-673	-124	518
16232	SLV 13	503	-33.76	32.85	151.05	-47	-159	-125	-25	385
16233	SLV 13	503	-29.69	-35.01	141.82	-14	96	-6	13	328
16682	SLV 7	618	-4.91	1.9	76.12	266	59	-58	-147	-205
16681	SLV 7	618	-6.37	20.65	70.53	133	-6	-65	-33	-176

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16892	SLV 6	18451	-9.42	0.2	-4.98	-4753	116	-462	-53	-13
16893	SLV 11	18451	10.73	0.34	4.55	-4685	-14	-472	-52	10
16868	SLV 9	18460	-10.26	0.34	-2.77	-4371	1178	1219	54	-14
16869	SLV 8	18444	10.18	0.15	2.12	-3986	-1097	1159	52	8
17212	SLV 13	18858	0.01	0	-0.18	-1384	0	-475	0	0

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16893	SLV 6	18451	-10.9	-0.19	-5.02	4769	189	353	53	-12
16892	SLV 11	18451	9.23	-0.21	4.5	4653	31	116	52	11
16869	SLV 9	18444	-10.18	-0.33	-2.31	4030	905	-699	-52	-8
16868	SLV 8	18460	10.28	-0.33	2.6	4029	-1486	-1544	-55	14
17212	SLV 4	18858	0	0	0.17	1399	0	458	0	0

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16228	SLU 84	1136	-3.41	-1.45	12.28	-1044	1169	-1943	1	2
3003	SLU 84	983	-0.21	-0.26	-0.69	-69	-635	-1561	-3	-1
16868	SLV 8	18460	10.28	-0.33	2.6	4029	-1486	-1544	-55	14
16863	SLV 8	18961	0.4	-0.27	0.39	-239	-61	-1434	18	4
825	SLU 84	502	0.24	-0.15	0.78	-544	294	-1383	-1	2

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16863	SLV 8	18959	-0.02	0.06	0.25	571	76	1884	18	4
16868	SLV 9	18713	5.05	-0.44	1.71	1569	-564	1325	-54	-9
17216	SLV 14	19047	-0.11	0	-0.04	-275	-1	1279	-1	-1
16228	SLU 84	561	1.1	-3.12	-1.52	1219	-952	1222	-54	5
16869	SLV 8	18444	10.18	0.15	2.12	-3986	-1097	1159	52	8

1.1.3 Sollecitazioni gusci armati

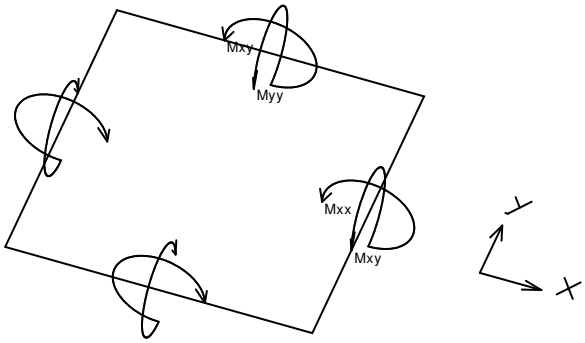
1.1.3.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

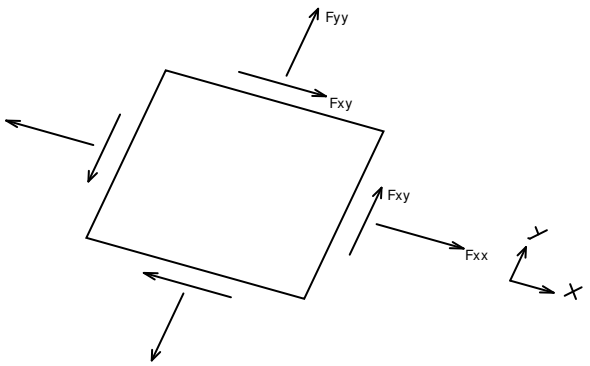
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

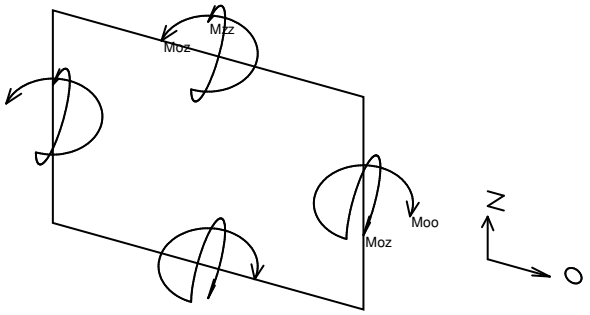
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

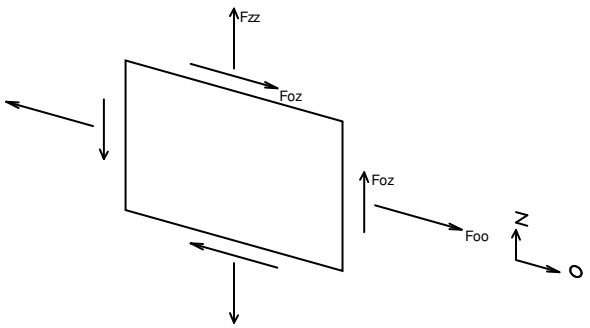
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.4 Sollecitazioni gusci muratura

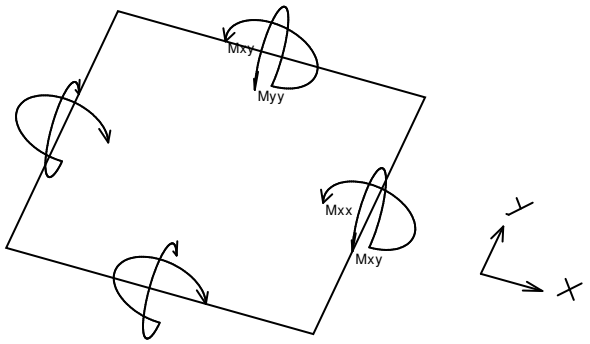
1.1.4.1 Convenzioni di segno gusci muratura

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

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

Convenzione di segno per gusci non verticali

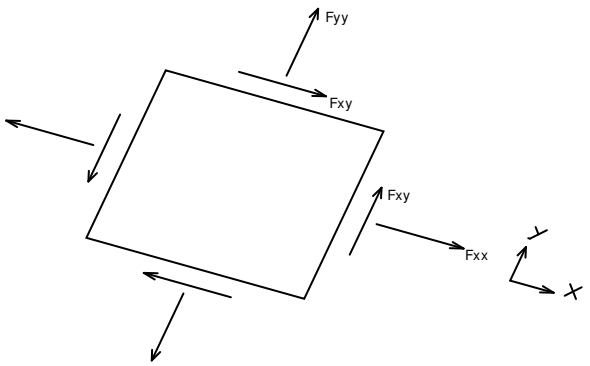
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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

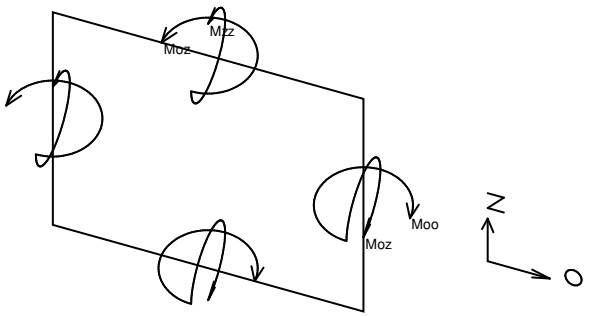


Si definiscono:

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

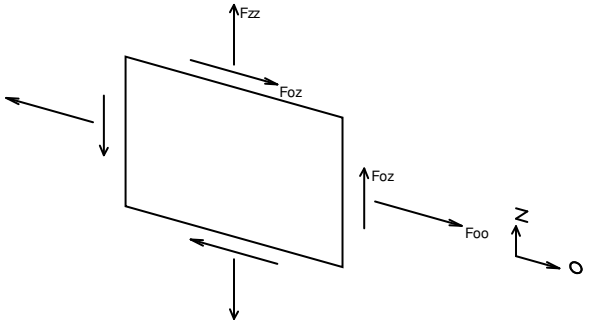
Convenzione di segno per gusci verticali

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



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

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



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

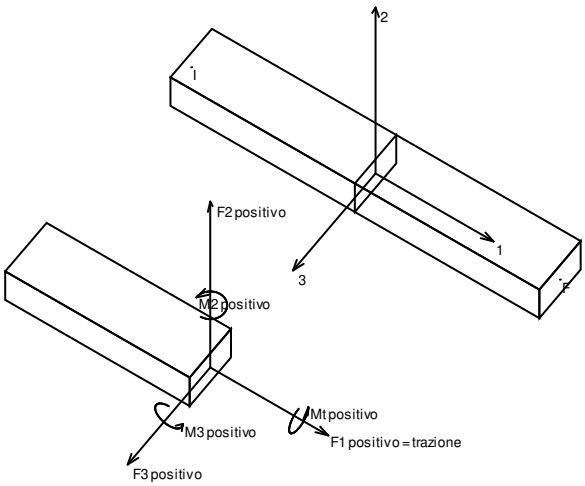
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia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

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

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

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



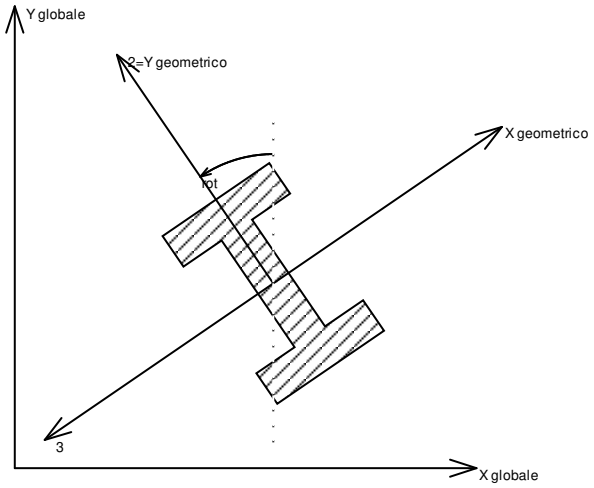
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

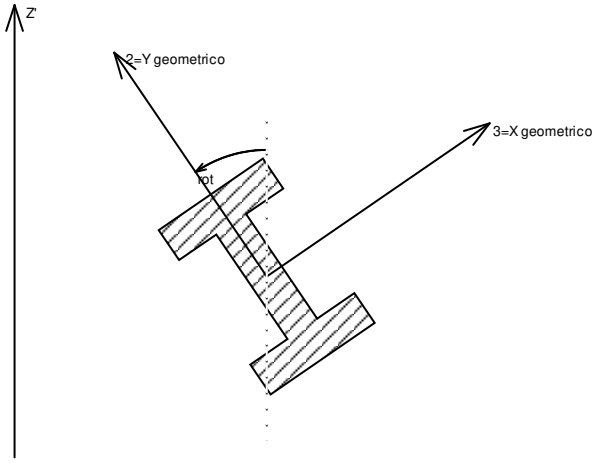
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

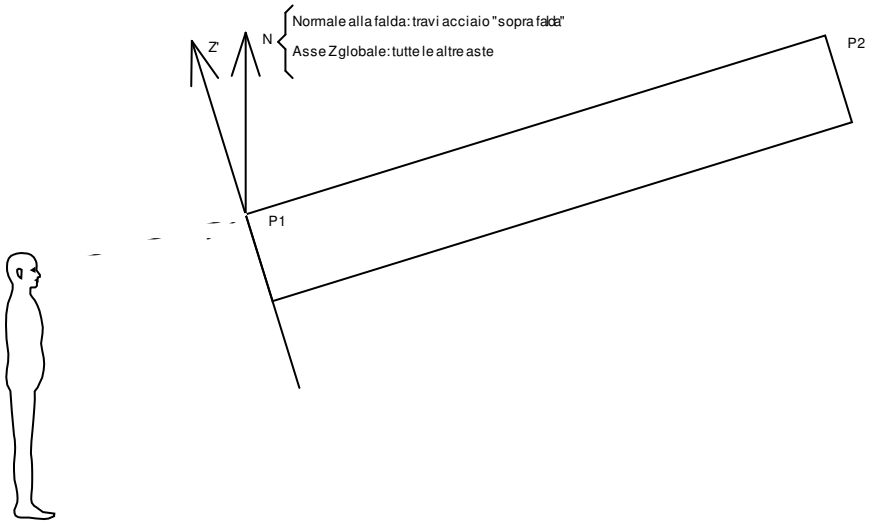
Sistema locale aste non verticali



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

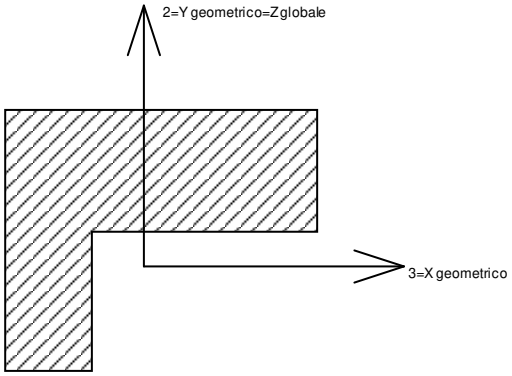
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



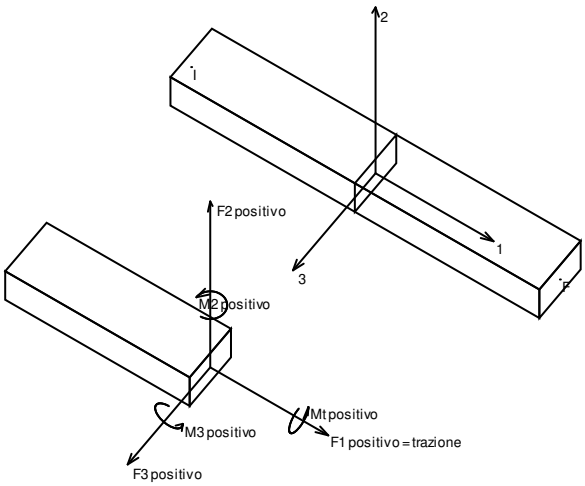
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

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

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



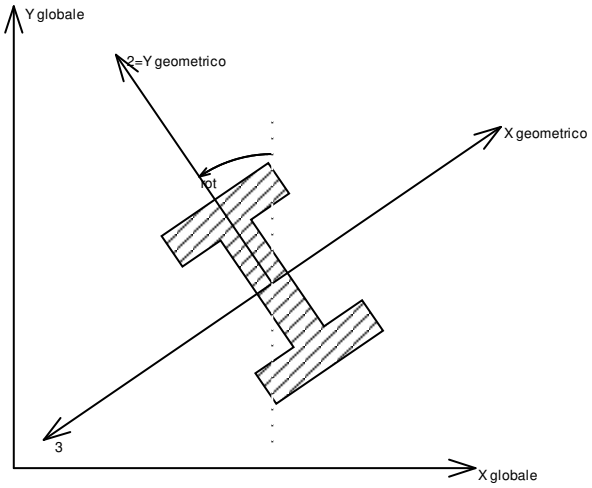
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

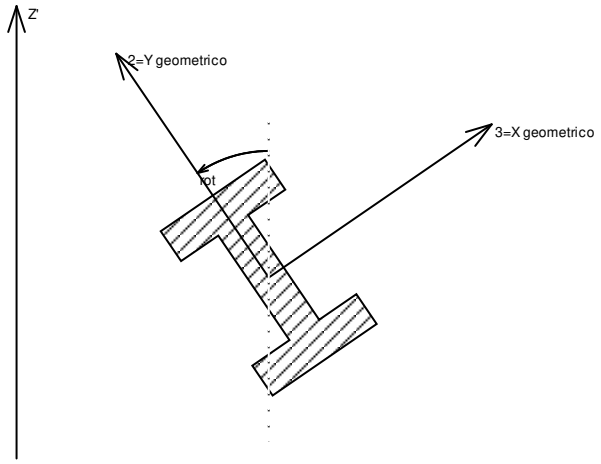
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

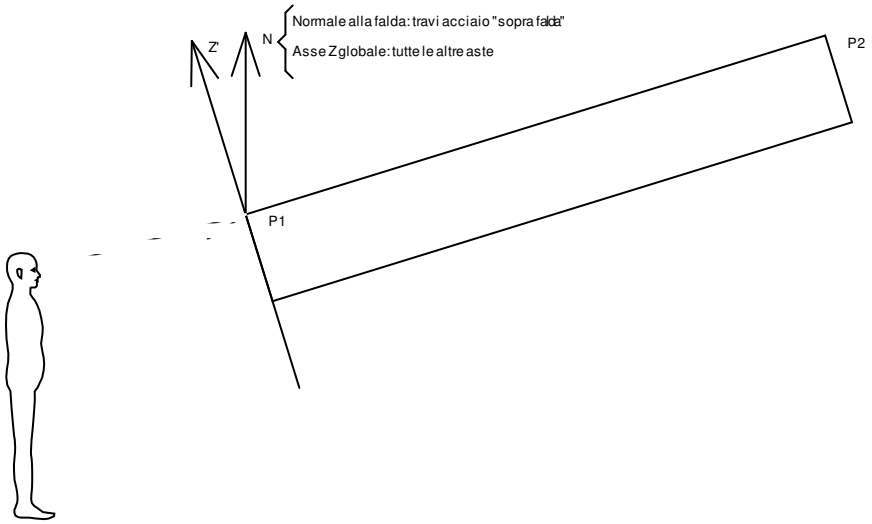
Sistema locale aste non verticali



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

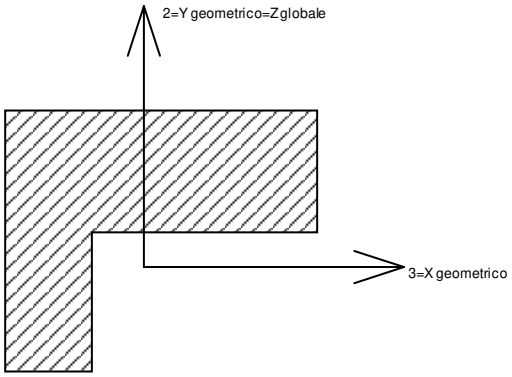
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



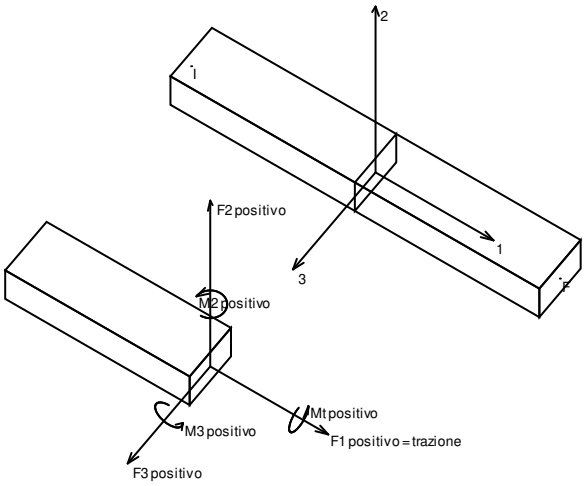
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

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

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



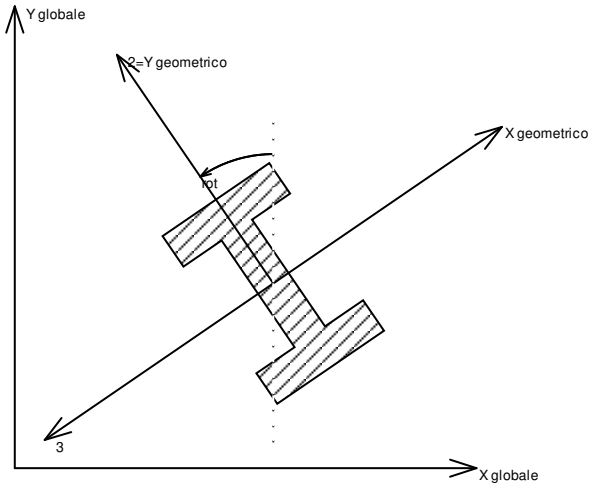
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

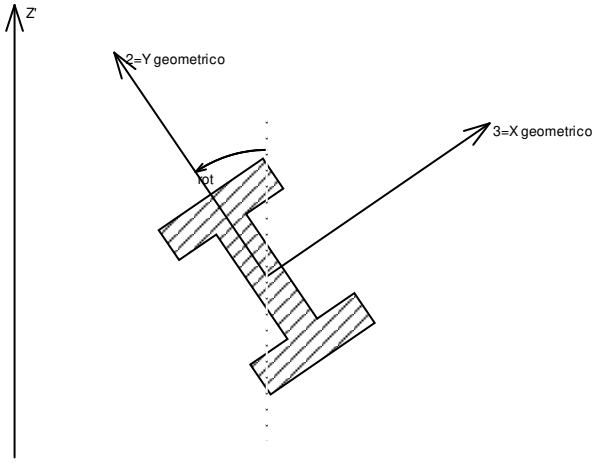
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

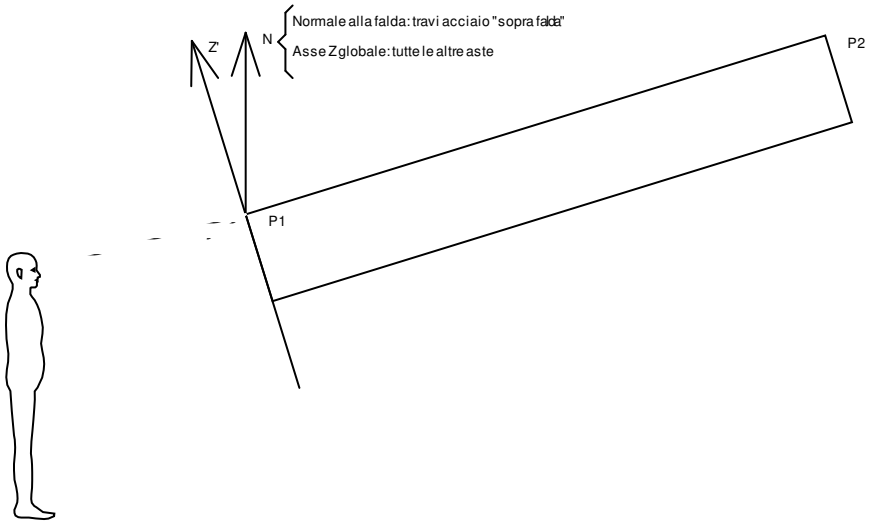
Sistema locale aste non verticali



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

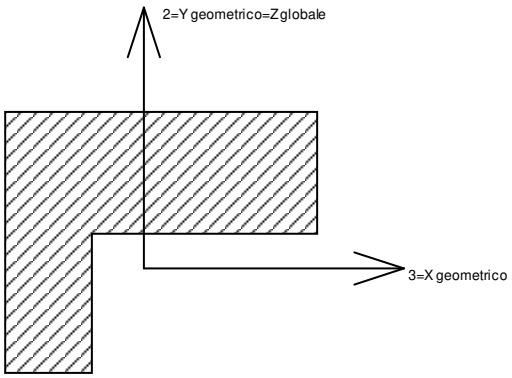
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

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

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18452	SLV 14	-69.43	330.91	27.13	6.6313	-2.8583	0.8328

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18451	SLV 16	-60.7	-306.27	35.87	8.8256	-3.0433	-0.0561
715	SLV 15	-45.13	-2.59	166.4	-12.9902	-11.0156	-3.6592
652	SLV 15	-41.05	-7.7	214.98	25.1126	-2.3958	5.0649
502	SLV 13	-40.13	4.9	215.67	14.0911	31.7987	1.4252

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18452	SLV 3	69.22	-276.32	32.39	18.2874	2.7676	-0.8476
18451	SLV 1	61.18	274.08	28.26	2.0122	3.1529	0.0521
715	SLV 2	39.46	-1.19	276.23	-19.9153	-16.04	2.8794
652	SLV 2	39.27	8	193.38	26.4553	0.5444	-5.3495
502	SLV 4	38.57	-8.1	190.19	11.954	25.1734	-0.8966

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18451	SLV 11	-18.69	-1124.34	37.07	15.5931	-0.9299	-0.0239
18452	SLV 8	21.42	-1115.17	33.97	25.2864	0.8347	-0.2556
715	SLV 8	8.83	-27.51	240.85	-18.3512	-14.8301	-1.0617
502	SLV 12	-10.87	-25.99	210.98	14.3172	30.2678	4.5259
652	SLV 12	-13.63	-24.01	210.27	25.0348	-1.8934	1.2056

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18452	SLV 9	-21.62	1169.76	25.55	-0.3677	-0.9254	0.2408
18451	SLV 6	19.16	1092.15	27.06	-4.7553	1.0395	0.02
652	SLV 5	11.85	24.3	198.09	26.5331	0.042	-1.4902
715	SLV 9	-14.5	23.72	201.78	-14.5544	-12.2255	0.282
502	SLV 5	9.31	22.79	194.88	11.7279	26.7043	-3.9973

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
700	SLV X	-19.22	3.66	-79.36	4.0736	14.3529	-1.1004
715	SLV X	-42.01	3.95	-55.68	3.703	2.6417	-2.8989
776	SLV X	-11.43	-2.22	-45.27	8.222	6.8963	-2.0565
623	SLV X	-11.24	1.97	-42.19	-0.0554	-0.0784	-0.0227
624	SLV X	-11.25	1.86	-39.56	-0.0588	-0.0755	-0.022

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
715	SLU 84	-3.95	-2.43	327.98	-24.3705	-20.0511	-0.5302
652	SLU 84	-1.19	0.51	303.44	38.3372	-1.3507	-0.2149
502	SLU 84	-1.05	-1.93	300.61	19.3662	42.4015	0.3267
655	SLU 83	-1.23	-1.72	273.84	-65.3899	4.2386	-0.418
639	SLU 83	-2.5	-2.5	240.22	-14.5216	-16.6617	-0.3114

1.2.2 Reazioni nodali in combinazioni di carico

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

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 1	0.01	-0.09	3.17	0	0	0
10	SLU 2	0.01	-0.09	3.17	0	0	0
10	SLU 3	0.01	-0.09	3.24	0	0	0
10	SLU 4	0.01	-0.09	3.24	0	0	0
10	SLU 5	0.01	-0.09	3.22	0	0	0
10	SLU 6	0.01	-0.09	3.28	0	0	0
10	SLU 7	0.01	-0.09	3.28	0	0	0
10	SLU 8	0.01	-0.09	3.26	0	0	0
10	SLU 9	0.01	-0.09	3.26	0	0	0
10	SLU 10	0.01	-0.1	3.61	0	0	0
10	SLU 11	0.01	-0.1	3.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 12	0.01	-0.1	3.68	0	0	0
10	SLU 13	0.01	-0.1	3.65	0	0	0
10	SLU 14	0.01	-0.1	3.72	0	0	0
10	SLU 15	0.01	-0.1	3.72	0	0	0
10	SLU 16	0.01	-0.1	3.69	0	0	0
10	SLU 17	0.01	-0.1	3.69	0	0	0
10	SLU 18	0.01	-0.1	3.79	0	0	0
10	SLU 19	0.01	-0.1	3.79	0	0	0
10	SLU 20	0.01	-0.1	3.84	0	0	0
10	SLU 21	0.01	-0.1	3.84	0	0	0
10	SLU 22	0.01	-0.1	3.55	0	0	0
10	SLU 23	0.01	-0.09	3.55	0	0	0
10	SLU 24	0.01	-0.09	3.62	0	0	0
10	SLU 25	0.01	-0.09	3.62	0	0	0
10	SLU 26	0.01	-0.09	3.6	0	0	0
10	SLU 27	0.01	-0.09	3.66	0	0	0
10	SLU 28	0.01	-0.09	3.66	0	0	0
10	SLU 29	0.01	-0.09	3.64	0	0	0
10	SLU 30	0.01	-0.09	3.64	0	0	0
10	SLU 31	0.01	-0.1	3.99	0	0	0
10	SLU 32	0.01	-0.1	4.05	0	0	0
10	SLU 33	0.01	-0.1	4.06	0	0	0
10	SLU 34	0.01	-0.1	4.03	0	0	0
10	SLU 35	0.01	-0.1	4.1	0	0	0
10	SLU 36	0.01	-0.1	4.1	0	0	0
10	SLU 37	0.01	-0.1	4.07	0	0	0
10	SLU 38	0.01	-0.1	4.07	0	0	0
10	SLU 39	0.01	-0.11	4.17	0	0	0
10	SLU 40	0.01	-0.11	4.17	0	0	0
10	SLU 41	0.01	-0.11	4.22	0	0	0
10	SLU 42	0.01	-0.1	4.22	0	0	0
10	SLU 43	0.01	-0.12	3.99	0	0	0
10	SLU 44	0.01	-0.12	3.99	0	0	0
10	SLU 45	0.01	-0.12	4.06	0	0	0
10	SLU 46	0.01	-0.12	4.06	0	0	0
10	SLU 47	0.01	-0.12	4.04	0	0	0
10	SLU 48	0.01	-0.12	4.1	0	0	0
10	SLU 49	0.01	-0.12	4.1	0	0	0
10	SLU 50	0.01	-0.12	4.08	0	0	0
10	SLU 51	0.01	-0.12	4.08	0	0	0
10	SLU 52	0.01	-0.12	4.43	0	0	0
10	SLU 53	0.01	-0.13	4.5	0	0	0
10	SLU 54	0.01	-0.13	4.5	0	0	0
10	SLU 55	0.01	-0.12	4.47	0	0	0
10	SLU 56	0.01	-0.13	4.54	0	0	0
10	SLU 57	0.01	-0.13	4.54	0	0	0
10	SLU 58	0.01	-0.13	4.51	0	0	0
10	SLU 59	0.01	-0.13	4.51	0	0	0
10	SLU 60	0.01	-0.13	4.61	0	0	0
10	SLU 61	0.01	-0.13	4.62	0	0	0
10	SLU 62	0.01	-0.13	4.66	0	0	0
10	SLU 63	0.01	-0.13	4.66	0	0	0
10	SLU 64	0.01	-0.12	4.37	0	0	0
10	SLU 65	0.01	-0.12	4.37	0	0	0
10	SLU 66	0.01	-0.12	4.44	0	0	0
10	SLU 67	0.01	-0.12	4.44	0	0	0
10	SLU 68	0.01	-0.12	4.42	0	0	0
10	SLU 69	0.01	-0.12	4.48	0	0	0
10	SLU 70	0.01	-0.12	4.48	0	0	0
10	SLU 71	0.01	-0.12	4.46	0	0	0
10	SLU 72	0.01	-0.12	4.46	0	0	0
10	SLU 73	0.01	-0.13	4.81	0	0	0
10	SLU 74	0.01	-0.13	4.88	0	0	0
10	SLU 75	0.01	-0.13	4.88	0	0	0
10	SLU 76	0.01	-0.13	4.85	0	0	0
10	SLU 77	0.01	-0.13	4.92	0	0	0
10	SLU 78	0.01	-0.13	4.92	0	0	0
10	SLU 79	0.01	-0.13	4.89	0	0	0
10	SLU 80	0.01	-0.13	4.89	0	0	0
10	SLU 81	0.01	-0.13	4.99	0	0	0
10	SLU 82	0.01	-0.13	5	0	0	0
10	SLU 83	0.01	-0.13	5.04	0	0	0
10	SLU 84	0.01	-0.13	5.04	0	0	0
10	SLE RA 1	0.01	-0.09	3.28	0	0	0
10	SLE RA 2	0.01	-0.09	3.28	0	0	0
10	SLE RA 3	0.01	-0.09	3.33	0	0	0
10	SLE RA 4	0.01	-0.09	3.33	0	0	0
10	SLE RA 5	0.01	-0.09	3.31	0	0	0
10	SLE RA 6	0.01	-0.09	3.35	0	0	0
10	SLE RA 7	0.01	-0.09	3.35	0	0	0
10	SLE RA 8	0.01	-0.09	3.34	0	0	0
10	SLE RA 9	0.01	-0.09	3.34	0	0	0
10	SLE RA 10	0.01	-0.1	3.57	0	0	0
10	SLE RA 11	0.01	-0.1	3.62	0	0	0
10	SLE RA 12	0.01	-0.1	3.62	0	0	0
10	SLE RA 13	0.01	-0.1	3.6	0	0	0
10	SLE RA 14	0.01	-0.1	3.64	0	0	0
10	SLE RA 15	0.01	-0.1	3.64	0	0	0
10	SLE RA 16	0.01	-0.1	3.63	0	0	0
10	SLE RA 17	0.01	-0.1	3.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLE RA 18	0.01	-0.1	3.69	0	0	0
10	SLE RA 19	0.01	-0.1	3.7	0	0	0
10	SLE RA 20	0.01	-0.1	3.72	0	0	0
10	SLE RA 21	0.01	-0.1	3.72	0	0	0
10	SLE FR 1	0.01	-0.09	3.28	0	0	0
10	SLE FR 2	0.01	-0.09	3.28	0	0	0
10	SLE FR 3	0.01	-0.09	3.29	0	0	0
10	SLE FR 4	0.01	-0.1	3.4	0	0	0
10	SLE FR 5	0.01	-0.1	3.42	0	0	0
10	SLE FR 6	0.01	-0.1	3.49	0	0	0
10	SLE QP 1	0.01	-0.09	3.28	0	0	0
10	SLE QP 2	0.01	-0.1	3.4	0	0	0
10	SLD 1	0.21	-0.07	3.45	0	0	0
10	SLD 2	0.22	-0.07	3.46	0	0	0
10	SLD 3	0.2	-0.14	3.43	0	0	0
10	SLD 4	0.22	-0.14	3.44	0	0	0
10	SLD 5	0.08	0.02	3.45	0	0	0
10	SLD 6	0.09	0.02	3.45	0	0	0
10	SLD 7	0.05	-0.22	3.38	0	0	0
10	SLD 8	0.06	-0.22	3.39	0	0	0
10	SLD 9	-0.04	0.02	3.42	0	0	0
10	SLD 10	-0.03	0.02	3.43	0	0	0
10	SLD 11	-0.07	-0.21	3.35	0	0	0
10	SLD 12	-0.06	-0.21	3.36	0	0	0
10	SLD 13	-0.2	-0.05	3.37	0	0	0
10	SLD 14	-0.18	-0.05	3.37	0	0	0
10	SLD 15	-0.2	-0.12	3.35	0	0	0
10	SLD 16	-0.19	-0.12	3.35	0	0	0
10	SLV 1	0.48	-0.04	3.52	0	0	0
10	SLV 2	0.51	-0.04	3.54	0	0	0
10	SLV 3	0.46	-0.2	3.47	0	0	0
10	SLV 4	0.49	-0.2	3.49	0	0	0
10	SLV 5	0.17	0.16	3.51	0	0	0
10	SLV 6	0.19	0.16	3.52	0	0	0
10	SLV 7	0.11	-0.37	3.35	0	0	0
10	SLV 8	0.13	-0.37	3.36	0	0	0
10	SLV 9	-0.11	0.18	3.45	0	0	0
10	SLV 10	-0.09	0.18	3.46	0	0	0
10	SLV 11	-0.17	-0.36	3.29	0	0	0
10	SLV 12	-0.15	-0.35	3.3	0	0	0
10	SLV 13	-0.47	0.01	3.32	0	0	0
10	SLV 14	-0.44	0.01	3.33	0	0	0
10	SLV 15	-0.49	-0.15	3.27	0	0	0
10	SLV 16	-0.46	-0.15	3.29	0	0	0
11	SLU 1	0.02	-0.18	6.3	0	0	0
11	SLU 2	0.02	-0.17	6.3	0	0	0
11	SLU 3	0.02	-0.18	6.43	0	0	0
11	SLU 4	0.02	-0.17	6.44	0	0	0
11	SLU 5	0.02	-0.17	6.39	0	0	0
11	SLU 6	0.01	-0.18	6.51	0	0	0
11	SLU 7	0.01	-0.17	6.52	0	0	0
11	SLU 8	0.01	-0.18	6.46	0	0	0
11	SLU 9	0.01	-0.17	6.46	0	0	0
11	SLU 10	0.02	-0.19	7.16	0	0	0
11	SLU 11	0.01	-0.19	7.29	0	0	0
11	SLU 12	0.01	-0.19	7.3	0	0	0
11	SLU 13	0.01	-0.19	7.24	0	0	0
11	SLU 14	0.01	-0.19	7.37	0	0	0
11	SLU 15	0.01	-0.19	7.38	0	0	0
11	SLU 16	0.01	-0.19	7.32	0	0	0
11	SLU 17	0.01	-0.19	7.32	0	0	0
11	SLU 18	0.02	-0.2	7.53	0	0	0
11	SLU 19	0.02	-0.2	7.53	0	0	0
11	SLU 20	0.01	-0.2	7.61	0	0	0
11	SLU 21	0.01	-0.19	7.61	0	0	0
11	SLU 22	0.02	-0.18	7.05	0	0	0
11	SLU 23	0.02	-0.17	7.06	0	0	0
11	SLU 24	0.02	-0.18	7.19	0	0	0
11	SLU 25	0.02	-0.18	7.19	0	0	0
11	SLU 26	0.02	-0.17	7.14	0	0	0
11	SLU 27	0.02	-0.18	7.27	0	0	0
11	SLU 28	0.02	-0.18	7.27	0	0	0
11	SLU 29	0.02	-0.18	7.22	0	0	0
11	SLU 30	0.02	-0.18	7.22	0	0	0
11	SLU 31	0.02	-0.19	7.92	0	0	0
11	SLU 32	0.02	-0.2	8.05	0	0	0
11	SLU 33	0.02	-0.19	8.05	0	0	0
11	SLU 34	0.02	-0.19	8	0	0	0
11	SLU 35	0.02	-0.2	8.13	0	0	0
11	SLU 36	0.02	-0.19	8.13	0	0	0
11	SLU 37	0.01	-0.2	8.08	0	0	0
11	SLU 38	0.01	-0.19	8.08	0	0	0
11	SLU 39	0.02	-0.2	8.28	0	0	0
11	SLU 40	0.02	-0.2	8.28	0	0	0
11	SLU 41	0.02	-0.2	8.36	0	0	0
11	SLU 42	0.02	-0.2	8.37	0	0	0
11	SLU 43	0.02	-0.23	7.93	0	0	0
11	SLU 44	0.02	-0.22	7.93	0	0	0
11	SLU 45	0.02	-0.23	8.06	0	0	0
11	SLU 46	0.02	-0.22	8.07	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 47	0.02	-0.22	8.02	0	0	0
11	SLU 48	0.02	-0.23	8.15	0	0	0
11	SLU 49	0.02	-0.22	8.15	0	0	0
11	SLU 50	0.02	-0.23	8.09	0	0	0
11	SLU 51	0.02	-0.22	8.1	0	0	0
11	SLU 52	0.02	-0.24	8.79	0	0	0
11	SLU 53	0.02	-0.24	8.92	0	0	0
11	SLU 54	0.02	-0.24	8.93	0	0	0
11	SLU 55	0.02	-0.24	8.88	0	0	0
11	SLU 56	0.02	-0.24	9	0	0	0
11	SLU 57	0.02	-0.24	9.01	0	0	0
11	SLU 58	0.01	-0.24	8.95	0	0	0
11	SLU 59	0.01	-0.24	8.96	0	0	0
11	SLU 60	0.02	-0.25	9.16	0	0	0
11	SLU 61	0.02	-0.25	9.16	0	0	0
11	SLU 62	0.02	-0.25	9.24	0	0	0
11	SLU 63	0.02	-0.25	9.24	0	0	0
11	SLU 64	0.03	-0.23	8.69	0	0	0
11	SLU 65	0.03	-0.23	8.69	0	0	0
11	SLU 66	0.03	-0.23	8.82	0	0	0
11	SLU 67	0.03	-0.23	8.82	0	0	0
11	SLU 68	0.03	-0.23	8.77	0	0	0
11	SLU 69	0.02	-0.23	8.9	0	0	0
11	SLU 70	0.02	-0.23	8.9	0	0	0
11	SLU 71	0.02	-0.23	8.85	0	0	0
11	SLU 72	0.02	-0.23	8.85	0	0	0
11	SLU 73	0.03	-0.24	9.55	0	0	0
11	SLU 74	0.02	-0.25	9.68	0	0	0
11	SLU 75	0.02	-0.24	9.68	0	0	0
11	SLU 76	0.02	-0.24	9.63	0	0	0
11	SLU 77	0.02	-0.25	9.76	0	0	0
11	SLU 78	0.02	-0.24	9.76	0	0	0
11	SLU 79	0.02	-0.25	9.71	0	0	0
11	SLU 80	0.02	-0.24	9.71	0	0	0
11	SLU 81	0.02	-0.25	9.91	0	0	0
11	SLU 82	0.02	-0.25	9.92	0	0	0
11	SLU 83	0.02	-0.25	9.99	0	0	0
11	SLU 84	0.02	-0.25	10	0	0	0
11	SLE RA 1	0.02	-0.18	6.51	0	0	0
11	SLE RA 2	0.02	-0.17	6.52	0	0	0
11	SLE RA 3	0.02	-0.18	6.6	0	0	0
11	SLE RA 4	0.02	-0.18	6.61	0	0	0
11	SLE RA 5	0.02	-0.17	6.57	0	0	0
11	SLE RA 6	0.02	-0.18	6.66	0	0	0
11	SLE RA 7	0.02	-0.17	6.66	0	0	0
11	SLE RA 8	0.02	-0.18	6.62	0	0	0
11	SLE RA 9	0.02	-0.17	6.63	0	0	0
11	SLE RA 10	0.02	-0.18	7.09	0	0	0
11	SLE RA 11	0.02	-0.19	7.18	0	0	0
11	SLE RA 12	0.02	-0.19	7.18	0	0	0
11	SLE RA 13	0.02	-0.18	7.15	0	0	0
11	SLE RA 14	0.02	-0.19	7.23	0	0	0
11	SLE RA 15	0.02	-0.19	7.23	0	0	0
11	SLE RA 16	0.01	-0.19	7.2	0	0	0
11	SLE RA 17	0.01	-0.19	7.2	0	0	0
11	SLE RA 18	0.02	-0.19	7.33	0	0	0
11	SLE RA 19	0.02	-0.19	7.34	0	0	0
11	SLE RA 20	0.02	-0.19	7.39	0	0	0
11	SLE RA 21	0.02	-0.19	7.39	0	0	0
11	SLE FR 1	0.02	-0.18	6.51	0	0	0
11	SLE FR 2	0.02	-0.18	6.52	0	0	0
11	SLE FR 3	0.02	-0.18	6.54	0	0	0
11	SLE FR 4	0.02	-0.18	6.76	0	0	0
11	SLE FR 5	0.02	-0.18	6.78	0	0	0
11	SLE FR 6	0.02	-0.19	6.92	0	0	0
11	SLE QP 1	0.02	-0.18	6.51	0	0	0
11	SLE QP 2	0.02	-0.18	6.76	0	0	0
11	SLD 1	0.42	-0.14	6.82	0	0	0
11	SLD 2	0.44	-0.13	6.83	0	0	0
11	SLD 3	0.4	-0.28	6.78	0	0	0
11	SLD 4	0.43	-0.27	6.79	0	0	0
11	SLD 5	0.16	0.04	6.84	0	0	0
11	SLD 6	0.17	0.04	6.85	0	0	0
11	SLD 7	0.11	-0.42	6.7	0	0	0
11	SLD 8	0.12	-0.42	6.71	0	0	0
11	SLD 9	-0.08	0.05	6.81	0	0	0
11	SLD 10	-0.07	0.06	6.82	0	0	0
11	SLD 11	-0.13	-0.41	6.67	0	0	0
11	SLD 12	-0.12	-0.4	6.68	0	0	0
11	SLD 13	-0.39	-0.09	6.73	0	0	0
11	SLD 14	-0.36	-0.09	6.74	0	0	0
11	SLD 15	-0.4	-0.23	6.69	0	0	0
11	SLD 16	-0.38	-0.22	6.7	0	0	0
11	SLV 1	0.95	-0.09	6.9	0	0	0
11	SLV 2	1.01	-0.07	6.93	0	0	0
11	SLV 3	0.92	-0.4	6.81	0	0	0
11	SLV 4	0.98	-0.38	6.83	0	0	0
11	SLV 5	0.34	0.32	6.95	0	0	0
11	SLV 6	0.38	0.33	6.96	0	0	0
11	SLV 7	0.23	-0.73	6.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLV 8	0.26	-0.71	6.64	0	0	0
11	SLV 9	-0.22	0.35	6.88	0	0	0
11	SLV 10	-0.19	0.36	6.9	0	0	0
11	SLV 11	-0.34	-0.69	6.56	0	0	0
11	SLV 12	-0.3	-0.68	6.58	0	0	0
11	SLV 13	-0.94	0.02	6.69	0	0	0
11	SLV 14	-0.88	0.04	6.71	0	0	0
11	SLV 15	-0.97	-0.29	6.59	0	0	0
11	SLV 16	-0.91	-0.28	6.62	0	0	0
12	SLU 1	0.01	-0.08	3.11	0	0	0
12	SLU 2	0.01	-0.08	3.11	0	0	0
12	SLU 3	0.01	-0.08	3.18	0	0	0
12	SLU 4	0.01	-0.08	3.18	0	0	0
12	SLU 5	0.01	-0.08	3.15	0	0	0
12	SLU 6	0.01	-0.08	3.21	0	0	0
12	SLU 7	0.01	-0.08	3.22	0	0	0
12	SLU 8	0.01	-0.08	3.19	0	0	0
12	SLU 9	0.01	-0.08	3.19	0	0	0
12	SLU 10	0.01	-0.09	3.54	0	0	0
12	SLU 11	0.01	-0.09	3.6	0	0	0
12	SLU 12	0.01	-0.09	3.6	0	0	0
12	SLU 13	0.01	-0.09	3.57	0	0	0
12	SLU 14	0.01	-0.09	3.64	0	0	0
12	SLU 15	0.01	-0.09	3.64	0	0	0
12	SLU 16	0	-0.09	3.61	0	0	0
12	SLU 17	0.01	-0.09	3.61	0	0	0
12	SLU 18	0.01	-0.09	3.71	0	0	0
12	SLU 19	0.01	-0.09	3.72	0	0	0
12	SLU 20	0.01	-0.09	3.75	0	0	0
12	SLU 21	0.01	-0.09	3.75	0	0	0
12	SLU 22	0.01	-0.09	3.48	0	0	0
12	SLU 23	0.01	-0.08	3.49	0	0	0
12	SLU 24	0.01	-0.08	3.55	0	0	0
12	SLU 25	0.01	-0.08	3.55	0	0	0
12	SLU 26	0.01	-0.08	3.53	0	0	0
12	SLU 27	0.01	-0.08	3.59	0	0	0
12	SLU 28	0.01	-0.08	3.59	0	0	0
12	SLU 29	0.01	-0.08	3.56	0	0	0
12	SLU 30	0.01	-0.08	3.56	0	0	0
12	SLU 31	0.01	-0.09	3.91	0	0	0
12	SLU 32	0.01	-0.09	3.97	0	0	0
12	SLU 33	0.01	-0.09	3.97	0	0	0
12	SLU 34	0.01	-0.09	3.95	0	0	0
12	SLU 35	0.01	-0.09	4.01	0	0	0
12	SLU 36	0.01	-0.09	4.01	0	0	0
12	SLU 37	0.01	-0.09	3.98	0	0	0
12	SLU 38	0.01	-0.09	3.98	0	0	0
12	SLU 39	0.01	-0.1	4.09	0	0	0
12	SLU 40	0.01	-0.09	4.09	0	0	0
12	SLU 41	0.01	-0.1	4.13	0	0	0
12	SLU 42	0.01	-0.09	4.13	0	0	0
12	SLU 43	0.01	-0.11	3.92	0	0	0
12	SLU 44	0.01	-0.11	3.92	0	0	0
12	SLU 45	0.01	-0.11	3.98	0	0	0
12	SLU 46	0.01	-0.11	3.98	0	0	0
12	SLU 47	0.01	-0.1	3.96	0	0	0
12	SLU 48	0.01	-0.11	4.02	0	0	0
12	SLU 49	0.01	-0.11	4.02	0	0	0
12	SLU 50	0.01	-0.11	3.99	0	0	0
12	SLU 51	0.01	-0.11	4	0	0	0
12	SLU 52	0.01	-0.11	4.34	0	0	0
12	SLU 53	0.01	-0.12	4.4	0	0	0
12	SLU 54	0.01	-0.11	4.4	0	0	0
12	SLU 55	0.01	-0.11	4.38	0	0	0
12	SLU 56	0.01	-0.11	4.44	0	0	0
12	SLU 57	0.01	-0.11	4.44	0	0	0
12	SLU 58	0.01	-0.11	4.42	0	0	0
12	SLU 59	0.01	-0.11	4.42	0	0	0
12	SLU 60	0.01	-0.12	4.52	0	0	0
12	SLU 61	0.01	-0.12	4.52	0	0	0
12	SLU 62	0.01	-0.12	4.56	0	0	0
12	SLU 63	0.01	-0.12	4.56	0	0	0
12	SLU 64	0.01	-0.11	4.29	0	0	0
12	SLU 65	0.01	-0.11	4.29	0	0	0
12	SLU 66	0.01	-0.11	4.35	0	0	0
12	SLU 67	0.01	-0.11	4.36	0	0	0
12	SLU 68	0.01	-0.11	4.33	0	0	0
12	SLU 69	0.01	-0.11	4.39	0	0	0
12	SLU 70	0.01	-0.11	4.39	0	0	0
12	SLU 71	0.01	-0.11	4.37	0	0	0
12	SLU 72	0.01	-0.11	4.37	0	0	0
12	SLU 73	0.01	-0.11	4.71	0	0	0
12	SLU 74	0.01	-0.12	4.78	0	0	0
12	SLU 75	0.01	-0.11	4.78	0	0	0
12	SLU 76	0.01	-0.11	4.75	0	0	0
12	SLU 77	0.01	-0.12	4.82	0	0	0
12	SLU 78	0.01	-0.11	4.82	0	0	0
12	SLU 79	0.01	-0.12	4.79	0	0	0
12	SLU 80	0.01	-0.11	4.79	0	0	0
12	SLU 81	0.01	-0.12	4.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 82	0.01	-0.12	4.89	0	0	0
12	SLU 83	0.01	-0.12	4.93	0	0	0
12	SLU 84	0.01	-0.12	4.93	0	0	0
12	SLE RA 1	0.01	-0.08	3.22	0	0	0
12	SLE RA 2	0.01	-0.08	3.22	0	0	0
12	SLE RA 3	0.01	-0.08	3.26	0	0	0
12	SLE RA 4	0.01	-0.08	3.26	0	0	0
12	SLE RA 5	0.01	-0.08	3.25	0	0	0
12	SLE RA 6	0.01	-0.08	3.29	0	0	0
12	SLE RA 7	0.01	-0.08	3.29	0	0	0
12	SLE RA 8	0.01	-0.08	3.27	0	0	0
12	SLE RA 9	0.01	-0.08	3.27	0	0	0
12	SLE RA 10	0.01	-0.09	3.5	0	0	0
12	SLE RA 11	0.01	-0.09	3.54	0	0	0
12	SLE RA 12	0.01	-0.09	3.54	0	0	0
12	SLE RA 13	0.01	-0.09	3.53	0	0	0
12	SLE RA 14	0.01	-0.09	3.57	0	0	0
12	SLE RA 15	0.01	-0.09	3.57	0	0	0
12	SLE RA 16	0.01	-0.09	3.55	0	0	0
12	SLE RA 17	0.01	-0.09	3.55	0	0	0
12	SLE RA 18	0.01	-0.09	3.62	0	0	0
12	SLE RA 19	0.01	-0.09	3.62	0	0	0
12	SLE RA 20	0.01	-0.09	3.65	0	0	0
12	SLE RA 21	0.01	-0.09	3.65	0	0	0
12	SLE FR 1	0.01	-0.08	3.22	0	0	0
12	SLE FR 2	0.01	-0.08	3.22	0	0	0
12	SLE FR 3	0.01	-0.08	3.23	0	0	0
12	SLE FR 4	0.01	-0.09	3.34	0	0	0
12	SLE FR 5	0.01	-0.09	3.35	0	0	0
12	SLE FR 6	0.01	-0.09	3.42	0	0	0
12	SLE QP 1	0.01	-0.08	3.22	0	0	0
12	SLE QP 2	0.01	-0.09	3.34	0	0	0
12	SLD 1	0.21	-0.07	3.33	0	0	0
12	SLD 2	0.22	-0.06	3.34	0	0	0
12	SLD 3	0.2	-0.13	3.31	0	0	0
12	SLD 4	0.21	-0.13	3.31	0	0	0
12	SLD 5	0.08	0.02	3.37	0	0	0
12	SLD 6	0.09	0.02	3.37	0	0	0
12	SLD 7	0.05	-0.2	3.3	0	0	0
12	SLD 8	0.06	-0.2	3.3	0	0	0
12	SLD 9	-0.04	0.03	3.38	0	0	0
12	SLD 10	-0.03	0.03	3.38	0	0	0
12	SLD 11	-0.07	-0.2	3.3	0	0	0
12	SLD 12	-0.06	-0.19	3.31	0	0	0
12	SLD 13	-0.19	-0.04	3.36	0	0	0
12	SLD 14	-0.18	-0.04	3.37	0	0	0
12	SLD 15	-0.2	-0.11	3.34	0	0	0
12	SLD 16	-0.19	-0.11	3.34	0	0	0
12	SLV 1	0.47	-0.04	3.32	0	0	0
12	SLV 2	0.5	-0.03	3.33	0	0	0
12	SLV 3	0.45	-0.2	3.27	0	0	0
12	SLV 4	0.48	-0.18	3.28	0	0	0
12	SLV 5	0.17	0.16	3.41	0	0	0
12	SLV 6	0.19	0.16	3.41	0	0	0
12	SLV 7	0.11	-0.35	3.24	0	0	0
12	SLV 8	0.13	-0.34	3.25	0	0	0
12	SLV 9	-0.11	0.17	3.43	0	0	0
12	SLV 10	-0.09	0.18	3.44	0	0	0
12	SLV 11	-0.17	-0.34	3.26	0	0	0
12	SLV 12	-0.15	-0.33	3.27	0	0	0
12	SLV 13	-0.46	0.01	3.39	0	0	0
12	SLV 14	-0.43	0.02	3.4	0	0	0
12	SLV 15	-0.48	-0.14	3.34	0	0	0
12	SLV 16	-0.45	-0.13	3.35	0	0	0
13	SLU 1	0.01	-0.09	3.48	0	0	0
13	SLU 2	0.01	-0.09	3.49	0	0	0
13	SLU 3	0.01	-0.09	3.55	0	0	0
13	SLU 4	0.01	-0.09	3.56	0	0	0
13	SLU 5	0.01	-0.09	3.53	0	0	0
13	SLU 6	0.01	-0.09	3.6	0	0	0
13	SLU 7	0.01	-0.09	3.6	0	0	0
13	SLU 8	0.01	-0.09	3.57	0	0	0
13	SLU 9	0.01	-0.09	3.57	0	0	0
13	SLU 10	0.01	-0.09	3.95	0	0	0
13	SLU 11	0.01	-0.1	4.02	0	0	0
13	SLU 12	0.01	-0.09	4.03	0	0	0
13	SLU 13	0.01	-0.09	4	0	0	0
13	SLU 14	0.01	-0.1	4.07	0	0	0
13	SLU 15	0.01	-0.09	4.07	0	0	0
13	SLU 16	0.01	-0.1	4.04	0	0	0
13	SLU 17	0.01	-0.09	4.04	0	0	0
13	SLU 18	0.01	-0.1	4.15	0	0	0
13	SLU 19	0.01	-0.1	4.15	0	0	0
13	SLU 20	0.01	-0.1	4.19	0	0	0
13	SLU 21	0.01	-0.1	4.2	0	0	0
13	SLU 22	0.01	-0.09	3.9	0	0	0
13	SLU 23	0.01	-0.09	3.9	0	0	0
13	SLU 24	0.01	-0.09	3.97	0	0	0
13	SLU 25	0.01	-0.09	3.97	0	0	0
13	SLU 26	0.01	-0.09	3.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLU 27	0.01	-0.09	4.01	0	0	0
13	SLU 28	0.01	-0.09	4.01	0	0	0
13	SLU 29	0.01	-0.09	3.98	0	0	0
13	SLU 30	0.01	-0.09	3.99	0	0	0
13	SLU 31	0.01	-0.1	4.37	0	0	0
13	SLU 32	0.01	-0.1	4.44	0	0	0
13	SLU 33	0.01	-0.1	4.44	0	0	0
13	SLU 34	0.01	-0.09	4.41	0	0	0
13	SLU 35	0.01	-0.1	4.48	0	0	0
13	SLU 36	0.01	-0.1	4.48	0	0	0
13	SLU 37	0.01	-0.1	4.45	0	0	0
13	SLU 38	0.01	-0.1	4.45	0	0	0
13	SLU 39	0.01	-0.1	4.57	0	0	0
13	SLU 40	0.01	-0.1	4.57	0	0	0
13	SLU 41	0.01	-0.1	4.61	0	0	0
13	SLU 42	0.01	-0.1	4.61	0	0	0
13	SLU 43	0.01	-0.12	4.38	0	0	0
13	SLU 44	0.01	-0.11	4.39	0	0	0
13	SLU 45	0.01	-0.12	4.46	0	0	0
13	SLU 46	0.01	-0.11	4.46	0	0	0
13	SLU 47	0.01	-0.11	4.43	0	0	0
13	SLU 48	0.01	-0.12	4.5	0	0	0
13	SLU 49	0.01	-0.11	4.5	0	0	0
13	SLU 50	0.01	-0.12	4.47	0	0	0
13	SLU 51	0.01	-0.11	4.47	0	0	0
13	SLU 52	0.01	-0.12	4.86	0	0	0
13	SLU 53	0.01	-0.12	4.93	0	0	0
13	SLU 54	0.01	-0.12	4.93	0	0	0
13	SLU 55	0.01	-0.12	4.9	0	0	0
13	SLU 56	0.01	-0.12	4.97	0	0	0
13	SLU 57	0.01	-0.12	4.97	0	0	0
13	SLU 58	0.01	-0.12	4.94	0	0	0
13	SLU 59	0.01	-0.12	4.94	0	0	0
13	SLU 60	0.01	-0.13	5.05	0	0	0
13	SLU 61	0.01	-0.12	5.06	0	0	0
13	SLU 62	0.01	-0.13	5.1	0	0	0
13	SLU 63	0.01	-0.12	5.1	0	0	0
13	SLU 64	0.02	-0.12	4.8	0	0	0
13	SLU 65	0.02	-0.11	4.8	0	0	0
13	SLU 66	0.01	-0.12	4.87	0	0	0
13	SLU 67	0.01	-0.11	4.87	0	0	0
13	SLU 68	0.01	-0.11	4.85	0	0	0
13	SLU 69	0.01	-0.12	4.91	0	0	0
13	SLU 70	0.01	-0.11	4.92	0	0	0
13	SLU 71	0.01	-0.12	4.89	0	0	0
13	SLU 72	0.01	-0.11	4.89	0	0	0
13	SLU 73	0.01	-0.12	5.27	0	0	0
13	SLU 74	0.01	-0.12	5.34	0	0	0
13	SLU 75	0.01	-0.12	5.34	0	0	0
13	SLU 76	0.01	-0.12	5.32	0	0	0
13	SLU 77	0.01	-0.12	5.38	0	0	0
13	SLU 78	0.01	-0.12	5.39	0	0	0
13	SLU 79	0.01	-0.12	5.35	0	0	0
13	SLU 80	0.01	-0.12	5.36	0	0	0
13	SLU 81	0.01	-0.13	5.47	0	0	0
13	SLU 82	0.01	-0.13	5.47	0	0	0
13	SLU 83	0.01	-0.13	5.51	0	0	0
13	SLU 84	0.01	-0.13	5.52	0	0	0
13	SLE RA 1	0.01	-0.09	3.6	0	0	0
13	SLE RA 2	0.01	-0.09	3.6	0	0	0
13	SLE RA 3	0.01	-0.09	3.65	0	0	0
13	SLE RA 4	0.01	-0.09	3.65	0	0	0
13	SLE RA 5	0.01	-0.09	3.63	0	0	0
13	SLE RA 6	0.01	-0.09	3.68	0	0	0
13	SLE RA 7	0.01	-0.09	3.68	0	0	0
13	SLE RA 8	0.01	-0.09	3.66	0	0	0
13	SLE RA 9	0.01	-0.09	3.66	0	0	0
13	SLE RA 10	0.01	-0.09	3.92	0	0	0
13	SLE RA 11	0.01	-0.09	3.96	0	0	0
13	SLE RA 12	0.01	-0.09	3.96	0	0	0
13	SLE RA 13	0.01	-0.09	3.94	0	0	0
13	SLE RA 14	0.01	-0.09	3.99	0	0	0
13	SLE RA 15	0.01	-0.09	3.99	0	0	0
13	SLE RA 16	0.01	-0.09	3.97	0	0	0
13	SLE RA 17	0.01	-0.09	3.97	0	0	0
13	SLE RA 18	0.01	-0.1	4.05	0	0	0
13	SLE RA 19	0.01	-0.1	4.05	0	0	0
13	SLE RA 20	0.01	-0.1	4.08	0	0	0
13	SLE RA 21	0.01	-0.1	4.08	0	0	0
13	SLE FR 1	0.01	-0.09	3.6	0	0	0
13	SLE FR 2	0.01	-0.09	3.6	0	0	0
13	SLE FR 3	0.01	-0.09	3.61	0	0	0
13	SLE FR 4	0.01	-0.09	3.74	0	0	0
13	SLE FR 5	0.01	-0.09	3.75	0	0	0
13	SLE FR 6	0.01	-0.09	3.82	0	0	0
13	SLE QP 1	0.01	-0.09	3.6	0	0	0
13	SLE QP 2	0.01	-0.09	3.74	0	0	0
13	SLD 1	0.23	-0.07	3.71	0	0	0
13	SLD 2	0.25	-0.07	3.71	0	0	0
13	SLD 3	0.22	-0.15	3.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLD 4	0.24	-0.14	3.69	0	0	0
13	SLD 5	0.09	0.02	3.77	0	0	0
13	SLD 6	0.1	0.03	3.77	0	0	0
13	SLD 7	0.06	-0.22	3.68	0	0	0
13	SLD 8	0.07	-0.22	3.68	0	0	0
13	SLD 9	-0.05	0.03	3.79	0	0	0
13	SLD 10	-0.04	0.04	3.79	0	0	0
13	SLD 11	-0.07	-0.21	3.7	0	0	0
13	SLD 12	-0.07	-0.21	3.7	0	0	0
13	SLD 13	-0.22	-0.05	3.78	0	0	0
13	SLD 14	-0.2	-0.04	3.79	0	0	0
13	SLD 15	-0.22	-0.12	3.76	0	0	0
13	SLD 16	-0.21	-0.11	3.76	0	0	0
13	SLV 1	0.53	-0.05	3.68	0	0	0
13	SLV 2	0.56	-0.03	3.69	0	0	0
13	SLV 3	0.51	-0.22	3.62	0	0	0
13	SLV 4	0.54	-0.2	3.63	0	0	0
13	SLV 5	0.19	0.17	3.81	0	0	0
13	SLV 6	0.21	0.18	3.81	0	0	0
13	SLV 7	0.13	-0.39	3.61	0	0	0
13	SLV 8	0.15	-0.38	3.61	0	0	0
13	SLV 9	-0.12	0.19	3.86	0	0	0
13	SLV 10	-0.1	0.2	3.86	0	0	0
13	SLV 11	-0.19	-0.37	3.66	0	0	0
13	SLV 12	-0.17	-0.36	3.66	0	0	0
13	SLV 13	-0.52	0.02	3.85	0	0	0
13	SLV 14	-0.49	0.03	3.85	0	0	0
13	SLV 15	-0.54	-0.15	3.79	0	0	0
13	SLV 16	-0.51	-0.13	3.79	0	0	0
14	SLU 1	0.01	-0.09	3.83	0	0	0
14	SLU 2	0.01	-0.09	3.84	0	0	0
14	SLU 3	0.01	-0.09	3.91	0	0	0
14	SLU 4	0.01	-0.09	3.91	0	0	0
14	SLU 5	0.01	-0.09	3.88	0	0	0
14	SLU 6	0.01	-0.09	3.96	0	0	0
14	SLU 7	0.01	-0.09	3.96	0	0	0
14	SLU 8	0.01	-0.09	3.92	0	0	0
14	SLU 9	0.01	-0.09	3.93	0	0	0
14	SLU 10	0.01	-0.1	4.35	0	0	0
14	SLU 11	0.01	-0.1	4.42	0	0	0
14	SLU 12	0.01	-0.1	4.43	0	0	0
14	SLU 13	0.01	-0.1	4.4	0	0	0
14	SLU 14	0.01	-0.1	4.47	0	0	0
14	SLU 15	0.01	-0.1	4.47	0	0	0
14	SLU 16	0.01	-0.1	4.44	0	0	0
14	SLU 17	0.01	-0.1	4.44	0	0	0
14	SLU 18	0.01	-0.11	4.57	0	0	0
14	SLU 19	0.01	-0.1	4.57	0	0	0
14	SLU 20	0.01	-0.1	4.61	0	0	0
14	SLU 21	0.01	-0.1	4.61	0	0	0
14	SLU 22	0.01	-0.1	4.29	0	0	0
14	SLU 23	0.01	-0.09	4.3	0	0	0
14	SLU 24	0.01	-0.09	4.37	0	0	0
14	SLU 25	0.01	-0.09	4.37	0	0	0
14	SLU 26	0.01	-0.09	4.34	0	0	0
14	SLU 27	0.01	-0.09	4.42	0	0	0
14	SLU 28	0.01	-0.09	4.42	0	0	0
14	SLU 29	0.01	-0.09	4.38	0	0	0
14	SLU 30	0.01	-0.09	4.38	0	0	0
14	SLU 31	0.01	-0.1	4.81	0	0	0
14	SLU 32	0.01	-0.1	4.88	0	0	0
14	SLU 33	0.01	-0.1	4.89	0	0	0
14	SLU 34	0.01	-0.1	4.85	0	0	0
14	SLU 35	0.01	-0.1	4.93	0	0	0
14	SLU 36	0.01	-0.1	4.93	0	0	0
14	SLU 37	0.01	-0.1	4.9	0	0	0
14	SLU 38	0.01	-0.1	4.9	0	0	0
14	SLU 39	0.01	-0.11	5.03	0	0	0
14	SLU 40	0.01	-0.1	5.03	0	0	0
14	SLU 41	0.01	-0.11	5.07	0	0	0
14	SLU 42	0.01	-0.1	5.07	0	0	0
14	SLU 43	0.01	-0.12	4.83	0	0	0
14	SLU 44	0.01	-0.12	4.83	0	0	0
14	SLU 45	0.01	-0.12	4.9	0	0	0
14	SLU 46	0.01	-0.12	4.91	0	0	0
14	SLU 47	0.01	-0.12	4.87	0	0	0
14	SLU 48	0.01	-0.12	4.95	0	0	0
14	SLU 49	0.01	-0.12	4.95	0	0	0
14	SLU 50	0.01	-0.12	4.92	0	0	0
14	SLU 51	0.01	-0.12	4.92	0	0	0
14	SLU 52	0.01	-0.13	5.34	0	0	0
14	SLU 53	0.01	-0.13	5.42	0	0	0
14	SLU 54	0.01	-0.13	5.42	0	0	0
14	SLU 55	0.01	-0.13	5.39	0	0	0
14	SLU 56	0.01	-0.13	5.46	0	0	0
14	SLU 57	0.01	-0.13	5.46	0	0	0
14	SLU 58	0.01	-0.13	5.43	0	0	0
14	SLU 59	0.01	-0.13	5.43	0	0	0
14	SLU 60	0.01	-0.13	5.56	0	0	0
14	SLU 61	0.01	-0.13	5.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 62	0.01	-0.13	5.6	0	0	0
14	SLU 63	0.01	-0.13	5.61	0	0	0
14	SLU 64	0.02	-0.12	5.29	0	0	0
14	SLU 65	0.02	-0.12	5.29	0	0	0
14	SLU 66	0.02	-0.12	5.36	0	0	0
14	SLU 67	0.02	-0.12	5.37	0	0	0
14	SLU 68	0.02	-0.12	5.33	0	0	0
14	SLU 69	0.01	-0.12	5.41	0	0	0
14	SLU 70	0.01	-0.12	5.41	0	0	0
14	SLU 71	0.01	-0.12	5.38	0	0	0
14	SLU 72	0.01	-0.12	5.38	0	0	0
14	SLU 73	0.02	-0.13	5.8	0	0	0
14	SLU 74	0.01	-0.13	5.88	0	0	0
14	SLU 75	0.01	-0.13	5.88	0	0	0
14	SLU 76	0.01	-0.13	5.85	0	0	0
14	SLU 77	0.01	-0.13	5.92	0	0	0
14	SLU 78	0.01	-0.13	5.92	0	0	0
14	SLU 79	0.01	-0.13	5.89	0	0	0
14	SLU 80	0.01	-0.13	5.89	0	0	0
14	SLU 81	0.01	-0.13	6.02	0	0	0
14	SLU 82	0.01	-0.13	6.02	0	0	0
14	SLU 83	0.01	-0.13	6.06	0	0	0
14	SLU 84	0.01	-0.13	6.07	0	0	0
14	SLE RA 1	0.01	-0.09	3.96	0	0	0
14	SLE RA 2	0.01	-0.09	3.97	0	0	0
14	SLE RA 3	0.01	-0.09	4.02	0	0	0
14	SLE RA 4	0.01	-0.09	4.02	0	0	0
14	SLE RA 5	0.01	-0.09	4	0	0	0
14	SLE RA 6	0.01	-0.09	4.05	0	0	0
14	SLE RA 7	0.01	-0.09	4.05	0	0	0
14	SLE RA 8	0.01	-0.09	4.02	0	0	0
14	SLE RA 9	0.01	-0.09	4.03	0	0	0
14	SLE RA 10	0.01	-0.1	4.31	0	0	0
14	SLE RA 11	0.01	-0.1	4.36	0	0	0
14	SLE RA 12	0.01	-0.1	4.36	0	0	0
14	SLE RA 13	0.01	-0.1	4.34	0	0	0
14	SLE RA 14	0.01	-0.1	4.39	0	0	0
14	SLE RA 15	0.01	-0.1	4.39	0	0	0
14	SLE RA 16	0.01	-0.1	4.37	0	0	0
14	SLE RA 17	0.01	-0.1	4.37	0	0	0
14	SLE RA 18	0.01	-0.1	4.45	0	0	0
14	SLE RA 19	0.01	-0.1	4.46	0	0	0
14	SLE RA 20	0.01	-0.1	4.48	0	0	0
14	SLE RA 21	0.01	-0.1	4.48	0	0	0
14	SLE FR 1	0.01	-0.09	3.96	0	0	0
14	SLE FR 2	0.01	-0.09	3.97	0	0	0
14	SLE FR 3	0.01	-0.09	3.98	0	0	0
14	SLE FR 4	0.01	-0.1	4.11	0	0	0
14	SLE FR 5	0.01	-0.1	4.12	0	0	0
14	SLE FR 6	0.01	-0.1	4.21	0	0	0
14	SLE QP 1	0.01	-0.09	3.96	0	0	0
14	SLE QP 2	0.01	-0.1	4.11	0	0	0
14	SLD 1	0.26	-0.08	4.06	0	0	0
14	SLD 2	0.27	-0.07	4.06	0	0	0
14	SLD 3	0.25	-0.16	4.03	0	0	0
14	SLD 4	0.26	-0.15	4.03	0	0	0
14	SLD 5	0.1	0.03	4.15	0	0	0
14	SLD 6	0.11	0.04	4.15	0	0	0
14	SLD 7	0.07	-0.24	4.04	0	0	0
14	SLD 8	0.08	-0.23	4.04	0	0	0
14	SLD 9	-0.05	0.04	4.18	0	0	0
14	SLD 10	-0.04	0.05	4.19	0	0	0
14	SLD 11	-0.08	-0.23	4.08	0	0	0
14	SLD 12	-0.07	-0.22	4.08	0	0	0
14	SLD 13	-0.24	-0.05	4.19	0	0	0
14	SLD 14	-0.22	-0.03	4.19	0	0	0
14	SLD 15	-0.25	-0.13	4.16	0	0	0
14	SLD 16	-0.23	-0.11	4.16	0	0	0
14	SLV 1	0.58	-0.06	3.99	0	0	0
14	SLV 2	0.62	-0.03	4	0	0	0
14	SLV 3	0.56	-0.24	3.92	0	0	0
14	SLV 4	0.59	-0.21	3.92	0	0	0
14	SLV 5	0.21	0.19	4.19	0	0	0
14	SLV 6	0.23	0.2	4.19	0	0	0
14	SLV 7	0.14	-0.42	3.94	0	0	0
14	SLV 8	0.16	-0.4	3.94	0	0	0
14	SLV 9	-0.14	0.21	4.28	0	0	0
14	SLV 10	-0.11	0.23	4.28	0	0	0
14	SLV 11	-0.21	-0.4	4.03	0	0	0
14	SLV 12	-0.18	-0.38	4.04	0	0	0
14	SLV 13	-0.57	0.02	4.3	0	0	0
14	SLV 14	-0.54	0.05	4.3	0	0	0
14	SLV 15	-0.59	-0.16	4.23	0	0	0
14	SLV 16	-0.56	-0.14	4.23	0	0	0
15	SLU 1	0.02	-0.14	5.93	0	0	0
15	SLU 2	0.02	-0.13	5.94	0	0	0
15	SLU 3	0.02	-0.14	6.05	0	0	0
15	SLU 4	0.02	-0.13	6.05	0	0	0
15	SLU 5	0.02	-0.13	6.01	0	0	0
15	SLU 6	0.01	-0.14	6.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLU 7	0.01	-0.13	6.12	0	0	0
15	SLU 8	0.01	-0.14	6.07	0	0	0
15	SLU 9	0.01	-0.13	6.07	0	0	0
15	SLU 10	0.02	-0.14	6.73	0	0	0
15	SLU 11	0.01	-0.15	6.84	0	0	0
15	SLU 12	0.01	-0.15	6.84	0	0	0
15	SLU 13	0.01	-0.14	6.79	0	0	0
15	SLU 14	0.01	-0.15	6.91	0	0	0
15	SLU 15	0.01	-0.14	6.91	0	0	0
15	SLU 16	0.01	-0.15	6.86	0	0	0
15	SLU 17	0.01	-0.14	6.86	0	0	0
15	SLU 18	0.01	-0.16	7.06	0	0	0
15	SLU 19	0.01	-0.15	7.06	0	0	0
15	SLU 20	0.01	-0.15	7.13	0	0	0
15	SLU 21	0.01	-0.15	7.13	0	0	0
15	SLU 22	0.02	-0.14	6.64	0	0	0
15	SLU 23	0.02	-0.13	6.65	0	0	0
15	SLU 24	0.02	-0.14	6.76	0	0	0
15	SLU 25	0.02	-0.14	6.76	0	0	0
15	SLU 26	0.02	-0.13	6.71	0	0	0
15	SLU 27	0.02	-0.14	6.83	0	0	0
15	SLU 28	0.02	-0.13	6.83	0	0	0
15	SLU 29	0.02	-0.14	6.78	0	0	0
15	SLU 30	0.02	-0.13	6.78	0	0	0
15	SLU 31	0.02	-0.15	7.44	0	0	0
15	SLU 32	0.02	-0.15	7.55	0	0	0
15	SLU 33	0.02	-0.15	7.55	0	0	0
15	SLU 34	0.02	-0.14	7.5	0	0	0
15	SLU 35	0.01	-0.15	7.62	0	0	0
15	SLU 36	0.01	-0.14	7.62	0	0	0
15	SLU 37	0.01	-0.15	7.57	0	0	0
15	SLU 38	0.01	-0.15	7.57	0	0	0
15	SLU 39	0.02	-0.16	7.77	0	0	0
15	SLU 40	0.02	-0.15	7.77	0	0	0
15	SLU 41	0.01	-0.15	7.84	0	0	0
15	SLU 42	0.01	-0.15	7.84	0	0	0
15	SLU 43	0.02	-0.18	7.47	0	0	0
15	SLU 44	0.02	-0.18	7.47	0	0	0
15	SLU 45	0.02	-0.18	7.59	0	0	0
15	SLU 46	0.02	-0.18	7.59	0	0	0
15	SLU 47	0.02	-0.17	7.54	0	0	0
15	SLU 48	0.02	-0.18	7.66	0	0	0
15	SLU 49	0.02	-0.18	7.66	0	0	0
15	SLU 50	0.02	-0.18	7.6	0	0	0
15	SLU 51	0.02	-0.18	7.61	0	0	0
15	SLU 52	0.02	-0.19	8.26	0	0	0
15	SLU 53	0.02	-0.19	8.38	0	0	0
15	SLU 54	0.02	-0.19	8.38	0	0	0
15	SLU 55	0.02	-0.19	8.33	0	0	0
15	SLU 56	0.01	-0.19	8.44	0	0	0
15	SLU 57	0.01	-0.19	8.45	0	0	0
15	SLU 58	0.01	-0.19	8.39	0	0	0
15	SLU 59	0.01	-0.19	8.4	0	0	0
15	SLU 60	0.02	-0.2	8.6	0	0	0
15	SLU 61	0.02	-0.19	8.6	0	0	0
15	SLU 62	0.01	-0.2	8.66	0	0	0
15	SLU 63	0.01	-0.19	8.67	0	0	0
15	SLU 64	0.03	-0.18	8.18	0	0	0
15	SLU 65	0.03	-0.18	8.18	0	0	0
15	SLU 66	0.02	-0.18	8.3	0	0	0
15	SLU 67	0.02	-0.18	8.3	0	0	0
15	SLU 68	0.02	-0.17	8.25	0	0	0
15	SLU 69	0.02	-0.18	8.36	0	0	0
15	SLU 70	0.02	-0.18	8.37	0	0	0
15	SLU 71	0.02	-0.18	8.31	0	0	0
15	SLU 72	0.02	-0.18	8.32	0	0	0
15	SLU 73	0.02	-0.19	8.97	0	0	0
15	SLU 74	0.02	-0.19	9.09	0	0	0
15	SLU 75	0.02	-0.19	9.09	0	0	0
15	SLU 76	0.02	-0.19	9.04	0	0	0
15	SLU 77	0.02	-0.19	9.15	0	0	0
15	SLU 78	0.02	-0.19	9.16	0	0	0
15	SLU 79	0.02	-0.19	9.1	0	0	0
15	SLU 80	0.02	-0.19	9.11	0	0	0
15	SLU 81	0.02	-0.2	9.31	0	0	0
15	SLU 82	0.02	-0.19	9.31	0	0	0
15	SLU 83	0.02	-0.2	9.37	0	0	0
15	SLU 84	0.02	-0.19	9.38	0	0	0
15	SLE RA 1	0.02	-0.14	6.14	0	0	0
15	SLE RA 2	0.02	-0.14	6.14	0	0	0
15	SLE RA 3	0.02	-0.14	6.21	0	0	0
15	SLE RA 4	0.02	-0.14	6.22	0	0	0
15	SLE RA 5	0.02	-0.14	6.18	0	0	0
15	SLE RA 6	0.02	-0.14	6.26	0	0	0
15	SLE RA 7	0.02	-0.14	6.26	0	0	0
15	SLE RA 8	0.02	-0.14	6.23	0	0	0
15	SLE RA 9	0.02	-0.14	6.23	0	0	0
15	SLE RA 10	0.02	-0.14	6.67	0	0	0
15	SLE RA 11	0.02	-0.15	6.74	0	0	0
15	SLE RA 12	0.02	-0.14	6.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLE RA 13	0.02	-0.14	6.71	0	0	0
15	SLE RA 14	0.01	-0.15	6.79	0	0	0
15	SLE RA 15	0.01	-0.14	6.79	0	0	0
15	SLE RA 16	0.01	-0.15	6.75	0	0	0
15	SLE RA 17	0.01	-0.14	6.75	0	0	0
15	SLE RA 18	0.02	-0.15	6.89	0	0	0
15	SLE RA 19	0.02	-0.15	6.89	0	0	0
15	SLE RA 20	0.01	-0.15	6.93	0	0	0
15	SLE RA 21	0.01	-0.15	6.93	0	0	0
15	SLE FR 1	0.02	-0.14	6.14	0	0	0
15	SLE FR 2	0.02	-0.14	6.14	0	0	0
15	SLE FR 3	0.02	-0.14	6.15	0	0	0
15	SLE FR 4	0.02	-0.14	6.36	0	0	0
15	SLE FR 5	0.02	-0.14	6.38	0	0	0
15	SLE FR 6	0.02	-0.14	6.51	0	0	0
15	SLE QP 1	0.02	-0.14	6.14	0	0	0
15	SLE QP 2	0.02	-0.14	6.36	0	0	0
15	SLD 1	0.4	-0.12	6.25	0	0	0
15	SLD 2	0.42	-0.1	6.25	0	0	0
15	SLD 3	0.38	-0.24	6.19	0	0	0
15	SLD 4	0.41	-0.22	6.19	0	0	0
15	SLD 5	0.15	0.05	6.41	0	0	0
15	SLD 6	0.16	0.06	6.41	0	0	0
15	SLD 7	0.1	-0.36	6.23	0	0	0
15	SLD 8	0.12	-0.35	6.23	0	0	0
15	SLD 9	-0.08	0.06	6.5	0	0	0
15	SLD 10	-0.06	0.08	6.5	0	0	0
15	SLD 11	-0.13	-0.35	6.31	0	0	0
15	SLD 12	-0.11	-0.33	6.31	0	0	0
15	SLD 13	-0.37	-0.06	6.53	0	0	0
15	SLD 14	-0.34	-0.04	6.53	0	0	0
15	SLD 15	-0.38	-0.19	6.48	0	0	0
15	SLD 16	-0.36	-0.17	6.48	0	0	0
15	SLV 1	0.9	-0.09	6.09	0	0	0
15	SLV 2	0.96	-0.04	6.09	0	0	0
15	SLV 3	0.87	-0.37	5.97	0	0	0
15	SLV 4	0.92	-0.32	5.96	0	0	0
15	SLV 5	0.32	0.29	6.47	0	0	0
15	SLV 6	0.36	0.32	6.47	0	0	0
15	SLV 7	0.21	-0.64	6.05	0	0	0
15	SLV 8	0.25	-0.61	6.05	0	0	0
15	SLV 9	-0.21	0.33	6.67	0	0	0
15	SLV 10	-0.18	0.36	6.67	0	0	0
15	SLV 11	-0.32	-0.6	6.25	0	0	0
15	SLV 12	-0.29	-0.57	6.25	0	0	0
15	SLV 13	-0.89	0.04	6.76	0	0	0
15	SLV 14	-0.83	0.09	6.76	0	0	0
15	SLV 15	-0.92	-0.24	6.63	0	0	0
15	SLV 16	-0.86	-0.19	6.63	0	0	0
16	SLU 1	0.01	-0.07	3.15	0	0	0
16	SLU 2	0.01	-0.07	3.15	0	0	0
16	SLU 3	0.01	-0.07	3.21	0	0	0
16	SLU 4	0.01	-0.07	3.21	0	0	0
16	SLU 5	0.01	-0.07	3.18	0	0	0
16	SLU 6	0.01	-0.07	3.24	0	0	0
16	SLU 7	0.01	-0.07	3.24	0	0	0
16	SLU 8	0.01	-0.07	3.21	0	0	0
16	SLU 9	0.01	-0.07	3.22	0	0	0
16	SLU 10	0.01	-0.07	3.56	0	0	0
16	SLU 11	0.01	-0.08	3.62	0	0	0
16	SLU 12	0.01	-0.07	3.62	0	0	0
16	SLU 13	0.01	-0.07	3.6	0	0	0
16	SLU 14	0.01	-0.07	3.66	0	0	0
16	SLU 15	0.01	-0.07	3.66	0	0	0
16	SLU 16	0	-0.07	3.63	0	0	0
16	SLU 17	0	-0.07	3.63	0	0	0
16	SLU 18	0.01	-0.08	3.74	0	0	0
16	SLU 19	0.01	-0.08	3.74	0	0	0
16	SLU 20	0.01	-0.08	3.77	0	0	0
16	SLU 21	0.01	-0.08	3.78	0	0	0
16	SLU 22	0.01	-0.07	3.52	0	0	0
16	SLU 23	0.01	-0.07	3.52	0	0	0
16	SLU 24	0.01	-0.07	3.58	0	0	0
16	SLU 25	0.01	-0.07	3.58	0	0	0
16	SLU 26	0.01	-0.07	3.56	0	0	0
16	SLU 27	0.01	-0.07	3.62	0	0	0
16	SLU 28	0.01	-0.07	3.62	0	0	0
16	SLU 29	0.01	-0.07	3.59	0	0	0
16	SLU 30	0.01	-0.07	3.59	0	0	0
16	SLU 31	0.01	-0.07	3.94	0	0	0
16	SLU 32	0.01	-0.07	4	0	0	0
16	SLU 33	0.01	-0.07	4	0	0	0
16	SLU 34	0.01	-0.07	3.97	0	0	0
16	SLU 35	0.01	-0.07	4.03	0	0	0
16	SLU 36	0.01	-0.07	4.04	0	0	0
16	SLU 37	0.01	-0.07	4.01	0	0	0
16	SLU 38	0.01	-0.07	4.01	0	0	0
16	SLU 39	0.01	-0.08	4.12	0	0	0
16	SLU 40	0.01	-0.08	4.12	0	0	0
16	SLU 41	0.01	-0.08	4.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLU 42	0.01	-0.08	4.15	0	0	0
16	SLU 43	0.01	-0.09	3.96	0	0	0
16	SLU 44	0.01	-0.09	3.96	0	0	0
16	SLU 45	0.01	-0.09	4.02	0	0	0
16	SLU 46	0.01	-0.09	4.02	0	0	0
16	SLU 47	0.01	-0.09	4	0	0	0
16	SLU 48	0.01	-0.09	4.06	0	0	0
16	SLU 49	0.01	-0.09	4.06	0	0	0
16	SLU 50	0.01	-0.09	4.03	0	0	0
16	SLU 51	0.01	-0.09	4.03	0	0	0
16	SLU 52	0.01	-0.09	4.38	0	0	0
16	SLU 53	0.01	-0.1	4.44	0	0	0
16	SLU 54	0.01	-0.09	4.44	0	0	0
16	SLU 55	0.01	-0.09	4.41	0	0	0
16	SLU 56	0.01	-0.1	4.47	0	0	0
16	SLU 57	0.01	-0.09	4.47	0	0	0
16	SLU 58	0.01	-0.1	4.44	0	0	0
16	SLU 59	0.01	-0.09	4.45	0	0	0
16	SLU 60	0.01	-0.1	4.55	0	0	0
16	SLU 61	0.01	-0.1	4.56	0	0	0
16	SLU 62	0.01	-0.1	4.59	0	0	0
16	SLU 63	0.01	-0.1	4.59	0	0	0
16	SLU 64	0.01	-0.09	4.34	0	0	0
16	SLU 65	0.01	-0.09	4.34	0	0	0
16	SLU 66	0.01	-0.09	4.4	0	0	0
16	SLU 67	0.01	-0.09	4.4	0	0	0
16	SLU 68	0.01	-0.09	4.37	0	0	0
16	SLU 69	0.01	-0.09	4.43	0	0	0
16	SLU 70	0.01	-0.09	4.43	0	0	0
16	SLU 71	0.01	-0.09	4.4	0	0	0
16	SLU 72	0.01	-0.09	4.41	0	0	0
16	SLU 73	0.01	-0.09	4.75	0	0	0
16	SLU 74	0.01	-0.1	4.81	0	0	0
16	SLU 75	0.01	-0.09	4.82	0	0	0
16	SLU 76	0.01	-0.09	4.79	0	0	0
16	SLU 77	0.01	-0.1	4.85	0	0	0
16	SLU 78	0.01	-0.09	4.85	0	0	0
16	SLU 79	0.01	-0.1	4.82	0	0	0
16	SLU 80	0.01	-0.09	4.82	0	0	0
16	SLU 81	0.01	-0.1	4.93	0	0	0
16	SLU 82	0.01	-0.1	4.93	0	0	0
16	SLU 83	0.01	-0.1	4.96	0	0	0
16	SLU 84	0.01	-0.1	4.97	0	0	0
16	SLE RA 1	0.01	-0.07	3.25	0	0	0
16	SLE RA 2	0.01	-0.07	3.25	0	0	0
16	SLE RA 3	0.01	-0.07	3.29	0	0	0
16	SLE RA 4	0.01	-0.07	3.3	0	0	0
16	SLE RA 5	0.01	-0.07	3.28	0	0	0
16	SLE RA 6	0.01	-0.07	3.32	0	0	0
16	SLE RA 7	0.01	-0.07	3.32	0	0	0
16	SLE RA 8	0.01	-0.07	3.3	0	0	0
16	SLE RA 9	0.01	-0.07	3.3	0	0	0
16	SLE RA 10	0.01	-0.07	3.53	0	0	0
16	SLE RA 11	0.01	-0.07	3.57	0	0	0
16	SLE RA 12	0.01	-0.07	3.57	0	0	0
16	SLE RA 13	0.01	-0.07	3.55	0	0	0
16	SLE RA 14	0.01	-0.07	3.59	0	0	0
16	SLE RA 15	0.01	-0.07	3.6	0	0	0
16	SLE RA 16	0.01	-0.07	3.58	0	0	0
16	SLE RA 17	0.01	-0.07	3.58	0	0	0
16	SLE RA 18	0.01	-0.08	3.65	0	0	0
16	SLE RA 19	0.01	-0.07	3.65	0	0	0
16	SLE RA 20	0.01	-0.08	3.67	0	0	0
16	SLE RA 21	0.01	-0.07	3.67	0	0	0
16	SLE FR 1	0.01	-0.07	3.25	0	0	0
16	SLE FR 2	0.01	-0.07	3.25	0	0	0
16	SLE FR 3	0.01	-0.07	3.26	0	0	0
16	SLE FR 4	0.01	-0.07	3.37	0	0	0
16	SLE FR 5	0.01	-0.07	3.38	0	0	0
16	SLE FR 6	0.01	-0.07	3.45	0	0	0
16	SLE QP 1	0.01	-0.07	3.25	0	0	0
16	SLE QP 2	0.01	-0.07	3.37	0	0	0
16	SLD 1	0.21	-0.06	3.29	0	0	0
16	SLD 2	0.22	-0.05	3.29	0	0	0
16	SLD 3	0.2	-0.13	3.26	0	0	0
16	SLD 4	0.22	-0.11	3.26	0	0	0
16	SLD 5	0.08	0.03	3.4	0	0	0
16	SLD 6	0.09	0.03	3.4	0	0	0
16	SLD 7	0.05	-0.19	3.29	0	0	0
16	SLD 8	0.06	-0.18	3.29	0	0	0
16	SLD 9	-0.04	0.04	3.46	0	0	0
16	SLD 10	-0.03	0.04	3.46	0	0	0
16	SLD 11	-0.07	-0.18	3.35	0	0	0
16	SLD 12	-0.06	-0.17	3.35	0	0	0
16	SLD 13	-0.2	-0.03	3.49	0	0	0
16	SLD 14	-0.18	-0.02	3.48	0	0	0
16	SLD 15	-0.2	-0.1	3.45	0	0	0
16	SLD 16	-0.19	-0.08	3.45	0	0	0
16	SLV 1	0.48	-0.05	3.18	0	0	0
16	SLV 2	0.51	-0.02	3.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLV 3	0.46	-0.2	3.11	0	0	0
16	SLV 4	0.49	-0.17	3.1	0	0	0
16	SLV 5	0.17	0.15	3.43	0	0	0
16	SLV 6	0.19	0.17	3.43	0	0	0
16	SLV 7	0.11	-0.34	3.18	0	0	0
16	SLV 8	0.13	-0.32	3.18	0	0	0
16	SLV 9	-0.11	0.17	3.57	0	0	0
16	SLV 10	-0.09	0.19	3.56	0	0	0
16	SLV 11	-0.17	-0.32	3.32	0	0	0
16	SLV 12	-0.15	-0.29	3.31	0	0	0
16	SLV 13	-0.47	0.02	3.64	0	0	0
16	SLV 14	-0.44	0.05	3.64	0	0	0
16	SLV 15	-0.49	-0.12	3.56	0	0	0
16	SLV 16	-0.46	-0.09	3.56	0	0	0
17	SLU 1	0.01	-0.1	3.55	0	0	0
17	SLU 2	0.01	-0.09	3.55	0	0	0
17	SLU 3	0.01	-0.1	3.62	0	0	0
17	SLU 4	0.01	-0.1	3.62	0	0	0
17	SLU 5	0.01	-0.09	3.59	0	0	0
17	SLU 6	0.01	-0.1	3.67	0	0	0
17	SLU 7	0.01	-0.09	3.67	0	0	0
17	SLU 8	0.01	-0.1	3.64	0	0	0
17	SLU 9	0.01	-0.09	3.64	0	0	0
17	SLU 10	0.01	-0.1	4.03	0	0	0
17	SLU 11	0.01	-0.11	4.11	0	0	0
17	SLU 12	0.01	-0.1	4.11	0	0	0
17	SLU 13	0	-0.1	4.08	0	0	0
17	SLU 14	0	-0.11	4.15	0	0	0
17	SLU 15	0	-0.1	4.15	0	0	0
17	SLU 16	0	-0.11	4.12	0	0	0
17	SLU 17	0	-0.1	4.12	0	0	0
17	SLU 18	0.01	-0.11	4.24	0	0	0
17	SLU 19	0.01	-0.11	4.24	0	0	0
17	SLU 20	0	-0.11	4.28	0	0	0
17	SLU 21	0	-0.11	4.28	0	0	0
17	SLU 22	0.01	-0.1	3.97	0	0	0
17	SLU 23	0.01	-0.1	3.98	0	0	0
17	SLU 24	0.01	-0.1	4.05	0	0	0
17	SLU 25	0.01	-0.1	4.05	0	0	0
17	SLU 26	0.01	-0.1	4.02	0	0	0
17	SLU 27	0.01	-0.1	4.09	0	0	0
17	SLU 28	0.01	-0.1	4.1	0	0	0
17	SLU 29	0.01	-0.1	4.06	0	0	0
17	SLU 30	0.01	-0.1	4.07	0	0	0
17	SLU 31	0.01	-0.1	4.46	0	0	0
17	SLU 32	0.01	-0.11	4.53	0	0	0
17	SLU 33	0.01	-0.11	4.53	0	0	0
17	SLU 34	0.01	-0.1	4.5	0	0	0
17	SLU 35	0.01	-0.11	4.58	0	0	0
17	SLU 36	0.01	-0.11	4.58	0	0	0
17	SLU 37	0.01	-0.11	4.55	0	0	0
17	SLU 38	0.01	-0.11	4.55	0	0	0
17	SLU 39	0.01	-0.11	4.66	0	0	0
17	SLU 40	0.01	-0.11	4.66	0	0	0
17	SLU 41	0.01	-0.11	4.71	0	0	0
17	SLU 42	0.01	-0.11	4.71	0	0	0
17	SLU 43	0.01	-0.13	4.46	0	0	0
17	SLU 44	0.01	-0.12	4.47	0	0	0
17	SLU 45	0.01	-0.13	4.54	0	0	0
17	SLU 46	0.01	-0.12	4.54	0	0	0
17	SLU 47	0.01	-0.12	4.51	0	0	0
17	SLU 48	0.01	-0.13	4.59	0	0	0
17	SLU 49	0.01	-0.12	4.59	0	0	0
17	SLU 50	0.01	-0.13	4.56	0	0	0
17	SLU 51	0.01	-0.12	4.56	0	0	0
17	SLU 52	0.01	-0.13	4.95	0	0	0
17	SLU 53	0.01	-0.13	5.02	0	0	0
17	SLU 54	0.01	-0.13	5.02	0	0	0
17	SLU 55	0.01	-0.13	5	0	0	0
17	SLU 56	0.01	-0.13	5.07	0	0	0
17	SLU 57	0.01	-0.13	5.07	0	0	0
17	SLU 58	0	-0.13	5.04	0	0	0
17	SLU 59	0	-0.13	5.04	0	0	0
17	SLU 60	0.01	-0.14	5.16	0	0	0
17	SLU 61	0.01	-0.14	5.16	0	0	0
17	SLU 62	0.01	-0.14	5.2	0	0	0
17	SLU 63	0.01	-0.14	5.2	0	0	0
17	SLU 64	0.01	-0.13	4.89	0	0	0
17	SLU 65	0.01	-0.12	4.89	0	0	0
17	SLU 66	0.01	-0.13	4.97	0	0	0
17	SLU 67	0.01	-0.13	4.97	0	0	0
17	SLU 68	0.01	-0.12	4.94	0	0	0
17	SLU 69	0.01	-0.13	5.01	0	0	0
17	SLU 70	0.01	-0.13	5.01	0	0	0
17	SLU 71	0.01	-0.13	4.98	0	0	0
17	SLU 72	0.01	-0.13	4.98	0	0	0
17	SLU 73	0.01	-0.13	5.38	0	0	0
17	SLU 74	0.01	-0.14	5.45	0	0	0
17	SLU 75	0.01	-0.13	5.45	0	0	0
17	SLU 76	0.01	-0.13	5.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 77	0.01	-0.14	5.49	0	0	0
17	SLU 78	0.01	-0.13	5.5	0	0	0
17	SLU 79	0.01	-0.14	5.47	0	0	0
17	SLU 80	0.01	-0.13	5.47	0	0	0
17	SLU 81	0.01	-0.14	5.58	0	0	0
17	SLU 82	0.01	-0.14	5.58	0	0	0
17	SLU 83	0.01	-0.14	5.63	0	0	0
17	SLU 84	0.01	-0.14	5.63	0	0	0
17	SLE RA 1	0.01	-0.1	3.67	0	0	0
17	SLE RA 2	0.01	-0.1	3.67	0	0	0
17	SLE RA 3	0.01	-0.1	3.72	0	0	0
17	SLE RA 4	0.01	-0.1	3.72	0	0	0
17	SLE RA 5	0.01	-0.1	3.7	0	0	0
17	SLE RA 6	0.01	-0.1	3.75	0	0	0
17	SLE RA 7	0.01	-0.1	3.75	0	0	0
17	SLE RA 8	0.01	-0.1	3.73	0	0	0
17	SLE RA 9	0.01	-0.1	3.73	0	0	0
17	SLE RA 10	0.01	-0.1	3.99	0	0	0
17	SLE RA 11	0.01	-0.1	4.04	0	0	0
17	SLE RA 12	0.01	-0.1	4.04	0	0	0
17	SLE RA 13	0.01	-0.1	4.02	0	0	0
17	SLE RA 14	0.01	-0.1	4.07	0	0	0
17	SLE RA 15	0.01	-0.1	4.07	0	0	0
17	SLE RA 16	0.01	-0.1	4.05	0	0	0
17	SLE RA 17	0.01	-0.1	4.05	0	0	0
17	SLE RA 18	0.01	-0.11	4.13	0	0	0
17	SLE RA 19	0.01	-0.1	4.13	0	0	0
17	SLE RA 20	0.01	-0.11	4.16	0	0	0
17	SLE RA 21	0.01	-0.1	4.16	0	0	0
17	SLE FR 1	0.01	-0.1	3.67	0	0	0
17	SLE FR 2	0.01	-0.1	3.67	0	0	0
17	SLE FR 3	0.01	-0.1	3.68	0	0	0
17	SLE FR 4	0.01	-0.1	3.81	0	0	0
17	SLE FR 5	0.01	-0.1	3.82	0	0	0
17	SLE FR 6	0.01	-0.1	3.9	0	0	0
17	SLE QP 1	0.01	-0.1	3.67	0	0	0
17	SLE QP 2	0.01	-0.1	3.81	0	0	0
17	SLD 1	0.24	-0.08	3.8	0	0	0
17	SLD 2	0.25	-0.07	3.8	0	0	0
17	SLD 3	0.23	-0.16	3.78	0	0	0
17	SLD 4	0.24	-0.15	3.79	0	0	0
17	SLD 5	0.09	0.02	3.83	0	0	0
17	SLD 6	0.1	0.03	3.83	0	0	0
17	SLD 7	0.06	-0.24	3.77	0	0	0
17	SLD 8	0.07	-0.23	3.78	0	0	0
17	SLD 9	-0.05	0.03	3.84	0	0	0
17	SLD 10	-0.04	0.03	3.84	0	0	0
17	SLD 11	-0.08	-0.23	3.78	0	0	0
17	SLD 12	-0.07	-0.22	3.78	0	0	0
17	SLD 13	-0.22	-0.05	3.83	0	0	0
17	SLD 14	-0.21	-0.05	3.83	0	0	0
17	SLD 15	-0.23	-0.13	3.81	0	0	0
17	SLD 16	-0.22	-0.12	3.82	0	0	0
17	SLV 1	0.54	-0.05	3.78	0	0	0
17	SLV 2	0.57	-0.04	3.8	0	0	0
17	SLV 3	0.52	-0.23	3.75	0	0	0
17	SLV 4	0.55	-0.21	3.76	0	0	0
17	SLV 5	0.19	0.18	3.86	0	0	0
17	SLV 6	0.21	0.19	3.86	0	0	0
17	SLV 7	0.13	-0.41	3.73	0	0	0
17	SLV 8	0.15	-0.4	3.73	0	0	0
17	SLV 9	-0.13	0.2	3.88	0	0	0
17	SLV 10	-0.11	0.21	3.89	0	0	0
17	SLV 11	-0.2	-0.39	3.75	0	0	0
17	SLV 12	-0.18	-0.38	3.76	0	0	0
17	SLV 13	-0.53	0.01	3.86	0	0	0
17	SLV 14	-0.5	0.02	3.87	0	0	0
17	SLV 15	-0.55	-0.16	3.82	0	0	0
17	SLV 16	-0.52	-0.15	3.83	0	0	0
18	SLU 1	0.01	-0.14	5.04	0	0	0
18	SLU 2	0.01	-0.13	5.05	0	0	0
18	SLU 3	0.01	-0.13	5.15	0	0	0
18	SLU 4	0.01	-0.13	5.15	0	0	0
18	SLU 5	0.01	-0.13	5.11	0	0	0
18	SLU 6	0.01	-0.13	5.21	0	0	0
18	SLU 7	0.01	-0.13	5.21	0	0	0
18	SLU 8	0.01	-0.13	5.17	0	0	0
18	SLU 9	0.01	-0.13	5.17	0	0	0
18	SLU 10	0.01	-0.14	5.73	0	0	0
18	SLU 11	0.01	-0.15	5.83	0	0	0
18	SLU 12	0.01	-0.14	5.83	0	0	0
18	SLU 13	0.01	-0.14	5.79	0	0	0
18	SLU 14	0	-0.15	5.9	0	0	0
18	SLU 15	0.01	-0.14	5.9	0	0	0
18	SLU 16	0	-0.15	5.85	0	0	0
18	SLU 17	0	-0.14	5.86	0	0	0
18	SLU 18	0.01	-0.15	6.02	0	0	0
18	SLU 19	0.01	-0.15	6.02	0	0	0
18	SLU 20	0.01	-0.15	6.08	0	0	0
18	SLU 21	0.01	-0.15	6.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 22	0.02	-0.14	5.65	0	0	0
18	SLU 23	0.02	-0.13	5.65	0	0	0
18	SLU 24	0.01	-0.14	5.75	0	0	0
18	SLU 25	0.01	-0.13	5.76	0	0	0
18	SLU 26	0.01	-0.13	5.72	0	0	0
18	SLU 27	0.01	-0.14	5.82	0	0	0
18	SLU 28	0.01	-0.13	5.82	0	0	0
18	SLU 29	0.01	-0.14	5.78	0	0	0
18	SLU 30	0.01	-0.13	5.78	0	0	0
18	SLU 31	0.01	-0.14	6.34	0	0	0
18	SLU 32	0.01	-0.15	6.44	0	0	0
18	SLU 33	0.01	-0.15	6.44	0	0	0
18	SLU 34	0.01	-0.14	6.4	0	0	0
18	SLU 35	0.01	-0.15	6.5	0	0	0
18	SLU 36	0.01	-0.14	6.5	0	0	0
18	SLU 37	0.01	-0.15	6.46	0	0	0
18	SLU 38	0.01	-0.14	6.46	0	0	0
18	SLU 39	0.01	-0.15	6.63	0	0	0
18	SLU 40	0.01	-0.15	6.63	0	0	0
18	SLU 41	0.01	-0.15	6.69	0	0	0
18	SLU 42	0.01	-0.15	6.69	0	0	0
18	SLU 43	0.02	-0.17	6.35	0	0	0
18	SLU 44	0.02	-0.17	6.35	0	0	0
18	SLU 45	0.01	-0.17	6.45	0	0	0
18	SLU 46	0.01	-0.17	6.46	0	0	0
18	SLU 47	0.01	-0.17	6.41	0	0	0
18	SLU 48	0.01	-0.17	6.52	0	0	0
18	SLU 49	0.01	-0.17	6.52	0	0	0
18	SLU 50	0.01	-0.17	6.47	0	0	0
18	SLU 51	0.01	-0.17	6.48	0	0	0
18	SLU 52	0.01	-0.18	7.04	0	0	0
18	SLU 53	0.01	-0.19	7.14	0	0	0
18	SLU 54	0.01	-0.18	7.14	0	0	0
18	SLU 55	0.01	-0.18	7.1	0	0	0
18	SLU 56	0.01	-0.18	7.2	0	0	0
18	SLU 57	0.01	-0.18	7.2	0	0	0
18	SLU 58	0.01	-0.19	7.16	0	0	0
18	SLU 59	0.01	-0.18	7.16	0	0	0
18	SLU 60	0.01	-0.19	7.32	0	0	0
18	SLU 61	0.01	-0.19	7.33	0	0	0
18	SLU 62	0.01	-0.19	7.39	0	0	0
18	SLU 63	0.01	-0.19	7.39	0	0	0
18	SLU 64	0.02	-0.18	6.95	0	0	0
18	SLU 65	0.02	-0.17	6.96	0	0	0
18	SLU 66	0.02	-0.18	7.06	0	0	0
18	SLU 67	0.02	-0.17	7.06	0	0	0
18	SLU 68	0.02	-0.17	7.02	0	0	0
18	SLU 69	0.01	-0.18	7.12	0	0	0
18	SLU 70	0.01	-0.17	7.12	0	0	0
18	SLU 71	0.01	-0.18	7.08	0	0	0
18	SLU 72	0.01	-0.17	7.08	0	0	0
18	SLU 73	0.02	-0.18	7.64	0	0	0
18	SLU 74	0.01	-0.19	7.74	0	0	0
18	SLU 75	0.01	-0.18	7.75	0	0	0
18	SLU 76	0.01	-0.18	7.7	0	0	0
18	SLU 77	0.01	-0.19	7.81	0	0	0
18	SLU 78	0.01	-0.18	7.81	0	0	0
18	SLU 79	0.01	-0.19	7.76	0	0	0
18	SLU 80	0.01	-0.18	7.77	0	0	0
18	SLU 81	0.01	-0.19	7.93	0	0	0
18	SLU 82	0.01	-0.19	7.93	0	0	0
18	SLU 83	0.01	-0.19	7.99	0	0	0
18	SLU 84	0.01	-0.19	8	0	0	0
18	SLE RA 1	0.01	-0.14	5.22	0	0	0
18	SLE RA 2	0.01	-0.13	5.22	0	0	0
18	SLE RA 3	0.01	-0.14	5.29	0	0	0
18	SLE RA 4	0.01	-0.13	5.29	0	0	0
18	SLE RA 5	0.01	-0.13	5.26	0	0	0
18	SLE RA 6	0.01	-0.13	5.33	0	0	0
18	SLE RA 7	0.01	-0.13	5.33	0	0	0
18	SLE RA 8	0.01	-0.13	5.3	0	0	0
18	SLE RA 9	0.01	-0.13	5.3	0	0	0
18	SLE RA 10	0.01	-0.14	5.67	0	0	0
18	SLE RA 11	0.01	-0.14	5.74	0	0	0
18	SLE RA 12	0.01	-0.14	5.74	0	0	0
18	SLE RA 13	0.01	-0.14	5.72	0	0	0
18	SLE RA 14	0.01	-0.14	5.78	0	0	0
18	SLE RA 15	0.01	-0.14	5.79	0	0	0
18	SLE RA 16	0.01	-0.14	5.76	0	0	0
18	SLE RA 17	0.01	-0.14	5.76	0	0	0
18	SLE RA 18	0.01	-0.15	5.87	0	0	0
18	SLE RA 19	0.01	-0.14	5.87	0	0	0
18	SLE RA 20	0.01	-0.15	5.91	0	0	0
18	SLE RA 21	0.01	-0.14	5.91	0	0	0
18	SLE FR 1	0.01	-0.14	5.22	0	0	0
18	SLE FR 2	0.01	-0.14	5.22	0	0	0
18	SLE FR 3	0.01	-0.14	5.23	0	0	0
18	SLE FR 4	0.01	-0.14	5.41	0	0	0
18	SLE FR 5	0.01	-0.14	5.43	0	0	0
18	SLE FR 6	0.01	-0.14	5.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLE QP 1	0.01	-0.14	5.22	0	0	0
18	SLE QP 2	0.01	-0.14	5.41	0	0	0
18	SLD 1	0.34	-0.11	5.39	0	0	0
18	SLD 2	0.35	-0.1	5.4	0	0	0
18	SLD 3	0.32	-0.22	5.37	0	0	0
18	SLD 4	0.34	-0.21	5.37	0	0	0
18	SLD 5	0.13	0.03	5.44	0	0	0
18	SLD 6	0.14	0.04	5.45	0	0	0
18	SLD 7	0.08	-0.33	5.36	0	0	0
18	SLD 8	0.1	-0.32	5.36	0	0	0
18	SLD 9	-0.07	0.04	5.46	0	0	0
18	SLD 10	-0.06	0.05	5.47	0	0	0
18	SLD 11	-0.11	-0.32	5.38	0	0	0
18	SLD 12	-0.1	-0.31	5.38	0	0	0
18	SLD 13	-0.32	-0.07	5.45	0	0	0
18	SLD 14	-0.3	-0.06	5.46	0	0	0
18	SLD 15	-0.33	-0.18	5.43	0	0	0
18	SLD 16	-0.31	-0.17	5.43	0	0	0
18	SLV 1	0.77	-0.07	5.36	0	0	0
18	SLV 2	0.81	-0.05	5.37	0	0	0
18	SLV 3	0.74	-0.32	5.3	0	0	0
18	SLV 4	0.78	-0.3	5.32	0	0	0
18	SLV 5	0.28	0.25	5.48	0	0	0
18	SLV 6	0.3	0.27	5.49	0	0	0
18	SLV 7	0.18	-0.57	5.29	0	0	0
18	SLV 8	0.21	-0.56	5.3	0	0	0
18	SLV 9	-0.18	0.28	5.53	0	0	0
18	SLV 10	-0.15	0.3	5.53	0	0	0
18	SLV 11	-0.28	-0.55	5.33	0	0	0
18	SLV 12	-0.25	-0.53	5.34	0	0	0
18	SLV 13	-0.76	0.02	5.51	0	0	0
18	SLV 14	-0.71	0.04	5.52	0	0	0
18	SLV 15	-0.79	-0.23	5.45	0	0	0
18	SLV 16	-0.74	-0.2	5.46	0	0	0
19	SLU 1	0.01	-0.14	5.25	0	0	0
19	SLU 2	0.01	-0.13	5.26	0	0	0
19	SLU 3	0.01	-0.13	5.36	0	0	0
19	SLU 4	0.01	-0.13	5.37	0	0	0
19	SLU 5	0.01	-0.13	5.32	0	0	0
19	SLU 6	0.01	-0.13	5.43	0	0	0
19	SLU 7	0.01	-0.13	5.43	0	0	0
19	SLU 8	0.01	-0.13	5.38	0	0	0
19	SLU 9	0.01	-0.13	5.38	0	0	0
19	SLU 10	0.01	-0.14	5.97	0	0	0
19	SLU 11	0.01	-0.15	6.07	0	0	0
19	SLU 12	0.01	-0.14	6.07	0	0	0
19	SLU 13	0.01	-0.14	6.03	0	0	0
19	SLU 14	0	-0.14	6.14	0	0	0
19	SLU 15	0	-0.14	6.14	0	0	0
19	SLU 16	0	-0.14	6.09	0	0	0
19	SLU 17	0	-0.14	6.09	0	0	0
19	SLU 18	0.01	-0.15	6.27	0	0	0
19	SLU 19	0.01	-0.15	6.27	0	0	0
19	SLU 20	0	-0.15	6.33	0	0	0
19	SLU 21	0.01	-0.15	6.33	0	0	0
19	SLU 22	0.02	-0.14	5.89	0	0	0
19	SLU 23	0.02	-0.13	5.89	0	0	0
19	SLU 24	0.01	-0.14	5.99	0	0	0
19	SLU 25	0.01	-0.13	6	0	0	0
19	SLU 26	0.01	-0.13	5.95	0	0	0
19	SLU 27	0.01	-0.14	6.06	0	0	0
19	SLU 28	0.01	-0.13	6.06	0	0	0
19	SLU 29	0.01	-0.14	6.01	0	0	0
19	SLU 30	0.01	-0.13	6.02	0	0	0
19	SLU 31	0.01	-0.14	6.6	0	0	0
19	SLU 32	0.01	-0.15	6.7	0	0	0
19	SLU 33	0.01	-0.14	6.71	0	0	0
19	SLU 34	0.01	-0.14	6.66	0	0	0
19	SLU 35	0.01	-0.15	6.77	0	0	0
19	SLU 36	0.01	-0.14	6.77	0	0	0
19	SLU 37	0.01	-0.15	6.72	0	0	0
19	SLU 38	0.01	-0.14	6.73	0	0	0
19	SLU 39	0.01	-0.15	6.9	0	0	0
19	SLU 40	0.01	-0.15	6.9	0	0	0
19	SLU 41	0.01	-0.15	6.96	0	0	0
19	SLU 42	0.01	-0.15	6.96	0	0	0
19	SLU 43	0.02	-0.18	6.61	0	0	0
19	SLU 44	0.02	-0.17	6.62	0	0	0
19	SLU 45	0.01	-0.17	6.72	0	0	0
19	SLU 46	0.01	-0.17	6.72	0	0	0
19	SLU 47	0.01	-0.17	6.68	0	0	0
19	SLU 48	0.01	-0.17	6.79	0	0	0
19	SLU 49	0.01	-0.17	6.79	0	0	0
19	SLU 50	0.01	-0.17	6.74	0	0	0
19	SLU 51	0.01	-0.17	6.74	0	0	0
19	SLU 52	0.01	-0.18	7.33	0	0	0
19	SLU 53	0.01	-0.19	7.43	0	0	0
19	SLU 54	0.01	-0.18	7.43	0	0	0
19	SLU 55	0.01	-0.18	7.39	0	0	0
19	SLU 56	0.01	-0.18	7.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLU 57	0.01	-0.18	7.5	0	0	0
19	SLU 58	0.01	-0.18	7.45	0	0	0
19	SLU 59	0.01	-0.18	7.45	0	0	0
19	SLU 60	0.01	-0.19	7.63	0	0	0
19	SLU 61	0.01	-0.19	7.63	0	0	0
19	SLU 62	0.01	-0.19	7.69	0	0	0
19	SLU 63	0.01	-0.19	7.69	0	0	0
19	SLU 64	0.02	-0.18	7.25	0	0	0
19	SLU 65	0.02	-0.17	7.25	0	0	0
19	SLU 66	0.02	-0.18	7.35	0	0	0
19	SLU 67	0.02	-0.17	7.36	0	0	0
19	SLU 68	0.02	-0.17	7.31	0	0	0
19	SLU 69	0.01	-0.18	7.42	0	0	0
19	SLU 70	0.01	-0.17	7.42	0	0	0
19	SLU 71	0.01	-0.18	7.37	0	0	0
19	SLU 72	0.01	-0.17	7.38	0	0	0
19	SLU 73	0.02	-0.18	7.96	0	0	0
19	SLU 74	0.01	-0.19	8.06	0	0	0
19	SLU 75	0.01	-0.18	8.07	0	0	0
19	SLU 76	0.01	-0.18	8.02	0	0	0
19	SLU 77	0.01	-0.19	8.13	0	0	0
19	SLU 78	0.01	-0.18	8.13	0	0	0
19	SLU 79	0.01	-0.19	8.08	0	0	0
19	SLU 80	0.01	-0.18	8.08	0	0	0
19	SLU 81	0.01	-0.19	8.26	0	0	0
19	SLU 82	0.01	-0.19	8.26	0	0	0
19	SLU 83	0.01	-0.19	8.32	0	0	0
19	SLU 84	0.01	-0.19	8.32	0	0	0
19	SLE RA 1	0.01	-0.14	5.43	0	0	0
19	SLE RA 2	0.01	-0.13	5.44	0	0	0
19	SLE RA 3	0.01	-0.14	5.51	0	0	0
19	SLE RA 4	0.01	-0.13	5.51	0	0	0
19	SLE RA 5	0.01	-0.13	5.48	0	0	0
19	SLE RA 6	0.01	-0.13	5.55	0	0	0
19	SLE RA 7	0.01	-0.13	5.55	0	0	0
19	SLE RA 8	0.01	-0.13	5.52	0	0	0
19	SLE RA 9	0.01	-0.13	5.52	0	0	0
19	SLE RA 10	0.01	-0.14	5.91	0	0	0
19	SLE RA 11	0.01	-0.14	5.98	0	0	0
19	SLE RA 12	0.01	-0.14	5.98	0	0	0
19	SLE RA 13	0.01	-0.14	5.95	0	0	0
19	SLE RA 14	0.01	-0.14	6.02	0	0	0
19	SLE RA 15	0.01	-0.14	6.02	0	0	0
19	SLE RA 16	0.01	-0.14	5.99	0	0	0
19	SLE RA 17	0.01	-0.14	5.99	0	0	0
19	SLE RA 18	0.01	-0.15	6.11	0	0	0
19	SLE RA 19	0.01	-0.14	6.11	0	0	0
19	SLE RA 20	0.01	-0.15	6.15	0	0	0
19	SLE RA 21	0.01	-0.14	6.15	0	0	0
19	SLE FR 1	0.01	-0.14	5.43	0	0	0
19	SLE FR 2	0.01	-0.14	5.44	0	0	0
19	SLE FR 3	0.01	-0.14	5.45	0	0	0
19	SLE FR 4	0.01	-0.14	5.64	0	0	0
19	SLE FR 5	0.01	-0.14	5.65	0	0	0
19	SLE FR 6	0.01	-0.14	5.77	0	0	0
19	SLE QP 1	0.01	-0.14	5.43	0	0	0
19	SLE QP 2	0.01	-0.14	5.64	0	0	0
19	SLD 1	0.35	-0.11	5.59	0	0	0
19	SLD 2	0.37	-0.1	5.59	0	0	0
19	SLD 3	0.34	-0.22	5.56	0	0	0
19	SLD 4	0.36	-0.21	5.56	0	0	0
19	SLD 5	0.13	0.04	5.67	0	0	0
19	SLD 6	0.14	0.05	5.67	0	0	0
19	SLD 7	0.09	-0.34	5.57	0	0	0
19	SLD 8	0.1	-0.33	5.57	0	0	0
19	SLD 9	-0.07	0.05	5.7	0	0	0
19	SLD 10	-0.06	0.06	5.7	0	0	0
19	SLD 11	-0.12	-0.32	5.61	0	0	0
19	SLD 12	-0.11	-0.31	5.61	0	0	0
19	SLD 13	-0.33	-0.07	5.71	0	0	0
19	SLD 14	-0.31	-0.05	5.72	0	0	0
19	SLD 15	-0.34	-0.18	5.68	0	0	0
19	SLD 16	-0.33	-0.17	5.69	0	0	0
19	SLV 1	0.8	-0.08	5.52	0	0	0
19	SLV 2	0.85	-0.05	5.53	0	0	0
19	SLV 3	0.77	-0.33	5.46	0	0	0
19	SLV 4	0.82	-0.3	5.46	0	0	0
19	SLV 5	0.29	0.26	5.7	0	0	0
19	SLV 6	0.32	0.28	5.71	0	0	0
19	SLV 7	0.19	-0.59	5.48	0	0	0
19	SLV 8	0.21	-0.57	5.49	0	0	0
19	SLV 9	-0.19	0.29	5.79	0	0	0
19	SLV 10	-0.16	0.31	5.79	0	0	0
19	SLV 11	-0.29	-0.56	5.57	0	0	0
19	SLV 12	-0.26	-0.54	5.57	0	0	0
19	SLV 13	-0.79	0.02	5.81	0	0	0
19	SLV 14	-0.75	0.06	5.82	0	0	0
19	SLV 15	-0.82	-0.23	5.75	0	0	0
19	SLV 16	-0.78	-0.2	5.75	0	0	0
20	SLU 1	0.01	-0.12	4.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLU 2	0.01	-0.11	4.8	0	0	0
20	SLU 3	0.01	-0.12	4.89	0	0	0
20	SLU 4	0.01	-0.12	4.9	0	0	0
20	SLU 5	0.01	-0.11	4.86	0	0	0
20	SLU 6	0.01	-0.12	4.95	0	0	0
20	SLU 7	0.01	-0.11	4.95	0	0	0
20	SLU 8	0.01	-0.12	4.91	0	0	0
20	SLU 9	0.01	-0.11	4.91	0	0	0
20	SLU 10	0.01	-0.12	5.44	0	0	0
20	SLU 11	0.01	-0.13	5.54	0	0	0
20	SLU 12	0.01	-0.12	5.54	0	0	0
20	SLU 13	0.01	-0.12	5.5	0	0	0
20	SLU 14	0	-0.13	5.6	0	0	0
20	SLU 15	0	-0.12	5.6	0	0	0
20	SLU 16	0	-0.13	5.55	0	0	0
20	SLU 17	0	-0.12	5.56	0	0	0
20	SLU 18	0.01	-0.13	5.72	0	0	0
20	SLU 19	0.01	-0.13	5.72	0	0	0
20	SLU 20	0	-0.13	5.77	0	0	0
20	SLU 21	0	-0.13	5.78	0	0	0
20	SLU 22	0.01	-0.12	5.37	0	0	0
20	SLU 23	0.01	-0.12	5.38	0	0	0
20	SLU 24	0.01	-0.12	5.47	0	0	0
20	SLU 25	0.01	-0.12	5.47	0	0	0
20	SLU 26	0.01	-0.11	5.43	0	0	0
20	SLU 27	0.01	-0.12	5.53	0	0	0
20	SLU 28	0.01	-0.12	5.53	0	0	0
20	SLU 29	0.01	-0.12	5.49	0	0	0
20	SLU 30	0.01	-0.12	5.49	0	0	0
20	SLU 31	0.01	-0.12	6.02	0	0	0
20	SLU 32	0.01	-0.13	6.12	0	0	0
20	SLU 33	0.01	-0.13	6.12	0	0	0
20	SLU 34	0.01	-0.12	6.08	0	0	0
20	SLU 35	0.01	-0.13	6.17	0	0	0
20	SLU 36	0.01	-0.12	6.17	0	0	0
20	SLU 37	0.01	-0.13	6.13	0	0	0
20	SLU 38	0.01	-0.12	6.13	0	0	0
20	SLU 39	0.01	-0.13	6.29	0	0	0
20	SLU 40	0.01	-0.13	6.3	0	0	0
20	SLU 41	0.01	-0.13	6.35	0	0	0
20	SLU 42	0.01	-0.13	6.35	0	0	0
20	SLU 43	0.01	-0.15	6.04	0	0	0
20	SLU 44	0.01	-0.15	6.04	0	0	0
20	SLU 45	0.01	-0.15	6.14	0	0	0
20	SLU 46	0.01	-0.15	6.14	0	0	0
20	SLU 47	0.01	-0.15	6.1	0	0	0
20	SLU 48	0.01	-0.15	6.19	0	0	0
20	SLU 49	0.01	-0.15	6.2	0	0	0
20	SLU 50	0.01	-0.15	6.15	0	0	0
20	SLU 51	0.01	-0.15	6.15	0	0	0
20	SLU 52	0.01	-0.16	6.69	0	0	0
20	SLU 53	0.01	-0.16	6.78	0	0	0
20	SLU 54	0.01	-0.16	6.78	0	0	0
20	SLU 55	0.01	-0.16	6.74	0	0	0
20	SLU 56	0.01	-0.16	6.84	0	0	0
20	SLU 57	0.01	-0.16	6.84	0	0	0
20	SLU 58	0.01	-0.16	6.8	0	0	0
20	SLU 59	0.01	-0.16	6.8	0	0	0
20	SLU 60	0.01	-0.17	6.96	0	0	0
20	SLU 61	0.01	-0.16	6.96	0	0	0
20	SLU 62	0.01	-0.17	7.01	0	0	0
20	SLU 63	0.01	-0.16	7.02	0	0	0
20	SLU 64	0.02	-0.16	6.61	0	0	0
20	SLU 65	0.02	-0.15	6.62	0	0	0
20	SLU 66	0.01	-0.15	6.71	0	0	0
20	SLU 67	0.02	-0.15	6.71	0	0	0
20	SLU 68	0.01	-0.15	6.68	0	0	0
20	SLU 69	0.01	-0.15	6.77	0	0	0
20	SLU 70	0.01	-0.15	6.77	0	0	0
20	SLU 71	0.01	-0.15	6.73	0	0	0
20	SLU 72	0.01	-0.15	6.73	0	0	0
20	SLU 73	0.01	-0.16	7.26	0	0	0
20	SLU 74	0.01	-0.16	7.36	0	0	0
20	SLU 75	0.01	-0.16	7.36	0	0	0
20	SLU 76	0.01	-0.16	7.32	0	0	0
20	SLU 77	0.01	-0.16	7.41	0	0	0
20	SLU 78	0.01	-0.16	7.42	0	0	0
20	SLU 79	0.01	-0.16	7.37	0	0	0
20	SLU 80	0.01	-0.16	7.37	0	0	0
20	SLU 81	0.01	-0.17	7.53	0	0	0
20	SLU 82	0.01	-0.17	7.54	0	0	0
20	SLU 83	0.01	-0.17	7.59	0	0	0
20	SLU 84	0.01	-0.17	7.59	0	0	0
20	SLE RA 1	0.01	-0.12	4.96	0	0	0
20	SLE RA 2	0.01	-0.12	4.96	0	0	0
20	SLE RA 3	0.01	-0.12	5.03	0	0	0
20	SLE RA 4	0.01	-0.12	5.03	0	0	0
20	SLE RA 5	0.01	-0.12	5	0	0	0
20	SLE RA 6	0.01	-0.12	5.06	0	0	0
20	SLE RA 7	0.01	-0.12	5.07	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLE RA 8	0.01	-0.12	5.04	0	0	0
20	SLE RA 9	0.01	-0.12	5.04	0	0	0
20	SLE RA 10	0.01	-0.12	5.39	0	0	0
20	SLE RA 11	0.01	-0.12	5.46	0	0	0
20	SLE RA 12	0.01	-0.12	5.46	0	0	0
20	SLE RA 13	0.01	-0.12	5.43	0	0	0
20	SLE RA 14	0.01	-0.12	5.49	0	0	0
20	SLE RA 15	0.01	-0.12	5.5	0	0	0
20	SLE RA 16	0.01	-0.12	5.47	0	0	0
20	SLE RA 17	0.01	-0.12	5.47	0	0	0
20	SLE RA 18	0.01	-0.13	5.57	0	0	0
20	SLE RA 19	0.01	-0.13	5.58	0	0	0
20	SLE RA 20	0.01	-0.13	5.61	0	0	0
20	SLE RA 21	0.01	-0.13	5.61	0	0	0
20	SLE FR 1	0.01	-0.12	4.96	0	0	0
20	SLE FR 2	0.01	-0.12	4.96	0	0	0
20	SLE FR 3	0.01	-0.12	4.98	0	0	0
20	SLE FR 4	0.01	-0.12	5.15	0	0	0
20	SLE FR 5	0.01	-0.12	5.16	0	0	0
20	SLE FR 6	0.01	-0.12	5.27	0	0	0
20	SLE QP 1	0.01	-0.12	4.96	0	0	0
20	SLE QP 2	0.01	-0.12	5.15	0	0	0
20	SLD 1	0.32	-0.1	5.07	0	0	0
20	SLD 2	0.34	-0.09	5.08	0	0	0
20	SLD 3	0.31	-0.2	5.04	0	0	0
20	SLD 4	0.32	-0.19	5.05	0	0	0
20	SLD 5	0.12	0.04	5.17	0	0	0
20	SLD 6	0.13	0.04	5.17	0	0	0
20	SLD 7	0.08	-0.3	5.07	0	0	0
20	SLD 8	0.09	-0.29	5.07	0	0	0
20	SLD 9	-0.07	0.05	5.22	0	0	0
20	SLD 10	-0.06	0.06	5.22	0	0	0
20	SLD 11	-0.11	-0.29	5.12	0	0	0
20	SLD 12	-0.1	-0.28	5.12	0	0	0
20	SLD 13	-0.3	-0.06	5.25	0	0	0
20	SLD 14	-0.29	-0.04	5.25	0	0	0
20	SLD 15	-0.31	-0.16	5.22	0	0	0
20	SLD 16	-0.3	-0.14	5.22	0	0	0
20	SLV 1	0.73	-0.07	4.98	0	0	0
20	SLV 2	0.77	-0.04	4.98	0	0	0
20	SLV 3	0.71	-0.3	4.91	0	0	0
20	SLV 4	0.74	-0.27	4.91	0	0	0
20	SLV 5	0.26	0.24	5.2	0	0	0
20	SLV 6	0.29	0.26	5.2	0	0	0
20	SLV 7	0.17	-0.53	4.97	0	0	0
20	SLV 8	0.2	-0.51	4.97	0	0	0
20	SLV 9	-0.17	0.27	5.32	0	0	0
20	SLV 10	-0.15	0.29	5.32	0	0	0
20	SLV 11	-0.27	-0.5	5.09	0	0	0
20	SLV 12	-0.24	-0.48	5.09	0	0	0
20	SLV 13	-0.72	0.03	5.38	0	0	0
20	SLV 14	-0.68	0.06	5.38	0	0	0
20	SLV 15	-0.75	-0.2	5.31	0	0	0
20	SLV 16	-0.71	-0.17	5.31	0	0	0
21	SLU 1	0	-0.03	1.33	0	0	0
21	SLU 2	0	-0.03	1.33	0	0	0
21	SLU 3	0	-0.03	1.36	0	0	0
21	SLU 4	0	-0.03	1.36	0	0	0
21	SLU 5	0	-0.03	1.35	0	0	0
21	SLU 6	0	-0.03	1.37	0	0	0
21	SLU 7	0	-0.03	1.37	0	0	0
21	SLU 8	0	-0.03	1.36	0	0	0
21	SLU 9	0	-0.03	1.36	0	0	0
21	SLU 10	0	-0.04	1.51	0	0	0
21	SLU 11	0	-0.04	1.54	0	0	0
21	SLU 12	0	-0.04	1.54	0	0	0
21	SLU 13	0	-0.03	1.52	0	0	0
21	SLU 14	0	-0.04	1.55	0	0	0
21	SLU 15	0	-0.04	1.55	0	0	0
21	SLU 16	0	-0.04	1.54	0	0	0
21	SLU 17	0	-0.04	1.54	0	0	0
21	SLU 18	0	-0.04	1.58	0	0	0
21	SLU 19	0	-0.04	1.59	0	0	0
21	SLU 20	0	-0.04	1.6	0	0	0
21	SLU 21	0	-0.04	1.6	0	0	0
21	SLU 22	0	-0.03	1.49	0	0	0
21	SLU 23	0	-0.03	1.49	0	0	0
21	SLU 24	0	-0.03	1.52	0	0	0
21	SLU 25	0	-0.03	1.52	0	0	0
21	SLU 26	0	-0.03	1.51	0	0	0
21	SLU 27	0	-0.03	1.53	0	0	0
21	SLU 28	0	-0.03	1.53	0	0	0
21	SLU 29	0	-0.03	1.52	0	0	0
21	SLU 30	0	-0.03	1.52	0	0	0
21	SLU 31	0	-0.04	1.67	0	0	0
21	SLU 32	0	-0.04	1.7	0	0	0
21	SLU 33	0	-0.04	1.7	0	0	0
21	SLU 34	0	-0.04	1.68	0	0	0
21	SLU 35	0	-0.04	1.71	0	0	0
21	SLU 36	0	-0.04	1.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 37	0	-0.04	1.7	0	0	0
21	SLU 38	0	-0.04	1.7	0	0	0
21	SLU 39	0	-0.04	1.74	0	0	0
21	SLU 40	0	-0.04	1.75	0	0	0
21	SLU 41	0	-0.04	1.76	0	0	0
21	SLU 42	0	-0.04	1.76	0	0	0
21	SLU 43	0	-0.04	1.67	0	0	0
21	SLU 44	0	-0.04	1.67	0	0	0
21	SLU 45	0	-0.04	1.7	0	0	0
21	SLU 46	0	-0.04	1.7	0	0	0
21	SLU 47	0	-0.04	1.69	0	0	0
21	SLU 48	0	-0.04	1.72	0	0	0
21	SLU 49	0	-0.04	1.72	0	0	0
21	SLU 50	0	-0.04	1.7	0	0	0
21	SLU 51	0	-0.04	1.71	0	0	0
21	SLU 52	0	-0.05	1.85	0	0	0
21	SLU 53	0	-0.05	1.88	0	0	0
21	SLU 54	0	-0.05	1.88	0	0	0
21	SLU 55	0	-0.04	1.87	0	0	0
21	SLU 56	0	-0.05	1.9	0	0	0
21	SLU 57	0	-0.05	1.9	0	0	0
21	SLU 58	0	-0.05	1.88	0	0	0
21	SLU 59	0	-0.05	1.88	0	0	0
21	SLU 60	0	-0.05	1.93	0	0	0
21	SLU 61	0	-0.05	1.93	0	0	0
21	SLU 62	0	-0.05	1.94	0	0	0
21	SLU 63	0	-0.05	1.94	0	0	0
21	SLU 64	0	-0.04	1.83	0	0	0
21	SLU 65	0	-0.04	1.83	0	0	0
21	SLU 66	0	-0.04	1.86	0	0	0
21	SLU 67	0	-0.04	1.86	0	0	0
21	SLU 68	0	-0.04	1.85	0	0	0
21	SLU 69	0	-0.04	1.88	0	0	0
21	SLU 70	0	-0.04	1.88	0	0	0
21	SLU 71	0	-0.04	1.86	0	0	0
21	SLU 72	0	-0.04	1.87	0	0	0
21	SLU 73	0	-0.05	2.01	0	0	0
21	SLU 74	0	-0.05	2.04	0	0	0
21	SLU 75	0	-0.05	2.04	0	0	0
21	SLU 76	0	-0.05	2.03	0	0	0
21	SLU 77	0	-0.05	2.06	0	0	0
21	SLU 78	0	-0.05	2.06	0	0	0
21	SLU 79	0	-0.05	2.04	0	0	0
21	SLU 80	0	-0.05	2.04	0	0	0
21	SLU 81	0	-0.05	2.09	0	0	0
21	SLU 82	0	-0.05	2.09	0	0	0
21	SLU 83	0	-0.05	2.1	0	0	0
21	SLU 84	0	-0.05	2.1	0	0	0
21	SLE RA 1	0	-0.03	1.37	0	0	0
21	SLE RA 2	0	-0.03	1.38	0	0	0
21	SLE RA 3	0	-0.03	1.39	0	0	0
21	SLE RA 4	0	-0.03	1.39	0	0	0
21	SLE RA 5	0	-0.03	1.39	0	0	0
21	SLE RA 6	0	-0.03	1.4	0	0	0
21	SLE RA 7	0	-0.03	1.4	0	0	0
21	SLE RA 8	0	-0.03	1.4	0	0	0
21	SLE RA 9	0	-0.03	1.4	0	0	0
21	SLE RA 10	0	-0.03	1.49	0	0	0
21	SLE RA 11	0	-0.04	1.51	0	0	0
21	SLE RA 12	0	-0.03	1.51	0	0	0
21	SLE RA 13	0	-0.03	1.51	0	0	0
21	SLE RA 14	0	-0.04	1.52	0	0	0
21	SLE RA 15	0	-0.03	1.52	0	0	0
21	SLE RA 16	0	-0.04	1.52	0	0	0
21	SLE RA 17	0	-0.03	1.52	0	0	0
21	SLE RA 18	0	-0.04	1.55	0	0	0
21	SLE RA 19	0	-0.04	1.55	0	0	0
21	SLE RA 20	0	-0.04	1.56	0	0	0
21	SLE RA 21	0	-0.04	1.56	0	0	0
21	SLE FR 1	0	-0.03	1.37	0	0	0
21	SLE FR 2	0	-0.03	1.37	0	0	0
21	SLE FR 3	0	-0.03	1.38	0	0	0
21	SLE FR 4	0	-0.03	1.43	0	0	0
21	SLE FR 5	0	-0.03	1.43	0	0	0
21	SLE FR 6	0	-0.04	1.46	0	0	0
21	SLE QP 1	0	-0.03	1.37	0	0	0
21	SLE QP 2	0	-0.03	1.43	0	0	0
21	SLD 1	0.09	-0.03	1.41	0	0	0
21	SLD 2	0.09	-0.02	1.41	0	0	0
21	SLD 3	0.09	-0.06	1.4	0	0	0
21	SLD 4	0.09	-0.05	1.4	0	0	0
21	SLD 5	0.03	0.01	1.43	0	0	0
21	SLD 6	0.04	0.01	1.43	0	0	0
21	SLD 7	0.02	-0.08	1.41	0	0	0
21	SLD 8	0.02	-0.08	1.41	0	0	0
21	SLD 9	-0.02	0.01	1.44	0	0	0
21	SLD 10	-0.02	0.02	1.44	0	0	0
21	SLD 11	-0.03	-0.08	1.42	0	0	0
21	SLD 12	-0.03	-0.08	1.42	0	0	0
21	SLD 13	-0.08	-0.02	1.45	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLD 14	-0.08	-0.01	1.45	0	0	0
21	SLD 15	-0.09	-0.04	1.44	0	0	0
21	SLD 16	-0.08	-0.04	1.44	0	0	0
21	SLV 1	0.2	-0.02	1.39	0	0	0
21	SLV 2	0.21	-0.01	1.39	0	0	0
21	SLV 3	0.2	-0.08	1.37	0	0	0
21	SLV 4	0.21	-0.08	1.37	0	0	0
21	SLV 5	0.07	0.07	1.44	0	0	0
21	SLV 6	0.08	0.07	1.44	0	0	0
21	SLV 7	0.05	-0.15	1.39	0	0	0
21	SLV 8	0.05	-0.14	1.39	0	0	0
21	SLV 9	-0.05	0.07	1.46	0	0	0
21	SLV 10	-0.04	0.08	1.47	0	0	0
21	SLV 11	-0.07	-0.14	1.41	0	0	0
21	SLV 12	-0.07	-0.14	1.41	0	0	0
21	SLV 13	-0.2	0.01	1.48	0	0	0
21	SLV 14	-0.19	0.02	1.48	0	0	0
21	SLV 15	-0.21	-0.06	1.46	0	0	0
21	SLV 16	-0.2	-0.05	1.46	0	0	0
22	SLU 1	0	-0.04	1.54	0	0	0
22	SLU 2	0	-0.04	1.54	0	0	0
22	SLU 3	0	-0.04	1.57	0	0	0
22	SLU 4	0	-0.04	1.57	0	0	0
22	SLU 5	0	-0.04	1.56	0	0	0
22	SLU 6	0	-0.04	1.59	0	0	0
22	SLU 7	0	-0.04	1.59	0	0	0
22	SLU 8	0	-0.04	1.58	0	0	0
22	SLU 9	0	-0.04	1.58	0	0	0
22	SLU 10	0	-0.04	1.75	0	0	0
22	SLU 11	0	-0.04	1.78	0	0	0
22	SLU 12	0	-0.04	1.78	0	0	0
22	SLU 13	0	-0.04	1.77	0	0	0
22	SLU 14	0	-0.04	1.8	0	0	0
22	SLU 15	0	-0.04	1.8	0	0	0
22	SLU 16	0	-0.04	1.79	0	0	0
22	SLU 17	0	-0.04	1.79	0	0	0
22	SLU 18	0	-0.04	1.84	0	0	0
22	SLU 19	0	-0.04	1.84	0	0	0
22	SLU 20	0	-0.04	1.86	0	0	0
22	SLU 21	0	-0.04	1.86	0	0	0
22	SLU 22	0	-0.04	1.73	0	0	0
22	SLU 23	0	-0.04	1.73	0	0	0
22	SLU 24	0	-0.04	1.76	0	0	0
22	SLU 25	0	-0.04	1.76	0	0	0
22	SLU 26	0	-0.04	1.75	0	0	0
22	SLU 27	0	-0.04	1.78	0	0	0
22	SLU 28	0	-0.04	1.78	0	0	0
22	SLU 29	0	-0.04	1.76	0	0	0
22	SLU 30	0	-0.04	1.76	0	0	0
22	SLU 31	0	-0.04	1.94	0	0	0
22	SLU 32	0	-0.04	1.97	0	0	0
22	SLU 33	0	-0.04	1.97	0	0	0
22	SLU 34	0	-0.04	1.95	0	0	0
22	SLU 35	0	-0.04	1.98	0	0	0
22	SLU 36	0	-0.04	1.98	0	0	0
22	SLU 37	0	-0.04	1.97	0	0	0
22	SLU 38	0	-0.04	1.97	0	0	0
22	SLU 39	0	-0.04	2.02	0	0	0
22	SLU 40	0	-0.04	2.02	0	0	0
22	SLU 41	0	-0.04	2.04	0	0	0
22	SLU 42	0	-0.04	2.04	0	0	0
22	SLU 43	0	-0.05	1.94	0	0	0
22	SLU 44	0	-0.05	1.94	0	0	0
22	SLU 45	0	-0.05	1.97	0	0	0
22	SLU 46	0	-0.05	1.97	0	0	0
22	SLU 47	0	-0.05	1.96	0	0	0
22	SLU 48	0	-0.05	1.99	0	0	0
22	SLU 49	0	-0.05	1.99	0	0	0
22	SLU 50	0	-0.05	1.98	0	0	0
22	SLU 51	0	-0.05	1.98	0	0	0
22	SLU 52	0	-0.05	2.15	0	0	0
22	SLU 53	0	-0.05	2.18	0	0	0
22	SLU 54	0	-0.05	2.18	0	0	0
22	SLU 55	0	-0.05	2.17	0	0	0
22	SLU 56	0	-0.05	2.2	0	0	0
22	SLU 57	0	-0.05	2.2	0	0	0
22	SLU 58	0	-0.05	2.18	0	0	0
22	SLU 59	0	-0.05	2.18	0	0	0
22	SLU 60	0	-0.05	2.24	0	0	0
22	SLU 61	0	-0.05	2.24	0	0	0
22	SLU 62	0	-0.05	2.25	0	0	0
22	SLU 63	0	-0.05	2.26	0	0	0
22	SLU 64	0	-0.05	2.13	0	0	0
22	SLU 65	0	-0.05	2.13	0	0	0
22	SLU 66	0	-0.05	2.16	0	0	0
22	SLU 67	0	-0.05	2.16	0	0	0
22	SLU 68	0	-0.05	2.15	0	0	0
22	SLU 69	0	-0.05	2.18	0	0	0
22	SLU 70	0	-0.05	2.18	0	0	0
22	SLU 71	0	-0.05	2.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
22	SLU 72	0	-0.05	2.16	0	0	0
22	SLU 73	0	-0.05	2.33	0	0	0
22	SLU 74	0	-0.05	2.36	0	0	0
22	SLU 75	0	-0.05	2.37	0	0	0
22	SLU 76	0	-0.05	2.35	0	0	0
22	SLU 77	0	-0.05	2.38	0	0	0
22	SLU 78	0	-0.05	2.38	0	0	0
22	SLU 79	0	-0.05	2.37	0	0	0
22	SLU 80	0	-0.05	2.37	0	0	0
22	SLU 81	0	-0.05	2.42	0	0	0
22	SLU 82	0	-0.05	2.42	0	0	0
22	SLU 83	0	-0.05	2.44	0	0	0
22	SLU 84	0	-0.05	2.44	0	0	0
22	SLE RA 1	0	-0.04	1.59	0	0	0
22	SLE RA 2	0	-0.04	1.6	0	0	0
22	SLE RA 3	0	-0.04	1.62	0	0	0
22	SLE RA 4	0	-0.04	1.62	0	0	0
22	SLE RA 5	0	-0.04	1.61	0	0	0
22	SLE RA 6	0	-0.04	1.63	0	0	0
22	SLE RA 7	0	-0.04	1.63	0	0	0
22	SLE RA 8	0	-0.04	1.62	0	0	0
22	SLE RA 9	0	-0.04	1.62	0	0	0
22	SLE RA 10	0	-0.04	1.73	0	0	0
22	SLE RA 11	0	-0.04	1.75	0	0	0
22	SLE RA 12	0	-0.04	1.75	0	0	0
22	SLE RA 13	0	-0.04	1.75	0	0	0
22	SLE RA 14	0	-0.04	1.77	0	0	0
22	SLE RA 15	0	-0.04	1.77	0	0	0
22	SLE RA 16	0	-0.04	1.76	0	0	0
22	SLE RA 17	0	-0.04	1.76	0	0	0
22	SLE RA 18	0	-0.04	1.79	0	0	0
22	SLE RA 19	0	-0.04	1.79	0	0	0
22	SLE RA 20	0	-0.04	1.8	0	0	0
22	SLE RA 21	0	-0.04	1.8	0	0	0
22	SLE FR 1	0	-0.04	1.59	0	0	0
22	SLE FR 2	0	-0.04	1.59	0	0	0
22	SLE FR 3	0	-0.04	1.6	0	0	0
22	SLE FR 4	0	-0.04	1.65	0	0	0
22	SLE FR 5	0	-0.04	1.66	0	0	0
22	SLE FR 6	0	-0.04	1.69	0	0	0
22	SLE QP 1	0	-0.04	1.59	0	0	0
22	SLE QP 2	0	-0.04	1.65	0	0	0
22	SLD 1	0.1	-0.03	1.63	0	0	0
22	SLD 2	0.11	-0.03	1.63	0	0	0
22	SLD 3	0.1	-0.06	1.62	0	0	0
22	SLD 4	0.1	-0.06	1.62	0	0	0
22	SLD 5	0.04	0.01	1.66	0	0	0
22	SLD 6	0.04	0.01	1.66	0	0	0
22	SLD 7	0.02	-0.1	1.63	0	0	0
22	SLD 8	0.03	-0.09	1.63	0	0	0
22	SLD 9	-0.02	0.02	1.68	0	0	0
22	SLD 10	-0.02	0.02	1.68	0	0	0
22	SLD 11	-0.04	-0.09	1.65	0	0	0
22	SLD 12	-0.03	-0.09	1.65	0	0	0
22	SLD 13	-0.1	-0.02	1.68	0	0	0
22	SLD 14	-0.09	-0.01	1.69	0	0	0
22	SLD 15	-0.1	-0.05	1.68	0	0	0
22	SLD 16	-0.1	-0.05	1.68	0	0	0
22	SLV 1	0.24	-0.02	1.6	0	0	0
22	SLV 2	0.25	-0.01	1.6	0	0	0
22	SLV 3	0.23	-0.1	1.58	0	0	0
22	SLV 4	0.24	-0.09	1.58	0	0	0
22	SLV 5	0.08	0.08	1.67	0	0	0
22	SLV 6	0.09	0.08	1.67	0	0	0
22	SLV 7	0.05	-0.17	1.6	0	0	0
22	SLV 8	0.06	-0.16	1.6	0	0	0
22	SLV 9	-0.06	0.09	1.7	0	0	0
22	SLV 10	-0.05	0.09	1.7	0	0	0
22	SLV 11	-0.09	-0.16	1.64	0	0	0
22	SLV 12	-0.08	-0.15	1.64	0	0	0
22	SLV 13	-0.23	0.01	1.73	0	0	0
22	SLV 14	-0.22	0.02	1.73	0	0	0
22	SLV 15	-0.24	-0.07	1.71	0	0	0
22	SLV 16	-0.23	-0.06	1.71	0	0	0
23	SLU 1	0.01	-0.19	6.26	0	0	0
23	SLU 2	0.01	-0.18	6.26	0	0	0
23	SLU 3	0.01	-0.18	6.39	0	0	0
23	SLU 4	0.01	-0.18	6.4	0	0	0
23	SLU 5	0.01	-0.18	6.35	0	0	0
23	SLU 6	0.01	-0.18	6.48	0	0	0
23	SLU 7	0.01	-0.18	6.48	0	0	0
23	SLU 8	0	-0.18	6.43	0	0	0
23	SLU 9	0.01	-0.18	6.43	0	0	0
23	SLU 10	0.01	-0.2	7.12	0	0	0
23	SLU 11	0	-0.2	7.25	0	0	0
23	SLU 12	0.01	-0.2	7.26	0	0	0
23	SLU 13	0	-0.19	7.21	0	0	0
23	SLU 14	0	-0.2	7.34	0	0	0
23	SLU 15	0	-0.2	7.34	0	0	0
23	SLU 16	0	-0.2	7.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLU 17	0	-0.2	7.29	0	0	0
23	SLU 18	0.01	-0.21	7.49	0	0	0
23	SLU 19	0.01	-0.21	7.49	0	0	0
23	SLU 20	0	-0.21	7.57	0	0	0
23	SLU 21	0	-0.2	7.57	0	0	0
23	SLU 22	0.02	-0.19	7.01	0	0	0
23	SLU 23	0.02	-0.18	7.02	0	0	0
23	SLU 24	0.01	-0.19	7.15	0	0	0
23	SLU 25	0.01	-0.19	7.15	0	0	0
23	SLU 26	0.01	-0.18	7.1	0	0	0
23	SLU 27	0.01	-0.19	7.23	0	0	0
23	SLU 28	0.01	-0.19	7.24	0	0	0
23	SLU 29	0.01	-0.19	7.18	0	0	0
23	SLU 30	0.01	-0.19	7.18	0	0	0
23	SLU 31	0.01	-0.2	7.88	0	0	0
23	SLU 32	0.01	-0.21	8.01	0	0	0
23	SLU 33	0.01	-0.2	8.01	0	0	0
23	SLU 34	0.01	-0.2	7.96	0	0	0
23	SLU 35	0	-0.21	8.09	0	0	0
23	SLU 36	0.01	-0.2	8.1	0	0	0
23	SLU 37	0	-0.21	8.04	0	0	0
23	SLU 38	0	-0.2	8.05	0	0	0
23	SLU 39	0.01	-0.21	8.24	0	0	0
23	SLU 40	0.01	-0.21	8.24	0	0	0
23	SLU 41	0.01	-0.21	8.33	0	0	0
23	SLU 42	0.01	-0.21	8.33	0	0	0
23	SLU 43	0.01	-0.24	7.88	0	0	0
23	SLU 44	0.01	-0.23	7.88	0	0	0
23	SLU 45	0.01	-0.24	8.01	0	0	0
23	SLU 46	0.01	-0.23	8.01	0	0	0
23	SLU 47	0.01	-0.23	7.96	0	0	0
23	SLU 48	0.01	-0.24	8.1	0	0	0
23	SLU 49	0.01	-0.23	8.1	0	0	0
23	SLU 50	0.01	-0.24	8.05	0	0	0
23	SLU 51	0.01	-0.23	8.05	0	0	0
23	SLU 52	0.01	-0.25	8.74	0	0	0
23	SLU 53	0.01	-0.26	8.87	0	0	0
23	SLU 54	0.01	-0.25	8.88	0	0	0
23	SLU 55	0.01	-0.25	8.83	0	0	0
23	SLU 56	0	-0.25	8.96	0	0	0
23	SLU 57	0	-0.25	8.96	0	0	0
23	SLU 58	0	-0.25	8.91	0	0	0
23	SLU 59	0	-0.25	8.91	0	0	0
23	SLU 60	0.01	-0.26	9.11	0	0	0
23	SLU 61	0.01	-0.26	9.11	0	0	0
23	SLU 62	0	-0.26	9.19	0	0	0
23	SLU 63	0	-0.26	9.19	0	0	0
23	SLU 64	0.02	-0.24	8.63	0	0	0
23	SLU 65	0.02	-0.24	8.63	0	0	0
23	SLU 66	0.02	-0.24	8.77	0	0	0
23	SLU 67	0.02	-0.24	8.77	0	0	0
23	SLU 68	0.01	-0.24	8.72	0	0	0
23	SLU 69	0.01	-0.24	8.85	0	0	0
23	SLU 70	0.01	-0.24	8.85	0	0	0
23	SLU 71	0.01	-0.24	8.8	0	0	0
23	SLU 72	0.01	-0.24	8.8	0	0	0
23	SLU 73	0.01	-0.25	9.5	0	0	0
23	SLU 74	0.01	-0.26	9.63	0	0	0
23	SLU 75	0.01	-0.26	9.63	0	0	0
23	SLU 76	0.01	-0.25	9.58	0	0	0
23	SLU 77	0.01	-0.26	9.71	0	0	0
23	SLU 78	0.01	-0.26	9.71	0	0	0
23	SLU 79	0.01	-0.26	9.66	0	0	0
23	SLU 80	0.01	-0.26	9.66	0	0	0
23	SLU 81	0.01	-0.27	9.86	0	0	0
23	SLU 82	0.01	-0.26	9.86	0	0	0
23	SLU 83	0.01	-0.27	9.95	0	0	0
23	SLU 84	0.01	-0.26	9.95	0	0	0
23	SLE RA 1	0.01	-0.19	6.47	0	0	0
23	SLE RA 2	0.01	-0.18	6.48	0	0	0
23	SLE RA 3	0.01	-0.19	6.56	0	0	0
23	SLE RA 4	0.01	-0.18	6.57	0	0	0
23	SLE RA 5	0.01	-0.18	6.53	0	0	0
23	SLE RA 6	0.01	-0.19	6.62	0	0	0
23	SLE RA 7	0.01	-0.18	6.62	0	0	0
23	SLE RA 8	0.01	-0.19	6.59	0	0	0
23	SLE RA 9	0.01	-0.18	6.59	0	0	0
23	SLE RA 10	0.01	-0.19	7.05	0	0	0
23	SLE RA 11	0.01	-0.2	7.14	0	0	0
23	SLE RA 12	0.01	-0.19	7.14	0	0	0
23	SLE RA 13	0.01	-0.19	7.11	0	0	0
23	SLE RA 14	0.01	-0.2	7.19	0	0	0
23	SLE RA 15	0.01	-0.19	7.2	0	0	0
23	SLE RA 16	0.01	-0.2	7.16	0	0	0
23	SLE RA 17	0.01	-0.19	7.16	0	0	0
23	SLE RA 18	0.01	-0.2	7.29	0	0	0
23	SLE RA 19	0.01	-0.2	7.29	0	0	0
23	SLE RA 20	0.01	-0.2	7.35	0	0	0
23	SLE RA 21	0.01	-0.2	7.35	0	0	0
23	SLE FR 1	0.01	-0.19	6.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLE FR 2	0.01	-0.19	6.47	0	0	0
23	SLE FR 3	0.01	-0.19	6.5	0	0	0
23	SLE FR 4	0.01	-0.19	6.72	0	0	0
23	SLE FR 5	0.01	-0.19	6.74	0	0	0
23	SLE FR 6	0.01	-0.19	6.88	0	0	0
23	SLE QP 1	0.01	-0.19	6.47	0	0	0
23	SLE QP 2	0.01	-0.19	6.72	0	0	0
23	SLD 1	0.42	-0.14	6.8	0	0	0
23	SLD 2	0.44	-0.14	6.82	0	0	0
23	SLD 3	0.4	-0.28	6.78	0	0	0
23	SLD 4	0.42	-0.28	6.79	0	0	0
23	SLD 5	0.15	0.03	6.78	0	0	0
23	SLD 6	0.17	0.04	6.78	0	0	0
23	SLD 7	0.1	-0.43	6.7	0	0	0
23	SLD 8	0.11	-0.43	6.71	0	0	0
23	SLD 9	-0.09	0.05	6.73	0	0	0
23	SLD 10	-0.08	0.05	6.74	0	0	0
23	SLD 11	-0.14	-0.42	6.65	0	0	0
23	SLD 12	-0.13	-0.42	6.66	0	0	0
23	SLD 13	-0.4	-0.1	6.65	0	0	0
23	SLD 14	-0.38	-0.1	6.66	0	0	0
23	SLD 15	-0.41	-0.24	6.62	0	0	0
23	SLD 16	-0.39	-0.24	6.64	0	0	0
23	SLV 1	0.96	-0.09	6.92	0	0	0
23	SLV 2	1	-0.08	6.94	0	0	0
23	SLV 3	0.92	-0.41	6.86	0	0	0
23	SLV 4	0.97	-0.4	6.89	0	0	0
23	SLV 5	0.34	0.32	6.85	0	0	0
23	SLV 6	0.37	0.33	6.87	0	0	0
23	SLV 7	0.22	-0.74	6.68	0	0	0
23	SLV 8	0.25	-0.74	6.69	0	0	0
23	SLV 9	-0.23	0.35	6.74	0	0	0
23	SLV 10	-0.2	0.36	6.76	0	0	0
23	SLV 11	-0.35	-0.71	6.57	0	0	0
23	SLV 12	-0.32	-0.71	6.58	0	0	0
23	SLV 13	-0.94	0.01	6.55	0	0	0
23	SLV 14	-0.9	0.02	6.58	0	0	0
23	SLV 15	-0.98	-0.3	6.5	0	0	0
23	SLV 16	-0.93	-0.3	6.52	0	0	0
25	SLU 1	0.01	-0.17	6.12	0	-1.3142	-0.0365
25	SLU 2	0.01	-0.16	6.12	0	-1.3149	-0.0352
25	SLU 3	0.01	-0.17	6.25	0	-1.3422	-0.0364
25	SLU 4	0.01	-0.17	6.25	0	-1.3426	-0.0356
25	SLU 5	0.01	-0.16	6.2	0	-1.3319	-0.035
25	SLU 6	0.01	-0.17	6.33	0	-1.3592	-0.0362
25	SLU 7	0.01	-0.16	6.33	0	-1.3596	-0.0354
25	SLU 8	0	-0.17	6.27	0	-1.3483	-0.0362
25	SLU 9	0.01	-0.16	6.28	0	-1.3487	-0.0354
25	SLU 10	0.01	-0.18	6.95	0	-1.4942	-0.0383
25	SLU 11	0	-0.18	7.08	0	-1.5215	-0.0395
25	SLU 12	0.01	-0.18	7.08	0	-1.5219	-0.0387
25	SLU 13	0	-0.18	7.03	0	-1.5112	-0.0382
25	SLU 14	0	-0.18	7.16	0	-1.5385	-0.0394
25	SLU 15	0	-0.18	7.16	0	-1.5389	-0.0386
25	SLU 16	0	-0.18	7.11	0	-1.5276	-0.0394
25	SLU 17	0	-0.18	7.11	0	-1.528	-0.0386
25	SLU 18	0.01	-0.19	7.31	0	-1.5703	-0.041
25	SLU 19	0.01	-0.19	7.31	0	-1.5707	-0.0402
25	SLU 20	0	-0.19	7.39	0	-1.5874	-0.0409
25	SLU 21	0	-0.19	7.39	0	-1.5878	-0.0401
25	SLU 22	0.02	-0.17	6.85	0	-1.4727	-0.0373
25	SLU 23	0.02	-0.17	6.86	0	-1.4734	-0.0359
25	SLU 24	0.01	-0.17	6.98	0	-1.5007	-0.0371
25	SLU 25	0.01	-0.17	6.99	0	-1.5011	-0.0363
25	SLU 26	0.01	-0.17	6.94	0	-1.4905	-0.0358
25	SLU 27	0.01	-0.17	7.06	0	-1.5178	-0.037
25	SLU 28	0.01	-0.17	7.06	0	-1.5182	-0.0361
25	SLU 29	0.01	-0.17	7.01	0	-1.5068	-0.037
25	SLU 30	0.01	-0.17	7.01	0	-1.5073	-0.0362
25	SLU 31	0.01	-0.18	7.69	0	-1.6527	-0.0391
25	SLU 32	0.01	-0.19	7.82	0	-1.68	-0.0403
25	SLU 33	0.01	-0.18	7.82	0	-1.6804	-0.0394
25	SLU 34	0.01	-0.18	7.77	0	-1.6697	-0.0389
25	SLU 35	0	-0.19	7.9	0	-1.697	-0.0401
25	SLU 36	0.01	-0.18	7.9	0	-1.6974	-0.0393
25	SLU 37	0	-0.19	7.85	0	-1.6861	-0.0401
25	SLU 38	0	-0.18	7.85	0	-1.6865	-0.0393
25	SLU 39	0.01	-0.19	8.05	0	-1.7288	-0.0418
25	SLU 40	0.01	-0.19	8.05	0	-1.7293	-0.041
25	SLU 41	0.01	-0.19	8.12	0	-1.7459	-0.0416
25	SLU 42	0.01	-0.19	8.13	0	-1.7463	-0.0408
25	SLU 43	0.01	-0.22	7.7	0	-1.6541	-0.0472
25	SLU 44	0.01	-0.21	7.7	0	-1.6548	-0.0459
25	SLU 45	0.01	-0.22	7.83	0	-1.6821	-0.0471
25	SLU 46	0.01	-0.22	7.83	0	-1.6825	-0.0463
25	SLU 47	0.01	-0.21	7.78	0	-1.6719	-0.0457
25	SLU 48	0.01	-0.22	7.91	0	-1.6991	-0.0469
25	SLU 49	0.01	-0.21	7.91	0	-1.6996	-0.0461
25	SLU 50	0.01	-0.22	7.86	0	-1.6882	-0.0469
25	SLU 51	0.01	-0.21	7.86	0	-1.6886	-0.0461

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLU 52	0.01	-0.23	8.54	0	-1.8341	-0.0491
25	SLU 53	0.01	-0.23	8.66	0	-1.8614	-0.0502
25	SLU 54	0.01	-0.23	8.66	0	-1.8618	-0.0494
25	SLU 55	0.01	-0.23	8.61	0	-1.8511	-0.0489
25	SLU 56	0	-0.23	8.74	0	-1.8784	-0.0501
25	SLU 57	0	-0.23	8.74	0	-1.8788	-0.0493
25	SLU 58	0	-0.23	8.69	0	-1.8675	-0.0501
25	SLU 59	0	-0.23	8.69	0	-1.8679	-0.0493
25	SLU 60	0.01	-0.24	8.89	0	-1.9102	-0.0518
25	SLU 61	0.01	-0.24	8.89	0	-1.9106	-0.0509
25	SLU 62	0	-0.24	8.97	0	-1.9273	-0.0516
25	SLU 63	0	-0.24	8.97	0	-1.9277	-0.0508
25	SLU 64	0.02	-0.22	8.44	0	-1.8127	-0.048
25	SLU 65	0.02	-0.22	8.44	0	-1.8133	-0.0466
25	SLU 66	0.02	-0.22	8.57	0	-1.8406	-0.0478
25	SLU 67	0.02	-0.22	8.57	0	-1.841	-0.047
25	SLU 68	0.01	-0.22	8.52	0	-1.8304	-0.0465
25	SLU 69	0.01	-0.22	8.64	0	-1.8577	-0.0477
25	SLU 70	0.01	-0.22	8.65	0	-1.8581	-0.0469
25	SLU 71	0.01	-0.22	8.59	0	-1.8468	-0.0477
25	SLU 72	0.01	-0.22	8.6	0	-1.8472	-0.0469
25	SLU 73	0.01	-0.23	9.27	0	-1.9926	-0.0498
25	SLU 74	0.01	-0.24	9.4	0	-2.0199	-0.051
25	SLU 75	0.01	-0.23	9.4	0	-2.0203	-0.0502
25	SLU 76	0.01	-0.23	9.35	0	-2.0097	-0.0496
25	SLU 77	0.01	-0.24	9.48	0	-2.0369	-0.0508
25	SLU 78	0.01	-0.23	9.48	0	-2.0374	-0.05
25	SLU 79	0.01	-0.24	9.43	0	-2.026	-0.0508
25	SLU 80	0.01	-0.23	9.43	0	-2.0264	-0.05
25	SLU 81	0.01	-0.24	9.63	0	-2.0688	-0.0525
25	SLU 82	0.01	-0.24	9.63	0	-2.0692	-0.0517
25	SLU 83	0.01	-0.24	9.71	0	-2.0858	-0.0523
25	SLU 84	0.01	-0.24	9.71	0	-2.0862	-0.0515
25	SLE RA 1	0.01	-0.17	6.33	0	-1.3595	-0.0367
25	SLE RA 2	0.01	-0.17	6.33	0	-1.36	-0.0358
25	SLE RA 3	0.01	-0.17	6.41	0	-1.3782	-0.0366
25	SLE RA 4	0.01	-0.17	6.41	0	-1.3784	-0.0361
25	SLE RA 5	0.01	-0.17	6.38	0	-1.3713	-0.0357
25	SLE RA 6	0.01	-0.17	6.47	0	-1.3895	-0.0365
25	SLE RA 7	0.01	-0.17	6.47	0	-1.3898	-0.036
25	SLE RA 8	0.01	-0.17	6.43	0	-1.3822	-0.0365
25	SLE RA 9	0.01	-0.17	6.43	0	-1.3825	-0.036
25	SLE RA 10	0.01	-0.18	6.88	0	-1.4795	-0.038
25	SLE RA 11	0.01	-0.18	6.97	0	-1.4977	-0.0387
25	SLE RA 12	0.01	-0.18	6.97	0	-1.4979	-0.0382
25	SLE RA 13	0.01	-0.18	6.94	0	-1.4908	-0.0379
25	SLE RA 14	0.01	-0.18	7.02	0	-1.509	-0.0386
25	SLE RA 15	0.01	-0.18	7.02	0	-1.5093	-0.0381
25	SLE RA 16	0.01	-0.18	6.99	0	-1.5018	-0.0386
25	SLE RA 17	0.01	-0.18	6.99	0	-1.502	-0.0381
25	SLE RA 18	0.01	-0.18	7.12	0	-1.5302	-0.0398
25	SLE RA 19	0.01	-0.18	7.12	0	-1.5305	-0.0392
25	SLE RA 20	0.01	-0.18	7.17	0	-1.5416	-0.0397
25	SLE RA 21	0.01	-0.18	7.18	0	-1.5419	-0.0391
25	SLE FR 1	0.01	-0.17	6.33	0	-1.3595	-0.0367
25	SLE FR 2	0.01	-0.17	6.33	0	-1.3596	-0.0366
25	SLE FR 3	0.01	-0.17	6.35	0	-1.3641	-0.0367
25	SLE FR 4	0.01	-0.17	6.57	0	-1.4108	-0.0375
25	SLE FR 5	0.01	-0.18	6.59	0	-1.4153	-0.0376
25	SLE FR 6	0.01	-0.18	6.72	0	-1.4449	-0.0382
25	SLE QP 1	0.01	-0.17	6.33	0	-1.3595	-0.0367
25	SLE QP 2	0.01	-0.18	6.56	0	-1.4107	-0.0376
25	SLD 1	0.41	-0.14	6.54	0	-1.4064	-0.0292
25	SLD 2	0.43	-0.13	6.55	0	-1.4079	-0.0272
25	SLD 3	0.39	-0.27	6.53	0	-1.4025	-0.058
25	SLD 4	0.41	-0.26	6.53	0	-1.4041	-0.056
25	SLD 5	0.15	0.04	6.58	0	-1.415	0.0082
25	SLD 6	0.16	0.04	6.59	0	-1.416	0.0095
25	SLD 7	0.1	-0.41	6.52	0	-1.4021	-0.0878
25	SLD 8	0.11	-0.4	6.53	0	-1.4031	-0.0864
25	SLD 9	-0.09	0.05	6.6	0	-1.4183	0.0112
25	SLD 10	-0.08	0.06	6.61	0	-1.4193	0.0125
25	SLD 11	-0.14	-0.39	6.54	0	-1.4054	-0.0848
25	SLD 12	-0.13	-0.39	6.54	0	-1.4064	-0.0835
25	SLD 13	-0.39	-0.09	6.6	0	-1.4174	-0.0193
25	SLD 14	-0.37	-0.08	6.6	0	-1.4189	-0.0173
25	SLD 15	-0.4	-0.22	6.58	0	-1.4135	-0.0481
25	SLD 16	-0.38	-0.21	6.59	0	-1.4151	-0.046
25	SLV 1	0.94	-0.09	6.52	0	-1.4005	-0.0188
25	SLV 2	0.98	-0.07	6.53	0	-1.4041	-0.0141
25	SLV 3	0.9	-0.39	6.48	0	-1.3916	-0.0844
25	SLV 4	0.95	-0.37	6.49	0	-1.3952	-0.0797
25	SLV 5	0.34	0.31	6.61	0	-1.4206	0.0667
25	SLV 6	0.37	0.32	6.62	0	-1.4229	0.0697
25	SLV 7	0.21	-0.71	6.47	0	-1.3908	-0.152
25	SLV 8	0.24	-0.69	6.48	0	-1.3932	-0.1489
25	SLV 9	-0.22	0.34	6.65	0	-1.4283	0.0736
25	SLV 10	-0.19	0.36	6.66	0	-1.4306	0.0767
25	SLV 11	-0.34	-0.67	6.51	0	-1.3986	-0.145
25	SLV 12	-0.31	-0.66	6.52	0	-1.4009	-0.142

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLV 13	-0.92	0.02	6.64	0	-1.4263	0.0044
25	SLV 14	-0.88	0.04	6.65	0	-1.4299	0.0092
25	SLV 15	-0.96	-0.28	6.6	0	-1.4173	-0.0612
25	SLV 16	-0.92	-0.26	6.61	0	-1.421	-0.0564
26	SLU 1	0.02	-0.27	9.65	0	0	0
26	SLU 2	0.02	-0.26	9.66	0	0	0
26	SLU 3	0.01	-0.27	9.86	0	0	0
26	SLU 4	0.02	-0.27	9.86	0	0	0
26	SLU 5	0.01	-0.26	9.79	0	0	0
26	SLU 6	0.01	-0.27	9.99	0	0	0
26	SLU 7	0.01	-0.27	9.99	0	0	0
26	SLU 8	0.01	-0.27	9.91	0	0	0
26	SLU 9	0.01	-0.27	9.91	0	0	0
26	SLU 10	0.01	-0.29	10.98	0	0	0
26	SLU 11	0.01	-0.3	11.18	0	0	0
26	SLU 12	0.01	-0.29	11.19	0	0	0
26	SLU 13	0.01	-0.29	11.11	0	0	0
26	SLU 14	0	-0.3	11.31	0	0	0
26	SLU 15	0	-0.29	11.31	0	0	0
26	SLU 16	0	-0.3	11.23	0	0	0
26	SLU 17	0	-0.29	11.23	0	0	0
26	SLU 18	0.01	-0.31	11.54	0	0	0
26	SLU 19	0.01	-0.3	11.54	0	0	0
26	SLU 20	0	-0.31	11.67	0	0	0
26	SLU 21	0	-0.3	11.67	0	0	0
26	SLU 22	0.02	-0.28	10.82	0	0	0
26	SLU 23	0.02	-0.27	10.82	0	0	0
26	SLU 24	0.02	-0.28	11.03	0	0	0
26	SLU 25	0.02	-0.27	11.03	0	0	0
26	SLU 26	0.02	-0.27	10.95	0	0	0
26	SLU 27	0.01	-0.28	11.15	0	0	0
26	SLU 28	0.02	-0.27	11.16	0	0	0
26	SLU 29	0.01	-0.28	11.07	0	0	0
26	SLU 30	0.01	-0.27	11.08	0	0	0
26	SLU 31	0.02	-0.29	12.15	0	0	0
26	SLU 32	0.01	-0.3	12.35	0	0	0
26	SLU 33	0.01	-0.3	12.35	0	0	0
26	SLU 34	0.01	-0.29	12.27	0	0	0
26	SLU 35	0.01	-0.3	12.47	0	0	0
26	SLU 36	0.01	-0.3	12.48	0	0	0
26	SLU 37	0.01	-0.3	12.4	0	0	0
26	SLU 38	0.01	-0.3	12.4	0	0	0
26	SLU 39	0.01	-0.31	12.71	0	0	0
26	SLU 40	0.01	-0.31	12.71	0	0	0
26	SLU 41	0.01	-0.31	12.83	0	0	0
26	SLU 42	0.01	-0.31	12.84	0	0	0
26	SLU 43	0.02	-0.35	12.15	0	0	0
26	SLU 44	0.02	-0.34	12.16	0	0	0
26	SLU 45	0.02	-0.35	12.36	0	0	0
26	SLU 46	0.02	-0.35	12.36	0	0	0
26	SLU 47	0.02	-0.34	12.28	0	0	0
26	SLU 48	0.01	-0.35	12.49	0	0	0
26	SLU 49	0.01	-0.35	12.49	0	0	0
26	SLU 50	0.01	-0.35	12.41	0	0	0
26	SLU 51	0.01	-0.35	12.41	0	0	0
26	SLU 52	0.02	-0.37	13.48	0	0	0
26	SLU 53	0.01	-0.38	13.68	0	0	0
26	SLU 54	0.01	-0.37	13.68	0	0	0
26	SLU 55	0.01	-0.37	13.6	0	0	0
26	SLU 56	0.01	-0.38	13.81	0	0	0
26	SLU 57	0.01	-0.37	13.81	0	0	0
26	SLU 58	0	-0.38	13.73	0	0	0
26	SLU 59	0	-0.37	13.73	0	0	0
26	SLU 60	0.01	-0.39	14.04	0	0	0
26	SLU 61	0.01	-0.38	14.04	0	0	0
26	SLU 62	0.01	-0.39	14.17	0	0	0
26	SLU 63	0.01	-0.38	14.17	0	0	0
26	SLU 64	0.03	-0.36	13.32	0	0	0
26	SLU 65	0.03	-0.35	13.32	0	0	0
26	SLU 66	0.02	-0.36	13.52	0	0	0
26	SLU 67	0.02	-0.35	13.53	0	0	0
26	SLU 68	0.02	-0.35	13.45	0	0	0
26	SLU 69	0.02	-0.36	13.65	0	0	0
26	SLU 70	0.02	-0.35	13.65	0	0	0
26	SLU 71	0.02	-0.36	13.57	0	0	0
26	SLU 72	0.02	-0.35	13.57	0	0	0
26	SLU 73	0.02	-0.37	14.64	0	0	0
26	SLU 74	0.02	-0.38	14.84	0	0	0
26	SLU 75	0.02	-0.38	14.85	0	0	0
26	SLU 76	0.02	-0.37	14.77	0	0	0
26	SLU 77	0.01	-0.38	14.97	0	0	0
26	SLU 78	0.01	-0.38	14.97	0	0	0
26	SLU 79	0.01	-0.38	14.89	0	0	0
26	SLU 80	0.01	-0.38	14.9	0	0	0
26	SLU 81	0.02	-0.39	15.2	0	0	0
26	SLU 82	0.02	-0.39	15.21	0	0	0
26	SLU 83	0.01	-0.39	15.33	0	0	0
26	SLU 84	0.01	-0.39	15.33	0	0	0
26	SLE RA 1	0.02	-0.28	9.99	0	0	0
26	SLE RA 2	0.02	-0.27	9.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLE RA 3	0.02	-0.28	10.13	0	0	0
26	SLE RA 4	0.02	-0.27	10.13	0	0	0
26	SLE RA 5	0.02	-0.27	10.08	0	0	0
26	SLE RA 6	0.01	-0.27	10.21	0	0	0
26	SLE RA 7	0.01	-0.27	10.21	0	0	0
26	SLE RA 8	0.01	-0.27	10.16	0	0	0
26	SLE RA 9	0.01	-0.27	10.16	0	0	0
26	SLE RA 10	0.02	-0.29	10.87	0	0	0
26	SLE RA 11	0.01	-0.29	11.01	0	0	0
26	SLE RA 12	0.01	-0.29	11.01	0	0	0
26	SLE RA 13	0.01	-0.28	10.96	0	0	0
26	SLE RA 14	0.01	-0.29	11.09	0	0	0
26	SLE RA 15	0.01	-0.29	11.09	0	0	0
26	SLE RA 16	0.01	-0.29	11.04	0	0	0
26	SLE RA 17	0.01	-0.29	11.04	0	0	0
26	SLE RA 18	0.01	-0.3	11.25	0	0	0
26	SLE RA 19	0.01	-0.29	11.25	0	0	0
26	SLE RA 20	0.01	-0.3	11.33	0	0	0
26	SLE RA 21	0.01	-0.29	11.33	0	0	0
26	SLE FR 1	0.02	-0.28	9.99	0	0	0
26	SLE FR 2	0.02	-0.27	9.99	0	0	0
26	SLE FR 3	0.02	-0.28	10.02	0	0	0
26	SLE FR 4	0.02	-0.28	10.37	0	0	0
26	SLE FR 5	0.02	-0.28	10.4	0	0	0
26	SLE FR 6	0.02	-0.29	10.62	0	0	0
26	SLE QP 1	0.02	-0.28	9.99	0	0	0
26	SLE QP 2	0.02	-0.28	10.36	0	0	0
26	SLD 1	0.64	-0.22	10.43	0	0	0
26	SLD 2	0.67	-0.21	10.45	0	0	0
26	SLD 3	0.62	-0.43	10.4	0	0	0
26	SLD 4	0.65	-0.42	10.42	0	0	0
26	SLD 5	0.24	0.06	10.43	0	0	0
26	SLD 6	0.26	0.07	10.44	0	0	0
26	SLD 7	0.15	-0.65	10.33	0	0	0
26	SLD 8	0.17	-0.64	10.34	0	0	0
26	SLD 9	-0.14	0.08	10.39	0	0	0
26	SLD 10	-0.12	0.09	10.4	0	0	0
26	SLD 11	-0.22	-0.63	10.29	0	0	0
26	SLD 12	-0.2	-0.62	10.3	0	0	0
26	SLD 13	-0.61	-0.15	10.31	0	0	0
26	SLD 14	-0.58	-0.14	10.33	0	0	0
26	SLD 15	-0.64	-0.36	10.28	0	0	0
26	SLD 16	-0.61	-0.35	10.3	0	0	0
26	SLV 1	1.48	-0.14	10.52	0	0	0
26	SLV 2	1.55	-0.11	10.55	0	0	0
26	SLV 3	1.42	-0.62	10.45	0	0	0
26	SLV 4	1.49	-0.59	10.49	0	0	0
26	SLV 5	0.53	0.49	10.51	0	0	0
26	SLV 6	0.58	0.51	10.53	0	0	0
26	SLV 7	0.34	-1.13	10.28	0	0	0
26	SLV 8	0.38	-1.11	10.3	0	0	0
26	SLV 9	-0.35	0.54	10.43	0	0	0
26	SLV 10	-0.3	0.56	10.45	0	0	0
26	SLV 11	-0.54	-1.08	10.2	0	0	0
26	SLV 12	-0.5	-1.06	10.22	0	0	0
26	SLV 13	-1.46	0.03	10.24	0	0	0
26	SLV 14	-1.38	0.06	10.28	0	0	0
26	SLV 15	-1.52	-0.46	10.18	0	0	0
26	SLV 16	-1.44	-0.43	10.21	0	0	0
28	SLU 1	0.01	-0.17	6.32	0	-1.087	-0.0294
28	SLU 2	0.01	-0.16	6.33	0	-1.0876	-0.0283
28	SLU 3	0.01	-0.17	6.46	0	-1.1099	-0.0292
28	SLU 4	0.01	-0.17	6.46	0	-1.1103	-0.0286
28	SLU 5	0.01	-0.16	6.41	0	-1.1014	-0.0281
28	SLU 6	0.01	-0.17	6.54	0	-1.1237	-0.0291
28	SLU 7	0.01	-0.17	6.54	0	-1.1241	-0.0284
28	SLU 8	0	-0.17	6.48	0	-1.1146	-0.0291
28	SLU 9	0.01	-0.17	6.49	0	-1.115	-0.0284
28	SLU 10	0.01	-0.18	7.19	0	-1.2353	-0.0308
28	SLU 11	0	-0.18	7.32	0	-1.2576	-0.0317
28	SLU 12	0.01	-0.18	7.32	0	-1.258	-0.0311
28	SLU 13	0	-0.18	7.27	0	-1.2491	-0.0306
28	SLU 14	0	-0.18	7.4	0	-1.2714	-0.0316
28	SLU 15	0	-0.18	7.4	0	-1.2718	-0.0309
28	SLU 16	0	-0.18	7.34	0	-1.2623	-0.0316
28	SLU 17	0	-0.18	7.34	0	-1.2627	-0.0309
28	SLU 18	0.01	-0.19	7.55	0	-1.298	-0.033
28	SLU 19	0.01	-0.19	7.55	0	-1.2984	-0.0323
28	SLU 20	0	-0.19	7.63	0	-1.3118	-0.0328
28	SLU 21	0	-0.19	7.63	0	-1.3122	-0.0321
28	SLU 22	0.02	-0.17	7.09	0	-1.2181	-0.0299
28	SLU 23	0.02	-0.17	7.09	0	-1.2187	-0.0288
28	SLU 24	0.01	-0.17	7.22	0	-1.241	-0.0297
28	SLU 25	0.01	-0.17	7.22	0	-1.2414	-0.0291
28	SLU 26	0.01	-0.17	7.17	0	-1.2325	-0.0287
28	SLU 27	0.01	-0.17	7.3	0	-1.2548	-0.0296
28	SLU 28	0.01	-0.17	7.3	0	-1.2552	-0.0289
28	SLU 29	0.01	-0.17	7.25	0	-1.2457	-0.0296
28	SLU 30	0.01	-0.17	7.25	0	-1.2461	-0.0289
28	SLU 31	0.01	-0.18	7.95	0	-1.3664	-0.0313

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLU 32	0.01	-0.19	8.08	0	-1.3887	-0.0322
28	SLU 33	0.01	-0.18	8.08	0	-1.3891	-0.0316
28	SLU 34	0.01	-0.18	8.03	0	-1.3802	-0.0311
28	SLU 35	0	-0.19	8.16	0	-1.4025	-0.0321
28	SLU 36	0.01	-0.18	8.16	0	-1.4029	-0.0314
28	SLU 37	0	-0.19	8.11	0	-1.3934	-0.0321
28	SLU 38	0	-0.18	8.11	0	-1.3938	-0.0314
28	SLU 39	0.01	-0.19	8.31	0	-1.4291	-0.0335
28	SLU 40	0.01	-0.19	8.32	0	-1.4295	-0.0328
28	SLU 41	0.01	-0.19	8.39	0	-1.4429	-0.0333
28	SLU 42	0.01	-0.19	8.4	0	-1.4433	-0.0327
28	SLU 43	0.01	-0.22	7.96	0	-1.3682	-0.038
28	SLU 44	0.01	-0.21	7.96	0	-1.3688	-0.0369
28	SLU 45	0.01	-0.22	8.09	0	-1.3911	-0.0379
28	SLU 46	0.01	-0.22	8.09	0	-1.3915	-0.0372
28	SLU 47	0.01	-0.21	8.04	0	-1.3826	-0.0368
28	SLU 48	0.01	-0.22	8.17	0	-1.4049	-0.0377
28	SLU 49	0.01	-0.22	8.17	0	-1.4053	-0.0371
28	SLU 50	0.01	-0.22	8.12	0	-1.3958	-0.0377
28	SLU 51	0.01	-0.22	8.12	0	-1.3962	-0.0371
28	SLU 52	0.01	-0.23	8.82	0	-1.5165	-0.0394
28	SLU 53	0.01	-0.23	8.95	0	-1.5388	-0.0404
28	SLU 54	0.01	-0.23	8.95	0	-1.5391	-0.0397
28	SLU 55	0.01	-0.23	8.9	0	-1.5303	-0.0393
28	SLU 56	0	-0.23	9.03	0	-1.5526	-0.0402
28	SLU 57	0	-0.23	9.03	0	-1.5529	-0.0396
28	SLU 58	0	-0.23	8.98	0	-1.5435	-0.0402
28	SLU 59	0	-0.23	8.98	0	-1.5438	-0.0396
28	SLU 60	0.01	-0.24	9.19	0	-1.5792	-0.0416
28	SLU 61	0.01	-0.24	9.19	0	-1.5795	-0.0409
28	SLU 62	0	-0.24	9.27	0	-1.593	-0.0414
28	SLU 63	0	-0.24	9.27	0	-1.5933	-0.0408
28	SLU 64	0.02	-0.22	8.72	0	-1.4993	-0.0385
28	SLU 65	0.02	-0.22	8.72	0	-1.4999	-0.0374
28	SLU 66	0.02	-0.22	8.85	0	-1.5222	-0.0384
28	SLU 67	0.02	-0.22	8.86	0	-1.5226	-0.0377
28	SLU 68	0.01	-0.22	8.81	0	-1.5137	-0.0373
28	SLU 69	0.01	-0.22	8.93	0	-1.536	-0.0382
28	SLU 70	0.01	-0.22	8.94	0	-1.5364	-0.0376
28	SLU 71	0.01	-0.22	8.88	0	-1.5269	-0.0383
28	SLU 72	0.01	-0.22	8.88	0	-1.5273	-0.0376
28	SLU 73	0.01	-0.23	9.58	0	-1.6476	-0.0399
28	SLU 74	0.01	-0.24	9.71	0	-1.6699	-0.0409
28	SLU 75	0.01	-0.23	9.72	0	-1.6702	-0.0402
28	SLU 76	0.01	-0.23	9.66	0	-1.6614	-0.0398
28	SLU 77	0.01	-0.24	9.79	0	-1.6837	-0.0407
28	SLU 78	0.01	-0.23	9.8	0	-1.684	-0.0401
28	SLU 79	0.01	-0.24	9.74	0	-1.6746	-0.0407
28	SLU 80	0.01	-0.23	9.74	0	-1.6749	-0.0401
28	SLU 81	0.01	-0.24	9.95	0	-1.7103	-0.0421
28	SLU 82	0.01	-0.24	9.95	0	-1.7106	-0.0414
28	SLU 83	0.01	-0.24	10.03	0	-1.7241	-0.042
28	SLU 84	0.01	-0.24	10.03	0	-1.7244	-0.0413
28	SLE RA 1	0.01	-0.17	6.54	0	-1.1245	-0.0295
28	SLE RA 2	0.01	-0.17	6.54	0	-1.1249	-0.0288
28	SLE RA 3	0.01	-0.17	6.63	0	-1.1398	-0.0294
28	SLE RA 4	0.01	-0.17	6.63	0	-1.14	-0.029
28	SLE RA 5	0.01	-0.17	6.6	0	-1.1341	-0.0287
28	SLE RA 6	0.01	-0.17	6.68	0	-1.149	-0.0293
28	SLE RA 7	0.01	-0.17	6.68	0	-1.1492	-0.0289
28	SLE RA 8	0.01	-0.17	6.65	0	-1.1429	-0.0293
28	SLE RA 9	0.01	-0.17	6.65	0	-1.1431	-0.0289
28	SLE RA 10	0.01	-0.18	7.12	0	-1.2233	-0.0305
28	SLE RA 11	0.01	-0.18	7.2	0	-1.2382	-0.0311
28	SLE RA 12	0.01	-0.18	7.2	0	-1.2385	-0.0306
28	SLE RA 13	0.01	-0.18	7.17	0	-1.2325	-0.0304
28	SLE RA 14	0.01	-0.18	7.26	0	-1.2474	-0.031
28	SLE RA 15	0.01	-0.18	7.26	0	-1.2477	-0.0306
28	SLE RA 16	0.01	-0.18	7.22	0	-1.2413	-0.031
28	SLE RA 17	0.01	-0.18	7.22	0	-1.2416	-0.0306
28	SLE RA 18	0.01	-0.19	7.36	0	-1.2651	-0.0319
28	SLE RA 19	0.01	-0.18	7.36	0	-1.2654	-0.0315
28	SLE RA 20	0.01	-0.19	7.41	0	-1.2743	-0.0318
28	SLE RA 21	0.01	-0.18	7.41	0	-1.2746	-0.0314
28	SLE FR 1	0.01	-0.17	6.54	0	-1.1245	-0.0295
28	SLE FR 2	0.01	-0.17	6.54	0	-1.1246	-0.0294
28	SLE FR 3	0.01	-0.17	6.56	0	-1.1282	-0.0295
28	SLE FR 4	0.01	-0.18	6.79	0	-1.1668	-0.0301
28	SLE FR 5	0.01	-0.18	6.81	0	-1.1704	-0.0302
28	SLE FR 6	0.01	-0.18	6.95	0	-1.1948	-0.0307
28	SLE QP 1	0.01	-0.17	6.54	0	-1.1245	-0.0295
28	SLE QP 2	0.01	-0.18	6.79	0	-1.1667	-0.0303
28	SLD 1	0.42	-0.14	6.75	0	-1.1612	-0.0238
28	SLD 2	0.44	-0.13	6.76	0	-1.1622	-0.0217
28	SLD 3	0.41	-0.28	6.73	0	-1.1578	-0.0474
28	SLD 4	0.43	-0.26	6.74	0	-1.1588	-0.0453
28	SLD 5	0.16	0.04	6.81	0	-1.17	0.0071
28	SLD 6	0.17	0.05	6.81	0	-1.1707	0.0085
28	SLD 7	0.1	-0.42	6.74	0	-1.1587	-0.0716
28	SLD 8	0.11	-0.41	6.74	0	-1.1593	-0.0702

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLD 9	-0.09	0.06	6.83	0	-1.1741	0.0097
28	SLD 10	-0.08	0.06	6.83	0	-1.1747	0.0111
28	SLD 11	-0.15	-0.4	6.76	0	-1.1627	-0.069
28	SLD 12	-0.13	-0.39	6.77	0	-1.1633	-0.0676
28	SLD 13	-0.4	-0.09	6.83	0	-1.1746	-0.0152
28	SLD 14	-0.38	-0.08	6.84	0	-1.1756	-0.0131
28	SLD 15	-0.42	-0.23	6.81	0	-1.1712	-0.0388
28	SLD 16	-0.4	-0.21	6.82	0	-1.1722	-0.0367
28	SLV 1	0.97	-0.09	6.71	0	-1.1538	-0.0159
28	SLV 2	1.02	-0.06	6.72	0	-1.156	-0.0109
28	SLV 3	0.93	-0.41	6.67	0	-1.146	-0.0697
28	SLV 4	0.98	-0.38	6.68	0	-1.1482	-0.0647
28	SLV 5	0.35	0.32	6.83	0	-1.1742	0.0548
28	SLV 6	0.38	0.34	6.84	0	-1.1757	0.058
28	SLV 7	0.22	-0.72	6.68	0	-1.1483	-0.1245
28	SLV 8	0.25	-0.71	6.69	0	-1.1497	-0.1213
28	SLV 9	-0.23	0.35	6.89	0	-1.1837	0.0608
28	SLV 10	-0.2	0.37	6.89	0	-1.1851	0.064
28	SLV 11	-0.36	-0.69	6.73	0	-1.1577	-0.1185
28	SLV 12	-0.33	-0.67	6.74	0	-1.1591	-0.1153
28	SLV 13	-0.96	0.02	6.89	0	-1.1851	0.0042
28	SLV 14	-0.91	0.05	6.91	0	-1.1874	0.0092
28	SLV 15	-1	-0.29	6.85	0	-1.1774	-0.0496
28	SLV 16	-0.95	-0.26	6.86	0	-1.1796	-0.0446
30	SLU 1	0.01	-0.16	5.98	0	-0.7714	-0.0202
30	SLU 2	0.01	-0.15	5.99	0	-0.7718	-0.0195
30	SLU 3	0.01	-0.16	6.11	0	-0.7875	-0.0201
30	SLU 4	0.01	-0.15	6.11	0	-0.7877	-0.0196
30	SLU 5	0.01	-0.15	6.06	0	-0.7814	-0.0193
30	SLU 6	0.01	-0.16	6.18	0	-0.797	-0.02
30	SLU 7	0.01	-0.15	6.18	0	-0.7973	-0.0195
30	SLU 8	0	-0.16	6.13	0	-0.7905	-0.02
30	SLU 9	0	-0.15	6.13	0	-0.7908	-0.0195
30	SLU 10	0.01	-0.16	6.8	0	-0.8762	-0.0212
30	SLU 11	0	-0.17	6.92	0	-0.8918	-0.0218
30	SLU 12	0	-0.17	6.92	0	-0.8921	-0.0213
30	SLU 13	0	-0.16	6.87	0	-0.8858	-0.021
30	SLU 14	0	-0.17	6.99	0	-0.9014	-0.0217
30	SLU 15	0	-0.16	6.99	0	-0.9017	-0.0212
30	SLU 16	0	-0.17	6.94	0	-0.8949	-0.0217
30	SLU 17	0	-0.16	6.94	0	-0.8952	-0.0212
30	SLU 18	0	-0.18	7.14	0	-0.9205	-0.0227
30	SLU 19	0.01	-0.17	7.14	0	-0.9207	-0.0222
30	SLU 20	0	-0.17	7.21	0	-0.9301	-0.0225
30	SLU 21	0	-0.17	7.22	0	-0.9303	-0.0221
30	SLU 22	0.01	-0.16	6.7	0	-0.8644	-0.0205
30	SLU 23	0.01	-0.15	6.71	0	-0.8648	-0.0198
30	SLU 24	0.01	-0.16	6.83	0	-0.8805	-0.0204
30	SLU 25	0.01	-0.15	6.83	0	-0.8807	-0.0199
30	SLU 26	0.01	-0.15	6.78	0	-0.8744	-0.0196
30	SLU 27	0.01	-0.16	6.9	0	-0.8901	-0.0203
30	SLU 28	0.01	-0.15	6.91	0	-0.8903	-0.0198
30	SLU 29	0.01	-0.16	6.85	0	-0.8835	-0.0203
30	SLU 30	0.01	-0.15	6.85	0	-0.8838	-0.0198
30	SLU 31	0.01	-0.17	7.52	0	-0.9692	-0.0214
30	SLU 32	0.01	-0.17	7.64	0	-0.9849	-0.0221
30	SLU 33	0.01	-0.17	7.64	0	-0.9851	-0.0216
30	SLU 34	0.01	-0.17	7.59	0	-0.9788	-0.0213
30	SLU 35	0	-0.17	7.71	0	-0.9944	-0.022
30	SLU 36	0	-0.17	7.71	0	-0.9947	-0.0215
30	SLU 37	0	-0.17	7.66	0	-0.9879	-0.022
30	SLU 38	0	-0.17	7.66	0	-0.9882	-0.0215
30	SLU 39	0.01	-0.18	7.86	0	-1.0135	-0.023
30	SLU 40	0.01	-0.17	7.86	0	-1.0138	-0.0225
30	SLU 41	0	-0.18	7.93	0	-1.0231	-0.0228
30	SLU 42	0.01	-0.17	7.94	0	-1.0233	-0.0224
30	SLU 43	0.01	-0.2	7.53	0	-0.9709	-0.0262
30	SLU 44	0.01	-0.2	7.53	0	-0.9713	-0.0254
30	SLU 45	0.01	-0.2	7.65	0	-0.987	-0.0261
30	SLU 46	0.01	-0.2	7.66	0	-0.9872	-0.0256
30	SLU 47	0.01	-0.2	7.61	0	-0.9809	-0.0253
30	SLU 48	0.01	-0.2	7.73	0	-0.9966	-0.026
30	SLU 49	0.01	-0.2	7.73	0	-0.9968	-0.0255
30	SLU 50	0.01	-0.2	7.68	0	-0.99	-0.026
30	SLU 51	0.01	-0.2	7.68	0	-0.9903	-0.0255
30	SLU 52	0.01	-0.21	8.34	0	-1.0757	-0.0271
30	SLU 53	0.01	-0.22	8.46	0	-1.0913	-0.0278
30	SLU 54	0.01	-0.21	8.47	0	-1.0916	-0.0273
30	SLU 55	0.01	-0.21	8.42	0	-1.0853	-0.027
30	SLU 56	0	-0.21	8.54	0	-1.1009	-0.0277
30	SLU 57	0	-0.21	8.54	0	-1.1012	-0.0272
30	SLU 58	0	-0.21	8.49	0	-1.0944	-0.0277
30	SLU 59	0	-0.21	8.49	0	-1.0947	-0.0272
30	SLU 60	0.01	-0.22	8.69	0	-1.12	-0.0286
30	SLU 61	0.01	-0.22	8.69	0	-1.1203	-0.0282
30	SLU 62	0	-0.22	8.76	0	-1.1296	-0.0285
30	SLU 63	0	-0.22	8.76	0	-1.1298	-0.028
30	SLU 64	0.02	-0.21	8.25	0	-1.0639	-0.0265
30	SLU 65	0.02	-0.2	8.26	0	-1.0644	-0.0257
30	SLU 66	0.01	-0.2	8.38	0	-1.08	-0.0264

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 67	0.01	-0.2	8.38	0	-1.0803	-0.0259
30	SLU 68	0.01	-0.2	8.33	0	-1.0739	-0.0256
30	SLU 69	0.01	-0.2	8.45	0	-1.0896	-0.0263
30	SLU 70	0.01	-0.2	8.45	0	-1.0898	-0.0258
30	SLU 71	0.01	-0.2	8.4	0	-1.0831	-0.0263
30	SLU 72	0.01	-0.2	8.4	0	-1.0833	-0.0258
30	SLU 73	0.01	-0.21	9.06	0	-1.1687	-0.0274
30	SLU 74	0.01	-0.22	9.19	0	-1.1844	-0.0281
30	SLU 75	0.01	-0.21	9.19	0	-1.1846	-0.0276
30	SLU 76	0.01	-0.21	9.14	0	-1.1783	-0.0273
30	SLU 77	0.01	-0.22	9.26	0	-1.1939	-0.0279
30	SLU 78	0.01	-0.21	9.26	0	-1.1942	-0.0275
30	SLU 79	0.01	-0.22	9.21	0	-1.1874	-0.028
30	SLU 80	0.01	-0.21	9.21	0	-1.1877	-0.0275
30	SLU 81	0.01	-0.22	9.41	0	-1.213	-0.0289
30	SLU 82	0.01	-0.22	9.41	0	-1.2133	-0.0285
30	SLU 83	0.01	-0.22	9.48	0	-1.2226	-0.0288
30	SLU 84	0.01	-0.22	9.48	0	-1.2229	-0.0283
30	SLE RA 1	0.01	-0.16	6.19	0	-0.7979	-0.0203
30	SLE RA 2	0.01	-0.15	6.19	0	-0.7982	-0.0198
30	SLE RA 3	0.01	-0.16	6.27	0	-0.8087	-0.0202
30	SLE RA 4	0.01	-0.15	6.27	0	-0.8089	-0.0199
30	SLE RA 5	0.01	-0.15	6.24	0	-0.8046	-0.0197
30	SLE RA 6	0.01	-0.16	6.32	0	-0.8151	-0.0202
30	SLE RA 7	0.01	-0.15	6.32	0	-0.8152	-0.0199
30	SLE RA 8	0.01	-0.16	6.29	0	-0.8107	-0.0202
30	SLE RA 9	0.01	-0.15	6.29	0	-0.8109	-0.0199
30	SLE RA 10	0.01	-0.16	6.73	0	-0.8678	-0.0209
30	SLE RA 11	0.01	-0.17	6.81	0	-0.8783	-0.0214
30	SLE RA 12	0.01	-0.16	6.81	0	-0.8784	-0.0211
30	SLE RA 13	0.01	-0.16	6.78	0	-0.8742	-0.0209
30	SLE RA 14	0.01	-0.17	6.86	0	-0.8846	-0.0213
30	SLE RA 15	0.01	-0.16	6.86	0	-0.8848	-0.021
30	SLE RA 16	0	-0.17	6.83	0	-0.8803	-0.0213
30	SLE RA 17	0	-0.16	6.83	0	-0.8805	-0.021
30	SLE RA 18	0.01	-0.17	6.96	0	-0.8973	-0.0219
30	SLE RA 19	0.01	-0.17	6.96	0	-0.8975	-0.0216
30	SLE RA 20	0.01	-0.17	7.01	0	-0.9037	-0.0219
30	SLE RA 21	0.01	-0.17	7.01	0	-0.9039	-0.0215
30	SLE FR 1	0.01	-0.16	6.19	0	-0.7979	-0.0203
30	SLE FR 2	0.01	-0.16	6.19	0	-0.798	-0.0202
30	SLE FR 3	0.01	-0.16	6.21	0	-0.8005	-0.0203
30	SLE FR 4	0.01	-0.16	6.42	0	-0.8278	-0.0207
30	SLE FR 5	0.01	-0.16	6.44	0	-0.8303	-0.0208
30	SLE FR 6	0.01	-0.16	6.57	0	-0.8476	-0.0211
30	SLE QP 1	0.01	-0.16	6.19	0	-0.7979	-0.0203
30	SLE QP 2	0.01	-0.16	6.42	0	-0.8278	-0.0208
30	SLD 1	0.4	-0.13	6.37	0	-0.8209	-0.0166
30	SLD 2	0.42	-0.11	6.37	0	-0.8214	-0.0148
30	SLD 3	0.38	-0.26	6.35	0	-0.8181	-0.0332
30	SLD 4	0.4	-0.24	6.35	0	-0.8186	-0.0314
30	SLD 5	0.15	0.04	6.44	0	-0.8298	0.0053
30	SLD 6	0.16	0.05	6.44	0	-0.8301	0.0065
30	SLD 7	0.1	-0.39	6.36	0	-0.8206	-0.05
30	SLD 8	0.11	-0.38	6.37	0	-0.8209	-0.0488
30	SLD 9	-0.09	0.06	6.47	0	-0.8346	0.0072
30	SLD 10	-0.07	0.07	6.48	0	-0.8349	0.0084
30	SLD 11	-0.14	-0.37	6.4	0	-0.8254	-0.0481
30	SLD 12	-0.13	-0.36	6.4	0	-0.8257	-0.0469
30	SLD 13	-0.38	-0.08	6.49	0	-0.8369	-0.0103
30	SLD 14	-0.36	-0.07	6.49	0	-0.8374	-0.0084
30	SLD 15	-0.4	-0.21	6.47	0	-0.8342	-0.0268
30	SLD 16	-0.38	-0.19	6.47	0	-0.8346	-0.025
30	SLV 1	0.92	-0.09	6.29	0	-0.8116	-0.0116
30	SLV 2	0.97	-0.06	6.3	0	-0.8127	-0.0072
30	SLV 3	0.88	-0.38	6.25	0	-0.8053	-0.0494
30	SLV 4	0.93	-0.35	6.25	0	-0.8064	-0.045
30	SLV 5	0.33	0.3	6.46	0	-0.8323	0.0386
30	SLV 6	0.36	0.32	6.46	0	-0.833	0.0414
30	SLV 7	0.21	-0.68	6.29	0	-0.8112	-0.0875
30	SLV 8	0.24	-0.66	6.3	0	-0.8119	-0.0847
30	SLV 9	-0.22	0.33	6.54	0	-0.8436	0.0431
30	SLV 10	-0.19	0.36	6.55	0	-0.8443	0.0459
30	SLV 11	-0.34	-0.64	6.38	0	-0.8225	-0.083
30	SLV 12	-0.31	-0.62	6.38	0	-0.8232	-0.0802
30	SLV 13	-0.91	0.03	6.59	0	-0.8491	0.0034
30	SLV 14	-0.86	0.06	6.59	0	-0.8502	0.0077
30	SLV 15	-0.94	-0.27	6.54	0	-0.8428	-0.0344
30	SLV 16	-0.9	-0.23	6.55	0	-0.8439	-0.0301
32	SLU 1	0.01	-0.13	5.14	0	-0.4417	-0.0112
32	SLU 2	0.01	-0.13	5.14	0	-0.442	-0.0108
32	SLU 3	0.01	-0.13	5.25	0	-0.4508	-0.0112
32	SLU 4	0.01	-0.13	5.25	0	-0.451	-0.0109
32	SLU 5	0.01	-0.12	5.2	0	-0.4474	-0.0107
32	SLU 6	0	-0.13	5.31	0	-0.4562	-0.0111
32	SLU 7	0	-0.13	5.31	0	-0.4564	-0.0108
32	SLU 8	0	-0.13	5.26	0	-0.4524	-0.0111
32	SLU 9	0	-0.13	5.27	0	-0.4526	-0.0108
32	SLU 10	0.01	-0.14	5.83	0	-0.5015	-0.0117
32	SLU 11	0	-0.14	5.94	0	-0.5104	-0.0121

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLU 12	0	-0.14	5.94	0	-0.5105	-0.0118
32	SLU 13	0	-0.14	5.9	0	-0.5069	-0.0116
32	SLU 14	0	-0.14	6	0	-0.5157	-0.012
32	SLU 15	0	-0.14	6	0	-0.5159	-0.0117
32	SLU 16	0	-0.14	5.96	0	-0.512	-0.012
32	SLU 17	0	-0.14	5.96	0	-0.5121	-0.0117
32	SLU 18	0	-0.15	6.13	0	-0.5268	-0.0126
32	SLU 19	0	-0.14	6.13	0	-0.5269	-0.0123
32	SLU 20	0	-0.15	6.19	0	-0.5321	-0.0125
32	SLU 21	0	-0.14	6.19	0	-0.5323	-0.0122
32	SLU 22	0.01	-0.13	5.76	0	-0.495	-0.0114
32	SLU 23	0.01	-0.13	5.76	0	-0.4953	-0.0109
32	SLU 24	0.01	-0.13	5.86	0	-0.5041	-0.0113
32	SLU 25	0.01	-0.13	5.87	0	-0.5043	-0.011
32	SLU 26	0.01	-0.13	5.82	0	-0.5006	-0.0109
32	SLU 27	0.01	-0.13	5.93	0	-0.5095	-0.0112
32	SLU 28	0.01	-0.13	5.93	0	-0.5096	-0.0109
32	SLU 29	0.01	-0.13	5.88	0	-0.5057	-0.0112
32	SLU 30	0.01	-0.13	5.89	0	-0.5059	-0.011
32	SLU 31	0.01	-0.14	6.45	0	-0.5548	-0.0118
32	SLU 32	0.01	-0.14	6.56	0	-0.5636	-0.0122
32	SLU 33	0.01	-0.14	6.56	0	-0.5638	-0.0119
32	SLU 34	0.01	-0.14	6.52	0	-0.5601	-0.0118
32	SLU 35	0	-0.14	6.62	0	-0.569	-0.0121
32	SLU 36	0	-0.14	6.62	0	-0.5692	-0.0119
32	SLU 37	0	-0.14	6.58	0	-0.5652	-0.0121
32	SLU 38	0	-0.14	6.58	0	-0.5654	-0.0119
32	SLU 39	0.01	-0.15	6.75	0	-0.58	-0.0127
32	SLU 40	0.01	-0.14	6.75	0	-0.5802	-0.0124
32	SLU 41	0	-0.15	6.81	0	-0.5854	-0.0126
32	SLU 42	0	-0.14	6.81	0	-0.5855	-0.0123
32	SLU 43	0.01	-0.17	6.47	0	-0.556	-0.0146
32	SLU 44	0.01	-0.16	6.47	0	-0.5562	-0.0141
32	SLU 45	0.01	-0.17	6.57	0	-0.5651	-0.0145
32	SLU 46	0.01	-0.17	6.58	0	-0.5653	-0.0142
32	SLU 47	0.01	-0.16	6.53	0	-0.5616	-0.014
32	SLU 48	0.01	-0.17	6.64	0	-0.5705	-0.0144
32	SLU 49	0.01	-0.16	6.64	0	-0.5706	-0.0141
32	SLU 50	0.01	-0.17	6.59	0	-0.5667	-0.0144
32	SLU 51	0.01	-0.16	6.59	0	-0.5669	-0.0141
32	SLU 52	0.01	-0.17	7.16	0	-0.6158	-0.015
32	SLU 53	0.01	-0.18	7.27	0	-0.6246	-0.0154
32	SLU 54	0.01	-0.18	7.27	0	-0.6248	-0.0151
32	SLU 55	0	-0.17	7.23	0	-0.6211	-0.015
32	SLU 56	0	-0.18	7.33	0	-0.63	-0.0153
32	SLU 57	0	-0.18	7.33	0	-0.6302	-0.0151
32	SLU 58	0	-0.18	7.29	0	-0.6262	-0.0153
32	SLU 59	0	-0.18	7.29	0	-0.6264	-0.0151
32	SLU 60	0.01	-0.18	7.46	0	-0.641	-0.0159
32	SLU 61	0.01	-0.18	7.46	0	-0.6412	-0.0156
32	SLU 62	0	-0.18	7.52	0	-0.6464	-0.0158
32	SLU 63	0	-0.18	7.52	0	-0.6465	-0.0155
32	SLU 64	0.01	-0.17	7.09	0	-0.6092	-0.0147
32	SLU 65	0.01	-0.17	7.09	0	-0.6095	-0.0143
32	SLU 66	0.01	-0.17	7.19	0	-0.6184	-0.0146
32	SLU 67	0.01	-0.17	7.2	0	-0.6185	-0.0143
32	SLU 68	0.01	-0.16	7.15	0	-0.6149	-0.0142
32	SLU 69	0.01	-0.17	7.26	0	-0.6237	-0.0145
32	SLU 70	0.01	-0.17	7.26	0	-0.6239	-0.0143
32	SLU 71	0.01	-0.17	7.21	0	-0.62	-0.0145
32	SLU 72	0.01	-0.17	7.21	0	-0.6201	-0.0143
32	SLU 73	0.01	-0.18	7.78	0	-0.669	-0.0152
32	SLU 74	0.01	-0.18	7.89	0	-0.6779	-0.0155
32	SLU 75	0.01	-0.18	7.89	0	-0.678	-0.0153
32	SLU 76	0.01	-0.18	7.85	0	-0.6744	-0.0151
32	SLU 77	0.01	-0.18	7.95	0	-0.6833	-0.0155
32	SLU 78	0.01	-0.18	7.95	0	-0.6834	-0.0152
32	SLU 79	0	-0.18	7.91	0	-0.6795	-0.0155
32	SLU 80	0	-0.18	7.91	0	-0.6797	-0.0152
32	SLU 81	0.01	-0.19	8.08	0	-0.6943	-0.016
32	SLU 82	0.01	-0.18	8.08	0	-0.6944	-0.0157
32	SLU 83	0.01	-0.19	8.14	0	-0.6996	-0.0159
32	SLU 84	0.01	-0.18	8.14	0	-0.6998	-0.0157
32	SLE RA 1	0.01	-0.13	5.32	0	-0.4569	-0.0113
32	SLE RA 2	0.01	-0.13	5.32	0	-0.4571	-0.011
32	SLE RA 3	0.01	-0.13	5.39	0	-0.463	-0.0112
32	SLE RA 4	0.01	-0.13	5.39	0	-0.4631	-0.011
32	SLE RA 5	0.01	-0.13	5.36	0	-0.4607	-0.0109
32	SLE RA 6	0.01	-0.13	5.43	0	-0.4666	-0.0112
32	SLE RA 7	0.01	-0.13	5.43	0	-0.4667	-0.011
32	SLE RA 8	0.01	-0.13	5.4	0	-0.4641	-0.0112
32	SLE RA 9	0.01	-0.13	5.4	0	-0.4642	-0.011
32	SLE RA 10	0.01	-0.13	5.78	0	-0.4968	-0.0116
32	SLE RA 11	0.01	-0.14	5.85	0	-0.5027	-0.0118
32	SLE RA 12	0.01	-0.14	5.85	0	-0.5028	-0.0117
32	SLE RA 13	0.01	-0.13	5.82	0	-0.5004	-0.0115
32	SLE RA 14	0	-0.14	5.89	0	-0.5063	-0.0118
32	SLE RA 15	0	-0.13	5.89	0	-0.5064	-0.0116
32	SLE RA 16	0	-0.14	5.86	0	-0.5038	-0.0118
32	SLE RA 17	0	-0.14	5.86	0	-0.5039	-0.0116

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLE RA 18	0.01	-0.14	5.98	0	-0.5136	-0.0122
32	SLE RA 19	0.01	-0.14	5.98	0	-0.5137	-0.012
32	SLE RA 20	0	-0.14	6.02	0	-0.5172	-0.0121
32	SLE RA 21	0	-0.14	6.02	0	-0.5173	-0.0119
32	SLE FR 1	0.01	-0.13	5.32	0	-0.4569	-0.0113
32	SLE FR 2	0.01	-0.13	5.32	0	-0.457	-0.0112
32	SLE FR 3	0.01	-0.13	5.33	0	-0.4584	-0.0113
32	SLE FR 4	0.01	-0.13	5.51	0	-0.474	-0.0115
32	SLE FR 5	0.01	-0.13	5.53	0	-0.4754	-0.0115
32	SLE FR 6	0.01	-0.14	5.65	0	-0.4853	-0.0117
32	SLE QP 1	0.01	-0.13	5.32	0	-0.4569	-0.0113
32	SLE QP 2	0.01	-0.13	5.51	0	-0.4739	-0.0115
32	SLD 1	0.34	-0.11	5.45	0	-0.4682	-0.0094
32	SLD 2	0.36	-0.09	5.45	0	-0.4683	-0.0081
32	SLD 3	0.33	-0.22	5.42	0	-0.4663	-0.0188
32	SLD 4	0.35	-0.2	5.43	0	-0.4664	-0.0175
32	SLD 5	0.13	0.04	5.53	0	-0.475	0.0032
32	SLD 6	0.14	0.05	5.53	0	-0.4751	0.004
32	SLD 7	0.08	-0.33	5.45	0	-0.4688	-0.0282
32	SLD 8	0.09	-0.32	5.45	0	-0.4689	-0.0274
32	SLD 9	-0.07	0.05	5.57	0	-0.479	0.0043
32	SLD 10	-0.06	0.06	5.57	0	-0.4791	0.0051
32	SLD 11	-0.12	-0.31	5.5	0	-0.4728	-0.0271
32	SLD 12	-0.11	-0.31	5.5	0	-0.4729	-0.0262
32	SLD 13	-0.33	-0.06	5.6	0	-0.4815	-0.0055
32	SLD 14	-0.31	-0.05	5.6	0	-0.4816	-0.0043
32	SLD 15	-0.34	-0.17	5.58	0	-0.4796	-0.015
32	SLD 16	-0.33	-0.16	5.58	0	-0.4797	-0.0137
32	SLV 1	0.79	-0.08	5.36	0	-0.4604	-0.0068
32	SLV 2	0.83	-0.04	5.36	0	-0.4607	-0.0038
32	SLV 3	0.76	-0.33	5.31	0	-0.4561	-0.0282
32	SLV 4	0.8	-0.29	5.31	0	-0.4564	-0.0253
32	SLV 5	0.28	0.26	5.54	0	-0.4763	0.0219
32	SLV 6	0.31	0.28	5.54	0	-0.4765	0.0238
32	SLV 7	0.18	-0.58	5.38	0	-0.462	-0.0496
32	SLV 8	0.21	-0.56	5.38	0	-0.4622	-0.0477
32	SLV 9	-0.19	0.29	5.65	0	-0.4857	0.0246
32	SLV 10	-0.16	0.31	5.65	0	-0.4859	0.0265
32	SLV 11	-0.29	-0.55	5.48	0	-0.4714	-0.0469
32	SLV 12	-0.27	-0.52	5.49	0	-0.4716	-0.045
32	SLV 13	-0.78	0.03	5.72	0	-0.4915	0.0022
32	SLV 14	-0.74	0.06	5.72	0	-0.4918	0.0051
32	SLV 15	-0.81	-0.22	5.67	0	-0.4872	-0.0193
32	SLV 16	-0.77	-0.19	5.67	0	-0.4875	-0.0163
34	SLU 1	0.01	-0.13	5.12	0	-0.2199	-0.0054
34	SLU 2	0.01	-0.12	5.12	0	-0.22	-0.0052
34	SLU 3	0.01	-0.12	5.22	0	-0.2244	-0.0054
34	SLU 4	0.01	-0.12	5.22	0	-0.2245	-0.0052
34	SLU 5	0.01	-0.12	5.18	0	-0.2226	-0.0052
34	SLU 6	0	-0.12	5.28	0	-0.227	-0.0053
34	SLU 7	0	-0.12	5.28	0	-0.2271	-0.0052
34	SLU 8	0	-0.12	5.24	0	-0.2251	-0.0053
34	SLU 9	0	-0.12	5.24	0	-0.2252	-0.0052
34	SLU 10	0.01	-0.13	5.81	0	-0.2495	-0.0056
34	SLU 11	0	-0.14	5.91	0	-0.2539	-0.0058
34	SLU 12	0	-0.13	5.91	0	-0.254	-0.0057
34	SLU 13	0	-0.13	5.87	0	-0.2522	-0.0056
34	SLU 14	0	-0.13	5.97	0	-0.2565	-0.0058
34	SLU 15	0	-0.13	5.97	0	-0.2566	-0.0056
34	SLU 16	0	-0.13	5.92	0	-0.2546	-0.0058
34	SLU 17	0	-0.13	5.93	0	-0.2547	-0.0056
34	SLU 18	0	-0.14	6.1	0	-0.2621	-0.006
34	SLU 19	0	-0.14	6.1	0	-0.2621	-0.0059
34	SLU 20	0	-0.14	6.16	0	-0.2647	-0.006
34	SLU 21	0	-0.14	6.16	0	-0.2647	-0.0059
34	SLU 22	0.01	-0.13	5.73	0	-0.2464	-0.0055
34	SLU 23	0.01	-0.12	5.74	0	-0.2465	-0.0052
34	SLU 24	0.01	-0.13	5.84	0	-0.2509	-0.0054
34	SLU 25	0.01	-0.12	5.84	0	-0.251	-0.0053
34	SLU 26	0.01	-0.12	5.8	0	-0.2492	-0.0052
34	SLU 27	0.01	-0.13	5.9	0	-0.2535	-0.0054
34	SLU 28	0.01	-0.12	5.9	0	-0.2536	-0.0052
34	SLU 29	0.01	-0.13	5.85	0	-0.2516	-0.0054
34	SLU 30	0.01	-0.12	5.86	0	-0.2517	-0.0052
34	SLU 31	0.01	-0.13	6.42	0	-0.2761	-0.0057
34	SLU 32	0.01	-0.14	6.52	0	-0.2804	-0.0058
34	SLU 33	0.01	-0.13	6.53	0	-0.2805	-0.0057
34	SLU 34	0.01	-0.13	6.48	0	-0.2787	-0.0056
34	SLU 35	0	-0.14	6.59	0	-0.283	-0.0058
34	SLU 36	0	-0.13	6.59	0	-0.2831	-0.0057
34	SLU 37	0	-0.14	6.54	0	-0.2811	-0.0058
34	SLU 38	0	-0.13	6.54	0	-0.2812	-0.0057
34	SLU 39	0.01	-0.14	6.71	0	-0.2886	-0.0061
34	SLU 40	0.01	-0.14	6.72	0	-0.2886	-0.0059
34	SLU 41	0	-0.14	6.77	0	-0.2912	-0.006
34	SLU 42	0	-0.14	6.78	0	-0.2913	-0.0059
34	SLU 43	0.01	-0.16	6.44	0	-0.2768	-0.007
34	SLU 44	0.01	-0.16	6.44	0	-0.2769	-0.0068
34	SLU 45	0.01	-0.16	6.54	0	-0.2813	-0.007
34	SLU 46	0.01	-0.16	6.55	0	-0.2814	-0.0068

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 47	0.01	-0.16	6.5	0	-0.2795	-0.0068
34	SLU 48	0.01	-0.16	6.61	0	-0.2839	-0.0069
34	SLU 49	0.01	-0.16	6.61	0	-0.284	-0.0068
34	SLU 50	0.01	-0.16	6.56	0	-0.282	-0.0069
34	SLU 51	0.01	-0.16	6.56	0	-0.2821	-0.0068
34	SLU 52	0.01	-0.17	7.13	0	-0.3064	-0.0072
34	SLU 53	0.01	-0.17	7.23	0	-0.3108	-0.0074
34	SLU 54	0.01	-0.17	7.23	0	-0.3109	-0.0073
34	SLU 55	0	-0.17	7.19	0	-0.309	-0.0072
34	SLU 56	0	-0.17	7.29	0	-0.3134	-0.0074
34	SLU 57	0	-0.17	7.29	0	-0.3135	-0.0072
34	SLU 58	0	-0.17	7.25	0	-0.3115	-0.0074
34	SLU 59	0	-0.17	7.25	0	-0.3116	-0.0072
34	SLU 60	0.01	-0.18	7.42	0	-0.3189	-0.0076
34	SLU 61	0.01	-0.17	7.42	0	-0.319	-0.0075
34	SLU 62	0	-0.18	7.48	0	-0.3215	-0.0076
34	SLU 63	0	-0.17	7.48	0	-0.3216	-0.0075
34	SLU 64	0.01	-0.16	7.06	0	-0.3033	-0.0071
34	SLU 65	0.01	-0.16	7.06	0	-0.3034	-0.0069
34	SLU 66	0.01	-0.16	7.16	0	-0.3078	-0.007
34	SLU 67	0.01	-0.16	7.16	0	-0.3079	-0.0069
34	SLU 68	0.01	-0.16	7.12	0	-0.306	-0.0068
34	SLU 69	0.01	-0.16	7.22	0	-0.3104	-0.007
34	SLU 70	0.01	-0.16	7.22	0	-0.3105	-0.0069
34	SLU 71	0.01	-0.16	7.18	0	-0.3085	-0.007
34	SLU 72	0.01	-0.16	7.18	0	-0.3086	-0.0069
34	SLU 73	0.01	-0.17	7.75	0	-0.3329	-0.0073
34	SLU 74	0.01	-0.17	7.85	0	-0.3373	-0.0075
34	SLU 75	0.01	-0.17	7.85	0	-0.3374	-0.0073
34	SLU 76	0.01	-0.17	7.81	0	-0.3355	-0.0072
34	SLU 77	0.01	-0.17	7.91	0	-0.3399	-0.0074
34	SLU 78	0.01	-0.17	7.91	0	-0.34	-0.0073
34	SLU 79	0	-0.17	7.86	0	-0.338	-0.0074
34	SLU 80	0	-0.17	7.87	0	-0.3381	-0.0073
34	SLU 81	0.01	-0.18	8.04	0	-0.3454	-0.0077
34	SLU 82	0.01	-0.18	8.04	0	-0.3455	-0.0076
34	SLU 83	0.01	-0.18	8.1	0	-0.3481	-0.0076
34	SLU 84	0.01	-0.17	8.1	0	-0.3481	-0.0075
34	SLE RA 1	0.01	-0.13	5.29	0	-0.2275	-0.0054
34	SLE RA 2	0.01	-0.12	5.29	0	-0.2276	-0.0053
34	SLE RA 3	0.01	-0.13	5.36	0	-0.2305	-0.0054
34	SLE RA 4	0.01	-0.12	5.36	0	-0.2305	-0.0053
34	SLE RA 5	0.01	-0.12	5.34	0	-0.2293	-0.0053
34	SLE RA 6	0.01	-0.12	5.4	0	-0.2322	-0.0054
34	SLE RA 7	0.01	-0.12	5.4	0	-0.2323	-0.0053
34	SLE RA 8	0.01	-0.13	5.37	0	-0.2309	-0.0054
34	SLE RA 9	0.01	-0.12	5.38	0	-0.231	-0.0053
34	SLE RA 10	0.01	-0.13	5.75	0	-0.2472	-0.0056
34	SLE RA 11	0.01	-0.13	5.82	0	-0.2501	-0.0057
34	SLE RA 12	0.01	-0.13	5.82	0	-0.2502	-0.0056
34	SLE RA 13	0.01	-0.13	5.79	0	-0.249	-0.0055
34	SLE RA 14	0	-0.13	5.86	0	-0.2519	-0.0057
34	SLE RA 15	0	-0.13	5.86	0	-0.2519	-0.0056
34	SLE RA 16	0	-0.13	5.83	0	-0.2506	-0.0057
34	SLE RA 17	0	-0.13	5.83	0	-0.2507	-0.0056
34	SLE RA 18	0.01	-0.14	5.95	0	-0.2556	-0.0058
34	SLE RA 19	0.01	-0.13	5.95	0	-0.2556	-0.0058
34	SLE RA 20	0	-0.14	5.99	0	-0.2573	-0.0058
34	SLE RA 21	0	-0.13	5.99	0	-0.2574	-0.0057
34	SLE FR 1	0.01	-0.13	5.29	0	-0.2275	-0.0054
34	SLE FR 2	0.01	-0.13	5.29	0	-0.2275	-0.0054
34	SLE FR 3	0.01	-0.13	5.31	0	-0.2282	-0.0054
34	SLE FR 4	0.01	-0.13	5.49	0	-0.2359	-0.0055
34	SLE FR 5	0.01	-0.13	5.51	0	-0.2366	-0.0055
34	SLE FR 6	0.01	-0.13	5.62	0	-0.2415	-0.0056
34	SLE QP 1	0.01	-0.13	5.29	0	-0.2275	-0.0054
34	SLE QP 2	0.01	-0.13	5.49	0	-0.2359	-0.0056
34	SLD 1	0.34	-0.11	5.4	0	-0.2321	-0.0046
34	SLD 2	0.36	-0.09	5.4	0	-0.2321	-0.0039
34	SLD 3	0.33	-0.22	5.37	0	-0.231	-0.0092
34	SLD 4	0.35	-0.2	5.37	0	-0.231	-0.0085
34	SLD 5	0.13	0.04	5.5	0	-0.2364	0.0017
34	SLD 6	0.14	0.05	5.5	0	-0.2364	0.0021
34	SLD 7	0.08	-0.32	5.42	0	-0.2327	-0.0138
34	SLD 8	0.09	-0.31	5.42	0	-0.2327	-0.0134
34	SLD 9	-0.07	0.05	5.56	0	-0.2391	0.0023
34	SLD 10	-0.06	0.06	5.56	0	-0.2391	0.0027
34	SLD 11	-0.12	-0.31	5.48	0	-0.2354	-0.0132
34	SLD 12	-0.11	-0.3	5.48	0	-0.2354	-0.0128
34	SLD 13	-0.33	-0.06	5.6	0	-0.2408	-0.0026
34	SLD 14	-0.31	-0.04	5.6	0	-0.2408	-0.0019
34	SLD 15	-0.34	-0.17	5.58	0	-0.2397	-0.0072
34	SLD 16	-0.32	-0.15	5.58	0	-0.2397	-0.0065
34	SLV 1	0.79	-0.08	5.28	0	-0.2269	-0.0034
34	SLV 2	0.83	-0.04	5.28	0	-0.227	-0.0018
34	SLV 3	0.76	-0.33	5.22	0	-0.2244	-0.014
34	SLV 4	0.8	-0.29	5.22	0	-0.2244	-0.0123
34	SLV 5	0.28	0.25	5.52	0	-0.237	0.0108
34	SLV 6	0.31	0.28	5.52	0	-0.2371	0.0119
34	SLV 7	0.18	-0.57	5.32	0	-0.2286	-0.0244

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLV 8	0.2	-0.54	5.32	0	-0.2286	-0.0234
34	SLV 9	-0.19	0.29	5.66	0	-0.2432	0.0123
34	SLV 10	-0.16	0.31	5.66	0	-0.2432	0.0133
34	SLV 11	-0.29	-0.54	5.46	0	-0.2347	-0.023
34	SLV 12	-0.27	-0.51	5.46	0	-0.2348	-0.022
34	SLV 13	-0.78	0.03	5.76	0	-0.2474	0.0012
34	SLV 14	-0.74	0.07	5.76	0	-0.2474	0.0029
34	SLV 15	-0.81	-0.22	5.7	0	-0.2448	-0.0094
34	SLV 16	-0.77	-0.18	5.7	0	-0.2449	-0.0077
36	SLU 1	0.02	-0.28	11.67	0	0	0
36	SLU 2	0.02	-0.27	11.68	0	0	0
36	SLU 3	0.02	-0.28	11.91	0	0	0
36	SLU 4	0.02	-0.27	11.91	0	0	0
36	SLU 5	0.01	-0.26	11.82	0	0	0
36	SLU 6	0.01	-0.27	12.04	0	0	0
36	SLU 7	0.01	-0.27	12.05	0	0	0
36	SLU 8	0.01	-0.27	11.94	0	0	0
36	SLU 9	0.01	-0.27	11.95	0	0	0
36	SLU 10	0.01	-0.29	13.24	0	0	0
36	SLU 11	0.01	-0.3	13.47	0	0	0
36	SLU 12	0.01	-0.29	13.47	0	0	0
36	SLU 13	0.01	-0.29	13.38	0	0	0
36	SLU 14	0	-0.29	13.6	0	0	0
36	SLU 15	0	-0.29	13.61	0	0	0
36	SLU 16	0	-0.3	13.5	0	0	0
36	SLU 17	0	-0.29	13.51	0	0	0
36	SLU 18	0.01	-0.31	13.9	0	0	0
36	SLU 19	0.01	-0.3	13.91	0	0	0
36	SLU 20	0	-0.31	14.04	0	0	0
36	SLU 21	0	-0.3	14.04	0	0	0
36	SLU 22	0.03	-0.28	13.08	0	0	0
36	SLU 23	0.03	-0.27	13.09	0	0	0
36	SLU 24	0.02	-0.28	13.32	0	0	0
36	SLU 25	0.02	-0.27	13.32	0	0	0
36	SLU 26	0.02	-0.27	13.22	0	0	0
36	SLU 27	0.02	-0.27	13.45	0	0	0
36	SLU 28	0.02	-0.27	13.46	0	0	0
36	SLU 29	0.01	-0.27	13.35	0	0	0
36	SLU 30	0.01	-0.27	13.35	0	0	0
36	SLU 31	0.02	-0.29	14.65	0	0	0
36	SLU 32	0.01	-0.3	14.88	0	0	0
36	SLU 33	0.01	-0.29	14.88	0	0	0
36	SLU 34	0.01	-0.29	14.78	0	0	0
36	SLU 35	0.01	-0.3	15.01	0	0	0
36	SLU 36	0.01	-0.29	15.02	0	0	0
36	SLU 37	0	-0.3	14.91	0	0	0
36	SLU 38	0.01	-0.29	14.91	0	0	0
36	SLU 39	0.01	-0.31	15.31	0	0	0
36	SLU 40	0.01	-0.3	15.31	0	0	0
36	SLU 41	0.01	-0.31	15.44	0	0	0
36	SLU 42	0.01	-0.3	15.45	0	0	0
36	SLU 43	0.02	-0.36	14.69	0	0	0
36	SLU 44	0.03	-0.35	14.7	0	0	0
36	SLU 45	0.02	-0.36	14.93	0	0	0
36	SLU 46	0.02	-0.35	14.93	0	0	0
36	SLU 47	0.02	-0.35	14.83	0	0	0
36	SLU 48	0.01	-0.36	15.06	0	0	0
36	SLU 49	0.01	-0.35	15.07	0	0	0
36	SLU 50	0.01	-0.36	14.96	0	0	0
36	SLU 51	0.01	-0.35	14.97	0	0	0
36	SLU 52	0.02	-0.37	16.26	0	0	0
36	SLU 53	0.01	-0.38	16.49	0	0	0
36	SLU 54	0.01	-0.37	16.49	0	0	0
36	SLU 55	0.01	-0.37	16.39	0	0	0
36	SLU 56	0	-0.38	16.62	0	0	0
36	SLU 57	0.01	-0.37	16.63	0	0	0
36	SLU 58	0	-0.38	16.52	0	0	0
36	SLU 59	0	-0.37	16.53	0	0	0
36	SLU 60	0.01	-0.39	16.92	0	0	0
36	SLU 61	0.01	-0.39	16.92	0	0	0
36	SLU 62	0.01	-0.39	17.06	0	0	0
36	SLU 63	0.01	-0.38	17.06	0	0	0
36	SLU 64	0.03	-0.36	16.1	0	0	0
36	SLU 65	0.03	-0.35	16.11	0	0	0
36	SLU 66	0.03	-0.36	16.33	0	0	0
36	SLU 67	0.03	-0.35	16.34	0	0	0
36	SLU 68	0.03	-0.35	16.24	0	0	0
36	SLU 69	0.02	-0.36	16.47	0	0	0
36	SLU 70	0.02	-0.35	16.47	0	0	0
36	SLU 71	0.02	-0.36	16.37	0	0	0
36	SLU 72	0.02	-0.35	16.37	0	0	0
36	SLU 73	0.02	-0.37	17.67	0	0	0
36	SLU 74	0.02	-0.38	17.89	0	0	0
36	SLU 75	0.02	-0.37	17.9	0	0	0
36	SLU 76	0.02	-0.37	17.8	0	0	0
36	SLU 77	0.01	-0.38	18.03	0	0	0
36	SLU 78	0.01	-0.37	18.04	0	0	0
36	SLU 79	0.01	-0.38	17.93	0	0	0
36	SLU 80	0.01	-0.37	17.93	0	0	0
36	SLU 81	0.02	-0.39	18.33	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
36	SLU 82	0.02	-0.39	18.33	0	0	0
36	SLU 83	0.01	-0.39	18.46	0	0	0
36	SLU 84	0.01	-0.38	18.47	0	0	0
36	SLE RA 1	0.02	-0.28	12.07	0	0	0
36	SLE RA 2	0.02	-0.27	12.08	0	0	0
36	SLE RA 3	0.02	-0.28	12.23	0	0	0
36	SLE RA 4	0.02	-0.27	12.23	0	0	0
36	SLE RA 5	0.02	-0.27	12.17	0	0	0
36	SLE RA 6	0.02	-0.28	12.32	0	0	0
36	SLE RA 7	0.02	-0.27	12.33	0	0	0
36	SLE RA 8	0.01	-0.28	12.25	0	0	0
36	SLE RA 9	0.01	-0.27	12.26	0	0	0
36	SLE RA 10	0.02	-0.29	13.12	0	0	0
36	SLE RA 11	0.01	-0.29	13.27	0	0	0
36	SLE RA 12	0.01	-0.29	13.27	0	0	0
36	SLE RA 13	0.01	-0.28	13.21	0	0	0
36	SLE RA 14	0.01	-0.29	13.36	0	0	0
36	SLE RA 15	0.01	-0.29	13.37	0	0	0
36	SLE RA 16	0.01	-0.29	13.29	0	0	0
36	SLE RA 17	0.01	-0.29	13.3	0	0	0
36	SLE RA 18	0.01	-0.3	13.56	0	0	0
36	SLE RA 19	0.01	-0.29	13.56	0	0	0
36	SLE RA 20	0.01	-0.3	13.65	0	0	0
36	SLE RA 21	0.01	-0.29	13.65	0	0	0
36	SLE FR 1	0.02	-0.28	12.07	0	0	0
36	SLE FR 2	0.02	-0.28	12.08	0	0	0
36	SLE FR 3	0.02	-0.28	12.11	0	0	0
36	SLE FR 4	0.02	-0.28	12.52	0	0	0
36	SLE FR 5	0.02	-0.28	12.56	0	0	0
36	SLE FR 6	0.02	-0.29	12.82	0	0	0
36	SLE QP 1	0.02	-0.28	12.07	0	0	0
36	SLE QP 2	0.02	-0.29	12.52	0	0	0
36	SLD 1	0.78	-0.24	12.27	0	0	0
36	SLD 2	0.82	-0.2	12.26	0	0	0
36	SLD 3	0.75	-0.48	12.2	0	0	0
36	SLD 4	0.79	-0.44	12.2	0	0	0
36	SLD 5	0.29	0.09	12.55	0	0	0
36	SLD 6	0.31	0.12	12.55	0	0	0
36	SLD 7	0.19	-0.72	12.32	0	0	0
36	SLD 8	0.21	-0.7	12.32	0	0	0
36	SLD 9	-0.17	0.13	12.72	0	0	0
36	SLD 10	-0.15	0.15	12.72	0	0	0
36	SLD 11	-0.27	-0.69	12.49	0	0	0
36	SLD 12	-0.25	-0.66	12.49	0	0	0
36	SLD 13	-0.75	-0.13	12.84	0	0	0
36	SLD 14	-0.71	-0.09	12.84	0	0	0
36	SLD 15	-0.78	-0.37	12.77	0	0	0
36	SLD 16	-0.74	-0.33	12.77	0	0	0
36	SLV 1	1.8	-0.19	11.93	0	0	0
36	SLV 2	1.89	-0.09	11.92	0	0	0
36	SLV 3	1.73	-0.74	11.77	0	0	0
36	SLV 4	1.82	-0.64	11.76	0	0	0
36	SLV 5	0.65	0.57	12.58	0	0	0
36	SLV 6	0.7	0.64	12.58	0	0	0
36	SLV 7	0.41	-1.29	12.06	0	0	0
36	SLV 8	0.47	-1.22	12.05	0	0	0
36	SLV 9	-0.43	0.65	12.99	0	0	0
36	SLV 10	-0.37	0.72	12.98	0	0	0
36	SLV 11	-0.66	-1.21	12.46	0	0	0
36	SLV 12	-0.61	-1.14	12.46	0	0	0
36	SLV 13	-1.78	0.07	13.28	0	0	0
36	SLV 14	-1.69	0.17	13.27	0	0	0
36	SLV 15	-1.85	-0.48	13.12	0	0	0
36	SLV 16	-1.76	-0.38	13.11	0	0	0
37	SLU 1	0.01	-0.14	6.17	0	0	0
37	SLU 2	0.01	-0.14	6.18	0	0	0
37	SLU 3	0.01	-0.14	6.3	0	0	0
37	SLU 4	0.01	-0.14	6.3	0	0	0
37	SLU 5	0.01	-0.13	6.25	0	0	0
37	SLU 6	0.01	-0.14	6.37	0	0	0
37	SLU 7	0.01	-0.13	6.37	0	0	0
37	SLU 8	0	-0.14	6.31	0	0	0
37	SLU 9	0	-0.13	6.32	0	0	0
37	SLU 10	0.01	-0.15	7	0	0	0
37	SLU 11	0	-0.15	7.12	0	0	0
37	SLU 12	0	-0.15	7.12	0	0	0
37	SLU 13	0	-0.14	7.07	0	0	0
37	SLU 14	0	-0.15	7.19	0	0	0
37	SLU 15	0	-0.14	7.19	0	0	0
37	SLU 16	0	-0.15	7.13	0	0	0
37	SLU 17	0	-0.15	7.14	0	0	0
37	SLU 18	0	-0.16	7.35	0	0	0
37	SLU 19	0	-0.15	7.35	0	0	0
37	SLU 20	0	-0.15	7.42	0	0	0
37	SLU 21	0	-0.15	7.42	0	0	0
37	SLU 22	0.01	-0.14	6.92	0	0	0
37	SLU 23	0.01	-0.14	6.92	0	0	0
37	SLU 24	0.01	-0.14	7.04	0	0	0
37	SLU 25	0.01	-0.14	7.04	0	0	0
37	SLU 26	0.01	-0.13	6.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLU 27	0.01	-0.14	7.11	0	0	0
37	SLU 28	0.01	-0.13	7.11	0	0	0
37	SLU 29	0.01	-0.14	7.06	0	0	0
37	SLU 30	0.01	-0.13	7.06	0	0	0
37	SLU 31	0.01	-0.15	7.74	0	0	0
37	SLU 32	0.01	-0.15	7.86	0	0	0
37	SLU 33	0.01	-0.15	7.87	0	0	0
37	SLU 34	0.01	-0.14	7.81	0	0	0
37	SLU 35	0	-0.15	7.93	0	0	0
37	SLU 36	0	-0.14	7.93	0	0	0
37	SLU 37	0	-0.15	7.88	0	0	0
37	SLU 38	0	-0.15	7.88	0	0	0
37	SLU 39	0.01	-0.16	8.09	0	0	0
37	SLU 40	0.01	-0.15	8.09	0	0	0
37	SLU 41	0	-0.15	8.16	0	0	0
37	SLU 42	0	-0.15	8.16	0	0	0
37	SLU 43	0.01	-0.18	7.77	0	0	0
37	SLU 44	0.01	-0.18	7.78	0	0	0
37	SLU 45	0.01	-0.18	7.89	0	0	0
37	SLU 46	0.01	-0.18	7.9	0	0	0
37	SLU 47	0.01	-0.18	7.85	0	0	0
37	SLU 48	0.01	-0.18	7.96	0	0	0
37	SLU 49	0.01	-0.18	7.97	0	0	0
37	SLU 50	0.01	-0.18	7.91	0	0	0
37	SLU 51	0.01	-0.18	7.91	0	0	0
37	SLU 52	0.01	-0.19	8.6	0	0	0
37	SLU 53	0.01	-0.19	8.72	0	0	0
37	SLU 54	0.01	-0.19	8.72	0	0	0
37	SLU 55	0.01	-0.19	8.67	0	0	0
37	SLU 56	0	-0.19	8.78	0	0	0
37	SLU 57	0	-0.19	8.79	0	0	0
37	SLU 58	0	-0.19	8.73	0	0	0
37	SLU 59	0	-0.19	8.73	0	0	0
37	SLU 60	0.01	-0.2	8.94	0	0	0
37	SLU 61	0.01	-0.19	8.95	0	0	0
37	SLU 62	0	-0.2	9.01	0	0	0
37	SLU 63	0	-0.19	9.02	0	0	0
37	SLU 64	0.02	-0.18	8.52	0	0	0
37	SLU 65	0.02	-0.18	8.52	0	0	0
37	SLU 66	0.01	-0.18	8.64	0	0	0
37	SLU 67	0.01	-0.18	8.64	0	0	0
37	SLU 68	0.01	-0.18	8.59	0	0	0
37	SLU 69	0.01	-0.18	8.71	0	0	0
37	SLU 70	0.01	-0.18	8.71	0	0	0
37	SLU 71	0.01	-0.18	8.65	0	0	0
37	SLU 72	0.01	-0.18	8.66	0	0	0
37	SLU 73	0.01	-0.19	9.34	0	0	0
37	SLU 74	0.01	-0.19	9.46	0	0	0
37	SLU 75	0.01	-0.19	9.46	0	0	0
37	SLU 76	0.01	-0.19	9.41	0	0	0
37	SLU 77	0.01	-0.19	9.53	0	0	0
37	SLU 78	0.01	-0.19	9.53	0	0	0
37	SLU 79	0	-0.19	9.47	0	0	0
37	SLU 80	0.01	-0.19	9.48	0	0	0
37	SLU 81	0.01	-0.2	9.69	0	0	0
37	SLU 82	0.01	-0.19	9.69	0	0	0
37	SLU 83	0.01	-0.2	9.76	0	0	0
37	SLU 84	0.01	-0.19	9.76	0	0	0
37	SLE RA 1	0.01	-0.14	6.39	0	0	0
37	SLE RA 2	0.01	-0.14	6.39	0	0	0
37	SLE RA 3	0.01	-0.14	6.47	0	0	0
37	SLE RA 4	0.01	-0.14	6.47	0	0	0
37	SLE RA 5	0.01	-0.14	6.44	0	0	0
37	SLE RA 6	0.01	-0.14	6.52	0	0	0
37	SLE RA 7	0.01	-0.14	6.52	0	0	0
37	SLE RA 8	0.01	-0.14	6.48	0	0	0
37	SLE RA 9	0.01	-0.14	6.48	0	0	0
37	SLE RA 10	0.01	-0.14	6.94	0	0	0
37	SLE RA 11	0.01	-0.15	7.02	0	0	0
37	SLE RA 12	0.01	-0.14	7.02	0	0	0
37	SLE RA 13	0.01	-0.14	6.98	0	0	0
37	SLE RA 14	0.01	-0.15	7.06	0	0	0
37	SLE RA 15	0.01	-0.14	7.06	0	0	0
37	SLE RA 16	0	-0.15	7.03	0	0	0
37	SLE RA 17	0	-0.14	7.03	0	0	0
37	SLE RA 18	0.01	-0.15	7.17	0	0	0
37	SLE RA 19	0.01	-0.15	7.17	0	0	0
37	SLE RA 20	0.01	-0.15	7.21	0	0	0
37	SLE RA 21	0.01	-0.15	7.22	0	0	0
37	SLE FR 1	0.01	-0.14	6.39	0	0	0
37	SLE FR 2	0.01	-0.14	6.39	0	0	0
37	SLE FR 3	0.01	-0.14	6.41	0	0	0
37	SLE FR 4	0.01	-0.14	6.62	0	0	0
37	SLE FR 5	0.01	-0.14	6.64	0	0	0
37	SLE FR 6	0.01	-0.15	6.78	0	0	0
37	SLE QP 1	0.01	-0.14	6.39	0	0	0
37	SLE QP 2	0.01	-0.14	6.62	0	0	0
37	SLD 1	0.42	-0.13	6.45	0	0	0
37	SLD 2	0.44	-0.1	6.45	0	0	0
37	SLD 3	0.4	-0.25	6.4	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLD 4	0.42	-0.23	6.4	0	0	0
37	SLD 5	0.15	0.05	6.64	0	0	0
37	SLD 6	0.17	0.07	6.64	0	0	0
37	SLD 7	0.1	-0.38	6.49	0	0	0
37	SLD 8	0.11	-0.36	6.49	0	0	0
37	SLD 9	-0.09	0.07	6.76	0	0	0
37	SLD 10	-0.08	0.09	6.75	0	0	0
37	SLD 11	-0.14	-0.36	6.61	0	0	0
37	SLD 12	-0.13	-0.34	6.6	0	0	0
37	SLD 13	-0.4	-0.06	6.84	0	0	0
37	SLD 14	-0.38	-0.04	6.84	0	0	0
37	SLD 15	-0.41	-0.19	6.8	0	0	0
37	SLD 16	-0.39	-0.16	6.79	0	0	0
37	SLV 1	0.96	-0.1	6.22	0	0	0
37	SLV 2	1	-0.04	6.21	0	0	0
37	SLV 3	0.92	-0.4	6.11	0	0	0
37	SLV 4	0.97	-0.33	6.11	0	0	0
37	SLV 5	0.34	0.3	6.66	0	0	0
37	SLV 6	0.37	0.34	6.65	0	0	0
37	SLV 7	0.22	-0.67	6.31	0	0	0
37	SLV 8	0.25	-0.63	6.31	0	0	0
37	SLV 9	-0.23	0.34	6.93	0	0	0
37	SLV 10	-0.2	0.39	6.93	0	0	0
37	SLV 11	-0.35	-0.63	6.59	0	0	0
37	SLV 12	-0.32	-0.59	6.58	0	0	0
37	SLV 13	-0.94	0.04	7.14	0	0	0
37	SLV 14	-0.9	0.11	7.13	0	0	0
37	SLV 15	-0.98	-0.25	7.03	0	0	0
37	SLV 16	-0.94	-0.18	7.03	0	0	0
38	SLU 1	0	-0.18	6.16	0	0	0
38	SLU 2	0	-0.18	6.16	0	0	0
38	SLU 3	0	-0.18	6.3	0	0	0
38	SLU 4	0	-0.18	6.3	0	0	0
38	SLU 5	0	-0.18	6.25	0	0	0
38	SLU 6	0	-0.18	6.38	0	0	0
38	SLU 7	0	-0.18	6.38	0	0	0
38	SLU 8	0	-0.18	6.33	0	0	0
38	SLU 9	0	-0.18	6.33	0	0	0
38	SLU 10	0	-0.2	7.01	0	0	0
38	SLU 11	0	-0.2	7.15	0	0	0
38	SLU 12	0	-0.2	7.15	0	0	0
38	SLU 13	-0.01	-0.19	7.1	0	0	0
38	SLU 14	-0.01	-0.2	7.23	0	0	0
38	SLU 15	-0.01	-0.2	7.23	0	0	0
38	SLU 16	-0.01	-0.2	7.18	0	0	0
38	SLU 17	-0.01	-0.2	7.18	0	0	0
38	SLU 18	0	-0.21	7.38	0	0	0
38	SLU 19	0	-0.2	7.38	0	0	0
38	SLU 20	-0.01	-0.21	7.46	0	0	0
38	SLU 21	-0.01	-0.2	7.46	0	0	0
38	SLU 22	0.01	-0.19	6.91	0	0	0
38	SLU 23	0.01	-0.18	6.91	0	0	0
38	SLU 24	0	-0.19	7.05	0	0	0
38	SLU 25	0	-0.19	7.05	0	0	0
38	SLU 26	0	-0.18	7	0	0	0
38	SLU 27	0	-0.19	7.13	0	0	0
38	SLU 28	0	-0.18	7.13	0	0	0
38	SLU 29	0	-0.19	7.08	0	0	0
38	SLU 30	0	-0.18	7.08	0	0	0
38	SLU 31	0	-0.2	7.76	0	0	0
38	SLU 32	0	-0.21	7.89	0	0	0
38	SLU 33	0	-0.2	7.9	0	0	0
38	SLU 34	0	-0.2	7.85	0	0	0
38	SLU 35	-0.01	-0.21	7.98	0	0	0
38	SLU 36	-0.01	-0.2	7.98	0	0	0
38	SLU 37	-0.01	-0.21	7.93	0	0	0
38	SLU 38	-0.01	-0.2	7.93	0	0	0
38	SLU 39	0	-0.21	8.12	0	0	0
38	SLU 40	0	-0.21	8.12	0	0	0
38	SLU 41	-0.01	-0.21	8.21	0	0	0
38	SLU 42	-0.01	-0.21	8.21	0	0	0
38	SLU 43	0	-0.24	7.76	0	0	0
38	SLU 44	0	-0.23	7.76	0	0	0
38	SLU 45	0	-0.24	7.89	0	0	0
38	SLU 46	0	-0.23	7.89	0	0	0
38	SLU 47	0	-0.23	7.84	0	0	0
38	SLU 48	0	-0.24	7.98	0	0	0
38	SLU 49	0	-0.23	7.98	0	0	0
38	SLU 50	0	-0.24	7.93	0	0	0
38	SLU 51	0	-0.23	7.93	0	0	0
38	SLU 52	0	-0.25	8.61	0	0	0
38	SLU 53	0	-0.25	8.74	0	0	0
38	SLU 54	0	-0.25	8.74	0	0	0
38	SLU 55	-0.01	-0.25	8.69	0	0	0
38	SLU 56	-0.01	-0.25	8.83	0	0	0
38	SLU 57	-0.01	-0.25	8.83	0	0	0
38	SLU 58	-0.01	-0.25	8.78	0	0	0
38	SLU 59	-0.01	-0.25	8.78	0	0	0
38	SLU 60	0	-0.26	8.97	0	0	0
38	SLU 61	0	-0.26	8.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLU 62	-0.01	-0.26	9.05	0	0	0
38	SLU 63	-0.01	-0.26	9.05	0	0	0
38	SLU 64	0.01	-0.24	8.5	0	0	0
38	SLU 65	0.01	-0.24	8.5	0	0	0
38	SLU 66	0	-0.24	8.64	0	0	0
38	SLU 67	0	-0.24	8.64	0	0	0
38	SLU 68	0	-0.24	8.59	0	0	0
38	SLU 69	0	-0.24	8.72	0	0	0
38	SLU 70	0	-0.24	8.72	0	0	0
38	SLU 71	0	-0.24	8.67	0	0	0
38	SLU 72	0	-0.24	8.67	0	0	0
38	SLU 73	0	-0.25	9.35	0	0	0
38	SLU 74	0	-0.26	9.49	0	0	0
38	SLU 75	0	-0.26	9.49	0	0	0
38	SLU 76	0	-0.25	9.44	0	0	0
38	SLU 77	-0.01	-0.26	9.57	0	0	0
38	SLU 78	-0.01	-0.26	9.57	0	0	0
38	SLU 79	-0.01	-0.26	9.52	0	0	0
38	SLU 80	-0.01	-0.26	9.52	0	0	0
38	SLU 81	0	-0.27	9.72	0	0	0
38	SLU 82	0	-0.26	9.72	0	0	0
38	SLU 83	-0.01	-0.27	9.8	0	0	0
38	SLU 84	-0.01	-0.26	9.8	0	0	0
38	SLE RA 1	0	-0.19	6.38	0	0	0
38	SLE RA 2	0	-0.18	6.38	0	0	0
38	SLE RA 3	0	-0.19	6.47	0	0	0
38	SLE RA 4	0	-0.18	6.47	0	0	0
38	SLE RA 5	0	-0.18	6.43	0	0	0
38	SLE RA 6	0	-0.19	6.52	0	0	0
38	SLE RA 7	0	-0.18	6.52	0	0	0
38	SLE RA 8	0	-0.19	6.49	0	0	0
38	SLE RA 9	0	-0.18	6.49	0	0	0
38	SLE RA 10	0	-0.19	6.94	0	0	0
38	SLE RA 11	0	-0.2	7.03	0	0	0
38	SLE RA 12	0	-0.19	7.03	0	0	0
38	SLE RA 13	0	-0.19	7	0	0	0
38	SLE RA 14	0	-0.2	7.09	0	0	0
38	SLE RA 15	0	-0.19	7.09	0	0	0
38	SLE RA 16	0	-0.2	7.06	0	0	0
38	SLE RA 17	0	-0.19	7.06	0	0	0
38	SLE RA 18	0	-0.2	7.19	0	0	0
38	SLE RA 19	0	-0.2	7.19	0	0	0
38	SLE RA 20	0	-0.2	7.24	0	0	0
38	SLE RA 21	0	-0.2	7.24	0	0	0
38	SLE FR 1	0	-0.19	6.38	0	0	0
38	SLE FR 2	0	-0.19	6.38	0	0	0
38	SLE FR 3	0	-0.19	6.4	0	0	0
38	SLE FR 4	0	-0.19	6.62	0	0	0
38	SLE FR 5	0	-0.19	6.64	0	0	0
38	SLE FR 6	0	-0.19	6.78	0	0	0
38	SLE QP 1	0	-0.19	6.38	0	0	0
38	SLE QP 2	0	-0.19	6.62	0	0	0
38	SLD 1	0.41	-0.14	6.67	0	0	0
38	SLD 2	0.43	-0.14	6.68	0	0	0
38	SLD 3	0.39	-0.28	6.7	0	0	0
38	SLD 4	0.41	-0.28	6.71	0	0	0
38	SLD 5	0.15	0.03	6.58	0	0	0
38	SLD 6	0.16	0.04	6.59	0	0	0
38	SLD 7	0.09	-0.43	6.69	0	0	0
38	SLD 8	0.1	-0.43	6.7	0	0	0
38	SLD 9	-0.1	0.05	6.54	0	0	0
38	SLD 10	-0.08	0.05	6.55	0	0	0
38	SLD 11	-0.15	-0.42	6.65	0	0	0
38	SLD 12	-0.14	-0.42	6.65	0	0	0
38	SLD 13	-0.4	-0.1	6.53	0	0	0
38	SLD 14	-0.39	-0.1	6.54	0	0	0
38	SLD 15	-0.42	-0.24	6.56	0	0	0
38	SLD 16	-0.4	-0.24	6.57	0	0	0
38	SLV 1	0.95	-0.09	6.73	0	0	0
38	SLV 2	0.99	-0.08	6.75	0	0	0
38	SLV 3	0.91	-0.4	6.81	0	0	0
38	SLV 4	0.95	-0.4	6.83	0	0	0
38	SLV 5	0.34	0.32	6.54	0	0	0
38	SLV 6	0.37	0.33	6.55	0	0	0
38	SLV 7	0.21	-0.74	6.78	0	0	0
38	SLV 8	0.23	-0.73	6.8	0	0	0
38	SLV 9	-0.23	0.35	6.44	0	0	0
38	SLV 10	-0.2	0.36	6.46	0	0	0
38	SLV 11	-0.36	-0.71	6.69	0	0	0
38	SLV 12	-0.34	-0.7	6.7	0	0	0
38	SLV 13	-0.95	0.01	6.41	0	0	0
38	SLV 14	-0.91	0.02	6.43	0	0	0
38	SLV 15	-0.99	-0.3	6.49	0	0	0
38	SLV 16	-0.95	-0.3	6.51	0	0	0
39	SLU 1	0.01	-0.29	9.93	0	0	0
39	SLU 2	0.01	-0.28	9.94	0	0	0
39	SLU 3	0	-0.29	10.15	0	0	0
39	SLU 4	0	-0.28	10.15	0	0	0
39	SLU 5	0	-0.28	10.07	0	0	0
39	SLU 6	0	-0.28	10.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLU 7	0	-0.28	10.29	0	0	0
39	SLU 8	-0.01	-0.28	10.2	0	0	0
39	SLU 9	-0.01	-0.28	10.2	0	0	0
39	SLU 10	0	-0.3	11.3	0	0	0
39	SLU 11	-0.01	-0.31	11.51	0	0	0
39	SLU 12	-0.01	-0.3	11.51	0	0	0
39	SLU 13	-0.01	-0.3	11.43	0	0	0
39	SLU 14	-0.01	-0.31	11.65	0	0	0
39	SLU 15	-0.01	-0.3	11.65	0	0	0
39	SLU 16	-0.02	-0.31	11.56	0	0	0
39	SLU 17	-0.02	-0.3	11.57	0	0	0
39	SLU 18	-0.01	-0.32	11.88	0	0	0
39	SLU 19	-0.01	-0.32	11.88	0	0	0
39	SLU 20	-0.01	-0.32	12.01	0	0	0
39	SLU 21	-0.01	-0.32	12.02	0	0	0
39	SLU 22	0.01	-0.29	11.14	0	0	0
39	SLU 23	0.01	-0.28	11.14	0	0	0
39	SLU 24	0.01	-0.29	11.36	0	0	0
39	SLU 25	0.01	-0.29	11.36	0	0	0
39	SLU 26	0	-0.28	11.28	0	0	0
39	SLU 27	0	-0.29	11.49	0	0	0
39	SLU 28	0	-0.28	11.49	0	0	0
39	SLU 29	0	-0.29	11.41	0	0	0
39	SLU 30	0	-0.29	11.41	0	0	0
39	SLU 31	0	-0.31	12.51	0	0	0
39	SLU 32	0	-0.32	12.72	0	0	0
39	SLU 33	0	-0.31	12.72	0	0	0
39	SLU 34	0	-0.31	12.64	0	0	0
39	SLU 35	-0.01	-0.32	12.85	0	0	0
39	SLU 36	-0.01	-0.31	12.85	0	0	0
39	SLU 37	-0.01	-0.32	12.77	0	0	0
39	SLU 38	-0.01	-0.31	12.77	0	0	0
39	SLU 39	0	-0.33	13.09	0	0	0
39	SLU 40	0	-0.32	13.09	0	0	0
39	SLU 41	-0.01	-0.33	13.22	0	0	0
39	SLU 42	-0.01	-0.32	13.22	0	0	0
39	SLU 43	0.01	-0.37	12.5	0	0	0
39	SLU 44	0.01	-0.36	12.5	0	0	0
39	SLU 45	0	-0.37	12.72	0	0	0
39	SLU 46	0	-0.36	12.72	0	0	0
39	SLU 47	0	-0.36	12.64	0	0	0
39	SLU 48	0	-0.37	12.85	0	0	0
39	SLU 49	0	-0.36	12.85	0	0	0
39	SLU 50	-0.01	-0.37	12.77	0	0	0
39	SLU 51	-0.01	-0.36	12.77	0	0	0
39	SLU 52	0	-0.39	13.87	0	0	0
39	SLU 53	-0.01	-0.39	14.08	0	0	0
39	SLU 54	-0.01	-0.39	14.08	0	0	0
39	SLU 55	-0.01	-0.38	14	0	0	0
39	SLU 56	-0.01	-0.39	14.21	0	0	0
39	SLU 57	-0.01	-0.39	14.21	0	0	0
39	SLU 58	-0.02	-0.39	14.13	0	0	0
39	SLU 59	-0.01	-0.39	14.13	0	0	0
39	SLU 60	-0.01	-0.41	14.45	0	0	0
39	SLU 61	-0.01	-0.4	14.45	0	0	0
39	SLU 62	-0.01	-0.41	14.58	0	0	0
39	SLU 63	-0.01	-0.4	14.58	0	0	0
39	SLU 64	0.01	-0.38	13.71	0	0	0
39	SLU 65	0.01	-0.37	13.71	0	0	0
39	SLU 66	0.01	-0.38	13.92	0	0	0
39	SLU 67	0.01	-0.37	13.92	0	0	0
39	SLU 68	0	-0.37	13.84	0	0	0
39	SLU 69	0	-0.38	14.06	0	0	0
39	SLU 70	0	-0.37	14.06	0	0	0
39	SLU 71	0	-0.38	13.98	0	0	0
39	SLU 72	0	-0.37	13.98	0	0	0
39	SLU 73	0	-0.39	15.07	0	0	0
39	SLU 74	0	-0.4	15.29	0	0	0
39	SLU 75	0	-0.4	15.29	0	0	0
39	SLU 76	0	-0.39	15.21	0	0	0
39	SLU 77	-0.01	-0.4	15.42	0	0	0
39	SLU 78	-0.01	-0.39	15.42	0	0	0
39	SLU 79	-0.01	-0.4	15.34	0	0	0
39	SLU 80	-0.01	-0.39	15.34	0	0	0
39	SLU 81	0	-0.41	15.65	0	0	0
39	SLU 82	0	-0.41	15.65	0	0	0
39	SLU 83	-0.01	-0.41	15.79	0	0	0
39	SLU 84	-0.01	-0.41	15.79	0	0	0
39	SLE RA 1	0.01	-0.29	10.28	0	0	0
39	SLE RA 2	0.01	-0.28	10.28	0	0	0
39	SLE RA 3	0	-0.29	10.42	0	0	0
39	SLE RA 4	0	-0.28	10.42	0	0	0
39	SLE RA 5	0	-0.28	10.37	0	0	0
39	SLE RA 6	0	-0.29	10.51	0	0	0
39	SLE RA 7	0	-0.28	10.51	0	0	0
39	SLE RA 8	0	-0.29	10.46	0	0	0
39	SLE RA 9	0	-0.28	10.46	0	0	0
39	SLE RA 10	0	-0.3	11.19	0	0	0
39	SLE RA 11	0	-0.3	11.33	0	0	0
39	SLE RA 12	0	-0.3	11.33	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLE RA 13	0	-0.3	11.28	0	0	0
39	SLE RA 14	-0.01	-0.3	11.42	0	0	0
39	SLE RA 15	-0.01	-0.3	11.42	0	0	0
39	SLE RA 16	-0.01	-0.3	11.37	0	0	0
39	SLE RA 17	-0.01	-0.3	11.37	0	0	0
39	SLE RA 18	0	-0.31	11.58	0	0	0
39	SLE RA 19	0	-0.31	11.58	0	0	0
39	SLE RA 20	-0.01	-0.31	11.67	0	0	0
39	SLE RA 21	-0.01	-0.31	11.67	0	0	0
39	SLE FR 1	0.01	-0.29	10.28	0	0	0
39	SLE FR 2	0.01	-0.29	10.28	0	0	0
39	SLE FR 3	0.01	-0.29	10.31	0	0	0
39	SLE FR 4	0	-0.29	10.67	0	0	0
39	SLE FR 5	0	-0.3	10.7	0	0	0
39	SLE FR 6	0	-0.3	10.93	0	0	0
39	SLE QP 1	0.01	-0.29	10.28	0	0	0
39	SLE QP 2	0	-0.3	10.67	0	0	0
39	SLD 1	0.66	-0.23	10.7	0	0	0
39	SLD 2	0.69	-0.22	10.71	0	0	0
39	SLD 3	0.63	-0.45	10.73	0	0	0
39	SLD 4	0.66	-0.44	10.74	0	0	0
39	SLD 5	0.24	0.06	10.62	0	0	0
39	SLD 6	0.26	0.07	10.63	0	0	0
39	SLD 7	0.15	-0.68	10.74	0	0	0
39	SLD 8	0.16	-0.67	10.75	0	0	0
39	SLD 9	-0.15	0.08	10.59	0	0	0
39	SLD 10	-0.14	0.09	10.6	0	0	0
39	SLD 11	-0.25	-0.66	10.71	0	0	0
39	SLD 12	-0.23	-0.65	10.72	0	0	0
39	SLD 13	-0.65	-0.15	10.59	0	0	0
39	SLD 14	-0.63	-0.14	10.6	0	0	0
39	SLD 15	-0.68	-0.38	10.63	0	0	0
39	SLD 16	-0.65	-0.36	10.64	0	0	0
39	SLV 1	1.54	-0.14	10.73	0	0	0
39	SLV 2	1.6	-0.11	10.76	0	0	0
39	SLV 3	1.48	-0.65	10.82	0	0	0
39	SLV 4	1.54	-0.62	10.84	0	0	0
39	SLV 5	0.56	0.51	10.56	0	0	0
39	SLV 6	0.59	0.53	10.57	0	0	0
39	SLV 7	0.34	-1.18	10.84	0	0	0
39	SLV 8	0.37	-1.16	10.85	0	0	0
39	SLV 9	-0.37	0.57	10.48	0	0	0
39	SLV 10	-0.33	0.58	10.5	0	0	0
39	SLV 11	-0.59	-1.12	10.77	0	0	0
39	SLV 12	-0.55	-1.11	10.78	0	0	0
39	SLV 13	-1.53	0.03	10.5	0	0	0
39	SLV 14	-1.47	0.06	10.52	0	0	0
39	SLV 15	-1.59	-0.48	10.58	0	0	0
39	SLV 16	-1.53	-0.45	10.6	0	0	0
40	SLU 1	0	-0.22	7.8	0	0	0
40	SLU 2	0	-0.21	7.8	0	0	0
40	SLU 3	0	-0.22	7.97	0	0	0
40	SLU 4	0	-0.21	7.97	0	0	0
40	SLU 5	0	-0.21	7.9	0	0	0
40	SLU 6	0	-0.22	8.07	0	0	0
40	SLU 7	0	-0.21	8.07	0	0	0
40	SLU 8	0	-0.22	8.01	0	0	0
40	SLU 9	0	-0.21	8.01	0	0	0
40	SLU 10	0	-0.23	8.87	0	0	0
40	SLU 11	-0.01	-0.24	9.03	0	0	0
40	SLU 12	-0.01	-0.23	9.03	0	0	0
40	SLU 13	-0.01	-0.23	8.97	0	0	0
40	SLU 14	-0.01	-0.24	9.14	0	0	0
40	SLU 15	-0.01	-0.23	9.14	0	0	0
40	SLU 16	-0.01	-0.24	9.07	0	0	0
40	SLU 17	-0.01	-0.23	9.07	0	0	0
40	SLU 18	-0.01	-0.25	9.32	0	0	0
40	SLU 19	-0.01	-0.24	9.32	0	0	0
40	SLU 20	-0.01	-0.25	9.43	0	0	0
40	SLU 21	-0.01	-0.24	9.43	0	0	0
40	SLU 22	0.01	-0.22	8.75	0	0	0
40	SLU 23	0.01	-0.22	8.75	0	0	0
40	SLU 24	0	-0.22	8.91	0	0	0
40	SLU 25	0	-0.22	8.91	0	0	0
40	SLU 26	0	-0.22	8.85	0	0	0
40	SLU 27	0	-0.22	9.02	0	0	0
40	SLU 28	0	-0.22	9.02	0	0	0
40	SLU 29	0	-0.22	8.95	0	0	0
40	SLU 30	0	-0.22	8.95	0	0	0
40	SLU 31	0	-0.24	9.81	0	0	0
40	SLU 32	0	-0.24	9.98	0	0	0
40	SLU 33	0	-0.24	9.98	0	0	0
40	SLU 34	0	-0.23	9.92	0	0	0
40	SLU 35	-0.01	-0.24	10.08	0	0	0
40	SLU 36	-0.01	-0.24	10.08	0	0	0
40	SLU 37	-0.01	-0.24	10.02	0	0	0
40	SLU 38	-0.01	-0.24	10.02	0	0	0
40	SLU 39	0	-0.25	10.27	0	0	0
40	SLU 40	0	-0.25	10.27	0	0	0
40	SLU 41	-0.01	-0.25	10.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLU 42	-0.01	-0.25	10.37	0	0	0
40	SLU 43	0	-0.28	9.81	0	0	0
40	SLU 44	0.01	-0.28	9.82	0	0	0
40	SLU 45	0	-0.28	9.98	0	0	0
40	SLU 46	0	-0.28	9.98	0	0	0
40	SLU 47	0	-0.28	9.92	0	0	0
40	SLU 48	0	-0.28	10.09	0	0	0
40	SLU 49	0	-0.28	10.09	0	0	0
40	SLU 50	0	-0.28	10.02	0	0	0
40	SLU 51	0	-0.28	10.02	0	0	0
40	SLU 52	0	-0.3	10.88	0	0	0
40	SLU 53	-0.01	-0.3	11.05	0	0	0
40	SLU 54	-0.01	-0.3	11.05	0	0	0
40	SLU 55	-0.01	-0.29	10.99	0	0	0
40	SLU 56	-0.01	-0.3	11.15	0	0	0
40	SLU 57	-0.01	-0.3	11.15	0	0	0
40	SLU 58	-0.01	-0.3	11.09	0	0	0
40	SLU 59	-0.01	-0.3	11.09	0	0	0
40	SLU 60	-0.01	-0.31	11.34	0	0	0
40	SLU 61	-0.01	-0.31	11.34	0	0	0
40	SLU 62	-0.01	-0.31	11.44	0	0	0
40	SLU 63	-0.01	-0.31	11.44	0	0	0
40	SLU 64	0.01	-0.29	10.76	0	0	0
40	SLU 65	0.01	-0.28	10.76	0	0	0
40	SLU 66	0	-0.29	10.93	0	0	0
40	SLU 67	0	-0.28	10.93	0	0	0
40	SLU 68	0	-0.28	10.87	0	0	0
40	SLU 69	0	-0.29	11.03	0	0	0
40	SLU 70	0	-0.28	11.03	0	0	0
40	SLU 71	0	-0.29	10.97	0	0	0
40	SLU 72	0	-0.28	10.97	0	0	0
40	SLU 73	0	-0.3	11.83	0	0	0
40	SLU 74	0	-0.31	11.99	0	0	0
40	SLU 75	0	-0.3	12	0	0	0
40	SLU 76	0	-0.3	11.93	0	0	0
40	SLU 77	-0.01	-0.31	12.1	0	0	0
40	SLU 78	-0.01	-0.3	12.1	0	0	0
40	SLU 79	-0.01	-0.31	12.03	0	0	0
40	SLU 80	-0.01	-0.3	12.03	0	0	0
40	SLU 81	0	-0.32	12.28	0	0	0
40	SLU 82	0	-0.31	12.28	0	0	0
40	SLU 83	-0.01	-0.32	12.39	0	0	0
40	SLU 84	-0.01	-0.31	12.39	0	0	0
40	SLE RA 1	0.01	-0.22	8.07	0	0	0
40	SLE RA 2	0.01	-0.22	8.07	0	0	0
40	SLE RA 3	0	-0.22	8.18	0	0	0
40	SLE RA 4	0	-0.22	8.18	0	0	0
40	SLE RA 5	0	-0.22	8.14	0	0	0
40	SLE RA 6	0	-0.22	8.25	0	0	0
40	SLE RA 7	0	-0.22	8.25	0	0	0
40	SLE RA 8	0	-0.22	8.21	0	0	0
40	SLE RA 9	0	-0.22	8.21	0	0	0
40	SLE RA 10	0	-0.23	8.78	0	0	0
40	SLE RA 11	0	-0.23	8.89	0	0	0
40	SLE RA 12	0	-0.23	8.89	0	0	0
40	SLE RA 13	0	-0.23	8.85	0	0	0
40	SLE RA 14	0	-0.23	8.96	0	0	0
40	SLE RA 15	0	-0.23	8.96	0	0	0
40	SLE RA 16	-0.01	-0.23	8.92	0	0	0
40	SLE RA 17	-0.01	-0.23	8.92	0	0	0
40	SLE RA 18	0	-0.24	9.08	0	0	0
40	SLE RA 19	0	-0.24	9.09	0	0	0
40	SLE RA 20	0	-0.24	9.15	0	0	0
40	SLE RA 21	0	-0.24	9.15	0	0	0
40	SLE FR 1	0.01	-0.22	8.07	0	0	0
40	SLE FR 2	0.01	-0.22	8.07	0	0	0
40	SLE FR 3	0	-0.22	8.1	0	0	0
40	SLE FR 4	0	-0.23	8.37	0	0	0
40	SLE FR 5	0	-0.23	8.4	0	0	0
40	SLE FR 6	0	-0.23	8.58	0	0	0
40	SLE QP 1	0.01	-0.22	8.07	0	0	0
40	SLE QP 2	0	-0.23	8.37	0	0	0
40	SLD 1	0.52	-0.18	8.33	0	0	0
40	SLD 2	0.54	-0.16	8.33	0	0	0
40	SLD 3	0.5	-0.35	8.35	0	0	0
40	SLD 4	0.52	-0.34	8.36	0	0	0
40	SLD 5	0.19	0.05	8.33	0	0	0
40	SLD 6	0.2	0.06	8.33	0	0	0
40	SLD 7	0.11	-0.53	8.4	0	0	0
40	SLD 8	0.13	-0.52	8.4	0	0	0
40	SLD 9	-0.12	0.07	8.34	0	0	0
40	SLD 10	-0.11	0.08	8.35	0	0	0
40	SLD 11	-0.2	-0.51	8.42	0	0	0
40	SLD 12	-0.18	-0.5	8.42	0	0	0
40	SLD 13	-0.51	-0.12	8.39	0	0	0
40	SLD 14	-0.49	-0.1	8.4	0	0	0
40	SLD 15	-0.53	-0.29	8.41	0	0	0
40	SLD 16	-0.51	-0.28	8.42	0	0	0
40	SLV 1	1.21	-0.11	8.27	0	0	0
40	SLV 2	1.26	-0.08	8.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLV 3	1.16	-0.51	8.32	0	0	0
40	SLV 4	1.21	-0.48	8.33	0	0	0
40	SLV 5	0.44	0.4	8.26	0	0	0
40	SLV 6	0.47	0.42	8.27	0	0	0
40	SLV 7	0.26	-0.92	8.43	0	0	0
40	SLV 8	0.29	-0.9	8.44	0	0	0
40	SLV 9	-0.29	0.44	8.31	0	0	0
40	SLV 10	-0.26	0.46	8.32	0	0	0
40	SLV 11	-0.46	-0.87	8.48	0	0	0
40	SLV 12	-0.43	-0.86	8.49	0	0	0
40	SLV 13	-1.2	0.03	8.41	0	0	0
40	SLV 14	-1.16	0.06	8.43	0	0	0
40	SLV 15	-1.25	-0.37	8.47	0	0	0
40	SLV 16	-1.21	-0.34	8.48	0	0	0
41	SLU 1	0	-0.22	8.12	0	0	0
41	SLU 2	0.01	-0.21	8.12	0	0	0
41	SLU 3	0	-0.22	8.29	0	0	0
41	SLU 4	0	-0.22	8.29	0	0	0
41	SLU 5	0	-0.21	8.23	0	0	0
41	SLU 6	0	-0.22	8.4	0	0	0
41	SLU 7	0	-0.22	8.4	0	0	0
41	SLU 8	-0.01	-0.22	8.33	0	0	0
41	SLU 9	0	-0.22	8.33	0	0	0
41	SLU 10	0	-0.23	9.23	0	0	0
41	SLU 11	-0.01	-0.24	9.4	0	0	0
41	SLU 12	-0.01	-0.24	9.4	0	0	0
41	SLU 13	-0.01	-0.23	9.33	0	0	0
41	SLU 14	-0.01	-0.24	9.5	0	0	0
41	SLU 15	-0.01	-0.23	9.51	0	0	0
41	SLU 16	-0.01	-0.24	9.44	0	0	0
41	SLU 17	-0.01	-0.23	9.44	0	0	0
41	SLU 18	-0.01	-0.25	9.7	0	0	0
41	SLU 19	-0.01	-0.25	9.7	0	0	0
41	SLU 20	-0.01	-0.25	9.81	0	0	0
41	SLU 21	-0.01	-0.24	9.81	0	0	0
41	SLU 22	0.01	-0.23	9.11	0	0	0
41	SLU 23	0.01	-0.22	9.11	0	0	0
41	SLU 24	0	-0.23	9.28	0	0	0
41	SLU 25	0	-0.22	9.28	0	0	0
41	SLU 26	0	-0.22	9.21	0	0	0
41	SLU 27	0	-0.22	9.38	0	0	0
41	SLU 28	0	-0.22	9.39	0	0	0
41	SLU 29	0	-0.22	9.32	0	0	0
41	SLU 30	0	-0.22	9.32	0	0	0
41	SLU 31	0	-0.24	10.21	0	0	0
41	SLU 32	0	-0.24	10.38	0	0	0
41	SLU 33	0	-0.24	10.39	0	0	0
41	SLU 34	0	-0.24	10.32	0	0	0
41	SLU 35	-0.01	-0.24	10.49	0	0	0
41	SLU 36	-0.01	-0.24	10.49	0	0	0
41	SLU 37	-0.01	-0.24	10.42	0	0	0
41	SLU 38	-0.01	-0.24	10.42	0	0	0
41	SLU 39	0	-0.25	10.69	0	0	0
41	SLU 40	0	-0.25	10.69	0	0	0
41	SLU 41	-0.01	-0.25	10.79	0	0	0
41	SLU 42	-0.01	-0.25	10.79	0	0	0
41	SLU 43	0	-0.29	10.22	0	0	0
41	SLU 44	0.01	-0.28	10.22	0	0	0
41	SLU 45	0	-0.29	10.39	0	0	0
41	SLU 46	0	-0.28	10.39	0	0	0
41	SLU 47	0	-0.28	10.33	0	0	0
41	SLU 48	0	-0.29	10.5	0	0	0
41	SLU 49	0	-0.28	10.5	0	0	0
41	SLU 50	-0.01	-0.29	10.43	0	0	0
41	SLU 51	0	-0.28	10.43	0	0	0
41	SLU 52	0	-0.3	11.33	0	0	0
41	SLU 53	-0.01	-0.31	11.5	0	0	0
41	SLU 54	-0.01	-0.3	11.5	0	0	0
41	SLU 55	-0.01	-0.3	11.43	0	0	0
41	SLU 56	-0.01	-0.31	11.6	0	0	0
41	SLU 57	-0.01	-0.3	11.6	0	0	0
41	SLU 58	-0.01	-0.31	11.53	0	0	0
41	SLU 59	-0.01	-0.3	11.54	0	0	0
41	SLU 60	-0.01	-0.32	11.8	0	0	0
41	SLU 61	-0.01	-0.31	11.8	0	0	0
41	SLU 62	-0.01	-0.31	11.9	0	0	0
41	SLU 63	-0.01	-0.31	11.9	0	0	0
41	SLU 64	0.01	-0.29	11.2	0	0	0
41	SLU 65	0.01	-0.28	11.21	0	0	0
41	SLU 66	0	-0.29	11.38	0	0	0
41	SLU 67	0.01	-0.29	11.38	0	0	0
41	SLU 68	0	-0.28	11.31	0	0	0
41	SLU 69	0	-0.29	11.48	0	0	0
41	SLU 70	0	-0.29	11.48	0	0	0
41	SLU 71	0	-0.29	11.41	0	0	0
41	SLU 72	0	-0.29	11.42	0	0	0
41	SLU 73	0	-0.3	12.31	0	0	0
41	SLU 74	0	-0.31	12.48	0	0	0
41	SLU 75	0	-0.31	12.48	0	0	0
41	SLU 76	0	-0.3	12.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLU 77	-0.01	-0.31	12.59	0	0	0
41	SLU 78	-0.01	-0.3	12.59	0	0	0
41	SLU 79	-0.01	-0.31	12.52	0	0	0
41	SLU 80	-0.01	-0.3	12.52	0	0	0
41	SLU 81	0	-0.32	12.78	0	0	0
41	SLU 82	0	-0.31	12.79	0	0	0
41	SLU 83	-0.01	-0.32	12.89	0	0	0
41	SLU 84	-0.01	-0.31	12.89	0	0	0
41	SLE RA 1	0.01	-0.22	8.4	0	0	0
41	SLE RA 2	0.01	-0.22	8.4	0	0	0
41	SLE RA 3	0	-0.22	8.52	0	0	0
41	SLE RA 4	0	-0.22	8.52	0	0	0
41	SLE RA 5	0	-0.22	8.47	0	0	0
41	SLE RA 6	0	-0.22	8.59	0	0	0
41	SLE RA 7	0	-0.22	8.59	0	0	0
41	SLE RA 8	0	-0.22	8.54	0	0	0
41	SLE RA 9	0	-0.22	8.54	0	0	0
41	SLE RA 10	0	-0.23	9.14	0	0	0
41	SLE RA 11	0	-0.24	9.25	0	0	0
41	SLE RA 12	0	-0.23	9.26	0	0	0
41	SLE RA 13	0	-0.23	9.21	0	0	0
41	SLE RA 14	-0.01	-0.24	9.32	0	0	0
41	SLE RA 15	0	-0.23	9.33	0	0	0
41	SLE RA 16	-0.01	-0.24	9.28	0	0	0
41	SLE RA 17	-0.01	-0.23	9.28	0	0	0
41	SLE RA 18	0	-0.24	9.45	0	0	0
41	SLE RA 19	0	-0.24	9.46	0	0	0
41	SLE RA 20	-0.01	-0.24	9.52	0	0	0
41	SLE RA 21	0	-0.24	9.53	0	0	0
41	SLE FR 1	0.01	-0.22	8.4	0	0	0
41	SLE FR 2	0.01	-0.22	8.4	0	0	0
41	SLE FR 3	0	-0.22	8.43	0	0	0
41	SLE FR 4	0	-0.23	8.72	0	0	0
41	SLE FR 5	0	-0.23	8.75	0	0	0
41	SLE FR 6	0	-0.23	8.93	0	0	0
41	SLE QP 1	0.01	-0.22	8.4	0	0	0
41	SLE QP 2	0	-0.23	8.72	0	0	0
41	SLD 1	0.54	-0.18	8.65	0	0	0
41	SLD 2	0.57	-0.16	8.65	0	0	0
41	SLD 3	0.52	-0.36	8.67	0	0	0
41	SLD 4	0.54	-0.34	8.67	0	0	0
41	SLD 5	0.2	0.05	8.67	0	0	0
41	SLD 6	0.21	0.06	8.67	0	0	0
41	SLD 7	0.12	-0.54	8.73	0	0	0
41	SLD 8	0.13	-0.53	8.73	0	0	0
41	SLD 9	-0.13	0.07	8.7	0	0	0
41	SLD 10	-0.11	0.08	8.71	0	0	0
41	SLD 11	-0.2	-0.52	8.76	0	0	0
41	SLD 12	-0.19	-0.51	8.76	0	0	0
41	SLD 13	-0.54	-0.12	8.76	0	0	0
41	SLD 14	-0.51	-0.1	8.77	0	0	0
41	SLD 15	-0.56	-0.3	8.78	0	0	0
41	SLD 16	-0.54	-0.28	8.78	0	0	0
41	SLV 1	1.27	-0.12	8.56	0	0	0
41	SLV 2	1.32	-0.08	8.57	0	0	0
41	SLV 3	1.21	-0.53	8.6	0	0	0
41	SLV 4	1.26	-0.49	8.61	0	0	0
41	SLV 5	0.46	0.42	8.61	0	0	0
41	SLV 6	0.49	0.44	8.62	0	0	0
41	SLV 7	0.28	-0.95	8.74	0	0	0
41	SLV 8	0.31	-0.92	8.75	0	0	0
41	SLV 9	-0.3	0.46	8.69	0	0	0
41	SLV 10	-0.27	0.49	8.69	0	0	0
41	SLV 11	-0.48	-0.9	8.82	0	0	0
41	SLV 12	-0.45	-0.88	8.83	0	0	0
41	SLV 13	-1.26	0.03	8.82	0	0	0
41	SLV 14	-1.21	0.07	8.84	0	0	0
41	SLV 15	-1.31	-0.38	8.86	0	0	0
41	SLV 16	-1.26	-0.34	8.87	0	0	0
42	SLU 1	0	-0.22	8.2	0	0	0
42	SLU 2	0	-0.21	8.2	0	0	0
42	SLU 3	0	-0.22	8.37	0	0	0
42	SLU 4	0	-0.21	8.37	0	0	0
42	SLU 5	0	-0.21	8.3	0	0	0
42	SLU 6	0	-0.22	8.47	0	0	0
42	SLU 7	0	-0.21	8.47	0	0	0
42	SLU 8	-0.01	-0.22	8.4	0	0	0
42	SLU 9	-0.01	-0.21	8.4	0	0	0
42	SLU 10	0	-0.23	9.31	0	0	0
42	SLU 11	-0.01	-0.24	9.48	0	0	0
42	SLU 12	-0.01	-0.23	9.48	0	0	0
42	SLU 13	-0.01	-0.23	9.41	0	0	0
42	SLU 14	-0.01	-0.23	9.58	0	0	0
42	SLU 15	-0.01	-0.23	9.59	0	0	0
42	SLU 16	-0.01	-0.23	9.52	0	0	0
42	SLU 17	-0.01	-0.23	9.52	0	0	0
42	SLU 18	-0.01	-0.25	9.78	0	0	0
42	SLU 19	-0.01	-0.24	9.79	0	0	0
42	SLU 20	-0.01	-0.24	9.89	0	0	0
42	SLU 21	-0.01	-0.24	9.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLU 22	0.01	-0.22	9.19	0	0	0
42	SLU 23	0.01	-0.21	9.19	0	0	0
42	SLU 24	0	-0.22	9.36	0	0	0
42	SLU 25	0	-0.22	9.36	0	0	0
42	SLU 26	0	-0.21	9.3	0	0	0
42	SLU 27	0	-0.22	9.47	0	0	0
42	SLU 28	0	-0.21	9.47	0	0	0
42	SLU 29	0	-0.22	9.4	0	0	0
42	SLU 30	0	-0.21	9.4	0	0	0
42	SLU 31	0	-0.23	10.31	0	0	0
42	SLU 32	0	-0.24	10.48	0	0	0
42	SLU 33	0	-0.23	10.48	0	0	0
42	SLU 34	0	-0.23	10.41	0	0	0
42	SLU 35	-0.01	-0.24	10.58	0	0	0
42	SLU 36	-0.01	-0.23	10.58	0	0	0
42	SLU 37	-0.01	-0.24	10.51	0	0	0
42	SLU 38	-0.01	-0.23	10.51	0	0	0
42	SLU 39	0	-0.25	10.78	0	0	0
42	SLU 40	0	-0.24	10.78	0	0	0
42	SLU 41	-0.01	-0.25	10.88	0	0	0
42	SLU 42	-0.01	-0.24	10.89	0	0	0
42	SLU 43	0	-0.28	10.31	0	0	0
42	SLU 44	0.01	-0.28	10.32	0	0	0
42	SLU 45	0	-0.28	10.49	0	0	0
42	SLU 46	0	-0.28	10.49	0	0	0
42	SLU 47	0	-0.27	10.42	0	0	0
42	SLU 48	0	-0.28	10.59	0	0	0
42	SLU 49	0	-0.28	10.59	0	0	0
42	SLU 50	-0.01	-0.28	10.52	0	0	0
42	SLU 51	0	-0.28	10.52	0	0	0
42	SLU 52	0	-0.29	11.43	0	0	0
42	SLU 53	-0.01	-0.3	11.6	0	0	0
42	SLU 54	-0.01	-0.3	11.6	0	0	0
42	SLU 55	-0.01	-0.29	11.53	0	0	0
42	SLU 56	-0.01	-0.3	11.7	0	0	0
42	SLU 57	-0.01	-0.29	11.7	0	0	0
42	SLU 58	-0.01	-0.3	11.63	0	0	0
42	SLU 59	-0.01	-0.29	11.63	0	0	0
42	SLU 60	-0.01	-0.31	11.9	0	0	0
42	SLU 61	-0.01	-0.3	11.9	0	0	0
42	SLU 62	-0.01	-0.31	12.01	0	0	0
42	SLU 63	-0.01	-0.3	12.01	0	0	0
42	SLU 64	0.01	-0.29	11.31	0	0	0
42	SLU 65	0.01	-0.28	11.31	0	0	0
42	SLU 66	0	-0.29	11.48	0	0	0
42	SLU 67	0	-0.28	11.48	0	0	0
42	SLU 68	0	-0.28	11.41	0	0	0
42	SLU 69	0	-0.28	11.58	0	0	0
42	SLU 70	0	-0.28	11.59	0	0	0
42	SLU 71	0	-0.28	11.52	0	0	0
42	SLU 72	0	-0.28	11.52	0	0	0
42	SLU 73	0	-0.3	12.42	0	0	0
42	SLU 74	0	-0.3	12.59	0	0	0
42	SLU 75	0	-0.3	12.59	0	0	0
42	SLU 76	0	-0.3	12.53	0	0	0
42	SLU 77	-0.01	-0.3	12.7	0	0	0
42	SLU 78	-0.01	-0.3	12.7	0	0	0
42	SLU 79	-0.01	-0.3	12.63	0	0	0
42	SLU 80	-0.01	-0.3	12.63	0	0	0
42	SLU 81	0	-0.31	12.9	0	0	0
42	SLU 82	0	-0.31	12.9	0	0	0
42	SLU 83	-0.01	-0.31	13	0	0	0
42	SLU 84	-0.01	-0.31	13	0	0	0
42	SLE RA 1	0.01	-0.22	8.48	0	0	0
42	SLE RA 2	0.01	-0.21	8.48	0	0	0
42	SLE RA 3	0	-0.22	8.59	0	0	0
42	SLE RA 4	0	-0.22	8.6	0	0	0
42	SLE RA 5	0	-0.21	8.55	0	0	0
42	SLE RA 6	0	-0.22	8.66	0	0	0
42	SLE RA 7	0	-0.21	8.67	0	0	0
42	SLE RA 8	0	-0.22	8.62	0	0	0
42	SLE RA 9	0	-0.22	8.62	0	0	0
42	SLE RA 10	0	-0.23	9.22	0	0	0
42	SLE RA 11	0	-0.23	9.34	0	0	0
42	SLE RA 12	0	-0.23	9.34	0	0	0
42	SLE RA 13	0	-0.23	9.29	0	0	0
42	SLE RA 14	-0.01	-0.23	9.41	0	0	0
42	SLE RA 15	-0.01	-0.23	9.41	0	0	0
42	SLE RA 16	-0.01	-0.23	9.36	0	0	0
42	SLE RA 17	-0.01	-0.23	9.36	0	0	0
42	SLE RA 18	0	-0.24	9.54	0	0	0
42	SLE RA 19	0	-0.23	9.54	0	0	0
42	SLE RA 20	-0.01	-0.24	9.61	0	0	0
42	SLE RA 21	-0.01	-0.23	9.61	0	0	0
42	SLE FR 1	0.01	-0.22	8.48	0	0	0
42	SLE FR 2	0.01	-0.22	8.48	0	0	0
42	SLE FR 3	0	-0.22	8.51	0	0	0
42	SLE FR 4	0	-0.22	8.8	0	0	0
42	SLE FR 5	0	-0.23	8.82	0	0	0
42	SLE FR 6	0	-0.23	9.01	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLE QP 1	0.01	-0.22	8.48	0	0	0
42	SLE QP 2	0	-0.23	8.8	0	0	0
42	SLD 1	0.55	-0.18	8.71	0	0	0
42	SLD 2	0.57	-0.16	8.71	0	0	0
42	SLD 3	0.53	-0.36	8.7	0	0	0
42	SLD 4	0.55	-0.34	8.7	0	0	0
42	SLD 5	0.2	0.06	8.79	0	0	0
42	SLD 6	0.21	0.07	8.79	0	0	0
42	SLD 7	0.12	-0.54	8.74	0	0	0
42	SLD 8	0.13	-0.53	8.75	0	0	0
42	SLD 9	-0.13	0.08	8.85	0	0	0
42	SLD 10	-0.11	0.09	8.85	0	0	0
42	SLD 11	-0.21	-0.52	8.8	0	0	0
42	SLD 12	-0.19	-0.51	8.8	0	0	0
42	SLD 13	-0.54	-0.11	8.89	0	0	0
42	SLD 14	-0.52	-0.09	8.9	0	0	0
42	SLD 15	-0.57	-0.29	8.88	0	0	0
42	SLD 16	-0.54	-0.27	8.88	0	0	0
42	SLV 1	1.28	-0.13	8.59	0	0	0
42	SLV 2	1.33	-0.08	8.6	0	0	0
42	SLV 3	1.23	-0.54	8.56	0	0	0
42	SLV 4	1.28	-0.49	8.57	0	0	0
42	SLV 5	0.46	0.42	8.79	0	0	0
42	SLV 6	0.49	0.45	8.79	0	0	0
42	SLV 7	0.28	-0.95	8.68	0	0	0
42	SLV 8	0.31	-0.92	8.68	0	0	0
42	SLV 9	-0.31	0.47	8.91	0	0	0
42	SLV 10	-0.27	0.5	8.92	0	0	0
42	SLV 11	-0.49	-0.9	8.8	0	0	0
42	SLV 12	-0.46	-0.87	8.81	0	0	0
42	SLV 13	-1.27	0.04	9.03	0	0	0
42	SLV 14	-1.22	0.08	9.03	0	0	0
42	SLV 15	-1.33	-0.37	8.99	0	0	0
42	SLV 16	-1.28	-0.33	9	0	0	0
43	SLU 1	0	-0.21	8.22	0	0	0
43	SLU 2	0	-0.21	8.22	0	0	0
43	SLU 3	0	-0.21	8.39	0	0	0
43	SLU 4	0	-0.21	8.39	0	0	0
43	SLU 5	0	-0.2	8.33	0	0	0
43	SLU 6	0	-0.21	8.49	0	0	0
43	SLU 7	0	-0.21	8.5	0	0	0
43	SLU 8	-0.01	-0.21	8.42	0	0	0
43	SLU 9	-0.01	-0.21	8.43	0	0	0
43	SLU 10	0	-0.22	9.34	0	0	0
43	SLU 11	-0.01	-0.23	9.5	0	0	0
43	SLU 12	-0.01	-0.22	9.51	0	0	0
43	SLU 13	-0.01	-0.22	9.44	0	0	0
43	SLU 14	-0.01	-0.23	9.61	0	0	0
43	SLU 15	-0.01	-0.22	9.61	0	0	0
43	SLU 16	-0.01	-0.23	9.54	0	0	0
43	SLU 17	-0.01	-0.22	9.54	0	0	0
43	SLU 18	-0.01	-0.24	9.81	0	0	0
43	SLU 19	-0.01	-0.23	9.81	0	0	0
43	SLU 20	-0.01	-0.24	9.91	0	0	0
43	SLU 21	-0.01	-0.23	9.91	0	0	0
43	SLU 22	0.01	-0.22	9.22	0	0	0
43	SLU 23	0.01	-0.21	9.22	0	0	0
43	SLU 24	0	-0.21	9.39	0	0	0
43	SLU 25	0	-0.21	9.39	0	0	0
43	SLU 26	0	-0.21	9.32	0	0	0
43	SLU 27	0	-0.21	9.49	0	0	0
43	SLU 28	0	-0.21	9.49	0	0	0
43	SLU 29	0	-0.21	9.42	0	0	0
43	SLU 30	0	-0.21	9.43	0	0	0
43	SLU 31	0	-0.22	10.33	0	0	0
43	SLU 32	0	-0.23	10.5	0	0	0
43	SLU 33	0	-0.23	10.5	0	0	0
43	SLU 34	0	-0.22	10.44	0	0	0
43	SLU 35	-0.01	-0.23	10.6	0	0	0
43	SLU 36	-0.01	-0.23	10.61	0	0	0
43	SLU 37	-0.01	-0.23	10.54	0	0	0
43	SLU 38	-0.01	-0.23	10.54	0	0	0
43	SLU 39	0	-0.24	10.81	0	0	0
43	SLU 40	0	-0.24	10.81	0	0	0
43	SLU 41	-0.01	-0.24	10.91	0	0	0
43	SLU 42	-0.01	-0.23	10.91	0	0	0
43	SLU 43	0	-0.28	10.34	0	0	0
43	SLU 44	0	-0.27	10.35	0	0	0
43	SLU 45	0	-0.28	10.52	0	0	0
43	SLU 46	0	-0.27	10.52	0	0	0
43	SLU 47	0	-0.27	10.45	0	0	0
43	SLU 48	0	-0.27	10.62	0	0	0
43	SLU 49	0	-0.27	10.62	0	0	0
43	SLU 50	-0.01	-0.27	10.55	0	0	0
43	SLU 51	-0.01	-0.27	10.55	0	0	0
43	SLU 52	0	-0.29	11.46	0	0	0
43	SLU 53	-0.01	-0.29	11.63	0	0	0
43	SLU 54	-0.01	-0.29	11.63	0	0	0
43	SLU 55	-0.01	-0.28	11.56	0	0	0
43	SLU 56	-0.01	-0.29	11.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLU 57	-0.01	-0.29	11.73	0	0	0
43	SLU 58	-0.01	-0.29	11.66	0	0	0
43	SLU 59	-0.01	-0.29	11.66	0	0	0
43	SLU 60	-0.01	-0.3	11.93	0	0	0
43	SLU 61	-0.01	-0.3	11.94	0	0	0
43	SLU 62	-0.01	-0.3	12.04	0	0	0
43	SLU 63	-0.01	-0.3	12.04	0	0	0
43	SLU 64	0.01	-0.28	11.34	0	0	0
43	SLU 65	0.01	-0.27	11.35	0	0	0
43	SLU 66	0	-0.28	11.51	0	0	0
43	SLU 67	0	-0.27	11.52	0	0	0
43	SLU 68	0	-0.27	11.45	0	0	0
43	SLU 69	0	-0.28	11.62	0	0	0
43	SLU 70	0	-0.27	11.62	0	0	0
43	SLU 71	0	-0.28	11.55	0	0	0
43	SLU 72	0	-0.27	11.55	0	0	0
43	SLU 73	0	-0.29	12.46	0	0	0
43	SLU 74	0	-0.29	12.63	0	0	0
43	SLU 75	0	-0.29	12.63	0	0	0
43	SLU 76	0	-0.29	12.56	0	0	0
43	SLU 77	-0.01	-0.29	12.73	0	0	0
43	SLU 78	-0.01	-0.29	12.73	0	0	0
43	SLU 79	-0.01	-0.29	12.66	0	0	0
43	SLU 80	-0.01	-0.29	12.66	0	0	0
43	SLU 81	0	-0.3	12.93	0	0	0
43	SLU 82	0	-0.3	12.93	0	0	0
43	SLU 83	-0.01	-0.3	13.03	0	0	0
43	SLU 84	-0.01	-0.3	13.04	0	0	0
43	SLE RA 1	0.01	-0.21	8.51	0	0	0
43	SLE RA 2	0.01	-0.21	8.51	0	0	0
43	SLE RA 3	0	-0.21	8.62	0	0	0
43	SLE RA 4	0	-0.21	8.62	0	0	0
43	SLE RA 5	0	-0.21	8.58	0	0	0
43	SLE RA 6	0	-0.21	8.69	0	0	0
43	SLE RA 7	0	-0.21	8.69	0	0	0
43	SLE RA 8	0	-0.21	8.64	0	0	0
43	SLE RA 9	0	-0.21	8.64	0	0	0
43	SLE RA 10	0	-0.22	9.25	0	0	0
43	SLE RA 11	0	-0.22	9.36	0	0	0
43	SLE RA 12	0	-0.22	9.36	0	0	0
43	SLE RA 13	0	-0.22	9.32	0	0	0
43	SLE RA 14	-0.01	-0.22	9.43	0	0	0
43	SLE RA 15	-0.01	-0.22	9.43	0	0	0
43	SLE RA 16	-0.01	-0.22	9.38	0	0	0
43	SLE RA 17	-0.01	-0.22	9.38	0	0	0
43	SLE RA 18	0	-0.23	9.56	0	0	0
43	SLE RA 19	0	-0.23	9.57	0	0	0
43	SLE RA 20	-0.01	-0.23	9.63	0	0	0
43	SLE RA 21	-0.01	-0.23	9.63	0	0	0
43	SLE FR 1	0.01	-0.21	8.51	0	0	0
43	SLE FR 2	0.01	-0.21	8.51	0	0	0
43	SLE FR 3	0	-0.21	8.53	0	0	0
43	SLE FR 4	0	-0.22	8.82	0	0	0
43	SLE FR 5	0	-0.22	8.85	0	0	0
43	SLE FR 6	0	-0.22	9.04	0	0	0
43	SLE QP 1	0.01	-0.21	8.51	0	0	0
43	SLE QP 2	0	-0.22	8.82	0	0	0
43	SLD 1	0.55	-0.18	8.7	0	0	0
43	SLD 2	0.57	-0.15	8.7	0	0	0
43	SLD 3	0.53	-0.36	8.69	0	0	0
43	SLD 4	0.55	-0.33	8.69	0	0	0
43	SLD 5	0.2	0.06	8.81	0	0	0
43	SLD 6	0.21	0.08	8.81	0	0	0
43	SLD 7	0.12	-0.54	8.76	0	0	0
43	SLD 8	0.14	-0.52	8.76	0	0	0
43	SLD 9	-0.13	0.08	8.89	0	0	0
43	SLD 10	-0.12	0.1	8.89	0	0	0
43	SLD 11	-0.21	-0.51	8.84	0	0	0
43	SLD 12	-0.19	-0.5	8.84	0	0	0
43	SLD 13	-0.54	-0.11	8.96	0	0	0
43	SLD 14	-0.52	-0.08	8.96	0	0	0
43	SLD 15	-0.57	-0.28	8.94	0	0	0
43	SLD 16	-0.55	-0.26	8.95	0	0	0
43	SLV 1	1.29	-0.13	8.54	0	0	0
43	SLV 2	1.34	-0.07	8.54	0	0	0
43	SLV 3	1.24	-0.54	8.5	0	0	0
43	SLV 4	1.28	-0.48	8.5	0	0	0
43	SLV 5	0.46	0.42	8.79	0	0	0
43	SLV 6	0.5	0.45	8.8	0	0	0
43	SLV 7	0.28	-0.94	8.67	0	0	0
43	SLV 8	0.31	-0.91	8.67	0	0	0
43	SLV 9	-0.31	0.47	8.98	0	0	0
43	SLV 10	-0.27	0.5	8.98	0	0	0
43	SLV 11	-0.49	-0.89	8.85	0	0	0
43	SLV 12	-0.46	-0.86	8.85	0	0	0
43	SLV 13	-1.28	0.04	9.15	0	0	0
43	SLV 14	-1.23	0.1	9.15	0	0	0
43	SLV 15	-1.33	-0.37	9.11	0	0	0
43	SLV 16	-1.28	-0.31	9.11	0	0	0
44	SLU 1	0	-0.21	8.23	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLU 2	0	-0.2	8.23	0	0	0
44	SLU 3	0	-0.21	8.4	0	0	0
44	SLU 4	0	-0.2	8.4	0	0	0
44	SLU 5	0	-0.2	8.33	0	0	0
44	SLU 6	0	-0.2	8.5	0	0	0
44	SLU 7	0	-0.2	8.5	0	0	0
44	SLU 8	-0.01	-0.2	8.43	0	0	0
44	SLU 9	-0.01	-0.2	8.43	0	0	0
44	SLU 10	0	-0.22	9.34	0	0	0
44	SLU 11	-0.01	-0.22	9.51	0	0	0
44	SLU 12	-0.01	-0.22	9.51	0	0	0
44	SLU 13	-0.01	-0.21	9.44	0	0	0
44	SLU 14	-0.01	-0.22	9.61	0	0	0
44	SLU 15	-0.01	-0.22	9.61	0	0	0
44	SLU 16	-0.01	-0.22	9.54	0	0	0
44	SLU 17	-0.01	-0.22	9.54	0	0	0
44	SLU 18	-0.01	-0.23	9.81	0	0	0
44	SLU 19	-0.01	-0.23	9.81	0	0	0
44	SLU 20	-0.01	-0.23	9.91	0	0	0
44	SLU 21	-0.01	-0.22	9.91	0	0	0
44	SLU 22	0.01	-0.21	9.23	0	0	0
44	SLU 23	0.01	-0.2	9.23	0	0	0
44	SLU 24	0	-0.21	9.4	0	0	0
44	SLU 25	0	-0.2	9.4	0	0	0
44	SLU 26	0	-0.2	9.33	0	0	0
44	SLU 27	0	-0.21	9.5	0	0	0
44	SLU 28	0	-0.2	9.5	0	0	0
44	SLU 29	0	-0.21	9.43	0	0	0
44	SLU 30	0	-0.2	9.43	0	0	0
44	SLU 31	0	-0.22	10.34	0	0	0
44	SLU 32	0	-0.22	10.51	0	0	0
44	SLU 33	0	-0.22	10.51	0	0	0
44	SLU 34	0	-0.22	10.44	0	0	0
44	SLU 35	-0.01	-0.22	10.61	0	0	0
44	SLU 36	-0.01	-0.22	10.61	0	0	0
44	SLU 37	-0.01	-0.22	10.54	0	0	0
44	SLU 38	-0.01	-0.22	10.54	0	0	0
44	SLU 39	0	-0.23	10.81	0	0	0
44	SLU 40	0	-0.23	10.81	0	0	0
44	SLU 41	-0.01	-0.23	10.91	0	0	0
44	SLU 42	-0.01	-0.23	10.91	0	0	0
44	SLU 43	0	-0.27	10.35	0	0	0
44	SLU 44	0	-0.26	10.36	0	0	0
44	SLU 45	0	-0.27	10.52	0	0	0
44	SLU 46	0	-0.26	10.53	0	0	0
44	SLU 47	0	-0.26	10.46	0	0	0
44	SLU 48	0	-0.27	10.62	0	0	0
44	SLU 49	0	-0.26	10.63	0	0	0
44	SLU 50	-0.01	-0.27	10.55	0	0	0
44	SLU 51	-0.01	-0.26	10.55	0	0	0
44	SLU 52	0	-0.28	11.47	0	0	0
44	SLU 53	-0.01	-0.28	11.63	0	0	0
44	SLU 54	-0.01	-0.28	11.63	0	0	0
44	SLU 55	-0.01	-0.28	11.57	0	0	0
44	SLU 56	-0.01	-0.28	11.73	0	0	0
44	SLU 57	-0.01	-0.28	11.73	0	0	0
44	SLU 58	-0.01	-0.28	11.66	0	0	0
44	SLU 59	-0.01	-0.28	11.66	0	0	0
44	SLU 60	-0.01	-0.29	11.94	0	0	0
44	SLU 61	-0.01	-0.29	11.94	0	0	0
44	SLU 62	-0.01	-0.29	12.04	0	0	0
44	SLU 63	-0.01	-0.29	12.04	0	0	0
44	SLU 64	0.01	-0.27	11.35	0	0	0
44	SLU 65	0.01	-0.26	11.36	0	0	0
44	SLU 66	0	-0.27	11.52	0	0	0
44	SLU 67	0	-0.26	11.52	0	0	0
44	SLU 68	0	-0.26	11.46	0	0	0
44	SLU 69	0	-0.27	11.62	0	0	0
44	SLU 70	0	-0.26	11.62	0	0	0
44	SLU 71	0	-0.27	11.55	0	0	0
44	SLU 72	0	-0.26	11.55	0	0	0
44	SLU 73	0	-0.28	12.46	0	0	0
44	SLU 74	0	-0.29	12.63	0	0	0
44	SLU 75	0	-0.28	12.63	0	0	0
44	SLU 76	0	-0.28	12.56	0	0	0
44	SLU 77	-0.01	-0.28	12.73	0	0	0
44	SLU 78	-0.01	-0.28	12.73	0	0	0
44	SLU 79	-0.01	-0.28	12.66	0	0	0
44	SLU 80	-0.01	-0.28	12.66	0	0	0
44	SLU 81	0	-0.29	12.94	0	0	0
44	SLU 82	0	-0.29	12.94	0	0	0
44	SLU 83	-0.01	-0.29	13.04	0	0	0
44	SLU 84	-0.01	-0.29	13.04	0	0	0
44	SLE RA 1	0.01	-0.21	8.51	0	0	0
44	SLE RA 2	0.01	-0.2	8.52	0	0	0
44	SLE RA 3	0	-0.21	8.63	0	0	0
44	SLE RA 4	0	-0.2	8.63	0	0	0
44	SLE RA 5	0	-0.2	8.58	0	0	0
44	SLE RA 6	0	-0.21	8.69	0	0	0
44	SLE RA 7	0	-0.2	8.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLE RA 8	0	-0.21	8.65	0	0	0
44	SLE RA 9	0	-0.2	8.65	0	0	0
44	SLE RA 10	0	-0.21	9.25	0	0	0
44	SLE RA 11	0	-0.22	9.37	0	0	0
44	SLE RA 12	0	-0.21	9.37	0	0	0
44	SLE RA 13	0	-0.21	9.32	0	0	0
44	SLE RA 14	-0.01	-0.22	9.43	0	0	0
44	SLE RA 15	-0.01	-0.21	9.43	0	0	0
44	SLE RA 16	-0.01	-0.22	9.39	0	0	0
44	SLE RA 17	-0.01	-0.21	9.39	0	0	0
44	SLE RA 18	0	-0.22	9.57	0	0	0
44	SLE RA 19	0	-0.22	9.57	0	0	0
44	SLE RA 20	-0.01	-0.22	9.64	0	0	0
44	SLE RA 21	-0.01	-0.22	9.64	0	0	0
44	SLE FR 1	0.01	-0.21	8.51	0	0	0
44	SLE FR 2	0.01	-0.21	8.51	0	0	0
44	SLE FR 3	0	-0.21	8.54	0	0	0
44	SLE FR 4	0	-0.21	8.83	0	0	0
44	SLE FR 5	0	-0.21	8.86	0	0	0
44	SLE FR 6	0	-0.22	9.04	0	0	0
44	SLE QP 1	0.01	-0.21	8.51	0	0	0
44	SLE QP 2	0	-0.21	8.83	0	0	0
44	SLD 1	0.55	-0.18	8.67	0	0	0
44	SLD 2	0.58	-0.15	8.67	0	0	0
44	SLD 3	0.53	-0.35	8.65	0	0	0
44	SLD 4	0.55	-0.33	8.65	0	0	0
44	SLD 5	0.2	0.06	8.82	0	0	0
44	SLD 6	0.21	0.08	8.82	0	0	0
44	SLD 7	0.12	-0.53	8.74	0	0	0
44	SLD 8	0.14	-0.51	8.74	0	0	0
44	SLD 9	-0.13	0.09	8.92	0	0	0
44	SLD 10	-0.12	0.1	8.92	0	0	0
44	SLD 11	-0.21	-0.51	8.84	0	0	0
44	SLD 12	-0.19	-0.49	8.84	0	0	0
44	SLD 13	-0.55	-0.1	9.01	0	0	0
44	SLD 14	-0.52	-0.07	9.01	0	0	0
44	SLD 15	-0.57	-0.28	8.99	0	0	0
44	SLD 16	-0.55	-0.25	8.99	0	0	0
44	SLV 1	1.29	-0.13	8.46	0	0	0
44	SLV 2	1.34	-0.07	8.46	0	0	0
44	SLV 3	1.24	-0.54	8.41	0	0	0
44	SLV 4	1.29	-0.47	8.41	0	0	0
44	SLV 5	0.46	0.41	8.8	0	0	0
44	SLV 6	0.5	0.46	8.8	0	0	0
44	SLV 7	0.28	-0.93	8.63	0	0	0
44	SLV 8	0.31	-0.89	8.62	0	0	0
44	SLV 9	-0.31	0.47	9.03	0	0	0
44	SLV 10	-0.28	0.51	9.03	0	0	0
44	SLV 11	-0.49	-0.88	8.86	0	0	0
44	SLV 12	-0.46	-0.84	8.86	0	0	0
44	SLV 13	-1.28	0.05	9.25	0	0	0
44	SLV 14	-1.23	0.11	9.25	0	0	0
44	SLV 15	-1.34	-0.36	9.2	0	0	0
44	SLV 16	-1.29	-0.29	9.2	0	0	0
45	SLU 1	0.01	-0.25	10.18	0	0	0
45	SLU 2	0.01	-0.24	10.18	0	0	0
45	SLU 3	0	-0.25	10.39	0	0	0
45	SLU 4	0	-0.24	10.39	0	0	0
45	SLU 5	0	-0.24	10.31	0	0	0
45	SLU 6	-0.01	-0.24	10.51	0	0	0
45	SLU 7	0	-0.24	10.51	0	0	0
45	SLU 8	-0.01	-0.24	10.42	0	0	0
45	SLU 9	-0.01	-0.24	10.42	0	0	0
45	SLU 10	0	-0.26	11.55	0	0	0
45	SLU 11	-0.01	-0.27	11.76	0	0	0
45	SLU 12	-0.01	-0.26	11.76	0	0	0
45	SLU 13	-0.01	-0.26	11.67	0	0	0
45	SLU 14	-0.02	-0.26	11.88	0	0	0
45	SLU 15	-0.01	-0.26	11.88	0	0	0
45	SLU 16	-0.02	-0.26	11.79	0	0	0
45	SLU 17	-0.02	-0.26	11.79	0	0	0
45	SLU 18	-0.01	-0.28	12.13	0	0	0
45	SLU 19	-0.01	-0.27	12.14	0	0	0
45	SLU 20	-0.01	-0.27	12.25	0	0	0
45	SLU 21	-0.01	-0.27	12.26	0	0	0
45	SLU 22	0.01	-0.25	11.42	0	0	0
45	SLU 23	0.01	-0.24	11.42	0	0	0
45	SLU 24	0	-0.25	11.63	0	0	0
45	SLU 25	0.01	-0.24	11.63	0	0	0
45	SLU 26	0	-0.24	11.54	0	0	0
45	SLU 27	0	-0.25	11.75	0	0	0
45	SLU 28	0	-0.24	11.75	0	0	0
45	SLU 29	0	-0.25	11.66	0	0	0
45	SLU 30	0	-0.24	11.66	0	0	0
45	SLU 31	0	-0.26	12.79	0	0	0
45	SLU 32	0	-0.27	12.99	0	0	0
45	SLU 33	0	-0.26	13	0	0	0
45	SLU 34	-0.01	-0.26	12.91	0	0	0
45	SLU 35	-0.01	-0.26	13.11	0	0	0
45	SLU 36	-0.01	-0.26	13.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLU 37	-0.01	-0.27	13.03	0	0	0
45	SLU 38	-0.01	-0.26	13.03	0	0	0
45	SLU 39	0	-0.28	13.37	0	0	0
45	SLU 40	0	-0.27	13.37	0	0	0
45	SLU 41	-0.01	-0.28	13.49	0	0	0
45	SLU 42	-0.01	-0.27	13.49	0	0	0
45	SLU 43	0.01	-0.32	12.81	0	0	0
45	SLU 44	0.01	-0.31	12.81	0	0	0
45	SLU 45	0	-0.32	13.02	0	0	0
45	SLU 46	0	-0.31	13.02	0	0	0
45	SLU 47	0	-0.31	12.93	0	0	0
45	SLU 48	-0.01	-0.32	13.14	0	0	0
45	SLU 49	0	-0.31	13.14	0	0	0
45	SLU 50	-0.01	-0.32	13.05	0	0	0
45	SLU 51	-0.01	-0.31	13.05	0	0	0
45	SLU 52	0	-0.33	14.18	0	0	0
45	SLU 53	-0.01	-0.34	14.39	0	0	0
45	SLU 54	-0.01	-0.33	14.39	0	0	0
45	SLU 55	-0.01	-0.33	14.3	0	0	0
45	SLU 56	-0.01	-0.34	14.51	0	0	0
45	SLU 57	-0.01	-0.33	14.51	0	0	0
45	SLU 58	-0.02	-0.34	14.42	0	0	0
45	SLU 59	-0.02	-0.33	14.42	0	0	0
45	SLU 60	-0.01	-0.35	14.76	0	0	0
45	SLU 61	-0.01	-0.34	14.77	0	0	0
45	SLU 62	-0.01	-0.35	14.88	0	0	0
45	SLU 63	-0.01	-0.34	14.89	0	0	0
45	SLU 64	0.01	-0.32	14.05	0	0	0
45	SLU 65	0.01	-0.31	14.05	0	0	0
45	SLU 66	0	-0.32	14.26	0	0	0
45	SLU 67	0.01	-0.32	14.26	0	0	0
45	SLU 68	0	-0.31	14.17	0	0	0
45	SLU 69	0	-0.32	14.38	0	0	0
45	SLU 70	0	-0.31	14.38	0	0	0
45	SLU 71	0	-0.32	14.29	0	0	0
45	SLU 72	0	-0.31	14.29	0	0	0
45	SLU 73	0	-0.33	15.42	0	0	0
45	SLU 74	0	-0.34	15.62	0	0	0
45	SLU 75	0	-0.34	15.63	0	0	0
45	SLU 76	-0.01	-0.33	15.54	0	0	0
45	SLU 77	-0.01	-0.34	15.74	0	0	0
45	SLU 78	-0.01	-0.33	15.75	0	0	0
45	SLU 79	-0.01	-0.34	15.66	0	0	0
45	SLU 80	-0.01	-0.33	15.66	0	0	0
45	SLU 81	0	-0.35	16	0	0	0
45	SLU 82	0	-0.35	16	0	0	0
45	SLU 83	-0.01	-0.35	16.12	0	0	0
45	SLU 84	-0.01	-0.34	16.12	0	0	0
45	SLE RA 1	0.01	-0.25	10.53	0	0	0
45	SLE RA 2	0.01	-0.24	10.54	0	0	0
45	SLE RA 3	0	-0.25	10.67	0	0	0
45	SLE RA 4	0	-0.24	10.67	0	0	0
45	SLE RA 5	0	-0.24	10.62	0	0	0
45	SLE RA 6	0	-0.25	10.75	0	0	0
45	SLE RA 7	0	-0.24	10.75	0	0	0
45	SLE RA 8	0	-0.25	10.69	0	0	0
45	SLE RA 9	0	-0.24	10.7	0	0	0
45	SLE RA 10	0	-0.26	11.45	0	0	0
45	SLE RA 11	0	-0.26	11.58	0	0	0
45	SLE RA 12	0	-0.26	11.59	0	0	0
45	SLE RA 13	0	-0.25	11.53	0	0	0
45	SLE RA 14	-0.01	-0.26	11.66	0	0	0
45	SLE RA 15	-0.01	-0.25	11.67	0	0	0
45	SLE RA 16	-0.01	-0.26	11.61	0	0	0
45	SLE RA 17	-0.01	-0.26	11.61	0	0	0
45	SLE RA 18	0	-0.27	11.84	0	0	0
45	SLE RA 19	0	-0.26	11.84	0	0	0
45	SLE RA 20	-0.01	-0.27	11.92	0	0	0
45	SLE RA 21	-0.01	-0.26	11.92	0	0	0
45	SLE FR 1	0.01	-0.25	10.53	0	0	0
45	SLE FR 2	0.01	-0.25	10.53	0	0	0
45	SLE FR 3	0	-0.25	10.57	0	0	0
45	SLE FR 4	0	-0.25	10.92	0	0	0
45	SLE FR 5	0	-0.25	10.96	0	0	0
45	SLE FR 6	0	-0.26	11.18	0	0	0
45	SLE QP 1	0.01	-0.25	10.53	0	0	0
45	SLE QP 2	0	-0.25	10.92	0	0	0
45	SLD 1	0.69	-0.21	10.69	0	0	0
45	SLD 2	0.71	-0.18	10.68	0	0	0
45	SLD 3	0.66	-0.43	10.65	0	0	0
45	SLD 4	0.68	-0.39	10.65	0	0	0
45	SLD 5	0.25	0.08	10.91	0	0	0
45	SLD 6	0.27	0.11	10.91	0	0	0
45	SLD 7	0.15	-0.65	10.79	0	0	0
45	SLD 8	0.17	-0.62	10.78	0	0	0
45	SLD 9	-0.16	0.11	11.06	0	0	0
45	SLD 10	-0.14	0.14	11.06	0	0	0
45	SLD 11	-0.26	-0.62	10.94	0	0	0
45	SLD 12	-0.24	-0.59	10.94	0	0	0
45	SLD 13	-0.68	-0.12	11.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLD 14	-0.65	-0.08	11.2	0	0	0
45	SLD 15	-0.71	-0.33	11.16	0	0	0
45	SLD 16	-0.68	-0.29	11.16	0	0	0
45	SLV 1	1.6	-0.17	10.37	0	0	0
45	SLV 2	1.66	-0.08	10.36	0	0	0
45	SLV 3	1.53	-0.66	10.28	0	0	0
45	SLV 4	1.59	-0.57	10.28	0	0	0
45	SLV 5	0.58	0.51	10.89	0	0	0
45	SLV 6	0.62	0.57	10.88	0	0	0
45	SLV 7	0.35	-1.15	10.6	0	0	0
45	SLV 8	0.39	-1.09	10.6	0	0	0
45	SLV 9	-0.38	0.58	11.25	0	0	0
45	SLV 10	-0.34	0.64	11.24	0	0	0
45	SLV 11	-0.61	-1.08	10.97	0	0	0
45	SLV 12	-0.57	-1.02	10.96	0	0	0
45	SLV 13	-1.59	0.06	11.57	0	0	0
45	SLV 14	-1.53	0.15	11.56	0	0	0
45	SLV 15	-1.66	-0.43	11.49	0	0	0
45	SLV 16	-1.59	-0.34	11.48	0	0	0
46	SLU 1	0	-0.14	6.04	0	0	0
46	SLU 2	0	-0.13	6.04	0	0	0
46	SLU 3	0	-0.14	6.16	0	0	0
46	SLU 4	0	-0.14	6.16	0	0	0
46	SLU 5	0	-0.13	6.11	0	0	0
46	SLU 6	0	-0.14	6.23	0	0	0
46	SLU 7	0	-0.13	6.23	0	0	0
46	SLU 8	0	-0.14	6.18	0	0	0
46	SLU 9	0	-0.13	6.18	0	0	0
46	SLU 10	0	-0.15	6.85	0	0	0
46	SLU 11	-0.01	-0.15	6.97	0	0	0
46	SLU 12	0	-0.15	6.97	0	0	0
46	SLU 13	-0.01	-0.14	6.92	0	0	0
46	SLU 14	-0.01	-0.15	7.04	0	0	0
46	SLU 15	-0.01	-0.14	7.04	0	0	0
46	SLU 16	-0.01	-0.15	6.98	0	0	0
46	SLU 17	-0.01	-0.14	6.99	0	0	0
46	SLU 18	-0.01	-0.16	7.19	0	0	0
46	SLU 19	0	-0.15	7.19	0	0	0
46	SLU 20	-0.01	-0.15	7.26	0	0	0
46	SLU 21	-0.01	-0.15	7.26	0	0	0
46	SLU 22	0.01	-0.14	6.77	0	0	0
46	SLU 23	0.01	-0.13	6.78	0	0	0
46	SLU 24	0	-0.14	6.89	0	0	0
46	SLU 25	0	-0.14	6.9	0	0	0
46	SLU 26	0	-0.13	6.85	0	0	0
46	SLU 27	0	-0.14	6.96	0	0	0
46	SLU 28	0	-0.13	6.97	0	0	0
46	SLU 29	0	-0.14	6.91	0	0	0
46	SLU 30	0	-0.13	6.91	0	0	0
46	SLU 31	0	-0.15	7.58	0	0	0
46	SLU 32	0	-0.15	7.7	0	0	0
46	SLU 33	0	-0.15	7.7	0	0	0
46	SLU 34	0	-0.14	7.65	0	0	0
46	SLU 35	-0.01	-0.15	7.77	0	0	0
46	SLU 36	-0.01	-0.14	7.77	0	0	0
46	SLU 37	-0.01	-0.15	7.72	0	0	0
46	SLU 38	-0.01	-0.14	7.72	0	0	0
46	SLU 39	0	-0.16	7.93	0	0	0
46	SLU 40	0	-0.15	7.93	0	0	0
46	SLU 41	-0.01	-0.15	8	0	0	0
46	SLU 42	-0.01	-0.15	8	0	0	0
46	SLU 43	0	-0.18	7.6	0	0	0
46	SLU 44	0	-0.18	7.6	0	0	0
46	SLU 45	0	-0.18	7.72	0	0	0
46	SLU 46	0	-0.18	7.72	0	0	0
46	SLU 47	0	-0.18	7.67	0	0	0
46	SLU 48	0	-0.18	7.79	0	0	0
46	SLU 49	0	-0.18	7.79	0	0	0
46	SLU 50	0	-0.18	7.74	0	0	0
46	SLU 51	0	-0.18	7.74	0	0	0
46	SLU 52	0	-0.19	8.41	0	0	0
46	SLU 53	-0.01	-0.19	8.53	0	0	0
46	SLU 54	0	-0.19	8.53	0	0	0
46	SLU 55	-0.01	-0.19	8.48	0	0	0
46	SLU 56	-0.01	-0.19	8.6	0	0	0
46	SLU 57	-0.01	-0.19	8.6	0	0	0
46	SLU 58	-0.01	-0.19	8.54	0	0	0
46	SLU 59	-0.01	-0.19	8.55	0	0	0
46	SLU 60	-0.01	-0.2	8.75	0	0	0
46	SLU 61	0	-0.19	8.75	0	0	0
46	SLU 62	-0.01	-0.2	8.82	0	0	0
46	SLU 63	-0.01	-0.19	8.82	0	0	0
46	SLU 64	0.01	-0.18	8.33	0	0	0
46	SLU 65	0.01	-0.18	8.34	0	0	0
46	SLU 66	0	-0.18	8.45	0	0	0
46	SLU 67	0	-0.18	8.46	0	0	0
46	SLU 68	0	-0.18	8.41	0	0	0
46	SLU 69	0	-0.18	8.52	0	0	0
46	SLU 70	0	-0.18	8.53	0	0	0
46	SLU 71	0	-0.18	8.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLU 72	0	-0.18	8.47	0	0	0
46	SLU 73	0	-0.19	9.14	0	0	0
46	SLU 74	0	-0.19	9.26	0	0	0
46	SLU 75	0	-0.19	9.26	0	0	0
46	SLU 76	0	-0.19	9.21	0	0	0
46	SLU 77	-0.01	-0.19	9.33	0	0	0
46	SLU 78	-0.01	-0.19	9.33	0	0	0
46	SLU 79	-0.01	-0.19	9.28	0	0	0
46	SLU 80	-0.01	-0.19	9.28	0	0	0
46	SLU 81	0	-0.2	9.49	0	0	0
46	SLU 82	0	-0.19	9.49	0	0	0
46	SLU 83	-0.01	-0.2	9.56	0	0	0
46	SLU 84	-0.01	-0.19	9.56	0	0	0
46	SLE RA 1	0	-0.14	6.25	0	0	0
46	SLE RA 2	0	-0.14	6.25	0	0	0
46	SLE RA 3	0	-0.14	6.33	0	0	0
46	SLE RA 4	0	-0.14	6.33	0	0	0
46	SLE RA 5	0	-0.14	6.3	0	0	0
46	SLE RA 6	0	-0.14	6.38	0	0	0
46	SLE RA 7	0	-0.14	6.38	0	0	0
46	SLE RA 8	0	-0.14	6.34	0	0	0
46	SLE RA 9	0	-0.14	6.34	0	0	0
46	SLE RA 10	0	-0.14	6.79	0	0	0
46	SLE RA 11	0	-0.15	6.87	0	0	0
46	SLE RA 12	0	-0.14	6.87	0	0	0
46	SLE RA 13	0	-0.14	6.83	0	0	0
46	SLE RA 14	0	-0.15	6.91	0	0	0
46	SLE RA 15	0	-0.14	6.92	0	0	0
46	SLE RA 16	0	-0.15	6.88	0	0	0
46	SLE RA 17	0	-0.14	6.88	0	0	0
46	SLE RA 18	0	-0.15	7.02	0	0	0
46	SLE RA 19	0	-0.15	7.02	0	0	0
46	SLE RA 20	0	-0.15	7.06	0	0	0
46	SLE RA 21	0	-0.15	7.06	0	0	0
46	SLE FR 1	0	-0.14	6.25	0	0	0
46	SLE FR 2	0	-0.14	6.25	0	0	0
46	SLE FR 3	0	-0.14	6.27	0	0	0
46	SLE FR 4	0	-0.14	6.48	0	0	0
46	SLE FR 5	0	-0.14	6.5	0	0	0
46	SLE FR 6	0	-0.15	6.63	0	0	0
46	SLE QP 1	0	-0.14	6.25	0	0	0
46	SLE QP 2	0	-0.14	6.48	0	0	0
46	SLD 1	0.41	-0.13	6.3	0	0	0
46	SLD 2	0.43	-0.1	6.3	0	0	0
46	SLD 3	0.39	-0.25	6.27	0	0	0
46	SLD 4	0.41	-0.23	6.27	0	0	0
46	SLD 5	0.15	0.05	6.47	0	0	0
46	SLD 6	0.16	0.07	6.47	0	0	0
46	SLD 7	0.09	-0.38	6.37	0	0	0
46	SLD 8	0.1	-0.36	6.37	0	0	0
46	SLD 9	-0.1	0.07	6.59	0	0	0
46	SLD 10	-0.09	0.09	6.59	0	0	0
46	SLD 11	-0.15	-0.36	6.49	0	0	0
46	SLD 12	-0.14	-0.34	6.49	0	0	0
46	SLD 13	-0.4	-0.06	6.69	0	0	0
46	SLD 14	-0.39	-0.04	6.69	0	0	0
46	SLD 15	-0.42	-0.19	6.66	0	0	0
46	SLD 16	-0.41	-0.16	6.66	0	0	0
46	SLV 1	0.95	-0.1	6.06	0	0	0
46	SLV 2	0.99	-0.04	6.05	0	0	0
46	SLV 3	0.91	-0.39	5.99	0	0	0
46	SLV 4	0.95	-0.33	5.98	0	0	0
46	SLV 5	0.34	0.3	6.46	0	0	0
46	SLV 6	0.37	0.34	6.46	0	0	0
46	SLV 7	0.21	-0.67	6.23	0	0	0
46	SLV 8	0.23	-0.63	6.22	0	0	0
46	SLV 9	-0.23	0.34	6.74	0	0	0
46	SLV 10	-0.2	0.38	6.73	0	0	0
46	SLV 11	-0.36	-0.63	6.5	0	0	0
46	SLV 12	-0.34	-0.59	6.49	0	0	0
46	SLV 13	-0.95	0.04	6.98	0	0	0
46	SLV 14	-0.91	0.11	6.97	0	0	0
46	SLV 15	-0.99	-0.25	6.91	0	0	0
46	SLV 16	-0.95	-0.18	6.9	0	0	0
48	SLU 1	-0.01	-0.19	6.08	0	0	0
48	SLU 2	0	-0.18	6.08	0	0	0
48	SLU 3	-0.01	-0.18	6.21	0	0	0
48	SLU 4	-0.01	-0.18	6.21	0	0	0
48	SLU 5	-0.01	-0.18	6.16	0	0	0
48	SLU 6	-0.01	-0.18	6.3	0	0	0
48	SLU 7	-0.01	-0.18	6.3	0	0	0
48	SLU 8	-0.01	-0.18	6.25	0	0	0
48	SLU 9	-0.01	-0.18	6.25	0	0	0
48	SLU 10	-0.01	-0.2	6.92	0	0	0
48	SLU 11	-0.01	-0.2	7.05	0	0	0
48	SLU 12	-0.01	-0.2	7.05	0	0	0
48	SLU 13	-0.02	-0.2	7	0	0	0
48	SLU 14	-0.02	-0.2	7.14	0	0	0
48	SLU 15	-0.02	-0.2	7.14	0	0	0
48	SLU 16	-0.02	-0.2	7.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLU 17	-0.02	-0.2	7.09	0	0	0
48	SLU 18	-0.01	-0.21	7.28	0	0	0
48	SLU 19	-0.01	-0.21	7.28	0	0	0
48	SLU 20	-0.02	-0.21	7.36	0	0	0
48	SLU 21	-0.02	-0.2	7.36	0	0	0
48	SLU 22	0	-0.19	6.82	0	0	0
48	SLU 23	0	-0.18	6.82	0	0	0
48	SLU 24	-0.01	-0.19	6.95	0	0	0
48	SLU 25	-0.01	-0.19	6.95	0	0	0
48	SLU 26	-0.01	-0.18	6.91	0	0	0
48	SLU 27	-0.01	-0.19	7.04	0	0	0
48	SLU 28	-0.01	-0.19	7.04	0	0	0
48	SLU 29	-0.01	-0.19	6.99	0	0	0
48	SLU 30	-0.01	-0.19	6.99	0	0	0
48	SLU 31	-0.01	-0.2	7.66	0	0	0
48	SLU 32	-0.01	-0.21	7.79	0	0	0
48	SLU 33	-0.01	-0.2	7.79	0	0	0
48	SLU 34	-0.01	-0.2	7.74	0	0	0
48	SLU 35	-0.02	-0.21	7.88	0	0	0
48	SLU 36	-0.02	-0.2	7.88	0	0	0
48	SLU 37	-0.02	-0.21	7.83	0	0	0
48	SLU 38	-0.02	-0.2	7.83	0	0	0
48	SLU 39	-0.01	-0.21	8.02	0	0	0
48	SLU 40	-0.01	-0.21	8.02	0	0	0
48	SLU 41	-0.02	-0.21	8.1	0	0	0
48	SLU 42	-0.02	-0.21	8.1	0	0	0
48	SLU 43	-0.01	-0.24	7.65	0	0	0
48	SLU 44	-0.01	-0.23	7.65	0	0	0
48	SLU 45	-0.01	-0.24	7.78	0	0	0
48	SLU 46	-0.01	-0.23	7.78	0	0	0
48	SLU 47	-0.01	-0.23	7.73	0	0	0
48	SLU 48	-0.01	-0.24	7.87	0	0	0
48	SLU 49	-0.01	-0.23	7.87	0	0	0
48	SLU 50	-0.01	-0.24	7.82	0	0	0
48	SLU 51	-0.01	-0.23	7.82	0	0	0
48	SLU 52	-0.01	-0.25	8.49	0	0	0
48	SLU 53	-0.02	-0.26	8.62	0	0	0
48	SLU 54	-0.02	-0.25	8.62	0	0	0
48	SLU 55	-0.02	-0.25	8.57	0	0	0
48	SLU 56	-0.02	-0.26	8.71	0	0	0
48	SLU 57	-0.02	-0.25	8.71	0	0	0
48	SLU 58	-0.02	-0.26	8.66	0	0	0
48	SLU 59	-0.02	-0.25	8.66	0	0	0
48	SLU 60	-0.02	-0.26	8.85	0	0	0
48	SLU 61	-0.02	-0.26	8.85	0	0	0
48	SLU 62	-0.02	-0.26	8.93	0	0	0
48	SLU 63	-0.02	-0.26	8.93	0	0	0
48	SLU 64	-0.01	-0.24	8.39	0	0	0
48	SLU 65	0	-0.24	8.39	0	0	0
48	SLU 66	-0.01	-0.24	8.52	0	0	0
48	SLU 67	-0.01	-0.24	8.52	0	0	0
48	SLU 68	-0.01	-0.24	8.48	0	0	0
48	SLU 69	-0.01	-0.24	8.61	0	0	0
48	SLU 70	-0.01	-0.24	8.61	0	0	0
48	SLU 71	-0.01	-0.24	8.56	0	0	0
48	SLU 72	-0.01	-0.24	8.56	0	0	0
48	SLU 73	-0.01	-0.25	9.23	0	0	0
48	SLU 74	-0.02	-0.26	9.36	0	0	0
48	SLU 75	-0.01	-0.26	9.36	0	0	0
48	SLU 76	-0.02	-0.25	9.31	0	0	0
48	SLU 77	-0.02	-0.26	9.45	0	0	0
48	SLU 78	-0.02	-0.26	9.45	0	0	0
48	SLU 79	-0.02	-0.26	9.4	0	0	0
48	SLU 80	-0.02	-0.26	9.4	0	0	0
48	SLU 81	-0.02	-0.27	9.59	0	0	0
48	SLU 82	-0.01	-0.26	9.59	0	0	0
48	SLU 83	-0.02	-0.27	9.67	0	0	0
48	SLU 84	-0.02	-0.26	9.67	0	0	0
48	SLE RA 1	0	-0.19	6.29	0	0	0
48	SLE RA 2	0	-0.18	6.29	0	0	0
48	SLE RA 3	-0.01	-0.19	6.38	0	0	0
48	SLE RA 4	-0.01	-0.18	6.38	0	0	0
48	SLE RA 5	-0.01	-0.18	6.35	0	0	0
48	SLE RA 6	-0.01	-0.19	6.44	0	0	0
48	SLE RA 7	-0.01	-0.18	6.44	0	0	0
48	SLE RA 8	-0.01	-0.19	6.41	0	0	0
48	SLE RA 9	-0.01	-0.18	6.41	0	0	0
48	SLE RA 10	-0.01	-0.19	6.85	0	0	0
48	SLE RA 11	-0.01	-0.2	6.94	0	0	0
48	SLE RA 12	-0.01	-0.19	6.94	0	0	0
48	SLE RA 13	-0.01	-0.19	6.91	0	0	0
48	SLE RA 14	-0.01	-0.2	7	0	0	0
48	SLE RA 15	-0.01	-0.19	7	0	0	0
48	SLE RA 16	-0.01	-0.2	6.96	0	0	0
48	SLE RA 17	-0.01	-0.19	6.96	0	0	0
48	SLE RA 18	-0.01	-0.2	7.09	0	0	0
48	SLE RA 19	-0.01	-0.2	7.09	0	0	0
48	SLE RA 20	-0.01	-0.2	7.15	0	0	0
48	SLE RA 21	-0.01	-0.2	7.15	0	0	0
48	SLE FR 1	0	-0.19	6.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLE FR 2	0	-0.19	6.29	0	0	0
48	SLE FR 3	-0.01	-0.19	6.31	0	0	0
48	SLE FR 4	-0.01	-0.19	6.53	0	0	0
48	SLE FR 5	-0.01	-0.19	6.55	0	0	0
48	SLE FR 6	-0.01	-0.19	6.69	0	0	0
48	SLE QP 1	0	-0.19	6.29	0	0	0
48	SLE QP 2	-0.01	-0.19	6.53	0	0	0
48	SLD 1	0.4	-0.14	6.56	0	0	0
48	SLD 2	0.42	-0.14	6.56	0	0	0
48	SLD 3	0.39	-0.28	6.62	0	0	0
48	SLD 4	0.4	-0.28	6.62	0	0	0
48	SLD 5	0.14	0.03	6.45	0	0	0
48	SLD 6	0.15	0.04	6.45	0	0	0
48	SLD 7	0.08	-0.43	6.64	0	0	0
48	SLD 8	0.09	-0.43	6.64	0	0	0
48	SLD 9	-0.1	0.05	6.42	0	0	0
48	SLD 10	-0.09	0.05	6.42	0	0	0
48	SLD 11	-0.16	-0.42	6.61	0	0	0
48	SLD 12	-0.16	-0.42	6.61	0	0	0
48	SLD 13	-0.41	-0.1	6.44	0	0	0
48	SLD 14	-0.4	-0.1	6.45	0	0	0
48	SLD 15	-0.43	-0.24	6.5	0	0	0
48	SLD 16	-0.42	-0.24	6.5	0	0	0
48	SLV 1	0.95	-0.09	6.6	0	0	0
48	SLV 2	0.98	-0.08	6.61	0	0	0
48	SLV 3	0.91	-0.4	6.73	0	0	0
48	SLV 4	0.94	-0.4	6.74	0	0	0
48	SLV 5	0.34	0.32	6.35	0	0	0
48	SLV 6	0.36	0.33	6.36	0	0	0
48	SLV 7	0.2	-0.74	6.78	0	0	0
48	SLV 8	0.21	-0.73	6.79	0	0	0
48	SLV 9	-0.23	0.35	6.27	0	0	0
48	SLV 10	-0.21	0.36	6.28	0	0	0
48	SLV 11	-0.37	-0.71	6.7	0	0	0
48	SLV 12	-0.36	-0.7	6.71	0	0	0
48	SLV 13	-0.95	0.01	6.32	0	0	0
48	SLV 14	-0.92	0.02	6.33	0	0	0
48	SLV 15	-0.99	-0.31	6.45	0	0	0
48	SLV 16	-0.97	-0.3	6.46	0	0	0
49	SLU 1	-0.01	-0.29	9.93	0	0	0
49	SLU 2	-0.01	-0.28	9.93	0	0	0
49	SLU 3	-0.01	-0.29	10.15	0	0	0
49	SLU 4	-0.01	-0.28	10.15	0	0	0
49	SLU 5	-0.01	-0.28	10.07	0	0	0
49	SLU 6	-0.02	-0.29	10.29	0	0	0
49	SLU 7	-0.02	-0.28	10.29	0	0	0
49	SLU 8	-0.02	-0.29	10.21	0	0	0
49	SLU 9	-0.02	-0.28	10.21	0	0	0
49	SLU 10	-0.02	-0.31	11.3	0	0	0
49	SLU 11	-0.02	-0.32	11.52	0	0	0
49	SLU 12	-0.02	-0.31	11.52	0	0	0
49	SLU 13	-0.02	-0.31	11.44	0	0	0
49	SLU 14	-0.03	-0.32	11.65	0	0	0
49	SLU 15	-0.03	-0.31	11.65	0	0	0
49	SLU 16	-0.03	-0.32	11.57	0	0	0
49	SLU 17	-0.03	-0.31	11.57	0	0	0
49	SLU 18	-0.02	-0.33	11.88	0	0	0
49	SLU 19	-0.02	-0.32	11.88	0	0	0
49	SLU 20	-0.03	-0.33	12.02	0	0	0
49	SLU 21	-0.03	-0.32	12.02	0	0	0
49	SLU 22	-0.01	-0.3	11.15	0	0	0
49	SLU 23	0	-0.29	11.15	0	0	0
49	SLU 24	-0.01	-0.3	11.36	0	0	0
49	SLU 25	-0.01	-0.29	11.36	0	0	0
49	SLU 26	-0.01	-0.29	11.28	0	0	0
49	SLU 27	-0.02	-0.3	11.5	0	0	0
49	SLU 28	-0.02	-0.29	11.5	0	0	0
49	SLU 29	-0.02	-0.3	11.42	0	0	0
49	SLU 30	-0.02	-0.29	11.42	0	0	0
49	SLU 31	-0.02	-0.31	12.51	0	0	0
49	SLU 32	-0.02	-0.32	12.73	0	0	0
49	SLU 33	-0.02	-0.32	12.73	0	0	0
49	SLU 34	-0.02	-0.31	12.65	0	0	0
49	SLU 35	-0.03	-0.32	12.87	0	0	0
49	SLU 36	-0.03	-0.32	12.87	0	0	0
49	SLU 37	-0.03	-0.32	12.78	0	0	0
49	SLU 38	-0.03	-0.32	12.78	0	0	0
49	SLU 39	-0.02	-0.34	13.1	0	0	0
49	SLU 40	-0.02	-0.33	13.1	0	0	0
49	SLU 41	-0.03	-0.33	13.23	0	0	0
49	SLU 42	-0.03	-0.33	13.23	0	0	0
49	SLU 43	-0.01	-0.38	12.5	0	0	0
49	SLU 44	-0.01	-0.37	12.5	0	0	0
49	SLU 45	-0.02	-0.38	12.72	0	0	0
49	SLU 46	-0.02	-0.37	12.72	0	0	0
49	SLU 47	-0.02	-0.37	12.64	0	0	0
49	SLU 48	-0.02	-0.38	12.85	0	0	0
49	SLU 49	-0.02	-0.37	12.85	0	0	0
49	SLU 50	-0.02	-0.38	12.77	0	0	0
49	SLU 51	-0.02	-0.37	12.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLU 52	-0.02	-0.39	13.86	0	0	0
49	SLU 53	-0.03	-0.4	14.08	0	0	0
49	SLU 54	-0.03	-0.4	14.08	0	0	0
49	SLU 55	-0.03	-0.39	14	0	0	0
49	SLU 56	-0.03	-0.4	14.22	0	0	0
49	SLU 57	-0.03	-0.39	14.22	0	0	0
49	SLU 58	-0.04	-0.4	14.14	0	0	0
49	SLU 59	-0.03	-0.39	14.14	0	0	0
49	SLU 60	-0.03	-0.41	14.45	0	0	0
49	SLU 61	-0.03	-0.41	14.45	0	0	0
49	SLU 62	-0.03	-0.41	14.58	0	0	0
49	SLU 63	-0.03	-0.41	14.58	0	0	0
49	SLU 64	-0.01	-0.38	13.71	0	0	0
49	SLU 65	-0.01	-0.37	13.71	0	0	0
49	SLU 66	-0.01	-0.38	13.93	0	0	0
49	SLU 67	-0.01	-0.38	13.93	0	0	0
49	SLU 68	-0.01	-0.37	13.85	0	0	0
49	SLU 69	-0.02	-0.38	14.07	0	0	0
49	SLU 70	-0.02	-0.38	14.07	0	0	0
49	SLU 71	-0.02	-0.38	13.98	0	0	0
49	SLU 72	-0.02	-0.38	13.98	0	0	0
49	SLU 73	-0.02	-0.4	15.08	0	0	0
49	SLU 74	-0.02	-0.41	15.29	0	0	0
49	SLU 75	-0.02	-0.4	15.29	0	0	0
49	SLU 76	-0.03	-0.4	15.21	0	0	0
49	SLU 77	-0.03	-0.41	15.43	0	0	0
49	SLU 78	-0.03	-0.4	15.43	0	0	0
49	SLU 79	-0.03	-0.41	15.35	0	0	0
49	SLU 80	-0.03	-0.4	15.35	0	0	0
49	SLU 81	-0.02	-0.42	15.66	0	0	0
49	SLU 82	-0.02	-0.41	15.66	0	0	0
49	SLU 83	-0.03	-0.42	15.8	0	0	0
49	SLU 84	-0.03	-0.41	15.8	0	0	0
49	SLE RA 1	-0.01	-0.29	10.28	0	0	0
49	SLE RA 2	-0.01	-0.29	10.28	0	0	0
49	SLE RA 3	-0.01	-0.29	10.43	0	0	0
49	SLE RA 4	-0.01	-0.29	10.43	0	0	0
49	SLE RA 5	-0.01	-0.29	10.37	0	0	0
49	SLE RA 6	-0.01	-0.29	10.52	0	0	0
49	SLE RA 7	-0.01	-0.29	10.52	0	0	0
49	SLE RA 8	-0.02	-0.29	10.46	0	0	0
49	SLE RA 9	-0.02	-0.29	10.46	0	0	0
49	SLE RA 10	-0.01	-0.3	11.19	0	0	0
49	SLE RA 11	-0.02	-0.31	11.34	0	0	0
49	SLE RA 12	-0.02	-0.31	11.34	0	0	0
49	SLE RA 13	-0.02	-0.3	11.28	0	0	0
49	SLE RA 14	-0.02	-0.31	11.43	0	0	0
49	SLE RA 15	-0.02	-0.31	11.43	0	0	0
49	SLE RA 16	-0.02	-0.31	11.37	0	0	0
49	SLE RA 17	-0.02	-0.31	11.37	0	0	0
49	SLE RA 18	-0.02	-0.32	11.58	0	0	0
49	SLE RA 19	-0.02	-0.31	11.58	0	0	0
49	SLE RA 20	-0.02	-0.32	11.67	0	0	0
49	SLE RA 21	-0.02	-0.31	11.67	0	0	0
49	SLE FR 1	-0.01	-0.29	10.28	0	0	0
49	SLE FR 2	-0.01	-0.29	10.28	0	0	0
49	SLE FR 3	-0.01	-0.29	10.32	0	0	0
49	SLE FR 4	-0.01	-0.3	10.67	0	0	0
49	SLE FR 5	-0.01	-0.3	10.71	0	0	0
49	SLE FR 6	-0.01	-0.31	10.93	0	0	0
49	SLE QP 1	-0.01	-0.29	10.28	0	0	0
49	SLE QP 2	-0.01	-0.3	10.67	0	0	0
49	SLD 1	0.66	-0.23	10.59	0	0	0
49	SLD 2	0.68	-0.22	10.59	0	0	0
49	SLD 3	0.63	-0.46	10.66	0	0	0
49	SLD 4	0.65	-0.45	10.67	0	0	0
49	SLD 5	0.24	0.06	10.52	0	0	0
49	SLD 6	0.25	0.07	10.53	0	0	0
49	SLD 7	0.13	-0.69	10.79	0	0	0
49	SLD 8	0.14	-0.68	10.79	0	0	0
49	SLD 9	-0.16	0.08	10.55	0	0	0
49	SLD 10	-0.15	0.09	10.55	0	0	0
49	SLD 11	-0.27	-0.67	10.81	0	0	0
49	SLD 12	-0.26	-0.66	10.82	0	0	0
49	SLD 13	-0.67	-0.16	10.67	0	0	0
49	SLD 14	-0.65	-0.14	10.68	0	0	0
49	SLD 15	-0.7	-0.38	10.75	0	0	0
49	SLD 16	-0.69	-0.37	10.76	0	0	0
49	SLV 1	1.57	-0.14	10.47	0	0	0
49	SLV 2	1.61	-0.12	10.49	0	0	0
49	SLV 3	1.49	-0.66	10.65	0	0	0
49	SLV 4	1.54	-0.63	10.67	0	0	0
49	SLV 5	0.57	0.52	10.34	0	0	0
49	SLV 6	0.59	0.54	10.35	0	0	0
49	SLV 7	0.32	-1.19	10.94	0	0	0
49	SLV 8	0.35	-1.18	10.94	0	0	0
49	SLV 9	-0.37	0.57	10.4	0	0	0
49	SLV 10	-0.34	0.59	10.41	0	0	0
49	SLV 11	-0.61	-1.14	10.99	0	0	0
49	SLV 12	-0.59	-1.12	11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLV 13	-1.56	0.03	10.67	0	0	0
49	SLV 14	-1.52	0.06	10.69	0	0	0
49	SLV 15	-1.63	-0.49	10.85	0	0	0
49	SLV 16	-1.59	-0.46	10.87	0	0	0
50	SLU 1	-0.01	-0.22	7.8	0	0	0
50	SLU 2	-0.01	-0.22	7.81	0	0	0
50	SLU 3	-0.01	-0.22	7.97	0	0	0
50	SLU 4	-0.01	-0.22	7.97	0	0	0
50	SLU 5	-0.01	-0.21	7.91	0	0	0
50	SLU 6	-0.01	-0.22	8.08	0	0	0
50	SLU 7	-0.01	-0.22	8.08	0	0	0
50	SLU 8	-0.02	-0.22	8.02	0	0	0
50	SLU 9	-0.02	-0.22	8.02	0	0	0
50	SLU 10	-0.01	-0.24	8.87	0	0	0
50	SLU 11	-0.02	-0.24	9.04	0	0	0
50	SLU 12	-0.02	-0.24	9.04	0	0	0
50	SLU 13	-0.02	-0.23	8.98	0	0	0
50	SLU 14	-0.02	-0.24	9.15	0	0	0
50	SLU 15	-0.02	-0.24	9.15	0	0	0
50	SLU 16	-0.03	-0.24	9.08	0	0	0
50	SLU 17	-0.02	-0.24	9.08	0	0	0
50	SLU 18	-0.02	-0.25	9.33	0	0	0
50	SLU 19	-0.02	-0.25	9.33	0	0	0
50	SLU 20	-0.02	-0.25	9.44	0	0	0
50	SLU 21	-0.02	-0.25	9.44	0	0	0
50	SLU 22	0	-0.23	8.76	0	0	0
50	SLU 23	0	-0.22	8.76	0	0	0
50	SLU 24	-0.01	-0.23	8.93	0	0	0
50	SLU 25	-0.01	-0.22	8.93	0	0	0
50	SLU 26	-0.01	-0.22	8.86	0	0	0
50	SLU 27	-0.01	-0.23	9.03	0	0	0
50	SLU 28	-0.01	-0.22	9.03	0	0	0
50	SLU 29	-0.01	-0.23	8.97	0	0	0
50	SLU 30	-0.01	-0.22	8.97	0	0	0
50	SLU 31	-0.01	-0.24	9.83	0	0	0
50	SLU 32	-0.02	-0.25	10	0	0	0
50	SLU 33	-0.02	-0.24	10	0	0	0
50	SLU 34	-0.02	-0.24	9.93	0	0	0
50	SLU 35	-0.02	-0.25	10.1	0	0	0
50	SLU 36	-0.02	-0.24	10.1	0	0	0
50	SLU 37	-0.02	-0.25	10.04	0	0	0
50	SLU 38	-0.02	-0.24	10.04	0	0	0
50	SLU 39	-0.02	-0.26	10.29	0	0	0
50	SLU 40	-0.02	-0.25	10.29	0	0	0
50	SLU 41	-0.02	-0.26	10.39	0	0	0
50	SLU 42	-0.02	-0.25	10.39	0	0	0
50	SLU 43	-0.01	-0.29	9.82	0	0	0
50	SLU 44	-0.01	-0.28	9.82	0	0	0
50	SLU 45	-0.01	-0.29	9.99	0	0	0
50	SLU 46	-0.01	-0.28	9.99	0	0	0
50	SLU 47	-0.01	-0.28	9.93	0	0	0
50	SLU 48	-0.02	-0.29	10.09	0	0	0
50	SLU 49	-0.02	-0.28	10.09	0	0	0
50	SLU 50	-0.02	-0.29	10.03	0	0	0
50	SLU 51	-0.02	-0.28	10.03	0	0	0
50	SLU 52	-0.02	-0.3	10.89	0	0	0
50	SLU 53	-0.02	-0.31	11.06	0	0	0
50	SLU 54	-0.02	-0.3	11.06	0	0	0
50	SLU 55	-0.02	-0.3	10.99	0	0	0
50	SLU 56	-0.03	-0.31	11.16	0	0	0
50	SLU 57	-0.03	-0.3	11.16	0	0	0
50	SLU 58	-0.03	-0.31	11.1	0	0	0
50	SLU 59	-0.03	-0.3	11.1	0	0	0
50	SLU 60	-0.02	-0.32	11.35	0	0	0
50	SLU 61	-0.02	-0.31	11.35	0	0	0
50	SLU 62	-0.03	-0.32	11.45	0	0	0
50	SLU 63	-0.03	-0.31	11.45	0	0	0
50	SLU 64	-0.01	-0.29	10.77	0	0	0
50	SLU 65	-0.01	-0.29	10.77	0	0	0
50	SLU 66	-0.01	-0.29	10.94	0	0	0
50	SLU 67	-0.01	-0.29	10.94	0	0	0
50	SLU 68	-0.01	-0.29	10.88	0	0	0
50	SLU 69	-0.02	-0.29	11.05	0	0	0
50	SLU 70	-0.02	-0.29	11.05	0	0	0
50	SLU 71	-0.02	-0.29	10.98	0	0	0
50	SLU 72	-0.02	-0.29	10.98	0	0	0
50	SLU 73	-0.02	-0.31	11.84	0	0	0
50	SLU 74	-0.02	-0.31	12.01	0	0	0
50	SLU 75	-0.02	-0.31	12.01	0	0	0
50	SLU 76	-0.02	-0.3	11.95	0	0	0
50	SLU 77	-0.02	-0.31	12.12	0	0	0
50	SLU 78	-0.02	-0.31	12.12	0	0	0
50	SLU 79	-0.03	-0.31	12.05	0	0	0
50	SLU 80	-0.03	-0.31	12.05	0	0	0
50	SLU 81	-0.02	-0.32	12.3	0	0	0
50	SLU 82	-0.02	-0.32	12.3	0	0	0
50	SLU 83	-0.02	-0.32	12.41	0	0	0
50	SLU 84	-0.02	-0.32	12.41	0	0	0
50	SLE RA 1	-0.01	-0.23	8.08	0	0	0
50	SLE RA 2	-0.01	-0.22	8.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLE RA 3	-0.01	-0.22	8.19	0	0	0
50	SLE RA 4	-0.01	-0.22	8.19	0	0	0
50	SLE RA 5	-0.01	-0.22	8.15	0	0	0
50	SLE RA 6	-0.01	-0.22	8.26	0	0	0
50	SLE RA 7	-0.01	-0.22	8.26	0	0	0
50	SLE RA 8	-0.01	-0.22	8.22	0	0	0
50	SLE RA 9	-0.01	-0.22	8.22	0	0	0
50	SLE RA 10	-0.01	-0.23	8.79	0	0	0
50	SLE RA 11	-0.01	-0.24	8.9	0	0	0
50	SLE RA 12	-0.01	-0.23	8.9	0	0	0
50	SLE RA 13	-0.01	-0.23	8.86	0	0	0
50	SLE RA 14	-0.02	-0.24	8.97	0	0	0
50	SLE RA 15	-0.02	-0.23	8.97	0	0	0
50	SLE RA 16	-0.02	-0.24	8.93	0	0	0
50	SLE RA 17	-0.02	-0.23	8.93	0	0	0
50	SLE RA 18	-0.01	-0.24	9.1	0	0	0
50	SLE RA 19	-0.01	-0.24	9.1	0	0	0
50	SLE RA 20	-0.02	-0.24	9.17	0	0	0
50	SLE RA 21	-0.02	-0.24	9.17	0	0	0
50	SLE FR 1	-0.01	-0.23	8.08	0	0	0
50	SLE FR 2	-0.01	-0.22	8.08	0	0	0
50	SLE FR 3	-0.01	-0.23	8.11	0	0	0
50	SLE FR 4	-0.01	-0.23	8.38	0	0	0
50	SLE FR 5	-0.01	-0.23	8.41	0	0	0
50	SLE FR 6	-0.01	-0.23	8.59	0	0	0
50	SLE QP 1	-0.01	-0.23	8.08	0	0	0
50	SLE QP 2	-0.01	-0.23	8.38	0	0	0
50	SLD 1	0.52	-0.18	8.32	0	0	0
50	SLD 2	0.54	-0.17	8.32	0	0	0
50	SLD 3	0.5	-0.36	8.37	0	0	0
50	SLD 4	0.51	-0.34	8.38	0	0	0
50	SLD 5	0.19	0.05	8.28	0	0	0
50	SLD 6	0.2	0.06	8.28	0	0	0
50	SLD 7	0.1	-0.54	8.46	0	0	0
50	SLD 8	0.11	-0.53	8.46	0	0	0
50	SLD 9	-0.13	0.07	8.3	0	0	0
50	SLD 10	-0.12	0.08	8.3	0	0	0
50	SLD 11	-0.21	-0.52	8.48	0	0	0
50	SLD 12	-0.2	-0.51	8.49	0	0	0
50	SLD 13	-0.53	-0.12	8.39	0	0	0
50	SLD 14	-0.52	-0.11	8.39	0	0	0
50	SLD 15	-0.56	-0.3	8.44	0	0	0
50	SLD 16	-0.54	-0.28	8.45	0	0	0
50	SLV 1	1.24	-0.12	8.23	0	0	0
50	SLV 2	1.27	-0.09	8.24	0	0	0
50	SLV 3	1.18	-0.52	8.36	0	0	0
50	SLV 4	1.21	-0.49	8.37	0	0	0
50	SLV 5	0.45	0.41	8.15	0	0	0
50	SLV 6	0.47	0.43	8.15	0	0	0
50	SLV 7	0.26	-0.93	8.56	0	0	0
50	SLV 8	0.28	-0.91	8.57	0	0	0
50	SLV 9	-0.29	0.45	8.2	0	0	0
50	SLV 10	-0.27	0.47	8.2	0	0	0
50	SLV 11	-0.48	-0.89	8.61	0	0	0
50	SLV 12	-0.46	-0.87	8.62	0	0	0
50	SLV 13	-1.23	0.03	8.4	0	0	0
50	SLV 14	-1.2	0.06	8.41	0	0	0
50	SLV 15	-1.29	-0.38	8.52	0	0	0
50	SLV 16	-1.25	-0.35	8.53	0	0	0
51	SLU 1	-0.01	-0.22	7.91	0	0	0
51	SLU 2	-0.01	-0.21	7.91	0	0	0
51	SLU 3	-0.01	-0.22	8.08	0	0	0
51	SLU 4	-0.01	-0.22	8.08	0	0	0
51	SLU 5	-0.01	-0.21	8.02	0	0	0
51	SLU 6	-0.02	-0.22	8.19	0	0	0
51	SLU 7	-0.01	-0.21	8.19	0	0	0
51	SLU 8	-0.02	-0.22	8.12	0	0	0
51	SLU 9	-0.02	-0.21	8.12	0	0	0
51	SLU 10	-0.01	-0.23	8.99	0	0	0
51	SLU 11	-0.02	-0.24	9.16	0	0	0
51	SLU 12	-0.02	-0.23	9.16	0	0	0
51	SLU 13	-0.02	-0.23	9.1	0	0	0
51	SLU 14	-0.02	-0.24	9.27	0	0	0
51	SLU 15	-0.02	-0.23	9.27	0	0	0
51	SLU 16	-0.03	-0.24	9.2	0	0	0
51	SLU 17	-0.03	-0.23	9.2	0	0	0
51	SLU 18	-0.02	-0.25	9.45	0	0	0
51	SLU 19	-0.02	-0.24	9.45	0	0	0
51	SLU 20	-0.02	-0.25	9.56	0	0	0
51	SLU 21	-0.02	-0.24	9.56	0	0	0
51	SLU 22	0	-0.23	8.88	0	0	0
51	SLU 23	0	-0.22	8.88	0	0	0
51	SLU 24	-0.01	-0.22	9.05	0	0	0
51	SLU 25	-0.01	-0.22	9.05	0	0	0
51	SLU 26	-0.01	-0.22	8.98	0	0	0
51	SLU 27	-0.01	-0.22	9.15	0	0	0
51	SLU 28	-0.01	-0.22	9.15	0	0	0
51	SLU 29	-0.01	-0.22	9.09	0	0	0
51	SLU 30	-0.01	-0.22	9.09	0	0	0
51	SLU 31	-0.01	-0.24	9.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLU 32	-0.02	-0.24	10.13	0	0	0
51	SLU 33	-0.02	-0.24	10.13	0	0	0
51	SLU 34	-0.02	-0.23	10.06	0	0	0
51	SLU 35	-0.02	-0.24	10.23	0	0	0
51	SLU 36	-0.02	-0.24	10.23	0	0	0
51	SLU 37	-0.02	-0.24	10.17	0	0	0
51	SLU 38	-0.02	-0.24	10.17	0	0	0
51	SLU 39	-0.02	-0.25	10.42	0	0	0
51	SLU 40	-0.02	-0.25	10.42	0	0	0
51	SLU 41	-0.02	-0.25	10.53	0	0	0
51	SLU 42	-0.02	-0.25	10.53	0	0	0
51	SLU 43	-0.01	-0.29	9.95	0	0	0
51	SLU 44	-0.01	-0.28	9.95	0	0	0
51	SLU 45	-0.01	-0.29	10.12	0	0	0
51	SLU 46	-0.01	-0.28	10.12	0	0	0
51	SLU 47	-0.01	-0.28	10.06	0	0	0
51	SLU 48	-0.02	-0.28	10.23	0	0	0
51	SLU 49	-0.02	-0.28	10.23	0	0	0
51	SLU 50	-0.02	-0.28	10.16	0	0	0
51	SLU 51	-0.02	-0.28	10.16	0	0	0
51	SLU 52	-0.02	-0.3	11.03	0	0	0
51	SLU 53	-0.02	-0.3	11.2	0	0	0
51	SLU 54	-0.02	-0.3	11.2	0	0	0
51	SLU 55	-0.02	-0.3	11.14	0	0	0
51	SLU 56	-0.03	-0.3	11.31	0	0	0
51	SLU 57	-0.03	-0.3	11.31	0	0	0
51	SLU 58	-0.03	-0.3	11.24	0	0	0
51	SLU 59	-0.03	-0.3	11.24	0	0	0
51	SLU 60	-0.02	-0.31	11.5	0	0	0
51	SLU 61	-0.02	-0.31	11.5	0	0	0
51	SLU 62	-0.03	-0.31	11.6	0	0	0
51	SLU 63	-0.03	-0.31	11.6	0	0	0
51	SLU 64	-0.01	-0.29	10.92	0	0	0
51	SLU 65	-0.01	-0.28	10.92	0	0	0
51	SLU 66	-0.01	-0.29	11.09	0	0	0
51	SLU 67	-0.01	-0.28	11.09	0	0	0
51	SLU 68	-0.01	-0.28	11.02	0	0	0
51	SLU 69	-0.02	-0.29	11.19	0	0	0
51	SLU 70	-0.02	-0.28	11.19	0	0	0
51	SLU 71	-0.02	-0.29	11.13	0	0	0
51	SLU 72	-0.02	-0.28	11.13	0	0	0
51	SLU 73	-0.02	-0.3	12	0	0	0
51	SLU 74	-0.02	-0.31	12.17	0	0	0
51	SLU 75	-0.02	-0.3	12.17	0	0	0
51	SLU 76	-0.02	-0.3	12.11	0	0	0
51	SLU 77	-0.02	-0.31	12.27	0	0	0
51	SLU 78	-0.02	-0.3	12.28	0	0	0
51	SLU 79	-0.03	-0.31	12.21	0	0	0
51	SLU 80	-0.03	-0.3	12.21	0	0	0
51	SLU 81	-0.02	-0.32	12.46	0	0	0
51	SLU 82	-0.02	-0.31	12.46	0	0	0
51	SLU 83	-0.03	-0.32	12.57	0	0	0
51	SLU 84	-0.02	-0.31	12.57	0	0	0
51	SLE RA 1	-0.01	-0.22	8.19	0	0	0
51	SLE RA 2	-0.01	-0.22	8.19	0	0	0
51	SLE RA 3	-0.01	-0.22	8.3	0	0	0
51	SLE RA 4	-0.01	-0.22	8.3	0	0	0
51	SLE RA 5	-0.01	-0.22	8.26	0	0	0
51	SLE RA 6	-0.01	-0.22	8.37	0	0	0
51	SLE RA 7	-0.01	-0.22	8.37	0	0	0
51	SLE RA 8	-0.01	-0.22	8.33	0	0	0
51	SLE RA 9	-0.01	-0.22	8.33	0	0	0
51	SLE RA 10	-0.01	-0.23	8.91	0	0	0
51	SLE RA 11	-0.01	-0.23	9.02	0	0	0
51	SLE RA 12	-0.01	-0.23	9.02	0	0	0
51	SLE RA 13	-0.01	-0.23	8.98	0	0	0
51	SLE RA 14	-0.02	-0.23	9.09	0	0	0
51	SLE RA 15	-0.02	-0.23	9.09	0	0	0
51	SLE RA 16	-0.02	-0.23	9.05	0	0	0
51	SLE RA 17	-0.02	-0.23	9.05	0	0	0
51	SLE RA 18	-0.01	-0.24	9.22	0	0	0
51	SLE RA 19	-0.01	-0.24	9.22	0	0	0
51	SLE RA 20	-0.02	-0.24	9.29	0	0	0
51	SLE RA 21	-0.02	-0.24	9.29	0	0	0
51	SLE FR 1	-0.01	-0.22	8.19	0	0	0
51	SLE FR 2	-0.01	-0.22	8.19	0	0	0
51	SLE FR 3	-0.01	-0.22	8.21	0	0	0
51	SLE FR 4	-0.01	-0.23	8.5	0	0	0
51	SLE FR 5	-0.01	-0.23	8.52	0	0	0
51	SLE FR 6	-0.01	-0.23	8.7	0	0	0
51	SLE QP 1	-0.01	-0.22	8.19	0	0	0
51	SLE QP 2	-0.01	-0.23	8.5	0	0	0
51	SLD 1	0.53	-0.18	8.41	0	0	0
51	SLD 2	0.55	-0.16	8.41	0	0	0
51	SLD 3	0.51	-0.36	8.46	0	0	0
51	SLD 4	0.52	-0.34	8.46	0	0	0
51	SLD 5	0.19	0.05	8.39	0	0	0
51	SLD 6	0.2	0.06	8.4	0	0	0
51	SLD 7	0.11	-0.54	8.56	0	0	0
51	SLD 8	0.12	-0.53	8.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLD 9	-0.13	0.07	8.43	0	0	0
51	SLD 10	-0.12	0.08	8.43	0	0	0
51	SLD 11	-0.22	-0.52	8.6	0	0	0
51	SLD 12	-0.21	-0.51	8.6	0	0	0
51	SLD 13	-0.54	-0.11	8.53	0	0	0
51	SLD 14	-0.53	-0.1	8.53	0	0	0
51	SLD 15	-0.57	-0.29	8.58	0	0	0
51	SLD 16	-0.55	-0.28	8.58	0	0	0
51	SLV 1	1.26	-0.12	8.29	0	0	0
51	SLV 2	1.29	-0.08	8.3	0	0	0
51	SLV 3	1.2	-0.53	8.4	0	0	0
51	SLV 4	1.24	-0.49	8.41	0	0	0
51	SLV 5	0.45	0.41	8.26	0	0	0
51	SLV 6	0.48	0.44	8.27	0	0	0
51	SLV 7	0.26	-0.94	8.64	0	0	0
51	SLV 8	0.28	-0.92	8.64	0	0	0
51	SLV 9	-0.3	0.46	8.35	0	0	0
51	SLV 10	-0.28	0.48	8.35	0	0	0
51	SLV 11	-0.49	-0.89	8.72	0	0	0
51	SLV 12	-0.47	-0.87	8.73	0	0	0
51	SLV 13	-1.25	0.03	8.58	0	0	0
51	SLV 14	-1.22	0.07	8.59	0	0	0
51	SLV 15	-1.31	-0.37	8.7	0	0	0
51	SLV 16	-1.28	-0.34	8.7	0	0	0
52	SLU 1	-0.01	-0.22	7.96	0	0	0
52	SLU 2	-0.01	-0.21	7.96	0	0	0
52	SLU 3	-0.01	-0.22	8.13	0	0	0
52	SLU 4	-0.01	-0.21	8.13	0	0	0
52	SLU 5	-0.01	-0.21	8.07	0	0	0
52	SLU 6	-0.02	-0.21	8.24	0	0	0
52	SLU 7	-0.01	-0.21	8.24	0	0	0
52	SLU 8	-0.02	-0.21	8.17	0	0	0
52	SLU 9	-0.02	-0.21	8.17	0	0	0
52	SLU 10	-0.02	-0.23	9.05	0	0	0
52	SLU 11	-0.02	-0.23	9.22	0	0	0
52	SLU 12	-0.02	-0.23	9.22	0	0	0
52	SLU 13	-0.02	-0.23	9.15	0	0	0
52	SLU 14	-0.02	-0.23	9.32	0	0	0
52	SLU 15	-0.02	-0.23	9.32	0	0	0
52	SLU 16	-0.03	-0.23	9.25	0	0	0
52	SLU 17	-0.03	-0.23	9.25	0	0	0
52	SLU 18	-0.02	-0.24	9.51	0	0	0
52	SLU 19	-0.02	-0.24	9.51	0	0	0
52	SLU 20	-0.02	-0.24	9.61	0	0	0
52	SLU 21	-0.02	-0.24	9.62	0	0	0
52	SLU 22	0	-0.22	8.94	0	0	0
52	SLU 23	0	-0.21	8.94	0	0	0
52	SLU 24	-0.01	-0.22	9.11	0	0	0
52	SLU 25	-0.01	-0.21	9.11	0	0	0
52	SLU 26	-0.01	-0.21	9.04	0	0	0
52	SLU 27	-0.01	-0.22	9.21	0	0	0
52	SLU 28	-0.01	-0.21	9.21	0	0	0
52	SLU 29	-0.01	-0.22	9.14	0	0	0
52	SLU 30	-0.01	-0.21	9.14	0	0	0
52	SLU 31	-0.01	-0.23	10.02	0	0	0
52	SLU 32	-0.02	-0.24	10.19	0	0	0
52	SLU 33	-0.02	-0.23	10.19	0	0	0
52	SLU 34	-0.02	-0.23	10.12	0	0	0
52	SLU 35	-0.02	-0.24	10.29	0	0	0
52	SLU 36	-0.02	-0.23	10.29	0	0	0
52	SLU 37	-0.02	-0.24	10.23	0	0	0
52	SLU 38	-0.02	-0.23	10.23	0	0	0
52	SLU 39	-0.02	-0.25	10.49	0	0	0
52	SLU 40	-0.02	-0.24	10.49	0	0	0
52	SLU 41	-0.02	-0.25	10.59	0	0	0
52	SLU 42	-0.02	-0.24	10.59	0	0	0
52	SLU 43	-0.01	-0.28	10.02	0	0	0
52	SLU 44	-0.01	-0.27	10.02	0	0	0
52	SLU 45	-0.01	-0.28	10.19	0	0	0
52	SLU 46	-0.01	-0.28	10.19	0	0	0
52	SLU 47	-0.01	-0.27	10.12	0	0	0
52	SLU 48	-0.02	-0.28	10.29	0	0	0
52	SLU 49	-0.02	-0.27	10.29	0	0	0
52	SLU 50	-0.02	-0.28	10.22	0	0	0
52	SLU 51	-0.02	-0.27	10.22	0	0	0
52	SLU 52	-0.02	-0.29	11.1	0	0	0
52	SLU 53	-0.02	-0.3	11.27	0	0	0
52	SLU 54	-0.02	-0.29	11.27	0	0	0
52	SLU 55	-0.02	-0.29	11.21	0	0	0
52	SLU 56	-0.03	-0.3	11.37	0	0	0
52	SLU 57	-0.03	-0.29	11.38	0	0	0
52	SLU 58	-0.03	-0.3	11.31	0	0	0
52	SLU 59	-0.03	-0.29	11.31	0	0	0
52	SLU 60	-0.02	-0.31	11.57	0	0	0
52	SLU 61	-0.02	-0.3	11.57	0	0	0
52	SLU 62	-0.03	-0.31	11.67	0	0	0
52	SLU 63	-0.03	-0.3	11.67	0	0	0
52	SLU 64	-0.01	-0.28	10.99	0	0	0
52	SLU 65	-0.01	-0.28	10.99	0	0	0
52	SLU 66	-0.01	-0.28	11.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLU 67	-0.01	-0.28	11.16	0	0	0
52	SLU 68	-0.01	-0.27	11.1	0	0	0
52	SLU 69	-0.02	-0.28	11.26	0	0	0
52	SLU 70	-0.02	-0.28	11.26	0	0	0
52	SLU 71	-0.02	-0.28	11.2	0	0	0
52	SLU 72	-0.02	-0.28	11.2	0	0	0
52	SLU 73	-0.02	-0.29	12.08	0	0	0
52	SLU 74	-0.02	-0.3	12.25	0	0	0
52	SLU 75	-0.02	-0.3	12.25	0	0	0
52	SLU 76	-0.02	-0.29	12.18	0	0	0
52	SLU 77	-0.03	-0.3	12.35	0	0	0
52	SLU 78	-0.02	-0.29	12.35	0	0	0
52	SLU 79	-0.03	-0.3	12.28	0	0	0
52	SLU 80	-0.03	-0.3	12.28	0	0	0
52	SLU 81	-0.02	-0.31	12.54	0	0	0
52	SLU 82	-0.02	-0.31	12.54	0	0	0
52	SLU 83	-0.03	-0.31	12.64	0	0	0
52	SLU 84	-0.02	-0.3	12.64	0	0	0
52	SLE RA 1	-0.01	-0.22	8.24	0	0	0
52	SLE RA 2	-0.01	-0.21	8.24	0	0	0
52	SLE RA 3	-0.01	-0.22	8.35	0	0	0
52	SLE RA 4	-0.01	-0.21	8.35	0	0	0
52	SLE RA 5	-0.01	-0.21	8.31	0	0	0
52	SLE RA 6	-0.01	-0.22	8.42	0	0	0
52	SLE RA 7	-0.01	-0.21	8.42	0	0	0
52	SLE RA 8	-0.01	-0.22	8.38	0	0	0
52	SLE RA 9	-0.01	-0.21	8.38	0	0	0
52	SLE RA 10	-0.01	-0.22	8.96	0	0	0
52	SLE RA 11	-0.01	-0.23	9.08	0	0	0
52	SLE RA 12	-0.01	-0.23	9.08	0	0	0
52	SLE RA 13	-0.02	-0.22	9.03	0	0	0
52	SLE RA 14	-0.02	-0.23	9.15	0	0	0
52	SLE RA 15	-0.02	-0.23	9.15	0	0	0
52	SLE RA 16	-0.02	-0.23	9.1	0	0	0
52	SLE RA 17	-0.02	-0.23	9.1	0	0	0
52	SLE RA 18	-0.01	-0.24	9.27	0	0	0
52	SLE RA 19	-0.01	-0.23	9.27	0	0	0
52	SLE RA 20	-0.02	-0.23	9.34	0	0	0
52	SLE RA 21	-0.02	-0.23	9.34	0	0	0
52	SLE FR 1	-0.01	-0.22	8.24	0	0	0
52	SLE FR 2	-0.01	-0.22	8.24	0	0	0
52	SLE FR 3	-0.01	-0.22	8.27	0	0	0
52	SLE FR 4	-0.01	-0.22	8.55	0	0	0
52	SLE FR 5	-0.01	-0.22	8.58	0	0	0
52	SLE FR 6	-0.01	-0.23	8.76	0	0	0
52	SLE QP 1	-0.01	-0.22	8.24	0	0	0
52	SLE QP 2	-0.01	-0.22	8.55	0	0	0
52	SLD 1	0.54	-0.18	8.43	0	0	0
52	SLD 2	0.55	-0.16	8.43	0	0	0
52	SLD 3	0.51	-0.36	8.47	0	0	0
52	SLD 4	0.53	-0.34	8.48	0	0	0
52	SLD 5	0.19	0.06	8.45	0	0	0
52	SLD 6	0.2	0.07	8.45	0	0	0
52	SLD 7	0.11	-0.54	8.59	0	0	0
52	SLD 8	0.12	-0.52	8.59	0	0	0
52	SLD 9	-0.13	0.08	8.51	0	0	0
52	SLD 10	-0.12	0.09	8.51	0	0	0
52	SLD 11	-0.22	-0.52	8.65	0	0	0
52	SLD 12	-0.21	-0.5	8.65	0	0	0
52	SLD 13	-0.55	-0.11	8.62	0	0	0
52	SLD 14	-0.53	-0.09	8.63	0	0	0
52	SLD 15	-0.57	-0.29	8.67	0	0	0
52	SLD 16	-0.56	-0.27	8.67	0	0	0
52	SLV 1	1.27	-0.12	8.27	0	0	0
52	SLV 2	1.31	-0.08	8.28	0	0	0
52	SLV 3	1.21	-0.53	8.37	0	0	0
52	SLV 4	1.25	-0.48	8.37	0	0	0
52	SLV 5	0.46	0.41	8.32	0	0	0
52	SLV 6	0.48	0.44	8.32	0	0	0
52	SLV 7	0.26	-0.94	8.65	0	0	0
52	SLV 8	0.29	-0.91	8.65	0	0	0
52	SLV 9	-0.3	0.46	8.45	0	0	0
52	SLV 10	-0.28	0.49	8.45	0	0	0
52	SLV 11	-0.5	-0.89	8.78	0	0	0
52	SLV 12	-0.48	-0.86	8.78	0	0	0
52	SLV 13	-1.27	0.04	8.73	0	0	0
52	SLV 14	-1.23	0.08	8.73	0	0	0
52	SLV 15	-1.33	-0.37	8.83	0	0	0
52	SLV 16	-1.29	-0.32	8.83	0	0	0
53	SLU 1	-0.01	-0.21	7.98	0	0	0
53	SLU 2	-0.01	-0.2	7.98	0	0	0
53	SLU 3	-0.01	-0.21	8.15	0	0	0
53	SLU 4	-0.01	-0.21	8.15	0	0	0
53	SLU 5	-0.01	-0.2	8.09	0	0	0
53	SLU 6	-0.02	-0.21	8.25	0	0	0
53	SLU 7	-0.02	-0.2	8.25	0	0	0
53	SLU 8	-0.02	-0.21	8.19	0	0	0
53	SLU 9	-0.02	-0.2	8.19	0	0	0
53	SLU 10	-0.02	-0.22	9.07	0	0	0
53	SLU 11	-0.02	-0.23	9.24	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLU 12	-0.02	-0.22	9.24	0	0	0
53	SLU 13	-0.02	-0.22	9.17	0	0	0
53	SLU 14	-0.02	-0.23	9.34	0	0	0
53	SLU 15	-0.02	-0.22	9.34	0	0	0
53	SLU 16	-0.03	-0.23	9.27	0	0	0
53	SLU 17	-0.03	-0.22	9.27	0	0	0
53	SLU 18	-0.02	-0.24	9.53	0	0	0
53	SLU 19	-0.02	-0.23	9.53	0	0	0
53	SLU 20	-0.02	-0.24	9.63	0	0	0
53	SLU 21	-0.02	-0.23	9.63	0	0	0
53	SLU 22	0	-0.21	8.96	0	0	0
53	SLU 23	0	-0.21	8.96	0	0	0
53	SLU 24	-0.01	-0.21	9.13	0	0	0
53	SLU 25	-0.01	-0.21	9.13	0	0	0
53	SLU 26	-0.01	-0.2	9.06	0	0	0
53	SLU 27	-0.01	-0.21	9.23	0	0	0
53	SLU 28	-0.01	-0.21	9.23	0	0	0
53	SLU 29	-0.01	-0.21	9.16	0	0	0
53	SLU 30	-0.01	-0.21	9.16	0	0	0
53	SLU 31	-0.01	-0.22	10.05	0	0	0
53	SLU 32	-0.02	-0.23	10.21	0	0	0
53	SLU 33	-0.02	-0.22	10.21	0	0	0
53	SLU 34	-0.02	-0.22	10.15	0	0	0
53	SLU 35	-0.02	-0.23	10.31	0	0	0
53	SLU 36	-0.02	-0.22	10.32	0	0	0
53	SLU 37	-0.02	-0.23	10.25	0	0	0
53	SLU 38	-0.02	-0.22	10.25	0	0	0
53	SLU 39	-0.02	-0.24	10.51	0	0	0
53	SLU 40	-0.02	-0.23	10.51	0	0	0
53	SLU 41	-0.02	-0.24	10.61	0	0	0
53	SLU 42	-0.02	-0.23	10.61	0	0	0
53	SLU 43	-0.01	-0.27	10.04	0	0	0
53	SLU 44	-0.01	-0.27	10.04	0	0	0
53	SLU 45	-0.01	-0.27	10.21	0	0	0
53	SLU 46	-0.01	-0.27	10.21	0	0	0
53	SLU 47	-0.01	-0.26	10.15	0	0	0
53	SLU 48	-0.02	-0.27	10.31	0	0	0
53	SLU 49	-0.02	-0.27	10.31	0	0	0
53	SLU 50	-0.02	-0.27	10.25	0	0	0
53	SLU 51	-0.02	-0.27	10.25	0	0	0
53	SLU 52	-0.02	-0.28	11.13	0	0	0
53	SLU 53	-0.02	-0.29	11.3	0	0	0
53	SLU 54	-0.02	-0.29	11.3	0	0	0
53	SLU 55	-0.02	-0.28	11.23	0	0	0
53	SLU 56	-0.03	-0.29	11.4	0	0	0
53	SLU 57	-0.03	-0.28	11.4	0	0	0
53	SLU 58	-0.03	-0.29	11.33	0	0	0
53	SLU 59	-0.03	-0.28	11.33	0	0	0
53	SLU 60	-0.02	-0.3	11.59	0	0	0
53	SLU 61	-0.02	-0.29	11.59	0	0	0
53	SLU 62	-0.03	-0.3	11.69	0	0	0
53	SLU 63	-0.03	-0.29	11.69	0	0	0
53	SLU 64	-0.01	-0.28	11.02	0	0	0
53	SLU 65	-0.01	-0.27	11.02	0	0	0
53	SLU 66	-0.01	-0.28	11.19	0	0	0
53	SLU 67	-0.01	-0.27	11.19	0	0	0
53	SLU 68	-0.01	-0.27	11.12	0	0	0
53	SLU 69	-0.02	-0.27	11.29	0	0	0
53	SLU 70	-0.02	-0.27	11.29	0	0	0
53	SLU 71	-0.02	-0.27	11.22	0	0	0
53	SLU 72	-0.02	-0.27	11.22	0	0	0
53	SLU 73	-0.02	-0.29	12.1	0	0	0
53	SLU 74	-0.02	-0.29	12.27	0	0	0
53	SLU 75	-0.02	-0.29	12.27	0	0	0
53	SLU 76	-0.02	-0.28	12.21	0	0	0
53	SLU 77	-0.03	-0.29	12.37	0	0	0
53	SLU 78	-0.02	-0.29	12.37	0	0	0
53	SLU 79	-0.03	-0.29	12.31	0	0	0
53	SLU 80	-0.03	-0.29	12.31	0	0	0
53	SLU 81	-0.02	-0.3	12.57	0	0	0
53	SLU 82	-0.02	-0.3	12.57	0	0	0
53	SLU 83	-0.03	-0.3	12.67	0	0	0
53	SLU 84	-0.03	-0.3	12.67	0	0	0
53	SLE RA 1	-0.01	-0.21	8.26	0	0	0
53	SLE RA 2	-0.01	-0.21	8.26	0	0	0
53	SLE RA 3	-0.01	-0.21	8.37	0	0	0
53	SLE RA 4	-0.01	-0.21	8.37	0	0	0
53	SLE RA 5	-0.01	-0.21	8.33	0	0	0
53	SLE RA 6	-0.01	-0.21	8.44	0	0	0
53	SLE RA 7	-0.01	-0.21	8.44	0	0	0
53	SLE RA 8	-0.01	-0.21	8.4	0	0	0
53	SLE RA 9	-0.01	-0.21	8.4	0	0	0
53	SLE RA 10	-0.01	-0.22	8.99	0	0	0
53	SLE RA 11	-0.01	-0.22	9.1	0	0	0
53	SLE RA 12	-0.01	-0.22	9.1	0	0	0
53	SLE RA 13	-0.02	-0.22	9.05	0	0	0
53	SLE RA 14	-0.02	-0.22	9.16	0	0	0
53	SLE RA 15	-0.02	-0.22	9.17	0	0	0
53	SLE RA 16	-0.02	-0.22	9.12	0	0	0
53	SLE RA 17	-0.02	-0.22	9.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLE RA 18	-0.01	-0.23	9.29	0	0	0
53	SLE RA 19	-0.01	-0.23	9.29	0	0	0
53	SLE RA 20	-0.02	-0.23	9.36	0	0	0
53	SLE RA 21	-0.02	-0.22	9.36	0	0	0
53	SLE FR 1	-0.01	-0.21	8.26	0	0	0
53	SLE FR 2	-0.01	-0.21	8.26	0	0	0
53	SLE FR 3	-0.01	-0.21	8.29	0	0	0
53	SLE FR 4	-0.01	-0.22	8.57	0	0	0
53	SLE FR 5	-0.01	-0.22	8.6	0	0	0
53	SLE FR 6	-0.01	-0.22	8.78	0	0	0
53	SLE QP 1	-0.01	-0.21	8.26	0	0	0
53	SLE QP 2	-0.01	-0.22	8.57	0	0	0
53	SLD 1	0.54	-0.18	8.42	0	0	0
53	SLD 2	0.56	-0.15	8.42	0	0	0
53	SLD 3	0.52	-0.35	8.46	0	0	0
53	SLD 4	0.53	-0.33	8.46	0	0	0
53	SLD 5	0.19	0.06	8.47	0	0	0
53	SLD 6	0.2	0.08	8.47	0	0	0
53	SLD 7	0.11	-0.53	8.6	0	0	0
53	SLD 8	0.12	-0.52	8.6	0	0	0
53	SLD 9	-0.13	0.08	8.55	0	0	0
53	SLD 10	-0.12	0.1	8.54	0	0	0
53	SLD 11	-0.22	-0.51	8.68	0	0	0
53	SLD 12	-0.21	-0.49	8.68	0	0	0
53	SLD 13	-0.55	-0.1	8.68	0	0	0
53	SLD 14	-0.53	-0.08	8.68	0	0	0
53	SLD 15	-0.58	-0.28	8.72	0	0	0
53	SLD 16	-0.56	-0.26	8.72	0	0	0
53	SLV 1	1.28	-0.13	8.22	0	0	0
53	SLV 2	1.32	-0.07	8.21	0	0	0
53	SLV 3	1.22	-0.53	8.31	0	0	0
53	SLV 4	1.26	-0.48	8.31	0	0	0
53	SLV 5	0.46	0.41	8.33	0	0	0
53	SLV 6	0.48	0.45	8.33	0	0	0
53	SLV 7	0.26	-0.93	8.63	0	0	0
53	SLV 8	0.29	-0.9	8.63	0	0	0
53	SLV 9	-0.3	0.46	8.51	0	0	0
53	SLV 10	-0.28	0.5	8.51	0	0	0
53	SLV 11	-0.5	-0.88	8.82	0	0	0
53	SLV 12	-0.48	-0.85	8.82	0	0	0
53	SLV 13	-1.27	0.04	8.84	0	0	0
53	SLV 14	-1.24	0.1	8.84	0	0	0
53	SLV 15	-1.33	-0.36	8.93	0	0	0
53	SLV 16	-1.3	-0.31	8.93	0	0	0
54	SLU 1	-0.01	-0.21	7.99	0	0	0
54	SLU 2	-0.01	-0.2	7.99	0	0	0
54	SLU 3	-0.01	-0.2	8.16	0	0	0
54	SLU 4	-0.01	-0.2	8.16	0	0	0
54	SLU 5	-0.01	-0.2	8.09	0	0	0
54	SLU 6	-0.02	-0.2	8.25	0	0	0
54	SLU 7	-0.02	-0.2	8.26	0	0	0
54	SLU 8	-0.02	-0.2	8.19	0	0	0
54	SLU 9	-0.02	-0.2	8.19	0	0	0
54	SLU 10	-0.02	-0.21	9.07	0	0	0
54	SLU 11	-0.02	-0.22	9.24	0	0	0
54	SLU 12	-0.02	-0.22	9.24	0	0	0
54	SLU 13	-0.02	-0.21	9.17	0	0	0
54	SLU 14	-0.02	-0.22	9.34	0	0	0
54	SLU 15	-0.02	-0.21	9.34	0	0	0
54	SLU 16	-0.03	-0.22	9.27	0	0	0
54	SLU 17	-0.03	-0.21	9.27	0	0	0
54	SLU 18	-0.02	-0.23	9.53	0	0	0
54	SLU 19	-0.02	-0.22	9.53	0	0	0
54	SLU 20	-0.03	-0.23	9.63	0	0	0
54	SLU 21	-0.02	-0.22	9.63	0	0	0
54	SLU 22	0	-0.21	8.97	0	0	0
54	SLU 23	0	-0.2	8.97	0	0	0
54	SLU 24	-0.01	-0.21	9.13	0	0	0
54	SLU 25	-0.01	-0.2	9.13	0	0	0
54	SLU 26	-0.01	-0.2	9.07	0	0	0
54	SLU 27	-0.01	-0.2	9.23	0	0	0
54	SLU 28	-0.01	-0.2	9.23	0	0	0
54	SLU 29	-0.01	-0.2	9.17	0	0	0
54	SLU 30	-0.01	-0.2	9.17	0	0	0
54	SLU 31	-0.01	-0.22	10.05	0	0	0
54	SLU 32	-0.02	-0.22	10.22	0	0	0
54	SLU 33	-0.02	-0.22	10.22	0	0	0
54	SLU 34	-0.02	-0.21	10.15	0	0	0
54	SLU 35	-0.02	-0.22	10.32	0	0	0
54	SLU 36	-0.02	-0.22	10.32	0	0	0
54	SLU 37	-0.02	-0.22	10.25	0	0	0
54	SLU 38	-0.02	-0.22	10.25	0	0	0
54	SLU 39	-0.02	-0.23	10.51	0	0	0
54	SLU 40	-0.02	-0.23	10.51	0	0	0
54	SLU 41	-0.02	-0.23	10.61	0	0	0
54	SLU 42	-0.02	-0.22	10.61	0	0	0
54	SLU 43	-0.01	-0.27	10.05	0	0	0
54	SLU 44	-0.01	-0.26	10.05	0	0	0
54	SLU 45	-0.01	-0.27	10.22	0	0	0
54	SLU 46	-0.01	-0.26	10.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLU 47	-0.01	-0.26	10.15	0	0	0
54	SLU 48	-0.02	-0.26	10.32	0	0	0
54	SLU 49	-0.02	-0.26	10.32	0	0	0
54	SLU 50	-0.02	-0.26	10.25	0	0	0
54	SLU 51	-0.02	-0.26	10.25	0	0	0
54	SLU 52	-0.02	-0.28	11.13	0	0	0
54	SLU 53	-0.02	-0.28	11.3	0	0	0
54	SLU 54	-0.02	-0.28	11.3	0	0	0
54	SLU 55	-0.02	-0.27	11.23	0	0	0
54	SLU 56	-0.03	-0.28	11.4	0	0	0
54	SLU 57	-0.03	-0.28	11.4	0	0	0
54	SLU 58	-0.03	-0.28	11.33	0	0	0
54	SLU 59	-0.03	-0.28	11.33	0	0	0
54	SLU 60	-0.02	-0.29	11.59	0	0	0
54	SLU 61	-0.02	-0.29	11.6	0	0	0
54	SLU 62	-0.03	-0.29	11.69	0	0	0
54	SLU 63	-0.03	-0.28	11.7	0	0	0
54	SLU 64	-0.01	-0.27	11.03	0	0	0
54	SLU 65	-0.01	-0.26	11.03	0	0	0
54	SLU 66	-0.01	-0.27	11.19	0	0	0
54	SLU 67	-0.01	-0.26	11.2	0	0	0
54	SLU 68	-0.01	-0.26	11.13	0	0	0
54	SLU 69	-0.02	-0.27	11.29	0	0	0
54	SLU 70	-0.02	-0.26	11.3	0	0	0
54	SLU 71	-0.02	-0.27	11.23	0	0	0
54	SLU 72	-0.02	-0.26	11.23	0	0	0
54	SLU 73	-0.02	-0.28	12.11	0	0	0
54	SLU 74	-0.02	-0.28	12.28	0	0	0
54	SLU 75	-0.02	-0.28	12.28	0	0	0
54	SLU 76	-0.02	-0.28	12.21	0	0	0
54	SLU 77	-0.03	-0.28	12.38	0	0	0
54	SLU 78	-0.02	-0.28	12.38	0	0	0
54	SLU 79	-0.03	-0.28	12.31	0	0	0
54	SLU 80	-0.03	-0.28	12.31	0	0	0
54	SLU 81	-0.02	-0.29	12.57	0	0	0
54	SLU 82	-0.02	-0.29	12.57	0	0	0
54	SLU 83	-0.03	-0.29	12.67	0	0	0
54	SLU 84	-0.03	-0.29	12.67	0	0	0
54	SLE RA 1	-0.01	-0.21	8.27	0	0	0
54	SLE RA 2	-0.01	-0.2	8.27	0	0	0
54	SLE RA 3	-0.01	-0.21	8.38	0	0	0
54	SLE RA 4	-0.01	-0.2	8.38	0	0	0
54	SLE RA 5	-0.01	-0.2	8.33	0	0	0
54	SLE RA 6	-0.01	-0.2	8.45	0	0	0
54	SLE RA 7	-0.01	-0.2	8.45	0	0	0
54	SLE RA 8	-0.01	-0.2	8.4	0	0	0
54	SLE RA 9	-0.01	-0.2	8.4	0	0	0
54	SLE RA 10	-0.01	-0.21	8.99	0	0	0
54	SLE RA 11	-0.01	-0.22	9.1	0	0	0
54	SLE RA 12	-0.01	-0.21	9.1	0	0	0
54	SLE RA 13	-0.02	-0.21	9.06	0	0	0
54	SLE RA 14	-0.02	-0.22	9.17	0	0	0
54	SLE RA 15	-0.02	-0.21	9.17	0	0	0
54	SLE RA 16	-0.02	-0.22	9.12	0	0	0
54	SLE RA 17	-0.02	-0.21	9.12	0	0	0
54	SLE RA 18	-0.01	-0.22	9.3	0	0	0
54	SLE RA 19	-0.01	-0.22	9.3	0	0	0
54	SLE RA 20	-0.02	-0.22	9.36	0	0	0
54	SLE RA 21	-0.02	-0.22	9.37	0	0	0
54	SLE FR 1	-0.01	-0.21	8.27	0	0	0
54	SLE FR 2	-0.01	-0.21	8.27	0	0	0
54	SLE FR 3	-0.01	-0.21	8.29	0	0	0
54	SLE FR 4	-0.01	-0.21	8.58	0	0	0
54	SLE FR 5	-0.01	-0.21	8.6	0	0	0
54	SLE FR 6	-0.01	-0.21	8.78	0	0	0
54	SLE QP 1	-0.01	-0.21	8.27	0	0	0
54	SLE QP 2	-0.01	-0.21	8.58	0	0	0
54	SLD 1	0.54	-0.17	8.39	0	0	0
54	SLD 2	0.56	-0.15	8.39	0	0	0
54	SLD 3	0.52	-0.35	8.43	0	0	0
54	SLD 4	0.53	-0.32	8.42	0	0	0
54	SLD 5	0.19	0.06	8.46	0	0	0
54	SLD 6	0.2	0.08	8.46	0	0	0
54	SLD 7	0.11	-0.53	8.59	0	0	0
54	SLD 8	0.12	-0.51	8.59	0	0	0
54	SLD 9	-0.14	0.08	8.57	0	0	0
54	SLD 10	-0.13	0.1	8.56	0	0	0
54	SLD 11	-0.22	-0.5	8.69	0	0	0
54	SLD 12	-0.21	-0.48	8.69	0	0	0
54	SLD 13	-0.55	-0.1	8.73	0	0	0
54	SLD 14	-0.54	-0.07	8.73	0	0	0
54	SLD 15	-0.58	-0.27	8.77	0	0	0
54	SLD 16	-0.56	-0.25	8.76	0	0	0
54	SLV 1	1.28	-0.13	8.14	0	0	0
54	SLV 2	1.32	-0.07	8.13	0	0	0
54	SLV 3	1.22	-0.53	8.23	0	0	0
54	SLV 4	1.26	-0.47	8.22	0	0	0
54	SLV 5	0.46	0.41	8.31	0	0	0
54	SLV 6	0.49	0.45	8.31	0	0	0
54	SLV 7	0.26	-0.93	8.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLV 8	0.29	-0.89	8.6	0	0	0
54	SLV 9	-0.31	0.46	8.55	0	0	0
54	SLV 10	-0.28	0.5	8.55	0	0	0
54	SLV 11	-0.5	-0.87	8.84	0	0	0
54	SLV 12	-0.48	-0.83	8.84	0	0	0
54	SLV 13	-1.28	0.05	8.93	0	0	0
54	SLV 14	-1.24	0.11	8.93	0	0	0
54	SLV 15	-1.34	-0.35	9.02	0	0	0
54	SLV 16	-1.3	-0.29	9.01	0	0	0
55	SLU 1	-0.01	-0.25	9.93	0	0	0
55	SLU 2	-0.01	-0.24	9.93	0	0	0
55	SLU 3	-0.01	-0.25	10.13	0	0	0
55	SLU 4	-0.01	-0.24	10.14	0	0	0
55	SLU 5	-0.01	-0.24	10.05	0	0	0
55	SLU 6	-0.02	-0.24	10.25	0	0	0
55	SLU 7	-0.02	-0.24	10.26	0	0	0
55	SLU 8	-0.02	-0.24	10.17	0	0	0
55	SLU 9	-0.02	-0.24	10.17	0	0	0
55	SLU 10	-0.02	-0.26	11.27	0	0	0
55	SLU 11	-0.02	-0.27	11.48	0	0	0
55	SLU 12	-0.02	-0.26	11.48	0	0	0
55	SLU 13	-0.03	-0.26	11.39	0	0	0
55	SLU 14	-0.03	-0.26	11.6	0	0	0
55	SLU 15	-0.03	-0.26	11.6	0	0	0
55	SLU 16	-0.03	-0.26	11.51	0	0	0
55	SLU 17	-0.03	-0.26	11.51	0	0	0
55	SLU 18	-0.02	-0.28	11.84	0	0	0
55	SLU 19	-0.02	-0.27	11.85	0	0	0
55	SLU 20	-0.03	-0.27	11.96	0	0	0
55	SLU 21	-0.03	-0.27	11.97	0	0	0
55	SLU 22	-0.01	-0.25	11.14	0	0	0
55	SLU 23	0	-0.24	11.15	0	0	0
55	SLU 24	-0.01	-0.25	11.35	0	0	0
55	SLU 25	-0.01	-0.24	11.35	0	0	0
55	SLU 26	-0.01	-0.24	11.27	0	0	0
55	SLU 27	-0.02	-0.25	11.47	0	0	0
55	SLU 28	-0.02	-0.24	11.47	0	0	0
55	SLU 29	-0.02	-0.25	11.39	0	0	0
55	SLU 30	-0.02	-0.24	11.39	0	0	0
55	SLU 31	-0.02	-0.26	12.49	0	0	0
55	SLU 32	-0.02	-0.27	12.69	0	0	0
55	SLU 33	-0.02	-0.26	12.69	0	0	0
55	SLU 34	-0.02	-0.26	12.61	0	0	0
55	SLU 35	-0.03	-0.26	12.81	0	0	0
55	SLU 36	-0.03	-0.26	12.82	0	0	0
55	SLU 37	-0.03	-0.26	12.73	0	0	0
55	SLU 38	-0.03	-0.26	12.73	0	0	0
55	SLU 39	-0.02	-0.28	13.06	0	0	0
55	SLU 40	-0.02	-0.27	13.06	0	0	0
55	SLU 41	-0.03	-0.28	13.18	0	0	0
55	SLU 42	-0.03	-0.27	13.18	0	0	0
55	SLU 43	-0.01	-0.32	12.49	0	0	0
55	SLU 44	-0.01	-0.31	12.49	0	0	0
55	SLU 45	-0.02	-0.32	12.69	0	0	0
55	SLU 46	-0.02	-0.31	12.7	0	0	0
55	SLU 47	-0.02	-0.31	12.61	0	0	0
55	SLU 48	-0.02	-0.32	12.82	0	0	0
55	SLU 49	-0.02	-0.31	12.82	0	0	0
55	SLU 50	-0.02	-0.32	12.73	0	0	0
55	SLU 51	-0.02	-0.31	12.73	0	0	0
55	SLU 52	-0.02	-0.33	13.83	0	0	0
55	SLU 53	-0.03	-0.34	14.04	0	0	0
55	SLU 54	-0.03	-0.33	14.04	0	0	0
55	SLU 55	-0.03	-0.33	13.95	0	0	0
55	SLU 56	-0.03	-0.34	14.16	0	0	0
55	SLU 57	-0.03	-0.33	14.16	0	0	0
55	SLU 58	-0.04	-0.34	14.07	0	0	0
55	SLU 59	-0.04	-0.33	14.07	0	0	0
55	SLU 60	-0.03	-0.35	14.4	0	0	0
55	SLU 61	-0.03	-0.34	14.41	0	0	0
55	SLU 62	-0.03	-0.35	14.53	0	0	0
55	SLU 63	-0.03	-0.34	14.53	0	0	0
55	SLU 64	-0.01	-0.32	13.71	0	0	0
55	SLU 65	-0.01	-0.31	13.71	0	0	0
55	SLU 66	-0.01	-0.32	13.91	0	0	0
55	SLU 67	-0.01	-0.32	13.91	0	0	0
55	SLU 68	-0.01	-0.31	13.83	0	0	0
55	SLU 69	-0.02	-0.32	14.03	0	0	0
55	SLU 70	-0.02	-0.31	14.03	0	0	0
55	SLU 71	-0.02	-0.32	13.95	0	0	0
55	SLU 72	-0.02	-0.31	13.95	0	0	0
55	SLU 73	-0.02	-0.33	15.05	0	0	0
55	SLU 74	-0.03	-0.34	15.25	0	0	0
55	SLU 75	-0.02	-0.33	15.25	0	0	0
55	SLU 76	-0.03	-0.33	15.17	0	0	0
55	SLU 77	-0.03	-0.34	15.37	0	0	0
55	SLU 78	-0.03	-0.33	15.38	0	0	0
55	SLU 79	-0.03	-0.34	15.29	0	0	0
55	SLU 80	-0.03	-0.33	15.29	0	0	0
55	SLU 81	-0.03	-0.35	15.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
55	SLU 82	-0.02	-0.35	15.62	0	0	0
55	SLU 83	-0.03	-0.35	15.74	0	0	0
55	SLU 84	-0.03	-0.34	15.74	0	0	0
55	SLE RA 1	-0.01	-0.25	10.28	0	0	0
55	SLE RA 2	-0.01	-0.24	10.28	0	0	0
55	SLE RA 3	-0.01	-0.25	10.41	0	0	0
55	SLE RA 4	-0.01	-0.24	10.41	0	0	0
55	SLE RA 5	-0.01	-0.24	10.36	0	0	0
55	SLE RA 6	-0.01	-0.25	10.49	0	0	0
55	SLE RA 7	-0.01	-0.24	10.49	0	0	0
55	SLE RA 8	-0.02	-0.25	10.44	0	0	0
55	SLE RA 9	-0.02	-0.24	10.44	0	0	0
55	SLE RA 10	-0.01	-0.25	11.17	0	0	0
55	SLE RA 11	-0.02	-0.26	11.31	0	0	0
55	SLE RA 12	-0.02	-0.26	11.31	0	0	0
55	SLE RA 13	-0.02	-0.25	11.25	0	0	0
55	SLE RA 14	-0.02	-0.26	11.39	0	0	0
55	SLE RA 15	-0.02	-0.25	11.39	0	0	0
55	SLE RA 16	-0.02	-0.26	11.33	0	0	0
55	SLE RA 17	-0.02	-0.25	11.33	0	0	0
55	SLE RA 18	-0.02	-0.27	11.55	0	0	0
55	SLE RA 19	-0.02	-0.26	11.55	0	0	0
55	SLE RA 20	-0.02	-0.27	11.63	0	0	0
55	SLE RA 21	-0.02	-0.26	11.63	0	0	0
55	SLE FR 1	-0.01	-0.25	10.28	0	0	0
55	SLE FR 2	-0.01	-0.25	10.28	0	0	0
55	SLE FR 3	-0.01	-0.25	10.31	0	0	0
55	SLE FR 4	-0.01	-0.25	10.66	0	0	0
55	SLE FR 5	-0.01	-0.25	10.69	0	0	0
55	SLE FR 6	-0.01	-0.26	10.91	0	0	0
55	SLE QP 1	-0.01	-0.25	10.28	0	0	0
55	SLE QP 2	-0.01	-0.25	10.66	0	0	0
55	SLD 1	0.68	-0.21	10.38	0	0	0
55	SLD 2	0.7	-0.18	10.38	0	0	0
55	SLD 3	0.64	-0.43	10.43	0	0	0
55	SLD 4	0.66	-0.39	10.42	0	0	0
55	SLD 5	0.24	0.08	10.5	0	0	0
55	SLD 6	0.25	0.11	10.5	0	0	0
55	SLD 7	0.13	-0.64	10.66	0	0	0
55	SLD 8	0.15	-0.62	10.66	0	0	0
55	SLD 9	-0.17	0.11	10.66	0	0	0
55	SLD 10	-0.16	0.13	10.66	0	0	0
55	SLD 11	-0.27	-0.61	10.82	0	0	0
55	SLD 12	-0.26	-0.59	10.81	0	0	0
55	SLD 13	-0.69	-0.12	10.89	0	0	0
55	SLD 14	-0.67	-0.08	10.89	0	0	0
55	SLD 15	-0.72	-0.33	10.94	0	0	0
55	SLD 16	-0.7	-0.29	10.94	0	0	0
55	SLV 1	1.6	-0.17	10.01	0	0	0
55	SLV 2	1.64	-0.08	10	0	0	0
55	SLV 3	1.52	-0.66	10.12	0	0	0
55	SLV 4	1.57	-0.57	10.11	0	0	0
55	SLV 5	0.58	0.51	10.3	0	0	0
55	SLV 6	0.6	0.56	10.29	0	0	0
55	SLV 7	0.33	-1.14	10.66	0	0	0
55	SLV 8	0.36	-1.08	10.66	0	0	0
55	SLV 9	-0.38	0.58	10.66	0	0	0
55	SLV 10	-0.35	0.63	10.65	0	0	0
55	SLV 11	-0.63	-1.07	11.02	0	0	0
55	SLV 12	-0.6	-1.02	11.02	0	0	0
55	SLV 13	-1.59	0.06	11.21	0	0	0
55	SLV 14	-1.54	0.15	11.2	0	0	0
55	SLV 15	-1.66	-0.43	11.32	0	0	0
55	SLV 16	-1.62	-0.34	11.31	0	0	0
56	SLU 1	0	-0.14	5.9	0	0	0
56	SLU 2	0	-0.14	5.91	0	0	0
56	SLU 3	-0.01	-0.14	6.03	0	0	0
56	SLU 4	-0.01	-0.14	6.03	0	0	0
56	SLU 5	-0.01	-0.13	5.98	0	0	0
56	SLU 6	-0.01	-0.14	6.09	0	0	0
56	SLU 7	-0.01	-0.13	6.1	0	0	0
56	SLU 8	-0.01	-0.14	6.04	0	0	0
56	SLU 9	-0.01	-0.13	6.04	0	0	0
56	SLU 10	-0.01	-0.15	6.7	0	0	0
56	SLU 11	-0.01	-0.15	6.82	0	0	0
56	SLU 12	-0.01	-0.15	6.82	0	0	0
56	SLU 13	-0.02	-0.14	6.77	0	0	0
56	SLU 14	-0.02	-0.15	6.89	0	0	0
56	SLU 15	-0.02	-0.15	6.89	0	0	0
56	SLU 16	-0.02	-0.15	6.84	0	0	0
56	SLU 17	-0.02	-0.15	6.84	0	0	0
56	SLU 18	-0.01	-0.16	7.04	0	0	0
56	SLU 19	-0.01	-0.15	7.04	0	0	0
56	SLU 20	-0.02	-0.16	7.11	0	0	0
56	SLU 21	-0.02	-0.15	7.11	0	0	0
56	SLU 22	0	-0.14	6.63	0	0	0
56	SLU 23	0	-0.14	6.63	0	0	0
56	SLU 24	-0.01	-0.14	6.75	0	0	0
56	SLU 25	-0.01	-0.14	6.75	0	0	0
56	SLU 26	-0.01	-0.13	6.7	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLU 27	-0.01	-0.14	6.82	0	0	0
56	SLU 28	-0.01	-0.13	6.82	0	0	0
56	SLU 29	-0.01	-0.14	6.77	0	0	0
56	SLU 30	-0.01	-0.13	6.77	0	0	0
56	SLU 31	-0.01	-0.15	7.43	0	0	0
56	SLU 32	-0.01	-0.15	7.54	0	0	0
56	SLU 33	-0.01	-0.15	7.55	0	0	0
56	SLU 34	-0.01	-0.14	7.49	0	0	0
56	SLU 35	-0.02	-0.15	7.61	0	0	0
56	SLU 36	-0.02	-0.15	7.62	0	0	0
56	SLU 37	-0.02	-0.15	7.56	0	0	0
56	SLU 38	-0.02	-0.15	7.56	0	0	0
56	SLU 39	-0.01	-0.16	7.76	0	0	0
56	SLU 40	-0.01	-0.15	7.76	0	0	0
56	SLU 41	-0.02	-0.16	7.83	0	0	0
56	SLU 42	-0.02	-0.15	7.83	0	0	0
56	SLU 43	-0.01	-0.18	7.43	0	0	0
56	SLU 44	-0.01	-0.18	7.43	0	0	0
56	SLU 45	-0.01	-0.18	7.55	0	0	0
56	SLU 46	-0.01	-0.18	7.55	0	0	0
56	SLU 47	-0.01	-0.18	7.5	0	0	0
56	SLU 48	-0.01	-0.18	7.62	0	0	0
56	SLU 49	-0.01	-0.18	7.62	0	0	0
56	SLU 50	-0.01	-0.18	7.57	0	0	0
56	SLU 51	-0.01	-0.18	7.57	0	0	0
56	SLU 52	-0.01	-0.19	8.22	0	0	0
56	SLU 53	-0.02	-0.19	8.34	0	0	0
56	SLU 54	-0.02	-0.19	8.34	0	0	0
56	SLU 55	-0.02	-0.19	8.29	0	0	0
56	SLU 56	-0.02	-0.19	8.41	0	0	0
56	SLU 57	-0.02	-0.19	8.41	0	0	0
56	SLU 58	-0.02	-0.19	8.36	0	0	0
56	SLU 59	-0.02	-0.19	8.36	0	0	0
56	SLU 60	-0.02	-0.2	8.56	0	0	0
56	SLU 61	-0.02	-0.2	8.56	0	0	0
56	SLU 62	-0.02	-0.2	8.63	0	0	0
56	SLU 63	-0.02	-0.19	8.63	0	0	0
56	SLU 64	-0.01	-0.18	8.15	0	0	0
56	SLU 65	0	-0.18	8.15	0	0	0
56	SLU 66	-0.01	-0.18	8.27	0	0	0
56	SLU 67	-0.01	-0.18	8.27	0	0	0
56	SLU 68	-0.01	-0.18	8.22	0	0	0
56	SLU 69	-0.01	-0.18	8.34	0	0	0
56	SLU 70	-0.01	-0.18	8.34	0	0	0
56	SLU 71	-0.01	-0.18	8.29	0	0	0
56	SLU 72	-0.01	-0.18	8.29	0	0	0
56	SLU 73	-0.01	-0.19	8.95	0	0	0
56	SLU 74	-0.01	-0.19	9.07	0	0	0
56	SLU 75	-0.01	-0.19	9.07	0	0	0
56	SLU 76	-0.02	-0.19	9.02	0	0	0
56	SLU 77	-0.02	-0.19	9.14	0	0	0
56	SLU 78	-0.02	-0.19	9.14	0	0	0
56	SLU 79	-0.02	-0.19	9.09	0	0	0
56	SLU 80	-0.02	-0.19	9.09	0	0	0
56	SLU 81	-0.02	-0.2	9.29	0	0	0
56	SLU 82	-0.01	-0.2	9.29	0	0	0
56	SLU 83	-0.02	-0.2	9.36	0	0	0
56	SLU 84	-0.02	-0.19	9.36	0	0	0
56	SLE RA 1	0	-0.14	6.11	0	0	0
56	SLE RA 2	0	-0.14	6.11	0	0	0
56	SLE RA 3	-0.01	-0.14	6.19	0	0	0
56	SLE RA 4	-0.01	-0.14	6.19	0	0	0
56	SLE RA 5	-0.01	-0.14	6.16	0	0	0
56	SLE RA 6	-0.01	-0.14	6.24	0	0	0
56	SLE RA 7	-0.01	-0.14	6.24	0	0	0
56	SLE RA 8	-0.01	-0.14	6.2	0	0	0
56	SLE RA 9	-0.01	-0.14	6.21	0	0	0
56	SLE RA 10	-0.01	-0.14	6.64	0	0	0
56	SLE RA 11	-0.01	-0.15	6.72	0	0	0
56	SLE RA 12	-0.01	-0.14	6.72	0	0	0
56	SLE RA 13	-0.01	-0.14	6.69	0	0	0
56	SLE RA 14	-0.01	-0.15	6.77	0	0	0
56	SLE RA 15	-0.01	-0.14	6.77	0	0	0
56	SLE RA 16	-0.01	-0.15	6.73	0	0	0
56	SLE RA 17	-0.01	-0.14	6.73	0	0	0
56	SLE RA 18	-0.01	-0.15	6.87	0	0	0
56	SLE RA 19	-0.01	-0.15	6.87	0	0	0
56	SLE RA 20	-0.01	-0.15	6.91	0	0	0
56	SLE RA 21	-0.01	-0.15	6.91	0	0	0
56	SLE FR 1	0	-0.14	6.11	0	0	0
56	SLE FR 2	0	-0.14	6.11	0	0	0
56	SLE FR 3	-0.01	-0.14	6.13	0	0	0
56	SLE FR 4	-0.01	-0.14	6.34	0	0	0
56	SLE FR 5	-0.01	-0.14	6.36	0	0	0
56	SLE FR 6	-0.01	-0.15	6.49	0	0	0
56	SLE QP 1	0	-0.14	6.11	0	0	0
56	SLE QP 2	-0.01	-0.14	6.34	0	0	0
56	SLD 1	0.4	-0.13	6.13	0	0	0
56	SLD 2	0.42	-0.1	6.12	0	0	0
56	SLD 3	0.39	-0.25	6.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLD 4	0.4	-0.23	6.16	0	0	0
56	SLD 5	0.14	0.05	6.23	0	0	0
56	SLD 6	0.15	0.07	6.23	0	0	0
56	SLD 7	0.08	-0.38	6.33	0	0	0
56	SLD 8	0.09	-0.36	6.33	0	0	0
56	SLD 9	-0.1	0.07	6.35	0	0	0
56	SLD 10	-0.09	0.09	6.34	0	0	0
56	SLD 11	-0.16	-0.36	6.45	0	0	0
56	SLD 12	-0.16	-0.34	6.45	0	0	0
56	SLD 13	-0.41	-0.06	6.52	0	0	0
56	SLD 14	-0.4	-0.04	6.52	0	0	0
56	SLD 15	-0.43	-0.19	6.55	0	0	0
56	SLD 16	-0.42	-0.16	6.55	0	0	0
56	SLV 1	0.95	-0.1	5.85	0	0	0
56	SLV 2	0.98	-0.04	5.84	0	0	0
56	SLV 3	0.91	-0.4	5.92	0	0	0
56	SLV 4	0.94	-0.33	5.91	0	0	0
56	SLV 5	0.34	0.3	6.08	0	0	0
56	SLV 6	0.36	0.34	6.08	0	0	0
56	SLV 7	0.2	-0.67	6.33	0	0	0
56	SLV 8	0.21	-0.63	6.32	0	0	0
56	SLV 9	-0.23	0.34	6.36	0	0	0
56	SLV 10	-0.21	0.38	6.35	0	0	0
56	SLV 11	-0.37	-0.63	6.6	0	0	0
56	SLV 12	-0.36	-0.59	6.59	0	0	0
56	SLV 13	-0.95	0.04	6.76	0	0	0
56	SLV 14	-0.92	0.11	6.75	0	0	0
56	SLV 15	-0.99	-0.25	6.84	0	0	0
56	SLV 16	-0.97	-0.18	6.83	0	0	0
57	SLU 1	-0.01	-0.19	5.99	0	0	0
57	SLU 2	-0.01	-0.18	5.99	0	0	0
57	SLU 3	-0.02	-0.19	6.12	0	0	0
57	SLU 4	-0.02	-0.18	6.12	0	0	0
57	SLU 5	-0.02	-0.18	6.07	0	0	0
57	SLU 6	-0.02	-0.18	6.21	0	0	0
57	SLU 7	-0.02	-0.18	6.21	0	0	0
57	SLU 8	-0.02	-0.18	6.16	0	0	0
57	SLU 9	-0.02	-0.18	6.16	0	0	0
57	SLU 10	-0.02	-0.2	6.82	0	0	0
57	SLU 11	-0.02	-0.2	6.95	0	0	0
57	SLU 12	-0.02	-0.2	6.95	0	0	0
57	SLU 13	-0.02	-0.2	6.9	0	0	0
57	SLU 14	-0.03	-0.2	7.04	0	0	0
57	SLU 15	-0.03	-0.2	7.04	0	0	0
57	SLU 16	-0.03	-0.2	6.99	0	0	0
57	SLU 17	-0.03	-0.2	6.99	0	0	0
57	SLU 18	-0.02	-0.21	7.17	0	0	0
57	SLU 19	-0.02	-0.21	7.17	0	0	0
57	SLU 20	-0.03	-0.21	7.26	0	0	0
57	SLU 21	-0.03	-0.21	7.26	0	0	0
57	SLU 22	-0.01	-0.19	6.72	0	0	0
57	SLU 23	-0.01	-0.18	6.72	0	0	0
57	SLU 24	-0.02	-0.19	6.86	0	0	0
57	SLU 25	-0.02	-0.19	6.86	0	0	0
57	SLU 26	-0.02	-0.18	6.81	0	0	0
57	SLU 27	-0.02	-0.19	6.95	0	0	0
57	SLU 28	-0.02	-0.19	6.94	0	0	0
57	SLU 29	-0.02	-0.19	6.9	0	0	0
57	SLU 30	-0.02	-0.19	6.9	0	0	0
57	SLU 31	-0.02	-0.2	7.55	0	0	0
57	SLU 32	-0.02	-0.21	7.69	0	0	0
57	SLU 33	-0.02	-0.2	7.68	0	0	0
57	SLU 34	-0.02	-0.2	7.64	0	0	0
57	SLU 35	-0.03	-0.21	7.77	0	0	0
57	SLU 36	-0.03	-0.2	7.77	0	0	0
57	SLU 37	-0.03	-0.21	7.72	0	0	0
57	SLU 38	-0.03	-0.2	7.72	0	0	0
57	SLU 39	-0.02	-0.21	7.91	0	0	0
57	SLU 40	-0.02	-0.21	7.9	0	0	0
57	SLU 41	-0.03	-0.21	7.99	0	0	0
57	SLU 42	-0.03	-0.21	7.99	0	0	0
57	SLU 43	-0.02	-0.24	7.54	0	0	0
57	SLU 44	-0.02	-0.23	7.53	0	0	0
57	SLU 45	-0.02	-0.24	7.67	0	0	0
57	SLU 46	-0.02	-0.24	7.67	0	0	0
57	SLU 47	-0.02	-0.23	7.62	0	0	0
57	SLU 48	-0.02	-0.24	7.76	0	0	0
57	SLU 49	-0.02	-0.23	7.75	0	0	0
57	SLU 50	-0.03	-0.24	7.71	0	0	0
57	SLU 51	-0.03	-0.23	7.71	0	0	0
57	SLU 52	-0.03	-0.25	8.36	0	0	0
57	SLU 53	-0.03	-0.26	8.5	0	0	0
57	SLU 54	-0.03	-0.25	8.5	0	0	0
57	SLU 55	-0.03	-0.25	8.45	0	0	0
57	SLU 56	-0.03	-0.26	8.58	0	0	0
57	SLU 57	-0.03	-0.25	8.58	0	0	0
57	SLU 58	-0.03	-0.26	8.54	0	0	0
57	SLU 59	-0.03	-0.25	8.53	0	0	0
57	SLU 60	-0.03	-0.26	8.72	0	0	0
57	SLU 61	-0.03	-0.26	8.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLU 62	-0.03	-0.26	8.8	0	0	0
57	SLU 63	-0.03	-0.26	8.8	0	0	0
57	SLU 64	-0.02	-0.24	8.27	0	0	0
57	SLU 65	-0.02	-0.24	8.27	0	0	0
57	SLU 66	-0.02	-0.24	8.4	0	0	0
57	SLU 67	-0.02	-0.24	8.4	0	0	0
57	SLU 68	-0.02	-0.24	8.35	0	0	0
57	SLU 69	-0.02	-0.24	8.49	0	0	0
57	SLU 70	-0.02	-0.24	8.49	0	0	0
57	SLU 71	-0.03	-0.24	8.44	0	0	0
57	SLU 72	-0.02	-0.24	8.44	0	0	0
57	SLU 73	-0.02	-0.25	9.1	0	0	0
57	SLU 74	-0.03	-0.26	9.23	0	0	0
57	SLU 75	-0.03	-0.26	9.23	0	0	0
57	SLU 76	-0.03	-0.25	9.18	0	0	0
57	SLU 77	-0.03	-0.26	9.32	0	0	0
57	SLU 78	-0.03	-0.26	9.32	0	0	0
57	SLU 79	-0.03	-0.26	9.27	0	0	0
57	SLU 80	-0.03	-0.26	9.27	0	0	0
57	SLU 81	-0.03	-0.27	9.45	0	0	0
57	SLU 82	-0.03	-0.26	9.45	0	0	0
57	SLU 83	-0.03	-0.27	9.54	0	0	0
57	SLU 84	-0.03	-0.26	9.54	0	0	0
57	SLE RA 1	-0.01	-0.19	6.2	0	0	0
57	SLE RA 2	-0.01	-0.18	6.2	0	0	0
57	SLE RA 3	-0.02	-0.19	6.29	0	0	0
57	SLE RA 4	-0.02	-0.18	6.29	0	0	0
57	SLE RA 5	-0.02	-0.18	6.26	0	0	0
57	SLE RA 6	-0.02	-0.19	6.35	0	0	0
57	SLE RA 7	-0.02	-0.18	6.35	0	0	0
57	SLE RA 8	-0.02	-0.19	6.32	0	0	0
57	SLE RA 9	-0.02	-0.18	6.31	0	0	0
57	SLE RA 10	-0.02	-0.19	6.75	0	0	0
57	SLE RA 11	-0.02	-0.2	6.84	0	0	0
57	SLE RA 12	-0.02	-0.2	6.84	0	0	0
57	SLE RA 13	-0.02	-0.19	6.81	0	0	0
57	SLE RA 14	-0.02	-0.2	6.9	0	0	0
57	SLE RA 15	-0.02	-0.19	6.9	0	0	0
57	SLE RA 16	-0.02	-0.2	6.87	0	0	0
57	SLE RA 17	-0.02	-0.19	6.87	0	0	0
57	SLE RA 18	-0.02	-0.2	6.99	0	0	0
57	SLE RA 19	-0.02	-0.2	6.99	0	0	0
57	SLE RA 20	-0.02	-0.2	7.05	0	0	0
57	SLE RA 21	-0.02	-0.2	7.04	0	0	0
57	SLE FR 1	-0.01	-0.19	6.2	0	0	0
57	SLE FR 2	-0.01	-0.19	6.2	0	0	0
57	SLE FR 3	-0.01	-0.19	6.22	0	0	0
57	SLE FR 4	-0.02	-0.19	6.44	0	0	0
57	SLE FR 5	-0.02	-0.19	6.46	0	0	0
57	SLE FR 6	-0.02	-0.19	6.59	0	0	0
57	SLE QP 1	-0.01	-0.19	6.2	0	0	0
57	SLE QP 2	-0.02	-0.19	6.44	0	0	0
57	SLD 1	0.4	-0.14	6.44	0	0	0
57	SLD 2	0.41	-0.14	6.45	0	0	0
57	SLD 3	0.38	-0.28	6.53	0	0	0
57	SLD 4	0.39	-0.28	6.53	0	0	0
57	SLD 5	0.14	0.03	6.31	0	0	0
57	SLD 6	0.14	0.04	6.31	0	0	0
57	SLD 7	0.07	-0.43	6.59	0	0	0
57	SLD 8	0.07	-0.43	6.59	0	0	0
57	SLD 9	-0.11	0.05	6.28	0	0	0
57	SLD 10	-0.1	0.05	6.28	0	0	0
57	SLD 11	-0.18	-0.42	6.56	0	0	0
57	SLD 12	-0.17	-0.42	6.56	0	0	0
57	SLD 13	-0.42	-0.1	6.34	0	0	0
57	SLD 14	-0.41	-0.1	6.34	0	0	0
57	SLD 15	-0.44	-0.24	6.42	0	0	0
57	SLD 16	-0.43	-0.24	6.43	0	0	0
57	SLV 1	0.96	-0.09	6.46	0	0	0
57	SLV 2	0.97	-0.08	6.47	0	0	0
57	SLV 3	0.91	-0.4	6.65	0	0	0
57	SLV 4	0.92	-0.4	6.66	0	0	0
57	SLV 5	0.35	0.32	6.15	0	0	0
57	SLV 6	0.36	0.33	6.15	0	0	0
57	SLV 7	0.19	-0.74	6.79	0	0	0
57	SLV 8	0.2	-0.73	6.8	0	0	0
57	SLV 9	-0.23	0.35	6.08	0	0	0
57	SLV 10	-0.22	0.36	6.08	0	0	0
57	SLV 11	-0.39	-0.71	6.72	0	0	0
57	SLV 12	-0.38	-0.71	6.72	0	0	0
57	SLV 13	-0.96	0.01	6.21	0	0	0
57	SLV 14	-0.94	0.02	6.22	0	0	0
57	SLV 15	-1	-0.31	6.41	0	0	0
57	SLV 16	-0.99	-0.3	6.41	0	0	0
58	SLU 1	-0.02	-0.29	9.86	0	0	0
58	SLU 2	-0.02	-0.28	9.85	0	0	0
58	SLU 3	-0.03	-0.29	10.08	0	0	0
58	SLU 4	-0.03	-0.29	10.07	0	0	0
58	SLU 5	-0.03	-0.28	9.99	0	0	0
58	SLU 6	-0.03	-0.29	10.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLU 7	-0.03	-0.29	10.21	0	0	0
58	SLU 8	-0.04	-0.29	10.13	0	0	0
58	SLU 9	-0.03	-0.29	10.13	0	0	0
58	SLU 10	-0.03	-0.31	11.21	0	0	0
58	SLU 11	-0.04	-0.32	11.43	0	0	0
58	SLU 12	-0.04	-0.31	11.43	0	0	0
58	SLU 13	-0.04	-0.31	11.35	0	0	0
58	SLU 14	-0.05	-0.32	11.57	0	0	0
58	SLU 15	-0.05	-0.31	11.57	0	0	0
58	SLU 16	-0.05	-0.32	11.49	0	0	0
58	SLU 17	-0.05	-0.31	11.49	0	0	0
58	SLU 18	-0.04	-0.33	11.8	0	0	0
58	SLU 19	-0.04	-0.33	11.79	0	0	0
58	SLU 20	-0.05	-0.33	11.93	0	0	0
58	SLU 21	-0.05	-0.32	11.93	0	0	0
58	SLU 22	-0.02	-0.3	11.07	0	0	0
58	SLU 23	-0.02	-0.29	11.07	0	0	0
58	SLU 24	-0.03	-0.3	11.29	0	0	0
58	SLU 25	-0.03	-0.29	11.28	0	0	0
58	SLU 26	-0.03	-0.29	11.2	0	0	0
58	SLU 27	-0.03	-0.3	11.42	0	0	0
58	SLU 28	-0.03	-0.29	11.42	0	0	0
58	SLU 29	-0.03	-0.3	11.34	0	0	0
58	SLU 30	-0.03	-0.29	11.34	0	0	0
58	SLU 31	-0.03	-0.32	12.42	0	0	0
58	SLU 32	-0.04	-0.33	12.64	0	0	0
58	SLU 33	-0.04	-0.32	12.64	0	0	0
58	SLU 34	-0.04	-0.32	12.56	0	0	0
58	SLU 35	-0.05	-0.33	12.78	0	0	0
58	SLU 36	-0.05	-0.32	12.78	0	0	0
58	SLU 37	-0.05	-0.33	12.7	0	0	0
58	SLU 38	-0.05	-0.32	12.7	0	0	0
58	SLU 39	-0.04	-0.34	13.01	0	0	0
58	SLU 40	-0.04	-0.33	13	0	0	0
58	SLU 41	-0.05	-0.34	13.14	0	0	0
58	SLU 42	-0.05	-0.33	13.14	0	0	0
58	SLU 43	-0.03	-0.38	12.4	0	0	0
58	SLU 44	-0.03	-0.37	12.4	0	0	0
58	SLU 45	-0.03	-0.38	12.62	0	0	0
58	SLU 46	-0.03	-0.37	12.62	0	0	0
58	SLU 47	-0.03	-0.37	12.53	0	0	0
58	SLU 48	-0.04	-0.38	12.76	0	0	0
58	SLU 49	-0.04	-0.37	12.75	0	0	0
58	SLU 50	-0.04	-0.38	12.68	0	0	0
58	SLU 51	-0.04	-0.37	12.67	0	0	0
58	SLU 52	-0.04	-0.4	13.75	0	0	0
58	SLU 53	-0.05	-0.41	13.97	0	0	0
58	SLU 54	-0.05	-0.4	13.97	0	0	0
58	SLU 55	-0.05	-0.4	13.89	0	0	0
58	SLU 56	-0.05	-0.41	14.11	0	0	0
58	SLU 57	-0.05	-0.4	14.11	0	0	0
58	SLU 58	-0.06	-0.41	14.03	0	0	0
58	SLU 59	-0.06	-0.4	14.03	0	0	0
58	SLU 60	-0.05	-0.42	14.34	0	0	0
58	SLU 61	-0.05	-0.41	14.34	0	0	0
58	SLU 62	-0.05	-0.42	14.48	0	0	0
58	SLU 63	-0.05	-0.41	14.47	0	0	0
58	SLU 64	-0.03	-0.39	13.61	0	0	0
58	SLU 65	-0.03	-0.38	13.61	0	0	0
58	SLU 66	-0.03	-0.39	13.83	0	0	0
58	SLU 67	-0.03	-0.38	13.83	0	0	0
58	SLU 68	-0.03	-0.38	13.75	0	0	0
58	SLU 69	-0.04	-0.39	13.97	0	0	0
58	SLU 70	-0.04	-0.38	13.96	0	0	0
58	SLU 71	-0.04	-0.39	13.89	0	0	0
58	SLU 72	-0.04	-0.38	13.88	0	0	0
58	SLU 73	-0.04	-0.4	14.96	0	0	0
58	SLU 74	-0.05	-0.41	15.18	0	0	0
58	SLU 75	-0.05	-0.41	15.18	0	0	0
58	SLU 76	-0.05	-0.4	15.1	0	0	0
58	SLU 77	-0.05	-0.41	15.32	0	0	0
58	SLU 78	-0.05	-0.41	15.32	0	0	0
58	SLU 79	-0.05	-0.41	15.24	0	0	0
58	SLU 80	-0.05	-0.41	15.24	0	0	0
58	SLU 81	-0.05	-0.42	15.55	0	0	0
58	SLU 82	-0.05	-0.42	15.55	0	0	0
58	SLU 83	-0.05	-0.42	15.69	0	0	0
58	SLU 84	-0.05	-0.42	15.68	0	0	0
58	SLE RA 1	-0.02	-0.3	10.2	0	0	0
58	SLE RA 2	-0.02	-0.29	10.2	0	0	0
58	SLE RA 3	-0.03	-0.3	10.35	0	0	0
58	SLE RA 4	-0.02	-0.29	10.35	0	0	0
58	SLE RA 5	-0.03	-0.29	10.29	0	0	0
58	SLE RA 6	-0.03	-0.3	10.44	0	0	0
58	SLE RA 7	-0.03	-0.29	10.44	0	0	0
58	SLE RA 8	-0.03	-0.3	10.39	0	0	0
58	SLE RA 9	-0.03	-0.29	10.39	0	0	0
58	SLE RA 10	-0.03	-0.31	11.11	0	0	0
58	SLE RA 11	-0.03	-0.31	11.25	0	0	0
58	SLE RA 12	-0.03	-0.31	11.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLE RA 13	-0.03	-0.31	11.2	0	0	0
58	SLE RA 14	-0.04	-0.31	11.35	0	0	0
58	SLE RA 15	-0.04	-0.31	11.34	0	0	0
58	SLE RA 16	-0.04	-0.31	11.29	0	0	0
58	SLE RA 17	-0.04	-0.31	11.29	0	0	0
58	SLE RA 18	-0.03	-0.32	11.49	0	0	0
58	SLE RA 19	-0.03	-0.32	11.49	0	0	0
58	SLE RA 20	-0.04	-0.32	11.59	0	0	0
58	SLE RA 21	-0.04	-0.32	11.59	0	0	0
58	SLE FR 1	-0.02	-0.3	10.2	0	0	0
58	SLE FR 2	-0.02	-0.3	10.2	0	0	0
58	SLE FR 3	-0.02	-0.3	10.24	0	0	0
58	SLE FR 4	-0.03	-0.3	10.59	0	0	0
58	SLE FR 5	-0.03	-0.3	10.63	0	0	0
58	SLE FR 6	-0.03	-0.31	10.85	0	0	0
58	SLE QP 1	-0.02	-0.3	10.2	0	0	0
58	SLE QP 2	-0.03	-0.3	10.59	0	0	0
58	SLD 1	0.66	-0.23	10.49	0	0	0
58	SLD 2	0.67	-0.22	10.49	0	0	0
58	SLD 3	0.63	-0.46	10.61	0	0	0
58	SLD 4	0.64	-0.45	10.61	0	0	0
58	SLD 5	0.23	0.06	10.37	0	0	0
58	SLD 6	0.24	0.07	10.37	0	0	0
58	SLD 7	0.12	-0.7	10.79	0	0	0
58	SLD 8	0.12	-0.69	10.79	0	0	0
58	SLD 9	-0.17	0.08	10.39	0	0	0
58	SLD 10	-0.17	0.09	10.4	0	0	0
58	SLD 11	-0.29	-0.68	10.81	0	0	0
58	SLD 12	-0.28	-0.67	10.81	0	0	0
58	SLD 13	-0.69	-0.16	10.57	0	0	0
58	SLD 14	-0.68	-0.15	10.57	0	0	0
58	SLD 15	-0.72	-0.39	10.69	0	0	0
58	SLD 16	-0.71	-0.37	10.69	0	0	0
58	SLV 1	1.58	-0.15	10.35	0	0	0
58	SLV 2	1.61	-0.12	10.36	0	0	0
58	SLV 3	1.5	-0.67	10.64	0	0	0
58	SLV 4	1.53	-0.64	10.64	0	0	0
58	SLV 5	0.57	0.53	10.09	0	0	0
58	SLV 6	0.59	0.54	10.09	0	0	0
58	SLV 7	0.31	-1.21	11.03	0	0	0
58	SLV 8	0.32	-1.19	11.04	0	0	0
58	SLV 9	-0.38	0.58	10.14	0	0	0
58	SLV 10	-0.36	0.6	10.15	0	0	0
58	SLV 11	-0.64	-1.15	11.09	0	0	0
58	SLV 12	-0.62	-1.13	11.09	0	0	0
58	SLV 13	-1.58	0.03	10.54	0	0	0
58	SLV 14	-1.55	0.06	10.54	0	0	0
58	SLV 15	-1.66	-0.49	10.82	0	0	0
58	SLV 16	-1.63	-0.46	10.83	0	0	0
59	SLU 1	-0.02	-0.23	7.77	0	0	0
59	SLU 2	-0.02	-0.22	7.77	0	0	0
59	SLU 3	-0.02	-0.23	7.95	0	0	0
59	SLU 4	-0.02	-0.22	7.94	0	0	0
59	SLU 5	-0.02	-0.22	7.88	0	0	0
59	SLU 6	-0.03	-0.23	8.05	0	0	0
59	SLU 7	-0.03	-0.22	8.05	0	0	0
59	SLU 8	-0.03	-0.23	7.99	0	0	0
59	SLU 9	-0.03	-0.22	7.99	0	0	0
59	SLU 10	-0.03	-0.24	8.84	0	0	0
59	SLU 11	-0.03	-0.25	9.01	0	0	0
59	SLU 12	-0.03	-0.24	9.01	0	0	0
59	SLU 13	-0.03	-0.24	8.95	0	0	0
59	SLU 14	-0.04	-0.24	9.12	0	0	0
59	SLU 15	-0.04	-0.24	9.12	0	0	0
59	SLU 16	-0.04	-0.24	9.06	0	0	0
59	SLU 17	-0.04	-0.24	9.06	0	0	0
59	SLU 18	-0.03	-0.26	9.3	0	0	0
59	SLU 19	-0.03	-0.25	9.3	0	0	0
59	SLU 20	-0.04	-0.25	9.41	0	0	0
59	SLU 21	-0.04	-0.25	9.41	0	0	0
59	SLU 22	-0.02	-0.23	8.73	0	0	0
59	SLU 23	-0.02	-0.22	8.73	0	0	0
59	SLU 24	-0.02	-0.23	8.9	0	0	0
59	SLU 25	-0.02	-0.23	8.9	0	0	0
59	SLU 26	-0.02	-0.22	8.84	0	0	0
59	SLU 27	-0.03	-0.23	9.01	0	0	0
59	SLU 28	-0.03	-0.22	9.01	0	0	0
59	SLU 29	-0.03	-0.23	8.95	0	0	0
59	SLU 30	-0.03	-0.22	8.94	0	0	0
59	SLU 31	-0.03	-0.24	9.8	0	0	0
59	SLU 32	-0.03	-0.25	9.97	0	0	0
59	SLU 33	-0.03	-0.25	9.97	0	0	0
59	SLU 34	-0.03	-0.24	9.9	0	0	0
59	SLU 35	-0.04	-0.25	10.08	0	0	0
59	SLU 36	-0.04	-0.24	10.08	0	0	0
59	SLU 37	-0.04	-0.25	10.01	0	0	0
59	SLU 38	-0.04	-0.24	10.01	0	0	0
59	SLU 39	-0.03	-0.26	10.26	0	0	0
59	SLU 40	-0.03	-0.25	10.26	0	0	0
59	SLU 41	-0.04	-0.26	10.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLU 42	-0.04	-0.25	10.36	0	0	0
59	SLU 43	-0.02	-0.29	9.78	0	0	0
59	SLU 44	-0.02	-0.29	9.78	0	0	0
59	SLU 45	-0.03	-0.29	9.95	0	0	0
59	SLU 46	-0.03	-0.29	9.95	0	0	0
59	SLU 47	-0.03	-0.28	9.89	0	0	0
59	SLU 48	-0.03	-0.29	10.06	0	0	0
59	SLU 49	-0.03	-0.29	10.06	0	0	0
59	SLU 50	-0.03	-0.29	9.99	0	0	0
59	SLU 51	-0.03	-0.29	9.99	0	0	0
59	SLU 52	-0.03	-0.3	10.85	0	0	0
59	SLU 53	-0.04	-0.31	11.02	0	0	0
59	SLU 54	-0.04	-0.31	11.02	0	0	0
59	SLU 55	-0.04	-0.3	10.95	0	0	0
59	SLU 56	-0.04	-0.31	11.13	0	0	0
59	SLU 57	-0.04	-0.31	11.12	0	0	0
59	SLU 58	-0.04	-0.31	11.06	0	0	0
59	SLU 59	-0.04	-0.31	11.06	0	0	0
59	SLU 60	-0.04	-0.32	11.31	0	0	0
59	SLU 61	-0.04	-0.32	11.3	0	0	0
59	SLU 62	-0.04	-0.32	11.41	0	0	0
59	SLU 63	-0.04	-0.32	11.41	0	0	0
59	SLU 64	-0.02	-0.3	10.74	0	0	0
59	SLU 65	-0.02	-0.29	10.73	0	0	0
59	SLU 66	-0.03	-0.3	10.91	0	0	0
59	SLU 67	-0.03	-0.29	10.91	0	0	0
59	SLU 68	-0.03	-0.29	10.84	0	0	0
59	SLU 69	-0.03	-0.3	11.01	0	0	0
59	SLU 70	-0.03	-0.29	11.01	0	0	0
59	SLU 71	-0.03	-0.3	10.95	0	0	0
59	SLU 72	-0.03	-0.29	10.95	0	0	0
59	SLU 73	-0.03	-0.31	11.8	0	0	0
59	SLU 74	-0.04	-0.32	11.97	0	0	0
59	SLU 75	-0.04	-0.31	11.97	0	0	0
59	SLU 76	-0.04	-0.31	11.91	0	0	0
59	SLU 77	-0.04	-0.32	12.08	0	0	0
59	SLU 78	-0.04	-0.31	12.08	0	0	0
59	SLU 79	-0.04	-0.32	12.02	0	0	0
59	SLU 80	-0.04	-0.31	12.02	0	0	0
59	SLU 81	-0.04	-0.33	12.26	0	0	0
59	SLU 82	-0.04	-0.32	12.26	0	0	0
59	SLU 83	-0.04	-0.33	12.37	0	0	0
59	SLU 84	-0.04	-0.32	12.37	0	0	0
59	SLE RA 1	-0.02	-0.23	8.05	0	0	0
59	SLE RA 2	-0.02	-0.22	8.05	0	0	0
59	SLE RA 3	-0.02	-0.23	8.16	0	0	0
59	SLE RA 4	-0.02	-0.22	8.16	0	0	0
59	SLE RA 5	-0.02	-0.22	8.12	0	0	0
59	SLE RA 6	-0.02	-0.23	8.23	0	0	0
59	SLE RA 7	-0.02	-0.22	8.23	0	0	0
59	SLE RA 8	-0.02	-0.23	8.19	0	0	0
59	SLE RA 9	-0.02	-0.22	8.19	0	0	0
59	SLE RA 10	-0.02	-0.24	8.76	0	0	0
59	SLE RA 11	-0.03	-0.24	8.87	0	0	0
59	SLE RA 12	-0.03	-0.24	8.87	0	0	0
59	SLE RA 13	-0.03	-0.24	8.83	0	0	0
59	SLE RA 14	-0.03	-0.24	8.95	0	0	0
59	SLE RA 15	-0.03	-0.24	8.94	0	0	0
59	SLE RA 16	-0.03	-0.24	8.9	0	0	0
59	SLE RA 17	-0.03	-0.24	8.9	0	0	0
59	SLE RA 18	-0.03	-0.25	9.07	0	0	0
59	SLE RA 19	-0.03	-0.24	9.06	0	0	0
59	SLE RA 20	-0.03	-0.25	9.14	0	0	0
59	SLE RA 21	-0.03	-0.24	9.14	0	0	0
59	SLE FR 1	-0.02	-0.23	8.05	0	0	0
59	SLE FR 2	-0.02	-0.23	8.05	0	0	0
59	SLE FR 3	-0.02	-0.23	8.08	0	0	0
59	SLE FR 4	-0.02	-0.23	8.35	0	0	0
59	SLE FR 5	-0.02	-0.23	8.38	0	0	0
59	SLE FR 6	-0.02	-0.24	8.56	0	0	0
59	SLE QP 1	-0.02	-0.23	8.05	0	0	0
59	SLE QP 2	-0.02	-0.23	8.35	0	0	0
59	SLD 1	0.52	-0.18	8.27	0	0	0
59	SLD 2	0.53	-0.17	8.27	0	0	0
59	SLD 3	0.5	-0.36	8.36	0	0	0
59	SLD 4	0.51	-0.35	8.36	0	0	0
59	SLD 5	0.18	0.05	8.19	0	0	0
59	SLD 6	0.19	0.06	8.19	0	0	0
59	SLD 7	0.09	-0.55	8.49	0	0	0
59	SLD 8	0.1	-0.54	8.49	0	0	0
59	SLD 9	-0.14	0.07	8.21	0	0	0
59	SLD 10	-0.13	0.08	8.21	0	0	0
59	SLD 11	-0.23	-0.53	8.52	0	0	0
59	SLD 12	-0.22	-0.52	8.52	0	0	0
59	SLD 13	-0.55	-0.12	8.35	0	0	0
59	SLD 14	-0.54	-0.11	8.35	0	0	0
59	SLD 15	-0.57	-0.3	8.44	0	0	0
59	SLD 16	-0.57	-0.29	8.44	0	0	0
59	SLV 1	1.25	-0.12	8.15	0	0	0
59	SLV 2	1.28	-0.09	8.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLV 3	1.19	-0.53	8.36	0	0	0
59	SLV 4	1.21	-0.49	8.36	0	0	0
59	SLV 5	0.45	0.41	7.98	0	0	0
59	SLV 6	0.47	0.43	7.98	0	0	0
59	SLV 7	0.24	-0.94	8.67	0	0	0
59	SLV 8	0.26	-0.93	8.67	0	0	0
59	SLV 9	-0.3	0.46	8.04	0	0	0
59	SLV 10	-0.28	0.48	8.04	0	0	0
59	SLV 11	-0.51	-0.9	8.72	0	0	0
59	SLV 12	-0.49	-0.88	8.73	0	0	0
59	SLV 13	-1.25	0.03	8.34	0	0	0
59	SLV 14	-1.23	0.06	8.35	0	0	0
59	SLV 15	-1.32	-0.38	8.55	0	0	0
59	SLV 16	-1.29	-0.35	8.55	0	0	0
60	SLU 1	-0.02	-0.22	7.78	0	0	0
60	SLU 2	-0.02	-0.21	7.78	0	0	0
60	SLU 3	-0.02	-0.22	7.95	0	0	0
60	SLU 4	-0.02	-0.22	7.95	0	0	0
60	SLU 5	-0.02	-0.21	7.89	0	0	0
60	SLU 6	-0.03	-0.22	8.06	0	0	0
60	SLU 7	-0.03	-0.21	8.06	0	0	0
60	SLU 8	-0.03	-0.22	8	0	0	0
60	SLU 9	-0.03	-0.21	7.99	0	0	0
60	SLU 10	-0.03	-0.23	8.85	0	0	0
60	SLU 11	-0.03	-0.24	9.02	0	0	0
60	SLU 12	-0.03	-0.23	9.02	0	0	0
60	SLU 13	-0.03	-0.23	8.96	0	0	0
60	SLU 14	-0.04	-0.24	9.13	0	0	0
60	SLU 15	-0.04	-0.23	9.13	0	0	0
60	SLU 16	-0.04	-0.24	9.06	0	0	0
60	SLU 17	-0.04	-0.23	9.06	0	0	0
60	SLU 18	-0.03	-0.25	9.31	0	0	0
60	SLU 19	-0.03	-0.24	9.31	0	0	0
60	SLU 20	-0.04	-0.25	9.41	0	0	0
60	SLU 21	-0.04	-0.24	9.41	0	0	0
60	SLU 22	-0.02	-0.23	8.74	0	0	0
60	SLU 23	-0.02	-0.22	8.74	0	0	0
60	SLU 24	-0.02	-0.22	8.91	0	0	0
60	SLU 25	-0.02	-0.22	8.91	0	0	0
60	SLU 26	-0.02	-0.22	8.85	0	0	0
60	SLU 27	-0.03	-0.22	9.02	0	0	0
60	SLU 28	-0.03	-0.22	9.02	0	0	0
60	SLU 29	-0.03	-0.22	8.95	0	0	0
60	SLU 30	-0.03	-0.22	8.95	0	0	0
60	SLU 31	-0.03	-0.24	9.81	0	0	0
60	SLU 32	-0.03	-0.24	9.98	0	0	0
60	SLU 33	-0.03	-0.24	9.98	0	0	0
60	SLU 34	-0.03	-0.24	9.91	0	0	0
60	SLU 35	-0.04	-0.24	10.09	0	0	0
60	SLU 36	-0.04	-0.24	10.08	0	0	0
60	SLU 37	-0.04	-0.24	10.02	0	0	0
60	SLU 38	-0.04	-0.24	10.02	0	0	0
60	SLU 39	-0.03	-0.25	10.27	0	0	0
60	SLU 40	-0.03	-0.25	10.27	0	0	0
60	SLU 41	-0.04	-0.25	10.37	0	0	0
60	SLU 42	-0.04	-0.25	10.37	0	0	0
60	SLU 43	-0.02	-0.29	9.79	0	0	0
60	SLU 44	-0.02	-0.28	9.79	0	0	0
60	SLU 45	-0.03	-0.29	9.96	0	0	0
60	SLU 46	-0.03	-0.28	9.96	0	0	0
60	SLU 47	-0.03	-0.28	9.9	0	0	0
60	SLU 48	-0.03	-0.28	10.07	0	0	0
60	SLU 49	-0.03	-0.28	10.07	0	0	0
60	SLU 50	-0.03	-0.28	10	0	0	0
60	SLU 51	-0.03	-0.28	10	0	0	0
60	SLU 52	-0.03	-0.3	10.86	0	0	0
60	SLU 53	-0.04	-0.3	11.03	0	0	0
60	SLU 54	-0.04	-0.3	11.03	0	0	0
60	SLU 55	-0.04	-0.3	10.96	0	0	0
60	SLU 56	-0.04	-0.3	11.13	0	0	0
60	SLU 57	-0.04	-0.3	11.13	0	0	0
60	SLU 58	-0.04	-0.3	11.07	0	0	0
60	SLU 59	-0.04	-0.3	11.07	0	0	0
60	SLU 60	-0.04	-0.31	11.32	0	0	0
60	SLU 61	-0.04	-0.31	11.32	0	0	0
60	SLU 62	-0.04	-0.31	11.42	0	0	0
60	SLU 63	-0.04	-0.31	11.42	0	0	0
60	SLU 64	-0.02	-0.29	10.75	0	0	0
60	SLU 65	-0.02	-0.28	10.75	0	0	0
60	SLU 66	-0.03	-0.29	10.92	0	0	0
60	SLU 67	-0.03	-0.28	10.92	0	0	0
60	SLU 68	-0.03	-0.28	10.85	0	0	0
60	SLU 69	-0.03	-0.29	11.02	0	0	0
60	SLU 70	-0.03	-0.28	11.02	0	0	0
60	SLU 71	-0.03	-0.29	10.96	0	0	0
60	SLU 72	-0.03	-0.28	10.96	0	0	0
60	SLU 73	-0.03	-0.3	11.82	0	0	0
60	SLU 74	-0.04	-0.31	11.99	0	0	0
60	SLU 75	-0.04	-0.3	11.99	0	0	0
60	SLU 76	-0.04	-0.3	11.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLU 77	-0.04	-0.31	12.09	0	0	0
60	SLU 78	-0.04	-0.3	12.09	0	0	0
60	SLU 79	-0.04	-0.31	12.03	0	0	0
60	SLU 80	-0.04	-0.3	12.03	0	0	0
60	SLU 81	-0.04	-0.32	12.27	0	0	0
60	SLU 82	-0.04	-0.31	12.27	0	0	0
60	SLU 83	-0.04	-0.32	12.38	0	0	0
60	SLU 84	-0.04	-0.31	12.38	0	0	0
60	SLE RA 1	-0.02	-0.22	8.06	0	0	0
60	SLE RA 2	-0.02	-0.22	8.06	0	0	0
60	SLE RA 3	-0.02	-0.22	8.17	0	0	0
60	SLE RA 4	-0.02	-0.22	8.17	0	0	0
60	SLE RA 5	-0.02	-0.22	8.13	0	0	0
60	SLE RA 6	-0.02	-0.22	8.24	0	0	0
60	SLE RA 7	-0.02	-0.22	8.24	0	0	0
60	SLE RA 8	-0.02	-0.22	8.2	0	0	0
60	SLE RA 9	-0.02	-0.22	8.2	0	0	0
60	SLE RA 10	-0.02	-0.23	8.77	0	0	0
60	SLE RA 11	-0.03	-0.23	8.88	0	0	0
60	SLE RA 12	-0.03	-0.23	8.88	0	0	0
60	SLE RA 13	-0.03	-0.23	8.84	0	0	0
60	SLE RA 14	-0.03	-0.23	8.95	0	0	0
60	SLE RA 15	-0.03	-0.23	8.95	0	0	0
60	SLE RA 16	-0.03	-0.23	8.91	0	0	0
60	SLE RA 17	-0.03	-0.23	8.91	0	0	0
60	SLE RA 18	-0.03	-0.24	9.07	0	0	0
60	SLE RA 19	-0.03	-0.24	9.07	0	0	0
60	SLE RA 20	-0.03	-0.24	9.14	0	0	0
60	SLE RA 21	-0.03	-0.24	9.14	0	0	0
60	SLE FR 1	-0.02	-0.22	8.06	0	0	0
60	SLE FR 2	-0.02	-0.22	8.06	0	0	0
60	SLE FR 3	-0.02	-0.22	8.09	0	0	0
60	SLE FR 4	-0.02	-0.23	8.36	0	0	0
60	SLE FR 5	-0.02	-0.23	8.39	0	0	0
60	SLE FR 6	-0.02	-0.23	8.57	0	0	0
60	SLE QP 1	-0.02	-0.22	8.06	0	0	0
60	SLE QP 2	-0.02	-0.23	8.36	0	0	0
60	SLD 1	0.53	-0.18	8.25	0	0	0
60	SLD 2	0.54	-0.16	8.25	0	0	0
60	SLD 3	0.5	-0.36	8.34	0	0	0
60	SLD 4	0.51	-0.34	8.34	0	0	0
60	SLD 5	0.18	0.05	8.2	0	0	0
60	SLD 6	0.19	0.06	8.2	0	0	0
60	SLD 7	0.09	-0.54	8.48	0	0	0
60	SLD 8	0.1	-0.53	8.48	0	0	0
60	SLD 9	-0.14	0.07	8.24	0	0	0
60	SLD 10	-0.13	0.08	8.24	0	0	0
60	SLD 11	-0.23	-0.52	8.52	0	0	0
60	SLD 12	-0.23	-0.51	8.52	0	0	0
60	SLD 13	-0.55	-0.11	8.39	0	0	0
60	SLD 14	-0.54	-0.1	8.39	0	0	0
60	SLD 15	-0.58	-0.29	8.47	0	0	0
60	SLD 16	-0.57	-0.28	8.47	0	0	0
60	SLV 1	1.26	-0.12	8.11	0	0	0
60	SLV 2	1.28	-0.08	8.11	0	0	0
60	SLV 3	1.2	-0.53	8.3	0	0	0
60	SLV 4	1.22	-0.49	8.3	0	0	0
60	SLV 5	0.46	0.41	8	0	0	0
60	SLV 6	0.47	0.44	8	0	0	0
60	SLV 7	0.25	-0.94	8.63	0	0	0
60	SLV 8	0.26	-0.92	8.63	0	0	0
60	SLV 9	-0.3	0.46	8.1	0	0	0
60	SLV 10	-0.29	0.48	8.1	0	0	0
60	SLV 11	-0.51	-0.9	8.73	0	0	0
60	SLV 12	-0.5	-0.87	8.73	0	0	0
60	SLV 13	-1.26	0.03	8.43	0	0	0
60	SLV 14	-1.24	0.07	8.43	0	0	0
60	SLV 15	-1.32	-0.37	8.62	0	0	0
60	SLV 16	-1.3	-0.34	8.62	0	0	0
61	SLU 1	-0.02	-0.22	7.79	0	0	0
61	SLU 2	-0.02	-0.21	7.79	0	0	0
61	SLU 3	-0.02	-0.21	7.95	0	0	0
61	SLU 4	-0.02	-0.21	7.95	0	0	0
61	SLU 5	-0.02	-0.21	7.89	0	0	0
61	SLU 6	-0.03	-0.21	8.06	0	0	0
61	SLU 7	-0.03	-0.21	8.06	0	0	0
61	SLU 8	-0.03	-0.21	7.99	0	0	0
61	SLU 9	-0.03	-0.21	7.99	0	0	0
61	SLU 10	-0.03	-0.23	8.85	0	0	0
61	SLU 11	-0.03	-0.23	9.02	0	0	0
61	SLU 12	-0.03	-0.23	9.02	0	0	0
61	SLU 13	-0.03	-0.22	8.95	0	0	0
61	SLU 14	-0.04	-0.23	9.12	0	0	0
61	SLU 15	-0.04	-0.23	9.12	0	0	0
61	SLU 16	-0.04	-0.23	9.06	0	0	0
61	SLU 17	-0.04	-0.23	9.06	0	0	0
61	SLU 18	-0.03	-0.24	9.31	0	0	0
61	SLU 19	-0.03	-0.24	9.31	0	0	0
61	SLU 20	-0.04	-0.24	9.41	0	0	0
61	SLU 21	-0.04	-0.24	9.41	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLU 22	-0.02	-0.22	8.75	0	0	0
61	SLU 23	-0.02	-0.21	8.75	0	0	0
61	SLU 24	-0.02	-0.22	8.91	0	0	0
61	SLU 25	-0.02	-0.21	8.91	0	0	0
61	SLU 26	-0.02	-0.21	8.85	0	0	0
61	SLU 27	-0.03	-0.22	9.02	0	0	0
61	SLU 28	-0.03	-0.21	9.02	0	0	0
61	SLU 29	-0.03	-0.22	8.95	0	0	0
61	SLU 30	-0.03	-0.21	8.95	0	0	0
61	SLU 31	-0.03	-0.23	9.81	0	0	0
61	SLU 32	-0.03	-0.24	9.98	0	0	0
61	SLU 33	-0.03	-0.23	9.98	0	0	0
61	SLU 34	-0.03	-0.23	9.91	0	0	0
61	SLU 35	-0.04	-0.23	10.08	0	0	0
61	SLU 36	-0.04	-0.23	10.08	0	0	0
61	SLU 37	-0.04	-0.23	10.02	0	0	0
61	SLU 38	-0.04	-0.23	10.02	0	0	0
61	SLU 39	-0.03	-0.25	10.27	0	0	0
61	SLU 40	-0.03	-0.24	10.27	0	0	0
61	SLU 41	-0.04	-0.24	10.37	0	0	0
61	SLU 42	-0.04	-0.24	10.37	0	0	0
61	SLU 43	-0.02	-0.28	9.79	0	0	0
61	SLU 44	-0.02	-0.27	9.79	0	0	0
61	SLU 45	-0.03	-0.28	9.96	0	0	0
61	SLU 46	-0.03	-0.27	9.96	0	0	0
61	SLU 47	-0.03	-0.27	9.9	0	0	0
61	SLU 48	-0.03	-0.28	10.07	0	0	0
61	SLU 49	-0.03	-0.27	10.06	0	0	0
61	SLU 50	-0.03	-0.28	10	0	0	0
61	SLU 51	-0.03	-0.27	10	0	0	0
61	SLU 52	-0.03	-0.29	10.86	0	0	0
61	SLU 53	-0.04	-0.3	11.03	0	0	0
61	SLU 54	-0.04	-0.29	11.03	0	0	0
61	SLU 55	-0.04	-0.29	10.96	0	0	0
61	SLU 56	-0.04	-0.3	11.13	0	0	0
61	SLU 57	-0.04	-0.29	11.13	0	0	0
61	SLU 58	-0.04	-0.3	11.07	0	0	0
61	SLU 59	-0.04	-0.29	11.07	0	0	0
61	SLU 60	-0.04	-0.31	11.32	0	0	0
61	SLU 61	-0.04	-0.3	11.32	0	0	0
61	SLU 62	-0.04	-0.3	11.42	0	0	0
61	SLU 63	-0.04	-0.3	11.42	0	0	0
61	SLU 64	-0.02	-0.28	10.75	0	0	0
61	SLU 65	-0.02	-0.28	10.75	0	0	0
61	SLU 66	-0.03	-0.28	10.92	0	0	0
61	SLU 67	-0.03	-0.28	10.92	0	0	0
61	SLU 68	-0.03	-0.27	10.86	0	0	0
61	SLU 69	-0.03	-0.28	11.03	0	0	0
61	SLU 70	-0.03	-0.28	11.02	0	0	0
61	SLU 71	-0.03	-0.28	10.96	0	0	0
61	SLU 72	-0.03	-0.28	10.96	0	0	0
61	SLU 73	-0.03	-0.29	11.82	0	0	0
61	SLU 74	-0.04	-0.3	11.99	0	0	0
61	SLU 75	-0.04	-0.29	11.99	0	0	0
61	SLU 76	-0.04	-0.29	11.92	0	0	0
61	SLU 77	-0.04	-0.3	12.09	0	0	0
61	SLU 78	-0.04	-0.29	12.09	0	0	0
61	SLU 79	-0.04	-0.3	12.03	0	0	0
61	SLU 80	-0.04	-0.29	12.03	0	0	0
61	SLU 81	-0.04	-0.31	12.28	0	0	0
61	SLU 82	-0.04	-0.3	12.27	0	0	0
61	SLU 83	-0.04	-0.31	12.38	0	0	0
61	SLU 84	-0.04	-0.3	12.38	0	0	0
61	SLE RA 1	-0.02	-0.22	8.06	0	0	0
61	SLE RA 2	-0.02	-0.21	8.06	0	0	0
61	SLE RA 3	-0.02	-0.22	8.17	0	0	0
61	SLE RA 4	-0.02	-0.21	8.17	0	0	0
61	SLE RA 5	-0.02	-0.21	8.13	0	0	0
61	SLE RA 6	-0.02	-0.22	8.24	0	0	0
61	SLE RA 7	-0.02	-0.21	8.24	0	0	0
61	SLE RA 8	-0.02	-0.22	8.2	0	0	0
61	SLE RA 9	-0.02	-0.21	8.2	0	0	0
61	SLE RA 10	-0.02	-0.22	8.77	0	0	0
61	SLE RA 11	-0.03	-0.23	8.88	0	0	0
61	SLE RA 12	-0.03	-0.23	8.88	0	0	0
61	SLE RA 13	-0.03	-0.22	8.84	0	0	0
61	SLE RA 14	-0.03	-0.23	8.95	0	0	0
61	SLE RA 15	-0.03	-0.22	8.95	0	0	0
61	SLE RA 16	-0.03	-0.23	8.91	0	0	0
61	SLE RA 17	-0.03	-0.22	8.91	0	0	0
61	SLE RA 18	-0.03	-0.23	9.08	0	0	0
61	SLE RA 19	-0.03	-0.23	9.08	0	0	0
61	SLE RA 20	-0.03	-0.23	9.14	0	0	0
61	SLE RA 21	-0.03	-0.23	9.14	0	0	0
61	SLE FR 1	-0.02	-0.22	8.06	0	0	0
61	SLE FR 2	-0.02	-0.22	8.06	0	0	0
61	SLE FR 3	-0.02	-0.22	8.09	0	0	0
61	SLE FR 4	-0.02	-0.22	8.37	0	0	0
61	SLE FR 5	-0.02	-0.22	8.39	0	0	0
61	SLE FR 6	-0.02	-0.23	8.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLE QP 1	-0.02	-0.22	8.06	0	0	0
61	SLE QP 2	-0.02	-0.22	8.37	0	0	0
61	SLD 1	0.53	-0.18	8.22	0	0	0
61	SLD 2	0.54	-0.16	8.22	0	0	0
61	SLD 3	0.5	-0.36	8.3	0	0	0
61	SLD 4	0.51	-0.34	8.3	0	0	0
61	SLD 5	0.19	0.06	8.21	0	0	0
61	SLD 6	0.19	0.07	8.21	0	0	0
61	SLD 7	0.09	-0.54	8.46	0	0	0
61	SLD 8	0.1	-0.52	8.46	0	0	0
61	SLD 9	-0.14	0.08	8.27	0	0	0
61	SLD 10	-0.13	0.09	8.27	0	0	0
61	SLD 11	-0.23	-0.51	8.52	0	0	0
61	SLD 12	-0.23	-0.5	8.52	0	0	0
61	SLD 13	-0.55	-0.11	8.43	0	0	0
61	SLD 14	-0.54	-0.09	8.43	0	0	0
61	SLD 15	-0.58	-0.29	8.51	0	0	0
61	SLD 16	-0.57	-0.27	8.51	0	0	0
61	SLV 1	1.27	-0.12	8.04	0	0	0
61	SLV 2	1.29	-0.08	8.04	0	0	0
61	SLV 3	1.21	-0.53	8.21	0	0	0
61	SLV 4	1.23	-0.48	8.21	0	0	0
61	SLV 5	0.46	0.41	8	0	0	0
61	SLV 6	0.47	0.44	8	0	0	0
61	SLV 7	0.25	-0.94	8.59	0	0	0
61	SLV 8	0.26	-0.91	8.58	0	0	0
61	SLV 9	-0.3	0.46	8.15	0	0	0
61	SLV 10	-0.29	0.49	8.14	0	0	0
61	SLV 11	-0.51	-0.89	8.73	0	0	0
61	SLV 12	-0.5	-0.86	8.73	0	0	0
61	SLV 13	-1.27	0.04	8.52	0	0	0
61	SLV 14	-1.25	0.08	8.52	0	0	0
61	SLV 15	-1.33	-0.37	8.69	0	0	0
61	SLV 16	-1.31	-0.32	8.69	0	0	0
62	SLU 1	-0.02	-0.21	7.78	0	0	0
62	SLU 2	-0.02	-0.2	7.78	0	0	0
62	SLU 3	-0.02	-0.21	7.95	0	0	0
62	SLU 4	-0.02	-0.2	7.95	0	0	0
62	SLU 5	-0.02	-0.2	7.88	0	0	0
62	SLU 6	-0.03	-0.21	8.05	0	0	0
62	SLU 7	-0.03	-0.2	8.05	0	0	0
62	SLU 8	-0.03	-0.21	7.98	0	0	0
62	SLU 9	-0.03	-0.2	7.98	0	0	0
62	SLU 10	-0.03	-0.22	8.84	0	0	0
62	SLU 11	-0.03	-0.23	9.01	0	0	0
62	SLU 12	-0.03	-0.22	9.01	0	0	0
62	SLU 13	-0.03	-0.22	8.94	0	0	0
62	SLU 14	-0.04	-0.22	9.11	0	0	0
62	SLU 15	-0.04	-0.22	9.11	0	0	0
62	SLU 16	-0.04	-0.22	9.04	0	0	0
62	SLU 17	-0.04	-0.22	9.04	0	0	0
62	SLU 18	-0.03	-0.24	9.3	0	0	0
62	SLU 19	-0.03	-0.23	9.3	0	0	0
62	SLU 20	-0.04	-0.23	9.4	0	0	0
62	SLU 21	-0.04	-0.23	9.4	0	0	0
62	SLU 22	-0.02	-0.21	8.74	0	0	0
62	SLU 23	-0.02	-0.2	8.74	0	0	0
62	SLU 24	-0.02	-0.21	8.91	0	0	0
62	SLU 25	-0.02	-0.21	8.91	0	0	0
62	SLU 26	-0.02	-0.2	8.84	0	0	0
62	SLU 27	-0.03	-0.21	9.01	0	0	0
62	SLU 28	-0.03	-0.2	9.01	0	0	0
62	SLU 29	-0.03	-0.21	8.94	0	0	0
62	SLU 30	-0.03	-0.21	8.94	0	0	0
62	SLU 31	-0.03	-0.22	9.8	0	0	0
62	SLU 32	-0.03	-0.23	9.97	0	0	0
62	SLU 33	-0.03	-0.22	9.97	0	0	0
62	SLU 34	-0.03	-0.22	9.9	0	0	0
62	SLU 35	-0.04	-0.23	10.07	0	0	0
62	SLU 36	-0.04	-0.22	10.07	0	0	0
62	SLU 37	-0.04	-0.23	10.01	0	0	0
62	SLU 38	-0.04	-0.22	10.01	0	0	0
62	SLU 39	-0.03	-0.24	10.26	0	0	0
62	SLU 40	-0.03	-0.23	10.26	0	0	0
62	SLU 41	-0.04	-0.24	10.36	0	0	0
62	SLU 42	-0.04	-0.23	10.36	0	0	0
62	SLU 43	-0.02	-0.27	9.78	0	0	0
62	SLU 44	-0.02	-0.26	9.78	0	0	0
62	SLU 45	-0.03	-0.27	9.95	0	0	0
62	SLU 46	-0.03	-0.27	9.95	0	0	0
62	SLU 47	-0.03	-0.26	9.89	0	0	0
62	SLU 48	-0.03	-0.27	10.05	0	0	0
62	SLU 49	-0.03	-0.26	10.05	0	0	0
62	SLU 50	-0.03	-0.27	9.99	0	0	0
62	SLU 51	-0.03	-0.26	9.99	0	0	0
62	SLU 52	-0.03	-0.28	10.85	0	0	0
62	SLU 53	-0.04	-0.29	11.01	0	0	0
62	SLU 54	-0.04	-0.28	11.01	0	0	0
62	SLU 55	-0.04	-0.28	10.95	0	0	0
62	SLU 56	-0.04	-0.29	11.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
62	SLU 57	-0.04	-0.28	11.11	0	0	0
62	SLU 58	-0.04	-0.29	11.05	0	0	0
62	SLU 59	-0.04	-0.28	11.05	0	0	0
62	SLU 60	-0.04	-0.3	11.3	0	0	0
62	SLU 61	-0.04	-0.29	11.3	0	0	0
62	SLU 62	-0.04	-0.3	11.4	0	0	0
62	SLU 63	-0.04	-0.29	11.4	0	0	0
62	SLU 64	-0.02	-0.28	10.74	0	0	0
62	SLU 65	-0.02	-0.27	10.74	0	0	0
62	SLU 66	-0.03	-0.27	10.91	0	0	0
62	SLU 67	-0.03	-0.27	10.91	0	0	0
62	SLU 68	-0.03	-0.27	10.85	0	0	0
62	SLU 69	-0.03	-0.27	11.01	0	0	0
62	SLU 70	-0.03	-0.27	11.01	0	0	0
62	SLU 71	-0.03	-0.27	10.95	0	0	0
62	SLU 72	-0.03	-0.27	10.95	0	0	0
62	SLU 73	-0.03	-0.28	11.81	0	0	0
62	SLU 74	-0.04	-0.29	11.97	0	0	0
62	SLU 75	-0.04	-0.29	11.97	0	0	0
62	SLU 76	-0.04	-0.28	11.91	0	0	0
62	SLU 77	-0.04	-0.29	12.08	0	0	0
62	SLU 78	-0.04	-0.28	12.08	0	0	0
62	SLU 79	-0.04	-0.29	12.01	0	0	0
62	SLU 80	-0.04	-0.28	12.01	0	0	0
62	SLU 81	-0.04	-0.3	12.26	0	0	0
62	SLU 82	-0.04	-0.29	12.26	0	0	0
62	SLU 83	-0.04	-0.3	12.36	0	0	0
62	SLU 84	-0.04	-0.29	12.36	0	0	0
62	SLE RA 1	-0.02	-0.21	8.05	0	0	0
62	SLE RA 2	-0.02	-0.21	8.05	0	0	0
62	SLE RA 3	-0.02	-0.21	8.17	0	0	0
62	SLE RA 4	-0.02	-0.21	8.17	0	0	0
62	SLE RA 5	-0.02	-0.2	8.12	0	0	0
62	SLE RA 6	-0.02	-0.21	8.23	0	0	0
62	SLE RA 7	-0.02	-0.21	8.23	0	0	0
62	SLE RA 8	-0.02	-0.21	8.19	0	0	0
62	SLE RA 9	-0.02	-0.21	8.19	0	0	0
62	SLE RA 10	-0.02	-0.22	8.76	0	0	0
62	SLE RA 11	-0.03	-0.22	8.87	0	0	0
62	SLE RA 12	-0.03	-0.22	8.87	0	0	0
62	SLE RA 13	-0.03	-0.22	8.83	0	0	0
62	SLE RA 14	-0.03	-0.22	8.94	0	0	0
62	SLE RA 15	-0.03	-0.22	8.94	0	0	0
62	SLE RA 16	-0.03	-0.22	8.9	0	0	0
62	SLE RA 17	-0.03	-0.22	8.9	0	0	0
62	SLE RA 18	-0.03	-0.23	9.07	0	0	0
62	SLE RA 19	-0.03	-0.22	9.07	0	0	0
62	SLE RA 20	-0.03	-0.23	9.13	0	0	0
62	SLE RA 21	-0.03	-0.22	9.13	0	0	0
62	SLE FR 1	-0.02	-0.21	8.05	0	0	0
62	SLE FR 2	-0.02	-0.21	8.05	0	0	0
62	SLE FR 3	-0.02	-0.21	8.08	0	0	0
62	SLE FR 4	-0.02	-0.22	8.36	0	0	0
62	SLE FR 5	-0.02	-0.22	8.38	0	0	0
62	SLE FR 6	-0.02	-0.22	8.56	0	0	0
62	SLE QP 1	-0.02	-0.21	8.05	0	0	0
62	SLE QP 2	-0.02	-0.22	8.36	0	0	0
62	SLD 1	0.53	-0.18	8.19	0	0	0
62	SLD 2	0.54	-0.15	8.18	0	0	0
62	SLD 3	0.51	-0.35	8.26	0	0	0
62	SLD 4	0.51	-0.33	8.26	0	0	0
62	SLD 5	0.19	0.06	8.2	0	0	0
62	SLD 6	0.19	0.07	8.2	0	0	0
62	SLD 7	0.09	-0.53	8.44	0	0	0
62	SLD 8	0.1	-0.51	8.43	0	0	0
62	SLD 9	-0.14	0.08	8.28	0	0	0
62	SLD 10	-0.13	0.1	8.28	0	0	0
62	SLD 11	-0.23	-0.51	8.52	0	0	0
62	SLD 12	-0.23	-0.49	8.52	0	0	0
62	SLD 13	-0.56	-0.1	8.46	0	0	0
62	SLD 14	-0.55	-0.08	8.46	0	0	0
62	SLD 15	-0.58	-0.28	8.53	0	0	0
62	SLD 16	-0.57	-0.26	8.53	0	0	0
62	SLV 1	1.27	-0.13	7.96	0	0	0
62	SLV 2	1.29	-0.07	7.95	0	0	0
62	SLV 3	1.21	-0.53	8.12	0	0	0
62	SLV 4	1.23	-0.47	8.12	0	0	0
62	SLV 5	0.46	0.41	7.99	0	0	0
62	SLV 6	0.47	0.45	7.99	0	0	0
62	SLV 7	0.25	-0.93	8.53	0	0	0
62	SLV 8	0.26	-0.89	8.53	0	0	0
62	SLV 9	-0.3	0.46	8.18	0	0	0
62	SLV 10	-0.29	0.5	8.18	0	0	0
62	SLV 11	-0.52	-0.88	8.73	0	0	0
62	SLV 12	-0.5	-0.84	8.72	0	0	0
62	SLV 13	-1.27	0.04	8.6	0	0	0
62	SLV 14	-1.25	0.1	8.59	0	0	0
62	SLV 15	-1.34	-0.36	8.76	0	0	0
62	SLV 16	-1.31	-0.3	8.76	0	0	0
63	SLU 1	-0.02	-0.2	7.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLU 2	-0.02	-0.2	7.77	0	0	0
63	SLU 3	-0.02	-0.2	7.93	0	0	0
63	SLU 4	-0.02	-0.2	7.93	0	0	0
63	SLU 5	-0.02	-0.19	7.87	0	0	0
63	SLU 6	-0.03	-0.2	8.03	0	0	0
63	SLU 7	-0.03	-0.2	8.03	0	0	0
63	SLU 8	-0.03	-0.2	7.97	0	0	0
63	SLU 9	-0.03	-0.2	7.97	0	0	0
63	SLU 10	-0.03	-0.21	8.83	0	0	0
63	SLU 11	-0.03	-0.22	8.99	0	0	0
63	SLU 12	-0.03	-0.21	8.99	0	0	0
63	SLU 13	-0.03	-0.21	8.92	0	0	0
63	SLU 14	-0.04	-0.22	9.09	0	0	0
63	SLU 15	-0.04	-0.21	9.09	0	0	0
63	SLU 16	-0.04	-0.22	9.02	0	0	0
63	SLU 17	-0.04	-0.21	9.02	0	0	0
63	SLU 18	-0.03	-0.23	9.28	0	0	0
63	SLU 19	-0.03	-0.22	9.28	0	0	0
63	SLU 20	-0.04	-0.23	9.38	0	0	0
63	SLU 21	-0.04	-0.22	9.38	0	0	0
63	SLU 22	-0.02	-0.21	8.73	0	0	0
63	SLU 23	-0.02	-0.2	8.73	0	0	0
63	SLU 24	-0.02	-0.2	8.89	0	0	0
63	SLU 25	-0.02	-0.2	8.89	0	0	0
63	SLU 26	-0.02	-0.2	8.83	0	0	0
63	SLU 27	-0.03	-0.2	8.99	0	0	0
63	SLU 28	-0.03	-0.2	8.99	0	0	0
63	SLU 29	-0.03	-0.2	8.93	0	0	0
63	SLU 30	-0.03	-0.2	8.93	0	0	0
63	SLU 31	-0.03	-0.21	9.79	0	0	0
63	SLU 32	-0.03	-0.22	9.95	0	0	0
63	SLU 33	-0.03	-0.22	9.95	0	0	0
63	SLU 34	-0.03	-0.21	9.89	0	0	0
63	SLU 35	-0.04	-0.22	10.05	0	0	0
63	SLU 36	-0.04	-0.21	10.05	0	0	0
63	SLU 37	-0.04	-0.22	9.98	0	0	0
63	SLU 38	-0.04	-0.21	9.98	0	0	0
63	SLU 39	-0.03	-0.23	10.24	0	0	0
63	SLU 40	-0.03	-0.22	10.24	0	0	0
63	SLU 41	-0.04	-0.23	10.34	0	0	0
63	SLU 42	-0.04	-0.22	10.34	0	0	0
63	SLU 43	-0.02	-0.27	9.77	0	0	0
63	SLU 44	-0.02	-0.26	9.77	0	0	0
63	SLU 45	-0.03	-0.26	9.93	0	0	0
63	SLU 46	-0.03	-0.26	9.93	0	0	0
63	SLU 47	-0.03	-0.26	9.87	0	0	0
63	SLU 48	-0.03	-0.26	10.03	0	0	0
63	SLU 49	-0.03	-0.26	10.03	0	0	0
63	SLU 50	-0.03	-0.26	9.97	0	0	0
63	SLU 51	-0.03	-0.26	9.97	0	0	0
63	SLU 52	-0.03	-0.27	10.83	0	0	0
63	SLU 53	-0.04	-0.28	10.99	0	0	0
63	SLU 54	-0.04	-0.27	10.99	0	0	0
63	SLU 55	-0.04	-0.27	10.93	0	0	0
63	SLU 56	-0.04	-0.28	11.09	0	0	0
63	SLU 57	-0.04	-0.27	11.09	0	0	0
63	SLU 58	-0.04	-0.28	11.03	0	0	0
63	SLU 59	-0.04	-0.27	11.03	0	0	0
63	SLU 60	-0.04	-0.29	11.28	0	0	0
63	SLU 61	-0.04	-0.28	11.28	0	0	0
63	SLU 62	-0.04	-0.29	11.38	0	0	0
63	SLU 63	-0.04	-0.28	11.38	0	0	0
63	SLU 64	-0.02	-0.27	10.73	0	0	0
63	SLU 65	-0.02	-0.26	10.73	0	0	0
63	SLU 66	-0.03	-0.27	10.89	0	0	0
63	SLU 67	-0.03	-0.26	10.89	0	0	0
63	SLU 68	-0.03	-0.26	10.83	0	0	0
63	SLU 69	-0.03	-0.26	10.99	0	0	0
63	SLU 70	-0.03	-0.26	10.99	0	0	0
63	SLU 71	-0.03	-0.26	10.93	0	0	0
63	SLU 72	-0.03	-0.26	10.93	0	0	0
63	SLU 73	-0.03	-0.28	11.79	0	0	0
63	SLU 74	-0.04	-0.28	11.95	0	0	0
63	SLU 75	-0.04	-0.28	11.95	0	0	0
63	SLU 76	-0.04	-0.27	11.89	0	0	0
63	SLU 77	-0.04	-0.28	12.05	0	0	0
63	SLU 78	-0.04	-0.27	12.05	0	0	0
63	SLU 79	-0.04	-0.28	11.99	0	0	0
63	SLU 80	-0.04	-0.28	11.99	0	0	0
63	SLU 81	-0.04	-0.29	12.24	0	0	0
63	SLU 82	-0.04	-0.29	12.24	0	0	0
63	SLU 83	-0.04	-0.29	12.34	0	0	0
63	SLU 84	-0.04	-0.28	12.34	0	0	0
63	SLE RA 1	-0.02	-0.21	8.04	0	0	0
63	SLE RA 2	-0.02	-0.2	8.04	0	0	0
63	SLE RA 3	-0.02	-0.2	8.15	0	0	0
63	SLE RA 4	-0.02	-0.2	8.15	0	0	0
63	SLE RA 5	-0.02	-0.2	8.11	0	0	0
63	SLE RA 6	-0.02	-0.2	8.22	0	0	0
63	SLE RA 7	-0.02	-0.2	8.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLE RA 8	-0.02	-0.2	8.17	0	0	0
63	SLE RA 9	-0.02	-0.2	8.17	0	0	0
63	SLE RA 10	-0.02	-0.21	8.75	0	0	0
63	SLE RA 11	-0.03	-0.21	8.86	0	0	0
63	SLE RA 12	-0.03	-0.21	8.86	0	0	0
63	SLE RA 13	-0.03	-0.21	8.81	0	0	0
63	SLE RA 14	-0.03	-0.21	8.92	0	0	0
63	SLE RA 15	-0.03	-0.21	8.92	0	0	0
63	SLE RA 16	-0.03	-0.21	8.88	0	0	0
63	SLE RA 17	-0.03	-0.21	8.88	0	0	0
63	SLE RA 18	-0.03	-0.22	9.05	0	0	0
63	SLE RA 19	-0.03	-0.22	9.05	0	0	0
63	SLE RA 20	-0.03	-0.22	9.12	0	0	0
63	SLE RA 21	-0.03	-0.22	9.12	0	0	0
63	SLE FR 1	-0.02	-0.21	8.04	0	0	0
63	SLE FR 2	-0.02	-0.2	8.04	0	0	0
63	SLE FR 3	-0.02	-0.2	8.07	0	0	0
63	SLE FR 4	-0.02	-0.21	8.34	0	0	0
63	SLE FR 5	-0.02	-0.21	8.37	0	0	0
63	SLE FR 6	-0.02	-0.21	8.55	0	0	0
63	SLE QP 1	-0.02	-0.21	8.04	0	0	0
63	SLE QP 2	-0.02	-0.21	8.34	0	0	0
63	SLD 1	0.53	-0.17	8.14	0	0	0
63	SLD 2	0.54	-0.15	8.14	0	0	0
63	SLD 3	0.51	-0.35	8.21	0	0	0
63	SLD 4	0.52	-0.32	8.2	0	0	0
63	SLD 5	0.19	0.06	8.18	0	0	0
63	SLD 6	0.19	0.08	8.18	0	0	0
63	SLD 7	0.09	-0.52	8.4	0	0	0
63	SLD 8	0.1	-0.5	8.4	0	0	0
63	SLD 9	-0.14	0.08	8.29	0	0	0
63	SLD 10	-0.13	0.1	8.28	0	0	0
63	SLD 11	-0.23	-0.5	8.51	0	0	0
63	SLD 12	-0.23	-0.48	8.51	0	0	0
63	SLD 13	-0.56	-0.1	8.48	0	0	0
63	SLD 14	-0.55	-0.07	8.48	0	0	0
63	SLD 15	-0.58	-0.27	8.55	0	0	0
63	SLD 16	-0.57	-0.25	8.55	0	0	0
63	SLV 1	1.28	-0.13	7.87	0	0	0
63	SLV 2	1.3	-0.07	7.86	0	0	0
63	SLV 3	1.21	-0.53	8.02	0	0	0
63	SLV 4	1.23	-0.47	8.01	0	0	0
63	SLV 5	0.46	0.41	7.97	0	0	0
63	SLV 6	0.48	0.45	7.97	0	0	0
63	SLV 7	0.25	-0.92	8.48	0	0	0
63	SLV 8	0.26	-0.88	8.48	0	0	0
63	SLV 9	-0.3	0.46	8.21	0	0	0
63	SLV 10	-0.29	0.5	8.21	0	0	0
63	SLV 11	-0.52	-0.87	8.72	0	0	0
63	SLV 12	-0.5	-0.83	8.72	0	0	0
63	SLV 13	-1.27	0.05	8.67	0	0	0
63	SLV 14	-1.25	0.11	8.67	0	0	0
63	SLV 15	-1.34	-0.35	8.83	0	0	0
63	SLV 16	-1.32	-0.29	8.82	0	0	0
64	SLU 1	-0.02	-0.25	9.68	0	0	0
64	SLU 2	-0.02	-0.24	9.68	0	0	0
64	SLU 3	-0.03	-0.25	9.89	0	0	0
64	SLU 4	-0.03	-0.24	9.89	0	0	0
64	SLU 5	-0.03	-0.24	9.8	0	0	0
64	SLU 6	-0.03	-0.24	10.01	0	0	0
64	SLU 7	-0.03	-0.24	10.01	0	0	0
64	SLU 8	-0.03	-0.24	9.92	0	0	0
64	SLU 9	-0.03	-0.24	9.92	0	0	0
64	SLU 10	-0.03	-0.26	11	0	0	0
64	SLU 11	-0.04	-0.27	11.2	0	0	0
64	SLU 12	-0.04	-0.26	11.2	0	0	0
64	SLU 13	-0.04	-0.26	11.12	0	0	0
64	SLU 14	-0.05	-0.26	11.32	0	0	0
64	SLU 15	-0.05	-0.26	11.32	0	0	0
64	SLU 16	-0.05	-0.26	11.24	0	0	0
64	SLU 17	-0.05	-0.26	11.24	0	0	0
64	SLU 18	-0.04	-0.28	11.56	0	0	0
64	SLU 19	-0.04	-0.27	11.56	0	0	0
64	SLU 20	-0.05	-0.27	11.68	0	0	0
64	SLU 21	-0.05	-0.27	11.68	0	0	0
64	SLU 22	-0.02	-0.25	10.88	0	0	0
64	SLU 23	-0.02	-0.24	10.88	0	0	0
64	SLU 24	-0.03	-0.25	11.08	0	0	0
64	SLU 25	-0.02	-0.24	11.08	0	0	0
64	SLU 26	-0.03	-0.24	11	0	0	0
64	SLU 27	-0.03	-0.25	11.21	0	0	0
64	SLU 28	-0.03	-0.24	11.21	0	0	0
64	SLU 29	-0.03	-0.25	11.12	0	0	0
64	SLU 30	-0.03	-0.24	11.12	0	0	0
64	SLU 31	-0.03	-0.26	12.2	0	0	0
64	SLU 32	-0.04	-0.27	12.4	0	0	0
64	SLU 33	-0.04	-0.26	12.4	0	0	0
64	SLU 34	-0.04	-0.26	12.32	0	0	0
64	SLU 35	-0.05	-0.26	12.52	0	0	0
64	SLU 36	-0.04	-0.26	12.52	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLU 37	-0.05	-0.26	12.44	0	0	0
64	SLU 38	-0.05	-0.26	12.44	0	0	0
64	SLU 39	-0.04	-0.28	12.76	0	0	0
64	SLU 40	-0.04	-0.27	12.76	0	0	0
64	SLU 41	-0.05	-0.28	12.88	0	0	0
64	SLU 42	-0.05	-0.27	12.88	0	0	0
64	SLU 43	-0.03	-0.32	12.18	0	0	0
64	SLU 44	-0.03	-0.31	12.18	0	0	0
64	SLU 45	-0.03	-0.32	12.38	0	0	0
64	SLU 46	-0.03	-0.31	12.38	0	0	0
64	SLU 47	-0.03	-0.31	12.3	0	0	0
64	SLU 48	-0.04	-0.32	12.5	0	0	0
64	SLU 49	-0.04	-0.31	12.5	0	0	0
64	SLU 50	-0.04	-0.32	12.42	0	0	0
64	SLU 51	-0.04	-0.31	12.42	0	0	0
64	SLU 52	-0.04	-0.33	13.49	0	0	0
64	SLU 53	-0.05	-0.34	13.7	0	0	0
64	SLU 54	-0.05	-0.33	13.7	0	0	0
64	SLU 55	-0.05	-0.33	13.61	0	0	0
64	SLU 56	-0.05	-0.34	13.82	0	0	0
64	SLU 57	-0.05	-0.33	13.82	0	0	0
64	SLU 58	-0.06	-0.34	13.73	0	0	0
64	SLU 59	-0.05	-0.33	13.73	0	0	0
64	SLU 60	-0.05	-0.35	14.06	0	0	0
64	SLU 61	-0.05	-0.34	14.06	0	0	0
64	SLU 62	-0.05	-0.35	14.18	0	0	0
64	SLU 63	-0.05	-0.34	14.18	0	0	0
64	SLU 64	-0.03	-0.32	13.37	0	0	0
64	SLU 65	-0.03	-0.31	13.37	0	0	0
64	SLU 66	-0.03	-0.32	13.58	0	0	0
64	SLU 67	-0.03	-0.32	13.58	0	0	0
64	SLU 68	-0.03	-0.31	13.5	0	0	0
64	SLU 69	-0.04	-0.32	13.7	0	0	0
64	SLU 70	-0.04	-0.31	13.7	0	0	0
64	SLU 71	-0.04	-0.32	13.62	0	0	0
64	SLU 72	-0.04	-0.31	13.62	0	0	0
64	SLU 73	-0.04	-0.33	14.69	0	0	0
64	SLU 74	-0.05	-0.34	14.89	0	0	0
64	SLU 75	-0.04	-0.33	14.89	0	0	0
64	SLU 76	-0.05	-0.33	14.81	0	0	0
64	SLU 77	-0.05	-0.34	15.02	0	0	0
64	SLU 78	-0.05	-0.33	15.02	0	0	0
64	SLU 79	-0.05	-0.34	14.93	0	0	0
64	SLU 80	-0.05	-0.33	14.93	0	0	0
64	SLU 81	-0.05	-0.35	15.25	0	0	0
64	SLU 82	-0.05	-0.35	15.25	0	0	0
64	SLU 83	-0.05	-0.35	15.38	0	0	0
64	SLU 84	-0.05	-0.34	15.38	0	0	0
64	SLE RA 1	-0.02	-0.25	10.02	0	0	0
64	SLE RA 2	-0.02	-0.24	10.02	0	0	0
64	SLE RA 3	-0.02	-0.25	10.16	0	0	0
64	SLE RA 4	-0.02	-0.24	10.16	0	0	0
64	SLE RA 5	-0.03	-0.24	10.11	0	0	0
64	SLE RA 6	-0.03	-0.25	10.24	0	0	0
64	SLE RA 7	-0.03	-0.24	10.24	0	0	0
64	SLE RA 8	-0.03	-0.25	10.19	0	0	0
64	SLE RA 9	-0.03	-0.24	10.19	0	0	0
64	SLE RA 10	-0.03	-0.25	10.9	0	0	0
64	SLE RA 11	-0.03	-0.26	11.04	0	0	0
64	SLE RA 12	-0.03	-0.26	11.04	0	0	0
64	SLE RA 13	-0.03	-0.25	10.98	0	0	0
64	SLE RA 14	-0.04	-0.26	11.12	0	0	0
64	SLE RA 15	-0.04	-0.25	11.12	0	0	0
64	SLE RA 16	-0.04	-0.26	11.06	0	0	0
64	SLE RA 17	-0.04	-0.25	11.06	0	0	0
64	SLE RA 18	-0.03	-0.27	11.28	0	0	0
64	SLE RA 19	-0.03	-0.26	11.28	0	0	0
64	SLE RA 20	-0.04	-0.27	11.36	0	0	0
64	SLE RA 21	-0.04	-0.26	11.36	0	0	0
64	SLE FR 1	-0.02	-0.25	10.02	0	0	0
64	SLE FR 2	-0.02	-0.25	10.02	0	0	0
64	SLE FR 3	-0.02	-0.25	10.06	0	0	0
64	SLE FR 4	-0.02	-0.25	10.4	0	0	0
64	SLE FR 5	-0.03	-0.25	10.43	0	0	0
64	SLE FR 6	-0.03	-0.26	10.65	0	0	0
64	SLE QP 1	-0.02	-0.25	10.02	0	0	0
64	SLE QP 2	-0.03	-0.25	10.4	0	0	0
64	SLD 1	0.67	-0.21	10.1	0	0	0
64	SLD 2	0.68	-0.18	10.1	0	0	0
64	SLD 3	0.63	-0.43	10.18	0	0	0
64	SLD 4	0.64	-0.39	10.18	0	0	0
64	SLD 5	0.23	0.08	10.19	0	0	0
64	SLD 6	0.24	0.1	10.19	0	0	0
64	SLD 7	0.12	-0.64	10.46	0	0	0
64	SLD 8	0.13	-0.62	10.45	0	0	0
64	SLD 9	-0.18	0.11	10.35	0	0	0
64	SLD 10	-0.17	0.13	10.34	0	0	0
64	SLD 11	-0.29	-0.61	10.61	0	0	0
64	SLD 12	-0.28	-0.59	10.61	0	0	0
64	SLD 13	-0.69	-0.12	10.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLD 14	-0.68	-0.08	10.62	0	0	0
64	SLD 15	-0.73	-0.33	10.7	0	0	0
64	SLD 16	-0.72	-0.29	10.7	0	0	0
64	SLV 1	1.59	-0.17	9.71	0	0	0
64	SLV 2	1.62	-0.08	9.7	0	0	0
64	SLV 3	1.51	-0.66	9.89	0	0	0
64	SLV 4	1.54	-0.57	9.88	0	0	0
64	SLV 5	0.58	0.5	9.92	0	0	0
64	SLV 6	0.59	0.56	9.91	0	0	0
64	SLV 7	0.31	-1.14	10.53	0	0	0
64	SLV 8	0.33	-1.08	10.52	0	0	0
64	SLV 9	-0.38	0.57	10.28	0	0	0
64	SLV 10	-0.36	0.63	10.28	0	0	0
64	SLV 11	-0.64	-1.07	10.89	0	0	0
64	SLV 12	-0.63	-1.01	10.88	0	0	0
64	SLV 13	-1.59	0.06	10.92	0	0	0
64	SLV 14	-1.57	0.15	10.91	0	0	0
64	SLV 15	-1.67	-0.43	11.1	0	0	0
64	SLV 16	-1.64	-0.34	11.09	0	0	0
65	SLU 1	-0.01	-0.14	5.77	0	0	0
65	SLU 2	-0.01	-0.14	5.77	0	0	0
65	SLU 3	-0.02	-0.14	5.89	0	0	0
65	SLU 4	-0.02	-0.14	5.89	0	0	0
65	SLU 5	-0.02	-0.13	5.84	0	0	0
65	SLU 6	-0.02	-0.14	5.96	0	0	0
65	SLU 7	-0.02	-0.13	5.96	0	0	0
65	SLU 8	-0.02	-0.14	5.91	0	0	0
65	SLU 9	-0.02	-0.13	5.91	0	0	0
65	SLU 10	-0.02	-0.15	6.55	0	0	0
65	SLU 11	-0.02	-0.15	6.67	0	0	0
65	SLU 12	-0.02	-0.15	6.67	0	0	0
65	SLU 13	-0.02	-0.14	6.62	0	0	0
65	SLU 14	-0.03	-0.15	6.74	0	0	0
65	SLU 15	-0.03	-0.15	6.74	0	0	0
65	SLU 16	-0.03	-0.15	6.69	0	0	0
65	SLU 17	-0.03	-0.15	6.69	0	0	0
65	SLU 18	-0.02	-0.16	6.88	0	0	0
65	SLU 19	-0.02	-0.15	6.88	0	0	0
65	SLU 20	-0.03	-0.16	6.95	0	0	0
65	SLU 21	-0.03	-0.15	6.95	0	0	0
65	SLU 22	-0.01	-0.14	6.48	0	0	0
65	SLU 23	-0.01	-0.14	6.48	0	0	0
65	SLU 24	-0.02	-0.14	6.6	0	0	0
65	SLU 25	-0.01	-0.14	6.6	0	0	0
65	SLU 26	-0.02	-0.13	6.55	0	0	0
65	SLU 27	-0.02	-0.14	6.67	0	0	0
65	SLU 28	-0.02	-0.13	6.67	0	0	0
65	SLU 29	-0.02	-0.14	6.62	0	0	0
65	SLU 30	-0.02	-0.13	6.62	0	0	0
65	SLU 31	-0.02	-0.15	7.26	0	0	0
65	SLU 32	-0.02	-0.15	7.38	0	0	0
65	SLU 33	-0.02	-0.15	7.38	0	0	0
65	SLU 34	-0.02	-0.14	7.33	0	0	0
65	SLU 35	-0.03	-0.15	7.45	0	0	0
65	SLU 36	-0.03	-0.15	7.45	0	0	0
65	SLU 37	-0.03	-0.15	7.4	0	0	0
65	SLU 38	-0.03	-0.15	7.4	0	0	0
65	SLU 39	-0.02	-0.16	7.6	0	0	0
65	SLU 40	-0.02	-0.15	7.6	0	0	0
65	SLU 41	-0.03	-0.16	7.67	0	0	0
65	SLU 42	-0.03	-0.15	7.67	0	0	0
65	SLU 43	-0.02	-0.18	7.25	0	0	0
65	SLU 44	-0.02	-0.18	7.25	0	0	0
65	SLU 45	-0.02	-0.18	7.37	0	0	0
65	SLU 46	-0.02	-0.18	7.37	0	0	0
65	SLU 47	-0.02	-0.18	7.32	0	0	0
65	SLU 48	-0.02	-0.18	7.44	0	0	0
65	SLU 49	-0.02	-0.18	7.44	0	0	0
65	SLU 50	-0.03	-0.18	7.39	0	0	0
65	SLU 51	-0.02	-0.18	7.39	0	0	0
65	SLU 52	-0.02	-0.19	8.03	0	0	0
65	SLU 53	-0.03	-0.19	8.15	0	0	0
65	SLU 54	-0.03	-0.19	8.15	0	0	0
65	SLU 55	-0.03	-0.19	8.1	0	0	0
65	SLU 56	-0.03	-0.19	8.22	0	0	0
65	SLU 57	-0.03	-0.19	8.22	0	0	0
65	SLU 58	-0.03	-0.19	8.17	0	0	0
65	SLU 59	-0.03	-0.19	8.17	0	0	0
65	SLU 60	-0.03	-0.2	8.37	0	0	0
65	SLU 61	-0.03	-0.2	8.37	0	0	0
65	SLU 62	-0.03	-0.2	8.44	0	0	0
65	SLU 63	-0.03	-0.19	8.44	0	0	0
65	SLU 64	-0.02	-0.18	7.97	0	0	0
65	SLU 65	-0.02	-0.18	7.97	0	0	0
65	SLU 66	-0.02	-0.18	8.09	0	0	0
65	SLU 67	-0.02	-0.18	8.09	0	0	0
65	SLU 68	-0.02	-0.18	8.04	0	0	0
65	SLU 69	-0.02	-0.18	8.16	0	0	0
65	SLU 70	-0.02	-0.18	8.16	0	0	0
65	SLU 71	-0.02	-0.18	8.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLU 72	-0.02	-0.18	8.11	0	0	0
65	SLU 73	-0.02	-0.19	8.75	0	0	0
65	SLU 74	-0.03	-0.19	8.87	0	0	0
65	SLU 75	-0.03	-0.19	8.87	0	0	0
65	SLU 76	-0.03	-0.19	8.82	0	0	0
65	SLU 77	-0.03	-0.19	8.94	0	0	0
65	SLU 78	-0.03	-0.19	8.94	0	0	0
65	SLU 79	-0.03	-0.19	8.89	0	0	0
65	SLU 80	-0.03	-0.19	8.89	0	0	0
65	SLU 81	-0.03	-0.2	9.08	0	0	0
65	SLU 82	-0.03	-0.2	9.08	0	0	0
65	SLU 83	-0.03	-0.2	9.15	0	0	0
65	SLU 84	-0.03	-0.19	9.15	0	0	0
65	SLE RA 1	-0.01	-0.14	5.97	0	0	0
65	SLE RA 2	-0.01	-0.14	5.97	0	0	0
65	SLE RA 3	-0.01	-0.14	6.05	0	0	0
65	SLE RA 4	-0.01	-0.14	6.05	0	0	0
65	SLE RA 5	-0.02	-0.14	6.02	0	0	0
65	SLE RA 6	-0.02	-0.14	6.1	0	0	0
65	SLE RA 7	-0.02	-0.14	6.1	0	0	0
65	SLE RA 8	-0.02	-0.14	6.06	0	0	0
65	SLE RA 9	-0.02	-0.14	6.06	0	0	0
65	SLE RA 10	-0.02	-0.14	6.49	0	0	0
65	SLE RA 11	-0.02	-0.15	6.57	0	0	0
65	SLE RA 12	-0.02	-0.14	6.57	0	0	0
65	SLE RA 13	-0.02	-0.14	6.54	0	0	0
65	SLE RA 14	-0.02	-0.15	6.62	0	0	0
65	SLE RA 15	-0.02	-0.14	6.62	0	0	0
65	SLE RA 16	-0.02	-0.15	6.58	0	0	0
65	SLE RA 17	-0.02	-0.14	6.58	0	0	0
65	SLE RA 18	-0.02	-0.15	6.71	0	0	0
65	SLE RA 19	-0.02	-0.15	6.71	0	0	0
65	SLE RA 20	-0.02	-0.15	6.76	0	0	0
65	SLE RA 21	-0.02	-0.15	6.76	0	0	0
65	SLE FR 1	-0.01	-0.14	5.97	0	0	0
65	SLE FR 2	-0.01	-0.14	5.97	0	0	0
65	SLE FR 3	-0.01	-0.14	5.99	0	0	0
65	SLE FR 4	-0.01	-0.14	6.19	0	0	0
65	SLE FR 5	-0.02	-0.14	6.21	0	0	0
65	SLE FR 6	-0.02	-0.15	6.34	0	0	0
65	SLE QP 1	-0.01	-0.14	5.97	0	0	0
65	SLE QP 2	-0.02	-0.14	6.19	0	0	0
65	SLD 1	0.4	-0.13	5.98	0	0	0
65	SLD 2	0.41	-0.1	5.97	0	0	0
65	SLD 3	0.38	-0.25	6.02	0	0	0
65	SLD 4	0.39	-0.23	6.02	0	0	0
65	SLD 5	0.14	0.05	6.06	0	0	0
65	SLD 6	0.14	0.07	6.06	0	0	0
65	SLD 7	0.07	-0.38	6.21	0	0	0
65	SLD 8	0.08	-0.36	6.21	0	0	0
65	SLD 9	-0.11	0.07	6.18	0	0	0
65	SLD 10	-0.1	0.09	6.17	0	0	0
65	SLD 11	-0.17	-0.36	6.33	0	0	0
65	SLD 12	-0.17	-0.34	6.33	0	0	0
65	SLD 13	-0.42	-0.06	6.37	0	0	0
65	SLD 14	-0.41	-0.04	6.36	0	0	0
65	SLD 15	-0.44	-0.19	6.41	0	0	0
65	SLD 16	-0.43	-0.16	6.41	0	0	0
65	SLV 1	0.96	-0.1	5.69	0	0	0
65	SLV 2	0.97	-0.04	5.68	0	0	0
65	SLV 3	0.91	-0.4	5.79	0	0	0
65	SLV 4	0.92	-0.33	5.78	0	0	0
65	SLV 5	0.35	0.3	5.88	0	0	0
65	SLV 6	0.36	0.34	5.88	0	0	0
65	SLV 7	0.19	-0.67	6.23	0	0	0
65	SLV 8	0.2	-0.63	6.23	0	0	0
65	SLV 9	-0.23	0.34	6.16	0	0	0
65	SLV 10	-0.22	0.38	6.15	0	0	0
65	SLV 11	-0.39	-0.63	6.51	0	0	0
65	SLV 12	-0.38	-0.59	6.5	0	0	0
65	SLV 13	-0.95	0.04	6.6	0	0	0
65	SLV 14	-0.94	0.11	6.59	0	0	0
65	SLV 15	-1	-0.25	6.71	0	0	0
65	SLV 16	-0.99	-0.18	6.7	0	0	0
66	SLU 1	-0.02	-0.14	4.55	0	0	0
66	SLU 2	-0.02	-0.14	4.55	0	0	0
66	SLU 3	-0.02	-0.14	4.65	0	0	0
66	SLU 4	-0.02	-0.14	4.65	0	0	0
66	SLU 5	-0.02	-0.14	4.61	0	0	0
66	SLU 6	-0.02	-0.14	4.72	0	0	0
66	SLU 7	-0.02	-0.14	4.72	0	0	0
66	SLU 8	-0.02	-0.14	4.68	0	0	0
66	SLU 9	-0.02	-0.14	4.68	0	0	0
66	SLU 10	-0.02	-0.15	5.18	0	0	0
66	SLU 11	-0.03	-0.16	5.28	0	0	0
66	SLU 12	-0.03	-0.15	5.28	0	0	0
66	SLU 13	-0.03	-0.15	5.24	0	0	0
66	SLU 14	-0.03	-0.16	5.35	0	0	0
66	SLU 15	-0.03	-0.15	5.35	0	0	0
66	SLU 16	-0.03	-0.16	5.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLU 17	-0.03	-0.15	5.31	0	0	0
66	SLU 18	-0.03	-0.16	5.45	0	0	0
66	SLU 19	-0.03	-0.16	5.45	0	0	0
66	SLU 20	-0.03	-0.16	5.52	0	0	0
66	SLU 21	-0.03	-0.16	5.51	0	0	0
66	SLU 22	-0.02	-0.15	5.11	0	0	0
66	SLU 23	-0.02	-0.14	5.11	0	0	0
66	SLU 24	-0.02	-0.15	5.21	0	0	0
66	SLU 25	-0.02	-0.14	5.21	0	0	0
66	SLU 26	-0.02	-0.14	5.17	0	0	0
66	SLU 27	-0.02	-0.15	5.28	0	0	0
66	SLU 28	-0.02	-0.14	5.28	0	0	0
66	SLU 29	-0.02	-0.15	5.24	0	0	0
66	SLU 30	-0.02	-0.14	5.24	0	0	0
66	SLU 31	-0.02	-0.15	5.74	0	0	0
66	SLU 32	-0.03	-0.16	5.84	0	0	0
66	SLU 33	-0.03	-0.16	5.84	0	0	0
66	SLU 34	-0.03	-0.15	5.8	0	0	0
66	SLU 35	-0.03	-0.16	5.91	0	0	0
66	SLU 36	-0.03	-0.16	5.91	0	0	0
66	SLU 37	-0.03	-0.16	5.87	0	0	0
66	SLU 38	-0.03	-0.16	5.87	0	0	0
66	SLU 39	-0.03	-0.17	6.01	0	0	0
66	SLU 40	-0.03	-0.16	6.01	0	0	0
66	SLU 41	-0.03	-0.17	6.08	0	0	0
66	SLU 42	-0.03	-0.16	6.07	0	0	0
66	SLU 43	-0.02	-0.19	5.72	0	0	0
66	SLU 44	-0.02	-0.18	5.72	0	0	0
66	SLU 45	-0.02	-0.18	5.82	0	0	0
66	SLU 46	-0.02	-0.18	5.82	0	0	0
66	SLU 47	-0.02	-0.18	5.79	0	0	0
66	SLU 48	-0.03	-0.18	5.89	0	0	0
66	SLU 49	-0.03	-0.18	5.89	0	0	0
66	SLU 50	-0.03	-0.18	5.86	0	0	0
66	SLU 51	-0.03	-0.18	5.85	0	0	0
66	SLU 52	-0.03	-0.19	6.35	0	0	0
66	SLU 53	-0.03	-0.2	6.45	0	0	0
66	SLU 54	-0.03	-0.19	6.45	0	0	0
66	SLU 55	-0.03	-0.19	6.42	0	0	0
66	SLU 56	-0.03	-0.2	6.52	0	0	0
66	SLU 57	-0.03	-0.19	6.52	0	0	0
66	SLU 58	-0.04	-0.2	6.48	0	0	0
66	SLU 59	-0.04	-0.19	6.48	0	0	0
66	SLU 60	-0.03	-0.2	6.62	0	0	0
66	SLU 61	-0.03	-0.2	6.62	0	0	0
66	SLU 62	-0.04	-0.2	6.69	0	0	0
66	SLU 63	-0.04	-0.2	6.69	0	0	0
66	SLU 64	-0.02	-0.19	6.28	0	0	0
66	SLU 65	-0.02	-0.18	6.28	0	0	0
66	SLU 66	-0.02	-0.19	6.39	0	0	0
66	SLU 67	-0.02	-0.19	6.38	0	0	0
66	SLU 68	-0.02	-0.18	6.35	0	0	0
66	SLU 69	-0.03	-0.19	6.45	0	0	0
66	SLU 70	-0.03	-0.19	6.45	0	0	0
66	SLU 71	-0.03	-0.19	6.42	0	0	0
66	SLU 72	-0.03	-0.19	6.41	0	0	0
66	SLU 73	-0.03	-0.2	6.91	0	0	0
66	SLU 74	-0.03	-0.2	7.02	0	0	0
66	SLU 75	-0.03	-0.2	7.01	0	0	0
66	SLU 76	-0.03	-0.2	6.98	0	0	0
66	SLU 77	-0.03	-0.2	7.08	0	0	0
66	SLU 78	-0.03	-0.2	7.08	0	0	0
66	SLU 79	-0.04	-0.2	7.05	0	0	0
66	SLU 80	-0.04	-0.2	7.04	0	0	0
66	SLU 81	-0.03	-0.21	7.18	0	0	0
66	SLU 82	-0.03	-0.2	7.18	0	0	0
66	SLU 83	-0.04	-0.21	7.25	0	0	0
66	SLU 84	-0.04	-0.2	7.25	0	0	0
66	SLE RA 1	-0.02	-0.14	4.71	0	0	0
66	SLE RA 2	-0.02	-0.14	4.71	0	0	0
66	SLE RA 3	-0.02	-0.14	4.78	0	0	0
66	SLE RA 4	-0.02	-0.14	4.78	0	0	0
66	SLE RA 5	-0.02	-0.14	4.75	0	0	0
66	SLE RA 6	-0.02	-0.14	4.82	0	0	0
66	SLE RA 7	-0.02	-0.14	4.82	0	0	0
66	SLE RA 8	-0.02	-0.14	4.8	0	0	0
66	SLE RA 9	-0.02	-0.14	4.8	0	0	0
66	SLE RA 10	-0.02	-0.15	5.13	0	0	0
66	SLE RA 11	-0.02	-0.15	5.2	0	0	0
66	SLE RA 12	-0.02	-0.15	5.2	0	0	0
66	SLE RA 13	-0.02	-0.15	5.17	0	0	0
66	SLE RA 14	-0.03	-0.15	5.24	0	0	0
66	SLE RA 15	-0.03	-0.15	5.24	0	0	0
66	SLE RA 16	-0.03	-0.15	5.22	0	0	0
66	SLE RA 17	-0.03	-0.15	5.22	0	0	0
66	SLE RA 18	-0.02	-0.16	5.31	0	0	0
66	SLE RA 19	-0.02	-0.15	5.31	0	0	0
66	SLE RA 20	-0.03	-0.16	5.35	0	0	0
66	SLE RA 21	-0.03	-0.15	5.35	0	0	0
66	SLE FR 1	-0.02	-0.14	4.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLE FR 2	-0.02	-0.14	4.71	0	0	0
66	SLE FR 3	-0.02	-0.14	4.73	0	0	0
66	SLE FR 4	-0.02	-0.15	4.89	0	0	0
66	SLE FR 5	-0.02	-0.15	4.91	0	0	0
66	SLE FR 6	-0.02	-0.15	5.01	0	0	0
66	SLE QP 1	-0.02	-0.14	4.71	0	0	0
66	SLE QP 2	-0.02	-0.15	4.89	0	0	0
66	SLD 1	0.31	-0.11	4.88	0	0	0
66	SLD 2	0.31	-0.11	4.88	0	0	0
66	SLD 3	0.29	-0.22	4.97	0	0	0
66	SLD 4	0.29	-0.22	4.97	0	0	0
66	SLD 5	0.1	0.03	4.76	0	0	0
66	SLD 6	0.11	0.03	4.76	0	0	0
66	SLD 7	0.05	-0.33	5.05	0	0	0
66	SLD 8	0.05	-0.33	5.05	0	0	0
66	SLD 9	-0.09	0.04	4.73	0	0	0
66	SLD 10	-0.08	0.04	4.73	0	0	0
66	SLD 11	-0.14	-0.32	5.02	0	0	0
66	SLD 12	-0.14	-0.32	5.02	0	0	0
66	SLD 13	-0.33	-0.08	4.81	0	0	0
66	SLD 14	-0.33	-0.08	4.81	0	0	0
66	SLD 15	-0.35	-0.19	4.9	0	0	0
66	SLD 16	-0.34	-0.18	4.9	0	0	0
66	SLV 1	0.74	-0.07	4.88	0	0	0
66	SLV 2	0.74	-0.06	4.88	0	0	0
66	SLV 3	0.7	-0.31	5.07	0	0	0
66	SLV 4	0.7	-0.31	5.07	0	0	0
66	SLV 5	0.27	0.25	4.59	0	0	0
66	SLV 6	0.27	0.25	4.59	0	0	0
66	SLV 7	0.13	-0.57	5.24	0	0	0
66	SLV 8	0.14	-0.57	5.24	0	0	0
66	SLV 9	-0.18	0.27	4.53	0	0	0
66	SLV 10	-0.17	0.27	4.53	0	0	0
66	SLV 11	-0.31	-0.55	5.19	0	0	0
66	SLV 12	-0.31	-0.54	5.19	0	0	0
66	SLV 13	-0.74	0.01	4.7	0	0	0
66	SLV 14	-0.74	0.02	4.7	0	0	0
66	SLV 15	-0.78	-0.24	4.9	0	0	0
66	SLV 16	-0.78	-0.23	4.9	0	0	0
67	SLU 1	-0.03	-0.24	7.91	0	0	0
67	SLU 2	-0.03	-0.23	7.91	0	0	0
67	SLU 3	-0.03	-0.24	8.09	0	0	0
67	SLU 4	-0.03	-0.23	8.09	0	0	0
67	SLU 5	-0.03	-0.23	8.02	0	0	0
67	SLU 6	-0.04	-0.24	8.2	0	0	0
67	SLU 7	-0.04	-0.23	8.2	0	0	0
67	SLU 8	-0.04	-0.24	8.14	0	0	0
67	SLU 9	-0.04	-0.23	8.14	0	0	0
67	SLU 10	-0.04	-0.25	9	0	0	0
67	SLU 11	-0.05	-0.26	9.18	0	0	0
67	SLU 12	-0.05	-0.26	9.18	0	0	0
67	SLU 13	-0.05	-0.25	9.11	0	0	0
67	SLU 14	-0.05	-0.26	9.3	0	0	0
67	SLU 15	-0.05	-0.26	9.29	0	0	0
67	SLU 16	-0.05	-0.26	9.23	0	0	0
67	SLU 17	-0.05	-0.26	9.23	0	0	0
67	SLU 18	-0.05	-0.27	9.47	0	0	0
67	SLU 19	-0.05	-0.27	9.47	0	0	0
67	SLU 20	-0.05	-0.27	9.59	0	0	0
67	SLU 21	-0.05	-0.26	9.58	0	0	0
67	SLU 22	-0.03	-0.25	8.89	0	0	0
67	SLU 23	-0.03	-0.24	8.89	0	0	0
67	SLU 24	-0.03	-0.25	9.07	0	0	0
67	SLU 25	-0.03	-0.24	9.07	0	0	0
67	SLU 26	-0.03	-0.24	9	0	0	0
67	SLU 27	-0.04	-0.24	9.18	0	0	0
67	SLU 28	-0.04	-0.24	9.18	0	0	0
67	SLU 29	-0.04	-0.24	9.12	0	0	0
67	SLU 30	-0.04	-0.24	9.12	0	0	0
67	SLU 31	-0.04	-0.26	9.98	0	0	0
67	SLU 32	-0.05	-0.27	10.16	0	0	0
67	SLU 33	-0.05	-0.26	10.16	0	0	0
67	SLU 34	-0.05	-0.26	10.09	0	0	0
67	SLU 35	-0.05	-0.27	10.27	0	0	0
67	SLU 36	-0.05	-0.26	10.27	0	0	0
67	SLU 37	-0.05	-0.27	10.21	0	0	0
67	SLU 38	-0.05	-0.26	10.21	0	0	0
67	SLU 39	-0.05	-0.28	10.45	0	0	0
67	SLU 40	-0.05	-0.27	10.45	0	0	0
67	SLU 41	-0.05	-0.28	10.56	0	0	0
67	SLU 42	-0.05	-0.27	10.56	0	0	0
67	SLU 43	-0.04	-0.31	9.95	0	0	0
67	SLU 44	-0.04	-0.3	9.95	0	0	0
67	SLU 45	-0.04	-0.31	10.13	0	0	0
67	SLU 46	-0.04	-0.31	10.13	0	0	0
67	SLU 47	-0.04	-0.3	10.06	0	0	0
67	SLU 48	-0.05	-0.31	10.24	0	0	0
67	SLU 49	-0.05	-0.3	10.24	0	0	0
67	SLU 50	-0.05	-0.31	10.18	0	0	0
67	SLU 51	-0.05	-0.3	10.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
67	SLU 52	-0.05	-0.32	11.04	0	0	0
67	SLU 53	-0.06	-0.33	11.22	0	0	0
67	SLU 54	-0.05	-0.33	11.22	0	0	0
67	SLU 55	-0.06	-0.32	11.15	0	0	0
67	SLU 56	-0.06	-0.33	11.33	0	0	0
67	SLU 57	-0.06	-0.33	11.33	0	0	0
67	SLU 58	-0.06	-0.33	11.27	0	0	0
67	SLU 59	-0.06	-0.33	11.27	0	0	0
67	SLU 60	-0.06	-0.34	11.51	0	0	0
67	SLU 61	-0.06	-0.34	11.51	0	0	0
67	SLU 62	-0.06	-0.34	11.62	0	0	0
67	SLU 63	-0.06	-0.34	11.62	0	0	0
67	SLU 64	-0.04	-0.32	10.93	0	0	0
67	SLU 65	-0.04	-0.31	10.93	0	0	0
67	SLU 66	-0.04	-0.32	11.11	0	0	0
67	SLU 67	-0.04	-0.31	11.1	0	0	0
67	SLU 68	-0.04	-0.31	11.04	0	0	0
67	SLU 69	-0.05	-0.31	11.22	0	0	0
67	SLU 70	-0.05	-0.31	11.22	0	0	0
67	SLU 71	-0.05	-0.32	11.16	0	0	0
67	SLU 72	-0.05	-0.31	11.15	0	0	0
67	SLU 73	-0.05	-0.33	12.02	0	0	0
67	SLU 74	-0.06	-0.34	12.2	0	0	0
67	SLU 75	-0.05	-0.33	12.2	0	0	0
67	SLU 76	-0.06	-0.33	12.13	0	0	0
67	SLU 77	-0.06	-0.34	12.31	0	0	0
67	SLU 78	-0.06	-0.33	12.31	0	0	0
67	SLU 79	-0.06	-0.34	12.25	0	0	0
67	SLU 80	-0.06	-0.33	12.25	0	0	0
67	SLU 81	-0.06	-0.35	12.49	0	0	0
67	SLU 82	-0.06	-0.34	12.49	0	0	0
67	SLU 83	-0.06	-0.35	12.6	0	0	0
67	SLU 84	-0.06	-0.34	12.6	0	0	0
67	SLE RA 1	-0.03	-0.24	8.19	0	0	0
67	SLE RA 2	-0.03	-0.24	8.19	0	0	0
67	SLE RA 3	-0.03	-0.24	8.31	0	0	0
67	SLE RA 4	-0.03	-0.24	8.31	0	0	0
67	SLE RA 5	-0.03	-0.24	8.27	0	0	0
67	SLE RA 6	-0.04	-0.24	8.39	0	0	0
67	SLE RA 7	-0.04	-0.24	8.38	0	0	0
67	SLE RA 8	-0.04	-0.24	8.34	0	0	0
67	SLE RA 9	-0.04	-0.24	8.34	0	0	0
67	SLE RA 10	-0.04	-0.25	8.92	0	0	0
67	SLE RA 11	-0.04	-0.26	9.04	0	0	0
67	SLE RA 12	-0.04	-0.25	9.04	0	0	0
67	SLE RA 13	-0.04	-0.25	8.99	0	0	0
67	SLE RA 14	-0.04	-0.26	9.11	0	0	0
67	SLE RA 15	-0.04	-0.25	9.11	0	0	0
67	SLE RA 16	-0.05	-0.26	9.07	0	0	0
67	SLE RA 17	-0.05	-0.25	9.07	0	0	0
67	SLE RA 18	-0.04	-0.26	9.23	0	0	0
67	SLE RA 19	-0.04	-0.26	9.23	0	0	0
67	SLE RA 20	-0.05	-0.26	9.31	0	0	0
67	SLE RA 21	-0.04	-0.26	9.31	0	0	0
67	SLE FR 1	-0.03	-0.24	8.19	0	0	0
67	SLE FR 2	-0.03	-0.24	8.19	0	0	0
67	SLE FR 3	-0.03	-0.24	8.22	0	0	0
67	SLE FR 4	-0.03	-0.25	8.5	0	0	0
67	SLE FR 5	-0.03	-0.25	8.53	0	0	0
67	SLE FR 6	-0.04	-0.25	8.71	0	0	0
67	SLE QP 1	-0.03	-0.24	8.19	0	0	0
67	SLE QP 2	-0.03	-0.25	8.5	0	0	0
67	SLD 1	0.53	-0.19	8.4	0	0	0
67	SLD 2	0.54	-0.18	8.4	0	0	0
67	SLD 3	0.5	-0.38	8.54	0	0	0
67	SLD 4	0.51	-0.37	8.54	0	0	0
67	SLD 5	0.18	0.05	8.26	0	0	0
67	SLD 6	0.18	0.06	8.26	0	0	0
67	SLD 7	0.08	-0.57	8.73	0	0	0
67	SLD 8	0.08	-0.56	8.73	0	0	0
67	SLD 9	-0.15	0.07	8.28	0	0	0
67	SLD 10	-0.15	0.07	8.28	0	0	0
67	SLD 11	-0.25	-0.55	8.75	0	0	0
67	SLD 12	-0.25	-0.55	8.75	0	0	0
67	SLD 13	-0.57	-0.13	8.47	0	0	0
67	SLD 14	-0.57	-0.12	8.47	0	0	0
67	SLD 15	-0.6	-0.32	8.61	0	0	0
67	SLD 16	-0.6	-0.31	8.61	0	0	0
67	SLV 1	1.29	-0.12	8.27	0	0	0
67	SLV 2	1.3	-0.1	8.27	0	0	0
67	SLV 3	1.22	-0.54	8.58	0	0	0
67	SLV 4	1.23	-0.52	8.58	0	0	0
67	SLV 5	0.47	0.43	7.96	0	0	0
67	SLV 6	0.47	0.44	7.95	0	0	0
67	SLV 7	0.23	-0.98	9.01	0	0	0
67	SLV 8	0.24	-0.97	9.01	0	0	0
67	SLV 9	-0.31	0.47	8	0	0	0
67	SLV 10	-0.3	0.49	8	0	0	0
67	SLV 11	-0.54	-0.94	9.05	0	0	0
67	SLV 12	-0.54	-0.93	9.05	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
67	SLV 13	-1.3	0.02	8.43	0	0	0
67	SLV 14	-1.29	0.05	8.42	0	0	0
67	SLV 15	-1.37	-0.4	8.74	0	0	0
67	SLV 16	-1.36	-0.38	8.74	0	0	0
68	SLU 1	-0.02	-0.14	4.65	0	0	0
68	SLU 2	-0.02	-0.13	4.65	0	0	0
68	SLU 3	-0.02	-0.14	4.76	0	0	0
68	SLU 4	-0.02	-0.13	4.76	0	0	0
68	SLU 5	-0.02	-0.13	4.72	0	0	0
68	SLU 6	-0.02	-0.14	4.82	0	0	0
68	SLU 7	-0.02	-0.13	4.82	0	0	0
68	SLU 8	-0.02	-0.14	4.79	0	0	0
68	SLU 9	-0.02	-0.13	4.78	0	0	0
68	SLU 10	-0.02	-0.15	5.29	0	0	0
68	SLU 11	-0.03	-0.15	5.4	0	0	0
68	SLU 12	-0.03	-0.15	5.4	0	0	0
68	SLU 13	-0.03	-0.14	5.36	0	0	0
68	SLU 14	-0.03	-0.15	5.46	0	0	0
68	SLU 15	-0.03	-0.15	5.46	0	0	0
68	SLU 16	-0.03	-0.15	5.43	0	0	0
68	SLU 17	-0.03	-0.15	5.43	0	0	0
68	SLU 18	-0.03	-0.16	5.57	0	0	0
68	SLU 19	-0.03	-0.15	5.57	0	0	0
68	SLU 20	-0.03	-0.15	5.64	0	0	0
68	SLU 21	-0.03	-0.15	5.63	0	0	0
68	SLU 22	-0.02	-0.14	5.23	0	0	0
68	SLU 23	-0.02	-0.14	5.23	0	0	0
68	SLU 24	-0.02	-0.14	5.33	0	0	0
68	SLU 25	-0.02	-0.14	5.33	0	0	0
68	SLU 26	-0.02	-0.14	5.29	0	0	0
68	SLU 27	-0.02	-0.14	5.4	0	0	0
68	SLU 28	-0.02	-0.14	5.4	0	0	0
68	SLU 29	-0.02	-0.14	5.36	0	0	0
68	SLU 30	-0.02	-0.14	5.36	0	0	0
68	SLU 31	-0.02	-0.15	5.87	0	0	0
68	SLU 32	-0.03	-0.15	5.98	0	0	0
68	SLU 33	-0.03	-0.15	5.97	0	0	0
68	SLU 34	-0.03	-0.15	5.94	0	0	0
68	SLU 35	-0.03	-0.15	6.04	0	0	0
68	SLU 36	-0.03	-0.15	6.04	0	0	0
68	SLU 37	-0.03	-0.15	6	0	0	0
68	SLU 38	-0.03	-0.15	6	0	0	0
68	SLU 39	-0.03	-0.16	6.15	0	0	0
68	SLU 40	-0.03	-0.15	6.15	0	0	0
68	SLU 41	-0.03	-0.16	6.21	0	0	0
68	SLU 42	-0.03	-0.15	6.21	0	0	0
68	SLU 43	-0.02	-0.18	5.85	0	0	0
68	SLU 44	-0.02	-0.17	5.85	0	0	0
68	SLU 45	-0.03	-0.18	5.96	0	0	0
68	SLU 46	-0.03	-0.18	5.95	0	0	0
68	SLU 47	-0.03	-0.17	5.92	0	0	0
68	SLU 48	-0.03	-0.18	6.02	0	0	0
68	SLU 49	-0.03	-0.17	6.02	0	0	0
68	SLU 50	-0.03	-0.18	5.98	0	0	0
68	SLU 51	-0.03	-0.17	5.98	0	0	0
68	SLU 52	-0.03	-0.19	6.49	0	0	0
68	SLU 53	-0.03	-0.19	6.6	0	0	0
68	SLU 54	-0.03	-0.19	6.6	0	0	0
68	SLU 55	-0.03	-0.18	6.56	0	0	0
68	SLU 56	-0.04	-0.19	6.66	0	0	0
68	SLU 57	-0.04	-0.19	6.66	0	0	0
68	SLU 58	-0.04	-0.19	6.62	0	0	0
68	SLU 59	-0.04	-0.19	6.62	0	0	0
68	SLU 60	-0.03	-0.2	6.77	0	0	0
68	SLU 61	-0.03	-0.19	6.77	0	0	0
68	SLU 62	-0.04	-0.2	6.83	0	0	0
68	SLU 63	-0.04	-0.19	6.83	0	0	0
68	SLU 64	-0.02	-0.18	6.43	0	0	0
68	SLU 65	-0.02	-0.18	6.43	0	0	0
68	SLU 66	-0.03	-0.18	6.53	0	0	0
68	SLU 67	-0.03	-0.18	6.53	0	0	0
68	SLU 68	-0.03	-0.18	6.49	0	0	0
68	SLU 69	-0.03	-0.18	6.6	0	0	0
68	SLU 70	-0.03	-0.18	6.6	0	0	0
68	SLU 71	-0.03	-0.18	6.56	0	0	0
68	SLU 72	-0.03	-0.18	6.56	0	0	0
68	SLU 73	-0.03	-0.19	7.07	0	0	0
68	SLU 74	-0.03	-0.19	7.17	0	0	0
68	SLU 75	-0.03	-0.19	7.17	0	0	0
68	SLU 76	-0.03	-0.19	7.13	0	0	0
68	SLU 77	-0.04	-0.19	7.24	0	0	0
68	SLU 78	-0.04	-0.19	7.24	0	0	0
68	SLU 79	-0.04	-0.19	7.2	0	0	0
68	SLU 80	-0.04	-0.19	7.2	0	0	0
68	SLU 81	-0.03	-0.2	7.35	0	0	0
68	SLU 82	-0.03	-0.2	7.34	0	0	0
68	SLU 83	-0.04	-0.2	7.41	0	0	0
68	SLU 84	-0.04	-0.19	7.41	0	0	0
68	SLE RA 1	-0.02	-0.14	4.82	0	0	0
68	SLE RA 2	-0.02	-0.14	4.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLE RA 3	-0.02	-0.14	4.89	0	0	0
68	SLE RA 4	-0.02	-0.14	4.89	0	0	0
68	SLE RA 5	-0.02	-0.14	4.86	0	0	0
68	SLE RA 6	-0.02	-0.14	4.93	0	0	0
68	SLE RA 7	-0.02	-0.14	4.93	0	0	0
68	SLE RA 8	-0.02	-0.14	4.91	0	0	0
68	SLE RA 9	-0.02	-0.14	4.91	0	0	0
68	SLE RA 10	-0.02	-0.14	5.24	0	0	0
68	SLE RA 11	-0.02	-0.15	5.32	0	0	0
68	SLE RA 12	-0.02	-0.14	5.31	0	0	0
68	SLE RA 13	-0.02	-0.14	5.29	0	0	0
68	SLE RA 14	-0.03	-0.15	5.36	0	0	0
68	SLE RA 15	-0.03	-0.14	5.36	0	0	0
68	SLE RA 16	-0.03	-0.15	5.33	0	0	0
68	SLE RA 17	-0.03	-0.14	5.33	0	0	0
68	SLE RA 18	-0.02	-0.15	5.43	0	0	0
68	SLE RA 19	-0.02	-0.15	5.43	0	0	0
68	SLE RA 20	-0.03	-0.15	5.47	0	0	0
68	SLE RA 21	-0.03	-0.15	5.47	0	0	0
68	SLE FR 1	-0.02	-0.14	4.82	0	0	0
68	SLE FR 2	-0.02	-0.14	4.82	0	0	0
68	SLE FR 3	-0.02	-0.14	4.84	0	0	0
68	SLE FR 4	-0.02	-0.14	5	0	0	0
68	SLE FR 5	-0.02	-0.14	5.02	0	0	0
68	SLE FR 6	-0.02	-0.14	5.12	0	0	0
68	SLE QP 1	-0.02	-0.14	4.82	0	0	0
68	SLE QP 2	-0.02	-0.14	5	0	0	0
68	SLD 1	0.32	-0.11	4.93	0	0	0
68	SLD 2	0.32	-0.1	4.93	0	0	0
68	SLD 3	0.3	-0.22	5.01	0	0	0
68	SLD 4	0.3	-0.21	5.01	0	0	0
68	SLD 5	0.11	0.03	4.87	0	0	0
68	SLD 6	0.11	0.04	4.86	0	0	0
68	SLD 7	0.05	-0.33	5.12	0	0	0
68	SLD 8	0.05	-0.33	5.12	0	0	0
68	SLD 9	-0.09	0.04	4.88	0	0	0
68	SLD 10	-0.09	0.05	4.88	0	0	0
68	SLD 11	-0.15	-0.32	5.14	0	0	0
68	SLD 12	-0.15	-0.32	5.14	0	0	0
68	SLD 13	-0.34	-0.07	4.99	0	0	0
68	SLD 14	-0.34	-0.07	4.99	0	0	0
68	SLD 15	-0.36	-0.18	5.07	0	0	0
68	SLD 16	-0.36	-0.17	5.07	0	0	0
68	SLV 1	0.76	-0.07	4.85	0	0	0
68	SLV 2	0.77	-0.05	4.85	0	0	0
68	SLV 3	0.72	-0.32	5.02	0	0	0
68	SLV 4	0.73	-0.3	5.02	0	0	0
68	SLV 5	0.28	0.25	4.69	0	0	0
68	SLV 6	0.28	0.26	4.69	0	0	0
68	SLV 7	0.14	-0.57	5.27	0	0	0
68	SLV 8	0.14	-0.56	5.27	0	0	0
68	SLV 9	-0.18	0.28	4.73	0	0	0
68	SLV 10	-0.18	0.29	4.73	0	0	0
68	SLV 11	-0.32	-0.55	5.31	0	0	0
68	SLV 12	-0.32	-0.54	5.31	0	0	0
68	SLV 13	-0.77	0.02	4.98	0	0	0
68	SLV 14	-0.76	0.03	4.98	0	0	0
68	SLV 15	-0.81	-0.23	5.16	0	0	0
68	SLV 16	-0.8	-0.21	5.16	0	0	0
69	SLU 1	-0.02	-0.13	4.57	0	0	0
69	SLU 2	-0.02	-0.13	4.57	0	0	0
69	SLU 3	-0.02	-0.13	4.67	0	0	0
69	SLU 4	-0.02	-0.13	4.67	0	0	0
69	SLU 5	-0.02	-0.13	4.63	0	0	0
69	SLU 6	-0.02	-0.13	4.74	0	0	0
69	SLU 7	-0.02	-0.13	4.74	0	0	0
69	SLU 8	-0.02	-0.13	4.7	0	0	0
69	SLU 9	-0.02	-0.13	4.7	0	0	0
69	SLU 10	-0.02	-0.14	5.2	0	0	0
69	SLU 11	-0.03	-0.14	5.3	0	0	0
69	SLU 12	-0.03	-0.14	5.3	0	0	0
69	SLU 13	-0.03	-0.14	5.26	0	0	0
69	SLU 14	-0.03	-0.14	5.37	0	0	0
69	SLU 15	-0.03	-0.14	5.37	0	0	0
69	SLU 16	-0.03	-0.14	5.33	0	0	0
69	SLU 17	-0.03	-0.14	5.33	0	0	0
69	SLU 18	-0.03	-0.15	5.47	0	0	0
69	SLU 19	-0.03	-0.15	5.47	0	0	0
69	SLU 20	-0.03	-0.15	5.54	0	0	0
69	SLU 21	-0.03	-0.14	5.53	0	0	0
69	SLU 22	-0.02	-0.13	5.14	0	0	0
69	SLU 23	-0.02	-0.13	5.14	0	0	0
69	SLU 24	-0.02	-0.13	5.24	0	0	0
69	SLU 25	-0.02	-0.13	5.24	0	0	0
69	SLU 26	-0.02	-0.13	5.2	0	0	0
69	SLU 27	-0.02	-0.13	5.3	0	0	0
69	SLU 28	-0.02	-0.13	5.3	0	0	0
69	SLU 29	-0.02	-0.13	5.27	0	0	0
69	SLU 30	-0.02	-0.13	5.27	0	0	0
69	SLU 31	-0.02	-0.14	5.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
69	SLU 32	-0.03	-0.15	5.87	0	0	0
69	SLU 33	-0.03	-0.14	5.87	0	0	0
69	SLU 34	-0.03	-0.14	5.83	0	0	0
69	SLU 35	-0.03	-0.14	5.93	0	0	0
69	SLU 36	-0.03	-0.14	5.93	0	0	0
69	SLU 37	-0.03	-0.14	5.9	0	0	0
69	SLU 38	-0.03	-0.14	5.9	0	0	0
69	SLU 39	-0.03	-0.15	6.04	0	0	0
69	SLU 40	-0.03	-0.15	6.04	0	0	0
69	SLU 41	-0.03	-0.15	6.1	0	0	0
69	SLU 42	-0.03	-0.15	6.1	0	0	0
69	SLU 43	-0.02	-0.17	5.75	0	0	0
69	SLU 44	-0.02	-0.17	5.75	0	0	0
69	SLU 45	-0.03	-0.17	5.85	0	0	0
69	SLU 46	-0.02	-0.17	5.85	0	0	0
69	SLU 47	-0.03	-0.17	5.81	0	0	0
69	SLU 48	-0.03	-0.17	5.91	0	0	0
69	SLU 49	-0.03	-0.17	5.91	0	0	0
69	SLU 50	-0.03	-0.17	5.88	0	0	0
69	SLU 51	-0.03	-0.17	5.88	0	0	0
69	SLU 52	-0.03	-0.18	6.38	0	0	0
69	SLU 53	-0.03	-0.18	6.48	0	0	0
69	SLU 54	-0.03	-0.18	6.48	0	0	0
69	SLU 55	-0.03	-0.18	6.44	0	0	0
69	SLU 56	-0.04	-0.18	6.54	0	0	0
69	SLU 57	-0.04	-0.18	6.54	0	0	0
69	SLU 58	-0.04	-0.18	6.51	0	0	0
69	SLU 59	-0.04	-0.18	6.51	0	0	0
69	SLU 60	-0.03	-0.19	6.65	0	0	0
69	SLU 61	-0.03	-0.18	6.65	0	0	0
69	SLU 62	-0.04	-0.19	6.71	0	0	0
69	SLU 63	-0.04	-0.18	6.71	0	0	0
69	SLU 64	-0.02	-0.17	6.32	0	0	0
69	SLU 65	-0.02	-0.17	6.32	0	0	0
69	SLU 66	-0.03	-0.17	6.42	0	0	0
69	SLU 67	-0.02	-0.17	6.42	0	0	0
69	SLU 68	-0.03	-0.17	6.38	0	0	0
69	SLU 69	-0.03	-0.17	6.48	0	0	0
69	SLU 70	-0.03	-0.17	6.48	0	0	0
69	SLU 71	-0.03	-0.17	6.44	0	0	0
69	SLU 72	-0.03	-0.17	6.44	0	0	0
69	SLU 73	-0.03	-0.18	6.95	0	0	0
69	SLU 74	-0.03	-0.18	7.05	0	0	0
69	SLU 75	-0.03	-0.18	7.05	0	0	0
69	SLU 76	-0.03	-0.18	7.01	0	0	0
69	SLU 77	-0.04	-0.18	7.11	0	0	0
69	SLU 78	-0.04	-0.18	7.11	0	0	0
69	SLU 79	-0.04	-0.18	7.07	0	0	0
69	SLU 80	-0.04	-0.18	7.07	0	0	0
69	SLU 81	-0.03	-0.19	7.22	0	0	0
69	SLU 82	-0.03	-0.19	7.22	0	0	0
69	SLU 83	-0.04	-0.19	7.28	0	0	0
69	SLU 84	-0.04	-0.19	7.28	0	0	0
69	SLE RA 1	-0.02	-0.13	4.73	0	0	0
69	SLE RA 2	-0.02	-0.13	4.73	0	0	0
69	SLE RA 3	-0.02	-0.13	4.8	0	0	0
69	SLE RA 4	-0.02	-0.13	4.8	0	0	0
69	SLE RA 5	-0.02	-0.13	4.78	0	0	0
69	SLE RA 6	-0.02	-0.13	4.84	0	0	0
69	SLE RA 7	-0.02	-0.13	4.84	0	0	0
69	SLE RA 8	-0.02	-0.13	4.82	0	0	0
69	SLE RA 9	-0.02	-0.13	4.82	0	0	0
69	SLE RA 10	-0.02	-0.14	5.15	0	0	0
69	SLE RA 11	-0.02	-0.14	5.22	0	0	0
69	SLE RA 12	-0.02	-0.14	5.22	0	0	0
69	SLE RA 13	-0.02	-0.14	5.2	0	0	0
69	SLE RA 14	-0.03	-0.14	5.26	0	0	0
69	SLE RA 15	-0.03	-0.14	5.26	0	0	0
69	SLE RA 16	-0.03	-0.14	5.24	0	0	0
69	SLE RA 17	-0.03	-0.14	5.24	0	0	0
69	SLE RA 18	-0.02	-0.14	5.33	0	0	0
69	SLE RA 19	-0.02	-0.14	5.33	0	0	0
69	SLE RA 20	-0.03	-0.14	5.38	0	0	0
69	SLE RA 21	-0.03	-0.14	5.38	0	0	0
69	SLE FR 1	-0.02	-0.13	4.73	0	0	0
69	SLE FR 2	-0.02	-0.13	4.73	0	0	0
69	SLE FR 3	-0.02	-0.13	4.75	0	0	0
69	SLE FR 4	-0.02	-0.14	4.91	0	0	0
69	SLE FR 5	-0.02	-0.14	4.93	0	0	0
69	SLE FR 6	-0.02	-0.14	5.03	0	0	0
69	SLE QP 1	-0.02	-0.13	4.73	0	0	0
69	SLE QP 2	-0.02	-0.14	4.91	0	0	0
69	SLD 1	0.31	-0.11	4.83	0	0	0
69	SLD 2	0.31	-0.1	4.83	0	0	0
69	SLD 3	0.29	-0.21	4.91	0	0	0
69	SLD 4	0.3	-0.2	4.9	0	0	0
69	SLD 5	0.11	0.03	4.78	0	0	0
69	SLD 6	0.11	0.04	4.78	0	0	0
69	SLD 7	0.05	-0.32	5.02	0	0	0
69	SLD 8	0.05	-0.32	5.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
69	SLD 9	-0.09	0.04	4.81	0	0	0
69	SLD 10	-0.09	0.05	4.81	0	0	0
69	SLD 11	-0.15	-0.31	5.05	0	0	0
69	SLD 12	-0.15	-0.3	5.05	0	0	0
69	SLD 13	-0.34	-0.07	4.93	0	0	0
69	SLD 14	-0.33	-0.06	4.92	0	0	0
69	SLD 15	-0.35	-0.18	5	0	0	0
69	SLD 16	-0.35	-0.17	5	0	0	0
69	SLV 1	0.76	-0.07	4.73	0	0	0
69	SLV 2	0.76	-0.05	4.73	0	0	0
69	SLV 3	0.71	-0.31	4.89	0	0	0
69	SLV 4	0.72	-0.29	4.89	0	0	0
69	SLV 5	0.27	0.25	4.62	0	0	0
69	SLV 6	0.28	0.26	4.61	0	0	0
69	SLV 7	0.14	-0.56	5.15	0	0	0
69	SLV 8	0.14	-0.55	5.15	0	0	0
69	SLV 9	-0.18	0.27	4.68	0	0	0
69	SLV 10	-0.18	0.29	4.68	0	0	0
69	SLV 11	-0.32	-0.53	5.22	0	0	0
69	SLV 12	-0.31	-0.52	5.21	0	0	0
69	SLV 13	-0.76	0.02	4.94	0	0	0
69	SLV 14	-0.75	0.04	4.94	0	0	0
69	SLV 15	-0.8	-0.22	5.1	0	0	0
69	SLV 16	-0.79	-0.2	5.1	0	0	0
70	SLU 1	-0.02	-0.14	5.05	0	0	0
70	SLU 2	-0.02	-0.14	5.05	0	0	0
70	SLU 3	-0.02	-0.14	5.16	0	0	0
70	SLU 4	-0.02	-0.14	5.16	0	0	0
70	SLU 5	-0.02	-0.14	5.11	0	0	0
70	SLU 6	-0.03	-0.14	5.23	0	0	0
70	SLU 7	-0.03	-0.14	5.23	0	0	0
70	SLU 8	-0.03	-0.14	5.18	0	0	0
70	SLU 9	-0.03	-0.14	5.18	0	0	0
70	SLU 10	-0.03	-0.15	5.74	0	0	0
70	SLU 11	-0.03	-0.15	5.85	0	0	0
70	SLU 12	-0.03	-0.15	5.85	0	0	0
70	SLU 13	-0.03	-0.15	5.81	0	0	0
70	SLU 14	-0.03	-0.15	5.92	0	0	0
70	SLU 15	-0.03	-0.15	5.92	0	0	0
70	SLU 16	-0.03	-0.15	5.88	0	0	0
70	SLU 17	-0.03	-0.15	5.88	0	0	0
70	SLU 18	-0.03	-0.16	6.04	0	0	0
70	SLU 19	-0.03	-0.16	6.04	0	0	0
70	SLU 20	-0.03	-0.16	6.11	0	0	0
70	SLU 21	-0.03	-0.16	6.11	0	0	0
70	SLU 22	-0.02	-0.14	5.67	0	0	0
70	SLU 23	-0.02	-0.14	5.67	0	0	0
70	SLU 24	-0.02	-0.14	5.79	0	0	0
70	SLU 25	-0.02	-0.14	5.78	0	0	0
70	SLU 26	-0.02	-0.14	5.74	0	0	0
70	SLU 27	-0.03	-0.14	5.85	0	0	0
70	SLU 28	-0.03	-0.14	5.85	0	0	0
70	SLU 29	-0.03	-0.14	5.81	0	0	0
70	SLU 30	-0.03	-0.14	5.81	0	0	0
70	SLU 31	-0.03	-0.15	6.37	0	0	0
70	SLU 32	-0.03	-0.16	6.48	0	0	0
70	SLU 33	-0.03	-0.15	6.48	0	0	0
70	SLU 34	-0.03	-0.15	6.44	0	0	0
70	SLU 35	-0.03	-0.15	6.55	0	0	0
70	SLU 36	-0.03	-0.15	6.55	0	0	0
70	SLU 37	-0.03	-0.15	6.51	0	0	0
70	SLU 38	-0.03	-0.15	6.51	0	0	0
70	SLU 39	-0.03	-0.16	6.67	0	0	0
70	SLU 40	-0.03	-0.16	6.67	0	0	0
70	SLU 41	-0.03	-0.16	6.73	0	0	0
70	SLU 42	-0.03	-0.16	6.73	0	0	0
70	SLU 43	-0.02	-0.18	6.35	0	0	0
70	SLU 44	-0.02	-0.18	6.34	0	0	0
70	SLU 45	-0.03	-0.18	6.46	0	0	0
70	SLU 46	-0.03	-0.18	6.46	0	0	0
70	SLU 47	-0.03	-0.18	6.41	0	0	0
70	SLU 48	-0.03	-0.18	6.53	0	0	0
70	SLU 49	-0.03	-0.18	6.52	0	0	0
70	SLU 50	-0.03	-0.18	6.48	0	0	0
70	SLU 51	-0.03	-0.18	6.48	0	0	0
70	SLU 52	-0.03	-0.19	7.04	0	0	0
70	SLU 53	-0.04	-0.2	7.15	0	0	0
70	SLU 54	-0.04	-0.19	7.15	0	0	0
70	SLU 55	-0.04	-0.19	7.11	0	0	0
70	SLU 56	-0.04	-0.19	7.22	0	0	0
70	SLU 57	-0.04	-0.19	7.22	0	0	0
70	SLU 58	-0.04	-0.19	7.18	0	0	0
70	SLU 59	-0.04	-0.19	7.18	0	0	0
70	SLU 60	-0.04	-0.2	7.34	0	0	0
70	SLU 61	-0.04	-0.2	7.34	0	0	0
70	SLU 62	-0.04	-0.2	7.41	0	0	0
70	SLU 63	-0.04	-0.2	7.41	0	0	0
70	SLU 64	-0.02	-0.19	6.97	0	0	0
70	SLU 65	-0.02	-0.18	6.97	0	0	0
70	SLU 66	-0.03	-0.19	7.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLU 67	-0.03	-0.18	7.08	0	0	0
70	SLU 68	-0.03	-0.18	7.04	0	0	0
70	SLU 69	-0.03	-0.18	7.15	0	0	0
70	SLU 70	-0.03	-0.18	7.15	0	0	0
70	SLU 71	-0.03	-0.19	7.11	0	0	0
70	SLU 72	-0.03	-0.18	7.11	0	0	0
70	SLU 73	-0.03	-0.19	7.67	0	0	0
70	SLU 74	-0.04	-0.2	7.78	0	0	0
70	SLU 75	-0.04	-0.19	7.78	0	0	0
70	SLU 76	-0.04	-0.19	7.73	0	0	0
70	SLU 77	-0.04	-0.2	7.85	0	0	0
70	SLU 78	-0.04	-0.19	7.85	0	0	0
70	SLU 79	-0.04	-0.2	7.81	0	0	0
70	SLU 80	-0.04	-0.19	7.8	0	0	0
70	SLU 81	-0.04	-0.2	7.97	0	0	0
70	SLU 82	-0.04	-0.2	7.96	0	0	0
70	SLU 83	-0.04	-0.2	8.03	0	0	0
70	SLU 84	-0.04	-0.2	8.03	0	0	0
70	SLE RA 1	-0.02	-0.14	5.23	0	0	0
70	SLE RA 2	-0.02	-0.14	5.23	0	0	0
70	SLE RA 3	-0.02	-0.14	5.3	0	0	0
70	SLE RA 4	-0.02	-0.14	5.3	0	0	0
70	SLE RA 5	-0.02	-0.14	5.27	0	0	0
70	SLE RA 6	-0.02	-0.14	5.35	0	0	0
70	SLE RA 7	-0.02	-0.14	5.35	0	0	0
70	SLE RA 8	-0.02	-0.14	5.32	0	0	0
70	SLE RA 9	-0.02	-0.14	5.32	0	0	0
70	SLE RA 10	-0.02	-0.15	5.69	0	0	0
70	SLE RA 11	-0.03	-0.15	5.76	0	0	0
70	SLE RA 12	-0.03	-0.15	5.76	0	0	0
70	SLE RA 13	-0.03	-0.15	5.73	0	0	0
70	SLE RA 14	-0.03	-0.15	5.81	0	0	0
70	SLE RA 15	-0.03	-0.15	5.81	0	0	0
70	SLE RA 16	-0.03	-0.15	5.78	0	0	0
70	SLE RA 17	-0.03	-0.15	5.78	0	0	0
70	SLE RA 18	-0.03	-0.15	5.89	0	0	0
70	SLE RA 19	-0.03	-0.15	5.89	0	0	0
70	SLE RA 20	-0.03	-0.15	5.93	0	0	0
70	SLE RA 21	-0.03	-0.15	5.93	0	0	0
70	SLE FR 1	-0.02	-0.14	5.23	0	0	0
70	SLE FR 2	-0.02	-0.14	5.23	0	0	0
70	SLE FR 3	-0.02	-0.14	5.24	0	0	0
70	SLE FR 4	-0.02	-0.15	5.42	0	0	0
70	SLE FR 5	-0.02	-0.15	5.44	0	0	0
70	SLE FR 6	-0.02	-0.15	5.56	0	0	0
70	SLE QP 1	-0.02	-0.14	5.23	0	0	0
70	SLE QP 2	-0.02	-0.15	5.42	0	0	0
70	SLD 1	0.35	-0.12	5.32	0	0	0
70	SLD 2	0.35	-0.1	5.32	0	0	0
70	SLD 3	0.33	-0.23	5.39	0	0	0
70	SLD 4	0.33	-0.22	5.39	0	0	0
70	SLD 5	0.12	0.04	5.28	0	0	0
70	SLD 6	0.12	0.05	5.28	0	0	0
70	SLD 7	0.05	-0.35	5.53	0	0	0
70	SLD 8	0.05	-0.34	5.52	0	0	0
70	SLD 9	-0.1	0.05	5.32	0	0	0
70	SLD 10	-0.1	0.06	5.32	0	0	0
70	SLD 11	-0.16	-0.34	5.57	0	0	0
70	SLD 12	-0.16	-0.33	5.57	0	0	0
70	SLD 13	-0.37	-0.07	5.46	0	0	0
70	SLD 14	-0.37	-0.06	5.46	0	0	0
70	SLD 15	-0.39	-0.19	5.53	0	0	0
70	SLD 16	-0.39	-0.18	5.53	0	0	0
70	SLV 1	0.84	-0.08	5.18	0	0	0
70	SLV 2	0.84	-0.05	5.17	0	0	0
70	SLV 3	0.79	-0.35	5.34	0	0	0
70	SLV 4	0.8	-0.32	5.34	0	0	0
70	SLV 5	0.3	0.27	5.1	0	0	0
70	SLV 6	0.31	0.29	5.1	0	0	0
70	SLV 7	0.15	-0.62	5.65	0	0	0
70	SLV 8	0.16	-0.6	5.65	0	0	0
70	SLV 9	-0.2	0.3	5.2	0	0	0
70	SLV 10	-0.2	0.32	5.2	0	0	0
70	SLV 11	-0.35	-0.58	5.75	0	0	0
70	SLV 12	-0.35	-0.56	5.75	0	0	0
70	SLV 13	-0.84	0.02	5.51	0	0	0
70	SLV 14	-0.84	0.06	5.51	0	0	0
70	SLV 15	-0.89	-0.24	5.68	0	0	0
70	SLV 16	-0.88	-0.21	5.67	0	0	0
71	SLU 1	-0.02	-0.14	4.95	0	0	0
71	SLU 2	-0.02	-0.13	4.95	0	0	0
71	SLU 3	-0.02	-0.14	5.06	0	0	0
71	SLU 4	-0.02	-0.13	5.06	0	0	0
71	SLU 5	-0.02	-0.13	5.01	0	0	0
71	SLU 6	-0.02	-0.13	5.12	0	0	0
71	SLU 7	-0.02	-0.13	5.12	0	0	0
71	SLU 8	-0.03	-0.13	5.08	0	0	0
71	SLU 9	-0.03	-0.13	5.08	0	0	0
71	SLU 10	-0.03	-0.14	5.63	0	0	0
71	SLU 11	-0.03	-0.15	5.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
71	SLU 12	-0.03	-0.14	5.74	0	0	0
71	SLU 13	-0.03	-0.14	5.69	0	0	0
71	SLU 14	-0.03	-0.15	5.8	0	0	0
71	SLU 15	-0.03	-0.14	5.8	0	0	0
71	SLU 16	-0.03	-0.15	5.76	0	0	0
71	SLU 17	-0.03	-0.14	5.76	0	0	0
71	SLU 18	-0.03	-0.15	5.92	0	0	0
71	SLU 19	-0.03	-0.15	5.92	0	0	0
71	SLU 20	-0.03	-0.15	5.99	0	0	0
71	SLU 21	-0.03	-0.15	5.99	0	0	0
71	SLU 22	-0.02	-0.14	5.57	0	0	0
71	SLU 23	-0.02	-0.13	5.56	0	0	0
71	SLU 24	-0.02	-0.14	5.67	0	0	0
71	SLU 25	-0.02	-0.13	5.67	0	0	0
71	SLU 26	-0.02	-0.13	5.63	0	0	0
71	SLU 27	-0.02	-0.14	5.74	0	0	0
71	SLU 28	-0.02	-0.13	5.74	0	0	0
71	SLU 29	-0.03	-0.14	5.7	0	0	0
71	SLU 30	-0.03	-0.13	5.7	0	0	0
71	SLU 31	-0.03	-0.14	6.24	0	0	0
71	SLU 32	-0.03	-0.15	6.35	0	0	0
71	SLU 33	-0.03	-0.14	6.35	0	0	0
71	SLU 34	-0.03	-0.14	6.31	0	0	0
71	SLU 35	-0.03	-0.15	6.42	0	0	0
71	SLU 36	-0.03	-0.14	6.42	0	0	0
71	SLU 37	-0.03	-0.15	6.38	0	0	0
71	SLU 38	-0.03	-0.14	6.38	0	0	0
71	SLU 39	-0.03	-0.15	6.54	0	0	0
71	SLU 40	-0.03	-0.15	6.54	0	0	0
71	SLU 41	-0.03	-0.15	6.6	0	0	0
71	SLU 42	-0.03	-0.15	6.6	0	0	0
71	SLU 43	-0.02	-0.18	6.22	0	0	0
71	SLU 44	-0.02	-0.17	6.22	0	0	0
71	SLU 45	-0.03	-0.18	6.33	0	0	0
71	SLU 46	-0.03	-0.17	6.33	0	0	0
71	SLU 47	-0.03	-0.17	6.29	0	0	0
71	SLU 48	-0.03	-0.17	6.4	0	0	0
71	SLU 49	-0.03	-0.17	6.4	0	0	0
71	SLU 50	-0.03	-0.17	6.35	0	0	0
71	SLU 51	-0.03	-0.17	6.35	0	0	0
71	SLU 52	-0.03	-0.18	6.9	0	0	0
71	SLU 53	-0.03	-0.19	7.01	0	0	0
71	SLU 54	-0.03	-0.18	7.01	0	0	0
71	SLU 55	-0.03	-0.18	6.97	0	0	0
71	SLU 56	-0.04	-0.19	7.08	0	0	0
71	SLU 57	-0.04	-0.18	7.07	0	0	0
71	SLU 58	-0.04	-0.19	7.03	0	0	0
71	SLU 59	-0.04	-0.18	7.03	0	0	0
71	SLU 60	-0.04	-0.19	7.19	0	0	0
71	SLU 61	-0.03	-0.19	7.19	0	0	0
71	SLU 62	-0.04	-0.19	7.26	0	0	0
71	SLU 63	-0.04	-0.19	7.26	0	0	0
71	SLU 64	-0.02	-0.18	6.84	0	0	0
71	SLU 65	-0.02	-0.17	6.84	0	0	0
71	SLU 66	-0.03	-0.18	6.95	0	0	0
71	SLU 67	-0.03	-0.17	6.95	0	0	0
71	SLU 68	-0.03	-0.17	6.9	0	0	0
71	SLU 69	-0.03	-0.18	7.01	0	0	0
71	SLU 70	-0.03	-0.17	7.01	0	0	0
71	SLU 71	-0.03	-0.18	6.97	0	0	0
71	SLU 72	-0.03	-0.17	6.97	0	0	0
71	SLU 73	-0.03	-0.18	7.52	0	0	0
71	SLU 74	-0.03	-0.19	7.63	0	0	0
71	SLU 75	-0.03	-0.19	7.63	0	0	0
71	SLU 76	-0.03	-0.18	7.58	0	0	0
71	SLU 77	-0.04	-0.19	7.69	0	0	0
71	SLU 78	-0.04	-0.18	7.69	0	0	0
71	SLU 79	-0.04	-0.19	7.65	0	0	0
71	SLU 80	-0.04	-0.18	7.65	0	0	0
71	SLU 81	-0.04	-0.19	7.81	0	0	0
71	SLU 82	-0.03	-0.19	7.81	0	0	0
71	SLU 83	-0.04	-0.19	7.88	0	0	0
71	SLU 84	-0.04	-0.19	7.87	0	0	0
71	SLE RA 1	-0.02	-0.14	5.13	0	0	0
71	SLE RA 2	-0.02	-0.13	5.12	0	0	0
71	SLE RA 3	-0.02	-0.14	5.2	0	0	0
71	SLE RA 4	-0.02	-0.13	5.2	0	0	0
71	SLE RA 5	-0.02	-0.13	5.17	0	0	0
71	SLE RA 6	-0.02	-0.14	5.24	0	0	0
71	SLE RA 7	-0.02	-0.13	5.24	0	0	0
71	SLE RA 8	-0.02	-0.14	5.21	0	0	0
71	SLE RA 9	-0.02	-0.13	5.21	0	0	0
71	SLE RA 10	-0.02	-0.14	5.58	0	0	0
71	SLE RA 11	-0.03	-0.14	5.65	0	0	0
71	SLE RA 12	-0.03	-0.14	5.65	0	0	0
71	SLE RA 13	-0.03	-0.14	5.62	0	0	0
71	SLE RA 14	-0.03	-0.14	5.69	0	0	0
71	SLE RA 15	-0.03	-0.14	5.69	0	0	0
71	SLE RA 16	-0.03	-0.14	5.67	0	0	0
71	SLE RA 17	-0.03	-0.14	5.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
71	SLE RA 18	-0.03	-0.15	5.77	0	0	0
71	SLE RA 19	-0.03	-0.15	5.77	0	0	0
71	SLE RA 20	-0.03	-0.15	5.82	0	0	0
71	SLE RA 21	-0.03	-0.14	5.82	0	0	0
71	SLE FR 1	-0.02	-0.14	5.13	0	0	0
71	SLE FR 2	-0.02	-0.14	5.13	0	0	0
71	SLE FR 3	-0.02	-0.14	5.14	0	0	0
71	SLE FR 4	-0.02	-0.14	5.32	0	0	0
71	SLE FR 5	-0.02	-0.14	5.34	0	0	0
71	SLE FR 6	-0.02	-0.14	5.45	0	0	0
71	SLE QP 1	-0.02	-0.14	5.13	0	0	0
71	SLE QP 2	-0.02	-0.14	5.32	0	0	0
71	SLD 1	0.34	-0.11	5.19	0	0	0
71	SLD 2	0.34	-0.1	5.19	0	0	0
71	SLD 3	0.32	-0.23	5.26	0	0	0
71	SLD 4	0.32	-0.21	5.26	0	0	0
71	SLD 5	0.12	0.04	5.18	0	0	0
71	SLD 6	0.12	0.05	5.18	0	0	0
71	SLD 7	0.05	-0.34	5.41	0	0	0
71	SLD 8	0.05	-0.33	5.4	0	0	0
71	SLD 9	-0.1	0.05	5.24	0	0	0
71	SLD 10	-0.09	0.06	5.23	0	0	0
71	SLD 11	-0.16	-0.33	5.46	0	0	0
71	SLD 12	-0.16	-0.32	5.46	0	0	0
71	SLD 13	-0.37	-0.07	5.38	0	0	0
71	SLD 14	-0.36	-0.05	5.38	0	0	0
71	SLD 15	-0.39	-0.18	5.45	0	0	0
71	SLD 16	-0.38	-0.17	5.44	0	0	0
71	SLV 1	0.83	-0.08	5.03	0	0	0
71	SLV 2	0.83	-0.05	5.02	0	0	0
71	SLV 3	0.78	-0.34	5.18	0	0	0
71	SLV 4	0.79	-0.31	5.18	0	0	0
71	SLV 5	0.3	0.27	5	0	0	0
71	SLV 6	0.3	0.29	5	0	0	0
71	SLV 7	0.15	-0.6	5.51	0	0	0
71	SLV 8	0.15	-0.58	5.51	0	0	0
71	SLV 9	-0.2	0.3	5.13	0	0	0
71	SLV 10	-0.19	0.32	5.13	0	0	0
71	SLV 11	-0.35	-0.57	5.64	0	0	0
71	SLV 12	-0.34	-0.55	5.64	0	0	0
71	SLV 13	-0.83	0.03	5.46	0	0	0
71	SLV 14	-0.82	0.06	5.46	0	0	0
71	SLV 15	-0.87	-0.23	5.62	0	0	0
71	SLV 16	-0.87	-0.2	5.61	0	0	0
72	SLU 1	-0.02	-0.13	4.89	0	0	0
72	SLU 2	-0.02	-0.13	4.89	0	0	0
72	SLU 3	-0.02	-0.13	5	0	0	0
72	SLU 4	-0.02	-0.13	5	0	0	0
72	SLU 5	-0.02	-0.13	4.96	0	0	0
72	SLU 6	-0.02	-0.13	5.06	0	0	0
72	SLU 7	-0.02	-0.13	5.06	0	0	0
72	SLU 8	-0.03	-0.13	5.02	0	0	0
72	SLU 9	-0.02	-0.13	5.02	0	0	0
72	SLU 10	-0.03	-0.14	5.56	0	0	0
72	SLU 11	-0.03	-0.14	5.67	0	0	0
72	SLU 12	-0.03	-0.14	5.67	0	0	0
72	SLU 13	-0.03	-0.14	5.63	0	0	0
72	SLU 14	-0.03	-0.14	5.74	0	0	0
72	SLU 15	-0.03	-0.14	5.73	0	0	0
72	SLU 16	-0.03	-0.14	5.69	0	0	0
72	SLU 17	-0.03	-0.14	5.69	0	0	0
72	SLU 18	-0.03	-0.15	5.85	0	0	0
72	SLU 19	-0.03	-0.14	5.85	0	0	0
72	SLU 20	-0.03	-0.15	5.92	0	0	0
72	SLU 21	-0.03	-0.14	5.92	0	0	0
72	SLU 22	-0.02	-0.13	5.51	0	0	0
72	SLU 23	-0.02	-0.13	5.5	0	0	0
72	SLU 24	-0.02	-0.13	5.61	0	0	0
72	SLU 25	-0.02	-0.13	5.61	0	0	0
72	SLU 26	-0.02	-0.13	5.57	0	0	0
72	SLU 27	-0.02	-0.13	5.68	0	0	0
72	SLU 28	-0.02	-0.13	5.67	0	0	0
72	SLU 29	-0.03	-0.13	5.63	0	0	0
72	SLU 30	-0.02	-0.13	5.63	0	0	0
72	SLU 31	-0.03	-0.14	6.18	0	0	0
72	SLU 32	-0.03	-0.14	6.28	0	0	0
72	SLU 33	-0.03	-0.14	6.28	0	0	0
72	SLU 34	-0.03	-0.14	6.24	0	0	0
72	SLU 35	-0.03	-0.14	6.35	0	0	0
72	SLU 36	-0.03	-0.14	6.35	0	0	0
72	SLU 37	-0.03	-0.14	6.31	0	0	0
72	SLU 38	-0.03	-0.14	6.3	0	0	0
72	SLU 39	-0.03	-0.15	6.46	0	0	0
72	SLU 40	-0.03	-0.14	6.46	0	0	0
72	SLU 41	-0.03	-0.15	6.53	0	0	0
72	SLU 42	-0.03	-0.14	6.53	0	0	0
72	SLU 43	-0.02	-0.17	6.15	0	0	0
72	SLU 44	-0.02	-0.17	6.15	0	0	0
72	SLU 45	-0.03	-0.17	6.26	0	0	0
72	SLU 46	-0.03	-0.17	6.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
72	SLU 47	-0.03	-0.16	6.22	0	0	0
72	SLU 48	-0.03	-0.17	6.32	0	0	0
72	SLU 49	-0.03	-0.17	6.32	0	0	0
72	SLU 50	-0.03	-0.17	6.28	0	0	0
72	SLU 51	-0.03	-0.17	6.28	0	0	0
72	SLU 52	-0.03	-0.18	6.82	0	0	0
72	SLU 53	-0.03	-0.18	6.93	0	0	0
72	SLU 54	-0.03	-0.18	6.93	0	0	0
72	SLU 55	-0.03	-0.17	6.89	0	0	0
72	SLU 56	-0.04	-0.18	6.99	0	0	0
72	SLU 57	-0.04	-0.18	6.99	0	0	0
72	SLU 58	-0.04	-0.18	6.95	0	0	0
72	SLU 59	-0.04	-0.18	6.95	0	0	0
72	SLU 60	-0.03	-0.19	7.11	0	0	0
72	SLU 61	-0.03	-0.18	7.11	0	0	0
72	SLU 62	-0.04	-0.18	7.18	0	0	0
72	SLU 63	-0.04	-0.18	7.18	0	0	0
72	SLU 64	-0.02	-0.17	6.76	0	0	0
72	SLU 65	-0.02	-0.17	6.76	0	0	0
72	SLU 66	-0.03	-0.17	6.87	0	0	0
72	SLU 67	-0.03	-0.17	6.87	0	0	0
72	SLU 68	-0.03	-0.17	6.83	0	0	0
72	SLU 69	-0.03	-0.17	6.93	0	0	0
72	SLU 70	-0.03	-0.17	6.93	0	0	0
72	SLU 71	-0.03	-0.17	6.89	0	0	0
72	SLU 72	-0.03	-0.17	6.89	0	0	0
72	SLU 73	-0.03	-0.18	7.43	0	0	0
72	SLU 74	-0.03	-0.18	7.54	0	0	0
72	SLU 75	-0.03	-0.18	7.54	0	0	0
72	SLU 76	-0.03	-0.18	7.5	0	0	0
72	SLU 77	-0.04	-0.18	7.61	0	0	0
72	SLU 78	-0.04	-0.18	7.6	0	0	0
72	SLU 79	-0.04	-0.18	7.56	0	0	0
72	SLU 80	-0.04	-0.18	7.56	0	0	0
72	SLU 81	-0.03	-0.19	7.72	0	0	0
72	SLU 82	-0.03	-0.18	7.72	0	0	0
72	SLU 83	-0.04	-0.19	7.79	0	0	0
72	SLU 84	-0.04	-0.18	7.79	0	0	0
72	SLE RA 1	-0.02	-0.13	5.07	0	0	0
72	SLE RA 2	-0.02	-0.13	5.07	0	0	0
72	SLE RA 3	-0.02	-0.13	5.14	0	0	0
72	SLE RA 4	-0.02	-0.13	5.14	0	0	0
72	SLE RA 5	-0.02	-0.13	5.11	0	0	0
72	SLE RA 6	-0.02	-0.13	5.18	0	0	0
72	SLE RA 7	-0.02	-0.13	5.18	0	0	0
72	SLE RA 8	-0.02	-0.13	5.16	0	0	0
72	SLE RA 9	-0.02	-0.13	5.15	0	0	0
72	SLE RA 10	-0.02	-0.14	5.52	0	0	0
72	SLE RA 11	-0.03	-0.14	5.59	0	0	0
72	SLE RA 12	-0.02	-0.14	5.59	0	0	0
72	SLE RA 13	-0.03	-0.13	5.56	0	0	0
72	SLE RA 14	-0.03	-0.14	5.63	0	0	0
72	SLE RA 15	-0.03	-0.14	5.63	0	0	0
72	SLE RA 16	-0.03	-0.14	5.6	0	0	0
72	SLE RA 17	-0.03	-0.14	5.6	0	0	0
72	SLE RA 18	-0.03	-0.14	5.71	0	0	0
72	SLE RA 19	-0.03	-0.14	5.71	0	0	0
72	SLE RA 20	-0.03	-0.14	5.75	0	0	0
72	SLE RA 21	-0.03	-0.14	5.75	0	0	0
72	SLE FR 1	-0.02	-0.13	5.07	0	0	0
72	SLE FR 2	-0.02	-0.13	5.07	0	0	0
72	SLE FR 3	-0.02	-0.13	5.09	0	0	0
72	SLE FR 4	-0.02	-0.13	5.26	0	0	0
72	SLE FR 5	-0.02	-0.13	5.28	0	0	0
72	SLE FR 6	-0.02	-0.14	5.39	0	0	0
72	SLE QP 1	-0.02	-0.13	5.07	0	0	0
72	SLE QP 2	-0.02	-0.13	5.26	0	0	0
72	SLD 1	0.34	-0.11	5.12	0	0	0
72	SLD 2	0.34	-0.09	5.11	0	0	0
72	SLD 3	0.32	-0.22	5.18	0	0	0
72	SLD 4	0.32	-0.21	5.18	0	0	0
72	SLD 5	0.12	0.04	5.12	0	0	0
72	SLD 6	0.12	0.05	5.12	0	0	0
72	SLD 7	0.05	-0.34	5.33	0	0	0
72	SLD 8	0.05	-0.32	5.33	0	0	0
72	SLD 9	-0.09	0.05	5.19	0	0	0
72	SLD 10	-0.09	0.07	5.19	0	0	0
72	SLD 11	-0.16	-0.32	5.4	0	0	0
72	SLD 12	-0.16	-0.31	5.4	0	0	0
72	SLD 13	-0.36	-0.06	5.34	0	0	0
72	SLD 14	-0.36	-0.05	5.34	0	0	0
72	SLD 15	-0.38	-0.18	5.41	0	0	0
72	SLD 16	-0.38	-0.16	5.41	0	0	0
72	SLV 1	0.82	-0.08	4.93	0	0	0
72	SLV 2	0.83	-0.04	4.92	0	0	0
72	SLV 3	0.78	-0.34	5.07	0	0	0
72	SLV 4	0.78	-0.3	5.06	0	0	0
72	SLV 5	0.3	0.26	4.94	0	0	0
72	SLV 6	0.3	0.29	4.94	0	0	0
72	SLV 7	0.15	-0.59	5.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
72	SLV 8	0.15	-0.57	5.42	0	0	0
72	SLV 9	-0.19	0.3	5.1	0	0	0
72	SLV 10	-0.19	0.32	5.1	0	0	0
72	SLV 11	-0.34	-0.56	5.58	0	0	0
72	SLV 12	-0.34	-0.53	5.58	0	0	0
72	SLV 13	-0.82	0.03	5.46	0	0	0
72	SLV 14	-0.82	0.07	5.45	0	0	0
72	SLV 15	-0.87	-0.23	5.6	0	0	0
72	SLV 16	-0.86	-0.19	5.6	0	0	0
73	SLU 1	-0.03	-0.19	7.15	0	0	0
73	SLU 2	-0.03	-0.18	7.15	0	0	0
73	SLU 3	-0.03	-0.19	7.3	0	0	0
73	SLU 4	-0.03	-0.18	7.3	0	0	0
73	SLU 5	-0.03	-0.18	7.24	0	0	0
73	SLU 6	-0.04	-0.18	7.39	0	0	0
73	SLU 7	-0.04	-0.18	7.39	0	0	0
73	SLU 8	-0.04	-0.18	7.33	0	0	0
73	SLU 9	-0.04	-0.18	7.33	0	0	0
73	SLU 10	-0.04	-0.19	8.13	0	0	0
73	SLU 11	-0.04	-0.2	8.28	0	0	0
73	SLU 12	-0.04	-0.2	8.28	0	0	0
73	SLU 13	-0.04	-0.19	8.22	0	0	0
73	SLU 14	-0.05	-0.2	8.37	0	0	0
73	SLU 15	-0.05	-0.19	8.37	0	0	0
73	SLU 16	-0.05	-0.2	8.31	0	0	0
73	SLU 17	-0.05	-0.19	8.31	0	0	0
73	SLU 18	-0.04	-0.21	8.55	0	0	0
73	SLU 19	-0.04	-0.2	8.55	0	0	0
73	SLU 20	-0.05	-0.21	8.64	0	0	0
73	SLU 21	-0.05	-0.2	8.64	0	0	0
73	SLU 22	-0.03	-0.19	8.04	0	0	0
73	SLU 23	-0.03	-0.18	8.04	0	0	0
73	SLU 24	-0.03	-0.19	8.19	0	0	0
73	SLU 25	-0.03	-0.18	8.19	0	0	0
73	SLU 26	-0.03	-0.18	8.13	0	0	0
73	SLU 27	-0.04	-0.18	8.29	0	0	0
73	SLU 28	-0.04	-0.18	8.29	0	0	0
73	SLU 29	-0.04	-0.18	8.23	0	0	0
73	SLU 30	-0.04	-0.18	8.23	0	0	0
73	SLU 31	-0.04	-0.19	9.02	0	0	0
73	SLU 32	-0.04	-0.2	9.17	0	0	0
73	SLU 33	-0.04	-0.2	9.17	0	0	0
73	SLU 34	-0.04	-0.19	9.11	0	0	0
73	SLU 35	-0.05	-0.2	9.27	0	0	0
73	SLU 36	-0.05	-0.19	9.26	0	0	0
73	SLU 37	-0.05	-0.2	9.2	0	0	0
73	SLU 38	-0.05	-0.19	9.2	0	0	0
73	SLU 39	-0.04	-0.21	9.44	0	0	0
73	SLU 40	-0.04	-0.2	9.44	0	0	0
73	SLU 41	-0.05	-0.21	9.53	0	0	0
73	SLU 42	-0.05	-0.2	9.53	0	0	0
73	SLU 43	-0.03	-0.24	8.99	0	0	0
73	SLU 44	-0.03	-0.24	8.99	0	0	0
73	SLU 45	-0.04	-0.24	9.14	0	0	0
73	SLU 46	-0.04	-0.24	9.14	0	0	0
73	SLU 47	-0.04	-0.23	9.08	0	0	0
73	SLU 48	-0.04	-0.24	9.23	0	0	0
73	SLU 49	-0.04	-0.23	9.23	0	0	0
73	SLU 50	-0.04	-0.24	9.17	0	0	0
73	SLU 51	-0.04	-0.24	9.17	0	0	0
73	SLU 52	-0.04	-0.25	9.96	0	0	0
73	SLU 53	-0.05	-0.26	10.12	0	0	0
73	SLU 54	-0.05	-0.25	10.12	0	0	0
73	SLU 55	-0.05	-0.25	10.06	0	0	0
73	SLU 56	-0.06	-0.25	10.21	0	0	0
73	SLU 57	-0.05	-0.25	10.21	0	0	0
73	SLU 58	-0.06	-0.25	10.15	0	0	0
73	SLU 59	-0.06	-0.25	10.15	0	0	0
73	SLU 60	-0.05	-0.26	10.38	0	0	0
73	SLU 61	-0.05	-0.26	10.38	0	0	0
73	SLU 62	-0.06	-0.26	10.48	0	0	0
73	SLU 63	-0.06	-0.26	10.48	0	0	0
73	SLU 64	-0.03	-0.24	9.88	0	0	0
73	SLU 65	-0.03	-0.24	9.88	0	0	0
73	SLU 66	-0.04	-0.24	10.03	0	0	0
73	SLU 67	-0.04	-0.24	10.03	0	0	0
73	SLU 68	-0.04	-0.23	9.97	0	0	0
73	SLU 69	-0.04	-0.24	10.13	0	0	0
73	SLU 70	-0.04	-0.24	10.12	0	0	0
73	SLU 71	-0.04	-0.24	10.06	0	0	0
73	SLU 72	-0.04	-0.24	10.06	0	0	0
73	SLU 73	-0.05	-0.25	10.86	0	0	0
73	SLU 74	-0.05	-0.26	11.01	0	0	0
73	SLU 75	-0.05	-0.25	11.01	0	0	0
73	SLU 76	-0.05	-0.25	10.95	0	0	0
73	SLU 77	-0.06	-0.25	11.1	0	0	0
73	SLU 78	-0.05	-0.25	11.1	0	0	0
73	SLU 79	-0.06	-0.26	11.04	0	0	0
73	SLU 80	-0.06	-0.25	11.04	0	0	0
73	SLU 81	-0.05	-0.26	11.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
73	SLU 82	-0.05	-0.26	11.28	0	0	0
73	SLU 83	-0.06	-0.26	11.37	0	0	0
73	SLU 84	-0.06	-0.26	11.37	0	0	0
73	SLE RA 1	-0.03	-0.19	7.4	0	0	0
73	SLE RA 2	-0.03	-0.18	7.4	0	0	0
73	SLE RA 3	-0.03	-0.19	7.51	0	0	0
73	SLE RA 4	-0.03	-0.18	7.51	0	0	0
73	SLE RA 5	-0.03	-0.18	7.46	0	0	0
73	SLE RA 6	-0.03	-0.19	7.57	0	0	0
73	SLE RA 7	-0.03	-0.18	7.57	0	0	0
73	SLE RA 8	-0.03	-0.19	7.53	0	0	0
73	SLE RA 9	-0.03	-0.18	7.53	0	0	0
73	SLE RA 10	-0.03	-0.19	8.06	0	0	0
73	SLE RA 11	-0.04	-0.2	8.16	0	0	0
73	SLE RA 12	-0.04	-0.19	8.16	0	0	0
73	SLE RA 13	-0.04	-0.19	8.12	0	0	0
73	SLE RA 14	-0.04	-0.19	8.22	0	0	0
73	SLE RA 15	-0.04	-0.19	8.22	0	0	0
73	SLE RA 16	-0.04	-0.19	8.18	0	0	0
73	SLE RA 17	-0.04	-0.19	8.18	0	0	0
73	SLE RA 18	-0.04	-0.2	8.34	0	0	0
73	SLE RA 19	-0.04	-0.2	8.34	0	0	0
73	SLE RA 20	-0.04	-0.2	8.4	0	0	0
73	SLE RA 21	-0.04	-0.2	8.4	0	0	0
73	SLE FR 1	-0.03	-0.19	7.4	0	0	0
73	SLE FR 2	-0.03	-0.19	7.4	0	0	0
73	SLE FR 3	-0.03	-0.19	7.43	0	0	0
73	SLE FR 4	-0.03	-0.19	7.68	0	0	0
73	SLE FR 5	-0.03	-0.19	7.71	0	0	0
73	SLE FR 6	-0.03	-0.19	7.87	0	0	0
73	SLE QP 1	-0.03	-0.19	7.4	0	0	0
73	SLE QP 2	-0.03	-0.19	7.68	0	0	0
73	SLD 1	0.5	-0.16	7.44	0	0	0
73	SLD 2	0.5	-0.13	7.44	0	0	0
73	SLD 3	0.47	-0.33	7.53	0	0	0
73	SLD 4	0.47	-0.3	7.53	0	0	0
73	SLD 5	0.17	0.06	7.48	0	0	0
73	SLD 6	0.17	0.08	7.48	0	0	0
73	SLD 7	0.08	-0.48	7.77	0	0	0
73	SLD 8	0.08	-0.47	7.77	0	0	0
73	SLD 9	-0.14	0.08	7.6	0	0	0
73	SLD 10	-0.14	0.1	7.59	0	0	0
73	SLD 11	-0.23	-0.46	7.89	0	0	0
73	SLD 12	-0.23	-0.44	7.89	0	0	0
73	SLD 13	-0.53	-0.09	7.84	0	0	0
73	SLD 14	-0.53	-0.06	7.84	0	0	0
73	SLD 15	-0.56	-0.25	7.93	0	0	0
73	SLD 16	-0.56	-0.22	7.92	0	0	0
73	SLV 1	1.21	-0.13	7.12	0	0	0
73	SLV 2	1.21	-0.06	7.11	0	0	0
73	SLV 3	1.14	-0.5	7.32	0	0	0
73	SLV 4	1.15	-0.43	7.31	0	0	0
73	SLV 5	0.44	0.38	7.21	0	0	0
73	SLV 6	0.44	0.42	7.2	0	0	0
73	SLV 7	0.22	-0.86	7.88	0	0	0
73	SLV 8	0.23	-0.82	7.88	0	0	0
73	SLV 9	-0.29	0.43	7.49	0	0	0
73	SLV 10	-0.28	0.48	7.48	0	0	0
73	SLV 11	-0.5	-0.81	8.16	0	0	0
73	SLV 12	-0.5	-0.76	8.16	0	0	0
73	SLV 13	-1.21	0.05	8.05	0	0	0
73	SLV 14	-1.2	0.12	8.04	0	0	0
73	SLV 15	-1.27	-0.32	8.26	0	0	0
73	SLV 16	-1.27	-0.26	8.24	0	0	0
74	SLU 1	-0.02	-0.11	4.35	0	0	0
74	SLU 2	-0.02	-0.1	4.34	0	0	0
74	SLU 3	-0.02	-0.11	4.44	0	0	0
74	SLU 4	-0.02	-0.11	4.44	0	0	0
74	SLU 5	-0.02	-0.1	4.4	0	0	0
74	SLU 6	-0.02	-0.11	4.49	0	0	0
74	SLU 7	-0.02	-0.1	4.49	0	0	0
74	SLU 8	-0.02	-0.11	4.45	0	0	0
74	SLU 9	-0.02	-0.1	4.45	0	0	0
74	SLU 10	-0.02	-0.11	4.94	0	0	0
74	SLU 11	-0.03	-0.12	5.03	0	0	0
74	SLU 12	-0.03	-0.11	5.03	0	0	0
74	SLU 13	-0.03	-0.11	4.99	0	0	0
74	SLU 14	-0.03	-0.11	5.08	0	0	0
74	SLU 15	-0.03	-0.11	5.08	0	0	0
74	SLU 16	-0.03	-0.12	5.05	0	0	0
74	SLU 17	-0.03	-0.11	5.05	0	0	0
74	SLU 18	-0.03	-0.12	5.19	0	0	0
74	SLU 19	-0.03	-0.12	5.19	0	0	0
74	SLU 20	-0.03	-0.12	5.25	0	0	0
74	SLU 21	-0.03	-0.12	5.25	0	0	0
74	SLU 22	-0.02	-0.11	4.89	0	0	0
74	SLU 23	-0.02	-0.1	4.89	0	0	0
74	SLU 24	-0.02	-0.11	4.98	0	0	0
74	SLU 25	-0.02	-0.11	4.98	0	0	0
74	SLU 26	-0.02	-0.1	4.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
74	SLU 27	-0.02	-0.11	5.04	0	0	0
74	SLU 28	-0.02	-0.1	5.03	0	0	0
74	SLU 29	-0.02	-0.11	5	0	0	0
74	SLU 30	-0.02	-0.1	5	0	0	0
74	SLU 31	-0.02	-0.11	5.48	0	0	0
74	SLU 32	-0.03	-0.12	5.57	0	0	0
74	SLU 33	-0.03	-0.11	5.57	0	0	0
74	SLU 34	-0.03	-0.11	5.54	0	0	0
74	SLU 35	-0.03	-0.11	5.63	0	0	0
74	SLU 36	-0.03	-0.11	5.63	0	0	0
74	SLU 37	-0.03	-0.12	5.59	0	0	0
74	SLU 38	-0.03	-0.11	5.59	0	0	0
74	SLU 39	-0.03	-0.12	5.74	0	0	0
74	SLU 40	-0.03	-0.12	5.74	0	0	0
74	SLU 41	-0.03	-0.12	5.79	0	0	0
74	SLU 42	-0.03	-0.12	5.79	0	0	0
74	SLU 43	-0.02	-0.14	5.46	0	0	0
74	SLU 44	-0.02	-0.14	5.46	0	0	0
74	SLU 45	-0.02	-0.14	5.55	0	0	0
74	SLU 46	-0.02	-0.14	5.55	0	0	0
74	SLU 47	-0.02	-0.14	5.52	0	0	0
74	SLU 48	-0.03	-0.14	5.61	0	0	0
74	SLU 49	-0.03	-0.14	5.61	0	0	0
74	SLU 50	-0.03	-0.14	5.57	0	0	0
74	SLU 51	-0.03	-0.14	5.57	0	0	0
74	SLU 52	-0.03	-0.15	6.05	0	0	0
74	SLU 53	-0.03	-0.15	6.15	0	0	0
74	SLU 54	-0.03	-0.15	6.15	0	0	0
74	SLU 55	-0.03	-0.14	6.11	0	0	0
74	SLU 56	-0.03	-0.15	6.2	0	0	0
74	SLU 57	-0.03	-0.14	6.2	0	0	0
74	SLU 58	-0.03	-0.15	6.16	0	0	0
74	SLU 59	-0.03	-0.15	6.16	0	0	0
74	SLU 60	-0.03	-0.15	6.31	0	0	0
74	SLU 61	-0.03	-0.15	6.31	0	0	0
74	SLU 62	-0.03	-0.15	6.36	0	0	0
74	SLU 63	-0.03	-0.15	6.36	0	0	0
74	SLU 64	-0.02	-0.14	6.01	0	0	0
74	SLU 65	-0.02	-0.14	6.01	0	0	0
74	SLU 66	-0.02	-0.14	6.1	0	0	0
74	SLU 67	-0.02	-0.14	6.1	0	0	0
74	SLU 68	-0.02	-0.14	6.06	0	0	0
74	SLU 69	-0.03	-0.14	6.15	0	0	0
74	SLU 70	-0.03	-0.14	6.15	0	0	0
74	SLU 71	-0.03	-0.14	6.11	0	0	0
74	SLU 72	-0.03	-0.14	6.11	0	0	0
74	SLU 73	-0.03	-0.15	6.6	0	0	0
74	SLU 74	-0.03	-0.15	6.69	0	0	0
74	SLU 75	-0.03	-0.15	6.69	0	0	0
74	SLU 76	-0.03	-0.14	6.65	0	0	0
74	SLU 77	-0.03	-0.15	6.74	0	0	0
74	SLU 78	-0.03	-0.14	6.74	0	0	0
74	SLU 79	-0.03	-0.15	6.71	0	0	0
74	SLU 80	-0.03	-0.15	6.71	0	0	0
74	SLU 81	-0.03	-0.15	6.85	0	0	0
74	SLU 82	-0.03	-0.15	6.85	0	0	0
74	SLU 83	-0.03	-0.15	6.91	0	0	0
74	SLU 84	-0.03	-0.15	6.91	0	0	0
74	SLE RA 1	-0.02	-0.11	4.5	0	0	0
74	SLE RA 2	-0.02	-0.11	4.5	0	0	0
74	SLE RA 3	-0.02	-0.11	4.56	0	0	0
74	SLE RA 4	-0.02	-0.11	4.56	0	0	0
74	SLE RA 5	-0.02	-0.11	4.54	0	0	0
74	SLE RA 6	-0.02	-0.11	4.6	0	0	0
74	SLE RA 7	-0.02	-0.11	4.6	0	0	0
74	SLE RA 8	-0.02	-0.11	4.57	0	0	0
74	SLE RA 9	-0.02	-0.11	4.57	0	0	0
74	SLE RA 10	-0.02	-0.11	4.9	0	0	0
74	SLE RA 11	-0.02	-0.11	4.96	0	0	0
74	SLE RA 12	-0.02	-0.11	4.96	0	0	0
74	SLE RA 13	-0.02	-0.11	4.93	0	0	0
74	SLE RA 14	-0.02	-0.11	4.99	0	0	0
74	SLE RA 15	-0.02	-0.11	4.99	0	0	0
74	SLE RA 16	-0.03	-0.11	4.97	0	0	0
74	SLE RA 17	-0.03	-0.11	4.97	0	0	0
74	SLE RA 18	-0.02	-0.12	5.06	0	0	0
74	SLE RA 19	-0.02	-0.12	5.06	0	0	0
74	SLE RA 20	-0.03	-0.12	5.1	0	0	0
74	SLE RA 21	-0.02	-0.11	5.1	0	0	0
74	SLE FR 1	-0.02	-0.11	4.5	0	0	0
74	SLE FR 2	-0.02	-0.11	4.5	0	0	0
74	SLE FR 3	-0.02	-0.11	4.52	0	0	0
74	SLE FR 4	-0.02	-0.11	4.67	0	0	0
74	SLE FR 5	-0.02	-0.11	4.68	0	0	0
74	SLE FR 6	-0.02	-0.11	4.78	0	0	0
74	SLE QP 1	-0.02	-0.11	4.5	0	0	0
74	SLE QP 2	-0.02	-0.11	4.67	0	0	0
74	SLD 1	0.31	-0.1	4.49	0	0	0
74	SLD 2	0.31	-0.08	4.49	0	0	0
74	SLD 3	0.29	-0.2	4.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
74	SLD 4	0.29	-0.18	4.54	0	0	0
74	SLD 5	0.1	0.04	4.54	0	0	0
74	SLD 6	0.11	0.05	4.54	0	0	0
74	SLD 7	0.05	-0.29	4.71	0	0	0
74	SLD 8	0.05	-0.28	4.71	0	0	0
74	SLD 9	-0.08	0.05	4.63	0	0	0
74	SLD 10	-0.08	0.07	4.63	0	0	0
74	SLD 11	-0.14	-0.28	4.8	0	0	0
74	SLD 12	-0.14	-0.26	4.8	0	0	0
74	SLD 13	-0.33	-0.05	4.8	0	0	0
74	SLD 14	-0.33	-0.03	4.8	0	0	0
74	SLD 15	-0.34	-0.15	4.85	0	0	0
74	SLD 16	-0.34	-0.13	4.85	0	0	0
74	SLV 1	0.74	-0.08	4.26	0	0	0
74	SLV 2	0.74	-0.03	4.25	0	0	0
74	SLV 3	0.7	-0.31	4.37	0	0	0
74	SLV 4	0.7	-0.26	4.37	0	0	0
74	SLV 5	0.27	0.23	4.37	0	0	0
74	SLV 6	0.27	0.26	4.37	0	0	0
74	SLV 7	0.14	-0.52	4.76	0	0	0
74	SLV 8	0.14	-0.49	4.75	0	0	0
74	SLV 9	-0.18	0.26	4.59	0	0	0
74	SLV 10	-0.17	0.3	4.58	0	0	0
74	SLV 11	-0.31	-0.48	4.97	0	0	0
74	SLV 12	-0.31	-0.45	4.97	0	0	0
74	SLV 13	-0.74	0.03	4.97	0	0	0
74	SLV 14	-0.74	0.08	4.96	0	0	0
74	SLV 15	-0.78	-0.19	5.09	0	0	0
74	SLV 16	-0.78	-0.14	5.08	0	0	0
75	SLU 1	-0.01	-0.04	1.38	0	0	0
75	SLU 2	-0.01	-0.04	1.37	0	0	0
75	SLU 3	-0.01	-0.04	1.41	0	0	0
75	SLU 4	-0.01	-0.04	1.41	0	0	0
75	SLU 5	-0.01	-0.04	1.39	0	0	0
75	SLU 6	-0.01	-0.04	1.42	0	0	0
75	SLU 7	-0.01	-0.04	1.42	0	0	0
75	SLU 8	-0.01	-0.04	1.41	0	0	0
75	SLU 9	-0.01	-0.04	1.41	0	0	0
75	SLU 10	-0.01	-0.04	1.56	0	0	0
75	SLU 11	-0.01	-0.04	1.6	0	0	0
75	SLU 12	-0.01	-0.04	1.59	0	0	0
75	SLU 13	-0.01	-0.04	1.58	0	0	0
75	SLU 14	-0.01	-0.04	1.61	0	0	0
75	SLU 15	-0.01	-0.04	1.61	0	0	0
75	SLU 16	-0.01	-0.04	1.6	0	0	0
75	SLU 17	-0.01	-0.04	1.6	0	0	0
75	SLU 18	-0.01	-0.04	1.65	0	0	0
75	SLU 19	-0.01	-0.04	1.65	0	0	0
75	SLU 20	-0.01	-0.04	1.66	0	0	0
75	SLU 21	-0.01	-0.04	1.66	0	0	0
75	SLU 22	-0.01	-0.04	1.55	0	0	0
75	SLU 23	-0.01	-0.04	1.55	0	0	0
75	SLU 24	-0.01	-0.04	1.58	0	0	0
75	SLU 25	-0.01	-0.04	1.58	0	0	0
75	SLU 26	-0.01	-0.04	1.56	0	0	0
75	SLU 27	-0.01	-0.04	1.6	0	0	0
75	SLU 28	-0.01	-0.04	1.6	0	0	0
75	SLU 29	-0.01	-0.04	1.58	0	0	0
75	SLU 30	-0.01	-0.04	1.58	0	0	0
75	SLU 31	-0.01	-0.04	1.73	0	0	0
75	SLU 32	-0.01	-0.04	1.77	0	0	0
75	SLU 33	-0.01	-0.04	1.77	0	0	0
75	SLU 34	-0.01	-0.04	1.75	0	0	0
75	SLU 35	-0.01	-0.04	1.79	0	0	0
75	SLU 36	-0.01	-0.04	1.78	0	0	0
75	SLU 37	-0.01	-0.04	1.77	0	0	0
75	SLU 38	-0.01	-0.04	1.77	0	0	0
75	SLU 39	-0.01	-0.05	1.82	0	0	0
75	SLU 40	-0.01	-0.04	1.82	0	0	0
75	SLU 41	-0.01	-0.05	1.84	0	0	0
75	SLU 42	-0.01	-0.04	1.84	0	0	0
75	SLU 43	-0.01	-0.05	1.73	0	0	0
75	SLU 44	-0.01	-0.05	1.73	0	0	0
75	SLU 45	-0.01	-0.05	1.76	0	0	0
75	SLU 46	-0.01	-0.05	1.76	0	0	0
75	SLU 47	-0.01	-0.05	1.75	0	0	0
75	SLU 48	-0.01	-0.05	1.78	0	0	0
75	SLU 49	-0.01	-0.05	1.78	0	0	0
75	SLU 50	-0.01	-0.05	1.77	0	0	0
75	SLU 51	-0.01	-0.05	1.77	0	0	0
75	SLU 52	-0.01	-0.05	1.92	0	0	0
75	SLU 53	-0.01	-0.05	1.95	0	0	0
75	SLU 54	-0.01	-0.05	1.95	0	0	0
75	SLU 55	-0.01	-0.05	1.94	0	0	0
75	SLU 56	-0.01	-0.05	1.97	0	0	0
75	SLU 57	-0.01	-0.05	1.97	0	0	0
75	SLU 58	-0.01	-0.05	1.96	0	0	0
75	SLU 59	-0.01	-0.05	1.96	0	0	0
75	SLU 60	-0.01	-0.06	2	0	0	0
75	SLU 61	-0.01	-0.06	2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
75	SLU 62	-0.01	-0.06	2.02	0	0	0
75	SLU 63	-0.01	-0.06	2.02	0	0	0
75	SLU 64	-0.01	-0.05	1.9	0	0	0
75	SLU 65	-0.01	-0.05	1.9	0	0	0
75	SLU 66	-0.01	-0.05	1.93	0	0	0
75	SLU 67	-0.01	-0.05	1.93	0	0	0
75	SLU 68	-0.01	-0.05	1.92	0	0	0
75	SLU 69	-0.01	-0.05	1.95	0	0	0
75	SLU 70	-0.01	-0.05	1.95	0	0	0
75	SLU 71	-0.01	-0.05	1.94	0	0	0
75	SLU 72	-0.01	-0.05	1.94	0	0	0
75	SLU 73	-0.01	-0.05	2.09	0	0	0
75	SLU 74	-0.01	-0.06	2.12	0	0	0
75	SLU 75	-0.01	-0.05	2.12	0	0	0
75	SLU 76	-0.01	-0.05	2.11	0	0	0
75	SLU 77	-0.01	-0.06	2.14	0	0	0
75	SLU 78	-0.01	-0.05	2.14	0	0	0
75	SLU 79	-0.01	-0.06	2.13	0	0	0
75	SLU 80	-0.01	-0.05	2.13	0	0	0
75	SLU 81	-0.01	-0.06	2.17	0	0	0
75	SLU 82	-0.01	-0.06	2.17	0	0	0
75	SLU 83	-0.01	-0.06	2.19	0	0	0
75	SLU 84	-0.01	-0.06	2.19	0	0	0
75	SLE RA 1	-0.01	-0.04	1.42	0	0	0
75	SLE RA 2	-0.01	-0.04	1.42	0	0	0
75	SLE RA 3	-0.01	-0.04	1.44	0	0	0
75	SLE RA 4	-0.01	-0.04	1.44	0	0	0
75	SLE RA 5	-0.01	-0.04	1.44	0	0	0
75	SLE RA 6	-0.01	-0.04	1.46	0	0	0
75	SLE RA 7	-0.01	-0.04	1.46	0	0	0
75	SLE RA 8	-0.01	-0.04	1.45	0	0	0
75	SLE RA 9	-0.01	-0.04	1.45	0	0	0
75	SLE RA 10	-0.01	-0.04	1.55	0	0	0
75	SLE RA 11	-0.01	-0.04	1.57	0	0	0
75	SLE RA 12	-0.01	-0.04	1.57	0	0	0
75	SLE RA 13	-0.01	-0.04	1.56	0	0	0
75	SLE RA 14	-0.01	-0.04	1.58	0	0	0
75	SLE RA 15	-0.01	-0.04	1.58	0	0	0
75	SLE RA 16	-0.01	-0.04	1.58	0	0	0
75	SLE RA 17	-0.01	-0.04	1.58	0	0	0
75	SLE RA 18	-0.01	-0.04	1.6	0	0	0
75	SLE RA 19	-0.01	-0.04	1.6	0	0	0
75	SLE RA 20	-0.01	-0.04	1.62	0	0	0
75	SLE RA 21	-0.01	-0.04	1.62	0	0	0
75	SLE FR 1	-0.01	-0.04	1.42	0	0	0
75	SLE FR 2	-0.01	-0.04	1.42	0	0	0
75	SLE FR 3	-0.01	-0.04	1.43	0	0	0
75	SLE FR 4	-0.01	-0.04	1.48	0	0	0
75	SLE FR 5	-0.01	-0.04	1.48	0	0	0
75	SLE FR 6	-0.01	-0.04	1.51	0	0	0
75	SLE QP 1	-0.01	-0.04	1.42	0	0	0
75	SLE QP 2	-0.01	-0.04	1.48	0	0	0
75	SLD 1	0.09	-0.03	1.45	0	0	0
75	SLD 2	0.09	-0.03	1.45	0	0	0
75	SLD 3	0.09	-0.06	1.48	0	0	0
75	SLD 4	0.09	-0.06	1.47	0	0	0
75	SLD 5	0.03	0.01	1.44	0	0	0
75	SLD 6	0.03	0.01	1.44	0	0	0
75	SLD 7	0.01	-0.1	1.51	0	0	0
75	SLD 8	0.01	-0.1	1.51	0	0	0
75	SLD 9	-0.03	0.01	1.45	0	0	0
75	SLD 10	-0.03	0.02	1.45	0	0	0
75	SLD 11	-0.04	-0.09	1.52	0	0	0
75	SLD 12	-0.04	-0.09	1.52	0	0	0
75	SLD 13	-0.1	-0.02	1.48	0	0	0
75	SLD 14	-0.1	-0.02	1.48	0	0	0
75	SLD 15	-0.11	-0.05	1.5	0	0	0
75	SLD 16	-0.11	-0.05	1.5	0	0	0
75	SLV 1	0.23	-0.02	1.42	0	0	0
75	SLV 2	0.23	-0.01	1.42	0	0	0
75	SLV 3	0.22	-0.09	1.47	0	0	0
75	SLV 4	0.22	-0.09	1.47	0	0	0
75	SLV 5	0.08	0.07	1.38	0	0	0
75	SLV 6	0.08	0.08	1.38	0	0	0
75	SLV 7	0.04	-0.17	1.55	0	0	0
75	SLV 8	0.04	-0.16	1.55	0	0	0
75	SLV 9	-0.05	0.08	1.4	0	0	0
75	SLV 10	-0.05	0.09	1.4	0	0	0
75	SLV 11	-0.1	-0.16	1.57	0	0	0
75	SLV 12	-0.1	-0.16	1.57	0	0	0
75	SLV 13	-0.23	0.01	1.49	0	0	0
75	SLV 14	-0.23	0.01	1.49	0	0	0
75	SLV 15	-0.24	-0.07	1.54	0	0	0
75	SLV 16	-0.24	-0.06	1.54	0	0	0
76	SLU 1	0	-0.03	0.84	0	0	0
76	SLU 2	0	-0.02	0.84	0	0	0
76	SLU 3	0	-0.02	0.86	0	0	0
76	SLU 4	0	-0.02	0.86	0	0	0
76	SLU 5	0	-0.02	0.85	0	0	0
76	SLU 6	0	-0.02	0.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
76	SLU 7	0	-0.02	0.87	0	0	0
76	SLU 8	0	-0.02	0.87	0	0	0
76	SLU 9	0	-0.02	0.87	0	0	0
76	SLU 10	0	-0.03	0.96	0	0	0
76	SLU 11	-0.01	-0.03	0.98	0	0	0
76	SLU 12	-0.01	-0.03	0.98	0	0	0
76	SLU 13	-0.01	-0.03	0.97	0	0	0
76	SLU 14	-0.01	-0.03	0.99	0	0	0
76	SLU 15	-0.01	-0.03	0.99	0	0	0
76	SLU 16	-0.01	-0.03	0.98	0	0	0
76	SLU 17	-0.01	-0.03	0.98	0	0	0
76	SLU 18	-0.01	-0.03	1.01	0	0	0
76	SLU 19	-0.01	-0.03	1.01	0	0	0
76	SLU 20	-0.01	-0.03	1.02	0	0	0
76	SLU 21	-0.01	-0.03	1.02	0	0	0
76	SLU 22	0	-0.03	0.95	0	0	0
76	SLU 23	0	-0.02	0.95	0	0	0
76	SLU 24	0	-0.03	0.96	0	0	0
76	SLU 25	0	-0.02	0.96	0	0	0
76	SLU 26	0	-0.02	0.96	0	0	0
76	SLU 27	0	-0.03	0.98	0	0	0
76	SLU 28	0	-0.02	0.98	0	0	0
76	SLU 29	0	-0.03	0.97	0	0	0
76	SLU 30	0	-0.02	0.97	0	0	0
76	SLU 31	0	-0.03	1.06	0	0	0
76	SLU 32	-0.01	-0.03	1.08	0	0	0
76	SLU 33	-0.01	-0.03	1.08	0	0	0
76	SLU 34	-0.01	-0.03	1.07	0	0	0
76	SLU 35	-0.01	-0.03	1.09	0	0	0
76	SLU 36	-0.01	-0.03	1.09	0	0	0
76	SLU 37	-0.01	-0.03	1.09	0	0	0
76	SLU 38	-0.01	-0.03	1.09	0	0	0
76	SLU 39	-0.01	-0.03	1.11	0	0	0
76	SLU 40	-0.01	-0.03	1.11	0	0	0
76	SLU 41	-0.01	-0.03	1.12	0	0	0
76	SLU 42	-0.01	-0.03	1.12	0	0	0
76	SLU 43	0	-0.03	1.06	0	0	0
76	SLU 44	0	-0.03	1.06	0	0	0
76	SLU 45	-0.01	-0.03	1.08	0	0	0
76	SLU 46	0	-0.03	1.08	0	0	0
76	SLU 47	-0.01	-0.03	1.07	0	0	0
76	SLU 48	-0.01	-0.03	1.09	0	0	0
76	SLU 49	-0.01	-0.03	1.09	0	0	0
76	SLU 50	-0.01	-0.03	1.08	0	0	0
76	SLU 51	-0.01	-0.03	1.08	0	0	0
76	SLU 52	-0.01	-0.03	1.17	0	0	0
76	SLU 53	-0.01	-0.03	1.19	0	0	0
76	SLU 54	-0.01	-0.03	1.19	0	0	0
76	SLU 55	-0.01	-0.03	1.19	0	0	0
76	SLU 56	-0.01	-0.03	1.2	0	0	0
76	SLU 57	-0.01	-0.03	1.2	0	0	0
76	SLU 58	-0.01	-0.03	1.2	0	0	0
76	SLU 59	-0.01	-0.03	1.2	0	0	0
76	SLU 60	-0.01	-0.04	1.22	0	0	0
76	SLU 61	-0.01	-0.03	1.22	0	0	0
76	SLU 62	-0.01	-0.04	1.24	0	0	0
76	SLU 63	-0.01	-0.03	1.24	0	0	0
76	SLU 64	0	-0.03	1.16	0	0	0
76	SLU 65	0	-0.03	1.16	0	0	0
76	SLU 66	-0.01	-0.03	1.18	0	0	0
76	SLU 67	-0.01	-0.03	1.18	0	0	0
76	SLU 68	-0.01	-0.03	1.17	0	0	0
76	SLU 69	-0.01	-0.03	1.19	0	0	0
76	SLU 70	-0.01	-0.03	1.19	0	0	0
76	SLU 71	-0.01	-0.03	1.19	0	0	0
76	SLU 72	-0.01	-0.03	1.19	0	0	0
76	SLU 73	-0.01	-0.03	1.28	0	0	0
76	SLU 74	-0.01	-0.03	1.3	0	0	0
76	SLU 75	-0.01	-0.03	1.3	0	0	0
76	SLU 76	-0.01	-0.03	1.29	0	0	0
76	SLU 77	-0.01	-0.03	1.31	0	0	0
76	SLU 78	-0.01	-0.03	1.31	0	0	0
76	SLU 79	-0.01	-0.03	1.3	0	0	0
76	SLU 80	-0.01	-0.03	1.3	0	0	0
76	SLU 81	-0.01	-0.04	1.33	0	0	0
76	SLU 82	-0.01	-0.04	1.33	0	0	0
76	SLU 83	-0.01	-0.04	1.34	0	0	0
76	SLU 84	-0.01	-0.04	1.34	0	0	0
76	SLE RA 1	0	-0.03	0.87	0	0	0
76	SLE RA 2	0	-0.02	0.87	0	0	0
76	SLE RA 3	0	-0.03	0.88	0	0	0
76	SLE RA 4	0	-0.02	0.88	0	0	0
76	SLE RA 5	0	-0.02	0.88	0	0	0
76	SLE RA 6	0	-0.03	0.89	0	0	0
76	SLE RA 7	0	-0.02	0.89	0	0	0
76	SLE RA 8	0	-0.03	0.89	0	0	0
76	SLE RA 9	0	-0.02	0.89	0	0	0
76	SLE RA 10	0	-0.03	0.95	0	0	0
76	SLE RA 11	0	-0.03	0.96	0	0	0
76	SLE RA 12	0	-0.03	0.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
76	SLE RA 13	0	-0.03	0.96	0	0	0
76	SLE RA 14	-0.01	-0.03	0.97	0	0	0
76	SLE RA 15	-0.01	-0.03	0.97	0	0	0
76	SLE RA 16	-0.01	-0.03	0.96	0	0	0
76	SLE RA 17	-0.01	-0.03	0.96	0	0	0
76	SLE RA 18	0	-0.03	0.98	0	0	0
76	SLE RA 19	0	-0.03	0.98	0	0	0
76	SLE RA 20	-0.01	-0.03	0.99	0	0	0
76	SLE RA 21	-0.01	-0.03	0.99	0	0	0
76	SLE FR 1	0	-0.03	0.87	0	0	0
76	SLE FR 2	0	-0.03	0.87	0	0	0
76	SLE FR 3	0	-0.03	0.87	0	0	0
76	SLE FR 4	0	-0.03	0.9	0	0	0
76	SLE FR 5	0	-0.03	0.91	0	0	0
76	SLE FR 6	0	-0.03	0.93	0	0	0
76	SLE QP 1	0	-0.03	0.87	0	0	0
76	SLE QP 2	0	-0.03	0.9	0	0	0
76	SLD 1	0.06	-0.02	0.89	0	0	0
76	SLD 2	0.06	-0.02	0.89	0	0	0
76	SLD 3	0.05	-0.04	0.91	0	0	0
76	SLD 4	0.05	-0.04	0.91	0	0	0
76	SLD 5	0.02	0.01	0.88	0	0	0
76	SLD 6	0.02	0.01	0.88	0	0	0
76	SLD 7	0.01	-0.06	0.93	0	0	0
76	SLD 8	0.01	-0.06	0.93	0	0	0
76	SLD 9	-0.02	0.01	0.88	0	0	0
76	SLD 10	-0.02	0.01	0.88	0	0	0
76	SLD 11	-0.03	-0.06	0.93	0	0	0
76	SLD 12	-0.03	-0.06	0.93	0	0	0
76	SLD 13	-0.06	-0.01	0.9	0	0	0
76	SLD 14	-0.06	-0.01	0.9	0	0	0
76	SLD 15	-0.07	-0.03	0.92	0	0	0
76	SLD 16	-0.06	-0.03	0.92	0	0	0
76	SLV 1	0.14	-0.01	0.87	0	0	0
76	SLV 2	0.14	-0.01	0.87	0	0	0
76	SLV 3	0.13	-0.06	0.91	0	0	0
76	SLV 4	0.13	-0.05	0.91	0	0	0
76	SLV 5	0.05	0.05	0.84	0	0	0
76	SLV 6	0.05	0.05	0.84	0	0	0
76	SLV 7	0.02	-0.1	0.96	0	0	0
76	SLV 8	0.03	-0.1	0.96	0	0	0
76	SLV 9	-0.03	0.05	0.85	0	0	0
76	SLV 10	-0.03	0.05	0.85	0	0	0
76	SLV 11	-0.06	-0.1	0.96	0	0	0
76	SLV 12	-0.06	-0.1	0.96	0	0	0
76	SLV 13	-0.14	0	0.9	0	0	0
76	SLV 14	-0.14	0.01	0.9	0	0	0
76	SLV 15	-0.15	-0.04	0.94	0	0	0
76	SLV 16	-0.15	-0.04	0.93	0	0	0
77	SLU 1	-0.01	-0.05	1.82	0	0	0
77	SLU 2	-0.01	-0.05	1.82	0	0	0
77	SLU 3	-0.01	-0.05	1.86	0	0	0
77	SLU 4	-0.01	-0.05	1.86	0	0	0
77	SLU 5	-0.01	-0.05	1.85	0	0	0
77	SLU 6	-0.01	-0.05	1.89	0	0	0
77	SLU 7	-0.01	-0.05	1.89	0	0	0
77	SLU 8	-0.01	-0.05	1.87	0	0	0
77	SLU 9	-0.01	-0.05	1.87	0	0	0
77	SLU 10	-0.01	-0.05	2.07	0	0	0
77	SLU 11	-0.01	-0.05	2.11	0	0	0
77	SLU 12	-0.01	-0.05	2.11	0	0	0
77	SLU 13	-0.01	-0.05	2.1	0	0	0
77	SLU 14	-0.01	-0.05	2.14	0	0	0
77	SLU 15	-0.01	-0.05	2.14	0	0	0
77	SLU 16	-0.01	-0.05	2.12	0	0	0
77	SLU 17	-0.01	-0.05	2.12	0	0	0
77	SLU 18	-0.01	-0.05	2.18	0	0	0
77	SLU 19	-0.01	-0.05	2.18	0	0	0
77	SLU 20	-0.01	-0.05	2.21	0	0	0
77	SLU 21	-0.01	-0.05	2.21	0	0	0
77	SLU 22	-0.01	-0.05	2.05	0	0	0
77	SLU 23	-0.01	-0.05	2.05	0	0	0
77	SLU 24	-0.01	-0.05	2.09	0	0	0
77	SLU 25	-0.01	-0.05	2.09	0	0	0
77	SLU 26	-0.01	-0.05	2.08	0	0	0
77	SLU 27	-0.01	-0.05	2.12	0	0	0
77	SLU 28	-0.01	-0.05	2.12	0	0	0
77	SLU 29	-0.01	-0.05	2.1	0	0	0
77	SLU 30	-0.01	-0.05	2.1	0	0	0
77	SLU 31	-0.01	-0.05	2.3	0	0	0
77	SLU 32	-0.01	-0.05	2.34	0	0	0
77	SLU 33	-0.01	-0.05	2.34	0	0	0
77	SLU 34	-0.01	-0.05	2.33	0	0	0
77	SLU 35	-0.01	-0.05	2.37	0	0	0
77	SLU 36	-0.01	-0.05	2.37	0	0	0
77	SLU 37	-0.01	-0.05	2.35	0	0	0
77	SLU 38	-0.01	-0.05	2.35	0	0	0
77	SLU 39	-0.01	-0.06	2.41	0	0	0
77	SLU 40	-0.01	-0.05	2.41	0	0	0
77	SLU 41	-0.01	-0.05	2.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
77	SLU 42	-0.01	-0.05	2.43	0	0	0
77	SLU 43	-0.01	-0.06	2.29	0	0	0
77	SLU 44	-0.01	-0.06	2.29	0	0	0
77	SLU 45	-0.01	-0.06	2.33	0	0	0
77	SLU 46	-0.01	-0.06	2.33	0	0	0
77	SLU 47	-0.01	-0.06	2.32	0	0	0
77	SLU 48	-0.01	-0.06	2.36	0	0	0
77	SLU 49	-0.01	-0.06	2.36	0	0	0
77	SLU 50	-0.01	-0.06	2.34	0	0	0
77	SLU 51	-0.01	-0.06	2.34	0	0	0
77	SLU 52	-0.01	-0.07	2.54	0	0	0
77	SLU 53	-0.01	-0.07	2.58	0	0	0
77	SLU 54	-0.01	-0.07	2.58	0	0	0
77	SLU 55	-0.01	-0.07	2.57	0	0	0
77	SLU 56	-0.02	-0.07	2.61	0	0	0
77	SLU 57	-0.01	-0.07	2.61	0	0	0
77	SLU 58	-0.02	-0.07	2.59	0	0	0
77	SLU 59	-0.02	-0.07	2.59	0	0	0
77	SLU 60	-0.01	-0.07	2.65	0	0	0
77	SLU 61	-0.01	-0.07	2.65	0	0	0
77	SLU 62	-0.02	-0.07	2.67	0	0	0
77	SLU 63	-0.02	-0.07	2.67	0	0	0
77	SLU 64	-0.01	-0.06	2.52	0	0	0
77	SLU 65	-0.01	-0.06	2.52	0	0	0
77	SLU 66	-0.01	-0.06	2.56	0	0	0
77	SLU 67	-0.01	-0.06	2.56	0	0	0
77	SLU 68	-0.01	-0.06	2.54	0	0	0
77	SLU 69	-0.01	-0.06	2.58	0	0	0
77	SLU 70	-0.01	-0.06	2.58	0	0	0
77	SLU 71	-0.01	-0.06	2.57	0	0	0
77	SLU 72	-0.01	-0.06	2.57	0	0	0
77	SLU 73	-0.01	-0.07	2.77	0	0	0
77	SLU 74	-0.01	-0.07	2.81	0	0	0
77	SLU 75	-0.01	-0.07	2.81	0	0	0
77	SLU 76	-0.01	-0.07	2.8	0	0	0
77	SLU 77	-0.02	-0.07	2.84	0	0	0
77	SLU 78	-0.02	-0.07	2.83	0	0	0
77	SLU 79	-0.02	-0.07	2.82	0	0	0
77	SLU 80	-0.02	-0.07	2.82	0	0	0
77	SLU 81	-0.01	-0.07	2.88	0	0	0
77	SLU 82	-0.01	-0.07	2.88	0	0	0
77	SLU 83	-0.02	-0.07	2.9	0	0	0
77	SLU 84	-0.02	-0.07	2.9	0	0	0
77	SLE RA 1	-0.01	-0.05	1.89	0	0	0
77	SLE RA 2	-0.01	-0.05	1.89	0	0	0
77	SLE RA 3	-0.01	-0.05	1.92	0	0	0
77	SLE RA 4	-0.01	-0.05	1.92	0	0	0
77	SLE RA 5	-0.01	-0.05	1.9	0	0	0
77	SLE RA 6	-0.01	-0.05	1.93	0	0	0
77	SLE RA 7	-0.01	-0.05	1.93	0	0	0
77	SLE RA 8	-0.01	-0.05	1.92	0	0	0
77	SLE RA 9	-0.01	-0.05	1.92	0	0	0
77	SLE RA 10	-0.01	-0.05	2.06	0	0	0
77	SLE RA 11	-0.01	-0.05	2.08	0	0	0
77	SLE RA 12	-0.01	-0.05	2.08	0	0	0
77	SLE RA 13	-0.01	-0.05	2.07	0	0	0
77	SLE RA 14	-0.01	-0.05	2.1	0	0	0
77	SLE RA 15	-0.01	-0.05	2.1	0	0	0
77	SLE RA 16	-0.01	-0.05	2.09	0	0	0
77	SLE RA 17	-0.01	-0.05	2.09	0	0	0
77	SLE RA 18	-0.01	-0.05	2.13	0	0	0
77	SLE RA 19	-0.01	-0.05	2.13	0	0	0
77	SLE RA 20	-0.01	-0.05	2.14	0	0	0
77	SLE RA 21	-0.01	-0.05	2.14	0	0	0
77	SLE FR 1	-0.01	-0.05	1.89	0	0	0
77	SLE FR 2	-0.01	-0.05	1.89	0	0	0
77	SLE FR 3	-0.01	-0.05	1.9	0	0	0
77	SLE FR 4	-0.01	-0.05	1.96	0	0	0
77	SLE FR 5	-0.01	-0.05	1.97	0	0	0
77	SLE FR 6	-0.01	-0.05	2.01	0	0	0
77	SLE QP 1	-0.01	-0.05	1.89	0	0	0
77	SLE QP 2	-0.01	-0.05	1.96	0	0	0
77	SLD 1	0.13	-0.04	1.91	0	0	0
77	SLD 2	0.13	-0.04	1.9	0	0	0
77	SLD 3	0.12	-0.08	1.93	0	0	0
77	SLD 4	0.12	-0.08	1.93	0	0	0
77	SLD 5	0.04	0.01	1.91	0	0	0
77	SLD 6	0.04	0.02	1.9	0	0	0
77	SLD 7	0.02	-0.13	1.99	0	0	0
77	SLD 8	0.02	-0.12	1.99	0	0	0
77	SLD 9	-0.04	0.02	1.93	0	0	0
77	SLD 10	-0.04	0.02	1.93	0	0	0
77	SLD 11	-0.06	-0.12	2.02	0	0	0
77	SLD 12	-0.06	-0.12	2.02	0	0	0
77	SLD 13	-0.14	-0.02	1.99	0	0	0
77	SLD 14	-0.14	-0.02	1.99	0	0	0
77	SLD 15	-0.14	-0.07	2.02	0	0	0
77	SLD 16	-0.14	-0.06	2.02	0	0	0
77	SLV 1	0.31	-0.03	1.83	0	0	0
77	SLV 2	0.31	-0.02	1.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
77	SLV 3	0.29	-0.13	1.89	0	0	0
77	SLV 4	0.29	-0.11	1.89	0	0	0
77	SLV 5	0.11	0.1	1.83	0	0	0
77	SLV 6	0.11	0.11	1.83	0	0	0
77	SLV 7	0.06	-0.22	2.03	0	0	0
77	SLV 8	0.06	-0.21	2.03	0	0	0
77	SLV 9	-0.07	0.11	1.89	0	0	0
77	SLV 10	-0.07	0.12	1.89	0	0	0
77	SLV 11	-0.13	-0.21	2.09	0	0	0
77	SLV 12	-0.13	-0.2	2.09	0	0	0
77	SLV 13	-0.31	0.01	2.03	0	0	0
77	SLV 14	-0.31	0.03	2.03	0	0	0
77	SLV 15	-0.33	-0.08	2.09	0	0	0
77	SLV 16	-0.32	-0.07	2.09	0	0	0
78	SLU 1	-0.01	-0.07	2.21	0	0	0
78	SLU 2	-0.01	-0.06	2.21	0	0	0
78	SLU 3	-0.01	-0.07	2.26	0	0	0
78	SLU 4	-0.01	-0.06	2.26	0	0	0
78	SLU 5	-0.01	-0.06	2.24	0	0	0
78	SLU 6	-0.01	-0.07	2.29	0	0	0
78	SLU 7	-0.01	-0.06	2.29	0	0	0
78	SLU 8	-0.01	-0.07	2.27	0	0	0
78	SLU 9	-0.01	-0.06	2.27	0	0	0
78	SLU 10	-0.01	-0.07	2.51	0	0	0
78	SLU 11	-0.01	-0.07	2.56	0	0	0
78	SLU 12	-0.01	-0.07	2.56	0	0	0
78	SLU 13	-0.01	-0.07	2.55	0	0	0
78	SLU 14	-0.02	-0.07	2.6	0	0	0
78	SLU 15	-0.02	-0.07	2.6	0	0	0
78	SLU 16	-0.02	-0.07	2.58	0	0	0
78	SLU 17	-0.02	-0.07	2.58	0	0	0
78	SLU 18	-0.01	-0.07	2.65	0	0	0
78	SLU 19	-0.01	-0.07	2.65	0	0	0
78	SLU 20	-0.02	-0.07	2.68	0	0	0
78	SLU 21	-0.02	-0.07	2.68	0	0	0
78	SLU 22	-0.01	-0.07	2.49	0	0	0
78	SLU 23	-0.01	-0.06	2.48	0	0	0
78	SLU 24	-0.01	-0.07	2.53	0	0	0
78	SLU 25	-0.01	-0.07	2.53	0	0	0
78	SLU 26	-0.01	-0.06	2.52	0	0	0
78	SLU 27	-0.01	-0.07	2.57	0	0	0
78	SLU 28	-0.01	-0.07	2.56	0	0	0
78	SLU 29	-0.01	-0.07	2.55	0	0	0
78	SLU 30	-0.01	-0.07	2.55	0	0	0
78	SLU 31	-0.01	-0.07	2.79	0	0	0
78	SLU 32	-0.01	-0.07	2.84	0	0	0
78	SLU 33	-0.01	-0.07	2.84	0	0	0
78	SLU 34	-0.01	-0.07	2.82	0	0	0
78	SLU 35	-0.02	-0.07	2.87	0	0	0
78	SLU 36	-0.02	-0.07	2.87	0	0	0
78	SLU 37	-0.02	-0.07	2.85	0	0	0
78	SLU 38	-0.02	-0.07	2.85	0	0	0
78	SLU 39	-0.01	-0.08	2.92	0	0	0
78	SLU 40	-0.01	-0.07	2.92	0	0	0
78	SLU 41	-0.02	-0.07	2.95	0	0	0
78	SLU 42	-0.02	-0.07	2.95	0	0	0
78	SLU 43	-0.01	-0.09	2.78	0	0	0
78	SLU 44	-0.01	-0.08	2.78	0	0	0
78	SLU 45	-0.01	-0.08	2.83	0	0	0
78	SLU 46	-0.01	-0.08	2.83	0	0	0
78	SLU 47	-0.01	-0.08	2.81	0	0	0
78	SLU 48	-0.01	-0.08	2.86	0	0	0
78	SLU 49	-0.01	-0.08	2.86	0	0	0
78	SLU 50	-0.02	-0.08	2.84	0	0	0
78	SLU 51	-0.02	-0.08	2.84	0	0	0
78	SLU 52	-0.02	-0.09	3.08	0	0	0
78	SLU 53	-0.02	-0.09	3.13	0	0	0
78	SLU 54	-0.02	-0.09	3.13	0	0	0
78	SLU 55	-0.02	-0.09	3.11	0	0	0
78	SLU 56	-0.02	-0.09	3.17	0	0	0
78	SLU 57	-0.02	-0.09	3.16	0	0	0
78	SLU 58	-0.02	-0.09	3.15	0	0	0
78	SLU 59	-0.02	-0.09	3.15	0	0	0
78	SLU 60	-0.02	-0.09	3.22	0	0	0
78	SLU 61	-0.02	-0.09	3.21	0	0	0
78	SLU 62	-0.02	-0.09	3.25	0	0	0
78	SLU 63	-0.02	-0.09	3.25	0	0	0
78	SLU 64	-0.01	-0.09	3.05	0	0	0
78	SLU 65	-0.01	-0.08	3.05	0	0	0
78	SLU 66	-0.01	-0.09	3.1	0	0	0
78	SLU 67	-0.01	-0.08	3.1	0	0	0
78	SLU 68	-0.01	-0.08	3.08	0	0	0
78	SLU 69	-0.02	-0.09	3.13	0	0	0
78	SLU 70	-0.01	-0.08	3.13	0	0	0
78	SLU 71	-0.02	-0.09	3.12	0	0	0
78	SLU 72	-0.02	-0.08	3.12	0	0	0
78	SLU 73	-0.02	-0.09	3.36	0	0	0
78	SLU 74	-0.02	-0.09	3.41	0	0	0
78	SLU 75	-0.02	-0.09	3.41	0	0	0
78	SLU 76	-0.02	-0.09	3.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
78	SLU 77	-0.02	-0.09	3.44	0	0	0
78	SLU 78	-0.02	-0.09	3.44	0	0	0
78	SLU 79	-0.02	-0.09	3.42	0	0	0
78	SLU 80	-0.02	-0.09	3.42	0	0	0
78	SLU 81	-0.02	-0.09	3.49	0	0	0
78	SLU 82	-0.02	-0.09	3.49	0	0	0
78	SLU 83	-0.02	-0.09	3.52	0	0	0
78	SLU 84	-0.02	-0.09	3.52	0	0	0
78	SLE RA 1	-0.01	-0.07	2.29	0	0	0
78	SLE RA 2	-0.01	-0.06	2.29	0	0	0
78	SLE RA 3	-0.01	-0.07	2.32	0	0	0
78	SLE RA 4	-0.01	-0.07	2.32	0	0	0
78	SLE RA 5	-0.01	-0.06	2.31	0	0	0
78	SLE RA 6	-0.01	-0.07	2.34	0	0	0
78	SLE RA 7	-0.01	-0.06	2.34	0	0	0
78	SLE RA 8	-0.01	-0.07	2.33	0	0	0
78	SLE RA 9	-0.01	-0.06	2.33	0	0	0
78	SLE RA 10	-0.01	-0.07	2.49	0	0	0
78	SLE RA 11	-0.01	-0.07	2.53	0	0	0
78	SLE RA 12	-0.01	-0.07	2.52	0	0	0
78	SLE RA 13	-0.01	-0.07	2.51	0	0	0
78	SLE RA 14	-0.01	-0.07	2.55	0	0	0
78	SLE RA 15	-0.01	-0.07	2.55	0	0	0
78	SLE RA 16	-0.01	-0.07	2.53	0	0	0
78	SLE RA 17	-0.01	-0.07	2.53	0	0	0
78	SLE RA 18	-0.01	-0.07	2.58	0	0	0
78	SLE RA 19	-0.01	-0.07	2.58	0	0	0
78	SLE RA 20	-0.01	-0.07	2.6	0	0	0
78	SLE RA 21	-0.01	-0.07	2.6	0	0	0
78	SLE FR 1	-0.01	-0.07	2.29	0	0	0
78	SLE FR 2	-0.01	-0.07	2.29	0	0	0
78	SLE FR 3	-0.01	-0.07	2.3	0	0	0
78	SLE FR 4	-0.01	-0.07	2.38	0	0	0
78	SLE FR 5	-0.01	-0.07	2.38	0	0	0
78	SLE FR 6	-0.01	-0.07	2.43	0	0	0
78	SLE QP 1	-0.01	-0.07	2.29	0	0	0
78	SLE QP 2	-0.01	-0.07	2.38	0	0	0
78	SLD 1	0.15	-0.05	2.34	0	0	0
78	SLD 2	0.15	-0.05	2.34	0	0	0
78	SLD 3	0.14	-0.1	2.38	0	0	0
78	SLD 4	0.14	-0.1	2.38	0	0	0
78	SLD 5	0.05	0.01	2.31	0	0	0
78	SLD 6	0.05	0.02	2.31	0	0	0
78	SLD 7	0.02	-0.16	2.44	0	0	0
78	SLD 8	0.02	-0.16	2.44	0	0	0
78	SLD 9	-0.04	0.02	2.32	0	0	0
78	SLD 10	-0.04	0.02	2.31	0	0	0
78	SLD 11	-0.07	-0.15	2.45	0	0	0
78	SLD 12	-0.07	-0.15	2.45	0	0	0
78	SLD 13	-0.16	-0.03	2.37	0	0	0
78	SLD 14	-0.16	-0.03	2.37	0	0	0
78	SLD 15	-0.17	-0.09	2.41	0	0	0
78	SLD 16	-0.17	-0.08	2.41	0	0	0
78	SLV 1	0.36	-0.03	2.3	0	0	0
78	SLV 2	0.37	-0.03	2.3	0	0	0
78	SLV 3	0.34	-0.15	2.39	0	0	0
78	SLV 4	0.35	-0.14	2.38	0	0	0
78	SLV 5	0.13	0.12	2.22	0	0	0
78	SLV 6	0.13	0.13	2.22	0	0	0
78	SLV 7	0.07	-0.27	2.52	0	0	0
78	SLV 8	0.07	-0.27	2.51	0	0	0
78	SLV 9	-0.09	0.13	2.24	0	0	0
78	SLV 10	-0.09	0.14	2.24	0	0	0
78	SLV 11	-0.15	-0.26	2.54	0	0	0
78	SLV 12	-0.15	-0.26	2.54	0	0	0
78	SLV 13	-0.37	0.01	2.37	0	0	0
78	SLV 14	-0.37	0.02	2.37	0	0	0
78	SLV 15	-0.39	-0.11	2.46	0	0	0
78	SLV 16	-0.39	-0.1	2.46	0	0	0
79	SLU 1	-0.01	-0.07	2.37	0	0	0
79	SLU 2	-0.01	-0.06	2.37	0	0	0
79	SLU 3	-0.01	-0.07	2.43	0	0	0
79	SLU 4	-0.01	-0.06	2.43	0	0	0
79	SLU 5	-0.01	-0.06	2.41	0	0	0
79	SLU 6	-0.01	-0.06	2.46	0	0	0
79	SLU 7	-0.01	-0.06	2.46	0	0	0
79	SLU 8	-0.01	-0.06	2.44	0	0	0
79	SLU 9	-0.01	-0.06	2.44	0	0	0
79	SLU 10	-0.01	-0.07	2.7	0	0	0
79	SLU 11	-0.02	-0.07	2.75	0	0	0
79	SLU 12	-0.02	-0.07	2.75	0	0	0
79	SLU 13	-0.02	-0.07	2.73	0	0	0
79	SLU 14	-0.02	-0.07	2.78	0	0	0
79	SLU 15	-0.02	-0.07	2.78	0	0	0
79	SLU 16	-0.02	-0.07	2.77	0	0	0
79	SLU 17	-0.02	-0.07	2.76	0	0	0
79	SLU 18	-0.02	-0.07	2.84	0	0	0
79	SLU 19	-0.02	-0.07	2.84	0	0	0
79	SLU 20	-0.02	-0.07	2.87	0	0	0
79	SLU 21	-0.02	-0.07	2.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
79	SLU 22	-0.01	-0.07	2.67	0	0	0
79	SLU 23	-0.01	-0.06	2.67	0	0	0
79	SLU 24	-0.01	-0.07	2.72	0	0	0
79	SLU 25	-0.01	-0.06	2.72	0	0	0
79	SLU 26	-0.01	-0.06	2.7	0	0	0
79	SLU 27	-0.01	-0.07	2.76	0	0	0
79	SLU 28	-0.01	-0.06	2.75	0	0	0
79	SLU 29	-0.01	-0.07	2.74	0	0	0
79	SLU 30	-0.01	-0.06	2.73	0	0	0
79	SLU 31	-0.01	-0.07	3	0	0	0
79	SLU 32	-0.02	-0.07	3.05	0	0	0
79	SLU 33	-0.02	-0.07	3.05	0	0	0
79	SLU 34	-0.02	-0.07	3.03	0	0	0
79	SLU 35	-0.02	-0.07	3.08	0	0	0
79	SLU 36	-0.02	-0.07	3.08	0	0	0
79	SLU 37	-0.02	-0.07	3.06	0	0	0
79	SLU 38	-0.02	-0.07	3.06	0	0	0
79	SLU 39	-0.02	-0.07	3.14	0	0	0
79	SLU 40	-0.02	-0.07	3.14	0	0	0
79	SLU 41	-0.02	-0.07	3.17	0	0	0
79	SLU 42	-0.02	-0.07	3.17	0	0	0
79	SLU 43	-0.01	-0.09	2.99	0	0	0
79	SLU 44	-0.01	-0.08	2.98	0	0	0
79	SLU 45	-0.01	-0.08	3.04	0	0	0
79	SLU 46	-0.01	-0.08	3.04	0	0	0
79	SLU 47	-0.01	-0.08	3.02	0	0	0
79	SLU 48	-0.02	-0.08	3.07	0	0	0
79	SLU 49	-0.02	-0.08	3.07	0	0	0
79	SLU 50	-0.02	-0.08	3.05	0	0	0
79	SLU 51	-0.02	-0.08	3.05	0	0	0
79	SLU 52	-0.02	-0.09	3.31	0	0	0
79	SLU 53	-0.02	-0.09	3.36	0	0	0
79	SLU 54	-0.02	-0.09	3.36	0	0	0
79	SLU 55	-0.02	-0.09	3.34	0	0	0
79	SLU 56	-0.02	-0.09	3.4	0	0	0
79	SLU 57	-0.02	-0.09	3.4	0	0	0
79	SLU 58	-0.02	-0.09	3.38	0	0	0
79	SLU 59	-0.02	-0.09	3.38	0	0	0
79	SLU 60	-0.02	-0.09	3.45	0	0	0
79	SLU 61	-0.02	-0.09	3.45	0	0	0
79	SLU 62	-0.02	-0.09	3.48	0	0	0
79	SLU 63	-0.02	-0.09	3.48	0	0	0
79	SLU 64	-0.01	-0.09	3.28	0	0	0
79	SLU 65	-0.01	-0.08	3.28	0	0	0
79	SLU 66	-0.01	-0.09	3.33	0	0	0
79	SLU 67	-0.01	-0.08	3.33	0	0	0
79	SLU 68	-0.01	-0.08	3.31	0	0	0
79	SLU 69	-0.02	-0.08	3.37	0	0	0
79	SLU 70	-0.02	-0.08	3.37	0	0	0
79	SLU 71	-0.02	-0.08	3.35	0	0	0
79	SLU 72	-0.02	-0.08	3.35	0	0	0
79	SLU 73	-0.02	-0.09	3.61	0	0	0
79	SLU 74	-0.02	-0.09	3.66	0	0	0
79	SLU 75	-0.02	-0.09	3.66	0	0	0
79	SLU 76	-0.02	-0.09	3.64	0	0	0
79	SLU 77	-0.02	-0.09	3.69	0	0	0
79	SLU 78	-0.02	-0.09	3.69	0	0	0
79	SLU 79	-0.02	-0.09	3.67	0	0	0
79	SLU 80	-0.02	-0.09	3.67	0	0	0
79	SLU 81	-0.02	-0.09	3.75	0	0	0
79	SLU 82	-0.02	-0.09	3.75	0	0	0
79	SLU 83	-0.02	-0.09	3.78	0	0	0
79	SLU 84	-0.02	-0.09	3.78	0	0	0
79	SLE RA 1	-0.01	-0.07	2.46	0	0	0
79	SLE RA 2	-0.01	-0.06	2.46	0	0	0
79	SLE RA 3	-0.01	-0.07	2.49	0	0	0
79	SLE RA 4	-0.01	-0.06	2.49	0	0	0
79	SLE RA 5	-0.01	-0.06	2.48	0	0	0
79	SLE RA 6	-0.01	-0.07	2.52	0	0	0
79	SLE RA 7	-0.01	-0.06	2.51	0	0	0
79	SLE RA 8	-0.01	-0.07	2.5	0	0	0
79	SLE RA 9	-0.01	-0.06	2.5	0	0	0
79	SLE RA 10	-0.01	-0.07	2.68	0	0	0
79	SLE RA 11	-0.01	-0.07	2.71	0	0	0
79	SLE RA 12	-0.01	-0.07	2.71	0	0	0
79	SLE RA 13	-0.01	-0.07	2.7	0	0	0
79	SLE RA 14	-0.01	-0.07	2.73	0	0	0
79	SLE RA 15	-0.01	-0.07	2.73	0	0	0
79	SLE RA 16	-0.01	-0.07	2.72	0	0	0
79	SLE RA 17	-0.01	-0.07	2.72	0	0	0
79	SLE RA 18	-0.01	-0.07	2.77	0	0	0
79	SLE RA 19	-0.01	-0.07	2.77	0	0	0
79	SLE RA 20	-0.01	-0.07	2.79	0	0	0
79	SLE RA 21	-0.01	-0.07	2.79	0	0	0
79	SLE FR 1	-0.01	-0.07	2.46	0	0	0
79	SLE FR 2	-0.01	-0.07	2.46	0	0	0
79	SLE FR 3	-0.01	-0.07	2.47	0	0	0
79	SLE FR 4	-0.01	-0.07	2.55	0	0	0
79	SLE FR 5	-0.01	-0.07	2.56	0	0	0
79	SLE FR 6	-0.01	-0.07	2.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
79	SLE QP 1	-0.01	-0.07	2.46	0	0	0
79	SLE QP 2	-0.01	-0.07	2.55	0	0	0
79	SLD 1	0.16	-0.05	2.49	0	0	0
79	SLD 2	0.17	-0.05	2.49	0	0	0
79	SLD 3	0.15	-0.11	2.52	0	0	0
79	SLD 4	0.16	-0.1	2.52	0	0	0
79	SLD 5	0.06	0.02	2.48	0	0	0
79	SLD 6	0.06	0.02	2.48	0	0	0
79	SLD 7	0.02	-0.16	2.6	0	0	0
79	SLD 8	0.02	-0.16	2.6	0	0	0
79	SLD 9	-0.05	0.03	2.51	0	0	0
79	SLD 10	-0.05	0.03	2.51	0	0	0
79	SLD 11	-0.08	-0.16	2.63	0	0	0
79	SLD 12	-0.08	-0.15	2.63	0	0	0
79	SLD 13	-0.18	-0.03	2.58	0	0	0
79	SLD 14	-0.18	-0.02	2.58	0	0	0
79	SLD 15	-0.19	-0.09	2.62	0	0	0
79	SLD 16	-0.19	-0.08	2.62	0	0	0
79	SLV 1	0.4	-0.04	2.41	0	0	0
79	SLV 2	0.4	-0.02	2.4	0	0	0
79	SLV 3	0.38	-0.17	2.49	0	0	0
79	SLV 4	0.38	-0.15	2.48	0	0	0
79	SLV 5	0.15	0.13	2.39	0	0	0
79	SLV 6	0.15	0.14	2.38	0	0	0
79	SLV 7	0.07	-0.29	2.66	0	0	0
79	SLV 8	0.07	-0.28	2.65	0	0	0
79	SLV 9	-0.09	0.14	2.45	0	0	0
79	SLV 10	-0.09	0.16	2.45	0	0	0
79	SLV 11	-0.17	-0.27	2.72	0	0	0
79	SLV 12	-0.17	-0.26	2.72	0	0	0
79	SLV 13	-0.4	0.01	2.62	0	0	0
79	SLV 14	-0.4	0.03	2.62	0	0	0
79	SLV 15	-0.42	-0.11	2.7	0	0	0
79	SLV 16	-0.42	-0.09	2.7	0	0	0
80	SLU 1	-0.01	-0.08	2.84	0	0	0
80	SLU 2	-0.01	-0.08	2.83	0	0	0
80	SLU 3	-0.01	-0.08	2.9	0	0	0
80	SLU 4	-0.01	-0.08	2.9	0	0	0
80	SLU 5	-0.01	-0.08	2.87	0	0	0
80	SLU 6	-0.02	-0.08	2.94	0	0	0
80	SLU 7	-0.02	-0.08	2.94	0	0	0
80	SLU 8	-0.02	-0.08	2.91	0	0	0
80	SLU 9	-0.02	-0.08	2.91	0	0	0
80	SLU 10	-0.02	-0.08	3.23	0	0	0
80	SLU 11	-0.02	-0.09	3.29	0	0	0
80	SLU 12	-0.02	-0.09	3.29	0	0	0
80	SLU 13	-0.02	-0.08	3.26	0	0	0
80	SLU 14	-0.02	-0.09	3.33	0	0	0
80	SLU 15	-0.02	-0.08	3.33	0	0	0
80	SLU 16	-0.02	-0.09	3.3	0	0	0
80	SLU 17	-0.02	-0.08	3.3	0	0	0
80	SLU 18	-0.02	-0.09	3.39	0	0	0
80	SLU 19	-0.02	-0.09	3.39	0	0	0
80	SLU 20	-0.02	-0.09	3.43	0	0	0
80	SLU 21	-0.02	-0.09	3.43	0	0	0
80	SLU 22	-0.01	-0.08	3.19	0	0	0
80	SLU 23	-0.01	-0.08	3.19	0	0	0
80	SLU 24	-0.01	-0.08	3.25	0	0	0
80	SLU 25	-0.01	-0.08	3.25	0	0	0
80	SLU 26	-0.01	-0.08	3.23	0	0	0
80	SLU 27	-0.02	-0.08	3.29	0	0	0
80	SLU 28	-0.02	-0.08	3.29	0	0	0
80	SLU 29	-0.02	-0.08	3.27	0	0	0
80	SLU 30	-0.02	-0.08	3.27	0	0	0
80	SLU 31	-0.02	-0.09	3.58	0	0	0
80	SLU 32	-0.02	-0.09	3.64	0	0	0
80	SLU 33	-0.02	-0.09	3.64	0	0	0
80	SLU 34	-0.02	-0.09	3.62	0	0	0
80	SLU 35	-0.02	-0.09	3.68	0	0	0
80	SLU 36	-0.02	-0.09	3.68	0	0	0
80	SLU 37	-0.02	-0.09	3.66	0	0	0
80	SLU 38	-0.02	-0.09	3.66	0	0	0
80	SLU 39	-0.02	-0.09	3.75	0	0	0
80	SLU 40	-0.02	-0.09	3.75	0	0	0
80	SLU 41	-0.02	-0.09	3.79	0	0	0
80	SLU 42	-0.02	-0.09	3.79	0	0	0
80	SLU 43	-0.02	-0.1	3.57	0	0	0
80	SLU 44	-0.02	-0.1	3.56	0	0	0
80	SLU 45	-0.02	-0.1	3.63	0	0	0
80	SLU 46	-0.02	-0.1	3.63	0	0	0
80	SLU 47	-0.02	-0.1	3.6	0	0	0
80	SLU 48	-0.02	-0.1	3.67	0	0	0
80	SLU 49	-0.02	-0.1	3.67	0	0	0
80	SLU 50	-0.02	-0.1	3.64	0	0	0
80	SLU 51	-0.02	-0.1	3.64	0	0	0
80	SLU 52	-0.02	-0.11	3.95	0	0	0
80	SLU 53	-0.02	-0.11	4.02	0	0	0
80	SLU 54	-0.02	-0.11	4.02	0	0	0
80	SLU 55	-0.02	-0.11	3.99	0	0	0
80	SLU 56	-0.02	-0.11	4.06	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
80	SLU 57	-0.02	-0.11	4.06	0	0	0
80	SLU 58	-0.02	-0.11	4.03	0	0	0
80	SLU 59	-0.02	-0.11	4.03	0	0	0
80	SLU 60	-0.02	-0.11	4.12	0	0	0
80	SLU 61	-0.02	-0.11	4.12	0	0	0
80	SLU 62	-0.02	-0.11	4.16	0	0	0
80	SLU 63	-0.02	-0.11	4.16	0	0	0
80	SLU 64	-0.02	-0.11	3.92	0	0	0
80	SLU 65	-0.02	-0.1	3.92	0	0	0
80	SLU 66	-0.02	-0.11	3.98	0	0	0
80	SLU 67	-0.02	-0.1	3.98	0	0	0
80	SLU 68	-0.02	-0.1	3.96	0	0	0
80	SLU 69	-0.02	-0.1	4.02	0	0	0
80	SLU 70	-0.02	-0.1	4.02	0	0	0
80	SLU 71	-0.02	-0.1	4	0	0	0
80	SLU 72	-0.02	-0.1	4	0	0	0
80	SLU 73	-0.02	-0.11	4.31	0	0	0
80	SLU 74	-0.02	-0.11	4.37	0	0	0
80	SLU 75	-0.02	-0.11	4.37	0	0	0
80	SLU 76	-0.02	-0.11	4.35	0	0	0
80	SLU 77	-0.02	-0.11	4.41	0	0	0
80	SLU 78	-0.02	-0.11	4.41	0	0	0
80	SLU 79	-0.02	-0.11	4.39	0	0	0
80	SLU 80	-0.02	-0.11	4.39	0	0	0
80	SLU 81	-0.02	-0.12	4.48	0	0	0
80	SLU 82	-0.02	-0.11	4.48	0	0	0
80	SLU 83	-0.02	-0.11	4.52	0	0	0
80	SLU 84	-0.02	-0.11	4.52	0	0	0
80	SLE RA 1	-0.01	-0.08	2.94	0	0	0
80	SLE RA 2	-0.01	-0.08	2.94	0	0	0
80	SLE RA 3	-0.01	-0.08	2.98	0	0	0
80	SLE RA 4	-0.01	-0.08	2.98	0	0	0
80	SLE RA 5	-0.01	-0.08	2.96	0	0	0
80	SLE RA 6	-0.01	-0.08	3	0	0	0
80	SLE RA 7	-0.01	-0.08	3	0	0	0
80	SLE RA 8	-0.02	-0.08	2.99	0	0	0
80	SLE RA 9	-0.01	-0.08	2.99	0	0	0
80	SLE RA 10	-0.02	-0.08	3.2	0	0	0
80	SLE RA 11	-0.02	-0.09	3.24	0	0	0
80	SLE RA 12	-0.02	-0.08	3.24	0	0	0
80	SLE RA 13	-0.02	-0.08	3.22	0	0	0
80	SLE RA 14	-0.02	-0.08	3.27	0	0	0
80	SLE RA 15	-0.02	-0.08	3.26	0	0	0
80	SLE RA 16	-0.02	-0.08	3.25	0	0	0
80	SLE RA 17	-0.02	-0.08	3.25	0	0	0
80	SLE RA 18	-0.02	-0.09	3.31	0	0	0
80	SLE RA 19	-0.02	-0.09	3.31	0	0	0
80	SLE RA 20	-0.02	-0.09	3.34	0	0	0
80	SLE RA 21	-0.02	-0.09	3.33	0	0	0
80	SLE FR 1	-0.01	-0.08	2.94	0	0	0
80	SLE FR 2	-0.01	-0.08	2.94	0	0	0
80	SLE FR 3	-0.01	-0.08	2.95	0	0	0
80	SLE FR 4	-0.01	-0.08	3.05	0	0	0
80	SLE FR 5	-0.01	-0.08	3.06	0	0	0
80	SLE FR 6	-0.01	-0.08	3.12	0	0	0
80	SLE QP 1	-0.01	-0.08	2.94	0	0	0
80	SLE QP 2	-0.01	-0.08	3.05	0	0	0
80	SLD 1	0.2	-0.07	2.99	0	0	0
80	SLD 2	0.2	-0.06	2.98	0	0	0
80	SLD 3	0.18	-0.13	3.03	0	0	0
80	SLD 4	0.18	-0.13	3.03	0	0	0
80	SLD 5	0.07	0.02	2.96	0	0	0
80	SLD 6	0.07	0.03	2.96	0	0	0
80	SLD 7	0.03	-0.2	3.11	0	0	0
80	SLD 8	0.03	-0.19	3.11	0	0	0
80	SLD 9	-0.06	0.03	2.98	0	0	0
80	SLD 10	-0.06	0.03	2.98	0	0	0
80	SLD 11	-0.09	-0.19	3.14	0	0	0
80	SLD 12	-0.09	-0.19	3.14	0	0	0
80	SLD 13	-0.21	-0.04	3.07	0	0	0
80	SLD 14	-0.21	-0.03	3.07	0	0	0
80	SLD 15	-0.22	-0.11	3.11	0	0	0
80	SLD 16	-0.22	-0.1	3.11	0	0	0
80	SLV 1	0.47	-0.05	2.9	0	0	0
80	SLV 2	0.48	-0.03	2.9	0	0	0
80	SLV 3	0.45	-0.2	3.01	0	0	0
80	SLV 4	0.45	-0.18	3	0	0	0
80	SLV 5	0.17	0.15	2.85	0	0	0
80	SLV 6	0.17	0.16	2.84	0	0	0
80	SLV 7	0.08	-0.35	3.2	0	0	0
80	SLV 8	0.09	-0.34	3.19	0	0	0
80	SLV 9	-0.11	0.17	2.9	0	0	0
80	SLV 10	-0.11	0.18	2.9	0	0	0
80	SLV 11	-0.2	-0.33	3.25	0	0	0
80	SLV 12	-0.2	-0.32	3.25	0	0	0
80	SLV 13	-0.48	0.01	3.09	0	0	0
80	SLV 14	-0.47	0.03	3.09	0	0	0
80	SLV 15	-0.5	-0.14	3.2	0	0	0
80	SLV 16	-0.5	-0.12	3.19	0	0	0
81	SLU 1	-0.01	-0.05	1.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
81	SLU 2	-0.01	-0.05	1.59	0	0	0
81	SLU 3	-0.01	-0.05	1.62	0	0	0
81	SLU 4	-0.01	-0.05	1.62	0	0	0
81	SLU 5	-0.01	-0.05	1.61	0	0	0
81	SLU 6	-0.01	-0.05	1.65	0	0	0
81	SLU 7	-0.01	-0.05	1.65	0	0	0
81	SLU 8	-0.01	-0.05	1.63	0	0	0
81	SLU 9	-0.01	-0.05	1.63	0	0	0
81	SLU 10	-0.01	-0.05	1.81	0	0	0
81	SLU 11	-0.01	-0.05	1.84	0	0	0
81	SLU 12	-0.01	-0.05	1.84	0	0	0
81	SLU 13	-0.01	-0.05	1.83	0	0	0
81	SLU 14	-0.01	-0.05	1.87	0	0	0
81	SLU 15	-0.01	-0.05	1.87	0	0	0
81	SLU 16	-0.01	-0.05	1.85	0	0	0
81	SLU 17	-0.01	-0.05	1.85	0	0	0
81	SLU 18	-0.01	-0.06	1.9	0	0	0
81	SLU 19	-0.01	-0.06	1.9	0	0	0
81	SLU 20	-0.01	-0.06	1.92	0	0	0
81	SLU 21	-0.01	-0.06	1.92	0	0	0
81	SLU 22	-0.01	-0.05	1.78	0	0	0
81	SLU 23	-0.01	-0.05	1.78	0	0	0
81	SLU 24	-0.01	-0.05	1.82	0	0	0
81	SLU 25	-0.01	-0.05	1.82	0	0	0
81	SLU 26	-0.01	-0.05	1.81	0	0	0
81	SLU 27	-0.01	-0.05	1.84	0	0	0
81	SLU 28	-0.01	-0.05	1.84	0	0	0
81	SLU 29	-0.01	-0.05	1.83	0	0	0
81	SLU 30	-0.01	-0.05	1.83	0	0	0
81	SLU 31	-0.01	-0.05	2	0	0	0
81	SLU 32	-0.01	-0.06	2.04	0	0	0
81	SLU 33	-0.01	-0.06	2.04	0	0	0
81	SLU 34	-0.01	-0.05	2.03	0	0	0
81	SLU 35	-0.01	-0.06	2.06	0	0	0
81	SLU 36	-0.01	-0.06	2.06	0	0	0
81	SLU 37	-0.01	-0.06	2.05	0	0	0
81	SLU 38	-0.01	-0.06	2.05	0	0	0
81	SLU 39	-0.01	-0.06	2.1	0	0	0
81	SLU 40	-0.01	-0.06	2.1	0	0	0
81	SLU 41	-0.01	-0.06	2.12	0	0	0
81	SLU 42	-0.01	-0.06	2.12	0	0	0
81	SLU 43	-0.01	-0.07	2	0	0	0
81	SLU 44	-0.01	-0.06	1.99	0	0	0
81	SLU 45	-0.01	-0.07	2.03	0	0	0
81	SLU 46	-0.01	-0.06	2.03	0	0	0
81	SLU 47	-0.01	-0.06	2.02	0	0	0
81	SLU 48	-0.01	-0.06	2.06	0	0	0
81	SLU 49	-0.01	-0.06	2.05	0	0	0
81	SLU 50	-0.01	-0.06	2.04	0	0	0
81	SLU 51	-0.01	-0.06	2.04	0	0	0
81	SLU 52	-0.01	-0.07	2.21	0	0	0
81	SLU 53	-0.01	-0.07	2.25	0	0	0
81	SLU 54	-0.01	-0.07	2.25	0	0	0
81	SLU 55	-0.01	-0.07	2.24	0	0	0
81	SLU 56	-0.01	-0.07	2.28	0	0	0
81	SLU 57	-0.01	-0.07	2.27	0	0	0
81	SLU 58	-0.01	-0.07	2.26	0	0	0
81	SLU 59	-0.01	-0.07	2.26	0	0	0
81	SLU 60	-0.01	-0.07	2.31	0	0	0
81	SLU 61	-0.01	-0.07	2.31	0	0	0
81	SLU 62	-0.01	-0.07	2.33	0	0	0
81	SLU 63	-0.01	-0.07	2.33	0	0	0
81	SLU 64	-0.01	-0.07	2.19	0	0	0
81	SLU 65	-0.01	-0.06	2.19	0	0	0
81	SLU 66	-0.01	-0.07	2.23	0	0	0
81	SLU 67	-0.01	-0.07	2.23	0	0	0
81	SLU 68	-0.01	-0.06	2.21	0	0	0
81	SLU 69	-0.01	-0.07	2.25	0	0	0
81	SLU 70	-0.01	-0.07	2.25	0	0	0
81	SLU 71	-0.01	-0.07	2.24	0	0	0
81	SLU 72	-0.01	-0.07	2.24	0	0	0
81	SLU 73	-0.01	-0.07	2.41	0	0	0
81	SLU 74	-0.01	-0.07	2.45	0	0	0
81	SLU 75	-0.01	-0.07	2.45	0	0	0
81	SLU 76	-0.01	-0.07	2.43	0	0	0
81	SLU 77	-0.01	-0.07	2.47	0	0	0
81	SLU 78	-0.01	-0.07	2.47	0	0	0
81	SLU 79	-0.01	-0.07	2.46	0	0	0
81	SLU 80	-0.01	-0.07	2.46	0	0	0
81	SLU 81	-0.01	-0.07	2.51	0	0	0
81	SLU 82	-0.01	-0.07	2.51	0	0	0
81	SLU 83	-0.01	-0.07	2.53	0	0	0
81	SLU 84	-0.01	-0.07	2.53	0	0	0
81	SLE RA 1	-0.01	-0.05	1.64	0	0	0
81	SLE RA 2	-0.01	-0.05	1.64	0	0	0
81	SLE RA 3	-0.01	-0.05	1.67	0	0	0
81	SLE RA 4	-0.01	-0.05	1.67	0	0	0
81	SLE RA 5	-0.01	-0.05	1.66	0	0	0
81	SLE RA 6	-0.01	-0.05	1.68	0	0	0
81	SLE RA 7	-0.01	-0.05	1.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
81	SLE RA 8	-0.01	-0.05	1.67	0	0	0
81	SLE RA 9	-0.01	-0.05	1.67	0	0	0
81	SLE RA 10	-0.01	-0.05	1.79	0	0	0
81	SLE RA 11	-0.01	-0.05	1.81	0	0	0
81	SLE RA 12	-0.01	-0.05	1.81	0	0	0
81	SLE RA 13	-0.01	-0.05	1.8	0	0	0
81	SLE RA 14	-0.01	-0.05	1.83	0	0	0
81	SLE RA 15	-0.01	-0.05	1.83	0	0	0
81	SLE RA 16	-0.01	-0.05	1.82	0	0	0
81	SLE RA 17	-0.01	-0.05	1.82	0	0	0
81	SLE RA 18	-0.01	-0.06	1.85	0	0	0
81	SLE RA 19	-0.01	-0.05	1.85	0	0	0
81	SLE RA 20	-0.01	-0.06	1.87	0	0	0
81	SLE RA 21	-0.01	-0.05	1.87	0	0	0
81	SLE FR 1	-0.01	-0.05	1.64	0	0	0
81	SLE FR 2	-0.01	-0.05	1.64	0	0	0
81	SLE FR 3	-0.01	-0.05	1.65	0	0	0
81	SLE FR 4	-0.01	-0.05	1.71	0	0	0
81	SLE FR 5	-0.01	-0.05	1.71	0	0	0
81	SLE FR 6	-0.01	-0.05	1.75	0	0	0
81	SLE QP 1	-0.01	-0.05	1.64	0	0	0
81	SLE QP 2	-0.01	-0.05	1.71	0	0	0
81	SLD 1	0.11	-0.04	1.7	0	0	0
81	SLD 2	0.11	-0.04	1.7	0	0	0
81	SLD 3	0.1	-0.08	1.74	0	0	0
81	SLD 4	0.1	-0.08	1.74	0	0	0
81	SLD 5	0.04	0.01	1.65	0	0	0
81	SLD 6	0.04	0.01	1.65	0	0	0
81	SLD 7	0.01	-0.12	1.77	0	0	0
81	SLD 8	0.01	-0.12	1.77	0	0	0
81	SLD 9	-0.03	0.01	1.64	0	0	0
81	SLD 10	-0.03	0.01	1.64	0	0	0
81	SLD 11	-0.05	-0.11	1.76	0	0	0
81	SLD 12	-0.05	-0.11	1.76	0	0	0
81	SLD 13	-0.12	-0.03	1.68	0	0	0
81	SLD 14	-0.12	-0.03	1.68	0	0	0
81	SLD 15	-0.12	-0.07	1.71	0	0	0
81	SLD 16	-0.12	-0.07	1.71	0	0	0
81	SLV 1	0.26	-0.02	1.7	0	0	0
81	SLV 2	0.26	-0.02	1.7	0	0	0
81	SLV 3	0.25	-0.11	1.78	0	0	0
81	SLV 4	0.25	-0.11	1.77	0	0	0
81	SLV 5	0.09	0.09	1.58	0	0	0
81	SLV 6	0.09	0.09	1.58	0	0	0
81	SLV 7	0.05	-0.2	1.85	0	0	0
81	SLV 8	0.05	-0.2	1.85	0	0	0
81	SLV 9	-0.06	0.1	1.57	0	0	0
81	SLV 10	-0.06	0.1	1.57	0	0	0
81	SLV 11	-0.11	-0.19	1.83	0	0	0
81	SLV 12	-0.11	-0.19	1.83	0	0	0
81	SLV 13	-0.26	0	1.64	0	0	0
81	SLV 14	-0.26	0.01	1.64	0	0	0
81	SLV 15	-0.28	-0.08	1.72	0	0	0
81	SLV 16	-0.28	-0.08	1.72	0	0	0
82	SLU 1	-0.01	-0.09	2.84	0	0	0
82	SLU 2	-0.01	-0.08	2.84	0	0	0
82	SLU 3	-0.01	-0.09	2.9	0	0	0
82	SLU 4	-0.01	-0.08	2.9	0	0	0
82	SLU 5	-0.01	-0.08	2.88	0	0	0
82	SLU 6	-0.02	-0.09	2.94	0	0	0
82	SLU 7	-0.02	-0.08	2.94	0	0	0
82	SLU 8	-0.02	-0.09	2.92	0	0	0
82	SLU 9	-0.02	-0.08	2.92	0	0	0
82	SLU 10	-0.02	-0.09	3.23	0	0	0
82	SLU 11	-0.02	-0.09	3.29	0	0	0
82	SLU 12	-0.02	-0.09	3.29	0	0	0
82	SLU 13	-0.02	-0.09	3.27	0	0	0
82	SLU 14	-0.02	-0.09	3.33	0	0	0
82	SLU 15	-0.02	-0.09	3.33	0	0	0
82	SLU 16	-0.02	-0.09	3.31	0	0	0
82	SLU 17	-0.02	-0.09	3.31	0	0	0
82	SLU 18	-0.02	-0.1	3.4	0	0	0
82	SLU 19	-0.02	-0.1	3.4	0	0	0
82	SLU 20	-0.02	-0.1	3.44	0	0	0
82	SLU 21	-0.02	-0.1	3.44	0	0	0
82	SLU 22	-0.01	-0.09	3.19	0	0	0
82	SLU 23	-0.01	-0.09	3.19	0	0	0
82	SLU 24	-0.02	-0.09	3.25	0	0	0
82	SLU 25	-0.01	-0.09	3.25	0	0	0
82	SLU 26	-0.02	-0.09	3.23	0	0	0
82	SLU 27	-0.02	-0.09	3.29	0	0	0
82	SLU 28	-0.02	-0.09	3.29	0	0	0
82	SLU 29	-0.02	-0.09	3.27	0	0	0
82	SLU 30	-0.02	-0.09	3.27	0	0	0
82	SLU 31	-0.02	-0.09	3.58	0	0	0
82	SLU 32	-0.02	-0.1	3.65	0	0	0
82	SLU 33	-0.02	-0.09	3.64	0	0	0
82	SLU 34	-0.02	-0.09	3.62	0	0	0
82	SLU 35	-0.02	-0.1	3.69	0	0	0
82	SLU 36	-0.02	-0.09	3.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
82	SLU 37	-0.02	-0.1	3.66	0	0	0
82	SLU 38	-0.02	-0.09	3.66	0	0	0
82	SLU 39	-0.02	-0.1	3.75	0	0	0
82	SLU 40	-0.02	-0.1	3.75	0	0	0
82	SLU 41	-0.02	-0.1	3.79	0	0	0
82	SLU 42	-0.02	-0.1	3.79	0	0	0
82	SLU 43	-0.02	-0.11	3.57	0	0	0
82	SLU 44	-0.02	-0.11	3.57	0	0	0
82	SLU 45	-0.02	-0.11	3.63	0	0	0
82	SLU 46	-0.02	-0.11	3.63	0	0	0
82	SLU 47	-0.02	-0.11	3.61	0	0	0
82	SLU 48	-0.02	-0.11	3.67	0	0	0
82	SLU 49	-0.02	-0.11	3.67	0	0	0
82	SLU 50	-0.02	-0.11	3.65	0	0	0
82	SLU 51	-0.02	-0.11	3.65	0	0	0
82	SLU 52	-0.02	-0.12	3.96	0	0	0
82	SLU 53	-0.02	-0.12	4.02	0	0	0
82	SLU 54	-0.02	-0.12	4.02	0	0	0
82	SLU 55	-0.02	-0.12	4	0	0	0
82	SLU 56	-0.03	-0.12	4.06	0	0	0
82	SLU 57	-0.03	-0.12	4.06	0	0	0
82	SLU 58	-0.03	-0.12	4.04	0	0	0
82	SLU 59	-0.03	-0.12	4.04	0	0	0
82	SLU 60	-0.02	-0.12	4.13	0	0	0
82	SLU 61	-0.02	-0.12	4.13	0	0	0
82	SLU 62	-0.03	-0.12	4.17	0	0	0
82	SLU 63	-0.03	-0.12	4.17	0	0	0
82	SLU 64	-0.02	-0.11	3.92	0	0	0
82	SLU 65	-0.02	-0.11	3.92	0	0	0
82	SLU 66	-0.02	-0.11	3.98	0	0	0
82	SLU 67	-0.02	-0.11	3.98	0	0	0
82	SLU 68	-0.02	-0.11	3.96	0	0	0
82	SLU 69	-0.02	-0.11	4.02	0	0	0
82	SLU 70	-0.02	-0.11	4.02	0	0	0
82	SLU 71	-0.02	-0.11	4	0	0	0
82	SLU 72	-0.02	-0.11	4	0	0	0
82	SLU 73	-0.02	-0.12	4.31	0	0	0
82	SLU 74	-0.02	-0.12	4.38	0	0	0
82	SLU 75	-0.02	-0.12	4.37	0	0	0
82	SLU 76	-0.02	-0.12	4.35	0	0	0
82	SLU 77	-0.03	-0.12	4.42	0	0	0
82	SLU 78	-0.03	-0.12	4.42	0	0	0
82	SLU 79	-0.03	-0.12	4.39	0	0	0
82	SLU 80	-0.03	-0.12	4.39	0	0	0
82	SLU 81	-0.02	-0.13	4.48	0	0	0
82	SLU 82	-0.02	-0.12	4.48	0	0	0
82	SLU 83	-0.03	-0.13	4.52	0	0	0
82	SLU 84	-0.03	-0.12	4.52	0	0	0
82	SLE RA 1	-0.01	-0.09	2.94	0	0	0
82	SLE RA 2	-0.01	-0.09	2.94	0	0	0
82	SLE RA 3	-0.01	-0.09	2.98	0	0	0
82	SLE RA 4	-0.01	-0.09	2.98	0	0	0
82	SLE RA 5	-0.01	-0.09	2.96	0	0	0
82	SLE RA 6	-0.02	-0.09	3.01	0	0	0
82	SLE RA 7	-0.02	-0.09	3.01	0	0	0
82	SLE RA 8	-0.02	-0.09	2.99	0	0	0
82	SLE RA 9	-0.02	-0.09	2.99	0	0	0
82	SLE RA 10	-0.02	-0.09	3.2	0	0	0
82	SLE RA 11	-0.02	-0.09	3.24	0	0	0
82	SLE RA 12	-0.02	-0.09	3.24	0	0	0
82	SLE RA 13	-0.02	-0.09	3.23	0	0	0
82	SLE RA 14	-0.02	-0.09	3.27	0	0	0
82	SLE RA 15	-0.02	-0.09	3.27	0	0	0
82	SLE RA 16	-0.02	-0.09	3.25	0	0	0
82	SLE RA 17	-0.02	-0.09	3.25	0	0	0
82	SLE RA 18	-0.02	-0.09	3.31	0	0	0
82	SLE RA 19	-0.02	-0.09	3.31	0	0	0
82	SLE RA 20	-0.02	-0.09	3.34	0	0	0
82	SLE RA 21	-0.02	-0.09	3.34	0	0	0
82	SLE FR 1	-0.01	-0.09	2.94	0	0	0
82	SLE FR 2	-0.01	-0.09	2.94	0	0	0
82	SLE FR 3	-0.01	-0.09	2.95	0	0	0
82	SLE FR 4	-0.01	-0.09	3.05	0	0	0
82	SLE FR 5	-0.02	-0.09	3.06	0	0	0
82	SLE FR 6	-0.02	-0.09	3.12	0	0	0
82	SLE QP 1	-0.01	-0.09	2.94	0	0	0
82	SLE QP 2	-0.01	-0.09	3.05	0	0	0
82	SLD 1	0.19	-0.07	3.01	0	0	0
82	SLD 2	0.19	-0.07	3.01	0	0	0
82	SLD 3	0.18	-0.14	3.07	0	0	0
82	SLD 4	0.18	-0.13	3.06	0	0	0
82	SLD 5	0.06	0.02	2.95	0	0	0
82	SLD 6	0.07	0.02	2.95	0	0	0
82	SLD 7	0.03	-0.21	3.14	0	0	0
82	SLD 8	0.03	-0.2	3.14	0	0	0
82	SLD 9	-0.06	0.02	2.96	0	0	0
82	SLD 10	-0.06	0.03	2.96	0	0	0
82	SLD 11	-0.09	-0.2	3.15	0	0	0
82	SLD 12	-0.09	-0.2	3.15	0	0	0
82	SLD 13	-0.21	-0.05	3.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
82	SLD 14	-0.21	-0.04	3.03	0	0	0
82	SLD 15	-0.22	-0.11	3.09	0	0	0
82	SLD 16	-0.22	-0.11	3.09	0	0	0
82	SLV 1	0.47	-0.04	2.95	0	0	0
82	SLV 2	0.47	-0.03	2.95	0	0	0
82	SLV 3	0.44	-0.2	3.09	0	0	0
82	SLV 4	0.44	-0.19	3.08	0	0	0
82	SLV 5	0.17	0.16	2.82	0	0	0
82	SLV 6	0.17	0.16	2.82	0	0	0
82	SLV 7	0.08	-0.36	3.26	0	0	0
82	SLV 8	0.08	-0.35	3.26	0	0	0
82	SLV 9	-0.11	0.17	2.84	0	0	0
82	SLV 10	-0.11	0.18	2.84	0	0	0
82	SLV 11	-0.2	-0.34	3.28	0	0	0
82	SLV 12	-0.2	-0.33	3.28	0	0	0
82	SLV 13	-0.47	0.01	3.02	0	0	0
82	SLV 14	-0.47	0.02	3.01	0	0	0
82	SLV 15	-0.5	-0.15	3.15	0	0	0
82	SLV 16	-0.5	-0.14	3.14	0	0	0
83	SLU 1	-0.01	-0.04	1.38	0	0	0
83	SLU 2	-0.01	-0.04	1.38	0	0	0
83	SLU 3	-0.01	-0.04	1.42	0	0	0
83	SLU 4	-0.01	-0.04	1.42	0	0	0
83	SLU 5	-0.01	-0.04	1.4	0	0	0
83	SLU 6	-0.01	-0.04	1.44	0	0	0
83	SLU 7	-0.01	-0.04	1.43	0	0	0
83	SLU 8	-0.01	-0.04	1.42	0	0	0
83	SLU 9	-0.01	-0.04	1.42	0	0	0
83	SLU 10	-0.01	-0.04	1.58	0	0	0
83	SLU 11	-0.01	-0.04	1.61	0	0	0
83	SLU 12	-0.01	-0.04	1.61	0	0	0
83	SLU 13	-0.01	-0.04	1.59	0	0	0
83	SLU 14	-0.01	-0.04	1.63	0	0	0
83	SLU 15	-0.01	-0.04	1.63	0	0	0
83	SLU 16	-0.01	-0.04	1.61	0	0	0
83	SLU 17	-0.01	-0.04	1.61	0	0	0
83	SLU 18	-0.01	-0.05	1.66	0	0	0
83	SLU 19	-0.01	-0.05	1.66	0	0	0
83	SLU 20	-0.01	-0.05	1.68	0	0	0
83	SLU 21	-0.01	-0.04	1.68	0	0	0
83	SLU 22	-0.01	-0.04	1.56	0	0	0
83	SLU 23	-0.01	-0.04	1.56	0	0	0
83	SLU 24	-0.01	-0.04	1.59	0	0	0
83	SLU 25	-0.01	-0.04	1.59	0	0	0
83	SLU 26	-0.01	-0.04	1.58	0	0	0
83	SLU 27	-0.01	-0.04	1.61	0	0	0
83	SLU 28	-0.01	-0.04	1.61	0	0	0
83	SLU 29	-0.01	-0.04	1.6	0	0	0
83	SLU 30	-0.01	-0.04	1.6	0	0	0
83	SLU 31	-0.01	-0.04	1.75	0	0	0
83	SLU 32	-0.01	-0.05	1.78	0	0	0
83	SLU 33	-0.01	-0.04	1.78	0	0	0
83	SLU 34	-0.01	-0.04	1.77	0	0	0
83	SLU 35	-0.01	-0.04	1.8	0	0	0
83	SLU 36	-0.01	-0.04	1.8	0	0	0
83	SLU 37	-0.01	-0.04	1.79	0	0	0
83	SLU 38	-0.01	-0.04	1.79	0	0	0
83	SLU 39	-0.01	-0.05	1.83	0	0	0
83	SLU 40	-0.01	-0.05	1.83	0	0	0
83	SLU 41	-0.01	-0.05	1.85	0	0	0
83	SLU 42	-0.01	-0.05	1.85	0	0	0
83	SLU 43	-0.01	-0.05	1.74	0	0	0
83	SLU 44	-0.01	-0.05	1.74	0	0	0
83	SLU 45	-0.01	-0.05	1.77	0	0	0
83	SLU 46	-0.01	-0.05	1.77	0	0	0
83	SLU 47	-0.01	-0.05	1.76	0	0	0
83	SLU 48	-0.01	-0.05	1.79	0	0	0
83	SLU 49	-0.01	-0.05	1.79	0	0	0
83	SLU 50	-0.01	-0.05	1.78	0	0	0
83	SLU 51	-0.01	-0.05	1.78	0	0	0
83	SLU 52	-0.01	-0.06	1.93	0	0	0
83	SLU 53	-0.01	-0.06	1.96	0	0	0
83	SLU 54	-0.01	-0.06	1.96	0	0	0
83	SLU 55	-0.01	-0.05	1.95	0	0	0
83	SLU 56	-0.01	-0.06	1.98	0	0	0
83	SLU 57	-0.01	-0.06	1.98	0	0	0
83	SLU 58	-0.01	-0.06	1.97	0	0	0
83	SLU 59	-0.01	-0.06	1.97	0	0	0
83	SLU 60	-0.01	-0.06	2.01	0	0	0
83	SLU 61	-0.01	-0.06	2.01	0	0	0
83	SLU 62	-0.01	-0.06	2.03	0	0	0
83	SLU 63	-0.01	-0.06	2.03	0	0	0
83	SLU 64	-0.01	-0.05	1.91	0	0	0
83	SLU 65	-0.01	-0.05	1.91	0	0	0
83	SLU 66	-0.01	-0.05	1.94	0	0	0
83	SLU 67	-0.01	-0.05	1.94	0	0	0
83	SLU 68	-0.01	-0.05	1.93	0	0	0
83	SLU 69	-0.01	-0.05	1.96	0	0	0
83	SLU 70	-0.01	-0.05	1.96	0	0	0
83	SLU 71	-0.01	-0.05	1.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
83	SLU 72	-0.01	-0.05	1.95	0	0	0
83	SLU 73	-0.01	-0.06	2.1	0	0	0
83	SLU 74	-0.01	-0.06	2.14	0	0	0
83	SLU 75	-0.01	-0.06	2.13	0	0	0
83	SLU 76	-0.01	-0.06	2.12	0	0	0
83	SLU 77	-0.01	-0.06	2.15	0	0	0
83	SLU 78	-0.01	-0.06	2.15	0	0	0
83	SLU 79	-0.01	-0.06	2.14	0	0	0
83	SLU 80	-0.01	-0.06	2.14	0	0	0
83	SLU 81	-0.01	-0.06	2.19	0	0	0
83	SLU 82	-0.01	-0.06	2.19	0	0	0
83	SLU 83	-0.01	-0.06	2.21	0	0	0
83	SLU 84	-0.01	-0.06	2.21	0	0	0
83	SLE RA 1	-0.01	-0.04	1.43	0	0	0
83	SLE RA 2	-0.01	-0.04	1.43	0	0	0
83	SLE RA 3	-0.01	-0.04	1.45	0	0	0
83	SLE RA 4	-0.01	-0.04	1.45	0	0	0
83	SLE RA 5	-0.01	-0.04	1.45	0	0	0
83	SLE RA 6	-0.01	-0.04	1.47	0	0	0
83	SLE RA 7	-0.01	-0.04	1.47	0	0	0
83	SLE RA 8	-0.01	-0.04	1.46	0	0	0
83	SLE RA 9	-0.01	-0.04	1.46	0	0	0
83	SLE RA 10	-0.01	-0.04	1.56	0	0	0
83	SLE RA 11	-0.01	-0.04	1.58	0	0	0
83	SLE RA 12	-0.01	-0.04	1.58	0	0	0
83	SLE RA 13	-0.01	-0.04	1.57	0	0	0
83	SLE RA 14	-0.01	-0.04	1.59	0	0	0
83	SLE RA 15	-0.01	-0.04	1.59	0	0	0
83	SLE RA 16	-0.01	-0.04	1.59	0	0	0
83	SLE RA 17	-0.01	-0.04	1.59	0	0	0
83	SLE RA 18	-0.01	-0.04	1.62	0	0	0
83	SLE RA 19	-0.01	-0.04	1.62	0	0	0
83	SLE RA 20	-0.01	-0.04	1.63	0	0	0
83	SLE RA 21	-0.01	-0.04	1.63	0	0	0
83	SLE FR 1	-0.01	-0.04	1.43	0	0	0
83	SLE FR 2	-0.01	-0.04	1.43	0	0	0
83	SLE FR 3	-0.01	-0.04	1.44	0	0	0
83	SLE FR 4	-0.01	-0.04	1.49	0	0	0
83	SLE FR 5	-0.01	-0.04	1.49	0	0	0
83	SLE FR 6	-0.01	-0.04	1.52	0	0	0
83	SLE QP 1	-0.01	-0.04	1.43	0	0	0
83	SLE QP 2	-0.01	-0.04	1.49	0	0	0
83	SLD 1	0.09	-0.03	1.46	0	0	0
83	SLD 2	0.09	-0.03	1.46	0	0	0
83	SLD 3	0.09	-0.07	1.49	0	0	0
83	SLD 4	0.09	-0.06	1.49	0	0	0
83	SLD 5	0.03	0.01	1.44	0	0	0
83	SLD 6	0.03	0.01	1.44	0	0	0
83	SLD 7	0.01	-0.1	1.53	0	0	0
83	SLD 8	0.01	-0.1	1.53	0	0	0
83	SLD 9	-0.03	0.01	1.45	0	0	0
83	SLD 10	-0.03	0.01	1.45	0	0	0
83	SLD 11	-0.05	-0.1	1.54	0	0	0
83	SLD 12	-0.05	-0.09	1.54	0	0	0
83	SLD 13	-0.1	-0.02	1.49	0	0	0
83	SLD 14	-0.1	-0.02	1.49	0	0	0
83	SLD 15	-0.11	-0.05	1.51	0	0	0
83	SLD 16	-0.11	-0.05	1.51	0	0	0
83	SLV 1	0.23	-0.02	1.43	0	0	0
83	SLV 2	0.23	-0.02	1.43	0	0	0
83	SLV 3	0.22	-0.1	1.49	0	0	0
83	SLV 4	0.22	-0.09	1.49	0	0	0
83	SLV 5	0.08	0.08	1.38	0	0	0
83	SLV 6	0.08	0.08	1.38	0	0	0
83	SLV 7	0.04	-0.17	1.58	0	0	0
83	SLV 8	0.04	-0.17	1.58	0	0	0
83	SLV 9	-0.05	0.08	1.4	0	0	0
83	SLV 10	-0.05	0.09	1.4	0	0	0
83	SLV 11	-0.1	-0.16	1.6	0	0	0
83	SLV 12	-0.1	-0.16	1.59	0	0	0
83	SLV 13	-0.23	0.01	1.49	0	0	0
83	SLV 14	-0.23	0.01	1.49	0	0	0
83	SLV 15	-0.24	-0.07	1.55	0	0	0
83	SLV 16	-0.24	-0.06	1.55	0	0	0
84	SLU 1	-0.01	-0.03	1.22	0	0	0
84	SLU 2	-0.01	-0.03	1.22	0	0	0
84	SLU 3	-0.01	-0.03	1.25	0	0	0
84	SLU 4	-0.01	-0.03	1.25	0	0	0
84	SLU 5	-0.01	-0.03	1.24	0	0	0
84	SLU 6	-0.01	-0.03	1.26	0	0	0
84	SLU 7	-0.01	-0.03	1.26	0	0	0
84	SLU 8	-0.01	-0.03	1.25	0	0	0
84	SLU 9	-0.01	-0.03	1.25	0	0	0
84	SLU 10	-0.01	-0.04	1.39	0	0	0
84	SLU 11	-0.01	-0.04	1.42	0	0	0
84	SLU 12	-0.01	-0.04	1.42	0	0	0
84	SLU 13	-0.01	-0.04	1.41	0	0	0
84	SLU 14	-0.01	-0.04	1.43	0	0	0
84	SLU 15	-0.01	-0.04	1.43	0	0	0
84	SLU 16	-0.01	-0.04	1.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLU 17	-0.01	-0.04	1.42	0	0	0
84	SLU 18	-0.01	-0.04	1.46	0	0	0
84	SLU 19	-0.01	-0.04	1.46	0	0	0
84	SLU 20	-0.01	-0.04	1.48	0	0	0
84	SLU 21	-0.01	-0.04	1.48	0	0	0
84	SLU 22	-0.01	-0.04	1.37	0	0	0
84	SLU 23	-0.01	-0.03	1.37	0	0	0
84	SLU 24	-0.01	-0.04	1.4	0	0	0
84	SLU 25	-0.01	-0.03	1.4	0	0	0
84	SLU 26	-0.01	-0.03	1.39	0	0	0
84	SLU 27	-0.01	-0.03	1.42	0	0	0
84	SLU 28	-0.01	-0.03	1.42	0	0	0
84	SLU 29	-0.01	-0.03	1.41	0	0	0
84	SLU 30	-0.01	-0.03	1.41	0	0	0
84	SLU 31	-0.01	-0.04	1.54	0	0	0
84	SLU 32	-0.01	-0.04	1.57	0	0	0
84	SLU 33	-0.01	-0.04	1.57	0	0	0
84	SLU 34	-0.01	-0.04	1.56	0	0	0
84	SLU 35	-0.01	-0.04	1.58	0	0	0
84	SLU 36	-0.01	-0.04	1.58	0	0	0
84	SLU 37	-0.01	-0.04	1.57	0	0	0
84	SLU 38	-0.01	-0.04	1.57	0	0	0
84	SLU 39	-0.01	-0.04	1.61	0	0	0
84	SLU 40	-0.01	-0.04	1.61	0	0	0
84	SLU 41	-0.01	-0.04	1.63	0	0	0
84	SLU 42	-0.01	-0.04	1.63	0	0	0
84	SLU 43	-0.01	-0.05	1.53	0	0	0
84	SLU 44	-0.01	-0.04	1.53	0	0	0
84	SLU 45	-0.01	-0.04	1.56	0	0	0
84	SLU 46	-0.01	-0.04	1.56	0	0	0
84	SLU 47	-0.01	-0.04	1.55	0	0	0
84	SLU 48	-0.01	-0.04	1.58	0	0	0
84	SLU 49	-0.01	-0.04	1.58	0	0	0
84	SLU 50	-0.01	-0.04	1.57	0	0	0
84	SLU 51	-0.01	-0.04	1.57	0	0	0
84	SLU 52	-0.01	-0.05	1.7	0	0	0
84	SLU 53	-0.01	-0.05	1.73	0	0	0
84	SLU 54	-0.01	-0.05	1.73	0	0	0
84	SLU 55	-0.01	-0.05	1.72	0	0	0
84	SLU 56	-0.01	-0.05	1.75	0	0	0
84	SLU 57	-0.01	-0.05	1.75	0	0	0
84	SLU 58	-0.01	-0.05	1.74	0	0	0
84	SLU 59	-0.01	-0.05	1.74	0	0	0
84	SLU 60	-0.01	-0.05	1.77	0	0	0
84	SLU 61	-0.01	-0.05	1.77	0	0	0
84	SLU 62	-0.01	-0.05	1.79	0	0	0
84	SLU 63	-0.01	-0.05	1.79	0	0	0
84	SLU 64	-0.01	-0.05	1.69	0	0	0
84	SLU 65	-0.01	-0.04	1.69	0	0	0
84	SLU 66	-0.01	-0.05	1.71	0	0	0
84	SLU 67	-0.01	-0.04	1.71	0	0	0
84	SLU 68	-0.01	-0.04	1.7	0	0	0
84	SLU 69	-0.01	-0.05	1.73	0	0	0
84	SLU 70	-0.01	-0.04	1.73	0	0	0
84	SLU 71	-0.01	-0.05	1.72	0	0	0
84	SLU 72	-0.01	-0.04	1.72	0	0	0
84	SLU 73	-0.01	-0.05	1.85	0	0	0
84	SLU 74	-0.01	-0.05	1.88	0	0	0
84	SLU 75	-0.01	-0.05	1.88	0	0	0
84	SLU 76	-0.01	-0.05	1.87	0	0	0
84	SLU 77	-0.01	-0.05	1.9	0	0	0
84	SLU 78	-0.01	-0.05	1.9	0	0	0
84	SLU 79	-0.01	-0.05	1.89	0	0	0
84	SLU 80	-0.01	-0.05	1.89	0	0	0
84	SLU 81	-0.01	-0.05	1.93	0	0	0
84	SLU 82	-0.01	-0.05	1.93	0	0	0
84	SLU 83	-0.01	-0.05	1.94	0	0	0
84	SLU 84	-0.01	-0.05	1.94	0	0	0
84	SLE RA 1	-0.01	-0.03	1.26	0	0	0
84	SLE RA 2	-0.01	-0.03	1.26	0	0	0
84	SLE RA 3	-0.01	-0.03	1.28	0	0	0
84	SLE RA 4	-0.01	-0.03	1.28	0	0	0
84	SLE RA 5	-0.01	-0.03	1.27	0	0	0
84	SLE RA 6	-0.01	-0.03	1.29	0	0	0
84	SLE RA 7	-0.01	-0.03	1.29	0	0	0
84	SLE RA 8	-0.01	-0.03	1.29	0	0	0
84	SLE RA 9	-0.01	-0.03	1.29	0	0	0
84	SLE RA 10	-0.01	-0.04	1.38	0	0	0
84	SLE RA 11	-0.01	-0.04	1.39	0	0	0
84	SLE RA 12	-0.01	-0.04	1.39	0	0	0
84	SLE RA 13	-0.01	-0.04	1.39	0	0	0
84	SLE RA 14	-0.01	-0.04	1.41	0	0	0
84	SLE RA 15	-0.01	-0.04	1.41	0	0	0
84	SLE RA 16	-0.01	-0.04	1.4	0	0	0
84	SLE RA 17	-0.01	-0.04	1.4	0	0	0
84	SLE RA 18	-0.01	-0.04	1.42	0	0	0
84	SLE RA 19	-0.01	-0.04	1.42	0	0	0
84	SLE RA 20	-0.01	-0.04	1.44	0	0	0
84	SLE RA 21	-0.01	-0.04	1.44	0	0	0
84	SLE FR 1	-0.01	-0.03	1.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLE FR 2	-0.01	-0.03	1.26	0	0	0
84	SLE FR 3	-0.01	-0.03	1.27	0	0	0
84	SLE FR 4	-0.01	-0.04	1.31	0	0	0
84	SLE FR 5	-0.01	-0.04	1.32	0	0	0
84	SLE FR 6	-0.01	-0.04	1.34	0	0	0
84	SLE QP 1	-0.01	-0.03	1.26	0	0	0
84	SLE QP 2	-0.01	-0.04	1.31	0	0	0
84	SLD 1	0.08	-0.03	1.28	0	0	0
84	SLD 2	0.08	-0.03	1.28	0	0	0
84	SLD 3	0.08	-0.06	1.3	0	0	0
84	SLD 4	0.08	-0.05	1.3	0	0	0
84	SLD 5	0.03	0.01	1.27	0	0	0
84	SLD 6	0.03	0.01	1.27	0	0	0
84	SLD 7	0.01	-0.09	1.34	0	0	0
84	SLD 8	0.01	-0.08	1.34	0	0	0
84	SLD 9	-0.02	0.01	1.28	0	0	0
84	SLD 10	-0.02	0.01	1.28	0	0	0
84	SLD 11	-0.04	-0.08	1.35	0	0	0
84	SLD 12	-0.04	-0.08	1.35	0	0	0
84	SLD 13	-0.09	-0.02	1.32	0	0	0
84	SLD 14	-0.09	-0.01	1.32	0	0	0
84	SLD 15	-0.1	-0.05	1.34	0	0	0
84	SLD 16	-0.1	-0.04	1.34	0	0	0
84	SLV 1	0.2	-0.02	1.25	0	0	0
84	SLV 2	0.2	-0.01	1.25	0	0	0
84	SLV 3	0.19	-0.09	1.29	0	0	0
84	SLV 4	0.19	-0.08	1.29	0	0	0
84	SLV 5	0.07	0.07	1.22	0	0	0
84	SLV 6	0.07	0.07	1.22	0	0	0
84	SLV 7	0.04	-0.15	1.38	0	0	0
84	SLV 8	0.04	-0.15	1.38	0	0	0
84	SLV 9	-0.05	0.07	1.25	0	0	0
84	SLV 10	-0.05	0.08	1.24	0	0	0
84	SLV 11	-0.09	-0.14	1.4	0	0	0
84	SLV 12	-0.09	-0.14	1.4	0	0	0
84	SLV 13	-0.21	0.01	1.33	0	0	0
84	SLV 14	-0.21	0.01	1.33	0	0	0
84	SLV 15	-0.22	-0.06	1.38	0	0	0
84	SLV 16	-0.22	-0.05	1.38	0	0	0
85	SLU 1	-0.01	-0.04	1.31	0	0	0
85	SLU 2	-0.01	-0.03	1.3	0	0	0
85	SLU 3	-0.01	-0.04	1.33	0	0	0
85	SLU 4	-0.01	-0.03	1.33	0	0	0
85	SLU 5	-0.01	-0.03	1.32	0	0	0
85	SLU 6	-0.01	-0.04	1.35	0	0	0
85	SLU 7	-0.01	-0.03	1.35	0	0	0
85	SLU 8	-0.01	-0.04	1.34	0	0	0
85	SLU 9	-0.01	-0.03	1.34	0	0	0
85	SLU 10	-0.01	-0.04	1.48	0	0	0
85	SLU 11	-0.01	-0.04	1.51	0	0	0
85	SLU 12	-0.01	-0.04	1.51	0	0	0
85	SLU 13	-0.01	-0.04	1.5	0	0	0
85	SLU 14	-0.01	-0.04	1.53	0	0	0
85	SLU 15	-0.01	-0.04	1.53	0	0	0
85	SLU 16	-0.01	-0.04	1.52	0	0	0
85	SLU 17	-0.01	-0.04	1.52	0	0	0
85	SLU 18	-0.01	-0.04	1.56	0	0	0
85	SLU 19	-0.01	-0.04	1.56	0	0	0
85	SLU 20	-0.01	-0.04	1.58	0	0	0
85	SLU 21	-0.01	-0.04	1.58	0	0	0
85	SLU 22	-0.01	-0.04	1.47	0	0	0
85	SLU 23	-0.01	-0.03	1.47	0	0	0
85	SLU 24	-0.01	-0.04	1.5	0	0	0
85	SLU 25	-0.01	-0.04	1.5	0	0	0
85	SLU 26	-0.01	-0.03	1.49	0	0	0
85	SLU 27	-0.01	-0.04	1.51	0	0	0
85	SLU 28	-0.01	-0.03	1.51	0	0	0
85	SLU 29	-0.01	-0.04	1.5	0	0	0
85	SLU 30	-0.01	-0.03	1.5	0	0	0
85	SLU 31	-0.01	-0.04	1.65	0	0	0
85	SLU 32	-0.01	-0.04	1.68	0	0	0
85	SLU 33	-0.01	-0.04	1.68	0	0	0
85	SLU 34	-0.01	-0.04	1.67	0	0	0
85	SLU 35	-0.01	-0.04	1.69	0	0	0
85	SLU 36	-0.01	-0.04	1.69	0	0	0
85	SLU 37	-0.01	-0.04	1.68	0	0	0
85	SLU 38	-0.01	-0.04	1.68	0	0	0
85	SLU 39	-0.01	-0.04	1.73	0	0	0
85	SLU 40	-0.01	-0.04	1.73	0	0	0
85	SLU 41	-0.01	-0.04	1.74	0	0	0
85	SLU 42	-0.01	-0.04	1.74	0	0	0
85	SLU 43	-0.01	-0.05	1.64	0	0	0
85	SLU 44	-0.01	-0.05	1.64	0	0	0
85	SLU 45	-0.01	-0.05	1.67	0	0	0
85	SLU 46	-0.01	-0.05	1.67	0	0	0
85	SLU 47	-0.01	-0.04	1.66	0	0	0
85	SLU 48	-0.01	-0.05	1.69	0	0	0
85	SLU 49	-0.01	-0.05	1.69	0	0	0
85	SLU 50	-0.01	-0.05	1.68	0	0	0
85	SLU 51	-0.01	-0.05	1.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
85	SLU 52	-0.01	-0.05	1.82	0	0	0
85	SLU 53	-0.01	-0.05	1.85	0	0	0
85	SLU 54	-0.01	-0.05	1.85	0	0	0
85	SLU 55	-0.01	-0.05	1.84	0	0	0
85	SLU 56	-0.01	-0.05	1.87	0	0	0
85	SLU 57	-0.01	-0.05	1.87	0	0	0
85	SLU 58	-0.01	-0.05	1.86	0	0	0
85	SLU 59	-0.01	-0.05	1.86	0	0	0
85	SLU 60	-0.01	-0.05	1.9	0	0	0
85	SLU 61	-0.01	-0.05	1.9	0	0	0
85	SLU 62	-0.01	-0.05	1.91	0	0	0
85	SLU 63	-0.01	-0.05	1.91	0	0	0
85	SLU 64	-0.01	-0.05	1.8	0	0	0
85	SLU 65	-0.01	-0.05	1.8	0	0	0
85	SLU 66	-0.01	-0.05	1.83	0	0	0
85	SLU 67	-0.01	-0.05	1.83	0	0	0
85	SLU 68	-0.01	-0.05	1.82	0	0	0
85	SLU 69	-0.01	-0.05	1.85	0	0	0
85	SLU 70	-0.01	-0.05	1.85	0	0	0
85	SLU 71	-0.01	-0.05	1.84	0	0	0
85	SLU 72	-0.01	-0.05	1.84	0	0	0
85	SLU 73	-0.01	-0.05	1.98	0	0	0
85	SLU 74	-0.01	-0.05	2.01	0	0	0
85	SLU 75	-0.01	-0.05	2.01	0	0	0
85	SLU 76	-0.01	-0.05	2	0	0	0
85	SLU 77	-0.01	-0.05	2.03	0	0	0
85	SLU 78	-0.01	-0.05	2.03	0	0	0
85	SLU 79	-0.01	-0.05	2.02	0	0	0
85	SLU 80	-0.01	-0.05	2.02	0	0	0
85	SLU 81	-0.01	-0.05	2.06	0	0	0
85	SLU 82	-0.01	-0.05	2.06	0	0	0
85	SLU 83	-0.01	-0.05	2.08	0	0	0
85	SLU 84	-0.01	-0.05	2.08	0	0	0
85	SLE RA 1	-0.01	-0.04	1.35	0	0	0
85	SLE RA 2	-0.01	-0.04	1.35	0	0	0
85	SLE RA 3	-0.01	-0.04	1.37	0	0	0
85	SLE RA 4	-0.01	-0.04	1.37	0	0	0
85	SLE RA 5	-0.01	-0.03	1.36	0	0	0
85	SLE RA 6	-0.01	-0.04	1.38	0	0	0
85	SLE RA 7	-0.01	-0.04	1.38	0	0	0
85	SLE RA 8	-0.01	-0.04	1.38	0	0	0
85	SLE RA 9	-0.01	-0.04	1.38	0	0	0
85	SLE RA 10	-0.01	-0.04	1.47	0	0	0
85	SLE RA 11	-0.01	-0.04	1.49	0	0	0
85	SLE RA 12	-0.01	-0.04	1.49	0	0	0
85	SLE RA 13	-0.01	-0.04	1.48	0	0	0
85	SLE RA 14	-0.01	-0.04	1.5	0	0	0
85	SLE RA 15	-0.01	-0.04	1.5	0	0	0
85	SLE RA 16	-0.01	-0.04	1.5	0	0	0
85	SLE RA 17	-0.01	-0.04	1.49	0	0	0
85	SLE RA 18	-0.01	-0.04	1.52	0	0	0
85	SLE RA 19	-0.01	-0.04	1.52	0	0	0
85	SLE RA 20	-0.01	-0.04	1.53	0	0	0
85	SLE RA 21	-0.01	-0.04	1.53	0	0	0
85	SLE FR 1	-0.01	-0.04	1.35	0	0	0
85	SLE FR 2	-0.01	-0.04	1.35	0	0	0
85	SLE FR 3	-0.01	-0.04	1.36	0	0	0
85	SLE FR 4	-0.01	-0.04	1.4	0	0	0
85	SLE FR 5	-0.01	-0.04	1.41	0	0	0
85	SLE FR 6	-0.01	-0.04	1.44	0	0	0
85	SLE QP 1	-0.01	-0.04	1.35	0	0	0
85	SLE QP 2	-0.01	-0.04	1.4	0	0	0
85	SLD 1	0.09	-0.03	1.37	0	0	0
85	SLD 2	0.09	-0.03	1.36	0	0	0
85	SLD 3	0.09	-0.06	1.39	0	0	0
85	SLD 4	0.09	-0.06	1.39	0	0	0
85	SLD 5	0.03	0.01	1.36	0	0	0
85	SLD 6	0.03	0.01	1.36	0	0	0
85	SLD 7	0.01	-0.09	1.43	0	0	0
85	SLD 8	0.01	-0.09	1.43	0	0	0
85	SLD 9	-0.03	0.01	1.38	0	0	0
85	SLD 10	-0.03	0.02	1.38	0	0	0
85	SLD 11	-0.04	-0.09	1.45	0	0	0
85	SLD 12	-0.04	-0.08	1.45	0	0	0
85	SLD 13	-0.1	-0.02	1.42	0	0	0
85	SLD 14	-0.1	-0.01	1.42	0	0	0
85	SLD 15	-0.1	-0.05	1.44	0	0	0
85	SLD 16	-0.1	-0.04	1.44	0	0	0
85	SLV 1	0.22	-0.02	1.32	0	0	0
85	SLV 2	0.22	-0.01	1.31	0	0	0
85	SLV 3	0.21	-0.09	1.36	0	0	0
85	SLV 4	0.21	-0.08	1.36	0	0	0
85	SLV 5	0.08	0.07	1.31	0	0	0
85	SLV 6	0.08	0.08	1.3	0	0	0
85	SLV 7	0.04	-0.16	1.46	0	0	0
85	SLV 8	0.04	-0.15	1.46	0	0	0
85	SLV 9	-0.05	0.08	1.34	0	0	0
85	SLV 10	-0.05	0.09	1.34	0	0	0
85	SLV 11	-0.09	-0.15	1.5	0	0	0
85	SLV 12	-0.09	-0.14	1.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
85	SLV 13	-0.22	0.01	1.45	0	0	0
85	SLV 14	-0.22	0.02	1.44	0	0	0
85	SLV 15	-0.23	-0.06	1.49	0	0	0
85	SLV 16	-0.23	-0.05	1.49	0	0	0
86	SLU 1	-0.01	-0.08	3.06	0	0	0
86	SLU 2	-0.01	-0.08	3.06	0	0	0
86	SLU 3	-0.02	-0.08	3.13	0	0	0
86	SLU 4	-0.02	-0.08	3.13	0	0	0
86	SLU 5	-0.02	-0.08	3.1	0	0	0
86	SLU 6	-0.02	-0.08	3.17	0	0	0
86	SLU 7	-0.02	-0.08	3.17	0	0	0
86	SLU 8	-0.02	-0.08	3.14	0	0	0
86	SLU 9	-0.02	-0.08	3.14	0	0	0
86	SLU 10	-0.02	-0.08	3.48	0	0	0
86	SLU 11	-0.02	-0.09	3.55	0	0	0
86	SLU 12	-0.02	-0.08	3.55	0	0	0
86	SLU 13	-0.02	-0.08	3.52	0	0	0
86	SLU 14	-0.02	-0.09	3.59	0	0	0
86	SLU 15	-0.02	-0.08	3.59	0	0	0
86	SLU 16	-0.02	-0.09	3.56	0	0	0
86	SLU 17	-0.02	-0.08	3.56	0	0	0
86	SLU 18	-0.02	-0.09	3.66	0	0	0
86	SLU 19	-0.02	-0.09	3.66	0	0	0
86	SLU 20	-0.02	-0.09	3.7	0	0	0
86	SLU 21	-0.02	-0.09	3.7	0	0	0
86	SLU 22	-0.01	-0.08	3.45	0	0	0
86	SLU 23	-0.01	-0.08	3.44	0	0	0
86	SLU 24	-0.02	-0.08	3.51	0	0	0
86	SLU 25	-0.02	-0.08	3.51	0	0	0
86	SLU 26	-0.02	-0.08	3.48	0	0	0
86	SLU 27	-0.02	-0.08	3.55	0	0	0
86	SLU 28	-0.02	-0.08	3.55	0	0	0
86	SLU 29	-0.02	-0.08	3.53	0	0	0
86	SLU 30	-0.02	-0.08	3.52	0	0	0
86	SLU 31	-0.02	-0.08	3.86	0	0	0
86	SLU 32	-0.02	-0.09	3.93	0	0	0
86	SLU 33	-0.02	-0.09	3.93	0	0	0
86	SLU 34	-0.02	-0.08	3.9	0	0	0
86	SLU 35	-0.02	-0.09	3.97	0	0	0
86	SLU 36	-0.02	-0.08	3.97	0	0	0
86	SLU 37	-0.02	-0.09	3.95	0	0	0
86	SLU 38	-0.02	-0.08	3.94	0	0	0
86	SLU 39	-0.02	-0.09	4.05	0	0	0
86	SLU 40	-0.02	-0.09	4.04	0	0	0
86	SLU 41	-0.02	-0.09	4.09	0	0	0
86	SLU 42	-0.02	-0.09	4.08	0	0	0
86	SLU 43	-0.02	-0.11	3.85	0	0	0
86	SLU 44	-0.02	-0.1	3.85	0	0	0
86	SLU 45	-0.02	-0.1	3.91	0	0	0
86	SLU 46	-0.02	-0.1	3.91	0	0	0
86	SLU 47	-0.02	-0.1	3.89	0	0	0
86	SLU 48	-0.02	-0.1	3.95	0	0	0
86	SLU 49	-0.02	-0.1	3.95	0	0	0
86	SLU 50	-0.02	-0.1	3.93	0	0	0
86	SLU 51	-0.02	-0.1	3.93	0	0	0
86	SLU 52	-0.02	-0.11	4.27	0	0	0
86	SLU 53	-0.03	-0.11	4.33	0	0	0
86	SLU 54	-0.02	-0.11	4.33	0	0	0
86	SLU 55	-0.03	-0.11	4.31	0	0	0
86	SLU 56	-0.03	-0.11	4.37	0	0	0
86	SLU 57	-0.03	-0.11	4.37	0	0	0
86	SLU 58	-0.03	-0.11	4.35	0	0	0
86	SLU 59	-0.03	-0.11	4.35	0	0	0
86	SLU 60	-0.03	-0.11	4.45	0	0	0
86	SLU 61	-0.03	-0.11	4.45	0	0	0
86	SLU 62	-0.03	-0.11	4.49	0	0	0
86	SLU 63	-0.03	-0.11	4.49	0	0	0
86	SLU 64	-0.02	-0.11	4.23	0	0	0
86	SLU 65	-0.02	-0.1	4.23	0	0	0
86	SLU 66	-0.02	-0.1	4.3	0	0	0
86	SLU 67	-0.02	-0.1	4.3	0	0	0
86	SLU 68	-0.02	-0.1	4.27	0	0	0
86	SLU 69	-0.02	-0.1	4.34	0	0	0
86	SLU 70	-0.02	-0.1	4.34	0	0	0
86	SLU 71	-0.02	-0.1	4.31	0	0	0
86	SLU 72	-0.02	-0.1	4.31	0	0	0
86	SLU 73	-0.02	-0.11	4.65	0	0	0
86	SLU 74	-0.03	-0.11	4.72	0	0	0
86	SLU 75	-0.03	-0.11	4.72	0	0	0
86	SLU 76	-0.03	-0.11	4.69	0	0	0
86	SLU 77	-0.03	-0.11	4.76	0	0	0
86	SLU 78	-0.03	-0.11	4.76	0	0	0
86	SLU 79	-0.03	-0.11	4.73	0	0	0
86	SLU 80	-0.03	-0.11	4.73	0	0	0
86	SLU 81	-0.03	-0.11	4.83	0	0	0
86	SLU 82	-0.03	-0.11	4.83	0	0	0
86	SLU 83	-0.03	-0.11	4.87	0	0	0
86	SLU 84	-0.03	-0.11	4.87	0	0	0
86	SLE RA 1	-0.01	-0.08	3.17	0	0	0
86	SLE RA 2	-0.01	-0.08	3.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
86	SLE RA 3	-0.02	-0.08	3.21	0	0	0
86	SLE RA 4	-0.02	-0.08	3.21	0	0	0
86	SLE RA 5	-0.02	-0.08	3.2	0	0	0
86	SLE RA 6	-0.02	-0.08	3.24	0	0	0
86	SLE RA 7	-0.02	-0.08	3.24	0	0	0
86	SLE RA 8	-0.02	-0.08	3.22	0	0	0
86	SLE RA 9	-0.02	-0.08	3.22	0	0	0
86	SLE RA 10	-0.02	-0.08	3.45	0	0	0
86	SLE RA 11	-0.02	-0.08	3.49	0	0	0
86	SLE RA 12	-0.02	-0.08	3.49	0	0	0
86	SLE RA 13	-0.02	-0.08	3.48	0	0	0
86	SLE RA 14	-0.02	-0.08	3.52	0	0	0
86	SLE RA 15	-0.02	-0.08	3.52	0	0	0
86	SLE RA 16	-0.02	-0.08	3.5	0	0	0
86	SLE RA 17	-0.02	-0.08	3.5	0	0	0
86	SLE RA 18	-0.02	-0.09	3.57	0	0	0
86	SLE RA 19	-0.02	-0.09	3.57	0	0	0
86	SLE RA 20	-0.02	-0.09	3.6	0	0	0
86	SLE RA 21	-0.02	-0.09	3.6	0	0	0
86	SLE FR 1	-0.01	-0.08	3.17	0	0	0
86	SLE FR 2	-0.01	-0.08	3.17	0	0	0
86	SLE FR 3	-0.01	-0.08	3.18	0	0	0
86	SLE FR 4	-0.02	-0.08	3.29	0	0	0
86	SLE FR 5	-0.02	-0.08	3.3	0	0	0
86	SLE FR 6	-0.02	-0.08	3.37	0	0	0
86	SLE QP 1	-0.01	-0.08	3.17	0	0	0
86	SLE QP 2	-0.02	-0.08	3.29	0	0	0
86	SLD 1	0.22	-0.07	3.18	0	0	0
86	SLD 2	0.22	-0.06	3.18	0	0	0
86	SLD 3	0.2	-0.14	3.23	0	0	0
86	SLD 4	0.2	-0.13	3.22	0	0	0
86	SLD 5	0.07	0.03	3.19	0	0	0
86	SLD 6	0.07	0.03	3.19	0	0	0
86	SLD 7	0.03	-0.21	3.34	0	0	0
86	SLD 8	0.03	-0.2	3.34	0	0	0
86	SLD 9	-0.06	0.04	3.24	0	0	0
86	SLD 10	-0.06	0.04	3.24	0	0	0
86	SLD 11	-0.1	-0.2	3.39	0	0	0
86	SLD 12	-0.1	-0.19	3.39	0	0	0
86	SLD 13	-0.23	-0.04	3.36	0	0	0
86	SLD 14	-0.23	-0.03	3.35	0	0	0
86	SLD 15	-0.25	-0.11	3.4	0	0	0
86	SLD 16	-0.25	-0.1	3.4	0	0	0
86	SLV 1	0.52	-0.06	3.04	0	0	0
86	SLV 2	0.52	-0.03	3.03	0	0	0
86	SLV 3	0.49	-0.22	3.14	0	0	0
86	SLV 4	0.49	-0.19	3.14	0	0	0
86	SLV 5	0.19	0.16	3.06	0	0	0
86	SLV 6	0.19	0.18	3.06	0	0	0
86	SLV 7	0.09	-0.37	3.4	0	0	0
86	SLV 8	0.09	-0.35	3.4	0	0	0
86	SLV 9	-0.12	0.19	3.18	0	0	0
86	SLV 10	-0.12	0.21	3.18	0	0	0
86	SLV 11	-0.22	-0.35	3.53	0	0	0
86	SLV 12	-0.22	-0.33	3.52	0	0	0
86	SLV 13	-0.52	0.02	3.45	0	0	0
86	SLV 14	-0.52	0.05	3.44	0	0	0
86	SLV 15	-0.55	-0.14	3.55	0	0	0
86	SLV 16	-0.55	-0.11	3.54	0	0	0
87	SLU 1	-0.01	-0.04	1.51	0	0	0
87	SLU 2	-0.01	-0.04	1.51	0	0	0
87	SLU 3	-0.01	-0.04	1.54	0	0	0
87	SLU 4	-0.01	-0.04	1.54	0	0	0
87	SLU 5	-0.01	-0.04	1.53	0	0	0
87	SLU 6	-0.01	-0.04	1.56	0	0	0
87	SLU 7	-0.01	-0.04	1.56	0	0	0
87	SLU 8	-0.01	-0.04	1.55	0	0	0
87	SLU 9	-0.01	-0.04	1.55	0	0	0
87	SLU 10	-0.01	-0.04	1.72	0	0	0
87	SLU 11	-0.01	-0.04	1.75	0	0	0
87	SLU 12	-0.01	-0.04	1.75	0	0	0
87	SLU 13	-0.01	-0.04	1.74	0	0	0
87	SLU 14	-0.01	-0.04	1.77	0	0	0
87	SLU 15	-0.01	-0.04	1.77	0	0	0
87	SLU 16	-0.01	-0.04	1.76	0	0	0
87	SLU 17	-0.01	-0.04	1.75	0	0	0
87	SLU 18	-0.01	-0.04	1.81	0	0	0
87	SLU 19	-0.01	-0.04	1.81	0	0	0
87	SLU 20	-0.01	-0.04	1.82	0	0	0
87	SLU 21	-0.01	-0.04	1.82	0	0	0
87	SLU 22	-0.01	-0.04	1.7	0	0	0
87	SLU 23	-0.01	-0.04	1.7	0	0	0
87	SLU 24	-0.01	-0.04	1.73	0	0	0
87	SLU 25	-0.01	-0.04	1.73	0	0	0
87	SLU 26	-0.01	-0.04	1.72	0	0	0
87	SLU 27	-0.01	-0.04	1.75	0	0	0
87	SLU 28	-0.01	-0.04	1.75	0	0	0
87	SLU 29	-0.01	-0.04	1.74	0	0	0
87	SLU 30	-0.01	-0.04	1.74	0	0	0
87	SLU 31	-0.01	-0.04	1.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
87	SLU 32	-0.01	-0.04	1.94	0	0	0
87	SLU 33	-0.01	-0.04	1.94	0	0	0
87	SLU 34	-0.01	-0.04	1.93	0	0	0
87	SLU 35	-0.01	-0.04	1.96	0	0	0
87	SLU 36	-0.01	-0.04	1.96	0	0	0
87	SLU 37	-0.01	-0.04	1.95	0	0	0
87	SLU 38	-0.01	-0.04	1.95	0	0	0
87	SLU 39	-0.01	-0.04	2	0	0	0
87	SLU 40	-0.01	-0.04	2	0	0	0
87	SLU 41	-0.01	-0.04	2.01	0	0	0
87	SLU 42	-0.01	-0.04	2.01	0	0	0
87	SLU 43	-0.01	-0.05	1.9	0	0	0
87	SLU 44	-0.01	-0.05	1.9	0	0	0
87	SLU 45	-0.01	-0.05	1.93	0	0	0
87	SLU 46	-0.01	-0.05	1.93	0	0	0
87	SLU 47	-0.01	-0.05	1.92	0	0	0
87	SLU 48	-0.01	-0.05	1.95	0	0	0
87	SLU 49	-0.01	-0.05	1.95	0	0	0
87	SLU 50	-0.01	-0.05	1.94	0	0	0
87	SLU 51	-0.01	-0.05	1.94	0	0	0
87	SLU 52	-0.01	-0.05	2.1	0	0	0
87	SLU 53	-0.01	-0.05	2.14	0	0	0
87	SLU 54	-0.01	-0.05	2.14	0	0	0
87	SLU 55	-0.01	-0.05	2.12	0	0	0
87	SLU 56	-0.01	-0.05	2.16	0	0	0
87	SLU 57	-0.01	-0.05	2.16	0	0	0
87	SLU 58	-0.01	-0.05	2.14	0	0	0
87	SLU 59	-0.01	-0.05	2.14	0	0	0
87	SLU 60	-0.01	-0.05	2.19	0	0	0
87	SLU 61	-0.01	-0.05	2.19	0	0	0
87	SLU 62	-0.01	-0.05	2.21	0	0	0
87	SLU 63	-0.01	-0.05	2.21	0	0	0
87	SLU 64	-0.01	-0.05	2.09	0	0	0
87	SLU 65	-0.01	-0.05	2.09	0	0	0
87	SLU 66	-0.01	-0.05	2.12	0	0	0
87	SLU 67	-0.01	-0.05	2.12	0	0	0
87	SLU 68	-0.01	-0.05	2.11	0	0	0
87	SLU 69	-0.01	-0.05	2.14	0	0	0
87	SLU 70	-0.01	-0.05	2.14	0	0	0
87	SLU 71	-0.01	-0.05	2.13	0	0	0
87	SLU 72	-0.01	-0.05	2.13	0	0	0
87	SLU 73	-0.01	-0.05	2.29	0	0	0
87	SLU 74	-0.01	-0.05	2.33	0	0	0
87	SLU 75	-0.01	-0.05	2.33	0	0	0
87	SLU 76	-0.01	-0.05	2.31	0	0	0
87	SLU 77	-0.01	-0.05	2.35	0	0	0
87	SLU 78	-0.01	-0.05	2.35	0	0	0
87	SLU 79	-0.01	-0.05	2.33	0	0	0
87	SLU 80	-0.01	-0.05	2.33	0	0	0
87	SLU 81	-0.01	-0.05	2.38	0	0	0
87	SLU 82	-0.01	-0.05	2.38	0	0	0
87	SLU 83	-0.01	-0.05	2.4	0	0	0
87	SLU 84	-0.01	-0.05	2.4	0	0	0
87	SLE RA 1	-0.01	-0.04	1.56	0	0	0
87	SLE RA 2	-0.01	-0.04	1.56	0	0	0
87	SLE RA 3	-0.01	-0.04	1.59	0	0	0
87	SLE RA 4	-0.01	-0.04	1.59	0	0	0
87	SLE RA 5	-0.01	-0.04	1.58	0	0	0
87	SLE RA 6	-0.01	-0.04	1.6	0	0	0
87	SLE RA 7	-0.01	-0.04	1.6	0	0	0
87	SLE RA 8	-0.01	-0.04	1.59	0	0	0
87	SLE RA 9	-0.01	-0.04	1.59	0	0	0
87	SLE RA 10	-0.01	-0.04	1.7	0	0	0
87	SLE RA 11	-0.01	-0.04	1.72	0	0	0
87	SLE RA 12	-0.01	-0.04	1.72	0	0	0
87	SLE RA 13	-0.01	-0.04	1.71	0	0	0
87	SLE RA 14	-0.01	-0.04	1.74	0	0	0
87	SLE RA 15	-0.01	-0.04	1.74	0	0	0
87	SLE RA 16	-0.01	-0.04	1.73	0	0	0
87	SLE RA 17	-0.01	-0.04	1.73	0	0	0
87	SLE RA 18	-0.01	-0.04	1.76	0	0	0
87	SLE RA 19	-0.01	-0.04	1.76	0	0	0
87	SLE RA 20	-0.01	-0.04	1.77	0	0	0
87	SLE RA 21	-0.01	-0.04	1.77	0	0	0
87	SLE FR 1	-0.01	-0.04	1.56	0	0	0
87	SLE FR 2	-0.01	-0.04	1.56	0	0	0
87	SLE FR 3	-0.01	-0.04	1.57	0	0	0
87	SLE FR 4	-0.01	-0.04	1.62	0	0	0
87	SLE FR 5	-0.01	-0.04	1.63	0	0	0
87	SLE FR 6	-0.01	-0.04	1.66	0	0	0
87	SLE QP 1	-0.01	-0.04	1.56	0	0	0
87	SLE QP 2	-0.01	-0.04	1.62	0	0	0
87	SLD 1	0.11	-0.03	1.56	0	0	0
87	SLD 2	0.11	-0.03	1.56	0	0	0
87	SLD 3	0.1	-0.07	1.58	0	0	0
87	SLD 4	0.1	-0.06	1.58	0	0	0
87	SLD 5	0.04	0.01	1.57	0	0	0
87	SLD 6	0.04	0.02	1.57	0	0	0
87	SLD 7	0.02	-0.1	1.64	0	0	0
87	SLD 8	0.02	-0.1	1.64	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
87	SLD 9	-0.03	0.02	1.61	0	0	0
87	SLD 10	-0.03	0.02	1.6	0	0	0
87	SLD 11	-0.05	-0.1	1.68	0	0	0
87	SLD 12	-0.05	-0.09	1.67	0	0	0
87	SLD 13	-0.12	-0.02	1.67	0	0	0
87	SLD 14	-0.12	-0.01	1.67	0	0	0
87	SLD 15	-0.12	-0.05	1.69	0	0	0
87	SLD 16	-0.12	-0.04	1.69	0	0	0
87	SLV 1	0.26	-0.03	1.47	0	0	0
87	SLV 2	0.26	-0.01	1.47	0	0	0
87	SLV 3	0.25	-0.11	1.52	0	0	0
87	SLV 4	0.25	-0.09	1.52	0	0	0
87	SLV 5	0.1	0.08	1.51	0	0	0
87	SLV 6	0.1	0.09	1.5	0	0	0
87	SLV 7	0.05	-0.18	1.67	0	0	0
87	SLV 8	0.05	-0.17	1.67	0	0	0
87	SLV 9	-0.06	0.09	1.58	0	0	0
87	SLV 10	-0.06	0.1	1.58	0	0	0
87	SLV 11	-0.11	-0.17	1.74	0	0	0
87	SLV 12	-0.11	-0.16	1.74	0	0	0
87	SLV 13	-0.26	0.01	1.73	0	0	0
87	SLV 14	-0.26	0.03	1.72	0	0	0
87	SLV 15	-0.28	-0.07	1.78	0	0	0
87	SLV 16	-0.28	-0.05	1.77	0	0	0
157	SLU 1	-0.02	-0.08	3.65	0	0	0
157	SLU 2	-0.02	-0.07	3.66	0	0	0
157	SLU 3	-0.02	-0.08	3.73	0	0	0
157	SLU 4	-0.02	-0.07	3.73	0	0	0
157	SLU 5	-0.02	-0.07	3.71	0	0	0
157	SLU 6	-0.02	-0.08	3.78	0	0	0
157	SLU 7	-0.02	-0.08	3.79	0	0	0
157	SLU 8	-0.02	-0.08	3.76	0	0	0
157	SLU 9	-0.02	-0.08	3.76	0	0	0
157	SLU 10	-0.02	-0.08	4.14	0	0	0
157	SLU 11	-0.02	-0.08	4.21	0	0	0
157	SLU 12	-0.02	-0.08	4.21	0	0	0
157	SLU 13	-0.02	-0.08	4.19	0	0	0
157	SLU 14	-0.02	-0.08	4.26	0	0	0
157	SLU 15	-0.02	-0.08	4.27	0	0	0
157	SLU 16	-0.02	-0.08	4.24	0	0	0
157	SLU 17	-0.02	-0.08	4.24	0	0	0
157	SLU 18	-0.02	-0.08	4.34	0	0	0
157	SLU 19	-0.02	-0.08	4.34	0	0	0
157	SLU 20	-0.02	-0.09	4.39	0	0	0
157	SLU 21	-0.02	-0.08	4.39	0	0	0
157	SLU 22	-0.02	-0.08	4.08	0	0	0
157	SLU 23	-0.02	-0.08	4.09	0	0	0
157	SLU 24	-0.02	-0.08	4.16	0	0	0
157	SLU 25	-0.02	-0.08	4.16	0	0	0
157	SLU 26	-0.02	-0.08	4.14	0	0	0
157	SLU 27	-0.02	-0.08	4.21	0	0	0
157	SLU 28	-0.02	-0.08	4.22	0	0	0
157	SLU 29	-0.02	-0.08	4.19	0	0	0
157	SLU 30	-0.02	-0.08	4.19	0	0	0
157	SLU 31	-0.02	-0.08	4.57	0	0	0
157	SLU 32	-0.02	-0.09	4.64	0	0	0
157	SLU 33	-0.02	-0.08	4.64	0	0	0
157	SLU 34	-0.02	-0.08	4.62	0	0	0
157	SLU 35	-0.02	-0.09	4.69	0	0	0
157	SLU 36	-0.02	-0.09	4.7	0	0	0
157	SLU 37	-0.02	-0.09	4.67	0	0	0
157	SLU 38	-0.02	-0.09	4.67	0	0	0
157	SLU 39	-0.02	-0.09	4.77	0	0	0
157	SLU 40	-0.02	-0.09	4.77	0	0	0
157	SLU 41	-0.02	-0.09	4.82	0	0	0
157	SLU 42	-0.02	-0.09	4.82	0	0	0
157	SLU 43	-0.02	-0.1	4.6	0	0	0
157	SLU 44	-0.02	-0.09	4.61	0	0	0
157	SLU 45	-0.02	-0.1	4.68	0	0	0
157	SLU 46	-0.02	-0.1	4.68	0	0	0
157	SLU 47	-0.02	-0.09	4.66	0	0	0
157	SLU 48	-0.02	-0.1	4.73	0	0	0
157	SLU 49	-0.02	-0.1	4.74	0	0	0
157	SLU 50	-0.02	-0.1	4.71	0	0	0
157	SLU 51	-0.02	-0.1	4.71	0	0	0
157	SLU 52	-0.02	-0.1	5.08	0	0	0
157	SLU 53	-0.03	-0.1	5.16	0	0	0
157	SLU 54	-0.02	-0.1	5.16	0	0	0
157	SLU 55	-0.02	-0.1	5.14	0	0	0
157	SLU 56	-0.03	-0.11	5.21	0	0	0
157	SLU 57	-0.03	-0.1	5.21	0	0	0
157	SLU 58	-0.02	-0.11	5.19	0	0	0
157	SLU 59	-0.02	-0.1	5.19	0	0	0
157	SLU 60	-0.03	-0.11	5.28	0	0	0
157	SLU 61	-0.02	-0.1	5.29	0	0	0
157	SLU 62	-0.03	-0.11	5.34	0	0	0
157	SLU 63	-0.03	-0.1	5.34	0	0	0
157	SLU 64	-0.03	-0.1	5.03	0	0	0
157	SLU 65	-0.03	-0.1	5.04	0	0	0
157	SLU 66	-0.03	-0.1	5.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
157	SLU 67	-0.03	-0.1	5.11	0	0	0
157	SLU 68	-0.03	-0.1	5.09	0	0	0
157	SLU 69	-0.03	-0.1	5.16	0	0	0
157	SLU 70	-0.03	-0.1	5.17	0	0	0
157	SLU 71	-0.03	-0.1	5.14	0	0	0
157	SLU 72	-0.03	-0.1	5.14	0	0	0
157	SLU 73	-0.03	-0.1	5.51	0	0	0
157	SLU 74	-0.03	-0.11	5.59	0	0	0
157	SLU 75	-0.03	-0.11	5.59	0	0	0
157	SLU 76	-0.03	-0.1	5.57	0	0	0
157	SLU 77	-0.03	-0.11	5.64	0	0	0
157	SLU 78	-0.03	-0.11	5.64	0	0	0
157	SLU 79	-0.03	-0.11	5.62	0	0	0
157	SLU 80	-0.03	-0.11	5.62	0	0	0
157	SLU 81	-0.03	-0.11	5.71	0	0	0
157	SLU 82	-0.03	-0.11	5.72	0	0	0
157	SLU 83	-0.03	-0.11	5.77	0	0	0
157	SLU 84	-0.03	-0.11	5.77	0	0	0
157	SLE RA 1	-0.02	-0.08	3.77	0	0	0
157	SLE RA 2	-0.02	-0.07	3.78	0	0	0
157	SLE RA 3	-0.02	-0.08	3.83	0	0	0
157	SLE RA 4	-0.02	-0.08	3.83	0	0	0
157	SLE RA 5	-0.02	-0.08	3.81	0	0	0
157	SLE RA 6	-0.02	-0.08	3.86	0	0	0
157	SLE RA 7	-0.02	-0.08	3.87	0	0	0
157	SLE RA 8	-0.02	-0.08	3.85	0	0	0
157	SLE RA 9	-0.02	-0.08	3.85	0	0	0
157	SLE RA 10	-0.02	-0.08	4.1	0	0	0
157	SLE RA 11	-0.02	-0.08	4.15	0	0	0
157	SLE RA 12	-0.02	-0.08	4.15	0	0	0
157	SLE RA 13	-0.02	-0.08	4.13	0	0	0
157	SLE RA 14	-0.02	-0.08	4.18	0	0	0
157	SLE RA 15	-0.02	-0.08	4.18	0	0	0
157	SLE RA 16	-0.02	-0.08	4.17	0	0	0
157	SLE RA 17	-0.02	-0.08	4.17	0	0	0
157	SLE RA 18	-0.02	-0.08	4.23	0	0	0
157	SLE RA 19	-0.02	-0.08	4.23	0	0	0
157	SLE RA 20	-0.02	-0.08	4.27	0	0	0
157	SLE RA 21	-0.02	-0.08	4.27	0	0	0
157	SLE FR 1	-0.02	-0.08	3.77	0	0	0
157	SLE FR 2	-0.02	-0.08	3.78	0	0	0
157	SLE FR 3	-0.02	-0.08	3.79	0	0	0
157	SLE FR 4	-0.02	-0.08	3.91	0	0	0
157	SLE FR 5	-0.02	-0.08	3.93	0	0	0
157	SLE FR 6	-0.02	-0.08	4	0	0	0
157	SLE QP 1	-0.02	-0.08	3.77	0	0	0
157	SLE QP 2	-0.02	-0.08	3.91	0	0	0
157	SLD 1	0.27	-0.07	4.27	0	0	0
157	SLD 2	0.31	-0.09	4.24	0	0	0
157	SLD 3	0.27	-0.15	4.13	0	0	0
157	SLD 4	0.31	-0.17	4.11	0	0	0
157	SLD 5	0.05	0.05	4.23	0	0	0
157	SLD 6	0.08	0.04	4.21	0	0	0
157	SLD 7	0.07	-0.22	3.78	0	0	0
157	SLD 8	0.09	-0.23	3.76	0	0	0
157	SLD 9	-0.13	0.08	4.06	0	0	0
157	SLD 10	-0.11	0.06	4.05	0	0	0
157	SLD 11	-0.12	-0.2	3.61	0	0	0
157	SLD 12	-0.09	-0.21	3.6	0	0	0
157	SLD 13	-0.35	0.01	3.72	0	0	0
157	SLD 14	-0.31	-0.01	3.69	0	0	0
157	SLD 15	-0.35	-0.07	3.58	0	0	0
157	SLD 16	-0.31	-0.09	3.56	0	0	0
157	SLV 1	0.66	-0.06	4.74	0	0	0
157	SLV 2	0.75	-0.11	4.68	0	0	0
157	SLV 3	0.67	-0.25	4.43	0	0	0
157	SLV 4	0.76	-0.29	4.38	0	0	0
157	SLV 5	0.15	0.22	4.63	0	0	0
157	SLV 6	0.21	0.19	4.6	0	0	0
157	SLV 7	0.19	-0.4	3.61	0	0	0
157	SLV 8	0.25	-0.43	3.58	0	0	0
157	SLV 9	-0.29	0.28	4.25	0	0	0
157	SLV 10	-0.23	0.25	4.21	0	0	0
157	SLV 11	-0.25	-0.35	3.22	0	0	0
157	SLV 12	-0.19	-0.38	3.19	0	0	0
157	SLV 13	-0.8	0.14	3.45	0	0	0
157	SLV 14	-0.71	0.09	3.39	0	0	0
157	SLV 15	-0.79	-0.05	3.14	0	0	0
157	SLV 16	-0.7	-0.1	3.09	0	0	0
158	SLU 1	-0.04	-0.13	7.2	0	0	0
158	SLU 2	-0.04	-0.12	7.21	0	0	0
158	SLU 3	-0.04	-0.14	7.35	0	0	0
158	SLU 4	-0.04	-0.13	7.36	0	0	0
158	SLU 5	-0.04	-0.13	7.32	0	0	0
158	SLU 6	-0.04	-0.14	7.46	0	0	0
158	SLU 7	-0.04	-0.13	7.47	0	0	0
158	SLU 8	-0.04	-0.14	7.41	0	0	0
158	SLU 9	-0.04	-0.13	7.42	0	0	0
158	SLU 10	-0.04	-0.13	8.15	0	0	0
158	SLU 11	-0.04	-0.15	8.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLU 12	-0.04	-0.14	8.3	0	0	0
158	SLU 13	-0.04	-0.14	8.26	0	0	0
158	SLU 14	-0.04	-0.15	8.4	0	0	0
158	SLU 15	-0.04	-0.14	8.41	0	0	0
158	SLU 16	-0.04	-0.15	8.35	0	0	0
158	SLU 17	-0.04	-0.14	8.36	0	0	0
158	SLU 18	-0.04	-0.15	8.54	0	0	0
158	SLU 19	-0.04	-0.14	8.55	0	0	0
158	SLU 20	-0.04	-0.15	8.65	0	0	0
158	SLU 21	-0.04	-0.14	8.66	0	0	0
158	SLU 22	-0.04	-0.14	8.04	0	0	0
158	SLU 23	-0.04	-0.13	8.05	0	0	0
158	SLU 24	-0.04	-0.14	8.2	0	0	0
158	SLU 25	-0.04	-0.14	8.2	0	0	0
158	SLU 26	-0.04	-0.13	8.16	0	0	0
158	SLU 27	-0.04	-0.14	8.3	0	0	0
158	SLU 28	-0.04	-0.14	8.31	0	0	0
158	SLU 29	-0.04	-0.14	8.25	0	0	0
158	SLU 30	-0.04	-0.14	8.26	0	0	0
158	SLU 31	-0.04	-0.14	9	0	0	0
158	SLU 32	-0.05	-0.15	9.14	0	0	0
158	SLU 33	-0.05	-0.15	9.15	0	0	0
158	SLU 34	-0.05	-0.14	9.1	0	0	0
158	SLU 35	-0.05	-0.15	9.25	0	0	0
158	SLU 36	-0.05	-0.15	9.25	0	0	0
158	SLU 37	-0.05	-0.15	9.2	0	0	0
158	SLU 38	-0.05	-0.15	9.2	0	0	0
158	SLU 39	-0.05	-0.15	9.39	0	0	0
158	SLU 40	-0.05	-0.15	9.39	0	0	0
158	SLU 41	-0.05	-0.16	9.49	0	0	0
158	SLU 42	-0.05	-0.15	9.5	0	0	0
158	SLU 43	-0.05	-0.17	9.07	0	0	0
158	SLU 44	-0.05	-0.16	9.08	0	0	0
158	SLU 45	-0.05	-0.17	9.22	0	0	0
158	SLU 46	-0.05	-0.17	9.23	0	0	0
158	SLU 47	-0.05	-0.16	9.19	0	0	0
158	SLU 48	-0.05	-0.18	9.33	0	0	0
158	SLU 49	-0.05	-0.17	9.34	0	0	0
158	SLU 50	-0.05	-0.18	9.28	0	0	0
158	SLU 51	-0.05	-0.17	9.29	0	0	0
158	SLU 52	-0.05	-0.17	10.02	0	0	0
158	SLU 53	-0.05	-0.18	10.16	0	0	0
158	SLU 54	-0.05	-0.18	10.17	0	0	0
158	SLU 55	-0.05	-0.17	10.13	0	0	0
158	SLU 56	-0.05	-0.19	10.27	0	0	0
158	SLU 57	-0.05	-0.18	10.28	0	0	0
158	SLU 58	-0.05	-0.19	10.22	0	0	0
158	SLU 59	-0.05	-0.18	10.23	0	0	0
158	SLU 60	-0.05	-0.19	10.41	0	0	0
158	SLU 61	-0.05	-0.18	10.42	0	0	0
158	SLU 62	-0.05	-0.19	10.52	0	0	0
158	SLU 63	-0.05	-0.18	10.53	0	0	0
158	SLU 64	-0.05	-0.18	9.91	0	0	0
158	SLU 65	-0.05	-0.17	9.92	0	0	0
158	SLU 66	-0.05	-0.18	10.07	0	0	0
158	SLU 67	-0.05	-0.17	10.07	0	0	0
158	SLU 68	-0.05	-0.17	10.03	0	0	0
158	SLU 69	-0.05	-0.18	10.17	0	0	0
158	SLU 70	-0.05	-0.18	10.18	0	0	0
158	SLU 71	-0.05	-0.18	10.12	0	0	0
158	SLU 72	-0.05	-0.18	10.13	0	0	0
158	SLU 73	-0.05	-0.18	10.87	0	0	0
158	SLU 74	-0.06	-0.19	11.01	0	0	0
158	SLU 75	-0.06	-0.18	11.02	0	0	0
158	SLU 76	-0.05	-0.18	10.97	0	0	0
158	SLU 77	-0.06	-0.19	11.12	0	0	0
158	SLU 78	-0.06	-0.19	11.12	0	0	0
158	SLU 79	-0.06	-0.19	11.07	0	0	0
158	SLU 80	-0.06	-0.19	11.07	0	0	0
158	SLU 81	-0.06	-0.19	11.26	0	0	0
158	SLU 82	-0.06	-0.19	11.26	0	0	0
158	SLU 83	-0.06	-0.19	11.36	0	0	0
158	SLU 84	-0.06	-0.19	11.37	0	0	0
158	SLE RA 1	-0.04	-0.14	7.44	0	0	0
158	SLE RA 2	-0.04	-0.13	7.45	0	0	0
158	SLE RA 3	-0.04	-0.14	7.54	0	0	0
158	SLE RA 4	-0.04	-0.13	7.55	0	0	0
158	SLE RA 5	-0.04	-0.13	7.52	0	0	0
158	SLE RA 6	-0.04	-0.14	7.61	0	0	0
158	SLE RA 7	-0.04	-0.13	7.62	0	0	0
158	SLE RA 8	-0.04	-0.14	7.58	0	0	0
158	SLE RA 9	-0.04	-0.13	7.59	0	0	0
158	SLE RA 10	-0.04	-0.14	8.07	0	0	0
158	SLE RA 11	-0.04	-0.14	8.17	0	0	0
158	SLE RA 12	-0.04	-0.14	8.17	0	0	0
158	SLE RA 13	-0.04	-0.14	8.15	0	0	0
158	SLE RA 14	-0.04	-0.14	8.24	0	0	0
158	SLE RA 15	-0.04	-0.14	8.25	0	0	0
158	SLE RA 16	-0.04	-0.14	8.21	0	0	0
158	SLE RA 17	-0.04	-0.14	8.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLE RA 18	-0.04	-0.14	8.34	0	0	0
158	SLE RA 19	-0.04	-0.14	8.34	0	0	0
158	SLE RA 20	-0.04	-0.15	8.41	0	0	0
158	SLE RA 21	-0.04	-0.14	8.41	0	0	0
158	SLE FR 1	-0.04	-0.14	7.44	0	0	0
158	SLE FR 2	-0.04	-0.13	7.44	0	0	0
158	SLE FR 3	-0.04	-0.14	7.47	0	0	0
158	SLE FR 4	-0.04	-0.14	7.71	0	0	0
158	SLE FR 5	-0.04	-0.14	7.74	0	0	0
158	SLE FR 6	-0.04	-0.14	7.89	0	0	0
158	SLE QP 1	-0.04	-0.14	7.44	0	0	0
158	SLE QP 2	-0.04	-0.14	7.71	0	0	0
158	SLD 1	0.54	-0.11	8.33	0	0	0
158	SLD 2	0.61	-0.14	8.28	0	0	0
158	SLD 3	0.55	-0.27	8.06	0	0	0
158	SLD 4	0.62	-0.31	8.02	0	0	0
158	SLD 5	0.1	0.13	8.3	0	0	0
158	SLD 6	0.15	0.1	8.27	0	0	0
158	SLD 7	0.14	-0.42	7.42	0	0	0
158	SLD 8	0.19	-0.44	7.39	0	0	0
158	SLD 9	-0.27	0.17	8.02	0	0	0
158	SLD 10	-0.22	0.15	8	0	0	0
158	SLD 11	-0.23	-0.38	7.14	0	0	0
158	SLD 12	-0.18	-0.4	7.11	0	0	0
158	SLD 13	-0.7	0.03	7.4	0	0	0
158	SLD 14	-0.63	0	7.35	0	0	0
158	SLD 15	-0.69	-0.13	7.13	0	0	0
158	SLD 16	-0.62	-0.17	7.09	0	0	0
158	SLV 1	1.31	-0.08	9.15	0	0	0
158	SLV 2	1.49	-0.16	9.05	0	0	0
158	SLV 3	1.33	-0.45	8.55	0	0	0
158	SLV 4	1.51	-0.53	8.45	0	0	0
158	SLV 5	0.3	0.46	9.07	0	0	0
158	SLV 6	0.41	0.41	9	0	0	0
158	SLV 7	0.37	-0.79	7.07	0	0	0
158	SLV 8	0.49	-0.84	7	0	0	0
158	SLV 9	-0.57	0.56	8.41	0	0	0
158	SLV 10	-0.45	0.51	8.35	0	0	0
158	SLV 11	-0.49	-0.69	6.41	0	0	0
158	SLV 12	-0.38	-0.74	6.35	0	0	0
158	SLV 13	-1.59	0.26	6.97	0	0	0
158	SLV 14	-1.41	0.17	6.87	0	0	0
158	SLV 15	-1.57	-0.12	6.37	0	0	0
158	SLV 16	-1.39	-0.2	6.27	0	0	0
159	SLU 1	-0.04	-0.11	6.96	0	0	0
159	SLU 2	-0.04	-0.11	6.97	0	0	0
159	SLU 3	-0.04	-0.12	7.11	0	0	0
159	SLU 4	-0.04	-0.11	7.12	0	0	0
159	SLU 5	-0.04	-0.11	7.08	0	0	0
159	SLU 6	-0.04	-0.12	7.21	0	0	0
159	SLU 7	-0.04	-0.11	7.22	0	0	0
159	SLU 8	-0.04	-0.12	7.17	0	0	0
159	SLU 9	-0.04	-0.11	7.17	0	0	0
159	SLU 10	-0.04	-0.11	7.89	0	0	0
159	SLU 11	-0.04	-0.12	8.02	0	0	0
159	SLU 12	-0.04	-0.12	8.03	0	0	0
159	SLU 13	-0.04	-0.12	7.99	0	0	0
159	SLU 14	-0.04	-0.12	8.13	0	0	0
159	SLU 15	-0.04	-0.12	8.13	0	0	0
159	SLU 16	-0.04	-0.13	8.08	0	0	0
159	SLU 17	-0.04	-0.12	8.09	0	0	0
159	SLU 18	-0.04	-0.13	8.26	0	0	0
159	SLU 19	-0.04	-0.12	8.27	0	0	0
159	SLU 20	-0.04	-0.13	8.37	0	0	0
159	SLU 21	-0.04	-0.12	8.38	0	0	0
159	SLU 22	-0.04	-0.12	7.77	0	0	0
159	SLU 23	-0.04	-0.11	7.79	0	0	0
159	SLU 24	-0.04	-0.12	7.92	0	0	0
159	SLU 25	-0.04	-0.11	7.93	0	0	0
159	SLU 26	-0.04	-0.11	7.89	0	0	0
159	SLU 27	-0.04	-0.12	8.03	0	0	0
159	SLU 28	-0.04	-0.12	8.03	0	0	0
159	SLU 29	-0.04	-0.12	7.98	0	0	0
159	SLU 30	-0.04	-0.12	7.99	0	0	0
159	SLU 31	-0.04	-0.12	8.7	0	0	0
159	SLU 32	-0.05	-0.13	8.84	0	0	0
159	SLU 33	-0.05	-0.12	8.84	0	0	0
159	SLU 34	-0.04	-0.12	8.8	0	0	0
159	SLU 35	-0.05	-0.13	8.94	0	0	0
159	SLU 36	-0.05	-0.12	8.95	0	0	0
159	SLU 37	-0.05	-0.13	8.89	0	0	0
159	SLU 38	-0.05	-0.12	8.9	0	0	0
159	SLU 39	-0.05	-0.13	9.08	0	0	0
159	SLU 40	-0.05	-0.12	9.08	0	0	0
159	SLU 41	-0.05	-0.13	9.18	0	0	0
159	SLU 42	-0.05	-0.13	9.19	0	0	0
159	SLU 43	-0.05	-0.15	8.77	0	0	0
159	SLU 44	-0.05	-0.14	8.78	0	0	0
159	SLU 45	-0.05	-0.15	8.92	0	0	0
159	SLU 46	-0.05	-0.14	8.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLU 47	-0.05	-0.14	8.89	0	0	0
159	SLU 48	-0.05	-0.15	9.02	0	0	0
159	SLU 49	-0.05	-0.14	9.03	0	0	0
159	SLU 50	-0.05	-0.15	8.98	0	0	0
159	SLU 51	-0.05	-0.15	8.98	0	0	0
159	SLU 52	-0.05	-0.15	9.69	0	0	0
159	SLU 53	-0.05	-0.16	9.83	0	0	0
159	SLU 54	-0.05	-0.15	9.84	0	0	0
159	SLU 55	-0.05	-0.15	9.8	0	0	0
159	SLU 56	-0.05	-0.16	9.94	0	0	0
159	SLU 57	-0.05	-0.15	9.94	0	0	0
159	SLU 58	-0.05	-0.16	9.89	0	0	0
159	SLU 59	-0.05	-0.15	9.9	0	0	0
159	SLU 60	-0.05	-0.16	10.07	0	0	0
159	SLU 61	-0.05	-0.15	10.08	0	0	0
159	SLU 62	-0.05	-0.16	10.18	0	0	0
159	SLU 63	-0.05	-0.15	10.18	0	0	0
159	SLU 64	-0.05	-0.15	9.58	0	0	0
159	SLU 65	-0.05	-0.14	9.6	0	0	0
159	SLU 66	-0.05	-0.15	9.73	0	0	0
159	SLU 67	-0.05	-0.15	9.74	0	0	0
159	SLU 68	-0.05	-0.14	9.7	0	0	0
159	SLU 69	-0.05	-0.15	9.84	0	0	0
159	SLU 70	-0.05	-0.15	9.84	0	0	0
159	SLU 71	-0.05	-0.16	9.79	0	0	0
159	SLU 72	-0.05	-0.15	9.8	0	0	0
159	SLU 73	-0.05	-0.15	10.51	0	0	0
159	SLU 74	-0.05	-0.16	10.65	0	0	0
159	SLU 75	-0.05	-0.15	10.65	0	0	0
159	SLU 76	-0.05	-0.15	10.61	0	0	0
159	SLU 77	-0.06	-0.16	10.75	0	0	0
159	SLU 78	-0.05	-0.16	10.76	0	0	0
159	SLU 79	-0.05	-0.16	10.7	0	0	0
159	SLU 80	-0.05	-0.16	10.71	0	0	0
159	SLU 81	-0.06	-0.16	10.89	0	0	0
159	SLU 82	-0.05	-0.16	10.89	0	0	0
159	SLU 83	-0.06	-0.16	10.99	0	0	0
159	SLU 84	-0.05	-0.16	11	0	0	0
159	SLE RA 1	-0.04	-0.12	7.19	0	0	0
159	SLE RA 2	-0.04	-0.11	7.2	0	0	0
159	SLE RA 3	-0.04	-0.12	7.29	0	0	0
159	SLE RA 4	-0.04	-0.11	7.3	0	0	0
159	SLE RA 5	-0.04	-0.11	7.27	0	0	0
159	SLE RA 6	-0.04	-0.12	7.36	0	0	0
159	SLE RA 7	-0.04	-0.11	7.37	0	0	0
159	SLE RA 8	-0.04	-0.12	7.33	0	0	0
159	SLE RA 9	-0.04	-0.11	7.34	0	0	0
159	SLE RA 10	-0.04	-0.11	7.81	0	0	0
159	SLE RA 11	-0.04	-0.12	7.9	0	0	0
159	SLE RA 12	-0.04	-0.12	7.91	0	0	0
159	SLE RA 13	-0.04	-0.12	7.88	0	0	0
159	SLE RA 14	-0.04	-0.12	7.97	0	0	0
159	SLE RA 15	-0.04	-0.12	7.97	0	0	0
159	SLE RA 16	-0.04	-0.12	7.94	0	0	0
159	SLE RA 17	-0.04	-0.12	7.94	0	0	0
159	SLE RA 18	-0.04	-0.12	8.06	0	0	0
159	SLE RA 19	-0.04	-0.12	8.07	0	0	0
159	SLE RA 20	-0.04	-0.12	8.13	0	0	0
159	SLE RA 21	-0.04	-0.12	8.14	0	0	0
159	SLE FR 1	-0.04	-0.12	7.19	0	0	0
159	SLE FR 2	-0.04	-0.11	7.19	0	0	0
159	SLE FR 3	-0.04	-0.12	7.22	0	0	0
159	SLE FR 4	-0.04	-0.12	7.46	0	0	0
159	SLE FR 5	-0.04	-0.12	7.48	0	0	0
159	SLE FR 6	-0.04	-0.12	7.63	0	0	0
159	SLE QP 1	-0.04	-0.12	7.19	0	0	0
159	SLE QP 2	-0.04	-0.12	7.45	0	0	0
159	SLD 1	0.52	-0.08	7.98	0	0	0
159	SLD 2	0.6	-0.11	7.93	0	0	0
159	SLD 3	0.53	-0.24	7.72	0	0	0
159	SLD 4	0.61	-0.27	7.68	0	0	0
159	SLD 5	0.1	0.14	8	0	0	0
159	SLD 6	0.15	0.12	7.98	0	0	0
159	SLD 7	0.13	-0.39	7.16	0	0	0
159	SLD 8	0.18	-0.41	7.13	0	0	0
159	SLD 9	-0.26	0.18	7.78	0	0	0
159	SLD 10	-0.21	0.16	7.75	0	0	0
159	SLD 11	-0.23	-0.36	6.93	0	0	0
159	SLD 12	-0.18	-0.38	6.9	0	0	0
159	SLD 13	-0.68	0.04	7.23	0	0	0
159	SLD 14	-0.61	0.01	7.19	0	0	0
159	SLD 15	-0.68	-0.12	6.97	0	0	0
159	SLD 16	-0.6	-0.16	6.93	0	0	0
159	SLV 1	1.28	-0.04	8.66	0	0	0
159	SLV 2	1.45	-0.11	8.57	0	0	0
159	SLV 3	1.3	-0.4	8.09	0	0	0
159	SLV 4	1.47	-0.47	7.99	0	0	0
159	SLV 5	0.29	0.48	8.71	0	0	0
159	SLV 6	0.4	0.43	8.65	0	0	0
159	SLV 7	0.36	-0.75	6.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLV 8	0.48	-0.8	6.73	0	0	0
159	SLV 9	-0.55	0.56	8.18	0	0	0
159	SLV 10	-0.44	0.51	8.12	0	0	0
159	SLV 11	-0.48	-0.67	6.26	0	0	0
159	SLV 12	-0.37	-0.71	6.2	0	0	0
159	SLV 13	-1.55	0.24	6.91	0	0	0
159	SLV 14	-1.38	0.17	6.82	0	0	0
159	SLV 15	-1.53	-0.13	6.34	0	0	0
159	SLV 16	-1.35	-0.2	6.24	0	0	0
160	SLU 1	-0.04	-0.1	6.61	0	0.3722	0.0054
160	SLU 2	-0.03	-0.09	6.62	0	0.3728	0.005
160	SLU 3	-0.04	-0.1	6.75	0	0.3802	0.0055
160	SLU 4	-0.04	-0.09	6.76	0	0.3805	0.0052
160	SLU 5	-0.04	-0.09	6.72	0	0.3784	0.0051
160	SLU 6	-0.04	-0.1	6.85	0	0.3857	0.0056
160	SLU 7	-0.04	-0.09	6.85	0	0.3861	0.0053
160	SLU 8	-0.04	-0.1	6.8	0	0.3832	0.0056
160	SLU 9	-0.04	-0.09	6.81	0	0.3836	0.0053
160	SLU 10	-0.04	-0.09	7.49	0	0.4217	0.0053
160	SLU 11	-0.04	-0.1	7.62	0	0.429	0.0058
160	SLU 12	-0.04	-0.1	7.62	0	0.4294	0.0055
160	SLU 13	-0.04	-0.1	7.58	0	0.4272	0.0054
160	SLU 14	-0.04	-0.1	7.71	0	0.4346	0.0059
160	SLU 15	-0.04	-0.1	7.72	0	0.435	0.0056
160	SLU 16	-0.04	-0.11	7.67	0	0.4321	0.006
160	SLU 17	-0.04	-0.1	7.68	0	0.4325	0.0057
160	SLU 18	-0.04	-0.11	7.85	0	0.442	0.0059
160	SLU 19	-0.04	-0.1	7.85	0	0.4424	0.0056
160	SLU 20	-0.04	-0.11	7.94	0	0.4475	0.006
160	SLU 21	-0.04	-0.1	7.95	0	0.4479	0.0057
160	SLU 22	-0.04	-0.1	7.38	0	0.4155	0.0056
160	SLU 23	-0.04	-0.09	7.39	0	0.4162	0.0051
160	SLU 24	-0.04	-0.1	7.52	0	0.4235	0.0056
160	SLU 25	-0.04	-0.1	7.53	0	0.4239	0.0054
160	SLU 26	-0.04	-0.09	7.49	0	0.4217	0.0052
160	SLU 27	-0.04	-0.1	7.62	0	0.4291	0.0057
160	SLU 28	-0.04	-0.1	7.62	0	0.4295	0.0054
160	SLU 29	-0.04	-0.1	7.57	0	0.4266	0.0058
160	SLU 30	-0.04	-0.1	7.58	0	0.427	0.0055
160	SLU 31	-0.04	-0.1	8.26	0	0.4651	0.0055
160	SLU 32	-0.04	-0.11	8.39	0	0.4724	0.006
160	SLU 33	-0.04	-0.1	8.39	0	0.4728	0.0057
160	SLU 34	-0.04	-0.1	8.35	0	0.4706	0.0056
160	SLU 35	-0.04	-0.11	8.48	0	0.4779	0.006
160	SLU 36	-0.04	-0.1	8.49	0	0.4783	0.0058
160	SLU 37	-0.04	-0.11	8.44	0	0.4755	0.0061
160	SLU 38	-0.04	-0.1	8.45	0	0.4759	0.0058
160	SLU 39	-0.04	-0.11	8.62	0	0.4854	0.0061
160	SLU 40	-0.04	-0.1	8.62	0	0.4857	0.0058
160	SLU 41	-0.04	-0.11	8.71	0	0.4909	0.0062
160	SLU 42	-0.04	-0.1	8.72	0	0.4913	0.0059
160	SLU 43	-0.04	-0.12	8.32	0	0.4689	0.007
160	SLU 44	-0.04	-0.12	8.34	0	0.4696	0.0066
160	SLU 45	-0.05	-0.13	8.47	0	0.4769	0.0071
160	SLU 46	-0.04	-0.12	8.47	0	0.4773	0.0068
160	SLU 47	-0.04	-0.12	8.43	0	0.4751	0.0067
160	SLU 48	-0.05	-0.13	8.56	0	0.4825	0.0072
160	SLU 49	-0.05	-0.12	8.57	0	0.4829	0.0069
160	SLU 50	-0.05	-0.13	8.52	0	0.48	0.0072
160	SLU 51	-0.04	-0.12	8.53	0	0.4804	0.0069
160	SLU 52	-0.05	-0.12	9.2	-0.0001	0.5185	0.0069
160	SLU 53	-0.05	-0.13	9.33	-0.0001	0.5258	0.0074
160	SLU 54	-0.05	-0.13	9.34	-0.0001	0.5262	0.0071
160	SLU 55	-0.05	-0.12	9.3	-0.0001	0.524	0.007
160	SLU 56	-0.05	-0.13	9.43	-0.0001	0.5313	0.0075
160	SLU 57	-0.05	-0.13	9.44	-0.0001	0.5317	0.0072
160	SLU 58	-0.05	-0.13	9.39	-0.0001	0.5289	0.0075
160	SLU 59	-0.05	-0.13	9.4	-0.0001	0.5293	0.0073
160	SLU 60	-0.05	-0.13	9.56	-0.0001	0.5388	0.0075
160	SLU 61	-0.05	-0.13	9.57	-0.0001	0.5391	0.0072
160	SLU 62	-0.05	-0.13	9.66	-0.0001	0.5443	0.0076
160	SLU 63	-0.05	-0.13	9.67	-0.0001	0.5447	0.0073
160	SLU 64	-0.05	-0.13	9.09	-0.0001	0.5123	0.0072
160	SLU 65	-0.05	-0.12	9.11	-0.0001	0.513	0.0067
160	SLU 66	-0.05	-0.13	9.24	-0.0001	0.5203	0.0072
160	SLU 67	-0.05	-0.12	9.24	-0.0001	0.5207	0.0069
160	SLU 68	-0.05	-0.12	9.2	-0.0001	0.5185	0.0068
160	SLU 69	-0.05	-0.13	9.33	-0.0001	0.5259	0.0073
160	SLU 70	-0.05	-0.12	9.34	-0.0001	0.5262	0.007
160	SLU 71	-0.05	-0.13	9.29	-0.0001	0.5234	0.0074
160	SLU 72	-0.05	-0.13	9.3	-0.0001	0.5238	0.0071
160	SLU 73	-0.05	-0.13	9.97	-0.0001	0.5618	0.0071
160	SLU 74	-0.05	-0.13	10.1	-0.0001	0.5692	0.0075
160	SLU 75	-0.05	-0.13	10.11	-0.0001	0.5696	0.0073
160	SLU 76	-0.05	-0.13	10.07	-0.0001	0.5674	0.0071
160	SLU 77	-0.05	-0.14	10.2	-0.0001	0.5747	0.0076
160	SLU 78	-0.05	-0.13	10.21	-0.0001	0.5751	0.0074
160	SLU 79	-0.05	-0.14	10.16	-0.0001	0.5723	0.0077
160	SLU 80	-0.05	-0.13	10.17	-0.0001	0.5727	0.0074
160	SLU 81	-0.05	-0.14	10.33	-0.0001	0.5821	0.0076

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLU 82	-0.05	-0.13	10.34	-0.0001	0.5825	0.0074
160	SLU 83	-0.05	-0.14	10.43	-0.0001	0.5877	0.0077
160	SLU 84	-0.05	-0.13	10.44	-0.0001	0.5881	0.0075
160	SLE RA 1	-0.04	-0.1	6.83	0	0.3846	0.0055
160	SLE RA 2	-0.04	-0.09	6.83	0	0.385	0.0052
160	SLE RA 3	-0.04	-0.1	6.92	0	0.3899	0.0055
160	SLE RA 4	-0.04	-0.09	6.93	0	0.3901	0.0053
160	SLE RA 5	-0.04	-0.09	6.9	0	0.3887	0.0052
160	SLE RA 6	-0.04	-0.1	6.99	0	0.3936	0.0056
160	SLE RA 7	-0.04	-0.1	6.99	0	0.3938	0.0054
160	SLE RA 8	-0.04	-0.1	6.96	0	0.3919	0.0056
160	SLE RA 9	-0.04	-0.1	6.96	0	0.3922	0.0054
160	SLE RA 10	-0.04	-0.1	7.41	0	0.4176	0.0054
160	SLE RA 11	-0.04	-0.1	7.5	0	0.4225	0.0057
160	SLE RA 12	-0.04	-0.1	7.5	0	0.4227	0.0055
160	SLE RA 13	-0.04	-0.1	7.48	0	0.4213	0.0055
160	SLE RA 14	-0.04	-0.1	7.57	0	0.4262	0.0058
160	SLE RA 15	-0.04	-0.1	7.57	0	0.4264	0.0056
160	SLE RA 16	-0.04	-0.1	7.54	0	0.4245	0.0058
160	SLE RA 17	-0.04	-0.1	7.54	0	0.4248	0.0056
160	SLE RA 18	-0.04	-0.1	7.65	0	0.4311	0.0058
160	SLE RA 19	-0.04	-0.1	7.66	0	0.4314	0.0056
160	SLE RA 20	-0.04	-0.1	7.72	0	0.4348	0.0059
160	SLE RA 21	-0.04	-0.1	7.72	0	0.4351	0.0057
160	SLE FR 1	-0.04	-0.1	6.83	0	0.3846	0.0055
160	SLE FR 2	-0.04	-0.1	6.83	0	0.3846	0.0054
160	SLE FR 3	-0.04	-0.1	6.85	0	0.386	0.0055
160	SLE FR 4	-0.04	-0.1	7.08	0	0.3986	0.0055
160	SLE FR 5	-0.04	-0.1	7.1	0	0.4	0.0056
160	SLE FR 6	-0.04	-0.1	7.24	0	0.4078	0.0056
160	SLE QP 1	-0.04	-0.1	6.83	0	0.3846	0.0055
160	SLE QP 2	-0.04	-0.1	7.07	0	0.3985	0.0056
160	SLD 1	0.5	-0.06	7.5	0	0.4227	0.0032
160	SLD 2	0.57	-0.08	7.47	0	0.4206	0.0047
160	SLD 3	0.51	-0.21	7.26	0	0.4092	0.0119
160	SLD 4	0.58	-0.24	7.23	0	0.4071	0.0134
160	SLD 5	0.1	0.15	7.57	0	0.4267	-0.0087
160	SLD 6	0.14	0.14	7.55	0	0.4253	-0.0077
160	SLD 7	0.13	-0.36	6.77	0	0.3816	0.0205
160	SLD 8	0.17	-0.38	6.75	0	0.3802	0.0215
160	SLD 9	-0.25	0.18	7.4	0	0.4168	-0.0103
160	SLD 10	-0.2	0.17	7.38	0	0.4155	-0.0093
160	SLD 11	-0.22	-0.34	6.6	0	0.3717	0.0189
160	SLD 12	-0.17	-0.35	6.58	0	0.3704	0.0198
160	SLD 13	-0.65	0.04	6.92	0	0.3899	-0.0023
160	SLD 14	-0.58	0.01	6.89	0	0.3879	-0.0008
160	SLD 15	-0.64	-0.12	6.68	0	0.3764	0.0065
160	SLD 16	-0.57	-0.14	6.65	0	0.3743	0.008
160	SLV 1	1.22	0	8.07	0	0.4546	0.0003
160	SLV 2	1.38	-0.07	7.98	0	0.4498	0.0037
160	SLV 3	1.24	-0.36	7.53	0	0.4239	0.0202
160	SLV 4	1.4	-0.42	7.44	0	0.4191	0.0237
160	SLV 5	0.28	0.48	8.21	0	0.4627	-0.0269
160	SLV 6	0.39	0.44	8.16	0	0.4596	-0.0246
160	SLV 7	0.35	-0.7	6.4	0	0.3605	0.0396
160	SLV 8	0.45	-0.74	6.34	0	0.3574	0.0418
160	SLV 9	-0.53	0.54	7.8	0	0.4397	-0.0307
160	SLV 10	-0.42	0.51	7.75	0	0.4366	-0.0285
160	SLV 11	-0.46	-0.64	5.99	0	0.3375	0.0358
160	SLV 12	-0.35	-0.68	5.94	0	0.3344	0.038
160	SLV 13	-1.48	0.22	6.71	0	0.3779	-0.0125
160	SLV 14	-1.31	0.16	6.62	0	0.3731	-0.009
160	SLV 15	-1.46	-0.13	6.16	0	0.3472	0.0074
160	SLV 16	-1.29	-0.19	6.08	0	0.3424	0.0109
160	CRTFP Ux+	0	0	0	0	0	0
160	CRTFP Ux-	0	0	0	0	0	0
160	CRTFP Uy+	0	0	0	0	0	0
160	CRTFP Uy-	0	0	0	0	0	0
161	SLU 1	-0.04	-0.09	6.82	0	0.5121	0.0065
161	SLU 2	-0.04	-0.08	6.83	0	0.5131	0.0059
161	SLU 3	-0.04	-0.09	6.96	0	0.5231	0.0065
161	SLU 4	-0.04	-0.08	6.97	0	0.5237	0.0061
161	SLU 5	-0.04	-0.08	6.93	0	0.5207	0.006
161	SLU 6	-0.04	-0.09	7.07	0	0.5308	0.0066
161	SLU 7	-0.04	-0.08	7.07	0	0.5313	0.0062
161	SLU 8	-0.04	-0.09	7.02	0	0.5274	0.0067
161	SLU 9	-0.04	-0.08	7.03	0	0.528	0.0063
161	SLU 10	-0.04	-0.08	7.73	0	0.5805	0.0062
161	SLU 11	-0.04	-0.09	7.86	0	0.5905	0.0068
161	SLU 12	-0.04	-0.09	7.87	0	0.5911	0.0065
161	SLU 13	-0.04	-0.08	7.83	0	0.5881	0.0063
161	SLU 14	-0.04	-0.09	7.96	0	0.5982	0.007
161	SLU 15	-0.04	-0.09	7.97	0	0.5988	0.0066
161	SLU 16	-0.04	-0.09	7.92	0	0.5948	0.007
161	SLU 17	-0.04	-0.09	7.93	0	0.5954	0.0067
161	SLU 18	-0.04	-0.09	8.1	0	0.6084	0.007
161	SLU 19	-0.04	-0.09	8.11	0	0.609	0.0066
161	SLU 20	-0.04	-0.09	8.2	0	0.6161	0.0071
161	SLU 21	-0.04	-0.09	8.21	0	0.6167	0.0067
161	SLU 22	-0.04	-0.09	7.61	0	0.5717	0.0066

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLU 23	-0.04	-0.08	7.62	0	0.5727	0.0059
161	SLU 24	-0.04	-0.09	7.76	0	0.5827	0.0066
161	SLU 25	-0.04	-0.08	7.77	0	0.5833	0.0062
161	SLU 26	-0.04	-0.08	7.73	0	0.5803	0.006
161	SLU 27	-0.04	-0.09	7.86	0	0.5904	0.0067
161	SLU 28	-0.04	-0.08	7.87	0	0.591	0.0063
161	SLU 29	-0.04	-0.09	7.82	0	0.587	0.0068
161	SLU 30	-0.04	-0.09	7.82	0	0.5876	0.0064
161	SLU 31	-0.04	-0.08	8.52	0	0.6401	0.0063
161	SLU 32	-0.04	-0.09	8.66	0	0.6502	0.0069
161	SLU 33	-0.04	-0.09	8.66	0	0.6507	0.0065
161	SLU 34	-0.04	-0.08	8.62	0	0.6477	0.0064
161	SLU 35	-0.05	-0.09	8.76	0	0.6578	0.007
161	SLU 36	-0.04	-0.09	8.77	0	0.6584	0.0066
161	SLU 37	-0.04	-0.09	8.71	0	0.6544	0.0071
161	SLU 38	-0.04	-0.09	8.72	0	0.655	0.0067
161	SLU 39	-0.05	-0.09	8.89	0	0.668	0.007
161	SLU 40	-0.04	-0.09	8.9	0	0.6686	0.0067
161	SLU 41	-0.05	-0.1	9	0	0.6757	0.0071
161	SLU 42	-0.05	-0.09	9	0	0.6763	0.0068
161	SLU 43	-0.05	-0.11	8.59	0	0.6453	0.0084
161	SLU 44	-0.05	-0.1	8.6	0	0.6463	0.0078
161	SLU 45	-0.05	-0.11	8.74	0	0.6563	0.0084
161	SLU 46	-0.05	-0.11	8.75	0	0.6569	0.0081
161	SLU 47	-0.05	-0.11	8.71	0	0.6539	0.0079
161	SLU 48	-0.05	-0.11	8.84	0	0.664	0.0085
161	SLU 49	-0.05	-0.11	8.85	0	0.6645	0.0082
161	SLU 50	-0.05	-0.11	8.8	0	0.6606	0.0086
161	SLU 51	-0.05	-0.11	8.8	0	0.6612	0.0083
161	SLU 52	-0.05	-0.11	9.5	-0.0001	0.7137	0.0081
161	SLU 53	-0.05	-0.12	9.64	-0.0001	0.7237	0.0088
161	SLU 54	-0.05	-0.11	9.64	-0.0001	0.7243	0.0084
161	SLU 55	-0.05	-0.11	9.6	-0.0001	0.7213	0.0082
161	SLU 56	-0.05	-0.12	9.74	-0.0001	0.7314	0.0089
161	SLU 57	-0.05	-0.11	9.75	-0.0001	0.732	0.0085
161	SLU 58	-0.05	-0.12	9.69	-0.0001	0.728	0.009
161	SLU 59	-0.05	-0.11	9.7	-0.0001	0.7286	0.0086
161	SLU 60	-0.05	-0.12	9.87	-0.0001	0.7416	0.0089
161	SLU 61	-0.05	-0.11	9.88	-0.0001	0.7422	0.0085
161	SLU 62	-0.05	-0.12	9.98	-0.0001	0.7493	0.009
161	SLU 63	-0.05	-0.11	9.98	-0.0001	0.7499	0.0086
161	SLU 64	-0.05	-0.11	9.39	-0.0001	0.7049	0.0085
161	SLU 65	-0.05	-0.1	9.4	-0.0001	0.7059	0.0079
161	SLU 66	-0.05	-0.11	9.53	-0.0001	0.7159	0.0085
161	SLU 67	-0.05	-0.11	9.54	-0.0001	0.7165	0.0081
161	SLU 68	-0.05	-0.11	9.5	-0.0001	0.7135	0.008
161	SLU 69	-0.05	-0.11	9.63	-0.0001	0.7236	0.0086
161	SLU 70	-0.05	-0.11	9.64	-0.0001	0.7242	0.0082
161	SLU 71	-0.05	-0.12	9.59	-0.0001	0.7202	0.0087
161	SLU 72	-0.05	-0.11	9.6	-0.0001	0.7208	0.0083
161	SLU 73	-0.05	-0.11	10.3	-0.0001	0.7733	0.0082
161	SLU 74	-0.05	-0.12	10.43	-0.0001	0.7834	0.0088
161	SLU 75	-0.05	-0.11	10.44	-0.0001	0.7839	0.0085
161	SLU 76	-0.05	-0.11	10.4	-0.0001	0.7809	0.0083
161	SLU 77	-0.05	-0.12	10.53	-0.0001	0.791	0.0089
161	SLU 78	-0.05	-0.11	10.54	-0.0001	0.7916	0.0086
161	SLU 79	-0.05	-0.12	10.49	-0.0001	0.7876	0.009
161	SLU 80	-0.05	-0.12	10.49	-0.0001	0.7882	0.0087
161	SLU 81	-0.05	-0.12	10.67	-0.0001	0.8012	0.009
161	SLU 82	-0.05	-0.11	10.68	-0.0001	0.8018	0.0086
161	SLU 83	-0.05	-0.12	10.77	-0.0001	0.8089	0.0091
161	SLU 84	-0.05	-0.12	10.78	-0.0001	0.8095	0.0087
161	SLE RA 1	-0.04	-0.09	7.04	0	0.5291	0.0065
161	SLE RA 2	-0.04	-0.08	7.05	0	0.5298	0.0061
161	SLE RA 3	-0.04	-0.09	7.14	0	0.5365	0.0065
161	SLE RA 4	-0.04	-0.08	7.15	0	0.5369	0.0063
161	SLE RA 5	-0.04	-0.08	7.12	0	0.5349	0.0062
161	SLE RA 6	-0.04	-0.09	7.21	0	0.5416	0.0066
161	SLE RA 7	-0.04	-0.08	7.22	0	0.542	0.0063
161	SLE RA 8	-0.04	-0.09	7.18	0	0.5393	0.0067
161	SLE RA 9	-0.04	-0.09	7.19	0	0.5397	0.0064
161	SLE RA 10	-0.04	-0.08	7.65	0	0.5747	0.0063
161	SLE RA 11	-0.04	-0.09	7.74	0	0.5814	0.0067
161	SLE RA 12	-0.04	-0.09	7.75	0	0.5818	0.0065
161	SLE RA 13	-0.04	-0.09	7.72	0	0.5798	0.0064
161	SLE RA 14	-0.04	-0.09	7.81	0	0.5865	0.0068
161	SLE RA 15	-0.04	-0.09	7.81	0	0.5869	0.0066
161	SLE RA 16	-0.04	-0.09	7.78	0	0.5843	0.0069
161	SLE RA 17	-0.04	-0.09	7.78	0	0.5847	0.0066
161	SLE RA 18	-0.04	-0.09	7.9	0	0.5934	0.0068
161	SLE RA 19	-0.04	-0.09	7.9	0	0.5937	0.0066
161	SLE RA 20	-0.04	-0.09	7.97	0	0.5985	0.0069
161	SLE RA 21	-0.04	-0.09	7.97	0	0.5988	0.0067
161	SLE FR 1	-0.04	-0.09	7.04	0	0.5291	0.0065
161	SLE FR 2	-0.04	-0.09	7.05	0	0.5293	0.0064
161	SLE FR 3	-0.04	-0.09	7.07	0	0.5312	0.0065
161	SLE FR 4	-0.04	-0.09	7.3	0	0.5485	0.0065
161	SLE FR 5	-0.04	-0.09	7.33	0	0.5504	0.0066
161	SLE FR 6	-0.04	-0.09	7.47	0	0.5612	0.0067
161	SLE QP 1	-0.04	-0.09	7.04	0	0.5291	0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLE QP 2	-0.04	-0.09	7.3	0	0.5484	0.0066
161	SLD 1	0.52	-0.04	7.67	0	0.5762	0.0027
161	SLD 2	0.59	-0.06	7.63	0	0.5735	0.0045
161	SLD 3	0.53	-0.2	7.42	0	0.5576	0.0149
161	SLD 4	0.6	-0.22	7.39	0	0.5549	0.0167
161	SLD 5	0.1	0.18	7.79	0	0.5853	-0.0134
161	SLD 6	0.15	0.16	7.77	0	0.5835	-0.0122
161	SLD 7	0.13	-0.36	6.97	0	0.5235	0.0273
161	SLD 8	0.18	-0.38	6.95	0	0.5218	0.0284
161	SLD 9	-0.26	0.2	7.66	0	0.575	-0.0152
161	SLD 10	-0.21	0.19	7.63	0	0.5733	-0.014
161	SLD 11	-0.23	-0.34	6.83	0	0.5133	0.0254
161	SLD 12	-0.18	-0.35	6.81	0	0.5115	0.0266
161	SLD 13	-0.68	0.05	7.21	0	0.5419	-0.0035
161	SLD 14	-0.6	0.02	7.18	0	0.5392	-0.0017
161	SLD 15	-0.67	-0.12	6.97	0	0.5233	0.0087
161	SLD 16	-0.59	-0.14	6.93	0	0.5206	0.0105
161	SLV 1	1.26	0.03	8.16	0	0.6127	-0.0021
161	SLV 2	1.43	-0.03	8.07	0	0.6064	0.0021
161	SLV 3	1.28	-0.34	7.6	0	0.5707	0.0257
161	SLV 4	1.45	-0.4	7.51	0	0.5644	0.0299
161	SLV 5	0.29	0.52	8.42	0	0.6325	-0.0388
161	SLV 6	0.4	0.48	8.37	0	0.6284	-0.0361
161	SLV 7	0.36	-0.71	6.56	0	0.4924	0.0537
161	SLV 8	0.47	-0.75	6.5	0	0.4884	0.0564
161	SLV 9	-0.55	0.57	8.1	0	0.6084	-0.0432
161	SLV 10	-0.44	0.54	8.05	0	0.6044	-0.0405
161	SLV 11	-0.48	-0.66	6.24	0	0.4684	0.0493
161	SLV 12	-0.37	-0.69	6.18	0	0.4643	0.052
161	SLV 13	-1.53	0.22	7.09	0	0.5325	-0.0166
161	SLV 14	-1.36	0.17	7	0	0.5261	-0.0124
161	SLV 15	-1.51	-0.15	6.53	0	0.4904	0.0111
161	SLV 16	-1.34	-0.2	6.45	0	0.4841	0.0153
161	CRTFP Ux+	0	0	0	0	0	0
161	CRTFP Ux-	0	0	0	0	0	0
161	CRTFP Uy+	0	0	0	0	0	0
161	CRTFP Uy-	0	0	0	0	0	0
162	SLU 1	-0.04	-0.07	6.81	0	0.6397	0.0069
162	SLU 2	-0.04	-0.07	6.83	0	0.6409	0.0061
162	SLU 3	-0.04	-0.07	6.96	0	0.6535	0.0069
162	SLU 4	-0.04	-0.07	6.97	0	0.6542	0.0064
162	SLU 5	-0.04	-0.07	6.93	0	0.6505	0.0062
162	SLU 6	-0.04	-0.07	7.06	0	0.6631	0.007
162	SLU 7	-0.04	-0.07	7.07	0	0.6638	0.0065
162	SLU 8	-0.04	-0.08	7.02	0	0.6589	0.0071
162	SLU 9	-0.04	-0.07	7.03	0	0.6596	0.0066
162	SLU 10	-0.04	-0.07	7.73	0	0.7255	0.0064
162	SLU 11	-0.04	-0.08	7.86	0	0.738	0.0071
162	SLU 12	-0.04	-0.07	7.87	0	0.7388	0.0067
162	SLU 13	-0.04	-0.07	7.83	0	0.7351	0.0065
162	SLU 14	-0.04	-0.08	7.96	0	0.7476	0.0072
162	SLU 15	-0.04	-0.07	7.97	0	0.7484	0.0068
162	SLU 16	-0.04	-0.08	7.92	0	0.7434	0.0074
162	SLU 17	-0.04	-0.07	7.93	0	0.7442	0.0069
162	SLU 18	-0.04	-0.08	8.1	0	0.7604	0.0073
162	SLU 19	-0.04	-0.07	8.11	0	0.7612	0.0068
162	SLU 20	-0.04	-0.08	8.2	0	0.77	0.0074
162	SLU 21	-0.04	-0.07	8.21	0	0.7708	0.0069
162	SLU 22	-0.04	-0.07	7.61	0	0.7141	0.0068
162	SLU 23	-0.04	-0.06	7.62	0	0.7154	0.006
162	SLU 24	-0.04	-0.07	7.75	0	0.7279	0.0068
162	SLU 25	-0.04	-0.07	7.76	0	0.7287	0.0063
162	SLU 26	-0.04	-0.07	7.72	0	0.725	0.0061
162	SLU 27	-0.04	-0.07	7.86	0	0.7375	0.0069
162	SLU 28	-0.04	-0.07	7.86	0	0.7383	0.0064
162	SLU 29	-0.04	-0.07	7.81	0	0.7333	0.007
162	SLU 30	-0.04	-0.07	7.82	0	0.7341	0.0066
162	SLU 31	-0.04	-0.07	8.52	0	0.7999	0.0063
162	SLU 32	-0.04	-0.08	8.65	0	0.8124	0.007
162	SLU 33	-0.04	-0.07	8.66	0	0.8132	0.0066
162	SLU 34	-0.04	-0.07	8.62	0	0.8095	0.0064
162	SLU 35	-0.05	-0.08	8.76	0	0.822	0.0072
162	SLU 36	-0.04	-0.07	8.76	0	0.8228	0.0067
162	SLU 37	-0.04	-0.08	8.71	0	0.8178	0.0073
162	SLU 38	-0.04	-0.07	8.72	0	0.8186	0.0068
162	SLU 39	-0.05	-0.08	8.89	0	0.8349	0.0072
162	SLU 40	-0.04	-0.07	8.9	0	0.8356	0.0067
162	SLU 41	-0.05	-0.08	8.99	0	0.8445	0.0073
162	SLU 42	-0.05	-0.07	9	0	0.8452	0.0068
162	SLU 43	-0.05	-0.1	8.59	0	0.8061	0.009
162	SLU 44	-0.05	-0.09	8.6	0	0.8073	0.0082
162	SLU 45	-0.05	-0.1	8.73	0	0.8199	0.0089
162	SLU 46	-0.05	-0.09	8.74	0	0.8206	0.0085
162	SLU 47	-0.05	-0.09	8.7	0	0.8169	0.0083
162	SLU 48	-0.05	-0.1	8.83	0	0.8295	0.009
162	SLU 49	-0.05	-0.09	8.84	0	0.8302	0.0086
162	SLU 50	-0.05	-0.1	8.79	0	0.8253	0.0092
162	SLU 51	-0.05	-0.09	8.8	0	0.826	0.0087
162	SLU 52	-0.05	-0.09	9.5	-0.0001	0.8919	0.0085
162	SLU 53	-0.05	-0.1	9.63	-0.0001	0.9044	0.0092

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLU 54	-0.05	-0.09	9.64	-0.0001	0.9051	0.0088
162	SLU 55	-0.05	-0.09	9.6	-0.0001	0.9015	0.0086
162	SLU 56	-0.05	-0.1	9.74	-0.0001	0.914	0.0093
162	SLU 57	-0.05	-0.09	9.74	-0.0001	0.9147	0.0089
162	SLU 58	-0.05	-0.1	9.69	-0.0001	0.9098	0.0095
162	SLU 59	-0.05	-0.1	9.7	-0.0001	0.9106	0.009
162	SLU 60	-0.05	-0.1	9.87	-0.0001	0.9268	0.0094
162	SLU 61	-0.05	-0.09	9.88	-0.0001	0.9276	0.0089
162	SLU 62	-0.05	-0.1	9.97	-0.0001	0.9364	0.0095
162	SLU 63	-0.05	-0.1	9.98	-0.0001	0.9372	0.009
162	SLU 64	-0.05	-0.09	9.38	-0.0001	0.8805	0.0089
162	SLU 65	-0.05	-0.09	9.39	-0.0001	0.8817	0.0081
162	SLU 66	-0.05	-0.09	9.53	-0.0001	0.8943	0.0089
162	SLU 67	-0.05	-0.09	9.53	-0.0001	0.895	0.0084
162	SLU 68	-0.05	-0.09	9.49	-0.0001	0.8913	0.0082
162	SLU 69	-0.05	-0.1	9.63	-0.0001	0.9039	0.009
162	SLU 70	-0.05	-0.09	9.64	-0.0001	0.9046	0.0085
162	SLU 71	-0.05	-0.1	9.58	-0.0001	0.8997	0.0091
162	SLU 72	-0.05	-0.09	9.59	-0.0001	0.9004	0.0086
162	SLU 73	-0.05	-0.09	10.29	-0.0001	0.9663	0.0084
162	SLU 74	-0.05	-0.1	10.43	-0.0001	0.9788	0.0091
162	SLU 75	-0.05	-0.09	10.43	-0.0001	0.9796	0.0087
162	SLU 76	-0.05	-0.09	10.39	-0.0001	0.9759	0.0085
162	SLU 77	-0.05	-0.1	10.53	-0.0001	0.9884	0.0092
162	SLU 78	-0.05	-0.09	10.54	-0.0001	0.9892	0.0088
162	SLU 79	-0.05	-0.1	10.48	-0.0001	0.9842	0.0094
162	SLU 80	-0.05	-0.09	10.49	-0.0001	0.985	0.0089
162	SLU 81	-0.05	-0.1	10.66	-0.0001	1.0012	0.0093
162	SLU 82	-0.05	-0.09	10.67	-0.0001	1.002	0.0088
162	SLU 83	-0.05	-0.1	10.77	-0.0001	1.0109	0.0094
162	SLU 84	-0.05	-0.1	10.77	-0.0001	1.0116	0.0089
162	SLE RA 1	-0.04	-0.07	7.04	0	0.6609	0.0068
162	SLE RA 2	-0.04	-0.07	7.05	0	0.6618	0.0063
162	SLE RA 3	-0.04	-0.07	7.14	0	0.6701	0.0068
162	SLE RA 4	-0.04	-0.07	7.14	0	0.6706	0.0065
162	SLE RA 5	-0.04	-0.07	7.12	0	0.6682	0.0064
162	SLE RA 6	-0.04	-0.07	7.21	0	0.6765	0.0069
162	SLE RA 7	-0.04	-0.07	7.21	0	0.677	0.0066
162	SLE RA 8	-0.04	-0.07	7.18	0	0.6737	0.007
162	SLE RA 9	-0.04	-0.07	7.18	0	0.6742	0.0067
162	SLE RA 10	-0.04	-0.07	7.65	0	0.7181	0.0065
162	SLE RA 11	-0.04	-0.07	7.74	0	0.7265	0.007
162	SLE RA 12	-0.04	-0.07	7.74	0	0.727	0.0067
162	SLE RA 13	-0.04	-0.07	7.72	0	0.7245	0.0066
162	SLE RA 14	-0.04	-0.08	7.81	0	0.7329	0.0071
162	SLE RA 15	-0.04	-0.07	7.81	0	0.7334	0.0068
162	SLE RA 16	-0.04	-0.08	7.78	0	0.7301	0.0072
162	SLE RA 17	-0.04	-0.07	7.78	0	0.7306	0.0069
162	SLE RA 18	-0.04	-0.08	7.9	0	0.7414	0.0071
162	SLE RA 19	-0.04	-0.07	7.9	0	0.742	0.0068
162	SLE RA 20	-0.04	-0.08	7.97	0	0.7478	0.0072
162	SLE RA 21	-0.04	-0.07	7.97	0	0.7484	0.0069
162	SLE FR 1	-0.04	-0.07	7.04	0	0.6609	0.0068
162	SLE FR 2	-0.04	-0.07	7.04	0	0.6611	0.0067
162	SLE FR 3	-0.04	-0.07	7.07	0	0.6635	0.0069
162	SLE FR 4	-0.04	-0.07	7.3	0	0.6853	0.0068
162	SLE FR 5	-0.04	-0.07	7.32	0	0.6877	0.007
162	SLE FR 6	-0.04	-0.07	7.47	0	0.7012	0.007
162	SLE QP 1	-0.04	-0.07	7.04	0	0.6609	0.0068
162	SLE QP 2	-0.04	-0.07	7.3	0	0.6851	0.0069
162	SLD 1	0.52	-0.01	7.6	0	0.7132	0.0013
162	SLD 2	0.59	-0.03	7.56	0	0.71	0.0032
162	SLD 3	0.53	-0.18	7.35	0	0.6901	0.0166
162	SLD 4	0.6	-0.2	7.32	0	0.6869	0.0186
162	SLD 5	0.1	0.2	7.77	0	0.7291	-0.0184
162	SLD 6	0.15	0.18	7.74	0	0.727	-0.0171
162	SLD 7	0.13	-0.35	6.95	0	0.6521	0.0328
162	SLD 8	0.18	-0.36	6.92	0	0.65	0.0341
162	SLD 9	-0.26	0.22	7.67	0	0.7202	-0.0202
162	SLD 10	-0.21	0.2	7.65	0	0.7181	-0.0189
162	SLD 11	-0.23	-0.33	6.85	0	0.6431	0.031
162	SLD 12	-0.18	-0.34	6.83	0	0.641	0.0323
162	SLD 13	-0.68	0.05	7.28	0	0.6833	-0.0047
162	SLD 14	-0.6	0.03	7.24	0	0.6801	-0.0028
162	SLD 15	-0.67	-0.11	7.03	0	0.6602	0.0106
162	SLD 16	-0.59	-0.13	7	0	0.657	0.0126
162	SLV 1	1.26	0.06	7.99	0	0.75	-0.0058
162	SLV 2	1.43	0.01	7.91	0	0.7425	-0.0013
162	SLV 3	1.28	-0.31	7.43	0	0.6976	0.0292
162	SLV 4	1.45	-0.36	7.35	0	0.6901	0.0337
162	SLV 5	0.29	0.54	8.36	0	0.7853	-0.0507
162	SLV 6	0.4	0.51	8.31	0	0.7805	-0.0478
162	SLV 7	0.36	-0.7	6.5	0	0.6107	0.0659
162	SLV 8	0.47	-0.73	6.45	0	0.6058	0.0688
162	SLV 9	-0.55	0.59	8.14	0	0.7643	-0.0549
162	SLV 10	-0.44	0.55	8.09	0	0.7595	-0.052
162	SLV 11	-0.48	-0.66	6.28	0	0.5897	0.0617
162	SLV 12	-0.37	-0.69	6.23	0	0.5849	0.0646
162	SLV 13	-1.53	0.21	7.24	0	0.6801	-0.0199
162	SLV 14	-1.36	0.16	7.16	0	0.6726	-0.0153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLV 15	-1.51	-0.16	6.69	0	0.6277	0.0151
162	SLV 16	-1.34	-0.21	6.61	0	0.6202	0.0196
162	CRTFP Ux+	0	0	0	0	0	0
162	CRTFP Ux-	0	0	0	0	0	0
162	CRTFP Uy+	0	0	0	0	0	0
162	CRTFP Uy-	0	0	0	0	0	0
163	SLU 1	-0.04	-0.06	6.83	0	0.7692	0.0068
163	SLU 2	-0.04	-0.05	6.84	0	0.7708	0.0059
163	SLU 3	-0.04	-0.06	6.98	0	0.7859	0.0067
163	SLU 4	-0.04	-0.05	6.98	0	0.7868	0.0062
163	SLU 5	-0.04	-0.05	6.94	0	0.7824	0.006
163	SLU 6	-0.04	-0.06	7.08	0	0.7975	0.0068
163	SLU 7	-0.04	-0.06	7.09	0	0.7984	0.0063
163	SLU 8	-0.04	-0.06	7.03	0	0.7924	0.007
163	SLU 9	-0.04	-0.06	7.04	0	0.7934	0.0065
163	SLU 10	-0.04	-0.05	7.75	0	0.8729	0.0061
163	SLU 11	-0.04	-0.06	7.88	0	0.888	0.0069
163	SLU 12	-0.04	-0.06	7.89	0	0.8889	0.0063
163	SLU 13	-0.04	-0.05	7.85	0	0.8845	0.0062
163	SLU 14	-0.04	-0.06	7.98	0	0.8996	0.007
163	SLU 15	-0.04	-0.06	7.99	0	0.9005	0.0065
163	SLU 16	-0.04	-0.06	7.94	0	0.8945	0.0072
163	SLU 17	-0.04	-0.06	7.95	0	0.8955	0.0066
163	SLU 18	-0.04	-0.06	8.12	0	0.9151	0.007
163	SLU 19	-0.04	-0.06	8.13	0	0.916	0.0065
163	SLU 20	-0.04	-0.06	8.23	0	0.9267	0.0071
163	SLU 21	-0.04	-0.06	8.23	0	0.9276	0.0066
163	SLU 22	-0.04	-0.06	7.62	0	0.8588	0.0065
163	SLU 23	-0.04	-0.05	7.64	0	0.8604	0.0056
163	SLU 24	-0.04	-0.06	7.77	0	0.8754	0.0064
163	SLU 25	-0.04	-0.05	7.78	0	0.8764	0.0059
163	SLU 26	-0.04	-0.05	7.74	0	0.872	0.0057
163	SLU 27	-0.04	-0.06	7.87	0	0.887	0.0065
163	SLU 28	-0.04	-0.05	7.88	0	0.888	0.006
163	SLU 29	-0.04	-0.06	7.83	0	0.882	0.0067
163	SLU 30	-0.04	-0.05	7.84	0	0.8829	0.0062
163	SLU 31	-0.04	-0.05	8.54	0	0.9625	0.0058
163	SLU 32	-0.05	-0.06	8.68	0	0.9775	0.0066
163	SLU 33	-0.05	-0.05	8.68	0	0.9785	0.0061
163	SLU 34	-0.04	-0.05	8.65	0	0.9741	0.0059
163	SLU 35	-0.05	-0.06	8.78	0	0.9891	0.0067
163	SLU 36	-0.05	-0.05	8.79	0	0.9901	0.0062
163	SLU 37	-0.05	-0.06	8.73	0	0.9841	0.0069
163	SLU 38	-0.04	-0.06	8.74	0	0.985	0.0063
163	SLU 39	-0.05	-0.06	8.92	0	1.0046	0.0067
163	SLU 40	-0.05	-0.05	8.93	0	1.0056	0.0062
163	SLU 41	-0.05	-0.06	9.02	0	1.0162	0.0068
163	SLU 42	-0.05	-0.06	9.03	0	1.0172	0.0063
163	SLU 43	-0.05	-0.08	8.6	0	0.9693	0.0089
163	SLU 44	-0.05	-0.07	8.62	0	0.9709	0.008
163	SLU 45	-0.05	-0.08	8.75	0	0.9859	0.0089
163	SLU 46	-0.05	-0.07	8.76	0	0.9869	0.0083
163	SLU 47	-0.05	-0.07	8.72	0	0.9825	0.0081
163	SLU 48	-0.05	-0.08	8.85	0	0.9975	0.009
163	SLU 49	-0.05	-0.07	8.86	0	0.9985	0.0084
163	SLU 50	-0.05	-0.08	8.81	0	0.9925	0.0091
163	SLU 51	-0.05	-0.08	8.82	0	0.9934	0.0086
163	SLU 52	-0.05	-0.07	9.52	-0.0001	1.073	0.0082
163	SLU 53	-0.05	-0.08	9.66	-0.0001	1.088	0.009
163	SLU 54	-0.05	-0.08	9.67	-0.0001	1.089	0.0085
163	SLU 55	-0.05	-0.07	9.63	-0.0001	1.0846	0.0083
163	SLU 56	-0.05	-0.08	9.76	-0.0001	1.0996	0.0091
163	SLU 57	-0.05	-0.08	9.77	-0.0001	1.1006	0.0086
163	SLU 58	-0.05	-0.08	9.72	-0.0001	1.0946	0.0093
163	SLU 59	-0.05	-0.08	9.72	-0.0001	1.0955	0.0088
163	SLU 60	-0.05	-0.08	9.9	-0.0001	1.1151	0.0091
163	SLU 61	-0.05	-0.08	9.91	-0.0001	1.1161	0.0086
163	SLU 62	-0.05	-0.08	10	-0.0001	1.1267	0.0093
163	SLU 63	-0.05	-0.08	10.01	-0.0001	1.1277	0.0087
163	SLU 64	-0.05	-0.08	9.4	-0.0001	1.0588	0.0086
163	SLU 65	-0.05	-0.07	9.41	-0.0001	1.0604	0.0077
163	SLU 66	-0.05	-0.08	9.55	-0.0001	1.0755	0.0086
163	SLU 67	-0.05	-0.07	9.55	-0.0001	1.0764	0.008
163	SLU 68	-0.05	-0.07	9.52	-0.0001	1.072	0.0079
163	SLU 69	-0.05	-0.08	9.65	-0.0001	1.0871	0.0087
163	SLU 70	-0.05	-0.07	9.66	-0.0001	1.088	0.0081
163	SLU 71	-0.05	-0.08	9.6	-0.0001	1.082	0.0089
163	SLU 72	-0.05	-0.07	9.61	-0.0001	1.083	0.0083
163	SLU 73	-0.05	-0.07	10.32	-0.0001	1.1625	0.0079
163	SLU 74	-0.05	-0.08	10.45	-0.0001	1.1776	0.0087
163	SLU 75	-0.05	-0.07	10.46	-0.0001	1.1785	0.0082
163	SLU 76	-0.05	-0.07	10.42	-0.0001	1.1741	0.008
163	SLU 77	-0.06	-0.08	10.55	-0.0001	1.1892	0.0088
163	SLU 78	-0.05	-0.07	10.56	-0.0001	1.1901	0.0083
163	SLU 79	-0.05	-0.08	10.51	-0.0001	1.1841	0.009
163	SLU 80	-0.05	-0.08	10.52	-0.0001	1.1851	0.0085
163	SLU 81	-0.06	-0.08	10.69	-0.0001	1.2047	0.0089
163	SLU 82	-0.05	-0.07	10.7	-0.0001	1.2056	0.0083
163	SLU 83	-0.06	-0.08	10.8	-0.0001	1.2163	0.009
163	SLU 84	-0.06	-0.07	10.8	-0.0001	1.2172	0.0084

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
163	SLE RA 1	-0.04	-0.06	7.05	0	0.7948	0.0067
163	SLE RA 2	-0.04	-0.05	7.06	0	0.7959	0.0061
163	SLE RA 3	-0.04	-0.06	7.15	0	0.8059	0.0067
163	SLE RA 4	-0.04	-0.06	7.16	0	0.8065	0.0063
163	SLE RA 5	-0.04	-0.05	7.13	0	0.8036	0.0062
163	SLE RA 6	-0.04	-0.06	7.22	0	0.8136	0.0067
163	SLE RA 7	-0.04	-0.06	7.23	0	0.8143	0.0064
163	SLE RA 8	-0.04	-0.06	7.19	0	0.8103	0.0068
163	SLE RA 9	-0.04	-0.06	7.2	0	0.8109	0.0065
163	SLE RA 10	-0.04	-0.06	7.67	0	0.8639	0.0062
163	SLE RA 11	-0.04	-0.06	7.76	0	0.874	0.0068
163	SLE RA 12	-0.04	-0.06	7.76	0	0.8746	0.0064
163	SLE RA 13	-0.04	-0.06	7.74	0	0.8717	0.0063
163	SLE RA 14	-0.04	-0.06	7.83	0	0.8817	0.0068
163	SLE RA 15	-0.04	-0.06	7.83	0	0.8823	0.0065
163	SLE RA 16	-0.04	-0.06	7.8	0	0.8783	0.007
163	SLE RA 17	-0.04	-0.06	7.8	0	0.879	0.0066
163	SLE RA 18	-0.04	-0.06	7.92	0	0.892	0.0069
163	SLE RA 19	-0.04	-0.06	7.92	0	0.8927	0.0065
163	SLE RA 20	-0.04	-0.06	7.99	0	0.8998	0.0069
163	SLE RA 21	-0.04	-0.06	7.99	0	0.9004	0.0066
163	SLE FR 1	-0.04	-0.06	7.05	0	0.7948	0.0067
163	SLE FR 2	-0.04	-0.06	7.06	0	0.795	0.0066
163	SLE FR 3	-0.04	-0.06	7.08	0	0.7979	0.0067
163	SLE FR 4	-0.04	-0.06	7.32	0	0.8242	0.0066
163	SLE FR 5	-0.04	-0.06	7.34	0	0.8271	0.0068
163	SLE FR 6	-0.04	-0.06	7.49	0	0.8434	0.0068
163	SLE QP 1	-0.04	-0.06	7.05	0	0.7948	0.0067
163	SLE QP 2	-0.04	-0.06	7.31	0	0.824	0.0068
163	SLD 1	0.52	0.01	7.55	0	0.8506	-0.0009
163	SLD 2	0.59	-0.01	7.52	0	0.8469	0.001
163	SLD 3	0.53	-0.16	7.3	0	0.8228	0.0177
163	SLD 4	0.6	-0.17	7.27	0	0.8191	0.0196
163	SLD 5	0.1	0.21	7.76	0	0.8748	-0.0241
163	SLD 6	0.15	0.2	7.74	0	0.8724	-0.0228
163	SLD 7	0.13	-0.34	6.94	0	0.7821	0.0379
163	SLD 8	0.18	-0.35	6.92	0	0.7797	0.0391
163	SLD 9	-0.26	0.23	7.71	0	0.8682	-0.0256
163	SLD 10	-0.21	0.22	7.69	0	0.8658	-0.0244
163	SLD 11	-0.23	-0.32	6.88	0	0.7755	0.0363
163	SLD 12	-0.18	-0.33	6.86	0	0.7732	0.0376
163	SLD 13	-0.68	0.05	7.36	0	0.8288	-0.0061
163	SLD 14	-0.6	0.04	7.32	0	0.8252	-0.0042
163	SLD 15	-0.67	-0.11	7.11	0	0.801	0.0125
163	SLD 16	-0.6	-0.13	7.08	0	0.7973	0.0144
163	SLV 1	1.26	0.09	7.86	0	0.8852	-0.0105
163	SLV 2	1.43	0.05	7.78	0	0.8767	-0.006
163	SLV 3	1.28	-0.28	7.3	0	0.8222	0.0318
163	SLV 4	1.45	-0.32	7.22	0	0.8137	0.0363
163	SLV 5	0.29	0.56	8.34	0	0.9394	-0.0634
163	SLV 6	0.4	0.54	8.29	0	0.934	-0.0605
163	SLV 7	0.36	-0.69	6.47	0	0.7293	0.0777
163	SLV 8	0.47	-0.72	6.42	0	0.7238	0.0806
163	SLV 9	-0.55	0.6	8.2	0	0.9241	-0.0671
163	SLV 10	-0.44	0.57	8.15	0	0.9187	-0.0642
163	SLV 11	-0.48	-0.66	6.34	0	0.714	0.074
163	SLV 12	-0.37	-0.68	6.29	0	0.7085	0.0769
163	SLV 13	-1.53	0.2	7.4	0	0.8342	-0.0228
163	SLV 14	-1.36	0.16	7.33	0	0.8258	-0.0183
163	SLV 15	-1.51	-0.17	6.85	0	0.7712	0.0195
163	SLV 16	-1.34	-0.21	6.77	0	0.7627	0.024
163	CRTFP Uy+	0	0	0	0	0	0
163	CRTFP Uy-	0	0	0	0	0	0
164	SLU 1	-0.04	-0.05	6.86	0	0.9012	0.0062
164	SLU 2	-0.04	-0.04	6.87	0	0.9032	0.0052
164	SLU 3	-0.04	-0.05	7.01	0	0.9208	0.0061
164	SLU 4	-0.04	-0.04	7.01	0	0.922	0.0054
164	SLU 5	-0.04	-0.04	6.98	0	0.9169	0.0053
164	SLU 6	-0.04	-0.05	7.11	0	0.9345	0.0062
164	SLU 7	-0.04	-0.04	7.12	0	0.9357	0.0055
164	SLU 8	-0.04	-0.05	7.06	0	0.9285	0.0064
164	SLU 9	-0.04	-0.04	7.07	0	0.9297	0.0058
164	SLU 10	-0.04	-0.04	7.79	0	1.0234	0.0052
164	SLU 11	-0.04	-0.05	7.92	0	1.041	0.006
164	SLU 12	-0.04	-0.04	7.93	0	1.0422	0.0054
164	SLU 13	-0.04	-0.04	7.89	0	1.0371	0.0053
164	SLU 14	-0.04	-0.05	8.02	0	1.0547	0.0061
164	SLU 15	-0.04	-0.04	8.03	0	1.0559	0.0055
164	SLU 16	-0.04	-0.05	7.98	0	1.0488	0.0064
164	SLU 17	-0.04	-0.04	7.99	0	1.0499	0.0058
164	SLU 18	-0.04	-0.05	8.16	0	1.073	0.0062
164	SLU 19	-0.04	-0.04	8.17	0	1.0742	0.0056
164	SLU 20	-0.04	-0.05	8.27	0	1.0866	0.0063
164	SLU 21	-0.04	-0.04	8.28	0	1.0878	0.0057
164	SLU 22	-0.04	-0.04	7.66	0	1.0063	0.0056
164	SLU 23	-0.04	-0.03	7.67	0	1.0083	0.0046
164	SLU 24	-0.04	-0.04	7.8	0	1.0259	0.0055
164	SLU 25	-0.04	-0.04	7.81	0	1.0271	0.0049
164	SLU 26	-0.04	-0.04	7.77	0	1.0219	0.0047
164	SLU 27	-0.04	-0.04	7.91	0	1.0395	0.0056

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLU 28	-0.04	-0.04	7.92	0	1.0407	0.005
164	SLU 29	-0.04	-0.04	7.86	0	1.0336	0.0058
164	SLU 30	-0.04	-0.04	7.87	0	1.0348	0.0052
164	SLU 31	-0.05	-0.03	8.59	0	1.1285	0.0046
164	SLU 32	-0.05	-0.04	8.72	0	1.1461	0.0055
164	SLU 33	-0.05	-0.04	8.73	0	1.1473	0.0048
164	SLU 34	-0.05	-0.04	8.69	0	1.1421	0.0047
164	SLU 35	-0.05	-0.04	8.82	0	1.1598	0.0056
164	SLU 36	-0.05	-0.04	8.83	0	1.1609	0.0049
164	SLU 37	-0.05	-0.04	8.78	0	1.1538	0.0058
164	SLU 38	-0.05	-0.04	8.79	0	1.155	0.0052
164	SLU 39	-0.05	-0.04	8.96	0	1.178	0.0056
164	SLU 40	-0.05	-0.04	8.97	0	1.1792	0.005
164	SLU 41	-0.05	-0.04	9.07	-0.0001	1.1917	0.0057
164	SLU 42	-0.05	-0.04	9.08	-0.0001	1.1929	0.0051
164	SLU 43	-0.05	-0.06	8.64	0	1.1356	0.0082
164	SLU 44	-0.05	-0.05	8.65	0	1.1376	0.0072
164	SLU 45	-0.05	-0.06	8.79	0	1.1552	0.0081
164	SLU 46	-0.05	-0.06	8.8	0	1.1564	0.0075
164	SLU 47	-0.05	-0.06	8.76	0	1.1512	0.0073
164	SLU 48	-0.05	-0.06	8.89	0	1.1688	0.0082
164	SLU 49	-0.05	-0.06	8.9	0	1.17	0.0076
164	SLU 50	-0.05	-0.06	8.85	0	1.1629	0.0084
164	SLU 51	-0.05	-0.06	8.86	0	1.1641	0.0078
164	SLU 52	-0.05	-0.05	9.57	-0.0001	1.2578	0.0072
164	SLU 53	-0.05	-0.06	9.7	-0.0001	1.2754	0.0081
164	SLU 54	-0.05	-0.06	9.71	-0.0001	1.2766	0.0075
164	SLU 55	-0.05	-0.06	9.67	-0.0001	1.2714	0.0073
164	SLU 56	-0.05	-0.06	9.81	-0.0001	1.289	0.0082
164	SLU 57	-0.05	-0.06	9.82	-0.0001	1.2902	0.0076
164	SLU 58	-0.05	-0.06	9.76	-0.0001	1.2831	0.0084
164	SLU 59	-0.05	-0.06	9.77	-0.0001	1.2843	0.0078
164	SLU 60	-0.05	-0.06	9.95	-0.0001	1.3073	0.0082
164	SLU 61	-0.05	-0.06	9.95	-0.0001	1.3085	0.0076
164	SLU 62	-0.05	-0.06	10.05	-0.0001	1.321	0.0083
164	SLU 63	-0.05	-0.06	10.06	-0.0001	1.3222	0.0077
164	SLU 64	-0.05	-0.06	9.44	-0.0001	1.2406	0.0076
164	SLU 65	-0.05	-0.05	9.45	-0.0001	1.2426	0.0066
164	SLU 66	-0.05	-0.06	9.59	-0.0001	1.2602	0.0075
164	SLU 67	-0.05	-0.05	9.6	-0.0001	1.2614	0.0069
164	SLU 68	-0.05	-0.05	9.56	-0.0001	1.2563	0.0067
164	SLU 69	-0.05	-0.06	9.69	-0.0001	1.2739	0.0076
164	SLU 70	-0.05	-0.05	9.7	-0.0001	1.2751	0.007
164	SLU 71	-0.05	-0.06	9.65	-0.0001	1.2679	0.0078
164	SLU 72	-0.05	-0.06	9.66	-0.0001	1.2691	0.0072
164	SLU 73	-0.05	-0.05	10.37	-0.0001	1.3628	0.0066
164	SLU 74	-0.06	-0.06	10.5	-0.0001	1.3804	0.0075
164	SLU 75	-0.06	-0.05	10.51	-0.0001	1.3816	0.0069
164	SLU 76	-0.06	-0.05	10.47	-0.0001	1.3765	0.0067
164	SLU 77	-0.06	-0.06	10.61	-0.0001	1.3941	0.0076
164	SLU 78	-0.06	-0.05	10.62	-0.0001	1.3953	0.007
164	SLU 79	-0.06	-0.06	10.56	-0.0001	1.3882	0.0078
164	SLU 80	-0.06	-0.05	10.57	-0.0001	1.3894	0.0072
164	SLU 81	-0.06	-0.06	10.75	-0.0001	1.4124	0.0076
164	SLU 82	-0.06	-0.05	10.75	-0.0001	1.4136	0.007
164	SLU 83	-0.06	-0.06	10.85	-0.0001	1.426	0.0077
164	SLU 84	-0.06	-0.05	10.86	-0.0001	1.4272	0.0071
164	SLE RA 1	-0.04	-0.05	7.08	0	0.9312	0.006
164	SLE RA 2	-0.04	-0.04	7.09	0	0.9326	0.0053
164	SLE RA 3	-0.04	-0.05	7.18	0	0.9443	0.0059
164	SLE RA 4	-0.04	-0.04	7.19	0	0.9451	0.0055
164	SLE RA 5	-0.04	-0.04	7.16	0	0.9417	0.0054
164	SLE RA 6	-0.04	-0.05	7.25	0	0.9534	0.006
164	SLE RA 7	-0.04	-0.04	7.26	0	0.9542	0.0056
164	SLE RA 8	-0.04	-0.05	7.22	0	0.9495	0.0061
164	SLE RA 9	-0.04	-0.04	7.23	0	0.9502	0.0057
164	SLE RA 10	-0.04	-0.04	7.7	0	1.0127	0.0053
164	SLE RA 11	-0.04	-0.05	7.79	0	1.0244	0.0059
164	SLE RA 12	-0.04	-0.04	7.8	0	1.0252	0.0055
164	SLE RA 13	-0.04	-0.04	7.77	0	1.0218	0.0054
164	SLE RA 14	-0.04	-0.05	7.86	0	1.0336	0.006
164	SLE RA 15	-0.04	-0.04	7.87	0	1.0343	0.0056
164	SLE RA 16	-0.04	-0.05	7.83	0	1.0296	0.0061
164	SLE RA 17	-0.04	-0.04	7.84	0	1.0304	0.0057
164	SLE RA 18	-0.04	-0.05	7.96	0	1.0457	0.006
164	SLE RA 19	-0.04	-0.04	7.96	0	1.0465	0.0056
164	SLE RA 20	-0.04	-0.05	8.03	0	1.0548	0.0061
164	SLE RA 21	-0.04	-0.04	8.03	0	1.0556	0.0057
164	SLE FR 1	-0.04	-0.05	7.08	0	0.9312	0.006
164	SLE FR 2	-0.04	-0.04	7.09	0	0.9315	0.0059
164	SLE FR 3	-0.04	-0.05	7.11	0	0.9349	0.006
164	SLE FR 4	-0.04	-0.04	7.35	0	0.9659	0.0059
164	SLE FR 5	-0.04	-0.05	7.37	0	0.9692	0.006
164	SLE FR 6	-0.04	-0.05	7.52	0	0.9885	0.006
164	SLE QP 1	-0.04	-0.05	7.08	0	0.9312	0.006
164	SLE QP 2	-0.04	-0.05	7.35	0	0.9656	0.006
164	SLD 1	0.52	0.03	7.53	0	0.9902	-0.0038
164	SLD 2	0.59	0.02	7.5	0	0.9862	-0.0021
164	SLD 3	0.53	-0.14	7.28	0	0.9575	0.0181
164	SLD 4	0.6	-0.15	7.25	0	0.9535	0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLD 5	0.1	0.23	7.78	0	1.0232	-0.0305
164	SLD 6	0.15	0.22	7.76	0	1.0206	-0.0293
164	SLD 7	0.13	-0.32	6.96	0	0.9143	0.0425
164	SLD 8	0.18	-0.33	6.94	0	0.9117	0.0437
164	SLD 9	-0.26	0.24	7.76	0	1.0195	-0.0317
164	SLD 10	-0.21	0.23	7.74	0	1.0169	-0.0305
164	SLD 11	-0.23	-0.31	6.93	0	0.9105	0.0413
164	SLD 12	-0.18	-0.32	6.91	0	0.9079	0.0425
164	SLD 13	-0.68	0.06	7.44	0	0.9776	-0.0078
164	SLD 14	-0.61	0.05	7.41	0	0.9737	-0.006
164	SLD 15	-0.67	-0.11	7.19	0	0.945	0.0141
164	SLD 16	-0.6	-0.12	7.16	0	0.941	0.0159
164	SLV 1	1.27	0.12	7.77	0	1.0219	-0.0164
164	SLV 2	1.44	0.09	7.7	0	1.0127	-0.0122
164	SLV 3	1.29	-0.26	7.21	0	0.9478	0.0335
164	SLV 4	1.46	-0.29	7.14	0	0.9386	0.0377
164	SLV 5	0.29	0.59	8.34	0	1.0965	-0.0771
164	SLV 6	0.4	0.57	8.3	0	1.0905	-0.0744
164	SLV 7	0.36	-0.68	6.46	0	0.8495	0.0892
164	SLV 8	0.47	-0.7	6.42	0	0.8435	0.0919
164	SLV 9	-0.55	0.61	8.27	0	1.0877	-0.0799
164	SLV 10	-0.44	0.59	8.23	0	1.0817	-0.0772
164	SLV 11	-0.48	-0.66	6.4	0	0.8407	0.0864
164	SLV 12	-0.37	-0.68	6.35	0	0.8347	0.0891
164	SLV 13	-1.54	0.2	7.55	0	0.9926	-0.0257
164	SLV 14	-1.37	0.16	7.48	0	0.9833	-0.0215
164	SLV 15	-1.52	-0.18	6.99	0	0.9185	0.0242
164	SLV 16	-1.35	-0.22	6.92	0	0.9092	0.0284
164	CRTFP Uy+	0	0	0	0	0	0
164	CRTFP Uy-	0	0	0	0	0	0
165	SLU 1	-0.18	-0.16	31.19	9.3246	-2.7083	0.0431
165	SLU 2	-0.18	-0.13	31.25	9.3424	-2.714	0.0462
165	SLU 3	-0.19	-0.16	31.87	9.5272	-2.7673	0.0448
165	SLU 4	-0.19	-0.13	31.91	9.5379	-2.7708	0.0467
165	SLU 5	-0.19	-0.13	31.73	9.4825	-2.755	0.047
165	SLU 6	-0.19	-0.16	32.34	9.6674	-2.8083	0.0455
165	SLU 7	-0.19	-0.14	32.38	9.6781	-2.8117	0.0474
165	SLU 8	-0.19	-0.17	32.13	9.6049	-2.7902	0.0445
165	SLU 9	-0.19	-0.15	32.17	9.6156	-2.7936	0.0464
165	SLU 10	-0.21	-0.12	35.46	10.6132	-3.0798	0.0556
165	SLU 11	-0.21	-0.15	36.07	10.7981	-3.1331	0.0542
165	SLU 12	-0.21	-0.13	36.11	10.8087	-3.1366	0.056
165	SLU 13	-0.21	-0.12	35.93	10.7534	-3.1208	0.0563
165	SLU 14	-0.22	-0.15	36.54	10.9382	-3.1741	0.0549
165	SLU 15	-0.22	-0.13	36.58	10.9489	-3.1775	0.0568
165	SLU 16	-0.22	-0.16	36.34	10.8757	-3.156	0.0539
165	SLU 17	-0.22	-0.14	36.38	10.8864	-3.1594	0.0558
165	SLU 18	-0.22	-0.15	37.19	11.1401	-3.2309	0.0565
165	SLU 19	-0.22	-0.13	37.23	11.1507	-3.2343	0.0583
165	SLU 20	-0.22	-0.15	37.66	11.2802	-3.2718	0.0572
165	SLU 21	-0.22	-0.13	37.7	11.2909	-3.2753	0.0591
165	SLU 22	-0.2	-0.13	34.83	10.417	-3.025	0.0521
165	SLU 23	-0.2	-0.1	34.9	10.4348	-3.0308	0.0553
165	SLU 24	-0.21	-0.13	35.51	10.6197	-3.0841	0.0538
165	SLU 25	-0.21	-0.11	35.55	10.6303	-3.0875	0.0557
165	SLU 26	-0.21	-0.1	35.37	10.575	-3.0717	0.056
165	SLU 27	-0.21	-0.13	35.99	10.7598	-3.125	0.0546
165	SLU 28	-0.21	-0.11	36.03	10.7705	-3.1285	0.0565
165	SLU 29	-0.21	-0.14	35.78	10.6973	-3.1069	0.0536
165	SLU 30	-0.21	-0.12	35.82	10.708	-3.1104	0.0555
165	SLU 31	-0.23	-0.09	39.1	11.7056	-3.3966	0.0646
165	SLU 32	-0.23	-0.12	39.72	11.8905	-3.4499	0.0632
165	SLU 33	-0.23	-0.1	39.76	11.9012	-3.4533	0.0651
165	SLU 34	-0.23	-0.09	39.58	11.8458	-3.4375	0.0654
165	SLU 35	-0.24	-0.12	40.19	12.0307	-3.4908	0.0639
165	SLU 36	-0.24	-0.1	40.23	12.0413	-3.4943	0.0658
165	SLU 37	-0.24	-0.13	39.98	11.9682	-3.4727	0.063
165	SLU 38	-0.24	-0.11	40.02	11.9789	-3.4762	0.0648
165	SLU 39	-0.24	-0.12	40.84	12.2325	-3.5476	0.0655
165	SLU 40	-0.24	-0.1	40.88	12.2432	-3.5511	0.0674
165	SLU 41	-0.25	-0.12	41.31	12.3727	-3.5886	0.0662
165	SLU 42	-0.24	-0.1	41.35	12.3833	-3.592	0.0681
165	SLU 43	-0.23	-0.22	39.29	11.7474	-3.4122	0.0529
165	SLU 44	-0.23	-0.19	39.36	11.7652	-3.4179	0.056
165	SLU 45	-0.24	-0.22	39.97	11.9501	-3.4712	0.0546
165	SLU 46	-0.24	-0.19	40.01	11.9607	-3.4747	0.0565
165	SLU 47	-0.23	-0.19	39.83	11.9053	-3.4589	0.0568
165	SLU 48	-0.24	-0.22	40.45	12.0902	-3.5122	0.0553
165	SLU 49	-0.24	-0.2	40.49	12.1009	-3.5156	0.0572
165	SLU 50	-0.24	-0.23	40.24	12.0277	-3.4941	0.0544
165	SLU 51	-0.24	-0.21	40.28	12.0384	-3.4975	0.0563
165	SLU 52	-0.26	-0.18	43.56	13.036	-3.7837	0.0654
165	SLU 53	-0.26	-0.21	44.18	13.2209	-3.837	0.064
165	SLU 54	-0.26	-0.18	44.22	13.2316	-3.8405	0.0659
165	SLU 55	-0.26	-0.18	44.04	13.1762	-3.8247	0.0661
165	SLU 56	-0.26	-0.21	44.65	13.3611	-3.878	0.0647
165	SLU 57	-0.26	-0.19	44.69	13.3717	-3.8814	0.0666
165	SLU 58	-0.26	-0.22	44.44	13.2986	-3.8599	0.0637
165	SLU 59	-0.26	-0.2	44.48	13.3092	-3.8633	0.0656
165	SLU 60	-0.27	-0.21	45.3	13.5629	-3.9348	0.0663

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
165	SLU 61	-0.27	-0.19	45.34	13.5736	-3.9382	0.0682
165	SLU 62	-0.27	-0.21	45.77	13.7031	-3.9757	0.067
165	SLU 63	-0.27	-0.19	45.81	13.7137	-3.9792	0.0689
165	SLU 64	-0.25	-0.19	42.94	12.8398	-3.7289	0.0619
165	SLU 65	-0.25	-0.16	43.01	12.8576	-3.7346	0.0651
165	SLU 66	-0.26	-0.19	43.62	13.0425	-3.7879	0.0636
165	SLU 67	-0.26	-0.16	43.66	13.0532	-3.7914	0.0655
165	SLU 68	-0.26	-0.16	43.48	12.9978	-3.7756	0.0658
165	SLU 69	-0.26	-0.19	44.09	13.1827	-3.8289	0.0644
165	SLU 70	-0.26	-0.17	44.13	13.1933	-3.8323	0.0663
165	SLU 71	-0.26	-0.2	43.88	13.1202	-3.8108	0.0634
165	SLU 72	-0.26	-0.18	43.92	13.1308	-3.8142	0.0653
165	SLU 73	-0.28	-0.15	47.21	14.1285	-4.1005	0.0744
165	SLU 74	-0.28	-0.18	47.82	14.3133	-4.1538	0.073
165	SLU 75	-0.28	-0.16	47.86	14.324	-4.1572	0.0749
165	SLU 76	-0.28	-0.15	47.68	14.2686	-4.1414	0.0752
165	SLU 77	-0.29	-0.18	48.29	14.4535	-4.1947	0.0738
165	SLU 78	-0.29	-0.16	48.34	14.4642	-4.1982	0.0756
165	SLU 79	-0.28	-0.19	48.09	14.391	-4.1766	0.0728
165	SLU 80	-0.28	-0.17	48.13	14.4017	-4.1801	0.0747
165	SLU 81	-0.29	-0.18	48.94	14.6553	-4.2515	0.0753
165	SLU 82	-0.29	-0.16	48.98	14.666	-4.2549	0.0772
165	SLU 83	-0.29	-0.18	49.42	14.7955	-4.2924	0.0761
165	SLU 84	-0.29	-0.16	49.46	14.8062	-4.2959	0.0779
165	SLE RA 1	-0.19	-0.15	32.23	9.6367	-2.7988	0.0456
165	SLE RA 2	-0.19	-0.13	32.27	9.6486	-2.8026	0.0477
165	SLE RA 3	-0.19	-0.15	32.68	9.7718	-2.8381	0.0468
165	SLE RA 4	-0.19	-0.14	32.71	9.7789	-2.8404	0.0481
165	SLE RA 5	-0.19	-0.13	32.59	9.742	-2.8299	0.0482
165	SLE RA 6	-0.19	-0.15	33	9.8652	-2.8654	0.0473
165	SLE RA 7	-0.19	-0.14	33.02	9.8724	-2.8677	0.0485
165	SLE RA 8	-0.19	-0.16	32.86	9.8236	-2.8534	0.0466
165	SLE RA 9	-0.19	-0.14	32.89	9.8307	-2.8557	0.0479
165	SLE RA 10	-0.21	-0.12	35.08	10.4958	-3.0465	0.054
165	SLE RA 11	-0.21	-0.14	35.48	10.619	-3.082	0.053
165	SLE RA 12	-0.21	-0.13	35.51	10.6261	-3.0843	0.0543
165	SLE RA 13	-0.21	-0.13	35.39	10.5892	-3.0738	0.0545
165	SLE RA 14	-0.21	-0.15	35.8	10.7125	-3.1093	0.0535
165	SLE RA 15	-0.21	-0.13	35.83	10.7196	-3.1116	0.0548
165	SLE RA 16	-0.21	-0.15	35.66	10.6708	-3.0972	0.0529
165	SLE RA 17	-0.21	-0.14	35.69	10.6779	-3.0995	0.0541
165	SLE RA 18	-0.21	-0.15	36.23	10.847	-3.1472	0.0546
165	SLE RA 19	-0.21	-0.13	36.26	10.8541	-3.1495	0.0558
165	SLE RA 20	-0.22	-0.15	36.55	10.9405	-3.1745	0.0551
165	SLE RA 21	-0.22	-0.13	36.57	10.9476	-3.1768	0.0563
165	SLE FR 1	-0.19	-0.15	32.23	9.6367	-2.7988	0.0456
165	SLE FR 2	-0.19	-0.15	32.24	9.6391	-2.7995	0.0461
165	SLE FR 3	-0.19	-0.15	32.36	9.6741	-2.8097	0.0458
165	SLE FR 4	-0.2	-0.15	33.44	10.0022	-2.9041	0.0487
165	SLE FR 5	-0.2	-0.15	33.56	10.0372	-2.9142	0.0485
165	SLE FR 6	-0.2	-0.15	34.23	10.2419	-2.973	0.0501
165	SLE QP 1	-0.19	-0.15	32.23	9.6367	-2.7988	0.0456
165	SLE QP 2	-0.2	-0.15	33.43	9.9998	-2.9033	0.0483
165	SLD 1	2.55	0.21	33.81	10.0866	-2.9326	-0.7697
165	SLD 2	2.89	0.17	33.71	10.064	-2.9253	-0.8796
165	SLD 3	2.5	-0.58	32.79	9.8389	-2.8483	-0.8385
165	SLD 4	2.84	-0.62	32.7	9.8162	-2.8411	-0.9484
165	SLD 5	0.63	1.16	35.1	10.4056	-3.0412	-0.0732
165	SLD 6	0.85	1.13	35.03	10.3907	-3.0364	-0.1453
165	SLD 7	0.49	-1.47	31.72	9.5798	-2.7603	-0.3025
165	SLD 8	0.71	-1.49	31.66	9.565	-2.7555	-0.3745
165	SLD 9	-1.11	1.19	35.2	10.4346	-3.051	0.4712
165	SLD 10	-0.88	1.16	35.14	10.4198	-3.0463	0.3991
165	SLD 11	-1.25	-1.43	31.83	9.6088	-2.7702	0.2419
165	SLD 12	-1.02	-1.46	31.77	9.594	-2.7654	0.1699
165	SLD 13	-3.24	0.32	34.16	10.1834	-2.9655	1.045
165	SLD 14	-2.9	0.27	34.07	10.1607	-2.9583	0.9351
165	SLD 15	-3.28	-0.47	33.15	9.9356	-2.8813	0.9763
165	SLD 16	-2.94	-0.51	33.05	9.913	-2.874	0.8664
165	SLV 1	6.22	0.67	34.27	10.194	-2.9688	-1.8674
165	SLV 2	7.01	0.57	34.05	10.1413	-2.9519	-2.1234
165	SLV 3	6.12	-1.12	31.98	9.6321	-2.7777	-2.0243
165	SLV 4	6.91	-1.22	31.76	9.5794	-2.7608	-2.2803
165	SLV 5	1.74	2.83	37.2	10.9193	-3.2157	-0.2444
165	SLV 6	2.25	2.76	37.06	10.8853	-3.2048	-0.4093
165	SLV 7	1.41	-3.14	29.55	9.0464	-2.5787	-0.7673
165	SLV 8	1.92	-3.21	29.41	9.0124	-2.5678	-0.9323
165	SLV 9	-2.32	2.91	37.45	10.9872	-3.2388	1.0289
165	SLV 10	-1.8	2.84	37.31	10.9532	-3.2279	0.864
165	SLV 11	-2.65	-3.07	29.8	9.1142	-2.6018	0.506
165	SLV 12	-2.14	-3.13	29.66	9.0803	-2.5909	0.341
165	SLV 13	-7.31	0.92	35.1	10.4202	-3.0458	2.3769
165	SLV 14	-6.51	0.82	34.88	10.3675	-3.0289	2.121
165	SLV 15	-7.41	-0.87	32.81	9.8583	-2.8547	2.22
165	SLV 16	-6.61	-0.97	32.59	9.8056	-2.8378	1.9641
165	CRTFP Ux+	0	0	0	0	0	0
165	CRTFP Ux-	0	0	0	0	0	0
165	CRTFP Uy+	0	0	0	0	0	0
165	CRTFP Uy-	0	0	0	0	0	0
166	SLU 1	-0.25	-0.22	41.84	14.0979	-0.7686	0.0821

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLU 2	-0.25	-0.17	41.93	14.1251	-0.7703	0.0831
166	SLU 3	-0.25	-0.21	42.75	14.4032	-0.7854	0.084
166	SLU 4	-0.25	-0.18	42.81	14.4195	-0.7864	0.0846
166	SLU 5	-0.25	-0.17	42.56	14.3359	-0.7819	0.0845
166	SLU 6	-0.26	-0.22	43.39	14.614	-0.797	0.0854
166	SLU 7	-0.26	-0.19	43.44	14.6304	-0.798	0.086
166	SLU 8	-0.25	-0.23	43.1	14.5195	-0.7918	0.0849
166	SLU 9	-0.25	-0.2	43.16	14.5358	-0.7928	0.0855
166	SLU 10	-0.28	-0.15	47.57	16.0624	-0.8739	0.0965
166	SLU 11	-0.29	-0.19	48.39	16.3405	-0.889	0.0974
166	SLU 12	-0.29	-0.17	48.45	16.3568	-0.89	0.098
166	SLU 13	-0.29	-0.16	48.21	16.2732	-0.8855	0.098
166	SLU 14	-0.29	-0.2	49.03	16.5513	-0.9006	0.0988
166	SLU 15	-0.29	-0.17	49.08	16.5676	-0.9016	0.0995
166	SLU 16	-0.29	-0.21	48.75	16.4568	-0.8954	0.0983
166	SLU 17	-0.29	-0.18	48.8	16.4731	-0.8964	0.099
166	SLU 18	-0.3	-0.2	49.9	16.8654	-0.9166	0.1013
166	SLU 19	-0.3	-0.17	49.95	16.8817	-0.9176	0.1019
166	SLU 20	-0.3	-0.2	50.53	17.0762	-0.9282	0.1027
166	SLU 21	-0.3	-0.17	50.59	17.0926	-0.9292	0.1033
166	SLU 22	-0.27	-0.18	46.73	15.7503	-0.8584	0.0924
166	SLU 23	-0.27	-0.13	46.82	15.7775	-0.8601	0.0935
166	SLU 24	-0.28	-0.18	47.64	16.0556	-0.8752	0.0943
166	SLU 25	-0.28	-0.15	47.7	16.0719	-0.8763	0.095
166	SLU 26	-0.28	-0.14	47.45	15.9883	-0.8717	0.0949
166	SLU 27	-0.28	-0.18	48.28	16.2664	-0.8868	0.0958
166	SLU 28	-0.28	-0.15	48.33	16.2828	-0.8879	0.0964
166	SLU 29	-0.28	-0.19	48	16.1719	-0.8816	0.0953
166	SLU 30	-0.28	-0.16	48.05	16.1883	-0.8827	0.0959
166	SLU 31	-0.31	-0.12	52.46	17.7148	-0.9637	0.1069
166	SLU 32	-0.32	-0.16	53.29	17.9929	-0.9788	0.1078
166	SLU 33	-0.32	-0.13	53.34	18.0092	-0.9798	0.1084
166	SLU 34	-0.32	-0.12	53.1	17.9256	-0.9753	0.1083
166	SLU 35	-0.32	-0.16	53.92	18.2037	-0.9904	0.1092
166	SLU 36	-0.32	-0.13	53.97	18.22	-0.9914	0.1098
166	SLU 37	-0.32	-0.17	53.64	18.1092	-0.9852	0.1087
166	SLU 38	-0.32	-0.14	53.69	18.1255	-0.9863	0.1093
166	SLU 39	-0.33	-0.16	54.79	18.5178	-1.0064	0.1116
166	SLU 40	-0.33	-0.13	54.85	18.5341	-1.0074	0.1122
166	SLU 41	-0.33	-0.16	55.42	18.7286	-1.018	0.113
166	SLU 42	-0.33	-0.13	55.48	18.745	-1.019	0.1137
166	SLU 43	-0.31	-0.3	52.71	17.7607	-0.9684	0.1031
166	SLU 44	-0.31	-0.25	52.81	17.7879	-0.9701	0.1042
166	SLU 45	-0.32	-0.29	53.63	18.066	-0.9852	0.105
166	SLU 46	-0.32	-0.26	53.68	18.0824	-0.9862	0.1057
166	SLU 47	-0.32	-0.25	53.44	17.9987	-0.9817	0.1056
166	SLU 48	-0.32	-0.3	54.26	18.2768	-0.9968	0.1065
166	SLU 49	-0.32	-0.27	54.31	18.2932	-0.9978	0.1071
166	SLU 50	-0.32	-0.31	53.98	18.1823	-0.9916	0.106
166	SLU 51	-0.32	-0.28	54.03	18.1987	-0.9926	0.1066
166	SLU 52	-0.35	-0.23	58.45	19.7252	-1.0737	0.1176
166	SLU 53	-0.35	-0.27	59.27	20.0033	-1.0888	0.1185
166	SLU 54	-0.35	-0.24	59.32	20.0196	-1.0898	0.1191
166	SLU 55	-0.35	-0.24	59.08	19.936	-1.0853	0.119
166	SLU 56	-0.36	-0.28	59.9	20.2141	-1.1004	0.1199
166	SLU 57	-0.36	-0.25	59.96	20.2305	-1.1014	0.1205
166	SLU 58	-0.36	-0.29	59.62	20.1196	-1.0952	0.1194
166	SLU 59	-0.36	-0.26	59.68	20.1359	-1.0962	0.12
166	SLU 60	-0.36	-0.27	60.77	20.5282	-1.1164	0.1223
166	SLU 61	-0.36	-0.25	60.83	20.5446	-1.1174	0.1229
166	SLU 62	-0.37	-0.28	61.41	20.739	-1.128	0.1237
166	SLU 63	-0.37	-0.25	61.46	20.7554	-1.129	0.1244
166	SLU 64	-0.34	-0.26	57.61	19.4131	-1.0582	0.1135
166	SLU 65	-0.34	-0.21	57.7	19.4403	-1.0599	0.1145
166	SLU 66	-0.34	-0.26	58.52	19.7184	-1.075	0.1154
166	SLU 67	-0.34	-0.23	58.57	19.7348	-1.076	0.116
166	SLU 68	-0.34	-0.22	58.33	19.6511	-1.0715	0.116
166	SLU 69	-0.35	-0.26	59.15	19.9292	-1.0866	0.1168
166	SLU 70	-0.35	-0.23	59.21	19.9456	-1.0876	0.1175
166	SLU 71	-0.35	-0.27	58.87	19.8347	-1.0814	0.1163
166	SLU 72	-0.35	-0.24	58.93	19.8511	-1.0824	0.117
166	SLU 73	-0.38	-0.2	63.34	21.3776	-1.1635	0.128
166	SLU 74	-0.38	-0.24	64.16	21.6557	-1.1786	0.1288
166	SLU 75	-0.38	-0.21	64.22	21.672	-1.1796	0.1295
166	SLU 76	-0.38	-0.2	63.97	21.5884	-1.1751	0.1294
166	SLU 77	-0.38	-0.24	64.79	21.8665	-1.1902	0.1303
166	SLU 78	-0.39	-0.21	64.85	21.8829	-1.1912	0.1309
166	SLU 79	-0.38	-0.25	64.51	21.772	-1.185	0.1298
166	SLU 80	-0.38	-0.22	64.57	21.7883	-1.186	0.1304
166	SLU 81	-0.39	-0.24	65.67	22.1806	-1.2062	0.1327
166	SLU 82	-0.39	-0.21	65.72	22.197	-1.2072	0.1333
166	SLU 83	-0.4	-0.24	66.3	22.3914	-1.2178	0.1341
166	SLU 84	-0.4	-0.21	66.35	22.4078	-1.2188	0.1347
166	SLE RA 1	-0.25	-0.21	43.24	14.57	-0.7943	0.085
166	SLE RA 2	-0.25	-0.18	43.3	14.5881	-0.7954	0.0857
166	SLE RA 3	-0.26	-0.21	43.85	14.7735	-0.8055	0.0863
166	SLE RA 4	-0.26	-0.19	43.88	14.7844	-0.8061	0.0867
166	SLE RA 5	-0.26	-0.18	43.72	14.7287	-0.8031	0.0867
166	SLE RA 6	-0.26	-0.21	44.27	14.9141	-0.8132	0.0873
166	SLE RA 7	-0.26	-0.19	44.3	14.925	-0.8139	0.0877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLE RA 8	-0.26	-0.21	44.08	14.8511	-0.8097	0.0869
166	SLE RA 9	-0.26	-0.19	44.12	14.862	-0.8104	0.0873
166	SLE RA 10	-0.28	-0.17	47.06	15.8797	-0.8645	0.0947
166	SLE RA 11	-0.28	-0.19	47.61	16.0651	-0.8745	0.0953
166	SLE RA 12	-0.28	-0.17	47.64	16.0759	-0.8752	0.0957
166	SLE RA 13	-0.28	-0.17	47.48	16.0202	-0.8722	0.0956
166	SLE RA 14	-0.29	-0.2	48.03	16.2056	-0.8823	0.0962
166	SLE RA 15	-0.29	-0.18	48.07	16.2165	-0.8829	0.0966
166	SLE RA 16	-0.28	-0.2	47.84	16.1426	-0.8788	0.0959
166	SLE RA 17	-0.28	-0.18	47.88	16.1535	-0.8795	0.0963
166	SLE RA 18	-0.29	-0.19	48.61	16.415	-0.8929	0.0978
166	SLE RA 19	-0.29	-0.17	48.65	16.4259	-0.8936	0.0982
166	SLE RA 20	-0.29	-0.2	49.03	16.5556	-0.9007	0.0988
166	SLE RA 21	-0.29	-0.18	49.07	16.5664	-0.9013	0.0992
166	SLE FR 1	-0.25	-0.21	43.24	14.57	-0.7943	0.085
166	SLE FR 2	-0.25	-0.2	43.25	14.5736	-0.7945	0.0852
166	SLE FR 3	-0.26	-0.21	43.41	14.6262	-0.7974	0.0854
166	SLE FR 4	-0.26	-0.2	44.86	15.1271	-0.8241	0.089
166	SLE FR 5	-0.27	-0.21	45.02	15.1797	-0.827	0.0892
166	SLE FR 6	-0.27	-0.2	45.92	15.4925	-0.8436	0.0914
166	SLE QP 1	-0.25	-0.21	43.24	14.57	-0.7943	0.085
166	SLE QP 2	-0.26	-0.21	44.85	15.1235	-0.8239	0.0889
166	SLD 1	3.47	0.26	45.28	15.2531	-0.8297	-1.1973
166	SLD 2	3.93	0.21	45.19	15.2273	-0.8288	-1.3596
166	SLD 3	3.41	-0.8	43.95	14.8805	-0.8052	-1.2238
166	SLD 4	3.87	-0.85	43.85	14.8547	-0.8043	-1.3861
166	SLD 5	0.86	1.55	47.02	15.732	-0.8629	-0.228
166	SLD 6	1.16	1.52	46.96	15.7151	-0.8624	-0.3343
166	SLD 7	0.67	-1.98	42.57	14.4901	-0.7813	-0.3163
166	SLD 8	0.97	-2.02	42.51	14.4732	-0.7807	-0.4227
166	SLD 9	-1.5	1.6	47.19	15.7738	-0.8671	0.6004
166	SLD 10	-1.2	1.57	47.13	15.7569	-0.8665	0.494
166	SLD 11	-1.69	-1.93	42.74	14.5319	-0.7854	0.5121
166	SLD 12	-1.39	-1.96	42.67	14.5149	-0.7848	0.4057
166	SLD 13	-4.4	0.44	45.85	15.3923	-0.8434	1.5638
166	SLD 14	-3.94	0.39	45.75	15.3665	-0.8426	1.4016
166	SLD 15	-4.46	-0.62	44.51	15.0197	-0.8189	1.5373
166	SLD 16	-4	-0.67	44.41	14.9939	-0.8181	1.3751
166	SLV 1	8.47	0.85	45.82	15.4134	-0.8366	-2.9204
166	SLV 2	9.55	0.73	45.59	15.3533	-0.8346	-3.2983
166	SLV 3	8.34	-1.56	42.79	14.5683	-0.781	-2.9818
166	SLV 4	9.41	-1.68	42.56	14.5082	-0.779	-3.3597
166	SLV 5	2.38	3.79	49.77	16.5025	-0.9123	-0.6557
166	SLV 6	3.07	3.72	49.63	16.4638	-0.911	-0.8993
166	SLV 7	1.92	-4.25	39.67	13.6856	-0.7271	-0.8604
166	SLV 8	2.62	-4.33	39.53	13.6468	-0.7258	-1.1039
166	SLV 9	-3.15	3.92	50.17	16.6002	-0.922	1.2816
166	SLV 10	-2.45	3.84	50.02	16.5614	-0.9207	1.0381
166	SLV 11	-3.6	-4.13	40.07	13.7832	-0.7367	1.077
166	SLV 12	-2.91	-4.2	39.92	13.7444	-0.7354	0.8335
166	SLV 13	-9.94	1.27	47.14	15.7388	-0.8687	3.5374
166	SLV 14	-8.87	1.15	46.91	15.6787	-0.8667	3.1595
166	SLV 15	-10.08	-1.14	44.11	14.8937	-0.8132	3.476
166	SLV 16	-9	-1.26	43.88	14.8336	-0.8112	3.0981
166	CRTFP Ux+	0	0	0	0	0	0
166	CRTFP Ux-	0	0	0	0	0	0
166	CRTFP Uy+	0	0	0	0	0	0
166	CRTFP Uy-	0	0	0	0	0	0
167	SLU 1	-0.26	-0.25	45.86	15.4479	0.0128	0.092
167	SLU 2	-0.26	-0.19	45.96	15.4782	0.0128	0.0923
167	SLU 3	-0.27	-0.24	46.86	15.7815	0.013	0.0939
167	SLU 4	-0.27	-0.2	46.92	15.7997	0.013	0.0941
167	SLU 5	-0.27	-0.19	46.65	15.7079	0.013	0.0939
167	SLU 6	-0.27	-0.24	47.55	16.0112	0.0133	0.0956
167	SLU 7	-0.27	-0.21	47.61	16.0294	0.0133	0.0957
167	SLU 8	-0.27	-0.25	47.24	15.9074	0.0132	0.0953
167	SLU 9	-0.27	-0.22	47.3	15.9256	0.0132	0.0955
167	SLU 10	-0.3	-0.17	52.14	17.6155	0.0147	0.1067
167	SLU 11	-0.31	-0.21	53.04	17.9188	0.0149	0.1083
167	SLU 12	-0.31	-0.18	53.1	17.937	0.0149	0.1085
167	SLU 13	-0.31	-0.17	52.83	17.8453	0.0149	0.1084
167	SLU 14	-0.31	-0.22	53.73	18.1486	0.0152	0.11
167	SLU 15	-0.31	-0.18	53.79	18.1667	0.0152	0.1101
167	SLU 16	-0.31	-0.23	53.42	18.0447	0.0152	0.1097
167	SLU 17	-0.31	-0.2	53.48	18.0629	0.0152	0.1099
167	SLU 18	-0.32	-0.21	54.69	18.5012	0.0155	0.1126
167	SLU 19	-0.32	-0.18	54.75	18.5194	0.0155	0.1128
167	SLU 20	-0.33	-0.22	55.38	18.731	0.0157	0.1143
167	SLU 21	-0.33	-0.18	55.44	18.7491	0.0157	0.1144
167	SLU 22	-0.29	-0.21	51.22	17.2592	0.0143	0.1022
167	SLU 23	-0.29	-0.15	51.32	17.2895	0.0143	0.1025
167	SLU 24	-0.3	-0.2	52.22	17.5928	0.0145	0.1041
167	SLU 25	-0.3	-0.17	52.28	17.6109	0.0145	0.1043
167	SLU 26	-0.3	-0.15	52.01	17.5192	0.0145	0.1041
167	SLU 27	-0.3	-0.2	52.91	17.8225	0.0148	0.1057
167	SLU 28	-0.3	-0.17	52.97	17.8407	0.0148	0.1059
167	SLU 29	-0.3	-0.21	52.6	17.7187	0.0148	0.1055
167	SLU 30	-0.3	-0.18	52.66	17.7368	0.0148	0.1056
167	SLU 31	-0.33	-0.13	57.5	19.4268	0.0162	0.1169
167	SLU 32	-0.34	-0.18	58.4	19.7301	0.0165	0.1185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLU 33	-0.34	-0.14	58.46	19.7483	0.0165	0.1187
167	SLU 34	-0.34	-0.13	58.19	19.6565	0.0164	0.1185
167	SLU 35	-0.34	-0.18	59.09	19.9598	0.0167	0.1202
167	SLU 36	-0.34	-0.14	59.15	19.978	0.0167	0.1203
167	SLU 37	-0.34	-0.19	58.78	19.856	0.0167	0.1199
167	SLU 38	-0.34	-0.16	58.84	19.8742	0.0167	0.1201
167	SLU 39	-0.35	-0.18	60.05	20.3125	0.017	0.1228
167	SLU 40	-0.35	-0.14	60.11	20.3307	0.017	0.123
167	SLU 41	-0.36	-0.18	60.74	20.5422	0.0173	0.1244
167	SLU 42	-0.36	-0.14	60.8	20.5604	0.0173	0.1246
167	SLU 43	-0.33	-0.33	57.78	19.4613	0.0161	0.1162
167	SLU 44	-0.33	-0.28	57.88	19.4916	0.0161	0.1164
167	SLU 45	-0.34	-0.32	58.78	19.7949	0.0163	0.1181
167	SLU 46	-0.34	-0.29	58.84	19.813	0.0163	0.1182
167	SLU 47	-0.34	-0.28	58.57	19.7213	0.0163	0.1181
167	SLU 48	-0.34	-0.33	59.47	20.0246	0.0166	0.1197
167	SLU 49	-0.34	-0.29	59.53	20.0428	0.0166	0.1199
167	SLU 50	-0.34	-0.34	59.16	19.9208	0.0165	0.1194
167	SLU 51	-0.34	-0.31	59.22	19.9389	0.0165	0.1196
167	SLU 52	-0.37	-0.26	64.06	21.6289	0.018	0.1308
167	SLU 53	-0.38	-0.3	64.96	21.9322	0.0182	0.1325
167	SLU 54	-0.38	-0.27	65.02	21.9504	0.0182	0.1326
167	SLU 55	-0.38	-0.26	64.75	21.8586	0.0182	0.1325
167	SLU 56	-0.38	-0.3	65.65	22.1619	0.0185	0.1341
167	SLU 57	-0.38	-0.27	65.71	22.1801	0.0185	0.1343
167	SLU 58	-0.38	-0.32	65.34	22.0581	0.0185	0.1338
167	SLU 59	-0.38	-0.28	65.4	22.0763	0.0185	0.134
167	SLU 60	-0.39	-0.3	66.61	22.5146	0.0188	0.1368
167	SLU 61	-0.39	-0.27	66.67	22.5328	0.0188	0.1369
167	SLU 62	-0.4	-0.3	67.3	22.7443	0.019	0.1384
167	SLU 63	-0.4	-0.27	67.36	22.7625	0.0191	0.1385
167	SLU 64	-0.36	-0.3	63.14	21.2726	0.0176	0.1263
167	SLU 65	-0.36	-0.24	63.24	21.3029	0.0176	0.1266
167	SLU 66	-0.37	-0.29	64.14	21.6061	0.0178	0.1282
167	SLU 67	-0.37	-0.25	64.2	21.6243	0.0178	0.1284
167	SLU 68	-0.37	-0.24	63.93	21.5326	0.0178	0.1282
167	SLU 69	-0.37	-0.29	64.83	21.8359	0.0181	0.1299
167	SLU 70	-0.37	-0.26	64.89	21.8541	0.0181	0.13
167	SLU 71	-0.37	-0.3	64.52	21.732	0.0181	0.1296
167	SLU 72	-0.37	-0.27	64.58	21.7502	0.0181	0.1298
167	SLU 73	-0.4	-0.22	69.42	23.4402	0.0195	0.141
167	SLU 74	-0.41	-0.26	70.32	23.7435	0.0198	0.1426
167	SLU 75	-0.41	-0.23	70.38	23.7616	0.0198	0.1428
167	SLU 76	-0.41	-0.22	70.11	23.6699	0.0198	0.1427
167	SLU 77	-0.41	-0.27	71.01	23.9732	0.02	0.1443
167	SLU 78	-0.41	-0.23	71.07	23.9914	0.02	0.1444
167	SLU 79	-0.41	-0.28	70.7	23.8694	0.02	0.144
167	SLU 80	-0.41	-0.24	70.76	23.8875	0.02	0.1442
167	SLU 81	-0.42	-0.26	71.97	24.3259	0.0203	0.1469
167	SLU 82	-0.42	-0.23	72.03	24.344	0.0203	0.1471
167	SLU 83	-0.42	-0.27	72.66	24.5556	0.0206	0.1486
167	SLU 84	-0.42	-0.23	72.72	24.5738	0.0206	0.1487
167	SLE RA 1	-0.27	-0.24	47.39	15.9654	0.0132	0.0949
167	SLE RA 2	-0.27	-0.2	47.46	15.9856	0.0132	0.0951
167	SLE RA 3	-0.28	-0.23	48.06	16.1878	0.0134	0.0962
167	SLE RA 4	-0.28	-0.21	48.1	16.1999	0.0134	0.0963
167	SLE RA 5	-0.28	-0.2	47.92	16.1388	0.0134	0.0962
167	SLE RA 6	-0.28	-0.23	48.52	16.341	0.0135	0.0973
167	SLE RA 7	-0.28	-0.21	48.56	16.3531	0.0135	0.0974
167	SLE RA 8	-0.28	-0.24	48.31	16.2718	0.0135	0.0971
167	SLE RA 9	-0.28	-0.22	48.35	16.2839	0.0135	0.0972
167	SLE RA 10	-0.3	-0.18	51.58	17.4105	0.0145	0.1047
167	SLE RA 11	-0.3	-0.21	52.18	17.6127	0.0146	0.1058
167	SLE RA 12	-0.3	-0.19	52.22	17.6248	0.0146	0.1059
167	SLE RA 13	-0.3	-0.18	52.04	17.5637	0.0146	0.1058
167	SLE RA 14	-0.31	-0.22	52.64	17.7658	0.0148	0.1069
167	SLE RA 15	-0.31	-0.19	52.68	17.778	0.0148	0.107
167	SLE RA 16	-0.31	-0.22	52.43	17.6966	0.0148	0.1067
167	SLE RA 17	-0.31	-0.2	52.47	17.7087	0.0148	0.1068
167	SLE RA 18	-0.31	-0.21	53.28	18.001	0.015	0.1087
167	SLE RA 19	-0.31	-0.19	53.32	18.0131	0.015	0.1088
167	SLE RA 20	-0.31	-0.22	53.74	18.1541	0.0152	0.1098
167	SLE RA 21	-0.31	-0.19	53.78	18.1662	0.0152	0.1099
167	SLE FR 1	-0.27	-0.24	47.39	15.9654	0.0132	0.0949
167	SLE FR 2	-0.27	-0.23	47.4	15.9695	0.0132	0.095
167	SLE FR 3	-0.27	-0.24	47.58	16.0267	0.0133	0.0954
167	SLE FR 4	-0.28	-0.22	49.17	16.5801	0.0137	0.0991
167	SLE FR 5	-0.28	-0.23	49.34	16.6374	0.0138	0.0995
167	SLE FR 6	-0.29	-0.22	50.33	16.9832	0.0141	0.1018
167	SLE QP 1	-0.27	-0.24	47.39	15.9654	0.0132	0.0949
167	SLE QP 2	-0.28	-0.23	49.16	16.5761	0.0137	0.0991
167	SLD 1	3.85	0.24	49.56	16.7003	0.0175	-1.3493
167	SLD 2	4.36	0.19	49.49	16.6834	0.0162	-1.5275
167	SLD 3	3.79	-0.93	48.1	16.292	0.0171	-1.3267
167	SLD 4	4.3	-0.97	48.03	16.275	0.0157	-1.505
167	SLD 5	0.96	1.69	51.51	17.2357	0.0157	-0.338
167	SLD 6	1.3	1.66	51.47	17.2246	0.0148	-0.4548
167	SLD 7	0.75	-2.2	46.63	15.8745	0.0144	-0.2627
167	SLD 8	1.08	-2.23	46.59	15.8634	0.0135	-0.3796
167	SLD 9	-1.65	1.77	51.73	17.2888	0.014	0.5777

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLD 10	-1.32	1.74	51.68	17.2777	0.0131	0.4609
167	SLD 11	-1.87	-2.11	46.85	15.9276	0.0126	0.653
167	SLD 12	-1.53	-2.14	46.8	15.9165	0.0117	0.5361
167	SLD 13	-4.86	0.51	50.28	16.8772	0.0117	1.7031
167	SLD 14	-4.35	0.47	50.21	16.8602	0.0104	1.5248
167	SLD 15	-4.93	-0.65	48.82	16.4688	0.0113	1.7257
167	SLD 16	-4.42	-0.7	48.75	16.4518	0.01	1.5474
167	SLV 1	9.39	0.83	50.06	16.8521	0.0225	-3.2891
167	SLV 2	10.58	0.73	49.9	16.8127	0.0194	-3.7043
167	SLV 3	9.24	-1.82	46.74	15.9259	0.0216	-3.2364
167	SLV 4	10.43	-1.93	46.58	15.8864	0.0185	-3.6516
167	SLV 5	2.64	4.13	54.49	18.0706	0.0183	-0.9258
167	SLV 6	3.41	4.06	54.39	18.0451	0.0163	-1.1934
167	SLV 7	2.14	-4.71	43.42	14.983	0.0152	-0.7501
167	SLV 8	2.91	-4.78	43.32	14.9575	0.0132	-1.0177
167	SLV 9	-3.47	4.32	54.99	18.1947	0.0143	1.2158
167	SLV 10	-2.71	4.25	54.89	18.1692	0.0122	0.9483
167	SLV 11	-3.97	-4.52	43.93	15.1071	0.0112	1.3915
167	SLV 12	-3.21	-4.59	43.82	15.0816	0.0091	1.124
167	SLV 13	-10.99	1.47	51.74	17.2658	0.009	3.8497
167	SLV 14	-9.8	1.36	51.58	17.2263	0.0059	3.4345
167	SLV 15	-11.14	-1.18	48.42	16.3395	0.0081	3.9024
167	SLV 16	-9.95	-1.29	48.26	16.3	0.0049	3.4873
167	CRTFP Ux+	0	0	0	0	0	0
167	CRTFP Ux-	0	0	0	0	0	0
167	CRTFP Uy+	0	0	0	0	0	0
167	CRTFP Uy-	0	0	0	0	0	0
168	SLU 1	-0.25	-0.25	45.5	15.3223	0.0102	0.0866
168	SLU 2	-0.25	-0.19	45.6	15.3525	0.0103	0.087
168	SLU 3	-0.25	-0.24	46.49	15.6526	0.0105	0.0884
168	SLU 4	-0.25	-0.2	46.55	15.6707	0.0105	0.0886
168	SLU 5	-0.25	-0.19	46.28	15.5793	0.0105	0.0886
168	SLU 6	-0.26	-0.24	47.18	15.8794	0.0107	0.09
168	SLU 7	-0.26	-0.21	47.24	15.8975	0.0107	0.0902
168	SLU 8	-0.26	-0.25	46.87	15.7758	0.0107	0.0898
168	SLU 9	-0.26	-0.22	46.93	15.794	0.0107	0.09
168	SLU 10	-0.29	-0.17	51.72	17.4796	0.0119	0.1009
168	SLU 11	-0.29	-0.21	52.62	17.7797	0.0121	0.1023
168	SLU 12	-0.29	-0.18	52.68	17.7978	0.0121	0.1026
168	SLU 13	-0.29	-0.17	52.41	17.7064	0.0121	0.1025
168	SLU 14	-0.3	-0.22	53.3	18.0065	0.0123	0.1039
168	SLU 15	-0.3	-0.18	53.36	18.0246	0.0123	0.1042
168	SLU 16	-0.3	-0.23	52.99	17.903	0.0123	0.1037
168	SLU 17	-0.3	-0.19	53.05	17.9211	0.0123	0.104
168	SLU 18	-0.3	-0.21	54.25	18.3611	0.0126	0.1065
168	SLU 19	-0.3	-0.18	54.31	18.3792	0.0126	0.1068
168	SLU 20	-0.31	-0.22	54.93	18.5878	0.0128	0.1081
168	SLU 21	-0.31	-0.18	54.99	18.606	0.0128	0.1083
168	SLU 22	-0.27	-0.21	50.81	17.1192	0.0114	0.0959
168	SLU 23	-0.28	-0.15	50.91	17.1494	0.0115	0.0963
168	SLU 24	-0.28	-0.2	51.81	17.4495	0.0117	0.0977
168	SLU 25	-0.28	-0.17	51.87	17.4676	0.0117	0.098
168	SLU 26	-0.28	-0.16	51.6	17.3762	0.0117	0.0979
168	SLU 27	-0.28	-0.2	52.49	17.6763	0.0119	0.0993
168	SLU 28	-0.28	-0.17	52.55	17.6944	0.0119	0.0996
168	SLU 29	-0.28	-0.21	52.19	17.5728	0.0119	0.0991
168	SLU 30	-0.28	-0.18	52.25	17.5909	0.0119	0.0994
168	SLU 31	-0.32	-0.13	57.04	19.2766	0.0131	0.1103
168	SLU 32	-0.32	-0.18	57.93	19.5766	0.0133	0.1117
168	SLU 33	-0.32	-0.14	57.99	19.5948	0.0133	0.1119
168	SLU 34	-0.32	-0.13	57.72	19.5033	0.0133	0.1119
168	SLU 35	-0.32	-0.18	58.62	19.8034	0.0135	0.1133
168	SLU 36	-0.32	-0.15	58.68	19.8215	0.0135	0.1135
168	SLU 37	-0.32	-0.19	58.31	19.6999	0.0135	0.1131
168	SLU 38	-0.32	-0.16	58.37	19.718	0.0135	0.1133
168	SLU 39	-0.33	-0.18	59.56	20.158	0.0138	0.1159
168	SLU 40	-0.33	-0.14	59.62	20.1761	0.0138	0.1161
168	SLU 41	-0.34	-0.18	60.25	20.3847	0.014	0.1175
168	SLU 42	-0.34	-0.14	60.31	20.4029	0.014	0.1177
168	SLU 43	-0.31	-0.33	57.32	19.3029	0.0129	0.1093
168	SLU 44	-0.31	-0.28	57.42	19.3331	0.0129	0.1097
168	SLU 45	-0.32	-0.32	58.32	19.6332	0.0131	0.1111
168	SLU 46	-0.32	-0.29	58.38	19.6513	0.0131	0.1114
168	SLU 47	-0.32	-0.28	58.11	19.5599	0.0131	0.1113
168	SLU 48	-0.32	-0.33	59	19.86	0.0133	0.1127
168	SLU 49	-0.32	-0.29	59.06	19.8781	0.0133	0.113
168	SLU 50	-0.32	-0.34	58.69	19.7564	0.0133	0.1125
168	SLU 51	-0.32	-0.3	58.75	19.7746	0.0133	0.1127
168	SLU 52	-0.35	-0.25	63.55	21.4602	0.0146	0.1237
168	SLU 53	-0.36	-0.3	64.44	21.7603	0.0148	0.1251
168	SLU 54	-0.36	-0.27	64.5	21.7785	0.0148	0.1253
168	SLU 55	-0.36	-0.26	64.23	21.687	0.0148	0.1253
168	SLU 56	-0.36	-0.3	65.13	21.9871	0.015	0.1267
168	SLU 57	-0.36	-0.27	65.19	22.0052	0.015	0.1269
168	SLU 58	-0.36	-0.31	64.82	21.8836	0.015	0.1265
168	SLU 59	-0.36	-0.28	64.88	21.9017	0.015	0.1267
168	SLU 60	-0.37	-0.3	66.07	22.3417	0.0153	0.1293
168	SLU 61	-0.37	-0.27	66.13	22.3598	0.0153	0.1295
168	SLU 62	-0.37	-0.3	66.76	22.5684	0.0155	0.1309
168	SLU 63	-0.37	-0.27	66.82	22.5866	0.0155	0.1311

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
168	SLU 64	-0.34	-0.3	62.64	21.0998	0.0141	0.1187
168	SLU 65	-0.34	-0.24	62.74	21.13	0.0141	0.1191
168	SLU 66	-0.34	-0.29	63.64	21.4301	0.0143	0.1205
168	SLU 67	-0.34	-0.25	63.7	21.4482	0.0143	0.1207
168	SLU 68	-0.34	-0.24	63.43	21.3568	0.0143	0.1207
168	SLU 69	-0.35	-0.29	64.32	21.6569	0.0145	0.1221
168	SLU 70	-0.35	-0.26	64.38	21.675	0.0145	0.1223
168	SLU 71	-0.35	-0.3	64.01	21.5534	0.0145	0.1219
168	SLU 72	-0.35	-0.27	64.07	21.5715	0.0145	0.1221
168	SLU 73	-0.38	-0.22	68.86	23.2572	0.0158	0.1331
168	SLU 74	-0.38	-0.26	69.76	23.5572	0.016	0.1345
168	SLU 75	-0.38	-0.23	69.82	23.5754	0.016	0.1347
168	SLU 76	-0.38	-0.22	69.55	23.4839	0.016	0.1347
168	SLU 77	-0.39	-0.27	70.44	23.784	0.0162	0.136
168	SLU 78	-0.39	-0.23	70.5	23.8021	0.0162	0.1363
168	SLU 79	-0.39	-0.28	70.14	23.6805	0.0162	0.1358
168	SLU 80	-0.39	-0.24	70.2	23.6986	0.0162	0.1361
168	SLU 81	-0.4	-0.26	71.39	24.1386	0.0165	0.1386
168	SLU 82	-0.4	-0.23	71.45	24.1567	0.0165	0.1389
168	SLU 83	-0.4	-0.26	72.07	24.3654	0.0167	0.1402
168	SLU 84	-0.4	-0.23	72.13	24.3835	0.0167	0.1405
168	SLE RA 1	-0.25	-0.24	47.02	15.8357	0.0106	0.0892
168	SLE RA 2	-0.26	-0.2	47.08	15.8558	0.0106	0.0895
168	SLE RA 3	-0.26	-0.23	47.68	16.0559	0.0107	0.0904
168	SLE RA 4	-0.26	-0.21	47.72	16.068	0.0107	0.0906
168	SLE RA 5	-0.26	-0.2	47.54	16.007	0.0107	0.0906
168	SLE RA 6	-0.26	-0.23	48.14	16.2071	0.0109	0.0915
168	SLE RA 7	-0.26	-0.21	48.18	16.2192	0.0109	0.0917
168	SLE RA 8	-0.26	-0.24	47.93	16.1381	0.0109	0.0914
168	SLE RA 9	-0.26	-0.22	47.97	16.1501	0.0109	0.0915
168	SLE RA 10	-0.28	-0.18	51.17	17.2739	0.0117	0.0988
168	SLE RA 11	-0.28	-0.21	51.76	17.474	0.0118	0.0997
168	SLE RA 12	-0.29	-0.19	51.8	17.4861	0.0118	0.0999
168	SLE RA 13	-0.29	-0.18	51.62	17.4251	0.0119	0.0999
168	SLE RA 14	-0.29	-0.22	52.22	17.6252	0.012	0.1008
168	SLE RA 15	-0.29	-0.19	52.26	17.6372	0.012	0.101
168	SLE RA 16	-0.29	-0.22	52.01	17.5562	0.012	0.1007
168	SLE RA 17	-0.29	-0.2	52.05	17.5682	0.012	0.1008
168	SLE RA 18	-0.29	-0.21	52.85	17.8616	0.0122	0.1025
168	SLE RA 19	-0.29	-0.19	52.89	17.8736	0.0122	0.1027
168	SLE RA 20	-0.3	-0.22	53.31	18.0127	0.0123	0.1036
168	SLE RA 21	-0.3	-0.19	53.35	18.0248	0.0123	0.1038
168	SLE FR 1	-0.25	-0.24	47.02	15.8357	0.0106	0.0892
168	SLE FR 2	-0.26	-0.23	47.03	15.8397	0.0106	0.0893
168	SLE FR 3	-0.26	-0.24	47.2	15.8962	0.0106	0.0897
168	SLE FR 4	-0.27	-0.22	48.78	16.4475	0.0111	0.0933
168	SLE FR 5	-0.27	-0.23	48.95	16.5039	0.0111	0.0937
168	SLE FR 6	-0.27	-0.22	49.93	16.8486	0.0114	0.0959
168	SLE QP 1	-0.25	-0.24	47.02	15.8357	0.0106	0.0892
168	SLE QP 2	-0.27	-0.23	48.77	16.4435	0.0111	0.0932
168	SLD 1	3.87	0.21	49.1	16.5324	0.0146	-1.3542
168	SLD 2	4.38	0.18	49.07	16.5269	0.0132	-1.5324
168	SLD 3	3.8	-0.95	47.64	16.1259	0.0144	-1.3316
168	SLD 4	4.31	-0.98	47.62	16.1204	0.013	-1.5097
168	SLD 5	0.98	1.67	51.08	17.0876	0.0127	-0.3436
168	SLD 6	1.32	1.65	51.06	17.084	0.0118	-0.4604
168	SLD 7	0.77	-2.2	46.23	15.7327	0.0119	-0.2683
168	SLD 8	1.1	-2.22	46.21	15.7291	0.011	-0.385
168	SLD 9	-1.63	1.76	51.32	17.1578	0.0111	0.5715
168	SLD 10	-1.3	1.74	51.3	17.1542	0.0102	0.4547
168	SLD 11	-1.85	-2.1	46.47	15.8029	0.0103	0.6469
168	SLD 12	-1.51	-2.12	46.46	15.7993	0.0094	0.5301
168	SLD 13	-4.85	0.52	49.91	16.7665	0.0091	1.6962
168	SLD 14	-4.34	0.49	49.89	16.761	0.0077	1.5181
168	SLD 15	-4.91	-0.64	48.46	16.36	0.0089	1.7188
168	SLD 16	-4.4	-0.67	48.43	16.3545	0.0075	1.5407
168	SLV 1	9.4	0.75	49.49	16.6369	0.0194	-3.2929
168	SLV 2	10.59	0.69	49.43	16.6241	0.0161	-3.7078
168	SLV 3	9.25	-1.89	46.19	15.7149	0.0188	-3.2401
168	SLV 4	10.44	-1.96	46.13	15.7021	0.0156	-3.655
168	SLV 5	2.66	4.08	54	17.9021	0.0149	-0.9312
168	SLV 6	3.43	4.04	53.96	17.8939	0.0129	-1.1986
168	SLV 7	2.16	-4.72	43	14.8287	0.0131	-0.7553
168	SLV 8	2.92	-4.76	42.96	14.8204	0.011	-1.0226
168	SLV 9	-3.45	4.31	54.57	18.0665	0.0111	1.2091
168	SLV 10	-2.69	4.26	54.53	18.0583	0.009	0.9417
168	SLV 11	-3.96	-4.5	43.57	14.9931	0.0093	1.385
168	SLV 12	-3.19	-4.54	43.53	14.9848	0.0072	1.1177
168	SLV 13	-10.97	1.5	51.4	17.1849	0.0066	3.8414
168	SLV 14	-9.79	1.43	51.34	17.1721	0.0033	3.4266
168	SLV 15	-11.13	-1.14	48.1	16.2628	0.006	3.8942
168	SLV 16	-9.94	-1.21	48.04	16.25	0.0028	3.4794
168	CRTFP Ux+	0	0	0	0	0	0
168	CRTFP Ux-	0	0	0	0	0	0
168	CRTFP Uy+	0	0	0	0	0	0
168	CRTFP Uy-	0	0	0	0	0	0
169	SLU 1	-0.23	-0.24	45.22	15.2323	0.0072	0.0793
169	SLU 2	-0.23	-0.19	45.32	15.2624	0.0072	0.0799
169	SLU 3	-0.23	-0.24	46.21	15.5607	0.0073	0.081
169	SLU 4	-0.23	-0.2	46.27	15.5788	0.0074	0.0813

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
169	SLU 5	-0.23	-0.19	46	15.4871	0.0074	0.0814
169	SLU 6	-0.24	-0.24	46.89	15.7854	0.0075	0.0825
169	SLU 7	-0.24	-0.2	46.95	15.8035	0.0075	0.0828
169	SLU 8	-0.24	-0.25	46.58	15.6817	0.0075	0.0824
169	SLU 9	-0.24	-0.22	46.64	15.6998	0.0076	0.0827
169	SLU 10	-0.27	-0.16	51.4	17.3752	0.0086	0.0931
169	SLU 11	-0.27	-0.21	52.29	17.6736	0.0087	0.0942
169	SLU 12	-0.27	-0.18	52.35	17.6916	0.0087	0.0946
169	SLU 13	-0.27	-0.17	52.08	17.5999	0.0087	0.0947
169	SLU 14	-0.27	-0.21	52.97	17.8983	0.0088	0.0958
169	SLU 15	-0.27	-0.18	53.03	17.9163	0.0088	0.0961
169	SLU 16	-0.27	-0.23	52.66	17.7946	0.0089	0.0956
169	SLU 17	-0.27	-0.19	52.72	17.8126	0.0089	0.096
169	SLU 18	-0.28	-0.21	53.91	18.2507	0.0091	0.0982
169	SLU 19	-0.28	-0.18	53.97	18.2687	0.0091	0.0986
169	SLU 20	-0.28	-0.21	54.59	18.4754	0.0093	0.0998
169	SLU 21	-0.29	-0.18	54.65	18.4934	0.0093	0.1001
169	SLU 22	-0.25	-0.21	50.51	17.0188	0.008	0.0876
169	SLU 23	-0.25	-0.15	50.61	17.0488	0.008	0.0882
169	SLU 24	-0.26	-0.2	51.5	17.3472	0.0081	0.0893
169	SLU 25	-0.26	-0.16	51.56	17.3653	0.0082	0.0897
169	SLU 26	-0.26	-0.15	51.29	17.2736	0.0082	0.0897
169	SLU 27	-0.26	-0.2	52.18	17.5719	0.0083	0.0909
169	SLU 28	-0.26	-0.17	52.24	17.59	0.0083	0.0912
169	SLU 29	-0.26	-0.21	51.87	17.4682	0.0083	0.0907
169	SLU 30	-0.26	-0.18	51.93	17.4862	0.0084	0.0911
169	SLU 31	-0.29	-0.13	56.69	19.1617	0.0094	0.1015
169	SLU 32	-0.29	-0.17	57.58	19.4601	0.0095	0.1026
169	SLU 33	-0.29	-0.14	57.64	19.4781	0.0095	0.1029
169	SLU 34	-0.29	-0.13	57.37	19.3864	0.0095	0.103
169	SLU 35	-0.3	-0.18	58.26	19.6848	0.0096	0.1041
169	SLU 36	-0.3	-0.14	58.32	19.7028	0.0097	0.1045
169	SLU 37	-0.3	-0.19	57.95	19.5811	0.0097	0.104
169	SLU 38	-0.3	-0.15	58.01	19.5991	0.0097	0.1043
169	SLU 39	-0.3	-0.17	59.19	20.0372	0.0099	0.1066
169	SLU 40	-0.31	-0.14	59.25	20.0552	0.0099	0.1069
169	SLU 41	-0.31	-0.18	59.87	20.2619	0.0101	0.1081
169	SLU 42	-0.31	-0.14	59.93	20.2799	0.0101	0.1085
169	SLU 43	-0.29	-0.33	56.98	19.1895	0.0091	0.1002
169	SLU 44	-0.29	-0.27	57.08	19.2196	0.0091	0.1008
169	SLU 45	-0.29	-0.32	57.97	19.5179	0.0092	0.1019
169	SLU 46	-0.29	-0.29	58.03	19.536	0.0092	0.1022
169	SLU 47	-0.29	-0.28	57.76	19.4443	0.0093	0.1023
169	SLU 48	-0.3	-0.32	58.65	19.7426	0.0094	0.1034
169	SLU 49	-0.3	-0.29	58.71	19.7607	0.0094	0.1038
169	SLU 50	-0.29	-0.34	58.34	19.6389	0.0094	0.1033
169	SLU 51	-0.3	-0.3	58.4	19.6569	0.0094	0.1036
169	SLU 52	-0.33	-0.25	63.16	21.3324	0.0104	0.1141
169	SLU 53	-0.33	-0.3	64.05	21.6308	0.0105	0.1152
169	SLU 54	-0.33	-0.26	64.1	21.6488	0.0106	0.1155
169	SLU 55	-0.33	-0.25	63.84	21.5571	0.0106	0.1156
169	SLU 56	-0.33	-0.3	64.72	21.8555	0.0107	0.1167
169	SLU 57	-0.33	-0.27	64.78	21.8735	0.0107	0.117
169	SLU 58	-0.33	-0.31	64.42	21.7518	0.0107	0.1166
169	SLU 59	-0.33	-0.28	64.48	21.7698	0.0108	0.1169
169	SLU 60	-0.34	-0.3	65.66	22.2079	0.011	0.1192
169	SLU 61	-0.34	-0.26	65.72	22.2259	0.011	0.1195
169	SLU 62	-0.34	-0.3	66.34	22.4326	0.0111	0.1207
169	SLU 63	-0.35	-0.27	66.4	22.4506	0.0112	0.121
169	SLU 64	-0.31	-0.29	62.27	20.976	0.0099	0.1086
169	SLU 65	-0.31	-0.24	62.36	21.006	0.0099	0.1091
169	SLU 66	-0.31	-0.28	63.25	21.3044	0.01	0.1102
169	SLU 67	-0.32	-0.25	63.31	21.3224	0.01	0.1106
169	SLU 68	-0.32	-0.24	63.04	21.2307	0.0101	0.1107
169	SLU 69	-0.32	-0.29	63.93	21.5291	0.0102	0.1118
169	SLU 70	-0.32	-0.25	63.99	21.5471	0.0102	0.1121
169	SLU 71	-0.32	-0.3	63.62	21.4254	0.0102	0.1116
169	SLU 72	-0.32	-0.26	63.68	21.4434	0.0102	0.112
169	SLU 73	-0.35	-0.21	68.44	23.1189	0.0113	0.1224
169	SLU 74	-0.35	-0.26	69.33	23.4173	0.0114	0.1235
169	SLU 75	-0.35	-0.23	69.39	23.4353	0.0114	0.1238
169	SLU 76	-0.35	-0.22	69.12	23.3436	0.0114	0.1239
169	SLU 77	-0.36	-0.26	70.01	23.642	0.0115	0.125
169	SLU 78	-0.36	-0.23	70.07	23.66	0.0115	0.1254
169	SLU 79	-0.36	-0.27	69.7	23.5383	0.0115	0.1249
169	SLU 80	-0.36	-0.24	69.76	23.5563	0.0116	0.1252
169	SLU 81	-0.36	-0.26	70.95	23.9944	0.0118	0.1275
169	SLU 82	-0.37	-0.23	71.01	24.0124	0.0118	0.1279
169	SLU 83	-0.37	-0.26	71.63	24.2191	0.012	0.1291
169	SLU 84	-0.37	-0.23	71.69	24.2371	0.012	0.1294
169	SLE RA 1	-0.23	-0.23	46.73	15.7428	0.0074	0.0817
169	SLE RA 2	-0.23	-0.2	46.8	15.7628	0.0075	0.0821
169	SLE RA 3	-0.24	-0.23	47.39	15.9617	0.0075	0.0828
169	SLE RA 4	-0.24	-0.21	47.43	15.9737	0.0075	0.083
169	SLE RA 5	-0.24	-0.2	47.25	15.9126	0.0076	0.0831
169	SLE RA 6	-0.24	-0.23	47.85	16.1115	0.0076	0.0838
169	SLE RA 7	-0.24	-0.21	47.89	16.1235	0.0076	0.084
169	SLE RA 8	-0.24	-0.24	47.64	16.0424	0.0077	0.0837
169	SLE RA 9	-0.24	-0.21	47.68	16.0544	0.0077	0.084
169	SLE RA 10	-0.26	-0.18	50.85	17.1714	0.0083	0.0909

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
169	SLE RA 11	-0.26	-0.21	51.45	17.3703	0.0084	0.0916
169	SLE RA 12	-0.26	-0.19	51.48	17.3823	0.0084	0.0919
169	SLE RA 13	-0.26	-0.18	51.31	17.3212	0.0084	0.0919
169	SLE RA 14	-0.26	-0.21	51.9	17.5201	0.0085	0.0927
169	SLE RA 15	-0.27	-0.19	51.94	17.5321	0.0085	0.0929
169	SLE RA 16	-0.26	-0.22	51.69	17.4509	0.0085	0.0926
169	SLE RA 17	-0.26	-0.2	51.73	17.463	0.0085	0.0928
169	SLE RA 18	-0.27	-0.21	52.52	17.755	0.0087	0.0943
169	SLE RA 19	-0.27	-0.19	52.56	17.767	0.0087	0.0945
169	SLE RA 20	-0.27	-0.21	52.98	17.9048	0.0088	0.0953
169	SLE RA 21	-0.27	-0.19	53.02	17.9168	0.0088	0.0956
169	SLE FR 1	-0.23	-0.23	46.73	15.7428	0.0074	0.0817
169	SLE FR 2	-0.23	-0.23	46.75	15.7468	0.0074	0.0818
169	SLE FR 3	-0.23	-0.23	46.92	15.8027	0.0075	0.0821
169	SLE FR 4	-0.24	-0.22	48.48	16.3504	0.0078	0.0855
169	SLE FR 5	-0.25	-0.23	48.65	16.4064	0.0079	0.0859
169	SLE FR 6	-0.25	-0.22	49.63	16.7489	0.0081	0.088
169	SLE QP 1	-0.23	-0.23	46.73	15.7428	0.0074	0.0817
169	SLE QP 2	-0.24	-0.23	48.47	16.3464	0.0078	0.0855
169	SLD 1	3.88	0.2	48.73	16.3938	0.0113	-1.3592
169	SLD 2	4.39	0.19	48.75	16.3996	0.0099	-1.5369
169	SLD 3	3.82	-0.96	47.28	15.9859	0.0111	-1.3365
169	SLD 4	4.33	-0.97	47.29	15.9917	0.0097	-1.5143
169	SLD 5	1	1.66	50.75	16.9782	0.0094	-0.3506
169	SLD 6	1.34	1.65	50.76	16.982	0.0085	-0.4672
169	SLD 7	0.79	-2.2	45.91	15.6187	0.0088	-0.2752
169	SLD 8	1.12	-2.21	45.92	15.6225	0.0079	-0.3917
169	SLD 9	-1.61	1.76	51.02	17.0704	0.0078	0.5627
169	SLD 10	-1.27	1.75	51.03	17.0742	0.0068	0.4461
169	SLD 11	-1.82	-2.11	46.18	15.7108	0.0072	0.6381
169	SLD 12	-1.49	-2.11	46.2	15.7146	0.0062	0.5216
169	SLD 13	-4.82	0.52	49.65	16.7011	0.0059	1.6852
169	SLD 14	-4.31	0.5	49.67	16.7069	0.0045	1.5075
169	SLD 15	-4.88	-0.64	48.2	16.2933	0.0057	1.7079
169	SLD 16	-4.37	-0.65	48.21	16.2991	0.0043	1.5301
169	SLV 1	9.41	0.73	49.02	16.4427	0.0159	-3.294
169	SLV 2	10.6	0.71	49.06	16.4562	0.0127	-3.7081
169	SLV 3	9.26	-1.9	45.73	15.5175	0.0155	-3.2412
169	SLV 4	10.45	-1.93	45.77	15.531	0.0123	-3.6552
169	SLV 5	2.68	4.07	53.62	17.7763	0.0114	-0.9372
169	SLV 6	3.44	4.05	53.65	17.785	0.0094	-1.204
169	SLV 7	2.17	-4.73	42.65	14.6921	0.01	-0.7611
169	SLV 8	2.94	-4.74	42.67	14.7008	0.008	-1.0279
169	SLV 9	-3.43	4.29	54.27	17.992	0.0077	1.1988
169	SLV 10	-2.66	4.27	54.3	18.0007	0.0056	0.932
169	SLV 11	-3.93	-4.5	43.29	14.9079	0.0063	1.375
169	SLV 12	-3.17	-4.52	43.32	14.9166	0.0042	1.1082
169	SLV 13	-10.94	1.48	51.17	17.1619	0.0033	3.8262
169	SLV 14	-9.75	1.45	51.21	17.1754	0.0001	3.4121
169	SLV 15	-11.09	-1.16	47.88	16.2367	0.0029	3.879
169	SLV 16	-9.9	-1.19	47.92	16.2502	-0.0003	3.465
169	CRTFP Ux+	0	0	0	0	0	0
169	CRTFP Ux-	0	0	0	0	0	0
169	CRTFP Uy+	0	0	0	0	0	0
169	CRTFP Uy-	0	0	0	0	0	0
170	SLU 1	-0.2	-0.25	45.05	15.1774	0.0043	0.071
170	SLU 2	-0.21	-0.19	45.14	15.2072	0.0044	0.0718
170	SLU 3	-0.21	-0.24	46.03	15.5054	0.0044	0.0725
170	SLU 4	-0.21	-0.2	46.09	15.5232	0.0044	0.073
170	SLU 5	-0.21	-0.19	45.82	15.4307	0.0045	0.0732
170	SLU 6	-0.21	-0.24	46.71	15.729	0.0045	0.074
170	SLU 7	-0.21	-0.21	46.76	15.7468	0.0046	0.0744
170	SLU 8	-0.21	-0.25	46.4	15.6246	0.0046	0.0739
170	SLU 9	-0.21	-0.22	46.45	15.6424	0.0046	0.0744
170	SLU 10	-0.24	-0.16	51.18	17.3008	0.0054	0.0842
170	SLU 11	-0.24	-0.21	52.07	17.5991	0.0054	0.085
170	SLU 12	-0.24	-0.18	52.13	17.6169	0.0055	0.0855
170	SLU 13	-0.25	-0.17	51.86	17.5244	0.0055	0.0857
170	SLU 14	-0.25	-0.22	52.75	17.8226	0.0056	0.0865
170	SLU 15	-0.25	-0.18	52.81	17.8405	0.0056	0.0869
170	SLU 16	-0.25	-0.23	52.44	17.7183	0.0056	0.0864
170	SLU 17	-0.25	-0.19	52.49	17.7361	0.0056	0.0868
170	SLU 18	-0.25	-0.21	53.68	18.1684	0.0058	0.0889
170	SLU 19	-0.26	-0.18	53.73	18.1862	0.0058	0.0893
170	SLU 20	-0.26	-0.21	54.35	18.392	0.0059	0.0903
170	SLU 21	-0.26	-0.18	54.41	18.4098	0.0059	0.0908
170	SLU 22	-0.22	-0.21	50.31	16.9573	0.0048	0.0782
170	SLU 23	-0.23	-0.15	50.41	16.987	0.0048	0.0789
170	SLU 24	-0.23	-0.2	51.3	17.2853	0.0049	0.0797
170	SLU 25	-0.23	-0.17	51.36	17.3031	0.0049	0.0802
170	SLU 26	-0.23	-0.15	51.08	17.2106	0.005	0.0804
170	SLU 27	-0.23	-0.2	51.97	17.5088	0.005	0.0812
170	SLU 28	-0.23	-0.17	52.03	17.5267	0.005	0.0816
170	SLU 29	-0.23	-0.21	51.66	17.4044	0.005	0.0811
170	SLU 30	-0.23	-0.18	51.72	17.4223	0.0051	0.0815
170	SLU 31	-0.26	-0.13	56.45	19.0807	0.0059	0.0914
170	SLU 32	-0.26	-0.18	57.34	19.3789	0.0059	0.0922
170	SLU 33	-0.27	-0.14	57.4	19.3968	0.0059	0.0927
170	SLU 34	-0.27	-0.13	57.13	19.3043	0.006	0.0929
170	SLU 35	-0.27	-0.18	58.01	19.6025	0.006	0.0937

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
170	SLU 36	-0.27	-0.14	58.07	19.6204	0.006	0.0941
170	SLU 37	-0.27	-0.19	57.7	19.4981	0.0061	0.0936
170	SLU 38	-0.27	-0.16	57.76	19.516	0.0061	0.094
170	SLU 39	-0.27	-0.17	58.94	19.9482	0.0062	0.0961
170	SLU 40	-0.28	-0.14	59	19.9661	0.0063	0.0965
170	SLU 41	-0.28	-0.18	59.62	20.1718	0.0064	0.0975
170	SLU 42	-0.28	-0.14	59.67	20.1897	0.0064	0.0979
170	SLU 43	-0.26	-0.33	56.75	19.1204	0.0055	0.0899
170	SLU 44	-0.26	-0.27	56.85	19.1501	0.0055	0.0906
170	SLU 45	-0.26	-0.32	57.74	19.4484	0.0055	0.0914
170	SLU 46	-0.26	-0.29	57.8	19.4662	0.0056	0.0918
170	SLU 47	-0.26	-0.28	57.53	19.3737	0.0056	0.092
170	SLU 48	-0.27	-0.33	58.41	19.6719	0.0057	0.0928
170	SLU 49	-0.27	-0.29	58.47	19.6898	0.0057	0.0933
170	SLU 50	-0.27	-0.34	58.1	19.5675	0.0057	0.0928
170	SLU 51	-0.27	-0.3	58.16	19.5854	0.0057	0.0932
170	SLU 52	-0.3	-0.25	62.89	21.2438	0.0065	0.1031
170	SLU 53	-0.3	-0.3	63.78	21.542	0.0066	0.1039
170	SLU 54	-0.3	-0.27	63.84	21.5599	0.0066	0.1043
170	SLU 55	-0.3	-0.25	63.57	21.4674	0.0067	0.1045
170	SLU 56	-0.3	-0.3	64.45	21.7656	0.0067	0.1053
170	SLU 57	-0.3	-0.27	64.51	21.7835	0.0067	0.1058
170	SLU 58	-0.3	-0.31	64.14	21.6612	0.0067	0.1053
170	SLU 59	-0.3	-0.28	64.2	21.6791	0.0068	0.1057
170	SLU 60	-0.31	-0.3	65.38	22.1113	0.0069	0.1077
170	SLU 61	-0.31	-0.26	65.44	22.1292	0.007	0.1082
170	SLU 62	-0.31	-0.3	66.06	22.3349	0.0071	0.1092
170	SLU 63	-0.31	-0.27	66.12	22.3528	0.0071	0.1096
170	SLU 64	-0.28	-0.29	62.02	20.9002	0.0059	0.0971
170	SLU 65	-0.28	-0.24	62.12	20.93	0.006	0.0978
170	SLU 66	-0.28	-0.29	63.01	21.2282	0.006	0.0986
170	SLU 67	-0.28	-0.25	63.06	21.2461	0.006	0.099
170	SLU 68	-0.28	-0.24	62.79	21.1536	0.0061	0.0992
170	SLU 69	-0.29	-0.29	63.68	21.4518	0.0061	0.1
170	SLU 70	-0.29	-0.25	63.74	21.4697	0.0062	0.1005
170	SLU 71	-0.29	-0.3	63.37	21.3474	0.0062	0.1
170	SLU 72	-0.29	-0.27	63.43	21.3653	0.0062	0.1004
170	SLU 73	-0.32	-0.21	68.16	23.0237	0.007	0.1103
170	SLU 74	-0.32	-0.26	69.05	23.3219	0.007	0.1111
170	SLU 75	-0.32	-0.23	69.1	23.3398	0.0071	0.1115
170	SLU 76	-0.32	-0.22	68.83	23.2473	0.0071	0.1117
170	SLU 77	-0.32	-0.27	69.72	23.5455	0.0072	0.1125
170	SLU 78	-0.32	-0.23	69.78	23.5634	0.0072	0.1129
170	SLU 79	-0.32	-0.28	69.41	23.4411	0.0072	0.1124
170	SLU 80	-0.32	-0.24	69.47	23.459	0.0072	0.1129
170	SLU 81	-0.33	-0.26	70.65	23.8912	0.0074	0.1149
170	SLU 82	-0.33	-0.23	70.71	23.9091	0.0074	0.1153
170	SLU 83	-0.33	-0.26	71.32	24.1148	0.0075	0.1164
170	SLU 84	-0.33	-0.23	71.38	24.1327	0.0075	0.1168
170	SLE RA 1	-0.21	-0.23	46.55	15.6859	0.0045	0.0731
170	SLE RA 2	-0.21	-0.2	46.62	15.7058	0.0045	0.0736
170	SLE RA 3	-0.21	-0.23	47.21	15.9046	0.0045	0.0741
170	SLE RA 4	-0.21	-0.21	47.25	15.9165	0.0045	0.0744
170	SLE RA 5	-0.21	-0.2	47.07	15.8548	0.0046	0.0745
170	SLE RA 6	-0.21	-0.23	47.66	16.0536	0.0046	0.0751
170	SLE RA 7	-0.22	-0.21	47.7	16.0655	0.0046	0.0753
170	SLE RA 8	-0.21	-0.24	47.45	15.984	0.0046	0.075
170	SLE RA 9	-0.22	-0.22	47.49	15.9959	0.0046	0.0753
170	SLE RA 10	-0.23	-0.18	50.64	17.1016	0.0052	0.0819
170	SLE RA 11	-0.24	-0.21	51.23	17.3004	0.0052	0.0824
170	SLE RA 12	-0.24	-0.19	51.27	17.3123	0.0052	0.0827
170	SLE RA 13	-0.24	-0.18	51.09	17.2506	0.0053	0.0829
170	SLE RA 14	-0.24	-0.22	51.68	17.4494	0.0053	0.0834
170	SLE RA 15	-0.24	-0.19	51.72	17.4613	0.0053	0.0837
170	SLE RA 16	-0.24	-0.22	51.48	17.3798	0.0053	0.0833
170	SLE RA 17	-0.24	-0.2	51.52	17.3917	0.0053	0.0836
170	SLE RA 18	-0.24	-0.21	52.3	17.6799	0.0054	0.085
170	SLE RA 19	-0.24	-0.19	52.34	17.6918	0.0055	0.0853
170	SLE RA 20	-0.25	-0.21	52.75	17.829	0.0055	0.0859
170	SLE RA 21	-0.25	-0.19	52.79	17.8409	0.0055	0.0862
170	SLE FR 1	-0.21	-0.23	46.55	15.6859	0.0045	0.0731
170	SLE FR 2	-0.21	-0.23	46.56	15.6899	0.0045	0.0732
170	SLE FR 3	-0.21	-0.24	46.73	15.7456	0.0045	0.0735
170	SLE FR 4	-0.22	-0.22	48.29	16.2881	0.0048	0.0767
170	SLE FR 5	-0.22	-0.23	48.46	16.3437	0.0048	0.077
170	SLE FR 6	-0.23	-0.22	49.43	16.6829	0.0049	0.079
170	SLE QP 1	-0.21	-0.23	46.55	15.6859	0.0045	0.0731
170	SLE QP 2	-0.22	-0.23	48.28	16.2841	0.0047	0.0766
170	SLD 1	3.9	0.21	48.45	16.2968	0.0081	-1.3632
170	SLD 2	4.41	0.22	48.51	16.3144	0.0067	-1.5405
170	SLD 3	3.83	-0.95	46.99	15.8846	0.0084	-1.3406
170	SLD 4	4.34	-0.94	47.05	15.9023	0.007	-1.5178
170	SLD 5	1.02	1.66	50.52	16.9098	0.0056	-0.3582
170	SLD 6	1.36	1.66	50.56	16.9214	0.0047	-0.4744
170	SLD 7	0.81	-2.2	45.67	15.536	0.0065	-0.2826
170	SLD 8	1.14	-2.2	45.71	15.5476	0.0056	-0.3988
170	SLD 9	-1.58	1.74	50.84	17.0206	0.0039	0.5521
170	SLD 10	-1.25	1.75	50.88	17.0322	0.003	0.4359
170	SLD 11	-1.8	-2.12	45.99	15.6468	0.0048	0.6277
170	SLD 12	-1.46	-2.12	46.03	15.6584	0.0039	0.5115

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
170	SLD 13	-4.78	0.49	49.5	16.666	0.0025	1.6711
170	SLD 14	-4.27	0.49	49.56	16.6836	0.0011	1.4939
170	SLD 15	-4.84	-0.67	48.04	16.2538	0.0028	1.6938
170	SLD 16	-4.34	-0.66	48.1	16.2715	0.0014	1.5165
170	SLV 1	9.41	0.76	48.63	16.299	0.0125	-3.2917
170	SLV 2	10.59	0.77	48.77	16.3402	0.0094	-3.7046
170	SLV 3	9.26	-1.88	45.33	15.3641	0.0132	-3.2388
170	SLV 4	10.44	-1.87	45.47	15.4053	0.0101	-3.6517
170	SLV 5	2.7	4.07	53.36	17.6995	0.0067	-0.943
170	SLV 6	3.46	4.08	53.45	17.726	0.0047	-1.209
170	SLV 7	2.19	-4.73	42.36	14.583	0.0088	-0.7667
170	SLV 8	2.95	-4.72	42.45	14.6096	0.0067	-1.0327
170	SLV 9	-3.39	4.26	54.1	17.9587	0.0027	1.186
170	SLV 10	-2.63	4.27	54.19	17.9852	0.0007	0.92
170	SLV 11	-3.9	-4.53	43.1	14.8422	0.0048	1.3623
170	SLV 12	-3.13	-4.52	43.19	14.8688	0.0028	1.0963
170	SLV 13	-10.88	1.41	51.08	17.163	-0.0006	3.805
170	SLV 14	-9.7	1.43	51.22	17.2042	-0.0037	3.3921
170	SLV 15	-11.03	-1.23	47.78	16.228	0.0001	3.8579
170	SLV 16	-9.85	-1.21	47.93	16.2692	-0.003	3.445
170	CRTFP Ux+	0	0	0	0	0	0
170	CRTFP Ux-	0	0	0	0	0	0
170	CRTFP Uy+	0	0	0	0	0	0
170	CRTFP Uy-	0	0	0	0	0	0
171	SLU 1	-0.16	-0.23	40.66	13.7065	0.7584	0.0611
171	SLU 2	-0.17	-0.18	40.74	13.733	0.7601	0.061
171	SLU 3	-0.17	-0.22	41.55	14.0038	0.775	0.0622
171	SLU 4	-0.17	-0.19	41.6	14.0197	0.776	0.0621
171	SLU 5	-0.17	-0.18	41.35	13.935	0.7714	0.0623
171	SLU 6	-0.17	-0.23	42.15	14.2059	0.7864	0.0635
171	SLU 7	-0.17	-0.2	42.21	14.2217	0.7874	0.0634
171	SLU 8	-0.17	-0.24	41.87	14.1106	0.7812	0.0637
171	SLU 9	-0.17	-0.21	41.92	14.1264	0.7822	0.0636
171	SLU 10	-0.2	-0.16	46.18	15.6046	0.8619	0.0713
171	SLU 11	-0.2	-0.2	46.98	15.8755	0.8769	0.0725
171	SLU 12	-0.2	-0.17	47.04	15.8914	0.8779	0.0724
171	SLU 13	-0.2	-0.16	46.79	15.8067	0.8733	0.0726
171	SLU 14	-0.2	-0.21	47.59	16.0775	0.8883	0.0738
171	SLU 15	-0.2	-0.18	47.64	16.0934	0.8893	0.0737
171	SLU 16	-0.2	-0.22	47.31	15.9822	0.883	0.074
171	SLU 17	-0.2	-0.19	47.36	15.9981	0.884	0.0739
171	SLU 18	-0.21	-0.2	48.43	16.3803	0.9039	0.0759
171	SLU 19	-0.21	-0.17	48.48	16.3962	0.9049	0.0758
171	SLU 20	-0.21	-0.21	49.03	16.5824	0.9153	0.0771
171	SLU 21	-0.21	-0.17	49.08	16.5982	0.9163	0.077
171	SLU 22	-0.18	-0.2	45.41	15.3133	0.8471	0.066
171	SLU 23	-0.18	-0.15	45.5	15.3397	0.8487	0.0658
171	SLU 24	-0.18	-0.19	46.3	15.6106	0.8637	0.0671
171	SLU 25	-0.18	-0.16	46.35	15.6265	0.8647	0.067
171	SLU 26	-0.19	-0.15	46.1	15.5417	0.8601	0.0671
171	SLU 27	-0.19	-0.2	46.91	15.8126	0.875	0.0684
171	SLU 28	-0.19	-0.16	46.96	15.8285	0.876	0.0683
171	SLU 29	-0.19	-0.21	46.63	15.7173	0.8698	0.0686
171	SLU 30	-0.19	-0.17	46.68	15.7332	0.8708	0.0685
171	SLU 31	-0.21	-0.13	50.94	17.2114	0.9506	0.0761
171	SLU 32	-0.21	-0.17	51.74	17.4823	0.9655	0.0774
171	SLU 33	-0.22	-0.14	51.79	17.4981	0.9665	0.0773
171	SLU 34	-0.22	-0.13	51.54	17.4134	0.962	0.0774
171	SLU 35	-0.22	-0.17	52.35	17.6843	0.9769	0.0787
171	SLU 36	-0.22	-0.14	52.4	17.7002	0.9779	0.0786
171	SLU 37	-0.22	-0.18	52.06	17.589	0.9717	0.0789
171	SLU 38	-0.22	-0.15	52.12	17.6049	0.9727	0.0788
171	SLU 39	-0.22	-0.17	53.18	17.9871	0.9926	0.0807
171	SLU 40	-0.22	-0.14	53.23	18.003	0.9936	0.0806
171	SLU 41	-0.23	-0.17	53.79	18.1891	1.004	0.082
171	SLU 42	-0.23	-0.14	53.84	18.205	1.005	0.0819
171	SLU 43	-0.21	-0.31	51.22	17.2676	0.9555	0.0778
171	SLU 44	-0.21	-0.26	51.31	17.294	0.9572	0.0776
171	SLU 45	-0.21	-0.31	52.11	17.5649	0.9721	0.0789
171	SLU 46	-0.21	-0.27	52.16	17.5808	0.9731	0.0788
171	SLU 47	-0.21	-0.26	51.92	17.496	0.9686	0.0789
171	SLU 48	-0.21	-0.31	52.72	17.7669	0.9835	0.0802
171	SLU 49	-0.22	-0.28	52.77	17.7828	0.9845	0.0801
171	SLU 50	-0.21	-0.32	52.44	17.6716	0.9783	0.0804
171	SLU 51	-0.22	-0.29	52.49	17.6875	0.9793	0.0803
171	SLU 52	-0.24	-0.24	56.75	19.1657	1.0591	0.088
171	SLU 53	-0.24	-0.28	57.55	19.4366	1.074	0.0892
171	SLU 54	-0.24	-0.25	57.6	19.4524	1.075	0.0891
171	SLU 55	-0.24	-0.24	57.36	19.3677	1.0704	0.0892
171	SLU 56	-0.25	-0.29	58.16	19.6386	1.0854	0.0905
171	SLU 57	-0.25	-0.26	58.21	19.6545	1.0864	0.0904
171	SLU 58	-0.25	-0.3	57.88	19.5433	1.0802	0.0907
171	SLU 59	-0.25	-0.27	57.93	19.5592	1.0812	0.0906
171	SLU 60	-0.25	-0.28	58.99	19.9414	1.1011	0.0925
171	SLU 61	-0.25	-0.25	59.04	19.9573	1.1021	0.0924
171	SLU 62	-0.25	-0.29	59.6	20.1434	1.1124	0.0938
171	SLU 63	-0.26	-0.25	59.65	20.1593	1.1134	0.0937
171	SLU 64	-0.22	-0.28	55.98	18.8743	1.0442	0.0827
171	SLU 65	-0.23	-0.23	56.06	18.9008	1.0459	0.0825
171	SLU 66	-0.23	-0.27	56.87	19.1717	1.0608	0.0838

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
171	SLU 67	-0.23	-0.24	56.92	19.1875	1.0618	0.0837
171	SLU 68	-0.23	-0.23	56.67	19.1028	1.0572	0.0838
171	SLU 69	-0.23	-0.28	57.47	19.3737	1.0722	0.085
171	SLU 70	-0.23	-0.24	57.53	19.3896	1.0732	0.0849
171	SLU 71	-0.23	-0.29	57.19	19.2784	1.0669	0.0852
171	SLU 72	-0.23	-0.25	57.24	19.2943	1.0679	0.0851
171	SLU 73	-0.26	-0.21	61.5	20.7725	1.1477	0.0928
171	SLU 74	-0.26	-0.25	62.3	21.0433	1.1627	0.0941
171	SLU 75	-0.26	-0.22	62.36	21.0592	1.1637	0.094
171	SLU 76	-0.26	-0.21	62.11	20.9745	1.1591	0.0941
171	SLU 77	-0.26	-0.26	62.91	21.2454	1.174	0.0953
171	SLU 78	-0.26	-0.22	62.96	21.2612	1.175	0.0953
171	SLU 79	-0.26	-0.27	62.63	21.1501	1.1688	0.0955
171	SLU 80	-0.26	-0.23	62.68	21.1659	1.1698	0.0954
171	SLU 81	-0.27	-0.25	63.75	21.5482	1.1897	0.0974
171	SLU 82	-0.27	-0.22	63.8	21.564	1.1907	0.0973
171	SLU 83	-0.27	-0.25	64.35	21.7502	1.2011	0.0987
171	SLU 84	-0.27	-0.22	64.41	21.7661	1.2021	0.0986
171	SLE RA 1	-0.17	-0.22	42.01	14.1656	0.7837	0.0625
171	SLE RA 2	-0.17	-0.19	42.07	14.1832	0.7848	0.0624
171	SLE RA 3	-0.17	-0.22	42.61	14.3638	0.7948	0.0633
171	SLE RA 4	-0.17	-0.2	42.64	14.3744	0.7955	0.0632
171	SLE RA 5	-0.17	-0.19	42.48	14.3179	0.7924	0.0633
171	SLE RA 6	-0.17	-0.22	43.01	14.4985	0.8024	0.0641
171	SLE RA 7	-0.17	-0.2	43.05	14.5091	0.803	0.064
171	SLE RA 8	-0.17	-0.23	42.82	14.435	0.7989	0.0642
171	SLE RA 9	-0.17	-0.21	42.86	14.4455	0.7996	0.0642
171	SLE RA 10	-0.19	-0.17	45.7	15.431	0.8528	0.0693
171	SLE RA 11	-0.19	-0.2	46.23	15.6116	0.8627	0.0701
171	SLE RA 12	-0.19	-0.18	46.27	15.6222	0.8634	0.0701
171	SLE RA 13	-0.19	-0.18	46.1	15.5657	0.8604	0.0701
171	SLE RA 14	-0.19	-0.21	46.64	15.7463	0.8703	0.071
171	SLE RA 15	-0.19	-0.19	46.67	15.7568	0.871	0.0709
171	SLE RA 16	-0.19	-0.21	46.45	15.6827	0.8668	0.0711
171	SLE RA 17	-0.19	-0.19	46.48	15.6933	0.8675	0.071
171	SLE RA 18	-0.2	-0.2	47.19	15.9481	0.8808	0.0723
171	SLE RA 19	-0.2	-0.18	47.23	15.9587	0.8814	0.0723
171	SLE RA 20	-0.2	-0.2	47.6	16.0828	0.8883	0.0732
171	SLE RA 21	-0.2	-0.18	47.63	16.0934	0.889	0.0731
171	SLE FR 1	-0.17	-0.22	42.01	14.1656	0.7837	0.0625
171	SLE FR 2	-0.17	-0.22	42.03	14.1691	0.784	0.0625
171	SLE FR 3	-0.17	-0.22	42.18	14.2195	0.7868	0.0629
171	SLE FR 4	-0.18	-0.21	43.58	14.7039	0.8131	0.0654
171	SLE FR 5	-0.18	-0.22	43.73	14.7542	0.8159	0.0658
171	SLE FR 6	-0.18	-0.21	44.6	15.0569	0.8322	0.0674
171	SLE QP 1	-0.17	-0.22	42.01	14.1656	0.7837	0.0625
171	SLE QP 2	-0.18	-0.22	43.57	14.7003	0.8128	0.0655
171	SLD 1	3.53	0.2	43.63	14.6913	0.8169	-1.2351
171	SLD 2	3.99	0.22	43.72	14.7176	0.8177	-1.3954
171	SLD 3	3.47	-0.85	42.31	14.3139	0.7925	-1.2042
171	SLD 4	3.93	-0.83	42.4	14.3403	0.7932	-1.3646
171	SLD 5	0.94	1.49	45.57	15.2652	0.851	-0.3429
171	SLD 6	1.24	1.51	45.63	15.2825	0.8515	-0.448
171	SLD 7	0.75	-2	41.17	14.0075	0.7695	-0.2402
171	SLD 8	1.05	-1.98	41.23	14.0248	0.77	-0.3453
171	SLD 9	-1.4	1.55	45.9	15.3759	0.8557	0.4762
171	SLD 10	-1.1	1.57	45.96	15.3932	0.8562	0.3711
171	SLD 11	-1.6	-1.94	41.5	14.1182	0.7741	0.579
171	SLD 12	-1.3	-1.93	41.56	14.1355	0.7747	0.4739
171	SLD 13	-4.29	0.39	44.73	15.0604	0.8324	1.4955
171	SLD 14	-3.83	0.42	44.82	15.0868	0.8332	1.3352
171	SLD 15	-4.34	-0.66	43.41	14.6831	0.808	1.5263
171	SLD 16	-3.89	-0.63	43.5	14.7094	0.8087	1.366
171	SLV 1	8.5	0.72	43.67	14.6657	0.8215	-2.9764
171	SLV 2	9.57	0.78	43.88	14.7272	0.8233	-3.3497
171	SLV 3	8.36	-1.67	40.68	13.8098	0.7661	-2.9055
171	SLV 4	9.43	-1.61	40.89	13.8713	0.7679	-3.2789
171	SLV 5	2.45	3.68	48.11	15.9775	0.8993	-0.8902
171	SLV 6	3.14	3.71	48.24	16.0171	0.9004	-1.1308
171	SLV 7	1.99	-4.28	38.12	13.1245	0.7144	-0.6541
171	SLV 8	2.68	-4.24	38.26	13.1641	0.7155	-0.8947
171	SLV 9	-3.03	3.81	48.88	16.2366	0.9101	1.0256
171	SLV 10	-2.35	3.85	49.01	16.2762	0.9113	0.785
171	SLV 11	-3.49	-4.14	38.9	13.3836	0.7252	1.2618
171	SLV 12	-2.8	-4.11	39.03	13.4232	0.7264	1.0212
171	SLV 13	-9.78	1.18	46.25	15.5294	0.8578	3.4098
171	SLV 14	-8.72	1.23	46.46	15.5909	0.8596	3.0365
171	SLV 15	-9.92	-1.21	43.26	14.6735	0.8023	3.4807
171	SLV 16	-8.85	-1.15	43.46	14.735	0.8041	3.1073
171	CRTFP Ux+	0	0	0	0	0	0
171	CRTFP Ux-	0	0	0	0	0	0
171	CRTFP Uy+	0	0	0	0	0	0
171	CRTFP Uy-	0	0	0	0	0	0
173	SLU 1	-0.21	-0.31	53.21	11.5006	11.2106	0.107
173	SLU 2	-0.21	-0.25	53.32	11.5232	11.2361	0.0937
173	SLU 3	-0.21	-0.3	54.37	11.7515	11.4565	0.1061
173	SLU 4	-0.21	-0.26	54.44	11.7651	11.4718	0.0981
173	SLU 5	-0.22	-0.25	54.12	11.6937	11.4044	0.0955
173	SLU 6	-0.22	-0.31	55.17	11.922	11.6248	0.108
173	SLU 7	-0.22	-0.27	55.24	11.9355	11.6401	0.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
173	SLU 8	-0.22	-0.32	54.8	11.8415	11.5473	0.1107
173	SLU 9	-0.22	-0.28	54.87	11.8551	11.5626	0.1027
173	SLU 10	-0.25	-0.22	60.41	13.0698	12.7342	0.0968
173	SLU 11	-0.25	-0.28	61.46	13.2981	12.9546	0.1092
173	SLU 12	-0.26	-0.24	61.53	13.3116	12.9699	0.1012
173	SLU 13	-0.26	-0.22	61.21	13.2403	12.9025	0.0987
173	SLU 14	-0.26	-0.28	62.26	13.4685	13.123	0.1111
173	SLU 15	-0.26	-0.24	62.33	13.4821	13.1382	0.1031
173	SLU 16	-0.26	-0.3	61.89	13.3881	13.0454	0.1138
173	SLU 17	-0.26	-0.26	61.96	13.4017	13.0607	0.1058
173	SLU 18	-0.27	-0.28	63.33	13.71	13.3507	0.1114
173	SLU 19	-0.27	-0.24	63.4	13.7236	13.366	0.1034
173	SLU 20	-0.27	-0.28	64.13	13.8804	13.5191	0.1133
173	SLU 21	-0.27	-0.24	64.2	13.894	13.5344	0.1053
173	SLU 22	-0.23	-0.27	59.43	12.8472	12.5209	0.1022
173	SLU 23	-0.23	-0.21	59.54	12.8699	12.5464	0.0889
173	SLU 24	-0.23	-0.26	60.59	13.0982	12.7668	0.1013
173	SLU 25	-0.23	-0.22	60.66	13.1117	12.7821	0.0934
173	SLU 26	-0.24	-0.21	60.34	13.0403	12.7148	0.0908
173	SLU 27	-0.24	-0.27	61.39	13.2686	12.9352	0.1032
173	SLU 28	-0.24	-0.23	61.46	13.2822	12.9505	0.0952
173	SLU 29	-0.24	-0.28	61.02	13.1882	12.8577	0.1059
173	SLU 30	-0.24	-0.24	61.09	13.2018	12.873	0.098
173	SLU 31	-0.27	-0.18	66.63	14.4164	14.0446	0.092
173	SLU 32	-0.27	-0.24	67.68	14.6447	14.265	0.1045
173	SLU 33	-0.27	-0.2	67.75	14.6583	14.2803	0.0965
173	SLU 34	-0.28	-0.18	67.43	14.5869	14.2129	0.0939
173	SLU 35	-0.28	-0.24	68.48	14.8152	14.4333	0.1063
173	SLU 36	-0.28	-0.2	68.55	14.8288	14.4486	0.0984
173	SLU 37	-0.28	-0.26	68.11	14.7348	14.3558	0.1091
173	SLU 38	-0.28	-0.22	68.18	14.7483	14.3711	0.1011
173	SLU 39	-0.29	-0.24	69.55	15.0566	14.6611	0.1067
173	SLU 40	-0.29	-0.2	69.62	15.0702	14.6764	0.0987
173	SLU 41	-0.29	-0.24	70.35	15.2271	14.8295	0.1085
173	SLU 42	-0.29	-0.2	70.42	15.2407	14.8448	0.1006
173	SLU 43	-0.26	-0.42	67.04	14.4891	14.1245	0.1407
173	SLU 44	-0.27	-0.35	67.16	14.5117	14.15	0.1274
173	SLU 45	-0.27	-0.41	68.21	14.74	14.3704	0.1398
173	SLU 46	-0.27	-0.37	68.27	14.7535	14.3857	0.1318
173	SLU 47	-0.27	-0.36	67.95	14.6822	14.3183	0.1292
173	SLU 48	-0.27	-0.42	69	14.9104	14.5387	0.1417
173	SLU 49	-0.28	-0.38	69.07	14.924	14.554	0.1337
173	SLU 50	-0.27	-0.43	68.63	14.83	14.4612	0.1444
173	SLU 51	-0.28	-0.39	68.7	14.8436	14.4765	0.1364
173	SLU 52	-0.31	-0.33	74.24	16.0583	15.6481	0.1305
173	SLU 53	-0.31	-0.39	75.29	16.2865	15.8685	0.1429
173	SLU 54	-0.31	-0.35	75.36	16.3001	15.8838	0.135
173	SLU 55	-0.31	-0.33	75.04	16.2287	15.8164	0.1324
173	SLU 56	-0.31	-0.39	76.09	16.457	16.0368	0.1448
173	SLU 57	-0.32	-0.35	76.16	16.4706	16.0521	0.1368
173	SLU 58	-0.31	-0.4	75.72	16.3766	15.9593	0.1475
173	SLU 59	-0.32	-0.36	75.79	16.3901	15.9746	0.1396
173	SLU 60	-0.32	-0.38	77.17	16.6984	16.2646	0.1451
173	SLU 61	-0.32	-0.34	77.23	16.712	16.2799	0.1372
173	SLU 62	-0.33	-0.39	77.96	16.8689	16.433	0.147
173	SLU 63	-0.33	-0.35	78.03	16.8825	16.4483	0.139
173	SLU 64	-0.28	-0.38	73.26	15.8357	15.4348	0.1359
173	SLU 65	-0.29	-0.31	73.37	15.8583	15.4603	0.1226
173	SLU 66	-0.29	-0.37	74.42	16.0866	15.6807	0.1351
173	SLU 67	-0.29	-0.33	74.49	16.1002	15.696	0.1271
173	SLU 68	-0.29	-0.32	74.17	16.0288	15.6287	0.1245
173	SLU 69	-0.29	-0.38	75.22	16.2571	15.8491	0.1369
173	SLU 70	-0.29	-0.34	75.29	16.2707	15.8644	0.129
173	SLU 71	-0.29	-0.39	74.85	16.1767	15.7716	0.1397
173	SLU 72	-0.29	-0.35	74.92	16.1902	15.7869	0.1317
173	SLU 73	-0.33	-0.29	80.46	17.4049	16.9585	0.1257
173	SLU 74	-0.33	-0.35	81.51	17.6332	17.1789	0.1382
173	SLU 75	-0.33	-0.31	81.58	17.6468	17.1942	0.1302
173	SLU 76	-0.33	-0.29	81.26	17.5754	17.1268	0.1276
173	SLU 77	-0.33	-0.35	82.31	17.8037	17.3472	0.14
173	SLU 78	-0.34	-0.31	82.38	17.8172	17.3625	0.1321
173	SLU 79	-0.33	-0.36	81.94	17.7232	17.2697	0.1428
173	SLU 80	-0.34	-0.32	82.01	17.7368	17.285	0.1348
173	SLU 81	-0.34	-0.34	83.38	18.0451	17.575	0.1404
173	SLU 82	-0.34	-0.3	83.45	18.0587	17.5903	0.1324
173	SLU 83	-0.35	-0.35	84.18	18.2156	17.7434	0.1422
173	SLU 84	-0.35	-0.31	84.25	18.2291	17.7587	0.1343
173	SLE RA 1	-0.21	-0.3	54.99	11.8854	11.585	0.1056
173	SLE RA 2	-0.22	-0.26	55.06	11.9004	11.602	0.0967
173	SLE RA 3	-0.22	-0.3	55.76	12.0526	11.7489	0.105
173	SLE RA 4	-0.22	-0.27	55.81	12.0617	11.7591	0.0997
173	SLE RA 5	-0.22	-0.26	55.59	12.0141	11.7142	0.098
173	SLE RA 6	-0.22	-0.3	56.29	12.1663	11.8611	0.1063
173	SLE RA 7	-0.22	-0.27	56.34	12.1753	11.8713	0.101
173	SLE RA 8	-0.22	-0.31	56.05	12.1126	11.8094	0.1081
173	SLE RA 9	-0.22	-0.28	56.09	12.1217	11.8196	0.1028
173	SLE RA 10	-0.24	-0.24	59.79	12.9315	12.6007	0.0988
173	SLE RA 11	-0.24	-0.28	60.49	13.0837	12.7476	0.1071
173	SLE RA 12	-0.24	-0.25	60.53	13.0927	12.7578	0.1018
173	SLE RA 13	-0.25	-0.24	60.32	13.0451	12.7129	0.1001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
173	SLE RA 14	-0.25	-0.28	61.02	13.1973	12.8599	0.1084
173	SLE RA 15	-0.25	-0.25	61.07	13.2064	12.8701	0.103
173	SLE RA 16	-0.25	-0.29	60.77	13.1437	12.8082	0.1102
173	SLE RA 17	-0.25	-0.26	60.82	13.1527	12.8184	0.1049
173	SLE RA 18	-0.25	-0.28	61.74	13.3583	13.0117	0.1086
173	SLE RA 19	-0.25	-0.25	61.78	13.3673	13.0219	0.1033
173	SLE RA 20	-0.26	-0.28	62.27	13.4719	13.124	0.1098
173	SLE RA 21	-0.26	-0.25	62.31	13.481	13.1342	0.1045
173	SLE FR 1	-0.21	-0.3	54.99	11.8854	11.585	0.1056
173	SLE FR 2	-0.21	-0.29	55	11.8884	11.5884	0.1038
173	SLE FR 3	-0.21	-0.3	55.2	11.9308	11.6299	0.1061
173	SLE FR 4	-0.23	-0.28	57.03	12.3302	12.0164	0.1047
173	SLE FR 5	-0.23	-0.3	57.22	12.3727	12.0579	0.107
173	SLE FR 6	-0.23	-0.29	58.36	12.6218	12.2984	0.1071
173	SLE QP 1	-0.21	-0.3	54.99	11.8854	11.585	0.1056
173	SLE QP 2	-0.23	-0.29	57.01	12.3272	12.013	0.1065
173	SLD 1	4.58	0.26	57.02	12.3214	12.0603	-1.0798
173	SLD 2	5.19	0.3	57.16	12.35	12.084	-1.221
173	SLD 3	4.51	-1.1	55.21	11.9829	11.6739	-0.7914
173	SLD 4	5.11	-1.06	55.36	12.0115	11.6976	-0.9326
173	SLD 5	1.23	1.92	59.73	12.8338	12.609	-0.6617
173	SLD 6	1.62	1.95	59.82	12.8526	12.6245	-0.7543
173	SLD 7	0.97	-2.6	53.71	11.7054	11.321	0.2996
173	SLD 8	1.37	-2.57	53.8	11.7241	11.3366	0.207
173	SLD 9	-1.82	1.99	60.22	12.9303	12.6894	0.0059
173	SLD 10	-1.42	2.01	60.32	12.9491	12.705	-0.0866
173	SLD 11	-2.07	-2.54	54.2	11.8019	11.4014	0.9672
173	SLD 12	-1.68	-2.51	54.3	11.8206	11.417	0.8747
173	SLD 13	-5.56	0.47	58.67	12.643	12.3284	1.1456
173	SLD 14	-4.96	0.51	58.81	12.6716	12.3521	1.0044
173	SLD 15	-5.64	-0.89	56.86	12.3045	11.942	1.434
173	SLD 16	-5.03	-0.84	57.01	12.3331	11.9657	1.2928
173	SLV 1	11.03	0.95	56.96	12.3016	12.1099	-2.6598
173	SLV 2	12.43	1.06	57.3	12.3683	12.1652	-2.9887
173	SLV 3	10.85	-2.14	52.87	11.5337	11.2335	-2.0032
173	SLV 4	12.25	-2.04	53.2	11.6004	11.2888	-2.3321
173	SLV 5	3.18	4.75	63.15	13.4727	13.3618	-1.6625
173	SLV 6	4.08	4.82	63.37	13.5156	13.3974	-1.8745
173	SLV 7	2.58	-5.55	49.5	10.9131	10.4404	0.526
173	SLV 8	3.49	-5.48	49.72	10.956	10.476	0.314
173	SLV 9	-3.94	4.9	64.31	13.6984	13.55	-0.1011
173	SLV 10	-3.03	4.96	64.52	13.7414	13.5856	-0.313
173	SLV 11	-4.53	-5.4	50.66	11.1388	10.6286	2.0874
173	SLV 12	-3.63	-5.34	50.87	11.1818	10.6642	1.8755
173	SLV 13	-12.7	1.45	60.82	13.0541	12.7372	2.5451
173	SLV 14	-11.3	1.55	61.16	13.1207	12.7925	2.2162
173	SLV 15	-12.88	-1.64	56.72	12.2862	11.8608	3.2016
173	SLV 16	-11.48	-1.54	57.06	12.3528	11.9161	2.8728
173	CRTFP Ux+	0	0	0	0	0	0
173	CRTFP Ux-	0	0	0	0	0	0
173	CRTFP Uy+	0	0	0	0	0	0
173	CRTFP Uy-	0	0	0	0	0	0
175	SLU 1	-0.02	-0.04	4.75	0	-0.6333	-0.0052
175	SLU 2	-0.02	-0.03	4.76	0	-0.6346	-0.0044
175	SLU 3	-0.02	-0.04	4.85	0	-0.6471	-0.0051
175	SLU 4	-0.02	-0.03	4.86	0	-0.6479	-0.0046
175	SLU 5	-0.02	-0.03	4.83	0	-0.6441	-0.0045
175	SLU 6	-0.02	-0.04	4.92	0	-0.6566	-0.0052
175	SLU 7	-0.02	-0.04	4.93	0	-0.6574	-0.0047
175	SLU 8	-0.02	-0.04	4.89	0	-0.6522	-0.0053
175	SLU 9	-0.02	-0.04	4.9	0	-0.653	-0.0049
175	SLU 10	-0.02	-0.03	5.39	0	-0.718	-0.0042
175	SLU 11	-0.02	-0.04	5.48	0	-0.7305	-0.005
175	SLU 12	-0.02	-0.03	5.48	0	-0.7313	-0.0045
175	SLU 13	-0.02	-0.03	5.46	0	-0.7275	-0.0043
175	SLU 14	-0.02	-0.04	5.55	0	-0.74	-0.0051
175	SLU 15	-0.03	-0.03	5.56	0	-0.7408	-0.0046
175	SLU 16	-0.02	-0.04	5.52	0	-0.7356	-0.0052
175	SLU 17	-0.03	-0.04	5.52	0	-0.7364	-0.0047
175	SLU 18	-0.03	-0.04	5.64	0	-0.7524	-0.005
175	SLU 19	-0.03	-0.03	5.65	0	-0.7532	-0.0045
175	SLU 20	-0.03	-0.04	5.71	0	-0.7619	-0.0051
175	SLU 21	-0.03	-0.03	5.72	0	-0.7627	-0.0046
175	SLU 22	-0.02	-0.04	5.3	0	-0.7072	-0.0049
175	SLU 23	-0.02	-0.03	5.31	0	-0.7085	-0.0041
175	SLU 24	-0.02	-0.04	5.41	0	-0.721	-0.0049
175	SLU 25	-0.02	-0.03	5.41	0	-0.7218	-0.0044
175	SLU 26	-0.02	-0.03	5.38	0	-0.718	-0.0042
175	SLU 27	-0.02	-0.04	5.48	0	-0.7305	-0.0049
175	SLU 28	-0.02	-0.03	5.48	0	-0.7313	-0.0045
175	SLU 29	-0.02	-0.04	5.45	0	-0.7261	-0.0051
175	SLU 30	-0.02	-0.03	5.45	0	-0.7269	-0.0046
175	SLU 31	-0.03	-0.03	5.94	0	-0.7919	-0.004
175	SLU 32	-0.03	-0.04	6.03	0	-0.8044	-0.0047
175	SLU 33	-0.03	-0.03	6.04	0	-0.8052	-0.0042
175	SLU 34	-0.03	-0.03	6.01	0	-0.8014	-0.0041
175	SLU 35	-0.03	-0.04	6.1	0	-0.8139	-0.0048
175	SLU 36	-0.03	-0.03	6.11	0	-0.8147	-0.0043
175	SLU 37	-0.03	-0.04	6.07	0	-0.8095	-0.0049
175	SLU 38	-0.03	-0.03	6.08	0	-0.8103	-0.0045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
175	SLU 39	-0.03	-0.04	6.2	0	-0.8263	-0.0047
175	SLU 40	-0.03	-0.03	6.2	0	-0.8271	-0.0042
175	SLU 41	-0.03	-0.04	6.27	0	-0.8358	-0.0048
175	SLU 42	-0.03	-0.03	6.27	0	-0.8366	-0.0043
175	SLU 43	-0.03	-0.05	5.98	0	-0.7979	-0.0068
175	SLU 44	-0.03	-0.05	5.99	0	-0.7993	-0.006
175	SLU 45	-0.03	-0.05	6.09	0	-0.8118	-0.0068
175	SLU 46	-0.03	-0.05	6.09	0	-0.8126	-0.0063
175	SLU 47	-0.03	-0.05	6.07	0	-0.8087	-0.0061
175	SLU 48	-0.03	-0.05	6.16	0	-0.8212	-0.0069
175	SLU 49	-0.03	-0.05	6.17	0	-0.822	-0.0064
175	SLU 50	-0.03	-0.05	6.13	0	-0.8169	-0.007
175	SLU 51	-0.03	-0.05	6.13	0	-0.8177	-0.0065
175	SLU 52	-0.03	-0.04	6.62	0	-0.8827	-0.0059
175	SLU 53	-0.03	-0.05	6.71	0	-0.8952	-0.0066
175	SLU 54	-0.03	-0.05	6.72	0	-0.896	-0.0062
175	SLU 55	-0.03	-0.04	6.69	0	-0.8921	-0.006
175	SLU 56	-0.03	-0.05	6.78	0	-0.9046	-0.0067
175	SLU 57	-0.03	-0.05	6.79	0	-0.9054	-0.0062
175	SLU 58	-0.03	-0.05	6.75	0	-0.9002	-0.0069
175	SLU 59	-0.03	-0.05	6.76	0	-0.901	-0.0064
175	SLU 60	-0.03	-0.05	6.88	0	-0.9171	-0.0066
175	SLU 61	-0.03	-0.05	6.88	0	-0.9179	-0.0062
175	SLU 62	-0.03	-0.05	6.95	0	-0.9265	-0.0067
175	SLU 63	-0.03	-0.05	6.95	0	-0.9273	-0.0062
175	SLU 64	-0.03	-0.05	6.54	0	-0.8718	-0.0065
175	SLU 65	-0.03	-0.04	6.55	0	-0.8732	-0.0057
175	SLU 66	-0.03	-0.05	6.64	0	-0.8857	-0.0065
175	SLU 67	-0.03	-0.05	6.65	0	-0.8865	-0.006
175	SLU 68	-0.03	-0.04	6.62	0	-0.8826	-0.0058
175	SLU 69	-0.03	-0.05	6.71	0	-0.8951	-0.0066
175	SLU 70	-0.03	-0.05	6.72	0	-0.8959	-0.0061
175	SLU 71	-0.03	-0.05	6.68	0	-0.8907	-0.0067
175	SLU 72	-0.03	-0.05	6.69	0	-0.8915	-0.0062
175	SLU 73	-0.03	-0.04	7.17	0	-0.9565	-0.0056
175	SLU 74	-0.03	-0.05	7.27	0	-0.9691	-0.0064
175	SLU 75	-0.03	-0.04	7.27	0	-0.9699	-0.0059
175	SLU 76	-0.03	-0.04	7.25	0	-0.966	-0.0057
175	SLU 77	-0.03	-0.05	7.34	0	-0.9785	-0.0065
175	SLU 78	-0.03	-0.04	7.34	0	-0.9793	-0.006
175	SLU 79	-0.03	-0.05	7.31	0	-0.9741	-0.0066
175	SLU 80	-0.03	-0.05	7.31	0	-0.9749	-0.0061
175	SLU 81	-0.03	-0.05	7.43	0	-0.9909	-0.0064
175	SLU 82	-0.03	-0.04	7.44	0	-0.9917	-0.0059
175	SLU 83	-0.03	-0.05	7.5	0	-1.0004	-0.0064
175	SLU 84	-0.03	-0.04	7.51	0	-1.0012	-0.006
175	SLE RA 1	-0.02	-0.04	4.91	0	-0.6544	-0.0051
175	SLE RA 2	-0.02	-0.03	4.91	0	-0.6553	-0.0046
175	SLE RA 3	-0.02	-0.04	4.98	0	-0.6636	-0.0051
175	SLE RA 4	-0.02	-0.04	4.98	0	-0.6642	-0.0047
175	SLE RA 5	-0.02	-0.03	4.96	0	-0.6616	-0.0046
175	SLE RA 6	-0.02	-0.04	5.02	0	-0.6699	-0.0051
175	SLE RA 7	-0.02	-0.04	5.03	0	-0.6705	-0.0048
175	SLE RA 8	-0.02	-0.04	5	0	-0.667	-0.0052
175	SLE RA 9	-0.02	-0.04	5.01	0	-0.6675	-0.0049
175	SLE RA 10	-0.02	-0.03	5.33	0	-0.7109	-0.0045
175	SLE RA 11	-0.02	-0.04	5.39	0	-0.7192	-0.005
175	SLE RA 12	-0.02	-0.03	5.4	0	-0.7198	-0.0047
175	SLE RA 13	-0.02	-0.03	5.38	0	-0.7172	-0.0045
175	SLE RA 14	-0.02	-0.04	5.44	0	-0.7255	-0.005
175	SLE RA 15	-0.02	-0.04	5.45	0	-0.7261	-0.0047
175	SLE RA 16	-0.02	-0.04	5.42	0	-0.7226	-0.0051
175	SLE RA 17	-0.02	-0.04	5.42	0	-0.7231	-0.0048
175	SLE RA 18	-0.02	-0.04	5.5	0	-0.7338	-0.005
175	SLE RA 19	-0.02	-0.03	5.51	0	-0.7343	-0.0047
175	SLE RA 20	-0.02	-0.04	5.55	0	-0.7401	-0.005
175	SLE RA 21	-0.02	-0.04	5.55	0	-0.7407	-0.0047
175	SLE FR 1	-0.02	-0.04	4.91	0	-0.6544	-0.0051
175	SLE FR 2	-0.02	-0.04	4.91	0	-0.6546	-0.005
175	SLE FR 3	-0.02	-0.04	4.93	0	-0.6569	-0.0051
175	SLE FR 4	-0.02	-0.04	5.09	0	-0.6784	-0.0049
175	SLE FR 5	-0.02	-0.04	5.11	0	-0.6807	-0.0051
175	SLE FR 6	-0.02	-0.04	5.21	0	-0.6941	-0.005
175	SLE QP 1	-0.02	-0.04	4.91	0	-0.6544	-0.0051
175	SLE QP 2	-0.02	-0.04	5.09	0	-0.6782	-0.0051
175	SLD 1	0.4	0.03	5.05	0	-0.673	0.0039
175	SLD 2	0.46	0.04	5.07	0	-0.6755	0.0051
175	SLD 3	0.4	-0.09	4.88	0	-0.6501	-0.0117
175	SLD 4	0.45	-0.08	4.89	0	-0.6526	-0.0105
175	SLD 5	0.11	0.16	5.33	0	-0.711	0.0211
175	SLD 6	0.14	0.16	5.34	0	-0.7126	0.0219
175	SLD 7	0.08	-0.23	4.76	0	-0.6346	-0.031
175	SLD 8	0.12	-0.23	4.77	0	-0.6362	-0.0302
175	SLD 9	-0.16	0.15	5.4	0	-0.7202	0.0201
175	SLD 10	-0.13	0.16	5.41	0	-0.7219	0.0209
175	SLD 11	-0.18	-0.24	4.83	0	-0.6438	-0.032
175	SLD 12	-0.15	-0.23	4.84	0	-0.6454	-0.0313
175	SLD 13	-0.49	0	5.28	0	-0.7038	0.0004
175	SLD 14	-0.44	0.01	5.3	0	-0.7063	0.0016
175	SLD 15	-0.5	-0.11	5.11	0	-0.6809	-0.0152

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
175	SLD 16	-0.45	-0.11	5.13	0	-0.6834	-0.014
175	SLV 1	0.97	0.12	4.99	0	-0.6653	0.0155
175	SLV 2	1.1	0.14	5.03	0	-0.6711	0.0182
175	SLV 3	0.95	-0.15	4.6	0	-0.6133	-0.0201
175	SLV 4	1.08	-0.13	4.64	0	-0.6191	-0.0174
175	SLV 5	0.28	0.41	5.64	0	-0.7522	0.0546
175	SLV 6	0.36	0.42	5.67	0	-0.756	0.0564
175	SLV 7	0.23	-0.48	4.34	0	-0.5788	-0.064
175	SLV 8	0.31	-0.47	4.37	0	-0.5826	-0.0623
175	SLV 9	-0.35	0.39	5.8	0	-0.7738	0.0522
175	SLV 10	-0.27	0.4	5.83	0	-0.7776	0.0539
175	SLV 11	-0.4	-0.5	4.5	0	-0.6005	-0.0665
175	SLV 12	-0.32	-0.49	4.53	0	-0.6042	-0.0647
175	SLV 13	-1.12	0.05	5.53	0	-0.7373	0.0073
175	SLV 14	-1	0.07	5.57	0	-0.7432	0.01
175	SLV 15	-1.14	-0.21	5.14	0	-0.6853	-0.0283
175	SLV 16	-1.01	-0.19	5.18	0	-0.6912	-0.0256
175	CRTFP Ux+	0	0	0	0	0	0
175	CRTFP Ux-	0	0	0	0	0	0
175	CRTFP Uy+	0	0	0	0	0	0
175	CRTFP Uy-	0	0	0	0	0	0
177	SLU 1	-0.02	-0.04	4.76	0	-0.5555	-0.0052
177	SLU 2	-0.02	-0.04	4.77	0	-0.5566	-0.0045
177	SLU 3	-0.02	-0.04	4.87	0	-0.5676	-0.0052
177	SLU 4	-0.02	-0.04	4.87	0	-0.5683	-0.0047
177	SLU 5	-0.02	-0.04	4.84	0	-0.5649	-0.0046
177	SLU 6	-0.02	-0.05	4.94	0	-0.5759	-0.0053
177	SLU 7	-0.02	-0.04	4.94	0	-0.5766	-0.0048
177	SLU 8	-0.02	-0.05	4.9	0	-0.572	-0.0054
177	SLU 9	-0.02	-0.04	4.91	0	-0.5727	-0.0049
177	SLU 10	-0.02	-0.04	5.4	0	-0.6295	-0.0045
177	SLU 11	-0.02	-0.04	5.49	0	-0.6405	-0.0051
177	SLU 12	-0.02	-0.04	5.5	0	-0.6412	-0.0047
177	SLU 13	-0.02	-0.04	5.47	0	-0.6378	-0.0045
177	SLU 14	-0.02	-0.04	5.56	0	-0.6488	-0.0052
177	SLU 15	-0.02	-0.04	5.57	0	-0.6495	-0.0048
177	SLU 16	-0.02	-0.05	5.53	0	-0.645	-0.0053
177	SLU 17	-0.02	-0.04	5.53	0	-0.6456	-0.0049
177	SLU 18	-0.02	-0.04	5.65	0	-0.6597	-0.0051
177	SLU 19	-0.03	-0.04	5.66	0	-0.6603	-0.0047
177	SLU 20	-0.03	-0.04	5.73	0	-0.6679	-0.0052
177	SLU 21	-0.03	-0.04	5.73	0	-0.6686	-0.0048
177	SLU 22	-0.02	-0.04	5.32	0	-0.6203	-0.005
177	SLU 23	-0.02	-0.04	5.33	0	-0.6214	-0.0043
177	SLU 24	-0.02	-0.04	5.42	0	-0.6324	-0.005
177	SLU 25	-0.02	-0.04	5.43	0	-0.6331	-0.0046
177	SLU 26	-0.02	-0.04	5.4	0	-0.6297	-0.0044
177	SLU 27	-0.02	-0.04	5.49	0	-0.6407	-0.0051
177	SLU 28	-0.02	-0.04	5.5	0	-0.6414	-0.0047
177	SLU 29	-0.02	-0.04	5.46	0	-0.6368	-0.0052
177	SLU 30	-0.02	-0.04	5.46	0	-0.6375	-0.0048
177	SLU 31	-0.03	-0.04	5.95	0	-0.6943	-0.0043
177	SLU 32	-0.03	-0.04	6.05	0	-0.7053	-0.005
177	SLU 33	-0.03	-0.04	6.05	0	-0.706	-0.0046
177	SLU 34	-0.03	-0.04	6.02	0	-0.7026	-0.0044
177	SLU 35	-0.03	-0.04	6.12	0	-0.7136	-0.0051
177	SLU 36	-0.03	-0.04	6.12	0	-0.7143	-0.0047
177	SLU 37	-0.03	-0.04	6.08	0	-0.7097	-0.0052
177	SLU 38	-0.03	-0.04	6.09	0	-0.7104	-0.0048
177	SLU 39	-0.03	-0.04	6.21	0	-0.7245	-0.005
177	SLU 40	-0.03	-0.04	6.22	0	-0.7251	-0.0046
177	SLU 41	-0.03	-0.04	6.28	0	-0.7327	-0.0051
177	SLU 42	-0.03	-0.04	6.29	0	-0.7334	-0.0047
177	SLU 43	-0.02	-0.06	6	0	-0.6999	-0.0068
177	SLU 44	-0.02	-0.05	6.01	0	-0.7011	-0.0061
177	SLU 45	-0.02	-0.06	6.1	0	-0.7121	-0.0068
177	SLU 46	-0.03	-0.05	6.11	0	-0.7127	-0.0063
177	SLU 47	-0.03	-0.05	6.08	0	-0.7093	-0.0062
177	SLU 48	-0.03	-0.06	6.17	0	-0.7203	-0.0069
177	SLU 49	-0.03	-0.06	6.18	0	-0.721	-0.0064
177	SLU 50	-0.03	-0.06	6.14	0	-0.7165	-0.007
177	SLU 51	-0.03	-0.06	6.15	0	-0.7172	-0.0065
177	SLU 52	-0.03	-0.05	6.63	0	-0.774	-0.0061
177	SLU 53	-0.03	-0.06	6.73	0	-0.785	-0.0067
177	SLU 54	-0.03	-0.05	6.73	0	-0.7856	-0.0063
177	SLU 55	-0.03	-0.05	6.7	0	-0.7822	-0.0061
177	SLU 56	-0.03	-0.06	6.8	0	-0.7932	-0.0068
177	SLU 57	-0.03	-0.05	6.8	0	-0.7939	-0.0064
177	SLU 58	-0.03	-0.06	6.77	0	-0.7894	-0.0069
177	SLU 59	-0.03	-0.06	6.77	0	-0.7901	-0.0065
177	SLU 60	-0.03	-0.06	6.89	0	-0.8041	-0.0068
177	SLU 61	-0.03	-0.05	6.9	0	-0.8048	-0.0063
177	SLU 62	-0.03	-0.06	6.96	0	-0.8124	-0.0068
177	SLU 63	-0.03	-0.06	6.97	0	-0.813	-0.0064
177	SLU 64	-0.03	-0.06	6.55	0	-0.7647	-0.0066
177	SLU 65	-0.03	-0.05	6.56	0	-0.7659	-0.0059
177	SLU 66	-0.03	-0.06	6.66	0	-0.7769	-0.0066
177	SLU 67	-0.03	-0.05	6.66	0	-0.7775	-0.0062
177	SLU 68	-0.03	-0.05	6.64	0	-0.7741	-0.006
177	SLU 69	-0.03	-0.06	6.73	0	-0.7851	-0.0067

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
177	SLU 70	-0.03	-0.05	6.74	0	-0.7858	-0.0063
177	SLU 71	-0.03	-0.06	6.7	0	-0.7813	-0.0068
177	SLU 72	-0.03	-0.05	6.7	0	-0.7819	-0.0064
177	SLU 73	-0.03	-0.05	7.19	0	-0.8388	-0.0059
177	SLU 74	-0.03	-0.06	7.28	0	-0.8498	-0.0066
177	SLU 75	-0.03	-0.05	7.29	0	-0.8504	-0.0062
177	SLU 76	-0.03	-0.05	7.26	0	-0.847	-0.006
177	SLU 77	-0.03	-0.06	7.35	0	-0.858	-0.0067
177	SLU 78	-0.03	-0.05	7.36	0	-0.8587	-0.0063
177	SLU 79	-0.03	-0.06	7.32	0	-0.8542	-0.0068
177	SLU 80	-0.03	-0.05	7.33	0	-0.8549	-0.0064
177	SLU 81	-0.03	-0.06	7.45	0	-0.8689	-0.0066
177	SLU 82	-0.03	-0.05	7.45	0	-0.8696	-0.0062
177	SLU 83	-0.03	-0.06	7.52	0	-0.8772	-0.0067
177	SLU 84	-0.03	-0.05	7.52	0	-0.8778	-0.0063
177	SLE RA 1	-0.02	-0.04	4.92	0	-0.574	-0.0051
177	SLE RA 2	-0.02	-0.04	4.93	0	-0.5748	-0.0047
177	SLE RA 3	-0.02	-0.04	4.99	0	-0.5821	-0.0051
177	SLE RA 4	-0.02	-0.04	4.99	0	-0.5825	-0.0048
177	SLE RA 5	-0.02	-0.04	4.97	0	-0.5803	-0.0047
177	SLE RA 6	-0.02	-0.04	5.04	0	-0.5876	-0.0052
177	SLE RA 7	-0.02	-0.04	5.04	0	-0.5881	-0.0049
177	SLE RA 8	-0.02	-0.05	5.01	0	-0.585	-0.0053
177	SLE RA 9	-0.02	-0.04	5.02	0	-0.5855	-0.005
177	SLE RA 10	-0.02	-0.04	5.34	0	-0.6234	-0.0047
177	SLE RA 11	-0.02	-0.04	5.41	0	-0.6307	-0.0051
177	SLE RA 12	-0.02	-0.04	5.41	0	-0.6312	-0.0048
177	SLE RA 13	-0.02	-0.04	5.39	0	-0.6289	-0.0047
177	SLE RA 14	-0.02	-0.04	5.45	0	-0.6362	-0.0052
177	SLE RA 15	-0.02	-0.04	5.46	0	-0.6367	-0.0049
177	SLE RA 16	-0.02	-0.04	5.43	0	-0.6336	-0.0052
177	SLE RA 17	-0.02	-0.04	5.44	0	-0.6341	-0.005
177	SLE RA 18	-0.02	-0.04	5.52	0	-0.6435	-0.0051
177	SLE RA 19	-0.02	-0.04	5.52	0	-0.6439	-0.0048
177	SLE RA 20	-0.02	-0.04	5.56	0	-0.649	-0.0052
177	SLE RA 21	-0.02	-0.04	5.57	0	-0.6494	-0.0049
177	SLE FR 1	-0.02	-0.04	4.92	0	-0.574	-0.0051
177	SLE FR 2	-0.02	-0.04	4.92	0	-0.5742	-0.005
177	SLE FR 3	-0.02	-0.04	4.94	0	-0.5762	-0.0052
177	SLE FR 4	-0.02	-0.04	5.1	0	-0.595	-0.005
177	SLE FR 5	-0.02	-0.04	5.12	0	-0.5971	-0.0052
177	SLE FR 6	-0.02	-0.04	5.22	0	-0.6087	-0.0051
177	SLE QP 1	-0.02	-0.04	4.92	0	-0.574	-0.0051
177	SLE QP 2	-0.02	-0.04	5.1	0	-0.5948	-0.0051
177	SLD 1	0.4	0.03	5.03	0	-0.587	0.0033
177	SLD 2	0.46	0.04	5.05	0	-0.5894	0.0046
177	SLD 3	0.4	-0.09	4.86	0	-0.5669	-0.0103
177	SLD 4	0.45	-0.08	4.88	0	-0.5693	-0.009
177	SLD 5	0.11	0.15	5.34	0	-0.6225	0.0178
177	SLD 6	0.14	0.16	5.35	0	-0.6241	0.0186
177	SLD 7	0.08	-0.24	4.76	0	-0.5556	-0.0275
177	SLD 8	0.12	-0.23	4.78	0	-0.5572	-0.0267
177	SLD 9	-0.16	0.14	5.42	0	-0.6325	0.0164
177	SLD 10	-0.13	0.15	5.43	0	-0.6341	0.0173
177	SLD 11	-0.18	-0.25	4.85	0	-0.5656	-0.0289
177	SLD 12	-0.15	-0.24	4.86	0	-0.5672	-0.028
177	SLD 13	-0.49	-0.01	5.32	0	-0.6203	-0.0013
177	SLD 14	-0.44	0	5.34	0	-0.6228	0
177	SLD 15	-0.5	-0.13	5.15	0	-0.6003	-0.0149
177	SLD 16	-0.44	-0.12	5.17	0	-0.6027	-0.0136
177	SLV 1	0.97	0.12	4.93	0	-0.5757	0.0142
177	SLV 2	1.1	0.15	4.98	0	-0.5814	0.0172
177	SLV 3	0.95	-0.14	4.54	0	-0.5302	-0.0168
177	SLV 4	1.08	-0.12	4.59	0	-0.5359	-0.0138
177	SLV 5	0.28	0.4	5.63	0	-0.6571	0.0471
177	SLV 6	0.36	0.42	5.66	0	-0.6608	0.049
177	SLV 7	0.23	-0.48	4.33	0	-0.5055	-0.0561
177	SLV 8	0.31	-0.46	4.36	0	-0.5092	-0.0541
177	SLV 9	-0.35	0.38	5.83	0	-0.6805	0.0439
177	SLV 10	-0.27	0.39	5.86	0	-0.6842	0.0458
177	SLV 11	-0.4	-0.51	4.53	0	-0.5289	-0.0593
177	SLV 12	-0.32	-0.49	4.57	0	-0.5326	-0.0573
177	SLV 13	-1.12	0.03	5.6	0	-0.6538	0.0035
177	SLV 14	-1	0.06	5.65	0	-0.6595	0.0065
177	SLV 15	-1.14	-0.24	5.21	0	-0.6083	-0.0274
177	SLV 16	-1.01	-0.21	5.26	0	-0.614	-0.0244
177	CRTFP Ux+	0	0	0	0	0	0
177	CRTFP Ux-	0	0	0	0	0	0
177	CRTFP Uy+	0	0	0	0	0	0
177	CRTFP Uy-	0	0	0	0	0	0
179	SLU 1	-0.02	-0.05	4.77	0	-0.477	-0.005
179	SLU 2	-0.02	-0.04	4.78	0	-0.478	-0.0044
179	SLU 3	-0.02	-0.05	4.87	0	-0.4874	-0.005
179	SLU 4	-0.02	-0.05	4.88	0	-0.488	-0.0047
179	SLU 5	-0.02	-0.04	4.85	0	-0.485	-0.0045
179	SLU 6	-0.02	-0.05	4.94	0	-0.4945	-0.0051
179	SLU 7	-0.02	-0.05	4.95	0	-0.495	-0.0047
179	SLU 8	-0.02	-0.05	4.91	0	-0.4912	-0.0052
179	SLU 9	-0.02	-0.05	4.92	0	-0.4917	-0.0048
179	SLU 10	-0.02	-0.04	5.4	0	-0.5404	-0.0045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
179	SLU 11	-0.02	-0.05	5.5	0	-0.5498	-0.0051
179	SLU 12	-0.02	-0.05	5.5	0	-0.5504	-0.0047
179	SLU 13	-0.02	-0.05	5.47	0	-0.5474	-0.0045
179	SLU 14	-0.02	-0.05	5.57	0	-0.5569	-0.0052
179	SLU 15	-0.02	-0.05	5.57	0	-0.5575	-0.0048
179	SLU 16	-0.02	-0.05	5.54	0	-0.5536	-0.0052
179	SLU 17	-0.02	-0.05	5.54	0	-0.5542	-0.0049
179	SLU 18	-0.02	-0.05	5.66	0	-0.5662	-0.0051
179	SLU 19	-0.02	-0.05	5.67	0	-0.5667	-0.0047
179	SLU 20	-0.03	-0.05	5.73	0	-0.5733	-0.0052
179	SLU 21	-0.03	-0.05	5.74	0	-0.5738	-0.0048
179	SLU 22	-0.02	-0.05	5.33	0	-0.5327	-0.005
179	SLU 23	-0.02	-0.04	5.34	0	-0.5336	-0.0044
179	SLU 24	-0.02	-0.05	5.43	0	-0.543	-0.005
179	SLU 25	-0.02	-0.05	5.44	0	-0.5436	-0.0046
179	SLU 26	-0.02	-0.04	5.41	0	-0.5407	-0.0044
179	SLU 27	-0.02	-0.05	5.5	0	-0.5501	-0.0051
179	SLU 28	-0.02	-0.05	5.51	0	-0.5507	-0.0047
179	SLU 29	-0.02	-0.05	5.47	0	-0.5468	-0.0051
179	SLU 30	-0.02	-0.05	5.47	0	-0.5474	-0.0048
179	SLU 31	-0.03	-0.04	5.96	0	-0.596	-0.0044
179	SLU 32	-0.03	-0.05	6.05	0	-0.6055	-0.005
179	SLU 33	-0.03	-0.05	6.06	0	-0.606	-0.0047
179	SLU 34	-0.03	-0.04	6.03	0	-0.6031	-0.0045
179	SLU 35	-0.03	-0.05	6.13	0	-0.6125	-0.0051
179	SLU 36	-0.03	-0.05	6.13	0	-0.6131	-0.0047
179	SLU 37	-0.03	-0.05	6.09	0	-0.6092	-0.0052
179	SLU 38	-0.03	-0.05	6.1	0	-0.6098	-0.0048
179	SLU 39	-0.03	-0.05	6.22	0	-0.6218	-0.005
179	SLU 40	-0.03	-0.05	6.22	0	-0.6224	-0.0047
179	SLU 41	-0.03	-0.05	6.29	0	-0.6289	-0.0051
179	SLU 42	-0.03	-0.05	6.29	0	-0.6295	-0.0048
179	SLU 43	-0.02	-0.07	6.01	0	-0.6011	-0.0065
179	SLU 44	-0.02	-0.06	6.02	0	-0.602	-0.0059
179	SLU 45	-0.02	-0.07	6.11	0	-0.6114	-0.0066
179	SLU 46	-0.02	-0.06	6.12	0	-0.612	-0.0062
179	SLU 47	-0.02	-0.06	6.09	0	-0.6091	-0.006
179	SLU 48	-0.03	-0.07	6.19	0	-0.6185	-0.0066
179	SLU 49	-0.03	-0.06	6.19	0	-0.6191	-0.0063
179	SLU 50	-0.02	-0.07	6.15	0	-0.6152	-0.0067
179	SLU 51	-0.03	-0.06	6.16	0	-0.6158	-0.0064
179	SLU 52	-0.03	-0.06	6.64	0	-0.6644	-0.006
179	SLU 53	-0.03	-0.07	6.74	0	-0.6739	-0.0066
179	SLU 54	-0.03	-0.06	6.74	0	-0.6744	-0.0062
179	SLU 55	-0.03	-0.06	6.71	0	-0.6715	-0.0061
179	SLU 56	-0.03	-0.07	6.81	0	-0.6809	-0.0067
179	SLU 57	-0.03	-0.06	6.81	0	-0.6815	-0.0063
179	SLU 58	-0.03	-0.07	6.78	0	-0.6776	-0.0068
179	SLU 59	-0.03	-0.06	6.78	0	-0.6782	-0.0064
179	SLU 60	-0.03	-0.07	6.9	0	-0.6902	-0.0066
179	SLU 61	-0.03	-0.06	6.91	0	-0.6908	-0.0063
179	SLU 62	-0.03	-0.07	6.97	0	-0.6973	-0.0067
179	SLU 63	-0.03	-0.06	6.98	0	-0.6979	-0.0063
179	SLU 64	-0.03	-0.06	6.57	0	-0.6567	-0.0065
179	SLU 65	-0.03	-0.06	6.58	0	-0.6576	-0.0059
179	SLU 66	-0.03	-0.06	6.67	0	-0.6671	-0.0065
179	SLU 67	-0.03	-0.06	6.68	0	-0.6676	-0.0061
179	SLU 68	-0.03	-0.06	6.65	0	-0.6647	-0.006
179	SLU 69	-0.03	-0.07	6.74	0	-0.6742	-0.0066
179	SLU 70	-0.03	-0.06	6.75	0	-0.6747	-0.0062
179	SLU 71	-0.03	-0.07	6.71	0	-0.6709	-0.0067
179	SLU 72	-0.03	-0.06	6.71	0	-0.6714	-0.0063
179	SLU 73	-0.03	-0.06	7.2	0	-0.72	-0.0059
179	SLU 74	-0.03	-0.07	7.29	0	-0.7295	-0.0065
179	SLU 75	-0.03	-0.06	7.3	0	-0.73	-0.0062
179	SLU 76	-0.03	-0.06	7.27	0	-0.7271	-0.006
179	SLU 77	-0.03	-0.07	7.37	0	-0.7366	-0.0066
179	SLU 78	-0.03	-0.06	7.37	0	-0.7371	-0.0063
179	SLU 79	-0.03	-0.07	7.33	0	-0.7333	-0.0067
179	SLU 80	-0.03	-0.06	7.34	0	-0.7338	-0.0064
179	SLU 81	-0.03	-0.07	7.46	0	-0.7459	-0.0066
179	SLU 82	-0.03	-0.06	7.46	0	-0.7464	-0.0062
179	SLU 83	-0.03	-0.07	7.53	0	-0.7529	-0.0067
179	SLU 84	-0.03	-0.06	7.53	0	-0.7535	-0.0063
179	SLE RA 1	-0.02	-0.05	4.93	0	-0.4929	-0.005
179	SLE RA 2	-0.02	-0.05	4.94	0	-0.4935	-0.0046
179	SLE RA 3	-0.02	-0.05	5	0	-0.4998	-0.005
179	SLE RA 4	-0.02	-0.05	5	0	-0.5002	-0.0048
179	SLE RA 5	-0.02	-0.05	4.98	0	-0.4983	-0.0047
179	SLE RA 6	-0.02	-0.05	5.05	0	-0.5046	-0.0051
179	SLE RA 7	-0.02	-0.05	5.05	0	-0.5049	-0.0048
179	SLE RA 8	-0.02	-0.05	5.02	0	-0.5024	-0.0051
179	SLE RA 9	-0.02	-0.05	5.03	0	-0.5027	-0.0049
179	SLE RA 10	-0.02	-0.05	5.35	0	-0.5351	-0.0046
179	SLE RA 11	-0.02	-0.05	5.41	0	-0.5415	-0.005
179	SLE RA 12	-0.02	-0.05	5.42	0	-0.5418	-0.0048
179	SLE RA 13	-0.02	-0.05	5.4	0	-0.5399	-0.0047
179	SLE RA 14	-0.02	-0.05	5.46	0	-0.5462	-0.0051
179	SLE RA 15	-0.02	-0.05	5.47	0	-0.5465	-0.0049
179	SLE RA 16	-0.02	-0.05	5.44	0	-0.544	-0.0052

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
179	SLE RA 17	-0.02	-0.05	5.44	0	-0.5443	-0.0049
179	SLE RA 18	-0.02	-0.05	5.52	0	-0.5524	-0.0051
179	SLE RA 19	-0.02	-0.05	5.53	0	-0.5527	-0.0048
179	SLE RA 20	-0.02	-0.05	5.57	0	-0.5571	-0.0051
179	SLE RA 21	-0.02	-0.05	5.57	0	-0.5575	-0.0049
179	SLE FR 1	-0.02	-0.05	4.93	0	-0.4929	-0.005
179	SLE FR 2	-0.02	-0.05	4.93	0	-0.493	-0.0049
179	SLE FR 3	-0.02	-0.05	4.95	0	-0.4948	-0.005
179	SLE FR 4	-0.02	-0.05	5.11	0	-0.5109	-0.0049
179	SLE FR 5	-0.02	-0.05	5.13	0	-0.5126	-0.005
179	SLE FR 6	-0.02	-0.05	5.23	0	-0.5226	-0.005
179	SLE QP 1	-0.02	-0.05	4.93	0	-0.4929	-0.005
179	SLE QP 2	-0.02	-0.05	5.11	0	-0.5108	-0.005
179	SLD 1	0.4	0.03	5.01	0	-0.5006	0.0027
179	SLD 2	0.46	0.04	5.03	0	-0.5029	0.004
179	SLD 3	0.4	-0.09	4.83	0	-0.4834	-0.0089
179	SLD 4	0.45	-0.08	4.86	0	-0.4857	-0.0076
179	SLD 5	0.11	0.15	5.33	0	-0.5334	0.0146
179	SLD 6	0.14	0.15	5.35	0	-0.5349	0.0155
179	SLD 7	0.08	-0.24	4.76	0	-0.4761	-0.024
179	SLD 8	0.12	-0.23	4.78	0	-0.4775	-0.0231
179	SLD 9	-0.16	0.13	5.44	0	-0.544	0.0131
179	SLD 10	-0.13	0.14	5.45	0	-0.5454	0.0139
179	SLD 11	-0.18	-0.26	4.87	0	-0.4866	-0.0255
179	SLD 12	-0.15	-0.25	4.88	0	-0.4881	-0.0246
179	SLD 13	-0.49	-0.02	5.36	0	-0.5358	-0.0025
179	SLD 14	-0.44	-0.01	5.38	0	-0.5381	-0.0011
179	SLD 15	-0.5	-0.14	5.19	0	-0.5186	-0.014
179	SLD 16	-0.44	-0.13	5.21	0	-0.5209	-0.0127
179	SLV 1	0.97	0.13	4.86	0	-0.4864	0.0126
179	SLV 2	1.09	0.16	4.92	0	-0.4917	0.0157
179	SLV 3	0.95	-0.14	4.47	0	-0.4474	-0.0137
179	SLV 4	1.08	-0.11	4.53	0	-0.4527	-0.0106
179	SLV 5	0.28	0.4	5.62	0	-0.5617	0.0397
179	SLV 6	0.36	0.42	5.65	0	-0.5651	0.0417
179	SLV 7	0.23	-0.48	4.32	0	-0.4317	-0.0481
179	SLV 8	0.31	-0.46	4.35	0	-0.4351	-0.0461
179	SLV 9	-0.35	0.36	5.86	0	-0.5864	0.0361
179	SLV 10	-0.27	0.38	5.9	0	-0.5898	0.0381
179	SLV 11	-0.4	-0.52	4.56	0	-0.4564	-0.0517
179	SLV 12	-0.32	-0.5	4.6	0	-0.4598	-0.0497
179	SLV 13	-1.12	0.01	5.69	0	-0.5688	0.0006
179	SLV 14	-0.99	0.04	5.74	0	-0.5741	0.0037
179	SLV 15	-1.13	-0.26	5.3	0	-0.5298	-0.0258
179	SLV 16	-1.01	-0.23	5.35	0	-0.5351	-0.0227
179	CRTFP Ux+	0	0	0	0	0	0
179	CRTFP Ux-	0	0	0	0	0	0
179	CRTFP Uy+	0	0	0	0	0	0
179	CRTFP Uy-	0	0	0	0	0	0
181	SLU 1	-0.02	-0.06	4.77	0	-0.3979	-0.0047
181	SLU 2	-0.02	-0.05	4.78	0	-0.3986	-0.0042
181	SLU 3	-0.02	-0.06	4.88	0	-0.4065	-0.0047
181	SLU 4	-0.02	-0.05	4.88	0	-0.4069	-0.0044
181	SLU 5	-0.02	-0.05	4.85	0	-0.4045	-0.0042
181	SLU 6	-0.02	-0.06	4.95	0	-0.4124	-0.0048
181	SLU 7	-0.02	-0.05	4.95	0	-0.4128	-0.0045
181	SLU 8	-0.02	-0.06	4.92	0	-0.4096	-0.0048
181	SLU 9	-0.02	-0.05	4.92	0	-0.4101	-0.0045
181	SLU 10	-0.02	-0.05	5.41	0	-0.4505	-0.0043
181	SLU 11	-0.02	-0.06	5.5	0	-0.4584	-0.0048
181	SLU 12	-0.02	-0.05	5.51	0	-0.4589	-0.0045
181	SLU 13	-0.02	-0.05	5.48	0	-0.4564	-0.0043
181	SLU 14	-0.02	-0.06	5.57	0	-0.4643	-0.0049
181	SLU 15	-0.02	-0.05	5.58	0	-0.4647	-0.0046
181	SLU 16	-0.02	-0.06	5.54	0	-0.4615	-0.0049
181	SLU 17	-0.02	-0.06	5.54	0	-0.462	-0.0046
181	SLU 18	-0.02	-0.06	5.66	0	-0.472	-0.0048
181	SLU 19	-0.02	-0.05	5.67	0	-0.4725	-0.0045
181	SLU 20	-0.03	-0.06	5.73	0	-0.4779	-0.0049
181	SLU 21	-0.03	-0.06	5.74	0	-0.4783	-0.0046
181	SLU 22	-0.02	-0.06	5.33	0	-0.4443	-0.0047
181	SLU 23	-0.02	-0.05	5.34	0	-0.445	-0.0042
181	SLU 24	-0.02	-0.06	5.43	0	-0.4529	-0.0047
181	SLU 25	-0.02	-0.05	5.44	0	-0.4534	-0.0044
181	SLU 26	-0.02	-0.05	5.41	0	-0.4509	-0.0043
181	SLU 27	-0.02	-0.06	5.51	0	-0.4588	-0.0048
181	SLU 28	-0.02	-0.05	5.51	0	-0.4592	-0.0045
181	SLU 29	-0.02	-0.06	5.47	0	-0.456	-0.0049
181	SLU 30	-0.02	-0.05	5.48	0	-0.4565	-0.0046
181	SLU 31	-0.02	-0.05	5.96	0	-0.4969	-0.0043
181	SLU 32	-0.02	-0.06	6.06	0	-0.5048	-0.0048
181	SLU 33	-0.03	-0.05	6.06	0	-0.5053	-0.0045
181	SLU 34	-0.03	-0.05	6.03	0	-0.5028	-0.0044
181	SLU 35	-0.03	-0.06	6.13	0	-0.5107	-0.0049
181	SLU 36	-0.03	-0.06	6.13	0	-0.5112	-0.0046
181	SLU 37	-0.03	-0.06	6.1	0	-0.508	-0.005
181	SLU 38	-0.03	-0.06	6.1	0	-0.5084	-0.0047
181	SLU 39	-0.03	-0.06	6.22	0	-0.5184	-0.0048
181	SLU 40	-0.03	-0.05	6.23	0	-0.5189	-0.0045
181	SLU 41	-0.03	-0.06	6.29	0	-0.5243	-0.0049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
181	SLU 42	-0.03	-0.06	6.3	0	-0.5248	-0.0046
181	SLU 43	-0.02	-0.07	6.02	0	-0.5013	-0.0061
181	SLU 44	-0.02	-0.07	6.02	0	-0.502	-0.0056
181	SLU 45	-0.02	-0.07	6.12	0	-0.5099	-0.0061
181	SLU 46	-0.02	-0.07	6.12	0	-0.5104	-0.0058
181	SLU 47	-0.02	-0.07	6.1	0	-0.5079	-0.0056
181	SLU 48	-0.02	-0.07	6.19	0	-0.5158	-0.0062
181	SLU 49	-0.02	-0.07	6.2	0	-0.5163	-0.0059
181	SLU 50	-0.02	-0.07	6.16	0	-0.5131	-0.0062
181	SLU 51	-0.02	-0.07	6.16	0	-0.5135	-0.0059
181	SLU 52	-0.03	-0.07	6.65	0	-0.554	-0.0057
181	SLU 53	-0.03	-0.07	6.74	0	-0.5619	-0.0062
181	SLU 54	-0.03	-0.07	6.75	0	-0.5623	-0.0059
181	SLU 55	-0.03	-0.07	6.72	0	-0.5598	-0.0057
181	SLU 56	-0.03	-0.08	6.81	0	-0.5677	-0.0063
181	SLU 57	-0.03	-0.07	6.82	0	-0.5682	-0.006
181	SLU 58	-0.03	-0.08	6.78	0	-0.565	-0.0063
181	SLU 59	-0.03	-0.07	6.79	0	-0.5654	-0.006
181	SLU 60	-0.03	-0.07	6.91	0	-0.5755	-0.0062
181	SLU 61	-0.03	-0.07	6.91	0	-0.5759	-0.0059
181	SLU 62	-0.03	-0.08	6.98	0	-0.5813	-0.0063
181	SLU 63	-0.03	-0.07	6.98	0	-0.5818	-0.006
181	SLU 64	-0.03	-0.07	6.57	0	-0.5477	-0.0061
181	SLU 65	-0.03	-0.07	6.58	0	-0.5485	-0.0056
181	SLU 66	-0.03	-0.07	6.68	0	-0.5564	-0.0061
181	SLU 67	-0.03	-0.07	6.68	0	-0.5568	-0.0058
181	SLU 68	-0.03	-0.07	6.65	0	-0.5543	-0.0057
181	SLU 69	-0.03	-0.07	6.75	0	-0.5622	-0.0062
181	SLU 70	-0.03	-0.07	6.75	0	-0.5627	-0.0059
181	SLU 71	-0.03	-0.08	6.71	0	-0.5595	-0.0063
181	SLU 72	-0.03	-0.07	6.72	0	-0.5599	-0.006
181	SLU 73	-0.03	-0.07	7.2	0	-0.6004	-0.0057
181	SLU 74	-0.03	-0.07	7.3	0	-0.6083	-0.0062
181	SLU 75	-0.03	-0.07	7.3	0	-0.6087	-0.0059
181	SLU 76	-0.03	-0.07	7.28	0	-0.6063	-0.0058
181	SLU 77	-0.03	-0.08	7.37	0	-0.6142	-0.0063
181	SLU 78	-0.03	-0.07	7.38	0	-0.6146	-0.006
181	SLU 79	-0.03	-0.08	7.34	0	-0.6114	-0.0064
181	SLU 80	-0.03	-0.07	7.34	0	-0.6118	-0.0061
181	SLU 81	-0.03	-0.07	7.46	0	-0.6219	-0.0062
181	SLU 82	-0.03	-0.07	7.47	0	-0.6223	-0.0059
181	SLU 83	-0.03	-0.08	7.53	0	-0.6278	-0.0063
181	SLU 84	-0.03	-0.07	7.54	0	-0.6282	-0.006
181	SLE RA 1	-0.02	-0.06	4.93	0	-0.4111	-0.0047
181	SLE RA 2	-0.02	-0.05	4.94	0	-0.4116	-0.0043
181	SLE RA 3	-0.02	-0.06	5	0	-0.4169	-0.0047
181	SLE RA 4	-0.02	-0.05	5.01	0	-0.4172	-0.0045
181	SLE RA 5	-0.02	-0.05	4.99	0	-0.4155	-0.0044
181	SLE RA 6	-0.02	-0.06	5.05	0	-0.4208	-0.0048
181	SLE RA 7	-0.02	-0.05	5.05	0	-0.4211	-0.0045
181	SLE RA 8	-0.02	-0.06	5.03	0	-0.419	-0.0048
181	SLE RA 9	-0.02	-0.06	5.03	0	-0.4193	-0.0046
181	SLE RA 10	-0.02	-0.05	5.35	0	-0.4462	-0.0044
181	SLE RA 11	-0.02	-0.06	5.42	0	-0.4515	-0.0048
181	SLE RA 12	-0.02	-0.05	5.42	0	-0.4518	-0.0046
181	SLE RA 13	-0.02	-0.05	5.4	0	-0.4501	-0.0045
181	SLE RA 14	-0.02	-0.06	5.46	0	-0.4554	-0.0048
181	SLE RA 15	-0.02	-0.06	5.47	0	-0.4557	-0.0046
181	SLE RA 16	-0.02	-0.06	5.44	0	-0.4536	-0.0049
181	SLE RA 17	-0.02	-0.06	5.45	0	-0.4539	-0.0047
181	SLE RA 18	-0.02	-0.06	5.53	0	-0.4606	-0.0048
181	SLE RA 19	-0.02	-0.05	5.53	0	-0.4609	-0.0046
181	SLE RA 20	-0.02	-0.06	5.57	0	-0.4645	-0.0048
181	SLE RA 21	-0.02	-0.06	5.58	0	-0.4648	-0.0046
181	SLE FR 1	-0.02	-0.06	4.93	0	-0.4111	-0.0047
181	SLE FR 2	-0.02	-0.06	4.93	0	-0.4112	-0.0046
181	SLE FR 3	-0.02	-0.06	4.95	0	-0.4127	-0.0047
181	SLE FR 4	-0.02	-0.06	5.11	0	-0.4261	-0.0046
181	SLE FR 5	-0.02	-0.06	5.13	0	-0.4275	-0.0047
181	SLE FR 6	-0.02	-0.06	5.23	0	-0.4358	-0.0047
181	SLE QP 1	-0.02	-0.06	4.93	0	-0.4111	-0.0047
181	SLE QP 2	-0.02	-0.06	5.11	0	-0.426	-0.0047
181	SLD 1	0.4	0.02	4.97	0	-0.4144	0.0021
181	SLD 2	0.45	0.04	5	0	-0.4164	0.0033
181	SLD 3	0.39	-0.09	4.8	0	-0.4001	-0.0075
181	SLD 4	0.45	-0.07	4.82	0	-0.4021	-0.0062
181	SLD 5	0.11	0.14	5.33	0	-0.4439	0.0116
181	SLD 6	0.14	0.15	5.34	0	-0.4452	0.0124
181	SLD 7	0.08	-0.24	4.75	0	-0.3961	-0.0203
181	SLD 8	0.12	-0.23	4.77	0	-0.3974	-0.0194
181	SLD 9	-0.16	0.12	5.45	0	-0.4545	0.01
181	SLD 10	-0.12	0.13	5.47	0	-0.4558	0.0109
181	SLD 11	-0.18	-0.26	4.88	0	-0.4067	-0.0219
181	SLD 12	-0.15	-0.25	4.9	0	-0.408	-0.021
181	SLD 13	-0.49	-0.04	5.4	0	-0.4499	-0.0032
181	SLD 14	-0.43	-0.02	5.42	0	-0.4519	-0.0019
181	SLD 15	-0.5	-0.15	5.23	0	-0.4355	-0.0128
181	SLD 16	-0.44	-0.14	5.25	0	-0.4375	-0.0115
181	SLV 1	0.96	0.13	4.78	0	-0.3984	0.0108
181	SLV 2	1.09	0.17	4.84	0	-0.4031	0.0138

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
181	SLV 3	0.95	-0.13	4.39	0	-0.3659	-0.0109
181	SLV 4	1.07	-0.1	4.45	0	-0.3705	-0.0079
181	SLV 5	0.28	0.39	5.6	0	-0.4663	0.0325
181	SLV 6	0.36	0.41	5.63	0	-0.4693	0.0344
181	SLV 7	0.22	-0.48	4.29	0	-0.3578	-0.0401
181	SLV 8	0.31	-0.46	4.33	0	-0.3608	-0.0382
181	SLV 9	-0.35	0.35	5.89	0	-0.4911	0.0288
181	SLV 10	-0.27	0.37	5.93	0	-0.4941	0.0307
181	SLV 11	-0.4	-0.53	4.59	0	-0.3826	-0.0438
181	SLV 12	-0.32	-0.5	4.63	0	-0.3857	-0.0419
181	SLV 13	-1.11	-0.02	5.78	0	-0.4814	-0.0015
181	SLV 14	-0.99	0.02	5.83	0	-0.486	0.0015
181	SLV 15	-1.13	-0.28	5.39	0	-0.4488	-0.0233
181	SLV 16	-1.01	-0.24	5.44	0	-0.4535	-0.0203
181	CRTFP Ux+	0	0	0	0	0	0
181	CRTFP Ux-	0	0	0	0	0	0
181	CRTFP Uy+	0	0	0	0	0	0
181	CRTFP Uy-	0	0	0	0	0	0
183	SLU 1	-0.02	-0.06	4.77	0	-0.3182	-0.0041
183	SLU 2	-0.02	-0.06	4.78	0	-0.3188	-0.0037
183	SLU 3	-0.02	-0.06	4.88	0	-0.3251	-0.0042
183	SLU 4	-0.02	-0.06	4.88	0	-0.3255	-0.0039
183	SLU 5	-0.02	-0.06	4.85	0	-0.3235	-0.0038
183	SLU 6	-0.02	-0.06	4.95	0	-0.3298	-0.0042
183	SLU 7	-0.02	-0.06	4.95	0	-0.3302	-0.004
183	SLU 8	-0.02	-0.06	4.91	0	-0.3276	-0.0043
183	SLU 9	-0.02	-0.06	4.92	0	-0.328	-0.004
183	SLU 10	-0.02	-0.06	5.4	0	-0.3602	-0.0038
183	SLU 11	-0.02	-0.06	5.5	0	-0.3666	-0.0043
183	SLU 12	-0.02	-0.06	5.5	0	-0.3669	-0.004
183	SLU 13	-0.02	-0.06	5.47	0	-0.3649	-0.0039
183	SLU 14	-0.02	-0.07	5.57	0	-0.3713	-0.0044
183	SLU 15	-0.02	-0.06	5.57	0	-0.3716	-0.0041
183	SLU 16	-0.02	-0.07	5.54	0	-0.3691	-0.0044
183	SLU 17	-0.02	-0.06	5.54	0	-0.3694	-0.0042
183	SLU 18	-0.02	-0.06	5.66	0	-0.3774	-0.0043
183	SLU 19	-0.02	-0.06	5.67	0	-0.3778	-0.0041
183	SLU 20	-0.02	-0.07	5.73	0	-0.3821	-0.0044
183	SLU 21	-0.02	-0.06	5.74	0	-0.3825	-0.0041
183	SLU 22	-0.02	-0.06	5.33	0	-0.3554	-0.0042
183	SLU 23	-0.02	-0.06	5.34	0	-0.356	-0.0038
183	SLU 24	-0.02	-0.06	5.43	0	-0.3623	-0.0042
183	SLU 25	-0.02	-0.06	5.44	0	-0.3626	-0.004
183	SLU 26	-0.02	-0.06	5.41	0	-0.3607	-0.0039
183	SLU 27	-0.02	-0.06	5.51	0	-0.367	-0.0043
183	SLU 28	-0.02	-0.06	5.51	0	-0.3673	-0.004
183	SLU 29	-0.02	-0.07	5.47	0	-0.3648	-0.0043
183	SLU 30	-0.02	-0.06	5.48	0	-0.3651	-0.0041
183	SLU 31	-0.02	-0.06	5.96	0	-0.3974	-0.0039
183	SLU 32	-0.02	-0.07	6.06	0	-0.4037	-0.0044
183	SLU 33	-0.02	-0.06	6.06	0	-0.4041	-0.0041
183	SLU 34	-0.02	-0.06	6.03	0	-0.4021	-0.004
183	SLU 35	-0.02	-0.07	6.13	0	-0.4084	-0.0044
183	SLU 36	-0.03	-0.06	6.13	0	-0.4088	-0.0042
183	SLU 37	-0.02	-0.07	6.09	0	-0.4062	-0.0045
183	SLU 38	-0.03	-0.06	6.1	0	-0.4066	-0.0042
183	SLU 39	-0.03	-0.07	6.22	0	-0.4146	-0.0044
183	SLU 40	-0.03	-0.06	6.22	0	-0.4149	-0.0041
183	SLU 41	-0.03	-0.07	6.29	0	-0.4193	-0.0045
183	SLU 42	-0.03	-0.06	6.29	0	-0.4196	-0.0042
183	SLU 43	-0.02	-0.08	6.01	0	-0.401	-0.0053
183	SLU 44	-0.02	-0.07	6.02	0	-0.4015	-0.0049
183	SLU 45	-0.02	-0.08	6.12	0	-0.4079	-0.0054
183	SLU 46	-0.02	-0.08	6.12	0	-0.4082	-0.0051
183	SLU 47	-0.02	-0.08	6.09	0	-0.4062	-0.005
183	SLU 48	-0.02	-0.08	6.19	0	-0.4126	-0.0054
183	SLU 49	-0.02	-0.08	6.19	0	-0.4129	-0.0052
183	SLU 50	-0.02	-0.08	6.16	0	-0.4104	-0.0055
183	SLU 51	-0.02	-0.08	6.16	0	-0.4107	-0.0052
183	SLU 52	-0.03	-0.08	6.64	0	-0.443	-0.0051
183	SLU 53	-0.03	-0.08	6.74	0	-0.4493	-0.0055
183	SLU 54	-0.03	-0.08	6.74	0	-0.4496	-0.0053
183	SLU 55	-0.03	-0.08	6.71	0	-0.4477	-0.0051
183	SLU 56	-0.03	-0.08	6.81	0	-0.454	-0.0056
183	SLU 57	-0.03	-0.08	6.82	0	-0.4543	-0.0053
183	SLU 58	-0.03	-0.08	6.78	0	-0.4518	-0.0056
183	SLU 59	-0.03	-0.08	6.78	0	-0.4521	-0.0054
183	SLU 60	-0.03	-0.08	6.9	0	-0.4602	-0.0055
183	SLU 61	-0.03	-0.08	6.91	0	-0.4605	-0.0053
183	SLU 62	-0.03	-0.08	6.97	0	-0.4649	-0.0056
183	SLU 63	-0.03	-0.08	6.98	0	-0.4652	-0.0054
183	SLU 64	-0.02	-0.08	6.57	0	-0.4381	-0.0054
183	SLU 65	-0.03	-0.07	6.58	0	-0.4387	-0.005
183	SLU 66	-0.03	-0.08	6.68	0	-0.445	-0.0054
183	SLU 67	-0.03	-0.08	6.68	0	-0.4454	-0.0052
183	SLU 68	-0.03	-0.08	6.65	0	-0.4434	-0.0051
183	SLU 69	-0.03	-0.08	6.75	0	-0.4497	-0.0055
183	SLU 70	-0.03	-0.08	6.75	0	-0.4501	-0.0053
183	SLU 71	-0.03	-0.08	6.71	0	-0.4475	-0.0056
183	SLU 72	-0.03	-0.08	6.72	0	-0.4479	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
183	SLU 73	-0.03	-0.08	7.2	0	-0.4801	-0.0051
183	SLU 74	-0.03	-0.08	7.3	0	-0.4865	-0.0056
183	SLU 75	-0.03	-0.08	7.3	0	-0.4868	-0.0053
183	SLU 76	-0.03	-0.08	7.27	0	-0.4848	-0.0052
183	SLU 77	-0.03	-0.08	7.37	0	-0.4912	-0.0056
183	SLU 78	-0.03	-0.08	7.37	0	-0.4915	-0.0054
183	SLU 79	-0.03	-0.09	7.33	0	-0.489	-0.0057
183	SLU 80	-0.03	-0.08	7.34	0	-0.4893	-0.0054
183	SLU 81	-0.03	-0.08	7.46	0	-0.4973	-0.0056
183	SLU 82	-0.03	-0.08	7.46	0	-0.4977	-0.0053
183	SLU 83	-0.03	-0.09	7.53	0	-0.502	-0.0057
183	SLU 84	-0.03	-0.08	7.54	0	-0.5024	-0.0054
183	SLE RA 1	-0.02	-0.06	4.93	0	-0.3289	-0.0041
183	SLE RA 2	-0.02	-0.06	4.94	0	-0.3292	-0.0039
183	SLE RA 3	-0.02	-0.06	5	0	-0.3335	-0.0042
183	SLE RA 4	-0.02	-0.06	5.01	0	-0.3337	-0.004
183	SLE RA 5	-0.02	-0.06	4.99	0	-0.3324	-0.0039
183	SLE RA 6	-0.02	-0.06	5.05	0	-0.3366	-0.0042
183	SLE RA 7	-0.02	-0.06	5.05	0	-0.3368	-0.004
183	SLE RA 8	-0.02	-0.06	5.03	0	-0.3351	-0.0042
183	SLE RA 9	-0.02	-0.06	5.03	0	-0.3354	-0.0041
183	SLE RA 10	-0.02	-0.06	5.35	0	-0.3569	-0.004
183	SLE RA 11	-0.02	-0.06	5.42	0	-0.3611	-0.0043
183	SLE RA 12	-0.02	-0.06	5.42	0	-0.3613	-0.0041
183	SLE RA 13	-0.02	-0.06	5.4	0	-0.36	-0.004
183	SLE RA 14	-0.02	-0.06	5.46	0	-0.3642	-0.0043
183	SLE RA 15	-0.02	-0.06	5.47	0	-0.3644	-0.0041
183	SLE RA 16	-0.02	-0.07	5.44	0	-0.3627	-0.0043
183	SLE RA 17	-0.02	-0.06	5.44	0	-0.363	-0.0042
183	SLE RA 18	-0.02	-0.06	5.52	0	-0.3683	-0.0043
183	SLE RA 19	-0.02	-0.06	5.53	0	-0.3685	-0.0041
183	SLE RA 20	-0.02	-0.06	5.57	0	-0.3714	-0.0043
183	SLE RA 21	-0.02	-0.06	5.58	0	-0.3717	-0.0042
183	SLE FR 1	-0.02	-0.06	4.93	0	-0.3289	-0.0041
183	SLE FR 2	-0.02	-0.06	4.93	0	-0.3289	-0.0041
183	SLE FR 3	-0.02	-0.06	4.95	0	-0.3301	-0.0042
183	SLE FR 4	-0.02	-0.06	5.11	0	-0.3408	-0.0041
183	SLE FR 5	-0.02	-0.06	5.13	0	-0.342	-0.0042
183	SLE FR 6	-0.02	-0.06	5.23	0	-0.3486	-0.0042
183	SLE QP 1	-0.02	-0.06	4.93	0	-0.3289	-0.0041
183	SLE QP 2	-0.02	-0.06	5.11	0	-0.3407	-0.0042
183	SLD 1	0.4	0.02	4.93	0	-0.3288	0.0015
183	SLD 2	0.45	0.04	4.96	0	-0.3305	0.0026
183	SLD 3	0.39	-0.09	4.76	0	-0.3173	-0.0061
183	SLD 4	0.45	-0.07	4.79	0	-0.319	-0.0049
183	SLD 5	0.11	0.13	5.31	0	-0.3543	0.0088
183	SLD 6	0.14	0.14	5.33	0	-0.3554	0.0096
183	SLD 7	0.08	-0.25	4.74	0	-0.3159	-0.0165
183	SLD 8	0.12	-0.24	4.76	0	-0.317	-0.0157
183	SLD 9	-0.16	0.11	5.47	0	-0.3644	0.0073
183	SLD 10	-0.12	0.12	5.48	0	-0.3655	0.0081
183	SLD 11	-0.18	-0.27	4.89	0	-0.326	-0.0179
183	SLD 12	-0.15	-0.26	4.91	0	-0.3271	-0.0172
183	SLD 13	-0.49	-0.05	5.44	0	-0.3624	-0.0034
183	SLD 14	-0.43	-0.03	5.46	0	-0.3641	-0.0023
183	SLD 15	-0.49	-0.17	5.26	0	-0.3509	-0.011
183	SLD 16	-0.44	-0.15	5.29	0	-0.3526	-0.0098
183	SLV 1	0.96	0.13	4.69	0	-0.3125	0.0088
183	SLV 2	1.08	0.17	4.75	0	-0.3165	0.0116
183	SLV 3	0.94	-0.13	4.3	0	-0.2864	-0.0084
183	SLV 4	1.07	-0.09	4.36	0	-0.2904	-0.0057
183	SLV 5	0.28	0.38	5.57	0	-0.3712	0.0254
183	SLV 6	0.36	0.41	5.61	0	-0.3737	0.0272
183	SLV 7	0.22	-0.48	4.26	0	-0.2842	-0.0321
183	SLV 8	0.3	-0.45	4.3	0	-0.2867	-0.0303
183	SLV 9	-0.34	0.33	5.92	0	-0.3947	0.022
183	SLV 10	-0.26	0.36	5.96	0	-0.3972	0.0237
183	SLV 11	-0.4	-0.53	4.62	0	-0.3077	-0.0355
183	SLV 12	-0.32	-0.51	4.65	0	-0.3102	-0.0338
183	SLV 13	-1.11	-0.04	5.87	0	-0.391	-0.0027
183	SLV 14	-0.98	0	5.92	0	-0.3949	0
183	SLV 15	-1.12	-0.3	5.47	0	-0.3649	-0.0199
183	SLV 16	-1	-0.26	5.53	0	-0.3689	-0.0172
183	CRTFP Ux+	0	0	0	0	0	0
183	CRTFP Ux-	0	0	0	0	0	0
185	SLU 1	-0.02	-0.07	4.71	0	-0.2356	-0.0033
185	SLU 2	-0.02	-0.06	4.72	0	-0.236	-0.003
185	SLU 3	-0.02	-0.07	4.81	0	-0.2407	-0.0034
185	SLU 4	-0.02	-0.06	4.82	0	-0.241	-0.0032
185	SLU 5	-0.02	-0.06	4.79	0	-0.2395	-0.0031
185	SLU 6	-0.02	-0.07	4.88	0	-0.2442	-0.0034
185	SLU 7	-0.02	-0.06	4.89	0	-0.2445	-0.0032
185	SLU 8	-0.02	-0.07	4.85	0	-0.2426	-0.0035
185	SLU 9	-0.02	-0.07	4.86	0	-0.2428	-0.0033
185	SLU 10	-0.02	-0.06	5.33	0	-0.2667	-0.0032
185	SLU 11	-0.02	-0.07	5.43	0	-0.2714	-0.0035
185	SLU 12	-0.02	-0.07	5.43	0	-0.2716	-0.0033
185	SLU 13	-0.02	-0.06	5.4	0	-0.2701	-0.0032
185	SLU 14	-0.02	-0.07	5.5	0	-0.2748	-0.0036
185	SLU 15	-0.02	-0.07	5.5	0	-0.2751	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLU 16	-0.02	-0.07	5.46	0	-0.2732	-0.0036
185	SLU 17	-0.02	-0.07	5.47	0	-0.2734	-0.0034
185	SLU 18	-0.02	-0.07	5.59	0	-0.2794	-0.0035
185	SLU 19	-0.02	-0.07	5.59	0	-0.2796	-0.0033
185	SLU 20	-0.02	-0.07	5.66	0	-0.2829	-0.0036
185	SLU 21	-0.02	-0.07	5.66	0	-0.2831	-0.0034
185	SLU 22	-0.02	-0.07	5.26	0	-0.2632	-0.0034
185	SLU 23	-0.02	-0.06	5.27	0	-0.2636	-0.0031
185	SLU 24	-0.02	-0.07	5.37	0	-0.2683	-0.0035
185	SLU 25	-0.02	-0.07	5.37	0	-0.2686	-0.0033
185	SLU 26	-0.02	-0.06	5.34	0	-0.2671	-0.0032
185	SLU 27	-0.02	-0.07	5.44	0	-0.2718	-0.0035
185	SLU 28	-0.02	-0.07	5.44	0	-0.272	-0.0033
185	SLU 29	-0.02	-0.07	5.4	0	-0.2702	-0.0036
185	SLU 30	-0.02	-0.07	5.41	0	-0.2704	-0.0034
185	SLU 31	-0.02	-0.07	5.88	0	-0.2942	-0.0033
185	SLU 32	-0.02	-0.07	5.98	0	-0.2989	-0.0036
185	SLU 33	-0.02	-0.07	5.98	0	-0.2992	-0.0034
185	SLU 34	-0.02	-0.07	5.95	0	-0.2977	-0.0033
185	SLU 35	-0.02	-0.07	6.05	0	-0.3024	-0.0037
185	SLU 36	-0.02	-0.07	6.05	0	-0.3026	-0.0035
185	SLU 37	-0.02	-0.07	6.02	0	-0.3008	-0.0037
185	SLU 38	-0.02	-0.07	6.02	0	-0.301	-0.0035
185	SLU 39	-0.03	-0.07	6.14	0	-0.3069	-0.0036
185	SLU 40	-0.03	-0.07	6.14	0	-0.3072	-0.0034
185	SLU 41	-0.03	-0.07	6.21	0	-0.3104	-0.0037
185	SLU 42	-0.03	-0.07	6.21	0	-0.3107	-0.0035
185	SLU 43	-0.02	-0.09	5.94	0	-0.2969	-0.0043
185	SLU 44	-0.02	-0.08	5.95	0	-0.2973	-0.004
185	SLU 45	-0.02	-0.09	6.04	0	-0.302	-0.0043
185	SLU 46	-0.02	-0.08	6.04	0	-0.3022	-0.0042
185	SLU 47	-0.02	-0.08	6.02	0	-0.3008	-0.0041
185	SLU 48	-0.02	-0.09	6.11	0	-0.3055	-0.0044
185	SLU 49	-0.02	-0.08	6.11	0	-0.3057	-0.0042
185	SLU 50	-0.02	-0.09	6.08	0	-0.3038	-0.0044
185	SLU 51	-0.02	-0.09	6.08	0	-0.3041	-0.0043
185	SLU 52	-0.03	-0.08	6.56	0	-0.3279	-0.0041
185	SLU 53	-0.03	-0.09	6.65	0	-0.3326	-0.0045
185	SLU 54	-0.03	-0.09	6.66	0	-0.3328	-0.0043
185	SLU 55	-0.03	-0.08	6.63	0	-0.3314	-0.0042
185	SLU 56	-0.03	-0.09	6.72	0	-0.3361	-0.0045
185	SLU 57	-0.03	-0.09	6.73	0	-0.3363	-0.0044
185	SLU 58	-0.03	-0.09	6.69	0	-0.3344	-0.0046
185	SLU 59	-0.03	-0.09	6.69	0	-0.3347	-0.0044
185	SLU 60	-0.03	-0.09	6.81	0	-0.3406	-0.0045
185	SLU 61	-0.03	-0.09	6.82	0	-0.3409	-0.0043
185	SLU 62	-0.03	-0.09	6.88	0	-0.3441	-0.0046
185	SLU 63	-0.03	-0.09	6.89	0	-0.3443	-0.0044
185	SLU 64	-0.02	-0.09	6.49	0	-0.3244	-0.0044
185	SLU 65	-0.02	-0.08	6.5	0	-0.3248	-0.0041
185	SLU 66	-0.02	-0.09	6.59	0	-0.3296	-0.0044
185	SLU 67	-0.02	-0.08	6.6	0	-0.3298	-0.0042
185	SLU 68	-0.02	-0.08	6.57	0	-0.3283	-0.0042
185	SLU 69	-0.03	-0.09	6.66	0	-0.333	-0.0045
185	SLU 70	-0.03	-0.09	6.67	0	-0.3333	-0.0043
185	SLU 71	-0.02	-0.09	6.63	0	-0.3314	-0.0045
185	SLU 72	-0.03	-0.09	6.63	0	-0.3316	-0.0043
185	SLU 73	-0.03	-0.08	7.11	0	-0.3555	-0.0042
185	SLU 74	-0.03	-0.09	7.2	0	-0.3602	-0.0046
185	SLU 75	-0.03	-0.09	7.21	0	-0.3604	-0.0044
185	SLU 76	-0.03	-0.09	7.18	0	-0.3589	-0.0043
185	SLU 77	-0.03	-0.09	7.27	0	-0.3636	-0.0046
185	SLU 78	-0.03	-0.09	7.28	0	-0.3639	-0.0044
185	SLU 79	-0.03	-0.09	7.24	0	-0.362	-0.0047
185	SLU 80	-0.03	-0.09	7.25	0	-0.3623	-0.0045
185	SLU 81	-0.03	-0.09	7.36	0	-0.3682	-0.0046
185	SLU 82	-0.03	-0.09	7.37	0	-0.3684	-0.0044
185	SLU 83	-0.03	-0.09	7.43	0	-0.3717	-0.0047
185	SLU 84	-0.03	-0.09	7.44	0	-0.3719	-0.0045
185	SLE RA 1	-0.02	-0.07	4.87	0	-0.2435	-0.0034
185	SLE RA 2	-0.02	-0.06	4.88	0	-0.2438	-0.0032
185	SLE RA 3	-0.02	-0.07	4.94	0	-0.2469	-0.0034
185	SLE RA 4	-0.02	-0.07	4.94	0	-0.2471	-0.0033
185	SLE RA 5	-0.02	-0.06	4.92	0	-0.2461	-0.0032
185	SLE RA 6	-0.02	-0.07	4.98	0	-0.2492	-0.0034
185	SLE RA 7	-0.02	-0.07	4.99	0	-0.2494	-0.0033
185	SLE RA 8	-0.02	-0.07	4.96	0	-0.2481	-0.0034
185	SLE RA 9	-0.02	-0.07	4.97	0	-0.2483	-0.0033
185	SLE RA 10	-0.02	-0.06	5.28	0	-0.2642	-0.0032
185	SLE RA 11	-0.02	-0.07	5.35	0	-0.2673	-0.0035
185	SLE RA 12	-0.02	-0.07	5.35	0	-0.2675	-0.0034
185	SLE RA 13	-0.02	-0.07	5.33	0	-0.2665	-0.0033
185	SLE RA 14	-0.02	-0.07	5.39	0	-0.2696	-0.0035
185	SLE RA 15	-0.02	-0.07	5.4	0	-0.2698	-0.0034
185	SLE RA 16	-0.02	-0.07	5.37	0	-0.2686	-0.0035
185	SLE RA 17	-0.02	-0.07	5.37	0	-0.2687	-0.0034
185	SLE RA 18	-0.02	-0.07	5.45	0	-0.2727	-0.0035
185	SLE RA 19	-0.02	-0.07	5.46	0	-0.2728	-0.0034
185	SLE RA 20	-0.02	-0.07	5.5	0	-0.275	-0.0035
185	SLE RA 21	-0.02	-0.07	5.5	0	-0.2752	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLE FR 1	-0.02	-0.07	4.87	0	-0.2435	-0.0034
185	SLE FR 2	-0.02	-0.07	4.87	0	-0.2436	-0.0033
185	SLE FR 3	-0.02	-0.07	4.89	0	-0.2444	-0.0034
185	SLE FR 4	-0.02	-0.07	5.05	0	-0.2523	-0.0034
185	SLE FR 5	-0.02	-0.07	5.06	0	-0.2532	-0.0034
185	SLE FR 6	-0.02	-0.07	5.16	0	-0.2581	-0.0034
185	SLE QP 1	-0.02	-0.07	4.87	0	-0.2435	-0.0034
185	SLE QP 2	-0.02	-0.07	5.05	0	-0.2523	-0.0034
185	SLD 1	0.39	0.02	4.83	0	-0.2415	0.001
185	SLD 2	0.44	0.04	4.86	0	-0.2428	0.0019
185	SLD 3	0.38	-0.09	4.66	0	-0.2329	-0.0046
185	SLD 4	0.44	-0.07	4.68	0	-0.2342	-0.0036
185	SLD 5	0.1	0.12	5.24	0	-0.2618	0.0061
185	SLD 6	0.14	0.14	5.25	0	-0.2626	0.0068
185	SLD 7	0.08	-0.25	4.66	0	-0.2332	-0.0123
185	SLD 8	0.12	-0.23	4.68	0	-0.2341	-0.0117
185	SLD 9	-0.16	0.1	5.41	0	-0.2704	0.0049
185	SLD 10	-0.12	0.11	5.43	0	-0.2713	0.0055
185	SLD 11	-0.18	-0.27	4.84	0	-0.2419	-0.0136
185	SLD 12	-0.14	-0.26	4.85	0	-0.2427	-0.013
185	SLD 13	-0.48	-0.06	5.41	0	-0.2703	-0.0032
185	SLD 14	-0.42	-0.04	5.43	0	-0.2716	-0.0022
185	SLD 15	-0.48	-0.17	5.23	0	-0.2617	-0.0087
185	SLD 16	-0.43	-0.16	5.26	0	-0.263	-0.0078
185	SLV 1	0.94	0.13	4.54	0	-0.2268	0.0066
185	SLV 2	1.06	0.18	4.6	0	-0.2298	0.0089
185	SLV 3	0.93	-0.12	4.15	0	-0.2074	-0.006
185	SLV 4	1.05	-0.08	4.21	0	-0.2104	-0.0038
185	SLV 5	0.27	0.37	5.47	0	-0.2735	0.0184
185	SLV 6	0.35	0.4	5.51	0	-0.2755	0.0198
185	SLV 7	0.22	-0.47	4.18	0	-0.2088	-0.0237
185	SLV 8	0.3	-0.45	4.22	0	-0.2108	-0.0223
185	SLV 9	-0.34	0.31	5.87	0	-0.2937	0.0155
185	SLV 10	-0.26	0.34	5.91	0	-0.2957	0.0169
185	SLV 11	-0.39	-0.53	4.58	0	-0.229	-0.0266
185	SLV 12	-0.31	-0.5	4.62	0	-0.231	-0.0252
185	SLV 13	-1.09	-0.06	5.88	0	-0.2941	-0.0031
185	SLV 14	-0.97	-0.02	5.94	0	-0.2972	-0.0008
185	SLV 15	-1.1	-0.31	5.49	0	-0.2747	-0.0157
185	SLV 16	-0.98	-0.27	5.56	0	-0.2778	-0.0134
185	CRTFP Ux+	0	0	0	0	0	0
185	CRTFP Ux-	0	0	0	0	0	0
187	SLU 1	-0.02	-0.07	4.62	0	0	0
187	SLU 2	-0.02	-0.06	4.63	0	0	0
187	SLU 3	-0.02	-0.07	4.72	0	0	0
187	SLU 4	-0.02	-0.07	4.73	0	0	0
187	SLU 5	-0.02	-0.07	4.7	0	0	0
187	SLU 6	-0.02	-0.07	4.79	0	0	0
187	SLU 7	-0.02	-0.07	4.8	0	0	0
187	SLU 8	-0.02	-0.07	4.76	0	0	0
187	SLU 9	-0.02	-0.07	4.76	0	0	0
187	SLU 10	-0.02	-0.07	5.23	0	0	0
187	SLU 11	-0.02	-0.07	5.32	0	0	0
187	SLU 12	-0.02	-0.07	5.33	0	0	0
187	SLU 13	-0.02	-0.07	5.3	0	0	0
187	SLU 14	-0.02	-0.08	5.39	0	0	0
187	SLU 15	-0.02	-0.07	5.4	0	0	0
187	SLU 16	-0.02	-0.08	5.36	0	0	0
187	SLU 17	-0.02	-0.07	5.36	0	0	0
187	SLU 18	-0.02	-0.08	5.48	0	0	0
187	SLU 19	-0.02	-0.07	5.48	0	0	0
187	SLU 20	-0.02	-0.08	5.55	0	0	0
187	SLU 21	-0.02	-0.07	5.55	0	0	0
187	SLU 22	-0.02	-0.07	5.16	0	0	0
187	SLU 23	-0.02	-0.07	5.17	0	0	0
187	SLU 24	-0.02	-0.07	5.26	0	0	0
187	SLU 25	-0.02	-0.07	5.27	0	0	0
187	SLU 26	-0.02	-0.07	5.24	0	0	0
187	SLU 27	-0.02	-0.08	5.33	0	0	0
187	SLU 28	-0.02	-0.07	5.34	0	0	0
187	SLU 29	-0.02	-0.08	5.3	0	0	0
187	SLU 30	-0.02	-0.07	5.31	0	0	0
187	SLU 31	-0.02	-0.07	5.77	0	0	0
187	SLU 32	-0.02	-0.08	5.86	0	0	0
187	SLU 33	-0.02	-0.07	5.87	0	0	0
187	SLU 34	-0.02	-0.07	5.84	0	0	0
187	SLU 35	-0.02	-0.08	5.93	0	0	0
187	SLU 36	-0.02	-0.07	5.94	0	0	0
187	SLU 37	-0.02	-0.08	5.9	0	0	0
187	SLU 38	-0.02	-0.08	5.91	0	0	0
187	SLU 39	-0.02	-0.08	6.02	0	0	0
187	SLU 40	-0.02	-0.07	6.03	0	0	0
187	SLU 41	-0.02	-0.08	6.09	0	0	0
187	SLU 42	-0.03	-0.08	6.09	0	0	0
187	SLU 43	-0.02	-0.09	5.82	0	0	0
187	SLU 44	-0.02	-0.08	5.83	0	0	0
187	SLU 45	-0.02	-0.09	5.92	0	0	0
187	SLU 46	-0.02	-0.09	5.93	0	0	0
187	SLU 47	-0.02	-0.09	5.9	0	0	0
187	SLU 48	-0.02	-0.09	5.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
187	SLU 49	-0.02	-0.09	6	0	0	0
187	SLU 50	-0.02	-0.09	5.96	0	0	0
187	SLU 51	-0.02	-0.09	5.96	0	0	0
187	SLU 52	-0.03	-0.09	6.43	0	0	0
187	SLU 53	-0.03	-0.1	6.52	0	0	0
187	SLU 54	-0.03	-0.09	6.53	0	0	0
187	SLU 55	-0.03	-0.09	6.5	0	0	0
187	SLU 56	-0.03	-0.1	6.59	0	0	0
187	SLU 57	-0.03	-0.09	6.6	0	0	0
187	SLU 58	-0.03	-0.1	6.56	0	0	0
187	SLU 59	-0.03	-0.09	6.56	0	0	0
187	SLU 60	-0.03	-0.1	6.68	0	0	0
187	SLU 61	-0.03	-0.09	6.69	0	0	0
187	SLU 62	-0.03	-0.1	6.75	0	0	0
187	SLU 63	-0.03	-0.09	6.75	0	0	0
187	SLU 64	-0.02	-0.09	6.37	0	0	0
187	SLU 65	-0.02	-0.09	6.37	0	0	0
187	SLU 66	-0.02	-0.09	6.47	0	0	0
187	SLU 67	-0.02	-0.09	6.47	0	0	0
187	SLU 68	-0.02	-0.09	6.44	0	0	0
187	SLU 69	-0.02	-0.1	6.53	0	0	0
187	SLU 70	-0.02	-0.09	6.54	0	0	0
187	SLU 71	-0.02	-0.1	6.5	0	0	0
187	SLU 72	-0.02	-0.09	6.51	0	0	0
187	SLU 73	-0.03	-0.09	6.97	0	0	0
187	SLU 74	-0.03	-0.1	7.07	0	0	0
187	SLU 75	-0.03	-0.09	7.07	0	0	0
187	SLU 76	-0.03	-0.09	7.04	0	0	0
187	SLU 77	-0.03	-0.1	7.13	0	0	0
187	SLU 78	-0.03	-0.1	7.14	0	0	0
187	SLU 79	-0.03	-0.1	7.1	0	0	0
187	SLU 80	-0.03	-0.1	7.11	0	0	0
187	SLU 81	-0.03	-0.1	7.22	0	0	0
187	SLU 82	-0.03	-0.09	7.23	0	0	0
187	SLU 83	-0.03	-0.1	7.29	0	0	0
187	SLU 84	-0.03	-0.1	7.3	0	0	0
187	SLE RA 1	-0.02	-0.07	4.78	0	0	0
187	SLE RA 2	-0.02	-0.07	4.78	0	0	0
187	SLE RA 3	-0.02	-0.07	4.84	0	0	0
187	SLE RA 4	-0.02	-0.07	4.85	0	0	0
187	SLE RA 5	-0.02	-0.07	4.83	0	0	0
187	SLE RA 6	-0.02	-0.07	4.89	0	0	0
187	SLE RA 7	-0.02	-0.07	4.89	0	0	0
187	SLE RA 8	-0.02	-0.07	4.87	0	0	0
187	SLE RA 9	-0.02	-0.07	4.87	0	0	0
187	SLE RA 10	-0.02	-0.07	5.18	0	0	0
187	SLE RA 11	-0.02	-0.07	5.24	0	0	0
187	SLE RA 12	-0.02	-0.07	5.25	0	0	0
187	SLE RA 13	-0.02	-0.07	5.23	0	0	0
187	SLE RA 14	-0.02	-0.07	5.29	0	0	0
187	SLE RA 15	-0.02	-0.07	5.29	0	0	0
187	SLE RA 16	-0.02	-0.08	5.27	0	0	0
187	SLE RA 17	-0.02	-0.07	5.27	0	0	0
187	SLE RA 18	-0.02	-0.07	5.35	0	0	0
187	SLE RA 19	-0.02	-0.07	5.35	0	0	0
187	SLE RA 20	-0.02	-0.08	5.39	0	0	0
187	SLE RA 21	-0.02	-0.07	5.4	0	0	0
187	SLE FR 1	-0.02	-0.07	4.78	0	0	0
187	SLE FR 2	-0.02	-0.07	4.78	0	0	0
187	SLE FR 3	-0.02	-0.07	4.8	0	0	0
187	SLE FR 4	-0.02	-0.07	4.95	0	0	0
187	SLE FR 5	-0.02	-0.07	4.97	0	0	0
187	SLE FR 6	-0.02	-0.07	5.06	0	0	0
187	SLE QP 1	-0.02	-0.07	4.78	0	0	0
187	SLE QP 2	-0.02	-0.07	4.95	0	0	0
187	SLD 1	0.38	0.02	4.7	0	0	0
187	SLD 2	0.43	0.04	4.73	0	0	0
187	SLD 3	0.38	-0.09	4.53	0	0	0
187	SLD 4	0.43	-0.07	4.56	0	0	0
187	SLD 5	0.1	0.11	5.13	0	0	0
187	SLD 6	0.14	0.13	5.14	0	0	0
187	SLD 7	0.08	-0.24	4.56	0	0	0
187	SLD 8	0.11	-0.23	4.58	0	0	0
187	SLD 9	-0.15	0.09	5.32	0	0	0
187	SLD 10	-0.12	0.1	5.33	0	0	0
187	SLD 11	-0.17	-0.27	4.75	0	0	0
187	SLD 12	-0.14	-0.26	4.77	0	0	0
187	SLD 13	-0.46	-0.07	5.34	0	0	0
187	SLD 14	-0.41	-0.05	5.36	0	0	0
187	SLD 15	-0.47	-0.18	5.17	0	0	0
187	SLD 16	-0.42	-0.16	5.2	0	0	0
187	SLV 1	0.92	0.13	4.37	0	0	0
187	SLV 2	1.04	0.18	4.43	0	0	0
187	SLV 3	0.9	-0.11	3.98	0	0	0
187	SLV 4	1.02	-0.07	4.04	0	0	0
187	SLV 5	0.27	0.35	5.34	0	0	0
187	SLV 6	0.34	0.38	5.38	0	0	0
187	SLV 7	0.21	-0.46	4.07	0	0	0
187	SLV 8	0.29	-0.43	4.11	0	0	0
187	SLV 9	-0.33	0.29	5.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
187	SLV 10	-0.25	0.32	5.83	0	0	0
187	SLV 11	-0.38	-0.53	4.51	0	0	0
187	SLV 12	-0.3	-0.5	4.55	0	0	0
187	SLV 13	-1.06	-0.08	5.85	0	0	0
187	SLV 14	-0.94	-0.03	5.91	0	0	0
187	SLV 15	-1.08	-0.32	5.47	0	0	0
187	SLV 16	-0.96	-0.28	5.53	0	0	0
188	SLU 1	-0.02	-0.08	4.9	0	0	0
188	SLU 2	-0.02	-0.08	4.91	0	0	0
188	SLU 3	-0.02	-0.08	5.01	0	0	0
188	SLU 4	-0.02	-0.08	5.01	0	0	0
188	SLU 5	-0.02	-0.08	4.98	0	0	0
188	SLU 6	-0.02	-0.08	5.08	0	0	0
188	SLU 7	-0.02	-0.08	5.08	0	0	0
188	SLU 8	-0.02	-0.08	5.05	0	0	0
188	SLU 9	-0.02	-0.08	5.05	0	0	0
188	SLU 10	-0.02	-0.08	5.54	0	0	0
188	SLU 11	-0.02	-0.09	5.64	0	0	0
188	SLU 12	-0.02	-0.08	5.65	0	0	0
188	SLU 13	-0.02	-0.08	5.62	0	0	0
188	SLU 14	-0.02	-0.09	5.72	0	0	0
188	SLU 15	-0.02	-0.08	5.72	0	0	0
188	SLU 16	-0.02	-0.09	5.68	0	0	0
188	SLU 17	-0.02	-0.09	5.69	0	0	0
188	SLU 18	-0.02	-0.09	5.81	0	0	0
188	SLU 19	-0.02	-0.08	5.81	0	0	0
188	SLU 20	-0.02	-0.09	5.88	0	0	0
188	SLU 21	-0.02	-0.09	5.89	0	0	0
188	SLU 22	-0.02	-0.08	5.48	0	0	0
188	SLU 23	-0.02	-0.08	5.48	0	0	0
188	SLU 24	-0.02	-0.09	5.58	0	0	0
188	SLU 25	-0.02	-0.08	5.59	0	0	0
188	SLU 26	-0.02	-0.08	5.56	0	0	0
188	SLU 27	-0.02	-0.09	5.66	0	0	0
188	SLU 28	-0.02	-0.08	5.66	0	0	0
188	SLU 29	-0.02	-0.09	5.62	0	0	0
188	SLU 30	-0.02	-0.08	5.63	0	0	0
188	SLU 31	-0.02	-0.08	6.12	0	0	0
188	SLU 32	-0.02	-0.09	6.22	0	0	0
188	SLU 33	-0.02	-0.09	6.22	0	0	0
188	SLU 34	-0.02	-0.08	6.19	0	0	0
188	SLU 35	-0.02	-0.09	6.29	0	0	0
188	SLU 36	-0.03	-0.09	6.3	0	0	0
188	SLU 37	-0.02	-0.09	6.26	0	0	0
188	SLU 38	-0.03	-0.09	6.26	0	0	0
188	SLU 39	-0.03	-0.09	6.39	0	0	0
188	SLU 40	-0.03	-0.09	6.39	0	0	0
188	SLU 41	-0.03	-0.09	6.46	0	0	0
188	SLU 42	-0.03	-0.09	6.46	0	0	0
188	SLU 43	-0.02	-0.1	6.17	0	0	0
188	SLU 44	-0.02	-0.1	6.18	0	0	0
188	SLU 45	-0.02	-0.11	6.28	0	0	0
188	SLU 46	-0.02	-0.1	6.28	0	0	0
188	SLU 47	-0.02	-0.1	6.25	0	0	0
188	SLU 48	-0.02	-0.11	6.35	0	0	0
188	SLU 49	-0.02	-0.1	6.36	0	0	0
188	SLU 50	-0.02	-0.11	6.32	0	0	0
188	SLU 51	-0.02	-0.1	6.32	0	0	0
188	SLU 52	-0.03	-0.1	6.82	0	0	0
188	SLU 53	-0.03	-0.11	6.92	0	0	0
188	SLU 54	-0.03	-0.11	6.92	0	0	0
188	SLU 55	-0.03	-0.1	6.89	0	0	0
188	SLU 56	-0.03	-0.11	6.99	0	0	0
188	SLU 57	-0.03	-0.11	6.99	0	0	0
188	SLU 58	-0.03	-0.11	6.95	0	0	0
188	SLU 59	-0.03	-0.11	6.96	0	0	0
188	SLU 60	-0.03	-0.11	7.08	0	0	0
188	SLU 61	-0.03	-0.11	7.09	0	0	0
188	SLU 62	-0.03	-0.11	7.15	0	0	0
188	SLU 63	-0.03	-0.11	7.16	0	0	0
188	SLU 64	-0.02	-0.11	6.75	0	0	0
188	SLU 65	-0.03	-0.1	6.76	0	0	0
188	SLU 66	-0.03	-0.11	6.86	0	0	0
188	SLU 67	-0.03	-0.11	6.86	0	0	0
188	SLU 68	-0.03	-0.1	6.83	0	0	0
188	SLU 69	-0.03	-0.11	6.93	0	0	0
188	SLU 70	-0.03	-0.11	6.93	0	0	0
188	SLU 71	-0.03	-0.11	6.89	0	0	0
188	SLU 72	-0.03	-0.11	6.9	0	0	0
188	SLU 73	-0.03	-0.11	7.39	0	0	0
188	SLU 74	-0.03	-0.11	7.49	0	0	0
188	SLU 75	-0.03	-0.11	7.5	0	0	0
188	SLU 76	-0.03	-0.11	7.47	0	0	0
188	SLU 77	-0.03	-0.12	7.56	0	0	0
188	SLU 78	-0.03	-0.11	7.57	0	0	0
188	SLU 79	-0.03	-0.12	7.53	0	0	0
188	SLU 80	-0.03	-0.11	7.53	0	0	0
188	SLU 81	-0.03	-0.11	7.66	0	0	0
188	SLU 82	-0.03	-0.11	7.66	0	0	0
188	SLU 83	-0.03	-0.12	7.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLU 84	-0.03	-0.11	7.74	0	0	0
188	SLE RA 1	-0.02	-0.08	5.07	0	0	0
188	SLE RA 2	-0.02	-0.08	5.07	0	0	0
188	SLE RA 3	-0.02	-0.08	5.14	0	0	0
188	SLE RA 4	-0.02	-0.08	5.14	0	0	0
188	SLE RA 5	-0.02	-0.08	5.12	0	0	0
188	SLE RA 6	-0.02	-0.08	5.18	0	0	0
188	SLE RA 7	-0.02	-0.08	5.19	0	0	0
188	SLE RA 8	-0.02	-0.08	5.16	0	0	0
188	SLE RA 9	-0.02	-0.08	5.16	0	0	0
188	SLE RA 10	-0.02	-0.08	5.49	0	0	0
188	SLE RA 11	-0.02	-0.09	5.56	0	0	0
188	SLE RA 12	-0.02	-0.08	5.56	0	0	0
188	SLE RA 13	-0.02	-0.08	5.54	0	0	0
188	SLE RA 14	-0.02	-0.09	5.61	0	0	0
188	SLE RA 15	-0.02	-0.08	5.61	0	0	0
188	SLE RA 16	-0.02	-0.09	5.59	0	0	0
188	SLE RA 17	-0.02	-0.08	5.59	0	0	0
188	SLE RA 18	-0.02	-0.09	5.67	0	0	0
188	SLE RA 19	-0.02	-0.08	5.67	0	0	0
188	SLE RA 20	-0.02	-0.09	5.72	0	0	0
188	SLE RA 21	-0.02	-0.09	5.72	0	0	0
188	SLE FR 1	-0.02	-0.08	5.07	0	0	0
188	SLE FR 2	-0.02	-0.08	5.07	0	0	0
188	SLE FR 3	-0.02	-0.08	5.08	0	0	0
188	SLE FR 4	-0.02	-0.08	5.25	0	0	0
188	SLE FR 5	-0.02	-0.08	5.27	0	0	0
188	SLE FR 6	-0.02	-0.08	5.37	0	0	0
188	SLE QP 1	-0.02	-0.08	5.07	0	0	0
188	SLE QP 2	-0.02	-0.08	5.25	0	0	0
188	SLD 1	0.4	0.01	4.94	0	0	0
188	SLD 2	0.46	0.04	4.97	0	0	0
188	SLD 3	0.39	-0.1	4.76	0	0	0
188	SLD 4	0.45	-0.07	4.79	0	0	0
188	SLD 5	0.11	0.11	5.42	0	0	0
188	SLD 6	0.14	0.13	5.44	0	0	0
188	SLD 7	0.08	-0.26	4.82	0	0	0
188	SLD 8	0.12	-0.25	4.84	0	0	0
188	SLD 9	-0.16	0.08	5.65	0	0	0
188	SLD 10	-0.12	0.1	5.67	0	0	0
188	SLD 11	-0.18	-0.29	5.05	0	0	0
188	SLD 12	-0.15	-0.28	5.07	0	0	0
188	SLD 13	-0.49	-0.09	5.7	0	0	0
188	SLD 14	-0.43	-0.07	5.73	0	0	0
188	SLD 15	-0.5	-0.21	5.52	0	0	0
188	SLD 16	-0.44	-0.18	5.55	0	0	0
188	SLV 1	0.97	0.14	4.53	0	0	0
188	SLV 2	1.09	0.2	4.6	0	0	0
188	SLV 3	0.95	-0.11	4.12	0	0	0
188	SLV 4	1.08	-0.06	4.19	0	0	0
188	SLV 5	0.28	0.36	5.64	0	0	0
188	SLV 6	0.36	0.4	5.68	0	0	0
188	SLV 7	0.22	-0.49	4.28	0	0	0
188	SLV 8	0.3	-0.45	4.32	0	0	0
188	SLV 9	-0.34	0.29	6.17	0	0	0
188	SLV 10	-0.26	0.32	6.22	0	0	0
188	SLV 11	-0.4	-0.57	4.81	0	0	0
188	SLV 12	-0.32	-0.53	4.85	0	0	0
188	SLV 13	-1.12	-0.11	6.31	0	0	0
188	SLV 14	-0.99	-0.05	6.37	0	0	0
188	SLV 15	-1.13	-0.37	5.9	0	0	0
188	SLV 16	-1.01	-0.31	5.97	0	0	0
189	SLU 1	-0.01	-0.05	2.52	0	0	0
189	SLU 2	-0.01	-0.04	2.53	0	0	0
189	SLU 3	-0.01	-0.05	2.58	0	0	0
189	SLU 4	-0.01	-0.04	2.58	0	0	0
189	SLU 5	-0.01	-0.04	2.56	0	0	0
189	SLU 6	-0.01	-0.05	2.61	0	0	0
189	SLU 7	-0.01	-0.05	2.62	0	0	0
189	SLU 8	-0.01	-0.05	2.6	0	0	0
189	SLU 9	-0.01	-0.05	2.6	0	0	0
189	SLU 10	-0.01	-0.04	2.85	0	0	0
189	SLU 11	-0.01	-0.05	2.9	0	0	0
189	SLU 12	-0.01	-0.05	2.91	0	0	0
189	SLU 13	-0.01	-0.05	2.89	0	0	0
189	SLU 14	-0.01	-0.05	2.94	0	0	0
189	SLU 15	-0.01	-0.05	2.94	0	0	0
189	SLU 16	-0.01	-0.05	2.92	0	0	0
189	SLU 17	-0.01	-0.05	2.93	0	0	0
189	SLU 18	-0.01	-0.05	2.99	0	0	0
189	SLU 19	-0.01	-0.05	2.99	0	0	0
189	SLU 20	-0.01	-0.05	3.03	0	0	0
189	SLU 21	-0.01	-0.05	3.03	0	0	0
189	SLU 22	-0.01	-0.05	2.82	0	0	0
189	SLU 23	-0.01	-0.04	2.82	0	0	0
189	SLU 24	-0.01	-0.05	2.88	0	0	0
189	SLU 25	-0.01	-0.05	2.88	0	0	0
189	SLU 26	-0.01	-0.05	2.86	0	0	0
189	SLU 27	-0.01	-0.05	2.91	0	0	0
189	SLU 28	-0.01	-0.05	2.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
189	SLU 29	-0.01	-0.05	2.89	0	0	0
189	SLU 30	-0.01	-0.05	2.9	0	0	0
189	SLU 31	-0.01	-0.05	3.15	0	0	0
189	SLU 32	-0.01	-0.05	3.2	0	0	0
189	SLU 33	-0.01	-0.05	3.2	0	0	0
189	SLU 34	-0.01	-0.05	3.19	0	0	0
189	SLU 35	-0.01	-0.05	3.24	0	0	0
189	SLU 36	-0.01	-0.05	3.24	0	0	0
189	SLU 37	-0.01	-0.05	3.22	0	0	0
189	SLU 38	-0.01	-0.05	3.22	0	0	0
189	SLU 39	-0.01	-0.05	3.29	0	0	0
189	SLU 40	-0.01	-0.05	3.29	0	0	0
189	SLU 41	-0.01	-0.05	3.33	0	0	0
189	SLU 42	-0.01	-0.05	3.33	0	0	0
189	SLU 43	-0.01	-0.06	3.18	0	0	0
189	SLU 44	-0.01	-0.06	3.18	0	0	0
189	SLU 45	-0.01	-0.06	3.23	0	0	0
189	SLU 46	-0.01	-0.06	3.23	0	0	0
189	SLU 47	-0.01	-0.06	3.22	0	0	0
189	SLU 48	-0.01	-0.06	3.27	0	0	0
189	SLU 49	-0.01	-0.06	3.27	0	0	0
189	SLU 50	-0.01	-0.06	3.25	0	0	0
189	SLU 51	-0.01	-0.06	3.25	0	0	0
189	SLU 52	-0.01	-0.06	3.51	0	0	0
189	SLU 53	-0.01	-0.06	3.56	0	0	0
189	SLU 54	-0.01	-0.06	3.56	0	0	0
189	SLU 55	-0.01	-0.06	3.55	0	0	0
189	SLU 56	-0.01	-0.06	3.6	0	0	0
189	SLU 57	-0.01	-0.06	3.6	0	0	0
189	SLU 58	-0.01	-0.06	3.58	0	0	0
189	SLU 59	-0.01	-0.06	3.58	0	0	0
189	SLU 60	-0.01	-0.06	3.64	0	0	0
189	SLU 61	-0.01	-0.06	3.65	0	0	0
189	SLU 62	-0.02	-0.06	3.68	0	0	0
189	SLU 63	-0.02	-0.06	3.68	0	0	0
189	SLU 64	-0.01	-0.06	3.48	0	0	0
189	SLU 65	-0.01	-0.06	3.48	0	0	0
189	SLU 66	-0.01	-0.06	3.53	0	0	0
189	SLU 67	-0.01	-0.06	3.53	0	0	0
189	SLU 68	-0.01	-0.06	3.52	0	0	0
189	SLU 69	-0.01	-0.06	3.57	0	0	0
189	SLU 70	-0.01	-0.06	3.57	0	0	0
189	SLU 71	-0.01	-0.06	3.55	0	0	0
189	SLU 72	-0.01	-0.06	3.55	0	0	0
189	SLU 73	-0.01	-0.06	3.81	0	0	0
189	SLU 74	-0.01	-0.06	3.86	0	0	0
189	SLU 75	-0.01	-0.06	3.86	0	0	0
189	SLU 76	-0.02	-0.06	3.84	0	0	0
189	SLU 77	-0.02	-0.06	3.89	0	0	0
189	SLU 78	-0.02	-0.06	3.9	0	0	0
189	SLU 79	-0.02	-0.07	3.88	0	0	0
189	SLU 80	-0.02	-0.06	3.88	0	0	0
189	SLU 81	-0.02	-0.06	3.94	0	0	0
189	SLU 82	-0.02	-0.06	3.94	0	0	0
189	SLU 83	-0.02	-0.07	3.98	0	0	0
189	SLU 84	-0.02	-0.06	3.98	0	0	0
189	SLE RA 1	-0.01	-0.05	2.61	0	0	0
189	SLE RA 2	-0.01	-0.04	2.61	0	0	0
189	SLE RA 3	-0.01	-0.05	2.64	0	0	0
189	SLE RA 4	-0.01	-0.05	2.65	0	0	0
189	SLE RA 5	-0.01	-0.04	2.63	0	0	0
189	SLE RA 6	-0.01	-0.05	2.67	0	0	0
189	SLE RA 7	-0.01	-0.05	2.67	0	0	0
189	SLE RA 8	-0.01	-0.05	2.66	0	0	0
189	SLE RA 9	-0.01	-0.05	2.66	0	0	0
189	SLE RA 10	-0.01	-0.05	2.83	0	0	0
189	SLE RA 11	-0.01	-0.05	2.86	0	0	0
189	SLE RA 12	-0.01	-0.05	2.86	0	0	0
189	SLE RA 13	-0.01	-0.05	2.85	0	0	0
189	SLE RA 14	-0.01	-0.05	2.89	0	0	0
189	SLE RA 15	-0.01	-0.05	2.89	0	0	0
189	SLE RA 16	-0.01	-0.05	2.88	0	0	0
189	SLE RA 17	-0.01	-0.05	2.88	0	0	0
189	SLE RA 18	-0.01	-0.05	2.92	0	0	0
189	SLE RA 19	-0.01	-0.05	2.92	0	0	0
189	SLE RA 20	-0.01	-0.05	2.94	0	0	0
189	SLE RA 21	-0.01	-0.05	2.95	0	0	0
189	SLE FR 1	-0.01	-0.05	2.61	0	0	0
189	SLE FR 2	-0.01	-0.05	2.61	0	0	0
189	SLE FR 3	-0.01	-0.05	2.62	0	0	0
189	SLE FR 4	-0.01	-0.05	2.7	0	0	0
189	SLE FR 5	-0.01	-0.05	2.71	0	0	0
189	SLE FR 6	-0.01	-0.05	2.76	0	0	0
189	SLE QP 1	-0.01	-0.05	2.61	0	0	0
189	SLE QP 2	-0.01	-0.05	2.7	0	0	0
189	SLD 1	0.2	0.01	2.52	0	0	0
189	SLD 2	0.23	0.02	2.54	0	0	0
189	SLD 3	0.2	-0.05	2.43	0	0	0
189	SLD 4	0.23	-0.04	2.45	0	0	0
189	SLD 5	0.05	0.05	2.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
189	SLD 6	0.07	0.06	2.8	0	0	0
189	SLD 7	0.04	-0.14	2.48	0	0	0
189	SLD 8	0.06	-0.13	2.49	0	0	0
189	SLD 9	-0.08	0.03	2.92	0	0	0
189	SLD 10	-0.06	0.04	2.93	0	0	0
189	SLD 11	-0.09	-0.16	2.61	0	0	0
189	SLD 12	-0.08	-0.15	2.62	0	0	0
189	SLD 13	-0.25	-0.06	2.96	0	0	0
189	SLD 14	-0.22	-0.04	2.97	0	0	0
189	SLD 15	-0.25	-0.11	2.86	0	0	0
189	SLD 16	-0.22	-0.1	2.88	0	0	0
189	SLV 1	0.49	0.08	2.28	0	0	0
189	SLV 2	0.56	0.11	2.32	0	0	0
189	SLV 3	0.48	-0.05	2.07	0	0	0
189	SLV 4	0.55	-0.02	2.11	0	0	0
189	SLV 5	0.14	0.18	2.89	0	0	0
189	SLV 6	0.18	0.2	2.91	0	0	0
189	SLV 7	0.11	-0.25	2.18	0	0	0
189	SLV 8	0.16	-0.23	2.21	0	0	0
189	SLV 9	-0.18	0.14	3.19	0	0	0
189	SLV 10	-0.13	0.16	3.22	0	0	0
189	SLV 11	-0.2	-0.3	2.49	0	0	0
189	SLV 12	-0.16	-0.28	2.51	0	0	0
189	SLV 13	-0.57	-0.07	3.3	0	0	0
189	SLV 14	-0.5	-0.04	3.33	0	0	0
189	SLV 15	-0.58	-0.2	3.08	0	0	0
189	SLV 16	-0.51	-0.17	3.12	0	0	0
199	SLU 1	-0.11	-0.19	32.56	0.7686	9.1123	0.0506
199	SLU 2	-0.12	-0.14	32.63	0.7702	9.1328	0.0391
199	SLU 3	-0.12	-0.18	33.28	0.7854	9.3121	0.049
199	SLU 4	-0.12	-0.16	33.32	0.7864	9.3245	0.0421
199	SLU 5	-0.12	-0.15	33.12	0.7816	9.2695	0.0398
199	SLU 6	-0.12	-0.18	33.76	0.7969	9.4488	0.0497
199	SLU 7	-0.12	-0.16	33.8	0.7978	9.4611	0.0428
199	SLU 8	-0.12	-0.19	33.54	0.7915	9.3856	0.0519
199	SLU 9	-0.12	-0.17	33.58	0.7924	9.3979	0.0451
199	SLU 10	-0.14	-0.13	36.98	0.8733	10.3574	0.0347
199	SLU 11	-0.14	-0.16	37.63	0.8885	10.5367	0.0446
199	SLU 12	-0.14	-0.14	37.67	0.8895	10.549	0.0377
199	SLU 13	-0.14	-0.13	37.47	0.8848	10.494	0.0354
199	SLU 14	-0.14	-0.17	38.11	0.9	10.6734	0.0453
199	SLU 15	-0.14	-0.14	38.15	0.9009	10.6857	0.0384
199	SLU 16	-0.14	-0.17	37.89	0.8946	10.6101	0.0476
199	SLU 17	-0.14	-0.15	37.93	0.8956	10.6225	0.0407
199	SLU 18	-0.15	-0.16	38.78	0.9159	10.8617	0.0443
199	SLU 19	-0.15	-0.14	38.82	0.9169	10.874	0.0374
199	SLU 20	-0.15	-0.17	39.26	0.9274	10.9983	0.045
199	SLU 21	-0.15	-0.14	39.31	0.9283	11.0106	0.0381
199	SLU 22	-0.12	-0.16	36.37	0.8586	10.1785	0.043
199	SLU 23	-0.13	-0.12	36.44	0.8602	10.1991	0.0316
199	SLU 24	-0.13	-0.15	37.08	0.8754	10.3784	0.0415
199	SLU 25	-0.13	-0.13	37.13	0.8763	10.3907	0.0346
199	SLU 26	-0.13	-0.12	36.93	0.8716	10.3357	0.0323
199	SLU 27	-0.13	-0.16	37.57	0.8868	10.515	0.0421
199	SLU 28	-0.13	-0.13	37.61	0.8878	10.5274	0.0353
199	SLU 29	-0.13	-0.17	37.34	0.8815	10.4518	0.0444
199	SLU 30	-0.13	-0.14	37.39	0.8824	10.4642	0.0376
199	SLU 31	-0.15	-0.1	40.79	0.9633	11.4236	0.0272
199	SLU 32	-0.15	-0.14	41.43	0.9785	11.603	0.0371
199	SLU 33	-0.15	-0.11	41.48	0.9795	11.6153	0.0302
199	SLU 34	-0.15	-0.1	41.28	0.9747	11.5603	0.0279
199	SLU 35	-0.15	-0.14	41.92	0.9899	11.7396	0.0377
199	SLU 36	-0.15	-0.12	41.96	0.9909	11.7519	0.0309
199	SLU 37	-0.15	-0.15	41.69	0.9846	11.6764	0.04
199	SLU 38	-0.15	-0.12	41.74	0.9855	11.6887	0.0332
199	SLU 39	-0.16	-0.14	42.59	1.0059	11.9279	0.0368
199	SLU 40	-0.16	-0.11	42.63	1.0068	11.9402	0.0299
199	SLU 41	-0.16	-0.14	43.07	1.0173	12.0646	0.0375
199	SLU 42	-0.16	-0.11	43.11	1.0183	12.0769	0.0306
199	SLU 43	-0.15	-0.25	41.03	0.9683	11.4804	0.0683
199	SLU 44	-0.15	-0.21	41.1	0.9699	11.5009	0.0569
199	SLU 45	-0.15	-0.25	41.74	0.9851	11.6802	0.0667
199	SLU 46	-0.15	-0.22	41.78	0.9861	11.6926	0.0599
199	SLU 47	-0.15	-0.21	41.58	0.9814	11.6376	0.0576
199	SLU 48	-0.15	-0.25	42.23	0.9966	11.8169	0.0674
199	SLU 49	-0.15	-0.22	42.27	0.9975	11.8292	0.0605
199	SLU 50	-0.15	-0.26	42	0.9912	11.7537	0.0697
199	SLU 51	-0.15	-0.23	42.04	0.9922	11.766	0.0628
199	SLU 52	-0.17	-0.19	45.45	1.0731	12.7255	0.0525
199	SLU 53	-0.17	-0.23	46.09	1.0883	12.9048	0.0623
199	SLU 54	-0.17	-0.2	46.13	1.0892	12.9171	0.0555
199	SLU 55	-0.17	-0.2	45.93	1.0845	12.8621	0.0532
199	SLU 56	-0.17	-0.23	46.58	1.0997	13.0415	0.063
199	SLU 57	-0.18	-0.21	46.62	1.1007	13.0538	0.0561
199	SLU 58	-0.17	-0.24	46.35	1.0944	12.9783	0.0653
199	SLU 59	-0.18	-0.21	46.39	1.0953	12.9906	0.0584
199	SLU 60	-0.18	-0.23	47.24	1.1157	13.2298	0.062
199	SLU 61	-0.18	-0.2	47.28	1.1166	13.2421	0.0552
199	SLU 62	-0.18	-0.23	47.73	1.1271	13.3664	0.0627
199	SLU 63	-0.18	-0.21	47.77	1.1281	13.3787	0.0559

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
199	SLU 64	-0.16	-0.22	44.84	1.0583	12.5466	0.0608
199	SLU 65	-0.16	-0.18	44.9	1.0599	12.5672	0.0493
199	SLU 66	-0.16	-0.22	45.55	1.0751	12.7465	0.0592
199	SLU 67	-0.16	-0.19	45.59	1.0761	12.7588	0.0523
199	SLU 68	-0.16	-0.19	45.39	1.0713	12.7038	0.05
199	SLU 69	-0.16	-0.22	46.03	1.0866	12.8831	0.0599
199	SLU 70	-0.16	-0.2	46.08	1.0875	12.8955	0.053
199	SLU 71	-0.16	-0.23	45.81	1.0812	12.8199	0.0622
199	SLU 72	-0.16	-0.2	45.85	1.0821	12.8323	0.0553
199	SLU 73	-0.18	-0.17	49.25	1.163	13.7917	0.045
199	SLU 74	-0.18	-0.2	49.9	1.1782	13.9711	0.0548
199	SLU 75	-0.18	-0.18	49.94	1.1792	13.9834	0.0479
199	SLU 76	-0.18	-0.17	49.74	1.1745	13.9284	0.0456
199	SLU 77	-0.18	-0.21	50.38	1.1897	14.1077	0.0555
199	SLU 78	-0.19	-0.18	50.43	1.1906	14.12	0.0486
199	SLU 79	-0.18	-0.21	50.16	1.1843	14.0445	0.0578
199	SLU 80	-0.19	-0.19	50.2	1.1853	14.0568	0.0509
199	SLU 81	-0.19	-0.2	51.05	1.2056	14.296	0.0545
199	SLU 82	-0.19	-0.18	51.09	1.2066	14.3083	0.0477
199	SLU 83	-0.19	-0.2	51.54	1.2171	14.4327	0.0552
199	SLU 84	-0.19	-0.18	51.58	1.218	14.445	0.0483
199	SLE RA 1	-0.12	-0.18	33.65	0.7943	9.4169	0.0484
199	SLE RA 2	-0.12	-0.15	33.7	0.7954	9.4306	0.0408
199	SLE RA 3	-0.12	-0.17	34.13	0.8055	9.5502	0.0474
199	SLE RA 4	-0.12	-0.16	34.15	0.8061	9.5584	0.0428
199	SLE RA 5	-0.12	-0.15	34.02	0.803	9.5217	0.0412
199	SLE RA 6	-0.12	-0.18	34.45	0.8131	9.6413	0.0478
199	SLE RA 7	-0.12	-0.16	34.48	0.8138	9.6495	0.0432
199	SLE RA 8	-0.12	-0.18	34.3	0.8096	9.5991	0.0493
199	SLE RA 9	-0.12	-0.17	34.33	0.8102	9.6073	0.0448
199	SLE RA 10	-0.13	-0.14	36.6	0.8641	10.247	0.0379
199	SLE RA 11	-0.13	-0.16	37.03	0.8743	10.3665	0.0444
199	SLE RA 12	-0.14	-0.15	37.05	0.8749	10.3748	0.0398
199	SLE RA 13	-0.14	-0.14	36.92	0.8717	10.3381	0.0383
199	SLE RA 14	-0.14	-0.17	37.35	0.8819	10.4576	0.0449
199	SLE RA 15	-0.14	-0.15	37.38	0.8825	10.4659	0.0403
199	SLE RA 16	-0.14	-0.17	37.2	0.8783	10.4155	0.0464
199	SLE RA 17	-0.14	-0.15	37.23	0.879	10.4237	0.0418
199	SLE RA 18	-0.14	-0.16	37.79	0.8925	10.5832	0.0442
199	SLE RA 19	-0.14	-0.15	37.82	0.8932	10.5914	0.0397
199	SLE RA 20	-0.14	-0.16	38.12	0.9002	10.6743	0.0447
199	SLE RA 21	-0.14	-0.15	38.15	0.9008	10.6825	0.0401
199	SLE FR 1	-0.12	-0.18	33.65	0.7943	9.4169	0.0484
199	SLE FR 2	-0.12	-0.17	33.66	0.7945	9.4197	0.0469
199	SLE FR 3	-0.12	-0.18	33.78	0.7974	9.4534	0.0486
199	SLE FR 4	-0.12	-0.17	34.9	0.824	9.7695	0.0456
199	SLE FR 5	-0.12	-0.17	35.02	0.8268	9.8032	0.0473
199	SLE FR 6	-0.13	-0.17	35.72	0.8434	10	0.0463
199	SLE QP 1	-0.12	-0.18	33.65	0.7943	9.4169	0.0484
199	SLE QP 2	-0.12	-0.17	34.89	0.8238	9.7668	0.0472
199	SLD 1	2.83	0.16	34.93	0.8256	9.8277	-0.1185
199	SLD 2	3.19	0.19	35.02	0.8274	9.8433	-0.1325
199	SLD 3	2.78	-0.68	33.86	0.8018	9.5279	0.1164
199	SLD 4	3.15	-0.65	33.94	0.8036	9.5436	0.1024
199	SLD 5	0.77	1.19	36.52	0.8601	10.237	-0.3563
199	SLD 6	1.01	1.21	36.57	0.8613	10.2472	-0.3655
199	SLD 7	0.61	-1.6	32.95	0.7807	9.2377	0.4267
199	SLD 8	0.85	-1.59	33	0.7819	9.2479	0.4175
199	SLD 9	-1.1	1.24	36.79	0.8657	10.2857	-0.3232
199	SLD 10	-0.86	1.25	36.84	0.8668	10.2959	-0.3323
199	SLD 11	-1.26	-1.56	33.22	0.7862	9.2864	0.4598
199	SLD 12	-1.02	-1.54	33.27	0.7874	9.2966	0.4506
199	SLD 13	-3.39	0.31	35.84	0.844	9.99	-0.0081
199	SLD 14	-3.03	0.33	35.93	0.8458	10.0057	-0.0221
199	SLD 15	-3.44	-0.53	34.77	0.8202	9.6903	0.2268
199	SLD 16	-3.08	-0.51	34.86	0.8219	9.7059	0.2128
199	SLV 1	6.78	0.58	34.94	0.8272	9.8987	-0.3331
199	SLV 2	7.63	0.64	35.14	0.8313	9.9351	-0.3657
199	SLV 3	6.67	-1.33	32.52	0.7731	9.2187	0.2017
199	SLV 4	7.52	-1.27	32.71	0.7773	9.2551	0.1691
199	SLV 5	1.97	2.94	38.56	0.906	10.8315	-0.8724
199	SLV 6	2.52	2.98	38.69	0.9087	10.8549	-0.8934
199	SLV 7	1.6	-3.43	30.46	0.7259	8.5648	0.9103
199	SLV 8	2.15	-3.39	30.59	0.7286	8.5882	0.8893
199	SLV 9	-2.4	3.04	39.2	0.919	10.9454	-0.795
199	SLV 10	-1.85	3.08	39.33	0.9216	10.9688	-0.8159
199	SLV 11	-2.76	-3.33	31.1	0.7388	8.6787	0.9878
199	SLV 12	-2.22	-3.29	31.23	0.7415	8.7021	0.9668
199	SLV 13	-7.77	0.92	37.08	0.8702	10.2784	-0.0748
199	SLV 14	-6.92	0.98	37.27	0.8744	10.3149	-0.1074
199	SLV 15	-7.88	-0.99	34.65	0.8162	9.5984	0.46
199	SLV 16	-7.03	-0.93	34.84	0.8204	9.6349	0.4274
199	CRTFP Ux+	0	0	0	0	0	0
199	CRTFP Ux-	0	0	0	0	0	0
199	CRTFP Uy+	0	0	0	0	0	0
199	CRTFP Uy-	0	0	0	0	0	0
201	SLU 1	-0.03	-0.08	9.24	0	0	0
201	SLU 2	-0.03	-0.07	9.26	0	0	0
201	SLU 3	-0.03	-0.08	9.44	0	0	0
201	SLU 4	-0.03	-0.07	9.45	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 5	-0.03	-0.07	9.39	0	0	0
201	SLU 6	-0.03	-0.08	9.58	0	0	0
201	SLU 7	-0.03	-0.07	9.59	0	0	0
201	SLU 8	-0.03	-0.08	9.51	0	0	0
201	SLU 9	-0.03	-0.07	9.52	0	0	0
201	SLU 10	-0.04	-0.06	10.48	0	0	0
201	SLU 11	-0.04	-0.07	10.66	0	0	0
201	SLU 12	-0.04	-0.07	10.67	0	0	0
201	SLU 13	-0.04	-0.06	10.62	0	0	0
201	SLU 14	-0.04	-0.08	10.8	0	0	0
201	SLU 15	-0.04	-0.07	10.81	0	0	0
201	SLU 16	-0.04	-0.08	10.74	0	0	0
201	SLU 17	-0.04	-0.07	10.75	0	0	0
201	SLU 18	-0.04	-0.07	10.99	0	0	0
201	SLU 19	-0.04	-0.07	11	0	0	0
201	SLU 20	-0.04	-0.08	11.12	0	0	0
201	SLU 21	-0.04	-0.07	11.13	0	0	0
201	SLU 22	-0.03	-0.07	10.32	0	0	0
201	SLU 23	-0.03	-0.06	10.34	0	0	0
201	SLU 24	-0.03	-0.07	10.52	0	0	0
201	SLU 25	-0.03	-0.07	10.53	0	0	0
201	SLU 26	-0.03	-0.06	10.47	0	0	0
201	SLU 27	-0.03	-0.07	10.66	0	0	0
201	SLU 28	-0.03	-0.07	10.67	0	0	0
201	SLU 29	-0.03	-0.08	10.59	0	0	0
201	SLU 30	-0.03	-0.07	10.6	0	0	0
201	SLU 31	-0.04	-0.06	11.56	0	0	0
201	SLU 32	-0.04	-0.07	11.74	0	0	0
201	SLU 33	-0.04	-0.06	11.75	0	0	0
201	SLU 34	-0.04	-0.06	11.7	0	0	0
201	SLU 35	-0.04	-0.07	11.88	0	0	0
201	SLU 36	-0.04	-0.06	11.89	0	0	0
201	SLU 37	-0.04	-0.07	11.82	0	0	0
201	SLU 38	-0.04	-0.07	11.83	0	0	0
201	SLU 39	-0.04	-0.07	12.07	0	0	0
201	SLU 40	-0.04	-0.06	12.08	0	0	0
201	SLU 41	-0.04	-0.07	12.2	0	0	0
201	SLU 42	-0.04	-0.06	12.21	0	0	0
201	SLU 43	-0.04	-0.1	11.64	0	0	0
201	SLU 44	-0.04	-0.09	11.66	0	0	0
201	SLU 45	-0.04	-0.1	11.84	0	0	0
201	SLU 46	-0.04	-0.09	11.85	0	0	0
201	SLU 47	-0.04	-0.09	11.8	0	0	0
201	SLU 48	-0.04	-0.1	11.98	0	0	0
201	SLU 49	-0.04	-0.1	11.99	0	0	0
201	SLU 50	-0.04	-0.1	11.92	0	0	0
201	SLU 51	-0.04	-0.1	11.93	0	0	0
201	SLU 52	-0.05	-0.09	12.88	0	0	0
201	SLU 53	-0.05	-0.1	13.07	0	0	0
201	SLU 54	-0.05	-0.09	13.08	0	0	0
201	SLU 55	-0.05	-0.09	13.02	0	0	0
201	SLU 56	-0.05	-0.1	13.2	0	0	0
201	SLU 57	-0.05	-0.09	13.21	0	0	0
201	SLU 58	-0.05	-0.1	13.14	0	0	0
201	SLU 59	-0.05	-0.1	13.15	0	0	0
201	SLU 60	-0.05	-0.1	13.39	0	0	0
201	SLU 61	-0.05	-0.09	13.4	0	0	0
201	SLU 62	-0.05	-0.1	13.53	0	0	0
201	SLU 63	-0.05	-0.09	13.54	0	0	0
201	SLU 64	-0.04	-0.1	12.72	0	0	0
201	SLU 65	-0.04	-0.09	12.74	0	0	0
201	SLU 66	-0.04	-0.1	12.92	0	0	0
201	SLU 67	-0.04	-0.09	12.93	0	0	0
201	SLU 68	-0.04	-0.09	12.88	0	0	0
201	SLU 69	-0.04	-0.1	13.06	0	0	0
201	SLU 70	-0.04	-0.09	13.07	0	0	0
201	SLU 71	-0.04	-0.1	12.99	0	0	0
201	SLU 72	-0.04	-0.09	13.01	0	0	0
201	SLU 73	-0.05	-0.08	13.96	0	0	0
201	SLU 74	-0.05	-0.1	14.14	0	0	0
201	SLU 75	-0.05	-0.09	14.16	0	0	0
201	SLU 76	-0.05	-0.09	14.1	0	0	0
201	SLU 77	-0.05	-0.1	14.28	0	0	0
201	SLU 78	-0.05	-0.09	14.29	0	0	0
201	SLU 79	-0.05	-0.1	14.22	0	0	0
201	SLU 80	-0.05	-0.09	14.23	0	0	0
201	SLU 81	-0.05	-0.1	14.47	0	0	0
201	SLU 82	-0.05	-0.09	14.48	0	0	0
201	SLU 83	-0.05	-0.1	14.6	0	0	0
201	SLU 84	-0.05	-0.09	14.62	0	0	0
201	SLE RA 1	-0.03	-0.08	9.55	0	0	0
201	SLE RA 2	-0.03	-0.07	9.56	0	0	0
201	SLE RA 3	-0.03	-0.08	9.68	0	0	0
201	SLE RA 4	-0.03	-0.07	9.69	0	0	0
201	SLE RA 5	-0.03	-0.07	9.65	0	0	0
201	SLE RA 6	-0.03	-0.08	9.77	0	0	0
201	SLE RA 7	-0.03	-0.07	9.78	0	0	0
201	SLE RA 8	-0.03	-0.08	9.73	0	0	0
201	SLE RA 9	-0.03	-0.07	9.74	0	0	0
201	SLE RA 10	-0.04	-0.07	10.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLE RA 11	-0.04	-0.07	10.5	0	0	0
201	SLE RA 12	-0.04	-0.07	10.5	0	0	0
201	SLE RA 13	-0.04	-0.07	10.47	0	0	0
201	SLE RA 14	-0.04	-0.08	10.59	0	0	0
201	SLE RA 15	-0.04	-0.07	10.6	0	0	0
201	SLE RA 16	-0.04	-0.08	10.55	0	0	0
201	SLE RA 17	-0.04	-0.07	10.55	0	0	0
201	SLE RA 18	-0.04	-0.07	10.71	0	0	0
201	SLE RA 19	-0.04	-0.07	10.72	0	0	0
201	SLE RA 20	-0.04	-0.08	10.8	0	0	0
201	SLE RA 21	-0.04	-0.07	10.81	0	0	0
201	SLE FR 1	-0.03	-0.08	9.55	0	0	0
201	SLE FR 2	-0.03	-0.07	9.55	0	0	0
201	SLE FR 3	-0.03	-0.08	9.58	0	0	0
201	SLE FR 4	-0.03	-0.07	9.9	0	0	0
201	SLE FR 5	-0.03	-0.08	9.93	0	0	0
201	SLE FR 6	-0.03	-0.08	10.13	0	0	0
201	SLE QP 1	-0.03	-0.08	9.55	0	0	0
201	SLE QP 2	-0.03	-0.08	9.9	0	0	0
201	SLD 1	0.8	0.06	9.83	0	0	0
201	SLD 2	0.91	0.08	9.86	0	0	0
201	SLD 3	0.79	-0.18	9.52	0	0	0
201	SLD 4	0.89	-0.16	9.55	0	0	0
201	SLD 5	0.22	0.32	10.33	0	0	0
201	SLD 6	0.29	0.33	10.35	0	0	0
201	SLD 7	0.18	-0.46	9.32	0	0	0
201	SLD 8	0.24	-0.45	9.34	0	0	0
201	SLD 9	-0.31	0.3	10.46	0	0	0
201	SLD 10	-0.24	0.31	10.48	0	0	0
201	SLD 11	-0.35	-0.48	9.44	0	0	0
201	SLD 12	-0.29	-0.47	9.46	0	0	0
201	SLD 13	-0.96	0.01	10.24	0	0	0
201	SLD 14	-0.86	0.02	10.27	0	0	0
201	SLD 15	-0.97	-0.23	9.93	0	0	0
201	SLD 16	-0.87	-0.21	9.97	0	0	0
201	SLV 1	1.93	0.23	9.72	0	0	0
201	SLV 2	2.17	0.27	9.8	0	0	0
201	SLV 3	1.89	-0.3	9.03	0	0	0
201	SLV 4	2.14	-0.26	9.11	0	0	0
201	SLV 5	0.56	0.82	10.88	0	0	0
201	SLV 6	0.72	0.85	10.93	0	0	0
201	SLV 7	0.46	-0.96	8.57	0	0	0
201	SLV 8	0.61	-0.94	8.62	0	0	0
201	SLV 9	-0.68	0.78	11.17	0	0	0
201	SLV 10	-0.52	0.81	11.22	0	0	0
201	SLV 11	-0.78	-1	8.86	0	0	0
201	SLV 12	-0.63	-0.97	8.92	0	0	0
201	SLV 13	-2.2	0.11	10.69	0	0	0
201	SLV 14	-1.96	0.15	10.77	0	0	0
201	SLV 15	-2.23	-0.43	10	0	0	0
201	SLV 16	-1.99	-0.38	10.08	0	0	0
202	SLU 1	-0.03	-0.09	9.26	0	0	0
202	SLU 2	-0.03	-0.08	9.28	0	0	0
202	SLU 3	-0.03	-0.09	9.46	0	0	0
202	SLU 4	-0.03	-0.08	9.47	0	0	0
202	SLU 5	-0.03	-0.08	9.42	0	0	0
202	SLU 6	-0.03	-0.09	9.6	0	0	0
202	SLU 7	-0.03	-0.08	9.61	0	0	0
202	SLU 8	-0.03	-0.09	9.54	0	0	0
202	SLU 9	-0.03	-0.09	9.55	0	0	0
202	SLU 10	-0.04	-0.08	10.5	0	0	0
202	SLU 11	-0.04	-0.09	10.68	0	0	0
202	SLU 12	-0.04	-0.08	10.69	0	0	0
202	SLU 13	-0.04	-0.08	10.64	0	0	0
202	SLU 14	-0.04	-0.09	10.82	0	0	0
202	SLU 15	-0.04	-0.08	10.83	0	0	0
202	SLU 16	-0.04	-0.09	10.76	0	0	0
202	SLU 17	-0.04	-0.08	10.77	0	0	0
202	SLU 18	-0.04	-0.09	11	0	0	0
202	SLU 19	-0.04	-0.08	11.01	0	0	0
202	SLU 20	-0.04	-0.09	11.14	0	0	0
202	SLU 21	-0.04	-0.08	11.15	0	0	0
202	SLU 22	-0.03	-0.09	10.34	0	0	0
202	SLU 23	-0.03	-0.07	10.36	0	0	0
202	SLU 24	-0.03	-0.09	10.54	0	0	0
202	SLU 25	-0.03	-0.08	10.55	0	0	0
202	SLU 26	-0.03	-0.08	10.5	0	0	0
202	SLU 27	-0.03	-0.09	10.68	0	0	0
202	SLU 28	-0.03	-0.08	10.69	0	0	0
202	SLU 29	-0.03	-0.09	10.62	0	0	0
202	SLU 30	-0.03	-0.08	10.63	0	0	0
202	SLU 31	-0.04	-0.07	11.58	0	0	0
202	SLU 32	-0.04	-0.09	11.76	0	0	0
202	SLU 33	-0.04	-0.08	11.77	0	0	0
202	SLU 34	-0.04	-0.08	11.72	0	0	0
202	SLU 35	-0.04	-0.09	11.9	0	0	0
202	SLU 36	-0.04	-0.08	11.91	0	0	0
202	SLU 37	-0.04	-0.09	11.84	0	0	0
202	SLU 38	-0.04	-0.08	11.85	0	0	0
202	SLU 39	-0.04	-0.09	12.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
202	SLU 40	-0.04	-0.08	12.1	0	0	0
202	SLU 41	-0.04	-0.09	12.22	0	0	0
202	SLU 42	-0.04	-0.08	12.23	0	0	0
202	SLU 43	-0.04	-0.12	11.67	0	0	0
202	SLU 44	-0.04	-0.1	11.69	0	0	0
202	SLU 45	-0.04	-0.12	11.87	0	0	0
202	SLU 46	-0.04	-0.11	11.88	0	0	0
202	SLU 47	-0.04	-0.11	11.82	0	0	0
202	SLU 48	-0.04	-0.12	12.01	0	0	0
202	SLU 49	-0.04	-0.11	12.02	0	0	0
202	SLU 50	-0.04	-0.12	11.94	0	0	0
202	SLU 51	-0.04	-0.11	11.95	0	0	0
202	SLU 52	-0.04	-0.1	12.91	0	0	0
202	SLU 53	-0.04	-0.12	13.09	0	0	0
202	SLU 54	-0.05	-0.11	13.1	0	0	0
202	SLU 55	-0.05	-0.11	13.04	0	0	0
202	SLU 56	-0.05	-0.12	13.23	0	0	0
202	SLU 57	-0.05	-0.11	13.24	0	0	0
202	SLU 58	-0.05	-0.12	13.16	0	0	0
202	SLU 59	-0.05	-0.11	13.17	0	0	0
202	SLU 60	-0.05	-0.12	13.41	0	0	0
202	SLU 61	-0.05	-0.11	13.42	0	0	0
202	SLU 62	-0.05	-0.12	13.55	0	0	0
202	SLU 63	-0.05	-0.11	13.56	0	0	0
202	SLU 64	-0.04	-0.11	12.75	0	0	0
202	SLU 65	-0.04	-0.1	12.77	0	0	0
202	SLU 66	-0.04	-0.11	12.95	0	0	0
202	SLU 67	-0.04	-0.11	12.96	0	0	0
202	SLU 68	-0.04	-0.1	12.9	0	0	0
202	SLU 69	-0.04	-0.12	13.09	0	0	0
202	SLU 70	-0.04	-0.11	13.1	0	0	0
202	SLU 71	-0.04	-0.12	13.02	0	0	0
202	SLU 72	-0.04	-0.11	13.03	0	0	0
202	SLU 73	-0.05	-0.1	13.99	0	0	0
202	SLU 74	-0.05	-0.11	14.17	0	0	0
202	SLU 75	-0.05	-0.11	14.18	0	0	0
202	SLU 76	-0.05	-0.1	14.12	0	0	0
202	SLU 77	-0.05	-0.12	14.31	0	0	0
202	SLU 78	-0.05	-0.11	14.32	0	0	0
202	SLU 79	-0.05	-0.12	14.24	0	0	0
202	SLU 80	-0.05	-0.11	14.25	0	0	0
202	SLU 81	-0.05	-0.11	14.49	0	0	0
202	SLU 82	-0.05	-0.11	14.5	0	0	0
202	SLU 83	-0.05	-0.12	14.63	0	0	0
202	SLU 84	-0.05	-0.11	14.64	0	0	0
202	SLE RA 1	-0.03	-0.09	9.57	0	0	0
202	SLE RA 2	-0.03	-0.08	9.58	0	0	0
202	SLE RA 3	-0.03	-0.09	9.7	0	0	0
202	SLE RA 4	-0.03	-0.08	9.71	0	0	0
202	SLE RA 5	-0.03	-0.08	9.67	0	0	0
202	SLE RA 6	-0.03	-0.09	9.8	0	0	0
202	SLE RA 7	-0.03	-0.08	9.8	0	0	0
202	SLE RA 8	-0.03	-0.09	9.75	0	0	0
202	SLE RA 9	-0.03	-0.09	9.76	0	0	0
202	SLE RA 10	-0.03	-0.08	10.39	0	0	0
202	SLE RA 11	-0.03	-0.09	10.52	0	0	0
202	SLE RA 12	-0.04	-0.08	10.52	0	0	0
202	SLE RA 13	-0.04	-0.08	10.49	0	0	0
202	SLE RA 14	-0.04	-0.09	10.61	0	0	0
202	SLE RA 15	-0.04	-0.08	10.62	0	0	0
202	SLE RA 16	-0.04	-0.09	10.57	0	0	0
202	SLE RA 17	-0.04	-0.09	10.57	0	0	0
202	SLE RA 18	-0.04	-0.09	10.73	0	0	0
202	SLE RA 19	-0.04	-0.08	10.74	0	0	0
202	SLE RA 20	-0.04	-0.09	10.82	0	0	0
202	SLE RA 21	-0.04	-0.08	10.83	0	0	0
202	SLE FR 1	-0.03	-0.09	9.57	0	0	0
202	SLE FR 2	-0.03	-0.09	9.57	0	0	0
202	SLE FR 3	-0.03	-0.09	9.61	0	0	0
202	SLE FR 4	-0.03	-0.09	9.92	0	0	0
202	SLE FR 5	-0.03	-0.09	9.95	0	0	0
202	SLE FR 6	-0.03	-0.09	10.15	0	0	0
202	SLE QP 1	-0.03	-0.09	9.57	0	0	0
202	SLE QP 2	-0.03	-0.09	9.92	0	0	0
202	SLD 1	0.81	0.06	9.79	0	0	0
202	SLD 2	0.91	0.08	9.83	0	0	0
202	SLD 3	0.79	-0.18	9.49	0	0	0
202	SLD 4	0.9	-0.15	9.53	0	0	0
202	SLD 5	0.22	0.31	10.34	0	0	0
202	SLD 6	0.29	0.32	10.36	0	0	0
202	SLD 7	0.18	-0.47	9.32	0	0	0
202	SLD 8	0.25	-0.46	9.35	0	0	0
202	SLD 9	-0.31	0.28	10.49	0	0	0
202	SLD 10	-0.24	0.3	10.52	0	0	0
202	SLD 11	-0.35	-0.5	9.48	0	0	0
202	SLD 12	-0.29	-0.48	9.5	0	0	0
202	SLD 13	-0.96	-0.02	10.31	0	0	0
202	SLD 14	-0.86	0	10.35	0	0	0
202	SLD 15	-0.98	-0.26	10	0	0	0
202	SLD 16	-0.87	-0.23	10.04	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
202	SLV 1	1.93	0.24	9.61	0	0	0
202	SLV 2	2.17	0.3	9.7	0	0	0
202	SLV 3	1.9	-0.29	8.92	0	0	0
202	SLV 4	2.14	-0.24	9.01	0	0	0
202	SLV 5	0.56	0.81	10.86	0	0	0
202	SLV 6	0.72	0.84	10.92	0	0	0
202	SLV 7	0.46	-0.96	8.56	0	0	0
202	SLV 8	0.61	-0.93	8.61	0	0	0
202	SLV 9	-0.68	0.75	11.22	0	0	0
202	SLV 10	-0.52	0.79	11.28	0	0	0
202	SLV 11	-0.78	-1.02	8.92	0	0	0
202	SLV 12	-0.63	-0.99	8.98	0	0	0
202	SLV 13	-2.21	0.06	10.82	0	0	0
202	SLV 14	-1.96	0.11	10.91	0	0	0
202	SLV 15	-2.24	-0.47	10.13	0	0	0
202	SLV 16	-1.99	-0.42	10.22	0	0	0
203	SLU 1	-0.03	-0.1	9.28	0	0	0
203	SLU 2	-0.03	-0.09	9.3	0	0	0
203	SLU 3	-0.03	-0.1	9.48	0	0	0
203	SLU 4	-0.03	-0.09	9.49	0	0	0
203	SLU 5	-0.03	-0.09	9.43	0	0	0
203	SLU 6	-0.03	-0.1	9.62	0	0	0
203	SLU 7	-0.03	-0.1	9.63	0	0	0
203	SLU 8	-0.03	-0.1	9.56	0	0	0
203	SLU 9	-0.03	-0.1	9.56	0	0	0
203	SLU 10	-0.04	-0.09	10.52	0	0	0
203	SLU 11	-0.04	-0.1	10.7	0	0	0
203	SLU 12	-0.04	-0.1	10.71	0	0	0
203	SLU 13	-0.04	-0.09	10.65	0	0	0
203	SLU 14	-0.04	-0.1	10.84	0	0	0
203	SLU 15	-0.04	-0.1	10.85	0	0	0
203	SLU 16	-0.04	-0.11	10.77	0	0	0
203	SLU 17	-0.04	-0.1	10.78	0	0	0
203	SLU 18	-0.04	-0.1	11.02	0	0	0
203	SLU 19	-0.04	-0.1	11.03	0	0	0
203	SLU 20	-0.04	-0.1	11.16	0	0	0
203	SLU 21	-0.04	-0.1	11.17	0	0	0
203	SLU 22	-0.03	-0.1	10.36	0	0	0
203	SLU 23	-0.03	-0.09	10.38	0	0	0
203	SLU 24	-0.03	-0.1	10.57	0	0	0
203	SLU 25	-0.03	-0.09	10.58	0	0	0
203	SLU 26	-0.03	-0.09	10.52	0	0	0
203	SLU 27	-0.03	-0.1	10.7	0	0	0
203	SLU 28	-0.03	-0.09	10.71	0	0	0
203	SLU 29	-0.03	-0.1	10.64	0	0	0
203	SLU 30	-0.03	-0.1	10.65	0	0	0
203	SLU 31	-0.04	-0.09	11.6	0	0	0
203	SLU 32	-0.04	-0.1	11.78	0	0	0
203	SLU 33	-0.04	-0.09	11.79	0	0	0
203	SLU 34	-0.04	-0.09	11.74	0	0	0
203	SLU 35	-0.04	-0.1	11.92	0	0	0
203	SLU 36	-0.04	-0.1	11.93	0	0	0
203	SLU 37	-0.04	-0.1	11.86	0	0	0
203	SLU 38	-0.04	-0.1	11.87	0	0	0
203	SLU 39	-0.04	-0.1	12.1	0	0	0
203	SLU 40	-0.04	-0.09	12.11	0	0	0
203	SLU 41	-0.04	-0.1	12.24	0	0	0
203	SLU 42	-0.04	-0.1	12.25	0	0	0
203	SLU 43	-0.04	-0.13	11.69	0	0	0
203	SLU 44	-0.04	-0.12	11.71	0	0	0
203	SLU 45	-0.04	-0.13	11.9	0	0	0
203	SLU 46	-0.04	-0.12	11.91	0	0	0
203	SLU 47	-0.04	-0.12	11.85	0	0	0
203	SLU 48	-0.04	-0.13	12.03	0	0	0
203	SLU 49	-0.04	-0.13	12.04	0	0	0
203	SLU 50	-0.04	-0.14	11.97	0	0	0
203	SLU 51	-0.04	-0.13	11.98	0	0	0
203	SLU 52	-0.04	-0.12	12.93	0	0	0
203	SLU 53	-0.04	-0.13	13.11	0	0	0
203	SLU 54	-0.04	-0.13	13.12	0	0	0
203	SLU 55	-0.04	-0.12	13.07	0	0	0
203	SLU 56	-0.04	-0.14	13.25	0	0	0
203	SLU 57	-0.04	-0.13	13.26	0	0	0
203	SLU 58	-0.04	-0.14	13.19	0	0	0
203	SLU 59	-0.04	-0.13	13.2	0	0	0
203	SLU 60	-0.05	-0.13	13.43	0	0	0
203	SLU 61	-0.05	-0.13	13.44	0	0	0
203	SLU 62	-0.05	-0.14	13.57	0	0	0
203	SLU 63	-0.05	-0.13	13.58	0	0	0
203	SLU 64	-0.04	-0.13	12.78	0	0	0
203	SLU 65	-0.04	-0.12	12.79	0	0	0
203	SLU 66	-0.04	-0.13	12.98	0	0	0
203	SLU 67	-0.04	-0.12	12.99	0	0	0
203	SLU 68	-0.04	-0.12	12.93	0	0	0
203	SLU 69	-0.04	-0.13	13.12	0	0	0
203	SLU 70	-0.04	-0.13	13.13	0	0	0
203	SLU 71	-0.04	-0.13	13.05	0	0	0
203	SLU 72	-0.04	-0.13	13.06	0	0	0
203	SLU 73	-0.05	-0.12	14.01	0	0	0
203	SLU 74	-0.05	-0.13	14.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLU 75	-0.05	-0.12	14.21	0	0	0
203	SLU 76	-0.05	-0.12	14.15	0	0	0
203	SLU 77	-0.05	-0.13	14.33	0	0	0
203	SLU 78	-0.05	-0.13	14.34	0	0	0
203	SLU 79	-0.05	-0.14	14.27	0	0	0
203	SLU 80	-0.05	-0.13	14.28	0	0	0
203	SLU 81	-0.05	-0.13	14.52	0	0	0
203	SLU 82	-0.05	-0.13	14.53	0	0	0
203	SLU 83	-0.05	-0.13	14.65	0	0	0
203	SLU 84	-0.05	-0.13	14.66	0	0	0
203	SLE RA 1	-0.03	-0.1	9.59	0	0	0
203	SLE RA 2	-0.03	-0.09	9.6	0	0	0
203	SLE RA 3	-0.03	-0.1	9.73	0	0	0
203	SLE RA 4	-0.03	-0.1	9.73	0	0	0
203	SLE RA 5	-0.03	-0.09	9.69	0	0	0
203	SLE RA 6	-0.03	-0.1	9.82	0	0	0
203	SLE RA 7	-0.03	-0.1	9.82	0	0	0
203	SLE RA 8	-0.03	-0.1	9.77	0	0	0
203	SLE RA 9	-0.03	-0.1	9.78	0	0	0
203	SLE RA 10	-0.03	-0.09	10.41	0	0	0
203	SLE RA 11	-0.03	-0.1	10.54	0	0	0
203	SLE RA 12	-0.03	-0.1	10.54	0	0	0
203	SLE RA 13	-0.03	-0.09	10.51	0	0	0
203	SLE RA 14	-0.03	-0.1	10.63	0	0	0
203	SLE RA 15	-0.03	-0.1	10.64	0	0	0
203	SLE RA 16	-0.03	-0.1	10.59	0	0	0
203	SLE RA 17	-0.03	-0.1	10.59	0	0	0
203	SLE RA 18	-0.04	-0.1	10.75	0	0	0
203	SLE RA 19	-0.04	-0.1	10.76	0	0	0
203	SLE RA 20	-0.04	-0.1	10.84	0	0	0
203	SLE RA 21	-0.04	-0.1	10.85	0	0	0
203	SLE FR 1	-0.03	-0.1	9.59	0	0	0
203	SLE FR 2	-0.03	-0.1	9.59	0	0	0
203	SLE FR 3	-0.03	-0.1	9.63	0	0	0
203	SLE FR 4	-0.03	-0.1	9.94	0	0	0
203	SLE FR 5	-0.03	-0.1	9.98	0	0	0
203	SLE FR 6	-0.03	-0.1	10.17	0	0	0
203	SLE QP 1	-0.03	-0.1	9.59	0	0	0
203	SLE QP 2	-0.03	-0.1	9.94	0	0	0
203	SLD 1	0.81	0.05	9.75	0	0	0
203	SLD 2	0.91	0.08	9.79	0	0	0
203	SLD 3	0.8	-0.18	9.45	0	0	0
203	SLD 4	0.9	-0.15	9.49	0	0	0
203	SLD 5	0.22	0.29	10.34	0	0	0
203	SLD 6	0.29	0.31	10.36	0	0	0
203	SLD 7	0.18	-0.48	9.32	0	0	0
203	SLD 8	0.25	-0.46	9.35	0	0	0
203	SLD 9	-0.31	0.26	10.53	0	0	0
203	SLD 10	-0.24	0.28	10.56	0	0	0
203	SLD 11	-0.35	-0.51	9.51	0	0	0
203	SLD 12	-0.28	-0.5	9.54	0	0	0
203	SLD 13	-0.96	-0.05	10.39	0	0	0
203	SLD 14	-0.86	-0.02	10.43	0	0	0
203	SLD 15	-0.97	-0.28	10.09	0	0	0
203	SLD 16	-0.87	-0.26	10.13	0	0	0
203	SLV 1	1.93	0.25	9.49	0	0	0
203	SLV 2	2.18	0.32	9.58	0	0	0
203	SLV 3	1.9	-0.28	8.8	0	0	0
203	SLV 4	2.15	-0.21	8.89	0	0	0
203	SLV 5	0.57	0.8	10.83	0	0	0
203	SLV 6	0.72	0.84	10.9	0	0	0
203	SLV 7	0.46	-0.97	8.53	0	0	0
203	SLV 8	0.62	-0.93	8.59	0	0	0
203	SLV 9	-0.68	0.72	11.28	0	0	0
203	SLV 10	-0.52	0.76	11.35	0	0	0
203	SLV 11	-0.78	-1.04	8.98	0	0	0
203	SLV 12	-0.63	-1	9.04	0	0	0
203	SLV 13	-2.21	0.01	10.98	0	0	0
203	SLV 14	-1.96	0.07	11.08	0	0	0
203	SLV 15	-2.24	-0.52	10.29	0	0	0
203	SLV 16	-2	-0.46	10.39	0	0	0
204	SLU 1	-0.03	-0.11	9.29	0	0	0
204	SLU 2	-0.03	-0.1	9.31	0	0	0
204	SLU 3	-0.03	-0.11	9.49	0	0	0
204	SLU 4	-0.03	-0.11	9.5	0	0	0
204	SLU 5	-0.03	-0.1	9.44	0	0	0
204	SLU 6	-0.03	-0.12	9.63	0	0	0
204	SLU 7	-0.03	-0.11	9.64	0	0	0
204	SLU 8	-0.03	-0.12	9.57	0	0	0
204	SLU 9	-0.03	-0.11	9.58	0	0	0
204	SLU 10	-0.03	-0.1	10.52	0	0	0
204	SLU 11	-0.03	-0.12	10.71	0	0	0
204	SLU 12	-0.03	-0.11	10.72	0	0	0
204	SLU 13	-0.04	-0.11	10.66	0	0	0
204	SLU 14	-0.04	-0.12	10.85	0	0	0
204	SLU 15	-0.04	-0.11	10.85	0	0	0
204	SLU 16	-0.04	-0.12	10.78	0	0	0
204	SLU 17	-0.04	-0.11	10.79	0	0	0
204	SLU 18	-0.04	-0.12	11.03	0	0	0
204	SLU 19	-0.04	-0.11	11.04	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLU 20	-0.04	-0.12	11.16	0	0	0
204	SLU 21	-0.04	-0.11	11.17	0	0	0
204	SLU 22	-0.03	-0.11	10.38	0	0	0
204	SLU 23	-0.03	-0.1	10.39	0	0	0
204	SLU 24	-0.03	-0.11	10.58	0	0	0
204	SLU 25	-0.03	-0.11	10.59	0	0	0
204	SLU 26	-0.03	-0.1	10.53	0	0	0
204	SLU 27	-0.03	-0.12	10.72	0	0	0
204	SLU 28	-0.03	-0.11	10.72	0	0	0
204	SLU 29	-0.03	-0.12	10.65	0	0	0
204	SLU 30	-0.03	-0.11	10.66	0	0	0
204	SLU 31	-0.04	-0.1	11.61	0	0	0
204	SLU 32	-0.04	-0.12	11.79	0	0	0
204	SLU 33	-0.04	-0.11	11.8	0	0	0
204	SLU 34	-0.04	-0.11	11.74	0	0	0
204	SLU 35	-0.04	-0.12	11.93	0	0	0
204	SLU 36	-0.04	-0.11	11.94	0	0	0
204	SLU 37	-0.04	-0.12	11.87	0	0	0
204	SLU 38	-0.04	-0.11	11.88	0	0	0
204	SLU 39	-0.04	-0.12	12.11	0	0	0
204	SLU 40	-0.04	-0.11	12.12	0	0	0
204	SLU 41	-0.04	-0.12	12.25	0	0	0
204	SLU 42	-0.04	-0.11	12.26	0	0	0
204	SLU 43	-0.03	-0.15	11.71	0	0	0
204	SLU 44	-0.04	-0.13	11.72	0	0	0
204	SLU 45	-0.03	-0.15	11.91	0	0	0
204	SLU 46	-0.04	-0.14	11.92	0	0	0
204	SLU 47	-0.04	-0.14	11.86	0	0	0
204	SLU 48	-0.04	-0.15	12.05	0	0	0
204	SLU 49	-0.04	-0.14	12.06	0	0	0
204	SLU 50	-0.04	-0.15	11.98	0	0	0
204	SLU 51	-0.04	-0.14	11.99	0	0	0
204	SLU 52	-0.04	-0.14	12.94	0	0	0
204	SLU 53	-0.04	-0.15	13.12	0	0	0
204	SLU 54	-0.04	-0.14	13.13	0	0	0
204	SLU 55	-0.04	-0.14	13.08	0	0	0
204	SLU 56	-0.04	-0.15	13.26	0	0	0
204	SLU 57	-0.04	-0.14	13.27	0	0	0
204	SLU 58	-0.04	-0.15	13.2	0	0	0
204	SLU 59	-0.04	-0.15	13.21	0	0	0
204	SLU 60	-0.04	-0.15	13.44	0	0	0
204	SLU 61	-0.04	-0.14	13.45	0	0	0
204	SLU 62	-0.04	-0.15	13.58	0	0	0
204	SLU 63	-0.05	-0.15	13.59	0	0	0
204	SLU 64	-0.04	-0.15	12.79	0	0	0
204	SLU 65	-0.04	-0.14	12.81	0	0	0
204	SLU 66	-0.04	-0.15	12.99	0	0	0
204	SLU 67	-0.04	-0.14	13	0	0	0
204	SLU 68	-0.04	-0.14	12.95	0	0	0
204	SLU 69	-0.04	-0.15	13.13	0	0	0
204	SLU 70	-0.04	-0.14	13.14	0	0	0
204	SLU 71	-0.04	-0.15	13.07	0	0	0
204	SLU 72	-0.04	-0.14	13.08	0	0	0
204	SLU 73	-0.04	-0.14	14.02	0	0	0
204	SLU 74	-0.04	-0.15	14.21	0	0	0
204	SLU 75	-0.04	-0.14	14.22	0	0	0
204	SLU 76	-0.04	-0.14	14.16	0	0	0
204	SLU 77	-0.04	-0.15	14.35	0	0	0
204	SLU 78	-0.05	-0.15	14.36	0	0	0
204	SLU 79	-0.04	-0.15	14.28	0	0	0
204	SLU 80	-0.05	-0.15	14.29	0	0	0
204	SLU 81	-0.05	-0.15	14.53	0	0	0
204	SLU 82	-0.05	-0.14	14.54	0	0	0
204	SLU 83	-0.05	-0.15	14.67	0	0	0
204	SLU 84	-0.05	-0.15	14.67	0	0	0
204	SLE RA 1	-0.03	-0.11	9.6	0	0	0
204	SLE RA 2	-0.03	-0.11	9.61	0	0	0
204	SLE RA 3	-0.03	-0.11	9.74	0	0	0
204	SLE RA 4	-0.03	-0.11	9.74	0	0	0
204	SLE RA 5	-0.03	-0.11	9.7	0	0	0
204	SLE RA 6	-0.03	-0.12	9.83	0	0	0
204	SLE RA 7	-0.03	-0.11	9.83	0	0	0
204	SLE RA 8	-0.03	-0.12	9.78	0	0	0
204	SLE RA 9	-0.03	-0.11	9.79	0	0	0
204	SLE RA 10	-0.03	-0.11	10.42	0	0	0
204	SLE RA 11	-0.03	-0.12	10.55	0	0	0
204	SLE RA 12	-0.03	-0.11	10.55	0	0	0
204	SLE RA 13	-0.03	-0.11	10.51	0	0	0
204	SLE RA 14	-0.03	-0.12	10.64	0	0	0
204	SLE RA 15	-0.03	-0.11	10.64	0	0	0
204	SLE RA 16	-0.03	-0.12	10.59	0	0	0
204	SLE RA 17	-0.03	-0.11	10.6	0	0	0
204	SLE RA 18	-0.03	-0.12	10.76	0	0	0
204	SLE RA 19	-0.03	-0.11	10.77	0	0	0
204	SLE RA 20	-0.03	-0.12	10.85	0	0	0
204	SLE RA 21	-0.03	-0.11	10.86	0	0	0
204	SLE FR 1	-0.03	-0.11	9.6	0	0	0
204	SLE FR 2	-0.03	-0.11	9.6	0	0	0
204	SLE FR 3	-0.03	-0.11	9.64	0	0	0
204	SLE FR 4	-0.03	-0.11	9.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLE FR 5	-0.03	-0.11	9.99	0	0	0
204	SLE FR 6	-0.03	-0.11	10.18	0	0	0
204	SLE QP 1	-0.03	-0.11	9.6	0	0	0
204	SLE QP 2	-0.03	-0.11	9.95	0	0	0
204	SLD 1	0.81	0.05	9.69	0	0	0
204	SLD 2	0.91	0.08	9.73	0	0	0
204	SLD 3	0.8	-0.18	9.39	0	0	0
204	SLD 4	0.9	-0.15	9.43	0	0	0
204	SLD 5	0.22	0.28	10.32	0	0	0
204	SLD 6	0.29	0.3	10.35	0	0	0
204	SLD 7	0.18	-0.49	9.31	0	0	0
204	SLD 8	0.25	-0.47	9.34	0	0	0
204	SLD 9	-0.31	0.24	10.56	0	0	0
204	SLD 10	-0.24	0.26	10.59	0	0	0
204	SLD 11	-0.35	-0.53	9.54	0	0	0
204	SLD 12	-0.28	-0.51	9.57	0	0	0
204	SLD 13	-0.96	-0.08	10.47	0	0	0
204	SLD 14	-0.85	-0.05	10.51	0	0	0
204	SLD 15	-0.97	-0.31	10.16	0	0	0
204	SLD 16	-0.87	-0.28	10.21	0	0	0
204	SLV 1	1.93	0.26	9.33	0	0	0
204	SLV 2	2.17	0.34	9.44	0	0	0
204	SLV 3	1.9	-0.26	8.64	0	0	0
204	SLV 4	2.14	-0.19	8.75	0	0	0
204	SLV 5	0.57	0.78	10.79	0	0	0
204	SLV 6	0.72	0.83	10.86	0	0	0
204	SLV 7	0.46	-0.97	8.49	0	0	0
204	SLV 8	0.62	-0.92	8.56	0	0	0
204	SLV 9	-0.67	0.69	11.34	0	0	0
204	SLV 10	-0.52	0.74	11.41	0	0	0
204	SLV 11	-0.78	-1.06	9.04	0	0	0
204	SLV 12	-0.62	-1.01	9.11	0	0	0
204	SLV 13	-2.2	-0.04	11.15	0	0	0
204	SLV 14	-1.96	0.03	11.26	0	0	0
204	SLV 15	-2.23	-0.56	10.46	0	0	0
204	SLV 16	-1.99	-0.49	10.57	0	0	0
205	SLU 1	-0.03	-0.13	9.29	0	0	0
205	SLU 2	-0.03	-0.11	9.31	0	0	0
205	SLU 3	-0.03	-0.13	9.49	0	0	0
205	SLU 4	-0.03	-0.12	9.5	0	0	0
205	SLU 5	-0.03	-0.11	9.44	0	0	0
205	SLU 6	-0.03	-0.13	9.63	0	0	0
205	SLU 7	-0.03	-0.12	9.64	0	0	0
205	SLU 8	-0.03	-0.13	9.56	0	0	0
205	SLU 9	-0.03	-0.12	9.57	0	0	0
205	SLU 10	-0.03	-0.12	10.52	0	0	0
205	SLU 11	-0.03	-0.13	10.7	0	0	0
205	SLU 12	-0.03	-0.12	10.71	0	0	0
205	SLU 13	-0.03	-0.12	10.65	0	0	0
205	SLU 14	-0.03	-0.13	10.84	0	0	0
205	SLU 15	-0.03	-0.12	10.85	0	0	0
205	SLU 16	-0.03	-0.13	10.77	0	0	0
205	SLU 17	-0.03	-0.13	10.78	0	0	0
205	SLU 18	-0.04	-0.13	11.02	0	0	0
205	SLU 19	-0.04	-0.12	11.03	0	0	0
205	SLU 20	-0.04	-0.13	11.16	0	0	0
205	SLU 21	-0.04	-0.13	11.17	0	0	0
205	SLU 22	-0.03	-0.13	10.38	0	0	0
205	SLU 23	-0.03	-0.11	10.39	0	0	0
205	SLU 24	-0.03	-0.13	10.58	0	0	0
205	SLU 25	-0.03	-0.12	10.59	0	0	0
205	SLU 26	-0.03	-0.12	10.53	0	0	0
205	SLU 27	-0.03	-0.13	10.71	0	0	0
205	SLU 28	-0.03	-0.12	10.72	0	0	0
205	SLU 29	-0.03	-0.13	10.65	0	0	0
205	SLU 30	-0.03	-0.12	10.66	0	0	0
205	SLU 31	-0.04	-0.12	11.6	0	0	0
205	SLU 32	-0.04	-0.13	11.79	0	0	0
205	SLU 33	-0.04	-0.12	11.8	0	0	0
205	SLU 34	-0.04	-0.12	11.74	0	0	0
205	SLU 35	-0.04	-0.13	11.93	0	0	0
205	SLU 36	-0.04	-0.13	11.93	0	0	0
205	SLU 37	-0.04	-0.14	11.86	0	0	0
205	SLU 38	-0.04	-0.13	11.87	0	0	0
205	SLU 39	-0.04	-0.13	12.11	0	0	0
205	SLU 40	-0.04	-0.13	12.12	0	0	0
205	SLU 41	-0.04	-0.14	12.24	0	0	0
205	SLU 42	-0.04	-0.13	12.25	0	0	0
205	SLU 43	-0.03	-0.16	11.71	0	0	0
205	SLU 44	-0.03	-0.15	11.72	0	0	0
205	SLU 45	-0.03	-0.16	11.91	0	0	0
205	SLU 46	-0.03	-0.16	11.92	0	0	0
205	SLU 47	-0.03	-0.15	11.86	0	0	0
205	SLU 48	-0.03	-0.17	12.04	0	0	0
205	SLU 49	-0.03	-0.16	12.05	0	0	0
205	SLU 50	-0.03	-0.17	11.98	0	0	0
205	SLU 51	-0.03	-0.16	11.99	0	0	0
205	SLU 52	-0.04	-0.15	12.93	0	0	0
205	SLU 53	-0.04	-0.17	13.12	0	0	0
205	SLU 54	-0.04	-0.16	13.13	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLU 55	-0.04	-0.16	13.07	0	0	0
205	SLU 56	-0.04	-0.17	13.25	0	0	0
205	SLU 57	-0.04	-0.16	13.26	0	0	0
205	SLU 58	-0.04	-0.17	13.19	0	0	0
205	SLU 59	-0.04	-0.16	13.2	0	0	0
205	SLU 60	-0.04	-0.17	13.44	0	0	0
205	SLU 61	-0.04	-0.16	13.44	0	0	0
205	SLU 62	-0.04	-0.17	13.57	0	0	0
205	SLU 63	-0.04	-0.16	13.58	0	0	0
205	SLU 64	-0.03	-0.16	12.79	0	0	0
205	SLU 65	-0.04	-0.15	12.81	0	0	0
205	SLU 66	-0.04	-0.17	12.99	0	0	0
205	SLU 67	-0.04	-0.16	13	0	0	0
205	SLU 68	-0.04	-0.15	12.94	0	0	0
205	SLU 69	-0.04	-0.17	13.13	0	0	0
205	SLU 70	-0.04	-0.16	13.14	0	0	0
205	SLU 71	-0.04	-0.17	13.06	0	0	0
205	SLU 72	-0.04	-0.16	13.07	0	0	0
205	SLU 73	-0.04	-0.16	14.02	0	0	0
205	SLU 74	-0.04	-0.17	14.2	0	0	0
205	SLU 75	-0.04	-0.16	14.21	0	0	0
205	SLU 76	-0.04	-0.16	14.15	0	0	0
205	SLU 77	-0.04	-0.17	14.34	0	0	0
205	SLU 78	-0.04	-0.16	14.35	0	0	0
205	SLU 79	-0.04	-0.17	14.28	0	0	0
205	SLU 80	-0.04	-0.17	14.28	0	0	0
205	SLU 81	-0.04	-0.17	14.52	0	0	0
205	SLU 82	-0.05	-0.16	14.53	0	0	0
205	SLU 83	-0.05	-0.17	14.66	0	0	0
205	SLU 84	-0.05	-0.16	14.67	0	0	0
205	SLE RA 1	-0.03	-0.13	9.6	0	0	0
205	SLE RA 2	-0.03	-0.12	9.61	0	0	0
205	SLE RA 3	-0.03	-0.13	9.73	0	0	0
205	SLE RA 4	-0.03	-0.12	9.74	0	0	0
205	SLE RA 5	-0.03	-0.12	9.7	0	0	0
205	SLE RA 6	-0.03	-0.13	9.83	0	0	0
205	SLE RA 7	-0.03	-0.12	9.83	0	0	0
205	SLE RA 8	-0.03	-0.13	9.78	0	0	0
205	SLE RA 9	-0.03	-0.12	9.79	0	0	0
205	SLE RA 10	-0.03	-0.12	10.42	0	0	0
205	SLE RA 11	-0.03	-0.13	10.54	0	0	0
205	SLE RA 12	-0.03	-0.12	10.55	0	0	0
205	SLE RA 13	-0.03	-0.12	10.51	0	0	0
205	SLE RA 14	-0.03	-0.13	10.63	0	0	0
205	SLE RA 15	-0.03	-0.13	10.64	0	0	0
205	SLE RA 16	-0.03	-0.13	10.59	0	0	0
205	SLE RA 17	-0.03	-0.13	10.6	0	0	0
205	SLE RA 18	-0.03	-0.13	10.75	0	0	0
205	SLE RA 19	-0.03	-0.12	10.76	0	0	0
205	SLE RA 20	-0.03	-0.13	10.85	0	0	0
205	SLE RA 21	-0.03	-0.13	10.85	0	0	0
205	SLE FR 1	-0.03	-0.13	9.6	0	0	0
205	SLE FR 2	-0.03	-0.12	9.6	0	0	0
205	SLE FR 3	-0.03	-0.13	9.64	0	0	0
205	SLE FR 4	-0.03	-0.13	9.95	0	0	0
205	SLE FR 5	-0.03	-0.13	9.98	0	0	0
205	SLE FR 6	-0.03	-0.13	10.18	0	0	0
205	SLE QP 1	-0.03	-0.13	9.6	0	0	0
205	SLE QP 2	-0.03	-0.13	9.95	0	0	0
205	SLD 1	0.81	0.04	9.61	0	0	0
205	SLD 2	0.91	0.08	9.66	0	0	0
205	SLD 3	0.79	-0.18	9.31	0	0	0
205	SLD 4	0.9	-0.15	9.36	0	0	0
205	SLD 5	0.22	0.26	10.3	0	0	0
205	SLD 6	0.29	0.29	10.33	0	0	0
205	SLD 7	0.18	-0.5	9.29	0	0	0
205	SLD 8	0.25	-0.47	9.32	0	0	0
205	SLD 9	-0.3	0.22	10.58	0	0	0
205	SLD 10	-0.23	0.24	10.61	0	0	0
205	SLD 11	-0.35	-0.54	9.56	0	0	0
205	SLD 12	-0.28	-0.52	9.59	0	0	0
205	SLD 13	-0.95	-0.11	10.54	0	0	0
205	SLD 14	-0.85	-0.07	10.59	0	0	0
205	SLD 15	-0.97	-0.33	10.23	0	0	0
205	SLD 16	-0.86	-0.3	10.28	0	0	0
205	SLV 1	1.92	0.27	9.15	0	0	0
205	SLV 2	2.16	0.35	9.26	0	0	0
205	SLV 3	1.89	-0.25	8.46	0	0	0
205	SLV 4	2.13	-0.17	8.58	0	0	0
205	SLV 5	0.56	0.77	10.73	0	0	0
205	SLV 6	0.72	0.82	10.81	0	0	0
205	SLV 7	0.46	-0.97	8.44	0	0	0
205	SLV 8	0.61	-0.91	8.51	0	0	0
205	SLV 9	-0.67	0.66	11.38	0	0	0
205	SLV 10	-0.51	0.71	11.46	0	0	0
205	SLV 11	-0.78	-1.07	9.09	0	0	0
205	SLV 12	-0.62	-1.02	9.16	0	0	0
205	SLV 13	-2.19	-0.08	11.32	0	0	0
205	SLV 14	-1.95	0	11.43	0	0	0
205	SLV 15	-2.22	-0.6	10.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLV 16	-1.98	-0.52	10.74	0	0	0
206	SLU 1	-0.02	-0.13	9.05	0	0	0
206	SLU 2	-0.02	-0.12	9.06	0	0	0
206	SLU 3	-0.02	-0.13	9.25	0	0	0
206	SLU 4	-0.03	-0.13	9.25	0	0	0
206	SLU 5	-0.03	-0.12	9.2	0	0	0
206	SLU 6	-0.03	-0.14	9.38	0	0	0
206	SLU 7	-0.03	-0.13	9.39	0	0	0
206	SLU 8	-0.03	-0.14	9.32	0	0	0
206	SLU 9	-0.03	-0.13	9.32	0	0	0
206	SLU 10	-0.03	-0.13	10.24	0	0	0
206	SLU 11	-0.03	-0.14	10.42	0	0	0
206	SLU 12	-0.03	-0.13	10.43	0	0	0
206	SLU 13	-0.03	-0.13	10.37	0	0	0
206	SLU 14	-0.03	-0.14	10.56	0	0	0
206	SLU 15	-0.03	-0.13	10.57	0	0	0
206	SLU 16	-0.03	-0.14	10.49	0	0	0
206	SLU 17	-0.03	-0.14	10.5	0	0	0
206	SLU 18	-0.03	-0.14	10.73	0	0	0
206	SLU 19	-0.03	-0.13	10.74	0	0	0
206	SLU 20	-0.03	-0.14	10.87	0	0	0
206	SLU 21	-0.03	-0.14	10.87	0	0	0
206	SLU 22	-0.03	-0.14	10.11	0	0	0
206	SLU 23	-0.03	-0.12	10.12	0	0	0
206	SLU 24	-0.03	-0.14	10.31	0	0	0
206	SLU 25	-0.03	-0.13	10.32	0	0	0
206	SLU 26	-0.03	-0.13	10.26	0	0	0
206	SLU 27	-0.03	-0.14	10.44	0	0	0
206	SLU 28	-0.03	-0.13	10.45	0	0	0
206	SLU 29	-0.03	-0.14	10.38	0	0	0
206	SLU 30	-0.03	-0.13	10.39	0	0	0
206	SLU 31	-0.03	-0.13	11.3	0	0	0
206	SLU 32	-0.03	-0.14	11.48	0	0	0
206	SLU 33	-0.03	-0.14	11.49	0	0	0
206	SLU 34	-0.03	-0.13	11.44	0	0	0
206	SLU 35	-0.03	-0.15	11.62	0	0	0
206	SLU 36	-0.03	-0.14	11.63	0	0	0
206	SLU 37	-0.03	-0.15	11.55	0	0	0
206	SLU 38	-0.03	-0.14	11.56	0	0	0
206	SLU 39	-0.04	-0.14	11.79	0	0	0
206	SLU 40	-0.04	-0.14	11.8	0	0	0
206	SLU 41	-0.04	-0.15	11.93	0	0	0
206	SLU 42	-0.04	-0.14	11.93	0	0	0
206	SLU 43	-0.03	-0.17	11.4	0	0	0
206	SLU 44	-0.03	-0.16	11.42	0	0	0
206	SLU 45	-0.03	-0.17	11.6	0	0	0
206	SLU 46	-0.03	-0.17	11.61	0	0	0
206	SLU 47	-0.03	-0.16	11.55	0	0	0
206	SLU 48	-0.03	-0.18	11.73	0	0	0
206	SLU 49	-0.03	-0.17	11.74	0	0	0
206	SLU 50	-0.03	-0.18	11.67	0	0	0
206	SLU 51	-0.03	-0.17	11.68	0	0	0
206	SLU 52	-0.04	-0.16	12.59	0	0	0
206	SLU 53	-0.04	-0.18	12.78	0	0	0
206	SLU 54	-0.04	-0.17	12.78	0	0	0
206	SLU 55	-0.04	-0.17	12.73	0	0	0
206	SLU 56	-0.04	-0.18	12.91	0	0	0
206	SLU 57	-0.04	-0.17	12.92	0	0	0
206	SLU 58	-0.04	-0.18	12.85	0	0	0
206	SLU 59	-0.04	-0.17	12.85	0	0	0
206	SLU 60	-0.04	-0.18	13.08	0	0	0
206	SLU 61	-0.04	-0.17	13.09	0	0	0
206	SLU 62	-0.04	-0.18	13.22	0	0	0
206	SLU 63	-0.04	-0.17	13.23	0	0	0
206	SLU 64	-0.03	-0.18	12.46	0	0	0
206	SLU 65	-0.03	-0.16	12.48	0	0	0
206	SLU 66	-0.03	-0.18	12.66	0	0	0
206	SLU 67	-0.03	-0.17	12.67	0	0	0
206	SLU 68	-0.03	-0.17	12.61	0	0	0
206	SLU 69	-0.03	-0.18	12.79	0	0	0
206	SLU 70	-0.03	-0.17	12.8	0	0	0
206	SLU 71	-0.03	-0.18	12.73	0	0	0
206	SLU 72	-0.03	-0.17	12.74	0	0	0
206	SLU 73	-0.04	-0.17	13.65	0	0	0
206	SLU 74	-0.04	-0.18	13.84	0	0	0
206	SLU 75	-0.04	-0.17	13.84	0	0	0
206	SLU 76	-0.04	-0.17	13.79	0	0	0
206	SLU 77	-0.04	-0.18	13.97	0	0	0
206	SLU 78	-0.04	-0.18	13.98	0	0	0
206	SLU 79	-0.04	-0.19	13.91	0	0	0
206	SLU 80	-0.04	-0.18	13.91	0	0	0
206	SLU 81	-0.04	-0.18	14.15	0	0	0
206	SLU 82	-0.04	-0.18	14.15	0	0	0
206	SLU 83	-0.04	-0.19	14.28	0	0	0
206	SLU 84	-0.04	-0.18	14.29	0	0	0
206	SLE RA 1	-0.02	-0.13	9.35	0	0	0
206	SLE RA 2	-0.03	-0.13	9.36	0	0	0
206	SLE RA 3	-0.03	-0.13	9.48	0	0	0
206	SLE RA 4	-0.03	-0.13	9.49	0	0	0
206	SLE RA 5	-0.03	-0.13	9.45	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
206	SLE RA 6	-0.03	-0.14	9.57	0	0	0
206	SLE RA 7	-0.03	-0.13	9.58	0	0	0
206	SLE RA 8	-0.03	-0.14	9.53	0	0	0
206	SLE RA 9	-0.03	-0.13	9.54	0	0	0
206	SLE RA 10	-0.03	-0.13	10.15	0	0	0
206	SLE RA 11	-0.03	-0.14	10.27	0	0	0
206	SLE RA 12	-0.03	-0.13	10.27	0	0	0
206	SLE RA 13	-0.03	-0.13	10.24	0	0	0
206	SLE RA 14	-0.03	-0.14	10.36	0	0	0
206	SLE RA 15	-0.03	-0.14	10.36	0	0	0
206	SLE RA 16	-0.03	-0.14	10.32	0	0	0
206	SLE RA 17	-0.03	-0.14	10.32	0	0	0
206	SLE RA 18	-0.03	-0.14	10.48	0	0	0
206	SLE RA 19	-0.03	-0.13	10.48	0	0	0
206	SLE RA 20	-0.03	-0.14	10.56	0	0	0
206	SLE RA 21	-0.03	-0.14	10.57	0	0	0
206	SLE FR 1	-0.02	-0.13	9.35	0	0	0
206	SLE FR 2	-0.02	-0.13	9.36	0	0	0
206	SLE FR 3	-0.02	-0.13	9.39	0	0	0
206	SLE FR 4	-0.03	-0.13	9.69	0	0	0
206	SLE FR 5	-0.03	-0.14	9.73	0	0	0
206	SLE FR 6	-0.03	-0.14	9.91	0	0	0
206	SLE QP 1	-0.02	-0.13	9.35	0	0	0
206	SLE QP 2	-0.03	-0.14	9.69	0	0	0
206	SLD 1	0.78	0.04	9.29	0	0	0
206	SLD 2	0.88	0.08	9.34	0	0	0
206	SLD 3	0.77	-0.18	8.99	0	0	0
206	SLD 4	0.87	-0.14	9.04	0	0	0
206	SLD 5	0.22	0.24	10.01	0	0	0
206	SLD 6	0.28	0.27	10.04	0	0	0
206	SLD 7	0.17	-0.49	9.02	0	0	0
206	SLD 8	0.24	-0.46	9.05	0	0	0
206	SLD 9	-0.29	0.19	10.33	0	0	0
206	SLD 10	-0.23	0.22	10.36	0	0	0
206	SLD 11	-0.34	-0.54	9.34	0	0	0
206	SLD 12	-0.27	-0.51	9.37	0	0	0
206	SLD 13	-0.92	-0.13	10.34	0	0	0
206	SLD 14	-0.82	-0.09	10.39	0	0	0
206	SLD 15	-0.93	-0.35	10.04	0	0	0
206	SLD 16	-0.83	-0.31	10.09	0	0	0
206	SLV 1	1.86	0.26	8.74	0	0	0
206	SLV 2	2.09	0.35	8.86	0	0	0
206	SLV 3	1.83	-0.24	8.07	0	0	0
206	SLV 4	2.06	-0.15	8.18	0	0	0
206	SLV 5	0.55	0.73	10.41	0	0	0
206	SLV 6	0.7	0.78	10.48	0	0	0
206	SLV 7	0.44	-0.94	8.17	0	0	0
206	SLV 8	0.59	-0.88	8.24	0	0	0
206	SLV 9	-0.65	0.61	11.14	0	0	0
206	SLV 10	-0.49	0.67	11.21	0	0	0
206	SLV 11	-0.75	-1.06	8.9	0	0	0
206	SLV 12	-0.6	-1	8.98	0	0	0
206	SLV 13	-2.11	-0.12	11.2	0	0	0
206	SLV 14	-1.88	-0.03	11.31	0	0	0
206	SLV 15	-2.14	-0.62	10.52	0	0	0
206	SLV 16	-1.91	-0.53	10.64	0	0	0
207	SLU 1	-0.02	-0.15	9.3	0	0	0
207	SLU 2	-0.02	-0.14	9.31	0	0	0
207	SLU 3	-0.02	-0.15	9.5	0	0	0
207	SLU 4	-0.03	-0.14	9.51	0	0	0
207	SLU 5	-0.03	-0.14	9.45	0	0	0
207	SLU 6	-0.03	-0.15	9.64	0	0	0
207	SLU 7	-0.03	-0.14	9.65	0	0	0
207	SLU 8	-0.03	-0.15	9.57	0	0	0
207	SLU 9	-0.03	-0.15	9.58	0	0	0
207	SLU 10	-0.03	-0.14	10.52	0	0	0
207	SLU 11	-0.03	-0.16	10.71	0	0	0
207	SLU 12	-0.03	-0.15	10.72	0	0	0
207	SLU 13	-0.03	-0.15	10.66	0	0	0
207	SLU 14	-0.03	-0.16	10.85	0	0	0
207	SLU 15	-0.03	-0.15	10.85	0	0	0
207	SLU 16	-0.03	-0.16	10.78	0	0	0
207	SLU 17	-0.03	-0.15	10.79	0	0	0
207	SLU 18	-0.03	-0.16	11.03	0	0	0
207	SLU 19	-0.03	-0.15	11.03	0	0	0
207	SLU 20	-0.03	-0.16	11.16	0	0	0
207	SLU 21	-0.03	-0.15	11.17	0	0	0
207	SLU 22	-0.03	-0.15	10.39	0	0	0
207	SLU 23	-0.03	-0.14	10.41	0	0	0
207	SLU 24	-0.03	-0.15	10.59	0	0	0
207	SLU 25	-0.03	-0.15	10.6	0	0	0
207	SLU 26	-0.03	-0.14	10.54	0	0	0
207	SLU 27	-0.03	-0.16	10.73	0	0	0
207	SLU 28	-0.03	-0.15	10.74	0	0	0
207	SLU 29	-0.03	-0.16	10.67	0	0	0
207	SLU 30	-0.03	-0.15	10.67	0	0	0
207	SLU 31	-0.03	-0.15	11.61	0	0	0
207	SLU 32	-0.03	-0.16	11.8	0	0	0
207	SLU 33	-0.03	-0.15	11.81	0	0	0
207	SLU 34	-0.03	-0.15	11.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLU 35	-0.03	-0.16	11.94	0	0	0
207	SLU 36	-0.03	-0.16	11.95	0	0	0
207	SLU 37	-0.03	-0.17	11.87	0	0	0
207	SLU 38	-0.03	-0.16	11.88	0	0	0
207	SLU 39	-0.04	-0.16	12.12	0	0	0
207	SLU 40	-0.04	-0.16	12.13	0	0	0
207	SLU 41	-0.04	-0.17	12.26	0	0	0
207	SLU 42	-0.04	-0.16	12.26	0	0	0
207	SLU 43	-0.03	-0.19	11.72	0	0	0
207	SLU 44	-0.03	-0.18	11.73	0	0	0
207	SLU 45	-0.03	-0.19	11.92	0	0	0
207	SLU 46	-0.03	-0.18	11.92	0	0	0
207	SLU 47	-0.03	-0.18	11.86	0	0	0
207	SLU 48	-0.03	-0.19	12.05	0	0	0
207	SLU 49	-0.03	-0.19	12.06	0	0	0
207	SLU 50	-0.03	-0.2	11.99	0	0	0
207	SLU 51	-0.03	-0.19	12	0	0	0
207	SLU 52	-0.04	-0.18	12.94	0	0	0
207	SLU 53	-0.04	-0.2	13.13	0	0	0
207	SLU 54	-0.04	-0.19	13.13	0	0	0
207	SLU 55	-0.04	-0.19	13.07	0	0	0
207	SLU 56	-0.04	-0.2	13.26	0	0	0
207	SLU 57	-0.04	-0.19	13.27	0	0	0
207	SLU 58	-0.04	-0.2	13.2	0	0	0
207	SLU 59	-0.04	-0.2	13.2	0	0	0
207	SLU 60	-0.04	-0.2	13.44	0	0	0
207	SLU 61	-0.04	-0.19	13.45	0	0	0
207	SLU 62	-0.04	-0.2	13.58	0	0	0
207	SLU 63	-0.04	-0.2	13.59	0	0	0
207	SLU 64	-0.03	-0.2	12.81	0	0	0
207	SLU 65	-0.03	-0.18	12.82	0	0	0
207	SLU 66	-0.03	-0.2	13.01	0	0	0
207	SLU 67	-0.03	-0.19	13.02	0	0	0
207	SLU 68	-0.03	-0.19	12.96	0	0	0
207	SLU 69	-0.03	-0.2	13.15	0	0	0
207	SLU 70	-0.03	-0.19	13.15	0	0	0
207	SLU 71	-0.03	-0.2	13.08	0	0	0
207	SLU 72	-0.03	-0.19	13.09	0	0	0
207	SLU 73	-0.04	-0.19	14.03	0	0	0
207	SLU 74	-0.04	-0.2	14.22	0	0	0
207	SLU 75	-0.04	-0.2	14.23	0	0	0
207	SLU 76	-0.04	-0.19	14.17	0	0	0
207	SLU 77	-0.04	-0.21	14.35	0	0	0
207	SLU 78	-0.04	-0.2	14.36	0	0	0
207	SLU 79	-0.04	-0.21	14.29	0	0	0
207	SLU 80	-0.04	-0.2	14.3	0	0	0
207	SLU 81	-0.04	-0.21	14.53	0	0	0
207	SLU 82	-0.04	-0.2	14.54	0	0	0
207	SLU 83	-0.04	-0.21	14.67	0	0	0
207	SLU 84	-0.04	-0.2	14.68	0	0	0
207	SLE RA 1	-0.02	-0.15	9.61	0	0	0
207	SLE RA 2	-0.03	-0.14	9.62	0	0	0
207	SLE RA 3	-0.02	-0.15	9.75	0	0	0
207	SLE RA 4	-0.03	-0.15	9.75	0	0	0
207	SLE RA 5	-0.03	-0.14	9.71	0	0	0
207	SLE RA 6	-0.03	-0.15	9.84	0	0	0
207	SLE RA 7	-0.03	-0.15	9.84	0	0	0
207	SLE RA 8	-0.03	-0.15	9.79	0	0	0
207	SLE RA 9	-0.03	-0.15	9.8	0	0	0
207	SLE RA 10	-0.03	-0.15	10.43	0	0	0
207	SLE RA 11	-0.03	-0.16	10.55	0	0	0
207	SLE RA 12	-0.03	-0.15	10.56	0	0	0
207	SLE RA 13	-0.03	-0.15	10.52	0	0	0
207	SLE RA 14	-0.03	-0.16	10.64	0	0	0
207	SLE RA 15	-0.03	-0.15	10.65	0	0	0
207	SLE RA 16	-0.03	-0.16	10.6	0	0	0
207	SLE RA 17	-0.03	-0.15	10.61	0	0	0
207	SLE RA 18	-0.03	-0.16	10.76	0	0	0
207	SLE RA 19	-0.03	-0.15	10.77	0	0	0
207	SLE RA 20	-0.03	-0.16	10.85	0	0	0
207	SLE RA 21	-0.03	-0.15	10.86	0	0	0
207	SLE FR 1	-0.02	-0.15	9.61	0	0	0
207	SLE FR 2	-0.02	-0.15	9.61	0	0	0
207	SLE FR 3	-0.02	-0.15	9.65	0	0	0
207	SLE FR 4	-0.03	-0.15	9.96	0	0	0
207	SLE FR 5	-0.03	-0.15	9.99	0	0	0
207	SLE FR 6	-0.03	-0.15	10.19	0	0	0
207	SLE QP 1	-0.02	-0.15	9.61	0	0	0
207	SLE QP 2	-0.03	-0.15	9.96	0	0	0
207	SLD 1	0.79	0.03	9.47	0	0	0
207	SLD 2	0.89	0.08	9.52	0	0	0
207	SLD 3	0.78	-0.19	9.16	0	0	0
207	SLD 4	0.88	-0.15	9.22	0	0	0
207	SLD 5	0.22	0.23	10.26	0	0	0
207	SLD 6	0.29	0.26	10.3	0	0	0
207	SLD 7	0.18	-0.51	9.25	0	0	0
207	SLD 8	0.24	-0.48	9.28	0	0	0
207	SLD 9	-0.3	0.18	10.63	0	0	0
207	SLD 10	-0.23	0.2	10.67	0	0	0
207	SLD 11	-0.34	-0.56	9.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLD 12	-0.27	-0.54	9.65	0	0	0
207	SLD 13	-0.93	-0.16	10.7	0	0	0
207	SLD 14	-0.83	-0.11	10.75	0	0	0
207	SLD 15	-0.95	-0.38	10.39	0	0	0
207	SLD 16	-0.85	-0.34	10.45	0	0	0
207	SLV 1	1.89	0.27	8.8	0	0	0
207	SLV 2	2.13	0.37	8.93	0	0	0
207	SLV 3	1.86	-0.23	8.11	0	0	0
207	SLV 4	2.09	-0.13	8.23	0	0	0
207	SLV 5	0.56	0.73	10.64	0	0	0
207	SLV 6	0.71	0.79	10.72	0	0	0
207	SLV 7	0.45	-0.96	8.33	0	0	0
207	SLV 8	0.6	-0.9	8.41	0	0	0
207	SLV 9	-0.66	0.59	11.5	0	0	0
207	SLV 10	-0.5	0.66	11.58	0	0	0
207	SLV 11	-0.76	-1.09	9.2	0	0	0
207	SLV 12	-0.61	-1.03	9.27	0	0	0
207	SLV 13	-2.15	-0.17	11.68	0	0	0
207	SLV 14	-1.91	-0.07	11.8	0	0	0
207	SLV 15	-2.18	-0.68	10.99	0	0	0
207	SLV 16	-1.94	-0.58	11.11	0	0	0
208	SLU 1	-0.02	-0.16	9.39	0	0	0
208	SLU 2	-0.02	-0.15	9.4	0	0	0
208	SLU 3	-0.02	-0.16	9.59	0	0	0
208	SLU 4	-0.02	-0.16	9.6	0	0	0
208	SLU 5	-0.03	-0.15	9.54	0	0	0
208	SLU 6	-0.02	-0.17	9.73	0	0	0
208	SLU 7	-0.03	-0.16	9.74	0	0	0
208	SLU 8	-0.03	-0.17	9.67	0	0	0
208	SLU 9	-0.03	-0.16	9.67	0	0	0
208	SLU 10	-0.03	-0.16	10.62	0	0	0
208	SLU 11	-0.03	-0.17	10.81	0	0	0
208	SLU 12	-0.03	-0.16	10.82	0	0	0
208	SLU 13	-0.03	-0.16	10.76	0	0	0
208	SLU 14	-0.03	-0.17	10.95	0	0	0
208	SLU 15	-0.03	-0.17	10.96	0	0	0
208	SLU 16	-0.03	-0.18	10.89	0	0	0
208	SLU 17	-0.03	-0.17	10.89	0	0	0
208	SLU 18	-0.03	-0.17	11.13	0	0	0
208	SLU 19	-0.03	-0.17	11.14	0	0	0
208	SLU 20	-0.03	-0.18	11.27	0	0	0
208	SLU 21	-0.03	-0.17	11.28	0	0	0
208	SLU 22	-0.03	-0.17	10.5	0	0	0
208	SLU 23	-0.03	-0.16	10.51	0	0	0
208	SLU 24	-0.03	-0.17	10.7	0	0	0
208	SLU 25	-0.03	-0.16	10.71	0	0	0
208	SLU 26	-0.03	-0.16	10.65	0	0	0
208	SLU 27	-0.03	-0.17	10.84	0	0	0
208	SLU 28	-0.03	-0.17	10.85	0	0	0
208	SLU 29	-0.03	-0.17	10.77	0	0	0
208	SLU 30	-0.03	-0.17	10.78	0	0	0
208	SLU 31	-0.03	-0.16	11.73	0	0	0
208	SLU 32	-0.03	-0.18	11.92	0	0	0
208	SLU 33	-0.03	-0.17	11.93	0	0	0
208	SLU 34	-0.03	-0.17	11.87	0	0	0
208	SLU 35	-0.03	-0.18	12.06	0	0	0
208	SLU 36	-0.03	-0.17	12.07	0	0	0
208	SLU 37	-0.03	-0.18	11.99	0	0	0
208	SLU 38	-0.03	-0.17	12	0	0	0
208	SLU 39	-0.03	-0.18	12.24	0	0	0
208	SLU 40	-0.04	-0.17	12.25	0	0	0
208	SLU 41	-0.04	-0.18	12.38	0	0	0
208	SLU 42	-0.04	-0.18	12.39	0	0	0
208	SLU 43	-0.03	-0.21	11.83	0	0	0
208	SLU 44	-0.03	-0.19	11.84	0	0	0
208	SLU 45	-0.03	-0.21	12.03	0	0	0
208	SLU 46	-0.03	-0.2	12.04	0	0	0
208	SLU 47	-0.03	-0.2	11.98	0	0	0
208	SLU 48	-0.03	-0.21	12.17	0	0	0
208	SLU 49	-0.03	-0.2	12.18	0	0	0
208	SLU 50	-0.03	-0.21	12.1	0	0	0
208	SLU 51	-0.03	-0.21	12.11	0	0	0
208	SLU 52	-0.04	-0.2	13.06	0	0	0
208	SLU 53	-0.04	-0.22	13.25	0	0	0
208	SLU 54	-0.04	-0.21	13.26	0	0	0
208	SLU 55	-0.04	-0.21	13.2	0	0	0
208	SLU 56	-0.04	-0.22	13.39	0	0	0
208	SLU 57	-0.04	-0.21	13.4	0	0	0
208	SLU 58	-0.04	-0.22	13.32	0	0	0
208	SLU 59	-0.04	-0.21	13.33	0	0	0
208	SLU 60	-0.04	-0.22	13.57	0	0	0
208	SLU 61	-0.04	-0.21	13.58	0	0	0
208	SLU 62	-0.04	-0.22	13.71	0	0	0
208	SLU 63	-0.04	-0.21	13.72	0	0	0
208	SLU 64	-0.03	-0.21	12.93	0	0	0
208	SLU 65	-0.03	-0.2	12.95	0	0	0
208	SLU 66	-0.03	-0.22	13.14	0	0	0
208	SLU 67	-0.03	-0.21	13.15	0	0	0
208	SLU 68	-0.03	-0.2	13.09	0	0	0
208	SLU 69	-0.03	-0.22	13.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLU 70	-0.03	-0.21	13.28	0	0	0
208	SLU 71	-0.03	-0.22	13.21	0	0	0
208	SLU 72	-0.03	-0.21	13.22	0	0	0
208	SLU 73	-0.04	-0.21	14.17	0	0	0
208	SLU 74	-0.04	-0.22	14.36	0	0	0
208	SLU 75	-0.04	-0.22	14.37	0	0	0
208	SLU 76	-0.04	-0.21	14.3	0	0	0
208	SLU 77	-0.04	-0.23	14.5	0	0	0
208	SLU 78	-0.04	-0.22	14.5	0	0	0
208	SLU 79	-0.04	-0.23	14.43	0	0	0
208	SLU 80	-0.04	-0.22	14.44	0	0	0
208	SLU 81	-0.04	-0.23	14.68	0	0	0
208	SLU 82	-0.04	-0.22	14.68	0	0	0
208	SLU 83	-0.04	-0.23	14.82	0	0	0
208	SLU 84	-0.04	-0.22	14.82	0	0	0
208	SLE RA 1	-0.02	-0.16	9.71	0	0	0
208	SLE RA 2	-0.02	-0.15	9.71	0	0	0
208	SLE RA 3	-0.02	-0.16	9.84	0	0	0
208	SLE RA 4	-0.02	-0.16	9.85	0	0	0
208	SLE RA 5	-0.03	-0.16	9.81	0	0	0
208	SLE RA 6	-0.02	-0.17	9.93	0	0	0
208	SLE RA 7	-0.03	-0.16	9.94	0	0	0
208	SLE RA 8	-0.03	-0.17	9.89	0	0	0
208	SLE RA 9	-0.03	-0.16	9.9	0	0	0
208	SLE RA 10	-0.03	-0.16	10.53	0	0	0
208	SLE RA 11	-0.03	-0.17	10.66	0	0	0
208	SLE RA 12	-0.03	-0.17	10.66	0	0	0
208	SLE RA 13	-0.03	-0.16	10.62	0	0	0
208	SLE RA 14	-0.03	-0.17	10.75	0	0	0
208	SLE RA 15	-0.03	-0.17	10.75	0	0	0
208	SLE RA 16	-0.03	-0.17	10.7	0	0	0
208	SLE RA 17	-0.03	-0.17	10.71	0	0	0
208	SLE RA 18	-0.03	-0.17	10.87	0	0	0
208	SLE RA 19	-0.03	-0.17	10.87	0	0	0
208	SLE RA 20	-0.03	-0.17	10.96	0	0	0
208	SLE RA 21	-0.03	-0.17	10.97	0	0	0
208	SLE FR 1	-0.02	-0.16	9.71	0	0	0
208	SLE FR 2	-0.02	-0.16	9.71	0	0	0
208	SLE FR 3	-0.02	-0.16	9.74	0	0	0
208	SLE FR 4	-0.03	-0.16	10.06	0	0	0
208	SLE FR 5	-0.03	-0.17	10.09	0	0	0
208	SLE FR 6	-0.03	-0.17	10.29	0	0	0
208	SLE QP 1	-0.02	-0.16	9.71	0	0	0
208	SLE QP 2	-0.03	-0.17	10.06	0	0	0
208	SLD 1	0.79	0.03	9.49	0	0	0
208	SLD 2	0.89	0.07	9.54	0	0	0
208	SLD 3	0.78	-0.19	9.18	0	0	0
208	SLD 4	0.88	-0.15	9.23	0	0	0
208	SLD 5	0.22	0.22	10.34	0	0	0
208	SLD 6	0.29	0.25	10.38	0	0	0
208	SLD 7	0.18	-0.52	9.31	0	0	0
208	SLD 8	0.24	-0.49	9.35	0	0	0
208	SLD 9	-0.29	0.15	10.76	0	0	0
208	SLD 10	-0.23	0.19	10.8	0	0	0
208	SLD 11	-0.34	-0.58	9.73	0	0	0
208	SLD 12	-0.27	-0.55	9.77	0	0	0
208	SLD 13	-0.93	-0.19	10.88	0	0	0
208	SLD 14	-0.83	-0.14	10.93	0	0	0
208	SLD 15	-0.94	-0.41	10.57	0	0	0
208	SLD 16	-0.84	-0.36	10.62	0	0	0
208	SLV 1	1.88	0.28	8.71	0	0	0
208	SLV 2	2.12	0.39	8.84	0	0	0
208	SLV 3	1.85	-0.22	8.01	0	0	0
208	SLV 4	2.09	-0.11	8.14	0	0	0
208	SLV 5	0.55	0.71	10.69	0	0	0
208	SLV 6	0.71	0.78	10.78	0	0	0
208	SLV 7	0.45	-0.96	8.36	0	0	0
208	SLV 8	0.6	-0.89	8.44	0	0	0
208	SLV 9	-0.65	0.56	11.67	0	0	0
208	SLV 10	-0.5	0.63	11.75	0	0	0
208	SLV 11	-0.76	-1.11	9.33	0	0	0
208	SLV 12	-0.61	-1.04	9.42	0	0	0
208	SLV 13	-2.14	-0.22	11.97	0	0	0
208	SLV 14	-1.9	-0.11	12.1	0	0	0
208	SLV 15	-2.17	-0.72	11.27	0	0	0
208	SLV 16	-1.94	-0.61	11.4	0	0	0
209	SLU 1	-0.01	-0.09	4.68	0	0	0
209	SLU 2	-0.01	-0.08	4.69	0	0	0
209	SLU 3	-0.01	-0.09	4.79	0	0	0
209	SLU 4	-0.01	-0.08	4.79	0	0	0
209	SLU 5	-0.01	-0.08	4.76	0	0	0
209	SLU 6	-0.01	-0.09	4.86	0	0	0
209	SLU 7	-0.01	-0.09	4.86	0	0	0
209	SLU 8	-0.01	-0.09	4.82	0	0	0
209	SLU 9	-0.01	-0.09	4.83	0	0	0
209	SLU 10	-0.02	-0.09	5.3	0	0	0
209	SLU 11	-0.02	-0.09	5.39	0	0	0
209	SLU 12	-0.02	-0.09	5.4	0	0	0
209	SLU 13	-0.02	-0.09	5.37	0	0	0
209	SLU 14	-0.02	-0.09	5.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
209	SLU 15	-0.02	-0.09	5.47	0	0	0
209	SLU 16	-0.02	-0.09	5.43	0	0	0
209	SLU 17	-0.02	-0.09	5.43	0	0	0
209	SLU 18	-0.02	-0.09	5.55	0	0	0
209	SLU 19	-0.02	-0.09	5.56	0	0	0
209	SLU 20	-0.02	-0.1	5.62	0	0	0
209	SLU 21	-0.02	-0.09	5.63	0	0	0
209	SLU 22	-0.01	-0.09	5.24	0	0	0
209	SLU 23	-0.01	-0.08	5.24	0	0	0
209	SLU 24	-0.01	-0.09	5.34	0	0	0
209	SLU 25	-0.01	-0.09	5.34	0	0	0
209	SLU 26	-0.01	-0.09	5.31	0	0	0
209	SLU 27	-0.01	-0.09	5.41	0	0	0
209	SLU 28	-0.01	-0.09	5.41	0	0	0
209	SLU 29	-0.01	-0.09	5.38	0	0	0
209	SLU 30	-0.01	-0.09	5.38	0	0	0
209	SLU 31	-0.02	-0.09	5.85	0	0	0
209	SLU 32	-0.02	-0.1	5.95	0	0	0
209	SLU 33	-0.02	-0.09	5.95	0	0	0
209	SLU 34	-0.02	-0.09	5.92	0	0	0
209	SLU 35	-0.02	-0.1	6.02	0	0	0
209	SLU 36	-0.02	-0.09	6.02	0	0	0
209	SLU 37	-0.02	-0.1	5.99	0	0	0
209	SLU 38	-0.02	-0.09	5.99	0	0	0
209	SLU 39	-0.02	-0.1	6.11	0	0	0
209	SLU 40	-0.02	-0.09	6.11	0	0	0
209	SLU 41	-0.02	-0.1	6.18	0	0	0
209	SLU 42	-0.02	-0.1	6.18	0	0	0
209	SLU 43	-0.02	-0.11	5.9	0	0	0
209	SLU 44	-0.02	-0.1	5.91	0	0	0
209	SLU 45	-0.02	-0.11	6	0	0	0
209	SLU 46	-0.02	-0.11	6.01	0	0	0
209	SLU 47	-0.02	-0.11	5.97	0	0	0
209	SLU 48	-0.02	-0.11	6.07	0	0	0
209	SLU 49	-0.02	-0.11	6.07	0	0	0
209	SLU 50	-0.02	-0.11	6.04	0	0	0
209	SLU 51	-0.02	-0.11	6.04	0	0	0
209	SLU 52	-0.02	-0.11	6.51	0	0	0
209	SLU 53	-0.02	-0.12	6.61	0	0	0
209	SLU 54	-0.02	-0.11	6.61	0	0	0
209	SLU 55	-0.02	-0.11	6.58	0	0	0
209	SLU 56	-0.02	-0.12	6.68	0	0	0
209	SLU 57	-0.02	-0.11	6.68	0	0	0
209	SLU 58	-0.02	-0.12	6.65	0	0	0
209	SLU 59	-0.02	-0.12	6.65	0	0	0
209	SLU 60	-0.02	-0.12	6.77	0	0	0
209	SLU 61	-0.02	-0.11	6.77	0	0	0
209	SLU 62	-0.02	-0.12	6.84	0	0	0
209	SLU 63	-0.02	-0.12	6.84	0	0	0
209	SLU 64	-0.02	-0.11	6.45	0	0	0
209	SLU 65	-0.02	-0.11	6.46	0	0	0
209	SLU 66	-0.02	-0.12	6.56	0	0	0
209	SLU 67	-0.02	-0.11	6.56	0	0	0
209	SLU 68	-0.02	-0.11	6.53	0	0	0
209	SLU 69	-0.02	-0.12	6.62	0	0	0
209	SLU 70	-0.02	-0.11	6.63	0	0	0
209	SLU 71	-0.02	-0.12	6.59	0	0	0
209	SLU 72	-0.02	-0.11	6.6	0	0	0
209	SLU 73	-0.02	-0.11	7.07	0	0	0
209	SLU 74	-0.02	-0.12	7.16	0	0	0
209	SLU 75	-0.02	-0.12	7.17	0	0	0
209	SLU 76	-0.02	-0.12	7.14	0	0	0
209	SLU 77	-0.02	-0.12	7.23	0	0	0
209	SLU 78	-0.02	-0.12	7.24	0	0	0
209	SLU 79	-0.02	-0.12	7.2	0	0	0
209	SLU 80	-0.02	-0.12	7.2	0	0	0
209	SLU 81	-0.02	-0.12	7.32	0	0	0
209	SLU 82	-0.02	-0.12	7.33	0	0	0
209	SLU 83	-0.02	-0.12	7.39	0	0	0
209	SLU 84	-0.02	-0.12	7.4	0	0	0
209	SLE RA 1	-0.01	-0.09	4.84	0	0	0
209	SLE RA 2	-0.01	-0.08	4.85	0	0	0
209	SLE RA 3	-0.01	-0.09	4.91	0	0	0
209	SLE RA 4	-0.01	-0.09	4.91	0	0	0
209	SLE RA 5	-0.01	-0.08	4.89	0	0	0
209	SLE RA 6	-0.01	-0.09	4.96	0	0	0
209	SLE RA 7	-0.01	-0.09	4.96	0	0	0
209	SLE RA 8	-0.01	-0.09	4.93	0	0	0
209	SLE RA 9	-0.01	-0.09	4.94	0	0	0
209	SLE RA 10	-0.01	-0.09	5.25	0	0	0
209	SLE RA 11	-0.01	-0.09	5.32	0	0	0
209	SLE RA 12	-0.01	-0.09	5.32	0	0	0
209	SLE RA 13	-0.01	-0.09	5.3	0	0	0
209	SLE RA 14	-0.01	-0.09	5.36	0	0	0
209	SLE RA 15	-0.01	-0.09	5.36	0	0	0
209	SLE RA 16	-0.01	-0.09	5.34	0	0	0
209	SLE RA 17	-0.01	-0.09	5.34	0	0	0
209	SLE RA 18	-0.02	-0.09	5.42	0	0	0
209	SLE RA 19	-0.02	-0.09	5.42	0	0	0
209	SLE RA 20	-0.02	-0.09	5.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
209	SLE RA 21	-0.02	-0.09	5.47	0	0	0
209	SLE FR 1	-0.01	-0.09	4.84	0	0	0
209	SLE FR 2	-0.01	-0.09	4.84	0	0	0
209	SLE FR 3	-0.01	-0.09	4.86	0	0	0
209	SLE FR 4	-0.01	-0.09	5.02	0	0	0
209	SLE FR 5	-0.01	-0.09	5.04	0	0	0
209	SLE FR 6	-0.01	-0.09	5.13	0	0	0
209	SLE QP 1	-0.01	-0.09	4.84	0	0	0
209	SLE QP 2	-0.01	-0.09	5.02	0	0	0
209	SLD 1	0.39	0.01	4.7	0	0	0
209	SLD 2	0.44	0.04	4.73	0	0	0
209	SLD 3	0.38	-0.1	4.54	0	0	0
209	SLD 4	0.43	-0.07	4.57	0	0	0
209	SLD 5	0.11	0.1	5.15	0	0	0
209	SLD 6	0.14	0.12	5.17	0	0	0
209	SLD 7	0.09	-0.26	4.63	0	0	0
209	SLD 8	0.12	-0.24	4.65	0	0	0
209	SLD 9	-0.15	0.07	5.38	0	0	0
209	SLD 10	-0.11	0.08	5.4	0	0	0
209	SLD 11	-0.17	-0.3	4.86	0	0	0
209	SLD 12	-0.13	-0.28	4.88	0	0	0
209	SLD 13	-0.46	-0.11	5.46	0	0	0
209	SLD 14	-0.41	-0.08	5.49	0	0	0
209	SLD 15	-0.47	-0.22	5.31	0	0	0
209	SLD 16	-0.42	-0.19	5.34	0	0	0
209	SLV 1	0.93	0.14	4.26	0	0	0
209	SLV 2	1.04	0.2	4.33	0	0	0
209	SLV 3	0.91	-0.1	3.91	0	0	0
209	SLV 4	1.03	-0.04	3.98	0	0	0
209	SLV 5	0.27	0.34	5.31	0	0	0
209	SLV 6	0.35	0.38	5.36	0	0	0
209	SLV 7	0.22	-0.48	4.14	0	0	0
209	SLV 8	0.3	-0.44	4.18	0	0	0
209	SLV 9	-0.32	0.26	5.85	0	0	0
209	SLV 10	-0.25	0.3	5.89	0	0	0
209	SLV 11	-0.37	-0.56	4.68	0	0	0
209	SLV 12	-0.3	-0.52	4.72	0	0	0
209	SLV 13	-1.05	-0.13	6.06	0	0	0
209	SLV 14	-0.94	-0.08	6.12	0	0	0
209	SLV 15	-1.07	-0.38	5.7	0	0	0
209	SLV 16	-0.95	-0.32	5.77	0	0	0
218	SLU 1	-0.11	-0.27	13.95	0	0	0
218	SLU 2	-0.11	-0.25	13.96	0	0	0
218	SLU 3	-0.11	-0.27	14.25	0	0	0
218	SLU 4	-0.11	-0.26	14.26	0	0	0
218	SLU 5	-0.11	-0.26	14.17	0	0	0
218	SLU 6	-0.11	-0.28	14.45	0	0	0
218	SLU 7	-0.11	-0.27	14.46	0	0	0
218	SLU 8	-0.11	-0.28	14.36	0	0	0
218	SLU 9	-0.11	-0.27	14.37	0	0	0
218	SLU 10	-0.11	-0.27	15.79	0	0	0
218	SLU 11	-0.12	-0.29	16.07	0	0	0
218	SLU 12	-0.12	-0.28	16.08	0	0	0
218	SLU 13	-0.12	-0.27	16	0	0	0
218	SLU 14	-0.12	-0.3	16.28	0	0	0
218	SLU 15	-0.12	-0.29	16.29	0	0	0
218	SLU 16	-0.12	-0.3	16.19	0	0	0
218	SLU 17	-0.12	-0.29	16.2	0	0	0
218	SLU 18	-0.12	-0.3	16.56	0	0	0
218	SLU 19	-0.12	-0.29	16.57	0	0	0
218	SLU 20	-0.12	-0.3	16.76	0	0	0
218	SLU 21	-0.12	-0.29	16.77	0	0	0
218	SLU 22	-0.12	-0.28	15.59	0	0	0
218	SLU 23	-0.12	-0.26	15.6	0	0	0
218	SLU 24	-0.13	-0.29	15.88	0	0	0
218	SLU 25	-0.13	-0.27	15.9	0	0	0
218	SLU 26	-0.12	-0.27	15.81	0	0	0
218	SLU 27	-0.13	-0.29	16.09	0	0	0
218	SLU 28	-0.13	-0.28	16.1	0	0	0
218	SLU 29	-0.13	-0.29	16	0	0	0
218	SLU 30	-0.13	-0.28	16.01	0	0	0
218	SLU 31	-0.13	-0.28	17.43	0	0	0
218	SLU 32	-0.13	-0.31	17.71	0	0	0
218	SLU 33	-0.13	-0.29	17.72	0	0	0
218	SLU 34	-0.13	-0.29	17.64	0	0	0
218	SLU 35	-0.14	-0.31	17.92	0	0	0
218	SLU 36	-0.13	-0.3	17.93	0	0	0
218	SLU 37	-0.13	-0.31	17.82	0	0	0
218	SLU 38	-0.13	-0.3	17.84	0	0	0
218	SLU 39	-0.14	-0.31	18.2	0	0	0
218	SLU 40	-0.13	-0.3	18.21	0	0	0
218	SLU 41	-0.14	-0.31	18.4	0	0	0
218	SLU 42	-0.14	-0.3	18.41	0	0	0
218	SLU 43	-0.14	-0.35	17.57	0	0	0
218	SLU 44	-0.13	-0.33	17.58	0	0	0
218	SLU 45	-0.14	-0.35	17.87	0	0	0
218	SLU 46	-0.14	-0.34	17.88	0	0	0
218	SLU 47	-0.13	-0.33	17.79	0	0	0
218	SLU 48	-0.14	-0.35	18.07	0	0	0
218	SLU 49	-0.14	-0.34	18.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLU 50	-0.14	-0.35	17.98	0	0	0
218	SLU 51	-0.14	-0.34	17.99	0	0	0
218	SLU 52	-0.14	-0.35	19.41	0	0	0
218	SLU 53	-0.15	-0.37	19.69	0	0	0
218	SLU 54	-0.14	-0.36	19.7	0	0	0
218	SLU 55	-0.14	-0.35	19.62	0	0	0
218	SLU 56	-0.15	-0.37	19.9	0	0	0
218	SLU 57	-0.15	-0.36	19.91	0	0	0
218	SLU 58	-0.15	-0.37	19.81	0	0	0
218	SLU 59	-0.14	-0.36	19.82	0	0	0
218	SLU 60	-0.15	-0.37	20.18	0	0	0
218	SLU 61	-0.15	-0.36	20.19	0	0	0
218	SLU 62	-0.15	-0.38	20.38	0	0	0
218	SLU 63	-0.15	-0.37	20.39	0	0	0
218	SLU 64	-0.15	-0.36	19.21	0	0	0
218	SLU 65	-0.15	-0.34	19.22	0	0	0
218	SLU 66	-0.15	-0.36	19.51	0	0	0
218	SLU 67	-0.15	-0.35	19.52	0	0	0
218	SLU 68	-0.15	-0.34	19.43	0	0	0
218	SLU 69	-0.15	-0.37	19.71	0	0	0
218	SLU 70	-0.15	-0.36	19.72	0	0	0
218	SLU 71	-0.15	-0.37	19.62	0	0	0
218	SLU 72	-0.15	-0.36	19.63	0	0	0
218	SLU 73	-0.16	-0.36	21.05	0	0	0
218	SLU 74	-0.16	-0.38	21.33	0	0	0
218	SLU 75	-0.16	-0.37	21.34	0	0	0
218	SLU 76	-0.16	-0.36	21.26	0	0	0
218	SLU 77	-0.16	-0.39	21.54	0	0	0
218	SLU 78	-0.16	-0.37	21.55	0	0	0
218	SLU 79	-0.16	-0.39	21.45	0	0	0
218	SLU 80	-0.16	-0.38	21.46	0	0	0
218	SLU 81	-0.16	-0.39	21.82	0	0	0
218	SLU 82	-0.16	-0.38	21.83	0	0	0
218	SLU 83	-0.16	-0.39	22.02	0	0	0
218	SLU 84	-0.16	-0.38	22.03	0	0	0
218	SLE RA 1	-0.11	-0.27	14.41	0	0	0
218	SLE RA 2	-0.11	-0.26	14.43	0	0	0
218	SLE RA 3	-0.11	-0.28	14.61	0	0	0
218	SLE RA 4	-0.11	-0.27	14.62	0	0	0
218	SLE RA 5	-0.11	-0.26	14.56	0	0	0
218	SLE RA 6	-0.12	-0.28	14.75	0	0	0
218	SLE RA 7	-0.11	-0.27	14.76	0	0	0
218	SLE RA 8	-0.11	-0.28	14.69	0	0	0
218	SLE RA 9	-0.11	-0.27	14.7	0	0	0
218	SLE RA 10	-0.12	-0.27	15.64	0	0	0
218	SLE RA 11	-0.12	-0.29	15.83	0	0	0
218	SLE RA 12	-0.12	-0.28	15.84	0	0	0
218	SLE RA 13	-0.12	-0.28	15.78	0	0	0
218	SLE RA 14	-0.12	-0.29	15.97	0	0	0
218	SLE RA 15	-0.12	-0.28	15.98	0	0	0
218	SLE RA 16	-0.12	-0.29	15.91	0	0	0
218	SLE RA 17	-0.12	-0.28	15.91	0	0	0
218	SLE RA 18	-0.12	-0.29	16.15	0	0	0
218	SLE RA 19	-0.12	-0.28	16.16	0	0	0
218	SLE RA 20	-0.12	-0.29	16.29	0	0	0
218	SLE RA 21	-0.12	-0.29	16.3	0	0	0
218	SLE FR 1	-0.11	-0.27	14.41	0	0	0
218	SLE FR 2	-0.11	-0.27	14.42	0	0	0
218	SLE FR 3	-0.11	-0.27	14.47	0	0	0
218	SLE FR 4	-0.11	-0.28	14.94	0	0	0
218	SLE FR 5	-0.12	-0.28	14.99	0	0	0
218	SLE FR 6	-0.12	-0.28	15.28	0	0	0
218	SLE QP 1	-0.11	-0.27	14.41	0	0	0
218	SLE QP 2	-0.12	-0.28	14.94	0	0	0
218	SLD 1	1.02	-0.22	16.05	0	0	0
218	SLD 2	1.17	-0.29	15.97	0	0	0
218	SLD 3	1.04	-0.55	15.6	0	0	0
218	SLD 4	1.19	-0.62	15.52	0	0	0
218	SLD 5	0.17	0.25	15.96	0	0	0
218	SLD 6	0.27	0.21	15.91	0	0	0
218	SLD 7	0.24	-0.85	14.47	0	0	0
218	SLD 8	0.33	-0.9	14.42	0	0	0
218	SLD 9	-0.56	0.34	15.45	0	0	0
218	SLD 10	-0.47	0.29	15.4	0	0	0
218	SLD 11	-0.5	-0.76	13.96	0	0	0
218	SLD 12	-0.4	-0.81	13.91	0	0	0
218	SLD 13	-1.42	0.06	14.35	0	0	0
218	SLD 14	-1.27	-0.01	14.27	0	0	0
218	SLD 15	-1.4	-0.27	13.9	0	0	0
218	SLD 16	-1.25	-0.34	13.82	0	0	0
218	SLV 1	2.55	-0.15	17.53	0	0	0
218	SLV 2	2.89	-0.32	17.34	0	0	0
218	SLV 3	2.6	-0.91	16.51	0	0	0
218	SLV 4	2.94	-1.07	16.33	0	0	0
218	SLV 5	0.56	0.93	17.28	0	0	0
218	SLV 6	0.78	0.82	17.16	0	0	0
218	SLV 7	0.71	-1.58	13.9	0	0	0
218	SLV 8	0.93	-1.69	13.78	0	0	0
218	SLV 9	-1.16	1.13	16.09	0	0	0
218	SLV 10	-0.94	1.02	15.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLV 11	-1.01	-1.38	12.71	0	0	0
218	SLV 12	-0.79	-1.49	12.59	0	0	0
218	SLV 13	-3.17	0.51	13.55	0	0	0
218	SLV 14	-2.83	0.35	13.36	0	0	0
218	SLV 15	-3.12	-0.24	12.53	0	0	0
218	SLV 16	-2.78	-0.4	12.35	0	0	0
218	CRTFP Ux+	0	0	0	0	0	0
218	CRTFP Ux-	0	0	0	0	0	0
219	SLU 1	-0.1	-0.23	13.08	0	0	0
219	SLU 2	-0.1	-0.21	13.1	0	0	0
219	SLU 3	-0.11	-0.23	13.36	0	0	0
219	SLU 4	-0.1	-0.22	13.37	0	0	0
219	SLU 5	-0.1	-0.21	13.29	0	0	0
219	SLU 6	-0.11	-0.23	13.56	0	0	0
219	SLU 7	-0.11	-0.22	13.57	0	0	0
219	SLU 8	-0.1	-0.23	13.47	0	0	0
219	SLU 9	-0.1	-0.22	13.48	0	0	0
219	SLU 10	-0.11	-0.22	14.82	0	0	0
219	SLU 11	-0.11	-0.24	15.08	0	0	0
219	SLU 12	-0.11	-0.23	15.09	0	0	0
219	SLU 13	-0.11	-0.23	15.01	0	0	0
219	SLU 14	-0.11	-0.25	15.27	0	0	0
219	SLU 15	-0.11	-0.24	15.28	0	0	0
219	SLU 16	-0.11	-0.25	15.19	0	0	0
219	SLU 17	-0.11	-0.24	15.2	0	0	0
219	SLU 18	-0.11	-0.25	15.53	0	0	0
219	SLU 19	-0.11	-0.24	15.54	0	0	0
219	SLU 20	-0.11	-0.25	15.73	0	0	0
219	SLU 21	-0.11	-0.24	15.74	0	0	0
219	SLU 22	-0.12	-0.23	14.61	0	0	0
219	SLU 23	-0.12	-0.22	14.63	0	0	0
219	SLU 24	-0.12	-0.24	14.9	0	0	0
219	SLU 25	-0.12	-0.23	14.91	0	0	0
219	SLU 26	-0.12	-0.22	14.83	0	0	0
219	SLU 27	-0.12	-0.24	15.09	0	0	0
219	SLU 28	-0.12	-0.23	15.1	0	0	0
219	SLU 29	-0.12	-0.24	15	0	0	0
219	SLU 30	-0.12	-0.23	15.01	0	0	0
219	SLU 31	-0.12	-0.23	16.35	0	0	0
219	SLU 32	-0.13	-0.25	16.61	0	0	0
219	SLU 33	-0.13	-0.24	16.62	0	0	0
219	SLU 34	-0.12	-0.24	16.54	0	0	0
219	SLU 35	-0.13	-0.25	16.8	0	0	0
219	SLU 36	-0.13	-0.24	16.82	0	0	0
219	SLU 37	-0.13	-0.26	16.72	0	0	0
219	SLU 38	-0.13	-0.25	16.73	0	0	0
219	SLU 39	-0.13	-0.26	17.07	0	0	0
219	SLU 40	-0.13	-0.25	17.08	0	0	0
219	SLU 41	-0.13	-0.26	17.26	0	0	0
219	SLU 42	-0.13	-0.25	17.27	0	0	0
219	SLU 43	-0.13	-0.29	16.48	0	0	0
219	SLU 44	-0.13	-0.27	16.5	0	0	0
219	SLU 45	-0.13	-0.29	16.76	0	0	0
219	SLU 46	-0.13	-0.28	16.77	0	0	0
219	SLU 47	-0.13	-0.28	16.69	0	0	0
219	SLU 48	-0.13	-0.3	16.96	0	0	0
219	SLU 49	-0.13	-0.29	16.97	0	0	0
219	SLU 50	-0.13	-0.3	16.87	0	0	0
219	SLU 51	-0.13	-0.29	16.88	0	0	0
219	SLU 52	-0.13	-0.29	18.22	0	0	0
219	SLU 53	-0.14	-0.31	18.48	0	0	0
219	SLU 54	-0.14	-0.3	18.49	0	0	0
219	SLU 55	-0.14	-0.29	18.41	0	0	0
219	SLU 56	-0.14	-0.31	18.67	0	0	0
219	SLU 57	-0.14	-0.3	18.68	0	0	0
219	SLU 58	-0.14	-0.31	18.59	0	0	0
219	SLU 59	-0.14	-0.3	18.6	0	0	0
219	SLU 60	-0.14	-0.31	18.93	0	0	0
219	SLU 61	-0.14	-0.3	18.94	0	0	0
219	SLU 62	-0.14	-0.31	19.13	0	0	0
219	SLU 63	-0.14	-0.3	19.14	0	0	0
219	SLU 64	-0.14	-0.3	18.01	0	0	0
219	SLU 65	-0.14	-0.28	18.03	0	0	0
219	SLU 66	-0.15	-0.3	18.29	0	0	0
219	SLU 67	-0.14	-0.29	18.31	0	0	0
219	SLU 68	-0.14	-0.29	18.23	0	0	0
219	SLU 69	-0.15	-0.3	18.49	0	0	0
219	SLU 70	-0.15	-0.29	18.5	0	0	0
219	SLU 71	-0.15	-0.31	18.4	0	0	0
219	SLU 72	-0.14	-0.3	18.41	0	0	0
219	SLU 73	-0.15	-0.3	19.75	0	0	0
219	SLU 74	-0.15	-0.32	20.01	0	0	0
219	SLU 75	-0.15	-0.31	20.02	0	0	0
219	SLU 76	-0.15	-0.3	19.94	0	0	0
219	SLU 77	-0.15	-0.32	20.2	0	0	0
219	SLU 78	-0.15	-0.31	20.22	0	0	0
219	SLU 79	-0.15	-0.32	20.12	0	0	0
219	SLU 80	-0.15	-0.31	20.13	0	0	0
219	SLU 81	-0.15	-0.32	20.47	0	0	0
219	SLU 82	-0.15	-0.31	20.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLU 83	-0.16	-0.32	20.66	0	0	0
219	SLU 84	-0.15	-0.31	20.67	0	0	0
219	SLE RA 1	-0.11	-0.23	13.52	0	0	0
219	SLE RA 2	-0.11	-0.22	13.53	0	0	0
219	SLE RA 3	-0.11	-0.23	13.71	0	0	0
219	SLE RA 4	-0.11	-0.22	13.71	0	0	0
219	SLE RA 5	-0.11	-0.22	13.66	0	0	0
219	SLE RA 6	-0.11	-0.23	13.84	0	0	0
219	SLE RA 7	-0.11	-0.22	13.84	0	0	0
219	SLE RA 8	-0.11	-0.23	13.78	0	0	0
219	SLE RA 9	-0.11	-0.23	13.79	0	0	0
219	SLE RA 10	-0.11	-0.23	14.68	0	0	0
219	SLE RA 11	-0.11	-0.24	14.85	0	0	0
219	SLE RA 12	-0.11	-0.23	14.86	0	0	0
219	SLE RA 13	-0.11	-0.23	14.81	0	0	0
219	SLE RA 14	-0.11	-0.24	14.98	0	0	0
219	SLE RA 15	-0.11	-0.23	14.99	0	0	0
219	SLE RA 16	-0.11	-0.24	14.92	0	0	0
219	SLE RA 17	-0.11	-0.24	14.93	0	0	0
219	SLE RA 18	-0.11	-0.24	15.15	0	0	0
219	SLE RA 19	-0.11	-0.24	15.16	0	0	0
219	SLE RA 20	-0.11	-0.24	15.28	0	0	0
219	SLE RA 21	-0.11	-0.24	15.29	0	0	0
219	SLE FR 1	-0.11	-0.23	13.52	0	0	0
219	SLE FR 2	-0.11	-0.23	13.52	0	0	0
219	SLE FR 3	-0.11	-0.23	13.57	0	0	0
219	SLE FR 4	-0.11	-0.23	14.01	0	0	0
219	SLE FR 5	-0.11	-0.23	14.06	0	0	0
219	SLE FR 6	-0.11	-0.23	14.34	0	0	0
219	SLE QP 1	-0.11	-0.23	13.52	0	0	0
219	SLE QP 2	-0.11	-0.23	14.01	0	0	0
219	SLD 1	0.98	-0.16	14.92	0	0	0
219	SLD 2	1.12	-0.22	14.84	0	0	0
219	SLD 3	1	-0.48	14.5	0	0	0
219	SLD 4	1.13	-0.54	14.43	0	0	0
219	SLD 5	0.16	0.28	14.93	0	0	0
219	SLD 6	0.25	0.24	14.88	0	0	0
219	SLD 7	0.23	-0.78	13.53	0	0	0
219	SLD 8	0.32	-0.82	13.49	0	0	0
219	SLD 9	-0.54	0.35	14.53	0	0	0
219	SLD 10	-0.44	0.31	14.49	0	0	0
219	SLD 11	-0.47	-0.71	13.14	0	0	0
219	SLD 12	-0.38	-0.75	13.09	0	0	0
219	SLD 13	-1.35	0.07	13.6	0	0	0
219	SLD 14	-1.21	0.01	13.52	0	0	0
219	SLD 15	-1.33	-0.24	13.18	0	0	0
219	SLD 16	-1.19	-0.3	13.11	0	0	0
219	SLV 1	2.43	-0.07	16.11	0	0	0
219	SLV 2	2.75	-0.21	15.94	0	0	0
219	SLV 3	2.47	-0.79	15.16	0	0	0
219	SLV 4	2.8	-0.93	15	0	0	0
219	SLV 5	0.53	0.94	16.11	0	0	0
219	SLV 6	0.74	0.85	16	0	0	0
219	SLV 7	0.68	-1.47	12.95	0	0	0
219	SLV 8	0.89	-1.56	12.84	0	0	0
219	SLV 9	-1.1	1.1	15.18	0	0	0
219	SLV 10	-0.89	1.01	15.07	0	0	0
219	SLV 11	-0.96	-1.31	12.02	0	0	0
219	SLV 12	-0.75	-1.4	11.91	0	0	0
219	SLV 13	-3.02	0.47	13.02	0	0	0
219	SLV 14	-2.69	0.33	12.86	0	0	0
219	SLV 15	-2.97	-0.25	12.08	0	0	0
219	SLV 16	-2.65	-0.39	11.91	0	0	0
220	SLU 1	-0.1	-0.2	13.01	0	0	0
220	SLU 2	-0.1	-0.18	13.03	0	0	0
220	SLU 3	-0.1	-0.2	13.29	0	0	0
220	SLU 4	-0.1	-0.19	13.3	0	0	0
220	SLU 5	-0.1	-0.18	13.23	0	0	0
220	SLU 6	-0.11	-0.2	13.49	0	0	0
220	SLU 7	-0.11	-0.19	13.5	0	0	0
220	SLU 8	-0.1	-0.2	13.4	0	0	0
220	SLU 9	-0.1	-0.19	13.41	0	0	0
220	SLU 10	-0.11	-0.19	14.74	0	0	0
220	SLU 11	-0.11	-0.21	15	0	0	0
220	SLU 12	-0.11	-0.2	15.01	0	0	0
220	SLU 13	-0.11	-0.2	14.94	0	0	0
220	SLU 14	-0.11	-0.21	15.2	0	0	0
220	SLU 15	-0.11	-0.2	15.21	0	0	0
220	SLU 16	-0.11	-0.22	15.11	0	0	0
220	SLU 17	-0.11	-0.21	15.12	0	0	0
220	SLU 18	-0.11	-0.21	15.46	0	0	0
220	SLU 19	-0.11	-0.2	15.47	0	0	0
220	SLU 20	-0.11	-0.22	15.65	0	0	0
220	SLU 21	-0.11	-0.21	15.66	0	0	0
220	SLU 22	-0.12	-0.2	14.53	0	0	0
220	SLU 23	-0.12	-0.19	14.55	0	0	0
220	SLU 24	-0.12	-0.2	14.81	0	0	0
220	SLU 25	-0.12	-0.19	14.82	0	0	0
220	SLU 26	-0.12	-0.19	14.74	0	0	0
220	SLU 27	-0.12	-0.21	15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLU 28	-0.12	-0.2	15.02	0	0	0
220	SLU 29	-0.12	-0.21	14.92	0	0	0
220	SLU 30	-0.12	-0.2	14.93	0	0	0
220	SLU 31	-0.12	-0.2	16.26	0	0	0
220	SLU 32	-0.13	-0.22	16.52	0	0	0
220	SLU 33	-0.13	-0.21	16.53	0	0	0
220	SLU 34	-0.12	-0.2	16.45	0	0	0
220	SLU 35	-0.13	-0.22	16.71	0	0	0
220	SLU 36	-0.13	-0.21	16.73	0	0	0
220	SLU 37	-0.13	-0.22	16.63	0	0	0
220	SLU 38	-0.13	-0.21	16.64	0	0	0
220	SLU 39	-0.13	-0.22	16.98	0	0	0
220	SLU 40	-0.13	-0.21	16.99	0	0	0
220	SLU 41	-0.13	-0.22	17.17	0	0	0
220	SLU 42	-0.13	-0.21	17.18	0	0	0
220	SLU 43	-0.13	-0.26	16.4	0	0	0
220	SLU 44	-0.13	-0.24	16.42	0	0	0
220	SLU 45	-0.13	-0.26	16.68	0	0	0
220	SLU 46	-0.13	-0.25	16.69	0	0	0
220	SLU 47	-0.13	-0.24	16.61	0	0	0
220	SLU 48	-0.13	-0.26	16.87	0	0	0
220	SLU 49	-0.13	-0.25	16.88	0	0	0
220	SLU 50	-0.13	-0.26	16.78	0	0	0
220	SLU 51	-0.13	-0.25	16.79	0	0	0
220	SLU 52	-0.13	-0.25	18.13	0	0	0
220	SLU 53	-0.14	-0.27	18.39	0	0	0
220	SLU 54	-0.14	-0.26	18.4	0	0	0
220	SLU 55	-0.14	-0.25	18.32	0	0	0
220	SLU 56	-0.14	-0.27	18.58	0	0	0
220	SLU 57	-0.14	-0.26	18.59	0	0	0
220	SLU 58	-0.14	-0.27	18.49	0	0	0
220	SLU 59	-0.14	-0.26	18.5	0	0	0
220	SLU 60	-0.14	-0.27	18.84	0	0	0
220	SLU 61	-0.14	-0.26	18.85	0	0	0
220	SLU 62	-0.14	-0.28	19.03	0	0	0
220	SLU 63	-0.14	-0.27	19.04	0	0	0
220	SLU 64	-0.14	-0.26	17.92	0	0	0
220	SLU 65	-0.14	-0.24	17.93	0	0	0
220	SLU 66	-0.15	-0.26	18.19	0	0	0
220	SLU 67	-0.14	-0.25	18.21	0	0	0
220	SLU 68	-0.14	-0.25	18.13	0	0	0
220	SLU 69	-0.15	-0.27	18.39	0	0	0
220	SLU 70	-0.15	-0.25	18.4	0	0	0
220	SLU 71	-0.15	-0.27	18.3	0	0	0
220	SLU 72	-0.14	-0.26	18.31	0	0	0
220	SLU 73	-0.15	-0.26	19.65	0	0	0
220	SLU 74	-0.15	-0.27	19.9	0	0	0
220	SLU 75	-0.15	-0.26	19.92	0	0	0
220	SLU 76	-0.15	-0.26	19.84	0	0	0
220	SLU 77	-0.15	-0.28	20.1	0	0	0
220	SLU 78	-0.15	-0.27	20.11	0	0	0
220	SLU 79	-0.15	-0.28	20.01	0	0	0
220	SLU 80	-0.15	-0.27	20.02	0	0	0
220	SLU 81	-0.15	-0.28	20.36	0	0	0
220	SLU 82	-0.15	-0.27	20.37	0	0	0
220	SLU 83	-0.15	-0.28	20.55	0	0	0
220	SLU 84	-0.15	-0.27	20.56	0	0	0
220	SLE RA 1	-0.11	-0.2	13.45	0	0	0
220	SLE RA 2	-0.11	-0.19	13.46	0	0	0
220	SLE RA 3	-0.11	-0.2	13.63	0	0	0
220	SLE RA 4	-0.11	-0.19	13.64	0	0	0
220	SLE RA 5	-0.11	-0.19	13.59	0	0	0
220	SLE RA 6	-0.11	-0.2	13.76	0	0	0
220	SLE RA 7	-0.11	-0.2	13.77	0	0	0
220	SLE RA 8	-0.11	-0.2	13.7	0	0	0
220	SLE RA 9	-0.11	-0.2	13.71	0	0	0
220	SLE RA 10	-0.11	-0.2	14.6	0	0	0
220	SLE RA 11	-0.11	-0.21	14.77	0	0	0
220	SLE RA 12	-0.11	-0.2	14.78	0	0	0
220	SLE RA 13	-0.11	-0.2	14.73	0	0	0
220	SLE RA 14	-0.11	-0.21	14.9	0	0	0
220	SLE RA 15	-0.11	-0.2	14.91	0	0	0
220	SLE RA 16	-0.11	-0.21	14.84	0	0	0
220	SLE RA 17	-0.11	-0.2	14.85	0	0	0
220	SLE RA 18	-0.11	-0.21	15.08	0	0	0
220	SLE RA 19	-0.11	-0.2	15.08	0	0	0
220	SLE RA 20	-0.11	-0.21	15.2	0	0	0
220	SLE RA 21	-0.11	-0.21	15.21	0	0	0
220	SLE FR 1	-0.11	-0.2	13.45	0	0	0
220	SLE FR 2	-0.11	-0.2	13.45	0	0	0
220	SLE FR 3	-0.11	-0.2	13.5	0	0	0
220	SLE FR 4	-0.11	-0.2	13.94	0	0	0
220	SLE FR 5	-0.11	-0.2	13.99	0	0	0
220	SLE FR 6	-0.11	-0.21	14.26	0	0	0
220	SLE QP 1	-0.11	-0.2	13.45	0	0	0
220	SLE QP 2	-0.11	-0.2	13.94	0	0	0
220	SLD 1	0.98	-0.11	14.7	0	0	0
220	SLD 2	1.12	-0.17	14.63	0	0	0
220	SLD 3	1	-0.44	14.28	0	0	0
220	SLD 4	1.14	-0.49	14.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLD 5	0.17	0.32	14.81	0	0	0
220	SLD 6	0.26	0.29	14.76	0	0	0
220	SLD 7	0.23	-0.75	13.42	0	0	0
220	SLD 8	0.32	-0.79	13.38	0	0	0
220	SLD 9	-0.54	0.38	14.5	0	0	0
220	SLD 10	-0.45	0.35	14.45	0	0	0
220	SLD 11	-0.47	-0.69	13.11	0	0	0
220	SLD 12	-0.38	-0.73	13.06	0	0	0
220	SLD 13	-1.36	0.08	13.66	0	0	0
220	SLD 14	-1.22	0.03	13.59	0	0	0
220	SLD 15	-1.34	-0.24	13.24	0	0	0
220	SLD 16	-1.2	-0.29	13.17	0	0	0
220	SLV 1	2.44	-0.01	15.7	0	0	0
220	SLV 2	2.77	-0.13	15.54	0	0	0
220	SLV 3	2.49	-0.74	14.76	0	0	0
220	SLV 4	2.81	-0.86	14.6	0	0	0
220	SLV 5	0.53	0.99	15.92	0	0	0
220	SLV 6	0.74	0.91	15.82	0	0	0
220	SLV 7	0.68	-1.45	12.78	0	0	0
220	SLV 8	0.89	-1.53	12.68	0	0	0
220	SLV 9	-1.11	1.13	15.19	0	0	0
220	SLV 10	-0.9	1.05	15.09	0	0	0
220	SLV 11	-0.96	-1.31	12.05	0	0	0
220	SLV 12	-0.75	-1.39	11.95	0	0	0
220	SLV 13	-3.03	0.46	13.27	0	0	0
220	SLV 14	-2.71	0.33	13.11	0	0	0
220	SLV 15	-2.99	-0.27	12.33	0	0	0
220	SLV 16	-2.66	-0.4	12.17	0	0	0
221	SLU 1	-0.1	-0.17	12.96	0	0	0
221	SLU 2	-0.1	-0.15	12.98	0	0	0
221	SLU 3	-0.1	-0.17	13.24	0	0	0
221	SLU 4	-0.1	-0.16	13.25	0	0	0
221	SLU 5	-0.1	-0.16	13.17	0	0	0
221	SLU 6	-0.11	-0.17	13.43	0	0	0
221	SLU 7	-0.1	-0.16	13.44	0	0	0
221	SLU 8	-0.1	-0.18	13.35	0	0	0
221	SLU 9	-0.1	-0.17	13.36	0	0	0
221	SLU 10	-0.11	-0.16	14.69	0	0	0
221	SLU 11	-0.11	-0.18	14.95	0	0	0
221	SLU 12	-0.11	-0.17	14.96	0	0	0
221	SLU 13	-0.11	-0.17	14.88	0	0	0
221	SLU 14	-0.11	-0.18	15.14	0	0	0
221	SLU 15	-0.11	-0.17	15.15	0	0	0
221	SLU 16	-0.11	-0.19	15.06	0	0	0
221	SLU 17	-0.11	-0.18	15.07	0	0	0
221	SLU 18	-0.11	-0.18	15.4	0	0	0
221	SLU 19	-0.11	-0.17	15.42	0	0	0
221	SLU 20	-0.11	-0.19	15.6	0	0	0
221	SLU 21	-0.11	-0.18	15.61	0	0	0
221	SLU 22	-0.12	-0.17	14.47	0	0	0
221	SLU 23	-0.11	-0.16	14.49	0	0	0
221	SLU 24	-0.12	-0.17	14.75	0	0	0
221	SLU 25	-0.12	-0.16	14.76	0	0	0
221	SLU 26	-0.12	-0.16	14.68	0	0	0
221	SLU 27	-0.12	-0.18	14.94	0	0	0
221	SLU 28	-0.12	-0.17	14.95	0	0	0
221	SLU 29	-0.12	-0.18	14.86	0	0	0
221	SLU 30	-0.12	-0.17	14.87	0	0	0
221	SLU 31	-0.12	-0.17	16.2	0	0	0
221	SLU 32	-0.13	-0.18	16.46	0	0	0
221	SLU 33	-0.12	-0.17	16.47	0	0	0
221	SLU 34	-0.12	-0.17	16.39	0	0	0
221	SLU 35	-0.13	-0.18	16.65	0	0	0
221	SLU 36	-0.13	-0.17	16.66	0	0	0
221	SLU 37	-0.13	-0.19	16.57	0	0	0
221	SLU 38	-0.12	-0.18	16.58	0	0	0
221	SLU 39	-0.13	-0.19	16.91	0	0	0
221	SLU 40	-0.13	-0.18	16.93	0	0	0
221	SLU 41	-0.13	-0.19	17.11	0	0	0
221	SLU 42	-0.13	-0.18	17.12	0	0	0
221	SLU 43	-0.13	-0.22	16.33	0	0	0
221	SLU 44	-0.13	-0.21	16.35	0	0	0
221	SLU 45	-0.13	-0.22	16.61	0	0	0
221	SLU 46	-0.13	-0.21	16.62	0	0	0
221	SLU 47	-0.13	-0.21	16.55	0	0	0
221	SLU 48	-0.13	-0.23	16.8	0	0	0
221	SLU 49	-0.13	-0.22	16.82	0	0	0
221	SLU 50	-0.13	-0.23	16.72	0	0	0
221	SLU 51	-0.13	-0.22	16.73	0	0	0
221	SLU 52	-0.13	-0.21	18.06	0	0	0
221	SLU 53	-0.14	-0.23	18.32	0	0	0
221	SLU 54	-0.14	-0.22	18.33	0	0	0
221	SLU 55	-0.13	-0.22	18.25	0	0	0
221	SLU 56	-0.14	-0.23	18.51	0	0	0
221	SLU 57	-0.14	-0.22	18.52	0	0	0
221	SLU 58	-0.14	-0.24	18.43	0	0	0
221	SLU 59	-0.14	-0.23	18.44	0	0	0
221	SLU 60	-0.14	-0.23	18.77	0	0	0
221	SLU 61	-0.14	-0.22	18.79	0	0	0
221	SLU 62	-0.14	-0.24	18.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLU 63	-0.14	-0.23	18.98	0	0	0
221	SLU 64	-0.14	-0.22	17.84	0	0	0
221	SLU 65	-0.14	-0.21	17.86	0	0	0
221	SLU 66	-0.14	-0.22	18.12	0	0	0
221	SLU 67	-0.14	-0.21	18.13	0	0	0
221	SLU 68	-0.14	-0.21	18.06	0	0	0
221	SLU 69	-0.14	-0.23	18.31	0	0	0
221	SLU 70	-0.14	-0.22	18.33	0	0	0
221	SLU 71	-0.14	-0.23	18.23	0	0	0
221	SLU 72	-0.14	-0.22	18.24	0	0	0
221	SLU 73	-0.15	-0.22	19.57	0	0	0
221	SLU 74	-0.15	-0.23	19.83	0	0	0
221	SLU 75	-0.15	-0.22	19.84	0	0	0
221	SLU 76	-0.15	-0.22	19.76	0	0	0
221	SLU 77	-0.15	-0.24	20.02	0	0	0
221	SLU 78	-0.15	-0.23	20.03	0	0	0
221	SLU 79	-0.15	-0.24	19.94	0	0	0
221	SLU 80	-0.15	-0.23	19.95	0	0	0
221	SLU 81	-0.15	-0.24	20.28	0	0	0
221	SLU 82	-0.15	-0.23	20.3	0	0	0
221	SLU 83	-0.15	-0.24	20.48	0	0	0
221	SLU 84	-0.15	-0.23	20.49	0	0	0
221	SLE RA 1	-0.11	-0.17	13.39	0	0	0
221	SLE RA 2	-0.1	-0.16	13.41	0	0	0
221	SLE RA 3	-0.11	-0.17	13.58	0	0	0
221	SLE RA 4	-0.11	-0.17	13.59	0	0	0
221	SLE RA 5	-0.11	-0.16	13.53	0	0	0
221	SLE RA 6	-0.11	-0.17	13.71	0	0	0
221	SLE RA 7	-0.11	-0.17	13.71	0	0	0
221	SLE RA 8	-0.11	-0.18	13.65	0	0	0
221	SLE RA 9	-0.11	-0.17	13.66	0	0	0
221	SLE RA 10	-0.11	-0.17	14.55	0	0	0
221	SLE RA 11	-0.11	-0.18	14.72	0	0	0
221	SLE RA 12	-0.11	-0.17	14.73	0	0	0
221	SLE RA 13	-0.11	-0.17	14.67	0	0	0
221	SLE RA 14	-0.11	-0.18	14.85	0	0	0
221	SLE RA 15	-0.11	-0.17	14.85	0	0	0
221	SLE RA 16	-0.11	-0.18	14.79	0	0	0
221	SLE RA 17	-0.11	-0.17	14.8	0	0	0
221	SLE RA 18	-0.11	-0.18	15.02	0	0	0
221	SLE RA 19	-0.11	-0.17	15.03	0	0	0
221	SLE RA 20	-0.11	-0.18	15.15	0	0	0
221	SLE RA 21	-0.11	-0.18	15.16	0	0	0
221	SLE FR 1	-0.11	-0.17	13.39	0	0	0
221	SLE FR 2	-0.11	-0.17	13.4	0	0	0
221	SLE FR 3	-0.11	-0.17	13.44	0	0	0
221	SLE FR 4	-0.11	-0.17	13.88	0	0	0
221	SLE FR 5	-0.11	-0.17	13.93	0	0	0
221	SLE FR 6	-0.11	-0.18	14.21	0	0	0
221	SLE QP 1	-0.11	-0.17	13.39	0	0	0
221	SLE QP 2	-0.11	-0.17	13.88	0	0	0
221	SLD 1	0.99	-0.07	14.5	0	0	0
221	SLD 2	1.13	-0.12	14.44	0	0	0
221	SLD 3	1	-0.39	14.09	0	0	0
221	SLD 4	1.14	-0.44	14.03	0	0	0
221	SLD 5	0.17	0.36	14.71	0	0	0
221	SLD 6	0.26	0.33	14.66	0	0	0
221	SLD 7	0.23	-0.72	13.33	0	0	0
221	SLD 8	0.32	-0.76	13.28	0	0	0
221	SLD 9	-0.54	0.41	14.48	0	0	0
221	SLD 10	-0.44	0.38	14.43	0	0	0
221	SLD 11	-0.47	-0.67	13.1	0	0	0
221	SLD 12	-0.38	-0.71	13.05	0	0	0
221	SLD 13	-1.36	0.09	13.74	0	0	0
221	SLD 14	-1.22	0.05	13.67	0	0	0
221	SLD 15	-1.34	-0.23	13.32	0	0	0
221	SLD 16	-1.2	-0.28	13.26	0	0	0
221	SLV 1	2.45	0.06	15.33	0	0	0
221	SLV 2	2.78	-0.05	15.17	0	0	0
221	SLV 3	2.49	-0.68	14.39	0	0	0
221	SLV 4	2.82	-0.79	14.24	0	0	0
221	SLV 5	0.54	1.04	15.76	0	0	0
221	SLV 6	0.75	0.96	15.67	0	0	0
221	SLV 7	0.68	-1.43	12.64	0	0	0
221	SLV 8	0.89	-1.5	12.54	0	0	0
221	SLV 9	-1.11	1.15	15.22	0	0	0
221	SLV 10	-0.9	1.08	15.13	0	0	0
221	SLV 11	-0.96	-1.31	12.1	0	0	0
221	SLV 12	-0.75	-1.38	12	0	0	0
221	SLV 13	-3.03	0.44	13.52	0	0	0
221	SLV 14	-2.71	0.33	13.37	0	0	0
221	SLV 15	-2.99	-0.3	12.59	0	0	0
221	SLV 16	-2.67	-0.41	12.44	0	0	0
222	SLU 1	-0.1	-0.14	12.94	0	0	0
222	SLU 2	-0.1	-0.13	12.96	0	0	0
222	SLU 3	-0.1	-0.14	13.22	0	0	0
222	SLU 4	-0.1	-0.13	13.23	0	0	0
222	SLU 5	-0.1	-0.13	13.16	0	0	0
222	SLU 6	-0.1	-0.15	13.41	0	0	0
222	SLU 7	-0.1	-0.14	13.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
222	SLU 8	-0.1	-0.15	13.33	0	0	0
222	SLU 9	-0.1	-0.14	13.34	0	0	0
222	SLU 10	-0.11	-0.13	14.68	0	0	0
222	SLU 11	-0.11	-0.15	14.94	0	0	0
222	SLU 12	-0.11	-0.14	14.95	0	0	0
222	SLU 13	-0.11	-0.14	14.87	0	0	0
222	SLU 14	-0.11	-0.15	15.13	0	0	0
222	SLU 15	-0.11	-0.14	15.14	0	0	0
222	SLU 16	-0.11	-0.15	15.04	0	0	0
222	SLU 17	-0.11	-0.14	15.06	0	0	0
222	SLU 18	-0.11	-0.15	15.39	0	0	0
222	SLU 19	-0.11	-0.14	15.41	0	0	0
222	SLU 20	-0.11	-0.15	15.59	0	0	0
222	SLU 21	-0.11	-0.15	15.6	0	0	0
222	SLU 22	-0.11	-0.14	14.45	0	0	0
222	SLU 23	-0.11	-0.13	14.47	0	0	0
222	SLU 24	-0.12	-0.14	14.73	0	0	0
222	SLU 25	-0.12	-0.13	14.74	0	0	0
222	SLU 26	-0.11	-0.13	14.66	0	0	0
222	SLU 27	-0.12	-0.14	14.92	0	0	0
222	SLU 28	-0.12	-0.13	14.93	0	0	0
222	SLU 29	-0.12	-0.15	14.84	0	0	0
222	SLU 30	-0.12	-0.14	14.85	0	0	0
222	SLU 31	-0.12	-0.13	16.19	0	0	0
222	SLU 32	-0.13	-0.15	16.44	0	0	0
222	SLU 33	-0.12	-0.14	16.46	0	0	0
222	SLU 34	-0.12	-0.13	16.38	0	0	0
222	SLU 35	-0.13	-0.15	16.64	0	0	0
222	SLU 36	-0.13	-0.14	16.65	0	0	0
222	SLU 37	-0.13	-0.15	16.55	0	0	0
222	SLU 38	-0.12	-0.14	16.56	0	0	0
222	SLU 39	-0.13	-0.15	16.9	0	0	0
222	SLU 40	-0.13	-0.14	16.91	0	0	0
222	SLU 41	-0.13	-0.15	17.09	0	0	0
222	SLU 42	-0.13	-0.14	17.11	0	0	0
222	SLU 43	-0.13	-0.19	16.31	0	0	0
222	SLU 44	-0.12	-0.17	16.33	0	0	0
222	SLU 45	-0.13	-0.19	16.59	0	0	0
222	SLU 46	-0.13	-0.18	16.6	0	0	0
222	SLU 47	-0.13	-0.17	16.52	0	0	0
222	SLU 48	-0.13	-0.19	16.78	0	0	0
222	SLU 49	-0.13	-0.18	16.79	0	0	0
222	SLU 50	-0.13	-0.19	16.69	0	0	0
222	SLU 51	-0.13	-0.18	16.71	0	0	0
222	SLU 52	-0.13	-0.18	18.05	0	0	0
222	SLU 53	-0.14	-0.19	18.3	0	0	0
222	SLU 54	-0.14	-0.18	18.31	0	0	0
222	SLU 55	-0.13	-0.18	18.24	0	0	0
222	SLU 56	-0.14	-0.2	18.49	0	0	0
222	SLU 57	-0.14	-0.19	18.51	0	0	0
222	SLU 58	-0.14	-0.2	18.41	0	0	0
222	SLU 59	-0.14	-0.19	18.42	0	0	0
222	SLU 60	-0.14	-0.2	18.76	0	0	0
222	SLU 61	-0.14	-0.19	18.77	0	0	0
222	SLU 62	-0.14	-0.2	18.95	0	0	0
222	SLU 63	-0.14	-0.19	18.96	0	0	0
222	SLU 64	-0.14	-0.19	17.81	0	0	0
222	SLU 65	-0.14	-0.17	17.84	0	0	0
222	SLU 66	-0.14	-0.19	18.09	0	0	0
222	SLU 67	-0.14	-0.18	18.11	0	0	0
222	SLU 68	-0.14	-0.17	18.03	0	0	0
222	SLU 69	-0.14	-0.19	18.29	0	0	0
222	SLU 70	-0.14	-0.18	18.3	0	0	0
222	SLU 71	-0.14	-0.19	18.2	0	0	0
222	SLU 72	-0.14	-0.18	18.21	0	0	0
222	SLU 73	-0.15	-0.18	19.55	0	0	0
222	SLU 74	-0.15	-0.19	19.81	0	0	0
222	SLU 75	-0.15	-0.18	19.82	0	0	0
222	SLU 76	-0.15	-0.18	19.75	0	0	0
222	SLU 77	-0.15	-0.19	20	0	0	0
222	SLU 78	-0.15	-0.18	20.02	0	0	0
222	SLU 79	-0.15	-0.2	19.92	0	0	0
222	SLU 80	-0.15	-0.19	19.93	0	0	0
222	SLU 81	-0.15	-0.19	20.26	0	0	0
222	SLU 82	-0.15	-0.18	20.28	0	0	0
222	SLU 83	-0.15	-0.2	20.46	0	0	0
222	SLU 84	-0.15	-0.19	20.47	0	0	0
222	SLE RA 1	-0.1	-0.14	13.37	0	0	0
222	SLE RA 2	-0.1	-0.13	13.39	0	0	0
222	SLE RA 3	-0.11	-0.14	13.56	0	0	0
222	SLE RA 4	-0.11	-0.14	13.57	0	0	0
222	SLE RA 5	-0.1	-0.13	13.52	0	0	0
222	SLE RA 6	-0.11	-0.15	13.69	0	0	0
222	SLE RA 7	-0.11	-0.14	13.7	0	0	0
222	SLE RA 8	-0.11	-0.15	13.63	0	0	0
222	SLE RA 9	-0.11	-0.14	13.64	0	0	0
222	SLE RA 10	-0.11	-0.14	14.53	0	0	0
222	SLE RA 11	-0.11	-0.15	14.7	0	0	0
222	SLE RA 12	-0.11	-0.14	14.71	0	0	0
222	SLE RA 13	-0.11	-0.14	14.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
222	SLE RA 14	-0.11	-0.15	14.83	0	0	0
222	SLE RA 15	-0.11	-0.14	14.84	0	0	0
222	SLE RA 16	-0.11	-0.15	14.77	0	0	0
222	SLE RA 17	-0.11	-0.14	14.78	0	0	0
222	SLE RA 18	-0.11	-0.15	15.01	0	0	0
222	SLE RA 19	-0.11	-0.14	15.01	0	0	0
222	SLE RA 20	-0.11	-0.15	15.13	0	0	0
222	SLE RA 21	-0.11	-0.14	15.14	0	0	0
222	SLE FR 1	-0.1	-0.14	13.37	0	0	0
222	SLE FR 2	-0.1	-0.14	13.38	0	0	0
222	SLE FR 3	-0.11	-0.14	13.42	0	0	0
222	SLE FR 4	-0.11	-0.14	13.87	0	0	0
222	SLE FR 5	-0.11	-0.15	13.91	0	0	0
222	SLE FR 6	-0.11	-0.15	14.19	0	0	0
222	SLE QP 1	-0.1	-0.14	13.37	0	0	0
222	SLE QP 2	-0.11	-0.15	13.86	0	0	0
222	SLD 1	0.98	-0.03	14.36	0	0	0
222	SLD 2	1.12	-0.07	14.3	0	0	0
222	SLD 3	1	-0.35	13.94	0	0	0
222	SLD 4	1.14	-0.39	13.88	0	0	0
222	SLD 5	0.17	0.39	14.65	0	0	0
222	SLD 6	0.26	0.37	14.61	0	0	0
222	SLD 7	0.23	-0.69	13.27	0	0	0
222	SLD 8	0.32	-0.72	13.23	0	0	0
222	SLD 9	-0.53	0.43	14.49	0	0	0
222	SLD 10	-0.44	0.4	14.45	0	0	0
222	SLD 11	-0.47	-0.66	13.12	0	0	0
222	SLD 12	-0.38	-0.68	13.08	0	0	0
222	SLD 13	-1.36	0.1	13.84	0	0	0
222	SLD 14	-1.22	0.06	13.78	0	0	0
222	SLD 15	-1.34	-0.22	13.43	0	0	0
222	SLD 16	-1.2	-0.27	13.37	0	0	0
222	SLV 1	2.44	0.13	15.01	0	0	0
222	SLV 2	2.77	0.03	14.86	0	0	0
222	SLV 3	2.49	-0.62	14.07	0	0	0
222	SLV 4	2.81	-0.71	13.93	0	0	0
222	SLV 5	0.54	1.08	15.65	0	0	0
222	SLV 6	0.75	1.02	15.56	0	0	0
222	SLV 7	0.68	-1.4	12.53	0	0	0
222	SLV 8	0.89	-1.46	12.43	0	0	0
222	SLV 9	-1.1	1.17	15.29	0	0	0
222	SLV 10	-0.89	1.11	15.2	0	0	0
222	SLV 11	-0.96	-1.31	12.16	0	0	0
222	SLV 12	-0.75	-1.37	12.07	0	0	0
222	SLV 13	-3.03	0.42	13.8	0	0	0
222	SLV 14	-2.7	0.33	13.66	0	0	0
222	SLV 15	-2.98	-0.32	12.86	0	0	0
222	SLV 16	-2.66	-0.42	12.72	0	0	0
223	SLU 1	-0.1	-0.12	12.99	0	0	0
223	SLU 2	-0.1	-0.1	13.02	0	0	0
223	SLU 3	-0.1	-0.12	13.27	0	0	0
223	SLU 4	-0.1	-0.11	13.29	0	0	0
223	SLU 5	-0.1	-0.1	13.21	0	0	0
223	SLU 6	-0.1	-0.12	13.47	0	0	0
223	SLU 7	-0.1	-0.11	13.48	0	0	0
223	SLU 8	-0.1	-0.12	13.38	0	0	0
223	SLU 9	-0.1	-0.11	13.4	0	0	0
223	SLU 10	-0.11	-0.11	14.75	0	0	0
223	SLU 11	-0.11	-0.12	15	0	0	0
223	SLU 12	-0.11	-0.11	15.02	0	0	0
223	SLU 13	-0.11	-0.11	14.94	0	0	0
223	SLU 14	-0.11	-0.12	15.2	0	0	0
223	SLU 15	-0.11	-0.11	15.21	0	0	0
223	SLU 16	-0.11	-0.12	15.11	0	0	0
223	SLU 17	-0.11	-0.12	15.13	0	0	0
223	SLU 18	-0.11	-0.12	15.47	0	0	0
223	SLU 19	-0.11	-0.11	15.48	0	0	0
223	SLU 20	-0.11	-0.12	15.66	0	0	0
223	SLU 21	-0.11	-0.11	15.68	0	0	0
223	SLU 22	-0.11	-0.11	14.51	0	0	0
223	SLU 23	-0.11	-0.1	14.53	0	0	0
223	SLU 24	-0.12	-0.11	14.79	0	0	0
223	SLU 25	-0.12	-0.1	14.8	0	0	0
223	SLU 26	-0.11	-0.1	14.73	0	0	0
223	SLU 27	-0.12	-0.11	14.98	0	0	0
223	SLU 28	-0.12	-0.1	15	0	0	0
223	SLU 29	-0.12	-0.12	14.9	0	0	0
223	SLU 30	-0.12	-0.11	14.91	0	0	0
223	SLU 31	-0.12	-0.1	16.26	0	0	0
223	SLU 32	-0.13	-0.11	16.52	0	0	0
223	SLU 33	-0.12	-0.11	16.53	0	0	0
223	SLU 34	-0.12	-0.1	16.46	0	0	0
223	SLU 35	-0.13	-0.12	16.71	0	0	0
223	SLU 36	-0.13	-0.11	16.73	0	0	0
223	SLU 37	-0.13	-0.12	16.63	0	0	0
223	SLU 38	-0.12	-0.11	16.64	0	0	0
223	SLU 39	-0.13	-0.12	16.98	0	0	0
223	SLU 40	-0.13	-0.11	17	0	0	0
223	SLU 41	-0.13	-0.12	17.18	0	0	0
223	SLU 42	-0.13	-0.11	17.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLU 43	-0.13	-0.16	16.37	0	0	0
223	SLU 44	-0.12	-0.14	16.39	0	0	0
223	SLU 45	-0.13	-0.15	16.65	0	0	0
223	SLU 46	-0.13	-0.15	16.67	0	0	0
223	SLU 47	-0.13	-0.14	16.59	0	0	0
223	SLU 48	-0.13	-0.16	16.85	0	0	0
223	SLU 49	-0.13	-0.15	16.86	0	0	0
223	SLU 50	-0.13	-0.16	16.76	0	0	0
223	SLU 51	-0.13	-0.15	16.77	0	0	0
223	SLU 52	-0.13	-0.14	18.13	0	0	0
223	SLU 53	-0.14	-0.16	18.38	0	0	0
223	SLU 54	-0.14	-0.15	18.4	0	0	0
223	SLU 55	-0.13	-0.14	18.32	0	0	0
223	SLU 56	-0.14	-0.16	18.58	0	0	0
223	SLU 57	-0.14	-0.15	18.59	0	0	0
223	SLU 58	-0.14	-0.16	18.49	0	0	0
223	SLU 59	-0.14	-0.15	18.51	0	0	0
223	SLU 60	-0.14	-0.16	18.85	0	0	0
223	SLU 61	-0.14	-0.15	18.86	0	0	0
223	SLU 62	-0.14	-0.16	19.04	0	0	0
223	SLU 63	-0.14	-0.15	19.05	0	0	0
223	SLU 64	-0.14	-0.15	17.88	0	0	0
223	SLU 65	-0.14	-0.13	17.91	0	0	0
223	SLU 66	-0.14	-0.15	18.17	0	0	0
223	SLU 67	-0.14	-0.14	18.18	0	0	0
223	SLU 68	-0.14	-0.14	18.1	0	0	0
223	SLU 69	-0.14	-0.15	18.36	0	0	0
223	SLU 70	-0.14	-0.14	18.37	0	0	0
223	SLU 71	-0.14	-0.15	18.27	0	0	0
223	SLU 72	-0.14	-0.14	18.29	0	0	0
223	SLU 73	-0.15	-0.14	19.64	0	0	0
223	SLU 74	-0.15	-0.15	19.9	0	0	0
223	SLU 75	-0.15	-0.14	19.91	0	0	0
223	SLU 76	-0.15	-0.14	19.84	0	0	0
223	SLU 77	-0.15	-0.15	20.09	0	0	0
223	SLU 78	-0.15	-0.14	20.11	0	0	0
223	SLU 79	-0.15	-0.16	20.01	0	0	0
223	SLU 80	-0.15	-0.15	20.02	0	0	0
223	SLU 81	-0.15	-0.15	20.36	0	0	0
223	SLU 82	-0.15	-0.14	20.37	0	0	0
223	SLU 83	-0.15	-0.16	20.55	0	0	0
223	SLU 84	-0.15	-0.15	20.57	0	0	0
223	SLE RA 1	-0.1	-0.12	13.42	0	0	0
223	SLE RA 2	-0.1	-0.11	13.44	0	0	0
223	SLE RA 3	-0.11	-0.12	13.61	0	0	0
223	SLE RA 4	-0.11	-0.11	13.62	0	0	0
223	SLE RA 5	-0.1	-0.11	13.57	0	0	0
223	SLE RA 6	-0.11	-0.12	13.74	0	0	0
223	SLE RA 7	-0.11	-0.11	13.75	0	0	0
223	SLE RA 8	-0.11	-0.12	13.68	0	0	0
223	SLE RA 9	-0.11	-0.11	13.69	0	0	0
223	SLE RA 10	-0.11	-0.11	14.6	0	0	0
223	SLE RA 11	-0.11	-0.12	14.77	0	0	0
223	SLE RA 12	-0.11	-0.11	14.78	0	0	0
223	SLE RA 13	-0.11	-0.11	14.73	0	0	0
223	SLE RA 14	-0.11	-0.12	14.9	0	0	0
223	SLE RA 15	-0.11	-0.11	14.91	0	0	0
223	SLE RA 16	-0.11	-0.12	14.84	0	0	0
223	SLE RA 17	-0.11	-0.11	14.85	0	0	0
223	SLE RA 18	-0.11	-0.12	15.07	0	0	0
223	SLE RA 19	-0.11	-0.11	15.08	0	0	0
223	SLE RA 20	-0.11	-0.12	15.2	0	0	0
223	SLE RA 21	-0.11	-0.11	15.21	0	0	0
223	SLE FR 1	-0.1	-0.12	13.42	0	0	0
223	SLE FR 2	-0.1	-0.11	13.43	0	0	0
223	SLE FR 3	-0.1	-0.12	13.48	0	0	0
223	SLE FR 4	-0.11	-0.12	13.92	0	0	0
223	SLE FR 5	-0.11	-0.12	13.97	0	0	0
223	SLE FR 6	-0.11	-0.12	14.25	0	0	0
223	SLE QP 1	-0.1	-0.12	13.42	0	0	0
223	SLE QP 2	-0.11	-0.12	13.92	0	0	0
223	SLD 1	0.98	0.02	14.3	0	0	0
223	SLD 2	1.12	-0.02	14.24	0	0	0
223	SLD 3	1	-0.31	13.88	0	0	0
223	SLD 4	1.14	-0.34	13.83	0	0	0
223	SLD 5	0.17	0.43	14.67	0	0	0
223	SLD 6	0.26	0.41	14.64	0	0	0
223	SLD 7	0.23	-0.67	13.29	0	0	0
223	SLD 8	0.32	-0.69	13.25	0	0	0
223	SLD 9	-0.53	0.45	14.59	0	0	0
223	SLD 10	-0.44	0.43	14.55	0	0	0
223	SLD 11	-0.47	-0.64	13.2	0	0	0
223	SLD 12	-0.38	-0.66	13.16	0	0	0
223	SLD 13	-1.35	0.11	14.01	0	0	0
223	SLD 14	-1.21	0.07	13.95	0	0	0
223	SLD 15	-1.33	-0.22	13.6	0	0	0
223	SLD 16	-1.19	-0.25	13.54	0	0	0
223	SLV 1	2.44	0.19	14.8	0	0	0
223	SLV 2	2.76	0.11	14.66	0	0	0
223	SLV 3	2.48	-0.56	13.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLV 4	2.8	-0.64	13.72	0	0	0
223	SLV 5	0.54	1.12	15.64	0	0	0
223	SLV 6	0.74	1.07	15.55	0	0	0
223	SLV 7	0.68	-1.37	12.49	0	0	0
223	SLV 8	0.89	-1.42	12.41	0	0	0
223	SLV 9	-1.1	1.19	15.43	0	0	0
223	SLV 10	-0.89	1.13	15.35	0	0	0
223	SLV 11	-0.96	-1.31	12.29	0	0	0
223	SLV 12	-0.75	-1.36	12.2	0	0	0
223	SLV 13	-3.02	0.4	14.12	0	0	0
223	SLV 14	-2.69	0.32	13.98	0	0	0
223	SLV 15	-2.97	-0.35	13.18	0	0	0
223	SLV 16	-2.65	-0.43	13.04	0	0	0
224	SLU 1	-0.1	-0.09	13.07	0	0	0
224	SLU 2	-0.1	-0.08	13.09	0	0	0
224	SLU 3	-0.1	-0.09	13.35	0	0	0
224	SLU 4	-0.1	-0.08	13.37	0	0	0
224	SLU 5	-0.1	-0.08	13.29	0	0	0
224	SLU 6	-0.1	-0.09	13.55	0	0	0
224	SLU 7	-0.1	-0.08	13.56	0	0	0
224	SLU 8	-0.1	-0.1	13.46	0	0	0
224	SLU 9	-0.1	-0.09	13.48	0	0	0
224	SLU 10	-0.11	-0.08	14.85	0	0	0
224	SLU 11	-0.11	-0.09	15.11	0	0	0
224	SLU 12	-0.11	-0.08	15.12	0	0	0
224	SLU 13	-0.11	-0.08	15.05	0	0	0
224	SLU 14	-0.11	-0.09	15.3	0	0	0
224	SLU 15	-0.11	-0.08	15.32	0	0	0
224	SLU 16	-0.11	-0.1	15.22	0	0	0
224	SLU 17	-0.11	-0.09	15.23	0	0	0
224	SLU 18	-0.11	-0.09	15.57	0	0	0
224	SLU 19	-0.11	-0.08	15.59	0	0	0
224	SLU 20	-0.11	-0.09	15.77	0	0	0
224	SLU 21	-0.11	-0.09	15.79	0	0	0
224	SLU 22	-0.11	-0.08	14.59	0	0	0
224	SLU 23	-0.11	-0.07	14.62	0	0	0
224	SLU 24	-0.12	-0.08	14.88	0	0	0
224	SLU 25	-0.12	-0.07	14.89	0	0	0
224	SLU 26	-0.11	-0.07	14.82	0	0	0
224	SLU 27	-0.12	-0.08	15.07	0	0	0
224	SLU 28	-0.12	-0.07	15.09	0	0	0
224	SLU 29	-0.12	-0.09	14.99	0	0	0
224	SLU 30	-0.12	-0.08	15	0	0	0
224	SLU 31	-0.12	-0.07	16.37	0	0	0
224	SLU 32	-0.13	-0.08	16.63	0	0	0
224	SLU 33	-0.12	-0.07	16.65	0	0	0
224	SLU 34	-0.12	-0.07	16.57	0	0	0
224	SLU 35	-0.13	-0.08	16.83	0	0	0
224	SLU 36	-0.13	-0.07	16.84	0	0	0
224	SLU 37	-0.13	-0.09	16.74	0	0	0
224	SLU 38	-0.12	-0.08	16.76	0	0	0
224	SLU 39	-0.13	-0.08	17.1	0	0	0
224	SLU 40	-0.13	-0.08	17.12	0	0	0
224	SLU 41	-0.13	-0.09	17.3	0	0	0
224	SLU 42	-0.13	-0.08	17.31	0	0	0
224	SLU 43	-0.13	-0.12	16.47	0	0	0
224	SLU 44	-0.12	-0.11	16.49	0	0	0
224	SLU 45	-0.13	-0.12	16.75	0	0	0
224	SLU 46	-0.13	-0.11	16.76	0	0	0
224	SLU 47	-0.13	-0.11	16.69	0	0	0
224	SLU 48	-0.13	-0.12	16.95	0	0	0
224	SLU 49	-0.13	-0.11	16.96	0	0	0
224	SLU 50	-0.13	-0.13	16.86	0	0	0
224	SLU 51	-0.13	-0.12	16.88	0	0	0
224	SLU 52	-0.13	-0.11	18.25	0	0	0
224	SLU 53	-0.14	-0.12	18.5	0	0	0
224	SLU 54	-0.14	-0.11	18.52	0	0	0
224	SLU 55	-0.13	-0.11	18.44	0	0	0
224	SLU 56	-0.14	-0.12	18.7	0	0	0
224	SLU 57	-0.14	-0.11	18.72	0	0	0
224	SLU 58	-0.14	-0.13	18.61	0	0	0
224	SLU 59	-0.14	-0.12	18.63	0	0	0
224	SLU 60	-0.14	-0.12	18.97	0	0	0
224	SLU 61	-0.14	-0.12	18.99	0	0	0
224	SLU 62	-0.14	-0.13	19.17	0	0	0
224	SLU 63	-0.14	-0.12	19.18	0	0	0
224	SLU 64	-0.14	-0.12	17.99	0	0	0
224	SLU 65	-0.14	-0.1	18.02	0	0	0
224	SLU 66	-0.14	-0.11	18.28	0	0	0
224	SLU 67	-0.14	-0.1	18.29	0	0	0
224	SLU 68	-0.14	-0.1	18.21	0	0	0
224	SLU 69	-0.14	-0.12	18.47	0	0	0
224	SLU 70	-0.14	-0.11	18.49	0	0	0
224	SLU 71	-0.14	-0.12	18.39	0	0	0
224	SLU 72	-0.14	-0.11	18.4	0	0	0
224	SLU 73	-0.15	-0.1	19.77	0	0	0
224	SLU 74	-0.15	-0.11	20.03	0	0	0
224	SLU 75	-0.15	-0.1	20.04	0	0	0
224	SLU 76	-0.15	-0.1	19.97	0	0	0
224	SLU 77	-0.15	-0.12	20.23	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLU 78	-0.15	-0.11	20.24	0	0	0
224	SLU 79	-0.15	-0.12	20.14	0	0	0
224	SLU 80	-0.15	-0.11	20.16	0	0	0
224	SLU 81	-0.15	-0.12	20.5	0	0	0
224	SLU 82	-0.15	-0.11	20.51	0	0	0
224	SLU 83	-0.15	-0.12	20.69	0	0	0
224	SLU 84	-0.15	-0.11	20.71	0	0	0
224	SLE RA 1	-0.1	-0.09	13.5	0	0	0
224	SLE RA 2	-0.1	-0.08	13.52	0	0	0
224	SLE RA 3	-0.11	-0.09	13.69	0	0	0
224	SLE RA 4	-0.11	-0.08	13.7	0	0	0
224	SLE RA 5	-0.1	-0.08	13.65	0	0	0
224	SLE RA 6	-0.11	-0.09	13.82	0	0	0
224	SLE RA 7	-0.11	-0.08	13.84	0	0	0
224	SLE RA 8	-0.11	-0.09	13.77	0	0	0
224	SLE RA 9	-0.11	-0.09	13.78	0	0	0
224	SLE RA 10	-0.11	-0.08	14.69	0	0	0
224	SLE RA 11	-0.11	-0.09	14.86	0	0	0
224	SLE RA 12	-0.11	-0.08	14.87	0	0	0
224	SLE RA 13	-0.11	-0.08	14.82	0	0	0
224	SLE RA 14	-0.11	-0.09	14.99	0	0	0
224	SLE RA 15	-0.11	-0.08	15	0	0	0
224	SLE RA 16	-0.11	-0.09	14.94	0	0	0
224	SLE RA 17	-0.11	-0.09	14.95	0	0	0
224	SLE RA 18	-0.11	-0.09	15.17	0	0	0
224	SLE RA 19	-0.11	-0.08	15.19	0	0	0
224	SLE RA 20	-0.11	-0.09	15.31	0	0	0
224	SLE RA 21	-0.11	-0.09	15.32	0	0	0
224	SLE FR 1	-0.1	-0.09	13.5	0	0	0
224	SLE FR 2	-0.1	-0.09	13.51	0	0	0
224	SLE FR 3	-0.1	-0.09	13.56	0	0	0
224	SLE FR 4	-0.11	-0.09	14.01	0	0	0
224	SLE FR 5	-0.11	-0.09	14.06	0	0	0
224	SLE FR 6	-0.11	-0.09	14.34	0	0	0
224	SLE QP 1	-0.1	-0.09	13.5	0	0	0
224	SLE QP 2	-0.11	-0.09	14.01	0	0	0
224	SLD 1	0.97	0.06	14.31	0	0	0
224	SLD 2	1.11	0.03	14.25	0	0	0
224	SLD 3	0.99	-0.27	13.89	0	0	0
224	SLD 4	1.13	-0.3	13.83	0	0	0
224	SLD 5	0.17	0.46	14.74	0	0	0
224	SLD 6	0.26	0.44	14.71	0	0	0
224	SLD 7	0.23	-0.64	13.34	0	0	0
224	SLD 8	0.32	-0.66	13.31	0	0	0
224	SLD 9	-0.53	0.48	14.7	0	0	0
224	SLD 10	-0.44	0.46	14.67	0	0	0
224	SLD 11	-0.47	-0.62	13.31	0	0	0
224	SLD 12	-0.38	-0.64	13.27	0	0	0
224	SLD 13	-1.34	0.12	14.18	0	0	0
224	SLD 14	-1.21	0.09	14.12	0	0	0
224	SLD 15	-1.33	-0.21	13.76	0	0	0
224	SLD 16	-1.19	-0.24	13.7	0	0	0
224	SLV 1	2.42	0.25	14.69	0	0	0
224	SLV 2	2.74	0.18	14.57	0	0	0
224	SLV 3	2.46	-0.51	13.74	0	0	0
224	SLV 4	2.78	-0.57	13.62	0	0	0
224	SLV 5	0.53	1.16	15.67	0	0	0
224	SLV 6	0.74	1.12	15.59	0	0	0
224	SLV 7	0.67	-1.34	12.51	0	0	0
224	SLV 8	0.88	-1.38	12.43	0	0	0
224	SLV 9	-1.09	1.2	15.58	0	0	0
224	SLV 10	-0.89	1.16	15.5	0	0	0
224	SLV 11	-0.95	-1.3	12.42	0	0	0
224	SLV 12	-0.75	-1.34	12.34	0	0	0
224	SLV 13	-3	0.39	14.39	0	0	0
224	SLV 14	-2.68	0.32	14.27	0	0	0
224	SLV 15	-2.96	-0.37	13.44	0	0	0
224	SLV 16	-2.64	-0.43	13.32	0	0	0
226	SLU 1	-0.06	-0.15	7.21	0	0	0
226	SLU 2	-0.05	-0.15	7.22	0	0	0
226	SLU 3	-0.06	-0.16	7.36	0	0	0
226	SLU 4	-0.06	-0.15	7.37	0	0	0
226	SLU 5	-0.05	-0.15	7.32	0	0	0
226	SLU 6	-0.06	-0.16	7.47	0	0	0
226	SLU 7	-0.06	-0.15	7.47	0	0	0
226	SLU 8	-0.06	-0.16	7.42	0	0	0
226	SLU 9	-0.06	-0.15	7.42	0	0	0
226	SLU 10	-0.06	-0.16	8.16	0	0	0
226	SLU 11	-0.06	-0.17	8.31	0	0	0
226	SLU 12	-0.06	-0.16	8.31	0	0	0
226	SLU 13	-0.06	-0.16	8.27	0	0	0
226	SLU 14	-0.06	-0.17	8.41	0	0	0
226	SLU 15	-0.06	-0.17	8.42	0	0	0
226	SLU 16	-0.06	-0.17	8.36	0	0	0
226	SLU 17	-0.06	-0.17	8.37	0	0	0
226	SLU 18	-0.06	-0.17	8.56	0	0	0
226	SLU 19	-0.06	-0.17	8.56	0	0	0
226	SLU 20	-0.06	-0.17	8.66	0	0	0
226	SLU 21	-0.06	-0.17	8.67	0	0	0
226	SLU 22	-0.06	-0.16	8.06	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLU 23	-0.06	-0.15	8.07	0	0	0
226	SLU 24	-0.06	-0.17	8.21	0	0	0
226	SLU 25	-0.06	-0.16	8.22	0	0	0
226	SLU 26	-0.06	-0.16	8.17	0	0	0
226	SLU 27	-0.06	-0.17	8.32	0	0	0
226	SLU 28	-0.06	-0.16	8.32	0	0	0
226	SLU 29	-0.06	-0.17	8.27	0	0	0
226	SLU 30	-0.06	-0.16	8.28	0	0	0
226	SLU 31	-0.07	-0.17	9.01	0	0	0
226	SLU 32	-0.07	-0.18	9.16	0	0	0
226	SLU 33	-0.07	-0.17	9.16	0	0	0
226	SLU 34	-0.07	-0.17	9.12	0	0	0
226	SLU 35	-0.07	-0.18	9.26	0	0	0
226	SLU 36	-0.07	-0.17	9.27	0	0	0
226	SLU 37	-0.07	-0.18	9.22	0	0	0
226	SLU 38	-0.07	-0.17	9.22	0	0	0
226	SLU 39	-0.07	-0.18	9.41	0	0	0
226	SLU 40	-0.07	-0.17	9.41	0	0	0
226	SLU 41	-0.07	-0.18	9.51	0	0	0
226	SLU 42	-0.07	-0.18	9.52	0	0	0
226	SLU 43	-0.07	-0.2	9.08	0	0	0
226	SLU 44	-0.07	-0.19	9.09	0	0	0
226	SLU 45	-0.07	-0.2	9.23	0	0	0
226	SLU 46	-0.07	-0.19	9.24	0	0	0
226	SLU 47	-0.07	-0.19	9.19	0	0	0
226	SLU 48	-0.07	-0.2	9.34	0	0	0
226	SLU 49	-0.07	-0.2	9.34	0	0	0
226	SLU 50	-0.07	-0.2	9.29	0	0	0
226	SLU 51	-0.07	-0.2	9.29	0	0	0
226	SLU 52	-0.07	-0.2	10.03	0	0	0
226	SLU 53	-0.07	-0.21	10.18	0	0	0
226	SLU 54	-0.07	-0.21	10.18	0	0	0
226	SLU 55	-0.07	-0.2	10.14	0	0	0
226	SLU 56	-0.07	-0.21	10.28	0	0	0
226	SLU 57	-0.07	-0.21	10.29	0	0	0
226	SLU 58	-0.07	-0.22	10.23	0	0	0
226	SLU 59	-0.07	-0.21	10.24	0	0	0
226	SLU 60	-0.07	-0.22	10.43	0	0	0
226	SLU 61	-0.07	-0.21	10.43	0	0	0
226	SLU 62	-0.08	-0.22	10.53	0	0	0
226	SLU 63	-0.07	-0.21	10.54	0	0	0
226	SLU 64	-0.08	-0.21	9.93	0	0	0
226	SLU 65	-0.08	-0.2	9.94	0	0	0
226	SLU 66	-0.08	-0.21	10.08	0	0	0
226	SLU 67	-0.08	-0.2	10.09	0	0	0
226	SLU 68	-0.08	-0.2	10.04	0	0	0
226	SLU 69	-0.08	-0.21	10.19	0	0	0
226	SLU 70	-0.08	-0.21	10.19	0	0	0
226	SLU 71	-0.08	-0.21	10.14	0	0	0
226	SLU 72	-0.08	-0.21	10.15	0	0	0
226	SLU 73	-0.08	-0.21	10.88	0	0	0
226	SLU 74	-0.08	-0.22	11.03	0	0	0
226	SLU 75	-0.08	-0.22	11.03	0	0	0
226	SLU 76	-0.08	-0.21	10.99	0	0	0
226	SLU 77	-0.08	-0.22	11.13	0	0	0
226	SLU 78	-0.08	-0.22	11.14	0	0	0
226	SLU 79	-0.08	-0.22	11.09	0	0	0
226	SLU 80	-0.08	-0.22	11.09	0	0	0
226	SLU 81	-0.08	-0.22	11.28	0	0	0
226	SLU 82	-0.08	-0.22	11.28	0	0	0
226	SLU 83	-0.08	-0.23	11.38	0	0	0
226	SLU 84	-0.08	-0.22	11.39	0	0	0
226	SLE RA 1	-0.06	-0.16	7.45	0	0	0
226	SLE RA 2	-0.06	-0.15	7.46	0	0	0
226	SLE RA 3	-0.06	-0.16	7.55	0	0	0
226	SLE RA 4	-0.06	-0.16	7.56	0	0	0
226	SLE RA 5	-0.06	-0.15	7.53	0	0	0
226	SLE RA 6	-0.06	-0.16	7.62	0	0	0
226	SLE RA 7	-0.06	-0.16	7.63	0	0	0
226	SLE RA 8	-0.06	-0.16	7.59	0	0	0
226	SLE RA 9	-0.06	-0.16	7.6	0	0	0
226	SLE RA 10	-0.06	-0.16	8.09	0	0	0
226	SLE RA 11	-0.06	-0.17	8.18	0	0	0
226	SLE RA 12	-0.06	-0.16	8.19	0	0	0
226	SLE RA 13	-0.06	-0.16	8.16	0	0	0
226	SLE RA 14	-0.06	-0.17	8.25	0	0	0
226	SLE RA 15	-0.06	-0.16	8.26	0	0	0
226	SLE RA 16	-0.06	-0.17	8.22	0	0	0
226	SLE RA 17	-0.06	-0.16	8.22	0	0	0
226	SLE RA 18	-0.06	-0.17	8.35	0	0	0
226	SLE RA 19	-0.06	-0.16	8.35	0	0	0
226	SLE RA 20	-0.06	-0.17	8.42	0	0	0
226	SLE RA 21	-0.06	-0.17	8.42	0	0	0
226	SLE FR 1	-0.06	-0.16	7.45	0	0	0
226	SLE FR 2	-0.06	-0.16	7.45	0	0	0
226	SLE FR 3	-0.06	-0.16	7.48	0	0	0
226	SLE FR 4	-0.06	-0.16	7.72	0	0	0
226	SLE FR 5	-0.06	-0.16	7.75	0	0	0
226	SLE FR 6	-0.06	-0.16	7.9	0	0	0
226	SLE QP 1	-0.06	-0.16	7.45	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLE QP 2	-0.06	-0.16	7.72	0	0	0
226	SLD 1	0.52	-0.14	8.37	0	0	0
226	SLD 2	0.59	-0.18	8.33	0	0	0
226	SLD 3	0.53	-0.31	8.14	0	0	0
226	SLD 4	0.6	-0.35	8.1	0	0	0
226	SLD 5	0.09	0.1	8.28	0	0	0
226	SLD 6	0.14	0.08	8.25	0	0	0
226	SLD 7	0.12	-0.45	7.5	0	0	0
226	SLD 8	0.17	-0.48	7.47	0	0	0
226	SLD 9	-0.29	0.16	7.97	0	0	0
226	SLD 10	-0.24	0.13	7.94	0	0	0
226	SLD 11	-0.25	-0.4	7.19	0	0	0
226	SLD 12	-0.2	-0.43	7.16	0	0	0
226	SLD 13	-0.72	0.03	7.34	0	0	0
226	SLD 14	-0.65	-0.01	7.3	0	0	0
226	SLD 15	-0.71	-0.14	7.11	0	0	0
226	SLD 16	-0.64	-0.18	7.07	0	0	0
226	SLV 1	1.29	-0.12	9.24	0	0	0
226	SLV 2	1.47	-0.22	9.14	0	0	0
226	SLV 3	1.32	-0.5	8.71	0	0	0
226	SLV 4	1.49	-0.6	8.61	0	0	0
226	SLV 5	0.28	0.44	8.99	0	0	0
226	SLV 6	0.39	0.38	8.93	0	0	0
226	SLV 7	0.36	-0.82	7.24	0	0	0
226	SLV 8	0.47	-0.88	7.17	0	0	0
226	SLV 9	-0.59	0.56	8.27	0	0	0
226	SLV 10	-0.48	0.5	8.2	0	0	0
226	SLV 11	-0.51	-0.7	6.51	0	0	0
226	SLV 12	-0.4	-0.76	6.45	0	0	0
226	SLV 13	-1.61	0.27	6.83	0	0	0
226	SLV 14	-1.43	0.18	6.73	0	0	0
226	SLV 15	-1.58	-0.11	6.3	0	0	0
226	SLV 16	-1.41	-0.2	6.2	0	0	0
227	SLU 1	-0.05	-0.03	6.59	0	0.9906	0.0052
227	SLU 2	-0.05	-0.03	6.61	0	0.9927	0.0041
227	SLU 3	-0.05	-0.03	6.74	0	1.0122	0.005
227	SLU 4	-0.05	-0.03	6.75	0	1.0134	0.0043
227	SLU 5	-0.05	-0.03	6.71	0	1.0077	0.0042
227	SLU 6	-0.05	-0.03	6.84	0	1.0272	0.0051
227	SLU 7	-0.05	-0.03	6.85	0	1.0284	0.0044
227	SLU 8	-0.05	-0.04	6.79	0	1.0206	0.0054
227	SLU 9	-0.05	-0.03	6.8	0	1.0219	0.0047
227	SLU 10	-0.05	-0.03	7.5	0	1.1265	0.0039
227	SLU 11	-0.05	-0.03	7.63	0	1.146	0.0048
227	SLU 12	-0.05	-0.03	7.64	0	1.1472	0.0041
227	SLU 13	-0.05	-0.03	7.6	0	1.1415	0.004
227	SLU 14	-0.06	-0.03	7.73	0	1.161	0.0049
227	SLU 15	-0.06	-0.03	7.74	0	1.1622	0.0042
227	SLU 16	-0.05	-0.03	7.68	0	1.1544	0.0052
227	SLU 17	-0.05	-0.03	7.69	0	1.1557	0.0045
227	SLU 18	-0.06	-0.03	7.87	0	1.1818	0.0049
227	SLU 19	-0.06	-0.03	7.88	0	1.183	0.0042
227	SLU 20	-0.06	-0.03	7.97	0	1.1968	0.005
227	SLU 21	-0.06	-0.03	7.98	0	1.198	0.0043
227	SLU 22	-0.06	-0.03	7.37	0	1.1065	0.0043
227	SLU 23	-0.06	-0.02	7.38	0	1.1086	0.0031
227	SLU 24	-0.06	-0.03	7.51	0	1.1281	0.0041
227	SLU 25	-0.06	-0.02	7.52	0	1.1294	0.0034
227	SLU 26	-0.06	-0.02	7.48	0	1.1236	0.0032
227	SLU 27	-0.06	-0.03	7.61	0	1.1431	0.0041
227	SLU 28	-0.06	-0.02	7.62	0	1.1444	0.0035
227	SLU 29	-0.06	-0.03	7.57	0	1.1365	0.0044
227	SLU 30	-0.06	-0.03	7.57	0	1.1378	0.0038
227	SLU 31	-0.06	-0.02	8.27	0	1.2424	0.003
227	SLU 32	-0.06	-0.03	8.4	0	1.2619	0.0039
227	SLU 33	-0.06	-0.02	8.41	0	1.2632	0.0032
227	SLU 34	-0.06	-0.02	8.37	0	1.2574	0.003
227	SLU 35	-0.06	-0.03	8.5	0	1.2769	0.004
227	SLU 36	-0.06	-0.02	8.51	0	1.2782	0.0033
227	SLU 37	-0.06	-0.03	8.46	0	1.2703	0.0042
227	SLU 38	-0.06	-0.02	8.46	0	1.2716	0.0036
227	SLU 39	-0.06	-0.03	8.64	0	1.2977	0.004
227	SLU 40	-0.06	-0.02	8.65	0	1.2989	0.0033
227	SLU 41	-0.06	-0.03	8.74	0	1.3127	0.0041
227	SLU 42	-0.06	-0.02	8.75	0	1.3139	0.0034
227	SLU 43	-0.06	-0.05	8.31	0	1.248	0.0071
227	SLU 44	-0.06	-0.04	8.32	0	1.2501	0.006
227	SLU 45	-0.06	-0.05	8.45	0	1.2696	0.0069
227	SLU 46	-0.06	-0.04	8.46	0	1.2709	0.0062
227	SLU 47	-0.06	-0.04	8.42	0	1.2651	0.006
227	SLU 48	-0.06	-0.05	8.55	0	1.2846	0.007
227	SLU 49	-0.06	-0.04	8.56	0	1.2859	0.0063
227	SLU 50	-0.06	-0.05	8.51	0	1.2781	0.0072
227	SLU 51	-0.06	-0.04	8.52	0	1.2793	0.0066
227	SLU 52	-0.07	-0.04	9.21	0	1.3839	0.0058
227	SLU 53	-0.07	-0.04	9.34	0	1.4034	0.0067
227	SLU 54	-0.07	-0.04	9.35	0	1.4047	0.006
227	SLU 55	-0.07	-0.04	9.31	0	1.3989	0.0059
227	SLU 56	-0.07	-0.05	9.44	0	1.4184	0.0068
227	SLU 57	-0.07	-0.04	9.45	0	1.4197	0.0061

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLU 58	-0.07	-0.05	9.4	0	1.4119	0.0071
227	SLU 59	-0.07	-0.04	9.41	0	1.4131	0.0064
227	SLU 60	-0.07	-0.05	9.58	0	1.4392	0.0068
227	SLU 61	-0.07	-0.04	9.59	0	1.4404	0.0061
227	SLU 62	-0.07	-0.05	9.68	0	1.4542	0.0069
227	SLU 63	-0.07	-0.04	9.69	0	1.4554	0.0062
227	SLU 64	-0.07	-0.04	9.08	0	1.364	0.0061
227	SLU 65	-0.07	-0.03	9.09	0	1.366	0.005
227	SLU 66	-0.07	-0.04	9.22	0	1.3855	0.0059
227	SLU 67	-0.07	-0.04	9.23	0	1.3868	0.0053
227	SLU 68	-0.07	-0.03	9.19	0	1.381	0.0051
227	SLU 69	-0.07	-0.04	9.32	0	1.4006	0.006
227	SLU 70	-0.07	-0.04	9.33	0	1.4018	0.0054
227	SLU 71	-0.07	-0.04	9.28	0	1.394	0.0063
227	SLU 72	-0.07	-0.04	9.29	0	1.3952	0.0056
227	SLU 73	-0.07	-0.03	9.98	0	1.4998	0.0048
227	SLU 74	-0.07	-0.04	10.11	0	1.5194	0.0057
227	SLU 75	-0.07	-0.03	10.12	0	1.5206	0.0051
227	SLU 76	-0.07	-0.03	10.08	0	1.5149	0.0049
227	SLU 77	-0.07	-0.04	10.21	0	1.5344	0.0058
227	SLU 78	-0.07	-0.03	10.22	0	1.5356	0.0052
227	SLU 79	-0.07	-0.04	10.17	0	1.5278	0.0061
227	SLU 80	-0.07	-0.04	10.18	0	1.529	0.0055
227	SLU 81	-0.07	-0.04	10.35	0	1.5551	0.0059
227	SLU 82	-0.07	-0.03	10.36	0	1.5564	0.0052
227	SLU 83	-0.08	-0.04	10.45	0	1.5701	0.0059
227	SLU 84	-0.08	-0.04	10.46	0	1.5714	0.0053
227	SLE RA 1	-0.05	-0.03	6.81	0	1.0237	0.0049
227	SLE RA 2	-0.05	-0.03	6.82	0	1.0251	0.0042
227	SLE RA 3	-0.05	-0.03	6.91	0	1.0381	0.0048
227	SLE RA 4	-0.05	-0.03	6.92	0	1.0389	0.0043
227	SLE RA 5	-0.05	-0.03	6.89	0	1.0351	0.0042
227	SLE RA 6	-0.05	-0.03	6.98	0	1.0481	0.0048
227	SLE RA 7	-0.05	-0.03	6.98	0	1.049	0.0044
227	SLE RA 8	-0.05	-0.03	6.95	0	1.0437	0.005
227	SLE RA 9	-0.05	-0.03	6.95	0	1.0446	0.0046
227	SLE RA 10	-0.05	-0.03	7.42	0	1.1143	0.0041
227	SLE RA 11	-0.06	-0.03	7.5	0	1.1273	0.0047
227	SLE RA 12	-0.05	-0.03	7.51	0	1.1282	0.0042
227	SLE RA 13	-0.05	-0.03	7.48	0	1.1243	0.0041
227	SLE RA 14	-0.06	-0.03	7.57	0	1.1373	0.0047
227	SLE RA 15	-0.06	-0.03	7.58	0	1.1382	0.0043
227	SLE RA 16	-0.06	-0.03	7.54	0	1.1329	0.0049
227	SLE RA 17	-0.05	-0.03	7.55	0	1.1338	0.0045
227	SLE RA 18	-0.06	-0.03	7.66	0	1.1512	0.0047
227	SLE RA 19	-0.06	-0.03	7.67	0	1.152	0.0043
227	SLE RA 20	-0.06	-0.03	7.73	0	1.1612	0.0048
227	SLE RA 21	-0.06	-0.03	7.74	0	1.162	0.0044
227	SLE FR 1	-0.05	-0.03	6.81	0	1.0237	0.0049
227	SLE FR 2	-0.05	-0.03	6.82	0	1.024	0.0048
227	SLE FR 3	-0.05	-0.03	6.84	0	1.0277	0.0049
227	SLE FR 4	-0.05	-0.03	7.07	0	1.0622	0.0047
227	SLE FR 5	-0.05	-0.03	7.1	0	1.066	0.0049
227	SLE FR 6	-0.05	-0.03	7.24	0	1.0874	0.0048
227	SLE QP 1	-0.05	-0.03	6.81	0	1.0237	0.0049
227	SLE QP 2	-0.05	-0.03	7.07	0	1.062	0.0049
227	SLD 1	0.49	0.07	7.14	0	1.0733	-0.0106
227	SLD 2	0.55	0.06	7.12	0	1.0697	-0.0092
227	SLD 3	0.49	-0.1	6.93	0	1.0416	0.0144
227	SLD 4	0.56	-0.11	6.91	0	1.038	0.0158
227	SLD 5	0.08	0.25	7.42	0	1.1141	-0.038
227	SLD 6	0.13	0.25	7.4	0	1.1118	-0.037
227	SLD 7	0.11	-0.3	6.71	0	1.0083	0.0454
227	SLD 8	0.16	-0.31	6.7	0	1.006	0.0463
227	SLD 9	-0.26	0.24	7.44	0	1.1179	-0.0366
227	SLD 10	-0.22	0.24	7.43	0	1.1156	-0.0356
227	SLD 11	-0.23	-0.31	6.74	0	1.0121	0.0467
227	SLD 12	-0.19	-0.32	6.72	0	1.0098	0.0477
227	SLD 13	-0.67	0.04	7.23	0	1.0859	-0.0061
227	SLD 14	-0.6	0.03	7.21	0	1.0823	-0.0046
227	SLD 15	-0.66	-0.13	7.02	0	1.0542	0.0189
227	SLD 16	-0.59	-0.14	6.99	0	1.0506	0.0204
227	SLV 1	1.21	0.2	7.24	0	1.0874	-0.0306
227	SLV 2	1.37	0.18	7.18	0	1.079	-0.0272
227	SLV 3	1.23	-0.18	6.76	0	1.0154	0.0263
227	SLV 4	1.39	-0.2	6.7	0	1.007	0.0297
227	SLV 5	0.27	0.62	7.86	0	1.1802	-0.0927
227	SLV 6	0.37	0.6	7.82	0	1.1748	-0.0905
227	SLV 7	0.34	-0.65	6.26	0	0.9402	0.097
227	SLV 8	0.44	-0.66	6.22	0	0.9349	0.0992
227	SLV 9	-0.54	0.6	7.92	0	1.1891	-0.0895
227	SLV 10	-0.44	0.58	7.88	0	1.1837	-0.0873
227	SLV 11	-0.47	-0.67	6.32	0	0.9491	0.1002
227	SLV 12	-0.37	-0.68	6.28	0	0.9437	0.1024
227	SLV 13	-1.49	0.13	7.43	0	1.1169	-0.02
227	SLV 14	-1.33	0.11	7.38	0	1.1085	-0.0166
227	SLV 15	-1.47	-0.25	6.96	0	1.0449	0.0369
227	SLV 16	-1.31	-0.27	6.9	0	1.0365	0.0404
227	CRTFP Uy+	0	0	0	0	0	0
227	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLU 1	-0.09	-0.22	38.11	-0.0206	11.136	0.0582
229	SLU 2	-0.1	-0.17	38.19	-0.0208	11.1597	0.0439
229	SLU 3	-0.1	-0.21	38.94	-0.0211	11.3798	0.0561
229	SLU 4	-0.1	-0.18	38.99	-0.0212	11.3941	0.0475
229	SLU 5	-0.1	-0.17	38.75	-0.0211	11.3258	0.0446
229	SLU 6	-0.1	-0.21	39.51	-0.0215	11.5459	0.0569
229	SLU 7	-0.1	-0.18	39.56	-0.0216	11.5602	0.0482
229	SLU 8	-0.1	-0.22	39.24	-0.0214	11.4681	0.0597
229	SLU 9	-0.1	-0.19	39.29	-0.0215	11.4824	0.0511
229	SLU 10	-0.12	-0.15	43.31	-0.0228	12.6649	0.0376
229	SLU 11	-0.12	-0.19	44.06	-0.0232	12.885	0.0498
229	SLU 12	-0.12	-0.16	44.11	-0.0233	12.8992	0.0412
229	SLU 13	-0.12	-0.15	43.87	-0.0232	12.8309	0.0384
229	SLU 14	-0.12	-0.19	44.63	-0.0236	13.051	0.0506
229	SLU 15	-0.12	-0.16	44.68	-0.0237	13.0653	0.042
229	SLU 16	-0.12	-0.2	44.36	-0.0235	12.9732	0.0535
229	SLU 17	-0.13	-0.17	44.41	-0.0236	12.9875	0.0449
229	SLU 18	-0.13	-0.19	45.43	-0.0236	13.2861	0.0493
229	SLU 19	-0.13	-0.16	45.47	-0.0237	13.3004	0.0407
229	SLU 20	-0.13	-0.19	45.99	-0.024	13.4522	0.05
229	SLU 21	-0.13	-0.16	46.04	-0.0241	13.4665	0.0414
229	SLU 22	-0.1	-0.19	42.57	-0.0229	12.441	0.0483
229	SLU 23	-0.1	-0.14	42.65	-0.023	12.4648	0.034
229	SLU 24	-0.1	-0.18	43.41	-0.0233	12.6849	0.0462
229	SLU 25	-0.1	-0.15	43.45	-0.0234	12.6992	0.0376
229	SLU 26	-0.11	-0.14	43.22	-0.0234	12.6309	0.0347
229	SLU 27	-0.11	-0.18	43.97	-0.0237	12.8509	0.047
229	SLU 28	-0.11	-0.15	44.02	-0.0238	12.8652	0.0384
229	SLU 29	-0.11	-0.19	43.71	-0.0236	12.7731	0.0498
229	SLU 30	-0.11	-0.16	43.75	-0.0237	12.7874	0.0412
229	SLU 31	-0.13	-0.12	47.77	-0.0251	13.9699	0.0277
229	SLU 32	-0.13	-0.16	48.53	-0.0254	14.19	0.04
229	SLU 33	-0.13	-0.13	48.57	-0.0255	14.2043	0.0313
229	SLU 34	-0.13	-0.12	48.34	-0.0255	14.136	0.0285
229	SLU 35	-0.13	-0.16	49.09	-0.0258	14.3561	0.0407
229	SLU 36	-0.13	-0.13	49.14	-0.0259	14.3703	0.0321
229	SLU 37	-0.13	-0.17	48.83	-0.0257	14.2783	0.0436
229	SLU 38	-0.13	-0.14	48.87	-0.0258	14.2925	0.035
229	SLU 39	-0.14	-0.16	49.89	-0.0258	14.5912	0.0394
229	SLU 40	-0.14	-0.13	49.93	-0.0259	14.6054	0.0308
229	SLU 41	-0.14	-0.16	50.45	-0.0262	14.7572	0.0401
229	SLU 42	-0.14	-0.13	50.5	-0.0263	14.7715	0.0315
229	SLU 43	-0.12	-0.29	48.01	-0.026	14.0293	0.0791
229	SLU 44	-0.12	-0.24	48.09	-0.0262	14.0531	0.0647
229	SLU 45	-0.12	-0.29	48.85	-0.0265	14.2732	0.077
229	SLU 46	-0.12	-0.26	48.89	-0.0266	14.2875	0.0683
229	SLU 47	-0.13	-0.25	48.66	-0.0265	14.2192	0.0655
229	SLU 48	-0.12	-0.29	49.41	-0.0269	14.4392	0.0777
229	SLU 49	-0.13	-0.26	49.46	-0.027	14.4535	0.0691
229	SLU 50	-0.13	-0.3	49.15	-0.0268	14.3614	0.0806
229	SLU 51	-0.13	-0.27	49.19	-0.0269	14.3757	0.072
229	SLU 52	-0.15	-0.22	53.21	-0.0283	15.5582	0.0585
229	SLU 53	-0.15	-0.27	53.97	-0.0286	15.7783	0.0707
229	SLU 54	-0.15	-0.24	54.01	-0.0287	15.7926	0.0621
229	SLU 55	-0.15	-0.23	53.78	-0.0286	15.7243	0.0592
229	SLU 56	-0.15	-0.27	54.53	-0.029	15.9444	0.0715
229	SLU 57	-0.15	-0.24	54.58	-0.0291	15.9587	0.0628
229	SLU 58	-0.15	-0.28	54.27	-0.0289	15.8666	0.0743
229	SLU 59	-0.15	-0.25	54.31	-0.029	15.8808	0.0657
229	SLU 60	-0.16	-0.27	55.33	-0.029	16.1795	0.0701
229	SLU 61	-0.16	-0.24	55.37	-0.0291	16.1938	0.0615
229	SLU 62	-0.16	-0.27	55.89	-0.0294	16.3455	0.0709
229	SLU 63	-0.16	-0.24	55.94	-0.0295	16.3598	0.0623
229	SLU 64	-0.13	-0.26	52.48	-0.0283	15.3343	0.0692
229	SLU 65	-0.13	-0.21	52.55	-0.0284	15.3581	0.0548
229	SLU 66	-0.13	-0.26	53.31	-0.0287	15.5782	0.0671
229	SLU 67	-0.13	-0.23	53.36	-0.0288	15.5925	0.0584
229	SLU 68	-0.13	-0.22	53.12	-0.0288	15.5242	0.0556
229	SLU 69	-0.13	-0.26	53.88	-0.0291	15.7443	0.0678
229	SLU 70	-0.13	-0.23	53.92	-0.0292	15.7586	0.0592
229	SLU 71	-0.13	-0.27	53.61	-0.029	15.6665	0.0707
229	SLU 72	-0.13	-0.24	53.66	-0.0291	15.6808	0.0621
229	SLU 73	-0.15	-0.19	57.67	-0.0305	16.8633	0.0486
229	SLU 74	-0.15	-0.24	58.43	-0.0308	17.0833	0.0608
229	SLU 75	-0.15	-0.21	58.48	-0.0309	17.0976	0.0522
229	SLU 76	-0.16	-0.2	58.24	-0.0309	17.0293	0.0493
229	SLU 77	-0.16	-0.24	59	-0.0312	17.2494	0.0616
229	SLU 78	-0.16	-0.21	59.04	-0.0313	17.2637	0.053
229	SLU 79	-0.16	-0.25	58.73	-0.0311	17.1716	0.0644
229	SLU 80	-0.16	-0.22	58.78	-0.0312	17.1859	0.0558
229	SLU 81	-0.16	-0.23	59.79	-0.0313	17.4845	0.0602
229	SLU 82	-0.16	-0.2	59.84	-0.0313	17.4988	0.0516
229	SLU 83	-0.16	-0.24	60.36	-0.0316	17.6506	0.061
229	SLU 84	-0.17	-0.21	60.4	-0.0317	17.6649	0.0524
229	SLE RA 1	-0.1	-0.21	39.39	-0.0212	11.5088	0.0554
229	SLE RA 2	-0.1	-0.18	39.44	-0.0213	11.5247	0.0458
229	SLE RA 3	-0.1	-0.2	39.94	-0.0216	11.6714	0.054
229	SLE RA 4	-0.1	-0.18	39.97	-0.0216	11.6809	0.0482
229	SLE RA 5	-0.1	-0.18	39.81	-0.0216	11.6354	0.0463
229	SLE RA 6	-0.1	-0.21	40.32	-0.0218	11.7821	0.0545

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLE RA 7	-0.1	-0.19	40.35	-0.0219	11.7916	0.0487
229	SLE RA 8	-0.1	-0.21	40.14	-0.0218	11.7302	0.0564
229	SLE RA 9	-0.1	-0.19	40.17	-0.0218	11.7398	0.0506
229	SLE RA 10	-0.11	-0.16	42.85	-0.0227	12.5281	0.0416
229	SLE RA 11	-0.11	-0.19	43.35	-0.023	12.6748	0.0498
229	SLE RA 12	-0.11	-0.17	43.39	-0.023	12.6843	0.0441
229	SLE RA 13	-0.12	-0.16	43.23	-0.023	12.6388	0.0421
229	SLE RA 14	-0.12	-0.19	43.73	-0.0232	12.7855	0.0503
229	SLE RA 15	-0.12	-0.17	43.76	-0.0233	12.7951	0.0446
229	SLE RA 16	-0.12	-0.2	43.55	-0.0231	12.7337	0.0522
229	SLE RA 17	-0.12	-0.18	43.58	-0.0232	12.7432	0.0465
229	SLE RA 18	-0.12	-0.19	44.26	-0.0232	12.9423	0.0494
229	SLE RA 19	-0.12	-0.17	44.29	-0.0233	12.9518	0.0437
229	SLE RA 20	-0.12	-0.19	44.64	-0.0235	13.053	0.0499
229	SLE RA 21	-0.12	-0.17	44.67	-0.0236	13.0625	0.0442
229	SLE FR 1	-0.1	-0.21	39.39	-0.0212	11.5088	0.0554
229	SLE FR 2	-0.1	-0.2	39.4	-0.0213	11.512	0.0535
229	SLE FR 3	-0.1	-0.21	39.54	-0.0213	11.5531	0.0556
229	SLE FR 4	-0.1	-0.2	40.86	-0.0219	11.942	0.0517
229	SLE FR 5	-0.1	-0.2	41	-0.0219	11.9831	0.0538
229	SLE FR 6	-0.11	-0.2	41.82	-0.0222	12.2256	0.0524
229	SLE QP 1	-0.1	-0.21	39.39	-0.0212	11.5088	0.0554
229	SLE QP 2	-0.1	-0.2	40.85	-0.0218	11.9389	0.0536
229	SLD 1	3.38	0.2	40.93	-0.0209	12.0226	-0.0588
229	SLD 2	3.81	0.23	41.02	-0.0211	12.0406	-0.0652
229	SLD 3	3.33	-0.81	39.79	-0.0177	11.6872	0.2345
229	SLD 4	3.75	-0.78	39.88	-0.0179	11.7051	0.2281
229	SLD 5	0.95	1.44	42.59	-0.0264	12.4695	-0.4238
229	SLD 6	1.23	1.46	42.65	-0.0266	12.4813	-0.428
229	SLD 7	0.76	-1.92	38.78	-0.0156	11.3514	0.5539
229	SLD 8	1.04	-1.9	38.84	-0.0158	11.3632	0.5496
229	SLD 9	-1.25	1.49	42.86	-0.0279	12.5145	-0.4425
229	SLD 10	-0.97	1.51	42.91	-0.028	12.5263	-0.4467
229	SLD 11	-1.44	-1.86	39.05	-0.0171	11.3964	0.5352
229	SLD 12	-1.16	-1.84	39.11	-0.0172	11.4082	0.531
229	SLD 13	-3.96	0.37	41.82	-0.0258	12.1726	-0.1209
229	SLD 14	-3.53	0.4	41.91	-0.026	12.1906	-0.1273
229	SLD 15	-4.01	-0.63	40.68	-0.0226	11.8371	0.1724
229	SLD 16	-3.59	-0.6	40.77	-0.0228	11.8551	0.166
229	SLV 1	8.05	0.7	41	-0.0196	12.123	-0.2003
229	SLV 2	9.04	0.77	41.21	-0.02	12.1649	-0.2152
229	SLV 3	7.92	-1.59	38.41	-0.0122	11.362	0.4676
229	SLV 4	8.91	-1.52	38.62	-0.0126	11.4039	0.4526
229	SLV 5	2.38	3.53	44.79	-0.0322	13.141	-1.0329
229	SLV 6	3.01	3.57	44.92	-0.0325	13.168	-1.0425
229	SLV 7	1.93	-4.1	36.15	-0.0077	10.6045	1.1932
229	SLV 8	2.57	-4.06	36.29	-0.008	10.6315	1.1836
229	SLV 9	-2.78	3.66	45.41	-0.0357	13.2462	-1.0764
229	SLV 10	-2.14	3.7	45.55	-0.0359	13.2732	-1.086
229	SLV 11	-3.22	-3.98	36.77	-0.0112	10.7098	1.1497
229	SLV 12	-2.58	-3.94	36.91	-0.0115	10.7368	1.14
229	SLV 13	-9.11	1.12	43.08	-0.0311	12.4738	-0.3454
229	SLV 14	-8.13	1.18	43.29	-0.0315	12.5157	-0.3604
229	SLV 15	-9.24	-1.17	40.49	-0.0237	11.7128	0.3224
229	SLV 16	-8.26	-1.11	40.7	-0.0241	11.7548	0.3074
229	CRTFP Ux+	0	0	0	0	0	0
229	CRTFP Ux-	0	0	0	0	0	0
229	CRTFP Uy+	0	0	0	0	0	0
229	CRTFP Uy-	0	0	0	0	0	0
231	SLU 1	-0.02	-0.08	9.01	0	0	0
231	SLU 2	-0.02	-0.07	9.03	0	0	0
231	SLU 3	-0.02	-0.08	9.21	0	0	0
231	SLU 4	-0.02	-0.07	9.22	0	0	0
231	SLU 5	-0.02	-0.07	9.16	0	0	0
231	SLU 6	-0.02	-0.08	9.34	0	0	0
231	SLU 7	-0.02	-0.07	9.35	0	0	0
231	SLU 8	-0.02	-0.08	9.28	0	0	0
231	SLU 9	-0.02	-0.07	9.29	0	0	0
231	SLU 10	-0.03	-0.06	10.22	0	0	0
231	SLU 11	-0.03	-0.08	10.4	0	0	0
231	SLU 12	-0.03	-0.07	10.41	0	0	0
231	SLU 13	-0.03	-0.07	10.36	0	0	0
231	SLU 14	-0.03	-0.08	10.54	0	0	0
231	SLU 15	-0.03	-0.07	10.55	0	0	0
231	SLU 16	-0.03	-0.08	10.47	0	0	0
231	SLU 17	-0.03	-0.07	10.48	0	0	0
231	SLU 18	-0.03	-0.08	10.72	0	0	0
231	SLU 19	-0.03	-0.07	10.73	0	0	0
231	SLU 20	-0.03	-0.08	10.85	0	0	0
231	SLU 21	-0.03	-0.07	10.86	0	0	0
231	SLU 22	-0.02	-0.07	10.06	0	0	0
231	SLU 23	-0.02	-0.06	10.08	0	0	0
231	SLU 24	-0.02	-0.07	10.26	0	0	0
231	SLU 25	-0.02	-0.07	10.27	0	0	0
231	SLU 26	-0.02	-0.06	10.21	0	0	0
231	SLU 27	-0.02	-0.07	10.39	0	0	0
231	SLU 28	-0.02	-0.07	10.4	0	0	0
231	SLU 29	-0.02	-0.08	10.33	0	0	0
231	SLU 30	-0.02	-0.07	10.34	0	0	0
231	SLU 31	-0.03	-0.06	11.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 32	-0.03	-0.07	11.46	0	0	0
231	SLU 33	-0.03	-0.06	11.47	0	0	0
231	SLU 34	-0.03	-0.06	11.41	0	0	0
231	SLU 35	-0.03	-0.07	11.59	0	0	0
231	SLU 36	-0.03	-0.07	11.6	0	0	0
231	SLU 37	-0.03	-0.08	11.53	0	0	0
231	SLU 38	-0.03	-0.07	11.54	0	0	0
231	SLU 39	-0.03	-0.07	11.77	0	0	0
231	SLU 40	-0.03	-0.06	11.78	0	0	0
231	SLU 41	-0.03	-0.07	11.91	0	0	0
231	SLU 42	-0.03	-0.07	11.92	0	0	0
231	SLU 43	-0.03	-0.1	11.35	0	0	0
231	SLU 44	-0.03	-0.09	11.37	0	0	0
231	SLU 45	-0.03	-0.1	11.55	0	0	0
231	SLU 46	-0.03	-0.1	11.56	0	0	0
231	SLU 47	-0.03	-0.09	11.5	0	0	0
231	SLU 48	-0.03	-0.1	11.68	0	0	0
231	SLU 49	-0.03	-0.1	11.69	0	0	0
231	SLU 50	-0.03	-0.11	11.62	0	0	0
231	SLU 51	-0.03	-0.1	11.63	0	0	0
231	SLU 52	-0.03	-0.09	12.57	0	0	0
231	SLU 53	-0.03	-0.1	12.75	0	0	0
231	SLU 54	-0.03	-0.09	12.76	0	0	0
231	SLU 55	-0.03	-0.09	12.7	0	0	0
231	SLU 56	-0.03	-0.1	12.88	0	0	0
231	SLU 57	-0.03	-0.09	12.89	0	0	0
231	SLU 58	-0.03	-0.1	12.82	0	0	0
231	SLU 59	-0.03	-0.1	12.83	0	0	0
231	SLU 60	-0.03	-0.1	13.06	0	0	0
231	SLU 61	-0.03	-0.09	13.07	0	0	0
231	SLU 62	-0.04	-0.1	13.2	0	0	0
231	SLU 63	-0.04	-0.09	13.21	0	0	0
231	SLU 64	-0.03	-0.1	12.4	0	0	0
231	SLU 65	-0.03	-0.09	12.42	0	0	0
231	SLU 66	-0.03	-0.1	12.6	0	0	0
231	SLU 67	-0.03	-0.09	12.61	0	0	0
231	SLU 68	-0.03	-0.09	12.55	0	0	0
231	SLU 69	-0.03	-0.1	12.73	0	0	0
231	SLU 70	-0.03	-0.09	12.74	0	0	0
231	SLU 71	-0.03	-0.1	12.67	0	0	0
231	SLU 72	-0.03	-0.09	12.68	0	0	0
231	SLU 73	-0.03	-0.09	13.62	0	0	0
231	SLU 74	-0.03	-0.1	13.8	0	0	0
231	SLU 75	-0.03	-0.09	13.81	0	0	0
231	SLU 76	-0.03	-0.09	13.75	0	0	0
231	SLU 77	-0.03	-0.1	13.93	0	0	0
231	SLU 78	-0.03	-0.09	13.94	0	0	0
231	SLU 79	-0.03	-0.1	13.87	0	0	0
231	SLU 80	-0.03	-0.09	13.88	0	0	0
231	SLU 81	-0.04	-0.1	14.12	0	0	0
231	SLU 82	-0.04	-0.09	14.13	0	0	0
231	SLU 83	-0.04	-0.1	14.25	0	0	0
231	SLU 84	-0.04	-0.09	14.26	0	0	0
231	SLE RA 1	-0.02	-0.08	9.31	0	0	0
231	SLE RA 2	-0.02	-0.07	9.32	0	0	0
231	SLE RA 3	-0.02	-0.08	9.44	0	0	0
231	SLE RA 4	-0.02	-0.07	9.45	0	0	0
231	SLE RA 5	-0.02	-0.07	9.41	0	0	0
231	SLE RA 6	-0.02	-0.08	9.53	0	0	0
231	SLE RA 7	-0.02	-0.07	9.54	0	0	0
231	SLE RA 8	-0.02	-0.08	9.49	0	0	0
231	SLE RA 9	-0.02	-0.07	9.49	0	0	0
231	SLE RA 10	-0.03	-0.07	10.12	0	0	0
231	SLE RA 11	-0.03	-0.08	10.24	0	0	0
231	SLE RA 12	-0.03	-0.07	10.25	0	0	0
231	SLE RA 13	-0.03	-0.07	10.21	0	0	0
231	SLE RA 14	-0.03	-0.08	10.33	0	0	0
231	SLE RA 15	-0.03	-0.07	10.34	0	0	0
231	SLE RA 16	-0.03	-0.08	10.29	0	0	0
231	SLE RA 17	-0.03	-0.07	10.29	0	0	0
231	SLE RA 18	-0.03	-0.08	10.45	0	0	0
231	SLE RA 19	-0.03	-0.07	10.46	0	0	0
231	SLE RA 20	-0.03	-0.08	10.54	0	0	0
231	SLE RA 21	-0.03	-0.07	10.55	0	0	0
231	SLE FR 1	-0.02	-0.08	9.31	0	0	0
231	SLE FR 2	-0.02	-0.08	9.31	0	0	0
231	SLE FR 3	-0.02	-0.08	9.35	0	0	0
231	SLE FR 4	-0.02	-0.08	9.65	0	0	0
231	SLE FR 5	-0.02	-0.08	9.69	0	0	0
231	SLE FR 6	-0.02	-0.08	9.88	0	0	0
231	SLE QP 1	-0.02	-0.08	9.31	0	0	0
231	SLE QP 2	-0.02	-0.08	9.65	0	0	0
231	SLD 1	0.81	0.06	9.59	0	0	0
231	SLD 2	0.91	0.08	9.62	0	0	0
231	SLD 3	0.79	-0.18	9.32	0	0	0
231	SLD 4	0.89	-0.16	9.35	0	0	0
231	SLD 5	0.23	0.32	10.03	0	0	0
231	SLD 6	0.29	0.33	10.05	0	0	0
231	SLD 7	0.18	-0.47	9.14	0	0	0
231	SLD 8	0.25	-0.46	9.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLD 9	-0.29	0.3	10.14	0	0	0
231	SLD 10	-0.23	0.31	10.16	0	0	0
231	SLD 11	-0.34	-0.48	9.25	0	0	0
231	SLD 12	-0.27	-0.47	9.27	0	0	0
231	SLD 13	-0.94	0.01	9.95	0	0	0
231	SLD 14	-0.84	0.02	9.98	0	0	0
231	SLD 15	-0.95	-0.23	9.69	0	0	0
231	SLD 16	-0.85	-0.21	9.72	0	0	0
231	SLV 1	1.92	0.23	9.49	0	0	0
231	SLV 2	2.15	0.28	9.57	0	0	0
231	SLV 3	1.89	-0.3	8.89	0	0	0
231	SLV 4	2.12	-0.26	8.96	0	0	0
231	SLV 5	0.57	0.82	10.51	0	0	0
231	SLV 6	0.72	0.85	10.56	0	0	0
231	SLV 7	0.46	-0.96	8.49	0	0	0
231	SLV 8	0.61	-0.94	8.54	0	0	0
231	SLV 9	-0.66	0.79	10.77	0	0	0
231	SLV 10	-0.51	0.81	10.82	0	0	0
231	SLV 11	-0.76	-1	8.74	0	0	0
231	SLV 12	-0.61	-0.98	8.79	0	0	0
231	SLV 13	-2.16	0.11	10.35	0	0	0
231	SLV 14	-1.93	0.15	10.42	0	0	0
231	SLV 15	-2.2	-0.43	9.74	0	0	0
231	SLV 16	-1.96	-0.39	9.81	0	0	0
232	SLU 1	-0.02	-0.09	9.06	0	0	0
232	SLU 2	-0.02	-0.08	9.08	0	0	0
232	SLU 3	-0.02	-0.09	9.26	0	0	0
232	SLU 4	-0.02	-0.08	9.27	0	0	0
232	SLU 5	-0.02	-0.08	9.21	0	0	0
232	SLU 6	-0.02	-0.09	9.39	0	0	0
232	SLU 7	-0.02	-0.08	9.4	0	0	0
232	SLU 8	-0.02	-0.09	9.33	0	0	0
232	SLU 9	-0.02	-0.09	9.34	0	0	0
232	SLU 10	-0.03	-0.08	10.28	0	0	0
232	SLU 11	-0.03	-0.09	10.46	0	0	0
232	SLU 12	-0.03	-0.08	10.47	0	0	0
232	SLU 13	-0.03	-0.08	10.41	0	0	0
232	SLU 14	-0.03	-0.09	10.59	0	0	0
232	SLU 15	-0.03	-0.08	10.6	0	0	0
232	SLU 16	-0.03	-0.09	10.53	0	0	0
232	SLU 17	-0.03	-0.09	10.54	0	0	0
232	SLU 18	-0.03	-0.09	10.78	0	0	0
232	SLU 19	-0.03	-0.08	10.79	0	0	0
232	SLU 20	-0.03	-0.09	10.91	0	0	0
232	SLU 21	-0.03	-0.08	10.92	0	0	0
232	SLU 22	-0.02	-0.09	10.12	0	0	0
232	SLU 23	-0.02	-0.08	10.14	0	0	0
232	SLU 24	-0.02	-0.09	10.32	0	0	0
232	SLU 25	-0.02	-0.08	10.33	0	0	0
232	SLU 26	-0.02	-0.08	10.27	0	0	0
232	SLU 27	-0.02	-0.09	10.45	0	0	0
232	SLU 28	-0.02	-0.08	10.46	0	0	0
232	SLU 29	-0.02	-0.09	10.39	0	0	0
232	SLU 30	-0.02	-0.08	10.4	0	0	0
232	SLU 31	-0.03	-0.08	11.34	0	0	0
232	SLU 32	-0.03	-0.09	11.52	0	0	0
232	SLU 33	-0.03	-0.08	11.53	0	0	0
232	SLU 34	-0.03	-0.08	11.47	0	0	0
232	SLU 35	-0.03	-0.09	11.65	0	0	0
232	SLU 36	-0.03	-0.08	11.66	0	0	0
232	SLU 37	-0.03	-0.09	11.59	0	0	0
232	SLU 38	-0.03	-0.08	11.6	0	0	0
232	SLU 39	-0.03	-0.09	11.84	0	0	0
232	SLU 40	-0.03	-0.08	11.85	0	0	0
232	SLU 41	-0.03	-0.09	11.97	0	0	0
232	SLU 42	-0.03	-0.08	11.98	0	0	0
232	SLU 43	-0.02	-0.12	11.42	0	0	0
232	SLU 44	-0.03	-0.11	11.43	0	0	0
232	SLU 45	-0.02	-0.12	11.62	0	0	0
232	SLU 46	-0.03	-0.11	11.63	0	0	0
232	SLU 47	-0.03	-0.11	11.57	0	0	0
232	SLU 48	-0.03	-0.12	11.75	0	0	0
232	SLU 49	-0.03	-0.11	11.76	0	0	0
232	SLU 50	-0.03	-0.12	11.69	0	0	0
232	SLU 51	-0.03	-0.11	11.7	0	0	0
232	SLU 52	-0.03	-0.11	12.63	0	0	0
232	SLU 53	-0.03	-0.12	12.82	0	0	0
232	SLU 54	-0.03	-0.11	12.82	0	0	0
232	SLU 55	-0.03	-0.11	12.77	0	0	0
232	SLU 56	-0.03	-0.12	12.95	0	0	0
232	SLU 57	-0.03	-0.11	12.96	0	0	0
232	SLU 58	-0.03	-0.12	12.89	0	0	0
232	SLU 59	-0.03	-0.11	12.89	0	0	0
232	SLU 60	-0.03	-0.12	13.13	0	0	0
232	SLU 61	-0.03	-0.11	13.14	0	0	0
232	SLU 62	-0.03	-0.12	13.27	0	0	0
232	SLU 63	-0.03	-0.11	13.28	0	0	0
232	SLU 64	-0.03	-0.12	12.48	0	0	0
232	SLU 65	-0.03	-0.1	12.49	0	0	0
232	SLU 66	-0.03	-0.12	12.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
232	SLU 67	-0.03	-0.11	12.68	0	0	0
232	SLU 68	-0.03	-0.11	12.63	0	0	0
232	SLU 69	-0.03	-0.12	12.81	0	0	0
232	SLU 70	-0.03	-0.11	12.82	0	0	0
232	SLU 71	-0.03	-0.12	12.74	0	0	0
232	SLU 72	-0.03	-0.11	12.75	0	0	0
232	SLU 73	-0.03	-0.1	13.69	0	0	0
232	SLU 74	-0.03	-0.12	13.87	0	0	0
232	SLU 75	-0.03	-0.11	13.88	0	0	0
232	SLU 76	-0.03	-0.1	13.83	0	0	0
232	SLU 77	-0.03	-0.12	14.01	0	0	0
232	SLU 78	-0.03	-0.11	14.02	0	0	0
232	SLU 79	-0.03	-0.12	13.94	0	0	0
232	SLU 80	-0.03	-0.11	13.95	0	0	0
232	SLU 81	-0.03	-0.12	14.19	0	0	0
232	SLU 82	-0.03	-0.11	14.2	0	0	0
232	SLU 83	-0.03	-0.12	14.33	0	0	0
232	SLU 84	-0.03	-0.11	14.33	0	0	0
232	SLE RA 1	-0.02	-0.09	9.37	0	0	0
232	SLE RA 2	-0.02	-0.08	9.38	0	0	0
232	SLE RA 3	-0.02	-0.09	9.5	0	0	0
232	SLE RA 4	-0.02	-0.08	9.5	0	0	0
232	SLE RA 5	-0.02	-0.08	9.47	0	0	0
232	SLE RA 6	-0.02	-0.09	9.59	0	0	0
232	SLE RA 7	-0.02	-0.09	9.59	0	0	0
232	SLE RA 8	-0.02	-0.09	9.54	0	0	0
232	SLE RA 9	-0.02	-0.09	9.55	0	0	0
232	SLE RA 10	-0.02	-0.08	10.18	0	0	0
232	SLE RA 11	-0.02	-0.09	10.3	0	0	0
232	SLE RA 12	-0.02	-0.08	10.3	0	0	0
232	SLE RA 13	-0.02	-0.08	10.26	0	0	0
232	SLE RA 14	-0.02	-0.09	10.39	0	0	0
232	SLE RA 15	-0.02	-0.09	10.39	0	0	0
232	SLE RA 16	-0.02	-0.09	10.34	0	0	0
232	SLE RA 17	-0.02	-0.09	10.35	0	0	0
232	SLE RA 18	-0.02	-0.09	10.51	0	0	0
232	SLE RA 19	-0.03	-0.08	10.51	0	0	0
232	SLE RA 20	-0.03	-0.09	10.6	0	0	0
232	SLE RA 21	-0.03	-0.09	10.6	0	0	0
232	SLE FR 1	-0.02	-0.09	9.37	0	0	0
232	SLE FR 2	-0.02	-0.09	9.37	0	0	0
232	SLE FR 3	-0.02	-0.09	9.4	0	0	0
232	SLE FR 4	-0.02	-0.09	9.71	0	0	0
232	SLE FR 5	-0.02	-0.09	9.74	0	0	0
232	SLE FR 6	-0.02	-0.09	9.94	0	0	0
232	SLE QP 1	-0.02	-0.09	9.37	0	0	0
232	SLE QP 2	-0.02	-0.09	9.71	0	0	0
232	SLD 1	0.82	0.06	9.59	0	0	0
232	SLD 2	0.92	0.08	9.63	0	0	0
232	SLD 3	0.8	-0.18	9.33	0	0	0
232	SLD 4	0.9	-0.16	9.36	0	0	0
232	SLD 5	0.23	0.31	10.07	0	0	0
232	SLD 6	0.3	0.32	10.1	0	0	0
232	SLD 7	0.19	-0.48	9.18	0	0	0
232	SLD 8	0.25	-0.46	9.2	0	0	0
232	SLD 9	-0.3	0.28	10.21	0	0	0
232	SLD 10	-0.23	0.3	10.24	0	0	0
232	SLD 11	-0.34	-0.5	9.32	0	0	0
232	SLD 12	-0.28	-0.49	9.34	0	0	0
232	SLD 13	-0.95	-0.02	10.06	0	0	0
232	SLD 14	-0.84	0	10.09	0	0	0
232	SLD 15	-0.96	-0.26	9.79	0	0	0
232	SLD 16	-0.86	-0.24	9.82	0	0	0
232	SLV 1	1.94	0.25	9.43	0	0	0
232	SLV 2	2.17	0.3	9.51	0	0	0
232	SLV 3	1.9	-0.29	8.82	0	0	0
232	SLV 4	2.14	-0.24	8.91	0	0	0
232	SLV 5	0.57	0.82	10.53	0	0	0
232	SLV 6	0.73	0.85	10.59	0	0	0
232	SLV 7	0.47	-0.97	8.51	0	0	0
232	SLV 8	0.62	-0.94	8.56	0	0	0
232	SLV 9	-0.66	0.76	10.86	0	0	0
232	SLV 10	-0.51	0.8	10.91	0	0	0
232	SLV 11	-0.77	-1.03	8.83	0	0	0
232	SLV 12	-0.62	-1	8.88	0	0	0
232	SLV 13	-2.18	0.06	10.51	0	0	0
232	SLV 14	-1.95	0.11	10.59	0	0	0
232	SLV 15	-2.21	-0.48	9.9	0	0	0
232	SLV 16	-1.98	-0.43	9.99	0	0	0
233	SLU 1	-0.02	-0.1	9.1	0	0	0
233	SLU 2	-0.02	-0.09	9.12	0	0	0
233	SLU 3	-0.02	-0.1	9.3	0	0	0
233	SLU 4	-0.02	-0.1	9.31	0	0	0
233	SLU 5	-0.02	-0.09	9.25	0	0	0
233	SLU 6	-0.02	-0.11	9.43	0	0	0
233	SLU 7	-0.02	-0.1	9.44	0	0	0
233	SLU 8	-0.02	-0.11	9.37	0	0	0
233	SLU 9	-0.02	-0.1	9.38	0	0	0
233	SLU 10	-0.02	-0.09	10.31	0	0	0
233	SLU 11	-0.02	-0.1	10.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 12	-0.02	-0.1	10.5	0	0	0
233	SLU 13	-0.03	-0.09	10.45	0	0	0
233	SLU 14	-0.02	-0.11	10.63	0	0	0
233	SLU 15	-0.02	-0.1	10.64	0	0	0
233	SLU 16	-0.02	-0.11	10.57	0	0	0
233	SLU 17	-0.03	-0.1	10.57	0	0	0
233	SLU 18	-0.03	-0.1	10.81	0	0	0
233	SLU 19	-0.03	-0.1	10.82	0	0	0
233	SLU 20	-0.03	-0.11	10.95	0	0	0
233	SLU 21	-0.03	-0.1	10.95	0	0	0
233	SLU 22	-0.02	-0.1	10.16	0	0	0
233	SLU 23	-0.02	-0.09	10.18	0	0	0
233	SLU 24	-0.02	-0.1	10.36	0	0	0
233	SLU 25	-0.02	-0.09	10.37	0	0	0
233	SLU 26	-0.02	-0.09	10.31	0	0	0
233	SLU 27	-0.02	-0.1	10.49	0	0	0
233	SLU 28	-0.02	-0.1	10.5	0	0	0
233	SLU 29	-0.02	-0.11	10.43	0	0	0
233	SLU 30	-0.02	-0.1	10.44	0	0	0
233	SLU 31	-0.03	-0.09	11.38	0	0	0
233	SLU 32	-0.02	-0.1	11.56	0	0	0
233	SLU 33	-0.03	-0.1	11.57	0	0	0
233	SLU 34	-0.03	-0.09	11.51	0	0	0
233	SLU 35	-0.03	-0.11	11.69	0	0	0
233	SLU 36	-0.03	-0.1	11.7	0	0	0
233	SLU 37	-0.03	-0.11	11.63	0	0	0
233	SLU 38	-0.03	-0.1	11.64	0	0	0
233	SLU 39	-0.03	-0.1	11.88	0	0	0
233	SLU 40	-0.03	-0.1	11.88	0	0	0
233	SLU 41	-0.03	-0.11	12.01	0	0	0
233	SLU 42	-0.03	-0.1	12.02	0	0	0
233	SLU 43	-0.02	-0.13	11.47	0	0	0
233	SLU 44	-0.02	-0.12	11.48	0	0	0
233	SLU 45	-0.02	-0.13	11.66	0	0	0
233	SLU 46	-0.02	-0.13	11.67	0	0	0
233	SLU 47	-0.02	-0.12	11.61	0	0	0
233	SLU 48	-0.02	-0.14	11.8	0	0	0
233	SLU 49	-0.02	-0.13	11.81	0	0	0
233	SLU 50	-0.02	-0.14	11.73	0	0	0
233	SLU 51	-0.02	-0.13	11.74	0	0	0
233	SLU 52	-0.03	-0.12	12.68	0	0	0
233	SLU 53	-0.03	-0.14	12.86	0	0	0
233	SLU 54	-0.03	-0.13	12.87	0	0	0
233	SLU 55	-0.03	-0.13	12.81	0	0	0
233	SLU 56	-0.03	-0.14	13	0	0	0
233	SLU 57	-0.03	-0.13	13	0	0	0
233	SLU 58	-0.03	-0.14	12.93	0	0	0
233	SLU 59	-0.03	-0.13	12.94	0	0	0
233	SLU 60	-0.03	-0.14	13.18	0	0	0
233	SLU 61	-0.03	-0.13	13.19	0	0	0
233	SLU 62	-0.03	-0.14	13.31	0	0	0
233	SLU 63	-0.03	-0.13	13.32	0	0	0
233	SLU 64	-0.02	-0.13	12.53	0	0	0
233	SLU 65	-0.02	-0.12	12.54	0	0	0
233	SLU 66	-0.02	-0.13	12.73	0	0	0
233	SLU 67	-0.02	-0.13	12.74	0	0	0
233	SLU 68	-0.03	-0.12	12.68	0	0	0
233	SLU 69	-0.02	-0.14	12.86	0	0	0
233	SLU 70	-0.03	-0.13	12.87	0	0	0
233	SLU 71	-0.02	-0.14	12.8	0	0	0
233	SLU 72	-0.03	-0.13	12.81	0	0	0
233	SLU 73	-0.03	-0.12	13.74	0	0	0
233	SLU 74	-0.03	-0.13	13.93	0	0	0
233	SLU 75	-0.03	-0.13	13.93	0	0	0
233	SLU 76	-0.03	-0.12	13.88	0	0	0
233	SLU 77	-0.03	-0.14	14.06	0	0	0
233	SLU 78	-0.03	-0.13	14.07	0	0	0
233	SLU 79	-0.03	-0.14	13.99	0	0	0
233	SLU 80	-0.03	-0.13	14	0	0	0
233	SLU 81	-0.03	-0.14	14.24	0	0	0
233	SLU 82	-0.03	-0.13	14.25	0	0	0
233	SLU 83	-0.03	-0.14	14.37	0	0	0
233	SLU 84	-0.03	-0.13	14.38	0	0	0
233	SLE RA 1	-0.02	-0.1	9.4	0	0	0
233	SLE RA 2	-0.02	-0.09	9.41	0	0	0
233	SLE RA 3	-0.02	-0.1	9.54	0	0	0
233	SLE RA 4	-0.02	-0.1	9.54	0	0	0
233	SLE RA 5	-0.02	-0.1	9.5	0	0	0
233	SLE RA 6	-0.02	-0.1	9.63	0	0	0
233	SLE RA 7	-0.02	-0.1	9.63	0	0	0
233	SLE RA 8	-0.02	-0.11	9.58	0	0	0
233	SLE RA 9	-0.02	-0.1	9.59	0	0	0
233	SLE RA 10	-0.02	-0.1	10.21	0	0	0
233	SLE RA 11	-0.02	-0.1	10.33	0	0	0
233	SLE RA 12	-0.02	-0.1	10.34	0	0	0
233	SLE RA 13	-0.02	-0.1	10.3	0	0	0
233	SLE RA 14	-0.02	-0.11	10.42	0	0	0
233	SLE RA 15	-0.02	-0.1	10.43	0	0	0
233	SLE RA 16	-0.02	-0.11	10.38	0	0	0
233	SLE RA 17	-0.02	-0.1	10.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLE RA 18	-0.02	-0.1	10.55	0	0	0
233	SLE RA 19	-0.02	-0.1	10.55	0	0	0
233	SLE RA 20	-0.02	-0.11	10.63	0	0	0
233	SLE RA 21	-0.02	-0.1	10.64	0	0	0
233	SLE FR 1	-0.02	-0.1	9.4	0	0	0
233	SLE FR 2	-0.02	-0.1	9.41	0	0	0
233	SLE FR 3	-0.02	-0.1	9.44	0	0	0
233	SLE FR 4	-0.02	-0.1	9.75	0	0	0
233	SLE FR 5	-0.02	-0.1	9.78	0	0	0
233	SLE FR 6	-0.02	-0.1	9.98	0	0	0
233	SLE QP 1	-0.02	-0.1	9.4	0	0	0
233	SLE QP 2	-0.02	-0.1	9.75	0	0	0
233	SLD 1	0.82	0.05	9.57	0	0	0
233	SLD 2	0.92	0.08	9.61	0	0	0
233	SLD 3	0.81	-0.18	9.3	0	0	0
233	SLD 4	0.91	-0.15	9.34	0	0	0
233	SLD 5	0.24	0.3	10.09	0	0	0
233	SLD 6	0.3	0.31	10.12	0	0	0
233	SLD 7	0.19	-0.49	9.2	0	0	0
233	SLD 8	0.26	-0.47	9.23	0	0	0
233	SLD 9	-0.3	0.26	10.27	0	0	0
233	SLD 10	-0.23	0.28	10.29	0	0	0
233	SLD 11	-0.34	-0.52	9.37	0	0	0
233	SLD 12	-0.28	-0.5	9.4	0	0	0
233	SLD 13	-0.95	-0.05	10.15	0	0	0
233	SLD 14	-0.85	-0.03	10.19	0	0	0
233	SLD 15	-0.96	-0.29	9.88	0	0	0
233	SLD 16	-0.86	-0.26	9.92	0	0	0
233	SLV 1	1.95	0.26	9.33	0	0	0
233	SLV 2	2.19	0.32	9.42	0	0	0
233	SLV 3	1.92	-0.28	8.72	0	0	0
233	SLV 4	2.15	-0.21	8.81	0	0	0
233	SLV 5	0.58	0.81	10.52	0	0	0
233	SLV 6	0.73	0.85	10.58	0	0	0
233	SLV 7	0.47	-0.98	8.5	0	0	0
233	SLV 8	0.62	-0.94	8.56	0	0	0
233	SLV 9	-0.66	0.73	10.93	0	0	0
233	SLV 10	-0.51	0.77	10.99	0	0	0
233	SLV 11	-0.77	-1.06	8.91	0	0	0
233	SLV 12	-0.62	-1.02	8.97	0	0	0
233	SLV 13	-2.19	0.01	10.68	0	0	0
233	SLV 14	-1.96	0.07	10.77	0	0	0
233	SLV 15	-2.23	-0.53	10.08	0	0	0
233	SLV 16	-1.99	-0.47	10.17	0	0	0
234	SLU 1	-0.02	-0.12	9.11	0	0	0
234	SLU 2	-0.02	-0.1	9.12	0	0	0
234	SLU 3	-0.02	-0.12	9.31	0	0	0
234	SLU 4	-0.02	-0.11	9.32	0	0	0
234	SLU 5	-0.02	-0.11	9.26	0	0	0
234	SLU 6	-0.02	-0.12	9.44	0	0	0
234	SLU 7	-0.02	-0.11	9.45	0	0	0
234	SLU 8	-0.02	-0.12	9.38	0	0	0
234	SLU 9	-0.02	-0.11	9.39	0	0	0
234	SLU 10	-0.02	-0.11	10.32	0	0	0
234	SLU 11	-0.02	-0.12	10.5	0	0	0
234	SLU 12	-0.02	-0.11	10.51	0	0	0
234	SLU 13	-0.02	-0.11	10.45	0	0	0
234	SLU 14	-0.02	-0.12	10.64	0	0	0
234	SLU 15	-0.02	-0.11	10.64	0	0	0
234	SLU 16	-0.02	-0.12	10.57	0	0	0
234	SLU 17	-0.02	-0.12	10.58	0	0	0
234	SLU 18	-0.02	-0.12	10.82	0	0	0
234	SLU 19	-0.03	-0.11	10.82	0	0	0
234	SLU 20	-0.03	-0.12	10.95	0	0	0
234	SLU 21	-0.03	-0.11	10.96	0	0	0
234	SLU 22	-0.02	-0.12	10.18	0	0	0
234	SLU 23	-0.02	-0.1	10.19	0	0	0
234	SLU 24	-0.02	-0.12	10.37	0	0	0
234	SLU 25	-0.02	-0.11	10.38	0	0	0
234	SLU 26	-0.02	-0.11	10.32	0	0	0
234	SLU 27	-0.02	-0.12	10.51	0	0	0
234	SLU 28	-0.02	-0.11	10.51	0	0	0
234	SLU 29	-0.02	-0.12	10.44	0	0	0
234	SLU 30	-0.02	-0.11	10.45	0	0	0
234	SLU 31	-0.02	-0.11	11.38	0	0	0
234	SLU 32	-0.02	-0.12	11.57	0	0	0
234	SLU 33	-0.02	-0.11	11.57	0	0	0
234	SLU 34	-0.02	-0.11	11.52	0	0	0
234	SLU 35	-0.02	-0.12	11.7	0	0	0
234	SLU 36	-0.02	-0.11	11.71	0	0	0
234	SLU 37	-0.02	-0.12	11.64	0	0	0
234	SLU 38	-0.02	-0.12	11.64	0	0	0
234	SLU 39	-0.03	-0.12	11.88	0	0	0
234	SLU 40	-0.03	-0.11	11.89	0	0	0
234	SLU 41	-0.03	-0.12	12.01	0	0	0
234	SLU 42	-0.03	-0.11	12.02	0	0	0
234	SLU 43	-0.02	-0.15	11.48	0	0	0
234	SLU 44	-0.02	-0.14	11.49	0	0	0
234	SLU 45	-0.02	-0.15	11.68	0	0	0
234	SLU 46	-0.02	-0.14	11.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLU 47	-0.02	-0.14	11.63	0	0	0
234	SLU 48	-0.02	-0.15	11.81	0	0	0
234	SLU 49	-0.02	-0.15	11.82	0	0	0
234	SLU 50	-0.02	-0.15	11.75	0	0	0
234	SLU 51	-0.02	-0.15	11.75	0	0	0
234	SLU 52	-0.03	-0.14	12.69	0	0	0
234	SLU 53	-0.03	-0.15	12.87	0	0	0
234	SLU 54	-0.03	-0.15	12.88	0	0	0
234	SLU 55	-0.03	-0.14	12.82	0	0	0
234	SLU 56	-0.03	-0.16	13	0	0	0
234	SLU 57	-0.03	-0.15	13.01	0	0	0
234	SLU 58	-0.03	-0.16	12.94	0	0	0
234	SLU 59	-0.03	-0.15	12.95	0	0	0
234	SLU 60	-0.03	-0.15	13.18	0	0	0
234	SLU 61	-0.03	-0.15	13.19	0	0	0
234	SLU 62	-0.03	-0.16	13.32	0	0	0
234	SLU 63	-0.03	-0.15	13.33	0	0	0
234	SLU 64	-0.02	-0.15	12.54	0	0	0
234	SLU 65	-0.02	-0.14	12.56	0	0	0
234	SLU 66	-0.02	-0.15	12.74	0	0	0
234	SLU 67	-0.02	-0.14	12.75	0	0	0
234	SLU 68	-0.02	-0.14	12.69	0	0	0
234	SLU 69	-0.02	-0.15	12.87	0	0	0
234	SLU 70	-0.02	-0.15	12.88	0	0	0
234	SLU 71	-0.02	-0.16	12.81	0	0	0
234	SLU 72	-0.02	-0.15	12.82	0	0	0
234	SLU 73	-0.03	-0.14	13.75	0	0	0
234	SLU 74	-0.03	-0.15	13.93	0	0	0
234	SLU 75	-0.03	-0.15	13.94	0	0	0
234	SLU 76	-0.03	-0.14	13.88	0	0	0
234	SLU 77	-0.03	-0.16	14.07	0	0	0
234	SLU 78	-0.03	-0.15	14.08	0	0	0
234	SLU 79	-0.03	-0.16	14	0	0	0
234	SLU 80	-0.03	-0.15	14.01	0	0	0
234	SLU 81	-0.03	-0.15	14.25	0	0	0
234	SLU 82	-0.03	-0.15	14.26	0	0	0
234	SLU 83	-0.03	-0.16	14.38	0	0	0
234	SLU 84	-0.03	-0.15	14.39	0	0	0
234	SLE RA 1	-0.02	-0.12	9.41	0	0	0
234	SLE RA 2	-0.02	-0.11	9.42	0	0	0
234	SLE RA 3	-0.02	-0.12	9.55	0	0	0
234	SLE RA 4	-0.02	-0.11	9.55	0	0	0
234	SLE RA 5	-0.02	-0.11	9.51	0	0	0
234	SLE RA 6	-0.02	-0.12	9.64	0	0	0
234	SLE RA 7	-0.02	-0.11	9.64	0	0	0
234	SLE RA 8	-0.02	-0.12	9.59	0	0	0
234	SLE RA 9	-0.02	-0.11	9.6	0	0	0
234	SLE RA 10	-0.02	-0.11	10.22	0	0	0
234	SLE RA 11	-0.02	-0.12	10.34	0	0	0
234	SLE RA 12	-0.02	-0.11	10.35	0	0	0
234	SLE RA 13	-0.02	-0.11	10.31	0	0	0
234	SLE RA 14	-0.02	-0.12	10.43	0	0	0
234	SLE RA 15	-0.02	-0.11	10.44	0	0	0
234	SLE RA 16	-0.02	-0.12	10.39	0	0	0
234	SLE RA 17	-0.02	-0.12	10.39	0	0	0
234	SLE RA 18	-0.02	-0.12	10.55	0	0	0
234	SLE RA 19	-0.02	-0.11	10.56	0	0	0
234	SLE RA 20	-0.02	-0.12	10.64	0	0	0
234	SLE RA 21	-0.02	-0.11	10.65	0	0	0
234	SLE FR 1	-0.02	-0.12	9.41	0	0	0
234	SLE FR 2	-0.02	-0.11	9.42	0	0	0
234	SLE FR 3	-0.02	-0.12	9.45	0	0	0
234	SLE FR 4	-0.02	-0.12	9.76	0	0	0
234	SLE FR 5	-0.02	-0.12	9.79	0	0	0
234	SLE FR 6	-0.02	-0.12	9.98	0	0	0
234	SLE QP 1	-0.02	-0.12	9.41	0	0	0
234	SLE QP 2	-0.02	-0.12	9.76	0	0	0
234	SLD 1	0.82	0.05	9.51	0	0	0
234	SLD 2	0.92	0.08	9.56	0	0	0
234	SLD 3	0.81	-0.18	9.25	0	0	0
234	SLD 4	0.91	-0.15	9.29	0	0	0
234	SLD 5	0.24	0.28	10.08	0	0	0
234	SLD 6	0.3	0.3	10.11	0	0	0
234	SLD 7	0.19	-0.5	9.19	0	0	0
234	SLD 8	0.26	-0.48	9.22	0	0	0
234	SLD 9	-0.29	0.24	10.29	0	0	0
234	SLD 10	-0.23	0.26	10.32	0	0	0
234	SLD 11	-0.34	-0.54	9.4	0	0	0
234	SLD 12	-0.27	-0.52	9.43	0	0	0
234	SLD 13	-0.95	-0.08	10.22	0	0	0
234	SLD 14	-0.85	-0.05	10.27	0	0	0
234	SLD 15	-0.96	-0.32	9.96	0	0	0
234	SLD 16	-0.86	-0.28	10	0	0	0
234	SLV 1	1.95	0.27	9.18	0	0	0
234	SLV 2	2.19	0.34	9.28	0	0	0
234	SLV 3	1.92	-0.27	8.57	0	0	0
234	SLV 4	2.15	-0.19	8.67	0	0	0
234	SLV 5	0.58	0.79	10.48	0	0	0
234	SLV 6	0.73	0.84	10.54	0	0	0
234	SLV 7	0.47	-0.98	8.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLV 8	0.62	-0.94	8.53	0	0	0
234	SLV 9	-0.66	0.7	10.98	0	0	0
234	SLV 10	-0.51	0.75	11.04	0	0	0
234	SLV 11	-0.77	-1.08	8.97	0	0	0
234	SLV 12	-0.62	-1.03	9.03	0	0	0
234	SLV 13	-2.19	-0.04	10.84	0	0	0
234	SLV 14	-1.95	0.03	10.94	0	0	0
234	SLV 15	-2.22	-0.58	10.24	0	0	0
234	SLV 16	-1.99	-0.5	10.34	0	0	0
235	SLU 1	-0.01	-0.13	9.08	0	0	0
235	SLU 2	-0.02	-0.11	9.1	0	0	0
235	SLU 3	-0.02	-0.13	9.28	0	0	0
235	SLU 4	-0.02	-0.12	9.29	0	0	0
235	SLU 5	-0.02	-0.12	9.23	0	0	0
235	SLU 6	-0.02	-0.13	9.41	0	0	0
235	SLU 7	-0.02	-0.12	9.42	0	0	0
235	SLU 8	-0.02	-0.13	9.35	0	0	0
235	SLU 9	-0.02	-0.12	9.36	0	0	0
235	SLU 10	-0.02	-0.12	10.28	0	0	0
235	SLU 11	-0.02	-0.13	10.47	0	0	0
235	SLU 12	-0.02	-0.13	10.48	0	0	0
235	SLU 13	-0.02	-0.12	10.42	0	0	0
235	SLU 14	-0.02	-0.14	10.6	0	0	0
235	SLU 15	-0.02	-0.13	10.61	0	0	0
235	SLU 16	-0.02	-0.14	10.54	0	0	0
235	SLU 17	-0.02	-0.13	10.54	0	0	0
235	SLU 18	-0.02	-0.13	10.78	0	0	0
235	SLU 19	-0.02	-0.13	10.79	0	0	0
235	SLU 20	-0.02	-0.14	10.91	0	0	0
235	SLU 21	-0.02	-0.13	10.92	0	0	0
235	SLU 22	-0.02	-0.13	10.15	0	0	0
235	SLU 23	-0.02	-0.12	10.16	0	0	0
235	SLU 24	-0.02	-0.13	10.34	0	0	0
235	SLU 25	-0.02	-0.12	10.35	0	0	0
235	SLU 26	-0.02	-0.12	10.29	0	0	0
235	SLU 27	-0.02	-0.13	10.48	0	0	0
235	SLU 28	-0.02	-0.13	10.49	0	0	0
235	SLU 29	-0.02	-0.13	10.41	0	0	0
235	SLU 30	-0.02	-0.13	10.42	0	0	0
235	SLU 31	-0.02	-0.12	11.35	0	0	0
235	SLU 32	-0.02	-0.13	11.53	0	0	0
235	SLU 33	-0.02	-0.13	11.54	0	0	0
235	SLU 34	-0.02	-0.12	11.48	0	0	0
235	SLU 35	-0.02	-0.14	11.66	0	0	0
235	SLU 36	-0.02	-0.13	11.67	0	0	0
235	SLU 37	-0.02	-0.14	11.6	0	0	0
235	SLU 38	-0.02	-0.13	11.61	0	0	0
235	SLU 39	-0.02	-0.14	11.84	0	0	0
235	SLU 40	-0.02	-0.13	11.85	0	0	0
235	SLU 41	-0.02	-0.14	11.98	0	0	0
235	SLU 42	-0.02	-0.13	11.98	0	0	0
235	SLU 43	-0.02	-0.17	11.45	0	0	0
235	SLU 44	-0.02	-0.15	11.46	0	0	0
235	SLU 45	-0.02	-0.17	11.64	0	0	0
235	SLU 46	-0.02	-0.16	11.65	0	0	0
235	SLU 47	-0.02	-0.15	11.59	0	0	0
235	SLU 48	-0.02	-0.17	11.77	0	0	0
235	SLU 49	-0.02	-0.16	11.78	0	0	0
235	SLU 50	-0.02	-0.17	11.71	0	0	0
235	SLU 51	-0.02	-0.16	11.72	0	0	0
235	SLU 52	-0.03	-0.16	12.64	0	0	0
235	SLU 53	-0.03	-0.17	12.83	0	0	0
235	SLU 54	-0.03	-0.16	12.84	0	0	0
235	SLU 55	-0.03	-0.16	12.78	0	0	0
235	SLU 56	-0.03	-0.17	12.96	0	0	0
235	SLU 57	-0.03	-0.16	12.97	0	0	0
235	SLU 58	-0.03	-0.17	12.9	0	0	0
235	SLU 59	-0.03	-0.17	12.9	0	0	0
235	SLU 60	-0.03	-0.17	13.14	0	0	0
235	SLU 61	-0.03	-0.16	13.15	0	0	0
235	SLU 62	-0.03	-0.17	13.27	0	0	0
235	SLU 63	-0.03	-0.17	13.28	0	0	0
235	SLU 64	-0.02	-0.17	12.51	0	0	0
235	SLU 65	-0.02	-0.15	12.52	0	0	0
235	SLU 66	-0.02	-0.17	12.71	0	0	0
235	SLU 67	-0.02	-0.16	12.71	0	0	0
235	SLU 68	-0.02	-0.16	12.65	0	0	0
235	SLU 69	-0.02	-0.17	12.84	0	0	0
235	SLU 70	-0.02	-0.16	12.85	0	0	0
235	SLU 71	-0.02	-0.17	12.77	0	0	0
235	SLU 72	-0.02	-0.16	12.78	0	0	0
235	SLU 73	-0.03	-0.16	13.71	0	0	0
235	SLU 74	-0.03	-0.17	13.89	0	0	0
235	SLU 75	-0.03	-0.16	13.9	0	0	0
235	SLU 76	-0.03	-0.16	13.84	0	0	0
235	SLU 77	-0.03	-0.17	14.02	0	0	0
235	SLU 78	-0.03	-0.17	14.03	0	0	0
235	SLU 79	-0.03	-0.18	13.96	0	0	0
235	SLU 80	-0.03	-0.17	13.97	0	0	0
235	SLU 81	-0.03	-0.17	14.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLU 82	-0.03	-0.17	14.21	0	0	0
235	SLU 83	-0.03	-0.18	14.34	0	0	0
235	SLU 84	-0.03	-0.17	14.34	0	0	0
235	SLE RA 1	-0.02	-0.13	9.39	0	0	0
235	SLE RA 2	-0.02	-0.12	9.4	0	0	0
235	SLE RA 3	-0.02	-0.13	9.52	0	0	0
235	SLE RA 4	-0.02	-0.12	9.52	0	0	0
235	SLE RA 5	-0.02	-0.12	9.49	0	0	0
235	SLE RA 6	-0.02	-0.13	9.61	0	0	0
235	SLE RA 7	-0.02	-0.13	9.61	0	0	0
235	SLE RA 8	-0.02	-0.13	9.57	0	0	0
235	SLE RA 9	-0.02	-0.13	9.57	0	0	0
235	SLE RA 10	-0.02	-0.12	10.19	0	0	0
235	SLE RA 11	-0.02	-0.13	10.31	0	0	0
235	SLE RA 12	-0.02	-0.13	10.32	0	0	0
235	SLE RA 13	-0.02	-0.12	10.28	0	0	0
235	SLE RA 14	-0.02	-0.13	10.4	0	0	0
235	SLE RA 15	-0.02	-0.13	10.4	0	0	0
235	SLE RA 16	-0.02	-0.13	10.36	0	0	0
235	SLE RA 17	-0.02	-0.13	10.36	0	0	0
235	SLE RA 18	-0.02	-0.13	10.52	0	0	0
235	SLE RA 19	-0.02	-0.13	10.52	0	0	0
235	SLE RA 20	-0.02	-0.13	10.61	0	0	0
235	SLE RA 21	-0.02	-0.13	10.61	0	0	0
235	SLE FR 1	-0.02	-0.13	9.39	0	0	0
235	SLE FR 2	-0.02	-0.13	9.39	0	0	0
235	SLE FR 3	-0.02	-0.13	9.42	0	0	0
235	SLE FR 4	-0.02	-0.13	9.73	0	0	0
235	SLE FR 5	-0.02	-0.13	9.76	0	0	0
235	SLE FR 6	-0.02	-0.13	9.95	0	0	0
235	SLE QP 1	-0.02	-0.13	9.39	0	0	0
235	SLE QP 2	-0.02	-0.13	9.73	0	0	0
235	SLD 1	0.82	0.04	9.41	0	0	0
235	SLD 2	0.92	0.08	9.46	0	0	0
235	SLD 3	0.8	-0.19	9.15	0	0	0
235	SLD 4	0.9	-0.15	9.19	0	0	0
235	SLD 5	0.24	0.27	10.03	0	0	0
235	SLD 6	0.3	0.29	10.06	0	0	0
235	SLD 7	0.19	-0.5	9.15	0	0	0
235	SLD 8	0.26	-0.48	9.17	0	0	0
235	SLD 9	-0.29	0.22	10.28	0	0	0
235	SLD 10	-0.22	0.24	10.31	0	0	0
235	SLD 11	-0.34	-0.55	9.4	0	0	0
235	SLD 12	-0.27	-0.53	9.43	0	0	0
235	SLD 13	-0.94	-0.11	10.26	0	0	0
235	SLD 14	-0.84	-0.07	10.31	0	0	0
235	SLD 15	-0.95	-0.34	10	0	0	0
235	SLD 16	-0.85	-0.3	10.04	0	0	0
235	SLV 1	1.93	0.27	8.98	0	0	0
235	SLV 2	2.17	0.36	9.09	0	0	0
235	SLV 3	1.9	-0.25	8.38	0	0	0
235	SLV 4	2.14	-0.17	8.49	0	0	0
235	SLV 5	0.58	0.77	10.39	0	0	0
235	SLV 6	0.73	0.83	10.46	0	0	0
235	SLV 7	0.47	-0.98	8.4	0	0	0
235	SLV 8	0.62	-0.92	8.47	0	0	0
235	SLV 9	-0.65	0.67	10.99	0	0	0
235	SLV 10	-0.5	0.72	11.06	0	0	0
235	SLV 11	-0.76	-1.09	8.99	0	0	0
235	SLV 12	-0.61	-1.03	9.06	0	0	0
235	SLV 13	-2.17	-0.09	10.97	0	0	0
235	SLV 14	-1.93	0	11.07	0	0	0
235	SLV 15	-2.2	-0.61	10.37	0	0	0
235	SLV 16	-1.97	-0.53	10.47	0	0	0
236	SLU 1	-0.01	-0.14	9.01	0	0	0
236	SLU 2	-0.01	-0.12	9.02	0	0	0
236	SLU 3	-0.01	-0.14	9.2	0	0	0
236	SLU 4	-0.01	-0.13	9.21	0	0	0
236	SLU 5	-0.01	-0.13	9.15	0	0	0
236	SLU 6	-0.01	-0.14	9.33	0	0	0
236	SLU 7	-0.01	-0.13	9.34	0	0	0
236	SLU 8	-0.01	-0.14	9.27	0	0	0
236	SLU 9	-0.01	-0.13	9.28	0	0	0
236	SLU 10	-0.02	-0.13	10.19	0	0	0
236	SLU 11	-0.02	-0.14	10.37	0	0	0
236	SLU 12	-0.02	-0.14	10.38	0	0	0
236	SLU 13	-0.02	-0.13	10.32	0	0	0
236	SLU 14	-0.02	-0.15	10.5	0	0	0
236	SLU 15	-0.02	-0.14	10.51	0	0	0
236	SLU 16	-0.02	-0.15	10.44	0	0	0
236	SLU 17	-0.02	-0.14	10.45	0	0	0
236	SLU 18	-0.02	-0.15	10.68	0	0	0
236	SLU 19	-0.02	-0.14	10.69	0	0	0
236	SLU 20	-0.02	-0.15	10.81	0	0	0
236	SLU 21	-0.02	-0.14	10.82	0	0	0
236	SLU 22	-0.01	-0.14	10.06	0	0	0
236	SLU 23	-0.01	-0.13	10.07	0	0	0
236	SLU 24	-0.01	-0.14	10.26	0	0	0
236	SLU 25	-0.01	-0.13	10.26	0	0	0
236	SLU 26	-0.01	-0.13	10.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLU 27	-0.01	-0.15	10.39	0	0	0
236	SLU 28	-0.01	-0.14	10.4	0	0	0
236	SLU 29	-0.01	-0.15	10.33	0	0	0
236	SLU 30	-0.01	-0.14	10.33	0	0	0
236	SLU 31	-0.02	-0.13	11.25	0	0	0
236	SLU 32	-0.02	-0.15	11.43	0	0	0
236	SLU 33	-0.02	-0.14	11.44	0	0	0
236	SLU 34	-0.02	-0.14	11.38	0	0	0
236	SLU 35	-0.02	-0.15	11.56	0	0	0
236	SLU 36	-0.02	-0.14	11.57	0	0	0
236	SLU 37	-0.02	-0.15	11.5	0	0	0
236	SLU 38	-0.02	-0.14	11.51	0	0	0
236	SLU 39	-0.02	-0.15	11.74	0	0	0
236	SLU 40	-0.02	-0.14	11.75	0	0	0
236	SLU 41	-0.02	-0.15	11.87	0	0	0
236	SLU 42	-0.02	-0.14	11.88	0	0	0
236	SLU 43	-0.02	-0.18	11.34	0	0	0
236	SLU 44	-0.02	-0.16	11.36	0	0	0
236	SLU 45	-0.02	-0.18	11.54	0	0	0
236	SLU 46	-0.02	-0.17	11.55	0	0	0
236	SLU 47	-0.02	-0.17	11.49	0	0	0
236	SLU 48	-0.02	-0.18	11.67	0	0	0
236	SLU 49	-0.02	-0.17	11.68	0	0	0
236	SLU 50	-0.02	-0.18	11.61	0	0	0
236	SLU 51	-0.02	-0.17	11.61	0	0	0
236	SLU 52	-0.02	-0.17	12.53	0	0	0
236	SLU 53	-0.02	-0.18	12.71	0	0	0
236	SLU 54	-0.02	-0.18	12.72	0	0	0
236	SLU 55	-0.02	-0.17	12.66	0	0	0
236	SLU 56	-0.02	-0.19	12.84	0	0	0
236	SLU 57	-0.02	-0.18	12.85	0	0	0
236	SLU 58	-0.02	-0.19	12.78	0	0	0
236	SLU 59	-0.02	-0.18	12.79	0	0	0
236	SLU 60	-0.02	-0.19	13.02	0	0	0
236	SLU 61	-0.03	-0.18	13.03	0	0	0
236	SLU 62	-0.03	-0.19	13.15	0	0	0
236	SLU 63	-0.03	-0.18	13.16	0	0	0
236	SLU 64	-0.02	-0.18	12.4	0	0	0
236	SLU 65	-0.02	-0.17	12.41	0	0	0
236	SLU 66	-0.02	-0.18	12.6	0	0	0
236	SLU 67	-0.02	-0.17	12.6	0	0	0
236	SLU 68	-0.02	-0.17	12.54	0	0	0
236	SLU 69	-0.02	-0.18	12.73	0	0	0
236	SLU 70	-0.02	-0.18	12.73	0	0	0
236	SLU 71	-0.02	-0.19	12.66	0	0	0
236	SLU 72	-0.02	-0.18	12.67	0	0	0
236	SLU 73	-0.02	-0.17	13.59	0	0	0
236	SLU 74	-0.02	-0.19	13.77	0	0	0
236	SLU 75	-0.02	-0.18	13.78	0	0	0
236	SLU 76	-0.02	-0.18	13.72	0	0	0
236	SLU 77	-0.02	-0.19	13.9	0	0	0
236	SLU 78	-0.02	-0.18	13.91	0	0	0
236	SLU 79	-0.02	-0.19	13.84	0	0	0
236	SLU 80	-0.02	-0.18	13.84	0	0	0
236	SLU 81	-0.02	-0.19	14.08	0	0	0
236	SLU 82	-0.03	-0.18	14.08	0	0	0
236	SLU 83	-0.03	-0.19	14.21	0	0	0
236	SLU 84	-0.03	-0.18	14.22	0	0	0
236	SLE RA 1	-0.01	-0.14	9.31	0	0	0
236	SLE RA 2	-0.01	-0.13	9.31	0	0	0
236	SLE RA 3	-0.01	-0.14	9.44	0	0	0
236	SLE RA 4	-0.01	-0.13	9.44	0	0	0
236	SLE RA 5	-0.01	-0.13	9.4	0	0	0
236	SLE RA 6	-0.01	-0.14	9.52	0	0	0
236	SLE RA 7	-0.01	-0.14	9.53	0	0	0
236	SLE RA 8	-0.01	-0.14	9.48	0	0	0
236	SLE RA 9	-0.01	-0.14	9.49	0	0	0
236	SLE RA 10	-0.02	-0.13	10.1	0	0	0
236	SLE RA 11	-0.02	-0.14	10.22	0	0	0
236	SLE RA 12	-0.02	-0.14	10.22	0	0	0
236	SLE RA 13	-0.02	-0.14	10.18	0	0	0
236	SLE RA 14	-0.02	-0.14	10.31	0	0	0
236	SLE RA 15	-0.02	-0.14	10.31	0	0	0
236	SLE RA 16	-0.02	-0.15	10.26	0	0	0
236	SLE RA 17	-0.02	-0.14	10.27	0	0	0
236	SLE RA 18	-0.02	-0.14	10.42	0	0	0
236	SLE RA 19	-0.02	-0.14	10.43	0	0	0
236	SLE RA 20	-0.02	-0.15	10.51	0	0	0
236	SLE RA 21	-0.02	-0.14	10.52	0	0	0
236	SLE FR 1	-0.01	-0.14	9.31	0	0	0
236	SLE FR 2	-0.01	-0.14	9.31	0	0	0
236	SLE FR 3	-0.01	-0.14	9.34	0	0	0
236	SLE FR 4	-0.01	-0.14	9.64	0	0	0
236	SLE FR 5	-0.01	-0.14	9.68	0	0	0
236	SLE FR 6	-0.02	-0.14	9.87	0	0	0
236	SLE QP 1	-0.01	-0.14	9.31	0	0	0
236	SLE QP 2	-0.01	-0.14	9.64	0	0	0
236	SLD 1	0.8	0.04	9.26	0	0	0
236	SLD 2	0.9	0.08	9.3	0	0	0
236	SLD 3	0.79	-0.19	9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLD 4	0.89	-0.15	9.04	0	0	0
236	SLD 5	0.23	0.25	9.91	0	0	0
236	SLD 6	0.3	0.27	9.95	0	0	0
236	SLD 7	0.19	-0.5	9.04	0	0	0
236	SLD 8	0.25	-0.48	9.08	0	0	0
236	SLD 9	-0.28	0.2	10.21	0	0	0
236	SLD 10	-0.22	0.22	10.24	0	0	0
236	SLD 11	-0.33	-0.55	9.34	0	0	0
236	SLD 12	-0.26	-0.53	9.37	0	0	0
236	SLD 13	-0.92	-0.13	10.24	0	0	0
236	SLD 14	-0.82	-0.09	10.29	0	0	0
236	SLD 15	-0.93	-0.36	9.98	0	0	0
236	SLD 16	-0.83	-0.32	10.03	0	0	0
236	SLV 1	1.9	0.27	8.73	0	0	0
236	SLV 2	2.13	0.36	8.84	0	0	0
236	SLV 3	1.86	-0.24	8.14	0	0	0
236	SLV 4	2.1	-0.15	8.25	0	0	0
236	SLV 5	0.57	0.75	10.25	0	0	0
236	SLV 6	0.72	0.8	10.32	0	0	0
236	SLV 7	0.46	-0.96	8.28	0	0	0
236	SLV 8	0.61	-0.91	8.35	0	0	0
236	SLV 9	-0.64	0.63	10.94	0	0	0
236	SLV 10	-0.49	0.68	11.01	0	0	0
236	SLV 11	-0.75	-1.08	8.97	0	0	0
236	SLV 12	-0.6	-1.03	9.04	0	0	0
236	SLV 13	-2.13	-0.13	11.03	0	0	0
236	SLV 14	-1.89	-0.04	11.14	0	0	0
236	SLV 15	-2.16	-0.64	10.44	0	0	0
236	SLV 16	-1.93	-0.55	10.55	0	0	0
237	SLU 1	-0.01	-0.15	8.86	0	0	0
237	SLU 2	-0.01	-0.13	8.87	0	0	0
237	SLU 3	-0.01	-0.15	9.06	0	0	0
237	SLU 4	-0.01	-0.14	9.06	0	0	0
237	SLU 5	-0.01	-0.14	9	0	0	0
237	SLU 6	-0.01	-0.15	9.19	0	0	0
237	SLU 7	-0.01	-0.14	9.19	0	0	0
237	SLU 8	-0.01	-0.15	9.12	0	0	0
237	SLU 9	-0.01	-0.14	9.13	0	0	0
237	SLU 10	-0.02	-0.14	10.03	0	0	0
237	SLU 11	-0.02	-0.15	10.21	0	0	0
237	SLU 12	-0.02	-0.15	10.22	0	0	0
237	SLU 13	-0.02	-0.14	10.16	0	0	0
237	SLU 14	-0.02	-0.16	10.34	0	0	0
237	SLU 15	-0.02	-0.15	10.34	0	0	0
237	SLU 16	-0.02	-0.16	10.28	0	0	0
237	SLU 17	-0.02	-0.15	10.28	0	0	0
237	SLU 18	-0.02	-0.16	10.51	0	0	0
237	SLU 19	-0.02	-0.15	10.52	0	0	0
237	SLU 20	-0.02	-0.16	10.64	0	0	0
237	SLU 21	-0.02	-0.15	10.65	0	0	0
237	SLU 22	-0.01	-0.15	9.91	0	0	0
237	SLU 23	-0.01	-0.14	9.92	0	0	0
237	SLU 24	-0.01	-0.15	10.1	0	0	0
237	SLU 25	-0.01	-0.14	10.11	0	0	0
237	SLU 26	-0.01	-0.14	10.05	0	0	0
237	SLU 27	-0.01	-0.15	10.23	0	0	0
237	SLU 28	-0.01	-0.15	10.24	0	0	0
237	SLU 29	-0.01	-0.16	10.17	0	0	0
237	SLU 30	-0.01	-0.15	10.17	0	0	0
237	SLU 31	-0.02	-0.15	11.07	0	0	0
237	SLU 32	-0.02	-0.16	11.25	0	0	0
237	SLU 33	-0.02	-0.15	11.26	0	0	0
237	SLU 34	-0.02	-0.15	11.2	0	0	0
237	SLU 35	-0.02	-0.16	11.38	0	0	0
237	SLU 36	-0.02	-0.15	11.39	0	0	0
237	SLU 37	-0.02	-0.16	11.32	0	0	0
237	SLU 38	-0.02	-0.16	11.33	0	0	0
237	SLU 39	-0.02	-0.16	11.56	0	0	0
237	SLU 40	-0.02	-0.15	11.56	0	0	0
237	SLU 41	-0.02	-0.16	11.68	0	0	0
237	SLU 42	-0.02	-0.16	11.69	0	0	0
237	SLU 43	-0.02	-0.19	11.16	0	0	0
237	SLU 44	-0.02	-0.17	11.18	0	0	0
237	SLU 45	-0.02	-0.19	11.36	0	0	0
237	SLU 46	-0.02	-0.18	11.36	0	0	0
237	SLU 47	-0.02	-0.18	11.3	0	0	0
237	SLU 48	-0.02	-0.19	11.49	0	0	0
237	SLU 49	-0.02	-0.18	11.49	0	0	0
237	SLU 50	-0.02	-0.19	11.42	0	0	0
237	SLU 51	-0.02	-0.19	11.43	0	0	0
237	SLU 52	-0.02	-0.18	12.33	0	0	0
237	SLU 53	-0.02	-0.2	12.51	0	0	0
237	SLU 54	-0.02	-0.19	12.52	0	0	0
237	SLU 55	-0.02	-0.18	12.46	0	0	0
237	SLU 56	-0.02	-0.2	12.64	0	0	0
237	SLU 57	-0.02	-0.19	12.65	0	0	0
237	SLU 58	-0.02	-0.2	12.58	0	0	0
237	SLU 59	-0.02	-0.19	12.58	0	0	0
237	SLU 60	-0.02	-0.2	12.81	0	0	0
237	SLU 61	-0.02	-0.19	12.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLU 62	-0.02	-0.2	12.94	0	0	0
237	SLU 63	-0.02	-0.19	12.95	0	0	0
237	SLU 64	-0.02	-0.19	12.21	0	0	0
237	SLU 65	-0.02	-0.18	12.22	0	0	0
237	SLU 66	-0.02	-0.19	12.4	0	0	0
237	SLU 67	-0.02	-0.19	12.41	0	0	0
237	SLU 68	-0.02	-0.18	12.35	0	0	0
237	SLU 69	-0.02	-0.2	12.53	0	0	0
237	SLU 70	-0.02	-0.19	12.54	0	0	0
237	SLU 71	-0.02	-0.2	12.47	0	0	0
237	SLU 72	-0.02	-0.19	12.47	0	0	0
237	SLU 73	-0.02	-0.19	13.37	0	0	0
237	SLU 74	-0.02	-0.2	13.55	0	0	0
237	SLU 75	-0.02	-0.19	13.56	0	0	0
237	SLU 76	-0.02	-0.19	13.5	0	0	0
237	SLU 77	-0.02	-0.2	13.68	0	0	0
237	SLU 78	-0.02	-0.2	13.69	0	0	0
237	SLU 79	-0.02	-0.2	13.62	0	0	0
237	SLU 80	-0.02	-0.2	13.63	0	0	0
237	SLU 81	-0.02	-0.2	13.86	0	0	0
237	SLU 82	-0.02	-0.19	13.86	0	0	0
237	SLU 83	-0.02	-0.21	13.99	0	0	0
237	SLU 84	-0.02	-0.2	13.99	0	0	0
237	SLE RA 1	-0.01	-0.15	9.16	0	0	0
237	SLE RA 2	-0.01	-0.14	9.17	0	0	0
237	SLE RA 3	-0.01	-0.15	9.29	0	0	0
237	SLE RA 4	-0.01	-0.14	9.29	0	0	0
237	SLE RA 5	-0.01	-0.14	9.26	0	0	0
237	SLE RA 6	-0.01	-0.15	9.38	0	0	0
237	SLE RA 7	-0.01	-0.14	9.38	0	0	0
237	SLE RA 8	-0.01	-0.15	9.33	0	0	0
237	SLE RA 9	-0.01	-0.15	9.34	0	0	0
237	SLE RA 10	-0.02	-0.14	9.94	0	0	0
237	SLE RA 11	-0.02	-0.15	10.06	0	0	0
237	SLE RA 12	-0.02	-0.15	10.06	0	0	0
237	SLE RA 13	-0.02	-0.15	10.02	0	0	0
237	SLE RA 14	-0.02	-0.15	10.15	0	0	0
237	SLE RA 15	-0.02	-0.15	10.15	0	0	0
237	SLE RA 16	-0.02	-0.16	10.1	0	0	0
237	SLE RA 17	-0.02	-0.15	10.11	0	0	0
237	SLE RA 18	-0.02	-0.15	10.26	0	0	0
237	SLE RA 19	-0.02	-0.15	10.26	0	0	0
237	SLE RA 20	-0.02	-0.16	10.35	0	0	0
237	SLE RA 21	-0.02	-0.15	10.35	0	0	0
237	SLE FR 1	-0.01	-0.15	9.16	0	0	0
237	SLE FR 2	-0.01	-0.15	9.16	0	0	0
237	SLE FR 3	-0.01	-0.15	9.2	0	0	0
237	SLE FR 4	-0.01	-0.15	9.49	0	0	0
237	SLE FR 5	-0.01	-0.15	9.53	0	0	0
237	SLE FR 6	-0.01	-0.15	9.71	0	0	0
237	SLE QP 1	-0.01	-0.15	9.16	0	0	0
237	SLE QP 2	-0.01	-0.15	9.49	0	0	0
237	SLD 1	0.78	0.03	9.04	0	0	0
237	SLD 2	0.88	0.07	9.09	0	0	0
237	SLD 3	0.77	-0.19	8.79	0	0	0
237	SLD 4	0.86	-0.14	8.83	0	0	0
237	SLD 5	0.23	0.23	9.74	0	0	0
237	SLD 6	0.29	0.26	9.77	0	0	0
237	SLD 7	0.18	-0.5	8.88	0	0	0
237	SLD 8	0.25	-0.47	8.91	0	0	0
237	SLD 9	-0.27	0.17	10.07	0	0	0
237	SLD 10	-0.21	0.2	10.1	0	0	0
237	SLD 11	-0.32	-0.55	9.21	0	0	0
237	SLD 12	-0.25	-0.53	9.25	0	0	0
237	SLD 13	-0.89	-0.15	10.15	0	0	0
237	SLD 14	-0.79	-0.11	10.2	0	0	0
237	SLD 15	-0.9	-0.37	9.89	0	0	0
237	SLD 16	-0.81	-0.33	9.94	0	0	0
237	SLV 1	1.84	0.27	8.43	0	0	0
237	SLV 2	2.07	0.37	8.54	0	0	0
237	SLV 3	1.81	-0.23	7.85	0	0	0
237	SLV 4	2.03	-0.13	7.96	0	0	0
237	SLV 5	0.55	0.71	10.04	0	0	0
237	SLV 6	0.7	0.77	10.11	0	0	0
237	SLV 7	0.45	-0.94	8.1	0	0	0
237	SLV 8	0.59	-0.88	8.17	0	0	0
237	SLV 9	-0.62	0.58	10.81	0	0	0
237	SLV 10	-0.47	0.64	10.89	0	0	0
237	SLV 11	-0.72	-1.07	8.87	0	0	0
237	SLV 12	-0.58	-1.01	8.95	0	0	0
237	SLV 13	-2.06	-0.17	11.02	0	0	0
237	SLV 14	-1.84	-0.07	11.13	0	0	0
237	SLV 15	-2.09	-0.66	10.44	0	0	0
237	SLV 16	-1.87	-0.56	10.55	0	0	0
238	SLU 1	-0.01	-0.15	8.77	0	0	0
238	SLU 2	-0.01	-0.14	8.78	0	0	0
238	SLU 3	-0.01	-0.16	8.96	0	0	0
238	SLU 4	-0.01	-0.15	8.96	0	0	0
238	SLU 5	-0.01	-0.14	8.91	0	0	0
238	SLU 6	-0.01	-0.16	9.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 7	-0.01	-0.15	9.09	0	0	0
238	SLU 8	-0.01	-0.16	9.02	0	0	0
238	SLU 9	-0.01	-0.15	9.03	0	0	0
238	SLU 10	-0.02	-0.15	9.92	0	0	0
238	SLU 11	-0.02	-0.16	10.1	0	0	0
238	SLU 12	-0.02	-0.16	10.1	0	0	0
238	SLU 13	-0.02	-0.15	10.05	0	0	0
238	SLU 14	-0.02	-0.17	10.23	0	0	0
238	SLU 15	-0.02	-0.16	10.23	0	0	0
238	SLU 16	-0.02	-0.17	10.16	0	0	0
238	SLU 17	-0.02	-0.16	10.17	0	0	0
238	SLU 18	-0.02	-0.17	10.4	0	0	0
238	SLU 19	-0.02	-0.16	10.4	0	0	0
238	SLU 20	-0.02	-0.17	10.52	0	0	0
238	SLU 21	-0.02	-0.16	10.53	0	0	0
238	SLU 22	-0.01	-0.16	9.8	0	0	0
238	SLU 23	-0.01	-0.15	9.81	0	0	0
238	SLU 24	-0.01	-0.16	9.99	0	0	0
238	SLU 25	-0.01	-0.16	10	0	0	0
238	SLU 26	-0.01	-0.15	9.94	0	0	0
238	SLU 27	-0.01	-0.17	10.12	0	0	0
238	SLU 28	-0.01	-0.16	10.13	0	0	0
238	SLU 29	-0.01	-0.17	10.06	0	0	0
238	SLU 30	-0.01	-0.16	10.07	0	0	0
238	SLU 31	-0.02	-0.16	10.95	0	0	0
238	SLU 32	-0.02	-0.17	11.13	0	0	0
238	SLU 33	-0.02	-0.16	11.14	0	0	0
238	SLU 34	-0.02	-0.16	11.08	0	0	0
238	SLU 35	-0.02	-0.17	11.26	0	0	0
238	SLU 36	-0.02	-0.17	11.27	0	0	0
238	SLU 37	-0.02	-0.17	11.2	0	0	0
238	SLU 38	-0.02	-0.17	11.21	0	0	0
238	SLU 39	-0.02	-0.17	11.43	0	0	0
238	SLU 40	-0.02	-0.16	11.44	0	0	0
238	SLU 41	-0.02	-0.18	11.56	0	0	0
238	SLU 42	-0.02	-0.17	11.57	0	0	0
238	SLU 43	-0.01	-0.2	11.04	0	0	0
238	SLU 44	-0.02	-0.19	11.05	0	0	0
238	SLU 45	-0.01	-0.2	11.23	0	0	0
238	SLU 46	-0.01	-0.19	11.24	0	0	0
238	SLU 47	-0.02	-0.19	11.18	0	0	0
238	SLU 48	-0.01	-0.2	11.36	0	0	0
238	SLU 49	-0.02	-0.2	11.37	0	0	0
238	SLU 50	-0.02	-0.2	11.3	0	0	0
238	SLU 51	-0.02	-0.2	11.31	0	0	0
238	SLU 52	-0.02	-0.19	12.19	0	0	0
238	SLU 53	-0.02	-0.21	12.37	0	0	0
238	SLU 54	-0.02	-0.2	12.38	0	0	0
238	SLU 55	-0.02	-0.2	12.32	0	0	0
238	SLU 56	-0.02	-0.21	12.5	0	0	0
238	SLU 57	-0.02	-0.2	12.51	0	0	0
238	SLU 58	-0.02	-0.21	12.44	0	0	0
238	SLU 59	-0.02	-0.2	12.44	0	0	0
238	SLU 60	-0.02	-0.21	12.67	0	0	0
238	SLU 61	-0.02	-0.2	12.68	0	0	0
238	SLU 62	-0.02	-0.21	12.8	0	0	0
238	SLU 63	-0.02	-0.21	12.81	0	0	0
238	SLU 64	-0.01	-0.2	12.08	0	0	0
238	SLU 65	-0.02	-0.19	12.09	0	0	0
238	SLU 66	-0.01	-0.21	12.27	0	0	0
238	SLU 67	-0.01	-0.2	12.28	0	0	0
238	SLU 68	-0.02	-0.2	12.22	0	0	0
238	SLU 69	-0.01	-0.21	12.4	0	0	0
238	SLU 70	-0.02	-0.2	12.4	0	0	0
238	SLU 71	-0.02	-0.21	12.34	0	0	0
238	SLU 72	-0.02	-0.2	12.34	0	0	0
238	SLU 73	-0.02	-0.2	13.23	0	0	0
238	SLU 74	-0.02	-0.21	13.41	0	0	0
238	SLU 75	-0.02	-0.21	13.42	0	0	0
238	SLU 76	-0.02	-0.2	13.36	0	0	0
238	SLU 77	-0.02	-0.22	13.54	0	0	0
238	SLU 78	-0.02	-0.21	13.54	0	0	0
238	SLU 79	-0.02	-0.22	13.48	0	0	0
238	SLU 80	-0.02	-0.21	13.48	0	0	0
238	SLU 81	-0.02	-0.22	13.71	0	0	0
238	SLU 82	-0.02	-0.21	13.71	0	0	0
238	SLU 83	-0.02	-0.22	13.84	0	0	0
238	SLU 84	-0.02	-0.21	13.84	0	0	0
238	SLE RA 1	-0.01	-0.16	9.06	0	0	0
238	SLE RA 2	-0.01	-0.15	9.07	0	0	0
238	SLE RA 3	-0.01	-0.16	9.19	0	0	0
238	SLE RA 4	-0.01	-0.15	9.19	0	0	0
238	SLE RA 5	-0.01	-0.15	9.16	0	0	0
238	SLE RA 6	-0.01	-0.16	9.28	0	0	0
238	SLE RA 7	-0.01	-0.15	9.28	0	0	0
238	SLE RA 8	-0.01	-0.16	9.24	0	0	0
238	SLE RA 9	-0.01	-0.15	9.24	0	0	0
238	SLE RA 10	-0.01	-0.15	9.83	0	0	0
238	SLE RA 11	-0.01	-0.16	9.95	0	0	0
238	SLE RA 12	-0.01	-0.16	9.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLE RA 13	-0.02	-0.16	9.92	0	0	0
238	SLE RA 14	-0.01	-0.16	10.04	0	0	0
238	SLE RA 15	-0.02	-0.16	10.04	0	0	0
238	SLE RA 16	-0.01	-0.17	9.99	0	0	0
238	SLE RA 17	-0.02	-0.16	10	0	0	0
238	SLE RA 18	-0.02	-0.16	10.15	0	0	0
238	SLE RA 19	-0.02	-0.16	10.15	0	0	0
238	SLE RA 20	-0.02	-0.17	10.24	0	0	0
238	SLE RA 21	-0.02	-0.16	10.24	0	0	0
238	SLE FR 1	-0.01	-0.16	9.06	0	0	0
238	SLE FR 2	-0.01	-0.15	9.07	0	0	0
238	SLE FR 3	-0.01	-0.16	9.1	0	0	0
238	SLE FR 4	-0.01	-0.16	9.39	0	0	0
238	SLE FR 5	-0.01	-0.16	9.42	0	0	0
238	SLE FR 6	-0.01	-0.16	9.61	0	0	0
238	SLE QP 1	-0.01	-0.16	9.06	0	0	0
238	SLE QP 2	-0.01	-0.16	9.39	0	0	0
238	SLD 1	0.76	0.03	8.88	0	0	0
238	SLD 2	0.85	0.07	8.93	0	0	0
238	SLD 3	0.75	-0.19	8.62	0	0	0
238	SLD 4	0.84	-0.14	8.67	0	0	0
238	SLD 5	0.22	0.21	9.61	0	0	0
238	SLD 6	0.28	0.24	9.65	0	0	0
238	SLD 7	0.18	-0.49	8.77	0	0	0
238	SLD 8	0.24	-0.46	8.8	0	0	0
238	SLD 9	-0.26	0.15	9.98	0	0	0
238	SLD 10	-0.2	0.18	10.01	0	0	0
238	SLD 11	-0.31	-0.56	9.13	0	0	0
238	SLD 12	-0.25	-0.53	9.17	0	0	0
238	SLD 13	-0.86	-0.18	10.11	0	0	0
238	SLD 14	-0.77	-0.13	10.16	0	0	0
238	SLD 15	-0.88	-0.39	9.85	0	0	0
238	SLD 16	-0.78	-0.34	9.9	0	0	0
238	SLV 1	1.79	0.27	8.18	0	0	0
238	SLV 2	2.01	0.37	8.3	0	0	0
238	SLV 3	1.76	-0.21	7.61	0	0	0
238	SLV 4	1.98	-0.11	7.72	0	0	0
238	SLV 5	0.54	0.68	9.88	0	0	0
238	SLV 6	0.68	0.75	9.96	0	0	0
238	SLV 7	0.44	-0.92	7.96	0	0	0
238	SLV 8	0.58	-0.85	8.04	0	0	0
238	SLV 9	-0.6	0.54	10.74	0	0	0
238	SLV 10	-0.46	0.61	10.82	0	0	0
238	SLV 11	-0.7	-1.06	8.82	0	0	0
238	SLV 12	-0.56	-1	8.9	0	0	0
238	SLV 13	-2.01	-0.21	11.06	0	0	0
238	SLV 14	-1.79	-0.1	11.17	0	0	0
238	SLV 15	-2.04	-0.69	10.48	0	0	0
238	SLV 16	-1.82	-0.58	10.6	0	0	0
239	SLU 1	-0.01	-0.08	4.4	0	0	0
239	SLU 2	-0.01	-0.08	4.41	0	0	0
239	SLU 3	-0.01	-0.08	4.5	0	0	0
239	SLU 4	-0.01	-0.08	4.5	0	0	0
239	SLU 5	-0.01	-0.08	4.47	0	0	0
239	SLU 6	-0.01	-0.09	4.56	0	0	0
239	SLU 7	-0.01	-0.08	4.57	0	0	0
239	SLU 8	-0.01	-0.09	4.53	0	0	0
239	SLU 9	-0.01	-0.08	4.54	0	0	0
239	SLU 10	-0.01	-0.08	4.98	0	0	0
239	SLU 11	-0.01	-0.09	5.07	0	0	0
239	SLU 12	-0.01	-0.09	5.08	0	0	0
239	SLU 13	-0.01	-0.08	5.05	0	0	0
239	SLU 14	-0.01	-0.09	5.14	0	0	0
239	SLU 15	-0.01	-0.09	5.14	0	0	0
239	SLU 16	-0.01	-0.09	5.11	0	0	0
239	SLU 17	-0.01	-0.09	5.11	0	0	0
239	SLU 18	-0.01	-0.09	5.22	0	0	0
239	SLU 19	-0.01	-0.09	5.22	0	0	0
239	SLU 20	-0.01	-0.09	5.29	0	0	0
239	SLU 21	-0.01	-0.09	5.29	0	0	0
239	SLU 22	-0.01	-0.09	4.93	0	0	0
239	SLU 23	-0.01	-0.08	4.93	0	0	0
239	SLU 24	-0.01	-0.09	5.02	0	0	0
239	SLU 25	-0.01	-0.08	5.03	0	0	0
239	SLU 26	-0.01	-0.08	5	0	0	0
239	SLU 27	-0.01	-0.09	5.09	0	0	0
239	SLU 28	-0.01	-0.09	5.09	0	0	0
239	SLU 29	-0.01	-0.09	5.06	0	0	0
239	SLU 30	-0.01	-0.09	5.06	0	0	0
239	SLU 31	-0.01	-0.09	5.5	0	0	0
239	SLU 32	-0.01	-0.09	5.6	0	0	0
239	SLU 33	-0.01	-0.09	5.6	0	0	0
239	SLU 34	-0.01	-0.09	5.57	0	0	0
239	SLU 35	-0.01	-0.09	5.66	0	0	0
239	SLU 36	-0.01	-0.09	5.66	0	0	0
239	SLU 37	-0.01	-0.09	5.63	0	0	0
239	SLU 38	-0.01	-0.09	5.63	0	0	0
239	SLU 39	-0.01	-0.09	5.74	0	0	0
239	SLU 40	-0.01	-0.09	5.75	0	0	0
239	SLU 41	-0.01	-0.1	5.81	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLU 42	-0.01	-0.09	5.81	0	0	0
239	SLU 43	-0.01	-0.11	5.55	0	0	0
239	SLU 44	-0.01	-0.1	5.55	0	0	0
239	SLU 45	-0.01	-0.11	5.64	0	0	0
239	SLU 46	-0.01	-0.1	5.64	0	0	0
239	SLU 47	-0.01	-0.1	5.62	0	0	0
239	SLU 48	-0.01	-0.11	5.71	0	0	0
239	SLU 49	-0.01	-0.11	5.71	0	0	0
239	SLU 50	-0.01	-0.11	5.68	0	0	0
239	SLU 51	-0.01	-0.11	5.68	0	0	0
239	SLU 52	-0.01	-0.11	6.12	0	0	0
239	SLU 53	-0.01	-0.11	6.21	0	0	0
239	SLU 54	-0.01	-0.11	6.22	0	0	0
239	SLU 55	-0.01	-0.11	6.19	0	0	0
239	SLU 56	-0.01	-0.11	6.28	0	0	0
239	SLU 57	-0.01	-0.11	6.28	0	0	0
239	SLU 58	-0.01	-0.11	6.25	0	0	0
239	SLU 59	-0.01	-0.11	6.25	0	0	0
239	SLU 60	-0.01	-0.11	6.36	0	0	0
239	SLU 61	-0.01	-0.11	6.37	0	0	0
239	SLU 62	-0.01	-0.11	6.43	0	0	0
239	SLU 63	-0.01	-0.11	6.43	0	0	0
239	SLU 64	-0.01	-0.11	6.07	0	0	0
239	SLU 65	-0.01	-0.1	6.07	0	0	0
239	SLU 66	-0.01	-0.11	6.17	0	0	0
239	SLU 67	-0.01	-0.11	6.17	0	0	0
239	SLU 68	-0.01	-0.11	6.14	0	0	0
239	SLU 69	-0.01	-0.11	6.23	0	0	0
239	SLU 70	-0.01	-0.11	6.23	0	0	0
239	SLU 71	-0.01	-0.11	6.2	0	0	0
239	SLU 72	-0.01	-0.11	6.2	0	0	0
239	SLU 73	-0.01	-0.11	6.65	0	0	0
239	SLU 74	-0.01	-0.12	6.74	0	0	0
239	SLU 75	-0.01	-0.11	6.74	0	0	0
239	SLU 76	-0.01	-0.11	6.71	0	0	0
239	SLU 77	-0.01	-0.12	6.8	0	0	0
239	SLU 78	-0.01	-0.11	6.8	0	0	0
239	SLU 79	-0.01	-0.12	6.77	0	0	0
239	SLU 80	-0.01	-0.11	6.77	0	0	0
239	SLU 81	-0.01	-0.12	6.89	0	0	0
239	SLU 82	-0.01	-0.11	6.89	0	0	0
239	SLU 83	-0.01	-0.12	6.95	0	0	0
239	SLU 84	-0.01	-0.12	6.95	0	0	0
239	SLE RA 1	-0.01	-0.08	4.55	0	0	0
239	SLE RA 2	-0.01	-0.08	4.56	0	0	0
239	SLE RA 3	-0.01	-0.08	4.62	0	0	0
239	SLE RA 4	-0.01	-0.08	4.62	0	0	0
239	SLE RA 5	-0.01	-0.08	4.6	0	0	0
239	SLE RA 6	-0.01	-0.09	4.66	0	0	0
239	SLE RA 7	-0.01	-0.08	4.66	0	0	0
239	SLE RA 8	-0.01	-0.09	4.64	0	0	0
239	SLE RA 9	-0.01	-0.08	4.64	0	0	0
239	SLE RA 10	-0.01	-0.08	4.94	0	0	0
239	SLE RA 11	-0.01	-0.09	5	0	0	0
239	SLE RA 12	-0.01	-0.09	5	0	0	0
239	SLE RA 13	-0.01	-0.08	4.98	0	0	0
239	SLE RA 14	-0.01	-0.09	5.04	0	0	0
239	SLE RA 15	-0.01	-0.09	5.04	0	0	0
239	SLE RA 16	-0.01	-0.09	5.02	0	0	0
239	SLE RA 17	-0.01	-0.09	5.02	0	0	0
239	SLE RA 18	-0.01	-0.09	5.1	0	0	0
239	SLE RA 19	-0.01	-0.09	5.1	0	0	0
239	SLE RA 20	-0.01	-0.09	5.14	0	0	0
239	SLE RA 21	-0.01	-0.09	5.14	0	0	0
239	SLE FR 1	-0.01	-0.08	4.55	0	0	0
239	SLE FR 2	-0.01	-0.08	4.55	0	0	0
239	SLE FR 3	-0.01	-0.08	4.57	0	0	0
239	SLE FR 4	-0.01	-0.08	4.72	0	0	0
239	SLE FR 5	-0.01	-0.09	4.73	0	0	0
239	SLE FR 6	-0.01	-0.09	4.83	0	0	0
239	SLE QP 1	-0.01	-0.08	4.55	0	0	0
239	SLE QP 2	-0.01	-0.09	4.72	0	0	0
239	SLD 1	0.38	0.01	4.43	0	0	0
239	SLD 2	0.42	0.04	4.45	0	0	0
239	SLD 3	0.37	-0.09	4.3	0	0	0
239	SLD 4	0.42	-0.07	4.33	0	0	0
239	SLD 5	0.11	0.1	4.82	0	0	0
239	SLD 6	0.14	0.11	4.84	0	0	0
239	SLD 7	0.09	-0.25	4.39	0	0	0
239	SLD 8	0.12	-0.23	4.41	0	0	0
239	SLD 9	-0.13	0.06	5.02	0	0	0
239	SLD 10	-0.1	0.08	5.04	0	0	0
239	SLD 11	-0.15	-0.28	4.6	0	0	0
239	SLD 12	-0.12	-0.27	4.61	0	0	0
239	SLD 13	-0.43	-0.1	5.11	0	0	0
239	SLD 14	-0.38	-0.08	5.14	0	0	0
239	SLD 15	-0.43	-0.21	4.98	0	0	0
239	SLD 16	-0.39	-0.18	5.01	0	0	0
239	SLV 1	0.89	0.14	4.03	0	0	0
239	SLV 2	0.99	0.19	4.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLV 3	0.87	-0.1	3.74	0	0	0
239	SLV 4	0.98	-0.04	3.81	0	0	0
239	SLV 5	0.27	0.33	4.94	0	0	0
239	SLV 6	0.34	0.37	4.98	0	0	0
239	SLV 7	0.22	-0.46	3.97	0	0	0
239	SLV 8	0.28	-0.42	4.01	0	0	0
239	SLV 9	-0.3	0.25	5.42	0	0	0
239	SLV 10	-0.23	0.29	5.46	0	0	0
239	SLV 11	-0.35	-0.54	4.45	0	0	0
239	SLV 12	-0.28	-0.5	4.49	0	0	0
239	SLV 13	-0.99	-0.13	5.63	0	0	0
239	SLV 14	-0.88	-0.07	5.69	0	0	0
239	SLV 15	-1.01	-0.36	5.34	0	0	0
239	SLV 16	-0.9	-0.31	5.4	0	0	0
240	SLU 1	-0.14	-0.27	13.61	0	0	0
240	SLU 2	-0.14	-0.25	13.63	0	0	0
240	SLU 3	-0.15	-0.27	13.9	0	0	0
240	SLU 4	-0.15	-0.26	13.91	0	0	0
240	SLU 5	-0.14	-0.26	13.83	0	0	0
240	SLU 6	-0.15	-0.28	14.11	0	0	0
240	SLU 7	-0.15	-0.27	14.11	0	0	0
240	SLU 8	-0.15	-0.28	14.01	0	0	0
240	SLU 9	-0.15	-0.27	14.02	0	0	0
240	SLU 10	-0.15	-0.27	15.41	0	0	0
240	SLU 11	-0.16	-0.29	15.69	0	0	0
240	SLU 12	-0.16	-0.28	15.7	0	0	0
240	SLU 13	-0.15	-0.28	15.61	0	0	0
240	SLU 14	-0.16	-0.3	15.89	0	0	0
240	SLU 15	-0.16	-0.29	15.9	0	0	0
240	SLU 16	-0.16	-0.3	15.8	0	0	0
240	SLU 17	-0.16	-0.29	15.81	0	0	0
240	SLU 18	-0.16	-0.3	16.16	0	0	0
240	SLU 19	-0.16	-0.29	16.17	0	0	0
240	SLU 20	-0.16	-0.3	16.36	0	0	0
240	SLU 21	-0.16	-0.29	16.37	0	0	0
240	SLU 22	-0.16	-0.28	15.22	0	0	0
240	SLU 23	-0.16	-0.26	15.23	0	0	0
240	SLU 24	-0.17	-0.29	15.51	0	0	0
240	SLU 25	-0.17	-0.28	15.52	0	0	0
240	SLU 26	-0.16	-0.27	15.43	0	0	0
240	SLU 27	-0.17	-0.29	15.71	0	0	0
240	SLU 28	-0.17	-0.28	15.72	0	0	0
240	SLU 29	-0.17	-0.29	15.62	0	0	0
240	SLU 30	-0.17	-0.28	15.63	0	0	0
240	SLU 31	-0.17	-0.28	17.02	0	0	0
240	SLU 32	-0.18	-0.31	17.29	0	0	0
240	SLU 33	-0.18	-0.29	17.3	0	0	0
240	SLU 34	-0.17	-0.29	17.22	0	0	0
240	SLU 35	-0.18	-0.31	17.5	0	0	0
240	SLU 36	-0.18	-0.3	17.5	0	0	0
240	SLU 37	-0.18	-0.31	17.4	0	0	0
240	SLU 38	-0.18	-0.3	17.41	0	0	0
240	SLU 39	-0.18	-0.31	17.77	0	0	0
240	SLU 40	-0.18	-0.3	17.78	0	0	0
240	SLU 41	-0.18	-0.32	17.97	0	0	0
240	SLU 42	-0.18	-0.3	17.98	0	0	0
240	SLU 43	-0.18	-0.35	17.15	0	0	0
240	SLU 44	-0.18	-0.33	17.16	0	0	0
240	SLU 45	-0.18	-0.35	17.44	0	0	0
240	SLU 46	-0.18	-0.34	17.45	0	0	0
240	SLU 47	-0.18	-0.33	17.36	0	0	0
240	SLU 48	-0.18	-0.35	17.64	0	0	0
240	SLU 49	-0.18	-0.34	17.65	0	0	0
240	SLU 50	-0.18	-0.36	17.55	0	0	0
240	SLU 51	-0.18	-0.34	17.55	0	0	0
240	SLU 52	-0.19	-0.35	18.94	0	0	0
240	SLU 53	-0.19	-0.37	19.22	0	0	0
240	SLU 54	-0.19	-0.36	19.23	0	0	0
240	SLU 55	-0.19	-0.35	19.14	0	0	0
240	SLU 56	-0.2	-0.37	19.42	0	0	0
240	SLU 57	-0.2	-0.36	19.43	0	0	0
240	SLU 58	-0.19	-0.37	19.33	0	0	0
240	SLU 59	-0.19	-0.36	19.34	0	0	0
240	SLU 60	-0.2	-0.37	19.69	0	0	0
240	SLU 61	-0.19	-0.36	19.7	0	0	0
240	SLU 62	-0.2	-0.38	19.9	0	0	0
240	SLU 63	-0.2	-0.37	19.9	0	0	0
240	SLU 64	-0.2	-0.36	18.75	0	0	0
240	SLU 65	-0.2	-0.34	18.76	0	0	0
240	SLU 66	-0.2	-0.36	19.04	0	0	0
240	SLU 67	-0.2	-0.35	19.05	0	0	0
240	SLU 68	-0.2	-0.35	18.96	0	0	0
240	SLU 69	-0.2	-0.37	19.24	0	0	0
240	SLU 70	-0.2	-0.36	19.25	0	0	0
240	SLU 71	-0.2	-0.37	19.15	0	0	0
240	SLU 72	-0.2	-0.36	19.16	0	0	0
240	SLU 73	-0.21	-0.36	20.55	0	0	0
240	SLU 74	-0.21	-0.38	20.83	0	0	0
240	SLU 75	-0.21	-0.37	20.84	0	0	0
240	SLU 76	-0.21	-0.37	20.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLU 77	-0.22	-0.39	21.03	0	0	0
240	SLU 78	-0.22	-0.38	21.04	0	0	0
240	SLU 79	-0.21	-0.39	20.94	0	0	0
240	SLU 80	-0.21	-0.38	20.94	0	0	0
240	SLU 81	-0.22	-0.39	21.3	0	0	0
240	SLU 82	-0.21	-0.38	21.31	0	0	0
240	SLU 83	-0.22	-0.39	21.5	0	0	0
240	SLU 84	-0.22	-0.38	21.51	0	0	0
240	SLE RA 1	-0.15	-0.27	14.07	0	0	0
240	SLE RA 2	-0.15	-0.26	14.08	0	0	0
240	SLE RA 3	-0.15	-0.28	14.27	0	0	0
240	SLE RA 4	-0.15	-0.27	14.27	0	0	0
240	SLE RA 5	-0.15	-0.26	14.21	0	0	0
240	SLE RA 6	-0.15	-0.28	14.4	0	0	0
240	SLE RA 7	-0.15	-0.27	14.4	0	0	0
240	SLE RA 8	-0.15	-0.28	14.34	0	0	0
240	SLE RA 9	-0.15	-0.27	14.34	0	0	0
240	SLE RA 10	-0.16	-0.27	15.27	0	0	0
240	SLE RA 11	-0.16	-0.29	15.46	0	0	0
240	SLE RA 12	-0.16	-0.28	15.46	0	0	0
240	SLE RA 13	-0.16	-0.28	15.4	0	0	0
240	SLE RA 14	-0.16	-0.29	15.59	0	0	0
240	SLE RA 15	-0.16	-0.28	15.59	0	0	0
240	SLE RA 16	-0.16	-0.29	15.53	0	0	0
240	SLE RA 17	-0.16	-0.29	15.53	0	0	0
240	SLE RA 18	-0.16	-0.29	15.77	0	0	0
240	SLE RA 19	-0.16	-0.29	15.78	0	0	0
240	SLE RA 20	-0.16	-0.3	15.9	0	0	0
240	SLE RA 21	-0.16	-0.29	15.91	0	0	0
240	SLE FR 1	-0.15	-0.27	14.07	0	0	0
240	SLE FR 2	-0.15	-0.27	14.07	0	0	0
240	SLE FR 3	-0.15	-0.28	14.12	0	0	0
240	SLE FR 4	-0.15	-0.28	14.58	0	0	0
240	SLE FR 5	-0.15	-0.28	14.63	0	0	0
240	SLE FR 6	-0.15	-0.28	14.92	0	0	0
240	SLE QP 1	-0.15	-0.27	14.07	0	0	0
240	SLE QP 2	-0.15	-0.28	14.58	0	0	0
240	SLD 1	0.98	-0.22	15.57	0	0	0
240	SLD 2	1.13	-0.29	15.5	0	0	0
240	SLD 3	1.01	-0.55	15.2	0	0	0
240	SLD 4	1.15	-0.62	15.13	0	0	0
240	SLD 5	0.13	0.26	15.45	0	0	0
240	SLD 6	0.22	0.21	15.4	0	0	0
240	SLD 7	0.2	-0.86	14.22	0	0	0
240	SLD 8	0.29	-0.91	14.17	0	0	0
240	SLD 9	-0.6	0.35	14.99	0	0	0
240	SLD 10	-0.51	0.3	14.94	0	0	0
240	SLD 11	-0.53	-0.77	13.76	0	0	0
240	SLD 12	-0.44	-0.82	13.71	0	0	0
240	SLD 13	-1.45	0.07	14.03	0	0	0
240	SLD 14	-1.31	-0.01	13.96	0	0	0
240	SLD 15	-1.43	-0.27	13.67	0	0	0
240	SLD 16	-1.29	-0.34	13.59	0	0	0
240	SLV 1	2.51	-0.15	16.88	0	0	0
240	SLV 2	2.84	-0.31	16.71	0	0	0
240	SLV 3	2.56	-0.91	16.05	0	0	0
240	SLV 4	2.89	-1.08	15.87	0	0	0
240	SLV 5	0.51	0.95	16.57	0	0	0
240	SLV 6	0.73	0.84	16.46	0	0	0
240	SLV 7	0.68	-1.6	13.78	0	0	0
240	SLV 8	0.89	-1.71	13.67	0	0	0
240	SLV 9	-1.2	1.15	15.49	0	0	0
240	SLV 10	-0.98	1.04	15.38	0	0	0
240	SLV 11	-1.03	-1.4	12.71	0	0	0
240	SLV 12	-0.82	-1.51	12.59	0	0	0
240	SLV 13	-3.19	0.52	13.29	0	0	0
240	SLV 14	-2.86	0.35	13.11	0	0	0
240	SLV 15	-3.14	-0.25	12.45	0	0	0
240	SLV 16	-2.81	-0.41	12.28	0	0	0
240	CRTFP Ux+	0	0	0	0	0	0
240	CRTFP Ux-	0	0	0	0	0	0
241	SLU 1	-0.14	-0.23	12.87	0	0	0
241	SLU 2	-0.14	-0.21	12.89	0	0	0
241	SLU 3	-0.14	-0.23	13.15	0	0	0
241	SLU 4	-0.14	-0.22	13.16	0	0	0
241	SLU 5	-0.14	-0.22	13.08	0	0	0
241	SLU 6	-0.14	-0.24	13.34	0	0	0
241	SLU 7	-0.14	-0.23	13.35	0	0	0
241	SLU 8	-0.14	-0.24	13.25	0	0	0
241	SLU 9	-0.14	-0.23	13.26	0	0	0
241	SLU 10	-0.15	-0.23	14.58	0	0	0
241	SLU 11	-0.15	-0.25	14.84	0	0	0
241	SLU 12	-0.15	-0.24	14.85	0	0	0
241	SLU 13	-0.15	-0.23	14.77	0	0	0
241	SLU 14	-0.15	-0.25	15.03	0	0	0
241	SLU 15	-0.15	-0.24	15.04	0	0	0
241	SLU 16	-0.15	-0.25	14.94	0	0	0
241	SLU 17	-0.15	-0.24	14.95	0	0	0
241	SLU 18	-0.15	-0.25	15.29	0	0	0
241	SLU 19	-0.15	-0.24	15.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLU 20	-0.16	-0.26	15.48	0	0	0
241	SLU 21	-0.15	-0.24	15.48	0	0	0
241	SLU 22	-0.16	-0.24	14.38	0	0	0
241	SLU 23	-0.15	-0.22	14.4	0	0	0
241	SLU 24	-0.16	-0.24	14.66	0	0	0
241	SLU 25	-0.16	-0.23	14.67	0	0	0
241	SLU 26	-0.16	-0.22	14.59	0	0	0
241	SLU 27	-0.16	-0.24	14.85	0	0	0
241	SLU 28	-0.16	-0.23	14.86	0	0	0
241	SLU 29	-0.16	-0.25	14.76	0	0	0
241	SLU 30	-0.16	-0.24	14.77	0	0	0
241	SLU 31	-0.17	-0.24	16.09	0	0	0
241	SLU 32	-0.17	-0.26	16.35	0	0	0
241	SLU 33	-0.17	-0.25	16.36	0	0	0
241	SLU 34	-0.17	-0.24	16.28	0	0	0
241	SLU 35	-0.17	-0.26	16.54	0	0	0
241	SLU 36	-0.17	-0.25	16.55	0	0	0
241	SLU 37	-0.17	-0.26	16.45	0	0	0
241	SLU 38	-0.17	-0.25	16.46	0	0	0
241	SLU 39	-0.17	-0.26	16.8	0	0	0
241	SLU 40	-0.17	-0.25	16.81	0	0	0
241	SLU 41	-0.17	-0.26	16.99	0	0	0
241	SLU 42	-0.17	-0.25	16.99	0	0	0
241	SLU 43	-0.17	-0.3	16.22	0	0	0
241	SLU 44	-0.17	-0.28	16.23	0	0	0
241	SLU 45	-0.18	-0.3	16.49	0	0	0
241	SLU 46	-0.17	-0.29	16.5	0	0	0
241	SLU 47	-0.17	-0.28	16.42	0	0	0
241	SLU 48	-0.18	-0.3	16.68	0	0	0
241	SLU 49	-0.18	-0.29	16.69	0	0	0
241	SLU 50	-0.18	-0.3	16.6	0	0	0
241	SLU 51	-0.17	-0.29	16.6	0	0	0
241	SLU 52	-0.18	-0.29	17.92	0	0	0
241	SLU 53	-0.19	-0.31	18.18	0	0	0
241	SLU 54	-0.19	-0.3	18.19	0	0	0
241	SLU 55	-0.18	-0.3	18.11	0	0	0
241	SLU 56	-0.19	-0.32	18.37	0	0	0
241	SLU 57	-0.19	-0.31	18.38	0	0	0
241	SLU 58	-0.19	-0.32	18.29	0	0	0
241	SLU 59	-0.19	-0.31	18.29	0	0	0
241	SLU 60	-0.19	-0.32	18.63	0	0	0
241	SLU 61	-0.19	-0.31	18.64	0	0	0
241	SLU 62	-0.19	-0.32	18.82	0	0	0
241	SLU 63	-0.19	-0.31	18.83	0	0	0
241	SLU 64	-0.19	-0.3	17.73	0	0	0
241	SLU 65	-0.19	-0.29	17.74	0	0	0
241	SLU 66	-0.19	-0.31	18	0	0	0
241	SLU 67	-0.19	-0.3	18.01	0	0	0
241	SLU 68	-0.19	-0.29	17.93	0	0	0
241	SLU 69	-0.2	-0.31	18.19	0	0	0
241	SLU 70	-0.2	-0.3	18.2	0	0	0
241	SLU 71	-0.19	-0.31	18.11	0	0	0
241	SLU 72	-0.19	-0.3	18.11	0	0	0
241	SLU 73	-0.2	-0.3	19.43	0	0	0
241	SLU 74	-0.21	-0.32	19.69	0	0	0
241	SLU 75	-0.2	-0.31	19.7	0	0	0
241	SLU 76	-0.2	-0.31	19.62	0	0	0
241	SLU 77	-0.21	-0.33	19.88	0	0	0
241	SLU 78	-0.21	-0.31	19.89	0	0	0
241	SLU 79	-0.21	-0.33	19.8	0	0	0
241	SLU 80	-0.2	-0.32	19.8	0	0	0
241	SLU 81	-0.21	-0.33	20.14	0	0	0
241	SLU 82	-0.21	-0.32	20.15	0	0	0
241	SLU 83	-0.21	-0.33	20.33	0	0	0
241	SLU 84	-0.21	-0.32	20.34	0	0	0
241	SLE RA 1	-0.14	-0.23	13.3	0	0	0
241	SLE RA 2	-0.14	-0.22	13.31	0	0	0
241	SLE RA 3	-0.15	-0.23	13.49	0	0	0
241	SLE RA 4	-0.14	-0.23	13.49	0	0	0
241	SLE RA 5	-0.14	-0.22	13.44	0	0	0
241	SLE RA 6	-0.15	-0.24	13.61	0	0	0
241	SLE RA 7	-0.15	-0.23	13.62	0	0	0
241	SLE RA 8	-0.15	-0.24	13.56	0	0	0
241	SLE RA 9	-0.14	-0.23	13.56	0	0	0
241	SLE RA 10	-0.15	-0.23	14.44	0	0	0
241	SLE RA 11	-0.15	-0.24	14.61	0	0	0
241	SLE RA 12	-0.15	-0.24	14.62	0	0	0
241	SLE RA 13	-0.15	-0.23	14.57	0	0	0
241	SLE RA 14	-0.15	-0.25	14.74	0	0	0
241	SLE RA 15	-0.15	-0.24	14.75	0	0	0
241	SLE RA 16	-0.15	-0.25	14.68	0	0	0
241	SLE RA 17	-0.15	-0.24	14.69	0	0	0
241	SLE RA 18	-0.15	-0.25	14.91	0	0	0
241	SLE RA 19	-0.15	-0.24	14.92	0	0	0
241	SLE RA 20	-0.15	-0.25	15.04	0	0	0
241	SLE RA 21	-0.15	-0.24	15.05	0	0	0
241	SLE FR 1	-0.14	-0.23	13.3	0	0	0
241	SLE FR 2	-0.14	-0.23	13.31	0	0	0
241	SLE FR 3	-0.14	-0.23	13.35	0	0	0
241	SLE FR 4	-0.15	-0.23	13.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLE FR 5	-0.15	-0.24	13.84	0	0	0
241	SLE FR 6	-0.15	-0.24	14.11	0	0	0
241	SLE QP 1	-0.14	-0.23	13.3	0	0	0
241	SLE QP 2	-0.15	-0.24	13.79	0	0	0
241	SLD 1	0.95	-0.16	14.59	0	0	0
241	SLD 2	1.09	-0.22	14.52	0	0	0
241	SLD 3	0.97	-0.49	14.24	0	0	0
241	SLD 4	1.11	-0.55	14.17	0	0	0
241	SLD 5	0.13	0.29	14.57	0	0	0
241	SLD 6	0.22	0.25	14.52	0	0	0
241	SLD 7	0.2	-0.8	13.4	0	0	0
241	SLD 8	0.29	-0.84	13.36	0	0	0
241	SLD 9	-0.58	0.36	14.21	0	0	0
241	SLD 10	-0.49	0.32	14.17	0	0	0
241	SLD 11	-0.51	-0.73	13.05	0	0	0
241	SLD 12	-0.42	-0.77	13.01	0	0	0
241	SLD 13	-1.4	0.08	13.4	0	0	0
241	SLD 14	-1.27	0.01	13.34	0	0	0
241	SLD 15	-1.38	-0.25	13.06	0	0	0
241	SLD 16	-1.25	-0.31	12.99	0	0	0
241	SLV 1	2.43	-0.07	15.64	0	0	0
241	SLV 2	2.75	-0.21	15.49	0	0	0
241	SLV 3	2.47	-0.81	14.85	0	0	0
241	SLV 4	2.79	-0.96	14.69	0	0	0
241	SLV 5	0.5	0.97	15.57	0	0	0
241	SLV 6	0.7	0.88	15.47	0	0	0
241	SLV 7	0.66	-1.52	12.93	0	0	0
241	SLV 8	0.86	-1.61	12.83	0	0	0
241	SLV 9	-1.15	1.14	14.74	0	0	0
241	SLV 10	-0.95	1.04	14.64	0	0	0
241	SLV 11	-1	-1.35	12.11	0	0	0
241	SLV 12	-0.79	-1.44	12	0	0	0
241	SLV 13	-3.08	0.48	12.88	0	0	0
241	SLV 14	-2.77	0.34	12.72	0	0	0
241	SLV 15	-3.04	-0.26	12.09	0	0	0
241	SLV 16	-2.72	-0.4	11.93	0	0	0
242	SLU 1	-0.13	-0.2	12.44	0	0	0
242	SLU 2	-0.13	-0.18	12.45	0	0	0
242	SLU 3	-0.13	-0.2	12.7	0	0	0
242	SLU 4	-0.13	-0.19	12.71	0	0	0
242	SLU 5	-0.13	-0.18	12.64	0	0	0
242	SLU 6	-0.14	-0.2	12.89	0	0	0
242	SLU 7	-0.13	-0.19	12.9	0	0	0
242	SLU 8	-0.13	-0.2	12.8	0	0	0
242	SLU 9	-0.13	-0.19	12.81	0	0	0
242	SLU 10	-0.14	-0.19	14.09	0	0	0
242	SLU 11	-0.15	-0.21	14.34	0	0	0
242	SLU 12	-0.14	-0.2	14.35	0	0	0
242	SLU 13	-0.14	-0.2	14.27	0	0	0
242	SLU 14	-0.15	-0.21	14.52	0	0	0
242	SLU 15	-0.15	-0.2	14.53	0	0	0
242	SLU 16	-0.15	-0.22	14.44	0	0	0
242	SLU 17	-0.14	-0.21	14.45	0	0	0
242	SLU 18	-0.15	-0.21	14.77	0	0	0
242	SLU 19	-0.15	-0.2	14.78	0	0	0
242	SLU 20	-0.15	-0.22	14.96	0	0	0
242	SLU 21	-0.15	-0.21	14.97	0	0	0
242	SLU 22	-0.15	-0.2	13.89	0	0	0
242	SLU 23	-0.15	-0.19	13.91	0	0	0
242	SLU 24	-0.15	-0.2	14.16	0	0	0
242	SLU 25	-0.15	-0.19	14.17	0	0	0
242	SLU 26	-0.15	-0.19	14.09	0	0	0
242	SLU 27	-0.15	-0.21	14.34	0	0	0
242	SLU 28	-0.15	-0.2	14.35	0	0	0
242	SLU 29	-0.15	-0.21	14.26	0	0	0
242	SLU 30	-0.15	-0.2	14.27	0	0	0
242	SLU 31	-0.16	-0.2	15.54	0	0	0
242	SLU 32	-0.16	-0.22	15.79	0	0	0
242	SLU 33	-0.16	-0.21	15.8	0	0	0
242	SLU 34	-0.16	-0.2	15.73	0	0	0
242	SLU 35	-0.17	-0.22	15.98	0	0	0
242	SLU 36	-0.16	-0.21	15.99	0	0	0
242	SLU 37	-0.16	-0.22	15.89	0	0	0
242	SLU 38	-0.16	-0.21	15.9	0	0	0
242	SLU 39	-0.17	-0.22	16.23	0	0	0
242	SLU 40	-0.16	-0.21	16.24	0	0	0
242	SLU 41	-0.17	-0.22	16.41	0	0	0
242	SLU 42	-0.17	-0.21	16.42	0	0	0
242	SLU 43	-0.16	-0.26	15.67	0	0	0
242	SLU 44	-0.16	-0.24	15.68	0	0	0
242	SLU 45	-0.17	-0.26	15.94	0	0	0
242	SLU 46	-0.17	-0.25	15.94	0	0	0
242	SLU 47	-0.16	-0.24	15.87	0	0	0
242	SLU 48	-0.17	-0.26	16.12	0	0	0
242	SLU 49	-0.17	-0.25	16.13	0	0	0
242	SLU 50	-0.17	-0.26	16.04	0	0	0
242	SLU 51	-0.17	-0.25	16.05	0	0	0
242	SLU 52	-0.17	-0.25	17.32	0	0	0
242	SLU 53	-0.18	-0.27	17.57	0	0	0
242	SLU 54	-0.18	-0.26	17.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLU 55	-0.17	-0.25	17.5	0	0	0
242	SLU 56	-0.18	-0.27	17.76	0	0	0
242	SLU 57	-0.18	-0.26	17.76	0	0	0
242	SLU 58	-0.18	-0.27	17.67	0	0	0
242	SLU 59	-0.18	-0.26	17.68	0	0	0
242	SLU 60	-0.18	-0.27	18.01	0	0	0
242	SLU 61	-0.18	-0.26	18.02	0	0	0
242	SLU 62	-0.18	-0.28	18.19	0	0	0
242	SLU 63	-0.18	-0.27	18.2	0	0	0
242	SLU 64	-0.18	-0.26	17.12	0	0	0
242	SLU 65	-0.18	-0.24	17.14	0	0	0
242	SLU 66	-0.19	-0.26	17.39	0	0	0
242	SLU 67	-0.18	-0.25	17.4	0	0	0
242	SLU 68	-0.18	-0.25	17.32	0	0	0
242	SLU 69	-0.19	-0.27	17.57	0	0	0
242	SLU 70	-0.19	-0.25	17.58	0	0	0
242	SLU 71	-0.19	-0.27	17.49	0	0	0
242	SLU 72	-0.18	-0.26	17.5	0	0	0
242	SLU 73	-0.19	-0.26	18.77	0	0	0
242	SLU 74	-0.2	-0.27	19.03	0	0	0
242	SLU 75	-0.2	-0.26	19.03	0	0	0
242	SLU 76	-0.19	-0.26	18.96	0	0	0
242	SLU 77	-0.2	-0.28	19.21	0	0	0
242	SLU 78	-0.2	-0.27	19.22	0	0	0
242	SLU 79	-0.2	-0.28	19.13	0	0	0
242	SLU 80	-0.2	-0.27	19.13	0	0	0
242	SLU 81	-0.2	-0.28	19.46	0	0	0
242	SLU 82	-0.2	-0.27	19.47	0	0	0
242	SLU 83	-0.2	-0.28	19.64	0	0	0
242	SLU 84	-0.2	-0.27	19.65	0	0	0
242	SLE RA 1	-0.14	-0.2	12.85	0	0	0
242	SLE RA 2	-0.14	-0.19	12.86	0	0	0
242	SLE RA 3	-0.14	-0.2	13.03	0	0	0
242	SLE RA 4	-0.14	-0.19	13.04	0	0	0
242	SLE RA 5	-0.14	-0.19	12.98	0	0	0
242	SLE RA 6	-0.14	-0.2	13.15	0	0	0
242	SLE RA 7	-0.14	-0.2	13.16	0	0	0
242	SLE RA 8	-0.14	-0.2	13.1	0	0	0
242	SLE RA 9	-0.14	-0.2	13.1	0	0	0
242	SLE RA 10	-0.14	-0.2	13.95	0	0	0
242	SLE RA 11	-0.15	-0.21	14.12	0	0	0
242	SLE RA 12	-0.15	-0.2	14.13	0	0	0
242	SLE RA 13	-0.14	-0.2	14.08	0	0	0
242	SLE RA 14	-0.15	-0.21	14.24	0	0	0
242	SLE RA 15	-0.15	-0.2	14.25	0	0	0
242	SLE RA 16	-0.15	-0.21	14.19	0	0	0
242	SLE RA 17	-0.15	-0.2	14.19	0	0	0
242	SLE RA 18	-0.15	-0.21	14.41	0	0	0
242	SLE RA 19	-0.15	-0.2	14.42	0	0	0
242	SLE RA 20	-0.15	-0.21	14.53	0	0	0
242	SLE RA 21	-0.15	-0.21	14.54	0	0	0
242	SLE FR 1	-0.14	-0.2	12.85	0	0	0
242	SLE FR 2	-0.14	-0.2	12.85	0	0	0
242	SLE FR 3	-0.14	-0.2	12.9	0	0	0
242	SLE FR 4	-0.14	-0.2	13.32	0	0	0
242	SLE FR 5	-0.14	-0.2	13.37	0	0	0
242	SLE FR 6	-0.14	-0.21	13.63	0	0	0
242	SLE QP 1	-0.14	-0.2	12.85	0	0	0
242	SLE QP 2	-0.14	-0.2	13.32	0	0	0
242	SLD 1	0.94	-0.11	13.96	0	0	0
242	SLD 2	1.07	-0.17	13.9	0	0	0
242	SLD 3	0.96	-0.44	13.62	0	0	0
242	SLD 4	1.09	-0.49	13.56	0	0	0
242	SLD 5	0.13	0.32	14.04	0	0	0
242	SLD 6	0.22	0.29	14	0	0	0
242	SLD 7	0.2	-0.75	12.91	0	0	0
242	SLD 8	0.28	-0.79	12.87	0	0	0
242	SLD 9	-0.56	0.38	13.77	0	0	0
242	SLD 10	-0.48	0.35	13.73	0	0	0
242	SLD 11	-0.5	-0.69	12.64	0	0	0
242	SLD 12	-0.41	-0.73	12.6	0	0	0
242	SLD 13	-1.37	0.09	13.08	0	0	0
242	SLD 14	-1.24	0.03	13.01	0	0	0
242	SLD 15	-1.35	-0.24	12.74	0	0	0
242	SLD 16	-1.22	-0.29	12.68	0	0	0
242	SLV 1	2.39	0	14.81	0	0	0
242	SLV 2	2.7	-0.13	14.67	0	0	0
242	SLV 3	2.43	-0.74	14.04	0	0	0
242	SLV 4	2.75	-0.87	13.9	0	0	0
242	SLV 5	0.5	1	14.95	0	0	0
242	SLV 6	0.7	0.92	14.86	0	0	0
242	SLV 7	0.65	-1.46	12.4	0	0	0
242	SLV 8	0.85	-1.54	12.31	0	0	0
242	SLV 9	-1.13	1.14	14.33	0	0	0
242	SLV 10	-0.93	1.06	14.24	0	0	0
242	SLV 11	-0.98	-1.32	11.78	0	0	0
242	SLV 12	-0.77	-1.4	11.68	0	0	0
242	SLV 13	-3.03	0.46	12.74	0	0	0
242	SLV 14	-2.71	0.34	12.59	0	0	0
242	SLV 15	-2.98	-0.28	11.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLV 16	-2.67	-0.4	11.83	0	0	0
243	SLU 1	-0.13	-0.17	12.24	0	0	0
243	SLU 2	-0.13	-0.15	12.25	0	0	0
243	SLU 3	-0.13	-0.17	12.5	0	0	0
243	SLU 4	-0.13	-0.16	12.51	0	0	0
243	SLU 5	-0.13	-0.15	12.43	0	0	0
243	SLU 6	-0.13	-0.17	12.68	0	0	0
243	SLU 7	-0.13	-0.16	12.69	0	0	0
243	SLU 8	-0.13	-0.17	12.6	0	0	0
243	SLU 9	-0.13	-0.16	12.61	0	0	0
243	SLU 10	-0.14	-0.16	13.87	0	0	0
243	SLU 11	-0.14	-0.18	14.11	0	0	0
243	SLU 12	-0.14	-0.17	14.12	0	0	0
243	SLU 13	-0.14	-0.16	14.05	0	0	0
243	SLU 14	-0.14	-0.18	14.3	0	0	0
243	SLU 15	-0.14	-0.17	14.31	0	0	0
243	SLU 16	-0.14	-0.18	14.21	0	0	0
243	SLU 17	-0.14	-0.17	14.22	0	0	0
243	SLU 18	-0.14	-0.18	14.55	0	0	0
243	SLU 19	-0.14	-0.17	14.56	0	0	0
243	SLU 20	-0.14	-0.18	14.73	0	0	0
243	SLU 21	-0.14	-0.17	14.74	0	0	0
243	SLU 22	-0.15	-0.17	13.66	0	0	0
243	SLU 23	-0.14	-0.15	13.68	0	0	0
243	SLU 24	-0.15	-0.17	13.92	0	0	0
243	SLU 25	-0.15	-0.16	13.93	0	0	0
243	SLU 26	-0.15	-0.16	13.86	0	0	0
243	SLU 27	-0.15	-0.17	14.11	0	0	0
243	SLU 28	-0.15	-0.16	14.12	0	0	0
243	SLU 29	-0.15	-0.18	14.02	0	0	0
243	SLU 30	-0.15	-0.17	14.03	0	0	0
243	SLU 31	-0.15	-0.16	15.3	0	0	0
243	SLU 32	-0.16	-0.18	15.54	0	0	0
243	SLU 33	-0.16	-0.17	15.55	0	0	0
243	SLU 34	-0.16	-0.16	15.48	0	0	0
243	SLU 35	-0.16	-0.18	15.72	0	0	0
243	SLU 36	-0.16	-0.17	15.73	0	0	0
243	SLU 37	-0.16	-0.18	15.64	0	0	0
243	SLU 38	-0.16	-0.17	15.65	0	0	0
243	SLU 39	-0.16	-0.18	15.97	0	0	0
243	SLU 40	-0.16	-0.17	15.98	0	0	0
243	SLU 41	-0.16	-0.18	16.15	0	0	0
243	SLU 42	-0.16	-0.17	16.16	0	0	0
243	SLU 43	-0.16	-0.22	15.42	0	0	0
243	SLU 44	-0.16	-0.2	15.43	0	0	0
243	SLU 45	-0.16	-0.22	15.68	0	0	0
243	SLU 46	-0.16	-0.21	15.69	0	0	0
243	SLU 47	-0.16	-0.21	15.61	0	0	0
243	SLU 48	-0.17	-0.22	15.86	0	0	0
243	SLU 49	-0.16	-0.21	15.87	0	0	0
243	SLU 50	-0.16	-0.22	15.78	0	0	0
243	SLU 51	-0.16	-0.21	15.79	0	0	0
243	SLU 52	-0.17	-0.21	17.05	0	0	0
243	SLU 53	-0.17	-0.23	17.3	0	0	0
243	SLU 54	-0.17	-0.22	17.31	0	0	0
243	SLU 55	-0.17	-0.21	17.23	0	0	0
243	SLU 56	-0.18	-0.23	17.48	0	0	0
243	SLU 57	-0.17	-0.22	17.49	0	0	0
243	SLU 58	-0.17	-0.23	17.4	0	0	0
243	SLU 59	-0.17	-0.22	17.41	0	0	0
243	SLU 60	-0.18	-0.23	17.73	0	0	0
243	SLU 61	-0.17	-0.22	17.74	0	0	0
243	SLU 62	-0.18	-0.23	17.91	0	0	0
243	SLU 63	-0.18	-0.22	17.92	0	0	0
243	SLU 64	-0.18	-0.22	16.84	0	0	0
243	SLU 65	-0.18	-0.2	16.86	0	0	0
243	SLU 66	-0.18	-0.22	17.11	0	0	0
243	SLU 67	-0.18	-0.21	17.12	0	0	0
243	SLU 68	-0.18	-0.21	17.04	0	0	0
243	SLU 69	-0.18	-0.22	17.29	0	0	0
243	SLU 70	-0.18	-0.21	17.3	0	0	0
243	SLU 71	-0.18	-0.23	17.21	0	0	0
243	SLU 72	-0.18	-0.22	17.22	0	0	0
243	SLU 73	-0.19	-0.21	18.48	0	0	0
243	SLU 74	-0.19	-0.23	18.72	0	0	0
243	SLU 75	-0.19	-0.22	18.73	0	0	0
243	SLU 76	-0.19	-0.21	18.66	0	0	0
243	SLU 77	-0.19	-0.23	18.9	0	0	0
243	SLU 78	-0.19	-0.22	18.91	0	0	0
243	SLU 79	-0.19	-0.23	18.82	0	0	0
243	SLU 80	-0.19	-0.22	18.83	0	0	0
243	SLU 81	-0.19	-0.23	19.15	0	0	0
243	SLU 82	-0.19	-0.22	19.16	0	0	0
243	SLU 83	-0.2	-0.23	19.33	0	0	0
243	SLU 84	-0.19	-0.23	19.34	0	0	0
243	SLE RA 1	-0.13	-0.17	12.64	0	0	0
243	SLE RA 2	-0.13	-0.16	12.65	0	0	0
243	SLE RA 3	-0.14	-0.17	12.82	0	0	0
243	SLE RA 4	-0.13	-0.16	12.82	0	0	0
243	SLE RA 5	-0.13	-0.16	12.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
243	SLE RA 6	-0.14	-0.17	12.94	0	0	0
243	SLE RA 7	-0.14	-0.16	12.95	0	0	0
243	SLE RA 8	-0.14	-0.17	12.88	0	0	0
243	SLE RA 9	-0.13	-0.17	12.89	0	0	0
243	SLE RA 10	-0.14	-0.16	13.73	0	0	0
243	SLE RA 11	-0.14	-0.17	13.9	0	0	0
243	SLE RA 12	-0.14	-0.17	13.9	0	0	0
243	SLE RA 13	-0.14	-0.17	13.85	0	0	0
243	SLE RA 14	-0.14	-0.18	14.02	0	0	0
243	SLE RA 15	-0.14	-0.17	14.02	0	0	0
243	SLE RA 16	-0.14	-0.18	13.96	0	0	0
243	SLE RA 17	-0.14	-0.17	13.97	0	0	0
243	SLE RA 18	-0.14	-0.18	14.18	0	0	0
243	SLE RA 19	-0.14	-0.17	14.19	0	0	0
243	SLE RA 20	-0.14	-0.18	14.3	0	0	0
243	SLE RA 21	-0.14	-0.17	14.31	0	0	0
243	SLE FR 1	-0.13	-0.17	12.64	0	0	0
243	SLE FR 2	-0.13	-0.17	12.65	0	0	0
243	SLE FR 3	-0.13	-0.17	12.69	0	0	0
243	SLE FR 4	-0.14	-0.17	13.11	0	0	0
243	SLE FR 5	-0.14	-0.17	13.15	0	0	0
243	SLE FR 6	-0.14	-0.17	13.41	0	0	0
243	SLE QP 1	-0.13	-0.17	12.64	0	0	0
243	SLE QP 2	-0.14	-0.17	13.11	0	0	0
243	SLD 1	0.93	-0.07	13.61	0	0	0
243	SLD 2	1.07	-0.11	13.56	0	0	0
243	SLD 3	0.95	-0.39	13.28	0	0	0
243	SLD 4	1.09	-0.44	13.22	0	0	0
243	SLD 5	0.13	0.36	13.78	0	0	0
243	SLD 6	0.22	0.33	13.74	0	0	0
243	SLD 7	0.2	-0.72	12.66	0	0	0
243	SLD 8	0.28	-0.75	12.62	0	0	0
243	SLD 9	-0.56	0.41	13.59	0	0	0
243	SLD 10	-0.47	0.38	13.55	0	0	0
243	SLD 11	-0.49	-0.67	12.47	0	0	0
243	SLD 12	-0.4	-0.7	12.43	0	0	0
243	SLD 13	-1.36	0.09	12.99	0	0	0
243	SLD 14	-1.23	0.05	12.93	0	0	0
243	SLD 15	-1.34	-0.23	12.65	0	0	0
243	SLD 16	-1.21	-0.28	12.6	0	0	0
243	SLV 1	2.37	0.06	14.28	0	0	0
243	SLV 2	2.68	-0.05	14.15	0	0	0
243	SLV 3	2.41	-0.67	13.53	0	0	0
243	SLV 4	2.72	-0.78	13.39	0	0	0
243	SLV 5	0.49	1.03	14.63	0	0	0
243	SLV 6	0.69	0.96	14.55	0	0	0
243	SLV 7	0.64	-1.42	12.1	0	0	0
243	SLV 8	0.84	-1.49	12.02	0	0	0
243	SLV 9	-1.12	1.15	14.19	0	0	0
243	SLV 10	-0.92	1.08	14.11	0	0	0
243	SLV 11	-0.96	-1.31	11.66	0	0	0
243	SLV 12	-0.77	-1.38	11.58	0	0	0
243	SLV 13	-2.99	0.44	12.82	0	0	0
243	SLV 14	-2.68	0.33	12.68	0	0	0
243	SLV 15	-2.95	-0.3	12.06	0	0	0
243	SLV 16	-2.64	-0.4	11.93	0	0	0
244	SLU 1	-0.13	-0.14	12.2	0	0	0
244	SLU 2	-0.12	-0.13	12.22	0	0	0
244	SLU 3	-0.13	-0.14	12.46	0	0	0
244	SLU 4	-0.13	-0.13	12.47	0	0	0
244	SLU 5	-0.13	-0.13	12.4	0	0	0
244	SLU 6	-0.13	-0.14	12.64	0	0	0
244	SLU 7	-0.13	-0.13	12.65	0	0	0
244	SLU 8	-0.13	-0.15	12.56	0	0	0
244	SLU 9	-0.13	-0.14	12.57	0	0	0
244	SLU 10	-0.13	-0.13	13.84	0	0	0
244	SLU 11	-0.14	-0.15	14.08	0	0	0
244	SLU 12	-0.14	-0.14	14.09	0	0	0
244	SLU 13	-0.14	-0.13	14.02	0	0	0
244	SLU 14	-0.14	-0.15	14.26	0	0	0
244	SLU 15	-0.14	-0.14	14.27	0	0	0
244	SLU 16	-0.14	-0.15	14.18	0	0	0
244	SLU 17	-0.14	-0.14	14.19	0	0	0
244	SLU 18	-0.14	-0.15	14.51	0	0	0
244	SLU 19	-0.14	-0.14	14.53	0	0	0
244	SLU 20	-0.14	-0.15	14.7	0	0	0
244	SLU 21	-0.14	-0.14	14.71	0	0	0
244	SLU 22	-0.14	-0.14	13.62	0	0	0
244	SLU 23	-0.14	-0.12	13.64	0	0	0
244	SLU 24	-0.15	-0.14	13.88	0	0	0
244	SLU 25	-0.15	-0.13	13.89	0	0	0
244	SLU 26	-0.14	-0.13	13.82	0	0	0
244	SLU 27	-0.15	-0.14	14.06	0	0	0
244	SLU 28	-0.15	-0.13	14.07	0	0	0
244	SLU 29	-0.15	-0.14	13.98	0	0	0
244	SLU 30	-0.15	-0.13	13.99	0	0	0
244	SLU 31	-0.15	-0.13	15.26	0	0	0
244	SLU 32	-0.16	-0.14	15.5	0	0	0
244	SLU 33	-0.16	-0.13	15.51	0	0	0
244	SLU 34	-0.15	-0.13	15.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLU 35	-0.16	-0.15	15.68	0	0	0
244	SLU 36	-0.16	-0.14	15.7	0	0	0
244	SLU 37	-0.16	-0.15	15.6	0	0	0
244	SLU 38	-0.16	-0.14	15.62	0	0	0
244	SLU 39	-0.16	-0.15	15.94	0	0	0
244	SLU 40	-0.16	-0.14	15.95	0	0	0
244	SLU 41	-0.16	-0.15	16.12	0	0	0
244	SLU 42	-0.16	-0.14	16.13	0	0	0
244	SLU 43	-0.16	-0.18	15.37	0	0	0
244	SLU 44	-0.16	-0.17	15.39	0	0	0
244	SLU 45	-0.16	-0.18	15.63	0	0	0
244	SLU 46	-0.16	-0.17	15.64	0	0	0
244	SLU 47	-0.16	-0.17	15.57	0	0	0
244	SLU 48	-0.16	-0.19	15.81	0	0	0
244	SLU 49	-0.16	-0.18	15.82	0	0	0
244	SLU 50	-0.16	-0.19	15.73	0	0	0
244	SLU 51	-0.16	-0.18	15.74	0	0	0
244	SLU 52	-0.17	-0.17	17.01	0	0	0
244	SLU 53	-0.17	-0.19	17.25	0	0	0
244	SLU 54	-0.17	-0.18	17.26	0	0	0
244	SLU 55	-0.17	-0.18	17.19	0	0	0
244	SLU 56	-0.17	-0.19	17.43	0	0	0
244	SLU 57	-0.17	-0.18	17.45	0	0	0
244	SLU 58	-0.17	-0.19	17.35	0	0	0
244	SLU 59	-0.17	-0.18	17.37	0	0	0
244	SLU 60	-0.17	-0.19	17.69	0	0	0
244	SLU 61	-0.17	-0.18	17.7	0	0	0
244	SLU 62	-0.17	-0.19	17.87	0	0	0
244	SLU 63	-0.17	-0.19	17.88	0	0	0
244	SLU 64	-0.18	-0.18	16.79	0	0	0
244	SLU 65	-0.17	-0.17	16.81	0	0	0
244	SLU 66	-0.18	-0.18	17.05	0	0	0
244	SLU 67	-0.18	-0.17	17.06	0	0	0
244	SLU 68	-0.18	-0.17	16.99	0	0	0
244	SLU 69	-0.18	-0.18	17.23	0	0	0
244	SLU 70	-0.18	-0.17	17.25	0	0	0
244	SLU 71	-0.18	-0.19	17.15	0	0	0
244	SLU 72	-0.18	-0.18	17.16	0	0	0
244	SLU 73	-0.18	-0.17	18.43	0	0	0
244	SLU 74	-0.19	-0.19	18.68	0	0	0
244	SLU 75	-0.19	-0.18	18.69	0	0	0
244	SLU 76	-0.19	-0.17	18.61	0	0	0
244	SLU 77	-0.19	-0.19	18.86	0	0	0
244	SLU 78	-0.19	-0.18	18.87	0	0	0
244	SLU 79	-0.19	-0.19	18.78	0	0	0
244	SLU 80	-0.19	-0.18	18.79	0	0	0
244	SLU 81	-0.19	-0.19	19.11	0	0	0
244	SLU 82	-0.19	-0.18	19.12	0	0	0
244	SLU 83	-0.19	-0.19	19.29	0	0	0
244	SLU 84	-0.19	-0.18	19.3	0	0	0
244	SLE RA 1	-0.13	-0.14	12.6	0	0	0
244	SLE RA 2	-0.13	-0.13	12.62	0	0	0
244	SLE RA 3	-0.13	-0.14	12.78	0	0	0
244	SLE RA 4	-0.13	-0.13	12.79	0	0	0
244	SLE RA 5	-0.13	-0.13	12.74	0	0	0
244	SLE RA 6	-0.13	-0.14	12.9	0	0	0
244	SLE RA 7	-0.13	-0.14	12.91	0	0	0
244	SLE RA 8	-0.13	-0.14	12.85	0	0	0
244	SLE RA 9	-0.13	-0.14	12.85	0	0	0
244	SLE RA 10	-0.14	-0.13	13.7	0	0	0
244	SLE RA 11	-0.14	-0.14	13.86	0	0	0
244	SLE RA 12	-0.14	-0.14	13.87	0	0	0
244	SLE RA 13	-0.14	-0.14	13.82	0	0	0
244	SLE RA 14	-0.14	-0.15	13.98	0	0	0
244	SLE RA 15	-0.14	-0.14	13.99	0	0	0
244	SLE RA 16	-0.14	-0.15	13.93	0	0	0
244	SLE RA 17	-0.14	-0.14	13.93	0	0	0
244	SLE RA 18	-0.14	-0.15	14.15	0	0	0
244	SLE RA 19	-0.14	-0.14	14.16	0	0	0
244	SLE RA 20	-0.14	-0.15	14.27	0	0	0
244	SLE RA 21	-0.14	-0.14	14.28	0	0	0
244	SLE FR 1	-0.13	-0.14	12.6	0	0	0
244	SLE FR 2	-0.13	-0.14	12.61	0	0	0
244	SLE FR 3	-0.13	-0.14	12.65	0	0	0
244	SLE FR 4	-0.13	-0.14	13.07	0	0	0
244	SLE FR 5	-0.13	-0.14	13.12	0	0	0
244	SLE FR 6	-0.14	-0.14	13.38	0	0	0
244	SLE QP 1	-0.13	-0.14	12.6	0	0	0
244	SLE QP 2	-0.13	-0.14	13.07	0	0	0
244	SLD 1	0.93	-0.02	13.46	0	0	0
244	SLD 2	1.06	-0.06	13.41	0	0	0
244	SLD 3	0.95	-0.35	13.12	0	0	0
244	SLD 4	1.08	-0.39	13.07	0	0	0
244	SLD 5	0.13	0.39	13.7	0	0	0
244	SLD 6	0.22	0.37	13.67	0	0	0
244	SLD 7	0.2	-0.69	12.58	0	0	0
244	SLD 8	0.28	-0.71	12.55	0	0	0
244	SLD 9	-0.55	0.43	13.59	0	0	0
244	SLD 10	-0.46	0.4	13.55	0	0	0
244	SLD 11	-0.49	-0.65	12.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLD 12	-0.4	-0.68	12.43	0	0	0
244	SLD 13	-1.35	0.1	13.06	0	0	0
244	SLD 14	-1.22	0.06	13.01	0	0	0
244	SLD 15	-1.33	-0.22	12.73	0	0	0
244	SLD 16	-1.2	-0.26	12.68	0	0	0
244	SLV 1	2.35	0.13	13.97	0	0	0
244	SLV 2	2.66	0.03	13.85	0	0	0
244	SLV 3	2.4	-0.61	13.21	0	0	0
244	SLV 4	2.7	-0.7	13.09	0	0	0
244	SLV 5	0.49	1.07	14.51	0	0	0
244	SLV 6	0.69	1.01	14.43	0	0	0
244	SLV 7	0.64	-1.39	11.98	0	0	0
244	SLV 8	0.84	-1.45	11.9	0	0	0
244	SLV 9	-1.11	1.16	14.24	0	0	0
244	SLV 10	-0.91	1.1	14.16	0	0	0
244	SLV 11	-0.96	-1.3	11.7	0	0	0
244	SLV 12	-0.76	-1.36	11.62	0	0	0
244	SLV 13	-2.97	0.42	13.05	0	0	0
244	SLV 14	-2.66	0.32	12.92	0	0	0
244	SLV 15	-2.93	-0.32	12.29	0	0	0
244	SLV 16	-2.62	-0.41	12.16	0	0	0
245	SLU 1	-0.12	-0.12	12.24	0	0	0
245	SLU 2	-0.12	-0.1	12.26	0	0	0
245	SLU 3	-0.13	-0.11	12.51	0	0	0
245	SLU 4	-0.13	-0.11	12.52	0	0	0
245	SLU 5	-0.12	-0.1	12.44	0	0	0
245	SLU 6	-0.13	-0.12	12.69	0	0	0
245	SLU 7	-0.13	-0.11	12.7	0	0	0
245	SLU 8	-0.13	-0.12	12.61	0	0	0
245	SLU 9	-0.13	-0.11	12.62	0	0	0
245	SLU 10	-0.13	-0.1	13.9	0	0	0
245	SLU 11	-0.14	-0.12	14.15	0	0	0
245	SLU 12	-0.14	-0.11	14.16	0	0	0
245	SLU 13	-0.14	-0.1	14.09	0	0	0
245	SLU 14	-0.14	-0.12	14.33	0	0	0
245	SLU 15	-0.14	-0.11	14.34	0	0	0
245	SLU 16	-0.14	-0.12	14.25	0	0	0
245	SLU 17	-0.14	-0.11	14.26	0	0	0
245	SLU 18	-0.14	-0.12	14.59	0	0	0
245	SLU 19	-0.14	-0.11	14.6	0	0	0
245	SLU 20	-0.14	-0.12	14.77	0	0	0
245	SLU 21	-0.14	-0.11	14.78	0	0	0
245	SLU 22	-0.14	-0.11	13.67	0	0	0
245	SLU 23	-0.14	-0.09	13.69	0	0	0
245	SLU 24	-0.15	-0.11	13.93	0	0	0
245	SLU 25	-0.14	-0.1	13.95	0	0	0
245	SLU 26	-0.14	-0.1	13.87	0	0	0
245	SLU 27	-0.15	-0.11	14.12	0	0	0
245	SLU 28	-0.15	-0.1	14.13	0	0	0
245	SLU 29	-0.15	-0.11	14.04	0	0	0
245	SLU 30	-0.14	-0.1	14.05	0	0	0
245	SLU 31	-0.15	-0.1	15.33	0	0	0
245	SLU 32	-0.16	-0.11	15.57	0	0	0
245	SLU 33	-0.15	-0.1	15.59	0	0	0
245	SLU 34	-0.15	-0.1	15.51	0	0	0
245	SLU 35	-0.16	-0.11	15.76	0	0	0
245	SLU 36	-0.16	-0.1	15.77	0	0	0
245	SLU 37	-0.16	-0.12	15.68	0	0	0
245	SLU 38	-0.15	-0.11	15.69	0	0	0
245	SLU 39	-0.16	-0.11	16.01	0	0	0
245	SLU 40	-0.16	-0.1	16.03	0	0	0
245	SLU 41	-0.16	-0.12	16.2	0	0	0
245	SLU 42	-0.16	-0.11	16.21	0	0	0
245	SLU 43	-0.16	-0.15	15.42	0	0	0
245	SLU 44	-0.15	-0.14	15.44	0	0	0
245	SLU 45	-0.16	-0.15	15.69	0	0	0
245	SLU 46	-0.16	-0.14	15.7	0	0	0
245	SLU 47	-0.16	-0.14	15.63	0	0	0
245	SLU 48	-0.16	-0.15	15.87	0	0	0
245	SLU 49	-0.16	-0.14	15.88	0	0	0
245	SLU 50	-0.16	-0.16	15.79	0	0	0
245	SLU 51	-0.16	-0.15	15.8	0	0	0
245	SLU 52	-0.16	-0.14	17.08	0	0	0
245	SLU 53	-0.17	-0.15	17.33	0	0	0
245	SLU 54	-0.17	-0.14	17.34	0	0	0
245	SLU 55	-0.17	-0.14	17.27	0	0	0
245	SLU 56	-0.17	-0.16	17.51	0	0	0
245	SLU 57	-0.17	-0.15	17.52	0	0	0
245	SLU 58	-0.17	-0.16	17.43	0	0	0
245	SLU 59	-0.17	-0.15	17.44	0	0	0
245	SLU 60	-0.17	-0.16	17.77	0	0	0
245	SLU 61	-0.17	-0.15	17.78	0	0	0
245	SLU 62	-0.17	-0.16	17.95	0	0	0
245	SLU 63	-0.17	-0.15	17.96	0	0	0
245	SLU 64	-0.17	-0.15	16.85	0	0	0
245	SLU 65	-0.17	-0.13	16.87	0	0	0
245	SLU 66	-0.18	-0.15	17.12	0	0	0
245	SLU 67	-0.18	-0.14	17.13	0	0	0
245	SLU 68	-0.17	-0.13	17.06	0	0	0
245	SLU 69	-0.18	-0.15	17.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLU 70	-0.18	-0.14	17.31	0	0	0
245	SLU 71	-0.18	-0.15	17.22	0	0	0
245	SLU 72	-0.18	-0.14	17.23	0	0	0
245	SLU 73	-0.18	-0.13	18.51	0	0	0
245	SLU 74	-0.19	-0.15	18.76	0	0	0
245	SLU 75	-0.19	-0.14	18.77	0	0	0
245	SLU 76	-0.18	-0.14	18.7	0	0	0
245	SLU 77	-0.19	-0.15	18.94	0	0	0
245	SLU 78	-0.19	-0.14	18.95	0	0	0
245	SLU 79	-0.19	-0.15	18.86	0	0	0
245	SLU 80	-0.19	-0.14	18.87	0	0	0
245	SLU 81	-0.19	-0.15	19.2	0	0	0
245	SLU 82	-0.19	-0.14	19.21	0	0	0
245	SLU 83	-0.19	-0.15	19.38	0	0	0
245	SLU 84	-0.19	-0.14	19.39	0	0	0
245	SLE RA 1	-0.13	-0.11	12.65	0	0	0
245	SLE RA 2	-0.13	-0.1	12.66	0	0	0
245	SLE RA 3	-0.13	-0.11	12.83	0	0	0
245	SLE RA 4	-0.13	-0.11	12.83	0	0	0
245	SLE RA 5	-0.13	-0.1	12.79	0	0	0
245	SLE RA 6	-0.13	-0.11	12.95	0	0	0
245	SLE RA 7	-0.13	-0.11	12.96	0	0	0
245	SLE RA 8	-0.13	-0.12	12.89	0	0	0
245	SLE RA 9	-0.13	-0.11	12.9	0	0	0
245	SLE RA 10	-0.14	-0.11	13.76	0	0	0
245	SLE RA 11	-0.14	-0.12	13.92	0	0	0
245	SLE RA 12	-0.14	-0.11	13.93	0	0	0
245	SLE RA 13	-0.14	-0.11	13.88	0	0	0
245	SLE RA 14	-0.14	-0.12	14.04	0	0	0
245	SLE RA 15	-0.14	-0.11	14.05	0	0	0
245	SLE RA 16	-0.14	-0.12	13.99	0	0	0
245	SLE RA 17	-0.14	-0.11	14	0	0	0
245	SLE RA 18	-0.14	-0.12	14.21	0	0	0
245	SLE RA 19	-0.14	-0.11	14.22	0	0	0
245	SLE RA 20	-0.14	-0.12	14.33	0	0	0
245	SLE RA 21	-0.14	-0.11	14.34	0	0	0
245	SLE FR 1	-0.13	-0.11	12.65	0	0	0
245	SLE FR 2	-0.13	-0.11	12.65	0	0	0
245	SLE FR 3	-0.13	-0.11	12.7	0	0	0
245	SLE FR 4	-0.13	-0.11	13.12	0	0	0
245	SLE FR 5	-0.13	-0.12	13.17	0	0	0
245	SLE FR 6	-0.13	-0.12	13.43	0	0	0
245	SLE QP 1	-0.13	-0.11	12.65	0	0	0
245	SLE QP 2	-0.13	-0.11	13.12	0	0	0
245	SLD 1	0.92	0.02	13.41	0	0	0
245	SLD 2	1.05	-0.01	13.36	0	0	0
245	SLD 3	0.94	-0.3	13.07	0	0	0
245	SLD 4	1.07	-0.34	13.02	0	0	0
245	SLD 5	0.13	0.42	13.73	0	0	0
245	SLD 6	0.22	0.4	13.69	0	0	0
245	SLD 7	0.19	-0.66	12.6	0	0	0
245	SLD 8	0.28	-0.68	12.57	0	0	0
245	SLD 9	-0.54	0.45	13.67	0	0	0
245	SLD 10	-0.46	0.43	13.64	0	0	0
245	SLD 11	-0.48	-0.63	12.54	0	0	0
245	SLD 12	-0.4	-0.65	12.51	0	0	0
245	SLD 13	-1.33	0.11	13.22	0	0	0
245	SLD 14	-1.2	0.07	13.17	0	0	0
245	SLD 15	-1.31	-0.22	12.88	0	0	0
245	SLD 16	-1.18	-0.25	12.83	0	0	0
245	SLV 1	2.33	0.19	13.78	0	0	0
245	SLV 2	2.63	0.11	13.67	0	0	0
245	SLV 3	2.37	-0.55	13.02	0	0	0
245	SLV 4	2.67	-0.62	12.9	0	0	0
245	SLV 5	0.49	1.11	14.5	0	0	0
245	SLV 6	0.68	1.06	14.43	0	0	0
245	SLV 7	0.63	-1.35	11.94	0	0	0
245	SLV 8	0.83	-1.4	11.87	0	0	0
245	SLV 9	-1.09	1.17	14.37	0	0	0
245	SLV 10	-0.9	1.12	14.29	0	0	0
245	SLV 11	-0.95	-1.29	11.81	0	0	0
245	SLV 12	-0.75	-1.34	11.74	0	0	0
245	SLV 13	-2.94	0.39	13.34	0	0	0
245	SLV 14	-2.64	0.32	13.22	0	0	0
245	SLV 15	-2.9	-0.34	12.57	0	0	0
245	SLV 16	-2.59	-0.42	12.45	0	0	0
246	SLU 1	-0.12	-0.09	12.24	0	0	0
246	SLU 2	-0.12	-0.08	12.27	0	0	0
246	SLU 3	-0.12	-0.09	12.51	0	0	0
246	SLU 4	-0.12	-0.08	12.52	0	0	0
246	SLU 5	-0.12	-0.08	12.45	0	0	0
246	SLU 6	-0.13	-0.09	12.69	0	0	0
246	SLU 7	-0.13	-0.08	12.71	0	0	0
246	SLU 8	-0.12	-0.09	12.61	0	0	0
246	SLU 9	-0.12	-0.09	12.63	0	0	0
246	SLU 10	-0.13	-0.08	13.92	0	0	0
246	SLU 11	-0.14	-0.09	14.16	0	0	0
246	SLU 12	-0.13	-0.08	14.18	0	0	0
246	SLU 13	-0.13	-0.08	14.1	0	0	0
246	SLU 14	-0.14	-0.09	14.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLU 15	-0.14	-0.08	14.36	0	0	0
246	SLU 16	-0.14	-0.09	14.27	0	0	0
246	SLU 17	-0.13	-0.09	14.28	0	0	0
246	SLU 18	-0.14	-0.09	14.61	0	0	0
246	SLU 19	-0.14	-0.08	14.62	0	0	0
246	SLU 20	-0.14	-0.09	14.79	0	0	0
246	SLU 21	-0.14	-0.08	14.81	0	0	0
246	SLU 22	-0.14	-0.08	13.68	0	0	0
246	SLU 23	-0.14	-0.07	13.7	0	0	0
246	SLU 24	-0.14	-0.08	13.94	0	0	0
246	SLU 25	-0.14	-0.07	13.96	0	0	0
246	SLU 26	-0.14	-0.07	13.88	0	0	0
246	SLU 27	-0.14	-0.08	14.13	0	0	0
246	SLU 28	-0.14	-0.07	14.14	0	0	0
246	SLU 29	-0.14	-0.09	14.04	0	0	0
246	SLU 30	-0.14	-0.08	14.06	0	0	0
246	SLU 31	-0.15	-0.07	15.35	0	0	0
246	SLU 32	-0.15	-0.08	15.6	0	0	0
246	SLU 33	-0.15	-0.07	15.61	0	0	0
246	SLU 34	-0.15	-0.07	15.54	0	0	0
246	SLU 35	-0.15	-0.08	15.78	0	0	0
246	SLU 36	-0.15	-0.07	15.79	0	0	0
246	SLU 37	-0.15	-0.09	15.7	0	0	0
246	SLU 38	-0.15	-0.08	15.71	0	0	0
246	SLU 39	-0.15	-0.08	16.04	0	0	0
246	SLU 40	-0.15	-0.07	16.05	0	0	0
246	SLU 41	-0.16	-0.08	16.22	0	0	0
246	SLU 42	-0.15	-0.08	16.24	0	0	0
246	SLU 43	-0.15	-0.12	15.43	0	0	0
246	SLU 44	-0.15	-0.11	15.45	0	0	0
246	SLU 45	-0.16	-0.12	15.69	0	0	0
246	SLU 46	-0.15	-0.11	15.71	0	0	0
246	SLU 47	-0.15	-0.11	15.63	0	0	0
246	SLU 48	-0.16	-0.12	15.88	0	0	0
246	SLU 49	-0.16	-0.11	15.89	0	0	0
246	SLU 50	-0.16	-0.12	15.79	0	0	0
246	SLU 51	-0.15	-0.12	15.81	0	0	0
246	SLU 52	-0.16	-0.11	17.1	0	0	0
246	SLU 53	-0.17	-0.12	17.35	0	0	0
246	SLU 54	-0.17	-0.11	17.36	0	0	0
246	SLU 55	-0.16	-0.11	17.29	0	0	0
246	SLU 56	-0.17	-0.12	17.53	0	0	0
246	SLU 57	-0.17	-0.11	17.54	0	0	0
246	SLU 58	-0.17	-0.12	17.45	0	0	0
246	SLU 59	-0.17	-0.12	17.46	0	0	0
246	SLU 60	-0.17	-0.12	17.79	0	0	0
246	SLU 61	-0.17	-0.11	17.8	0	0	0
246	SLU 62	-0.17	-0.12	17.97	0	0	0
246	SLU 63	-0.17	-0.11	17.99	0	0	0
246	SLU 64	-0.17	-0.11	16.86	0	0	0
246	SLU 65	-0.17	-0.1	16.88	0	0	0
246	SLU 66	-0.17	-0.11	17.12	0	0	0
246	SLU 67	-0.17	-0.1	17.14	0	0	0
246	SLU 68	-0.17	-0.1	17.06	0	0	0
246	SLU 69	-0.17	-0.11	17.31	0	0	0
246	SLU 70	-0.17	-0.1	17.32	0	0	0
246	SLU 71	-0.17	-0.12	17.23	0	0	0
246	SLU 72	-0.17	-0.11	17.24	0	0	0
246	SLU 73	-0.18	-0.1	18.54	0	0	0
246	SLU 74	-0.18	-0.11	18.78	0	0	0
246	SLU 75	-0.18	-0.1	18.79	0	0	0
246	SLU 76	-0.18	-0.1	18.72	0	0	0
246	SLU 77	-0.18	-0.11	18.96	0	0	0
246	SLU 78	-0.18	-0.1	18.98	0	0	0
246	SLU 79	-0.18	-0.12	18.88	0	0	0
246	SLU 80	-0.18	-0.11	18.89	0	0	0
246	SLU 81	-0.18	-0.11	19.22	0	0	0
246	SLU 82	-0.18	-0.1	19.24	0	0	0
246	SLU 83	-0.19	-0.11	19.41	0	0	0
246	SLU 84	-0.19	-0.11	19.42	0	0	0
246	SLE RA 1	-0.13	-0.09	12.65	0	0	0
246	SLE RA 2	-0.13	-0.08	12.67	0	0	0
246	SLE RA 3	-0.13	-0.09	12.83	0	0	0
246	SLE RA 4	-0.13	-0.08	12.84	0	0	0
246	SLE RA 5	-0.13	-0.08	12.79	0	0	0
246	SLE RA 6	-0.13	-0.09	12.95	0	0	0
246	SLE RA 7	-0.13	-0.08	12.96	0	0	0
246	SLE RA 8	-0.13	-0.09	12.9	0	0	0
246	SLE RA 9	-0.13	-0.08	12.91	0	0	0
246	SLE RA 10	-0.13	-0.08	13.77	0	0	0
246	SLE RA 11	-0.14	-0.09	13.93	0	0	0
246	SLE RA 12	-0.14	-0.08	13.94	0	0	0
246	SLE RA 13	-0.13	-0.08	13.89	0	0	0
246	SLE RA 14	-0.14	-0.09	14.06	0	0	0
246	SLE RA 15	-0.14	-0.08	14.07	0	0	0
246	SLE RA 16	-0.14	-0.09	14	0	0	0
246	SLE RA 17	-0.14	-0.08	14.01	0	0	0
246	SLE RA 18	-0.14	-0.09	14.23	0	0	0
246	SLE RA 19	-0.14	-0.08	14.24	0	0	0
246	SLE RA 20	-0.14	-0.09	14.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLE RA 21	-0.14	-0.08	14.36	0	0	0
246	SLE FR 1	-0.13	-0.09	12.65	0	0	0
246	SLE FR 2	-0.13	-0.09	12.66	0	0	0
246	SLE FR 3	-0.13	-0.09	12.7	0	0	0
246	SLE FR 4	-0.13	-0.09	13.13	0	0	0
246	SLE FR 5	-0.13	-0.09	13.18	0	0	0
246	SLE FR 6	-0.13	-0.09	13.44	0	0	0
246	SLE QP 1	-0.13	-0.09	12.65	0	0	0
246	SLE QP 2	-0.13	-0.09	13.13	0	0	0
246	SLD 1	0.9	0.06	13.27	0	0	0
246	SLD 2	1.03	0.03	13.23	0	0	0
246	SLD 3	0.92	-0.26	12.93	0	0	0
246	SLD 4	1.05	-0.29	12.89	0	0	0
246	SLD 5	0.13	0.45	13.69	0	0	0
246	SLD 6	0.21	0.43	13.66	0	0	0
246	SLD 7	0.19	-0.62	12.56	0	0	0
246	SLD 8	0.27	-0.64	12.53	0	0	0
246	SLD 9	-0.53	0.46	13.72	0	0	0
246	SLD 10	-0.45	0.45	13.69	0	0	0
246	SLD 11	-0.47	-0.61	12.59	0	0	0
246	SLD 12	-0.39	-0.62	12.56	0	0	0
246	SLD 13	-1.3	0.11	13.37	0	0	0
246	SLD 14	-1.18	0.09	13.32	0	0	0
246	SLD 15	-1.29	-0.21	13.03	0	0	0
246	SLD 16	-1.16	-0.23	12.98	0	0	0
246	SLV 1	2.28	0.24	13.46	0	0	0
246	SLV 2	2.58	0.18	13.35	0	0	0
246	SLV 3	2.32	-0.49	12.69	0	0	0
246	SLV 4	2.62	-0.55	12.58	0	0	0
246	SLV 5	0.48	1.13	14.41	0	0	0
246	SLV 6	0.67	1.09	14.34	0	0	0
246	SLV 7	0.62	-1.31	11.85	0	0	0
246	SLV 8	0.81	-1.35	11.78	0	0	0
246	SLV 9	-1.07	1.17	14.48	0	0	0
246	SLV 10	-0.88	1.13	14.41	0	0	0
246	SLV 11	-0.93	-1.27	11.91	0	0	0
246	SLV 12	-0.74	-1.31	11.84	0	0	0
246	SLV 13	-2.88	0.37	13.67	0	0	0
246	SLV 14	-2.58	0.31	13.57	0	0	0
246	SLV 15	-2.83	-0.36	12.9	0	0	0
246	SLV 16	-2.54	-0.42	12.8	0	0	0
248	SLU 1	-0.07	-0.16	7.17	0	0	0
248	SLU 2	-0.07	-0.15	7.18	0	0	0
248	SLU 3	-0.08	-0.16	7.32	0	0	0
248	SLU 4	-0.07	-0.16	7.33	0	0	0
248	SLU 5	-0.07	-0.15	7.28	0	0	0
248	SLU 6	-0.08	-0.16	7.43	0	0	0
248	SLU 7	-0.08	-0.16	7.43	0	0	0
248	SLU 8	-0.08	-0.16	7.38	0	0	0
248	SLU 9	-0.07	-0.16	7.38	0	0	0
248	SLU 10	-0.08	-0.16	8.12	0	0	0
248	SLU 11	-0.08	-0.17	8.26	0	0	0
248	SLU 12	-0.08	-0.17	8.27	0	0	0
248	SLU 13	-0.08	-0.16	8.22	0	0	0
248	SLU 14	-0.08	-0.18	8.37	0	0	0
248	SLU 15	-0.08	-0.17	8.37	0	0	0
248	SLU 16	-0.08	-0.18	8.32	0	0	0
248	SLU 17	-0.08	-0.17	8.32	0	0	0
248	SLU 18	-0.08	-0.18	8.51	0	0	0
248	SLU 19	-0.08	-0.17	8.52	0	0	0
248	SLU 20	-0.08	-0.18	8.62	0	0	0
248	SLU 21	-0.08	-0.17	8.62	0	0	0
248	SLU 22	-0.08	-0.17	8.02	0	0	0
248	SLU 23	-0.08	-0.16	8.03	0	0	0
248	SLU 24	-0.09	-0.17	8.17	0	0	0
248	SLU 25	-0.09	-0.16	8.18	0	0	0
248	SLU 26	-0.08	-0.16	8.13	0	0	0
248	SLU 27	-0.09	-0.17	8.28	0	0	0
248	SLU 28	-0.09	-0.17	8.28	0	0	0
248	SLU 29	-0.09	-0.17	8.23	0	0	0
248	SLU 30	-0.09	-0.17	8.24	0	0	0
248	SLU 31	-0.09	-0.17	8.97	0	0	0
248	SLU 32	-0.09	-0.18	9.11	0	0	0
248	SLU 33	-0.09	-0.18	9.12	0	0	0
248	SLU 34	-0.09	-0.17	9.07	0	0	0
248	SLU 35	-0.09	-0.18	9.22	0	0	0
248	SLU 36	-0.09	-0.18	9.22	0	0	0
248	SLU 37	-0.09	-0.19	9.17	0	0	0
248	SLU 38	-0.09	-0.18	9.18	0	0	0
248	SLU 39	-0.09	-0.19	9.36	0	0	0
248	SLU 40	-0.09	-0.18	9.37	0	0	0
248	SLU 41	-0.09	-0.19	9.47	0	0	0
248	SLU 42	-0.09	-0.18	9.47	0	0	0
248	SLU 43	-0.09	-0.2	9.03	0	0	0
248	SLU 44	-0.09	-0.19	9.04	0	0	0
248	SLU 45	-0.09	-0.21	9.18	0	0	0
248	SLU 46	-0.09	-0.2	9.19	0	0	0
248	SLU 47	-0.09	-0.2	9.14	0	0	0
248	SLU 48	-0.1	-0.21	9.29	0	0	0
248	SLU 49	-0.09	-0.2	9.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLU 50	-0.09	-0.21	9.24	0	0	0
248	SLU 51	-0.09	-0.2	9.24	0	0	0
248	SLU 52	-0.1	-0.21	9.98	0	0	0
248	SLU 53	-0.1	-0.22	10.12	0	0	0
248	SLU 54	-0.1	-0.21	10.13	0	0	0
248	SLU 55	-0.1	-0.21	10.08	0	0	0
248	SLU 56	-0.1	-0.22	10.23	0	0	0
248	SLU 57	-0.1	-0.21	10.23	0	0	0
248	SLU 58	-0.1	-0.22	10.18	0	0	0
248	SLU 59	-0.1	-0.21	10.18	0	0	0
248	SLU 60	-0.1	-0.22	10.37	0	0	0
248	SLU 61	-0.1	-0.21	10.38	0	0	0
248	SLU 62	-0.1	-0.22	10.48	0	0	0
248	SLU 63	-0.1	-0.22	10.48	0	0	0
248	SLU 64	-0.1	-0.21	9.88	0	0	0
248	SLU 65	-0.1	-0.2	9.89	0	0	0
248	SLU 66	-0.1	-0.21	10.03	0	0	0
248	SLU 67	-0.1	-0.21	10.04	0	0	0
248	SLU 68	-0.1	-0.21	9.99	0	0	0
248	SLU 69	-0.11	-0.22	10.14	0	0	0
248	SLU 70	-0.1	-0.21	10.14	0	0	0
248	SLU 71	-0.1	-0.22	10.09	0	0	0
248	SLU 72	-0.1	-0.21	10.09	0	0	0
248	SLU 73	-0.11	-0.21	10.83	0	0	0
248	SLU 74	-0.11	-0.23	10.97	0	0	0
248	SLU 75	-0.11	-0.22	10.98	0	0	0
248	SLU 76	-0.11	-0.22	10.93	0	0	0
248	SLU 77	-0.11	-0.23	11.08	0	0	0
248	SLU 78	-0.11	-0.22	11.08	0	0	0
248	SLU 79	-0.11	-0.23	11.03	0	0	0
248	SLU 80	-0.11	-0.22	11.03	0	0	0
248	SLU 81	-0.11	-0.23	11.22	0	0	0
248	SLU 82	-0.11	-0.22	11.23	0	0	0
248	SLU 83	-0.11	-0.23	11.33	0	0	0
248	SLU 84	-0.11	-0.23	11.33	0	0	0
248	SLE RA 1	-0.08	-0.16	7.41	0	0	0
248	SLE RA 2	-0.08	-0.15	7.42	0	0	0
248	SLE RA 3	-0.08	-0.16	7.52	0	0	0
248	SLE RA 4	-0.08	-0.16	7.52	0	0	0
248	SLE RA 5	-0.08	-0.16	7.49	0	0	0
248	SLE RA 6	-0.08	-0.16	7.59	0	0	0
248	SLE RA 7	-0.08	-0.16	7.59	0	0	0
248	SLE RA 8	-0.08	-0.16	7.55	0	0	0
248	SLE RA 9	-0.08	-0.16	7.56	0	0	0
248	SLE RA 10	-0.08	-0.16	8.04	0	0	0
248	SLE RA 11	-0.08	-0.17	8.14	0	0	0
248	SLE RA 12	-0.08	-0.17	8.15	0	0	0
248	SLE RA 13	-0.08	-0.16	8.11	0	0	0
248	SLE RA 14	-0.08	-0.17	8.21	0	0	0
248	SLE RA 15	-0.08	-0.17	8.22	0	0	0
248	SLE RA 16	-0.08	-0.17	8.18	0	0	0
248	SLE RA 17	-0.08	-0.17	8.18	0	0	0
248	SLE RA 18	-0.08	-0.17	8.31	0	0	0
248	SLE RA 19	-0.08	-0.17	8.31	0	0	0
248	SLE RA 20	-0.08	-0.17	8.38	0	0	0
248	SLE RA 21	-0.08	-0.17	8.38	0	0	0
248	SLE FR 1	-0.08	-0.16	7.41	0	0	0
248	SLE FR 2	-0.08	-0.16	7.41	0	0	0
248	SLE FR 3	-0.08	-0.16	7.44	0	0	0
248	SLE FR 4	-0.08	-0.16	7.68	0	0	0
248	SLE FR 5	-0.08	-0.17	7.71	0	0	0
248	SLE FR 6	-0.08	-0.17	7.86	0	0	0
248	SLE QP 1	-0.08	-0.16	7.41	0	0	0
248	SLE QP 2	-0.08	-0.16	7.68	0	0	0
248	SLD 1	0.51	-0.14	8.28	0	0	0
248	SLD 2	0.58	-0.19	8.24	0	0	0
248	SLD 3	0.52	-0.32	8.09	0	0	0
248	SLD 4	0.59	-0.36	8.04	0	0	0
248	SLD 5	0.07	0.11	8.16	0	0	0
248	SLD 6	0.12	0.08	8.14	0	0	0
248	SLD 7	0.1	-0.46	7.52	0	0	0
248	SLD 8	0.15	-0.49	7.49	0	0	0
248	SLD 9	-0.31	0.16	7.87	0	0	0
248	SLD 10	-0.26	0.13	7.85	0	0	0
248	SLD 11	-0.27	-0.41	7.23	0	0	0
248	SLD 12	-0.22	-0.44	7.2	0	0	0
248	SLD 13	-0.75	0.03	7.32	0	0	0
248	SLD 14	-0.67	-0.01	7.28	0	0	0
248	SLD 15	-0.73	-0.14	7.12	0	0	0
248	SLD 16	-0.66	-0.19	7.08	0	0	0
248	SLV 1	1.29	-0.12	9.08	0	0	0
248	SLV 2	1.46	-0.22	8.98	0	0	0
248	SLV 3	1.31	-0.51	8.64	0	0	0
248	SLV 4	1.48	-0.61	8.54	0	0	0
248	SLV 5	0.26	0.46	8.78	0	0	0
248	SLV 6	0.37	0.39	8.72	0	0	0
248	SLV 7	0.35	-0.84	7.32	0	0	0
248	SLV 8	0.46	-0.91	7.25	0	0	0
248	SLV 9	-0.61	0.58	8.11	0	0	0
248	SLV 10	-0.5	0.51	8.05	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLV 11	-0.53	-0.72	6.64	0	0	0
248	SLV 12	-0.42	-0.79	6.58	0	0	0
248	SLV 13	-1.64	0.28	6.82	0	0	0
248	SLV 14	-1.47	0.18	6.73	0	0	0
248	SLV 15	-1.61	-0.11	6.38	0	0	0
248	SLV 16	-1.44	-0.21	6.29	0	0	0
249	SLU 1	-0.06	-0.03	6.21	0	0.9326	0.0052
249	SLU 2	-0.06	-0.03	6.22	0	0.9343	0.0041
249	SLU 3	-0.06	-0.03	6.34	0	0.9529	0.005
249	SLU 4	-0.06	-0.03	6.35	0	0.9539	0.0043
249	SLU 5	-0.06	-0.03	6.31	0	0.9484	0.0042
249	SLU 6	-0.06	-0.03	6.44	0	0.967	0.0051
249	SLU 7	-0.06	-0.03	6.44	0	0.968	0.0044
249	SLU 8	-0.06	-0.04	6.4	0	0.9607	0.0053
249	SLU 9	-0.06	-0.03	6.4	0	0.9618	0.0047
249	SLU 10	-0.06	-0.03	7.07	0	1.0614	0.0039
249	SLU 11	-0.07	-0.03	7.19	0	1.08	0.0048
249	SLU 12	-0.07	-0.03	7.2	0	1.081	0.0042
249	SLU 13	-0.07	-0.03	7.16	0	1.0755	0.004
249	SLU 14	-0.07	-0.03	7.28	0	1.0941	0.0049
249	SLU 15	-0.07	-0.03	7.29	0	1.0951	0.0043
249	SLU 16	-0.07	-0.03	7.24	0	1.0878	0.0052
249	SLU 17	-0.07	-0.03	7.25	0	1.0889	0.0045
249	SLU 18	-0.07	-0.03	7.42	0	1.1141	0.0049
249	SLU 19	-0.07	-0.03	7.42	0	1.1152	0.0043
249	SLU 20	-0.07	-0.03	7.51	0	1.1282	0.005
249	SLU 21	-0.07	-0.03	7.52	0	1.1293	0.0044
249	SLU 22	-0.07	-0.03	6.94	0	1.042	0.0043
249	SLU 23	-0.07	-0.02	6.95	0	1.0438	0.0032
249	SLU 24	-0.07	-0.03	7.07	0	1.0623	0.0041
249	SLU 25	-0.07	-0.02	7.08	0	1.0634	0.0035
249	SLU 26	-0.07	-0.02	7.04	0	1.0579	0.0033
249	SLU 27	-0.07	-0.03	7.17	0	1.0764	0.0042
249	SLU 28	-0.07	-0.02	7.17	0	1.0775	0.0035
249	SLU 29	-0.07	-0.03	7.12	0	1.0702	0.0045
249	SLU 30	-0.07	-0.03	7.13	0	1.0712	0.0038
249	SLU 31	-0.07	-0.02	7.79	0	1.1709	0.0031
249	SLU 32	-0.08	-0.03	7.92	0	1.1894	0.0039
249	SLU 33	-0.08	-0.02	7.93	0	1.1905	0.0033
249	SLU 34	-0.07	-0.02	7.89	0	1.185	0.0031
249	SLU 35	-0.08	-0.03	8.01	0	1.2035	0.004
249	SLU 36	-0.08	-0.02	8.02	0	1.2046	0.0034
249	SLU 37	-0.08	-0.03	7.97	0	1.1973	0.0043
249	SLU 38	-0.08	-0.02	7.98	0	1.1983	0.0037
249	SLU 39	-0.08	-0.03	8.15	0	1.2236	0.0041
249	SLU 40	-0.08	-0.02	8.15	0	1.2247	0.0034
249	SLU 41	-0.08	-0.03	8.24	0	1.2377	0.0042
249	SLU 42	-0.08	-0.02	8.25	0	1.2387	0.0035
249	SLU 43	-0.08	-0.05	7.82	0	1.1748	0.007
249	SLU 44	-0.07	-0.04	7.83	0	1.1766	0.0059
249	SLU 45	-0.08	-0.05	7.96	0	1.1951	0.0068
249	SLU 46	-0.08	-0.04	7.96	0	1.1962	0.0062
249	SLU 47	-0.08	-0.04	7.93	0	1.1907	0.006
249	SLU 48	-0.08	-0.05	8.05	0	1.2092	0.0069
249	SLU 49	-0.08	-0.04	8.06	0	1.2103	0.0063
249	SLU 50	-0.08	-0.05	8.01	0	1.203	0.0072
249	SLU 51	-0.08	-0.04	8.02	0	1.204	0.0065
249	SLU 52	-0.08	-0.04	8.68	0	1.3037	0.0058
249	SLU 53	-0.08	-0.04	8.8	0	1.3222	0.0067
249	SLU 54	-0.08	-0.04	8.81	0	1.3233	0.006
249	SLU 55	-0.08	-0.04	8.77	0	1.3178	0.0059
249	SLU 56	-0.08	-0.04	8.9	0	1.3363	0.0068
249	SLU 57	-0.08	-0.04	8.9	0	1.3374	0.0061
249	SLU 58	-0.08	-0.05	8.85	0	1.3301	0.007
249	SLU 59	-0.08	-0.04	8.86	0	1.3311	0.0064
249	SLU 60	-0.08	-0.05	9.03	0	1.3564	0.0068
249	SLU 61	-0.08	-0.04	9.04	0	1.3575	0.0061
249	SLU 62	-0.08	-0.05	9.12	0	1.3705	0.0069
249	SLU 63	-0.08	-0.04	9.13	0	1.3715	0.0062
249	SLU 64	-0.08	-0.04	8.55	0	1.2843	0.0061
249	SLU 65	-0.08	-0.03	8.56	0	1.286	0.0051
249	SLU 66	-0.09	-0.04	8.68	0	1.3046	0.006
249	SLU 67	-0.09	-0.04	8.69	0	1.3056	0.0053
249	SLU 68	-0.08	-0.03	8.65	0	1.3001	0.0052
249	SLU 69	-0.09	-0.04	8.78	0	1.3187	0.006
249	SLU 70	-0.09	-0.04	8.79	0	1.3197	0.0054
249	SLU 71	-0.09	-0.04	8.74	0	1.3124	0.0063
249	SLU 72	-0.09	-0.04	8.74	0	1.3135	0.0057
249	SLU 73	-0.09	-0.03	9.41	0	1.4131	0.0049
249	SLU 74	-0.09	-0.04	9.53	0	1.4317	0.0058
249	SLU 75	-0.09	-0.03	9.54	0	1.4327	0.0051
249	SLU 76	-0.09	-0.03	9.5	0	1.4272	0.005
249	SLU 77	-0.09	-0.04	9.62	0	1.4458	0.0059
249	SLU 78	-0.09	-0.03	9.63	0	1.4468	0.0052
249	SLU 79	-0.09	-0.04	9.58	0	1.4395	0.0062
249	SLU 80	-0.09	-0.04	9.59	0	1.4406	0.0055
249	SLU 81	-0.09	-0.04	9.76	0	1.4658	0.0059
249	SLU 82	-0.09	-0.04	9.77	0	1.4669	0.0053
249	SLU 83	-0.09	-0.04	9.85	0	1.4799	0.006
249	SLU 84	-0.09	-0.04	9.86	0	1.481	0.0054

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLE RA 1	-0.06	-0.03	6.42	0	0.9638	0.0049
249	SLE RA 2	-0.06	-0.03	6.42	0	0.965	0.0042
249	SLE RA 3	-0.06	-0.03	6.51	0	0.9774	0.0048
249	SLE RA 4	-0.06	-0.03	6.51	0	0.9781	0.0044
249	SLE RA 5	-0.06	-0.03	6.49	0	0.9744	0.0043
249	SLE RA 6	-0.06	-0.03	6.57	0	0.9868	0.0049
249	SLE RA 7	-0.06	-0.03	6.57	0	0.9875	0.0044
249	SLE RA 8	-0.06	-0.03	6.54	0	0.9826	0.005
249	SLE RA 9	-0.06	-0.03	6.55	0	0.9833	0.0046
249	SLE RA 10	-0.07	-0.03	6.99	0	1.0498	0.0041
249	SLE RA 11	-0.07	-0.03	7.07	0	1.0621	0.0047
249	SLE RA 12	-0.07	-0.03	7.08	0	1.0628	0.0043
249	SLE RA 13	-0.07	-0.03	7.05	0	1.0591	0.0042
249	SLE RA 14	-0.07	-0.03	7.13	0	1.0715	0.0047
249	SLE RA 15	-0.07	-0.03	7.14	0	1.0722	0.0043
249	SLE RA 16	-0.07	-0.03	7.11	0	1.0673	0.0049
249	SLE RA 17	-0.07	-0.03	7.11	0	1.0681	0.0045
249	SLE RA 18	-0.07	-0.03	7.22	0	1.0849	0.0048
249	SLE RA 19	-0.07	-0.03	7.23	0	1.0856	0.0043
249	SLE RA 20	-0.07	-0.03	7.28	0	1.0943	0.0048
249	SLE RA 21	-0.07	-0.03	7.29	0	1.095	0.0044
249	SLE FR 1	-0.06	-0.03	6.42	0	0.9638	0.0049
249	SLE FR 2	-0.06	-0.03	6.42	0	0.9641	0.0048
249	SLE FR 3	-0.06	-0.03	6.44	0	0.9676	0.0049
249	SLE FR 4	-0.06	-0.03	6.66	0	1.0004	0.0047
249	SLE FR 5	-0.06	-0.03	6.68	0	1.0039	0.0049
249	SLE FR 6	-0.07	-0.03	6.82	0	1.0244	0.0048
249	SLE QP 1	-0.06	-0.03	6.42	0	0.9638	0.0049
249	SLE QP 2	-0.06	-0.03	6.66	0	1.0002	0.0049
249	SLD 1	0.44	0.07	6.7	0	1.0062	-0.0101
249	SLD 2	0.51	0.06	6.68	0	1.0031	-0.0086
249	SLD 3	0.45	-0.09	6.53	0	0.9803	0.0141
249	SLD 4	0.52	-0.1	6.5	0	0.9772	0.0155
249	SLD 5	0.06	0.24	6.94	0	1.0418	-0.0365
249	SLD 6	0.1	0.24	6.92	0	1.0397	-0.0356
249	SLD 7	0.09	-0.29	6.36	0	0.9555	0.044
249	SLD 8	0.13	-0.3	6.35	0	0.9534	0.0449
249	SLD 9	-0.26	0.23	6.97	0	1.0469	-0.0352
249	SLD 10	-0.22	0.23	6.96	0	1.0448	-0.0343
249	SLD 11	-0.23	-0.3	6.39	0	0.9606	0.0453
249	SLD 12	-0.19	-0.31	6.38	0	0.9585	0.0462
249	SLD 13	-0.64	0.04	6.81	0	1.0232	-0.0058
249	SLD 14	-0.58	0.03	6.79	0	1.02	-0.0043
249	SLD 15	-0.64	-0.12	6.64	0	0.9973	0.0184
249	SLD 16	-0.57	-0.13	6.62	0	0.9941	0.0198
249	SLV 1	1.12	0.2	6.75	0	1.0134	-0.0293
249	SLV 2	1.27	0.17	6.7	0	1.006	-0.026
249	SLV 3	1.15	-0.17	6.35	0	0.9546	0.0257
249	SLV 4	1.29	-0.19	6.31	0	0.9473	0.029
249	SLV 5	0.23	0.59	7.29	0	1.0944	-0.0894
249	SLV 6	0.33	0.58	7.25	0	1.0897	-0.0872
249	SLV 7	0.31	-0.63	5.98	0	0.8987	0.0939
249	SLV 8	0.4	-0.64	5.95	0	0.894	0.0961
249	SLV 9	-0.53	0.57	7.36	0	1.1063	-0.0863
249	SLV 10	-0.43	0.56	7.33	0	1.1016	-0.0842
249	SLV 11	-0.46	-0.65	6.06	0	0.9106	0.097
249	SLV 12	-0.36	-0.66	6.03	0	0.9059	0.0991
249	SLV 13	-1.42	0.13	7.01	0	1.053	-0.0192
249	SLV 14	-1.27	0.11	6.96	0	1.0457	-0.0159
249	SLV 15	-1.4	-0.24	6.62	0	0.9943	0.0358
249	SLV 16	-1.25	-0.26	6.57	0	0.987	0.0391
249	CRTFP Uy+	0	0	0	0	0	0
249	CRTFP Uy-	0	0	0	0	0	0
252	SLU 1	-0.05	-0.21	37.11	-0.0206	10.8812	0.0573
252	SLU 2	-0.05	-0.16	37.18	-0.0207	10.9031	0.043
252	SLU 3	-0.05	-0.21	37.92	-0.0211	11.1191	0.0552
252	SLU 4	-0.05	-0.18	37.96	-0.0212	11.1322	0.0466
252	SLU 5	-0.05	-0.17	37.73	-0.0211	11.0643	0.0437
252	SLU 6	-0.05	-0.21	38.47	-0.0214	11.2803	0.0559
252	SLU 7	-0.05	-0.18	38.51	-0.0215	11.2935	0.0473
252	SLU 8	-0.05	-0.22	38.21	-0.0214	11.2036	0.0588
252	SLU 9	-0.05	-0.19	38.25	-0.0214	11.2168	0.0502
252	SLU 10	-0.07	-0.15	42.2	-0.0229	12.3827	0.0367
252	SLU 11	-0.07	-0.19	42.94	-0.0233	12.5988	0.049
252	SLU 12	-0.07	-0.16	42.98	-0.0233	12.6119	0.0403
252	SLU 13	-0.07	-0.15	42.75	-0.0233	12.5439	0.0375
252	SLU 14	-0.07	-0.19	43.49	-0.0236	12.76	0.0497
252	SLU 15	-0.07	-0.16	43.53	-0.0237	12.7731	0.0411
252	SLU 16	-0.07	-0.2	43.22	-0.0235	12.6833	0.0526
252	SLU 17	-0.07	-0.17	43.27	-0.0236	12.6964	0.044
252	SLU 18	-0.07	-0.19	44.28	-0.0237	12.995	0.0484
252	SLU 19	-0.08	-0.16	44.32	-0.0238	13.0081	0.0398
252	SLU 20	-0.07	-0.19	44.82	-0.0241	13.1562	0.0492
252	SLU 21	-0.08	-0.16	44.87	-0.0242	13.1693	0.0405
252	SLU 22	-0.05	-0.18	41.47	-0.0229	12.1585	0.0473
252	SLU 23	-0.05	-0.13	41.54	-0.023	12.1804	0.033
252	SLU 24	-0.05	-0.18	42.28	-0.0233	12.3964	0.0452
252	SLU 25	-0.05	-0.15	42.32	-0.0234	12.4095	0.0366
252	SLU 26	-0.05	-0.14	42.08	-0.0234	12.3416	0.0337
252	SLU 27	-0.05	-0.18	42.82	-0.0237	12.5577	0.0459

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 28	-0.05	-0.15	42.86	-0.0238	12.5708	0.0373
252	SLU 29	-0.05	-0.19	42.56	-0.0236	12.481	0.0488
252	SLU 30	-0.05	-0.16	42.6	-0.0237	12.4941	0.0402
252	SLU 31	-0.07	-0.11	46.55	-0.0252	13.66	0.0267
252	SLU 32	-0.07	-0.16	47.29	-0.0255	13.8761	0.039
252	SLU 33	-0.07	-0.13	47.33	-0.0256	13.8892	0.0304
252	SLU 34	-0.07	-0.12	47.1	-0.0256	13.8212	0.0275
252	SLU 35	-0.07	-0.16	47.84	-0.0259	14.0373	0.0397
252	SLU 36	-0.07	-0.13	47.88	-0.026	14.0504	0.0311
252	SLU 37	-0.07	-0.17	47.58	-0.0258	13.9606	0.0426
252	SLU 38	-0.07	-0.14	47.62	-0.0259	13.9737	0.034
252	SLU 39	-0.07	-0.15	48.63	-0.026	14.2723	0.0384
252	SLU 40	-0.08	-0.12	48.67	-0.0261	14.2854	0.0298
252	SLU 41	-0.07	-0.16	49.18	-0.0264	14.4335	0.0392
252	SLU 42	-0.08	-0.13	49.22	-0.0265	14.4466	0.0305
252	SLU 43	-0.06	-0.29	46.75	-0.026	13.7076	0.078
252	SLU 44	-0.06	-0.24	46.82	-0.0261	13.7295	0.0636
252	SLU 45	-0.06	-0.28	47.56	-0.0265	13.9456	0.0758
252	SLU 46	-0.06	-0.25	47.61	-0.0266	13.9587	0.0672
252	SLU 47	-0.07	-0.24	47.37	-0.0265	13.8907	0.0643
252	SLU 48	-0.06	-0.29	48.11	-0.0268	14.1068	0.0766
252	SLU 49	-0.06	-0.26	48.15	-0.0269	14.1199	0.0679
252	SLU 50	-0.06	-0.3	47.85	-0.0267	14.0301	0.0794
252	SLU 51	-0.07	-0.27	47.89	-0.0268	14.0432	0.0708
252	SLU 52	-0.08	-0.22	51.84	-0.0283	15.2091	0.0574
252	SLU 53	-0.08	-0.26	52.58	-0.0287	15.4252	0.0696
252	SLU 54	-0.08	-0.23	52.62	-0.0287	15.4383	0.061
252	SLU 55	-0.08	-0.22	52.39	-0.0287	15.3703	0.0581
252	SLU 56	-0.08	-0.27	53.13	-0.029	15.5864	0.0703
252	SLU 57	-0.08	-0.24	53.17	-0.0291	15.5995	0.0617
252	SLU 58	-0.08	-0.28	52.86	-0.0289	15.5097	0.0732
252	SLU 59	-0.08	-0.25	52.91	-0.029	15.5228	0.0646
252	SLU 60	-0.09	-0.26	53.92	-0.0291	15.8214	0.069
252	SLU 61	-0.09	-0.23	53.96	-0.0292	15.8345	0.0604
252	SLU 62	-0.09	-0.26	54.47	-0.0295	15.9826	0.0698
252	SLU 63	-0.09	-0.23	54.51	-0.0296	15.9957	0.0612
252	SLU 64	-0.06	-0.26	51.11	-0.0283	14.9849	0.068
252	SLU 65	-0.06	-0.21	51.18	-0.0284	15.0068	0.0536
252	SLU 66	-0.06	-0.25	51.92	-0.0287	15.2229	0.0658
252	SLU 67	-0.06	-0.22	51.96	-0.0288	15.236	0.0572
252	SLU 68	-0.07	-0.21	51.72	-0.0288	15.168	0.0543
252	SLU 69	-0.06	-0.25	52.46	-0.0291	15.3841	0.0666
252	SLU 70	-0.06	-0.22	52.51	-0.0292	15.3972	0.058
252	SLU 71	-0.06	-0.26	52.2	-0.029	15.3074	0.0694
252	SLU 72	-0.07	-0.23	52.24	-0.0291	15.3205	0.0608
252	SLU 73	-0.08	-0.19	56.19	-0.0306	16.4864	0.0474
252	SLU 74	-0.08	-0.23	56.93	-0.0309	16.7025	0.0596
252	SLU 75	-0.08	-0.2	56.97	-0.031	16.7156	0.051
252	SLU 76	-0.08	-0.19	56.74	-0.031	16.6476	0.0481
252	SLU 77	-0.08	-0.23	57.48	-0.0313	16.8637	0.0603
252	SLU 78	-0.08	-0.2	57.52	-0.0314	16.8768	0.0517
252	SLU 79	-0.08	-0.24	57.22	-0.0312	16.787	0.0632
252	SLU 80	-0.08	-0.21	57.26	-0.0313	16.8001	0.0546
252	SLU 81	-0.09	-0.23	58.27	-0.0314	17.0987	0.0591
252	SLU 82	-0.09	-0.2	58.31	-0.0315	17.1118	0.0504
252	SLU 83	-0.09	-0.23	58.82	-0.0318	17.2599	0.0598
252	SLU 84	-0.09	-0.2	58.86	-0.0319	17.273	0.0512
252	SLE RA 1	-0.05	-0.21	38.36	-0.0212	11.2462	0.0545
252	SLE RA 2	-0.05	-0.17	38.4	-0.0213	11.2607	0.0449
252	SLE RA 3	-0.05	-0.2	38.9	-0.0216	11.4048	0.0531
252	SLE RA 4	-0.05	-0.18	38.92	-0.0216	11.4135	0.0473
252	SLE RA 5	-0.05	-0.17	38.77	-0.0216	11.3682	0.0454
252	SLE RA 6	-0.05	-0.2	39.26	-0.0218	11.5122	0.0535
252	SLE RA 7	-0.05	-0.18	39.29	-0.0219	11.521	0.0478
252	SLE RA 8	-0.05	-0.21	39.09	-0.0217	11.4611	0.0555
252	SLE RA 9	-0.05	-0.19	39.11	-0.0218	11.4699	0.0497
252	SLE RA 10	-0.06	-0.16	41.75	-0.0228	12.2471	0.0407
252	SLE RA 11	-0.06	-0.19	42.24	-0.023	12.3912	0.0489
252	SLE RA 12	-0.06	-0.17	42.27	-0.0231	12.3999	0.0432
252	SLE RA 13	-0.06	-0.16	42.11	-0.0231	12.3546	0.0412
252	SLE RA 14	-0.06	-0.19	42.6	-0.0233	12.4987	0.0494
252	SLE RA 15	-0.06	-0.17	42.63	-0.0233	12.5074	0.0436
252	SLE RA 16	-0.06	-0.2	42.43	-0.0232	12.4475	0.0513
252	SLE RA 17	-0.06	-0.18	42.46	-0.0233	12.4563	0.0456
252	SLE RA 18	-0.06	-0.19	43.13	-0.0233	12.6553	0.0485
252	SLE RA 19	-0.07	-0.17	43.16	-0.0234	12.6641	0.0428
252	SLE RA 20	-0.07	-0.19	43.5	-0.0236	12.7628	0.049
252	SLE RA 21	-0.07	-0.17	43.53	-0.0236	12.7715	0.0433
252	SLE FR 1	-0.05	-0.21	38.36	-0.0212	11.2462	0.0545
252	SLE FR 2	-0.05	-0.2	38.37	-0.0213	11.2491	0.0526
252	SLE FR 3	-0.05	-0.21	38.5	-0.0213	11.2891	0.0547
252	SLE FR 4	-0.05	-0.19	39.8	-0.0219	11.6718	0.0508
252	SLE FR 5	-0.05	-0.2	39.94	-0.022	11.7119	0.0529
252	SLE FR 6	-0.06	-0.2	40.74	-0.0223	11.9507	0.0515
252	SLE QP 1	-0.05	-0.21	38.36	-0.0212	11.2462	0.0545
252	SLE QP 2	-0.05	-0.2	39.79	-0.0219	11.6689	0.0527
252	SLD 1	3.38	0.2	39.91	-0.0209	11.762	-0.0595
252	SLD 2	3.78	0.23	39.99	-0.0211	11.7783	-0.0658
252	SLD 3	3.32	-0.81	38.92	-0.0178	11.4674	0.2343
252	SLD 4	3.72	-0.78	39	-0.018	11.4837	0.228

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLD 5	0.99	1.44	41.32	-0.0262	12.1407	-0.4254
252	SLD 6	1.26	1.46	41.37	-0.0263	12.1514	-0.4295
252	SLD 7	0.8	-1.91	38.01	-0.0159	11.1588	0.5539
252	SLD 8	1.06	-1.89	38.06	-0.016	11.1695	0.5497
252	SLD 9	-1.17	1.49	41.52	-0.0277	12.1684	-0.4443
252	SLD 10	-0.9	1.51	41.57	-0.0278	12.179	-0.4485
252	SLD 11	-1.36	-1.86	38.2	-0.0174	11.1864	0.5349
252	SLD 12	-1.1	-1.84	38.26	-0.0175	11.1971	0.5308
252	SLD 13	-3.83	0.38	40.58	-0.0258	11.8541	-0.1226
252	SLD 14	-3.42	0.41	40.66	-0.0259	11.8704	-0.1289
252	SLD 15	-3.89	-0.63	39.58	-0.0227	11.5595	0.1712
252	SLD 16	-3.48	-0.6	39.67	-0.0228	11.5758	0.1648
252	SLV 1	7.97	0.7	40.04	-0.0195	11.8764	-0.2006
252	SLV 2	8.91	0.77	40.23	-0.0199	11.9144	-0.2154
252	SLV 3	7.84	-1.59	37.79	-0.0125	11.208	0.4683
252	SLV 4	8.78	-1.52	37.98	-0.0129	11.246	0.4535
252	SLV 5	2.4	3.53	43.25	-0.0317	12.7383	-1.0352
252	SLV 6	3	3.58	43.38	-0.032	12.7628	-1.0448
252	SLV 7	1.95	-4.1	35.73	-0.0084	10.5104	1.1944
252	SLV 8	2.56	-4.06	35.86	-0.0086	10.5349	1.1849
252	SLV 9	-2.66	3.66	43.72	-0.0351	12.8029	-1.0795
252	SLV 10	-2.05	3.7	43.84	-0.0354	12.8274	-1.089
252	SLV 11	-3.11	-3.97	36.2	-0.0118	10.575	1.1501
252	SLV 12	-2.5	-3.93	36.33	-0.012	10.5995	1.1406
252	SLV 13	-8.88	1.12	41.6	-0.0309	12.0918	-0.3481
252	SLV 14	-7.94	1.19	41.79	-0.0312	12.1298	-0.3629
252	SLV 15	-9.02	-1.17	39.34	-0.0239	11.4235	0.3208
252	SLV 16	-8.08	-1.1	39.54	-0.0242	11.4614	0.306
252	CRTFP Ux+	0	0	0	0	0	0
252	CRTFP Ux-	0	0	0	0	0	0
252	CRTFP Uy+	0	0	0	0	0	0
252	CRTFP Uy-	0	0	0	0	0	0
254	SLU 1	-0.01	-0.08	8.77	0	0	0
254	SLU 2	-0.01	-0.07	8.78	0	0	0
254	SLU 3	-0.01	-0.08	8.96	0	0	0
254	SLU 4	-0.01	-0.07	8.97	0	0	0
254	SLU 5	-0.01	-0.07	8.91	0	0	0
254	SLU 6	-0.01	-0.08	9.09	0	0	0
254	SLU 7	-0.01	-0.07	9.1	0	0	0
254	SLU 8	-0.01	-0.08	9.03	0	0	0
254	SLU 9	-0.01	-0.07	9.04	0	0	0
254	SLU 10	-0.02	-0.06	9.96	0	0	0
254	SLU 11	-0.01	-0.08	10.13	0	0	0
254	SLU 12	-0.02	-0.07	10.14	0	0	0
254	SLU 13	-0.02	-0.07	10.08	0	0	0
254	SLU 14	-0.01	-0.08	10.26	0	0	0
254	SLU 15	-0.02	-0.07	10.27	0	0	0
254	SLU 16	-0.02	-0.08	10.2	0	0	0
254	SLU 17	-0.02	-0.07	10.21	0	0	0
254	SLU 18	-0.02	-0.08	10.44	0	0	0
254	SLU 19	-0.02	-0.07	10.45	0	0	0
254	SLU 20	-0.02	-0.08	10.57	0	0	0
254	SLU 21	-0.02	-0.07	10.58	0	0	0
254	SLU 22	-0.01	-0.07	9.8	0	0	0
254	SLU 23	-0.01	-0.06	9.81	0	0	0
254	SLU 24	-0.01	-0.07	9.99	0	0	0
254	SLU 25	-0.01	-0.07	10	0	0	0
254	SLU 26	-0.01	-0.06	9.94	0	0	0
254	SLU 27	-0.01	-0.07	10.12	0	0	0
254	SLU 28	-0.01	-0.07	10.12	0	0	0
254	SLU 29	-0.01	-0.08	10.05	0	0	0
254	SLU 30	-0.01	-0.07	10.06	0	0	0
254	SLU 31	-0.02	-0.06	10.98	0	0	0
254	SLU 32	-0.01	-0.07	11.16	0	0	0
254	SLU 33	-0.02	-0.06	11.17	0	0	0
254	SLU 34	-0.02	-0.06	11.11	0	0	0
254	SLU 35	-0.01	-0.07	11.29	0	0	0
254	SLU 36	-0.02	-0.07	11.3	0	0	0
254	SLU 37	-0.02	-0.08	11.23	0	0	0
254	SLU 38	-0.02	-0.07	11.23	0	0	0
254	SLU 39	-0.02	-0.07	11.47	0	0	0
254	SLU 40	-0.02	-0.06	11.48	0	0	0
254	SLU 41	-0.02	-0.07	11.6	0	0	0
254	SLU 42	-0.02	-0.07	11.61	0	0	0
254	SLU 43	-0.01	-0.1	11.05	0	0	0
254	SLU 44	-0.01	-0.09	11.06	0	0	0
254	SLU 45	-0.01	-0.1	11.24	0	0	0
254	SLU 46	-0.01	-0.1	11.25	0	0	0
254	SLU 47	-0.01	-0.09	11.19	0	0	0
254	SLU 48	-0.01	-0.1	11.37	0	0	0
254	SLU 49	-0.01	-0.1	11.38	0	0	0
254	SLU 50	-0.01	-0.11	11.31	0	0	0
254	SLU 51	-0.01	-0.1	11.31	0	0	0
254	SLU 52	-0.02	-0.09	12.23	0	0	0
254	SLU 53	-0.02	-0.1	12.41	0	0	0
254	SLU 54	-0.02	-0.09	12.42	0	0	0
254	SLU 55	-0.02	-0.09	12.36	0	0	0
254	SLU 56	-0.02	-0.1	12.54	0	0	0
254	SLU 57	-0.02	-0.09	12.55	0	0	0
254	SLU 58	-0.02	-0.1	12.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 59	-0.02	-0.1	12.49	0	0	0
254	SLU 60	-0.02	-0.1	12.72	0	0	0
254	SLU 61	-0.02	-0.09	12.73	0	0	0
254	SLU 62	-0.02	-0.1	12.85	0	0	0
254	SLU 63	-0.02	-0.09	12.86	0	0	0
254	SLU 64	-0.01	-0.1	12.07	0	0	0
254	SLU 65	-0.01	-0.09	12.09	0	0	0
254	SLU 66	-0.01	-0.1	12.27	0	0	0
254	SLU 67	-0.01	-0.09	12.27	0	0	0
254	SLU 68	-0.01	-0.09	12.22	0	0	0
254	SLU 69	-0.01	-0.1	12.39	0	0	0
254	SLU 70	-0.01	-0.09	12.4	0	0	0
254	SLU 71	-0.01	-0.1	12.33	0	0	0
254	SLU 72	-0.01	-0.09	12.34	0	0	0
254	SLU 73	-0.02	-0.09	13.26	0	0	0
254	SLU 74	-0.02	-0.1	13.44	0	0	0
254	SLU 75	-0.02	-0.09	13.45	0	0	0
254	SLU 76	-0.02	-0.09	13.39	0	0	0
254	SLU 77	-0.02	-0.1	13.57	0	0	0
254	SLU 78	-0.02	-0.09	13.58	0	0	0
254	SLU 79	-0.02	-0.1	13.5	0	0	0
254	SLU 80	-0.02	-0.09	13.51	0	0	0
254	SLU 81	-0.02	-0.1	13.75	0	0	0
254	SLU 82	-0.02	-0.09	13.76	0	0	0
254	SLU 83	-0.02	-0.1	13.88	0	0	0
254	SLU 84	-0.02	-0.09	13.89	0	0	0
254	SLE RA 1	-0.01	-0.08	9.06	0	0	0
254	SLE RA 2	-0.01	-0.07	9.07	0	0	0
254	SLE RA 3	-0.01	-0.08	9.19	0	0	0
254	SLE RA 4	-0.01	-0.07	9.2	0	0	0
254	SLE RA 5	-0.01	-0.07	9.16	0	0	0
254	SLE RA 6	-0.01	-0.08	9.28	0	0	0
254	SLE RA 7	-0.01	-0.07	9.28	0	0	0
254	SLE RA 8	-0.01	-0.08	9.23	0	0	0
254	SLE RA 9	-0.01	-0.07	9.24	0	0	0
254	SLE RA 10	-0.01	-0.07	9.85	0	0	0
254	SLE RA 11	-0.01	-0.08	9.97	0	0	0
254	SLE RA 12	-0.01	-0.07	9.98	0	0	0
254	SLE RA 13	-0.01	-0.07	9.94	0	0	0
254	SLE RA 14	-0.01	-0.08	10.06	0	0	0
254	SLE RA 15	-0.01	-0.07	10.06	0	0	0
254	SLE RA 16	-0.01	-0.08	10.02	0	0	0
254	SLE RA 17	-0.01	-0.07	10.02	0	0	0
254	SLE RA 18	-0.01	-0.08	10.18	0	0	0
254	SLE RA 19	-0.01	-0.07	10.19	0	0	0
254	SLE RA 20	-0.01	-0.08	10.26	0	0	0
254	SLE RA 21	-0.01	-0.07	10.27	0	0	0
254	SLE FR 1	-0.01	-0.08	9.06	0	0	0
254	SLE FR 2	-0.01	-0.08	9.06	0	0	0
254	SLE FR 3	-0.01	-0.08	9.1	0	0	0
254	SLE FR 4	-0.01	-0.08	9.4	0	0	0
254	SLE FR 5	-0.01	-0.08	9.43	0	0	0
254	SLE FR 6	-0.01	-0.08	9.62	0	0	0
254	SLE QP 1	-0.01	-0.08	9.06	0	0	0
254	SLE QP 2	-0.01	-0.08	9.4	0	0	0
254	SLD 1	0.81	0.06	9.34	0	0	0
254	SLD 2	0.9	0.08	9.37	0	0	0
254	SLD 3	0.79	-0.18	9.11	0	0	0
254	SLD 4	0.89	-0.16	9.14	0	0	0
254	SLD 5	0.24	0.32	9.73	0	0	0
254	SLD 6	0.3	0.33	9.75	0	0	0
254	SLD 7	0.19	-0.47	8.96	0	0	0
254	SLD 8	0.26	-0.46	8.98	0	0	0
254	SLD 9	-0.28	0.3	9.82	0	0	0
254	SLD 10	-0.21	0.31	9.84	0	0	0
254	SLD 11	-0.32	-0.48	9.05	0	0	0
254	SLD 12	-0.26	-0.47	9.07	0	0	0
254	SLD 13	-0.91	0.01	9.65	0	0	0
254	SLD 14	-0.82	0.02	9.68	0	0	0
254	SLD 15	-0.93	-0.23	9.42	0	0	0
254	SLD 16	-0.83	-0.21	9.45	0	0	0
254	SLV 1	1.91	0.24	9.26	0	0	0
254	SLV 2	2.13	0.28	9.33	0	0	0
254	SLV 3	1.87	-0.3	8.74	0	0	0
254	SLV 4	2.1	-0.26	8.81	0	0	0
254	SLV 5	0.57	0.83	10.14	0	0	0
254	SLV 6	0.72	0.85	10.18	0	0	0
254	SLV 7	0.47	-0.97	8.39	0	0	0
254	SLV 8	0.61	-0.94	8.44	0	0	0
254	SLV 9	-0.63	0.79	10.36	0	0	0
254	SLV 10	-0.49	0.81	10.4	0	0	0
254	SLV 11	-0.74	-1.01	8.61	0	0	0
254	SLV 12	-0.6	-0.98	8.66	0	0	0
254	SLV 13	-2.12	0.11	9.99	0	0	0
254	SLV 14	-1.9	0.15	10.06	0	0	0
254	SLV 15	-2.15	-0.43	9.47	0	0	0
254	SLV 16	-1.93	-0.39	9.53	0	0	0
255	SLU 1	-0.01	-0.09	8.89	0	0	0
255	SLU 2	-0.01	-0.08	8.9	0	0	0
255	SLU 3	-0.01	-0.09	9.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLU 4	-0.01	-0.08	9.09	0	0	0
255	SLU 5	-0.01	-0.08	9.03	0	0	0
255	SLU 6	-0.01	-0.09	9.21	0	0	0
255	SLU 7	-0.01	-0.09	9.22	0	0	0
255	SLU 8	-0.01	-0.09	9.15	0	0	0
255	SLU 9	-0.01	-0.09	9.16	0	0	0
255	SLU 10	-0.01	-0.08	10.08	0	0	0
255	SLU 11	-0.01	-0.09	10.26	0	0	0
255	SLU 12	-0.01	-0.08	10.27	0	0	0
255	SLU 13	-0.01	-0.08	10.21	0	0	0
255	SLU 14	-0.01	-0.09	10.39	0	0	0
255	SLU 15	-0.01	-0.09	10.4	0	0	0
255	SLU 16	-0.01	-0.09	10.33	0	0	0
255	SLU 17	-0.01	-0.09	10.34	0	0	0
255	SLU 18	-0.02	-0.09	10.58	0	0	0
255	SLU 19	-0.02	-0.08	10.58	0	0	0
255	SLU 20	-0.02	-0.09	10.71	0	0	0
255	SLU 21	-0.02	-0.09	10.71	0	0	0
255	SLU 22	-0.01	-0.09	9.93	0	0	0
255	SLU 23	-0.01	-0.08	9.94	0	0	0
255	SLU 24	-0.01	-0.09	10.12	0	0	0
255	SLU 25	-0.01	-0.08	10.13	0	0	0
255	SLU 26	-0.01	-0.08	10.07	0	0	0
255	SLU 27	-0.01	-0.09	10.25	0	0	0
255	SLU 28	-0.01	-0.08	10.26	0	0	0
255	SLU 29	-0.01	-0.09	10.19	0	0	0
255	SLU 30	-0.01	-0.08	10.2	0	0	0
255	SLU 31	-0.01	-0.08	11.12	0	0	0
255	SLU 32	-0.01	-0.09	11.3	0	0	0
255	SLU 33	-0.01	-0.08	11.31	0	0	0
255	SLU 34	-0.01	-0.08	11.25	0	0	0
255	SLU 35	-0.01	-0.09	11.43	0	0	0
255	SLU 36	-0.01	-0.08	11.44	0	0	0
255	SLU 37	-0.01	-0.09	11.37	0	0	0
255	SLU 38	-0.01	-0.08	11.38	0	0	0
255	SLU 39	-0.02	-0.09	11.62	0	0	0
255	SLU 40	-0.02	-0.08	11.62	0	0	0
255	SLU 41	-0.02	-0.09	11.75	0	0	0
255	SLU 42	-0.02	-0.08	11.75	0	0	0
255	SLU 43	-0.01	-0.12	11.2	0	0	0
255	SLU 44	-0.01	-0.11	11.21	0	0	0
255	SLU 45	-0.01	-0.12	11.39	0	0	0
255	SLU 46	-0.01	-0.11	11.4	0	0	0
255	SLU 47	-0.01	-0.11	11.34	0	0	0
255	SLU 48	-0.01	-0.12	11.52	0	0	0
255	SLU 49	-0.01	-0.11	11.53	0	0	0
255	SLU 50	-0.01	-0.12	11.46	0	0	0
255	SLU 51	-0.01	-0.12	11.47	0	0	0
255	SLU 52	-0.02	-0.11	12.39	0	0	0
255	SLU 53	-0.02	-0.12	12.57	0	0	0
255	SLU 54	-0.02	-0.11	12.58	0	0	0
255	SLU 55	-0.02	-0.11	12.52	0	0	0
255	SLU 56	-0.02	-0.12	12.7	0	0	0
255	SLU 57	-0.02	-0.11	12.71	0	0	0
255	SLU 58	-0.02	-0.12	12.64	0	0	0
255	SLU 59	-0.02	-0.12	12.65	0	0	0
255	SLU 60	-0.02	-0.12	12.89	0	0	0
255	SLU 61	-0.02	-0.11	12.89	0	0	0
255	SLU 62	-0.02	-0.12	13.02	0	0	0
255	SLU 63	-0.02	-0.11	13.02	0	0	0
255	SLU 64	-0.01	-0.12	12.24	0	0	0
255	SLU 65	-0.01	-0.11	12.25	0	0	0
255	SLU 66	-0.01	-0.12	12.43	0	0	0
255	SLU 67	-0.01	-0.11	12.44	0	0	0
255	SLU 68	-0.01	-0.11	12.38	0	0	0
255	SLU 69	-0.01	-0.12	12.56	0	0	0
255	SLU 70	-0.01	-0.11	12.57	0	0	0
255	SLU 71	-0.01	-0.12	12.5	0	0	0
255	SLU 72	-0.01	-0.11	12.51	0	0	0
255	SLU 73	-0.02	-0.1	13.43	0	0	0
255	SLU 74	-0.02	-0.12	13.61	0	0	0
255	SLU 75	-0.02	-0.11	13.62	0	0	0
255	SLU 76	-0.02	-0.11	13.56	0	0	0
255	SLU 77	-0.02	-0.12	13.74	0	0	0
255	SLU 78	-0.02	-0.11	13.75	0	0	0
255	SLU 79	-0.02	-0.12	13.68	0	0	0
255	SLU 80	-0.02	-0.11	13.69	0	0	0
255	SLU 81	-0.02	-0.12	13.93	0	0	0
255	SLU 82	-0.02	-0.11	13.93	0	0	0
255	SLU 83	-0.02	-0.12	14.06	0	0	0
255	SLU 84	-0.02	-0.11	14.06	0	0	0
255	SLE RA 1	-0.01	-0.09	9.19	0	0	0
255	SLE RA 2	-0.01	-0.08	9.2	0	0	0
255	SLE RA 3	-0.01	-0.09	9.31	0	0	0
255	SLE RA 4	-0.01	-0.09	9.32	0	0	0
255	SLE RA 5	-0.01	-0.08	9.28	0	0	0
255	SLE RA 6	-0.01	-0.09	9.4	0	0	0
255	SLE RA 7	-0.01	-0.09	9.41	0	0	0
255	SLE RA 8	-0.01	-0.09	9.36	0	0	0
255	SLE RA 9	-0.01	-0.09	9.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLE RA 10	-0.01	-0.08	9.98	0	0	0
255	SLE RA 11	-0.01	-0.09	10.1	0	0	0
255	SLE RA 12	-0.01	-0.09	10.11	0	0	0
255	SLE RA 13	-0.01	-0.08	10.07	0	0	0
255	SLE RA 14	-0.01	-0.09	10.19	0	0	0
255	SLE RA 15	-0.01	-0.09	10.19	0	0	0
255	SLE RA 16	-0.01	-0.09	10.15	0	0	0
255	SLE RA 17	-0.01	-0.09	10.15	0	0	0
255	SLE RA 18	-0.01	-0.09	10.31	0	0	0
255	SLE RA 19	-0.01	-0.09	10.32	0	0	0
255	SLE RA 20	-0.01	-0.09	10.4	0	0	0
255	SLE RA 21	-0.01	-0.09	10.4	0	0	0
255	SLE FR 1	-0.01	-0.09	9.19	0	0	0
255	SLE FR 2	-0.01	-0.09	9.19	0	0	0
255	SLE FR 3	-0.01	-0.09	9.22	0	0	0
255	SLE FR 4	-0.01	-0.09	9.53	0	0	0
255	SLE FR 5	-0.01	-0.09	9.56	0	0	0
255	SLE FR 6	-0.01	-0.09	9.75	0	0	0
255	SLE QP 1	-0.01	-0.09	9.19	0	0	0
255	SLE QP 2	-0.01	-0.09	9.52	0	0	0
255	SLD 1	0.83	0.06	9.42	0	0	0
255	SLD 2	0.92	0.08	9.45	0	0	0
255	SLD 3	0.81	-0.18	9.19	0	0	0
255	SLD 4	0.91	-0.16	9.22	0	0	0
255	SLD 5	0.24	0.31	9.84	0	0	0
255	SLD 6	0.31	0.33	9.86	0	0	0
255	SLD 7	0.2	-0.48	9.06	0	0	0
255	SLD 8	0.26	-0.47	9.09	0	0	0
255	SLD 9	-0.28	0.29	9.96	0	0	0
255	SLD 10	-0.22	0.3	9.98	0	0	0
255	SLD 11	-0.33	-0.51	9.19	0	0	0
255	SLD 12	-0.27	-0.49	9.21	0	0	0
255	SLD 13	-0.93	-0.02	9.83	0	0	0
255	SLD 14	-0.83	0	9.86	0	0	0
255	SLD 15	-0.94	-0.26	9.59	0	0	0
255	SLD 16	-0.85	-0.24	9.63	0	0	0
255	SLV 1	1.95	0.25	9.27	0	0	0
255	SLV 2	2.18	0.3	9.35	0	0	0
255	SLV 3	1.91	-0.29	8.75	0	0	0
255	SLV 4	2.14	-0.24	8.82	0	0	0
255	SLV 5	0.59	0.83	10.23	0	0	0
255	SLV 6	0.74	0.86	10.28	0	0	0
255	SLV 7	0.48	-0.99	8.48	0	0	0
255	SLV 8	0.62	-0.95	8.53	0	0	0
255	SLV 9	-0.65	0.77	10.52	0	0	0
255	SLV 10	-0.5	0.8	10.57	0	0	0
255	SLV 11	-0.76	-1.04	8.76	0	0	0
255	SLV 12	-0.61	-1.01	8.81	0	0	0
255	SLV 13	-2.16	0.06	10.22	0	0	0
255	SLV 14	-1.93	0.11	10.3	0	0	0
255	SLV 15	-2.2	-0.49	9.7	0	0	0
255	SLV 16	-1.97	-0.43	9.78	0	0	0
256	SLU 1	-0.01	-0.11	8.94	0	0	0
256	SLU 2	-0.01	-0.09	8.95	0	0	0
256	SLU 3	-0.01	-0.11	9.13	0	0	0
256	SLU 4	-0.01	-0.1	9.14	0	0	0
256	SLU 5	-0.01	-0.09	9.08	0	0	0
256	SLU 6	-0.01	-0.11	9.26	0	0	0
256	SLU 7	-0.01	-0.1	9.27	0	0	0
256	SLU 8	-0.01	-0.11	9.2	0	0	0
256	SLU 9	-0.01	-0.1	9.2	0	0	0
256	SLU 10	-0.01	-0.09	10.13	0	0	0
256	SLU 11	-0.01	-0.11	10.31	0	0	0
256	SLU 12	-0.01	-0.1	10.32	0	0	0
256	SLU 13	-0.01	-0.1	10.26	0	0	0
256	SLU 14	-0.01	-0.11	10.44	0	0	0
256	SLU 15	-0.01	-0.1	10.45	0	0	0
256	SLU 16	-0.01	-0.11	10.38	0	0	0
256	SLU 17	-0.01	-0.1	10.39	0	0	0
256	SLU 18	-0.01	-0.11	10.62	0	0	0
256	SLU 19	-0.01	-0.1	10.63	0	0	0
256	SLU 20	-0.01	-0.11	10.75	0	0	0
256	SLU 21	-0.01	-0.1	10.76	0	0	0
256	SLU 22	-0.01	-0.1	9.98	0	0	0
256	SLU 23	-0.01	-0.09	9.99	0	0	0
256	SLU 24	-0.01	-0.1	10.18	0	0	0
256	SLU 25	-0.01	-0.1	10.18	0	0	0
256	SLU 26	-0.01	-0.09	10.13	0	0	0
256	SLU 27	-0.01	-0.11	10.31	0	0	0
256	SLU 28	-0.01	-0.1	10.31	0	0	0
256	SLU 29	-0.01	-0.11	10.24	0	0	0
256	SLU 30	-0.01	-0.1	10.25	0	0	0
256	SLU 31	-0.01	-0.09	11.18	0	0	0
256	SLU 32	-0.01	-0.11	11.36	0	0	0
256	SLU 33	-0.01	-0.1	11.36	0	0	0
256	SLU 34	-0.01	-0.09	11.31	0	0	0
256	SLU 35	-0.01	-0.11	11.49	0	0	0
256	SLU 36	-0.01	-0.1	11.49	0	0	0
256	SLU 37	-0.01	-0.11	11.42	0	0	0
256	SLU 38	-0.01	-0.1	11.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLU 39	-0.01	-0.11	11.67	0	0	0
256	SLU 40	-0.01	-0.1	11.68	0	0	0
256	SLU 41	-0.01	-0.11	11.8	0	0	0
256	SLU 42	-0.01	-0.1	11.81	0	0	0
256	SLU 43	-0.01	-0.14	11.26	0	0	0
256	SLU 44	-0.01	-0.12	11.27	0	0	0
256	SLU 45	-0.01	-0.14	11.45	0	0	0
256	SLU 46	-0.01	-0.13	11.46	0	0	0
256	SLU 47	-0.01	-0.13	11.4	0	0	0
256	SLU 48	-0.01	-0.14	11.58	0	0	0
256	SLU 49	-0.01	-0.13	11.59	0	0	0
256	SLU 50	-0.01	-0.14	11.52	0	0	0
256	SLU 51	-0.01	-0.13	11.53	0	0	0
256	SLU 52	-0.02	-0.13	12.45	0	0	0
256	SLU 53	-0.01	-0.14	12.63	0	0	0
256	SLU 54	-0.01	-0.13	12.64	0	0	0
256	SLU 55	-0.02	-0.13	12.58	0	0	0
256	SLU 56	-0.01	-0.14	12.76	0	0	0
256	SLU 57	-0.02	-0.13	12.77	0	0	0
256	SLU 58	-0.01	-0.14	12.7	0	0	0
256	SLU 59	-0.02	-0.13	12.71	0	0	0
256	SLU 60	-0.02	-0.14	12.95	0	0	0
256	SLU 61	-0.02	-0.13	12.95	0	0	0
256	SLU 62	-0.02	-0.14	13.08	0	0	0
256	SLU 63	-0.02	-0.13	13.08	0	0	0
256	SLU 64	-0.01	-0.14	12.3	0	0	0
256	SLU 65	-0.01	-0.12	12.32	0	0	0
256	SLU 66	-0.01	-0.14	12.5	0	0	0
256	SLU 67	-0.01	-0.13	12.51	0	0	0
256	SLU 68	-0.01	-0.13	12.45	0	0	0
256	SLU 69	-0.01	-0.14	12.63	0	0	0
256	SLU 70	-0.01	-0.13	12.64	0	0	0
256	SLU 71	-0.01	-0.14	12.57	0	0	0
256	SLU 72	-0.01	-0.13	12.57	0	0	0
256	SLU 73	-0.01	-0.13	13.5	0	0	0
256	SLU 74	-0.01	-0.14	13.68	0	0	0
256	SLU 75	-0.01	-0.13	13.69	0	0	0
256	SLU 76	-0.02	-0.13	13.63	0	0	0
256	SLU 77	-0.01	-0.14	13.81	0	0	0
256	SLU 78	-0.01	-0.13	13.82	0	0	0
256	SLU 79	-0.01	-0.14	13.75	0	0	0
256	SLU 80	-0.01	-0.13	13.75	0	0	0
256	SLU 81	-0.02	-0.14	13.99	0	0	0
256	SLU 82	-0.02	-0.13	14	0	0	0
256	SLU 83	-0.02	-0.14	14.12	0	0	0
256	SLU 84	-0.02	-0.13	14.13	0	0	0
256	SLE RA 1	-0.01	-0.11	9.24	0	0	0
256	SLE RA 2	-0.01	-0.1	9.24	0	0	0
256	SLE RA 3	-0.01	-0.11	9.36	0	0	0
256	SLE RA 4	-0.01	-0.1	9.37	0	0	0
256	SLE RA 5	-0.01	-0.1	9.33	0	0	0
256	SLE RA 6	-0.01	-0.11	9.45	0	0	0
256	SLE RA 7	-0.01	-0.1	9.46	0	0	0
256	SLE RA 8	-0.01	-0.11	9.41	0	0	0
256	SLE RA 9	-0.01	-0.1	9.41	0	0	0
256	SLE RA 10	-0.01	-0.1	10.03	0	0	0
256	SLE RA 11	-0.01	-0.11	10.15	0	0	0
256	SLE RA 12	-0.01	-0.1	10.16	0	0	0
256	SLE RA 13	-0.01	-0.1	10.12	0	0	0
256	SLE RA 14	-0.01	-0.11	10.24	0	0	0
256	SLE RA 15	-0.01	-0.1	10.24	0	0	0
256	SLE RA 16	-0.01	-0.11	10.2	0	0	0
256	SLE RA 17	-0.01	-0.1	10.2	0	0	0
256	SLE RA 18	-0.01	-0.11	10.36	0	0	0
256	SLE RA 19	-0.01	-0.1	10.36	0	0	0
256	SLE RA 20	-0.01	-0.11	10.45	0	0	0
256	SLE RA 21	-0.01	-0.1	10.45	0	0	0
256	SLE FR 1	-0.01	-0.11	9.24	0	0	0
256	SLE FR 2	-0.01	-0.1	9.24	0	0	0
256	SLE FR 3	-0.01	-0.11	9.27	0	0	0
256	SLE FR 4	-0.01	-0.1	9.57	0	0	0
256	SLE FR 5	-0.01	-0.11	9.61	0	0	0
256	SLE FR 6	-0.01	-0.11	9.8	0	0	0
256	SLE QP 1	-0.01	-0.11	9.24	0	0	0
256	SLE QP 2	-0.01	-0.11	9.57	0	0	0
256	SLD 1	0.84	0.06	9.41	0	0	0
256	SLD 2	0.94	0.08	9.45	0	0	0
256	SLD 3	0.82	-0.18	9.18	0	0	0
256	SLD 4	0.92	-0.16	9.22	0	0	0
256	SLD 5	0.25	0.3	9.87	0	0	0
256	SLD 6	0.31	0.32	9.89	0	0	0
256	SLD 7	0.2	-0.5	9.1	0	0	0
256	SLD 8	0.27	-0.48	9.12	0	0	0
256	SLD 9	-0.28	0.27	10.02	0	0	0
256	SLD 10	-0.22	0.29	10.05	0	0	0
256	SLD 11	-0.33	-0.53	9.25	0	0	0
256	SLD 12	-0.27	-0.51	9.28	0	0	0
256	SLD 13	-0.94	-0.05	9.93	0	0	0
256	SLD 14	-0.84	-0.03	9.97	0	0	0
256	SLD 15	-0.95	-0.29	9.7	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLD 16	-0.85	-0.27	9.74	0	0	0
256	SLV 1	1.97	0.26	9.18	0	0	0
256	SLV 2	2.2	0.33	9.27	0	0	0
256	SLV 3	1.93	-0.28	8.66	0	0	0
256	SLV 4	2.17	-0.22	8.75	0	0	0
256	SLV 5	0.6	0.82	10.24	0	0	0
256	SLV 6	0.74	0.86	10.29	0	0	0
256	SLV 7	0.48	-1	8.49	0	0	0
256	SLV 8	0.63	-0.96	8.55	0	0	0
256	SLV 9	-0.65	0.74	10.6	0	0	0
256	SLV 10	-0.5	0.79	10.66	0	0	0
256	SLV 11	-0.76	-1.08	8.85	0	0	0
256	SLV 12	-0.61	-1.03	8.91	0	0	0
256	SLV 13	-2.18	0.01	10.4	0	0	0
256	SLV 14	-1.95	0.07	10.48	0	0	0
256	SLV 15	-2.22	-0.54	9.87	0	0	0
256	SLV 16	-1.99	-0.48	9.96	0	0	0
257	SLU 1	-0.01	-0.12	8.94	0	0	0
257	SLU 2	-0.01	-0.11	8.96	0	0	0
257	SLU 3	-0.01	-0.12	9.14	0	0	0
257	SLU 4	-0.01	-0.11	9.14	0	0	0
257	SLU 5	-0.01	-0.11	9.09	0	0	0
257	SLU 6	-0.01	-0.12	9.27	0	0	0
257	SLU 7	-0.01	-0.11	9.27	0	0	0
257	SLU 8	-0.01	-0.12	9.2	0	0	0
257	SLU 9	-0.01	-0.12	9.21	0	0	0
257	SLU 10	-0.01	-0.11	10.13	0	0	0
257	SLU 11	-0.01	-0.12	10.31	0	0	0
257	SLU 12	-0.01	-0.11	10.32	0	0	0
257	SLU 13	-0.01	-0.11	10.26	0	0	0
257	SLU 14	-0.01	-0.12	10.44	0	0	0
257	SLU 15	-0.01	-0.12	10.45	0	0	0
257	SLU 16	-0.01	-0.13	10.38	0	0	0
257	SLU 17	-0.01	-0.12	10.39	0	0	0
257	SLU 18	-0.01	-0.12	10.62	0	0	0
257	SLU 19	-0.01	-0.12	10.63	0	0	0
257	SLU 20	-0.01	-0.13	10.75	0	0	0
257	SLU 21	-0.01	-0.12	10.76	0	0	0
257	SLU 22	0	-0.12	9.99	0	0	0
257	SLU 23	-0.01	-0.11	10	0	0	0
257	SLU 24	0	-0.12	10.18	0	0	0
257	SLU 25	-0.01	-0.11	10.19	0	0	0
257	SLU 26	-0.01	-0.11	10.13	0	0	0
257	SLU 27	0	-0.12	10.31	0	0	0
257	SLU 28	-0.01	-0.11	10.32	0	0	0
257	SLU 29	-0.01	-0.12	10.25	0	0	0
257	SLU 30	-0.01	-0.12	10.26	0	0	0
257	SLU 31	-0.01	-0.11	11.18	0	0	0
257	SLU 32	-0.01	-0.12	11.36	0	0	0
257	SLU 33	-0.01	-0.12	11.37	0	0	0
257	SLU 34	-0.01	-0.11	11.31	0	0	0
257	SLU 35	-0.01	-0.13	11.49	0	0	0
257	SLU 36	-0.01	-0.12	11.5	0	0	0
257	SLU 37	-0.01	-0.13	11.43	0	0	0
257	SLU 38	-0.01	-0.12	11.43	0	0	0
257	SLU 39	-0.01	-0.12	11.67	0	0	0
257	SLU 40	-0.01	-0.12	11.68	0	0	0
257	SLU 41	-0.01	-0.13	11.8	0	0	0
257	SLU 42	-0.01	-0.12	11.81	0	0	0
257	SLU 43	-0.01	-0.15	11.27	0	0	0
257	SLU 44	-0.01	-0.14	11.28	0	0	0
257	SLU 45	-0.01	-0.15	11.46	0	0	0
257	SLU 46	-0.01	-0.15	11.47	0	0	0
257	SLU 47	-0.01	-0.14	11.41	0	0	0
257	SLU 48	-0.01	-0.16	11.59	0	0	0
257	SLU 49	-0.01	-0.15	11.6	0	0	0
257	SLU 50	-0.01	-0.16	11.53	0	0	0
257	SLU 51	-0.01	-0.15	11.54	0	0	0
257	SLU 52	-0.01	-0.14	12.45	0	0	0
257	SLU 53	-0.01	-0.16	12.64	0	0	0
257	SLU 54	-0.01	-0.15	12.64	0	0	0
257	SLU 55	-0.01	-0.15	12.58	0	0	0
257	SLU 56	-0.01	-0.16	12.77	0	0	0
257	SLU 57	-0.01	-0.15	12.77	0	0	0
257	SLU 58	-0.01	-0.16	12.7	0	0	0
257	SLU 59	-0.01	-0.15	12.71	0	0	0
257	SLU 60	-0.01	-0.16	12.95	0	0	0
257	SLU 61	-0.01	-0.15	12.95	0	0	0
257	SLU 62	-0.01	-0.16	13.08	0	0	0
257	SLU 63	-0.01	-0.15	13.08	0	0	0
257	SLU 64	-0.01	-0.16	12.31	0	0	0
257	SLU 65	-0.01	-0.14	12.33	0	0	0
257	SLU 66	-0.01	-0.16	12.51	0	0	0
257	SLU 67	-0.01	-0.15	12.51	0	0	0
257	SLU 68	-0.01	-0.14	12.46	0	0	0
257	SLU 69	-0.01	-0.16	12.64	0	0	0
257	SLU 70	-0.01	-0.15	12.65	0	0	0
257	SLU 71	-0.01	-0.16	12.57	0	0	0
257	SLU 72	-0.01	-0.15	12.58	0	0	0
257	SLU 73	-0.01	-0.14	13.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLU 74	-0.01	-0.16	13.68	0	0	0
257	SLU 75	-0.01	-0.15	13.69	0	0	0
257	SLU 76	-0.01	-0.15	13.63	0	0	0
257	SLU 77	-0.01	-0.16	13.81	0	0	0
257	SLU 78	-0.01	-0.15	13.82	0	0	0
257	SLU 79	-0.01	-0.16	13.75	0	0	0
257	SLU 80	-0.01	-0.15	13.76	0	0	0
257	SLU 81	-0.01	-0.16	13.99	0	0	0
257	SLU 82	-0.01	-0.15	14	0	0	0
257	SLU 83	-0.01	-0.16	14.12	0	0	0
257	SLU 84	-0.01	-0.15	14.13	0	0	0
257	SLE RA 1	-0.01	-0.12	9.24	0	0	0
257	SLE RA 2	-0.01	-0.11	9.25	0	0	0
257	SLE RA 3	-0.01	-0.12	9.37	0	0	0
257	SLE RA 4	-0.01	-0.11	9.38	0	0	0
257	SLE RA 5	-0.01	-0.11	9.34	0	0	0
257	SLE RA 6	-0.01	-0.12	9.46	0	0	0
257	SLE RA 7	-0.01	-0.12	9.46	0	0	0
257	SLE RA 8	-0.01	-0.12	9.42	0	0	0
257	SLE RA 9	-0.01	-0.12	9.42	0	0	0
257	SLE RA 10	-0.01	-0.11	10.03	0	0	0
257	SLE RA 11	-0.01	-0.12	10.15	0	0	0
257	SLE RA 12	-0.01	-0.12	10.16	0	0	0
257	SLE RA 13	-0.01	-0.11	10.12	0	0	0
257	SLE RA 14	-0.01	-0.12	10.24	0	0	0
257	SLE RA 15	-0.01	-0.12	10.25	0	0	0
257	SLE RA 16	-0.01	-0.12	10.2	0	0	0
257	SLE RA 17	-0.01	-0.12	10.2	0	0	0
257	SLE RA 18	-0.01	-0.12	10.36	0	0	0
257	SLE RA 19	-0.01	-0.12	10.37	0	0	0
257	SLE RA 20	-0.01	-0.12	10.45	0	0	0
257	SLE RA 21	-0.01	-0.12	10.45	0	0	0
257	SLE FR 1	-0.01	-0.12	9.24	0	0	0
257	SLE FR 2	-0.01	-0.12	9.24	0	0	0
257	SLE FR 3	-0.01	-0.12	9.28	0	0	0
257	SLE FR 4	-0.01	-0.12	9.58	0	0	0
257	SLE FR 5	-0.01	-0.12	9.61	0	0	0
257	SLE FR 6	-0.01	-0.12	9.8	0	0	0
257	SLE QP 1	-0.01	-0.12	9.24	0	0	0
257	SLE QP 2	-0.01	-0.12	9.58	0	0	0
257	SLD 1	0.84	0.05	9.35	0	0	0
257	SLD 2	0.94	0.08	9.39	0	0	0
257	SLD 3	0.82	-0.19	9.12	0	0	0
257	SLD 4	0.92	-0.15	9.16	0	0	0
257	SLD 5	0.25	0.29	9.85	0	0	0
257	SLD 6	0.32	0.31	9.88	0	0	0
257	SLD 7	0.2	-0.51	9.09	0	0	0
257	SLD 8	0.27	-0.49	9.11	0	0	0
257	SLD 9	-0.28	0.25	10.04	0	0	0
257	SLD 10	-0.22	0.27	10.07	0	0	0
257	SLD 11	-0.33	-0.55	9.28	0	0	0
257	SLD 12	-0.26	-0.53	9.31	0	0	0
257	SLD 13	-0.94	-0.09	9.99	0	0	0
257	SLD 14	-0.84	-0.05	10.03	0	0	0
257	SLD 15	-0.95	-0.32	9.77	0	0	0
257	SLD 16	-0.85	-0.29	9.81	0	0	0
257	SLV 1	1.97	0.27	9.04	0	0	0
257	SLV 2	2.2	0.35	9.13	0	0	0
257	SLV 3	1.94	-0.27	8.52	0	0	0
257	SLV 4	2.17	-0.19	8.61	0	0	0
257	SLV 5	0.6	0.81	10.19	0	0	0
257	SLV 6	0.75	0.86	10.25	0	0	0
257	SLV 7	0.49	-1	8.46	0	0	0
257	SLV 8	0.63	-0.95	8.52	0	0	0
257	SLV 9	-0.65	0.71	10.64	0	0	0
257	SLV 10	-0.5	0.76	10.7	0	0	0
257	SLV 11	-0.76	-1.1	8.91	0	0	0
257	SLV 12	-0.61	-1.05	8.97	0	0	0
257	SLV 13	-2.18	-0.05	10.54	0	0	0
257	SLV 14	-1.95	0.03	10.64	0	0	0
257	SLV 15	-2.22	-0.59	10.03	0	0	0
257	SLV 16	-1.99	-0.51	10.12	0	0	0
258	SLU 1	0	-0.13	8.91	0	0	0
258	SLU 2	0	-0.12	8.92	0	0	0
258	SLU 3	0	-0.13	9.1	0	0	0
258	SLU 4	0	-0.12	9.11	0	0	0
258	SLU 5	0	-0.12	9.05	0	0	0
258	SLU 6	0	-0.13	9.23	0	0	0
258	SLU 7	0	-0.13	9.24	0	0	0
258	SLU 8	0	-0.14	9.17	0	0	0
258	SLU 9	0	-0.13	9.18	0	0	0
258	SLU 10	-0.01	-0.12	10.09	0	0	0
258	SLU 11	-0.01	-0.14	10.27	0	0	0
258	SLU 12	-0.01	-0.13	10.28	0	0	0
258	SLU 13	-0.01	-0.12	10.22	0	0	0
258	SLU 14	-0.01	-0.14	10.4	0	0	0
258	SLU 15	-0.01	-0.13	10.41	0	0	0
258	SLU 16	-0.01	-0.14	10.34	0	0	0
258	SLU 17	-0.01	-0.13	10.34	0	0	0
258	SLU 18	-0.01	-0.14	10.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLU 19	-0.01	-0.13	10.58	0	0	0
258	SLU 20	-0.01	-0.14	10.71	0	0	0
258	SLU 21	-0.01	-0.13	10.71	0	0	0
258	SLU 22	0	-0.13	9.96	0	0	0
258	SLU 23	0	-0.12	9.97	0	0	0
258	SLU 24	0	-0.13	10.15	0	0	0
258	SLU 25	0	-0.13	10.15	0	0	0
258	SLU 26	0	-0.12	10.1	0	0	0
258	SLU 27	0	-0.14	10.28	0	0	0
258	SLU 28	0	-0.13	10.28	0	0	0
258	SLU 29	0	-0.14	10.22	0	0	0
258	SLU 30	0	-0.13	10.22	0	0	0
258	SLU 31	-0.01	-0.12	11.13	0	0	0
258	SLU 32	-0.01	-0.14	11.31	0	0	0
258	SLU 33	-0.01	-0.13	11.32	0	0	0
258	SLU 34	-0.01	-0.13	11.26	0	0	0
258	SLU 35	-0.01	-0.14	11.44	0	0	0
258	SLU 36	-0.01	-0.13	11.45	0	0	0
258	SLU 37	-0.01	-0.14	11.38	0	0	0
258	SLU 38	-0.01	-0.13	11.39	0	0	0
258	SLU 39	-0.01	-0.14	11.62	0	0	0
258	SLU 40	-0.01	-0.13	11.63	0	0	0
258	SLU 41	-0.01	-0.14	11.75	0	0	0
258	SLU 42	-0.01	-0.13	11.76	0	0	0
258	SLU 43	-0.01	-0.17	11.23	0	0	0
258	SLU 44	-0.01	-0.16	11.24	0	0	0
258	SLU 45	0	-0.17	11.42	0	0	0
258	SLU 46	-0.01	-0.16	11.43	0	0	0
258	SLU 47	-0.01	-0.16	11.37	0	0	0
258	SLU 48	-0.01	-0.17	11.55	0	0	0
258	SLU 49	-0.01	-0.16	11.55	0	0	0
258	SLU 50	-0.01	-0.17	11.49	0	0	0
258	SLU 51	-0.01	-0.17	11.49	0	0	0
258	SLU 52	-0.01	-0.16	12.4	0	0	0
258	SLU 53	-0.01	-0.17	12.58	0	0	0
258	SLU 54	-0.01	-0.17	12.59	0	0	0
258	SLU 55	-0.01	-0.16	12.53	0	0	0
258	SLU 56	-0.01	-0.18	12.71	0	0	0
258	SLU 57	-0.01	-0.17	12.72	0	0	0
258	SLU 58	-0.01	-0.18	12.65	0	0	0
258	SLU 59	-0.01	-0.17	12.66	0	0	0
258	SLU 60	-0.01	-0.18	12.89	0	0	0
258	SLU 61	-0.01	-0.17	12.9	0	0	0
258	SLU 62	-0.01	-0.18	13.02	0	0	0
258	SLU 63	-0.01	-0.17	13.03	0	0	0
258	SLU 64	0	-0.17	12.27	0	0	0
258	SLU 65	-0.01	-0.16	12.28	0	0	0
258	SLU 66	0	-0.17	12.46	0	0	0
258	SLU 67	0	-0.16	12.47	0	0	0
258	SLU 68	-0.01	-0.16	12.41	0	0	0
258	SLU 69	0	-0.17	12.59	0	0	0
258	SLU 70	0	-0.17	12.6	0	0	0
258	SLU 71	0	-0.18	12.53	0	0	0
258	SLU 72	-0.01	-0.17	12.54	0	0	0
258	SLU 73	-0.01	-0.16	13.45	0	0	0
258	SLU 74	-0.01	-0.18	13.63	0	0	0
258	SLU 75	-0.01	-0.17	13.64	0	0	0
258	SLU 76	-0.01	-0.17	13.58	0	0	0
258	SLU 77	-0.01	-0.18	13.76	0	0	0
258	SLU 78	-0.01	-0.17	13.77	0	0	0
258	SLU 79	-0.01	-0.18	13.7	0	0	0
258	SLU 80	-0.01	-0.17	13.7	0	0	0
258	SLU 81	-0.01	-0.18	13.94	0	0	0
258	SLU 82	-0.01	-0.17	13.94	0	0	0
258	SLU 83	-0.01	-0.18	14.07	0	0	0
258	SLU 84	-0.01	-0.17	14.07	0	0	0
258	SLE RA 1	0	-0.13	9.21	0	0	0
258	SLE RA 2	0	-0.12	9.22	0	0	0
258	SLE RA 3	0	-0.13	9.34	0	0	0
258	SLE RA 4	0	-0.13	9.34	0	0	0
258	SLE RA 5	0	-0.12	9.3	0	0	0
258	SLE RA 6	0	-0.13	9.42	0	0	0
258	SLE RA 7	0	-0.13	9.43	0	0	0
258	SLE RA 8	0	-0.13	9.38	0	0	0
258	SLE RA 9	0	-0.13	9.39	0	0	0
258	SLE RA 10	-0.01	-0.13	9.99	0	0	0
258	SLE RA 11	-0.01	-0.14	10.12	0	0	0
258	SLE RA 12	-0.01	-0.13	10.12	0	0	0
258	SLE RA 13	-0.01	-0.13	10.08	0	0	0
258	SLE RA 14	-0.01	-0.14	10.2	0	0	0
258	SLE RA 15	-0.01	-0.13	10.21	0	0	0
258	SLE RA 16	-0.01	-0.14	10.16	0	0	0
258	SLE RA 17	-0.01	-0.13	10.16	0	0	0
258	SLE RA 18	-0.01	-0.14	10.32	0	0	0
258	SLE RA 19	-0.01	-0.13	10.32	0	0	0
258	SLE RA 20	-0.01	-0.14	10.41	0	0	0
258	SLE RA 21	-0.01	-0.13	10.41	0	0	0
258	SLE FR 1	0	-0.13	9.21	0	0	0
258	SLE FR 2	0	-0.13	9.21	0	0	0
258	SLE FR 3	0	-0.13	9.24	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLE FR 4	0	-0.13	9.54	0	0	0
258	SLE FR 5	0	-0.13	9.58	0	0	0
258	SLE FR 6	-0.01	-0.13	9.76	0	0	0
258	SLE QP 1	0	-0.13	9.21	0	0	0
258	SLE QP 2	0	-0.13	9.54	0	0	0
258	SLD 1	0.83	0.05	9.25	0	0	0
258	SLD 2	0.93	0.08	9.29	0	0	0
258	SLD 3	0.82	-0.19	9.02	0	0	0
258	SLD 4	0.92	-0.15	9.06	0	0	0
258	SLD 5	0.25	0.27	9.79	0	0	0
258	SLD 6	0.32	0.29	9.82	0	0	0
258	SLD 7	0.2	-0.51	9.04	0	0	0
258	SLD 8	0.27	-0.49	9.07	0	0	0
258	SLD 9	-0.28	0.22	10.02	0	0	0
258	SLD 10	-0.21	0.25	10.05	0	0	0
258	SLD 11	-0.32	-0.56	9.27	0	0	0
258	SLD 12	-0.26	-0.54	9.3	0	0	0
258	SLD 13	-0.93	-0.11	10.02	0	0	0
258	SLD 14	-0.83	-0.08	10.06	0	0	0
258	SLD 15	-0.94	-0.35	9.8	0	0	0
258	SLD 16	-0.84	-0.31	9.84	0	0	0
258	SLV 1	1.95	0.28	8.84	0	0	0
258	SLV 2	2.18	0.36	8.94	0	0	0
258	SLV 3	1.92	-0.26	8.33	0	0	0
258	SLV 4	2.15	-0.17	8.43	0	0	0
258	SLV 5	0.59	0.78	10.09	0	0	0
258	SLV 6	0.74	0.84	10.15	0	0	0
258	SLV 7	0.48	-0.99	8.39	0	0	0
258	SLV 8	0.63	-0.94	8.45	0	0	0
258	SLV 9	-0.64	0.67	10.63	0	0	0
258	SLV 10	-0.49	0.73	10.7	0	0	0
258	SLV 11	-0.75	-1.11	8.93	0	0	0
258	SLV 12	-0.6	-1.05	9	0	0	0
258	SLV 13	-2.16	-0.09	10.65	0	0	0
258	SLV 14	-1.93	-0.01	10.75	0	0	0
258	SLV 15	-2.19	-0.63	10.14	0	0	0
258	SLV 16	-1.96	-0.54	10.24	0	0	0
259	SLU 1	0	-0.14	8.8	0	0	0
259	SLU 2	0	-0.13	8.8	0	0	0
259	SLU 3	0	-0.14	8.99	0	0	0
259	SLU 4	0	-0.13	8.99	0	0	0
259	SLU 5	0	-0.13	8.93	0	0	0
259	SLU 6	0	-0.14	9.11	0	0	0
259	SLU 7	0	-0.14	9.12	0	0	0
259	SLU 8	0	-0.15	9.05	0	0	0
259	SLU 9	0	-0.14	9.06	0	0	0
259	SLU 10	-0.01	-0.13	9.95	0	0	0
259	SLU 11	-0.01	-0.15	10.13	0	0	0
259	SLU 12	-0.01	-0.14	10.14	0	0	0
259	SLU 13	-0.01	-0.14	10.08	0	0	0
259	SLU 14	-0.01	-0.15	10.26	0	0	0
259	SLU 15	-0.01	-0.14	10.27	0	0	0
259	SLU 16	-0.01	-0.15	10.2	0	0	0
259	SLU 17	-0.01	-0.14	10.2	0	0	0
259	SLU 18	-0.01	-0.15	10.43	0	0	0
259	SLU 19	-0.01	-0.14	10.44	0	0	0
259	SLU 20	-0.01	-0.15	10.56	0	0	0
259	SLU 21	-0.01	-0.14	10.57	0	0	0
259	SLU 22	0	-0.14	9.83	0	0	0
259	SLU 23	0	-0.13	9.84	0	0	0
259	SLU 24	0	-0.15	10.02	0	0	0
259	SLU 25	0	-0.14	10.03	0	0	0
259	SLU 26	0	-0.13	9.97	0	0	0
259	SLU 27	0	-0.15	10.15	0	0	0
259	SLU 28	0	-0.14	10.15	0	0	0
259	SLU 29	0	-0.15	10.09	0	0	0
259	SLU 30	0	-0.14	10.09	0	0	0
259	SLU 31	-0.01	-0.14	10.99	0	0	0
259	SLU 32	0	-0.15	11.17	0	0	0
259	SLU 33	0	-0.14	11.17	0	0	0
259	SLU 34	-0.01	-0.14	11.11	0	0	0
259	SLU 35	0	-0.15	11.3	0	0	0
259	SLU 36	0	-0.15	11.3	0	0	0
259	SLU 37	0	-0.15	11.23	0	0	0
259	SLU 38	-0.01	-0.15	11.24	0	0	0
259	SLU 39	-0.01	-0.15	11.47	0	0	0
259	SLU 40	-0.01	-0.14	11.47	0	0	0
259	SLU 41	-0.01	-0.15	11.6	0	0	0
259	SLU 42	-0.01	-0.15	11.6	0	0	0
259	SLU 43	0	-0.18	11.08	0	0	0
259	SLU 44	0	-0.17	11.09	0	0	0
259	SLU 45	0	-0.18	11.27	0	0	0
259	SLU 46	0	-0.17	11.27	0	0	0
259	SLU 47	0	-0.17	11.22	0	0	0
259	SLU 48	0	-0.18	11.4	0	0	0
259	SLU 49	0	-0.18	11.4	0	0	0
259	SLU 50	0	-0.19	11.33	0	0	0
259	SLU 51	0	-0.18	11.34	0	0	0
259	SLU 52	-0.01	-0.17	12.24	0	0	0
259	SLU 53	-0.01	-0.19	12.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLU 54	-0.01	-0.18	12.42	0	0	0
259	SLU 55	-0.01	-0.18	12.36	0	0	0
259	SLU 56	-0.01	-0.19	12.54	0	0	0
259	SLU 57	-0.01	-0.18	12.55	0	0	0
259	SLU 58	-0.01	-0.19	12.48	0	0	0
259	SLU 59	-0.01	-0.18	12.49	0	0	0
259	SLU 60	-0.01	-0.19	12.72	0	0	0
259	SLU 61	-0.01	-0.18	12.72	0	0	0
259	SLU 62	-0.01	-0.19	12.85	0	0	0
259	SLU 63	-0.01	-0.18	12.85	0	0	0
259	SLU 64	0	-0.18	12.11	0	0	0
259	SLU 65	0	-0.17	12.12	0	0	0
259	SLU 66	0	-0.19	12.3	0	0	0
259	SLU 67	0	-0.18	12.31	0	0	0
259	SLU 68	0	-0.17	12.25	0	0	0
259	SLU 69	0	-0.19	12.43	0	0	0
259	SLU 70	0	-0.18	12.44	0	0	0
259	SLU 71	0	-0.19	12.37	0	0	0
259	SLU 72	0	-0.18	12.37	0	0	0
259	SLU 73	-0.01	-0.18	13.27	0	0	0
259	SLU 74	0	-0.19	13.45	0	0	0
259	SLU 75	-0.01	-0.18	13.46	0	0	0
259	SLU 76	-0.01	-0.18	13.4	0	0	0
259	SLU 77	0	-0.19	13.58	0	0	0
259	SLU 78	-0.01	-0.19	13.58	0	0	0
259	SLU 79	-0.01	-0.2	13.52	0	0	0
259	SLU 80	-0.01	-0.19	13.52	0	0	0
259	SLU 81	-0.01	-0.19	13.75	0	0	0
259	SLU 82	-0.01	-0.19	13.76	0	0	0
259	SLU 83	-0.01	-0.2	13.88	0	0	0
259	SLU 84	-0.01	-0.19	13.89	0	0	0
259	SLE RA 1	0	-0.14	9.09	0	0	0
259	SLE RA 2	0	-0.13	9.1	0	0	0
259	SLE RA 3	0	-0.14	9.22	0	0	0
259	SLE RA 4	0	-0.14	9.22	0	0	0
259	SLE RA 5	0	-0.13	9.18	0	0	0
259	SLE RA 6	0	-0.14	9.3	0	0	0
259	SLE RA 7	0	-0.14	9.31	0	0	0
259	SLE RA 8	0	-0.14	9.26	0	0	0
259	SLE RA 9	0	-0.14	9.26	0	0	0
259	SLE RA 10	0	-0.14	9.86	0	0	0
259	SLE RA 11	0	-0.15	9.98	0	0	0
259	SLE RA 12	0	-0.14	9.99	0	0	0
259	SLE RA 13	0	-0.14	9.95	0	0	0
259	SLE RA 14	0	-0.15	10.07	0	0	0
259	SLE RA 15	0	-0.14	10.07	0	0	0
259	SLE RA 16	0	-0.15	10.03	0	0	0
259	SLE RA 17	0	-0.14	10.03	0	0	0
259	SLE RA 18	0	-0.15	10.18	0	0	0
259	SLE RA 19	-0.01	-0.14	10.19	0	0	0
259	SLE RA 20	-0.01	-0.15	10.27	0	0	0
259	SLE RA 21	-0.01	-0.14	10.27	0	0	0
259	SLE FR 1	0	-0.14	9.09	0	0	0
259	SLE FR 2	0	-0.14	9.09	0	0	0
259	SLE FR 3	0	-0.14	9.12	0	0	0
259	SLE FR 4	0	-0.14	9.42	0	0	0
259	SLE FR 5	0	-0.14	9.45	0	0	0
259	SLE FR 6	0	-0.14	9.64	0	0	0
259	SLE QP 1	0	-0.14	9.09	0	0	0
259	SLE QP 2	0	-0.14	9.42	0	0	0
259	SLD 1	0.81	0.04	9.06	0	0	0
259	SLD 2	0.91	0.08	9.1	0	0	0
259	SLD 3	0.8	-0.19	8.84	0	0	0
259	SLD 4	0.89	-0.15	8.88	0	0	0
259	SLD 5	0.25	0.25	9.64	0	0	0
259	SLD 6	0.31	0.28	9.67	0	0	0
259	SLD 7	0.2	-0.51	8.9	0	0	0
259	SLD 8	0.26	-0.48	8.93	0	0	0
259	SLD 9	-0.27	0.2	9.91	0	0	0
259	SLD 10	-0.2	0.22	9.94	0	0	0
259	SLD 11	-0.31	-0.56	9.17	0	0	0
259	SLD 12	-0.25	-0.53	9.2	0	0	0
259	SLD 13	-0.9	-0.14	9.96	0	0	0
259	SLD 14	-0.8	-0.1	10	0	0	0
259	SLD 15	-0.91	-0.36	9.74	0	0	0
259	SLD 16	-0.82	-0.32	9.78	0	0	0
259	SLV 1	1.9	0.27	8.56	0	0	0
259	SLV 2	2.13	0.37	8.67	0	0	0
259	SLV 3	1.87	-0.24	8.06	0	0	0
259	SLV 4	2.09	-0.15	8.17	0	0	0
259	SLV 5	0.58	0.75	9.9	0	0	0
259	SLV 6	0.73	0.81	9.97	0	0	0
259	SLV 7	0.47	-0.97	8.24	0	0	0
259	SLV 8	0.62	-0.91	8.3	0	0	0
259	SLV 9	-0.62	0.63	10.53	0	0	0
259	SLV 10	-0.48	0.69	10.6	0	0	0
259	SLV 11	-0.73	-1.1	8.87	0	0	0
259	SLV 12	-0.59	-1.04	8.94	0	0	0
259	SLV 13	-2.1	-0.14	10.67	0	0	0
259	SLV 14	-1.88	-0.04	10.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLV 15	-2.13	-0.65	10.17	0	0	0
259	SLV 16	-1.91	-0.56	10.27	0	0	0
260	SLU 1	0	-0.14	8.48	0	0	0
260	SLU 2	0	-0.13	8.49	0	0	0
260	SLU 3	0	-0.15	8.66	0	0	0
260	SLU 4	0	-0.14	8.67	0	0	0
260	SLU 5	0	-0.13	8.61	0	0	0
260	SLU 6	0	-0.15	8.79	0	0	0
260	SLU 7	0	-0.14	8.79	0	0	0
260	SLU 8	0	-0.15	8.73	0	0	0
260	SLU 9	0	-0.14	8.73	0	0	0
260	SLU 10	0	-0.14	9.59	0	0	0
260	SLU 11	0	-0.15	9.77	0	0	0
260	SLU 12	0	-0.14	9.77	0	0	0
260	SLU 13	0	-0.14	9.71	0	0	0
260	SLU 14	0	-0.15	9.89	0	0	0
260	SLU 15	0	-0.15	9.89	0	0	0
260	SLU 16	0	-0.16	9.83	0	0	0
260	SLU 17	0	-0.15	9.83	0	0	0
260	SLU 18	0	-0.15	10.06	0	0	0
260	SLU 19	-0.01	-0.15	10.06	0	0	0
260	SLU 20	0	-0.16	10.18	0	0	0
260	SLU 21	-0.01	-0.15	10.18	0	0	0
260	SLU 22	0	-0.15	9.48	0	0	0
260	SLU 23	0	-0.14	9.49	0	0	0
260	SLU 24	0	-0.15	9.66	0	0	0
260	SLU 25	0	-0.14	9.67	0	0	0
260	SLU 26	0	-0.14	9.61	0	0	0
260	SLU 27	0	-0.15	9.79	0	0	0
260	SLU 28	0	-0.15	9.79	0	0	0
260	SLU 29	0	-0.15	9.73	0	0	0
260	SLU 30	0	-0.15	9.73	0	0	0
260	SLU 31	0	-0.14	10.59	0	0	0
260	SLU 32	0	-0.16	10.77	0	0	0
260	SLU 33	0	-0.15	10.77	0	0	0
260	SLU 34	0	-0.15	10.72	0	0	0
260	SLU 35	0	-0.16	10.89	0	0	0
260	SLU 36	0	-0.15	10.9	0	0	0
260	SLU 37	0	-0.16	10.83	0	0	0
260	SLU 38	0	-0.15	10.84	0	0	0
260	SLU 39	0	-0.16	11.06	0	0	0
260	SLU 40	0	-0.15	11.06	0	0	0
260	SLU 41	0	-0.16	11.18	0	0	0
260	SLU 42	0	-0.15	11.19	0	0	0
260	SLU 43	0	-0.18	10.68	0	0	0
260	SLU 44	0	-0.17	10.69	0	0	0
260	SLU 45	0	-0.19	10.86	0	0	0
260	SLU 46	0	-0.18	10.87	0	0	0
260	SLU 47	0	-0.18	10.81	0	0	0
260	SLU 48	0	-0.19	10.99	0	0	0
260	SLU 49	0	-0.18	10.99	0	0	0
260	SLU 50	0	-0.19	10.93	0	0	0
260	SLU 51	0	-0.18	10.93	0	0	0
260	SLU 52	0	-0.18	11.79	0	0	0
260	SLU 53	0	-0.19	11.97	0	0	0
260	SLU 54	0	-0.19	11.97	0	0	0
260	SLU 55	0	-0.18	11.91	0	0	0
260	SLU 56	0	-0.2	12.09	0	0	0
260	SLU 57	0	-0.19	12.09	0	0	0
260	SLU 58	0	-0.2	12.03	0	0	0
260	SLU 59	0	-0.19	12.03	0	0	0
260	SLU 60	0	-0.19	12.26	0	0	0
260	SLU 61	-0.01	-0.19	12.26	0	0	0
260	SLU 62	-0.01	-0.2	12.38	0	0	0
260	SLU 63	-0.01	-0.19	12.38	0	0	0
260	SLU 64	0	-0.19	11.68	0	0	0
260	SLU 65	0	-0.18	11.69	0	0	0
260	SLU 66	0	-0.19	11.86	0	0	0
260	SLU 67	0	-0.18	11.87	0	0	0
260	SLU 68	0	-0.18	11.81	0	0	0
260	SLU 69	0	-0.19	11.99	0	0	0
260	SLU 70	0	-0.19	11.99	0	0	0
260	SLU 71	0	-0.2	11.93	0	0	0
260	SLU 72	0	-0.19	11.93	0	0	0
260	SLU 73	0	-0.18	12.79	0	0	0
260	SLU 74	0	-0.2	12.97	0	0	0
260	SLU 75	0	-0.19	12.97	0	0	0
260	SLU 76	0	-0.19	12.92	0	0	0
260	SLU 77	0	-0.2	13.09	0	0	0
260	SLU 78	0	-0.19	13.1	0	0	0
260	SLU 79	0	-0.2	13.03	0	0	0
260	SLU 80	0	-0.19	13.04	0	0	0
260	SLU 81	0	-0.2	13.26	0	0	0
260	SLU 82	0	-0.19	13.26	0	0	0
260	SLU 83	0	-0.2	13.38	0	0	0
260	SLU 84	0	-0.2	13.39	0	0	0
260	SLE RA 1	0	-0.14	8.76	0	0	0
260	SLE RA 2	0	-0.14	8.77	0	0	0
260	SLE RA 3	0	-0.15	8.89	0	0	0
260	SLE RA 4	0	-0.14	8.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLE RA 5	0	-0.14	8.85	0	0	0
260	SLE RA 6	0	-0.15	8.97	0	0	0
260	SLE RA 7	0	-0.14	8.97	0	0	0
260	SLE RA 8	0	-0.15	8.93	0	0	0
260	SLE RA 9	0	-0.14	8.93	0	0	0
260	SLE RA 10	0	-0.14	9.51	0	0	0
260	SLE RA 11	0	-0.15	9.62	0	0	0
260	SLE RA 12	0	-0.15	9.63	0	0	0
260	SLE RA 13	0	-0.14	9.59	0	0	0
260	SLE RA 14	0	-0.15	9.71	0	0	0
260	SLE RA 15	0	-0.15	9.71	0	0	0
260	SLE RA 16	0	-0.15	9.67	0	0	0
260	SLE RA 17	0	-0.15	9.67	0	0	0
260	SLE RA 18	0	-0.15	9.82	0	0	0
260	SLE RA 19	0	-0.15	9.82	0	0	0
260	SLE RA 20	0	-0.15	9.9	0	0	0
260	SLE RA 21	0	-0.15	9.9	0	0	0
260	SLE FR 1	0	-0.14	8.76	0	0	0
260	SLE FR 2	0	-0.14	8.77	0	0	0
260	SLE FR 3	0	-0.15	8.8	0	0	0
260	SLE FR 4	0	-0.15	9.08	0	0	0
260	SLE FR 5	0	-0.15	9.11	0	0	0
260	SLE FR 6	0	-0.15	9.29	0	0	0
260	SLE QP 1	0	-0.14	8.76	0	0	0
260	SLE QP 2	0	-0.15	9.08	0	0	0
260	SLD 1	0.77	0.03	8.66	0	0	0
260	SLD 2	0.86	0.07	8.71	0	0	0
260	SLD 3	0.76	-0.18	8.45	0	0	0
260	SLD 4	0.85	-0.14	8.5	0	0	0
260	SLD 5	0.24	0.22	9.27	0	0	0
260	SLD 6	0.3	0.25	9.3	0	0	0
260	SLD 7	0.19	-0.49	8.56	0	0	0
260	SLD 8	0.25	-0.46	8.59	0	0	0
260	SLD 9	-0.25	0.17	9.57	0	0	0
260	SLD 10	-0.19	0.2	9.6	0	0	0
260	SLD 11	-0.3	-0.55	8.86	0	0	0
260	SLD 12	-0.24	-0.52	8.89	0	0	0
260	SLD 13	-0.85	-0.15	9.66	0	0	0
260	SLD 14	-0.76	-0.11	9.71	0	0	0
260	SLD 15	-0.86	-0.37	9.45	0	0	0
260	SLD 16	-0.77	-0.32	9.5	0	0	0
260	SLV 1	1.8	0.26	8.1	0	0	0
260	SLV 2	2.02	0.36	8.21	0	0	0
260	SLV 3	1.77	-0.22	7.62	0	0	0
260	SLV 4	1.98	-0.13	7.73	0	0	0
260	SLV 5	0.55	0.7	9.49	0	0	0
260	SLV 6	0.69	0.76	9.56	0	0	0
260	SLV 7	0.45	-0.93	7.9	0	0	0
260	SLV 8	0.58	-0.86	7.97	0	0	0
260	SLV 9	-0.58	0.57	10.19	0	0	0
260	SLV 10	-0.45	0.63	10.26	0	0	0
260	SLV 11	-0.69	-1.06	8.6	0	0	0
260	SLV 12	-0.55	-0.99	8.67	0	0	0
260	SLV 13	-1.98	-0.17	10.43	0	0	0
260	SLV 14	-1.77	-0.07	10.54	0	0	0
260	SLV 15	-2.02	-0.65	9.95	0	0	0
260	SLV 16	-1.8	-0.56	10.06	0	0	0
261	SLU 1	0	-0.15	8.23	0	0	0
261	SLU 2	0	-0.14	8.24	0	0	0
261	SLU 3	0	-0.15	8.41	0	0	0
261	SLU 4	0	-0.14	8.41	0	0	0
261	SLU 5	0	-0.14	8.36	0	0	0
261	SLU 6	0	-0.15	8.53	0	0	0
261	SLU 7	0	-0.15	8.53	0	0	0
261	SLU 8	0	-0.15	8.47	0	0	0
261	SLU 9	0	-0.15	8.47	0	0	0
261	SLU 10	0	-0.14	9.31	0	0	0
261	SLU 11	0	-0.16	9.48	0	0	0
261	SLU 12	0	-0.15	9.48	0	0	0
261	SLU 13	0	-0.15	9.43	0	0	0
261	SLU 14	0	-0.16	9.6	0	0	0
261	SLU 15	0	-0.15	9.6	0	0	0
261	SLU 16	0	-0.16	9.54	0	0	0
261	SLU 17	0	-0.15	9.55	0	0	0
261	SLU 18	0	-0.16	9.76	0	0	0
261	SLU 19	0	-0.15	9.77	0	0	0
261	SLU 20	0	-0.16	9.88	0	0	0
261	SLU 21	0	-0.15	9.89	0	0	0
261	SLU 22	0	-0.15	9.21	0	0	0
261	SLU 23	0	-0.14	9.21	0	0	0
261	SLU 24	0	-0.16	9.39	0	0	0
261	SLU 25	0	-0.15	9.39	0	0	0
261	SLU 26	0	-0.14	9.33	0	0	0
261	SLU 27	0	-0.16	9.51	0	0	0
261	SLU 28	0	-0.15	9.51	0	0	0
261	SLU 29	0	-0.16	9.45	0	0	0
261	SLU 30	0	-0.15	9.45	0	0	0
261	SLU 31	0	-0.15	10.28	0	0	0
261	SLU 32	0	-0.16	10.46	0	0	0
261	SLU 33	0	-0.16	10.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLU 34	0	-0.15	10.4	0	0	0
261	SLU 35	0	-0.17	10.58	0	0	0
261	SLU 36	0	-0.16	10.58	0	0	0
261	SLU 37	0	-0.17	10.52	0	0	0
261	SLU 38	0	-0.16	10.52	0	0	0
261	SLU 39	0	-0.17	10.74	0	0	0
261	SLU 40	0	-0.16	10.74	0	0	0
261	SLU 41	0	-0.17	10.86	0	0	0
261	SLU 42	0	-0.16	10.86	0	0	0
261	SLU 43	0	-0.19	10.37	0	0	0
261	SLU 44	0	-0.18	10.37	0	0	0
261	SLU 45	0	-0.19	10.54	0	0	0
261	SLU 46	0	-0.18	10.55	0	0	0
261	SLU 47	0	-0.18	10.49	0	0	0
261	SLU 48	0	-0.19	10.66	0	0	0
261	SLU 49	0	-0.19	10.67	0	0	0
261	SLU 50	0	-0.2	10.61	0	0	0
261	SLU 51	0	-0.19	10.61	0	0	0
261	SLU 52	0	-0.19	11.44	0	0	0
261	SLU 53	0	-0.2	11.62	0	0	0
261	SLU 54	0	-0.19	11.62	0	0	0
261	SLU 55	0	-0.19	11.56	0	0	0
261	SLU 56	0	-0.2	11.74	0	0	0
261	SLU 57	0	-0.2	11.74	0	0	0
261	SLU 58	0	-0.2	11.68	0	0	0
261	SLU 59	0	-0.2	11.68	0	0	0
261	SLU 60	0	-0.2	11.9	0	0	0
261	SLU 61	0	-0.19	11.9	0	0	0
261	SLU 62	0	-0.2	12.02	0	0	0
261	SLU 63	0	-0.2	12.02	0	0	0
261	SLU 64	0	-0.2	11.34	0	0	0
261	SLU 65	0	-0.18	11.35	0	0	0
261	SLU 66	0	-0.2	11.52	0	0	0
261	SLU 67	0	-0.19	11.52	0	0	0
261	SLU 68	0	-0.19	11.47	0	0	0
261	SLU 69	0	-0.2	11.64	0	0	0
261	SLU 70	0	-0.19	11.64	0	0	0
261	SLU 71	0	-0.2	11.58	0	0	0
261	SLU 72	0	-0.19	11.59	0	0	0
261	SLU 73	0	-0.19	12.42	0	0	0
261	SLU 74	0	-0.21	12.59	0	0	0
261	SLU 75	0	-0.2	12.6	0	0	0
261	SLU 76	0	-0.19	12.54	0	0	0
261	SLU 77	0	-0.21	12.71	0	0	0
261	SLU 78	0	-0.2	12.72	0	0	0
261	SLU 79	0	-0.21	12.65	0	0	0
261	SLU 80	0	-0.2	12.66	0	0	0
261	SLU 81	0	-0.21	12.87	0	0	0
261	SLU 82	0	-0.2	12.88	0	0	0
261	SLU 83	0	-0.21	12.99	0	0	0
261	SLU 84	0	-0.2	13	0	0	0
261	SLE RA 1	0	-0.15	8.51	0	0	0
261	SLE RA 2	0	-0.14	8.51	0	0	0
261	SLE RA 3	0	-0.15	8.63	0	0	0
261	SLE RA 4	0	-0.15	8.63	0	0	0
261	SLE RA 5	0	-0.14	8.59	0	0	0
261	SLE RA 6	0	-0.15	8.71	0	0	0
261	SLE RA 7	0	-0.15	8.71	0	0	0
261	SLE RA 8	0	-0.15	8.67	0	0	0
261	SLE RA 9	0	-0.15	8.67	0	0	0
261	SLE RA 10	0	-0.15	9.23	0	0	0
261	SLE RA 11	0	-0.16	9.34	0	0	0
261	SLE RA 12	0	-0.15	9.35	0	0	0
261	SLE RA 13	0	-0.15	9.31	0	0	0
261	SLE RA 14	0	-0.16	9.42	0	0	0
261	SLE RA 15	0	-0.15	9.43	0	0	0
261	SLE RA 16	0	-0.16	9.38	0	0	0
261	SLE RA 17	0	-0.15	9.39	0	0	0
261	SLE RA 18	0	-0.16	9.53	0	0	0
261	SLE RA 19	0	-0.15	9.53	0	0	0
261	SLE RA 20	0	-0.16	9.61	0	0	0
261	SLE RA 21	0	-0.15	9.61	0	0	0
261	SLE FR 1	0	-0.15	8.51	0	0	0
261	SLE FR 2	0	-0.15	8.51	0	0	0
261	SLE FR 3	0	-0.15	8.54	0	0	0
261	SLE FR 4	0	-0.15	8.82	0	0	0
261	SLE FR 5	0	-0.15	8.85	0	0	0
261	SLE FR 6	0	-0.15	9.02	0	0	0
261	SLE QP 1	0	-0.15	8.51	0	0	0
261	SLE QP 2	0	-0.15	8.82	0	0	0
261	SLD 1	0.74	0.02	8.35	0	0	0
261	SLD 2	0.82	0.07	8.4	0	0	0
261	SLD 3	0.72	-0.18	8.15	0	0	0
261	SLD 4	0.81	-0.14	8.19	0	0	0
261	SLD 5	0.23	0.2	8.98	0	0	0
261	SLD 6	0.28	0.23	9.01	0	0	0
261	SLD 7	0.18	-0.48	8.3	0	0	0
261	SLD 8	0.24	-0.45	8.33	0	0	0
261	SLD 9	-0.24	0.14	9.3	0	0	0
261	SLD 10	-0.18	0.17	9.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLD 11	-0.28	-0.53	8.62	0	0	0
261	SLD 12	-0.22	-0.5	8.65	0	0	0
261	SLD 13	-0.81	-0.17	9.44	0	0	0
261	SLD 14	-0.72	-0.12	9.48	0	0	0
261	SLD 15	-0.82	-0.37	9.23	0	0	0
261	SLD 16	-0.73	-0.33	9.28	0	0	0
261	SLV 1	1.72	0.25	7.72	0	0	0
261	SLV 2	1.92	0.36	7.83	0	0	0
261	SLV 3	1.69	-0.21	7.26	0	0	0
261	SLV 4	1.89	-0.11	7.37	0	0	0
261	SLV 5	0.53	0.65	9.17	0	0	0
261	SLV 6	0.66	0.72	9.24	0	0	0
261	SLV 7	0.43	-0.89	7.63	0	0	0
261	SLV 8	0.56	-0.82	7.7	0	0	0
261	SLV 9	-0.56	0.52	9.94	0	0	0
261	SLV 10	-0.43	0.58	10.01	0	0	0
261	SLV 11	-0.66	-1.02	8.39	0	0	0
261	SLV 12	-0.53	-0.96	8.46	0	0	0
261	SLV 13	-1.89	-0.2	10.27	0	0	0
261	SLV 14	-1.69	-0.09	10.37	0	0	0
261	SLV 15	-1.92	-0.66	9.8	0	0	0
261	SLV 16	-1.72	-0.56	9.91	0	0	0
262	SLU 1	0	-0.08	4.12	0	0	0
262	SLU 2	0	-0.07	4.13	0	0	0
262	SLU 3	0	-0.08	4.21	0	0	0
262	SLU 4	0	-0.08	4.21	0	0	0
262	SLU 5	0	-0.07	4.19	0	0	0
262	SLU 6	0	-0.08	4.27	0	0	0
262	SLU 7	0	-0.08	4.27	0	0	0
262	SLU 8	0	-0.08	4.24	0	0	0
262	SLU 9	0	-0.08	4.24	0	0	0
262	SLU 10	0	-0.08	4.66	0	0	0
262	SLU 11	0	-0.08	4.75	0	0	0
262	SLU 12	0	-0.08	4.75	0	0	0
262	SLU 13	0	-0.08	4.72	0	0	0
262	SLU 14	0	-0.09	4.81	0	0	0
262	SLU 15	0	-0.08	4.81	0	0	0
262	SLU 16	0	-0.09	4.78	0	0	0
262	SLU 17	0	-0.08	4.78	0	0	0
262	SLU 18	0	-0.09	4.89	0	0	0
262	SLU 19	0	-0.08	4.89	0	0	0
262	SLU 20	0	-0.09	4.95	0	0	0
262	SLU 21	0	-0.08	4.95	0	0	0
262	SLU 22	0	-0.08	4.61	0	0	0
262	SLU 23	0	-0.08	4.62	0	0	0
262	SLU 24	0	-0.08	4.7	0	0	0
262	SLU 25	0	-0.08	4.71	0	0	0
262	SLU 26	0	-0.08	4.68	0	0	0
262	SLU 27	0	-0.09	4.76	0	0	0
262	SLU 28	0	-0.08	4.77	0	0	0
262	SLU 29	0	-0.09	4.73	0	0	0
262	SLU 30	0	-0.08	4.74	0	0	0
262	SLU 31	0	-0.08	5.15	0	0	0
262	SLU 32	0	-0.09	5.24	0	0	0
262	SLU 33	0	-0.09	5.24	0	0	0
262	SLU 34	0	-0.08	5.21	0	0	0
262	SLU 35	0	-0.09	5.3	0	0	0
262	SLU 36	0	-0.09	5.3	0	0	0
262	SLU 37	0	-0.09	5.27	0	0	0
262	SLU 38	0	-0.09	5.27	0	0	0
262	SLU 39	0	-0.09	5.38	0	0	0
262	SLU 40	0	-0.09	5.38	0	0	0
262	SLU 41	0	-0.09	5.44	0	0	0
262	SLU 42	0	-0.09	5.44	0	0	0
262	SLU 43	0	-0.1	5.19	0	0	0
262	SLU 44	0	-0.1	5.19	0	0	0
262	SLU 45	0	-0.1	5.28	0	0	0
262	SLU 46	0	-0.1	5.28	0	0	0
262	SLU 47	0	-0.1	5.25	0	0	0
262	SLU 48	0	-0.1	5.34	0	0	0
262	SLU 49	0	-0.1	5.34	0	0	0
262	SLU 50	0	-0.1	5.31	0	0	0
262	SLU 51	0	-0.1	5.31	0	0	0
262	SLU 52	0	-0.1	5.73	0	0	0
262	SLU 53	0	-0.11	5.82	0	0	0
262	SLU 54	0	-0.1	5.82	0	0	0
262	SLU 55	0	-0.1	5.79	0	0	0
262	SLU 56	0	-0.11	5.88	0	0	0
262	SLU 57	0	-0.11	5.88	0	0	0
262	SLU 58	0	-0.11	5.85	0	0	0
262	SLU 59	0	-0.11	5.85	0	0	0
262	SLU 60	0	-0.11	5.96	0	0	0
262	SLU 61	0	-0.1	5.96	0	0	0
262	SLU 62	0	-0.11	6.02	0	0	0
262	SLU 63	0	-0.11	6.02	0	0	0
262	SLU 64	0	-0.11	5.68	0	0	0
262	SLU 65	0	-0.1	5.69	0	0	0
262	SLU 66	0	-0.11	5.77	0	0	0
262	SLU 67	0	-0.1	5.77	0	0	0
262	SLU 68	0	-0.1	5.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLU 69	0	-0.11	5.83	0	0	0
262	SLU 70	0	-0.1	5.83	0	0	0
262	SLU 71	0	-0.11	5.8	0	0	0
262	SLU 72	0	-0.1	5.8	0	0	0
262	SLU 73	0	-0.1	6.22	0	0	0
262	SLU 74	0	-0.11	6.31	0	0	0
262	SLU 75	0	-0.11	6.31	0	0	0
262	SLU 76	0	-0.11	6.28	0	0	0
262	SLU 77	0	-0.11	6.37	0	0	0
262	SLU 78	0	-0.11	6.37	0	0	0
262	SLU 79	0	-0.11	6.34	0	0	0
262	SLU 80	0	-0.11	6.34	0	0	0
262	SLU 81	0	-0.11	6.45	0	0	0
262	SLU 82	0	-0.11	6.45	0	0	0
262	SLU 83	0	-0.11	6.51	0	0	0
262	SLU 84	0	-0.11	6.51	0	0	0
262	SLE RA 1	0	-0.08	4.26	0	0	0
262	SLE RA 2	0	-0.08	4.26	0	0	0
262	SLE RA 3	0	-0.08	4.32	0	0	0
262	SLE RA 4	0	-0.08	4.32	0	0	0
262	SLE RA 5	0	-0.08	4.31	0	0	0
262	SLE RA 6	0	-0.08	4.36	0	0	0
262	SLE RA 7	0	-0.08	4.36	0	0	0
262	SLE RA 8	0	-0.08	4.34	0	0	0
262	SLE RA 9	0	-0.08	4.34	0	0	0
262	SLE RA 10	0	-0.08	4.62	0	0	0
262	SLE RA 11	0	-0.08	4.68	0	0	0
262	SLE RA 12	0	-0.08	4.68	0	0	0
262	SLE RA 13	0	-0.08	4.66	0	0	0
262	SLE RA 14	0	-0.08	4.72	0	0	0
262	SLE RA 15	0	-0.08	4.72	0	0	0
262	SLE RA 16	0	-0.09	4.7	0	0	0
262	SLE RA 17	0	-0.08	4.7	0	0	0
262	SLE RA 18	0	-0.08	4.77	0	0	0
262	SLE RA 19	0	-0.08	4.77	0	0	0
262	SLE RA 20	0	-0.09	4.81	0	0	0
262	SLE RA 21	0	-0.08	4.82	0	0	0
262	SLE FR 1	0	-0.08	4.26	0	0	0
262	SLE FR 2	0	-0.08	4.26	0	0	0
262	SLE FR 3	0	-0.08	4.28	0	0	0
262	SLE FR 4	0	-0.08	4.42	0	0	0
262	SLE FR 5	0	-0.08	4.43	0	0	0
262	SLE FR 6	0	-0.08	4.52	0	0	0
262	SLE QP 1	0	-0.08	4.26	0	0	0
262	SLE QP 2	0	-0.08	4.42	0	0	0
262	SLD 1	0.36	0.01	4.15	0	0	0
262	SLD 2	0.4	0.03	4.18	0	0	0
262	SLD 3	0.36	-0.09	4.05	0	0	0
262	SLD 4	0.4	-0.07	4.08	0	0	0
262	SLD 5	0.11	0.09	4.49	0	0	0
262	SLD 6	0.14	0.11	4.51	0	0	0
262	SLD 7	0.09	-0.24	4.15	0	0	0
262	SLD 8	0.12	-0.22	4.16	0	0	0
262	SLD 9	-0.12	0.06	4.67	0	0	0
262	SLD 10	-0.09	0.08	4.69	0	0	0
262	SLD 11	-0.14	-0.27	4.33	0	0	0
262	SLD 12	-0.11	-0.26	4.34	0	0	0
262	SLD 13	-0.4	-0.1	4.76	0	0	0
262	SLD 14	-0.35	-0.07	4.78	0	0	0
262	SLD 15	-0.4	-0.2	4.65	0	0	0
262	SLD 16	-0.36	-0.17	4.68	0	0	0
262	SLV 1	0.85	0.13	3.8	0	0	0
262	SLV 2	0.94	0.18	3.86	0	0	0
262	SLV 3	0.83	-0.1	3.57	0	0	0
262	SLV 4	0.93	-0.04	3.62	0	0	0
262	SLV 5	0.26	0.32	4.58	0	0	0
262	SLV 6	0.32	0.35	4.61	0	0	0
262	SLV 7	0.21	-0.44	3.8	0	0	0
262	SLV 8	0.27	-0.4	3.83	0	0	0
262	SLV 9	-0.27	0.24	5	0	0	0
262	SLV 10	-0.21	0.28	5.03	0	0	0
262	SLV 11	-0.32	-0.51	4.22	0	0	0
262	SLV 12	-0.26	-0.48	4.26	0	0	0
262	SLV 13	-0.93	-0.12	5.21	0	0	0
262	SLV 14	-0.83	-0.06	5.26	0	0	0
262	SLV 15	-0.94	-0.34	4.98	0	0	0
262	SLV 16	-0.84	-0.29	5.03	0	0	0
263	SLU 1	-0.19	-0.27	13.44	0	0	0
263	SLU 2	-0.18	-0.25	13.45	0	0	0
263	SLU 3	-0.19	-0.28	13.73	0	0	0
263	SLU 4	-0.19	-0.26	13.74	0	0	0
263	SLU 5	-0.19	-0.26	13.65	0	0	0
263	SLU 6	-0.19	-0.28	13.93	0	0	0
263	SLU 7	-0.19	-0.27	13.93	0	0	0
263	SLU 8	-0.19	-0.28	13.84	0	0	0
263	SLU 9	-0.19	-0.27	13.84	0	0	0
263	SLU 10	-0.2	-0.27	15.21	0	0	0
263	SLU 11	-0.21	-0.3	15.49	0	0	0
263	SLU 12	-0.2	-0.28	15.5	0	0	0
263	SLU 13	-0.2	-0.28	15.41	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLU 14	-0.21	-0.3	15.69	0	0	0
263	SLU 15	-0.21	-0.29	15.7	0	0	0
263	SLU 16	-0.21	-0.3	15.6	0	0	0
263	SLU 17	-0.21	-0.29	15.6	0	0	0
263	SLU 18	-0.21	-0.3	15.96	0	0	0
263	SLU 19	-0.21	-0.29	15.97	0	0	0
263	SLU 20	-0.21	-0.3	16.16	0	0	0
263	SLU 21	-0.21	-0.29	16.16	0	0	0
263	SLU 22	-0.21	-0.29	15.03	0	0	0
263	SLU 23	-0.21	-0.27	15.04	0	0	0
263	SLU 24	-0.22	-0.29	15.32	0	0	0
263	SLU 25	-0.21	-0.28	15.33	0	0	0
263	SLU 26	-0.21	-0.27	15.24	0	0	0
263	SLU 27	-0.22	-0.29	15.52	0	0	0
263	SLU 28	-0.22	-0.28	15.52	0	0	0
263	SLU 29	-0.22	-0.29	15.43	0	0	0
263	SLU 30	-0.21	-0.28	15.43	0	0	0
263	SLU 31	-0.22	-0.29	16.8	0	0	0
263	SLU 32	-0.23	-0.31	17.08	0	0	0
263	SLU 33	-0.23	-0.3	17.09	0	0	0
263	SLU 34	-0.23	-0.29	17	0	0	0
263	SLU 35	-0.23	-0.31	17.28	0	0	0
263	SLU 36	-0.23	-0.3	17.29	0	0	0
263	SLU 37	-0.23	-0.31	17.19	0	0	0
263	SLU 38	-0.23	-0.3	17.19	0	0	0
263	SLU 39	-0.23	-0.31	17.55	0	0	0
263	SLU 40	-0.23	-0.3	17.55	0	0	0
263	SLU 41	-0.24	-0.32	17.75	0	0	0
263	SLU 42	-0.24	-0.31	17.75	0	0	0
263	SLU 43	-0.23	-0.35	16.93	0	0	0
263	SLU 44	-0.23	-0.33	16.94	0	0	0
263	SLU 45	-0.24	-0.35	17.22	0	0	0
263	SLU 46	-0.24	-0.34	17.22	0	0	0
263	SLU 47	-0.23	-0.34	17.13	0	0	0
263	SLU 48	-0.24	-0.36	17.41	0	0	0
263	SLU 49	-0.24	-0.35	17.42	0	0	0
263	SLU 50	-0.24	-0.36	17.32	0	0	0
263	SLU 51	-0.24	-0.35	17.33	0	0	0
263	SLU 52	-0.25	-0.35	18.7	0	0	0
263	SLU 53	-0.25	-0.37	18.98	0	0	0
263	SLU 54	-0.25	-0.36	18.99	0	0	0
263	SLU 55	-0.25	-0.35	18.9	0	0	0
263	SLU 56	-0.26	-0.38	19.18	0	0	0
263	SLU 57	-0.25	-0.37	19.18	0	0	0
263	SLU 58	-0.25	-0.38	19.09	0	0	0
263	SLU 59	-0.25	-0.37	19.09	0	0	0
263	SLU 60	-0.26	-0.38	19.45	0	0	0
263	SLU 61	-0.25	-0.37	19.45	0	0	0
263	SLU 62	-0.26	-0.38	19.64	0	0	0
263	SLU 63	-0.26	-0.37	19.65	0	0	0
263	SLU 64	-0.26	-0.36	18.52	0	0	0
263	SLU 65	-0.26	-0.34	18.53	0	0	0
263	SLU 66	-0.26	-0.37	18.81	0	0	0
263	SLU 67	-0.26	-0.35	18.81	0	0	0
263	SLU 68	-0.26	-0.35	18.72	0	0	0
263	SLU 69	-0.27	-0.37	19	0	0	0
263	SLU 70	-0.26	-0.36	19.01	0	0	0
263	SLU 71	-0.26	-0.37	18.91	0	0	0
263	SLU 72	-0.26	-0.36	18.92	0	0	0
263	SLU 73	-0.27	-0.36	20.29	0	0	0
263	SLU 74	-0.28	-0.39	20.57	0	0	0
263	SLU 75	-0.28	-0.37	20.58	0	0	0
263	SLU 76	-0.27	-0.37	20.49	0	0	0
263	SLU 77	-0.28	-0.39	20.77	0	0	0
263	SLU 78	-0.28	-0.38	20.77	0	0	0
263	SLU 79	-0.28	-0.39	20.68	0	0	0
263	SLU 80	-0.28	-0.38	20.68	0	0	0
263	SLU 81	-0.28	-0.39	21.04	0	0	0
263	SLU 82	-0.28	-0.38	21.04	0	0	0
263	SLU 83	-0.28	-0.4	21.23	0	0	0
263	SLU 84	-0.28	-0.38	21.24	0	0	0
263	SLE RA 1	-0.19	-0.28	13.9	0	0	0
263	SLE RA 2	-0.19	-0.26	13.9	0	0	0
263	SLE RA 3	-0.2	-0.28	14.09	0	0	0
263	SLE RA 4	-0.19	-0.27	14.09	0	0	0
263	SLE RA 5	-0.19	-0.27	14.03	0	0	0
263	SLE RA 6	-0.2	-0.28	14.22	0	0	0
263	SLE RA 7	-0.2	-0.27	14.22	0	0	0
263	SLE RA 8	-0.2	-0.28	14.16	0	0	0
263	SLE RA 9	-0.19	-0.27	14.16	0	0	0
263	SLE RA 10	-0.2	-0.28	15.08	0	0	0
263	SLE RA 11	-0.21	-0.29	15.26	0	0	0
263	SLE RA 12	-0.21	-0.28	15.27	0	0	0
263	SLE RA 13	-0.2	-0.28	15.21	0	0	0
263	SLE RA 14	-0.21	-0.29	15.39	0	0	0
263	SLE RA 15	-0.21	-0.29	15.4	0	0	0
263	SLE RA 16	-0.21	-0.3	15.33	0	0	0
263	SLE RA 17	-0.21	-0.29	15.34	0	0	0
263	SLE RA 18	-0.21	-0.3	15.57	0	0	0
263	SLE RA 19	-0.21	-0.29	15.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLE RA 20	-0.21	-0.3	15.71	0	0	0
263	SLE RA 21	-0.21	-0.29	15.71	0	0	0
263	SLE FR 1	-0.19	-0.28	13.9	0	0	0
263	SLE FR 2	-0.19	-0.27	13.9	0	0	0
263	SLE FR 3	-0.19	-0.28	13.95	0	0	0
263	SLE FR 4	-0.2	-0.28	14.4	0	0	0
263	SLE FR 5	-0.2	-0.28	14.45	0	0	0
263	SLE FR 6	-0.2	-0.29	14.74	0	0	0
263	SLE QP 1	-0.19	-0.28	13.9	0	0	0
263	SLE QP 2	-0.2	-0.28	14.4	0	0	0
263	SLD 1	0.96	-0.21	15.27	0	0	0
263	SLD 2	1.1	-0.29	15.2	0	0	0
263	SLD 3	0.98	-0.56	14.98	0	0	0
263	SLD 4	1.12	-0.63	14.91	0	0	0
263	SLD 5	0.09	0.28	15.12	0	0	0
263	SLD 6	0.18	0.23	15.07	0	0	0
263	SLD 7	0.17	-0.88	14.14	0	0	0
263	SLD 8	0.26	-0.93	14.09	0	0	0
263	SLD 9	-0.65	0.36	14.71	0	0	0
263	SLD 10	-0.56	0.32	14.66	0	0	0
263	SLD 11	-0.57	-0.8	13.72	0	0	0
263	SLD 12	-0.48	-0.84	13.68	0	0	0
263	SLD 13	-1.51	0.07	13.89	0	0	0
263	SLD 14	-1.38	0	13.82	0	0	0
263	SLD 15	-1.49	-0.28	13.6	0	0	0
263	SLD 16	-1.35	-0.35	13.53	0	0	0
263	SLV 1	2.5	-0.13	16.43	0	0	0
263	SLV 2	2.83	-0.3	16.27	0	0	0
263	SLV 3	2.56	-0.93	15.77	0	0	0
263	SLV 4	2.88	-1.09	15.6	0	0	0
263	SLV 5	0.47	0.99	16.05	0	0	0
263	SLV 6	0.68	0.88	15.94	0	0	0
263	SLV 7	0.66	-1.65	13.82	0	0	0
263	SLV 8	0.87	-1.76	13.72	0	0	0
263	SLV 9	-1.26	1.19	15.08	0	0	0
263	SLV 10	-1.05	1.08	14.97	0	0	0
263	SLV 11	-1.08	-1.45	12.85	0	0	0
263	SLV 12	-0.87	-1.56	12.75	0	0	0
263	SLV 13	-3.28	0.53	13.2	0	0	0
263	SLV 14	-2.95	0.36	13.03	0	0	0
263	SLV 15	-3.22	-0.26	12.53	0	0	0
263	SLV 16	-2.9	-0.43	12.37	0	0	0
264	SLU 1	-0.16	-0.23	12.14	0	0	0
264	SLU 2	-0.16	-0.21	12.15	0	0	0
264	SLU 3	-0.17	-0.23	12.41	0	0	0
264	SLU 4	-0.17	-0.22	12.41	0	0	0
264	SLU 5	-0.16	-0.21	12.33	0	0	0
264	SLU 6	-0.17	-0.23	12.58	0	0	0
264	SLU 7	-0.17	-0.22	12.59	0	0	0
264	SLU 8	-0.17	-0.24	12.5	0	0	0
264	SLU 9	-0.17	-0.23	12.51	0	0	0
264	SLU 10	-0.18	-0.23	13.75	0	0	0
264	SLU 11	-0.18	-0.25	14	0	0	0
264	SLU 12	-0.18	-0.23	14.01	0	0	0
264	SLU 13	-0.18	-0.23	13.93	0	0	0
264	SLU 14	-0.19	-0.25	14.18	0	0	0
264	SLU 15	-0.18	-0.24	14.18	0	0	0
264	SLU 16	-0.18	-0.25	14.1	0	0	0
264	SLU 17	-0.18	-0.24	14.1	0	0	0
264	SLU 18	-0.19	-0.25	14.42	0	0	0
264	SLU 19	-0.18	-0.24	14.43	0	0	0
264	SLU 20	-0.19	-0.25	14.6	0	0	0
264	SLU 21	-0.19	-0.24	14.61	0	0	0
264	SLU 22	-0.19	-0.24	13.57	0	0	0
264	SLU 23	-0.19	-0.22	13.58	0	0	0
264	SLU 24	-0.19	-0.24	13.83	0	0	0
264	SLU 25	-0.19	-0.23	13.84	0	0	0
264	SLU 26	-0.19	-0.22	13.76	0	0	0
264	SLU 27	-0.19	-0.24	14.01	0	0	0
264	SLU 28	-0.19	-0.23	14.02	0	0	0
264	SLU 29	-0.19	-0.24	13.93	0	0	0
264	SLU 30	-0.19	-0.23	13.93	0	0	0
264	SLU 31	-0.2	-0.23	15.18	0	0	0
264	SLU 32	-0.21	-0.25	15.43	0	0	0
264	SLU 33	-0.2	-0.24	15.43	0	0	0
264	SLU 34	-0.2	-0.24	15.36	0	0	0
264	SLU 35	-0.21	-0.26	15.61	0	0	0
264	SLU 36	-0.21	-0.25	15.61	0	0	0
264	SLU 37	-0.21	-0.26	15.52	0	0	0
264	SLU 38	-0.2	-0.25	15.53	0	0	0
264	SLU 39	-0.21	-0.26	15.85	0	0	0
264	SLU 40	-0.21	-0.25	15.86	0	0	0
264	SLU 41	-0.21	-0.26	16.03	0	0	0
264	SLU 42	-0.21	-0.25	16.03	0	0	0
264	SLU 43	-0.21	-0.29	15.3	0	0	0
264	SLU 44	-0.2	-0.28	15.31	0	0	0
264	SLU 45	-0.21	-0.3	15.56	0	0	0
264	SLU 46	-0.21	-0.29	15.56	0	0	0
264	SLU 47	-0.21	-0.28	15.49	0	0	0
264	SLU 48	-0.21	-0.3	15.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLU 49	-0.21	-0.29	15.74	0	0	0
264	SLU 50	-0.21	-0.3	15.65	0	0	0
264	SLU 51	-0.21	-0.29	15.66	0	0	0
264	SLU 52	-0.22	-0.29	16.9	0	0	0
264	SLU 53	-0.22	-0.31	17.15	0	0	0
264	SLU 54	-0.22	-0.3	17.16	0	0	0
264	SLU 55	-0.22	-0.3	17.08	0	0	0
264	SLU 56	-0.23	-0.31	17.33	0	0	0
264	SLU 57	-0.23	-0.3	17.34	0	0	0
264	SLU 58	-0.22	-0.32	17.25	0	0	0
264	SLU 59	-0.22	-0.31	17.25	0	0	0
264	SLU 60	-0.23	-0.32	17.58	0	0	0
264	SLU 61	-0.23	-0.3	17.58	0	0	0
264	SLU 62	-0.23	-0.32	17.75	0	0	0
264	SLU 63	-0.23	-0.31	17.76	0	0	0
264	SLU 64	-0.23	-0.3	16.73	0	0	0
264	SLU 65	-0.23	-0.29	16.74	0	0	0
264	SLU 66	-0.23	-0.3	16.99	0	0	0
264	SLU 67	-0.23	-0.29	16.99	0	0	0
264	SLU 68	-0.23	-0.29	16.91	0	0	0
264	SLU 69	-0.24	-0.31	17.16	0	0	0
264	SLU 70	-0.23	-0.3	17.17	0	0	0
264	SLU 71	-0.23	-0.31	17.08	0	0	0
264	SLU 72	-0.23	-0.3	17.09	0	0	0
264	SLU 73	-0.24	-0.3	18.33	0	0	0
264	SLU 74	-0.25	-0.32	18.58	0	0	0
264	SLU 75	-0.25	-0.31	18.59	0	0	0
264	SLU 76	-0.24	-0.3	18.51	0	0	0
264	SLU 77	-0.25	-0.32	18.76	0	0	0
264	SLU 78	-0.25	-0.31	18.77	0	0	0
264	SLU 79	-0.25	-0.32	18.68	0	0	0
264	SLU 80	-0.25	-0.31	18.68	0	0	0
264	SLU 81	-0.25	-0.32	19	0	0	0
264	SLU 82	-0.25	-0.31	19.01	0	0	0
264	SLU 83	-0.25	-0.33	19.18	0	0	0
264	SLU 84	-0.25	-0.32	19.19	0	0	0
264	SLE RA 1	-0.17	-0.23	12.55	0	0	0
264	SLE RA 2	-0.17	-0.22	12.56	0	0	0
264	SLE RA 3	-0.17	-0.23	12.73	0	0	0
264	SLE RA 4	-0.17	-0.23	12.73	0	0	0
264	SLE RA 5	-0.17	-0.22	12.68	0	0	0
264	SLE RA 6	-0.18	-0.23	12.84	0	0	0
264	SLE RA 7	-0.17	-0.23	12.85	0	0	0
264	SLE RA 8	-0.17	-0.24	12.79	0	0	0
264	SLE RA 9	-0.17	-0.23	12.79	0	0	0
264	SLE RA 10	-0.18	-0.23	13.62	0	0	0
264	SLE RA 11	-0.18	-0.24	13.79	0	0	0
264	SLE RA 12	-0.18	-0.24	13.79	0	0	0
264	SLE RA 13	-0.18	-0.23	13.74	0	0	0
264	SLE RA 14	-0.19	-0.24	13.91	0	0	0
264	SLE RA 15	-0.18	-0.24	13.91	0	0	0
264	SLE RA 16	-0.18	-0.25	13.85	0	0	0
264	SLE RA 17	-0.18	-0.24	13.86	0	0	0
264	SLE RA 18	-0.18	-0.25	14.07	0	0	0
264	SLE RA 19	-0.18	-0.24	14.08	0	0	0
264	SLE RA 20	-0.19	-0.25	14.19	0	0	0
264	SLE RA 21	-0.19	-0.24	14.19	0	0	0
264	SLE FR 1	-0.17	-0.23	12.55	0	0	0
264	SLE FR 2	-0.17	-0.23	12.55	0	0	0
264	SLE FR 3	-0.17	-0.23	12.6	0	0	0
264	SLE FR 4	-0.17	-0.23	13.01	0	0	0
264	SLE FR 5	-0.18	-0.24	13.06	0	0	0
264	SLE FR 6	-0.18	-0.24	13.31	0	0	0
264	SLE QP 1	-0.17	-0.23	12.55	0	0	0
264	SLE QP 2	-0.18	-0.24	13.01	0	0	0
264	SLD 1	0.9	-0.16	13.67	0	0	0
264	SLD 2	1.03	-0.22	13.61	0	0	0
264	SLD 3	0.92	-0.49	13.4	0	0	0
264	SLD 4	1.05	-0.55	13.34	0	0	0
264	SLD 5	0.09	0.29	13.62	0	0	0
264	SLD 6	0.18	0.25	13.58	0	0	0
264	SLD 7	0.16	-0.79	12.73	0	0	0
264	SLD 8	0.25	-0.83	12.69	0	0	0
264	SLD 9	-0.6	0.36	13.32	0	0	0
264	SLD 10	-0.51	0.32	13.28	0	0	0
264	SLD 11	-0.53	-0.72	12.43	0	0	0
264	SLD 12	-0.44	-0.76	12.39	0	0	0
264	SLD 13	-1.4	0.08	12.67	0	0	0
264	SLD 14	-1.27	0.02	12.61	0	0	0
264	SLD 15	-1.38	-0.25	12.41	0	0	0
264	SLD 16	-1.25	-0.31	12.35	0	0	0
264	SLV 1	2.34	-0.07	14.55	0	0	0
264	SLV 2	2.64	-0.21	14.4	0	0	0
264	SLV 3	2.39	-0.81	13.94	0	0	0
264	SLV 4	2.69	-0.95	13.8	0	0	0
264	SLV 5	0.45	0.96	14.41	0	0	0
264	SLV 6	0.65	0.87	14.32	0	0	0
264	SLV 7	0.62	-1.51	12.39	0	0	0
264	SLV 8	0.81	-1.6	12.3	0	0	0
264	SLV 9	-1.16	1.13	13.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLV 10	-0.97	1.04	13.62	0	0	0
264	SLV 11	-1	-1.34	11.7	0	0	0
264	SLV 12	-0.8	-1.43	11.61	0	0	0
264	SLV 13	-3.05	0.48	12.22	0	0	0
264	SLV 14	-2.74	0.34	12.08	0	0	0
264	SLV 15	-2.99	-0.26	11.61	0	0	0
264	SLV 16	-2.69	-0.4	11.47	0	0	0
265	SLU 1	-0.16	-0.2	11.67	0	0	0
265	SLU 2	-0.15	-0.18	11.68	0	0	0
265	SLU 3	-0.16	-0.2	11.92	0	0	0
265	SLU 4	-0.16	-0.19	11.93	0	0	0
265	SLU 5	-0.16	-0.18	11.85	0	0	0
265	SLU 6	-0.16	-0.2	12.09	0	0	0
265	SLU 7	-0.16	-0.19	12.1	0	0	0
265	SLU 8	-0.16	-0.2	12.01	0	0	0
265	SLU 9	-0.16	-0.19	12.02	0	0	0
265	SLU 10	-0.17	-0.19	13.22	0	0	0
265	SLU 11	-0.17	-0.21	13.46	0	0	0
265	SLU 12	-0.17	-0.2	13.46	0	0	0
265	SLU 13	-0.17	-0.19	13.39	0	0	0
265	SLU 14	-0.18	-0.21	13.63	0	0	0
265	SLU 15	-0.18	-0.2	13.64	0	0	0
265	SLU 16	-0.17	-0.21	13.55	0	0	0
265	SLU 17	-0.17	-0.2	13.56	0	0	0
265	SLU 18	-0.18	-0.21	13.87	0	0	0
265	SLU 19	-0.18	-0.2	13.87	0	0	0
265	SLU 20	-0.18	-0.21	14.04	0	0	0
265	SLU 21	-0.18	-0.2	14.04	0	0	0
265	SLU 22	-0.18	-0.2	13.04	0	0	0
265	SLU 23	-0.18	-0.18	13.05	0	0	0
265	SLU 24	-0.18	-0.2	13.29	0	0	0
265	SLU 25	-0.18	-0.19	13.29	0	0	0
265	SLU 26	-0.18	-0.19	13.22	0	0	0
265	SLU 27	-0.18	-0.2	13.46	0	0	0
265	SLU 28	-0.18	-0.19	13.46	0	0	0
265	SLU 29	-0.18	-0.21	13.38	0	0	0
265	SLU 30	-0.18	-0.2	13.39	0	0	0
265	SLU 31	-0.19	-0.19	14.59	0	0	0
265	SLU 32	-0.2	-0.21	14.82	0	0	0
265	SLU 33	-0.2	-0.2	14.83	0	0	0
265	SLU 34	-0.19	-0.2	14.76	0	0	0
265	SLU 35	-0.2	-0.22	15	0	0	0
265	SLU 36	-0.2	-0.21	15	0	0	0
265	SLU 37	-0.2	-0.22	14.92	0	0	0
265	SLU 38	-0.2	-0.21	14.92	0	0	0
265	SLU 39	-0.2	-0.22	15.23	0	0	0
265	SLU 40	-0.2	-0.21	15.24	0	0	0
265	SLU 41	-0.2	-0.22	15.4	0	0	0
265	SLU 42	-0.2	-0.21	15.41	0	0	0
265	SLU 43	-0.2	-0.25	14.7	0	0	0
265	SLU 44	-0.19	-0.24	14.72	0	0	0
265	SLU 45	-0.2	-0.25	14.95	0	0	0
265	SLU 46	-0.2	-0.24	14.96	0	0	0
265	SLU 47	-0.2	-0.24	14.89	0	0	0
265	SLU 48	-0.2	-0.26	15.13	0	0	0
265	SLU 49	-0.2	-0.25	15.13	0	0	0
265	SLU 50	-0.2	-0.26	15.05	0	0	0
265	SLU 51	-0.2	-0.25	15.05	0	0	0
265	SLU 52	-0.21	-0.25	16.25	0	0	0
265	SLU 53	-0.21	-0.26	16.49	0	0	0
265	SLU 54	-0.21	-0.25	16.5	0	0	0
265	SLU 55	-0.21	-0.25	16.42	0	0	0
265	SLU 56	-0.22	-0.27	16.66	0	0	0
265	SLU 57	-0.21	-0.26	16.67	0	0	0
265	SLU 58	-0.21	-0.27	16.58	0	0	0
265	SLU 59	-0.21	-0.26	16.59	0	0	0
265	SLU 60	-0.22	-0.27	16.9	0	0	0
265	SLU 61	-0.21	-0.26	16.91	0	0	0
265	SLU 62	-0.22	-0.27	17.07	0	0	0
265	SLU 63	-0.22	-0.26	17.08	0	0	0
265	SLU 64	-0.22	-0.26	16.07	0	0	0
265	SLU 65	-0.22	-0.24	16.08	0	0	0
265	SLU 66	-0.22	-0.26	16.32	0	0	0
265	SLU 67	-0.22	-0.25	16.33	0	0	0
265	SLU 68	-0.22	-0.24	16.25	0	0	0
265	SLU 69	-0.22	-0.26	16.49	0	0	0
265	SLU 70	-0.22	-0.25	16.5	0	0	0
265	SLU 71	-0.22	-0.26	16.41	0	0	0
265	SLU 72	-0.22	-0.25	16.42	0	0	0
265	SLU 73	-0.23	-0.25	17.62	0	0	0
265	SLU 74	-0.24	-0.27	17.86	0	0	0
265	SLU 75	-0.23	-0.26	17.86	0	0	0
265	SLU 76	-0.23	-0.25	17.79	0	0	0
265	SLU 77	-0.24	-0.27	18.03	0	0	0
265	SLU 78	-0.24	-0.26	18.03	0	0	0
265	SLU 79	-0.24	-0.27	17.95	0	0	0
265	SLU 80	-0.23	-0.26	17.96	0	0	0
265	SLU 81	-0.24	-0.27	18.27	0	0	0
265	SLU 82	-0.24	-0.26	18.27	0	0	0
265	SLU 83	-0.24	-0.28	18.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
265	SLU 84	-0.24	-0.27	18.44	0	0	0
265	SLE RA 1	-0.16	-0.2	12.06	0	0	0
265	SLE RA 2	-0.16	-0.19	12.07	0	0	0
265	SLE RA 3	-0.17	-0.2	12.23	0	0	0
265	SLE RA 4	-0.16	-0.19	12.23	0	0	0
265	SLE RA 5	-0.16	-0.19	12.18	0	0	0
265	SLE RA 6	-0.17	-0.2	12.34	0	0	0
265	SLE RA 7	-0.17	-0.19	12.35	0	0	0
265	SLE RA 8	-0.17	-0.2	12.29	0	0	0
265	SLE RA 9	-0.16	-0.19	12.29	0	0	0
265	SLE RA 10	-0.17	-0.19	13.09	0	0	0
265	SLE RA 11	-0.17	-0.21	13.25	0	0	0
265	SLE RA 12	-0.17	-0.2	13.26	0	0	0
265	SLE RA 13	-0.17	-0.2	13.21	0	0	0
265	SLE RA 14	-0.18	-0.21	13.37	0	0	0
265	SLE RA 15	-0.18	-0.2	13.37	0	0	0
265	SLE RA 16	-0.17	-0.21	13.31	0	0	0
265	SLE RA 17	-0.17	-0.2	13.32	0	0	0
265	SLE RA 18	-0.18	-0.21	13.53	0	0	0
265	SLE RA 19	-0.18	-0.2	13.53	0	0	0
265	SLE RA 20	-0.18	-0.21	13.64	0	0	0
265	SLE RA 21	-0.18	-0.2	13.64	0	0	0
265	SLE FR 1	-0.16	-0.2	12.06	0	0	0
265	SLE FR 2	-0.16	-0.19	12.06	0	0	0
265	SLE FR 3	-0.16	-0.2	12.11	0	0	0
265	SLE FR 4	-0.17	-0.2	12.5	0	0	0
265	SLE FR 5	-0.17	-0.2	12.55	0	0	0
265	SLE FR 6	-0.17	-0.2	12.79	0	0	0
265	SLE QP 1	-0.16	-0.2	12.06	0	0	0
265	SLE QP 2	-0.17	-0.2	12.5	0	0	0
265	SLD 1	0.89	-0.11	13.02	0	0	0
265	SLD 2	1.01	-0.16	12.96	0	0	0
265	SLD 3	0.91	-0.43	12.76	0	0	0
265	SLD 4	1.04	-0.49	12.71	0	0	0
265	SLD 5	0.09	0.32	13.06	0	0	0
265	SLD 6	0.18	0.29	13.02	0	0	0
265	SLD 7	0.17	-0.75	12.2	0	0	0
265	SLD 8	0.25	-0.78	12.16	0	0	0
265	SLD 9	-0.58	0.38	12.84	0	0	0
265	SLD 10	-0.5	0.35	12.81	0	0	0
265	SLD 11	-0.51	-0.69	11.98	0	0	0
265	SLD 12	-0.43	-0.72	11.94	0	0	0
265	SLD 13	-1.37	0.09	12.3	0	0	0
265	SLD 14	-1.24	0.03	12.24	0	0	0
265	SLD 15	-1.35	-0.24	12.04	0	0	0
265	SLD 16	-1.22	-0.29	11.98	0	0	0
265	SLV 1	2.3	0	13.7	0	0	0
265	SLV 2	2.6	-0.13	13.58	0	0	0
265	SLV 3	2.35	-0.73	13.12	0	0	0
265	SLV 4	2.64	-0.86	12.99	0	0	0
265	SLV 5	0.45	0.99	13.77	0	0	0
265	SLV 6	0.64	0.91	13.69	0	0	0
265	SLV 7	0.61	-1.45	11.82	0	0	0
265	SLV 8	0.8	-1.53	11.74	0	0	0
265	SLV 9	-1.14	1.13	13.27	0	0	0
265	SLV 10	-0.95	1.05	13.18	0	0	0
265	SLV 11	-0.97	-1.31	11.31	0	0	0
265	SLV 12	-0.78	-1.39	11.23	0	0	0
265	SLV 13	-2.98	0.46	12.01	0	0	0
265	SLV 14	-2.68	0.33	11.89	0	0	0
265	SLV 15	-2.93	-0.27	11.43	0	0	0
265	SLV 16	-2.63	-0.4	11.3	0	0	0
266	SLU 1	-0.15	-0.17	11.49	0	0	0
266	SLU 2	-0.15	-0.15	11.5	0	0	0
266	SLU 3	-0.16	-0.17	11.73	0	0	0
266	SLU 4	-0.15	-0.16	11.74	0	0	0
266	SLU 5	-0.15	-0.15	11.67	0	0	0
266	SLU 6	-0.16	-0.17	11.9	0	0	0
266	SLU 7	-0.16	-0.16	11.91	0	0	0
266	SLU 8	-0.16	-0.17	11.82	0	0	0
266	SLU 9	-0.15	-0.16	11.83	0	0	0
266	SLU 10	-0.16	-0.16	13.02	0	0	0
266	SLU 11	-0.17	-0.17	13.25	0	0	0
266	SLU 12	-0.17	-0.16	13.26	0	0	0
266	SLU 13	-0.17	-0.16	13.19	0	0	0
266	SLU 14	-0.17	-0.18	13.42	0	0	0
266	SLU 15	-0.17	-0.17	13.43	0	0	0
266	SLU 16	-0.17	-0.18	13.34	0	0	0
266	SLU 17	-0.17	-0.17	13.35	0	0	0
266	SLU 18	-0.17	-0.18	13.66	0	0	0
266	SLU 19	-0.17	-0.17	13.67	0	0	0
266	SLU 20	-0.17	-0.18	13.83	0	0	0
266	SLU 21	-0.17	-0.17	13.84	0	0	0
266	SLU 22	-0.17	-0.17	12.83	0	0	0
266	SLU 23	-0.17	-0.15	12.84	0	0	0
266	SLU 24	-0.18	-0.17	13.07	0	0	0
266	SLU 25	-0.18	-0.16	13.08	0	0	0
266	SLU 26	-0.17	-0.15	13.01	0	0	0
266	SLU 27	-0.18	-0.17	13.24	0	0	0
266	SLU 28	-0.18	-0.16	13.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLU 29	-0.18	-0.17	13.17	0	0	0
266	SLU 30	-0.18	-0.16	13.17	0	0	0
266	SLU 31	-0.18	-0.16	14.36	0	0	0
266	SLU 32	-0.19	-0.18	14.59	0	0	0
266	SLU 33	-0.19	-0.17	14.6	0	0	0
266	SLU 34	-0.19	-0.16	14.53	0	0	0
266	SLU 35	-0.19	-0.18	14.76	0	0	0
266	SLU 36	-0.19	-0.17	14.77	0	0	0
266	SLU 37	-0.19	-0.18	14.69	0	0	0
266	SLU 38	-0.19	-0.17	14.69	0	0	0
266	SLU 39	-0.19	-0.18	15	0	0	0
266	SLU 40	-0.19	-0.17	15.01	0	0	0
266	SLU 41	-0.19	-0.18	15.17	0	0	0
266	SLU 42	-0.19	-0.17	15.18	0	0	0
266	SLU 43	-0.19	-0.22	14.47	0	0	0
266	SLU 44	-0.19	-0.2	14.49	0	0	0
266	SLU 45	-0.19	-0.22	14.72	0	0	0
266	SLU 46	-0.19	-0.21	14.73	0	0	0
266	SLU 47	-0.19	-0.2	14.65	0	0	0
266	SLU 48	-0.2	-0.22	14.89	0	0	0
266	SLU 49	-0.2	-0.21	14.9	0	0	0
266	SLU 50	-0.19	-0.22	14.81	0	0	0
266	SLU 51	-0.19	-0.21	14.82	0	0	0
266	SLU 52	-0.2	-0.21	16.01	0	0	0
266	SLU 53	-0.21	-0.22	16.24	0	0	0
266	SLU 54	-0.21	-0.21	16.25	0	0	0
266	SLU 55	-0.2	-0.21	16.17	0	0	0
266	SLU 56	-0.21	-0.23	16.41	0	0	0
266	SLU 57	-0.21	-0.22	16.42	0	0	0
266	SLU 58	-0.21	-0.23	16.33	0	0	0
266	SLU 59	-0.21	-0.22	16.34	0	0	0
266	SLU 60	-0.21	-0.23	16.65	0	0	0
266	SLU 61	-0.21	-0.22	16.65	0	0	0
266	SLU 62	-0.21	-0.23	16.81	0	0	0
266	SLU 63	-0.21	-0.22	16.82	0	0	0
266	SLU 64	-0.21	-0.22	15.81	0	0	0
266	SLU 65	-0.21	-0.2	15.83	0	0	0
266	SLU 66	-0.22	-0.22	16.06	0	0	0
266	SLU 67	-0.21	-0.21	16.07	0	0	0
266	SLU 68	-0.21	-0.2	16	0	0	0
266	SLU 69	-0.22	-0.22	16.23	0	0	0
266	SLU 70	-0.22	-0.21	16.24	0	0	0
266	SLU 71	-0.22	-0.22	16.15	0	0	0
266	SLU 72	-0.21	-0.21	16.16	0	0	0
266	SLU 73	-0.22	-0.21	17.35	0	0	0
266	SLU 74	-0.23	-0.22	17.58	0	0	0
266	SLU 75	-0.23	-0.22	17.59	0	0	0
266	SLU 76	-0.23	-0.21	17.52	0	0	0
266	SLU 77	-0.23	-0.23	17.75	0	0	0
266	SLU 78	-0.23	-0.22	17.76	0	0	0
266	SLU 79	-0.23	-0.23	17.67	0	0	0
266	SLU 80	-0.23	-0.22	17.68	0	0	0
266	SLU 81	-0.23	-0.23	17.99	0	0	0
266	SLU 82	-0.23	-0.22	17.99	0	0	0
266	SLU 83	-0.23	-0.23	18.15	0	0	0
266	SLU 84	-0.23	-0.22	18.16	0	0	0
266	SLE RA 1	-0.16	-0.17	11.87	0	0	0
266	SLE RA 2	-0.16	-0.16	11.88	0	0	0
266	SLE RA 3	-0.16	-0.17	12.03	0	0	0
266	SLE RA 4	-0.16	-0.16	12.04	0	0	0
266	SLE RA 5	-0.16	-0.16	11.99	0	0	0
266	SLE RA 6	-0.16	-0.17	12.15	0	0	0
266	SLE RA 7	-0.16	-0.16	12.15	0	0	0
266	SLE RA 8	-0.16	-0.17	12.09	0	0	0
266	SLE RA 9	-0.16	-0.16	12.1	0	0	0
266	SLE RA 10	-0.17	-0.16	12.89	0	0	0
266	SLE RA 11	-0.17	-0.17	13.05	0	0	0
266	SLE RA 12	-0.17	-0.17	13.05	0	0	0
266	SLE RA 13	-0.17	-0.16	13	0	0	0
266	SLE RA 14	-0.17	-0.17	13.16	0	0	0
266	SLE RA 15	-0.17	-0.17	13.16	0	0	0
266	SLE RA 16	-0.17	-0.18	13.11	0	0	0
266	SLE RA 17	-0.17	-0.17	13.11	0	0	0
266	SLE RA 18	-0.17	-0.17	13.32	0	0	0
266	SLE RA 19	-0.17	-0.17	13.32	0	0	0
266	SLE RA 20	-0.17	-0.18	13.43	0	0	0
266	SLE RA 21	-0.17	-0.17	13.44	0	0	0
266	SLE FR 1	-0.16	-0.17	11.87	0	0	0
266	SLE FR 2	-0.16	-0.16	11.87	0	0	0
266	SLE FR 3	-0.16	-0.17	11.91	0	0	0
266	SLE FR 4	-0.16	-0.17	12.31	0	0	0
266	SLE FR 5	-0.16	-0.17	12.35	0	0	0
266	SLE FR 6	-0.16	-0.17	12.59	0	0	0
266	SLE QP 1	-0.16	-0.17	11.87	0	0	0
266	SLE QP 2	-0.16	-0.17	12.3	0	0	0
266	SLD 1	0.88	-0.06	12.7	0	0	0
266	SLD 2	1.01	-0.11	12.65	0	0	0
266	SLD 3	0.9	-0.39	12.44	0	0	0
266	SLD 4	1.03	-0.43	12.39	0	0	0
266	SLD 5	0.1	0.36	12.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLD 6	0.18	0.33	12.79	0	0	0
266	SLD 7	0.17	-0.71	11.96	0	0	0
266	SLD 8	0.25	-0.74	11.93	0	0	0
266	SLD 9	-0.57	0.41	12.68	0	0	0
266	SLD 10	-0.49	0.38	12.64	0	0	0
266	SLD 11	-0.5	-0.67	11.82	0	0	0
266	SLD 12	-0.42	-0.7	11.78	0	0	0
266	SLD 13	-1.35	0.1	12.21	0	0	0
266	SLD 14	-1.23	0.05	12.16	0	0	0
266	SLD 15	-1.33	-0.23	11.96	0	0	0
266	SLD 16	-1.21	-0.27	11.91	0	0	0
266	SLV 1	2.28	0.06	13.23	0	0	0
266	SLV 2	2.57	-0.04	13.11	0	0	0
266	SLV 3	2.33	-0.67	12.64	0	0	0
266	SLV 4	2.62	-0.78	12.52	0	0	0
266	SLV 5	0.45	1.03	13.49	0	0	0
266	SLV 6	0.64	0.96	13.41	0	0	0
266	SLV 7	0.61	-1.41	11.54	0	0	0
266	SLV 8	0.8	-1.48	11.46	0	0	0
266	SLV 9	-1.12	1.14	13.15	0	0	0
266	SLV 10	-0.93	1.07	13.07	0	0	0
266	SLV 11	-0.96	-1.3	11.19	0	0	0
266	SLV 12	-0.77	-1.37	11.12	0	0	0
266	SLV 13	-2.95	0.44	12.08	0	0	0
266	SLV 14	-2.65	0.33	11.97	0	0	0
266	SLV 15	-2.9	-0.29	11.5	0	0	0
266	SLV 16	-2.61	-0.4	11.38	0	0	0
267	SLU 1	-0.15	-0.14	11.49	0	0	0
267	SLU 2	-0.15	-0.12	11.51	0	0	0
267	SLU 3	-0.15	-0.14	11.74	0	0	0
267	SLU 4	-0.15	-0.13	11.75	0	0	0
267	SLU 5	-0.15	-0.12	11.68	0	0	0
267	SLU 6	-0.16	-0.14	11.91	0	0	0
267	SLU 7	-0.15	-0.13	11.92	0	0	0
267	SLU 8	-0.15	-0.14	11.83	0	0	0
267	SLU 9	-0.15	-0.13	11.84	0	0	0
267	SLU 10	-0.16	-0.13	13.04	0	0	0
267	SLU 11	-0.17	-0.14	13.27	0	0	0
267	SLU 12	-0.17	-0.13	13.28	0	0	0
267	SLU 13	-0.16	-0.13	13.21	0	0	0
267	SLU 14	-0.17	-0.15	13.44	0	0	0
267	SLU 15	-0.17	-0.14	13.45	0	0	0
267	SLU 16	-0.17	-0.15	13.37	0	0	0
267	SLU 17	-0.17	-0.14	13.38	0	0	0
267	SLU 18	-0.17	-0.15	13.69	0	0	0
267	SLU 19	-0.17	-0.14	13.69	0	0	0
267	SLU 20	-0.17	-0.15	13.85	0	0	0
267	SLU 21	-0.17	-0.14	13.86	0	0	0
267	SLU 22	-0.17	-0.14	12.84	0	0	0
267	SLU 23	-0.17	-0.12	12.85	0	0	0
267	SLU 24	-0.17	-0.14	13.08	0	0	0
267	SLU 25	-0.17	-0.13	13.09	0	0	0
267	SLU 26	-0.17	-0.12	13.02	0	0	0
267	SLU 27	-0.18	-0.14	13.25	0	0	0
267	SLU 28	-0.18	-0.13	13.26	0	0	0
267	SLU 29	-0.17	-0.14	13.18	0	0	0
267	SLU 30	-0.17	-0.13	13.18	0	0	0
267	SLU 31	-0.18	-0.13	14.38	0	0	0
267	SLU 32	-0.19	-0.14	14.62	0	0	0
267	SLU 33	-0.19	-0.13	14.62	0	0	0
267	SLU 34	-0.18	-0.13	14.55	0	0	0
267	SLU 35	-0.19	-0.14	14.79	0	0	0
267	SLU 36	-0.19	-0.13	14.79	0	0	0
267	SLU 37	-0.19	-0.15	14.71	0	0	0
267	SLU 38	-0.19	-0.14	14.72	0	0	0
267	SLU 39	-0.19	-0.14	15.03	0	0	0
267	SLU 40	-0.19	-0.13	15.04	0	0	0
267	SLU 41	-0.19	-0.15	15.2	0	0	0
267	SLU 42	-0.19	-0.14	15.21	0	0	0
267	SLU 43	-0.19	-0.18	14.48	0	0	0
267	SLU 44	-0.19	-0.17	14.5	0	0	0
267	SLU 45	-0.19	-0.18	14.73	0	0	0
267	SLU 46	-0.19	-0.17	14.74	0	0	0
267	SLU 47	-0.19	-0.17	14.67	0	0	0
267	SLU 48	-0.19	-0.18	14.9	0	0	0
267	SLU 49	-0.19	-0.17	14.91	0	0	0
267	SLU 50	-0.19	-0.19	14.82	0	0	0
267	SLU 51	-0.19	-0.18	14.83	0	0	0
267	SLU 52	-0.2	-0.17	16.03	0	0	0
267	SLU 53	-0.2	-0.19	16.26	0	0	0
267	SLU 54	-0.2	-0.18	16.27	0	0	0
267	SLU 55	-0.2	-0.17	16.2	0	0	0
267	SLU 56	-0.21	-0.19	16.43	0	0	0
267	SLU 57	-0.21	-0.18	16.44	0	0	0
267	SLU 58	-0.2	-0.19	16.36	0	0	0
267	SLU 59	-0.2	-0.18	16.37	0	0	0
267	SLU 60	-0.21	-0.19	16.67	0	0	0
267	SLU 61	-0.21	-0.18	16.68	0	0	0
267	SLU 62	-0.21	-0.19	16.84	0	0	0
267	SLU 63	-0.21	-0.18	16.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLU 64	-0.21	-0.18	15.82	0	0	0
267	SLU 65	-0.21	-0.16	15.84	0	0	0
267	SLU 66	-0.21	-0.18	16.07	0	0	0
267	SLU 67	-0.21	-0.17	16.08	0	0	0
267	SLU 68	-0.21	-0.16	16.01	0	0	0
267	SLU 69	-0.21	-0.18	16.24	0	0	0
267	SLU 70	-0.21	-0.17	16.25	0	0	0
267	SLU 71	-0.21	-0.18	16.16	0	0	0
267	SLU 72	-0.21	-0.17	16.17	0	0	0
267	SLU 73	-0.22	-0.17	17.37	0	0	0
267	SLU 74	-0.23	-0.18	17.6	0	0	0
267	SLU 75	-0.22	-0.17	17.61	0	0	0
267	SLU 76	-0.22	-0.17	17.54	0	0	0
267	SLU 77	-0.23	-0.19	17.77	0	0	0
267	SLU 78	-0.23	-0.18	17.78	0	0	0
267	SLU 79	-0.23	-0.19	17.7	0	0	0
267	SLU 80	-0.22	-0.18	17.71	0	0	0
267	SLU 81	-0.23	-0.19	18.02	0	0	0
267	SLU 82	-0.23	-0.18	18.02	0	0	0
267	SLU 83	-0.23	-0.19	18.18	0	0	0
267	SLU 84	-0.23	-0.18	18.19	0	0	0
267	SLE RA 1	-0.16	-0.14	11.88	0	0	0
267	SLE RA 2	-0.15	-0.13	11.89	0	0	0
267	SLE RA 3	-0.16	-0.14	12.04	0	0	0
267	SLE RA 4	-0.16	-0.13	12.05	0	0	0
267	SLE RA 5	-0.16	-0.13	12	0	0	0
267	SLE RA 6	-0.16	-0.14	12.16	0	0	0
267	SLE RA 7	-0.16	-0.13	12.16	0	0	0
267	SLE RA 8	-0.16	-0.14	12.1	0	0	0
267	SLE RA 9	-0.16	-0.13	12.11	0	0	0
267	SLE RA 10	-0.16	-0.13	12.91	0	0	0
267	SLE RA 11	-0.17	-0.14	13.06	0	0	0
267	SLE RA 12	-0.17	-0.13	13.07	0	0	0
267	SLE RA 13	-0.16	-0.13	13.02	0	0	0
267	SLE RA 14	-0.17	-0.14	13.18	0	0	0
267	SLE RA 15	-0.17	-0.14	13.18	0	0	0
267	SLE RA 16	-0.17	-0.14	13.13	0	0	0
267	SLE RA 17	-0.17	-0.14	13.13	0	0	0
267	SLE RA 18	-0.17	-0.14	13.34	0	0	0
267	SLE RA 19	-0.17	-0.14	13.34	0	0	0
267	SLE RA 20	-0.17	-0.14	13.45	0	0	0
267	SLE RA 21	-0.17	-0.14	13.46	0	0	0
267	SLE FR 1	-0.16	-0.14	11.88	0	0	0
267	SLE FR 2	-0.16	-0.14	11.88	0	0	0
267	SLE FR 3	-0.16	-0.14	11.92	0	0	0
267	SLE FR 4	-0.16	-0.14	12.32	0	0	0
267	SLE FR 5	-0.16	-0.14	12.36	0	0	0
267	SLE FR 6	-0.16	-0.14	12.61	0	0	0
267	SLE QP 1	-0.16	-0.14	11.88	0	0	0
267	SLE QP 2	-0.16	-0.14	12.32	0	0	0
267	SLD 1	0.88	-0.02	12.61	0	0	0
267	SLD 2	1	-0.06	12.56	0	0	0
267	SLD 3	0.9	-0.34	12.35	0	0	0
267	SLD 4	1.02	-0.38	12.3	0	0	0
267	SLD 5	0.1	0.39	12.81	0	0	0
267	SLD 6	0.18	0.37	12.78	0	0	0
267	SLD 7	0.17	-0.68	11.94	0	0	0
267	SLD 8	0.25	-0.71	11.91	0	0	0
267	SLD 9	-0.57	0.43	12.73	0	0	0
267	SLD 10	-0.49	0.4	12.7	0	0	0
267	SLD 11	-0.5	-0.65	11.85	0	0	0
267	SLD 12	-0.42	-0.67	11.82	0	0	0
267	SLD 13	-1.34	0.1	12.33	0	0	0
267	SLD 14	-1.22	0.06	12.29	0	0	0
267	SLD 15	-1.32	-0.22	12.07	0	0	0
267	SLD 16	-1.2	-0.26	12.02	0	0	0
267	SLV 1	2.27	0.13	12.99	0	0	0
267	SLV 2	2.56	0.04	12.88	0	0	0
267	SLV 3	2.32	-0.6	12.4	0	0	0
267	SLV 4	2.6	-0.7	12.29	0	0	0
267	SLV 5	0.45	1.07	13.44	0	0	0
267	SLV 6	0.63	1.01	13.37	0	0	0
267	SLV 7	0.61	-1.38	11.46	0	0	0
267	SLV 8	0.79	-1.44	11.39	0	0	0
267	SLV 9	-1.11	1.16	13.24	0	0	0
267	SLV 10	-0.92	1.1	13.17	0	0	0
267	SLV 11	-0.95	-1.29	11.26	0	0	0
267	SLV 12	-0.77	-1.35	11.19	0	0	0
267	SLV 13	-2.92	0.42	12.34	0	0	0
267	SLV 14	-2.63	0.32	12.23	0	0	0
267	SLV 15	-2.88	-0.32	11.75	0	0	0
267	SLV 16	-2.59	-0.41	11.64	0	0	0
268	SLU 1	-0.15	-0.11	11.63	0	0	0
268	SLU 2	-0.15	-0.1	11.64	0	0	0
268	SLU 3	-0.15	-0.11	11.88	0	0	0
268	SLU 4	-0.15	-0.1	11.89	0	0	0
268	SLU 5	-0.15	-0.1	11.82	0	0	0
268	SLU 6	-0.15	-0.11	12.05	0	0	0
268	SLU 7	-0.15	-0.11	12.06	0	0	0
268	SLU 8	-0.15	-0.12	11.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
268	SLU 9	-0.15	-0.11	11.98	0	0	0
268	SLU 10	-0.16	-0.1	13.21	0	0	0
268	SLU 11	-0.17	-0.12	13.44	0	0	0
268	SLU 12	-0.16	-0.11	13.45	0	0	0
268	SLU 13	-0.16	-0.1	13.38	0	0	0
268	SLU 14	-0.17	-0.12	13.61	0	0	0
268	SLU 15	-0.17	-0.11	13.62	0	0	0
268	SLU 16	-0.17	-0.12	13.54	0	0	0
268	SLU 17	-0.16	-0.11	13.55	0	0	0
268	SLU 18	-0.17	-0.12	13.86	0	0	0
268	SLU 19	-0.17	-0.11	13.87	0	0	0
268	SLU 20	-0.17	-0.12	14.03	0	0	0
268	SLU 21	-0.17	-0.11	14.04	0	0	0
268	SLU 22	-0.17	-0.11	12.98	0	0	0
268	SLU 23	-0.17	-0.09	13	0	0	0
268	SLU 24	-0.17	-0.11	13.23	0	0	0
268	SLU 25	-0.17	-0.1	13.24	0	0	0
268	SLU 26	-0.17	-0.09	13.17	0	0	0
268	SLU 27	-0.17	-0.11	13.41	0	0	0
268	SLU 28	-0.17	-0.1	13.42	0	0	0
268	SLU 29	-0.17	-0.11	13.33	0	0	0
268	SLU 30	-0.17	-0.1	13.34	0	0	0
268	SLU 31	-0.18	-0.1	14.57	0	0	0
268	SLU 32	-0.19	-0.11	14.8	0	0	0
268	SLU 33	-0.18	-0.1	14.81	0	0	0
268	SLU 34	-0.18	-0.1	14.74	0	0	0
268	SLU 35	-0.19	-0.11	14.97	0	0	0
268	SLU 36	-0.19	-0.1	14.98	0	0	0
268	SLU 37	-0.19	-0.11	14.9	0	0	0
268	SLU 38	-0.18	-0.11	14.91	0	0	0
268	SLU 39	-0.19	-0.11	15.22	0	0	0
268	SLU 40	-0.19	-0.1	15.23	0	0	0
268	SLU 41	-0.19	-0.11	15.39	0	0	0
268	SLU 42	-0.19	-0.1	15.4	0	0	0
268	SLU 43	-0.19	-0.15	14.65	0	0	0
268	SLU 44	-0.18	-0.13	14.66	0	0	0
268	SLU 45	-0.19	-0.15	14.9	0	0	0
268	SLU 46	-0.19	-0.14	14.91	0	0	0
268	SLU 47	-0.18	-0.14	14.84	0	0	0
268	SLU 48	-0.19	-0.15	15.07	0	0	0
268	SLU 49	-0.19	-0.14	15.08	0	0	0
268	SLU 50	-0.19	-0.15	14.99	0	0	0
268	SLU 51	-0.19	-0.14	15	0	0	0
268	SLU 52	-0.2	-0.14	16.23	0	0	0
268	SLU 53	-0.2	-0.15	16.46	0	0	0
268	SLU 54	-0.2	-0.14	16.47	0	0	0
268	SLU 55	-0.2	-0.14	16.4	0	0	0
268	SLU 56	-0.2	-0.15	16.64	0	0	0
268	SLU 57	-0.2	-0.14	16.65	0	0	0
268	SLU 58	-0.2	-0.16	16.56	0	0	0
268	SLU 59	-0.2	-0.15	16.57	0	0	0
268	SLU 60	-0.2	-0.15	16.88	0	0	0
268	SLU 61	-0.2	-0.14	16.89	0	0	0
268	SLU 62	-0.21	-0.16	17.06	0	0	0
268	SLU 63	-0.2	-0.15	17.07	0	0	0
268	SLU 64	-0.21	-0.14	16.01	0	0	0
268	SLU 65	-0.2	-0.13	16.02	0	0	0
268	SLU 66	-0.21	-0.14	16.26	0	0	0
268	SLU 67	-0.21	-0.13	16.27	0	0	0
268	SLU 68	-0.21	-0.13	16.2	0	0	0
268	SLU 69	-0.21	-0.14	16.43	0	0	0
268	SLU 70	-0.21	-0.14	16.44	0	0	0
268	SLU 71	-0.21	-0.15	16.35	0	0	0
268	SLU 72	-0.21	-0.14	16.36	0	0	0
268	SLU 73	-0.22	-0.13	17.59	0	0	0
268	SLU 74	-0.22	-0.15	17.82	0	0	0
268	SLU 75	-0.22	-0.14	17.83	0	0	0
268	SLU 76	-0.22	-0.13	17.76	0	0	0
268	SLU 77	-0.23	-0.15	17.99	0	0	0
268	SLU 78	-0.22	-0.14	18	0	0	0
268	SLU 79	-0.22	-0.15	17.92	0	0	0
268	SLU 80	-0.22	-0.14	17.93	0	0	0
268	SLU 81	-0.22	-0.15	18.24	0	0	0
268	SLU 82	-0.22	-0.14	18.25	0	0	0
268	SLU 83	-0.23	-0.15	18.42	0	0	0
268	SLU 84	-0.23	-0.14	18.43	0	0	0
268	SLE RA 1	-0.15	-0.11	12.01	0	0	0
268	SLE RA 2	-0.15	-0.1	12.02	0	0	0
268	SLE RA 3	-0.16	-0.11	12.18	0	0	0
268	SLE RA 4	-0.16	-0.11	12.19	0	0	0
268	SLE RA 5	-0.15	-0.1	12.14	0	0	0
268	SLE RA 6	-0.16	-0.11	12.3	0	0	0
268	SLE RA 7	-0.16	-0.11	12.3	0	0	0
268	SLE RA 8	-0.16	-0.11	12.24	0	0	0
268	SLE RA 9	-0.16	-0.11	12.25	0	0	0
268	SLE RA 10	-0.16	-0.1	13.07	0	0	0
268	SLE RA 11	-0.17	-0.11	13.22	0	0	0
268	SLE RA 12	-0.16	-0.11	13.23	0	0	0
268	SLE RA 13	-0.16	-0.11	13.18	0	0	0
268	SLE RA 14	-0.17	-0.11	13.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
268	SLE RA 15	-0.17	-0.11	13.35	0	0	0
268	SLE RA 16	-0.17	-0.12	13.29	0	0	0
268	SLE RA 17	-0.16	-0.11	13.29	0	0	0
268	SLE RA 18	-0.17	-0.11	13.5	0	0	0
268	SLE RA 19	-0.17	-0.11	13.51	0	0	0
268	SLE RA 20	-0.17	-0.12	13.62	0	0	0
268	SLE RA 21	-0.17	-0.11	13.63	0	0	0
268	SLE FR 1	-0.15	-0.11	12.01	0	0	0
268	SLE FR 2	-0.15	-0.11	12.02	0	0	0
268	SLE FR 3	-0.15	-0.11	12.06	0	0	0
268	SLE FR 4	-0.16	-0.11	12.46	0	0	0
268	SLE FR 5	-0.16	-0.11	12.51	0	0	0
268	SLE FR 6	-0.16	-0.11	12.76	0	0	0
268	SLE QP 1	-0.15	-0.11	12.01	0	0	0
268	SLE QP 2	-0.16	-0.11	12.46	0	0	0
268	SLD 1	0.87	0.02	12.67	0	0	0
268	SLD 2	0.99	-0.01	12.62	0	0	0
268	SLD 3	0.89	-0.3	12.4	0	0	0
268	SLD 4	1.01	-0.33	12.35	0	0	0
268	SLD 5	0.1	0.42	12.94	0	0	0
268	SLD 6	0.18	0.4	12.91	0	0	0
268	SLD 7	0.17	-0.65	12.04	0	0	0
268	SLD 8	0.25	-0.68	12.01	0	0	0
268	SLD 9	-0.56	0.45	12.91	0	0	0
268	SLD 10	-0.48	0.43	12.88	0	0	0
268	SLD 11	-0.49	-0.63	12.01	0	0	0
268	SLD 12	-0.41	-0.65	11.98	0	0	0
268	SLD 13	-1.33	0.11	12.57	0	0	0
268	SLD 14	-1.21	0.07	12.52	0	0	0
268	SLD 15	-1.31	-0.22	12.3	0	0	0
268	SLD 16	-1.19	-0.25	12.26	0	0	0
268	SLV 1	2.25	0.19	12.93	0	0	0
268	SLV 2	2.54	0.12	12.83	0	0	0
268	SLV 3	2.3	-0.54	12.32	0	0	0
268	SLV 4	2.58	-0.62	12.22	0	0	0
268	SLV 5	0.44	1.11	13.54	0	0	0
268	SLV 6	0.63	1.06	13.48	0	0	0
268	SLV 7	0.6	-1.34	11.51	0	0	0
268	SLV 8	0.79	-1.39	11.45	0	0	0
268	SLV 9	-1.1	1.17	13.47	0	0	0
268	SLV 10	-0.92	1.12	13.41	0	0	0
268	SLV 11	-0.94	-1.29	11.44	0	0	0
268	SLV 12	-0.76	-1.33	11.38	0	0	0
268	SLV 13	-2.9	0.39	12.7	0	0	0
268	SLV 14	-2.61	0.32	12.6	0	0	0
268	SLV 15	-2.85	-0.34	12.09	0	0	0
268	SLV 16	-2.56	-0.42	11.99	0	0	0
269	SLU 1	-0.14	-0.09	11.35	0	0	0
269	SLU 2	-0.14	-0.07	11.36	0	0	0
269	SLU 3	-0.14	-0.09	11.59	0	0	0
269	SLU 4	-0.14	-0.08	11.6	0	0	0
269	SLU 5	-0.14	-0.07	11.53	0	0	0
269	SLU 6	-0.15	-0.09	11.76	0	0	0
269	SLU 7	-0.14	-0.08	11.77	0	0	0
269	SLU 8	-0.14	-0.09	11.68	0	0	0
269	SLU 9	-0.14	-0.08	11.7	0	0	0
269	SLU 10	-0.15	-0.07	12.91	0	0	0
269	SLU 11	-0.16	-0.09	13.13	0	0	0
269	SLU 12	-0.16	-0.08	13.15	0	0	0
269	SLU 13	-0.15	-0.07	13.08	0	0	0
269	SLU 14	-0.16	-0.09	13.3	0	0	0
269	SLU 15	-0.16	-0.08	13.32	0	0	0
269	SLU 16	-0.16	-0.09	13.23	0	0	0
269	SLU 17	-0.15	-0.08	13.24	0	0	0
269	SLU 18	-0.16	-0.09	13.55	0	0	0
269	SLU 19	-0.16	-0.08	13.56	0	0	0
269	SLU 20	-0.16	-0.09	13.72	0	0	0
269	SLU 21	-0.16	-0.08	13.73	0	0	0
269	SLU 22	-0.16	-0.08	12.68	0	0	0
269	SLU 23	-0.16	-0.06	12.69	0	0	0
269	SLU 24	-0.16	-0.08	12.92	0	0	0
269	SLU 25	-0.16	-0.07	12.93	0	0	0
269	SLU 26	-0.16	-0.07	12.86	0	0	0
269	SLU 27	-0.17	-0.08	13.09	0	0	0
269	SLU 28	-0.16	-0.07	13.1	0	0	0
269	SLU 29	-0.16	-0.08	13.02	0	0	0
269	SLU 30	-0.16	-0.07	13.03	0	0	0
269	SLU 31	-0.17	-0.06	14.24	0	0	0
269	SLU 32	-0.18	-0.08	14.46	0	0	0
269	SLU 33	-0.17	-0.07	14.48	0	0	0
269	SLU 34	-0.17	-0.07	14.41	0	0	0
269	SLU 35	-0.18	-0.08	14.63	0	0	0
269	SLU 36	-0.18	-0.07	14.65	0	0	0
269	SLU 37	-0.18	-0.08	14.56	0	0	0
269	SLU 38	-0.17	-0.07	14.57	0	0	0
269	SLU 39	-0.18	-0.08	14.88	0	0	0
269	SLU 40	-0.18	-0.07	14.89	0	0	0
269	SLU 41	-0.18	-0.08	15.05	0	0	0
269	SLU 42	-0.18	-0.07	15.06	0	0	0
269	SLU 43	-0.18	-0.12	14.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLU 44	-0.17	-0.1	14.31	0	0	0
269	SLU 45	-0.18	-0.11	14.54	0	0	0
269	SLU 46	-0.18	-0.11	14.55	0	0	0
269	SLU 47	-0.18	-0.1	14.48	0	0	0
269	SLU 48	-0.18	-0.12	14.71	0	0	0
269	SLU 49	-0.18	-0.11	14.72	0	0	0
269	SLU 50	-0.18	-0.12	14.63	0	0	0
269	SLU 51	-0.18	-0.11	14.64	0	0	0
269	SLU 52	-0.19	-0.1	15.85	0	0	0
269	SLU 53	-0.19	-0.11	16.08	0	0	0
269	SLU 54	-0.19	-0.11	16.09	0	0	0
269	SLU 55	-0.19	-0.1	16.02	0	0	0
269	SLU 56	-0.19	-0.12	16.25	0	0	0
269	SLU 57	-0.19	-0.11	16.26	0	0	0
269	SLU 58	-0.19	-0.12	16.18	0	0	0
269	SLU 59	-0.19	-0.11	16.19	0	0	0
269	SLU 60	-0.19	-0.12	16.5	0	0	0
269	SLU 61	-0.19	-0.11	16.51	0	0	0
269	SLU 62	-0.2	-0.12	16.67	0	0	0
269	SLU 63	-0.19	-0.11	16.68	0	0	0
269	SLU 64	-0.19	-0.11	15.62	0	0	0
269	SLU 65	-0.19	-0.09	15.64	0	0	0
269	SLU 66	-0.2	-0.11	15.87	0	0	0
269	SLU 67	-0.2	-0.1	15.88	0	0	0
269	SLU 68	-0.19	-0.09	15.81	0	0	0
269	SLU 69	-0.2	-0.11	16.04	0	0	0
269	SLU 70	-0.2	-0.1	16.05	0	0	0
269	SLU 71	-0.2	-0.11	15.96	0	0	0
269	SLU 72	-0.2	-0.1	15.97	0	0	0
269	SLU 73	-0.21	-0.09	17.18	0	0	0
269	SLU 74	-0.21	-0.11	17.41	0	0	0
269	SLU 75	-0.21	-0.1	17.42	0	0	0
269	SLU 76	-0.21	-0.1	17.35	0	0	0
269	SLU 77	-0.21	-0.11	17.58	0	0	0
269	SLU 78	-0.21	-0.1	17.59	0	0	0
269	SLU 79	-0.21	-0.11	17.51	0	0	0
269	SLU 80	-0.21	-0.1	17.52	0	0	0
269	SLU 81	-0.21	-0.11	17.83	0	0	0
269	SLU 82	-0.21	-0.1	17.84	0	0	0
269	SLU 83	-0.21	-0.11	18	0	0	0
269	SLU 84	-0.21	-0.1	18.01	0	0	0
269	SLE RA 1	-0.15	-0.08	11.73	0	0	0
269	SLE RA 2	-0.14	-0.08	11.74	0	0	0
269	SLE RA 3	-0.15	-0.08	11.89	0	0	0
269	SLE RA 4	-0.15	-0.08	11.9	0	0	0
269	SLE RA 5	-0.15	-0.08	11.85	0	0	0
269	SLE RA 6	-0.15	-0.08	12	0	0	0
269	SLE RA 7	-0.15	-0.08	12.01	0	0	0
269	SLE RA 8	-0.15	-0.09	11.95	0	0	0
269	SLE RA 9	-0.15	-0.08	11.96	0	0	0
269	SLE RA 10	-0.15	-0.08	12.77	0	0	0
269	SLE RA 11	-0.16	-0.08	12.92	0	0	0
269	SLE RA 12	-0.16	-0.08	12.93	0	0	0
269	SLE RA 13	-0.15	-0.08	12.88	0	0	0
269	SLE RA 14	-0.16	-0.08	13.03	0	0	0
269	SLE RA 15	-0.16	-0.08	13.04	0	0	0
269	SLE RA 16	-0.16	-0.09	12.98	0	0	0
269	SLE RA 17	-0.16	-0.08	12.99	0	0	0
269	SLE RA 18	-0.16	-0.08	13.2	0	0	0
269	SLE RA 19	-0.16	-0.08	13.2	0	0	0
269	SLE RA 20	-0.16	-0.09	13.31	0	0	0
269	SLE RA 21	-0.16	-0.08	13.32	0	0	0
269	SLE FR 1	-0.15	-0.08	11.73	0	0	0
269	SLE FR 2	-0.15	-0.08	11.73	0	0	0
269	SLE FR 3	-0.15	-0.08	11.77	0	0	0
269	SLE FR 4	-0.15	-0.08	12.17	0	0	0
269	SLE FR 5	-0.15	-0.09	12.21	0	0	0
269	SLE FR 6	-0.15	-0.08	12.46	0	0	0
269	SLE QP 1	-0.15	-0.08	11.73	0	0	0
269	SLE QP 2	-0.15	-0.08	12.17	0	0	0
269	SLD 1	0.82	0.06	12.25	0	0	0
269	SLD 2	0.94	0.03	12.21	0	0	0
269	SLD 3	0.84	-0.25	11.99	0	0	0
269	SLD 4	0.96	-0.28	11.95	0	0	0
269	SLD 5	0.09	0.43	12.6	0	0	0
269	SLD 6	0.17	0.41	12.58	0	0	0
269	SLD 7	0.16	-0.6	11.72	0	0	0
269	SLD 8	0.23	-0.62	11.69	0	0	0
269	SLD 9	-0.53	0.45	12.64	0	0	0
269	SLD 10	-0.46	0.43	12.61	0	0	0
269	SLD 11	-0.47	-0.58	11.76	0	0	0
269	SLD 12	-0.39	-0.6	11.73	0	0	0
269	SLD 13	-1.26	0.11	12.38	0	0	0
269	SLD 14	-1.14	0.08	12.34	0	0	0
269	SLD 15	-1.24	-0.2	12.12	0	0	0
269	SLD 16	-1.12	-0.22	12.08	0	0	0
269	SLV 1	2.13	0.23	12.36	0	0	0
269	SLV 2	2.4	0.18	12.27	0	0	0
269	SLV 3	2.17	-0.47	11.76	0	0	0
269	SLV 4	2.44	-0.53	11.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLV 5	0.42	1.09	13.15	0	0	0
269	SLV 6	0.59	1.05	13.09	0	0	0
269	SLV 7	0.57	-1.26	11.15	0	0	0
269	SLV 8	0.74	-1.3	11.09	0	0	0
269	SLV 9	-1.04	1.13	13.24	0	0	0
269	SLV 10	-0.87	1.09	13.18	0	0	0
269	SLV 11	-0.89	-1.22	11.24	0	0	0
269	SLV 12	-0.72	-1.26	11.18	0	0	0
269	SLV 13	-2.74	0.36	12.66	0	0	0
269	SLV 14	-2.47	0.3	12.57	0	0	0
269	SLV 15	-2.7	-0.35	12.06	0	0	0
269	SLV 16	-2.42	-0.4	11.97	0	0	0
271	SLU 1	-0.1	-0.17	7.56	0	0	0
271	SLU 2	-0.1	-0.16	7.57	0	0	0
271	SLU 3	-0.1	-0.17	7.73	0	0	0
271	SLU 4	-0.1	-0.17	7.73	0	0	0
271	SLU 5	-0.1	-0.16	7.68	0	0	0
271	SLU 6	-0.11	-0.18	7.84	0	0	0
271	SLU 7	-0.1	-0.17	7.84	0	0	0
271	SLU 8	-0.1	-0.18	7.79	0	0	0
271	SLU 9	-0.1	-0.17	7.79	0	0	0
271	SLU 10	-0.11	-0.17	8.56	0	0	0
271	SLU 11	-0.11	-0.19	8.72	0	0	0
271	SLU 12	-0.11	-0.18	8.72	0	0	0
271	SLU 13	-0.11	-0.18	8.67	0	0	0
271	SLU 14	-0.11	-0.19	8.83	0	0	0
271	SLU 15	-0.11	-0.18	8.83	0	0	0
271	SLU 16	-0.11	-0.19	8.78	0	0	0
271	SLU 17	-0.11	-0.18	8.78	0	0	0
271	SLU 18	-0.11	-0.19	8.98	0	0	0
271	SLU 19	-0.11	-0.18	8.98	0	0	0
271	SLU 20	-0.12	-0.19	9.09	0	0	0
271	SLU 21	-0.11	-0.19	9.1	0	0	0
271	SLU 22	-0.12	-0.18	8.47	0	0	0
271	SLU 23	-0.11	-0.17	8.47	0	0	0
271	SLU 24	-0.12	-0.18	8.63	0	0	0
271	SLU 25	-0.12	-0.18	8.63	0	0	0
271	SLU 26	-0.12	-0.17	8.58	0	0	0
271	SLU 27	-0.12	-0.19	8.74	0	0	0
271	SLU 28	-0.12	-0.18	8.74	0	0	0
271	SLU 29	-0.12	-0.19	8.69	0	0	0
271	SLU 30	-0.12	-0.18	8.69	0	0	0
271	SLU 31	-0.12	-0.18	9.46	0	0	0
271	SLU 32	-0.13	-0.2	9.62	0	0	0
271	SLU 33	-0.13	-0.19	9.62	0	0	0
271	SLU 34	-0.12	-0.19	9.57	0	0	0
271	SLU 35	-0.13	-0.2	9.73	0	0	0
271	SLU 36	-0.13	-0.19	9.73	0	0	0
271	SLU 37	-0.13	-0.2	9.68	0	0	0
271	SLU 38	-0.13	-0.19	9.68	0	0	0
271	SLU 39	-0.13	-0.2	9.88	0	0	0
271	SLU 40	-0.13	-0.19	9.89	0	0	0
271	SLU 41	-0.13	-0.2	9.99	0	0	0
271	SLU 42	-0.13	-0.2	10	0	0	0
271	SLU 43	-0.13	-0.22	9.53	0	0	0
271	SLU 44	-0.13	-0.21	9.53	0	0	0
271	SLU 45	-0.13	-0.22	9.69	0	0	0
271	SLU 46	-0.13	-0.22	9.69	0	0	0
271	SLU 47	-0.13	-0.21	9.64	0	0	0
271	SLU 48	-0.13	-0.22	9.8	0	0	0
271	SLU 49	-0.13	-0.22	9.8	0	0	0
271	SLU 50	-0.13	-0.22	9.75	0	0	0
271	SLU 51	-0.13	-0.22	9.75	0	0	0
271	SLU 52	-0.13	-0.22	10.52	0	0	0
271	SLU 53	-0.14	-0.23	10.68	0	0	0
271	SLU 54	-0.14	-0.23	10.68	0	0	0
271	SLU 55	-0.14	-0.22	10.63	0	0	0
271	SLU 56	-0.14	-0.24	10.79	0	0	0
271	SLU 57	-0.14	-0.23	10.79	0	0	0
271	SLU 58	-0.14	-0.24	10.74	0	0	0
271	SLU 59	-0.14	-0.23	10.74	0	0	0
271	SLU 60	-0.14	-0.24	10.94	0	0	0
271	SLU 61	-0.14	-0.23	10.95	0	0	0
271	SLU 62	-0.14	-0.24	11.05	0	0	0
271	SLU 63	-0.14	-0.23	11.06	0	0	0
271	SLU 64	-0.14	-0.23	10.43	0	0	0
271	SLU 65	-0.14	-0.22	10.43	0	0	0
271	SLU 66	-0.14	-0.23	10.59	0	0	0
271	SLU 67	-0.14	-0.23	10.59	0	0	0
271	SLU 68	-0.14	-0.22	10.54	0	0	0
271	SLU 69	-0.14	-0.23	10.7	0	0	0
271	SLU 70	-0.14	-0.23	10.7	0	0	0
271	SLU 71	-0.14	-0.23	10.65	0	0	0
271	SLU 72	-0.14	-0.23	10.65	0	0	0
271	SLU 73	-0.15	-0.23	11.42	0	0	0
271	SLU 74	-0.15	-0.24	11.58	0	0	0
271	SLU 75	-0.15	-0.24	11.58	0	0	0
271	SLU 76	-0.15	-0.23	11.53	0	0	0
271	SLU 77	-0.15	-0.25	11.69	0	0	0
271	SLU 78	-0.15	-0.24	11.7	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	SLU 79	-0.15	-0.25	11.64	0	0	0
271	SLU 80	-0.15	-0.24	11.64	0	0	0
271	SLU 81	-0.15	-0.25	11.84	0	0	0
271	SLU 82	-0.15	-0.24	11.85	0	0	0
271	SLU 83	-0.15	-0.25	11.96	0	0	0
271	SLU 84	-0.15	-0.24	11.96	0	0	0
271	SLE RA 1	-0.11	-0.17	7.82	0	0	0
271	SLE RA 2	-0.1	-0.17	7.82	0	0	0
271	SLE RA 3	-0.11	-0.18	7.93	0	0	0
271	SLE RA 4	-0.11	-0.17	7.93	0	0	0
271	SLE RA 5	-0.11	-0.17	7.9	0	0	0
271	SLE RA 6	-0.11	-0.18	8.01	0	0	0
271	SLE RA 7	-0.11	-0.17	8.01	0	0	0
271	SLE RA 8	-0.11	-0.18	7.97	0	0	0
271	SLE RA 9	-0.11	-0.17	7.97	0	0	0
271	SLE RA 10	-0.11	-0.18	8.49	0	0	0
271	SLE RA 11	-0.11	-0.18	8.59	0	0	0
271	SLE RA 12	-0.11	-0.18	8.59	0	0	0
271	SLE RA 13	-0.11	-0.18	8.56	0	0	0
271	SLE RA 14	-0.11	-0.19	8.67	0	0	0
271	SLE RA 15	-0.11	-0.18	8.67	0	0	0
271	SLE RA 16	-0.11	-0.19	8.63	0	0	0
271	SLE RA 17	-0.11	-0.18	8.63	0	0	0
271	SLE RA 18	-0.11	-0.19	8.77	0	0	0
271	SLE RA 19	-0.11	-0.18	8.77	0	0	0
271	SLE RA 20	-0.11	-0.19	8.84	0	0	0
271	SLE RA 21	-0.11	-0.18	8.84	0	0	0
271	SLE FR 1	-0.11	-0.17	7.82	0	0	0
271	SLE FR 2	-0.11	-0.17	7.82	0	0	0
271	SLE FR 3	-0.11	-0.17	7.85	0	0	0
271	SLE FR 4	-0.11	-0.18	8.11	0	0	0
271	SLE FR 5	-0.11	-0.18	8.14	0	0	0
271	SLE FR 6	-0.11	-0.18	8.29	0	0	0
271	SLE QP 1	-0.11	-0.17	7.82	0	0	0
271	SLE QP 2	-0.11	-0.18	8.11	0	0	0
271	SLD 1	0.52	-0.15	8.69	0	0	0
271	SLD 2	0.6	-0.2	8.64	0	0	0
271	SLD 3	0.53	-0.34	8.52	0	0	0
271	SLD 4	0.61	-0.38	8.48	0	0	0
271	SLD 5	0.05	0.12	8.54	0	0	0
271	SLD 6	0.1	0.09	8.51	0	0	0
271	SLD 7	0.09	-0.5	7.98	0	0	0
271	SLD 8	0.14	-0.53	7.96	0	0	0
271	SLD 9	-0.36	0.18	8.25	0	0	0
271	SLD 10	-0.31	0.15	8.23	0	0	0
271	SLD 11	-0.31	-0.45	7.7	0	0	0
271	SLD 12	-0.26	-0.48	7.67	0	0	0
271	SLD 13	-0.82	0.03	7.73	0	0	0
271	SLD 14	-0.75	-0.02	7.69	0	0	0
271	SLD 15	-0.81	-0.16	7.57	0	0	0
271	SLD 16	-0.74	-0.2	7.53	0	0	0
271	SLV 1	1.36	-0.12	9.46	0	0	0
271	SLV 2	1.54	-0.23	9.36	0	0	0
271	SLV 3	1.39	-0.55	9.08	0	0	0
271	SLV 4	1.57	-0.65	8.98	0	0	0
271	SLV 5	0.26	0.5	9.1	0	0	0
271	SLV 6	0.37	0.44	9.04	0	0	0
271	SLV 7	0.36	-0.92	7.84	0	0	0
271	SLV 8	0.47	-0.98	7.78	0	0	0
271	SLV 9	-0.69	0.63	8.43	0	0	0
271	SLV 10	-0.57	0.56	8.37	0	0	0
271	SLV 11	-0.59	-0.79	7.18	0	0	0
271	SLV 12	-0.47	-0.86	7.11	0	0	0
271	SLV 13	-1.78	0.3	7.23	0	0	0
271	SLV 14	-1.61	0.19	7.13	0	0	0
271	SLV 15	-1.75	-0.13	6.85	0	0	0
271	SLV 16	-1.58	-0.23	6.76	0	0	0
272	SLU 1	-0.07	-0.03	5.68	0	0.854	0.0051
272	SLU 2	-0.07	-0.03	5.69	0	0.8554	0.0041
272	SLU 3	-0.07	-0.03	5.81	0	0.8726	0.005
272	SLU 4	-0.07	-0.03	5.81	0	0.8735	0.0043
272	SLU 5	-0.07	-0.03	5.78	0	0.8683	0.0042
272	SLU 6	-0.07	-0.03	5.89	0	0.8854	0.005
272	SLU 7	-0.07	-0.03	5.9	0	0.8863	0.0044
272	SLU 8	-0.07	-0.04	5.86	0	0.8797	0.0053
272	SLU 9	-0.07	-0.03	5.86	0	0.8806	0.0047
272	SLU 10	-0.07	-0.03	6.48	0	0.9727	0.004
272	SLU 11	-0.08	-0.03	6.59	0	0.9899	0.0049
272	SLU 12	-0.07	-0.03	6.6	0	0.9908	0.0042
272	SLU 13	-0.07	-0.03	6.56	0	0.9856	0.0041
272	SLU 14	-0.08	-0.03	6.68	0	1.0027	0.0049
272	SLU 15	-0.08	-0.03	6.68	0	1.0036	0.0043
272	SLU 16	-0.08	-0.03	6.64	0	0.997	0.0052
272	SLU 17	-0.07	-0.03	6.64	0	0.9979	0.0046
272	SLU 18	-0.08	-0.03	6.8	0	1.0216	0.005
272	SLU 19	-0.08	-0.03	6.81	0	1.0224	0.0044
272	SLU 20	-0.08	-0.03	6.89	0	1.0344	0.0051
272	SLU 21	-0.08	-0.03	6.89	0	1.0353	0.0044
272	SLU 22	-0.08	-0.03	6.35	0	0.9545	0.0044
272	SLU 23	-0.08	-0.02	6.36	0	0.956	0.0033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
272	SLU 24	-0.08	-0.03	6.48	0	0.9731	0.0042
272	SLU 25	-0.08	-0.02	6.48	0	0.974	0.0036
272	SLU 26	-0.08	-0.02	6.45	0	0.9688	0.0034
272	SLU 27	-0.08	-0.03	6.56	0	0.986	0.0043
272	SLU 28	-0.08	-0.02	6.57	0	0.9868	0.0037
272	SLU 29	-0.08	-0.03	6.53	0	0.9802	0.0045
272	SLU 30	-0.08	-0.03	6.53	0	0.9811	0.0039
272	SLU 31	-0.08	-0.02	7.14	0	1.0733	0.0032
272	SLU 32	-0.09	-0.03	7.26	0	1.0904	0.0041
272	SLU 33	-0.08	-0.02	7.26	0	1.0913	0.0035
272	SLU 34	-0.08	-0.02	7.23	0	1.0861	0.0033
272	SLU 35	-0.09	-0.03	7.34	0	1.1033	0.0042
272	SLU 36	-0.09	-0.02	7.35	0	1.1041	0.0036
272	SLU 37	-0.08	-0.03	7.31	0	1.0975	0.0044
272	SLU 38	-0.08	-0.03	7.31	0	1.0984	0.0038
272	SLU 39	-0.09	-0.03	7.47	0	1.1221	0.0042
272	SLU 40	-0.09	-0.02	7.48	0	1.123	0.0036
272	SLU 41	-0.09	-0.03	7.56	0	1.1349	0.0043
272	SLU 42	-0.09	-0.02	7.56	0	1.1358	0.0037
272	SLU 43	-0.08	-0.05	7.16	0	1.0757	0.0069
272	SLU 44	-0.08	-0.04	7.17	0	1.0772	0.0059
272	SLU 45	-0.09	-0.04	7.28	0	1.0943	0.0068
272	SLU 46	-0.09	-0.04	7.29	0	1.0952	0.0061
272	SLU 47	-0.08	-0.04	7.26	0	1.09	0.006
272	SLU 48	-0.09	-0.05	7.37	0	1.1072	0.0068
272	SLU 49	-0.09	-0.04	7.38	0	1.108	0.0062
272	SLU 50	-0.09	-0.05	7.33	0	1.1014	0.0071
272	SLU 51	-0.09	-0.04	7.34	0	1.1023	0.0065
272	SLU 52	-0.09	-0.04	7.95	0	1.1945	0.0058
272	SLU 53	-0.09	-0.04	8.07	0	1.2116	0.0067
272	SLU 54	-0.09	-0.04	8.07	0	1.2125	0.006
272	SLU 55	-0.09	-0.04	8.04	0	1.2073	0.0059
272	SLU 56	-0.09	-0.04	8.15	0	1.2245	0.0067
272	SLU 57	-0.09	-0.04	8.16	0	1.2253	0.0061
272	SLU 58	-0.09	-0.05	8.11	0	1.2187	0.007
272	SLU 59	-0.09	-0.04	8.12	0	1.2196	0.0064
272	SLU 60	-0.09	-0.05	8.28	0	1.2433	0.0068
272	SLU 61	-0.09	-0.04	8.28	0	1.2442	0.0062
272	SLU 62	-0.09	-0.05	8.36	0	1.2562	0.0069
272	SLU 63	-0.09	-0.04	8.37	0	1.257	0.0062
272	SLU 64	-0.09	-0.04	7.83	0	1.1762	0.0062
272	SLU 65	-0.09	-0.03	7.84	0	1.1777	0.0051
272	SLU 66	-0.1	-0.04	7.95	0	1.1948	0.006
272	SLU 67	-0.1	-0.04	7.96	0	1.1957	0.0054
272	SLU 68	-0.09	-0.03	7.93	0	1.1905	0.0052
272	SLU 69	-0.1	-0.04	8.04	0	1.2077	0.0061
272	SLU 70	-0.1	-0.04	8.05	0	1.2086	0.0055
272	SLU 71	-0.1	-0.04	8	0	1.2019	0.0063
272	SLU 72	-0.1	-0.04	8.01	0	1.2028	0.0057
272	SLU 73	-0.1	-0.03	8.62	0	1.295	0.005
272	SLU 74	-0.1	-0.04	8.73	0	1.3121	0.0059
272	SLU 75	-0.1	-0.04	8.74	0	1.313	0.0053
272	SLU 76	-0.1	-0.03	8.71	0	1.3079	0.0051
272	SLU 77	-0.1	-0.04	8.82	0	1.325	0.006
272	SLU 78	-0.1	-0.04	8.83	0	1.3259	0.0054
272	SLU 79	-0.1	-0.04	8.78	0	1.3193	0.0062
272	SLU 80	-0.1	-0.04	8.79	0	1.3201	0.0056
272	SLU 81	-0.1	-0.04	8.95	0	1.3438	0.006
272	SLU 82	-0.1	-0.04	8.95	0	1.3447	0.0054
272	SLU 83	-0.1	-0.04	9.03	0	1.3567	0.0061
272	SLU 84	-0.1	-0.04	9.04	0	1.3575	0.0055
272	SLE RA 1	-0.07	-0.03	5.88	0	0.8827	0.0049
272	SLE RA 2	-0.07	-0.03	5.88	0	0.8837	0.0042
272	SLE RA 3	-0.07	-0.03	5.96	0	0.8951	0.0048
272	SLE RA 4	-0.07	-0.03	5.96	0	0.8957	0.0044
272	SLE RA 5	-0.07	-0.03	5.94	0	0.8922	0.0043
272	SLE RA 6	-0.07	-0.03	6.02	0	0.9037	0.0049
272	SLE RA 7	-0.07	-0.03	6.02	0	0.9043	0.0044
272	SLE RA 8	-0.07	-0.03	5.99	0	0.8998	0.005
272	SLE RA 9	-0.07	-0.03	5.99	0	0.9004	0.0046
272	SLE RA 10	-0.07	-0.03	6.4	0	0.9619	0.0042
272	SLE RA 11	-0.08	-0.03	6.48	0	0.9733	0.0047
272	SLE RA 12	-0.08	-0.03	6.48	0	0.9739	0.0043
272	SLE RA 13	-0.07	-0.03	6.46	0	0.9704	0.0042
272	SLE RA 14	-0.08	-0.03	6.54	0	0.9819	0.0048
272	SLE RA 15	-0.08	-0.03	6.54	0	0.9825	0.0044
272	SLE RA 16	-0.08	-0.03	6.51	0	0.978	0.005
272	SLE RA 17	-0.08	-0.03	6.51	0	0.9786	0.0045
272	SLE RA 18	-0.08	-0.03	6.62	0	0.9944	0.0048
272	SLE RA 19	-0.08	-0.03	6.62	0	0.995	0.0044
272	SLE RA 20	-0.08	-0.03	6.68	0	1.003	0.0049
272	SLE RA 21	-0.08	-0.03	6.68	0	1.0036	0.0045
272	SLE FR 1	-0.07	-0.03	5.88	0	0.8827	0.0049
272	SLE FR 2	-0.07	-0.03	5.88	0	0.8829	0.0048
272	SLE FR 3	-0.07	-0.03	5.9	0	0.8861	0.0049
272	SLE FR 4	-0.07	-0.03	6.1	0	0.9164	0.0047
272	SLE FR 5	-0.07	-0.03	6.12	0	0.9197	0.0049
272	SLE FR 6	-0.07	-0.03	6.25	0	0.9386	0.0049
272	SLE QP 1	-0.07	-0.03	5.88	0	0.8827	0.0049
272	SLE QP 2	-0.07	-0.03	6.1	0	0.9162	0.0049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
272	SLD 1	0.4	0.06	6.1	0	0.9171	-0.0092
272	SLD 2	0.45	0.05	6.09	0	0.9144	-0.0078
272	SLD 3	0.41	-0.09	5.97	0	0.897	0.0136
272	SLD 4	0.46	-0.1	5.95	0	0.8943	0.0149
272	SLD 5	0.04	0.23	6.31	0	0.9474	-0.0341
272	SLD 6	0.08	0.22	6.3	0	0.9456	-0.0332
272	SLD 7	0.08	-0.28	5.86	0	0.8805	0.0418
272	SLD 8	0.11	-0.28	5.85	0	0.8787	0.0426
272	SLD 9	-0.26	0.22	6.35	0	0.9537	-0.0329
272	SLD 10	-0.22	0.21	6.34	0	0.952	-0.032
272	SLD 11	-0.23	-0.29	5.9	0	0.8868	0.043
272	SLD 12	-0.19	-0.29	5.89	0	0.8851	0.0438
272	SLD 13	-0.61	0.03	6.25	0	0.9381	-0.0052
272	SLD 14	-0.55	0.03	6.23	0	0.9355	-0.0038
272	SLD 15	-0.6	-0.12	6.11	0	0.9181	0.0176
272	SLD 16	-0.54	-0.13	6.09	0	0.9154	0.0189
272	SLV 1	1.03	0.18	6.11	0	0.9174	-0.0273
272	SLV 2	1.16	0.16	6.07	0	0.9112	-0.0241
272	SLV 3	1.05	-0.16	5.8	0	0.8719	0.0246
272	SLV 4	1.18	-0.18	5.76	0	0.8657	0.0277
272	SLV 5	0.2	0.56	6.57	0	0.9867	-0.0839
272	SLV 6	0.29	0.54	6.54	0	0.9827	-0.0819
272	SLV 7	0.27	-0.59	5.56	0	0.835	0.0888
272	SLV 8	0.36	-0.6	5.53	0	0.831	0.0908
272	SLV 9	-0.5	0.54	6.67	0	1.0015	-0.0811
272	SLV 10	-0.42	0.53	6.64	0	0.9975	-0.0791
272	SLV 11	-0.43	-0.61	5.66	0	0.8498	0.0916
272	SLV 12	-0.35	-0.62	5.63	0	0.8458	0.0936
272	SLV 13	-1.33	0.12	6.44	0	0.9668	-0.0179
272	SLV 14	-1.19	0.1	6.39	0	0.9606	-0.0148
272	SLV 15	-1.3	-0.23	6.13	0	0.9213	0.0339
272	SLV 16	-1.17	-0.25	6.09	0	0.915	0.037
272	CRTFP Uy+	0	0	0	0	0	0
272	CRTFP Uy-	0	0	0	0	0	0
274	SLU 1	0	-0.18	30.05	-0.7374	8.5478	0.0457
274	SLU 2	-0.01	-0.14	30.11	-0.7388	8.564	0.0341
274	SLU 3	0	-0.17	30.71	-0.7535	8.7344	0.044
274	SLU 4	0	-0.15	30.74	-0.7543	8.7442	0.037
274	SLU 5	-0.01	-0.14	30.55	-0.7496	8.6899	0.0346
274	SLU 6	0	-0.17	31.15	-0.7643	8.8603	0.0446
274	SLU 7	0	-0.15	31.18	-0.7652	8.87	0.0376
274	SLU 8	0	-0.18	30.93	-0.7591	8.7996	0.0469
274	SLU 9	-0.01	-0.16	30.97	-0.7599	8.8093	0.0399
274	SLU 10	-0.02	-0.12	34.18	-0.8387	9.7318	0.0288
274	SLU 11	-0.01	-0.16	34.79	-0.8534	9.9022	0.0388
274	SLU 12	-0.02	-0.13	34.82	-0.8542	9.9119	0.0318
274	SLU 13	-0.02	-0.12	34.62	-0.8495	9.8576	0.0294
274	SLU 14	-0.01	-0.16	35.23	-0.8643	10.0281	0.0393
274	SLU 15	-0.02	-0.13	35.26	-0.8651	10.0378	0.0324
274	SLU 16	-0.02	-0.17	35.01	-0.8591	9.9673	0.0416
274	SLU 17	-0.02	-0.14	35.04	-0.8599	9.977	0.0346
274	SLU 18	-0.02	-0.15	35.88	-0.8801	10.2161	0.0382
274	SLU 19	-0.02	-0.13	35.91	-0.881	10.2258	0.0312
274	SLU 20	-0.02	-0.16	36.32	-0.891	10.3419	0.0388
274	SLU 21	-0.02	-0.13	36.35	-0.8918	10.3516	0.0318
274	SLU 22	0	-0.15	33.58	-0.8239	9.5525	0.0378
274	SLU 23	0	-0.11	33.63	-0.8253	9.5687	0.0261
274	SLU 24	0	-0.15	34.24	-0.84	9.7391	0.0361
274	SLU 25	0	-0.12	34.27	-0.8408	9.7488	0.0291
274	SLU 26	0	-0.11	34.07	-0.8362	9.6945	0.0267
274	SLU 27	0	-0.15	34.68	-0.8509	9.865	0.0367
274	SLU 28	0	-0.12	34.71	-0.8517	9.8747	0.0297
274	SLU 29	0	-0.16	34.46	-0.8457	9.8042	0.0389
274	SLU 30	0	-0.13	34.49	-0.8465	9.8139	0.0319
274	SLU 31	-0.01	-0.09	37.71	-0.9252	10.7364	0.0209
274	SLU 32	-0.01	-0.13	38.32	-0.94	10.9069	0.0308
274	SLU 33	-0.01	-0.1	38.35	-0.9408	10.9166	0.0239
274	SLU 34	-0.01	-0.1	38.15	-0.9361	10.8623	0.0215
274	SLU 35	-0.01	-0.13	38.76	-0.9508	11.0327	0.0314
274	SLU 36	-0.01	-0.11	38.79	-0.9516	11.0424	0.0244
274	SLU 37	-0.01	-0.14	38.54	-0.9456	10.972	0.0337
274	SLU 38	-0.01	-0.11	38.57	-0.9464	10.9817	0.0267
274	SLU 39	-0.02	-0.13	39.41	-0.9667	11.2207	0.0303
274	SLU 40	-0.02	-0.1	39.44	-0.9675	11.2304	0.0233
274	SLU 41	-0.02	-0.13	39.85	-0.9776	11.3466	0.0309
274	SLU 42	-0.02	-0.11	39.88	-0.9784	11.3563	0.0239
274	SLU 43	-0.01	-0.24	37.86	-0.929	10.7677	0.0621
274	SLU 44	-0.01	-0.2	37.91	-0.9303	10.7839	0.0505
274	SLU 45	0	-0.23	38.51	-0.945	10.9543	0.0604
274	SLU 46	-0.01	-0.21	38.54	-0.9458	10.9641	0.0535
274	SLU 47	-0.01	-0.2	38.35	-0.9412	10.9098	0.0511
274	SLU 48	0	-0.24	38.95	-0.9559	11.0802	0.061
274	SLU 49	-0.01	-0.21	38.99	-0.9567	11.0899	0.054
274	SLU 50	-0.01	-0.24	38.74	-0.9507	11.0194	0.0633
274	SLU 51	-0.01	-0.22	38.77	-0.9515	11.0292	0.0563
274	SLU 52	-0.02	-0.18	41.99	-1.0302	11.9517	0.0452
274	SLU 53	-0.02	-0.22	42.59	-1.045	12.1221	0.0552
274	SLU 54	-0.02	-0.19	42.62	-1.0458	12.1318	0.0482
274	SLU 55	-0.02	-0.18	42.43	-1.0411	12.0775	0.0458
274	SLU 56	-0.02	-0.22	43.03	-1.0558	12.248	0.0558

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
274	SLU 57	-0.02	-0.2	43.06	-1.0566	12.2577	0.0488
274	SLU 58	-0.02	-0.23	42.82	-1.0506	12.1872	0.058
274	SLU 59	-0.02	-0.2	42.85	-1.0514	12.1969	0.0511
274	SLU 60	-0.02	-0.22	43.69	-1.0717	12.436	0.0546
274	SLU 61	-0.02	-0.19	43.72	-1.0725	12.4457	0.0477
274	SLU 62	-0.02	-0.22	44.13	-1.0826	12.5618	0.0552
274	SLU 63	-0.02	-0.19	44.16	-1.0834	12.5715	0.0482
274	SLU 64	0	-0.21	41.39	-1.0155	11.7724	0.0542
274	SLU 65	0	-0.17	41.44	-1.0169	11.7886	0.0426
274	SLU 66	0	-0.21	42.04	-1.0316	11.959	0.0525
274	SLU 67	0	-0.18	42.07	-1.0324	11.9687	0.0455
274	SLU 68	0	-0.17	41.88	-1.0277	11.9144	0.0431
274	SLU 69	0	-0.21	42.48	-1.0424	12.0849	0.0531
274	SLU 70	0	-0.18	42.51	-1.0433	12.0946	0.0461
274	SLU 71	0	-0.22	42.27	-1.0372	12.0241	0.0554
274	SLU 72	0	-0.19	42.3	-1.038	12.0338	0.0484
274	SLU 73	-0.02	-0.16	45.52	-1.1168	12.9563	0.0373
274	SLU 74	-0.01	-0.19	46.12	-1.1315	13.1268	0.0473
274	SLU 75	-0.01	-0.17	46.15	-1.1323	13.1365	0.0403
274	SLU 76	-0.02	-0.16	45.96	-1.1276	13.0822	0.0379
274	SLU 77	-0.01	-0.19	46.56	-1.1424	13.2526	0.0478
274	SLU 78	-0.01	-0.17	46.59	-1.1432	13.2623	0.0409
274	SLU 79	-0.01	-0.2	46.35	-1.1371	13.1919	0.0501
274	SLU 80	-0.02	-0.18	46.38	-1.138	13.2016	0.0431
274	SLU 81	-0.02	-0.19	47.21	-1.1582	13.4406	0.0467
274	SLU 82	-0.02	-0.17	47.25	-1.1591	13.4503	0.0397
274	SLU 83	-0.02	-0.19	47.66	-1.1691	13.5665	0.0473
274	SLU 84	-0.02	-0.17	47.69	-1.1699	13.5762	0.0403
274	SLE RA 1	0	-0.17	31.06	-0.7621	8.8349	0.0434
274	SLE RA 2	0	-0.14	31.1	-0.763	8.8457	0.0357
274	SLE RA 3	0	-0.17	31.5	-0.7729	8.9593	0.0423
274	SLE RA 4	0	-0.15	31.52	-0.7734	8.9658	0.0377
274	SLE RA 5	0	-0.14	31.39	-0.7703	8.9296	0.0361
274	SLE RA 6	0	-0.17	31.79	-0.7801	9.0432	0.0427
274	SLE RA 7	0	-0.15	31.81	-0.7806	9.0497	0.038
274	SLE RA 8	0	-0.17	31.65	-0.7766	9.0027	0.0442
274	SLE RA 9	0	-0.16	31.67	-0.7772	9.0092	0.0395
274	SLE RA 10	-0.01	-0.13	33.82	-0.8297	9.6242	0.0322
274	SLE RA 11	-0.01	-0.16	34.22	-0.8395	9.7378	0.0388
274	SLE RA 12	-0.01	-0.14	34.24	-0.84	9.7443	0.0342
274	SLE RA 13	-0.01	-0.13	34.11	-0.8369	9.7081	0.0326
274	SLE RA 14	-0.01	-0.16	34.51	-0.8467	9.8217	0.0392
274	SLE RA 15	-0.01	-0.14	34.53	-0.8473	9.8282	0.0345
274	SLE RA 16	-0.01	-0.16	34.37	-0.8432	9.7812	0.0407
274	SLE RA 17	-0.01	-0.15	34.39	-0.8438	9.7877	0.0361
274	SLE RA 18	-0.01	-0.15	34.95	-0.8573	9.947	0.0384
274	SLE RA 19	-0.01	-0.14	34.97	-0.8578	9.9535	0.0338
274	SLE RA 20	-0.01	-0.16	35.24	-0.8645	10.0309	0.0388
274	SLE RA 21	-0.01	-0.14	35.26	-0.8651	10.0374	0.0342
274	SLE FR 1	0	-0.17	31.06	-0.7621	8.8349	0.0434
274	SLE FR 2	0	-0.16	31.07	-0.7623	8.837	0.0419
274	SLE FR 3	0	-0.17	31.18	-0.765	8.8684	0.0436
274	SLE FR 4	-0.01	-0.16	32.23	-0.7909	9.1707	0.0404
274	SLE FR 5	-0.01	-0.17	32.34	-0.7936	9.2021	0.0421
274	SLE FR 6	-0.01	-0.16	33	-0.8097	9.391	0.0409
274	SLE QP 1	0	-0.17	31.06	-0.7621	8.8349	0.0434
274	SLE QP 2	-0.01	-0.17	32.23	-0.7907	9.1685	0.0419
274	SLD 1	2.8	0.17	32.35	-0.7939	9.2423	0.017
274	SLD 2	3.12	0.19	32.42	-0.7954	9.254	0.0196
274	SLD 3	2.75	-0.67	31.63	-0.7749	9.0337	0.2525
274	SLD 4	3.07	-0.65	31.7	-0.7764	9.0455	0.2552
274	SLD 5	0.86	1.2	33.34	-0.8202	9.5049	-0.3234
274	SLD 6	1.07	1.21	33.38	-0.8212	9.5126	-0.3216
274	SLD 7	0.69	-1.59	30.95	-0.7569	8.8097	0.462
274	SLD 8	0.9	-1.57	30.99	-0.7579	8.8174	0.4637
274	SLD 9	-0.91	1.24	33.46	-0.8235	9.5197	-0.3799
274	SLD 10	-0.7	1.26	33.5	-0.8245	9.5274	-0.3781
274	SLD 11	-1.08	-1.54	31.07	-0.7602	8.8245	0.4055
274	SLD 12	-0.87	-1.53	31.11	-0.7612	8.8322	0.4072
274	SLD 13	-3.08	0.32	32.76	-0.8049	9.2916	-0.1714
274	SLD 14	-2.76	0.34	32.82	-0.8065	9.3033	-0.1687
274	SLD 15	-3.13	-0.52	32.04	-0.7859	9.083	0.0642
274	SLD 16	-2.81	-0.5	32.1	-0.7875	9.0948	0.0669
274	SLV 1	6.56	0.58	32.5	-0.7975	9.3338	-0.0092
274	SLV 2	7.31	0.64	32.64	-0.8011	9.3613	-0.003
274	SLV 3	6.45	-1.32	30.87	-0.7544	8.8606	0.5272
274	SLV 4	7.2	-1.26	31.01	-0.758	8.888	0.5335
274	SLV 5	2.01	2.94	34.75	-0.8575	9.9312	-0.7881
274	SLV 6	2.49	2.97	34.85	-0.8598	9.9489	-0.7841
274	SLV 7	1.63	-3.41	29.32	-0.7138	8.3536	1
274	SLV 8	2.11	-3.37	29.42	-0.7161	8.3713	1.0041
274	SLV 9	-2.12	3.04	35.04	-0.8652	9.9658	-0.9202
274	SLV 10	-1.64	3.08	35.13	-0.8675	9.9834	-0.9162
274	SLV 11	-2.5	-3.3	29.61	-0.7216	8.3882	0.8679
274	SLV 12	-2.02	-3.27	29.7	-0.7239	8.4059	0.872
274	SLV 13	-7.21	0.93	33.44	-0.8233	9.4491	-0.4496
274	SLV 14	-6.46	0.99	33.59	-0.8269	9.4765	-0.4433
274	SLV 15	-7.32	-0.97	31.81	-0.7802	8.9758	0.0868
274	SLV 16	-6.57	-0.91	31.96	-0.7838	9.0032	0.0931
274	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
274	CRTFP Ux-	0	0	0	0	0	0
274	CRTFP Uy+	0	0	0	0	0	0
274	CRTFP Uy-	0	0	0	0	0	0
276	SLU 1	0	-0.08	8.51	0	0	0
276	SLU 2	0	-0.07	8.52	0	0	0
276	SLU 3	0	-0.08	8.69	0	0	0
276	SLU 4	0	-0.07	8.7	0	0	0
276	SLU 5	0	-0.07	8.65	0	0	0
276	SLU 6	0	-0.08	8.82	0	0	0
276	SLU 7	0	-0.07	8.83	0	0	0
276	SLU 8	0	-0.08	8.76	0	0	0
276	SLU 9	0	-0.07	8.77	0	0	0
276	SLU 10	0	-0.06	9.67	0	0	0
276	SLU 11	0	-0.07	9.84	0	0	0
276	SLU 12	0	-0.07	9.85	0	0	0
276	SLU 13	0	-0.06	9.79	0	0	0
276	SLU 14	0	-0.08	9.96	0	0	0
276	SLU 15	0	-0.07	9.97	0	0	0
276	SLU 16	0	-0.08	9.9	0	0	0
276	SLU 17	0	-0.07	9.91	0	0	0
276	SLU 18	0	-0.07	10.14	0	0	0
276	SLU 19	-0.01	-0.07	10.15	0	0	0
276	SLU 20	0	-0.08	10.27	0	0	0
276	SLU 21	-0.01	-0.07	10.27	0	0	0
276	SLU 22	0	-0.07	9.51	0	0	0
276	SLU 23	0	-0.06	9.52	0	0	0
276	SLU 24	0	-0.07	9.69	0	0	0
276	SLU 25	0	-0.07	9.7	0	0	0
276	SLU 26	0	-0.06	9.64	0	0	0
276	SLU 27	0	-0.07	9.82	0	0	0
276	SLU 28	0	-0.07	9.82	0	0	0
276	SLU 29	0	-0.08	9.76	0	0	0
276	SLU 30	0	-0.07	9.76	0	0	0
276	SLU 31	0	-0.06	10.66	0	0	0
276	SLU 32	0	-0.07	10.84	0	0	0
276	SLU 33	0	-0.06	10.84	0	0	0
276	SLU 34	0	-0.06	10.79	0	0	0
276	SLU 35	0	-0.07	10.96	0	0	0
276	SLU 36	0	-0.06	10.97	0	0	0
276	SLU 37	0	-0.07	10.9	0	0	0
276	SLU 38	0	-0.07	10.91	0	0	0
276	SLU 39	0	-0.07	11.14	0	0	0
276	SLU 40	0	-0.06	11.15	0	0	0
276	SLU 41	0	-0.07	11.27	0	0	0
276	SLU 42	0	-0.06	11.27	0	0	0
276	SLU 43	0	-0.1	10.72	0	0	0
276	SLU 44	0	-0.09	10.73	0	0	0
276	SLU 45	0	-0.1	10.91	0	0	0
276	SLU 46	0	-0.09	10.91	0	0	0
276	SLU 47	0	-0.09	10.86	0	0	0
276	SLU 48	0	-0.1	11.03	0	0	0
276	SLU 49	0	-0.1	11.04	0	0	0
276	SLU 50	0	-0.1	10.97	0	0	0
276	SLU 51	0	-0.1	10.98	0	0	0
276	SLU 52	0	-0.09	11.88	0	0	0
276	SLU 53	0	-0.1	12.05	0	0	0
276	SLU 54	0	-0.09	12.06	0	0	0
276	SLU 55	0	-0.09	12	0	0	0
276	SLU 56	0	-0.1	12.17	0	0	0
276	SLU 57	0	-0.09	12.18	0	0	0
276	SLU 58	0	-0.1	12.11	0	0	0
276	SLU 59	0	-0.1	12.12	0	0	0
276	SLU 60	0	-0.1	12.35	0	0	0
276	SLU 61	-0.01	-0.09	12.36	0	0	0
276	SLU 62	-0.01	-0.1	12.48	0	0	0
276	SLU 63	-0.01	-0.09	12.49	0	0	0
276	SLU 64	0	-0.1	11.72	0	0	0
276	SLU 65	0	-0.09	11.73	0	0	0
276	SLU 66	0	-0.1	11.9	0	0	0
276	SLU 67	0	-0.09	11.91	0	0	0
276	SLU 68	0	-0.09	11.86	0	0	0
276	SLU 69	0	-0.1	12.03	0	0	0
276	SLU 70	0	-0.09	12.04	0	0	0
276	SLU 71	0	-0.1	11.97	0	0	0
276	SLU 72	0	-0.09	11.97	0	0	0
276	SLU 73	0	-0.08	12.87	0	0	0
276	SLU 74	0	-0.1	13.05	0	0	0
276	SLU 75	0	-0.09	13.05	0	0	0
276	SLU 76	0	-0.09	13	0	0	0
276	SLU 77	0	-0.1	13.17	0	0	0
276	SLU 78	0	-0.09	13.18	0	0	0
276	SLU 79	0	-0.1	13.11	0	0	0
276	SLU 80	0	-0.09	13.12	0	0	0
276	SLU 81	0	-0.1	13.35	0	0	0
276	SLU 82	0	-0.09	13.36	0	0	0
276	SLU 83	0	-0.1	13.48	0	0	0
276	SLU 84	0	-0.09	13.48	0	0	0
276	SLE RA 1	0	-0.08	8.8	0	0	0
276	SLE RA 2	0	-0.07	8.8	0	0	0
276	SLE RA 3	0	-0.08	8.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
276	SLE RA 4	0	-0.07	8.92	0	0	0
276	SLE RA 5	0	-0.07	8.89	0	0	0
276	SLE RA 6	0	-0.08	9	0	0	0
276	SLE RA 7	0	-0.07	9.01	0	0	0
276	SLE RA 8	0	-0.08	8.96	0	0	0
276	SLE RA 9	0	-0.07	8.97	0	0	0
276	SLE RA 10	0	-0.07	9.57	0	0	0
276	SLE RA 11	0	-0.07	9.68	0	0	0
276	SLE RA 12	0	-0.07	9.69	0	0	0
276	SLE RA 13	0	-0.07	9.65	0	0	0
276	SLE RA 14	0	-0.08	9.76	0	0	0
276	SLE RA 15	0	-0.07	9.77	0	0	0
276	SLE RA 16	0	-0.08	9.72	0	0	0
276	SLE RA 17	0	-0.07	9.73	0	0	0
276	SLE RA 18	0	-0.07	9.88	0	0	0
276	SLE RA 19	0	-0.07	9.89	0	0	0
276	SLE RA 20	0	-0.08	9.97	0	0	0
276	SLE RA 21	0	-0.07	9.97	0	0	0
276	SLE FR 1	0	-0.08	8.8	0	0	0
276	SLE FR 2	0	-0.07	8.8	0	0	0
276	SLE FR 3	0	-0.08	8.83	0	0	0
276	SLE FR 4	0	-0.07	9.12	0	0	0
276	SLE FR 5	0	-0.08	9.16	0	0	0
276	SLE FR 6	0	-0.08	9.34	0	0	0
276	SLE QP 1	0	-0.08	8.8	0	0	0
276	SLE QP 2	0	-0.08	9.12	0	0	0
276	SLD 1	0.81	0.06	9.08	0	0	0
276	SLD 2	0.9	0.08	9.1	0	0	0
276	SLD 3	0.79	-0.18	8.88	0	0	0
276	SLD 4	0.88	-0.16	8.91	0	0	0
276	SLD 5	0.25	0.32	9.4	0	0	0
276	SLD 6	0.31	0.33	9.42	0	0	0
276	SLD 7	0.2	-0.47	8.75	0	0	0
276	SLD 8	0.26	-0.46	8.77	0	0	0
276	SLD 9	-0.26	0.3	9.48	0	0	0
276	SLD 10	-0.2	0.32	9.49	0	0	0
276	SLD 11	-0.31	-0.48	8.83	0	0	0
276	SLD 12	-0.25	-0.47	8.84	0	0	0
276	SLD 13	-0.89	0.01	9.33	0	0	0
276	SLD 14	-0.79	0.02	9.36	0	0	0
276	SLD 15	-0.9	-0.23	9.14	0	0	0
276	SLD 16	-0.81	-0.21	9.17	0	0	0
276	SLV 1	1.89	0.24	9.01	0	0	0
276	SLV 2	2.1	0.28	9.07	0	0	0
276	SLV 3	1.85	-0.3	8.57	0	0	0
276	SLV 4	2.07	-0.26	8.63	0	0	0
276	SLV 5	0.58	0.83	9.75	0	0	0
276	SLV 6	0.72	0.85	9.79	0	0	0
276	SLV 7	0.47	-0.97	8.27	0	0	0
276	SLV 8	0.61	-0.94	8.31	0	0	0
276	SLV 9	-0.61	0.79	9.93	0	0	0
276	SLV 10	-0.47	0.81	9.97	0	0	0
276	SLV 11	-0.72	-1	8.45	0	0	0
276	SLV 12	-0.58	-0.98	8.49	0	0	0
276	SLV 13	-2.07	0.11	9.61	0	0	0
276	SLV 14	-1.86	0.15	9.67	0	0	0
276	SLV 15	-2.1	-0.43	9.17	0	0	0
276	SLV 16	-1.89	-0.39	9.23	0	0	0
277	SLU 1	0	-0.09	8.79	0	0	0
277	SLU 2	0	-0.08	8.8	0	0	0
277	SLU 3	0	-0.09	8.98	0	0	0
277	SLU 4	0	-0.09	8.98	0	0	0
277	SLU 5	0	-0.08	8.93	0	0	0
277	SLU 6	0	-0.09	9.1	0	0	0
277	SLU 7	0	-0.09	9.11	0	0	0
277	SLU 8	0	-0.1	9.04	0	0	0
277	SLU 9	0	-0.09	9.05	0	0	0
277	SLU 10	0	-0.08	9.97	0	0	0
277	SLU 11	0	-0.09	10.15	0	0	0
277	SLU 12	0	-0.09	10.16	0	0	0
277	SLU 13	0	-0.08	10.1	0	0	0
277	SLU 14	0	-0.09	10.28	0	0	0
277	SLU 15	0	-0.09	10.28	0	0	0
277	SLU 16	0	-0.1	10.21	0	0	0
277	SLU 17	0	-0.09	10.22	0	0	0
277	SLU 18	0	-0.09	10.46	0	0	0
277	SLU 19	0	-0.09	10.47	0	0	0
277	SLU 20	0	-0.09	10.59	0	0	0
277	SLU 21	0	-0.09	10.6	0	0	0
277	SLU 22	0	-0.09	9.82	0	0	0
277	SLU 23	0	-0.08	9.83	0	0	0
277	SLU 24	0	-0.09	10.01	0	0	0
277	SLU 25	0	-0.08	10.01	0	0	0
277	SLU 26	0	-0.08	9.96	0	0	0
277	SLU 27	0	-0.09	10.13	0	0	0
277	SLU 28	0	-0.08	10.14	0	0	0
277	SLU 29	0	-0.09	10.07	0	0	0
277	SLU 30	0	-0.09	10.08	0	0	0
277	SLU 31	0	-0.08	11	0	0	0
277	SLU 32	0	-0.09	11.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLU 33	0	-0.08	11.19	0	0	0
277	SLU 34	0	-0.08	11.13	0	0	0
277	SLU 35	0	-0.09	11.31	0	0	0
277	SLU 36	0	-0.08	11.31	0	0	0
277	SLU 37	0	-0.09	11.24	0	0	0
277	SLU 38	0	-0.09	11.25	0	0	0
277	SLU 39	0	-0.09	11.49	0	0	0
277	SLU 40	0	-0.08	11.5	0	0	0
277	SLU 41	0	-0.09	11.62	0	0	0
277	SLU 42	0	-0.08	11.63	0	0	0
277	SLU 43	0	-0.12	11.07	0	0	0
277	SLU 44	0	-0.11	11.08	0	0	0
277	SLU 45	0	-0.12	11.26	0	0	0
277	SLU 46	0	-0.11	11.27	0	0	0
277	SLU 47	0	-0.11	11.21	0	0	0
277	SLU 48	0	-0.12	11.39	0	0	0
277	SLU 49	0	-0.12	11.4	0	0	0
277	SLU 50	0	-0.13	11.33	0	0	0
277	SLU 51	0	-0.12	11.33	0	0	0
277	SLU 52	0	-0.11	12.25	0	0	0
277	SLU 53	0	-0.12	12.43	0	0	0
277	SLU 54	0	-0.11	12.44	0	0	0
277	SLU 55	0	-0.11	12.38	0	0	0
277	SLU 56	0	-0.12	12.56	0	0	0
277	SLU 57	0	-0.12	12.57	0	0	0
277	SLU 58	0	-0.13	12.5	0	0	0
277	SLU 59	0	-0.12	12.51	0	0	0
277	SLU 60	0	-0.12	12.75	0	0	0
277	SLU 61	0	-0.11	12.75	0	0	0
277	SLU 62	0	-0.12	12.87	0	0	0
277	SLU 63	0	-0.12	12.88	0	0	0
277	SLU 64	0	-0.12	12.1	0	0	0
277	SLU 65	0	-0.11	12.11	0	0	0
277	SLU 66	0	-0.12	12.29	0	0	0
277	SLU 67	0	-0.11	12.3	0	0	0
277	SLU 68	0	-0.11	12.24	0	0	0
277	SLU 69	0	-0.12	12.42	0	0	0
277	SLU 70	0	-0.11	12.42	0	0	0
277	SLU 71	0	-0.12	12.35	0	0	0
277	SLU 72	0	-0.12	12.36	0	0	0
277	SLU 73	0	-0.11	13.28	0	0	0
277	SLU 74	0	-0.12	13.46	0	0	0
277	SLU 75	0	-0.11	13.47	0	0	0
277	SLU 76	0	-0.11	13.41	0	0	0
277	SLU 77	0	-0.12	13.59	0	0	0
277	SLU 78	0	-0.11	13.6	0	0	0
277	SLU 79	0	-0.12	13.53	0	0	0
277	SLU 80	0	-0.12	13.53	0	0	0
277	SLU 81	0	-0.12	13.77	0	0	0
277	SLU 82	0	-0.11	13.78	0	0	0
277	SLU 83	0	-0.12	13.9	0	0	0
277	SLU 84	0	-0.11	13.91	0	0	0
277	SLE RA 1	0	-0.09	9.08	0	0	0
277	SLE RA 2	0	-0.08	9.09	0	0	0
277	SLE RA 3	0	-0.09	9.21	0	0	0
277	SLE RA 4	0	-0.09	9.21	0	0	0
277	SLE RA 5	0	-0.09	9.17	0	0	0
277	SLE RA 6	0	-0.09	9.29	0	0	0
277	SLE RA 7	0	-0.09	9.3	0	0	0
277	SLE RA 8	0	-0.09	9.25	0	0	0
277	SLE RA 9	0	-0.09	9.26	0	0	0
277	SLE RA 10	0	-0.08	9.87	0	0	0
277	SLE RA 11	0	-0.09	9.99	0	0	0
277	SLE RA 12	0	-0.09	9.99	0	0	0
277	SLE RA 13	0	-0.09	9.96	0	0	0
277	SLE RA 14	0	-0.09	10.07	0	0	0
277	SLE RA 15	0	-0.09	10.08	0	0	0
277	SLE RA 16	0	-0.09	10.03	0	0	0
277	SLE RA 17	0	-0.09	10.04	0	0	0
277	SLE RA 18	0	-0.09	10.2	0	0	0
277	SLE RA 19	0	-0.09	10.2	0	0	0
277	SLE RA 20	0	-0.09	10.28	0	0	0
277	SLE RA 21	0	-0.09	10.29	0	0	0
277	SLE FR 1	0	-0.09	9.08	0	0	0
277	SLE FR 2	0	-0.09	9.08	0	0	0
277	SLE FR 3	0	-0.09	9.12	0	0	0
277	SLE FR 4	0	-0.09	9.42	0	0	0
277	SLE FR 5	0	-0.09	9.45	0	0	0
277	SLE FR 6	0	-0.09	9.64	0	0	0
277	SLE QP 1	0	-0.09	9.08	0	0	0
277	SLE QP 2	0	-0.09	9.42	0	0	0
277	SLD 1	0.84	0.06	9.32	0	0	0
277	SLD 2	0.94	0.08	9.35	0	0	0
277	SLD 3	0.83	-0.18	9.12	0	0	0
277	SLD 4	0.93	-0.16	9.16	0	0	0
277	SLD 5	0.26	0.32	9.68	0	0	0
277	SLD 6	0.32	0.34	9.7	0	0	0
277	SLD 7	0.21	-0.49	9.02	0	0	0
277	SLD 8	0.27	-0.48	9.04	0	0	0
277	SLD 9	-0.27	0.29	9.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLD 10	-0.21	0.31	9.81	0	0	0
277	SLD 11	-0.32	-0.52	9.13	0	0	0
277	SLD 12	-0.26	-0.51	9.15	0	0	0
277	SLD 13	-0.92	-0.02	9.68	0	0	0
277	SLD 14	-0.83	0	9.71	0	0	0
277	SLD 15	-0.94	-0.27	9.48	0	0	0
277	SLD 16	-0.84	-0.25	9.51	0	0	0
277	SLV 1	1.97	0.26	9.19	0	0	0
277	SLV 2	2.2	0.31	9.26	0	0	0
277	SLV 3	1.94	-0.3	8.74	0	0	0
277	SLV 4	2.16	-0.24	8.81	0	0	0
277	SLV 5	0.61	0.85	10.02	0	0	0
277	SLV 6	0.75	0.88	10.07	0	0	0
277	SLV 7	0.49	-1.01	8.52	0	0	0
277	SLV 8	0.64	-0.97	8.56	0	0	0
277	SLV 9	-0.63	0.79	10.27	0	0	0
277	SLV 10	-0.49	0.82	10.31	0	0	0
277	SLV 11	-0.75	-1.07	8.77	0	0	0
277	SLV 12	-0.6	-1.03	8.81	0	0	0
277	SLV 13	-2.16	0.06	10.02	0	0	0
277	SLV 14	-1.94	0.11	10.09	0	0	0
277	SLV 15	-2.2	-0.5	9.57	0	0	0
277	SLV 16	-1.97	-0.44	9.64	0	0	0
278	SLU 1	0	-0.11	8.81	0	0	0
278	SLU 2	0	-0.1	8.82	0	0	0
278	SLU 3	0	-0.11	9	0	0	0
278	SLU 4	0	-0.1	9	0	0	0
278	SLU 5	0	-0.1	8.95	0	0	0
278	SLU 6	0	-0.11	9.13	0	0	0
278	SLU 7	0	-0.1	9.13	0	0	0
278	SLU 8	0	-0.11	9.06	0	0	0
278	SLU 9	0	-0.1	9.07	0	0	0
278	SLU 10	0	-0.1	9.99	0	0	0
278	SLU 11	0	-0.11	10.17	0	0	0
278	SLU 12	0	-0.1	10.17	0	0	0
278	SLU 13	0	-0.1	10.11	0	0	0
278	SLU 14	0	-0.11	10.29	0	0	0
278	SLU 15	0	-0.1	10.3	0	0	0
278	SLU 16	0	-0.11	10.23	0	0	0
278	SLU 17	0	-0.11	10.24	0	0	0
278	SLU 18	0	-0.11	10.48	0	0	0
278	SLU 19	0	-0.1	10.48	0	0	0
278	SLU 20	0	-0.11	10.6	0	0	0
278	SLU 21	0	-0.1	10.61	0	0	0
278	SLU 22	0.01	-0.11	9.84	0	0	0
278	SLU 23	0	-0.09	9.85	0	0	0
278	SLU 24	0.01	-0.11	10.03	0	0	0
278	SLU 25	0.01	-0.1	10.04	0	0	0
278	SLU 26	0	-0.1	9.98	0	0	0
278	SLU 27	0.01	-0.11	10.16	0	0	0
278	SLU 28	0.01	-0.1	10.16	0	0	0
278	SLU 29	0.01	-0.11	10.09	0	0	0
278	SLU 30	0	-0.1	10.1	0	0	0
278	SLU 31	0	-0.1	11.02	0	0	0
278	SLU 32	0	-0.11	11.2	0	0	0
278	SLU 33	0	-0.1	11.2	0	0	0
278	SLU 34	0	-0.1	11.14	0	0	0
278	SLU 35	0	-0.11	11.32	0	0	0
278	SLU 36	0	-0.1	11.33	0	0	0
278	SLU 37	0	-0.11	11.26	0	0	0
278	SLU 38	0	-0.1	11.27	0	0	0
278	SLU 39	0	-0.11	11.51	0	0	0
278	SLU 40	0	-0.1	11.51	0	0	0
278	SLU 41	0	-0.11	11.63	0	0	0
278	SLU 42	0	-0.1	11.64	0	0	0
278	SLU 43	0	-0.14	11.1	0	0	0
278	SLU 44	0	-0.13	11.11	0	0	0
278	SLU 45	0	-0.14	11.29	0	0	0
278	SLU 46	0	-0.13	11.29	0	0	0
278	SLU 47	0	-0.13	11.24	0	0	0
278	SLU 48	0	-0.14	11.41	0	0	0
278	SLU 49	0	-0.14	11.42	0	0	0
278	SLU 50	0	-0.14	11.35	0	0	0
278	SLU 51	0	-0.14	11.36	0	0	0
278	SLU 52	0	-0.13	12.27	0	0	0
278	SLU 53	0	-0.14	12.45	0	0	0
278	SLU 54	0	-0.13	12.46	0	0	0
278	SLU 55	0	-0.13	12.4	0	0	0
278	SLU 56	0	-0.14	12.58	0	0	0
278	SLU 57	0	-0.14	12.59	0	0	0
278	SLU 58	0	-0.15	12.52	0	0	0
278	SLU 59	0	-0.14	12.53	0	0	0
278	SLU 60	0	-0.14	12.76	0	0	0
278	SLU 61	0	-0.14	12.77	0	0	0
278	SLU 62	0	-0.14	12.89	0	0	0
278	SLU 63	0	-0.14	12.9	0	0	0
278	SLU 64	0.01	-0.14	12.13	0	0	0
278	SLU 65	0	-0.13	12.14	0	0	0
278	SLU 66	0.01	-0.14	12.32	0	0	0
278	SLU 67	0.01	-0.13	12.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
278	SLU 68	0	-0.13	12.27	0	0	0
278	SLU 69	0.01	-0.14	12.45	0	0	0
278	SLU 70	0.01	-0.13	12.45	0	0	0
278	SLU 71	0.01	-0.14	12.38	0	0	0
278	SLU 72	0.01	-0.14	12.39	0	0	0
278	SLU 73	0	-0.13	13.31	0	0	0
278	SLU 74	0	-0.14	13.49	0	0	0
278	SLU 75	0	-0.13	13.49	0	0	0
278	SLU 76	0	-0.13	13.43	0	0	0
278	SLU 77	0	-0.14	13.61	0	0	0
278	SLU 78	0	-0.14	13.62	0	0	0
278	SLU 79	0	-0.15	13.55	0	0	0
278	SLU 80	0	-0.14	13.56	0	0	0
278	SLU 81	0	-0.14	13.8	0	0	0
278	SLU 82	0	-0.13	13.8	0	0	0
278	SLU 83	0	-0.14	13.92	0	0	0
278	SLU 84	0	-0.14	13.93	0	0	0
278	SLE RA 1	0	-0.11	9.1	0	0	0
278	SLE RA 2	0	-0.1	9.11	0	0	0
278	SLE RA 3	0	-0.11	9.23	0	0	0
278	SLE RA 4	0	-0.1	9.23	0	0	0
278	SLE RA 5	0	-0.1	9.2	0	0	0
278	SLE RA 6	0	-0.11	9.31	0	0	0
278	SLE RA 7	0	-0.1	9.32	0	0	0
278	SLE RA 8	0	-0.11	9.27	0	0	0
278	SLE RA 9	0	-0.11	9.28	0	0	0
278	SLE RA 10	0	-0.1	9.89	0	0	0
278	SLE RA 11	0	-0.11	10.01	0	0	0
278	SLE RA 12	0	-0.1	10.01	0	0	0
278	SLE RA 13	0	-0.1	9.97	0	0	0
278	SLE RA 14	0	-0.11	10.09	0	0	0
278	SLE RA 15	0	-0.11	10.1	0	0	0
278	SLE RA 16	0	-0.11	10.05	0	0	0
278	SLE RA 17	0	-0.11	10.06	0	0	0
278	SLE RA 18	0	-0.11	10.21	0	0	0
278	SLE RA 19	0	-0.1	10.22	0	0	0
278	SLE RA 20	0	-0.11	10.3	0	0	0
278	SLE RA 21	0	-0.11	10.3	0	0	0
278	SLE FR 1	0	-0.11	9.1	0	0	0
278	SLE FR 2	0	-0.11	9.1	0	0	0
278	SLE FR 3	0	-0.11	9.14	0	0	0
278	SLE FR 4	0	-0.11	9.44	0	0	0
278	SLE FR 5	0	-0.11	9.47	0	0	0
278	SLE FR 6	0	-0.11	9.66	0	0	0
278	SLE QP 1	0	-0.11	9.1	0	0	0
278	SLE QP 2	0	-0.11	9.44	0	0	0
278	SLD 1	0.86	0.06	9.29	0	0	0
278	SLD 2	0.95	0.09	9.32	0	0	0
278	SLD 3	0.84	-0.19	9.09	0	0	0
278	SLD 4	0.94	-0.16	9.13	0	0	0
278	SLD 5	0.26	0.31	9.68	0	0	0
278	SLD 6	0.33	0.33	9.7	0	0	0
278	SLD 7	0.21	-0.51	9.03	0	0	0
278	SLD 8	0.28	-0.49	9.05	0	0	0
278	SLD 9	-0.27	0.27	9.82	0	0	0
278	SLD 10	-0.21	0.29	9.84	0	0	0
278	SLD 11	-0.32	-0.54	9.17	0	0	0
278	SLD 12	-0.26	-0.52	9.19	0	0	0
278	SLD 13	-0.93	-0.06	9.75	0	0	0
278	SLD 14	-0.83	-0.03	9.78	0	0	0
278	SLD 15	-0.95	-0.3	9.55	0	0	0
278	SLD 16	-0.85	-0.27	9.58	0	0	0
278	SLV 1	2	0.27	9.08	0	0	0
278	SLV 2	2.22	0.34	9.16	0	0	0
278	SLV 3	1.96	-0.29	8.64	0	0	0
278	SLV 4	2.19	-0.22	8.72	0	0	0
278	SLV 5	0.62	0.84	9.99	0	0	0
278	SLV 6	0.76	0.88	10.04	0	0	0
278	SLV 7	0.5	-1.02	8.51	0	0	0
278	SLV 8	0.64	-0.98	8.56	0	0	0
278	SLV 9	-0.64	0.76	10.31	0	0	0
278	SLV 10	-0.49	0.8	10.36	0	0	0
278	SLV 11	-0.76	-1.1	8.83	0	0	0
278	SLV 12	-0.61	-1.06	8.89	0	0	0
278	SLV 13	-2.18	0	10.15	0	0	0
278	SLV 14	-1.96	0.07	10.23	0	0	0
278	SLV 15	-2.22	-0.55	9.71	0	0	0
278	SLV 16	-1.99	-0.49	9.79	0	0	0
279	SLU 1	0.01	-0.12	8.8	0	0	0
279	SLU 2	0	-0.11	8.81	0	0	0
279	SLU 3	0.01	-0.12	8.99	0	0	0
279	SLU 4	0.01	-0.12	9	0	0	0
279	SLU 5	0	-0.11	8.94	0	0	0
279	SLU 6	0.01	-0.13	9.12	0	0	0
279	SLU 7	0.01	-0.12	9.13	0	0	0
279	SLU 8	0.01	-0.13	9.06	0	0	0
279	SLU 9	0	-0.12	9.06	0	0	0
279	SLU 10	0	-0.11	9.97	0	0	0
279	SLU 11	0	-0.13	10.15	0	0	0
279	SLU 12	0	-0.12	10.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLU 13	0	-0.11	10.1	0	0	0
279	SLU 14	0	-0.13	10.28	0	0	0
279	SLU 15	0	-0.12	10.29	0	0	0
279	SLU 16	0	-0.13	10.22	0	0	0
279	SLU 17	0	-0.12	10.22	0	0	0
279	SLU 18	0	-0.13	10.46	0	0	0
279	SLU 19	0	-0.12	10.47	0	0	0
279	SLU 20	0	-0.13	10.59	0	0	0
279	SLU 21	0	-0.12	10.59	0	0	0
279	SLU 22	0.01	-0.12	9.84	0	0	0
279	SLU 23	0.01	-0.11	9.85	0	0	0
279	SLU 24	0.01	-0.12	10.03	0	0	0
279	SLU 25	0.01	-0.12	10.03	0	0	0
279	SLU 26	0.01	-0.11	9.97	0	0	0
279	SLU 27	0.01	-0.13	10.15	0	0	0
279	SLU 28	0.01	-0.12	10.16	0	0	0
279	SLU 29	0.01	-0.13	10.09	0	0	0
279	SLU 30	0.01	-0.12	10.1	0	0	0
279	SLU 31	0	-0.11	11.01	0	0	0
279	SLU 32	0.01	-0.13	11.19	0	0	0
279	SLU 33	0	-0.12	11.19	0	0	0
279	SLU 34	0	-0.12	11.13	0	0	0
279	SLU 35	0.01	-0.13	11.31	0	0	0
279	SLU 36	0	-0.12	11.32	0	0	0
279	SLU 37	0	-0.13	11.25	0	0	0
279	SLU 38	0	-0.12	11.26	0	0	0
279	SLU 39	0	-0.13	11.49	0	0	0
279	SLU 40	0	-0.12	11.5	0	0	0
279	SLU 41	0	-0.13	11.62	0	0	0
279	SLU 42	0	-0.12	11.63	0	0	0
279	SLU 43	0.01	-0.16	11.09	0	0	0
279	SLU 44	0.01	-0.15	11.1	0	0	0
279	SLU 45	0.01	-0.16	11.28	0	0	0
279	SLU 46	0.01	-0.15	11.29	0	0	0
279	SLU 47	0.01	-0.15	11.23	0	0	0
279	SLU 48	0.01	-0.16	11.41	0	0	0
279	SLU 49	0.01	-0.15	11.42	0	0	0
279	SLU 50	0.01	-0.16	11.35	0	0	0
279	SLU 51	0.01	-0.16	11.35	0	0	0
279	SLU 52	0	-0.15	12.26	0	0	0
279	SLU 53	0	-0.16	12.44	0	0	0
279	SLU 54	0	-0.15	12.45	0	0	0
279	SLU 55	0	-0.15	12.39	0	0	0
279	SLU 56	0	-0.16	12.57	0	0	0
279	SLU 57	0	-0.16	12.57	0	0	0
279	SLU 58	0	-0.17	12.51	0	0	0
279	SLU 59	0	-0.16	12.51	0	0	0
279	SLU 60	0	-0.16	12.75	0	0	0
279	SLU 61	0	-0.16	12.75	0	0	0
279	SLU 62	0	-0.17	12.88	0	0	0
279	SLU 63	0	-0.16	12.88	0	0	0
279	SLU 64	0.01	-0.16	12.12	0	0	0
279	SLU 65	0.01	-0.15	12.13	0	0	0
279	SLU 66	0.01	-0.16	12.31	0	0	0
279	SLU 67	0.01	-0.15	12.32	0	0	0
279	SLU 68	0.01	-0.15	12.26	0	0	0
279	SLU 69	0.01	-0.16	12.44	0	0	0
279	SLU 70	0.01	-0.15	12.45	0	0	0
279	SLU 71	0.01	-0.16	12.38	0	0	0
279	SLU 72	0.01	-0.16	12.38	0	0	0
279	SLU 73	0	-0.15	13.29	0	0	0
279	SLU 74	0.01	-0.16	13.47	0	0	0
279	SLU 75	0.01	-0.16	13.48	0	0	0
279	SLU 76	0	-0.15	13.42	0	0	0
279	SLU 77	0.01	-0.17	13.6	0	0	0
279	SLU 78	0.01	-0.16	13.61	0	0	0
279	SLU 79	0.01	-0.17	13.54	0	0	0
279	SLU 80	0	-0.16	13.54	0	0	0
279	SLU 81	0	-0.16	13.78	0	0	0
279	SLU 82	0	-0.16	13.79	0	0	0
279	SLU 83	0	-0.17	13.91	0	0	0
279	SLU 84	0	-0.16	13.91	0	0	0
279	SLE RA 1	0.01	-0.12	9.1	0	0	0
279	SLE RA 2	0.01	-0.11	9.11	0	0	0
279	SLE RA 3	0.01	-0.12	9.23	0	0	0
279	SLE RA 4	0.01	-0.12	9.23	0	0	0
279	SLE RA 5	0.01	-0.12	9.19	0	0	0
279	SLE RA 6	0.01	-0.12	9.31	0	0	0
279	SLE RA 7	0.01	-0.12	9.31	0	0	0
279	SLE RA 8	0.01	-0.13	9.27	0	0	0
279	SLE RA 9	0.01	-0.12	9.27	0	0	0
279	SLE RA 10	0	-0.12	9.88	0	0	0
279	SLE RA 11	0	-0.13	10	0	0	0
279	SLE RA 12	0	-0.12	10	0	0	0
279	SLE RA 13	0	-0.12	9.96	0	0	0
279	SLE RA 14	0	-0.13	10.08	0	0	0
279	SLE RA 15	0	-0.12	10.09	0	0	0
279	SLE RA 16	0	-0.13	10.04	0	0	0
279	SLE RA 17	0	-0.12	10.05	0	0	0
279	SLE RA 18	0	-0.13	10.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLE RA 19	0	-0.12	10.21	0	0	0
279	SLE RA 20	0	-0.13	10.29	0	0	0
279	SLE RA 21	0	-0.12	10.29	0	0	0
279	SLE FR 1	0.01	-0.12	9.1	0	0	0
279	SLE FR 2	0.01	-0.12	9.1	0	0	0
279	SLE FR 3	0.01	-0.12	9.13	0	0	0
279	SLE FR 4	0.01	-0.12	9.43	0	0	0
279	SLE FR 5	0.01	-0.12	9.46	0	0	0
279	SLE FR 6	0	-0.12	9.65	0	0	0
279	SLE QP 1	0.01	-0.12	9.1	0	0	0
279	SLE QP 2	0.01	-0.12	9.43	0	0	0
279	SLD 1	0.86	0.05	9.22	0	0	0
279	SLD 2	0.96	0.09	9.26	0	0	0
279	SLD 3	0.84	-0.19	9.03	0	0	0
279	SLD 4	0.94	-0.16	9.07	0	0	0
279	SLD 5	0.27	0.29	9.65	0	0	0
279	SLD 6	0.33	0.31	9.68	0	0	0
279	SLD 7	0.22	-0.52	9.01	0	0	0
279	SLD 8	0.28	-0.5	9.04	0	0	0
279	SLD 9	-0.27	0.25	9.82	0	0	0
279	SLD 10	-0.21	0.27	9.85	0	0	0
279	SLD 11	-0.32	-0.56	9.19	0	0	0
279	SLD 12	-0.26	-0.54	9.21	0	0	0
279	SLD 13	-0.93	-0.09	9.8	0	0	0
279	SLD 14	-0.83	-0.06	9.83	0	0	0
279	SLD 15	-0.95	-0.33	9.6	0	0	0
279	SLD 16	-0.85	-0.3	9.64	0	0	0
279	SLV 1	2	0.28	8.93	0	0	0
279	SLV 2	2.23	0.36	9.02	0	0	0
279	SLV 3	1.97	-0.27	8.5	0	0	0
279	SLV 4	2.2	-0.2	8.58	0	0	0
279	SLV 5	0.62	0.82	9.92	0	0	0
279	SLV 6	0.77	0.88	9.98	0	0	0
279	SLV 7	0.5	-1.02	8.48	0	0	0
279	SLV 8	0.65	-0.97	8.54	0	0	0
279	SLV 9	-0.64	0.73	10.33	0	0	0
279	SLV 10	-0.49	0.78	10.38	0	0	0
279	SLV 11	-0.76	-1.12	8.88	0	0	0
279	SLV 12	-0.61	-1.07	8.94	0	0	0
279	SLV 13	-2.19	-0.05	10.28	0	0	0
279	SLV 14	-1.96	0.03	10.37	0	0	0
279	SLV 15	-2.22	-0.61	9.84	0	0	0
279	SLV 16	-1.99	-0.53	9.93	0	0	0
280	SLU 1	0.01	-0.14	8.8	0	0	0
280	SLU 2	0.01	-0.12	8.81	0	0	0
280	SLU 3	0.01	-0.14	8.99	0	0	0
280	SLU 4	0.01	-0.13	9	0	0	0
280	SLU 5	0.01	-0.12	8.94	0	0	0
280	SLU 6	0.01	-0.14	9.12	0	0	0
280	SLU 7	0.01	-0.13	9.12	0	0	0
280	SLU 8	0.01	-0.14	9.06	0	0	0
280	SLU 9	0.01	-0.13	9.06	0	0	0
280	SLU 10	0	-0.13	9.96	0	0	0
280	SLU 11	0.01	-0.14	10.15	0	0	0
280	SLU 12	0	-0.13	10.15	0	0	0
280	SLU 13	0	-0.13	10.09	0	0	0
280	SLU 14	0.01	-0.14	10.27	0	0	0
280	SLU 15	0	-0.14	10.28	0	0	0
280	SLU 16	0	-0.15	10.21	0	0	0
280	SLU 17	0	-0.14	10.21	0	0	0
280	SLU 18	0	-0.14	10.45	0	0	0
280	SLU 19	0	-0.13	10.45	0	0	0
280	SLU 20	0	-0.14	10.58	0	0	0
280	SLU 21	0	-0.14	10.58	0	0	0
280	SLU 22	0.01	-0.14	9.84	0	0	0
280	SLU 23	0.01	-0.13	9.84	0	0	0
280	SLU 24	0.01	-0.14	10.03	0	0	0
280	SLU 25	0.01	-0.13	10.03	0	0	0
280	SLU 26	0.01	-0.13	9.97	0	0	0
280	SLU 27	0.01	-0.14	10.15	0	0	0
280	SLU 28	0.01	-0.13	10.16	0	0	0
280	SLU 29	0.01	-0.14	10.09	0	0	0
280	SLU 30	0.01	-0.14	10.1	0	0	0
280	SLU 31	0.01	-0.13	11	0	0	0
280	SLU 32	0.01	-0.14	11.18	0	0	0
280	SLU 33	0.01	-0.14	11.18	0	0	0
280	SLU 34	0.01	-0.13	11.12	0	0	0
280	SLU 35	0.01	-0.15	11.31	0	0	0
280	SLU 36	0.01	-0.14	11.31	0	0	0
280	SLU 37	0.01	-0.15	11.24	0	0	0
280	SLU 38	0.01	-0.14	11.25	0	0	0
280	SLU 39	0.01	-0.14	11.48	0	0	0
280	SLU 40	0.01	-0.14	11.49	0	0	0
280	SLU 41	0.01	-0.15	11.61	0	0	0
280	SLU 42	0.01	-0.14	11.62	0	0	0
280	SLU 43	0.01	-0.18	11.09	0	0	0
280	SLU 44	0.01	-0.16	11.1	0	0	0
280	SLU 45	0.01	-0.18	11.28	0	0	0
280	SLU 46	0.01	-0.17	11.28	0	0	0
280	SLU 47	0.01	-0.16	11.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLU 48	0.01	-0.18	11.41	0	0	0
280	SLU 49	0.01	-0.17	11.41	0	0	0
280	SLU 50	0.01	-0.18	11.34	0	0	0
280	SLU 51	0.01	-0.17	11.35	0	0	0
280	SLU 52	0	-0.17	12.25	0	0	0
280	SLU 53	0.01	-0.18	12.43	0	0	0
280	SLU 54	0.01	-0.17	12.44	0	0	0
280	SLU 55	0	-0.17	12.38	0	0	0
280	SLU 56	0.01	-0.18	12.56	0	0	0
280	SLU 57	0.01	-0.18	12.56	0	0	0
280	SLU 58	0.01	-0.19	12.5	0	0	0
280	SLU 59	0.01	-0.18	12.5	0	0	0
280	SLU 60	0	-0.18	12.74	0	0	0
280	SLU 61	0	-0.17	12.74	0	0	0
280	SLU 62	0	-0.18	12.86	0	0	0
280	SLU 63	0	-0.18	12.87	0	0	0
280	SLU 64	0.01	-0.18	12.12	0	0	0
280	SLU 65	0.01	-0.16	12.13	0	0	0
280	SLU 66	0.01	-0.18	12.31	0	0	0
280	SLU 67	0.01	-0.17	12.32	0	0	0
280	SLU 68	0.01	-0.17	12.26	0	0	0
280	SLU 69	0.01	-0.18	12.44	0	0	0
280	SLU 70	0.01	-0.17	12.44	0	0	0
280	SLU 71	0.01	-0.18	12.38	0	0	0
280	SLU 72	0.01	-0.18	12.38	0	0	0
280	SLU 73	0.01	-0.17	13.28	0	0	0
280	SLU 74	0.01	-0.18	13.47	0	0	0
280	SLU 75	0.01	-0.18	13.47	0	0	0
280	SLU 76	0.01	-0.17	13.41	0	0	0
280	SLU 77	0.01	-0.19	13.59	0	0	0
280	SLU 78	0.01	-0.18	13.6	0	0	0
280	SLU 79	0.01	-0.19	13.53	0	0	0
280	SLU 80	0.01	-0.18	13.53	0	0	0
280	SLU 81	0.01	-0.18	13.77	0	0	0
280	SLU 82	0.01	-0.18	13.77	0	0	0
280	SLU 83	0.01	-0.19	13.9	0	0	0
280	SLU 84	0.01	-0.18	13.9	0	0	0
280	SLE RA 1	0.01	-0.14	9.1	0	0	0
280	SLE RA 2	0.01	-0.13	9.1	0	0	0
280	SLE RA 3	0.01	-0.14	9.22	0	0	0
280	SLE RA 4	0.01	-0.13	9.23	0	0	0
280	SLE RA 5	0.01	-0.13	9.19	0	0	0
280	SLE RA 6	0.01	-0.14	9.31	0	0	0
280	SLE RA 7	0.01	-0.13	9.31	0	0	0
280	SLE RA 8	0.01	-0.14	9.27	0	0	0
280	SLE RA 9	0.01	-0.13	9.27	0	0	0
280	SLE RA 10	0.01	-0.13	9.87	0	0	0
280	SLE RA 11	0.01	-0.14	9.99	0	0	0
280	SLE RA 12	0.01	-0.13	10	0	0	0
280	SLE RA 13	0.01	-0.13	9.96	0	0	0
280	SLE RA 14	0.01	-0.14	10.08	0	0	0
280	SLE RA 15	0.01	-0.14	10.08	0	0	0
280	SLE RA 16	0.01	-0.14	10.04	0	0	0
280	SLE RA 17	0.01	-0.14	10.04	0	0	0
280	SLE RA 18	0.01	-0.14	10.2	0	0	0
280	SLE RA 19	0	-0.14	10.2	0	0	0
280	SLE RA 20	0.01	-0.14	10.28	0	0	0
280	SLE RA 21	0	-0.14	10.28	0	0	0
280	SLE FR 1	0.01	-0.14	9.1	0	0	0
280	SLE FR 2	0.01	-0.13	9.1	0	0	0
280	SLE FR 3	0.01	-0.14	9.13	0	0	0
280	SLE FR 4	0.01	-0.14	9.43	0	0	0
280	SLE FR 5	0.01	-0.14	9.46	0	0	0
280	SLE FR 6	0.01	-0.14	9.65	0	0	0
280	SLE QP 1	0.01	-0.14	9.1	0	0	0
280	SLE QP 2	0.01	-0.14	9.43	0	0	0
280	SLD 1	0.86	0.05	9.15	0	0	0
280	SLD 2	0.95	0.08	9.19	0	0	0
280	SLD 3	0.84	-0.19	8.96	0	0	0
280	SLD 4	0.94	-0.16	9	0	0	0
280	SLD 5	0.27	0.27	9.62	0	0	0
280	SLD 6	0.33	0.3	9.65	0	0	0
280	SLD 7	0.22	-0.53	9	0	0	0
280	SLD 8	0.28	-0.5	9.02	0	0	0
280	SLD 9	-0.27	0.22	9.83	0	0	0
280	SLD 10	-0.2	0.25	9.86	0	0	0
280	SLD 11	-0.32	-0.57	9.21	0	0	0
280	SLD 12	-0.25	-0.55	9.23	0	0	0
280	SLD 13	-0.92	-0.12	9.85	0	0	0
280	SLD 14	-0.83	-0.08	9.89	0	0	0
280	SLD 15	-0.94	-0.36	9.67	0	0	0
280	SLD 16	-0.84	-0.32	9.71	0	0	0
280	SLV 1	1.99	0.28	8.77	0	0	0
280	SLV 2	2.22	0.37	8.86	0	0	0
280	SLV 3	1.96	-0.26	8.34	0	0	0
280	SLV 4	2.18	-0.17	8.44	0	0	0
280	SLV 5	0.62	0.8	9.86	0	0	0
280	SLV 6	0.76	0.86	9.92	0	0	0
280	SLV 7	0.5	-1.02	8.44	0	0	0
280	SLV 8	0.65	-0.96	8.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLV 9	-0.63	0.69	10.35	0	0	0
280	SLV 10	-0.48	0.74	10.41	0	0	0
280	SLV 11	-0.75	-1.13	8.94	0	0	0
280	SLV 12	-0.6	-1.08	9	0	0	0
280	SLV 13	-2.17	-0.1	10.42	0	0	0
280	SLV 14	-1.94	-0.01	10.51	0	0	0
280	SLV 15	-2.2	-0.65	9.99	0	0	0
280	SLV 16	-1.98	-0.56	10.09	0	0	0
281	SLU 1	0.01	-0.15	8.77	0	0	0
281	SLU 2	0.01	-0.13	8.78	0	0	0
281	SLU 3	0.01	-0.15	8.96	0	0	0
281	SLU 4	0.01	-0.14	8.96	0	0	0
281	SLU 5	0.01	-0.14	8.9	0	0	0
281	SLU 6	0.01	-0.15	9.08	0	0	0
281	SLU 7	0.01	-0.14	9.09	0	0	0
281	SLU 8	0.01	-0.15	9.02	0	0	0
281	SLU 9	0.01	-0.14	9.03	0	0	0
281	SLU 10	0.01	-0.14	9.92	0	0	0
281	SLU 11	0.01	-0.15	10.1	0	0	0
281	SLU 12	0.01	-0.15	10.11	0	0	0
281	SLU 13	0.01	-0.14	10.05	0	0	0
281	SLU 14	0.01	-0.16	10.23	0	0	0
281	SLU 15	0.01	-0.15	10.23	0	0	0
281	SLU 16	0.01	-0.16	10.17	0	0	0
281	SLU 17	0.01	-0.15	10.17	0	0	0
281	SLU 18	0.01	-0.16	10.4	0	0	0
281	SLU 19	0.01	-0.15	10.41	0	0	0
281	SLU 20	0.01	-0.16	10.53	0	0	0
281	SLU 21	0.01	-0.15	10.53	0	0	0
281	SLU 22	0.01	-0.15	9.8	0	0	0
281	SLU 23	0.01	-0.14	9.81	0	0	0
281	SLU 24	0.01	-0.15	9.99	0	0	0
281	SLU 25	0.01	-0.14	10	0	0	0
281	SLU 26	0.01	-0.14	9.94	0	0	0
281	SLU 27	0.01	-0.15	10.12	0	0	0
281	SLU 28	0.01	-0.15	10.12	0	0	0
281	SLU 29	0.01	-0.16	10.06	0	0	0
281	SLU 30	0.01	-0.15	10.06	0	0	0
281	SLU 31	0.01	-0.14	10.95	0	0	0
281	SLU 32	0.01	-0.16	11.14	0	0	0
281	SLU 33	0.01	-0.15	11.14	0	0	0
281	SLU 34	0.01	-0.15	11.08	0	0	0
281	SLU 35	0.01	-0.16	11.26	0	0	0
281	SLU 36	0.01	-0.15	11.27	0	0	0
281	SLU 37	0.01	-0.16	11.2	0	0	0
281	SLU 38	0.01	-0.15	11.2	0	0	0
281	SLU 39	0.01	-0.16	11.44	0	0	0
281	SLU 40	0.01	-0.15	11.44	0	0	0
281	SLU 41	0.01	-0.16	11.56	0	0	0
281	SLU 42	0.01	-0.15	11.57	0	0	0
281	SLU 43	0.01	-0.19	11.04	0	0	0
281	SLU 44	0.01	-0.18	11.05	0	0	0
281	SLU 45	0.01	-0.19	11.23	0	0	0
281	SLU 46	0.01	-0.18	11.24	0	0	0
281	SLU 47	0.01	-0.18	11.18	0	0	0
281	SLU 48	0.01	-0.19	11.36	0	0	0
281	SLU 49	0.01	-0.18	11.36	0	0	0
281	SLU 50	0.01	-0.19	11.3	0	0	0
281	SLU 51	0.01	-0.19	11.3	0	0	0
281	SLU 52	0.01	-0.18	12.2	0	0	0
281	SLU 53	0.01	-0.2	12.38	0	0	0
281	SLU 54	0.01	-0.19	12.38	0	0	0
281	SLU 55	0.01	-0.18	12.32	0	0	0
281	SLU 56	0.01	-0.2	12.51	0	0	0
281	SLU 57	0.01	-0.19	12.51	0	0	0
281	SLU 58	0.01	-0.2	12.44	0	0	0
281	SLU 59	0.01	-0.19	12.45	0	0	0
281	SLU 60	0.01	-0.2	12.68	0	0	0
281	SLU 61	0.01	-0.19	12.68	0	0	0
281	SLU 62	0.01	-0.2	12.81	0	0	0
281	SLU 63	0.01	-0.19	12.81	0	0	0
281	SLU 64	0.02	-0.19	12.08	0	0	0
281	SLU 65	0.01	-0.18	12.08	0	0	0
281	SLU 66	0.02	-0.19	12.27	0	0	0
281	SLU 67	0.02	-0.19	12.27	0	0	0
281	SLU 68	0.01	-0.18	12.21	0	0	0
281	SLU 69	0.02	-0.2	12.39	0	0	0
281	SLU 70	0.02	-0.19	12.4	0	0	0
281	SLU 71	0.02	-0.2	12.33	0	0	0
281	SLU 72	0.01	-0.19	12.34	0	0	0
281	SLU 73	0.01	-0.19	13.23	0	0	0
281	SLU 74	0.01	-0.2	13.41	0	0	0
281	SLU 75	0.01	-0.19	13.42	0	0	0
281	SLU 76	0.01	-0.19	13.36	0	0	0
281	SLU 77	0.01	-0.2	13.54	0	0	0
281	SLU 78	0.01	-0.2	13.54	0	0	0
281	SLU 79	0.01	-0.2	13.48	0	0	0
281	SLU 80	0.01	-0.2	13.48	0	0	0
281	SLU 81	0.01	-0.2	13.71	0	0	0
281	SLU 82	0.01	-0.19	13.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLU 83	0.01	-0.2	13.84	0	0	0
281	SLU 84	0.01	-0.2	13.84	0	0	0
281	SLE RA 1	0.01	-0.15	9.06	0	0	0
281	SLE RA 2	0.01	-0.14	9.07	0	0	0
281	SLE RA 3	0.01	-0.15	9.19	0	0	0
281	SLE RA 4	0.01	-0.14	9.19	0	0	0
281	SLE RA 5	0.01	-0.14	9.15	0	0	0
281	SLE RA 6	0.01	-0.15	9.27	0	0	0
281	SLE RA 7	0.01	-0.14	9.28	0	0	0
281	SLE RA 8	0.01	-0.15	9.23	0	0	0
281	SLE RA 9	0.01	-0.15	9.24	0	0	0
281	SLE RA 10	0.01	-0.14	9.83	0	0	0
281	SLE RA 11	0.01	-0.15	9.95	0	0	0
281	SLE RA 12	0.01	-0.15	9.96	0	0	0
281	SLE RA 13	0.01	-0.14	9.92	0	0	0
281	SLE RA 14	0.01	-0.15	10.04	0	0	0
281	SLE RA 15	0.01	-0.15	10.04	0	0	0
281	SLE RA 16	0.01	-0.16	10	0	0	0
281	SLE RA 17	0.01	-0.15	10	0	0	0
281	SLE RA 18	0.01	-0.15	10.15	0	0	0
281	SLE RA 19	0.01	-0.15	10.16	0	0	0
281	SLE RA 20	0.01	-0.16	10.24	0	0	0
281	SLE RA 21	0.01	-0.15	10.24	0	0	0
281	SLE FR 1	0.01	-0.15	9.06	0	0	0
281	SLE FR 2	0.01	-0.15	9.06	0	0	0
281	SLE FR 3	0.01	-0.15	9.1	0	0	0
281	SLE FR 4	0.01	-0.15	9.39	0	0	0
281	SLE FR 5	0.01	-0.15	9.42	0	0	0
281	SLE FR 6	0.01	-0.15	9.61	0	0	0
281	SLE QP 1	0.01	-0.15	9.06	0	0	0
281	SLE QP 2	0.01	-0.15	9.39	0	0	0
281	SLD 1	0.84	0.04	9.04	0	0	0
281	SLD 2	0.94	0.08	9.09	0	0	0
281	SLD 3	0.83	-0.2	8.86	0	0	0
281	SLD 4	0.92	-0.15	8.9	0	0	0
281	SLD 5	0.27	0.25	9.56	0	0	0
281	SLD 6	0.33	0.28	9.59	0	0	0
281	SLD 7	0.22	-0.53	8.94	0	0	0
281	SLD 8	0.28	-0.5	8.97	0	0	0
281	SLD 9	-0.26	0.2	9.81	0	0	0
281	SLD 10	-0.19	0.23	9.84	0	0	0
281	SLD 11	-0.31	-0.58	9.2	0	0	0
281	SLD 12	-0.25	-0.55	9.22	0	0	0
281	SLD 13	-0.9	-0.14	9.88	0	0	0
281	SLD 14	-0.81	-0.1	9.92	0	0	0
281	SLD 15	-0.92	-0.38	9.7	0	0	0
281	SLD 16	-0.82	-0.34	9.74	0	0	0
281	SLV 1	1.96	0.28	8.57	0	0	0
281	SLV 2	2.18	0.38	8.67	0	0	0
281	SLV 3	1.92	-0.25	8.15	0	0	0
281	SLV 4	2.14	-0.15	8.25	0	0	0
281	SLV 5	0.61	0.77	9.76	0	0	0
281	SLV 6	0.75	0.83	9.82	0	0	0
281	SLV 7	0.49	-1	8.37	0	0	0
281	SLV 8	0.64	-0.94	8.44	0	0	0
281	SLV 9	-0.61	0.64	10.35	0	0	0
281	SLV 10	-0.47	0.71	10.41	0	0	0
281	SLV 11	-0.73	-1.13	8.96	0	0	0
281	SLV 12	-0.59	-1.07	9.02	0	0	0
281	SLV 13	-2.12	-0.15	10.53	0	0	0
281	SLV 14	-1.9	-0.05	10.63	0	0	0
281	SLV 15	-2.16	-0.68	10.11	0	0	0
281	SLV 16	-1.93	-0.58	10.21	0	0	0
282	SLU 1	0.01	-0.14	8.05	0	0	0
282	SLU 2	0.01	-0.13	8.06	0	0	0
282	SLU 3	0.01	-0.14	8.23	0	0	0
282	SLU 4	0.01	-0.14	8.23	0	0	0
282	SLU 5	0.01	-0.13	8.17	0	0	0
282	SLU 6	0.01	-0.15	8.34	0	0	0
282	SLU 7	0.01	-0.14	8.35	0	0	0
282	SLU 8	0.01	-0.15	8.28	0	0	0
282	SLU 9	0.01	-0.14	8.29	0	0	0
282	SLU 10	0.01	-0.14	9.11	0	0	0
282	SLU 11	0.01	-0.15	9.27	0	0	0
282	SLU 12	0.01	-0.14	9.28	0	0	0
282	SLU 13	0.01	-0.14	9.22	0	0	0
282	SLU 14	0.01	-0.15	9.39	0	0	0
282	SLU 15	0.01	-0.15	9.39	0	0	0
282	SLU 16	0.01	-0.15	9.33	0	0	0
282	SLU 17	0.01	-0.15	9.34	0	0	0
282	SLU 18	0.01	-0.15	9.55	0	0	0
282	SLU 19	0.01	-0.14	9.55	0	0	0
282	SLU 20	0.01	-0.15	9.67	0	0	0
282	SLU 21	0.01	-0.15	9.67	0	0	0
282	SLU 22	0.02	-0.15	9	0	0	0
282	SLU 23	0.01	-0.13	9.01	0	0	0
282	SLU 24	0.02	-0.15	9.18	0	0	0
282	SLU 25	0.02	-0.14	9.18	0	0	0
282	SLU 26	0.01	-0.14	9.13	0	0	0
282	SLU 27	0.02	-0.15	9.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLU 28	0.02	-0.14	9.3	0	0	0
282	SLU 29	0.02	-0.15	9.24	0	0	0
282	SLU 30	0.02	-0.15	9.24	0	0	0
282	SLU 31	0.01	-0.14	10.06	0	0	0
282	SLU 32	0.01	-0.16	10.23	0	0	0
282	SLU 33	0.01	-0.15	10.23	0	0	0
282	SLU 34	0.01	-0.14	10.18	0	0	0
282	SLU 35	0.01	-0.16	10.35	0	0	0
282	SLU 36	0.01	-0.15	10.35	0	0	0
282	SLU 37	0.01	-0.16	10.29	0	0	0
282	SLU 38	0.01	-0.15	10.29	0	0	0
282	SLU 39	0.01	-0.16	10.5	0	0	0
282	SLU 40	0.01	-0.15	10.51	0	0	0
282	SLU 41	0.01	-0.16	10.62	0	0	0
282	SLU 42	0.01	-0.15	10.62	0	0	0
282	SLU 43	0.02	-0.18	10.14	0	0	0
282	SLU 44	0.01	-0.17	10.14	0	0	0
282	SLU 45	0.02	-0.18	10.31	0	0	0
282	SLU 46	0.02	-0.18	10.32	0	0	0
282	SLU 47	0.01	-0.17	10.26	0	0	0
282	SLU 48	0.02	-0.19	10.43	0	0	0
282	SLU 49	0.02	-0.18	10.43	0	0	0
282	SLU 50	0.02	-0.19	10.37	0	0	0
282	SLU 51	0.01	-0.18	10.38	0	0	0
282	SLU 52	0.01	-0.18	11.19	0	0	0
282	SLU 53	0.01	-0.19	11.36	0	0	0
282	SLU 54	0.01	-0.18	11.37	0	0	0
282	SLU 55	0.01	-0.18	11.31	0	0	0
282	SLU 56	0.01	-0.19	11.48	0	0	0
282	SLU 57	0.01	-0.19	11.48	0	0	0
282	SLU 58	0.01	-0.19	11.42	0	0	0
282	SLU 59	0.01	-0.19	11.43	0	0	0
282	SLU 60	0.01	-0.19	11.64	0	0	0
282	SLU 61	0.01	-0.19	11.64	0	0	0
282	SLU 62	0.01	-0.2	11.76	0	0	0
282	SLU 63	0.01	-0.19	11.76	0	0	0
282	SLU 64	0.02	-0.19	11.09	0	0	0
282	SLU 65	0.02	-0.18	11.1	0	0	0
282	SLU 66	0.02	-0.19	11.27	0	0	0
282	SLU 67	0.02	-0.18	11.27	0	0	0
282	SLU 68	0.02	-0.18	11.22	0	0	0
282	SLU 69	0.02	-0.19	11.38	0	0	0
282	SLU 70	0.02	-0.18	11.39	0	0	0
282	SLU 71	0.02	-0.19	11.33	0	0	0
282	SLU 72	0.02	-0.19	11.33	0	0	0
282	SLU 73	0.01	-0.18	12.15	0	0	0
282	SLU 74	0.02	-0.2	12.32	0	0	0
282	SLU 75	0.02	-0.19	12.32	0	0	0
282	SLU 76	0.01	-0.19	12.26	0	0	0
282	SLU 77	0.02	-0.2	12.43	0	0	0
282	SLU 78	0.02	-0.19	12.44	0	0	0
282	SLU 79	0.02	-0.2	12.38	0	0	0
282	SLU 80	0.02	-0.19	12.38	0	0	0
282	SLU 81	0.01	-0.2	12.59	0	0	0
282	SLU 82	0.01	-0.19	12.6	0	0	0
282	SLU 83	0.01	-0.2	12.71	0	0	0
282	SLU 84	0.01	-0.19	12.71	0	0	0
282	SLE RA 1	0.01	-0.14	8.32	0	0	0
282	SLE RA 2	0.01	-0.14	8.33	0	0	0
282	SLE RA 3	0.01	-0.14	8.44	0	0	0
282	SLE RA 4	0.01	-0.14	8.44	0	0	0
282	SLE RA 5	0.01	-0.14	8.4	0	0	0
282	SLE RA 6	0.01	-0.15	8.52	0	0	0
282	SLE RA 7	0.01	-0.14	8.52	0	0	0
282	SLE RA 8	0.01	-0.15	8.48	0	0	0
282	SLE RA 9	0.01	-0.14	8.48	0	0	0
282	SLE RA 10	0.01	-0.14	9.03	0	0	0
282	SLE RA 11	0.01	-0.15	9.14	0	0	0
282	SLE RA 12	0.01	-0.14	9.14	0	0	0
282	SLE RA 13	0.01	-0.14	9.1	0	0	0
282	SLE RA 14	0.01	-0.15	9.22	0	0	0
282	SLE RA 15	0.01	-0.15	9.22	0	0	0
282	SLE RA 16	0.01	-0.15	9.18	0	0	0
282	SLE RA 17	0.01	-0.15	9.18	0	0	0
282	SLE RA 18	0.01	-0.15	9.32	0	0	0
282	SLE RA 19	0.01	-0.15	9.33	0	0	0
282	SLE RA 20	0.01	-0.15	9.4	0	0	0
282	SLE RA 21	0.01	-0.15	9.4	0	0	0
282	SLE FR 1	0.01	-0.14	8.32	0	0	0
282	SLE FR 2	0.01	-0.14	8.32	0	0	0
282	SLE FR 3	0.01	-0.14	8.35	0	0	0
282	SLE FR 4	0.01	-0.14	8.62	0	0	0
282	SLE FR 5	0.01	-0.15	8.65	0	0	0
282	SLE FR 6	0.01	-0.15	8.82	0	0	0
282	SLE QP 1	0.01	-0.14	8.32	0	0	0
282	SLE QP 2	0.01	-0.15	8.62	0	0	0
282	SLD 1	0.76	0.03	8.24	0	0	0
282	SLD 2	0.84	0.07	8.28	0	0	0
282	SLD 3	0.75	-0.18	8.07	0	0	0
282	SLD 4	0.83	-0.14	8.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLD 5	0.24	0.22	8.75	0	0	0
282	SLD 6	0.3	0.24	8.78	0	0	0
282	SLD 7	0.2	-0.48	8.2	0	0	0
282	SLD 8	0.25	-0.45	8.22	0	0	0
282	SLD 9	-0.23	0.16	9.02	0	0	0
282	SLD 10	-0.17	0.19	9.05	0	0	0
282	SLD 11	-0.27	-0.53	8.46	0	0	0
282	SLD 12	-0.22	-0.51	8.49	0	0	0
282	SLD 13	-0.81	-0.15	9.13	0	0	0
282	SLD 14	-0.72	-0.11	9.17	0	0	0
282	SLD 15	-0.82	-0.36	8.96	0	0	0
282	SLD 16	-0.73	-0.32	9.01	0	0	0
282	SLV 1	1.76	0.26	7.72	0	0	0
282	SLV 2	1.96	0.35	7.82	0	0	0
282	SLV 3	1.73	-0.22	7.34	0	0	0
282	SLV 4	1.93	-0.12	7.44	0	0	0
282	SLV 5	0.55	0.68	8.91	0	0	0
282	SLV 6	0.68	0.74	8.97	0	0	0
282	SLV 7	0.44	-0.91	7.65	0	0	0
282	SLV 8	0.57	-0.84	7.71	0	0	0
282	SLV 9	-0.55	0.55	9.54	0	0	0
282	SLV 10	-0.42	0.62	9.6	0	0	0
282	SLV 11	-0.65	-1.03	8.27	0	0	0
282	SLV 12	-0.52	-0.97	8.34	0	0	0
282	SLV 13	-1.9	-0.17	9.81	0	0	0
282	SLV 14	-1.7	-0.07	9.9	0	0	0
282	SLV 15	-1.93	-0.64	9.43	0	0	0
282	SLV 16	-1.73	-0.55	9.52	0	0	0
283	SLU 1	0.01	-0.14	7.51	0	0	0
283	SLU 2	0.01	-0.13	7.52	0	0	0
283	SLU 3	0.02	-0.14	7.67	0	0	0
283	SLU 4	0.01	-0.13	7.68	0	0	0
283	SLU 5	0.01	-0.13	7.63	0	0	0
283	SLU 6	0.02	-0.14	7.78	0	0	0
283	SLU 7	0.01	-0.13	7.79	0	0	0
283	SLU 8	0.01	-0.14	7.73	0	0	0
283	SLU 9	0.01	-0.14	7.73	0	0	0
283	SLU 10	0.01	-0.13	8.49	0	0	0
283	SLU 11	0.01	-0.15	8.65	0	0	0
283	SLU 12	0.01	-0.14	8.66	0	0	0
283	SLU 13	0.01	-0.14	8.6	0	0	0
283	SLU 14	0.01	-0.15	8.76	0	0	0
283	SLU 15	0.01	-0.14	8.77	0	0	0
283	SLU 16	0.01	-0.15	8.71	0	0	0
283	SLU 17	0.01	-0.14	8.71	0	0	0
283	SLU 18	0.01	-0.15	8.91	0	0	0
283	SLU 19	0.01	-0.14	8.91	0	0	0
283	SLU 20	0.01	-0.15	9.02	0	0	0
283	SLU 21	0.01	-0.14	9.02	0	0	0
283	SLU 22	0.02	-0.14	8.41	0	0	0
283	SLU 23	0.02	-0.13	8.41	0	0	0
283	SLU 24	0.02	-0.14	8.57	0	0	0
283	SLU 25	0.02	-0.14	8.57	0	0	0
283	SLU 26	0.02	-0.13	8.52	0	0	0
283	SLU 27	0.02	-0.15	8.68	0	0	0
283	SLU 28	0.02	-0.14	8.68	0	0	0
283	SLU 29	0.02	-0.15	8.62	0	0	0
283	SLU 30	0.02	-0.14	8.63	0	0	0
283	SLU 31	0.01	-0.14	9.39	0	0	0
283	SLU 32	0.02	-0.15	9.55	0	0	0
283	SLU 33	0.02	-0.15	9.55	0	0	0
283	SLU 34	0.01	-0.14	9.5	0	0	0
283	SLU 35	0.02	-0.15	9.66	0	0	0
283	SLU 36	0.02	-0.15	9.66	0	0	0
283	SLU 37	0.02	-0.16	9.6	0	0	0
283	SLU 38	0.02	-0.15	9.6	0	0	0
283	SLU 39	0.01	-0.15	9.8	0	0	0
283	SLU 40	0.01	-0.15	9.81	0	0	0
283	SLU 41	0.01	-0.16	9.91	0	0	0
283	SLU 42	0.01	-0.15	9.91	0	0	0
283	SLU 43	0.02	-0.18	9.46	0	0	0
283	SLU 44	0.02	-0.16	9.46	0	0	0
283	SLU 45	0.02	-0.18	9.62	0	0	0
283	SLU 46	0.02	-0.17	9.62	0	0	0
283	SLU 47	0.02	-0.17	9.57	0	0	0
283	SLU 48	0.02	-0.18	9.73	0	0	0
283	SLU 49	0.02	-0.17	9.73	0	0	0
283	SLU 50	0.02	-0.18	9.68	0	0	0
283	SLU 51	0.02	-0.17	9.68	0	0	0
283	SLU 52	0.01	-0.17	10.44	0	0	0
283	SLU 53	0.02	-0.19	10.6	0	0	0
283	SLU 54	0.02	-0.18	10.6	0	0	0
283	SLU 55	0.01	-0.17	10.55	0	0	0
283	SLU 56	0.02	-0.19	10.71	0	0	0
283	SLU 57	0.02	-0.18	10.71	0	0	0
283	SLU 58	0.02	-0.19	10.66	0	0	0
283	SLU 59	0.02	-0.18	10.66	0	0	0
283	SLU 60	0.01	-0.19	10.86	0	0	0
283	SLU 61	0.01	-0.18	10.86	0	0	0
283	SLU 62	0.02	-0.19	10.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLU 63	0.01	-0.18	10.97	0	0	0
283	SLU 64	0.02	-0.18	10.35	0	0	0
283	SLU 65	0.02	-0.17	10.36	0	0	0
283	SLU 66	0.02	-0.18	10.52	0	0	0
283	SLU 67	0.02	-0.18	10.52	0	0	0
283	SLU 68	0.02	-0.17	10.47	0	0	0
283	SLU 69	0.02	-0.19	10.62	0	0	0
283	SLU 70	0.02	-0.18	10.63	0	0	0
283	SLU 71	0.02	-0.19	10.57	0	0	0
283	SLU 72	0.02	-0.18	10.57	0	0	0
283	SLU 73	0.02	-0.18	11.34	0	0	0
283	SLU 74	0.02	-0.19	11.49	0	0	0
283	SLU 75	0.02	-0.18	11.5	0	0	0
283	SLU 76	0.02	-0.18	11.44	0	0	0
283	SLU 77	0.02	-0.19	11.6	0	0	0
283	SLU 78	0.02	-0.19	11.61	0	0	0
283	SLU 79	0.02	-0.19	11.55	0	0	0
283	SLU 80	0.02	-0.19	11.55	0	0	0
283	SLU 81	0.02	-0.19	11.75	0	0	0
283	SLU 82	0.02	-0.19	11.75	0	0	0
283	SLU 83	0.02	-0.19	11.86	0	0	0
283	SLU 84	0.02	-0.19	11.86	0	0	0
283	SLE RA 1	0.02	-0.14	7.77	0	0	0
283	SLE RA 2	0.01	-0.13	7.77	0	0	0
283	SLE RA 3	0.02	-0.14	7.88	0	0	0
283	SLE RA 4	0.02	-0.14	7.88	0	0	0
283	SLE RA 5	0.01	-0.13	7.84	0	0	0
283	SLE RA 6	0.02	-0.14	7.95	0	0	0
283	SLE RA 7	0.02	-0.14	7.95	0	0	0
283	SLE RA 8	0.02	-0.14	7.91	0	0	0
283	SLE RA 9	0.02	-0.14	7.91	0	0	0
283	SLE RA 10	0.01	-0.14	8.42	0	0	0
283	SLE RA 11	0.01	-0.14	8.53	0	0	0
283	SLE RA 12	0.01	-0.14	8.53	0	0	0
283	SLE RA 13	0.01	-0.14	8.49	0	0	0
283	SLE RA 14	0.01	-0.15	8.6	0	0	0
283	SLE RA 15	0.01	-0.14	8.6	0	0	0
283	SLE RA 16	0.01	-0.15	8.56	0	0	0
283	SLE RA 17	0.01	-0.14	8.57	0	0	0
283	SLE RA 18	0.01	-0.15	8.7	0	0	0
283	SLE RA 19	0.01	-0.14	8.7	0	0	0
283	SLE RA 20	0.01	-0.15	8.77	0	0	0
283	SLE RA 21	0.01	-0.14	8.77	0	0	0
283	SLE FR 1	0.02	-0.14	7.77	0	0	0
283	SLE FR 2	0.02	-0.14	7.77	0	0	0
283	SLE FR 3	0.02	-0.14	7.8	0	0	0
283	SLE FR 4	0.01	-0.14	8.05	0	0	0
283	SLE FR 5	0.01	-0.14	8.08	0	0	0
283	SLE FR 6	0.01	-0.14	8.23	0	0	0
283	SLE QP 1	0.02	-0.14	7.77	0	0	0
283	SLE QP 2	0.01	-0.14	8.05	0	0	0
283	SLD 1	0.7	0.02	7.64	0	0	0
283	SLD 2	0.77	0.06	7.68	0	0	0
283	SLD 3	0.68	-0.17	7.48	0	0	0
283	SLD 4	0.76	-0.13	7.52	0	0	0
283	SLD 5	0.22	0.19	8.15	0	0	0
283	SLD 6	0.28	0.22	8.18	0	0	0
283	SLD 7	0.18	-0.45	7.63	0	0	0
283	SLD 8	0.23	-0.42	7.66	0	0	0
283	SLD 9	-0.2	0.14	8.43	0	0	0
283	SLD 10	-0.15	0.16	8.46	0	0	0
283	SLD 11	-0.25	-0.5	7.91	0	0	0
283	SLD 12	-0.19	-0.47	7.94	0	0	0
283	SLD 13	-0.73	-0.15	8.57	0	0	0
283	SLD 14	-0.65	-0.11	8.61	0	0	0
283	SLD 15	-0.74	-0.34	8.41	0	0	0
283	SLD 16	-0.67	-0.3	8.46	0	0	0
283	SLV 1	1.61	0.23	7.08	0	0	0
283	SLV 2	1.79	0.33	7.18	0	0	0
283	SLV 3	1.58	-0.2	6.73	0	0	0
283	SLV 4	1.76	-0.1	6.83	0	0	0
283	SLV 5	0.5	0.61	8.28	0	0	0
283	SLV 6	0.62	0.68	8.34	0	0	0
283	SLV 7	0.41	-0.83	7.1	0	0	0
283	SLV 8	0.53	-0.77	7.16	0	0	0
283	SLV 9	-0.5	0.49	8.93	0	0	0
283	SLV 10	-0.38	0.55	8.99	0	0	0
283	SLV 11	-0.59	-0.96	7.75	0	0	0
283	SLV 12	-0.48	-0.9	7.82	0	0	0
283	SLV 13	-1.73	-0.18	9.27	0	0	0
283	SLV 14	-1.55	-0.08	9.36	0	0	0
283	SLV 15	-1.76	-0.61	8.91	0	0	0
283	SLV 16	-1.58	-0.52	9.01	0	0	0
284	SLU 1	0.01	-0.07	3.76	0	0	0
284	SLU 2	0.01	-0.07	3.76	0	0	0
284	SLU 3	0.01	-0.07	3.84	0	0	0
284	SLU 4	0.01	-0.07	3.84	0	0	0
284	SLU 5	0.01	-0.07	3.81	0	0	0
284	SLU 6	0.01	-0.08	3.89	0	0	0
284	SLU 7	0.01	-0.07	3.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLU 8	0.01	-0.08	3.87	0	0	0
284	SLU 9	0.01	-0.07	3.87	0	0	0
284	SLU 10	0.01	-0.07	4.25	0	0	0
284	SLU 11	0.01	-0.08	4.33	0	0	0
284	SLU 12	0.01	-0.08	4.33	0	0	0
284	SLU 13	0.01	-0.07	4.3	0	0	0
284	SLU 14	0.01	-0.08	4.38	0	0	0
284	SLU 15	0.01	-0.08	4.38	0	0	0
284	SLU 16	0.01	-0.08	4.36	0	0	0
284	SLU 17	0.01	-0.08	4.36	0	0	0
284	SLU 18	0.01	-0.08	4.46	0	0	0
284	SLU 19	0.01	-0.08	4.46	0	0	0
284	SLU 20	0.01	-0.08	4.51	0	0	0
284	SLU 21	0.01	-0.08	4.51	0	0	0
284	SLU 22	0.01	-0.08	4.21	0	0	0
284	SLU 23	0.01	-0.07	4.21	0	0	0
284	SLU 24	0.01	-0.08	4.29	0	0	0
284	SLU 25	0.01	-0.07	4.29	0	0	0
284	SLU 26	0.01	-0.07	4.26	0	0	0
284	SLU 27	0.01	-0.08	4.34	0	0	0
284	SLU 28	0.01	-0.08	4.34	0	0	0
284	SLU 29	0.01	-0.08	4.32	0	0	0
284	SLU 30	0.01	-0.08	4.32	0	0	0
284	SLU 31	0.01	-0.08	4.7	0	0	0
284	SLU 32	0.01	-0.08	4.78	0	0	0
284	SLU 33	0.01	-0.08	4.78	0	0	0
284	SLU 34	0.01	-0.08	4.75	0	0	0
284	SLU 35	0.01	-0.08	4.83	0	0	0
284	SLU 36	0.01	-0.08	4.83	0	0	0
284	SLU 37	0.01	-0.08	4.81	0	0	0
284	SLU 38	0.01	-0.08	4.81	0	0	0
284	SLU 39	0.01	-0.08	4.91	0	0	0
284	SLU 40	0.01	-0.08	4.91	0	0	0
284	SLU 41	0.01	-0.08	4.96	0	0	0
284	SLU 42	0.01	-0.08	4.96	0	0	0
284	SLU 43	0.01	-0.09	4.73	0	0	0
284	SLU 44	0.01	-0.09	4.73	0	0	0
284	SLU 45	0.01	-0.09	4.81	0	0	0
284	SLU 46	0.01	-0.09	4.81	0	0	0
284	SLU 47	0.01	-0.09	4.79	0	0	0
284	SLU 48	0.01	-0.1	4.87	0	0	0
284	SLU 49	0.01	-0.09	4.87	0	0	0
284	SLU 50	0.01	-0.1	4.84	0	0	0
284	SLU 51	0.01	-0.09	4.84	0	0	0
284	SLU 52	0.01	-0.09	5.22	0	0	0
284	SLU 53	0.01	-0.1	5.3	0	0	0
284	SLU 54	0.01	-0.1	5.3	0	0	0
284	SLU 55	0.01	-0.09	5.28	0	0	0
284	SLU 56	0.01	-0.1	5.36	0	0	0
284	SLU 57	0.01	-0.1	5.36	0	0	0
284	SLU 58	0.01	-0.1	5.33	0	0	0
284	SLU 59	0.01	-0.1	5.33	0	0	0
284	SLU 60	0.01	-0.1	5.43	0	0	0
284	SLU 61	0.01	-0.1	5.43	0	0	0
284	SLU 62	0.01	-0.1	5.49	0	0	0
284	SLU 63	0.01	-0.1	5.49	0	0	0
284	SLU 64	0.01	-0.1	5.18	0	0	0
284	SLU 65	0.01	-0.09	5.18	0	0	0
284	SLU 66	0.01	-0.1	5.26	0	0	0
284	SLU 67	0.01	-0.09	5.26	0	0	0
284	SLU 68	0.01	-0.09	5.24	0	0	0
284	SLU 69	0.01	-0.1	5.32	0	0	0
284	SLU 70	0.01	-0.1	5.32	0	0	0
284	SLU 71	0.01	-0.1	5.29	0	0	0
284	SLU 72	0.01	-0.1	5.29	0	0	0
284	SLU 73	0.01	-0.1	5.67	0	0	0
284	SLU 74	0.01	-0.1	5.75	0	0	0
284	SLU 75	0.01	-0.1	5.75	0	0	0
284	SLU 76	0.01	-0.1	5.73	0	0	0
284	SLU 77	0.01	-0.1	5.81	0	0	0
284	SLU 78	0.01	-0.1	5.81	0	0	0
284	SLU 79	0.01	-0.1	5.78	0	0	0
284	SLU 80	0.01	-0.1	5.78	0	0	0
284	SLU 81	0.01	-0.1	5.88	0	0	0
284	SLU 82	0.01	-0.1	5.88	0	0	0
284	SLU 83	0.01	-0.1	5.93	0	0	0
284	SLU 84	0.01	-0.1	5.94	0	0	0
284	SLE RA 1	0.01	-0.07	3.89	0	0	0
284	SLE RA 2	0.01	-0.07	3.89	0	0	0
284	SLE RA 3	0.01	-0.07	3.94	0	0	0
284	SLE RA 4	0.01	-0.07	3.94	0	0	0
284	SLE RA 5	0.01	-0.07	3.92	0	0	0
284	SLE RA 6	0.01	-0.08	3.98	0	0	0
284	SLE RA 7	0.01	-0.07	3.98	0	0	0
284	SLE RA 8	0.01	-0.08	3.96	0	0	0
284	SLE RA 9	0.01	-0.07	3.96	0	0	0
284	SLE RA 10	0.01	-0.07	4.21	0	0	0
284	SLE RA 11	0.01	-0.08	4.27	0	0	0
284	SLE RA 12	0.01	-0.08	4.27	0	0	0
284	SLE RA 13	0.01	-0.07	4.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLE RA 14	0.01	-0.08	4.3	0	0	0
284	SLE RA 15	0.01	-0.08	4.3	0	0	0
284	SLE RA 16	0.01	-0.08	4.29	0	0	0
284	SLE RA 17	0.01	-0.08	4.29	0	0	0
284	SLE RA 18	0.01	-0.08	4.35	0	0	0
284	SLE RA 19	0.01	-0.08	4.35	0	0	0
284	SLE RA 20	0.01	-0.08	4.39	0	0	0
284	SLE RA 21	0.01	-0.08	4.39	0	0	0
284	SLE FR 1	0.01	-0.07	3.89	0	0	0
284	SLE FR 2	0.01	-0.07	3.89	0	0	0
284	SLE FR 3	0.01	-0.07	3.9	0	0	0
284	SLE FR 4	0.01	-0.07	4.03	0	0	0
284	SLE FR 5	0.01	-0.08	4.04	0	0	0
284	SLE FR 6	0.01	-0.08	4.12	0	0	0
284	SLE QP 1	0.01	-0.07	3.89	0	0	0
284	SLE QP 2	0.01	-0.08	4.03	0	0	0
284	SLD 1	0.34	0.01	3.8	0	0	0
284	SLD 2	0.38	0.03	3.82	0	0	0
284	SLD 3	0.34	-0.09	3.72	0	0	0
284	SLD 4	0.37	-0.06	3.74	0	0	0
284	SLD 5	0.11	0.09	4.07	0	0	0
284	SLD 6	0.14	0.1	4.09	0	0	0
284	SLD 7	0.09	-0.22	3.81	0	0	0
284	SLD 8	0.11	-0.21	3.82	0	0	0
284	SLD 9	-0.1	0.06	4.23	0	0	0
284	SLD 10	-0.07	0.07	4.24	0	0	0
284	SLD 11	-0.12	-0.25	3.97	0	0	0
284	SLD 12	-0.1	-0.24	3.98	0	0	0
284	SLD 13	-0.36	-0.09	4.31	0	0	0
284	SLD 14	-0.32	-0.07	4.33	0	0	0
284	SLD 15	-0.36	-0.18	4.23	0	0	0
284	SLD 16	-0.33	-0.16	4.26	0	0	0
284	SLV 1	0.79	0.12	3.49	0	0	0
284	SLV 2	0.88	0.17	3.54	0	0	0
284	SLV 3	0.77	-0.1	3.31	0	0	0
284	SLV 4	0.86	-0.05	3.36	0	0	0
284	SLV 5	0.25	0.3	4.12	0	0	0
284	SLV 6	0.31	0.33	4.16	0	0	0
284	SLV 7	0.2	-0.41	3.53	0	0	0
284	SLV 8	0.26	-0.38	3.56	0	0	0
284	SLV 9	-0.24	0.23	4.49	0	0	0
284	SLV 10	-0.19	0.26	4.52	0	0	0
284	SLV 11	-0.29	-0.48	3.89	0	0	0
284	SLV 12	-0.23	-0.45	3.93	0	0	0
284	SLV 13	-0.85	-0.1	4.69	0	0	0
284	SLV 14	-0.76	-0.05	4.74	0	0	0
284	SLV 15	-0.86	-0.32	4.52	0	0	0
284	SLV 16	-0.77	-0.27	4.57	0	0	0
285	SLU 1	-1.05	-0.09	55.96	12.7854	-9.6506	0.2447
285	SLU 2	-1.06	0.04	55.9	12.776	-9.6399	0.2695
285	SLU 3	-1.09	-0.09	57.24	13.0781	-9.871	0.253
285	SLU 4	-1.09	-0.01	57.21	13.0725	-9.8646	0.2678
285	SLU 5	-1.08	0.04	56.73	12.9644	-9.7822	0.273
285	SLU 6	-1.1	-0.09	58.07	13.2664	-10.0134	0.2566
285	SLU 7	-1.11	-0.01	58.04	13.2608	-10.0069	0.2714
285	SLU 8	-1.09	-0.09	57.62	13.162	-9.9352	0.2519
285	SLU 9	-1.09	-0.02	57.58	13.1564	-9.9288	0.2667
285	SLU 10	-1.15	0.06	62.93	14.3723	-10.8466	0.2941
285	SLU 11	-1.17	-0.07	64.27	14.6743	-11.0777	0.2776
285	SLU 12	-1.18	0.01	64.23	14.6687	-11.0713	0.2924
285	SLU 13	-1.16	0.05	63.76	14.5606	-10.9889	0.2977
285	SLU 14	-1.19	-0.07	65.1	14.8626	-11.2201	0.2812
285	SLU 15	-1.19	0	65.06	14.857	-11.2136	0.296
285	SLU 16	-1.17	-0.08	64.64	14.7582	-11.1419	0.2765
285	SLU 17	-1.18	0	64.61	14.7526	-11.1355	0.2914
285	SLU 18	-1.18	-0.07	65.99	15.0657	-11.3744	0.2799
285	SLU 19	-1.18	0.01	65.96	15.0601	-11.368	0.2948
285	SLU 20	-1.19	-0.07	66.82	15.254	-11.5167	0.2835
285	SLU 21	-1.2	0.01	66.79	15.2484	-11.5103	0.2983
285	SLU 22	-1.19	-0.07	62.85	14.3548	-10.8333	0.2839
285	SLU 23	-1.2	0.06	62.8	14.3455	-10.8226	0.3086
285	SLU 24	-1.23	-0.06	64.14	14.6475	-11.0538	0.2921
285	SLU 25	-1.23	0.01	64.11	14.6419	-11.0474	0.307
285	SLU 26	-1.22	0.06	63.63	14.5338	-10.9649	0.3122
285	SLU 27	-1.24	-0.07	64.97	14.8358	-11.1961	0.2957
285	SLU 28	-1.25	0.01	64.94	14.8302	-11.1897	0.3105
285	SLU 29	-1.23	-0.07	64.51	14.7314	-11.118	0.291
285	SLU 30	-1.23	0.01	64.48	14.7258	-11.1116	0.3059
285	SLU 31	-1.29	0.08	69.82	15.9417	-12.0293	0.3332
285	SLU 32	-1.31	-0.05	71.16	16.2437	-12.2605	0.3167
285	SLU 33	-1.32	0.03	71.13	16.2381	-12.2541	0.3316
285	SLU 34	-1.31	0.08	70.65	16.13	-12.1716	0.3368
285	SLU 35	-1.33	-0.05	71.99	16.432	-12.4028	0.3203
285	SLU 36	-1.33	0.03	71.96	16.4265	-12.3964	0.3352
285	SLU 37	-1.31	-0.06	71.54	16.3277	-12.3247	0.3157
285	SLU 38	-1.32	0.02	71.5	16.3221	-12.3183	0.3305
285	SLU 39	-1.32	-0.04	72.89	16.6351	-12.5572	0.3191
285	SLU 40	-1.32	0.03	72.85	16.6295	-12.5508	0.3339
285	SLU 41	-1.34	-0.05	73.72	16.8234	-12.6995	0.3226
285	SLU 42	-1.34	0.03	73.68	16.8179	-12.6931	0.3375

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLU 43	-1.32	-0.12	70.38	16.0829	-12.1402	0.3047
285	SLU 44	-1.33	0.01	70.32	16.0736	-12.1295	0.3295
285	SLU 45	-1.35	-0.12	71.67	16.3756	-12.3607	0.313
285	SLU 46	-1.36	-0.04	71.63	16.37	-12.3543	0.3278
285	SLU 47	-1.34	0	71.15	16.2619	-12.2718	0.333
285	SLU 48	-1.37	-0.12	72.49	16.5639	-12.503	0.3166
285	SLU 49	-1.37	-0.05	72.46	16.5583	-12.4966	0.3314
285	SLU 50	-1.35	-0.13	72.04	16.4595	-12.4249	0.3119
285	SLU 51	-1.36	-0.05	72	16.4539	-12.4184	0.3267
285	SLU 52	-1.42	0.02	77.35	17.6698	-13.3362	0.3541
285	SLU 53	-1.44	-0.1	78.69	17.9718	-13.5674	0.3376
285	SLU 54	-1.44	-0.03	78.66	17.9662	-13.561	0.3524
285	SLU 55	-1.43	0.02	78.18	17.8581	-13.4785	0.3577
285	SLU 56	-1.46	-0.11	79.52	18.1602	-13.7097	0.3412
285	SLU 57	-1.46	-0.03	79.49	18.1546	-13.7033	0.356
285	SLU 58	-1.44	-0.11	79.06	18.0558	-13.6316	0.3365
285	SLU 59	-1.45	-0.03	79.03	18.0502	-13.6251	0.3514
285	SLU 60	-1.45	-0.1	80.41	18.3632	-13.8641	0.3399
285	SLU 61	-1.45	-0.02	80.38	18.3576	-13.8576	0.3548
285	SLU 62	-1.46	-0.1	81.24	18.5516	-14.0064	0.3435
285	SLU 63	-1.47	-0.03	81.21	18.546	-14	0.3583
285	SLU 64	-1.46	-0.1	77.27	17.6523	-13.323	0.3439
285	SLU 65	-1.47	0.03	77.22	17.643	-13.3123	0.3686
285	SLU 66	-1.49	-0.1	78.56	17.945	-13.5434	0.3521
285	SLU 67	-1.5	-0.02	78.53	17.9394	-13.537	0.367
285	SLU 68	-1.49	0.03	78.05	17.8313	-13.4546	0.3722
285	SLU 69	-1.51	-0.1	79.39	18.1333	-13.6858	0.3557
285	SLU 70	-1.51	-0.02	79.36	18.1277	-13.6793	0.3705
285	SLU 71	-1.49	-0.11	78.93	18.0289	-13.6076	0.351
285	SLU 72	-1.5	-0.03	78.9	18.0233	-13.6012	0.3659
285	SLU 73	-1.56	0.04	84.24	19.2392	-14.519	0.3932
285	SLU 74	-1.58	-0.08	85.59	19.5413	-14.7501	0.3767
285	SLU 75	-1.59	-0.01	85.55	19.5357	-14.7437	0.3916
285	SLU 76	-1.57	0.04	85.07	19.4275	-14.6613	0.3968
285	SLU 77	-1.6	-0.08	86.42	19.7296	-14.8925	0.3803
285	SLU 78	-1.6	-0.01	86.38	19.724	-14.886	0.3952
285	SLU 79	-1.58	-0.09	85.96	19.6252	-14.8143	0.3757
285	SLU 80	-1.59	-0.01	85.93	19.6196	-14.8079	0.3905
285	SLU 81	-1.59	-0.08	87.31	19.9327	-15.0468	0.3791
285	SLU 82	-1.59	0	87.28	19.9271	-15.0404	0.3939
285	SLU 83	-1.6	-0.08	88.14	20.121	-15.1892	0.3826
285	SLU 84	-1.61	0	88.11	20.1154	-15.1827	0.3975
285	SLE RA 1	-1.09	-0.08	57.93	13.2338	-9.9885	0.2559
285	SLE RA 2	-1.1	0	57.89	13.2276	-9.9814	0.2724
285	SLE RA 3	-1.11	-0.08	58.78	13.4289	-10.1355	0.2614
285	SLE RA 4	-1.12	-0.03	58.76	13.4252	-10.1312	0.2713
285	SLE RA 5	-1.11	0	58.44	13.3531	-10.0762	0.2748
285	SLE RA 6	-1.13	-0.08	59.34	13.5544	-10.2304	0.2638
285	SLE RA 7	-1.13	-0.03	59.32	13.5507	-10.2261	0.2737
285	SLE RA 8	-1.12	-0.09	59.03	13.4849	-10.1783	0.2607
285	SLE RA 9	-1.12	-0.03	59.01	13.4811	-10.174	0.2706
285	SLE RA 10	-1.16	0.01	62.57	14.2917	-10.7858	0.2888
285	SLE RA 11	-1.17	-0.07	63.47	14.4931	-10.9399	0.2778
285	SLE RA 12	-1.18	-0.02	63.45	14.4893	-10.9357	0.2877
285	SLE RA 13	-1.17	0.01	63.13	14.4173	-10.8807	0.2912
285	SLE RA 14	-1.18	-0.07	64.02	14.6186	-11.0348	0.2802
285	SLE RA 15	-1.19	-0.02	64	14.6149	-11.0305	0.2901
285	SLE RA 16	-1.17	-0.07	63.72	14.549	-10.9827	0.2771
285	SLE RA 17	-1.18	-0.02	63.69	14.5453	-10.9784	0.287
285	SLE RA 18	-1.18	-0.07	64.62	14.754	-11.1377	0.2794
285	SLE RA 19	-1.18	-0.02	64.59	14.7503	-11.1334	0.2893
285	SLE RA 20	-1.19	-0.07	65.17	14.8795	-11.2326	0.2818
285	SLE RA 21	-1.19	-0.02	65.15	14.8758	-11.2283	0.2917
285	SLE FR 1	-1.09	-0.08	57.93	13.2338	-9.9885	0.2559
285	SLE FR 2	-1.09	-0.06	57.92	13.2325	-9.9871	0.2592
285	SLE FR 3	-1.1	-0.08	58.15	13.284	-10.0264	0.2569
285	SLE FR 4	-1.12	-0.06	59.93	13.6886	-10.3318	0.2662
285	SLE FR 5	-1.12	-0.08	60.15	13.7401	-10.3712	0.2639
285	SLE FR 6	-1.14	-0.07	61.27	13.9939	-10.5631	0.2676
285	SLE QP 1	-1.09	-0.08	57.93	13.2338	-9.9885	0.2559
285	SLE QP 2	-1.12	-0.08	59.93	13.6898	-10.3333	0.2629
285	SLD 1	3.22	0.67	77.2	17.6285	-13.2294	-0.5884
285	SLD 2	3.74	-0.29	76.47	17.4778	-13.1044	-0.8926
285	SLD 3	3.37	-1.3	75.83	17.3435	-12.9941	-0.9816
285	SLD 4	3.9	-2.26	75.1	17.1928	-12.8691	-1.2858
285	SLD 5	-0.15	3.3	67.32	15.3304	-11.5812	0.658
285	SLD 6	0.19	2.68	66.84	15.2316	-11.4993	0.4586
285	SLD 7	0.37	-3.26	62.75	14.3806	-10.7968	-0.6527
285	SLD 8	0.72	-3.89	62.28	14.2818	-10.7149	-0.8521
285	SLD 9	-2.95	3.73	57.59	13.0979	-9.9516	1.378
285	SLD 10	-2.61	3.11	57.11	12.9991	-9.8697	1.1786
285	SLD 11	-2.43	-2.83	53.03	12.1481	-9.1672	0.0673
285	SLD 12	-2.09	-3.46	52.55	12.0493	-9.0853	-0.1321
285	SLD 13	-6.13	2.1	44.77	10.1868	-7.7974	1.8117
285	SLD 14	-5.61	1.15	44.04	10.0362	-7.6724	1.5075
285	SLD 15	-5.98	0.13	43.4	9.9019	-7.5621	1.4185
285	SLD 16	-5.45	-0.82	42.67	9.7512	-7.4371	1.1143
285	SLV 1	9.02	1.6	100.28	22.8963	-17.1018	-1.7412
285	SLV 2	10.25	-0.63	98.59	22.5454	-16.8107	-2.4497
285	SLV 3	9.38	-2.88	97.17	22.2493	-16.5679	-2.6361

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLV 4	10.61	-5.11	95.48	21.8984	-16.2768	-3.3446
285	SLV 5	1.17	7.61	77.04	17.4936	-13.2237	1.141
285	SLV 6	1.96	6.17	75.95	17.2674	-13.0361	0.6845
285	SLV 7	2.37	-7.33	66.68	15.3368	-11.444	-1.8421
285	SLV 8	3.15	-8.77	65.59	15.1106	-11.2564	-2.2987
285	SLV 9	-5.39	8.62	54.28	12.269	-9.4101	2.8245
285	SLV 10	-4.6	7.18	53.19	12.0429	-9.2225	2.368
285	SLV 11	-4.19	-6.33	43.91	10.1123	-7.6304	-0.1586
285	SLV 12	-3.41	-7.76	42.82	9.8861	-7.4428	-0.6151
285	SLV 13	-12.84	4.96	24.39	5.4813	-4.3897	3.8705
285	SLV 14	-11.62	2.73	22.7	5.1304	-4.0986	3.162
285	SLV 15	-12.48	0.47	21.28	4.8343	-3.8558	2.9756
285	SLV 16	-11.26	-1.75	19.59	4.4833	-3.5647	2.2671
285	CRTFP Ux+	0	0	0	0	0	0
285	CRTFP Ux-	0	0	0	0	0	0
285	CRTFP Uy+	0	0	0	0	0	0
285	CRTFP Uy-	0	0	0	0	0	0
287	SLU 1	-0.77	-0.07	37.84	10.3319	-0.9705	0.2664
287	SLU 2	-0.77	0.01	37.8	10.3299	-0.9695	0.2691
287	SLU 3	-0.79	-0.07	38.7	10.564	-0.9925	0.2745
287	SLU 4	-0.79	-0.02	38.68	10.5628	-0.9919	0.2761
287	SLU 5	-0.78	0.01	38.36	10.4791	-0.9837	0.2732
287	SLU 6	-0.8	-0.08	39.26	10.7132	-1.0067	0.2786
287	SLU 7	-0.8	-0.02	39.24	10.712	-1.0061	0.2802
287	SLU 8	-0.79	-0.08	38.96	10.6303	-0.9989	0.2746
287	SLU 9	-0.79	-0.03	38.93	10.6291	-0.9983	0.2762
287	SLU 10	-0.83	0.02	42.53	11.5928	-1.0902	0.2917
287	SLU 11	-0.86	-0.06	43.43	11.8269	-1.1132	0.2971
287	SLU 12	-0.86	-0.01	43.41	11.8257	-1.1126	0.2988
287	SLU 13	-0.85	0.02	43.09	11.742	-1.1044	0.2958
287	SLU 14	-0.87	-0.06	43.99	11.9761	-1.1275	0.3012
287	SLU 15	-0.87	-0.01	43.97	11.9749	-1.1268	0.3029
287	SLU 16	-0.86	-0.07	43.69	11.8932	-1.1197	0.2972
287	SLU 17	-0.86	-0.02	43.66	11.892	-1.119	0.2989
287	SLU 18	-0.86	-0.06	44.6	12.1361	-1.143	0.2987
287	SLU 19	-0.86	-0.01	44.57	12.1349	-1.1424	0.3004
287	SLU 20	-0.87	-0.06	45.15	12.2852	-1.1572	0.3028
287	SLU 21	-0.87	-0.01	45.13	12.284	-1.1566	0.3045
287	SLU 22	-0.87	-0.06	42.48	11.5751	-1.0887	0.3028
287	SLU 23	-0.87	0.03	42.44	11.5731	-1.0876	0.3055
287	SLU 24	-0.89	-0.06	43.34	11.8072	-1.1107	0.3109
287	SLU 25	-0.9	-0.01	43.32	11.806	-1.11	0.3126
287	SLU 26	-0.88	0.02	43	11.7223	-1.1018	0.3096
287	SLU 27	-0.91	-0.06	43.9	11.9564	-1.1249	0.315
287	SLU 28	-0.91	-0.01	43.88	11.9552	-1.1242	0.3167
287	SLU 29	-0.89	-0.06	43.59	11.8735	-1.1171	0.311
287	SLU 30	-0.9	-0.01	43.57	11.8723	-1.1165	0.3126
287	SLU 31	-0.94	0.04	47.17	12.836	-1.2084	0.3282
287	SLU 32	-0.96	-0.05	48.07	13.0701	-1.2314	0.3336
287	SLU 33	-0.96	0	48.05	13.0689	-1.2308	0.3352
287	SLU 34	-0.95	0.03	47.73	12.9852	-1.2226	0.3323
287	SLU 35	-0.97	-0.05	48.63	13.2193	-1.2456	0.3377
287	SLU 36	-0.97	0	48.61	13.2181	-1.245	0.3393
287	SLU 37	-0.96	-0.05	48.32	13.1364	-1.2378	0.3336
287	SLU 38	-0.96	0	48.3	13.1352	-1.2372	0.3353
287	SLU 39	-0.96	-0.04	49.24	13.3793	-1.2612	0.3351
287	SLU 40	-0.96	0.01	49.21	13.3781	-1.2605	0.3368
287	SLU 41	-0.97	-0.05	49.79	13.5284	-1.2754	0.3392
287	SLU 42	-0.98	0.01	49.77	13.5272	-1.2747	0.3409
287	SLU 43	-0.96	-0.1	47.6	13.0052	-1.2212	0.3338
287	SLU 44	-0.97	-0.02	47.56	13.0032	-1.2201	0.3366
287	SLU 45	-0.99	-0.1	48.47	13.2374	-1.2432	0.342
287	SLU 46	-0.99	-0.05	48.44	13.2361	-1.2425	0.3436
287	SLU 47	-0.98	-0.02	48.12	13.1524	-1.2343	0.3407
287	SLU 48	-1	-0.1	49.02	13.3865	-1.2574	0.346
287	SLU 49	-1	-0.05	49	13.3853	-1.2567	0.3477
287	SLU 50	-0.99	-0.11	48.72	13.3036	-1.2496	0.342
287	SLU 51	-0.99	-0.05	48.69	13.3024	-1.2489	0.3437
287	SLU 52	-1.03	-0.01	52.29	14.2661	-1.3408	0.3592
287	SLU 53	-1.05	-0.09	53.2	14.5003	-1.3639	0.3646
287	SLU 54	-1.05	-0.04	53.17	14.4991	-1.3632	0.3662
287	SLU 55	-1.04	-0.01	52.85	14.4153	-1.355	0.3633
287	SLU 56	-1.06	-0.09	53.75	14.6494	-1.3781	0.3687
287	SLU 57	-1.06	-0.04	53.73	14.6482	-1.3775	0.3703
287	SLU 58	-1.05	-0.09	53.45	14.5665	-1.3703	0.3647
287	SLU 59	-1.05	-0.04	53.42	14.5653	-1.3697	0.3663
287	SLU 60	-1.05	-0.09	54.36	14.8094	-1.3936	0.3662
287	SLU 61	-1.06	-0.04	54.34	14.8082	-1.393	0.3678
287	SLU 62	-1.07	-0.09	54.92	14.9586	-1.4079	0.3703
287	SLU 63	-1.07	-0.04	54.89	14.9574	-1.4072	0.3719
287	SLU 64	-1.07	-0.09	52.24	14.2484	-1.3393	0.3703
287	SLU 65	-1.07	0	52.2	14.2464	-1.3383	0.373
287	SLU 66	-1.09	-0.09	53.1	14.4806	-1.3613	0.3784
287	SLU 67	-1.09	-0.03	53.08	14.4794	-1.3607	0.38
287	SLU 68	-1.08	0	52.76	14.3956	-1.3525	0.3771
287	SLU 69	-1.1	-0.09	53.66	14.6297	-1.3755	0.3825
287	SLU 70	-1.1	-0.04	53.64	14.6285	-1.3749	0.3841
287	SLU 71	-1.09	-0.09	53.36	14.5468	-1.3677	0.3785
287	SLU 72	-1.09	-0.04	53.33	14.5456	-1.3671	0.3801
287	SLU 73	-1.13	0.01	56.93	15.5093	-1.459	0.3956

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLU 74	-1.15	-0.07	57.84	15.7435	-1.4821	0.401
287	SLU 75	-1.15	-0.02	57.81	15.7423	-1.4814	0.4026
287	SLU 76	-1.14	0.01	57.49	15.6585	-1.4732	0.3997
287	SLU 77	-1.17	-0.08	58.39	15.8926	-1.4963	0.4051
287	SLU 78	-1.17	-0.03	58.37	15.8914	-1.4956	0.4067
287	SLU 79	-1.15	-0.08	58.09	15.8097	-1.4885	0.4011
287	SLU 80	-1.16	-0.03	58.06	15.8085	-1.4878	0.4027
287	SLU 81	-1.16	-0.07	59	16.0526	-1.5118	0.4026
287	SLU 82	-1.16	-0.02	58.98	16.0514	-1.5112	0.4042
287	SLU 83	-1.17	-0.07	59.56	16.2018	-1.526	0.4067
287	SLU 84	-1.17	-0.02	59.53	16.2006	-1.5254	0.4083
287	SLE RA 1	-0.8	-0.07	39.17	10.6871	-1.0043	0.2768
287	SLE RA 2	-0.8	-0.01	39.14	10.6858	-1.0036	0.2786
287	SLE RA 3	-0.81	-0.07	39.74	10.8419	-1.0189	0.2822
287	SLE RA 4	-0.81	-0.03	39.73	10.8411	-1.0185	0.2833
287	SLE RA 5	-0.81	-0.01	39.51	10.7852	-1.013	0.2814
287	SLE RA 6	-0.82	-0.07	40.11	10.9413	-1.0284	0.285
287	SLE RA 7	-0.82	-0.04	40.1	10.9405	-1.028	0.286
287	SLE RA 8	-0.81	-0.07	39.91	10.886	-1.0232	0.2823
287	SLE RA 9	-0.81	-0.04	39.89	10.8852	-1.0228	0.2834
287	SLE RA 10	-0.84	-0.01	42.29	11.5277	-1.0841	0.2937
287	SLE RA 11	-0.86	-0.06	42.9	11.6838	-1.0994	0.2973
287	SLE RA 12	-0.86	-0.03	42.88	11.683	-1.099	0.2984
287	SLE RA 13	-0.85	-0.01	42.67	11.6272	-1.0935	0.2964
287	SLE RA 14	-0.86	-0.06	43.27	11.7832	-1.1089	0.3
287	SLE RA 15	-0.86	-0.03	43.25	11.7824	-1.1085	0.3011
287	SLE RA 16	-0.86	-0.07	43.06	11.728	-1.1037	0.2974
287	SLE RA 17	-0.86	-0.03	43.05	11.7271	-1.1033	0.2984
287	SLE RA 18	-0.86	-0.06	43.67	11.8899	-1.1193	0.2984
287	SLE RA 19	-0.86	-0.03	43.66	11.8891	-1.1188	0.2994
287	SLE RA 20	-0.87	-0.06	44.04	11.9893	-1.1287	0.3011
287	SLE RA 21	-0.87	-0.03	44.03	11.9885	-1.1283	0.3022
287	SLE FR 1	-0.8	-0.07	39.17	10.6871	-1.0043	0.2768
287	SLE FR 2	-0.8	-0.06	39.16	10.6868	-1.0041	0.2772
287	SLE FR 3	-0.8	-0.07	39.31	10.7269	-1.0081	0.2779
287	SLE FR 4	-0.82	-0.06	40.51	11.0477	-1.0386	0.2836
287	SLE FR 5	-0.82	-0.07	40.67	11.0877	-1.0426	0.2844
287	SLE FR 6	-0.83	-0.06	41.42	11.2885	-1.0618	0.2876
287	SLE QP 1	-0.8	-0.07	39.17	10.6871	-1.0043	0.2768
287	SLE QP 2	-0.82	-0.07	40.52	11.0479	-1.0388	0.2833
287	SLD 1	2.36	0.45	51.88	14.1876	-1.3182	-0.8064
287	SLD 2	2.73	-0.21	51.41	14.0724	-1.3065	-0.9528
287	SLD 3	2.46	-0.93	51	13.9566	-1.296	-0.8719
287	SLD 4	2.83	-1.59	50.53	13.8414	-1.2843	-1.0183
287	SLD 5	-0.07	2.3	45.36	12.3606	-1.1584	0.0817
287	SLD 6	0.17	1.87	45.05	12.2851	-1.1507	-0.0142
287	SLD 7	0.24	-2.3	42.4	11.5907	-1.0843	-0.1366
287	SLD 8	0.49	-2.74	42.09	11.5152	-1.0766	-0.2326
287	SLD 9	-2.12	2.6	38.94	10.5807	-1.0009	0.7991
287	SLD 10	-1.87	2.17	38.64	10.5052	-0.9933	0.7032
287	SLD 11	-1.8	-2	35.98	9.8108	-0.9268	0.5808
287	SLD 12	-1.56	-2.44	35.68	9.7352	-0.9192	0.4848
287	SLD 13	-4.46	1.46	30.51	8.2545	-0.7933	1.5849
287	SLD 14	-4.09	0.79	30.04	8.1393	-0.7816	1.4385
287	SLD 15	-4.36	0.08	29.62	8.0235	-0.7711	1.5194
287	SLD 16	-3.99	-0.59	29.15	7.9083	-0.7594	1.373
287	SLV 1	6.62	1.1	67.09	18.3864	-1.6918	-2.2674
287	SLV 2	7.48	-0.44	65.99	18.1181	-1.6645	-2.6083
287	SLV 3	6.84	-2.04	65.07	17.8626	-1.6414	-2.4169
287	SLV 4	7.7	-3.59	63.98	17.5943	-1.6142	-2.7578
287	SLV 5	0.94	5.32	51.73	14.0902	-1.3158	-0.1965
287	SLV 6	1.49	4.33	51.03	13.9173	-1.2982	-0.4162
287	SLV 7	1.66	-5.16	45.02	12.3441	-1.1478	-0.6948
287	SLV 8	2.21	-6.16	44.31	12.1712	-1.1303	-0.9145
287	SLV 9	-3.85	6.03	36.72	9.9247	-0.9473	1.481
287	SLV 10	-3.29	5.03	36.02	9.7518	-0.9297	1.2613
287	SLV 11	-3.13	-4.46	30.01	8.1786	-0.7793	0.9828
287	SLV 12	-2.57	-5.45	29.3	8.0057	-0.7618	0.7631
287	SLV 13	-9.33	3.45	17.06	4.5016	-0.4634	3.3244
287	SLV 14	-8.47	1.91	15.96	4.2333	-0.4362	2.9835
287	SLV 15	-9.11	0.31	15.04	3.9778	-0.413	3.1749
287	SLV 16	-8.25	-1.24	13.95	3.7095	-0.3858	2.834
287	CRTFP Ux+	0	0	0	0	0	0
287	CRTFP Ux-	0	0	0	0	0	0
287	CRTFP Uy+	0	0	0	0	0	0
287	CRTFP Uy-	0	0	0	0	0	0
288	SLU 1	-0.9	-0.1	40.39	9.4039	0.1143	0.3129
288	SLU 2	-0.9	-0.01	40.35	9.409	0.1144	0.313
288	SLU 3	-0.92	-0.1	41.31	9.6097	0.1172	0.3224
288	SLU 4	-0.92	-0.05	41.28	9.6128	0.1172	0.3224
288	SLU 5	-0.91	-0.02	40.94	9.5413	0.1162	0.3179
288	SLU 6	-0.94	-0.1	41.9	9.742	0.119	0.3272
288	SLU 7	-0.94	-0.05	41.87	9.7451	0.1191	0.3272
288	SLU 8	-0.92	-0.1	41.58	9.6685	0.118	0.3226
288	SLU 9	-0.92	-0.05	41.55	9.6716	0.118	0.3227
288	SLU 10	-0.97	0	45.37	10.5269	0.1294	0.3392
288	SLU 11	-1	-0.09	46.33	10.7275	0.1322	0.3485
288	SLU 12	-1	-0.04	46.31	10.7306	0.1322	0.3485
288	SLU 13	-0.99	-0.01	45.97	10.6592	0.1312	0.344
288	SLU 14	-1.01	-0.09	46.93	10.8599	0.134	0.3533

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLU 15	-1.01	-0.04	46.9	10.8629	0.1341	0.3534
288	SLU 16	-1	-0.09	46.6	10.7864	0.133	0.3487
288	SLU 17	-1	-0.04	46.58	10.7894	0.133	0.3488
288	SLU 18	-1	-0.08	47.57	11.0008	0.1358	0.3503
288	SLU 19	-1	-0.03	47.55	11.0039	0.1358	0.3503
288	SLU 20	-1.02	-0.09	48.16	11.1331	0.1376	0.3551
288	SLU 21	-1.02	-0.04	48.14	11.1362	0.1376	0.3552
288	SLU 22	-1.02	-0.08	45.31	10.5045	0.1295	0.3549
288	SLU 23	-1.02	0	45.27	10.5097	0.1295	0.355
288	SLU 24	-1.04	-0.08	46.23	10.7104	0.1323	0.3644
288	SLU 25	-1.04	-0.03	46.2	10.7134	0.1324	0.3644
288	SLU 26	-1.03	0	45.86	10.642	0.1313	0.3599
288	SLU 27	-1.06	-0.08	46.82	10.8427	0.1341	0.3692
288	SLU 28	-1.06	-0.03	46.79	10.8458	0.1342	0.3692
288	SLU 29	-1.04	-0.09	46.49	10.7692	0.1331	0.3646
288	SLU 30	-1.04	-0.04	46.47	10.7723	0.1331	0.3647
288	SLU 31	-1.09	0.01	50.29	11.6275	0.1445	0.3812
288	SLU 32	-1.12	-0.07	51.25	11.8282	0.1473	0.3905
288	SLU 33	-1.12	-0.02	51.23	11.8313	0.1474	0.3905
288	SLU 34	-1.11	0.01	50.88	11.7599	0.1463	0.386
288	SLU 35	-1.13	-0.07	51.84	11.9605	0.1492	0.3953
288	SLU 36	-1.13	-0.02	51.82	11.9636	0.1492	0.3954
288	SLU 37	-1.12	-0.08	51.52	11.887	0.1481	0.3907
288	SLU 38	-1.12	-0.03	51.49	11.8901	0.1481	0.3908
288	SLU 39	-1.12	-0.07	52.49	12.1015	0.1509	0.3923
288	SLU 40	-1.12	-0.02	52.47	12.1046	0.1509	0.3923
288	SLU 41	-1.14	-0.07	53.08	12.2338	0.1527	0.3971
288	SLU 42	-1.14	-0.02	53.06	12.2369	0.1527	0.3972
288	SLU 43	-1.12	-0.13	50.82	11.8477	0.1435	0.3924
288	SLU 44	-1.12	-0.05	50.78	11.8528	0.1435	0.3925
288	SLU 45	-1.15	-0.13	51.74	12.0535	0.1463	0.4018
288	SLU 46	-1.15	-0.08	51.71	12.0566	0.1464	0.4019
288	SLU 47	-1.14	-0.05	51.37	11.9851	0.1453	0.3973
288	SLU 48	-1.16	-0.13	52.33	12.1858	0.1482	0.4067
288	SLU 49	-1.16	-0.09	52.3	12.1889	0.1482	0.4067
288	SLU 50	-1.15	-0.14	52.01	12.1123	0.1471	0.4021
288	SLU 51	-1.15	-0.09	51.98	12.1154	0.1471	0.4022
288	SLU 52	-1.2	-0.04	55.81	12.9707	0.1585	0.4186
288	SLU 53	-1.22	-0.12	56.77	13.1713	0.1613	0.428
288	SLU 54	-1.23	-0.07	56.74	13.1744	0.1614	0.428
288	SLU 55	-1.21	-0.04	56.4	13.103	0.1603	0.4235
288	SLU 56	-1.24	-0.12	57.36	13.3036	0.1632	0.4328
288	SLU 57	-1.24	-0.07	57.33	13.3067	0.1632	0.4329
288	SLU 58	-1.23	-0.13	57.03	13.2301	0.1621	0.4282
288	SLU 59	-1.23	-0.08	57.01	13.2332	0.1621	0.4283
288	SLU 60	-1.23	-0.12	58	13.4446	0.1649	0.4297
288	SLU 61	-1.23	-0.07	57.98	13.4477	0.1649	0.4298
288	SLU 62	-1.24	-0.12	58.6	13.5769	0.1667	0.4346
288	SLU 63	-1.24	-0.07	58.57	13.58	0.1667	0.4346
288	SLU 64	-1.24	-0.12	55.74	12.9483	0.1586	0.4344
288	SLU 65	-1.24	-0.03	55.7	12.9535	0.1586	0.4345
288	SLU 66	-1.27	-0.12	56.66	13.1541	0.1614	0.4438
288	SLU 67	-1.27	-0.07	56.63	13.1572	0.1615	0.4439
288	SLU 68	-1.26	-0.04	56.29	13.0858	0.1604	0.4394
288	SLU 69	-1.28	-0.12	57.25	13.2865	0.1633	0.4487
288	SLU 70	-1.28	-0.07	57.22	13.2895	0.1633	0.4487
288	SLU 71	-1.27	-0.12	56.93	13.213	0.1622	0.4441
288	SLU 72	-1.27	-0.07	56.9	13.216	0.1622	0.4442
288	SLU 73	-1.32	-0.02	60.72	14.0713	0.1736	0.4606
288	SLU 74	-1.34	-0.11	61.68	14.272	0.1765	0.47
288	SLU 75	-1.35	-0.06	61.66	14.2751	0.1765	0.47
288	SLU 76	-1.33	-0.03	61.32	14.2036	0.1754	0.4655
288	SLU 77	-1.36	-0.11	62.28	14.4043	0.1783	0.4748
288	SLU 78	-1.36	-0.06	62.25	14.4074	0.1783	0.4749
288	SLU 79	-1.35	-0.11	61.95	14.3308	0.1772	0.4702
288	SLU 80	-1.35	-0.06	61.93	14.3339	0.1772	0.4703
288	SLU 81	-1.35	-0.1	62.92	14.5453	0.18	0.4717
288	SLU 82	-1.35	-0.05	62.9	14.5484	0.18	0.4718
288	SLU 83	-1.36	-0.1	63.52	14.6776	0.1818	0.4766
288	SLU 84	-1.36	-0.05	63.49	14.6807	0.1819	0.4766
288	SLE RA 1	-0.93	-0.09	41.8	9.7183	0.1187	0.3249
288	SLE RA 2	-0.93	-0.04	41.77	9.7218	0.1187	0.325
288	SLE RA 3	-0.95	-0.09	42.41	9.8556	0.1206	0.3312
288	SLE RA 4	-0.95	-0.06	42.39	9.8576	0.1206	0.3313
288	SLE RA 5	-0.94	-0.04	42.16	9.81	0.1199	0.3282
288	SLE RA 6	-0.96	-0.09	42.8	9.9438	0.1218	0.3344
288	SLE RA 7	-0.96	-0.06	42.78	9.9458	0.1218	0.3345
288	SLE RA 8	-0.95	-0.1	42.59	9.8948	0.1211	0.3314
288	SLE RA 9	-0.95	-0.06	42.57	9.8968	0.1211	0.3314
288	SLE RA 10	-0.98	-0.03	45.12	10.467	0.1287	0.3424
288	SLE RA 11	-1	-0.09	45.76	10.6008	0.1306	0.3486
288	SLE RA 12	-1	-0.05	45.74	10.6029	0.1306	0.3487
288	SLE RA 13	-0.99	-0.03	45.51	10.5552	0.1299	0.3456
288	SLE RA 14	-1.01	-0.09	46.15	10.689	0.1318	0.3519
288	SLE RA 15	-1.01	-0.05	46.14	10.6911	0.1318	0.3519
288	SLE RA 16	-1	-0.09	45.94	10.64	0.1311	0.3488
288	SLE RA 17	-1	-0.06	45.92	10.6421	0.1311	0.3488
288	SLE RA 18	-1	-0.08	46.59	10.783	0.133	0.3498
288	SLE RA 19	-1	-0.05	46.57	10.785	0.133	0.3499
288	SLE RA 20	-1.01	-0.08	46.98	10.8712	0.1342	0.3531

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLE RA 21	-1.01	-0.05	46.96	10.8732	0.1342	0.3531
288	SLE FR 1	-0.93	-0.09	41.8	9.7183	0.1187	0.3249
288	SLE FR 2	-0.93	-0.08	41.79	9.719	0.1187	0.325
288	SLE FR 3	-0.93	-0.09	41.96	9.7536	0.1191	0.3262
288	SLE FR 4	-0.95	-0.08	43.23	10.0384	0.123	0.3324
288	SLE FR 5	-0.95	-0.09	43.39	10.073	0.1234	0.3337
288	SLE FR 6	-0.97	-0.09	44.19	10.2507	0.1258	0.3374
288	SLE QP 1	-0.93	-0.09	41.8	9.7183	0.1187	0.3249
288	SLE QP 2	-0.95	-0.09	43.23	10.0377	0.1229	0.3324
288	SLD 1	2.74	1.55	54.85	12.8222	0.176	-0.9612
288	SLD 2	3.17	0.85	54.36	12.7205	0.174	-1.1089
288	SLD 3	2.85	0.06	53.92	12.5833	0.1719	-0.9955
288	SLD 4	3.27	-0.65	53.44	12.4816	0.1699	-1.1431
288	SLD 5	-0.08	2.8	48.21	11.2535	0.1455	0.0226
288	SLD 6	0.2	2.34	47.89	11.1868	0.1442	-0.0742
288	SLD 7	0.27	-2.19	45.13	10.4572	0.1317	-0.0917
288	SLD 8	0.56	-2.65	44.81	10.3905	0.1304	-0.1885
288	SLD 9	-2.46	2.47	41.66	9.685	0.1155	0.8533
288	SLD 10	-2.18	2.01	41.34	9.6183	0.1142	0.7565
288	SLD 11	-2.1	-2.52	38.58	8.8887	0.1017	0.739
288	SLD 12	-1.82	-2.98	38.26	8.822	0.1004	0.6422
288	SLD 13	-5.18	0.47	33.03	7.5939	0.076	1.8079
288	SLD 14	-4.75	-0.24	32.54	7.4922	0.074	1.6603
288	SLD 15	-5.07	-1.03	32.11	7.355	0.0719	1.7737
288	SLD 16	-4.64	-1.73	31.62	7.2533	0.0699	1.626
288	SLV 1	7.68	3.71	70.38	16.5452	0.247	-2.6939
288	SLV 2	8.68	2.07	69.25	16.3083	0.2424	-3.0378
288	SLV 3	7.93	0.3	68.28	16.0026	0.2375	-2.7728
288	SLV 4	8.93	-1.34	67.15	15.7657	0.2328	-3.1167
288	SLV 5	1.09	6.5	54.75	12.8536	0.1755	-0.3965
288	SLV 6	1.74	5.44	54.02	12.7009	0.1725	-0.6182
288	SLV 7	1.91	-4.86	47.77	11.0452	0.1436	-0.6597
288	SLV 8	2.56	-5.91	47.04	10.8925	0.1406	-0.8813
288	SLV 9	-4.46	5.73	39.43	9.183	0.1053	1.5461
288	SLV 10	-3.82	4.68	38.7	9.0303	0.1023	1.3245
288	SLV 11	-3.64	-5.62	32.45	7.3745	0.0734	1.283
288	SLV 12	-2.99	-6.68	31.72	7.2219	0.0704	1.0613
288	SLV 13	-10.83	1.16	19.32	4.3097	0.0131	3.7816
288	SLV 14	-9.83	-0.48	18.19	4.0728	0.0084	3.4376
288	SLV 15	-10.58	-2.25	17.22	3.7672	0.0035	3.7026
288	SLV 16	-9.58	-3.89	16.09	3.5303	-0.0012	3.3587
288	CRTFP Ux+	0	0	0	0	0	0
288	CRTFP Ux-	0	0	0	0	0	0
288	CRTFP Uy+	0	0	0	0	0	0
288	CRTFP Uy-	0	0	0	0	0	0
289	SLU 1	-0.9	-0.11	37.31	7.2229	0.0912	0.3147
289	SLU 2	-0.9	-0.04	37.27	7.2356	0.0913	0.3146
289	SLU 3	-0.93	-0.11	38.15	7.3751	0.0935	0.3242
289	SLU 4	-0.93	-0.07	38.12	7.3827	0.0936	0.3241
289	SLU 5	-0.92	-0.04	37.81	7.3335	0.0927	0.3194
289	SLU 6	-0.94	-0.11	38.69	7.473	0.095	0.329
289	SLU 7	-0.94	-0.07	38.66	7.4806	0.095	0.3289
289	SLU 8	-0.93	-0.11	38.4	7.4187	0.0941	0.3244
289	SLU 9	-0.93	-0.07	38.37	7.4263	0.0942	0.3243
289	SLU 10	-0.98	-0.03	41.89	8.0604	0.1032	0.341
289	SLU 11	-1	-0.1	42.77	8.1999	0.1054	0.3506
289	SLU 12	-1	-0.06	42.75	8.2075	0.1054	0.3505
289	SLU 13	-0.99	-0.04	42.43	8.1583	0.1046	0.3458
289	SLU 14	-1.02	-0.1	43.32	8.2978	0.1069	0.3554
289	SLU 15	-1.02	-0.06	43.29	8.3054	0.1069	0.3553
289	SLU 16	-1	-0.11	43.02	8.2436	0.106	0.3508
289	SLU 17	-1	-0.07	42.99	8.2511	0.106	0.3507
289	SLU 18	-1.01	-0.09	43.92	8.4012	0.1082	0.3524
289	SLU 19	-1.01	-0.05	43.89	8.4088	0.1082	0.3523
289	SLU 20	-1.02	-0.1	44.46	8.4991	0.1096	0.3573
289	SLU 21	-1.02	-0.06	44.43	8.5067	0.1097	0.3572
289	SLU 22	-1.02	-0.09	41.82	8.035	0.1033	0.357
289	SLU 23	-1.02	-0.03	41.78	8.0477	0.1033	0.3569
289	SLU 24	-1.05	-0.09	42.66	8.1872	0.1056	0.3665
289	SLU 25	-1.05	-0.05	42.63	8.1948	0.1056	0.3664
289	SLU 26	-1.04	-0.03	42.32	8.1456	0.1048	0.3617
289	SLU 27	-1.06	-0.1	43.2	8.2851	0.107	0.3713
289	SLU 28	-1.06	-0.06	43.18	8.2927	0.1071	0.3712
289	SLU 29	-1.05	-0.1	42.91	8.2308	0.1062	0.3667
289	SLU 30	-1.05	-0.06	42.88	8.2384	0.1062	0.3666
289	SLU 31	-1.1	-0.02	46.4	8.8725	0.1152	0.3833
289	SLU 32	-1.12	-0.08	47.29	9.012	0.1175	0.3929
289	SLU 33	-1.12	-0.04	47.26	9.0196	0.1175	0.3928
289	SLU 34	-1.11	-0.02	46.94	8.9704	0.1167	0.3881
289	SLU 35	-1.14	-0.09	47.83	9.1099	0.1189	0.3977
289	SLU 36	-1.14	-0.05	47.8	9.1175	0.1189	0.3976
289	SLU 37	-1.12	-0.09	47.53	9.0557	0.1181	0.3931
289	SLU 38	-1.13	-0.05	47.5	9.0633	0.1181	0.393
289	SLU 39	-1.13	-0.08	48.43	9.2134	0.1202	0.3947
289	SLU 40	-1.13	-0.04	48.4	9.2209	0.1203	0.3946
289	SLU 41	-1.14	-0.08	48.97	9.3113	0.1217	0.3996
289	SLU 42	-1.14	-0.04	48.94	9.3188	0.1217	0.3995
289	SLU 43	-1.13	-0.14	46.96	9.1114	0.1145	0.3946
289	SLU 44	-1.13	-0.08	46.91	9.124	0.1145	0.3945
289	SLU 45	-1.16	-0.14	47.8	9.2635	0.1168	0.4041

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLU 46	-1.16	-0.1	47.77	9.2711	0.1168	0.404
289	SLU 47	-1.14	-0.08	47.46	9.2219	0.116	0.3993
289	SLU 48	-1.17	-0.15	48.34	9.3614	0.1182	0.4089
289	SLU 49	-1.17	-0.11	48.31	9.369	0.1182	0.4088
289	SLU 50	-1.16	-0.15	48.04	9.3072	0.1174	0.4043
289	SLU 51	-1.16	-0.11	48.02	9.3148	0.1174	0.4043
289	SLU 52	-1.21	-0.07	51.54	9.9488	0.1264	0.4209
289	SLU 53	-1.23	-0.14	52.42	10.0884	0.1286	0.4305
289	SLU 54	-1.23	-0.1	52.39	10.0959	0.1287	0.4304
289	SLU 55	-1.22	-0.07	52.08	10.0467	0.1278	0.4257
289	SLU 56	-1.25	-0.14	52.96	10.1863	0.1301	0.4353
289	SLU 57	-1.25	-0.1	52.94	10.1938	0.1301	0.4353
289	SLU 58	-1.23	-0.14	52.67	10.132	0.1292	0.4307
289	SLU 59	-1.23	-0.1	52.64	10.1396	0.1293	0.4307
289	SLU 60	-1.24	-0.13	53.56	10.2897	0.1314	0.4323
289	SLU 61	-1.24	-0.09	53.54	10.2973	0.1315	0.4323
289	SLU 62	-1.25	-0.14	54.11	10.3876	0.1329	0.4372
289	SLU 63	-1.25	-0.1	54.08	10.3952	0.1329	0.4371
289	SLU 64	-1.25	-0.13	51.47	9.9235	0.1265	0.4369
289	SLU 65	-1.25	-0.06	51.42	9.9361	0.1266	0.4368
289	SLU 66	-1.28	-0.13	52.31	10.0756	0.1288	0.4464
289	SLU 67	-1.28	-0.09	52.28	10.0832	0.1288	0.4463
289	SLU 68	-1.26	-0.07	51.97	10.034	0.128	0.4416
289	SLU 69	-1.29	-0.13	52.85	10.1736	0.1303	0.4512
289	SLU 70	-1.29	-0.09	52.82	10.1811	0.1303	0.4511
289	SLU 71	-1.28	-0.14	52.56	10.1193	0.1294	0.4466
289	SLU 72	-1.28	-0.1	52.53	10.1269	0.1294	0.4466
289	SLU 73	-1.33	-0.05	56.05	10.7609	0.1384	0.4632
289	SLU 74	-1.35	-0.12	56.93	10.9005	0.1407	0.4728
289	SLU 75	-1.35	-0.08	56.9	10.908	0.1407	0.4727
289	SLU 76	-1.34	-0.06	56.59	10.8588	0.1399	0.468
289	SLU 77	-1.37	-0.12	57.47	10.9984	0.1421	0.4776
289	SLU 78	-1.37	-0.08	57.45	11.006	0.1422	0.4776
289	SLU 79	-1.35	-0.13	57.18	10.9441	0.1413	0.473
289	SLU 80	-1.35	-0.09	57.15	10.9517	0.1413	0.473
289	SLU 81	-1.36	-0.12	58.08	11.1018	0.1435	0.4746
289	SLU 82	-1.36	-0.08	58.05	11.1094	0.1435	0.4746
289	SLU 83	-1.37	-0.12	58.62	11.1997	0.1449	0.4795
289	SLU 84	-1.37	-0.08	58.59	11.2073	0.145	0.4794
289	SLE RA 1	-0.93	-0.1	38.6	7.4549	0.0947	0.3268
289	SLE RA 2	-0.94	-0.06	38.57	7.4634	0.0947	0.3267
289	SLE RA 3	-0.95	-0.1	39.16	7.5564	0.0962	0.3331
289	SLE RA 4	-0.95	-0.08	39.14	7.5615	0.0962	0.333
289	SLE RA 5	-0.94	-0.06	38.93	7.5286	0.0957	0.3299
289	SLE RA 6	-0.96	-0.11	39.52	7.6217	0.0972	0.3363
289	SLE RA 7	-0.96	-0.08	39.5	7.6267	0.0972	0.3363
289	SLE RA 8	-0.95	-0.11	39.32	7.5855	0.0966	0.3333
289	SLE RA 9	-0.95	-0.08	39.31	7.5905	0.0966	0.3332
289	SLE RA 10	-0.99	-0.05	41.65	8.0133	0.1026	0.3443
289	SLE RA 11	-1	-0.1	42.24	8.1063	0.1041	0.3507
289	SLE RA 12	-1	-0.07	42.22	8.1113	0.1041	0.3506
289	SLE RA 13	-1	-0.05	42.01	8.0785	0.1036	0.3475
289	SLE RA 14	-1.01	-0.1	42.6	8.1716	0.1051	0.3539
289	SLE RA 15	-1.01	-0.07	42.59	8.1766	0.1051	0.3539
289	SLE RA 16	-1	-0.1	42.41	8.1354	0.1045	0.3509
289	SLE RA 17	-1	-0.07	42.39	8.1404	0.1045	0.3508
289	SLE RA 18	-1.01	-0.09	43	8.2405	0.106	0.3519
289	SLE RA 19	-1.01	-0.07	42.99	8.2456	0.106	0.3519
289	SLE RA 20	-1.02	-0.1	43.37	8.3058	0.1069	0.3552
289	SLE RA 21	-1.02	-0.07	43.35	8.3108	0.107	0.3551
289	SLE FR 1	-0.93	-0.1	38.6	7.4549	0.0947	0.3268
289	SLE FR 2	-0.93	-0.09	38.6	7.4566	0.0947	0.3268
289	SLE FR 3	-0.94	-0.1	38.75	7.4811	0.0951	0.3281
289	SLE FR 4	-0.96	-0.09	39.92	7.6923	0.0981	0.3343
289	SLE FR 5	-0.96	-0.1	40.07	7.7167	0.0984	0.3356
289	SLE FR 6	-0.97	-0.1	40.8	7.8477	0.1003	0.3394
289	SLE QP 1	-0.93	-0.1	38.6	7.4549	0.0947	0.3268
289	SLE QP 2	-0.96	-0.1	39.92	7.6906	0.0981	0.3343
289	SLD 1	2.74	1.42	50.07	9.743	0.1436	-0.962
289	SLD 2	3.17	0.78	49.64	9.6693	0.1419	-1.1099
289	SLD 3	2.85	0.03	49.24	9.5078	0.1401	-0.9959
289	SLD 4	3.27	-0.6	48.81	9.4342	0.1384	-1.1437
289	SLD 5	-0.08	2.57	44.31	8.676	0.1173	0.0231
289	SLD 6	0.2	2.15	44.03	8.6277	0.1162	-0.0738
289	SLD 7	0.27	-2.04	41.53	7.8923	0.1057	-0.0898
289	SLD 8	0.55	-2.46	41.25	7.844	0.1046	-0.1867
289	SLD 9	-2.46	2.26	38.6	7.5372	0.0916	0.8554
289	SLD 10	-2.18	1.84	38.31	7.489	0.0905	0.7585
289	SLD 11	-2.11	-2.35	35.82	6.7535	0.0799	0.7425
289	SLD 12	-1.83	-2.77	35.54	6.7052	0.0788	0.6456
289	SLD 13	-5.19	0.4	31.04	5.947	0.0578	1.8124
289	SLD 14	-4.76	-0.23	30.6	5.8734	0.0561	1.6646
289	SLD 15	-5.08	-0.98	30.2	5.7119	0.0543	1.7785
289	SLD 16	-4.65	-1.62	29.77	5.6383	0.0526	1.6307
289	SLV 1	7.69	3.41	63.65	12.4866	0.2045	-2.6984
289	SLV 2	8.69	1.92	62.64	12.3151	0.2005	-3.0427
289	SLV 3	7.94	0.25	61.76	11.9496	0.1964	-2.7764
289	SLV 4	8.93	-1.23	60.75	11.7781	0.1925	-3.1208
289	SLV 5	1.1	5.99	50.08	9.9735	0.1429	-0.3979
289	SLV 6	1.74	5.03	49.43	9.8629	0.1403	-0.6198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLV 7	1.91	-4.52	43.78	8.1833	0.116	-0.6579
289	SLV 8	2.55	-5.48	43.13	8.0728	0.1135	-0.8798
289	SLV 9	-4.46	5.28	36.71	7.3084	0.0826	1.5485
289	SLV 10	-3.82	4.32	36.06	7.1979	0.0801	1.3266
289	SLV 11	-3.65	-5.23	30.42	5.5183	0.0558	1.2884
289	SLV 12	-3.01	-6.19	29.77	5.4078	0.0533	1.0665
289	SLV 13	-10.85	1.03	19.09	3.6031	0.0037	3.7894
289	SLV 14	-9.85	-0.45	18.09	3.4316	-0.0003	3.4451
289	SLV 15	-10.6	-2.12	17.2	3.0661	-0.0044	3.7114
289	SLV 16	-9.6	-3.61	16.2	2.8946	-0.0083	3.3671
289	CRTFP Ux+	0	0	0	0	0	0
289	CRTFP Ux-	0	0	0	0	0	0
289	CRTFP Uy+	0	0	0	0	0	0
289	CRTFP Uy-	0	0	0	0	0	0
290	SLU 1	-0.9	-0.12	34.93	5.5956	0.0677	0.3159
290	SLU 2	-0.9	-0.06	34.89	5.6149	0.0677	0.3155
290	SLU 3	-0.93	-0.12	35.71	5.7078	0.0694	0.3254
290	SLU 4	-0.93	-0.09	35.68	5.7193	0.0694	0.3251
290	SLU 5	-0.92	-0.07	35.39	5.6872	0.0688	0.3204
290	SLU 6	-0.94	-0.12	36.22	5.78	0.0705	0.3302
290	SLU 7	-0.94	-0.09	36.19	5.7916	0.0705	0.33
290	SLU 8	-0.93	-0.12	35.94	5.7402	0.0698	0.3256
290	SLU 9	-0.93	-0.09	35.91	5.7517	0.0699	0.3254
290	SLU 10	-0.98	-0.06	39.2	6.2216	0.0764	0.3422
290	SLU 11	-1.01	-0.11	40.03	6.3145	0.0781	0.352
290	SLU 12	-1.01	-0.08	40	6.3261	0.0781	0.3518
290	SLU 13	-0.99	-0.06	39.71	6.2939	0.0775	0.347
290	SLU 14	-1.02	-0.11	40.53	6.3868	0.0792	0.3569
290	SLU 15	-1.02	-0.08	40.5	6.3984	0.0792	0.3566
290	SLU 16	-1.01	-0.12	40.26	6.3469	0.0785	0.3523
290	SLU 17	-1.01	-0.09	40.23	6.3585	0.0786	0.352
290	SLU 18	-1.01	-0.11	41.1	6.4624	0.0801	0.354
290	SLU 19	-1.01	-0.08	41.07	6.474	0.0801	0.3537
290	SLU 20	-1.03	-0.11	41.6	6.5347	0.0812	0.3588
290	SLU 21	-1.03	-0.08	41.58	6.5462	0.0812	0.3586
290	SLU 22	-1.02	-0.1	39.13	6.1926	0.0766	0.3584
290	SLU 23	-1.03	-0.05	39.08	6.2119	0.0767	0.358
290	SLU 24	-1.05	-0.1	39.91	6.3047	0.0783	0.3679
290	SLU 25	-1.05	-0.07	39.88	6.3163	0.0784	0.3677
290	SLU 26	-1.04	-0.05	39.59	6.2841	0.0778	0.3629
290	SLU 27	-1.07	-0.11	40.41	6.377	0.0794	0.3728
290	SLU 28	-1.07	-0.07	40.39	6.3886	0.0795	0.3725
290	SLU 29	-1.05	-0.11	40.14	6.3371	0.0788	0.3682
290	SLU 30	-1.05	-0.08	40.11	6.3487	0.0788	0.3679
290	SLU 31	-1.1	-0.04	43.4	6.8186	0.0854	0.3847
290	SLU 32	-1.13	-0.09	44.23	6.9115	0.087	0.3945
290	SLU 33	-1.13	-0.06	44.2	6.9231	0.0871	0.3943
290	SLU 34	-1.12	-0.05	43.9	6.8909	0.0864	0.3896
290	SLU 35	-1.14	-0.1	44.73	6.9838	0.0881	0.3994
290	SLU 36	-1.14	-0.07	44.7	6.9953	0.0881	0.3992
290	SLU 37	-1.13	-0.1	44.46	6.9439	0.0875	0.3948
290	SLU 38	-1.13	-0.07	44.43	6.9555	0.0875	0.3946
290	SLU 39	-1.13	-0.09	45.3	7.0594	0.089	0.3965
290	SLU 40	-1.13	-0.06	45.27	7.0709	0.089	0.3963
290	SLU 41	-1.15	-0.09	45.8	7.1317	0.0901	0.4014
290	SLU 42	-1.15	-0.06	45.77	7.1432	0.0901	0.4011
290	SLU 43	-1.13	-0.16	43.97	7.0696	0.0849	0.3961
290	SLU 44	-1.13	-0.1	43.93	7.0889	0.085	0.3957
290	SLU 45	-1.16	-0.16	44.75	7.1818	0.0867	0.4055
290	SLU 46	-1.16	-0.13	44.72	7.1933	0.0867	0.4053
290	SLU 47	-1.15	-0.11	44.43	7.1612	0.0861	0.4006
290	SLU 48	-1.17	-0.16	45.26	7.254	0.0877	0.4104
290	SLU 49	-1.17	-0.13	45.23	7.2656	0.0878	0.4102
290	SLU 50	-1.16	-0.16	44.98	7.2142	0.0871	0.4058
290	SLU 51	-1.16	-0.13	44.96	7.2257	0.0871	0.4056
290	SLU 52	-1.21	-0.1	48.24	7.6956	0.0937	0.4223
290	SLU 53	-1.24	-0.15	49.07	7.7885	0.0953	0.4322
290	SLU 54	-1.24	-0.12	49.04	7.8001	0.0954	0.432
290	SLU 55	-1.22	-0.1	48.75	7.7679	0.0947	0.4272
290	SLU 56	-1.25	-0.15	49.57	7.8608	0.0964	0.4371
290	SLU 57	-1.25	-0.12	49.54	7.8724	0.0964	0.4368
290	SLU 58	-1.24	-0.16	49.3	7.8209	0.0958	0.4325
290	SLU 59	-1.24	-0.13	49.27	7.8325	0.0958	0.4322
290	SLU 60	-1.24	-0.15	50.14	7.9364	0.0973	0.4341
290	SLU 61	-1.24	-0.12	50.11	7.948	0.0974	0.4339
290	SLU 62	-1.26	-0.15	50.65	8.0087	0.0984	0.439
290	SLU 63	-1.26	-0.12	50.62	8.0202	0.0984	0.4388
290	SLU 64	-1.25	-0.14	48.17	7.6666	0.0939	0.4386
290	SLU 65	-1.25	-0.09	48.13	7.6859	0.0939	0.4382
290	SLU 66	-1.28	-0.14	48.95	7.7788	0.0956	0.4481
290	SLU 67	-1.28	-0.11	48.92	7.7903	0.0956	0.4479
290	SLU 68	-1.27	-0.09	48.63	7.7582	0.095	0.4431
290	SLU 69	-1.3	-0.15	49.45	7.851	0.0967	0.4529
290	SLU 70	-1.3	-0.11	49.43	7.8626	0.0967	0.4527
290	SLU 71	-1.28	-0.15	49.18	7.8112	0.096	0.4483
290	SLU 72	-1.28	-0.12	49.15	7.8227	0.0961	0.4481
290	SLU 73	-1.33	-0.08	52.44	8.2926	0.1026	0.4649
290	SLU 74	-1.36	-0.13	53.27	8.3855	0.1043	0.4747
290	SLU 75	-1.36	-0.1	53.24	8.3971	0.1043	0.4745
290	SLU 76	-1.34	-0.09	52.95	8.3649	0.1037	0.4697

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLU 77	-1.37	-0.14	53.77	8.4578	0.1053	0.4796
290	SLU 78	-1.37	-0.11	53.74	8.4693	0.1054	0.4794
290	SLU 79	-1.36	-0.14	53.5	8.4179	0.1047	0.475
290	SLU 80	-1.36	-0.11	53.47	8.4295	0.1047	0.4748
290	SLU 81	-1.36	-0.13	54.34	8.5334	0.1063	0.4767
290	SLU 82	-1.36	-0.1	54.31	8.545	0.1063	0.4765
290	SLU 83	-1.38	-0.13	54.84	8.6057	0.1073	0.4815
290	SLU 84	-1.38	-0.1	54.81	8.6172	0.1074	0.4813
290	SLE RA 1	-0.94	-0.11	36.13	5.7662	0.0702	0.328
290	SLE RA 2	-0.94	-0.08	36.1	5.779	0.0703	0.3278
290	SLE RA 3	-0.96	-0.11	36.65	5.841	0.0714	0.3344
290	SLE RA 4	-0.96	-0.09	36.63	5.8487	0.0714	0.3342
290	SLE RA 5	-0.95	-0.08	36.44	5.8272	0.071	0.331
290	SLE RA 6	-0.97	-0.11	36.99	5.8891	0.0721	0.3376
290	SLE RA 7	-0.97	-0.09	36.97	5.8968	0.0721	0.3375
290	SLE RA 8	-0.96	-0.12	36.81	5.8626	0.0717	0.3345
290	SLE RA 9	-0.96	-0.1	36.79	5.8703	0.0717	0.3344
290	SLE RA 10	-0.99	-0.07	38.98	6.1835	0.0761	0.3456
290	SLE RA 11	-1.01	-0.11	39.53	6.2454	0.0772	0.3521
290	SLE RA 12	-1.01	-0.09	39.51	6.2532	0.0772	0.352
290	SLE RA 13	-1	-0.08	39.32	6.2317	0.0768	0.3488
290	SLE RA 14	-1.02	-0.11	39.87	6.2936	0.0779	0.3554
290	SLE RA 15	-1.02	-0.09	39.85	6.3013	0.0779	0.3552
290	SLE RA 16	-1.01	-0.11	39.68	6.267	0.0775	0.3523
290	SLE RA 17	-1.01	-0.09	39.66	6.2748	0.0775	0.3521
290	SLE RA 18	-1.01	-0.11	40.24	6.344	0.0785	0.3534
290	SLE RA 19	-1.01	-0.08	40.22	6.3518	0.0785	0.3533
290	SLE RA 20	-1.02	-0.11	40.58	6.3922	0.0792	0.3567
290	SLE RA 21	-1.02	-0.09	40.56	6.3999	0.0792	0.3565
290	SLE FR 1	-0.94	-0.11	36.13	5.7662	0.0702	0.328
290	SLE FR 2	-0.94	-0.1	36.13	5.7688	0.0702	0.328
290	SLE FR 3	-0.94	-0.11	36.27	5.7855	0.0705	0.3293
290	SLE FR 4	-0.96	-0.1	37.36	5.9421	0.0727	0.3356
290	SLE FR 5	-0.96	-0.11	37.5	5.9588	0.073	0.337
290	SLE FR 6	-0.97	-0.11	38.19	6.0551	0.0744	0.3407
290	SLE QP 1	-0.94	-0.11	36.13	5.7662	0.0702	0.328
290	SLE QP 2	-0.96	-0.11	37.37	5.9395	0.0727	0.3357
290	SLD 1	2.74	0.35	46.28	7.4302	0.1106	-0.9632
290	SLD 2	3.17	-0.23	45.9	7.378	0.1092	-1.1113
290	SLD 3	2.85	-0.94	45.52	7.1795	0.1079	-0.9969
290	SLD 4	3.28	-1.51	45.13	7.1274	0.1065	-1.145
290	SLD 5	-0.08	2.07	41.27	6.7762	0.0885	0.0233
290	SLD 6	0.2	1.69	41.02	6.742	0.0876	-0.0737
290	SLD 7	0.26	-2.2	38.72	5.9406	0.0794	-0.0888
290	SLD 8	0.54	-2.58	38.47	5.9064	0.0785	-0.1859
290	SLD 9	-2.46	2.36	36.27	5.9727	0.067	0.8572
290	SLD 10	-2.18	1.98	36.02	5.9385	0.0661	0.7601
290	SLD 11	-2.12	-1.91	33.71	5.137	0.0579	0.7451
290	SLD 12	-1.84	-2.29	33.46	5.1029	0.057	0.648
290	SLD 13	-5.2	1.29	29.6	4.7517	0.0389	1.8163
290	SLD 14	-4.77	0.72	29.22	4.6996	0.0376	1.6682
290	SLD 15	-5.09	0.01	28.83	4.501	0.0362	1.7826
290	SLD 16	-4.66	-0.57	28.45	4.4489	0.0348	1.6345
290	SLV 1	7.7	0.91	58.2	9.4225	0.1613	-2.703
290	SLV 2	8.7	-0.43	57.31	9.3011	0.1581	-3.0479
290	SLV 3	7.94	-2.01	56.47	8.8463	0.155	-2.7805
290	SLV 4	8.94	-3.35	55.57	8.7249	0.1518	-3.1254
290	SLV 5	1.11	4.86	46.41	7.8793	0.1094	-0.399
290	SLV 6	1.75	3.99	45.83	7.801	0.1074	-0.6213
290	SLV 7	1.9	-4.88	40.62	5.9585	0.0884	-0.6573
290	SLV 8	2.54	-5.74	40.04	5.8803	0.0863	-0.8796
290	SLV 9	-4.46	5.52	34.69	5.9988	0.0591	1.5509
290	SLV 10	-3.82	4.66	34.11	5.9205	0.057	1.3286
290	SLV 11	-3.67	-4.21	28.91	4.0781	0.0381	1.2926
290	SLV 12	-3.02	-5.08	28.33	3.9998	0.036	1.0703
290	SLV 13	-10.86	3.13	19.16	3.1542	-0.0064	3.7967
290	SLV 14	-9.86	1.79	18.26	3.0328	-0.0096	3.4518
290	SLV 15	-10.62	0.21	17.42	2.578	-0.0127	3.7192
290	SLV 16	-9.62	-1.13	16.53	2.4566	-0.0159	3.3743
290	CRTFP Ux+	0	0	0	0	0	0
290	CRTFP Ux-	0	0	0	0	0	0
290	CRTFP Uy+	0	0	0	0	0	0
290	CRTFP Uy-	0	0	0	0	0	0
291	SLU 1	-0.9	-0.13	33.25	4.4965	0.045	0.3164
291	SLU 2	-0.9	-0.09	33.2	4.5213	0.045	0.3157
291	SLU 3	-0.93	-0.13	33.98	4.5816	0.0461	0.3259
291	SLU 4	-0.93	-0.1	33.95	4.5965	0.0462	0.3255
291	SLU 5	-0.92	-0.09	33.68	4.5763	0.0457	0.3206
291	SLU 6	-0.95	-0.13	34.46	4.6366	0.0468	0.3307
291	SLU 7	-0.95	-0.11	34.43	4.6514	0.0469	0.3303
291	SLU 8	-0.93	-0.13	34.21	4.6065	0.0464	0.3261
291	SLU 9	-0.93	-0.11	34.18	4.6214	0.0464	0.3257
291	SLU 10	-0.98	-0.08	37.3	4.9817	0.0506	0.3426
291	SLU 11	-1.01	-0.12	38.09	5.0419	0.0517	0.3527
291	SLU 12	-1.01	-0.1	38.06	5.0568	0.0517	0.3523
291	SLU 13	-0.99	-0.09	37.78	5.0366	0.0513	0.3474
291	SLU 14	-1.02	-0.12	38.56	5.0969	0.0524	0.3576
291	SLU 15	-1.02	-0.1	38.54	5.1118	0.0525	0.3572
291	SLU 16	-1.01	-0.13	38.31	5.0669	0.052	0.353
291	SLU 17	-1.01	-0.1	38.28	5.0817	0.052	0.3526

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLU 18	-1.01	-0.12	39.11	5.1542	0.0529	0.3547
291	SLU 19	-1.01	-0.09	39.08	5.169	0.053	0.3544
291	SLU 20	-1.03	-0.12	39.59	5.2092	0.0537	0.3596
291	SLU 21	-1.03	-0.1	39.56	5.224	0.0537	0.3592
291	SLU 22	-1.03	-0.11	37.23	4.9484	0.0509	0.3591
291	SLU 23	-1.03	-0.07	37.18	4.9732	0.0509	0.3584
291	SLU 24	-1.05	-0.11	37.96	5.0334	0.0521	0.3686
291	SLU 25	-1.05	-0.09	37.93	5.0483	0.0521	0.3682
291	SLU 26	-1.04	-0.08	37.65	5.0281	0.0516	0.3633
291	SLU 27	-1.07	-0.11	38.44	5.0884	0.0528	0.3734
291	SLU 28	-1.07	-0.09	38.41	5.1033	0.0528	0.373
291	SLU 29	-1.05	-0.12	38.18	5.0584	0.0523	0.3688
291	SLU 30	-1.05	-0.09	38.15	5.0732	0.0523	0.3684
291	SLU 31	-1.1	-0.07	41.28	5.4335	0.0565	0.3853
291	SLU 32	-1.13	-0.11	42.06	5.4938	0.0576	0.3954
291	SLU 33	-1.13	-0.08	42.03	5.5087	0.0577	0.395
291	SLU 34	-1.12	-0.07	41.76	5.4885	0.0572	0.3901
291	SLU 35	-1.14	-0.11	42.54	5.5488	0.0583	0.4003
291	SLU 36	-1.14	-0.09	42.51	5.5637	0.0584	0.3999
291	SLU 37	-1.13	-0.11	42.28	5.5187	0.0579	0.3957
291	SLU 38	-1.13	-0.09	42.25	5.5336	0.0579	0.3953
291	SLU 39	-1.14	-0.1	43.09	5.606	0.0589	0.3975
291	SLU 40	-1.14	-0.08	43.06	5.6209	0.0589	0.3971
291	SLU 41	-1.15	-0.11	43.56	5.661	0.0596	0.4023
291	SLU 42	-1.15	-0.08	43.54	5.6759	0.0596	0.4019
291	SLU 43	-1.13	-0.17	41.86	5.6905	0.0564	0.3967
291	SLU 44	-1.13	-0.13	41.81	5.7153	0.0565	0.396
291	SLU 45	-1.16	-0.17	42.6	5.7756	0.0576	0.4061
291	SLU 46	-1.16	-0.15	42.57	5.7905	0.0576	0.4057
291	SLU 47	-1.15	-0.13	42.29	5.7703	0.0572	0.4009
291	SLU 48	-1.18	-0.17	43.07	5.8306	0.0583	0.411
291	SLU 49	-1.18	-0.15	43.04	5.8455	0.0583	0.4106
291	SLU 50	-1.16	-0.18	42.82	5.8005	0.0579	0.4064
291	SLU 51	-1.16	-0.15	42.79	5.8154	0.0579	0.406
291	SLU 52	-1.21	-0.12	45.92	6.1757	0.0621	0.4229
291	SLU 53	-1.24	-0.16	46.7	6.236	0.0632	0.433
291	SLU 54	-1.24	-0.14	46.67	6.2508	0.0632	0.4326
291	SLU 55	-1.22	-0.13	46.39	6.2307	0.0628	0.4277
291	SLU 56	-1.25	-0.17	47.18	6.291	0.0639	0.4378
291	SLU 57	-1.25	-0.14	47.15	6.3058	0.0639	0.4375
291	SLU 58	-1.24	-0.17	46.92	6.2609	0.0634	0.4332
291	SLU 59	-1.24	-0.15	46.89	6.2758	0.0635	0.4328
291	SLU 60	-1.24	-0.16	47.72	6.3482	0.0644	0.435
291	SLU 61	-1.24	-0.14	47.69	6.3631	0.0644	0.4346
291	SLU 62	-1.26	-0.16	48.2	6.4032	0.0651	0.4399
291	SLU 63	-1.26	-0.14	48.17	6.4181	0.0651	0.4395
291	SLU 64	-1.26	-0.15	45.84	6.1424	0.0624	0.4394
291	SLU 65	-1.26	-0.11	45.79	6.1672	0.0624	0.4387
291	SLU 66	-1.28	-0.15	46.57	6.2275	0.0635	0.4488
291	SLU 67	-1.28	-0.13	46.54	6.2423	0.0635	0.4484
291	SLU 68	-1.27	-0.12	46.27	6.2222	0.0631	0.4436
291	SLU 69	-1.3	-0.16	47.05	6.2825	0.0642	0.4537
291	SLU 70	-1.3	-0.13	47.02	6.2973	0.0643	0.4533
291	SLU 71	-1.28	-0.16	46.79	6.2524	0.0638	0.4491
291	SLU 72	-1.28	-0.14	46.76	6.2673	0.0638	0.4487
291	SLU 73	-1.33	-0.11	49.89	6.6275	0.068	0.4656
291	SLU 74	-1.36	-0.15	50.67	6.6878	0.0691	0.4757
291	SLU 75	-1.36	-0.13	50.65	6.7027	0.0691	0.4753
291	SLU 76	-1.35	-0.11	50.37	6.6825	0.0687	0.4704
291	SLU 77	-1.37	-0.15	51.15	6.7428	0.0698	0.4806
291	SLU 78	-1.37	-0.13	51.12	6.7577	0.0698	0.4802
291	SLU 79	-1.36	-0.16	50.9	6.7127	0.0694	0.4759
291	SLU 80	-1.36	-0.13	50.87	6.7276	0.0694	0.4756
291	SLU 81	-1.37	-0.15	51.7	6.8001	0.0703	0.4777
291	SLU 82	-1.37	-0.12	51.67	6.8149	0.0704	0.4773
291	SLU 83	-1.38	-0.15	52.18	6.8551	0.071	0.4826
291	SLU 84	-1.38	-0.13	52.15	6.8699	0.0711	0.4822
291	SLE RA 1	-0.94	-0.12	34.39	4.6256	0.0467	0.3286
291	SLE RA 2	-0.94	-0.1	34.35	4.6421	0.0467	0.3282
291	SLE RA 3	-0.96	-0.12	34.88	4.6823	0.0474	0.3349
291	SLE RA 4	-0.96	-0.11	34.86	4.6922	0.0475	0.3346
291	SLE RA 5	-0.95	-0.1	34.67	4.6788	0.0472	0.3314
291	SLE RA 6	-0.97	-0.12	35.19	4.719	0.0479	0.3382
291	SLE RA 7	-0.97	-0.11	35.17	4.7289	0.0479	0.3379
291	SLE RA 8	-0.96	-0.13	35.02	4.6989	0.0476	0.3351
291	SLE RA 9	-0.96	-0.11	35	4.7089	0.0476	0.3348
291	SLE RA 10	-0.99	-0.09	37.09	4.949	0.0504	0.3461
291	SLE RA 11	-1.01	-0.12	37.61	4.9892	0.0512	0.3528
291	SLE RA 12	-1.01	-0.1	37.59	4.9991	0.0512	0.3525
291	SLE RA 13	-1	-0.09	37.41	4.9857	0.0509	0.3493
291	SLE RA 14	-1.02	-0.12	37.93	5.0259	0.0516	0.356
291	SLE RA 15	-1.02	-0.11	37.91	5.0358	0.0517	0.3558
291	SLE RA 16	-1.01	-0.12	37.76	5.0058	0.0513	0.353
291	SLE RA 17	-1.01	-0.11	37.74	5.0158	0.0514	0.3527
291	SLE RA 18	-1.01	-0.12	38.29	5.0641	0.052	0.3542
291	SLE RA 19	-1.01	-0.1	38.27	5.074	0.052	0.3539
291	SLE RA 20	-1.02	-0.12	38.61	5.1007	0.0525	0.3574
291	SLE RA 21	-1.02	-0.1	38.59	5.1106	0.0525	0.3571
291	SLE FR 1	-0.94	-0.12	34.39	4.6256	0.0467	0.3286
291	SLE FR 2	-0.94	-0.12	34.38	4.6289	0.0467	0.3285

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLE FR 3	-0.94	-0.12	34.51	4.6403	0.0469	0.3299
291	SLE FR 4	-0.96	-0.11	35.55	4.7605	0.0483	0.3362
291	SLE FR 5	-0.97	-0.12	35.69	4.7718	0.0484	0.3376
291	SLE FR 6	-0.98	-0.12	36.34	4.8448	0.0493	0.3414
291	SLE QP 1	-0.94	-0.12	34.39	4.6256	0.0467	0.3286
291	SLE QP 2	-0.96	-0.12	35.56	4.7572	0.0483	0.3363
291	SLD 1	2.75	0.3	43.46	5.8372	0.079	-0.9649
291	SLD 2	3.18	-0.23	43.11	5.8	0.0779	-1.1133
291	SLD 3	2.85	-0.9	42.74	5.5646	0.0771	-0.9984
291	SLD 4	3.28	-1.42	42.39	5.5274	0.076	-1.1468
291	SLD 5	-0.08	1.91	39.08	5.5011	0.0606	0.0232
291	SLD 6	0.2	1.56	38.86	5.4768	0.0599	-0.0741
291	SLD 7	0.26	-2.07	36.68	4.5926	0.0542	-0.0886
291	SLD 8	0.54	-2.41	36.45	4.5682	0.0535	-0.1859
291	SLD 9	-2.47	2.17	34.66	4.9461	0.043	0.8584
291	SLD 10	-2.18	1.83	34.43	4.9217	0.0423	0.7612
291	SLD 11	-2.12	-1.8	32.26	4.0375	0.0366	0.7466
291	SLD 12	-1.84	-2.15	32.03	4.0132	0.0359	0.6494
291	SLD 13	-5.2	1.18	28.72	3.9869	0.0205	1.8193
291	SLD 14	-4.77	0.66	28.37	3.9497	0.0194	1.671
291	SLD 15	-5.1	-0.01	28	3.7143	0.0186	1.7858
291	SLD 16	-4.67	-0.53	27.65	3.6772	0.0175	1.6374
291	SLV 1	7.72	0.81	54.03	7.28	0.1202	-2.7077
291	SLV 2	8.72	-0.41	53.22	7.1934	0.1177	-3.0533
291	SLV 3	7.95	-1.91	52.39	6.651	0.1157	-2.785
291	SLV 4	8.95	-3.13	51.58	6.5643	0.1133	-3.1305
291	SLV 5	1.11	4.5	43.71	6.483	0.077	-0.4002
291	SLV 6	1.76	3.71	43.19	6.4272	0.0754	-0.6229
291	SLV 7	1.9	-4.57	38.27	4.3861	0.0622	-0.6578
291	SLV 8	2.54	-5.36	37.75	4.3303	0.0606	-0.8805
291	SLV 9	-4.46	5.12	33.37	5.184	0.0359	1.553
291	SLV 10	-3.82	4.33	32.84	5.1282	0.0343	1.3304
291	SLV 11	-3.68	-3.95	27.92	3.0871	0.0211	1.2954
291	SLV 12	-3.04	-4.74	27.4	3.0313	0.0195	1.0728
291	SLV 13	-10.88	2.89	19.53	2.95	-0.0167	3.8031
291	SLV 14	-9.88	1.67	18.72	2.8634	-0.0192	3.4576
291	SLV 15	-10.64	0.17	17.9	2.3209	-0.0212	3.7258
291	SLV 16	-9.64	-1.05	17.09	2.2343	-0.0237	3.3803
291	CRTFP Ux+	0	0	0	0	0	0
291	CRTFP Ux-	0	0	0	0	0	0
291	CRTFP Uy+	0	0	0	0	0	0
291	CRTFP Uy-	0	0	0	0	0	0
292	SLU 1	-0.9	-0.14	32.23	3.8901	0.0236	0.3162
292	SLU 2	-0.9	-0.11	32.18	3.9191	0.0236	0.3152
292	SLU 3	-0.93	-0.14	32.93	3.9602	0.0242	0.3256
292	SLU 4	-0.93	-0.12	32.9	3.9776	0.0242	0.325
292	SLU 5	-0.92	-0.11	32.64	3.9646	0.024	0.3201
292	SLU 6	-0.95	-0.14	33.4	4.0056	0.0246	0.3305
292	SLU 7	-0.94	-0.12	33.37	4.023	0.0246	0.3299
292	SLU 8	-0.93	-0.14	33.15	3.9811	0.0243	0.3259
292	SLU 9	-0.93	-0.13	33.12	3.9985	0.0243	0.3253
292	SLU 10	-0.98	-0.1	36.16	4.3001	0.0263	0.3422
292	SLU 11	-1.01	-0.13	36.91	4.3412	0.0269	0.3526
292	SLU 12	-1.01	-0.11	36.88	4.3586	0.0269	0.352
292	SLU 13	-0.99	-0.11	36.62	4.3456	0.0266	0.347
292	SLU 14	-1.02	-0.14	37.38	4.3866	0.0272	0.3575
292	SLU 15	-1.02	-0.12	37.35	4.404	0.0273	0.3569
292	SLU 16	-1.01	-0.14	37.13	4.3621	0.027	0.3529
292	SLU 17	-1.01	-0.12	37.1	4.3795	0.027	0.3523
292	SLU 18	-1.01	-0.13	37.91	4.4344	0.0274	0.3547
292	SLU 19	-1.01	-0.11	37.88	4.4518	0.0274	0.3542
292	SLU 20	-1.03	-0.13	38.37	4.4799	0.0277	0.3596
292	SLU 21	-1.03	-0.12	38.34	4.4973	0.0278	0.359
292	SLU 22	-1.03	-0.12	36.07	4.2621	0.0267	0.359
292	SLU 23	-1.02	-0.09	36.02	4.2911	0.0267	0.358
292	SLU 24	-1.05	-0.12	36.78	4.3321	0.0273	0.3684
292	SLU 25	-1.05	-0.1	36.75	4.3495	0.0273	0.3678
292	SLU 26	-1.04	-0.09	36.48	4.3365	0.0271	0.3629
292	SLU 27	-1.07	-0.12	37.24	4.3776	0.0277	0.3733
292	SLU 28	-1.07	-0.11	37.21	4.395	0.0277	0.3727
292	SLU 29	-1.05	-0.13	36.99	4.353	0.0274	0.3687
292	SLU 30	-1.05	-0.11	36.96	4.3704	0.0274	0.3681
292	SLU 31	-1.1	-0.09	40	4.6721	0.0293	0.385
292	SLU 32	-1.13	-0.12	40.76	4.7131	0.0299	0.3954
292	SLU 33	-1.13	-0.1	40.73	4.7305	0.03	0.3948
292	SLU 34	-1.12	-0.09	40.46	4.7175	0.0297	0.3898
292	SLU 35	-1.14	-0.12	41.22	4.7586	0.0303	0.4003
292	SLU 36	-1.14	-0.1	41.19	4.776	0.0303	0.3997
292	SLU 37	-1.13	-0.12	40.97	4.734	0.0301	0.3957
292	SLU 38	-1.13	-0.11	40.94	4.7514	0.0301	0.3951
292	SLU 39	-1.14	-0.11	41.75	4.8064	0.0304	0.3975
292	SLU 40	-1.14	-0.1	41.72	4.8238	0.0305	0.397
292	SLU 41	-1.15	-0.12	42.22	4.8518	0.0308	0.4024
292	SLU 42	-1.15	-0.1	42.19	4.8692	0.0308	0.4018
292	SLU 43	-1.13	-0.18	40.58	4.9297	0.0296	0.3964
292	SLU 44	-1.13	-0.15	40.53	4.9587	0.0296	0.3954
292	SLU 45	-1.16	-0.18	41.28	4.9997	0.0302	0.4058
292	SLU 46	-1.16	-0.16	41.25	5.0171	0.0302	0.4052
292	SLU 47	-1.15	-0.16	40.99	5.0041	0.03	0.4002
292	SLU 48	-1.17	-0.19	41.75	5.0452	0.0306	0.4107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 49	-1.17	-0.17	41.72	5.0626	0.0306	0.4101
292	SLU 50	-1.16	-0.19	41.5	5.0206	0.0303	0.4061
292	SLU 51	-1.16	-0.17	41.47	5.038	0.0304	0.4055
292	SLU 52	-1.21	-0.15	44.51	5.3397	0.0323	0.4224
292	SLU 53	-1.24	-0.18	45.26	5.3807	0.0329	0.4328
292	SLU 54	-1.24	-0.16	45.23	5.3981	0.0329	0.4322
292	SLU 55	-1.22	-0.15	44.97	5.3851	0.0326	0.4272
292	SLU 56	-1.25	-0.18	45.73	5.4262	0.0333	0.4376
292	SLU 57	-1.25	-0.16	45.7	5.4436	0.0333	0.4371
292	SLU 58	-1.24	-0.19	45.48	5.4016	0.033	0.4331
292	SLU 59	-1.24	-0.17	45.45	5.419	0.033	0.4325
292	SLU 60	-1.24	-0.18	46.26	5.474	0.0334	0.4349
292	SLU 61	-1.24	-0.16	46.23	5.4914	0.0334	0.4343
292	SLU 62	-1.26	-0.18	46.72	5.5194	0.0338	0.4398
292	SLU 63	-1.26	-0.16	46.69	5.5368	0.0338	0.4392
292	SLU 64	-1.26	-0.17	44.42	5.3016	0.0327	0.4392
292	SLU 65	-1.25	-0.14	44.37	5.3306	0.0327	0.4382
292	SLU 66	-1.28	-0.17	45.13	5.3716	0.0333	0.4486
292	SLU 67	-1.28	-0.15	45.1	5.389	0.0333	0.448
292	SLU 68	-1.27	-0.14	44.83	5.3761	0.0331	0.443
292	SLU 69	-1.3	-0.17	45.59	5.4171	0.0337	0.4535
292	SLU 70	-1.3	-0.15	45.56	5.4345	0.0337	0.4529
292	SLU 71	-1.28	-0.17	45.34	5.3925	0.0334	0.4489
292	SLU 72	-1.28	-0.16	45.31	5.4099	0.0334	0.4483
292	SLU 73	-1.33	-0.13	48.35	5.7116	0.0354	0.4652
292	SLU 74	-1.36	-0.16	49.11	5.7526	0.036	0.4756
292	SLU 75	-1.36	-0.14	49.08	5.77	0.036	0.475
292	SLU 76	-1.35	-0.14	48.81	5.7571	0.0357	0.47
292	SLU 77	-1.37	-0.17	49.57	5.7981	0.0363	0.4804
292	SLU 78	-1.37	-0.15	49.54	5.8155	0.0363	0.4799
292	SLU 79	-1.36	-0.17	49.32	5.7735	0.0361	0.4758
292	SLU 80	-1.36	-0.15	49.29	5.7909	0.0361	0.4753
292	SLU 81	-1.37	-0.16	50.1	5.8459	0.0365	0.4777
292	SLU 82	-1.37	-0.14	50.07	5.8633	0.0365	0.4771
292	SLU 83	-1.38	-0.16	50.57	5.8914	0.0368	0.4826
292	SLU 84	-1.38	-0.15	50.54	5.9088	0.0369	0.482
292	SLE RA 1	-0.94	-0.13	33.32	3.9964	0.0245	0.3284
292	SLE RA 2	-0.94	-0.11	33.29	4.0157	0.0245	0.3278
292	SLE RA 3	-0.96	-0.13	33.8	4.0431	0.0249	0.3347
292	SLE RA 4	-0.96	-0.12	33.78	4.0547	0.0249	0.3343
292	SLE RA 5	-0.95	-0.11	33.6	4.0461	0.0247	0.331
292	SLE RA 6	-0.97	-0.13	34.1	4.0734	0.0251	0.3379
292	SLE RA 7	-0.97	-0.12	34.08	4.085	0.0251	0.3375
292	SLE RA 8	-0.96	-0.14	33.94	4.057	0.025	0.3349
292	SLE RA 9	-0.96	-0.12	33.92	4.0686	0.025	0.3345
292	SLE RA 10	-0.99	-0.11	35.94	4.2697	0.0262	0.3458
292	SLE RA 11	-1.01	-0.13	36.45	4.2971	0.0266	0.3527
292	SLE RA 12	-1.01	-0.12	36.43	4.3087	0.0267	0.3523
292	SLE RA 13	-1	-0.11	36.25	4.3001	0.0265	0.349
292	SLE RA 14	-1.02	-0.13	36.76	4.3274	0.0269	0.3559
292	SLE RA 15	-1.02	-0.12	36.74	4.339	0.0269	0.3555
292	SLE RA 16	-1.01	-0.13	36.59	4.311	0.0267	0.3529
292	SLE RA 17	-1.01	-0.12	36.57	4.3226	0.0267	0.3525
292	SLE RA 18	-1.01	-0.13	37.11	4.3593	0.027	0.3541
292	SLE RA 19	-1.01	-0.12	37.09	4.3709	0.027	0.3537
292	SLE RA 20	-1.02	-0.13	37.42	4.3896	0.0272	0.3574
292	SLE RA 21	-1.02	-0.12	37.4	4.4012	0.0272	0.357
292	SLE FR 1	-0.94	-0.13	33.32	3.9964	0.0245	0.3284
292	SLE FR 2	-0.94	-0.13	33.32	4.0003	0.0245	0.3283
292	SLE FR 3	-0.94	-0.13	33.45	4.0085	0.0246	0.3297
292	SLE FR 4	-0.96	-0.13	34.45	4.1091	0.0252	0.336
292	SLE FR 5	-0.97	-0.13	34.58	4.1174	0.0253	0.3374
292	SLE FR 6	-0.98	-0.13	35.22	4.1778	0.0257	0.3413
292	SLE QP 1	-0.94	-0.13	33.32	3.9964	0.0245	0.3284
292	SLE QP 2	-0.96	-0.13	34.46	4.1053	0.0252	0.3361
292	SLD 1	2.76	0.25	41.55	4.9048	0.0496	-0.967
292	SLD 2	3.18	-0.23	41.23	4.8764	0.0488	-1.1157
292	SLD 3	2.86	-0.87	40.86	4.6138	0.0484	-1.0006
292	SLD 4	3.28	-1.35	40.54	4.5854	0.0477	-1.1492
292	SLD 5	-0.08	1.77	37.7	4.7915	0.0344	0.0225
292	SLD 6	0.21	1.46	37.49	4.7729	0.0339	-0.0749
292	SLD 7	0.26	-1.97	35.39	3.8216	0.0306	-0.0893
292	SLD 8	0.54	-2.28	35.18	3.8029	0.0301	-0.1868
292	SLD 9	-2.46	2.02	33.75	4.4076	0.0203	0.859
292	SLD 10	-2.18	1.71	33.54	4.389	0.0198	0.7616
292	SLD 11	-2.13	-1.72	31.44	3.4377	0.0166	0.7472
292	SLD 12	-1.85	-2.03	31.23	3.4191	0.0161	0.6498
292	SLD 13	-5.21	1.09	28.38	3.6251	0.0027	1.8215
292	SLD 14	-4.78	0.61	28.06	3.5967	0.002	1.6728
292	SLD 15	-5.11	-0.03	27.69	3.3342	0.0016	1.7879
292	SLD 16	-4.68	-0.51	27.37	3.3058	0.0009	1.6393
292	SLV 1	7.73	0.73	51.03	5.972	0.0822	-2.7125
292	SLV 2	8.73	-0.38	50.28	5.9059	0.0804	-3.0587
292	SLV 3	7.97	-1.83	49.46	5.2992	0.0796	-2.7898
292	SLV 4	8.96	-2.94	48.71	5.233	0.0778	-3.136
292	SLV 5	1.12	4.2	41.94	5.6972	0.0466	-0.4016
292	SLV 6	1.77	3.48	41.46	5.6546	0.0454	-0.6247
292	SLV 7	1.9	-4.33	36.71	3.4543	0.0379	-0.6593
292	SLV 8	2.54	-5.05	36.23	3.4117	0.0367	-0.8823
292	SLV 9	-4.46	4.79	32.7	4.7988	0.0137	1.5546

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLV 10	-3.82	4.07	32.21	4.7562	0.0125	1.3315
292	SLV 11	-3.69	-3.74	27.46	2.556	0.005	1.297
292	SLV 12	-3.05	-4.46	26.98	2.5134	0.0039	1.0739
292	SLV 13	-10.89	2.68	20.21	2.9775	-0.0274	3.8082
292	SLV 14	-9.89	1.57	19.46	2.9114	-0.0292	3.4621
292	SLV 15	-10.66	0.12	18.64	2.3047	-0.03	3.7309
292	SLV 16	-9.66	-0.99	17.9	2.2385	-0.0318	3.3848
292	CRTFP Ux+	0	0	0	0	0	0
292	CRTFP Ux-	0	0	0	0	0	0
292	CRTFP Uy+	0	0	0	0	0	0
292	CRTFP Uy-	0	0	0	0	0	0
293	SLU 1	-0.9	-0.15	31.82	3.738	0.0036	0.3153
293	SLU 2	-0.9	-0.12	31.77	3.7699	0.0036	0.314
293	SLU 3	-0.93	-0.15	32.52	3.804	0.0037	0.3247
293	SLU 4	-0.93	-0.13	32.49	3.8231	0.0037	0.3239
293	SLU 5	-0.91	-0.13	32.23	3.813	0.0036	0.3188
293	SLU 6	-0.94	-0.15	32.97	3.8471	0.0038	0.3295
293	SLU 7	-0.94	-0.14	32.94	3.8662	0.0038	0.3287
293	SLU 8	-0.93	-0.16	32.73	3.8242	0.0037	0.3249
293	SLU 9	-0.93	-0.14	32.7	3.8433	0.0037	0.3241
293	SLU 10	-0.98	-0.12	35.71	4.1335	0.0035	0.3411
293	SLU 11	-1.01	-0.14	36.46	4.1677	0.0037	0.3518
293	SLU 12	-1	-0.13	36.43	4.1868	0.0036	0.351
293	SLU 13	-0.99	-0.13	36.17	4.1766	0.0036	0.3459
293	SLU 14	-1.02	-0.15	36.92	4.2108	0.0037	0.3566
293	SLU 15	-1.02	-0.14	36.89	4.2299	0.0037	0.3558
293	SLU 16	-1.01	-0.15	36.67	4.1879	0.0036	0.352
293	SLU 17	-1.01	-0.14	36.64	4.207	0.0036	0.3512
293	SLU 18	-1.01	-0.14	37.45	4.2576	0.0035	0.354
293	SLU 19	-1.01	-0.13	37.42	4.2767	0.0035	0.3532
293	SLU 20	-1.03	-0.15	37.91	4.3007	0.0035	0.3588
293	SLU 21	-1.02	-0.13	37.88	4.3198	0.0035	0.358
293	SLU 22	-1.02	-0.13	35.61	4.09	0.004	0.3581
293	SLU 23	-1.02	-0.11	35.56	4.1218	0.004	0.3568
293	SLU 24	-1.05	-0.13	36.31	4.156	0.0042	0.3675
293	SLU 25	-1.05	-0.12	36.28	4.1751	0.0042	0.3667
293	SLU 26	-1.03	-0.11	36.02	4.1649	0.0041	0.3616
293	SLU 27	-1.06	-0.13	36.76	4.1991	0.0042	0.3723
293	SLU 28	-1.06	-0.12	36.73	4.2182	0.0042	0.3715
293	SLU 29	-1.05	-0.14	36.52	4.1762	0.0041	0.3677
293	SLU 30	-1.05	-0.12	36.49	4.1953	0.0041	0.3669
293	SLU 31	-1.1	-0.11	39.5	4.4855	0.0039	0.3839
293	SLU 32	-1.13	-0.13	40.25	4.5197	0.0041	0.3946
293	SLU 33	-1.13	-0.11	40.22	4.5387	0.0041	0.3938
293	SLU 34	-1.11	-0.11	39.96	4.5286	0.004	0.3887
293	SLU 35	-1.14	-0.13	40.7	4.5628	0.0041	0.3994
293	SLU 36	-1.14	-0.12	40.67	4.5818	0.0041	0.3986
293	SLU 37	-1.13	-0.14	40.46	4.5399	0.0041	0.3948
293	SLU 38	-1.13	-0.12	40.43	4.559	0.0041	0.394
293	SLU 39	-1.13	-0.13	41.24	4.6095	0.0039	0.3968
293	SLU 40	-1.13	-0.11	41.21	4.6286	0.0039	0.396
293	SLU 41	-1.15	-0.13	41.7	4.6526	0.004	0.4016
293	SLU 42	-1.15	-0.12	41.67	4.6717	0.004	0.4008
293	SLU 43	-1.13	-0.2	40.07	4.7388	0.0045	0.3952
293	SLU 44	-1.13	-0.17	40.02	4.7706	0.0045	0.3939
293	SLU 45	-1.16	-0.2	40.77	4.8048	0.0047	0.4046
293	SLU 46	-1.16	-0.18	40.74	4.8239	0.0047	0.4038
293	SLU 47	-1.14	-0.18	40.47	4.8137	0.0046	0.3987
293	SLU 48	-1.17	-0.2	41.22	4.8479	0.0047	0.4094
293	SLU 49	-1.17	-0.19	41.19	4.867	0.0047	0.4086
293	SLU 50	-1.16	-0.2	40.98	4.825	0.0046	0.4048
293	SLU 51	-1.16	-0.19	40.95	4.8441	0.0046	0.404
293	SLU 52	-1.2	-0.17	43.96	5.1343	0.0044	0.421
293	SLU 53	-1.24	-0.19	44.71	5.1684	0.0046	0.4317
293	SLU 54	-1.23	-0.18	44.68	5.1875	0.0046	0.4309
293	SLU 55	-1.22	-0.18	44.42	5.1774	0.0045	0.4258
293	SLU 56	-1.25	-0.2	45.16	5.2115	0.0046	0.4365
293	SLU 57	-1.25	-0.19	45.13	5.2306	0.0046	0.4357
293	SLU 58	-1.24	-0.2	44.92	5.1887	0.0045	0.4319
293	SLU 59	-1.23	-0.19	44.89	5.2078	0.0045	0.4311
293	SLU 60	-1.24	-0.19	45.7	5.2583	0.0044	0.4339
293	SLU 61	-1.24	-0.18	45.67	5.2774	0.0044	0.4331
293	SLU 62	-1.26	-0.2	46.16	5.3014	0.0045	0.4387
293	SLU 63	-1.25	-0.18	46.13	5.3205	0.0044	0.4379
293	SLU 64	-1.25	-0.18	43.86	5.0907	0.005	0.438
293	SLU 65	-1.25	-0.16	43.81	5.1226	0.005	0.4367
293	SLU 66	-1.28	-0.18	44.56	5.1567	0.0051	0.4474
293	SLU 67	-1.28	-0.17	44.53	5.1758	0.0051	0.4466
293	SLU 68	-1.26	-0.16	44.26	5.1657	0.005	0.4415
293	SLU 69	-1.29	-0.18	45.01	5.1998	0.0052	0.4522
293	SLU 70	-1.29	-0.17	44.98	5.2189	0.0052	0.4514
293	SLU 71	-1.28	-0.19	44.77	5.1769	0.0051	0.4476
293	SLU 72	-1.28	-0.17	44.74	5.196	0.0051	0.4468
293	SLU 73	-1.33	-0.15	47.75	5.4862	0.0049	0.4638
293	SLU 74	-1.36	-0.18	48.5	5.5204	0.005	0.4745
293	SLU 75	-1.36	-0.16	48.47	5.5395	0.005	0.4737
293	SLU 76	-1.34	-0.16	48.21	5.5293	0.0049	0.4686
293	SLU 77	-1.37	-0.18	48.95	5.5635	0.0051	0.4793
293	SLU 78	-1.37	-0.17	48.92	5.5826	0.0051	0.4785
293	SLU 79	-1.36	-0.19	48.71	5.5406	0.005	0.4747

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLU 80	-1.36	-0.17	48.68	5.5597	0.005	0.4739
293	SLU 81	-1.36	-0.18	49.49	5.6103	0.0048	0.4767
293	SLU 82	-1.36	-0.16	49.46	5.6294	0.0048	0.4759
293	SLU 83	-1.38	-0.18	49.95	5.6534	0.0049	0.4815
293	SLU 84	-1.38	-0.17	49.92	5.6725	0.0049	0.4807
293	SLE RA 1	-0.94	-0.14	32.91	3.8386	0.0037	0.3275
293	SLE RA 2	-0.93	-0.13	32.87	3.8598	0.0037	0.3266
293	SLE RA 3	-0.95	-0.14	33.37	3.8826	0.0038	0.3338
293	SLE RA 4	-0.95	-0.13	33.35	3.8953	0.0038	0.3333
293	SLE RA 5	-0.94	-0.13	33.18	3.8885	0.0038	0.3299
293	SLE RA 6	-0.96	-0.14	33.67	3.9113	0.0039	0.337
293	SLE RA 7	-0.96	-0.14	33.65	3.924	0.0039	0.3365
293	SLE RA 8	-0.96	-0.15	33.51	3.8961	0.0038	0.3339
293	SLE RA 9	-0.95	-0.14	33.49	3.9088	0.0038	0.3334
293	SLE RA 10	-0.99	-0.13	35.5	4.1023	0.0037	0.3447
293	SLE RA 11	-1.01	-0.14	36	4.125	0.0038	0.3518
293	SLE RA 12	-1.01	-0.13	35.98	4.1378	0.0038	0.3513
293	SLE RA 13	-1	-0.13	35.8	4.131	0.0037	0.3479
293	SLE RA 14	-1.02	-0.14	36.3	4.1538	0.0038	0.355
293	SLE RA 15	-1.01	-0.13	36.28	4.1665	0.0038	0.3545
293	SLE RA 16	-1.01	-0.15	36.14	4.1385	0.0037	0.352
293	SLE RA 17	-1.01	-0.14	36.12	4.1512	0.0037	0.3515
293	SLE RA 18	-1.01	-0.14	36.66	4.185	0.0036	0.3533
293	SLE RA 19	-1.01	-0.13	36.64	4.1977	0.0036	0.3528
293	SLE RA 20	-1.02	-0.14	36.96	4.2137	0.0037	0.3565
293	SLE RA 21	-1.02	-0.13	36.94	4.2264	0.0037	0.356
293	SLE FR 1	-0.94	-0.14	32.91	3.8386	0.0037	0.3275
293	SLE FR 2	-0.94	-0.14	32.9	3.8428	0.0037	0.3274
293	SLE FR 3	-0.94	-0.14	33.03	3.8501	0.0037	0.3288
293	SLE FR 4	-0.96	-0.14	34.02	3.9468	0.0037	0.3351
293	SLE FR 5	-0.96	-0.14	34.15	3.954	0.0037	0.3365
293	SLE FR 6	-0.97	-0.14	34.78	4.0118	0.0037	0.3404
293	SLE QP 1	-0.94	-0.14	32.91	3.8386	0.0037	0.3275
293	SLE QP 2	-0.96	-0.14	34.03	3.9425	0.0037	0.3353
293	SLD 1	2.76	0.22	40.48	4.5722	0.0225	-0.9696
293	SLD 2	3.19	-0.22	40.18	4.5472	0.022	-1.1184
293	SLD 3	2.86	-0.85	39.81	4.2716	0.0221	-1.0032
293	SLD 4	3.29	-1.29	39.5	4.2466	0.0216	-1.152
293	SLD 5	-0.07	1.67	37.05	4.5918	0.0101	0.0212
293	SLD 6	0.21	1.38	36.85	4.5754	0.0098	-0.0763
293	SLD 7	0.26	-1.9	34.79	3.5897	0.0086	-0.0908
293	SLD 8	0.54	-2.19	34.59	3.5734	0.0083	-0.1884
293	SLD 9	-2.46	1.9	33.47	4.3117	-0.0009	0.8589
293	SLD 10	-2.18	1.61	33.27	4.2953	-0.0012	0.7613
293	SLD 11	-2.13	-1.66	31.21	3.3096	-0.0024	0.7469
293	SLD 12	-1.85	-1.95	31.01	3.2932	-0.0027	0.6493
293	SLD 13	-5.21	1.01	28.56	3.6384	-0.0142	1.8225
293	SLD 14	-4.78	0.57	28.26	3.6134	-0.0147	1.6737
293	SLD 15	-5.11	-0.06	27.88	3.3378	-0.0146	1.7889
293	SLD 16	-4.68	-0.5	27.58	3.3128	-0.0151	1.6401
293	SLV 1	7.75	0.66	49.1	5.4118	0.0478	-2.7173
293	SLV 2	8.75	-0.36	48.4	5.3536	0.0466	-3.064
293	SLV 3	7.98	-1.78	47.57	4.7164	0.0468	-2.7947
293	SLV 4	8.98	-2.8	46.86	4.6582	0.0456	-3.1414
293	SLV 5	1.13	3.98	41	5.448	0.0187	-0.4034
293	SLV 6	1.78	3.32	40.55	5.4105	0.0179	-0.6268
293	SLV 7	1.9	-4.16	35.89	3.13	0.0153	-0.6614
293	SLV 8	2.54	-4.82	35.43	3.0925	0.0145	-0.8848
293	SLV 9	-4.46	4.54	32.63	4.7925	-0.0071	1.5554
293	SLV 10	-3.81	3.87	32.18	4.755	-0.0079	1.332
293	SLV 11	-3.7	-3.6	27.52	2.4745	-0.0105	1.2973
293	SLV 12	-3.05	-4.26	27.06	2.437	-0.0113	1.0739
293	SLV 13	-10.89	2.52	21.2	3.2268	-0.0382	3.8119
293	SLV 14	-9.9	1.49	20.5	3.1687	-0.0394	3.4653
293	SLV 15	-10.67	0.08	19.67	2.5314	-0.0392	3.7345
293	SLV 16	-9.67	-0.95	18.96	2.4733	-0.0404	3.3878
293	CRTFP Ux+	0	0	0	0	0	0
293	CRTFP Ux-	0	0	0	0	0	0
293	CRTFP Uy+	0	0	0	0	0	0
293	CRTFP Uy-	0	0	0	0	0	0
294	SLU 1	-0.9	-0.16	32	4.0069	-0.015	0.3138
294	SLU 2	-0.89	-0.14	31.95	4.0399	-0.015	0.3121
294	SLU 3	-0.92	-0.16	32.69	4.0789	-0.0153	0.3231
294	SLU 4	-0.92	-0.15	32.66	4.0988	-0.0153	0.3221
294	SLU 5	-0.91	-0.15	32.4	4.0872	-0.0153	0.3169
294	SLU 6	-0.94	-0.17	33.15	4.1263	-0.0155	0.3279
294	SLU 7	-0.94	-0.15	33.12	4.1461	-0.0156	0.3269
294	SLU 8	-0.93	-0.17	32.91	4.1015	-0.0155	0.3233
294	SLU 9	-0.92	-0.16	32.88	4.1213	-0.0155	0.3223
294	SLU 10	-0.97	-0.14	35.93	4.4441	-0.0177	0.3392
294	SLU 11	-1	-0.16	36.68	4.4832	-0.0179	0.3502
294	SLU 12	-1	-0.15	36.65	4.503	-0.018	0.3492
294	SLU 13	-0.98	-0.15	36.39	4.4915	-0.0179	0.344
294	SLU 14	-1.02	-0.16	37.14	4.5305	-0.0182	0.355
294	SLU 15	-1.01	-0.15	37.11	4.5503	-0.0182	0.354
294	SLU 16	-1	-0.17	36.9	4.5057	-0.0181	0.3504
294	SLU 17	-1	-0.16	36.87	4.5256	-0.0181	0.3494
294	SLU 18	-1.01	-0.16	37.69	4.5843	-0.0188	0.3525
294	SLU 19	-1.01	-0.15	37.66	4.6042	-0.0188	0.3515
294	SLU 20	-1.02	-0.17	38.14	4.6317	-0.019	0.3573

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLU 21	-1.02	-0.15	38.11	4.6515	-0.019	0.3563
294	SLU 22	-1.02	-0.14	35.81	4.3943	-0.017	0.3565
294	SLU 23	-1.02	-0.12	35.76	4.4274	-0.017	0.3548
294	SLU 24	-1.05	-0.14	36.51	4.4664	-0.0173	0.3658
294	SLU 25	-1.04	-0.13	36.48	4.4862	-0.0173	0.3648
294	SLU 26	-1.03	-0.13	36.22	4.4747	-0.0173	0.3596
294	SLU 27	-1.06	-0.15	36.97	4.5137	-0.0175	0.3706
294	SLU 28	-1.06	-0.14	36.94	4.5336	-0.0176	0.3696
294	SLU 29	-1.05	-0.15	36.73	4.489	-0.0175	0.3661
294	SLU 30	-1.04	-0.14	36.7	4.5088	-0.0175	0.365
294	SLU 31	-1.09	-0.12	39.74	4.8316	-0.0197	0.382
294	SLU 32	-1.12	-0.14	40.49	4.8707	-0.02	0.393
294	SLU 33	-1.12	-0.13	40.46	4.8905	-0.02	0.392
294	SLU 34	-1.11	-0.13	40.2	4.8789	-0.0199	0.3867
294	SLU 35	-1.14	-0.15	40.95	4.918	-0.0202	0.3977
294	SLU 36	-1.14	-0.14	40.92	4.9378	-0.0202	0.3967
294	SLU 37	-1.13	-0.15	40.71	4.8932	-0.0201	0.3932
294	SLU 38	-1.12	-0.14	40.68	4.913	-0.0201	0.3922
294	SLU 39	-1.13	-0.14	41.5	4.9718	-0.0208	0.3953
294	SLU 40	-1.13	-0.13	41.47	4.9916	-0.0208	0.3943
294	SLU 41	-1.14	-0.15	41.96	5.0191	-0.021	0.4
294	SLU 42	-1.14	-0.14	41.93	5.039	-0.021	0.399
294	SLU 43	-1.13	-0.22	40.29	5.0761	-0.0188	0.3933
294	SLU 44	-1.12	-0.2	40.24	5.1091	-0.0188	0.3916
294	SLU 45	-1.15	-0.22	40.99	5.1481	-0.0191	0.4026
294	SLU 46	-1.15	-0.2	40.96	5.168	-0.0191	0.4016
294	SLU 47	-1.13	-0.2	40.7	5.1564	-0.0191	0.3963
294	SLU 48	-1.17	-0.22	41.44	5.1955	-0.0193	0.4073
294	SLU 49	-1.16	-0.21	41.41	5.2153	-0.0194	0.4063
294	SLU 50	-1.15	-0.22	41.2	5.1707	-0.0193	0.4028
294	SLU 51	-1.15	-0.21	41.17	5.1905	-0.0193	0.4018
294	SLU 52	-1.2	-0.2	44.22	5.5133	-0.0215	0.4187
294	SLU 53	-1.23	-0.22	44.97	5.5524	-0.0218	0.4297
294	SLU 54	-1.23	-0.2	44.94	5.5722	-0.0218	0.4287
294	SLU 55	-1.21	-0.2	44.68	5.5607	-0.0217	0.4235
294	SLU 56	-1.24	-0.22	45.43	5.5997	-0.022	0.4345
294	SLU 57	-1.24	-0.21	45.4	5.6195	-0.022	0.4335
294	SLU 58	-1.23	-0.22	45.19	5.5749	-0.0219	0.4299
294	SLU 59	-1.23	-0.21	45.16	5.5948	-0.0219	0.4289
294	SLU 60	-1.24	-0.22	45.98	5.6535	-0.0226	0.432
294	SLU 61	-1.23	-0.2	45.95	5.6734	-0.0226	0.431
294	SLU 62	-1.25	-0.22	46.44	5.7009	-0.0228	0.4368
294	SLU 63	-1.25	-0.21	46.41	5.7207	-0.0228	0.4358
294	SLU 64	-1.25	-0.2	44.1	5.4635	-0.0208	0.436
294	SLU 65	-1.24	-0.18	44.05	5.4966	-0.0208	0.4343
294	SLU 66	-1.27	-0.2	44.8	5.5356	-0.0211	0.4453
294	SLU 67	-1.27	-0.19	44.77	5.5555	-0.0211	0.4443
294	SLU 68	-1.26	-0.18	44.51	5.5439	-0.0211	0.4391
294	SLU 69	-1.29	-0.2	45.26	5.583	-0.0214	0.4501
294	SLU 70	-1.29	-0.19	45.23	5.6028	-0.0214	0.4491
294	SLU 71	-1.28	-0.21	45.02	5.5582	-0.0213	0.4455
294	SLU 72	-1.27	-0.2	44.99	5.578	-0.0213	0.4445
294	SLU 73	-1.32	-0.18	48.03	5.9008	-0.0235	0.4615
294	SLU 74	-1.35	-0.2	48.78	5.9399	-0.0238	0.4724
294	SLU 75	-1.35	-0.19	48.75	5.9597	-0.0238	0.4714
294	SLU 76	-1.33	-0.18	48.49	5.9481	-0.0237	0.4662
294	SLU 77	-1.37	-0.2	49.24	5.9872	-0.024	0.4772
294	SLU 78	-1.36	-0.19	49.21	6.007	-0.024	0.4762
294	SLU 79	-1.35	-0.21	49	5.9624	-0.0239	0.4727
294	SLU 80	-1.35	-0.19	48.97	5.9822	-0.024	0.4717
294	SLU 81	-1.36	-0.2	49.79	6.041	-0.0246	0.4748
294	SLU 82	-1.36	-0.19	49.76	6.0608	-0.0246	0.4738
294	SLU 83	-1.37	-0.2	50.25	6.0883	-0.0248	0.4795
294	SLU 84	-1.37	-0.19	50.22	6.1082	-0.0249	0.4785
294	SLE RA 1	-0.93	-0.16	33.09	4.1176	-0.0156	0.326
294	SLE RA 2	-0.93	-0.14	33.05	4.1396	-0.0156	0.3249
294	SLE RA 3	-0.95	-0.16	33.55	4.1656	-0.0158	0.3322
294	SLE RA 4	-0.95	-0.15	33.53	4.1788	-0.0158	0.3315
294	SLE RA 5	-0.94	-0.15	33.36	4.1711	-0.0157	0.328
294	SLE RA 6	-0.96	-0.16	33.86	4.1972	-0.0159	0.3354
294	SLE RA 7	-0.96	-0.15	33.84	4.2104	-0.0159	0.3347
294	SLE RA 8	-0.95	-0.16	33.7	4.1807	-0.0159	0.3323
294	SLE RA 9	-0.95	-0.15	33.68	4.1939	-0.0159	0.3317
294	SLE RA 10	-0.98	-0.14	35.71	4.4091	-0.0174	0.343
294	SLE RA 11	-1	-0.16	36.21	4.4351	-0.0175	0.3503
294	SLE RA 12	-1	-0.15	36.19	4.4483	-0.0176	0.3496
294	SLE RA 13	-0.99	-0.15	36.01	4.4406	-0.0175	0.3461
294	SLE RA 14	-1.01	-0.16	36.51	4.4667	-0.0177	0.3535
294	SLE RA 15	-1.01	-0.15	36.49	4.4799	-0.0177	0.3528
294	SLE RA 16	-1	-0.16	36.35	4.4502	-0.0176	0.3504
294	SLE RA 17	-1	-0.15	36.33	4.4634	-0.0177	0.3498
294	SLE RA 18	-1.01	-0.16	36.88	4.5026	-0.0181	0.3518
294	SLE RA 19	-1.01	-0.15	36.86	4.5158	-0.0181	0.3512
294	SLE RA 20	-1.02	-0.16	37.18	4.5341	-0.0182	0.355
294	SLE RA 21	-1.01	-0.15	37.16	4.5473	-0.0183	0.3543
294	SLE FR 1	-0.93	-0.16	33.09	4.1176	-0.0156	0.326
294	SLE FR 2	-0.93	-0.15	33.08	4.122	-0.0156	0.3258
294	SLE FR 3	-0.94	-0.16	33.21	4.1302	-0.0156	0.3273
294	SLE FR 4	-0.95	-0.15	34.22	4.2375	-0.0163	0.3335
294	SLE FR 5	-0.96	-0.16	34.35	4.2457	-0.0164	0.335

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLE FR 6	-0.97	-0.16	34.98	4.3101	-0.0168	0.3389
294	SLE QP 1	-0.93	-0.16	33.09	4.1176	-0.0156	0.326
294	SLE QP 2	-0.96	-0.16	34.22	4.2331	-0.0163	0.3337
294	SLD 1	2.77	0.18	40.18	4.7868	-0.0024	-0.9724
294	SLD 2	3.2	-0.23	39.89	4.7608	-0.0026	-1.1214
294	SLD 3	2.87	-0.85	39.51	4.4874	-0.0018	-1.0061
294	SLD 4	3.3	-1.26	39.22	4.4614	-0.002	-1.1551
294	SLD 5	-0.06	1.59	37.08	4.8578	-0.013	0.0195
294	SLD 6	0.22	1.32	36.89	4.8407	-0.0132	-0.0782
294	SLD 7	0.26	-1.86	34.84	3.86	-0.011	-0.0928
294	SLD 8	0.55	-2.13	34.65	3.8429	-0.0111	-0.1905
294	SLD 9	-2.46	1.82	33.8	4.6232	-0.0215	0.858
294	SLD 10	-2.18	1.55	33.61	4.6061	-0.0217	0.7603
294	SLD 11	-2.13	-1.63	31.56	3.6254	-0.0194	0.7457
294	SLD 12	-1.85	-1.9	31.36	3.6083	-0.0196	0.648
294	SLD 13	-5.21	0.95	29.23	4.0047	-0.0306	1.8226
294	SLD 14	-4.78	0.54	28.94	3.9787	-0.0309	1.6736
294	SLD 15	-5.11	-0.09	28.56	3.7054	-0.03	1.7889
294	SLD 16	-4.68	-0.5	28.26	3.6794	-0.0302	1.6399
294	SLV 1	7.76	0.61	48.14	5.524	0.0163	-2.722
294	SLV 2	8.76	-0.35	47.46	5.4634	0.0157	-3.069
294	SLV 3	7.99	-1.76	46.62	4.8321	0.0177	-2.7996
294	SLV 4	8.99	-2.71	45.94	4.7716	0.0172	-3.1466
294	SLV 5	1.15	3.83	40.83	5.68	-0.0086	-0.4056
294	SLV 6	1.79	3.21	40.39	5.641	-0.009	-0.6292
294	SLV 7	1.9	-4.06	35.75	3.374	-0.0038	-0.6641
294	SLV 8	2.54	-4.68	35.31	3.3349	-0.0042	-0.8878
294	SLV 9	-4.45	4.36	33.13	5.1312	-0.0285	1.5552
294	SLV 10	-3.81	3.75	32.7	5.0922	-0.0288	1.3316
294	SLV 11	-3.7	-3.52	28.06	2.8251	-0.0236	1.2967
294	SLV 12	-3.06	-4.14	27.62	2.7861	-0.024	1.0731
294	SLV 13	-10.9	2.4	22.51	3.6945	-0.0498	3.8141
294	SLV 14	-9.9	1.44	21.83	3.634	-0.0504	3.467
294	SLV 15	-10.67	0.04	20.98	3.0027	-0.0484	3.7365
294	SLV 16	-9.68	-0.92	20.31	2.9422	-0.0489	3.3895
294	CRTFP Ux+	0	0	0	0	0	0
294	CRTFP Ux-	0	0	0	0	0	0
294	CRTFP Uy+	0	0	0	0	0	0
294	CRTFP Uy-	0	0	0	0	0	0
295	SLU 1	-0.89	-0.18	32.7	4.6689	-0.0321	0.3117
295	SLU 2	-0.89	-0.16	32.66	4.7013	-0.0321	0.3096
295	SLU 3	-0.92	-0.18	33.42	4.7565	-0.0328	0.3209
295	SLU 4	-0.92	-0.17	33.39	4.7759	-0.0328	0.3197
295	SLU 5	-0.9	-0.17	33.13	4.759	-0.0326	0.3144
295	SLU 6	-0.93	-0.19	33.89	4.8142	-0.0333	0.3256
295	SLU 7	-0.93	-0.17	33.86	4.8337	-0.0333	0.3244
295	SLU 8	-0.92	-0.19	33.64	4.7843	-0.0331	0.3211
295	SLU 9	-0.92	-0.18	33.61	4.8037	-0.0331	0.3199
295	SLU 10	-0.96	-0.16	36.75	5.2006	-0.0371	0.3368
295	SLU 11	-1	-0.18	37.52	5.2558	-0.0378	0.3481
295	SLU 12	-0.99	-0.17	37.49	5.2752	-0.0378	0.3468
295	SLU 13	-0.98	-0.17	37.22	5.2583	-0.0377	0.3415
295	SLU 14	-1.01	-0.19	37.99	5.3135	-0.0383	0.3528
295	SLU 15	-1.01	-0.18	37.96	5.3329	-0.0383	0.3516
295	SLU 16	-1	-0.19	37.74	5.2836	-0.0381	0.3483
295	SLU 17	-0.99	-0.18	37.71	5.303	-0.0381	0.3471
295	SLU 18	-1	-0.19	38.56	5.3821	-0.0392	0.3505
295	SLU 19	-1	-0.17	38.53	5.4016	-0.0393	0.3493
295	SLU 20	-1.02	-0.19	39.03	5.4398	-0.0397	0.3552
295	SLU 21	-1.01	-0.18	39	5.4593	-0.0398	0.354
295	SLU 22	-1.01	-0.17	36.61	5.1437	-0.0363	0.3543
295	SLU 23	-1.01	-0.14	36.56	5.1762	-0.0364	0.3523
295	SLU 24	-1.04	-0.16	37.33	5.2314	-0.037	0.3635
295	SLU 25	-1.04	-0.15	37.3	5.2508	-0.0371	0.3623
295	SLU 26	-1.02	-0.15	37.03	5.2339	-0.0369	0.357
295	SLU 27	-1.05	-0.17	37.79	5.2891	-0.0375	0.3683
295	SLU 28	-1.05	-0.16	37.77	5.3085	-0.0376	0.367
295	SLU 29	-1.04	-0.17	37.55	5.2592	-0.0373	0.3637
295	SLU 30	-1.04	-0.16	37.52	5.2786	-0.0374	0.3625
295	SLU 31	-1.09	-0.15	40.66	5.6755	-0.0414	0.3794
295	SLU 32	-1.12	-0.17	41.42	5.7306	-0.042	0.3907
295	SLU 33	-1.12	-0.15	41.4	5.7501	-0.0421	0.3895
295	SLU 34	-1.1	-0.15	41.13	5.7332	-0.0419	0.3841
295	SLU 35	-1.13	-0.17	41.89	5.7884	-0.0425	0.3954
295	SLU 36	-1.13	-0.16	41.86	5.8078	-0.0426	0.3942
295	SLU 37	-1.12	-0.18	41.65	5.7584	-0.0423	0.3909
295	SLU 38	-1.12	-0.16	41.62	5.7779	-0.0424	0.3897
295	SLU 39	-1.13	-0.17	42.47	5.857	-0.0435	0.3931
295	SLU 40	-1.12	-0.16	42.44	5.8765	-0.0435	0.3919
295	SLU 41	-1.14	-0.17	42.94	5.9147	-0.044	0.3978
295	SLU 42	-1.14	-0.16	42.91	5.9342	-0.044	0.3966
295	SLU 43	-1.12	-0.24	41.18	5.9067	-0.0402	0.3906
295	SLU 44	-1.11	-0.22	41.13	5.9391	-0.0403	0.3885
295	SLU 45	-1.15	-0.24	41.89	5.9943	-0.0409	0.3998
295	SLU 46	-1.14	-0.23	41.86	6.0138	-0.041	0.3986
295	SLU 47	-1.13	-0.23	41.6	5.9968	-0.0408	0.3933
295	SLU 48	-1.16	-0.25	42.36	6.052	-0.0415	0.4045
295	SLU 49	-1.16	-0.24	42.33	6.0715	-0.0415	0.4033
295	SLU 50	-1.15	-0.25	42.11	6.0221	-0.0412	0.4
295	SLU 51	-1.14	-0.24	42.09	6.0416	-0.0413	0.3988

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLU 52	-1.19	-0.23	45.23	6.4384	-0.0453	0.4157
295	SLU 53	-1.22	-0.25	45.99	6.4936	-0.046	0.427
295	SLU 54	-1.22	-0.23	45.96	6.5131	-0.046	0.4257
295	SLU 55	-1.2	-0.23	45.7	6.4961	-0.0458	0.4204
295	SLU 56	-1.24	-0.25	46.46	6.5513	-0.0465	0.4317
295	SLU 57	-1.23	-0.24	46.43	6.5708	-0.0465	0.4305
295	SLU 58	-1.22	-0.25	46.21	6.5214	-0.0462	0.4272
295	SLU 59	-1.22	-0.24	46.18	6.5409	-0.0463	0.426
295	SLU 60	-1.23	-0.25	47.03	6.62	-0.0474	0.4294
295	SLU 61	-1.23	-0.23	47	6.6394	-0.0474	0.4282
295	SLU 62	-1.24	-0.25	47.5	6.6777	-0.0479	0.4341
295	SLU 63	-1.24	-0.24	47.47	6.6971	-0.0479	0.4329
295	SLU 64	-1.24	-0.23	45.08	6.3816	-0.0445	0.4332
295	SLU 65	-1.23	-0.21	45.04	6.414	-0.0445	0.4312
295	SLU 66	-1.27	-0.23	45.8	6.4692	-0.0452	0.4424
295	SLU 67	-1.26	-0.21	45.77	6.4887	-0.0452	0.4412
295	SLU 68	-1.25	-0.21	45.5	6.4717	-0.0451	0.4359
295	SLU 69	-1.28	-0.23	46.27	6.5269	-0.0457	0.4472
295	SLU 70	-1.28	-0.22	46.24	6.5464	-0.0458	0.4459
295	SLU 71	-1.27	-0.24	46.02	6.497	-0.0455	0.4426
295	SLU 72	-1.26	-0.22	45.99	6.5165	-0.0455	0.4414
295	SLU 73	-1.31	-0.21	49.13	6.9133	-0.0496	0.4583
295	SLU 74	-1.35	-0.23	49.9	6.9685	-0.0502	0.4696
295	SLU 75	-1.34	-0.21	49.87	6.9879	-0.0502	0.4684
295	SLU 76	-1.33	-0.21	49.6	6.971	-0.0501	0.463
295	SLU 77	-1.36	-0.23	50.36	7.0262	-0.0507	0.4743
295	SLU 78	-1.36	-0.22	50.34	7.0457	-0.0508	0.4731
295	SLU 79	-1.35	-0.24	50.12	6.9963	-0.0505	0.4698
295	SLU 80	-1.34	-0.22	50.09	7.0157	-0.0505	0.4686
295	SLU 81	-1.35	-0.23	50.94	7.0948	-0.0516	0.472
295	SLU 82	-1.35	-0.22	50.91	7.1143	-0.0517	0.4708
295	SLU 83	-1.37	-0.23	51.41	7.1525	-0.0521	0.4767
295	SLU 84	-1.36	-0.22	51.38	7.172	-0.0522	0.4755
295	SLE RA 1	-0.93	-0.18	33.82	4.8045	-0.0333	0.3239
295	SLE RA 2	-0.92	-0.16	33.79	4.8262	-0.0333	0.3225
295	SLE RA 3	-0.95	-0.18	34.3	4.8629	-0.0338	0.33
295	SLE RA 4	-0.94	-0.17	34.28	4.8759	-0.0338	0.3292
295	SLE RA 5	-0.93	-0.17	34.1	4.8646	-0.0337	0.3257
295	SLE RA 6	-0.95	-0.18	34.61	4.9014	-0.0341	0.3332
295	SLE RA 7	-0.95	-0.17	34.59	4.9144	-0.0341	0.3324
295	SLE RA 8	-0.95	-0.18	34.45	4.8815	-0.034	0.3302
295	SLE RA 9	-0.94	-0.18	34.43	4.8945	-0.034	0.3293
295	SLE RA 10	-0.98	-0.17	36.52	5.159	-0.0367	0.3406
295	SLE RA 11	-1	-0.18	37.03	5.1958	-0.0371	0.3481
295	SLE RA 12	-0.99	-0.17	37.01	5.2088	-0.0371	0.3473
295	SLE RA 13	-0.98	-0.17	36.83	5.1975	-0.037	0.3438
295	SLE RA 14	-1.01	-0.18	37.34	5.2343	-0.0374	0.3513
295	SLE RA 15	-1	-0.17	37.32	5.2473	-0.0375	0.3505
295	SLE RA 16	-1	-0.19	37.18	5.2143	-0.0373	0.3483
295	SLE RA 17	-1	-0.18	37.16	5.2273	-0.0373	0.3474
295	SLE RA 18	-1	-0.18	37.72	5.28	-0.038	0.3497
295	SLE RA 19	-1	-0.17	37.7	5.293	-0.0381	0.3489
295	SLE RA 20	-1.01	-0.18	38.04	5.3185	-0.0384	0.3529
295	SLE RA 21	-1.01	-0.17	38.02	5.3315	-0.0384	0.3521
295	SLE FR 1	-0.93	-0.18	33.82	4.8045	-0.0333	0.3239
295	SLE FR 2	-0.93	-0.18	33.81	4.8089	-0.0333	0.3236
295	SLE FR 3	-0.93	-0.18	33.95	4.8199	-0.0334	0.3251
295	SLE FR 4	-0.95	-0.18	34.99	4.9515	-0.0347	0.3314
295	SLE FR 5	-0.95	-0.18	35.12	4.9626	-0.0348	0.3329
295	SLE FR 6	-0.96	-0.18	35.77	5.0423	-0.0357	0.3368
295	SLE QP 1	-0.93	-0.18	33.82	4.8045	-0.0333	0.3239
295	SLE QP 2	-0.95	-0.18	34.99	4.9472	-0.0347	0.3316
295	SLD 1	2.78	0.15	40.58	5.5044	-0.0247	-0.9756
295	SLD 2	3.21	-0.24	40.3	5.4738	-0.0247	-1.1246
295	SLD 3	2.88	-0.87	39.91	5.2167	-0.0235	-1.0093
295	SLD 4	3.31	-1.26	39.62	5.1861	-0.0235	-1.1583
295	SLD 5	-0.05	1.54	37.75	5.5562	-0.0336	0.0171
295	SLD 6	0.23	1.28	37.56	5.5361	-0.0336	-0.0806
295	SLD 7	0.27	-1.87	35.49	4.5971	-0.0295	-0.0953
295	SLD 8	0.55	-2.12	35.3	4.577	-0.0295	-0.193
295	SLD 9	-2.45	1.76	34.68	5.3174	-0.0399	0.8563
295	SLD 10	-2.17	1.51	34.49	5.2973	-0.0399	0.7586
295	SLD 11	-2.13	-1.64	32.43	4.3582	-0.0358	0.7439
295	SLD 12	-1.85	-1.9	32.24	4.3381	-0.0359	0.6461
295	SLD 13	-5.21	0.9	30.36	4.7083	-0.0459	1.8216
295	SLD 14	-4.78	0.51	30.08	4.6777	-0.0459	1.6726
295	SLD 15	-5.11	-0.12	29.69	4.4206	-0.0447	1.7879
295	SLD 16	-4.68	-0.51	29.4	4.3899	-0.0447	1.6388
295	SLV 1	7.78	0.56	48.05	6.2457	-0.0113	-2.7265
295	SLV 2	8.77	-0.34	47.38	6.1743	-0.0113	-3.0737
295	SLV 3	8	-1.77	46.52	5.5822	-0.0084	-2.8042
295	SLV 4	9	-2.68	45.85	5.5108	-0.0085	-3.1513
295	SLV 5	1.16	3.74	41.34	6.3554	-0.032	-0.4082
295	SLV 6	1.8	3.15	40.91	6.3094	-0.032	-0.6319
295	SLV 7	1.9	-4.04	36.24	4.1436	-0.0225	-0.6671
295	SLV 8	2.54	-4.62	35.81	4.0976	-0.0225	-0.8908
295	SLV 9	-4.44	4.27	34.17	5.7968	-0.0469	1.5541
295	SLV 10	-3.8	3.68	33.74	5.7508	-0.0469	1.3304
295	SLV 11	-3.7	-3.51	29.07	3.585	-0.0374	1.2952
295	SLV 12	-3.06	-4.1	28.64	3.539	-0.0374	1.0715

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLV 13	-10.9	2.32	24.13	4.3836	-0.0609	3.8146
295	SLV 14	-9.9	1.41	23.46	4.3122	-0.061	3.4674
295	SLV 15	-10.68	-0.01	22.6	3.72	-0.0581	3.7369
295	SLV 16	-9.68	-0.92	21.93	3.6487	-0.0581	3.3898
295	CRTFP Ux+	0	0	0	0	0	0
295	CRTFP Ux-	0	0	0	0	0	0
295	CRTFP Uy+	0	0	0	0	0	0
295	CRTFP Uy-	0	0	0	0	0	0
296	SLU 1	-0.89	-0.22	33.89	5.6962	-0.0471	0.3091
296	SLU 2	-0.88	-0.19	33.85	5.7261	-0.0472	0.3067
296	SLU 3	-0.91	-0.22	34.64	5.8081	-0.0482	0.3182
296	SLU 4	-0.91	-0.2	34.61	5.826	-0.0483	0.3168
296	SLU 5	-0.89	-0.2	34.34	5.7999	-0.048	0.3113
296	SLU 6	-0.93	-0.22	35.12	5.882	-0.049	0.3229
296	SLU 7	-0.92	-0.21	35.1	5.8999	-0.049	0.3214
296	SLU 8	-0.91	-0.23	34.87	5.8439	-0.0486	0.3184
296	SLU 9	-0.91	-0.21	34.84	5.8618	-0.0487	0.317
296	SLU 10	-0.96	-0.2	38.13	6.3715	-0.0543	0.3338
296	SLU 11	-0.99	-0.22	38.92	6.4535	-0.0553	0.3454
296	SLU 12	-0.99	-0.21	38.89	6.4714	-0.0554	0.3439
296	SLU 13	-0.97	-0.2	38.62	6.4453	-0.0551	0.3385
296	SLU 14	-1	-0.23	39.4	6.5273	-0.0561	0.35
296	SLU 15	-1	-0.21	39.38	6.5453	-0.0561	0.3486
296	SLU 16	-0.99	-0.23	39.15	6.4893	-0.0557	0.3456
296	SLU 17	-0.99	-0.22	39.12	6.5072	-0.0558	0.3441
296	SLU 18	-1	-0.22	40.01	6.6182	-0.0573	0.3479
296	SLU 19	-0.99	-0.21	39.98	6.6361	-0.0573	0.3464
296	SLU 20	-1.01	-0.23	40.5	6.692	-0.058	0.3525
296	SLU 21	-1.01	-0.21	40.47	6.7099	-0.0581	0.3511
296	SLU 22	-1.01	-0.2	37.96	6.3068	-0.0533	0.3515
296	SLU 23	-1	-0.18	37.91	6.3366	-0.0535	0.3491
296	SLU 24	-1.03	-0.2	38.7	6.4187	-0.0544	0.3606
296	SLU 25	-1.03	-0.18	38.67	6.4366	-0.0545	0.3592
296	SLU 26	-1.01	-0.18	38.4	6.4105	-0.0542	0.3538
296	SLU 27	-1.05	-0.2	39.19	6.4925	-0.0552	0.3653
296	SLU 28	-1.04	-0.19	39.16	6.5104	-0.0552	0.3638
296	SLU 29	-1.04	-0.21	38.94	6.4544	-0.0548	0.3608
296	SLU 30	-1.03	-0.19	38.91	6.4723	-0.0549	0.3594
296	SLU 31	-1.08	-0.18	42.19	6.982	-0.0605	0.3762
296	SLU 32	-1.11	-0.2	42.98	7.0641	-0.0615	0.3878
296	SLU 33	-1.11	-0.19	42.95	7.082	-0.0616	0.3863
296	SLU 34	-1.09	-0.18	42.68	7.0558	-0.0613	0.3809
296	SLU 35	-1.13	-0.21	43.47	7.1379	-0.0623	0.3924
296	SLU 36	-1.12	-0.19	43.44	7.1558	-0.0623	0.391
296	SLU 37	-1.11	-0.21	43.22	7.0998	-0.0619	0.388
296	SLU 38	-1.11	-0.2	43.19	7.1177	-0.062	0.3865
296	SLU 39	-1.12	-0.21	44.07	7.2288	-0.0635	0.3903
296	SLU 40	-1.12	-0.19	44.05	7.2467	-0.0635	0.3888
296	SLU 41	-1.13	-0.21	44.56	7.3026	-0.0642	0.3949
296	SLU 42	-1.13	-0.2	44.53	7.3205	-0.0643	0.3935
296	SLU 43	-1.11	-0.29	42.67	7.1958	-0.0591	0.3873
296	SLU 44	-1.1	-0.26	42.62	7.2256	-0.0592	0.3849
296	SLU 45	-1.14	-0.29	43.41	7.3077	-0.0602	0.3964
296	SLU 46	-1.13	-0.27	43.38	7.3256	-0.0603	0.395
296	SLU 47	-1.12	-0.27	43.11	7.2994	-0.06	0.3895
296	SLU 48	-1.15	-0.29	43.9	7.3815	-0.061	0.4011
296	SLU 49	-1.15	-0.28	43.87	7.3994	-0.061	0.3996
296	SLU 50	-1.14	-0.3	43.65	7.3434	-0.0606	0.3966
296	SLU 51	-1.13	-0.28	43.62	7.3613	-0.0607	0.3951
296	SLU 52	-1.18	-0.27	46.9	7.871	-0.0663	0.412
296	SLU 53	-1.22	-0.29	47.69	7.953	-0.0673	0.4235
296	SLU 54	-1.21	-0.28	47.66	7.971	-0.0674	0.4221
296	SLU 55	-1.2	-0.27	47.39	7.9448	-0.0671	0.4167
296	SLU 56	-1.23	-0.3	48.18	8.0269	-0.0681	0.4282
296	SLU 57	-1.22	-0.28	48.15	8.0448	-0.0681	0.4267
296	SLU 58	-1.22	-0.3	47.93	7.9888	-0.0677	0.4237
296	SLU 59	-1.21	-0.29	47.9	8.0067	-0.0678	0.4223
296	SLU 60	-1.22	-0.29	48.78	8.1177	-0.0693	0.4261
296	SLU 61	-1.22	-0.28	48.76	8.1357	-0.0693	0.4246
296	SLU 62	-1.24	-0.3	49.27	8.1916	-0.07	0.4307
296	SLU 63	-1.23	-0.28	49.25	8.2095	-0.0701	0.4293
296	SLU 64	-1.23	-0.27	46.73	7.8063	-0.0653	0.4297
296	SLU 65	-1.23	-0.25	46.69	7.8362	-0.0655	0.4273
296	SLU 66	-1.26	-0.27	47.48	7.9182	-0.0664	0.4388
296	SLU 67	-1.25	-0.25	47.45	7.9361	-0.0665	0.4374
296	SLU 68	-1.24	-0.25	47.18	7.91	-0.0662	0.4319
296	SLU 69	-1.27	-0.27	47.96	7.992	-0.0672	0.4435
296	SLU 70	-1.27	-0.26	47.94	8.01	-0.0673	0.442
296	SLU 71	-1.26	-0.28	47.71	7.954	-0.0668	0.439
296	SLU 72	-1.26	-0.27	47.68	7.9719	-0.0669	0.4376
296	SLU 73	-1.3	-0.25	50.97	8.4816	-0.0725	0.4544
296	SLU 74	-1.34	-0.27	51.76	8.5636	-0.0735	0.466
296	SLU 75	-1.33	-0.26	51.73	8.5815	-0.0736	0.4645
296	SLU 76	-1.32	-0.26	51.46	8.5554	-0.0733	0.4591
296	SLU 77	-1.35	-0.28	52.24	8.6374	-0.0743	0.4706
296	SLU 78	-1.35	-0.26	52.22	8.6553	-0.0743	0.4692
296	SLU 79	-1.34	-0.29	51.99	8.5994	-0.0739	0.4662
296	SLU 80	-1.33	-0.27	51.96	8.6173	-0.074	0.4647
296	SLU 81	-1.34	-0.28	52.85	8.7283	-0.0755	0.4685
296	SLU 82	-1.34	-0.26	52.82	8.7462	-0.0755	0.467

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLU 83	-1.36	-0.28	53.34	8.8021	-0.0762	0.4731
296	SLU 84	-1.35	-0.27	53.31	8.82	-0.0763	0.4717
296	SLE RA 1	-0.92	-0.21	35.06	5.8707	-0.0489	0.3212
296	SLE RA 2	-0.92	-0.2	35.03	5.8906	-0.049	0.3196
296	SLE RA 3	-0.94	-0.21	35.55	5.9453	-0.0496	0.3273
296	SLE RA 4	-0.94	-0.2	35.53	5.9572	-0.0497	0.3263
296	SLE RA 5	-0.93	-0.2	35.35	5.9398	-0.0495	0.3227
296	SLE RA 6	-0.95	-0.21	35.88	5.9945	-0.0501	0.3304
296	SLE RA 7	-0.95	-0.2	35.86	6.0064	-0.0502	0.3294
296	SLE RA 8	-0.94	-0.22	35.71	5.9691	-0.0499	0.3274
296	SLE RA 9	-0.94	-0.21	35.69	5.981	-0.0499	0.3265
296	SLE RA 10	-0.97	-0.2	37.88	6.3208	-0.0537	0.3377
296	SLE RA 11	-0.99	-0.21	38.4	6.3755	-0.0544	0.3454
296	SLE RA 12	-0.99	-0.2	38.39	6.3875	-0.0544	0.3444
296	SLE RA 13	-0.98	-0.2	38.2	6.37	-0.0542	0.3408
296	SLE RA 14	-1	-0.22	38.73	6.4247	-0.0549	0.3485
296	SLE RA 15	-1	-0.21	38.71	6.4367	-0.0549	0.3475
296	SLE RA 16	-0.99	-0.22	38.56	6.3994	-0.0546	0.3455
296	SLE RA 17	-0.99	-0.21	38.54	6.4113	-0.0547	0.3446
296	SLE RA 18	-1	-0.22	39.13	6.4853	-0.0557	0.3471
296	SLE RA 19	-0.99	-0.21	39.11	6.4973	-0.0557	0.3461
296	SLE RA 20	-1	-0.22	39.46	6.5345	-0.0562	0.3502
296	SLE RA 21	-1	-0.21	39.44	6.5465	-0.0562	0.3492
296	SLE FR 1	-0.92	-0.21	35.06	5.8707	-0.0489	0.3212
296	SLE FR 2	-0.92	-0.21	35.05	5.8746	-0.0489	0.3209
296	SLE FR 3	-0.93	-0.21	35.19	5.8904	-0.0491	0.3225
296	SLE FR 4	-0.94	-0.21	36.27	6.059	-0.0509	0.3287
296	SLE FR 5	-0.95	-0.21	36.41	6.0748	-0.0511	0.3302
296	SLE FR 6	-0.96	-0.21	37.09	6.178	-0.0523	0.3341
296	SLE QP 1	-0.92	-0.21	35.06	5.8707	-0.0489	0.3212
296	SLE QP 2	-0.94	-0.21	36.28	6.0551	-0.0509	0.329
296	SLD 1	2.79	0.11	41.61	6.6836	-0.0441	-0.9789
296	SLD 2	3.22	-0.26	41.32	6.6455	-0.0439	-1.128
296	SLD 3	2.89	-0.91	40.92	6.4148	-0.0423	-1.0126
296	SLD 4	3.31	-1.29	40.63	6.3766	-0.0422	-1.1617
296	SLD 5	-0.04	1.5	38.97	6.6581	-0.0515	0.0142
296	SLD 6	0.24	1.26	38.78	6.6331	-0.0514	-0.0835
296	SLD 7	0.27	-1.91	36.68	5.762	-0.0458	-0.0981
296	SLD 8	0.55	-2.15	36.49	5.737	-0.0457	-0.1958
296	SLD 9	-2.44	1.73	36.07	6.3731	-0.0562	0.8538
296	SLD 10	-2.16	1.48	35.88	6.3481	-0.0561	0.7561
296	SLD 11	-2.12	-1.69	33.77	5.477	-0.0504	0.7414
296	SLD 12	-1.84	-1.93	33.58	5.452	-0.0503	0.6437
296	SLD 13	-5.2	0.86	31.93	5.7335	-0.0597	1.8196
296	SLD 14	-4.77	0.49	31.64	5.6954	-0.0595	1.6706
296	SLD 15	-5.11	-0.16	31.24	5.4647	-0.0579	1.7859
296	SLD 16	-4.68	-0.54	30.95	5.4265	-0.0578	1.6369
296	SLV 1	7.79	0.51	48.72	7.5193	-0.0348	-2.7309
296	SLV 2	8.79	-0.35	48.04	7.4306	-0.0344	-3.0779
296	SLV 3	8.01	-1.82	47.16	6.9017	-0.0308	-2.8085
296	SLV 4	9.01	-2.69	46.48	6.813	-0.0304	-3.1556
296	SLV 5	1.17	3.7	42.49	7.4464	-0.0522	-0.4115
296	SLV 6	1.81	3.14	42.06	7.3892	-0.052	-0.6351
296	SLV 7	1.9	-4.09	37.29	5.3876	-0.0389	-0.6702
296	SLV 8	2.55	-4.65	36.86	5.3304	-0.0386	-0.8939
296	SLV 9	-4.43	4.23	35.7	6.7797	-0.0632	1.5519
296	SLV 10	-3.79	3.67	35.26	6.7225	-0.063	1.3282
296	SLV 11	-3.7	-3.57	30.5	4.721	-0.0498	1.2931
296	SLV 12	-3.06	-4.13	30.07	4.6638	-0.0496	1.0694
296	SLV 13	-10.89	2.27	26.08	5.2972	-0.0714	3.8135
296	SLV 14	-9.9	1.4	25.4	5.2084	-0.0711	3.4665
296	SLV 15	-10.67	-0.07	24.52	4.6796	-0.0674	3.7359
296	SLV 16	-9.68	-0.94	23.84	4.5908	-0.0671	3.3888
296	CRTFP Ux+	0	0	0	0	0	0
296	CRTFP Ux-	0	0	0	0	0	0
296	CRTFP Uy+	0	0	0	0	0	0
296	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	-0.88	-0.27	35.49	7.0499	-0.059	0.306
297	SLU 2	-0.87	-0.24	35.45	7.0753	-0.0592	0.3032
297	SLU 3	-0.91	-0.27	36.27	7.1939	-0.0604	0.315
297	SLU 4	-0.9	-0.25	36.25	7.2091	-0.0605	0.3133
297	SLU 5	-0.88	-0.24	35.96	7.1703	-0.0601	0.3078
297	SLU 6	-0.92	-0.27	36.78	7.289	-0.0614	0.3195
297	SLU 7	-0.91	-0.25	36.76	7.3042	-0.0614	0.3179
297	SLU 8	-0.91	-0.28	36.52	7.2401	-0.0609	0.3151
297	SLU 9	-0.9	-0.26	36.49	7.2553	-0.061	0.3135
297	SLU 10	-0.95	-0.25	39.97	7.9127	-0.0679	0.3302
297	SLU 11	-0.98	-0.28	40.79	8.0313	-0.0692	0.342
297	SLU 12	-0.98	-0.26	40.76	8.0465	-0.0692	0.3404
297	SLU 13	-0.96	-0.25	40.48	8.0077	-0.0689	0.3348
297	SLU 14	-1	-0.28	41.3	8.1264	-0.0701	0.3466
297	SLU 15	-0.99	-0.26	41.28	8.1416	-0.0702	0.3449
297	SLU 16	-0.98	-0.29	41.04	8.0775	-0.0697	0.3422
297	SLU 17	-0.98	-0.27	41.01	8.0927	-0.0697	0.3405
297	SLU 18	-0.99	-0.28	41.95	8.2462	-0.0715	0.3446
297	SLU 19	-0.99	-0.26	41.92	8.2614	-0.0716	0.343
297	SLU 20	-1	-0.29	42.46	8.3413	-0.0725	0.3492
297	SLU 21	-1	-0.27	42.44	8.3565	-0.0725	0.3476
297	SLU 22	-1	-0.25	39.77	7.8393	-0.0668	0.3481
297	SLU 23	-0.99	-0.22	39.73	7.8647	-0.0669	0.3453

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 24	-1.03	-0.25	40.55	7.9833	-0.0682	0.3571
297	SLU 25	-1.02	-0.23	40.52	7.9985	-0.0682	0.3554
297	SLU 26	-1.01	-0.23	40.24	7.9597	-0.0679	0.3499
297	SLU 27	-1.04	-0.26	41.06	8.0784	-0.0691	0.3617
297	SLU 28	-1.03	-0.24	41.03	8.0936	-0.0692	0.36
297	SLU 29	-1.03	-0.26	40.79	8.0295	-0.0687	0.3573
297	SLU 30	-1.02	-0.25	40.77	8.0447	-0.0687	0.3556
297	SLU 31	-1.07	-0.23	44.24	8.7021	-0.0757	0.3724
297	SLU 32	-1.1	-0.26	45.06	8.8207	-0.0769	0.3842
297	SLU 33	-1.1	-0.24	45.04	8.8359	-0.077	0.3825
297	SLU 34	-1.08	-0.24	44.76	8.7971	-0.0766	0.377
297	SLU 35	-1.12	-0.27	45.58	8.9158	-0.0778	0.3888
297	SLU 36	-1.11	-0.25	45.55	8.931	-0.0779	0.3871
297	SLU 37	-1.11	-0.27	45.31	8.8669	-0.0774	0.3844
297	SLU 38	-1.1	-0.26	45.29	8.8821	-0.0775	0.3827
297	SLU 39	-1.11	-0.27	46.22	9.0356	-0.0793	0.3868
297	SLU 40	-1.11	-0.25	46.2	9.0508	-0.0794	0.3851
297	SLU 41	-1.13	-0.27	46.74	9.1307	-0.0802	0.3914
297	SLU 42	-1.12	-0.25	46.71	9.1459	-0.0803	0.3897
297	SLU 43	-1.1	-0.35	44.67	8.8943	-0.0741	0.3833
297	SLU 44	-1.09	-0.32	44.63	8.9196	-0.0742	0.3805
297	SLU 45	-1.13	-0.35	45.45	9.0383	-0.0755	0.3923
297	SLU 46	-1.12	-0.33	45.43	9.0535	-0.0756	0.3906
297	SLU 47	-1.11	-0.33	45.15	9.0147	-0.0752	0.3851
297	SLU 48	-1.14	-0.36	45.97	9.1333	-0.0764	0.3969
297	SLU 49	-1.14	-0.34	45.94	9.1485	-0.0765	0.3952
297	SLU 50	-1.13	-0.36	45.7	9.0844	-0.076	0.3925
297	SLU 51	-1.12	-0.34	45.68	9.0996	-0.0761	0.3908
297	SLU 52	-1.17	-0.33	49.15	9.757	-0.083	0.4076
297	SLU 53	-1.21	-0.36	49.97	9.8757	-0.0842	0.4194
297	SLU 54	-1.2	-0.34	49.95	9.8909	-0.0843	0.4177
297	SLU 55	-1.18	-0.34	49.67	9.8521	-0.0839	0.4122
297	SLU 56	-1.22	-0.37	50.49	9.9707	-0.0851	0.424
297	SLU 57	-1.21	-0.35	50.46	9.9859	-0.0852	0.4223
297	SLU 58	-1.21	-0.37	50.22	9.9218	-0.0847	0.4195
297	SLU 59	-1.2	-0.35	50.2	9.937	-0.0848	0.4179
297	SLU 60	-1.21	-0.37	51.13	10.0906	-0.0866	0.422
297	SLU 61	-1.21	-0.35	51.1	10.1058	-0.0867	0.4203
297	SLU 62	-1.23	-0.37	51.64	10.1856	-0.0875	0.4266
297	SLU 63	-1.22	-0.35	51.62	10.2008	-0.0876	0.4249
297	SLU 64	-1.22	-0.34	48.95	9.6837	-0.0818	0.4254
297	SLU 65	-1.21	-0.31	48.91	9.709	-0.082	0.4227
297	SLU 66	-1.25	-0.34	49.73	9.8277	-0.0832	0.4344
297	SLU 67	-1.24	-0.32	49.7	9.8429	-0.0833	0.4328
297	SLU 68	-1.23	-0.31	49.42	9.8041	-0.0829	0.4272
297	SLU 69	-1.26	-0.34	50.24	9.9227	-0.0842	0.439
297	SLU 70	-1.26	-0.32	50.22	9.9379	-0.0842	0.4374
297	SLU 71	-1.25	-0.35	49.98	9.8738	-0.0837	0.4346
297	SLU 72	-1.24	-0.33	49.95	9.889	-0.0838	0.4329
297	SLU 73	-1.29	-0.32	53.43	10.5464	-0.0907	0.4497
297	SLU 74	-1.33	-0.35	54.25	10.665	-0.092	0.4615
297	SLU 75	-1.32	-0.33	54.22	10.6802	-0.092	0.4599
297	SLU 76	-1.31	-0.32	53.94	10.6415	-0.0917	0.4543
297	SLU 77	-1.34	-0.35	54.76	10.7601	-0.0929	0.4661
297	SLU 78	-1.34	-0.33	54.73	10.7753	-0.093	0.4644
297	SLU 79	-1.33	-0.36	54.49	10.7112	-0.0925	0.4617
297	SLU 80	-1.32	-0.34	54.47	10.7264	-0.0925	0.46
297	SLU 81	-1.33	-0.35	55.4	10.8799	-0.0943	0.4641
297	SLU 82	-1.33	-0.33	55.38	10.8951	-0.0944	0.4625
297	SLU 83	-1.35	-0.36	55.92	10.975	-0.0953	0.4687
297	SLU 84	-1.34	-0.34	55.89	10.9902	-0.0954	0.467
297	SLE RA 1	-0.91	-0.26	36.71	7.2755	-0.0613	0.318
297	SLE RA 2	-0.91	-0.24	36.69	7.2924	-0.0614	0.3161
297	SLE RA 3	-0.93	-0.26	37.23	7.3715	-0.0622	0.324
297	SLE RA 4	-0.93	-0.25	37.22	7.3816	-0.0622	0.3229
297	SLE RA 5	-0.92	-0.25	37.03	7.3558	-0.062	0.3192
297	SLE RA 6	-0.94	-0.27	37.58	7.4349	-0.0628	0.3271
297	SLE RA 7	-0.94	-0.25	37.56	7.445	-0.0629	0.3259
297	SLE RA 8	-0.93	-0.27	37.4	7.4022	-0.0625	0.3241
297	SLE RA 9	-0.93	-0.26	37.38	7.4124	-0.0626	0.323
297	SLE RA 10	-0.96	-0.25	39.7	7.8506	-0.0672	0.3342
297	SLE RA 11	-0.98	-0.27	40.25	7.9297	-0.068	0.3421
297	SLE RA 12	-0.98	-0.26	40.23	7.9399	-0.0681	0.3409
297	SLE RA 13	-0.97	-0.25	40.04	7.914	-0.0678	0.3373
297	SLE RA 14	-0.99	-0.27	40.59	7.9931	-0.0686	0.3451
297	SLE RA 15	-0.99	-0.26	40.57	8.0032	-0.0687	0.344
297	SLE RA 16	-0.98	-0.28	40.41	7.9605	-0.0683	0.3422
297	SLE RA 17	-0.98	-0.26	40.39	7.9706	-0.0684	0.3411
297	SLE RA 18	-0.99	-0.27	41.02	8.073	-0.0696	0.3438
297	SLE RA 19	-0.99	-0.26	41	8.0831	-0.0696	0.3427
297	SLE RA 20	-1	-0.28	41.36	8.1364	-0.0702	0.3469
297	SLE RA 21	-0.99	-0.26	41.34	8.1465	-0.0703	0.3457
297	SLE FR 1	-0.91	-0.26	36.71	7.2755	-0.0613	0.318
297	SLE FR 2	-0.91	-0.26	36.71	7.2789	-0.0613	0.3176
297	SLE FR 3	-0.92	-0.26	36.85	7.3008	-0.0615	0.3192
297	SLE FR 4	-0.94	-0.26	38	7.5181	-0.0638	0.3254
297	SLE FR 5	-0.94	-0.27	38.14	7.5401	-0.064	0.327
297	SLE FR 6	-0.95	-0.27	38.87	7.6742	-0.0654	0.3309
297	SLE QP 1	-0.91	-0.26	36.71	7.2755	-0.0613	0.318
297	SLE QP 2	-0.94	-0.27	38	7.5147	-0.0638	0.3257

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLD 1	2.8	0.06	43.15	8.2691	-0.0591	-0.9826
297	SLD 2	3.23	-0.3	42.85	8.2214	-0.0588	-1.1315
297	SLD 3	2.89	-0.98	42.44	8.0213	-0.0571	-1.0162
297	SLD 4	3.32	-1.34	42.14	7.9736	-0.0568	-1.1651
297	SLD 5	-0.03	1.47	40.68	8.1254	-0.0655	0.0107
297	SLD 6	0.24	1.24	40.48	8.0941	-0.0653	-0.0869
297	SLD 7	0.28	-1.99	38.31	7.2994	-0.0587	-0.1014
297	SLD 8	0.56	-2.23	38.12	7.2681	-0.0586	-0.1989
297	SLD 9	-2.43	1.7	37.89	7.7614	-0.0689	0.8504
297	SLD 10	-2.15	1.46	37.7	7.7301	-0.0688	0.7528
297	SLD 11	-2.12	-1.77	35.53	6.9354	-0.0622	0.7384
297	SLD 12	-1.84	-2.01	35.33	6.9041	-0.062	0.6408
297	SLD 13	-5.19	0.81	33.87	7.0559	-0.0707	1.8166
297	SLD 14	-4.77	0.45	33.57	7.0082	-0.0704	1.6677
297	SLD 15	-5.1	-0.23	33.16	6.8081	-0.0687	1.783
297	SLD 16	-4.67	-0.59	32.86	6.7604	-0.0684	1.6341
297	SLV 1	7.8	0.46	50.01	9.2724	-0.0528	-2.7352
297	SLV 2	8.8	-0.38	49.32	9.1612	-0.0522	-3.0818
297	SLV 3	8.02	-1.92	48.4	8.706	-0.0481	-2.8126
297	SLV 4	9.01	-2.76	47.71	8.5948	-0.0475	-3.1592
297	SLV 5	1.19	3.7	44.16	8.9202	-0.0677	-0.4154
297	SLV 6	1.83	3.15	43.72	8.8486	-0.0673	-0.6388
297	SLV 7	1.91	-4.22	38.8	7.0322	-0.052	-0.6734
297	SLV 8	2.55	-4.76	38.36	6.9606	-0.0516	-0.8968
297	SLV 9	-4.42	4.23	37.65	8.0689	-0.0759	1.5483
297	SLV 10	-3.78	3.68	37.21	7.9973	-0.0755	1.3249
297	SLV 11	-3.7	-3.69	32.29	6.1809	-0.0602	1.2903
297	SLV 12	-3.06	-4.23	31.85	6.1093	-0.0598	1.0669
297	SLV 13	-10.89	2.22	28.3	6.4347	-0.08	3.8107
297	SLV 14	-9.89	1.38	27.61	6.3235	-0.0794	3.464
297	SLV 15	-10.67	-0.15	26.69	5.8683	-0.0753	3.7333
297	SLV 16	-9.68	-0.99	26	5.7571	-0.0747	3.3866
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	0	0	0
297	CRTFP Uy-	0	0	0	0	0	0
298	SLU 1	-0.87	-0.34	37.37	8.6615	-0.0657	0.3021
298	SLU 2	-0.86	-0.3	37.34	8.6806	-0.0659	0.299
298	SLU 3	-0.9	-0.34	38.2	8.8438	-0.0673	0.311
298	SLU 4	-0.89	-0.32	38.17	8.8552	-0.0674	0.3091
298	SLU 5	-0.87	-0.31	37.88	8.801	-0.0669	0.3035
298	SLU 6	-0.91	-0.35	38.74	8.9641	-0.0683	0.3155
298	SLU 7	-0.9	-0.32	38.72	8.9756	-0.0684	0.3136
298	SLU 8	-0.9	-0.35	38.46	8.9023	-0.0678	0.3112
298	SLU 9	-0.89	-0.33	38.44	8.9137	-0.0679	0.3093
298	SLU 10	-0.94	-0.32	42.13	9.7465	-0.0756	0.326
298	SLU 11	-0.97	-0.36	42.99	9.9096	-0.0769	0.338
298	SLU 12	-0.97	-0.33	42.97	9.9211	-0.077	0.3361
298	SLU 13	-0.95	-0.32	42.68	9.8669	-0.0766	0.3305
298	SLU 14	-0.99	-0.36	43.54	10.03	-0.078	0.3425
298	SLU 15	-0.98	-0.34	43.51	10.0415	-0.0781	0.3406
298	SLU 16	-0.98	-0.37	43.26	9.9681	-0.0775	0.3381
298	SLU 17	-0.97	-0.35	43.23	9.9796	-0.0776	0.3362
298	SLU 18	-0.98	-0.36	44.23	10.1842	-0.0795	0.3407
298	SLU 19	-0.98	-0.34	44.2	10.1957	-0.0796	0.3388
298	SLU 20	-1	-0.37	44.77	10.3046	-0.0806	0.3452
298	SLU 21	-0.99	-0.35	44.75	10.316	-0.0807	0.3433
298	SLU 22	-0.99	-0.33	41.9	9.6639	-0.0743	0.3439
298	SLU 23	-0.98	-0.29	41.86	9.683	-0.0745	0.3408
298	SLU 24	-1.02	-0.33	42.72	9.8461	-0.0758	0.3528
298	SLU 25	-1.01	-0.31	42.7	9.8576	-0.0759	0.3509
298	SLU 26	-0.99	-0.3	42.4	9.8033	-0.0755	0.3453
298	SLU 27	-1.03	-0.34	43.26	9.9665	-0.0769	0.3573
298	SLU 28	-1.02	-0.31	43.24	9.9779	-0.077	0.3554
298	SLU 29	-1.02	-0.34	42.98	9.9046	-0.0764	0.353
298	SLU 30	-1.01	-0.32	42.96	9.9161	-0.0765	0.3511
298	SLU 31	-1.06	-0.31	46.65	10.7488	-0.0841	0.3678
298	SLU 32	-1.09	-0.35	47.51	10.912	-0.0855	0.3798
298	SLU 33	-1.09	-0.33	47.49	10.9234	-0.0856	0.3779
298	SLU 34	-1.07	-0.32	47.2	10.8692	-0.0852	0.3723
298	SLU 35	-1.11	-0.36	48.06	11.0323	-0.0865	0.3843
298	SLU 36	-1.1	-0.33	48.03	11.0438	-0.0866	0.3824
298	SLU 37	-1.1	-0.36	47.78	10.9705	-0.0861	0.3799
298	SLU 38	-1.09	-0.34	47.76	10.9819	-0.0862	0.378
298	SLU 39	-1.1	-0.36	48.75	11.1865	-0.0881	0.3825
298	SLU 40	-1.1	-0.33	48.72	11.198	-0.0882	0.3806
298	SLU 41	-1.12	-0.36	49.29	11.3069	-0.0892	0.387
298	SLU 42	-1.11	-0.34	49.27	11.3184	-0.0893	0.3851
298	SLU 43	-1.09	-0.44	47.04	10.9163	-0.0825	0.3784
298	SLU 44	-1.08	-0.4	47	10.9354	-0.0827	0.3753
298	SLU 45	-1.12	-0.44	47.86	11.0986	-0.084	0.3873
298	SLU 46	-1.11	-0.42	47.84	11.11	-0.0841	0.3854
298	SLU 47	-1.09	-0.41	47.54	11.0558	-0.0837	0.3798
298	SLU 48	-1.13	-0.45	48.4	11.2189	-0.0851	0.3918
298	SLU 49	-1.12	-0.43	48.38	11.2304	-0.0852	0.3899
298	SLU 50	-1.12	-0.46	48.12	11.1571	-0.0846	0.3875
298	SLU 51	-1.11	-0.43	48.1	11.1685	-0.0847	0.3856
298	SLU 52	-1.16	-0.42	51.8	12.0013	-0.0923	0.4023
298	SLU 53	-1.19	-0.46	52.65	12.1644	-0.0937	0.4143
298	SLU 54	-1.19	-0.44	52.63	12.1759	-0.0938	0.4124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLU 55	-1.17	-0.43	52.34	12.1217	-0.0934	0.4068
298	SLU 56	-1.21	-0.47	53.2	12.2848	-0.0947	0.4188
298	SLU 57	-1.2	-0.44	53.18	12.2963	-0.0948	0.4169
298	SLU 58	-1.2	-0.47	52.92	12.2229	-0.0943	0.4144
298	SLU 59	-1.19	-0.45	52.9	12.2344	-0.0944	0.4126
298	SLU 60	-1.2	-0.47	53.89	12.439	-0.0963	0.417
298	SLU 61	-1.2	-0.44	53.87	12.4505	-0.0964	0.4151
298	SLU 62	-1.22	-0.47	54.43	12.5594	-0.0974	0.4215
298	SLU 63	-1.21	-0.45	54.41	12.5708	-0.0975	0.4196
298	SLU 64	-1.21	-0.44	51.56	11.9187	-0.0911	0.4202
298	SLU 65	-1.2	-0.4	51.52	11.9378	-0.0913	0.4171
298	SLU 66	-1.24	-0.44	52.38	12.1009	-0.0926	0.4291
298	SLU 67	-1.23	-0.41	52.36	12.1124	-0.0927	0.4272
298	SLU 68	-1.21	-0.4	52.06	12.0581	-0.0923	0.4216
298	SLU 69	-1.25	-0.44	52.92	12.2213	-0.0937	0.4336
298	SLU 70	-1.24	-0.42	52.9	12.2327	-0.0938	0.4317
298	SLU 71	-1.24	-0.45	52.64	12.1594	-0.0932	0.4293
298	SLU 72	-1.23	-0.43	52.62	12.1709	-0.0933	0.4274
298	SLU 73	-1.28	-0.41	56.32	13.0036	-0.1009	0.4441
298	SLU 74	-1.31	-0.45	57.18	13.1668	-0.1023	0.4561
298	SLU 75	-1.31	-0.43	57.15	13.1782	-0.1024	0.4542
298	SLU 76	-1.29	-0.42	56.86	13.124	-0.102	0.4486
298	SLU 77	-1.33	-0.46	57.72	13.2871	-0.1033	0.4606
298	SLU 78	-1.32	-0.44	57.7	13.2986	-0.1034	0.4587
298	SLU 79	-1.32	-0.47	57.44	13.2253	-0.1028	0.4562
298	SLU 80	-1.31	-0.44	57.42	13.2367	-0.1029	0.4544
298	SLU 81	-1.32	-0.46	58.41	13.4413	-0.1049	0.4588
298	SLU 82	-1.32	-0.44	58.39	13.4528	-0.105	0.4569
298	SLU 83	-1.34	-0.47	58.95	13.5617	-0.1059	0.4633
298	SLU 84	-1.33	-0.44	58.93	13.5732	-0.106	0.4614
298	SLE RA 1	-0.91	-0.34	38.67	8.9479	-0.0682	0.3141
298	SLE RA 2	-0.9	-0.31	38.64	8.9606	-0.0683	0.312
298	SLE RA 3	-0.92	-0.34	39.21	9.0694	-0.0692	0.32
298	SLE RA 4	-0.92	-0.32	39.2	9.077	-0.0693	0.3187
298	SLE RA 5	-0.91	-0.32	39	9.0409	-0.069	0.315
298	SLE RA 6	-0.93	-0.34	39.58	9.1496	-0.0699	0.323
298	SLE RA 7	-0.93	-0.33	39.56	9.1573	-0.07	0.3217
298	SLE RA 8	-0.92	-0.35	39.39	9.1084	-0.0696	0.3201
298	SLE RA 9	-0.92	-0.33	39.38	9.116	-0.0696	0.3188
298	SLE RA 10	-0.95	-0.32	41.84	9.6712	-0.0747	0.33
298	SLE RA 11	-0.97	-0.35	42.41	9.78	-0.0757	0.338
298	SLE RA 12	-0.97	-0.33	42.4	9.7876	-0.0757	0.3367
298	SLE RA 13	-0.96	-0.33	42.2	9.7515	-0.0754	0.333
298	SLE RA 14	-0.98	-0.35	42.77	9.8602	-0.0763	0.341
298	SLE RA 15	-0.98	-0.34	42.76	9.8679	-0.0764	0.3397
298	SLE RA 16	-0.97	-0.36	42.59	9.819	-0.076	0.3381
298	SLE RA 17	-0.97	-0.34	42.57	9.8266	-0.0761	0.3368
298	SLE RA 18	-0.98	-0.35	43.23	9.963	-0.0774	0.3398
298	SLE RA 19	-0.98	-0.34	43.22	9.9707	-0.0775	0.3385
298	SLE RA 20	-0.99	-0.36	43.6	10.0433	-0.0781	0.3428
298	SLE RA 21	-0.98	-0.34	43.58	10.0509	-0.0781	0.3415
298	SLE FR 1	-0.91	-0.34	38.67	8.9479	-0.0682	0.3141
298	SLE FR 2	-0.9	-0.33	38.66	8.9505	-0.0682	0.3137
298	SLE FR 3	-0.91	-0.34	38.81	8.98	-0.0685	0.3153
298	SLE FR 4	-0.93	-0.34	40.03	9.255	-0.071	0.3214
298	SLE FR 5	-0.93	-0.34	40.18	9.2845	-0.0712	0.323
298	SLE FR 6	-0.94	-0.35	40.95	9.4555	-0.0728	0.3269
298	SLE QP 1	-0.91	-0.34	38.67	8.9479	-0.0682	0.3141
298	SLE QP 2	-0.93	-0.34	40.04	9.2524	-0.071	0.3218
298	SLD 1	2.81	-0.02	45.05	10.1709	-0.0674	-0.9868
298	SLD 2	3.23	-0.37	44.74	10.1123	-0.0671	-1.1353
298	SLD 3	2.9	-1.08	44.31	9.9408	-0.0654	-1.0201
298	SLD 4	3.33	-1.43	44	9.8822	-0.0651	-1.1687
298	SLD 5	-0.02	1.43	42.71	9.8874	-0.073	0.0062
298	SLD 6	0.26	1.2	42.51	9.849	-0.0728	-0.0911
298	SLD 7	0.29	-2.12	40.25	9.1203	-0.0663	-0.105
298	SLD 8	0.57	-2.35	40.05	9.0819	-0.0661	-0.2024
298	SLD 9	-2.42	1.66	40.02	9.423	-0.0758	0.8459
298	SLD 10	-2.14	1.43	39.82	9.3846	-0.0756	0.7486
298	SLD 11	-2.11	-1.89	37.56	8.6559	-0.0691	0.7347
298	SLD 12	-1.83	-2.12	37.36	8.6175	-0.0689	0.6373
298	SLD 13	-5.18	0.75	36.07	8.6227	-0.0768	1.8122
298	SLD 14	-4.76	0.4	35.76	8.5641	-0.0765	1.6637
298	SLD 15	-5.09	-0.32	35.33	8.3926	-0.0748	1.7789
298	SLD 16	-4.67	-0.67	35.03	8.334	-0.0745	1.6303
298	SLV 1	7.82	0.39	51.72	11.3928	-0.0626	-2.7396
298	SLV 2	8.81	-0.43	51.02	11.2563	-0.0619	-3.0855
298	SLV 3	8.03	-2.04	50.06	10.8696	-0.0579	-2.8165
298	SLV 4	9.02	-2.86	49.35	10.7331	-0.0572	-3.1624
298	SLV 5	1.2	3.7	46.19	10.7115	-0.0757	-0.4204
298	SLV 6	1.84	3.18	45.74	10.6235	-0.0752	-0.6434
298	SLV 7	1.91	-4.4	40.63	8.9677	-0.06	-0.6767
298	SLV 8	2.55	-4.93	40.18	8.8797	-0.0596	-0.8996
298	SLV 9	-4.41	4.24	39.89	9.6252	-0.0823	1.5432
298	SLV 10	-3.77	3.71	39.44	9.5372	-0.0819	1.3203
298	SLV 11	-3.69	-3.86	34.33	7.8814	-0.0667	1.2869
298	SLV 12	-3.05	-4.39	33.88	7.7934	-0.0662	1.064
298	SLV 13	-10.88	2.18	30.72	7.7717	-0.0847	3.806
298	SLV 14	-9.89	1.36	30.02	7.6353	-0.084	3.46
298	SLV 15	-10.66	-0.25	29.06	7.2486	-0.08	3.7291

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLV 16	-9.67	-1.07	28.35	7.1121	-0.0793	3.3832
298	CRTFP Ux+	0	0	0	0	0	0
298	CRTFP Ux-	0	0	0	0	0	0
298	CRTFP Uy+	0	0	0	0	0	0
298	CRTFP Uy-	0	0	0	0	0	0
299	SLU 1	-0.86	-0.44	39.34	10.4202	-0.0639	0.2974
299	SLU 2	-0.85	-0.39	39.31	10.4318	-0.0641	0.294
299	SLU 3	-0.88	-0.44	40.21	10.6443	-0.0654	0.3061
299	SLU 4	-0.88	-0.41	40.19	10.6512	-0.0655	0.304
299	SLU 5	-0.86	-0.39	39.88	10.5798	-0.0651	0.2984
299	SLU 6	-0.9	-0.44	40.78	10.7923	-0.0664	0.3105
299	SLU 7	-0.89	-0.42	40.76	10.7992	-0.0665	0.3084
299	SLU 8	-0.89	-0.45	40.49	10.7162	-0.0659	0.3062
299	SLU 9	-0.88	-0.42	40.47	10.7231	-0.066	0.3042
299	SLU 10	-0.93	-0.41	44.39	11.7472	-0.0735	0.3207
299	SLU 11	-0.96	-0.46	45.29	11.9597	-0.0748	0.3328
299	SLU 12	-0.96	-0.44	45.27	11.9667	-0.0749	0.3308
299	SLU 13	-0.94	-0.42	44.96	11.8952	-0.0745	0.3251
299	SLU 14	-0.98	-0.47	45.86	12.1077	-0.0758	0.3373
299	SLU 15	-0.97	-0.44	45.84	12.1146	-0.0759	0.3352
299	SLU 16	-0.96	-0.48	45.57	12.0317	-0.0753	0.333
299	SLU 17	-0.96	-0.45	45.55	12.0386	-0.0754	0.3309
299	SLU 18	-0.97	-0.47	46.6	12.2994	-0.0774	0.3356
299	SLU 19	-0.96	-0.45	46.58	12.3064	-0.0774	0.3336
299	SLU 20	-0.98	-0.48	47.17	12.4474	-0.0784	0.34
299	SLU 21	-0.98	-0.45	47.15	12.4544	-0.0784	0.338
299	SLU 22	-0.98	-0.44	44.11	11.655	-0.0722	0.3387
299	SLU 23	-0.97	-0.39	44.08	11.6665	-0.0724	0.3353
299	SLU 24	-1	-0.44	44.98	11.879	-0.0737	0.3474
299	SLU 25	-1	-0.41	44.96	11.8859	-0.0738	0.3453
299	SLU 26	-0.98	-0.4	44.66	11.8145	-0.0734	0.3397
299	SLU 27	-1.02	-0.45	45.56	12.027	-0.0747	0.3518
299	SLU 28	-1.01	-0.42	45.54	12.0339	-0.0748	0.3497
299	SLU 29	-1	-0.45	45.26	11.951	-0.0742	0.3475
299	SLU 30	-1	-0.42	45.24	11.9579	-0.0743	0.3455
299	SLU 31	-1.05	-0.42	49.17	12.982	-0.0818	0.362
299	SLU 32	-1.08	-0.47	50.07	13.1945	-0.0831	0.3741
299	SLU 33	-1.08	-0.44	50.05	13.2014	-0.0832	0.3721
299	SLU 34	-1.06	-0.42	49.74	13.13	-0.0828	0.3664
299	SLU 35	-1.09	-0.47	50.64	13.3425	-0.0841	0.3786
299	SLU 36	-1.09	-0.44	50.62	13.3494	-0.0842	0.3765
299	SLU 37	-1.08	-0.48	50.35	13.2664	-0.0836	0.3743
299	SLU 38	-1.08	-0.45	50.33	13.2734	-0.0837	0.3722
299	SLU 39	-1.09	-0.48	51.38	13.5342	-0.0856	0.3769
299	SLU 40	-1.08	-0.45	51.36	13.5411	-0.0857	0.3749
299	SLU 41	-1.1	-0.48	51.95	13.6822	-0.0866	0.3813
299	SLU 42	-1.1	-0.46	51.93	13.6891	-0.0867	0.3793
299	SLU 43	-1.08	-0.57	49.5	13.1229	-0.0803	0.3725
299	SLU 44	-1.07	-0.52	49.47	13.1345	-0.0804	0.369
299	SLU 45	-1.1	-0.57	50.37	13.347	-0.0817	0.3812
299	SLU 46	-1.1	-0.54	50.35	13.3539	-0.0818	0.3791
299	SLU 47	-1.08	-0.52	50.04	13.2825	-0.0814	0.3734
299	SLU 48	-1.11	-0.57	50.94	13.495	-0.0828	0.3856
299	SLU 49	-1.11	-0.55	50.92	13.5019	-0.0828	0.3835
299	SLU 50	-1.1	-0.58	50.65	13.4189	-0.0823	0.3813
299	SLU 51	-1.1	-0.55	50.63	13.4259	-0.0824	0.3792
299	SLU 52	-1.14	-0.54	54.55	14.45	-0.0898	0.3958
299	SLU 53	-1.18	-0.59	55.45	14.6624	-0.0911	0.4079
299	SLU 54	-1.17	-0.56	55.43	14.6694	-0.0912	0.4058
299	SLU 55	-1.16	-0.55	55.13	14.5979	-0.0908	0.4002
299	SLU 56	-1.19	-0.6	56.03	14.8104	-0.0921	0.4123
299	SLU 57	-1.19	-0.57	56.01	14.8174	-0.0922	0.4102
299	SLU 58	-1.18	-0.61	55.73	14.7344	-0.0917	0.4081
299	SLU 59	-1.17	-0.58	55.71	14.7413	-0.0918	0.406
299	SLU 60	-1.19	-0.6	56.76	15.0022	-0.0937	0.4107
299	SLU 61	-1.18	-0.58	56.74	15.0091	-0.0938	0.4086
299	SLU 62	-1.2	-0.61	57.34	15.1502	-0.0947	0.4151
299	SLU 63	-1.19	-0.58	57.32	15.1571	-0.0948	0.413
299	SLU 64	-1.2	-0.57	54.28	14.3577	-0.0886	0.4138
299	SLU 65	-1.19	-0.52	54.24	14.3692	-0.0887	0.4103
299	SLU 66	-1.22	-0.57	55.14	14.5817	-0.09	0.4225
299	SLU 67	-1.21	-0.54	55.13	14.5887	-0.0901	0.4204
299	SLU 68	-1.2	-0.53	54.82	14.5172	-0.0897	0.4147
299	SLU 69	-1.23	-0.58	55.72	14.7297	-0.091	0.4269
299	SLU 70	-1.23	-0.55	55.7	14.7367	-0.0911	0.4248
299	SLU 71	-1.22	-0.58	55.43	14.6537	-0.0906	0.4226
299	SLU 72	-1.22	-0.55	55.41	14.6606	-0.0907	0.4205
299	SLU 73	-1.26	-0.55	59.33	15.6847	-0.0981	0.4371
299	SLU 74	-1.3	-0.6	60.23	15.8972	-0.0994	0.4492
299	SLU 75	-1.29	-0.57	60.21	15.9041	-0.0995	0.4471
299	SLU 76	-1.28	-0.55	59.9	15.8327	-0.0991	0.4415
299	SLU 77	-1.31	-0.6	60.8	16.0452	-0.1004	0.4536
299	SLU 78	-1.31	-0.57	60.78	16.0521	-0.1005	0.4516
299	SLU 79	-1.3	-0.61	60.51	15.9691	-0.1	0.4494
299	SLU 80	-1.29	-0.58	60.49	15.9761	-0.1	0.4473
299	SLU 81	-1.31	-0.61	61.54	16.2369	-0.102	0.452
299	SLU 82	-1.3	-0.58	61.52	16.2439	-0.1021	0.4499
299	SLU 83	-1.32	-0.61	62.11	16.3849	-0.103	0.4564
299	SLU 84	-1.31	-0.59	62.09	16.3918	-0.1031	0.4543
299	SLE RA 1	-0.89	-0.44	40.7	10.773	-0.0663	0.3092

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLE RA 2	-0.89	-0.4	40.68	10.7807	-0.0664	0.3069
299	SLE RA 3	-0.91	-0.44	41.28	10.9224	-0.0673	0.315
299	SLE RA 4	-0.91	-0.42	41.27	10.927	-0.0673	0.3136
299	SLE RA 5	-0.9	-0.41	41.06	10.8794	-0.0671	0.3099
299	SLE RA 6	-0.92	-0.44	41.66	11.021	-0.068	0.3179
299	SLE RA 7	-0.91	-0.42	41.65	11.0256	-0.068	0.3166
299	SLE RA 8	-0.91	-0.45	41.47	10.9703	-0.0676	0.3151
299	SLE RA 9	-0.91	-0.43	41.45	10.975	-0.0677	0.3137
299	SLE RA 10	-0.94	-0.42	44.07	11.6577	-0.0727	0.3247
299	SLE RA 11	-0.96	-0.46	44.67	11.7993	-0.0735	0.3328
299	SLE RA 12	-0.96	-0.44	44.66	11.804	-0.0736	0.3315
299	SLE RA 13	-0.95	-0.43	44.45	11.7563	-0.0733	0.3277
299	SLE RA 14	-0.97	-0.46	45.05	11.898	-0.0742	0.3358
299	SLE RA 15	-0.97	-0.44	45.04	11.9026	-0.0743	0.3344
299	SLE RA 16	-0.96	-0.46	44.86	11.8473	-0.0739	0.3329
299	SLE RA 17	-0.96	-0.44	44.84	11.8519	-0.074	0.3316
299	SLE RA 18	-0.97	-0.46	45.54	12.0258	-0.0752	0.3347
299	SLE RA 19	-0.96	-0.44	45.53	12.0304	-0.0753	0.3333
299	SLE RA 20	-0.98	-0.47	45.93	12.1245	-0.0759	0.3376
299	SLE RA 21	-0.97	-0.45	45.91	12.1291	-0.076	0.3363
299	SLE FR 1	-0.89	-0.44	40.7	10.773	-0.0663	0.3092
299	SLE FR 2	-0.89	-0.43	40.7	10.7745	-0.0663	0.3088
299	SLE FR 3	-0.9	-0.44	40.86	10.8125	-0.0666	0.3104
299	SLE FR 4	-0.91	-0.44	42.15	11.1504	-0.069	0.3164
299	SLE FR 5	-0.92	-0.45	42.31	11.1883	-0.0692	0.318
299	SLE FR 6	-0.93	-0.45	43.12	11.3994	-0.0708	0.322
299	SLE QP 1	-0.89	-0.44	40.7	10.773	-0.0663	0.3092
299	SLE QP 2	-0.92	-0.44	42.15	11.1489	-0.069	0.3169
299	SLD 1	2.82	-0.11	47.04	12.2465	-0.065	-0.9917
299	SLD 2	3.25	-0.45	46.73	12.177	-0.0648	-1.1397
299	SLD 3	2.91	-1.21	46.28	12.0288	-0.0634	-1.0246
299	SLD 4	3.34	-1.55	45.97	11.9593	-0.0632	-1.1727
299	SLD 5	-0.01	1.38	44.83	11.8207	-0.0703	0.0007
299	SLD 6	0.27	1.15	44.63	11.7752	-0.0702	-0.0964
299	SLD 7	0.3	-2.27	42.29	11.0949	-0.0649	-0.1093
299	SLD 8	0.58	-2.5	42.09	11.0494	-0.0648	-0.2064
299	SLD 9	-2.41	1.61	42.22	11.2483	-0.0732	0.8401
299	SLD 10	-2.13	1.38	42.02	11.2028	-0.0731	0.743
299	SLD 11	-2.1	-2.04	39.68	10.5225	-0.0678	0.7301
299	SLD 12	-1.82	-2.27	39.48	10.477	-0.0677	0.6331
299	SLD 13	-5.17	0.66	38.34	10.3384	-0.0748	1.8064
299	SLD 14	-4.75	0.32	38.03	10.2689	-0.0746	1.6584
299	SLD 15	-5.08	-0.44	37.58	10.1207	-0.0731	1.7734
299	SLD 16	-4.65	-0.78	37.27	10.0512	-0.0729	1.6254
299	SLV 1	7.83	0.3	53.56	13.7078	-0.0597	-2.7444
299	SLV 2	8.82	-0.49	52.83	13.546	-0.0592	-3.0892
299	SLV 3	8.04	-2.19	51.84	13.2147	-0.0559	-2.8204
299	SLV 4	9.03	-2.99	51.11	13.0528	-0.0554	-3.1652
299	SLV 5	1.21	3.7	48.31	12.6924	-0.072	-0.4268
299	SLV 6	1.85	3.19	47.85	12.5881	-0.0717	-0.6491
299	SLV 7	1.92	-4.62	42.57	11.0485	-0.0594	-0.6802
299	SLV 8	2.56	-5.13	42.1	10.9442	-0.0591	-0.9024
299	SLV 9	-4.39	4.24	42.21	11.3535	-0.0789	1.5362
299	SLV 10	-3.76	3.73	41.74	11.2492	-0.0786	1.3139
299	SLV 11	-3.68	-4.08	36.46	9.7096	-0.0662	1.2828
299	SLV 12	-3.05	-4.59	36	9.6053	-0.066	1.0606
299	SLV 13	-10.86	2.1	33.2	9.2449	-0.0825	3.7989
299	SLV 14	-9.87	1.31	32.47	9.083	-0.0821	3.4541
299	SLV 15	-10.65	-0.39	31.48	8.7517	-0.0788	3.7229
299	SLV 16	-9.66	-1.19	30.75	8.5899	-0.0783	3.3781
299	CRTFP Ux+	0	0	0	0	0	0
299	CRTFP Ux-	0	0	0	0	0	0
299	CRTFP Uy+	0	0	0	0	0	0
299	CRTFP Uy-	0	0	0	0	0	0
300	SLU 1	-0.77	-0.5	37.25	11.0099	0.6557	0.2748
300	SLU 2	-0.76	-0.45	37.22	11.0128	0.6551	0.2705
300	SLU 3	-0.79	-0.5	38.07	11.2502	0.6702	0.2826
300	SLU 4	-0.78	-0.47	38.06	11.2519	0.6698	0.28
300	SLU 5	-0.77	-0.45	37.77	11.1715	0.6647	0.2745
300	SLU 6	-0.8	-0.51	38.62	11.4089	0.6797	0.2867
300	SLU 7	-0.8	-0.48	38.6	11.4106	0.6794	0.2841
300	SLU 8	-0.79	-0.51	38.34	11.3273	0.6748	0.283
300	SLU 9	-0.78	-0.48	38.33	11.329	0.6745	0.2804
300	SLU 10	-0.83	-0.48	42.07	12.4274	0.7397	0.2952
300	SLU 11	-0.86	-0.53	42.92	12.6648	0.7547	0.3073
300	SLU 12	-0.85	-0.5	42.9	12.6666	0.7544	0.3047
300	SLU 13	-0.84	-0.49	42.61	12.5861	0.7492	0.2992
300	SLU 14	-0.87	-0.54	43.46	12.8235	0.7643	0.3114
300	SLU 15	-0.86	-0.51	43.45	12.8253	0.7639	0.3087
300	SLU 16	-0.86	-0.55	43.18	12.7419	0.7594	0.3077
300	SLU 17	-0.85	-0.52	43.17	12.7437	0.759	0.3051
300	SLU 18	-0.87	-0.55	44.17	13.0308	0.7765	0.3101
300	SLU 19	-0.86	-0.52	44.15	13.0325	0.7761	0.3075
300	SLU 20	-0.88	-0.55	44.71	13.1895	0.786	0.3142
300	SLU 21	-0.87	-0.52	44.7	13.1912	0.7857	0.3116
300	SLU 22	-0.87	-0.51	41.78	12.3357	0.7353	0.3121
300	SLU 23	-0.86	-0.46	41.76	12.3386	0.7347	0.3077
300	SLU 24	-0.9	-0.51	42.61	12.576	0.7498	0.3198
300	SLU 25	-0.89	-0.48	42.59	12.5778	0.7494	0.3172
300	SLU 26	-0.88	-0.47	42.3	12.4973	0.7443	0.3118

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLU 27	-0.91	-0.52	43.15	12.7347	0.7593	0.3239
300	SLU 28	-0.9	-0.49	43.14	12.7365	0.759	0.3213
300	SLU 29	-0.9	-0.53	42.87	12.6531	0.7544	0.3202
300	SLU 30	-0.89	-0.5	42.86	12.6549	0.7541	0.3176
300	SLU 31	-0.93	-0.49	46.6	13.7533	0.8193	0.3324
300	SLU 32	-0.97	-0.55	47.45	13.9907	0.8343	0.3445
300	SLU 33	-0.96	-0.52	47.43	13.9924	0.834	0.3419
300	SLU 34	-0.95	-0.5	47.15	13.912	0.8288	0.3365
300	SLU 35	-0.98	-0.56	47.99	14.1494	0.8439	0.3486
300	SLU 36	-0.97	-0.53	47.98	14.1511	0.8435	0.346
300	SLU 37	-0.97	-0.56	47.72	14.0678	0.839	0.3449
300	SLU 38	-0.96	-0.53	47.7	14.0695	0.8386	0.3423
300	SLU 39	-0.97	-0.56	48.7	14.3566	0.8561	0.3473
300	SLU 40	-0.97	-0.53	48.69	14.3584	0.8557	0.3447
300	SLU 41	-0.99	-0.57	49.25	14.5153	0.8656	0.3514
300	SLU 42	-0.98	-0.54	49.23	14.5171	0.8653	0.3488
300	SLU 43	-0.96	-0.64	46.87	13.8583	0.8251	0.3445
300	SLU 44	-0.95	-0.59	46.85	13.8612	0.8246	0.3401
300	SLU 45	-0.98	-0.64	47.69	14.0986	0.8396	0.3523
300	SLU 46	-0.98	-0.61	47.68	14.1003	0.8393	0.3497
300	SLU 47	-0.96	-0.6	47.39	14.0199	0.8341	0.3442
300	SLU 48	-0.99	-0.65	48.24	14.2573	0.8492	0.3563
300	SLU 49	-0.99	-0.62	48.22	14.259	0.8488	0.3537
300	SLU 50	-0.98	-0.66	47.96	14.1757	0.8443	0.3526
300	SLU 51	-0.98	-0.63	47.95	14.1774	0.8439	0.35
300	SLU 52	-1.02	-0.62	51.69	15.2758	0.9091	0.3648
300	SLU 53	-1.05	-0.68	52.54	15.5132	0.9241	0.377
300	SLU 54	-1.05	-0.65	52.52	15.515	0.9238	0.3744
300	SLU 55	-1.03	-0.63	52.23	15.4345	0.9187	0.3689
300	SLU 56	-1.06	-0.69	53.08	15.6719	0.9337	0.381
300	SLU 57	-1.06	-0.66	53.07	15.6737	0.9333	0.3784
300	SLU 58	-1.05	-0.69	52.8	15.5903	0.9288	0.3773
300	SLU 59	-1.05	-0.66	52.79	15.5921	0.9284	0.3747
300	SLU 60	-1.06	-0.69	53.79	15.8792	0.9459	0.3798
300	SLU 61	-1.05	-0.66	53.77	15.8809	0.9455	0.3772
300	SLU 62	-1.07	-0.7	54.33	16.0379	0.9555	0.3839
300	SLU 63	-1.07	-0.67	54.32	16.0396	0.9551	0.3812
300	SLU 64	-1.07	-0.65	51.4	15.1841	0.9047	0.3817
300	SLU 65	-1.06	-0.6	51.38	15.187	0.9042	0.3774
300	SLU 66	-1.09	-0.66	52.23	15.4244	0.9192	0.3895
300	SLU 67	-1.08	-0.63	52.21	15.4262	0.9188	0.3869
300	SLU 68	-1.07	-0.61	51.92	15.3457	0.9137	0.3815
300	SLU 69	-1.1	-0.66	52.77	15.5831	0.9288	0.3936
300	SLU 70	-1.1	-0.63	52.76	15.5849	0.9284	0.391
300	SLU 71	-1.09	-0.67	52.5	15.5015	0.9239	0.3899
300	SLU 72	-1.08	-0.64	52.48	15.5033	0.9235	0.3873
300	SLU 73	-1.13	-0.64	56.22	16.6017	0.9887	0.4021
300	SLU 74	-1.16	-0.69	57.07	16.8391	1.0037	0.4142
300	SLU 75	-1.15	-0.66	57.05	16.8408	1.0034	0.4116
300	SLU 76	-1.14	-0.65	56.77	16.7604	0.9982	0.4061
300	SLU 77	-1.17	-0.7	57.61	16.9978	1.0133	0.4183
300	SLU 78	-1.17	-0.67	57.6	16.9995	1.0129	0.4157
300	SLU 79	-1.16	-0.71	57.34	16.9162	1.0084	0.4146
300	SLU 80	-1.15	-0.67	57.32	16.9179	1.008	0.412
300	SLU 81	-1.17	-0.7	58.32	17.205	1.0255	0.417
300	SLU 82	-1.16	-0.67	58.31	17.2068	1.0251	0.4144
300	SLU 83	-1.18	-0.71	58.87	17.3637	1.0351	0.4211
300	SLU 84	-1.17	-0.68	58.85	17.3655	1.0347	0.4185
300	SLE RA 1	-0.8	-0.5	38.55	11.3887	0.6785	0.2855
300	SLE RA 2	-0.79	-0.47	38.53	11.3906	0.6781	0.2826
300	SLE RA 3	-0.81	-0.5	39.09	11.5489	0.6881	0.2906
300	SLE RA 4	-0.81	-0.48	39.08	11.5501	0.6879	0.2889
300	SLE RA 5	-0.8	-0.47	38.89	11.4964	0.6844	0.2853
300	SLE RA 6	-0.82	-0.51	39.46	11.6547	0.6945	0.2934
300	SLE RA 7	-0.82	-0.49	39.45	11.6559	0.6942	0.2916
300	SLE RA 8	-0.81	-0.51	39.27	11.6003	0.6912	0.2909
300	SLE RA 9	-0.81	-0.49	39.26	11.6015	0.691	0.2891
300	SLE RA 10	-0.84	-0.49	41.76	12.3337	0.7344	0.299
300	SLE RA 11	-0.86	-0.53	42.32	12.492	0.7444	0.3071
300	SLE RA 12	-0.86	-0.5	42.31	12.4932	0.7442	0.3054
300	SLE RA 13	-0.85	-0.49	42.12	12.4395	0.7408	0.3017
300	SLE RA 14	-0.87	-0.53	42.69	12.5978	0.7508	0.3098
300	SLE RA 15	-0.86	-0.51	42.68	12.599	0.7506	0.3081
300	SLE RA 16	-0.86	-0.53	42.5	12.5434	0.7476	0.3074
300	SLE RA 17	-0.86	-0.51	42.49	12.5446	0.7473	0.3056
300	SLE RA 18	-0.86	-0.53	43.16	12.736	0.759	0.309
300	SLE RA 19	-0.86	-0.51	43.15	12.7371	0.7587	0.3072
300	SLE RA 20	-0.87	-0.54	43.52	12.8418	0.7653	0.3117
300	SLE RA 21	-0.87	-0.52	43.51	12.8429	0.7651	0.31
300	SLE FR 1	-0.8	-0.5	38.55	11.3887	0.6785	0.2855
300	SLE FR 2	-0.8	-0.49	38.54	11.3891	0.6784	0.2849
300	SLE FR 3	-0.8	-0.5	38.69	11.431	0.681	0.2865
300	SLE FR 4	-0.82	-0.5	39.93	11.7933	0.7025	0.2919
300	SLE FR 5	-0.82	-0.51	40.07	11.8352	0.7052	0.2936
300	SLE FR 6	-0.83	-0.52	40.85	12.0623	0.7187	0.2972
300	SLE QP 1	-0.8	-0.5	38.55	11.3887	0.6785	0.2855
300	SLE QP 2	-0.82	-0.51	39.93	11.7929	0.7026	0.2925
300	SLD 1	2.58	-0.2	44.23	12.9373	0.7877	-0.8988
300	SLD 2	2.96	-0.5	43.94	12.8656	0.7824	-1.0273
300	SLD 3	2.66	-1.22	43.53	12.7497	0.7746	-0.9185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLD 4	3.05	-1.51	43.25	12.678	0.7693	-1.047
300	SLD 5	0.01	1.18	42.33	12.4335	0.749	-0.0122
300	SLD 6	0.26	0.98	42.14	12.3865	0.7455	-0.0964
300	SLD 7	0.28	-2.21	40	11.8081	0.7052	-0.0778
300	SLD 8	0.54	-2.41	39.81	11.7611	0.7017	-0.1621
300	SLD 9	-2.17	1.39	40.04	11.8246	0.7035	0.7471
300	SLD 10	-1.92	1.19	39.86	11.7777	0.7	0.6629
300	SLD 11	-1.89	-2	37.72	11.1992	0.6597	0.6814
300	SLD 12	-1.64	-2.2	37.53	11.1523	0.6562	0.5972
300	SLD 13	-4.68	0.5	36.61	10.9077	0.636	1.632
300	SLD 14	-4.3	0.2	36.33	10.8361	0.6306	1.5035
300	SLD 15	-4.6	-0.52	35.91	10.7201	0.6228	1.6123
300	SLD 16	-4.21	-0.82	35.63	10.6485	0.6175	1.4838
300	SLV 1	7.13	0.18	49.96	14.4621	0.9013	-2.4941
300	SLV 2	8.02	-0.51	49.3	14.2952	0.8888	-2.7933
300	SLV 3	7.32	-2.13	48.38	14.0375	0.8715	-2.5401
300	SLV 4	8.21	-2.83	47.72	13.8707	0.859	-2.8393
300	SLV 5	1.12	3.33	45.45	13.2663	0.8095	-0.4221
300	SLV 6	1.7	2.88	45.03	13.1588	0.8015	-0.6149
300	SLV 7	1.76	-4.39	40.18	11.8511	0.7102	-0.5755
300	SLV 8	2.34	-4.84	39.75	11.7435	0.7022	-0.7684
300	SLV 9	-3.97	3.82	40.11	11.8422	0.703	1.3534
300	SLV 10	-3.4	3.37	39.68	11.7347	0.695	1.1606
300	SLV 11	-3.33	-3.9	34.83	10.427	0.6037	1.2
300	SLV 12	-2.76	-4.35	34.4	10.3194	0.5957	1.0072
300	SLV 13	-9.85	1.81	32.14	9.7151	0.5462	3.4243
300	SLV 14	-8.95	1.11	31.48	9.5482	0.5337	3.1251
300	SLV 15	-9.66	-0.51	30.56	9.2905	0.5164	3.3783
300	SLV 16	-8.76	-1.2	29.9	9.1236	0.5039	3.0791
300	CRTFP Ux+	0	0	0	0	0	0
300	CRTFP Ux-	0	0	0	0	0	0
300	CRTFP Uy+	0	0	0	0	0	0
300	CRTFP Uy-	0	0	0	0	0	0
302	SLU 1	-1.86	-1.45	92.55	21.1868	0.2526	0.4246
302	SLU 2	-1.83	-1.32	92.49	21.1768	0.2509	0.4183
302	SLU 3	-1.91	-1.47	94.59	21.6547	0.2586	0.4368
302	SLU 4	-1.89	-1.39	94.56	21.6487	0.2576	0.433
302	SLU 5	-1.86	-1.34	93.85	21.4862	0.2545	0.4245
302	SLU 6	-1.94	-1.49	95.95	21.9642	0.2621	0.443
302	SLU 7	-1.92	-1.41	95.91	21.9582	0.2611	0.4392
302	SLU 8	-1.91	-1.5	95.26	21.8058	0.2597	0.4371
302	SLU 9	-1.89	-1.42	95.23	21.7997	0.2587	0.4333
302	SLU 10	-2	-1.43	104.57	23.939	0.2752	0.4566
302	SLU 11	-2.08	-1.58	106.67	24.4169	0.2829	0.4751
302	SLU 12	-2.06	-1.5	106.64	24.4109	0.2819	0.4713
302	SLU 13	-2.02	-1.45	105.93	24.2484	0.2788	0.4628
302	SLU 14	-2.11	-1.6	108.03	24.7264	0.2864	0.4813
302	SLU 15	-2.09	-1.52	108	24.7204	0.2854	0.4775
302	SLU 16	-2.08	-1.61	107.35	24.5679	0.284	0.4754
302	SLU 17	-2.06	-1.53	107.31	24.5619	0.283	0.4716
302	SLU 18	-2.1	-1.61	109.81	25.1328	0.2873	0.4794
302	SLU 19	-2.08	-1.53	109.78	25.1268	0.2863	0.4755
302	SLU 20	-2.12	-1.64	111.17	25.4423	0.2908	0.4856
302	SLU 21	-2.11	-1.56	111.13	25.4362	0.2898	0.4818
302	SLU 22	-2.11	-1.51	103.81	23.7683	0.2843	0.4833
302	SLU 23	-2.09	-1.38	103.75	23.7582	0.2826	0.4769
302	SLU 24	-2.17	-1.53	105.85	24.2362	0.2903	0.4955
302	SLU 25	-2.15	-1.45	105.82	24.2302	0.2893	0.4916
302	SLU 26	-2.11	-1.41	105.11	24.0677	0.2862	0.4832
302	SLU 27	-2.19	-1.55	107.21	24.5457	0.2939	0.5017
302	SLU 28	-2.18	-1.47	107.18	24.5396	0.2929	0.4979
302	SLU 29	-2.17	-1.56	106.53	24.3872	0.2914	0.4958
302	SLU 30	-2.15	-1.48	106.49	24.3812	0.2904	0.492
302	SLU 31	-2.25	-1.49	115.84	26.5204	0.3069	0.5153
302	SLU 32	-2.34	-1.64	117.94	26.9984	0.3146	0.5338
302	SLU 33	-2.32	-1.56	117.9	26.9923	0.3136	0.53
302	SLU 34	-2.28	-1.52	117.2	26.8299	0.3105	0.5215
302	SLU 35	-2.36	-1.66	119.3	27.3078	0.3182	0.54
302	SLU 36	-2.35	-1.58	119.26	27.3018	0.3172	0.5362
302	SLU 37	-2.34	-1.67	118.61	27.1494	0.3157	0.5341
302	SLU 38	-2.32	-1.59	118.58	27.1434	0.3147	0.5303
302	SLU 39	-2.35	-1.67	121.07	27.7142	0.319	0.538
302	SLU 40	-2.34	-1.59	121.04	27.7082	0.318	0.5342
302	SLU 41	-2.38	-1.7	122.43	28.0237	0.3226	0.5443
302	SLU 42	-2.36	-1.62	122.4	28.0177	0.3216	0.5405
302	SLU 43	-2.32	-1.87	116.45	26.6578	0.3175	0.5319
302	SLU 44	-2.3	-1.73	116.39	26.6478	0.3158	0.5255
302	SLU 45	-2.38	-1.88	118.49	27.1257	0.3235	0.544
302	SLU 46	-2.36	-1.8	118.46	27.1197	0.3225	0.5402
302	SLU 47	-2.32	-1.76	117.75	26.9572	0.3193	0.5318
302	SLU 48	-2.4	-1.9	119.85	27.4352	0.327	0.5503
302	SLU 49	-2.39	-1.82	119.82	27.4292	0.326	0.5465
302	SLU 50	-2.38	-1.91	119.16	27.2767	0.3246	0.5444
302	SLU 51	-2.36	-1.83	119.13	27.2707	0.3236	0.5405
302	SLU 52	-2.47	-1.84	128.48	29.4099	0.3401	0.5638
302	SLU 53	-2.55	-1.99	130.58	29.8879	0.3478	0.5824
302	SLU 54	-2.53	-1.91	130.54	29.8819	0.3468	0.5785
302	SLU 55	-2.49	-1.87	129.83	29.7194	0.3436	0.5701
302	SLU 56	-2.57	-2.02	131.93	30.1974	0.3513	0.5886
302	SLU 57	-2.56	-1.94	131.9	30.1913	0.3503	0.5848

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLU 58	-2.55	-2.03	131.25	30.0389	0.3489	0.5827
302	SLU 59	-2.53	-1.95	131.21	30.0329	0.3479	0.5789
302	SLU 60	-2.57	-2.03	133.71	30.6038	0.3522	0.5866
302	SLU 61	-2.55	-1.95	133.68	30.5977	0.3512	0.5828
302	SLU 62	-2.59	-2.05	135.07	30.9132	0.3557	0.5929
302	SLU 63	-2.58	-1.97	135.04	30.9072	0.3547	0.589
302	SLU 64	-2.58	-1.93	127.71	29.2392	0.3492	0.5906
302	SLU 65	-2.55	-1.8	127.66	29.2292	0.3475	0.5842
302	SLU 66	-2.63	-1.94	129.76	29.7072	0.3552	0.6027
302	SLU 67	-2.62	-1.86	129.72	29.7011	0.3542	0.5989
302	SLU 68	-2.58	-1.82	129.01	29.5387	0.3511	0.5904
302	SLU 69	-2.66	-1.97	131.11	30.0166	0.3588	0.609
302	SLU 70	-2.65	-1.89	131.08	30.0106	0.3578	0.6051
302	SLU 71	-2.64	-1.98	130.43	29.8582	0.3563	0.603
302	SLU 72	-2.62	-1.9	130.39	29.8522	0.3553	0.5992
302	SLU 73	-2.72	-1.91	139.74	31.9914	0.3718	0.6225
302	SLU 74	-2.8	-2.05	141.84	32.4694	0.3795	0.641
302	SLU 75	-2.79	-1.97	141.81	32.4633	0.3785	0.6372
302	SLU 76	-2.75	-1.93	141.1	32.3009	0.3754	0.6288
302	SLU 77	-2.83	-2.08	143.2	32.7788	0.3831	0.6473
302	SLU 78	-2.81	-2	143.16	32.7728	0.3821	0.6435
302	SLU 79	-2.8	-2.09	142.51	32.6204	0.3806	0.6414
302	SLU 80	-2.79	-2.01	142.48	32.6143	0.3796	0.6375
302	SLU 81	-2.82	-2.09	144.98	33.1852	0.3839	0.6453
302	SLU 82	-2.81	-2.01	144.94	33.1792	0.3829	0.6415
302	SLU 83	-2.85	-2.11	146.33	33.4947	0.3875	0.6515
302	SLU 84	-2.83	-2.03	146.3	33.4887	0.3865	0.6477
302	SLE RA 1	-1.93	-1.47	95.76	21.9244	0.2616	0.4414
302	SLE RA 2	-1.91	-1.38	95.73	21.9177	0.2605	0.4371
302	SLE RA 3	-1.96	-1.48	97.13	22.2363	0.2657	0.4495
302	SLE RA 4	-1.95	-1.43	97.1	22.2323	0.265	0.4469
302	SLE RA 5	-1.93	-1.4	96.63	22.124	0.2629	0.4413
302	SLE RA 6	-1.98	-1.5	98.03	22.4426	0.268	0.4536
302	SLE RA 7	-1.97	-1.44	98.01	22.4386	0.2674	0.4511
302	SLE RA 8	-1.97	-1.5	97.58	22.337	0.2664	0.4497
302	SLE RA 9	-1.95	-1.45	97.55	22.333	0.2657	0.4472
302	SLE RA 10	-2.02	-1.46	103.78	23.7591	0.2767	0.4627
302	SLE RA 11	-2.08	-1.55	105.18	24.0778	0.2819	0.475
302	SLE RA 12	-2.07	-1.5	105.16	24.0738	0.2812	0.4725
302	SLE RA 13	-2.04	-1.47	104.69	23.9654	0.2791	0.4668
302	SLE RA 14	-2.1	-1.57	106.09	24.2841	0.2842	0.4792
302	SLE RA 15	-2.08	-1.52	106.07	24.2801	0.2836	0.4766
302	SLE RA 16	-2.08	-1.58	105.63	24.1785	0.2826	0.4752
302	SLE RA 17	-2.07	-1.52	105.61	24.1744	0.2819	0.4727
302	SLE RA 18	-2.09	-1.58	107.27	24.555	0.2848	0.4779
302	SLE RA 19	-2.08	-1.52	107.25	24.551	0.2841	0.4753
302	SLE RA 20	-2.11	-1.59	108.18	24.7613	0.2872	0.482
302	SLE RA 21	-2.1	-1.54	108.16	24.7573	0.2865	0.4795
302	SLE FR 1	-1.93	-1.47	95.76	21.9244	0.2616	0.4414
302	SLE FR 2	-1.93	-1.45	95.76	21.923	0.2614	0.4405
302	SLE FR 3	-1.94	-1.48	96.13	22.0069	0.2626	0.443
302	SLE FR 4	-1.97	-1.48	99.21	22.7122	0.2684	0.4515
302	SLE FR 5	-1.98	-1.51	99.58	22.7961	0.2695	0.454
302	SLE FR 6	-2.01	-1.52	101.52	23.2397	0.2732	0.4596
302	SLE QP 1	-1.93	-1.47	95.76	21.9244	0.2616	0.4414
302	SLE QP 2	-1.98	-1.5	99.22	22.7136	0.2686	0.4523
302	SLD 1	6.12	-0.74	109.1	24.8929	0.4829	-1.5117
302	SLD 2	7.05	-1.41	108.41	24.7504	0.4733	-1.725
302	SLD 3	6.32	-3.2	107.39	24.5655	0.4524	-1.5493
302	SLD 4	7.24	-3.86	106.69	24.423	0.4428	-1.7626
302	SLD 5	-0.01	2.56	104.92	23.8893	0.3808	-0.0418
302	SLD 6	0.6	2.12	104.46	23.7959	0.3745	-0.1817
302	SLD 7	0.64	-5.61	99.18	22.7979	0.2792	-0.1674
302	SLD 8	1.25	-6.05	98.73	22.7045	0.273	-0.3072
302	SLD 9	-5.2	3.04	99.71	22.7226	0.2642	1.2119
302	SLD 10	-4.6	2.61	99.25	22.6292	0.2579	1.072
302	SLD 11	-4.55	-5.13	93.98	21.6313	0.1627	1.0863
302	SLD 12	-3.94	-5.57	93.52	21.5379	0.1564	0.9465
302	SLD 13	-11.2	0.86	91.75	21.0041	0.0943	2.6673
302	SLD 14	-10.27	0.19	91.05	20.8616	0.0847	2.454
302	SLD 15	-11	-1.59	90.03	20.6767	0.0639	2.6296
302	SLD 16	-10.07	-2.26	89.33	20.5342	0.0543	2.4163
302	SLV 1	16.96	0.19	122.28	27.7983	0.7688	-4.1419
302	SLV 2	19.12	-1.36	120.66	27.4665	0.7465	-4.6387
302	SLV 3	17.42	-5.39	118.38	27.0567	0.6998	-4.2294
302	SLV 4	19.57	-6.95	116.76	26.7249	0.6775	-4.7262
302	SLV 5	2.65	7.74	112.32	25.4209	0.5272	-0.7078
302	SLV 6	4.04	6.74	111.28	25.2071	0.5128	-1.0279
302	SLV 7	4.16	-10.87	99.34	22.9489	0.2971	-0.9993
302	SLV 8	5.55	-11.87	98.29	22.7351	0.2827	-1.3194
302	SLV 9	-9.5	8.87	100.14	22.6921	0.2545	2.2241
302	SLV 10	-8.11	7.87	99.1	22.4782	0.2401	1.9039
302	SLV 11	-7.99	-9.74	87.15	20.2201	0.0244	1.9326
302	SLV 12	-6.6	-10.75	86.11	20.0062	0.01	1.6124
302	SLV 13	-23.53	3.94	81.67	18.7023	-0.1403	5.6308
302	SLV 14	-21.37	2.39	80.05	18.3704	-0.1627	5.134
302	SLV 15	-23.08	-1.64	77.78	17.9607	-0.2094	5.5434
302	SLV 16	-20.92	-3.19	76.15	17.6288	-0.2317	5.0466
302	CRTFP Ux+	0	0	0	0	0	0
302	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	CRTFP Uy+	0	0	0	0	0	0
302	CRTFP Uy-	0	0	0	0	0	0
304	SLU 1	-0.64	-0.62	33.56	10.7888	-0.6262	0.2094
304	SLU 2	-0.63	-0.57	33.54	10.7824	-0.6259	0.2071
304	SLU 3	-0.66	-0.63	34.3	11.0265	-0.6399	0.2156
304	SLU 4	-0.65	-0.6	34.29	11.0227	-0.6398	0.2143
304	SLU 5	-0.64	-0.58	34.03	10.9393	-0.6351	0.2102
304	SLU 6	-0.66	-0.64	34.79	11.1835	-0.6491	0.2187
304	SLU 7	-0.66	-0.61	34.78	11.1797	-0.6489	0.2173
304	SLU 8	-0.66	-0.64	34.54	11.1026	-0.6445	0.2155
304	SLU 9	-0.65	-0.61	34.53	11.0988	-0.6443	0.2141
304	SLU 10	-0.69	-0.62	37.93	12.1883	-0.708	0.2264
304	SLU 11	-0.71	-0.68	38.69	12.4325	-0.722	0.2349
304	SLU 12	-0.71	-0.65	38.68	12.4287	-0.7219	0.2335
304	SLU 13	-0.7	-0.63	38.43	12.3453	-0.7172	0.2294
304	SLU 14	-0.72	-0.69	39.18	12.5895	-0.7312	0.2379
304	SLU 15	-0.72	-0.66	39.17	12.5856	-0.731	0.2366
304	SLU 16	-0.71	-0.69	38.94	12.5086	-0.7266	0.2347
304	SLU 17	-0.71	-0.66	38.93	12.5048	-0.7265	0.2334
304	SLU 18	-0.72	-0.69	39.83	12.7973	-0.7435	0.2369
304	SLU 19	-0.71	-0.66	39.82	12.7934	-0.7433	0.2355
304	SLU 20	-0.73	-0.7	40.33	12.9542	-0.7527	0.2399
304	SLU 21	-0.72	-0.67	40.32	12.9504	-0.7525	0.2386
304	SLU 22	-0.73	-0.65	37.64	12.1019	-0.7021	0.2398
304	SLU 23	-0.72	-0.6	37.62	12.0955	-0.7018	0.2375
304	SLU 24	-0.74	-0.66	38.38	12.3397	-0.7158	0.246
304	SLU 25	-0.74	-0.63	38.37	12.3358	-0.7157	0.2447
304	SLU 26	-0.73	-0.61	38.12	12.2524	-0.711	0.2406
304	SLU 27	-0.75	-0.67	38.87	12.4966	-0.725	0.2491
304	SLU 28	-0.75	-0.64	38.86	12.4928	-0.7248	0.2477
304	SLU 29	-0.74	-0.67	38.62	12.4158	-0.7204	0.2459
304	SLU 30	-0.74	-0.64	38.61	12.4119	-0.7202	0.2445
304	SLU 31	-0.77	-0.65	42.02	13.5015	-0.7839	0.2568
304	SLU 32	-0.8	-0.71	42.77	13.7457	-0.7979	0.2653
304	SLU 33	-0.8	-0.68	42.76	13.7418	-0.7978	0.2639
304	SLU 34	-0.78	-0.66	42.51	13.6584	-0.7931	0.2598
304	SLU 35	-0.81	-0.72	43.26	13.9026	-0.8071	0.2683
304	SLU 36	-0.81	-0.69	43.25	13.8988	-0.8069	0.267
304	SLU 37	-0.8	-0.72	43.02	13.8217	-0.8025	0.2651
304	SLU 38	-0.8	-0.69	43.01	13.8179	-0.8024	0.2638
304	SLU 39	-0.81	-0.72	43.91	14.1104	-0.8194	0.2673
304	SLU 40	-0.8	-0.69	43.9	14.1066	-0.8192	0.2659
304	SLU 41	-0.82	-0.73	44.41	14.2674	-0.8285	0.2703
304	SLU 42	-0.81	-0.7	44.4	14.2635	-0.8284	0.269
304	SLU 43	-0.8	-0.79	42.23	13.5752	-0.788	0.2618
304	SLU 44	-0.79	-0.74	42.21	13.5688	-0.7878	0.2595
304	SLU 45	-0.82	-0.8	42.97	13.813	-0.8017	0.268
304	SLU 46	-0.81	-0.77	42.96	13.8091	-0.8016	0.2667
304	SLU 47	-0.8	-0.75	42.7	13.7257	-0.7969	0.2626
304	SLU 48	-0.83	-0.81	43.46	13.9699	-0.8109	0.2711
304	SLU 49	-0.82	-0.78	43.45	13.9661	-0.8108	0.2697
304	SLU 50	-0.82	-0.82	43.21	13.8891	-0.8063	0.2679
304	SLU 51	-0.81	-0.78	43.2	13.8852	-0.8062	0.2665
304	SLU 52	-0.85	-0.79	46.6	14.9747	-0.8699	0.2788
304	SLU 53	-0.87	-0.85	47.36	15.2189	-0.8839	0.2873
304	SLU 54	-0.87	-0.82	47.35	15.2151	-0.8837	0.2859
304	SLU 55	-0.86	-0.8	47.1	15.1317	-0.879	0.2818
304	SLU 56	-0.88	-0.86	47.85	15.3759	-0.893	0.2903
304	SLU 57	-0.88	-0.83	47.84	15.372	-0.8929	0.289
304	SLU 58	-0.87	-0.86	47.6	15.295	-0.8885	0.2871
304	SLU 59	-0.87	-0.83	47.59	15.2912	-0.8883	0.2858
304	SLU 60	-0.88	-0.86	48.5	15.5837	-0.9053	0.2893
304	SLU 61	-0.87	-0.83	48.49	15.5798	-0.9052	0.2879
304	SLU 62	-0.89	-0.87	48.99	15.7406	-0.9145	0.2923
304	SLU 63	-0.88	-0.84	48.98	15.7368	-0.9143	0.291
304	SLU 64	-0.89	-0.83	46.31	14.8883	-0.8639	0.2922
304	SLU 65	-0.88	-0.78	46.29	14.8819	-0.8637	0.2899
304	SLU 66	-0.91	-0.84	47.05	15.1261	-0.8776	0.2984
304	SLU 67	-0.9	-0.8	47.04	15.1223	-0.8775	0.2971
304	SLU 68	-0.89	-0.79	46.78	15.0388	-0.8728	0.293
304	SLU 69	-0.91	-0.85	47.54	15.283	-0.8868	0.3015
304	SLU 70	-0.91	-0.81	47.53	15.2792	-0.8867	0.3001
304	SLU 71	-0.91	-0.85	47.29	15.2022	-0.8822	0.2983
304	SLU 72	-0.9	-0.82	47.28	15.1984	-0.8821	0.2969
304	SLU 73	-0.94	-0.83	50.68	16.2879	-0.9458	0.3092
304	SLU 74	-0.96	-0.88	51.44	16.5321	-0.9598	0.3177
304	SLU 75	-0.96	-0.85	51.43	16.5282	-0.9596	0.3163
304	SLU 76	-0.94	-0.84	51.18	16.4448	-0.9549	0.3122
304	SLU 77	-0.97	-0.89	51.93	16.689	-0.9689	0.3207
304	SLU 78	-0.97	-0.86	51.92	16.6852	-0.9688	0.3194
304	SLU 79	-0.96	-0.9	51.68	16.6082	-0.9643	0.3175
304	SLU 80	-0.96	-0.87	51.67	16.6043	-0.9642	0.3162
304	SLU 81	-0.97	-0.9	52.58	16.8968	-0.9812	0.3197
304	SLU 82	-0.96	-0.87	52.57	16.893	-0.9811	0.3183
304	SLU 83	-0.98	-0.91	53.08	17.0538	-0.9904	0.3227
304	SLU 84	-0.97	-0.88	53.07	17.0499	-0.9902	0.3214
304	SLE RA 1	-0.66	-0.63	34.73	11.1639	-0.6479	0.2181
304	SLE RA 2	-0.66	-0.6	34.71	11.1597	-0.6477	0.2166
304	SLE RA 3	-0.67	-0.63	35.22	11.3225	-0.657	0.2222
304	SLE RA 4	-0.67	-0.61	35.21	11.3199	-0.6569	0.2213

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLE RA 5	-0.66	-0.6	35.04	11.2643	-0.6538	0.2186
304	SLE RA 6	-0.68	-0.64	35.55	11.4271	-0.6631	0.2243
304	SLE RA 7	-0.68	-0.62	35.54	11.4245	-0.663	0.2234
304	SLE RA 8	-0.67	-0.64	35.38	11.3732	-0.6601	0.2221
304	SLE RA 9	-0.67	-0.62	35.37	11.3706	-0.66	0.2212
304	SLE RA 10	-0.7	-0.63	37.64	12.097	-0.7024	0.2294
304	SLE RA 11	-0.71	-0.67	38.15	12.2598	-0.7118	0.2351
304	SLE RA 12	-0.71	-0.65	38.14	12.2572	-0.7117	0.2342
304	SLE RA 13	-0.7	-0.63	37.97	12.2016	-0.7085	0.2314
304	SLE RA 14	-0.72	-0.67	38.47	12.3644	-0.7179	0.2371
304	SLE RA 15	-0.72	-0.65	38.47	12.3618	-0.7178	0.2362
304	SLE RA 16	-0.71	-0.68	38.31	12.3105	-0.7148	0.235
304	SLE RA 17	-0.71	-0.66	38.3	12.3079	-0.7147	0.2341
304	SLE RA 18	-0.72	-0.68	38.91	12.503	-0.7261	0.2364
304	SLE RA 19	-0.71	-0.66	38.9	12.5004	-0.726	0.2355
304	SLE RA 20	-0.72	-0.68	39.24	12.6076	-0.7322	0.2384
304	SLE RA 21	-0.72	-0.66	39.23	12.605	-0.7321	0.2375
304	SLE FR 1	-0.66	-0.63	34.73	11.1639	-0.6479	0.2181
304	SLE FR 2	-0.66	-0.62	34.72	11.1631	-0.6478	0.2178
304	SLE FR 3	-0.66	-0.63	34.86	11.2058	-0.6503	0.2189
304	SLE FR 4	-0.68	-0.64	35.98	11.5648	-0.6713	0.2233
304	SLE FR 5	-0.68	-0.65	36.11	11.6075	-0.6738	0.2244
304	SLE FR 6	-0.69	-0.65	36.82	11.8334	-0.687	0.2272
304	SLE QP 1	-0.66	-0.63	34.73	11.1639	-0.6479	0.2181
304	SLE QP 2	-0.68	-0.64	35.98	11.5656	-0.6713	0.2236
304	SLD 1	2.28	-0.38	39.21	12.5603	-0.7239	-0.8071
304	SLD 2	2.61	-0.61	38.98	12.4924	-0.72	-0.9277
304	SLD 3	2.35	-1.27	38.66	12.4296	-0.7148	-0.8462
304	SLD 4	2.68	-1.5	38.43	12.3617	-0.7109	-0.9667
304	SLD 5	0.04	0.83	37.82	12.0743	-0.7016	-0.005
304	SLD 6	0.26	0.68	37.67	12.0298	-0.699	-0.084
304	SLD 7	0.28	-2.15	36	11.6387	-0.6713	-0.1351
304	SLD 8	0.5	-2.3	35.85	11.5942	-0.6687	-0.2141
304	SLD 9	-1.86	1.01	36.12	11.5371	-0.6739	0.6613
304	SLD 10	-1.64	0.86	35.96	11.4926	-0.6714	0.5823
304	SLD 11	-1.62	-1.97	34.29	11.1015	-0.6436	0.5312
304	SLD 12	-1.4	-2.12	34.14	11.057	-0.6411	0.4522
304	SLD 13	-4.04	0.21	33.53	10.7696	-0.6317	1.4139
304	SLD 14	-3.71	-0.01	33.3	10.7017	-0.6278	1.2933
304	SLD 15	-3.97	-0.68	32.98	10.6389	-0.6227	1.3748
304	SLD 16	-3.63	-0.91	32.75	10.571	-0.6187	1.2543
304	SLV 1	6.24	-0.05	43.51	13.8869	-0.794	-2.1884
304	SLV 2	7.01	-0.58	42.97	13.7287	-0.7848	-2.4691
304	SLV 3	6.4	-2.09	42.27	13.5909	-0.7734	-2.2778
304	SLV 4	7.18	-2.62	41.74	13.4327	-0.7643	-2.5585
304	SLV 5	1.01	2.72	40.21	12.7383	-0.7409	-0.3161
304	SLV 6	1.51	2.37	39.87	12.6364	-0.735	-0.497
304	SLV 7	1.56	-4.08	36.08	11.7514	-0.6723	-0.6141
304	SLV 8	2.06	-4.42	35.74	11.6495	-0.6664	-0.795
304	SLV 9	-3.42	3.13	36.23	11.4818	-0.6762	1.2421
304	SLV 10	-2.92	2.79	35.88	11.3799	-0.6703	1.0612
304	SLV 11	-2.87	-3.66	32.1	10.4949	-0.6076	0.9441
304	SLV 12	-2.37	-4	31.75	10.393	-0.6017	0.7632
304	SLV 13	-8.53	1.33	30.23	9.6986	-0.5784	3.0057
304	SLV 14	-7.76	0.8	29.69	9.5404	-0.5692	2.7249
304	SLV 15	-8.37	-0.7	28.99	9.4025	-0.5578	2.9163
304	SLV 16	-7.59	-1.24	28.45	9.2444	-0.5486	2.6355
304	CRTFP Ux+	0	0	0	0	0	0
304	CRTFP Ux-	0	0	0	0	0	0
304	CRTFP Uy+	0	0	0	0	0	0
304	CRTFP Uy-	0	0	0	0	0	0
305	SLU 1	-0.7	-0.78	37.33	11.8879	0.0089	0.2423
305	SLU 2	-0.69	-0.72	37.31	11.8798	0.0087	0.2387
305	SLU 3	-0.72	-0.79	38.15	12.1489	0.0092	0.2493
305	SLU 4	-0.71	-0.75	38.14	12.144	0.0091	0.2471
305	SLU 5	-0.7	-0.73	37.86	12.0522	0.0089	0.2422
305	SLU 6	-0.73	-0.8	38.7	12.3213	0.0093	0.2528
305	SLU 7	-0.72	-0.77	38.69	12.3164	0.0093	0.2506
305	SLU 8	-0.72	-0.8	38.42	12.2328	0.0092	0.2493
305	SLU 9	-0.71	-0.77	38.41	12.2279	0.0091	0.2472
305	SLU 10	-0.75	-0.78	42.21	13.4289	0.0098	0.261
305	SLU 11	-0.78	-0.85	43.04	13.698	0.0102	0.2716
305	SLU 12	-0.78	-0.81	43.03	13.6931	0.0102	0.2694
305	SLU 13	-0.76	-0.79	42.75	13.6013	0.01	0.2645
305	SLU 14	-0.79	-0.86	43.59	13.8704	0.0104	0.2751
305	SLU 15	-0.79	-0.83	43.58	13.8656	0.0103	0.2729
305	SLU 16	-0.78	-0.86	43.31	13.7819	0.0103	0.2716
305	SLU 17	-0.78	-0.83	43.3	13.7771	0.0102	0.2695
305	SLU 18	-0.79	-0.86	44.32	14.1009	0.0104	0.2742
305	SLU 19	-0.78	-0.83	44.31	14.096	0.0103	0.272
305	SLU 20	-0.8	-0.88	44.86	14.2734	0.0105	0.2777
305	SLU 21	-0.79	-0.84	44.85	14.2685	0.0105	0.2755
305	SLU 22	-0.8	-0.82	41.85	13.3304	0.0105	0.2764
305	SLU 23	-0.79	-0.76	41.84	13.3223	0.0104	0.2728
305	SLU 24	-0.82	-0.83	42.67	13.5914	0.0108	0.2834
305	SLU 25	-0.81	-0.8	42.66	13.5865	0.0108	0.2813
305	SLU 26	-0.8	-0.78	42.39	13.4947	0.0106	0.2764
305	SLU 27	-0.83	-0.85	43.22	13.7638	0.011	0.2869
305	SLU 28	-0.82	-0.81	43.21	13.759	0.0109	0.2848
305	SLU 29	-0.82	-0.85	42.95	13.6753	0.0108	0.2834

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLU 30	-0.81	-0.81	42.94	13.6705	0.0108	0.2813
305	SLU 31	-0.85	-0.83	46.73	14.8714	0.0115	0.2951
305	SLU 32	-0.88	-0.89	47.56	15.1405	0.0119	0.3057
305	SLU 33	-0.88	-0.86	47.56	15.1356	0.0118	0.3036
305	SLU 34	-0.86	-0.84	47.28	15.0439	0.0116	0.2987
305	SLU 35	-0.89	-0.91	48.11	15.313	0.012	0.3092
305	SLU 36	-0.89	-0.87	48.1	15.3081	0.012	0.3071
305	SLU 37	-0.88	-0.91	47.84	15.2245	0.0119	0.3057
305	SLU 38	-0.88	-0.87	47.83	15.2196	0.0118	0.3036
305	SLU 39	-0.89	-0.91	48.84	15.5435	0.012	0.3083
305	SLU 40	-0.88	-0.87	48.83	15.5386	0.0119	0.3061
305	SLU 41	-0.9	-0.92	49.39	15.7159	0.0122	0.3118
305	SLU 42	-0.89	-0.89	49.38	15.711	0.0121	0.3096
305	SLU 43	-0.88	-1	46.98	14.9597	0.0109	0.3033
305	SLU 44	-0.87	-0.94	46.96	14.9515	0.0108	0.2997
305	SLU 45	-0.9	-1.01	47.8	15.2206	0.0113	0.3103
305	SLU 46	-0.89	-0.97	47.79	15.2158	0.0112	0.3081
305	SLU 47	-0.88	-0.95	47.51	15.124	0.011	0.3032
305	SLU 48	-0.91	-1.02	48.34	15.3931	0.0114	0.3138
305	SLU 49	-0.9	-0.98	48.33	15.3882	0.0114	0.3116
305	SLU 50	-0.9	-1.02	48.07	15.3046	0.0113	0.3103
305	SLU 51	-0.89	-0.99	48.06	15.2997	0.0112	0.3082
305	SLU 52	-0.93	-1	51.85	16.5007	0.0119	0.322
305	SLU 53	-0.96	-1.07	52.69	16.7698	0.0123	0.3326
305	SLU 54	-0.95	-1.03	52.68	16.7649	0.0123	0.3304
305	SLU 55	-0.94	-1.01	52.4	16.6731	0.0121	0.3255
305	SLU 56	-0.97	-1.08	53.23	16.9422	0.0125	0.3361
305	SLU 57	-0.96	-1.04	53.22	16.9373	0.0124	0.3339
305	SLU 58	-0.96	-1.08	52.96	16.8537	0.0123	0.3326
305	SLU 59	-0.95	-1.05	52.95	16.8488	0.0123	0.3305
305	SLU 60	-0.97	-1.08	53.96	17.1727	0.0125	0.3351
305	SLU 61	-0.96	-1.05	53.96	17.1678	0.0124	0.333
305	SLU 62	-0.98	-1.1	54.51	17.3452	0.0126	0.3387
305	SLU 63	-0.97	-1.06	54.5	17.3403	0.0126	0.3365
305	SLU 64	-0.97	-1.04	51.5	16.4022	0.0126	0.3374
305	SLU 65	-0.96	-0.98	51.49	16.3941	0.0125	0.3338
305	SLU 66	-0.99	-1.05	52.32	16.6632	0.0129	0.3444
305	SLU 67	-0.99	-1.02	52.31	16.6583	0.0128	0.3422
305	SLU 68	-0.97	-1	52.03	16.5665	0.0126	0.3373
305	SLU 69	-1	-1.06	52.87	16.8356	0.0131	0.3479
305	SLU 70	-1	-1.03	52.86	16.8308	0.013	0.3458
305	SLU 71	-0.99	-1.07	52.59	16.7471	0.0129	0.3444
305	SLU 72	-0.99	-1.03	52.59	16.7422	0.0129	0.3423
305	SLU 73	-1.03	-1.04	56.38	17.9432	0.0135	0.3561
305	SLU 74	-1.06	-1.11	57.21	18.2123	0.014	0.3667
305	SLU 75	-1.05	-1.08	57.2	18.2074	0.0139	0.3645
305	SLU 76	-1.04	-1.06	56.92	18.1157	0.0137	0.3596
305	SLU 77	-1.07	-1.12	57.76	18.3848	0.0141	0.3702
305	SLU 78	-1.06	-1.09	57.75	18.3799	0.0141	0.3681
305	SLU 79	-1.06	-1.13	57.49	18.2962	0.014	0.3667
305	SLU 80	-1.05	-1.09	57.48	18.2914	0.0139	0.3646
305	SLU 81	-1.07	-1.13	58.49	18.6152	0.0141	0.3693
305	SLU 82	-1.06	-1.09	58.48	18.6104	0.014	0.3671
305	SLU 83	-1.08	-1.14	59.04	18.7877	0.0143	0.3728
305	SLU 84	-1.07	-1.11	59.03	18.7828	0.0142	0.3706
305	SLE RA 1	-0.73	-0.79	38.62	12.3	0.0093	0.2521
305	SLE RA 2	-0.72	-0.75	38.61	12.2946	0.0093	0.2497
305	SLE RA 3	-0.74	-0.8	39.17	12.474	0.0095	0.2567
305	SLE RA 4	-0.74	-0.77	39.16	12.4708	0.0095	0.2553
305	SLE RA 5	-0.73	-0.76	38.98	12.4096	0.0094	0.252
305	SLE RA 6	-0.75	-0.81	39.53	12.589	0.0096	0.259
305	SLE RA 7	-0.74	-0.78	39.53	12.5857	0.0096	0.2576
305	SLE RA 8	-0.74	-0.81	39.35	12.53	0.0095	0.2567
305	SLE RA 9	-0.74	-0.78	39.34	12.5267	0.0095	0.2553
305	SLE RA 10	-0.76	-0.79	41.87	13.3274	0.01	0.2645
305	SLE RA 11	-0.78	-0.84	42.43	13.5068	0.0102	0.2716
305	SLE RA 12	-0.78	-0.81	42.42	13.5035	0.0102	0.2701
305	SLE RA 13	-0.77	-0.8	42.24	13.4423	0.0101	0.2669
305	SLE RA 14	-0.79	-0.85	42.79	13.6217	0.0104	0.2739
305	SLE RA 15	-0.79	-0.82	42.79	13.6185	0.0103	0.2725
305	SLE RA 16	-0.78	-0.85	42.61	13.5627	0.0103	0.2716
305	SLE RA 17	-0.78	-0.82	42.61	13.5595	0.0102	0.2702
305	SLE RA 18	-0.79	-0.85	43.28	13.7754	0.0103	0.2733
305	SLE RA 19	-0.78	-0.83	43.27	13.7721	0.0103	0.2719
305	SLE RA 20	-0.8	-0.86	43.64	13.8904	0.0104	0.2756
305	SLE RA 21	-0.79	-0.83	43.64	13.8871	0.0104	0.2742
305	SLE FR 1	-0.73	-0.79	38.62	12.3	0.0093	0.2521
305	SLE FR 2	-0.73	-0.78	38.62	12.299	0.0093	0.2516
305	SLE FR 3	-0.73	-0.79	38.77	12.346	0.0094	0.253
305	SLE FR 4	-0.74	-0.8	40.02	12.7416	0.0096	0.2579
305	SLE FR 5	-0.75	-0.81	40.17	12.7886	0.0097	0.2594
305	SLE FR 6	-0.76	-0.82	40.95	13.0377	0.0098	0.2627
305	SLE QP 1	-0.73	-0.79	38.62	12.3	0.0093	0.2521
305	SLE QP 2	-0.75	-0.81	40.02	12.7426	0.0096	0.2584
305	SLD 1	2.56	-0.55	43.25	13.7267	0.0219	-0.8998
305	SLD 2	2.93	-0.8	43.02	13.6539	0.0213	-1.0297
305	SLD 3	2.64	-1.55	42.7	13.6034	0.0201	-0.9278
305	SLD 4	3.01	-1.79	42.46	13.5306	0.0195	-1.0577
305	SLD 5	0.06	0.83	41.88	13.2378	0.0162	-0.0235
305	SLD 6	0.3	0.67	41.72	13.1901	0.0158	-0.1086

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLD 7	0.32	-2.5	40.02	12.8268	0.0101	-0.1168
305	SLD 8	0.57	-2.66	39.87	12.779	0.0097	-0.202
305	SLD 9	-2.06	1.05	40.17	12.7063	0.0096	0.7188
305	SLD 10	-1.82	0.88	40.02	12.6585	0.0091	0.6337
305	SLD 11	-1.79	-2.28	38.32	12.2952	0.0034	0.6255
305	SLD 12	-1.55	-2.44	38.16	12.2475	0.003	0.5403
305	SLD 13	-4.5	0.18	37.58	11.9547	-0.0002	1.5745
305	SLD 14	-4.13	-0.07	37.34	11.8819	-0.0009	1.4446
305	SLD 15	-4.42	-0.82	37.03	11.8314	-0.0021	1.5465
305	SLD 16	-4.05	-1.07	36.79	11.7586	-0.0027	1.4166
305	SLV 1	6.98	-0.24	47.56	15.0393	0.0384	-2.4512
305	SLV 2	7.85	-0.81	47.01	14.8698	0.0369	-2.7538
305	SLV 3	7.17	-2.51	46.3	14.7598	0.0342	-2.5158
305	SLV 4	8.04	-3.08	45.75	14.5903	0.0328	-2.8184
305	SLV 5	1.14	2.91	44.29	13.8847	0.0248	-0.4044
305	SLV 6	1.7	2.54	43.93	13.7754	0.0239	-0.5993
305	SLV 7	1.76	-4.67	40.09	12.9531	0.0109	-0.6197
305	SLV 8	2.32	-5.04	39.73	12.8439	0.01	-0.8147
305	SLV 9	-3.81	3.42	40.31	12.6414	0.0092	1.3316
305	SLV 10	-3.25	3.05	39.95	12.5321	0.0083	1.1366
305	SLV 11	-3.19	-4.16	36.11	11.7098	-0.0046	1.1162
305	SLV 12	-2.64	-4.53	35.75	11.6006	-0.0056	0.9212
305	SLV 13	-9.53	1.47	34.29	10.895	-0.0135	3.3352
305	SLV 14	-8.66	0.9	33.74	10.7254	-0.0149	3.0326
305	SLV 15	-9.34	-0.8	33.03	10.6155	-0.0177	3.2706
305	SLV 16	-8.48	-1.38	32.48	10.446	-0.0191	2.968
305	CRTFP Ux+	0	0	0	0	0	0
305	CRTFP Ux-	0	0	0	0	0	0
305	CRTFP Uy+	0	0	0	0	0	0
305	CRTFP Uy-	0	0	0	0	0	0
306	SLU 1	-0.58	-0.71	31.17	9.8967	0.8807	0.2231
306	SLU 2	-0.57	-0.66	31.16	9.8895	0.8803	0.2188
306	SLU 3	-0.6	-0.72	31.85	10.1129	0.9	0.2292
306	SLU 4	-0.59	-0.69	31.84	10.1086	0.8998	0.2266
306	SLU 5	-0.58	-0.67	31.61	10.0327	0.8932	0.222
306	SLU 6	-0.61	-0.73	32.3	10.2561	0.9128	0.2325
306	SLU 7	-0.6	-0.7	32.3	10.2518	0.9126	0.2298
306	SLU 8	-0.6	-0.73	32.08	10.1831	0.9064	0.2296
306	SLU 9	-0.59	-0.7	32.07	10.1788	0.9062	0.227
306	SLU 10	-0.63	-0.71	35.24	11.1801	0.9957	0.2392
306	SLU 11	-0.65	-0.77	35.93	11.4036	1.0154	0.2496
306	SLU 12	-0.65	-0.74	35.93	11.3992	1.0152	0.247
306	SLU 13	-0.64	-0.73	35.7	11.3233	1.0086	0.2424
306	SLU 14	-0.66	-0.78	36.39	11.5467	1.0283	0.2529
306	SLU 15	-0.66	-0.75	36.38	11.5424	1.028	0.2503
306	SLU 16	-0.65	-0.79	36.16	11.4737	1.0218	0.2501
306	SLU 17	-0.65	-0.76	36.16	11.4694	1.0216	0.2474
306	SLU 18	-0.66	-0.79	37	11.7405	1.0455	0.2523
306	SLU 19	-0.66	-0.76	37	11.7362	1.0453	0.2497
306	SLU 20	-0.67	-0.8	37.46	11.8837	1.0584	0.2556
306	SLU 21	-0.66	-0.77	37.45	11.8793	1.0582	0.2529
306	SLU 22	-0.67	-0.75	34.93	11.0931	0.9873	0.2529
306	SLU 23	-0.66	-0.7	34.92	11.0859	0.987	0.2485
306	SLU 24	-0.68	-0.76	35.61	11.3093	1.0067	0.259
306	SLU 25	-0.68	-0.73	35.6	11.3049	1.0064	0.2564
306	SLU 26	-0.66	-0.71	35.37	11.2291	0.9999	0.2518
306	SLU 27	-0.69	-0.77	36.06	11.4525	1.0195	0.2622
306	SLU 28	-0.69	-0.74	36.06	11.4481	1.0193	0.2596
306	SLU 29	-0.68	-0.77	35.84	11.3794	1.0131	0.2594
306	SLU 30	-0.68	-0.74	35.83	11.3751	1.0129	0.2568
306	SLU 31	-0.71	-0.76	39	12.3765	1.1024	0.2689
306	SLU 32	-0.74	-0.81	39.69	12.5999	1.1221	0.2794
306	SLU 33	-0.73	-0.78	39.69	12.5956	1.1218	0.2768
306	SLU 34	-0.72	-0.77	39.46	12.5197	1.1153	0.2722
306	SLU 35	-0.74	-0.83	40.15	12.7431	1.1349	0.2827
306	SLU 36	-0.74	-0.8	40.14	12.7388	1.1347	0.28
306	SLU 37	-0.74	-0.83	39.92	12.6701	1.1285	0.2798
306	SLU 38	-0.73	-0.8	39.92	12.6658	1.1283	0.2772
306	SLU 39	-0.74	-0.83	40.76	12.9369	1.1522	0.2821
306	SLU 40	-0.74	-0.8	40.76	12.9325	1.152	0.2795
306	SLU 41	-0.75	-0.84	41.22	13.08	1.1651	0.2853
306	SLU 42	-0.75	-0.81	41.21	13.0757	1.1649	0.2827
306	SLU 43	-0.73	-0.91	39.23	12.4556	1.1083	0.2799
306	SLU 44	-0.72	-0.86	39.22	12.4483	1.1079	0.2755
306	SLU 45	-0.75	-0.92	39.91	12.6717	1.1276	0.286
306	SLU 46	-0.74	-0.89	39.9	12.6674	1.1274	0.2833
306	SLU 47	-0.73	-0.87	39.67	12.5915	1.1208	0.2787
306	SLU 48	-0.76	-0.93	40.36	12.8149	1.1405	0.2892
306	SLU 49	-0.75	-0.9	40.36	12.8106	1.1403	0.2866
306	SLU 50	-0.75	-0.93	40.14	12.7419	1.134	0.2864
306	SLU 51	-0.74	-0.9	40.13	12.7376	1.1338	0.2837
306	SLU 52	-0.78	-0.91	43.3	13.739	1.2233	0.2959
306	SLU 53	-0.8	-0.97	43.99	13.9624	1.243	0.3064
306	SLU 54	-0.8	-0.94	43.99	13.9581	1.2428	0.3038
306	SLU 55	-0.78	-0.92	43.76	13.8822	1.2362	0.2992
306	SLU 56	-0.81	-0.98	44.45	14.1056	1.2559	0.3096
306	SLU 57	-0.8	-0.95	44.44	14.1012	1.2557	0.307
306	SLU 58	-0.8	-0.98	44.22	14.0326	1.2494	0.3068
306	SLU 59	-0.8	-0.96	44.22	14.0282	1.2492	0.3042
306	SLU 60	-0.81	-0.99	45.06	14.2993	1.2731	0.3091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLU 61	-0.8	-0.96	45.06	14.295	1.2729	0.3064
306	SLU 62	-0.82	-1	45.52	14.4425	1.286	0.3123
306	SLU 63	-0.81	-0.97	45.51	14.4382	1.2858	0.3097
306	SLU 64	-0.81	-0.95	42.99	13.6519	1.215	0.3097
306	SLU 65	-0.8	-0.9	42.98	13.6447	1.2146	0.3053
306	SLU 66	-0.83	-0.96	43.67	13.8681	1.2343	0.3157
306	SLU 67	-0.82	-0.93	43.66	13.8638	1.2341	0.3131
306	SLU 68	-0.81	-0.91	43.43	13.7879	1.2275	0.3085
306	SLU 69	-0.84	-0.97	44.13	14.0113	1.2472	0.319
306	SLU 70	-0.83	-0.94	44.12	14.007	1.2469	0.3164
306	SLU 71	-0.83	-0.97	43.9	13.9383	1.2407	0.3161
306	SLU 72	-0.82	-0.94	43.89	13.934	1.2405	0.3135
306	SLU 73	-0.86	-0.95	47.06	14.9353	1.33	0.3257
306	SLU 74	-0.88	-1.01	47.76	15.1588	1.3497	0.3362
306	SLU 75	-0.88	-0.98	47.75	15.1544	1.3495	0.3335
306	SLU 76	-0.87	-0.97	47.52	15.0785	1.3429	0.3289
306	SLU 77	-0.89	-1.02	48.21	15.3019	1.3626	0.3394
306	SLU 78	-0.89	-0.99	48.2	15.2976	1.3623	0.3368
306	SLU 79	-0.88	-1.03	47.98	15.2289	1.3561	0.3366
306	SLU 80	-0.88	-1	47.98	15.2246	1.3559	0.3339
306	SLU 81	-0.89	-1.03	48.83	15.4957	1.3798	0.3388
306	SLU 82	-0.88	-1	48.82	15.4914	1.3796	0.3362
306	SLU 83	-0.9	-1.04	49.28	15.6389	1.3927	0.3421
306	SLU 84	-0.89	-1.01	49.27	15.6345	1.3925	0.3394
306	SLE RA 1	-0.61	-0.72	32.24	10.2385	0.9111	0.2317
306	SLE RA 2	-0.6	-0.69	32.24	10.2337	0.9109	0.2287
306	SLE RA 3	-0.62	-0.73	32.7	10.3827	0.924	0.2357
306	SLE RA 4	-0.61	-0.71	32.69	10.3798	0.9239	0.234
306	SLE RA 5	-0.61	-0.7	32.54	10.3292	0.9195	0.2309
306	SLE RA 6	-0.62	-0.73	33	10.4781	0.9326	0.2379
306	SLE RA 7	-0.62	-0.71	33	10.4752	0.9325	0.2361
306	SLE RA 8	-0.62	-0.74	32.85	10.4294	0.9283	0.236
306	SLE RA 9	-0.61	-0.72	32.84	10.4266	0.9282	0.2342
306	SLE RA 10	-0.64	-0.72	34.96	11.0942	0.9878	0.2423
306	SLE RA 11	-0.65	-0.76	35.42	11.2431	1.001	0.2493
306	SLE RA 12	-0.65	-0.74	35.42	11.2402	1.0008	0.2476
306	SLE RA 13	-0.64	-0.73	35.26	11.1896	0.9964	0.2445
306	SLE RA 14	-0.66	-0.77	35.72	11.3385	1.0095	0.2515
306	SLE RA 15	-0.66	-0.75	35.72	11.3357	1.0094	0.2497
306	SLE RA 16	-0.65	-0.77	35.57	11.2899	1.0053	0.2496
306	SLE RA 17	-0.65	-0.75	35.57	11.287	1.0051	0.2478
306	SLE RA 18	-0.66	-0.77	36.13	11.4677	1.0211	0.2511
306	SLE RA 19	-0.65	-0.75	36.13	11.4648	1.0209	0.2493
306	SLE RA 20	-0.66	-0.78	36.44	11.5632	1.0296	0.2533
306	SLE RA 21	-0.66	-0.76	36.43	11.5603	1.0295	0.2515
306	SLE FR 1	-0.61	-0.72	32.24	10.2385	0.9111	0.2317
306	SLE FR 2	-0.61	-0.71	32.24	10.2376	0.9111	0.2311
306	SLE FR 3	-0.61	-0.72	32.36	10.2767	0.9146	0.2325
306	SLE FR 4	-0.62	-0.73	33.41	10.6063	0.9441	0.2369
306	SLE FR 5	-0.62	-0.74	33.53	10.6455	0.9475	0.2384
306	SLE FR 6	-0.63	-0.75	34.19	10.8531	0.9661	0.2414
306	SLE QP 1	-0.61	-0.72	32.24	10.2385	0.9111	0.2317
306	SLE QP 2	-0.62	-0.74	33.41	10.6073	0.9441	0.2375
306	SLD 1	2.17	-0.56	35.8	11.3217	1.0188	-0.7383
306	SLD 2	2.48	-0.76	35.62	11.2636	1.0132	-0.8424
306	SLD 3	2.24	-1.4	35.38	11.237	1.006	-0.7554
306	SLD 4	2.55	-1.6	35.2	11.179	1.0004	-0.8595
306	SLD 5	0.06	0.63	34.8	10.9603	0.987	-0.0108
306	SLD 6	0.26	0.5	34.68	10.9223	0.9833	-0.079
306	SLD 7	0.28	-2.18	33.39	10.6781	0.9442	-0.0678
306	SLD 8	0.49	-2.31	33.27	10.6401	0.9406	-0.1361
306	SLD 9	-1.73	0.84	33.55	10.5745	0.9477	0.611
306	SLD 10	-1.53	0.71	33.43	10.5365	0.944	0.5428
306	SLD 11	-1.51	-1.97	32.14	10.2923	0.9049	0.554
306	SLD 12	-1.3	-2.11	32.02	10.2543	0.9013	0.4858
306	SLD 13	-3.8	0.13	31.62	10.0356	0.8878	1.3345
306	SLD 14	-3.48	-0.07	31.44	9.9776	0.8823	1.2303
306	SLD 15	-3.73	-0.72	31.2	9.9509	0.875	1.3174
306	SLD 16	-3.41	-0.92	31.02	9.8929	0.8694	1.2132
306	SLV 1	5.91	-0.34	38.99	12.2747	1.1183	-2.045
306	SLV 2	6.64	-0.81	38.56	12.1396	1.1053	-2.2875
306	SLV 3	6.07	-2.26	38.04	12.0828	1.0892	-2.0848
306	SLV 4	6.8	-2.73	37.6	11.9477	1.0763	-2.3273
306	SLV 5	0.98	2.38	36.61	11.4217	1.0427	-0.3451
306	SLV 6	1.45	2.07	36.34	11.3347	1.0343	-0.5014
306	SLV 7	1.49	-4.03	33.42	10.7823	0.9458	-0.4778
306	SLV 8	1.97	-4.33	33.14	10.6952	0.9375	-0.6341
306	SLV 9	-3.21	2.86	33.68	10.5194	0.9508	1.1091
306	SLV 10	-2.74	2.55	33.4	10.4323	0.9424	0.9528
306	SLV 11	-2.69	-3.55	30.48	9.8799	0.8539	0.9763
306	SLV 12	-2.22	-3.85	30.21	9.7929	0.8456	0.8201
306	SLV 13	-8.04	1.26	29.22	9.2668	0.8119	2.8023
306	SLV 14	-7.31	0.79	28.78	9.1317	0.799	2.5598
306	SLV 15	-7.89	-0.66	28.26	9.075	0.7829	2.7624
306	SLV 16	-7.16	-1.13	27.82	8.9399	0.77	2.5199
306	CRTFP Ux+	0	0	0	0	0	0
306	CRTFP Ux-	0	0	0	0	0	0
306	CRTFP Uy+	0	0	0	0	0	0
306	CRTFP Uy-	0	0	0	0	0	0
307	SLU 1	-1.12	-1.39	59.12	18.0346	-2.2413	0.3166

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLU 2	-1.1	-1.29	59.11	18.0222	-2.2412	0.3147
307	SLU 3	-1.15	-1.4	60.4	18.4263	-2.2893	0.3264
307	SLU 4	-1.14	-1.35	60.39	18.4188	-2.2893	0.3253
307	SLU 5	-1.12	-1.32	59.97	18.2828	-2.2737	0.3192
307	SLU 6	-1.17	-1.43	61.26	18.6869	-2.3217	0.3309
307	SLU 7	-1.16	-1.37	61.25	18.6794	-2.3217	0.3298
307	SLU 8	-1.15	-1.43	60.84	18.5558	-2.3061	0.3254
307	SLU 9	-1.14	-1.38	60.83	18.5483	-2.3061	0.3243
307	SLU 10	-1.21	-1.4	66.85	20.3833	-2.535	0.3455
307	SLU 11	-1.25	-1.51	68.15	20.7873	-2.5831	0.3572
307	SLU 12	-1.24	-1.45	68.14	20.7799	-2.5831	0.3561
307	SLU 13	-1.22	-1.42	67.71	20.6438	-2.5675	0.3499
307	SLU 14	-1.27	-1.53	69.01	21.0479	-2.6156	0.3617
307	SLU 15	-1.26	-1.48	69	21.0404	-2.6156	0.3606
307	SLU 16	-1.25	-1.54	68.59	20.9168	-2.5999	0.3562
307	SLU 17	-1.24	-1.48	68.58	20.9094	-2.5999	0.3551
307	SLU 18	-1.27	-1.54	70.19	21.4075	-2.661	0.3606
307	SLU 19	-1.26	-1.48	70.18	21.4001	-2.661	0.3595
307	SLU 20	-1.28	-1.56	71.05	21.6681	-2.6934	0.365
307	SLU 21	-1.27	-1.5	71.04	21.6607	-2.6934	0.3639
307	SLU 22	-1.27	-1.46	66.2	20.2044	-2.507	0.3658
307	SLU 23	-1.26	-1.37	66.19	20.192	-2.5069	0.364
307	SLU 24	-1.31	-1.48	67.48	20.596	-2.555	0.3757
307	SLU 25	-1.3	-1.43	67.47	20.5886	-2.555	0.3746
307	SLU 26	-1.27	-1.39	67.05	20.4526	-2.5394	0.3684
307	SLU 27	-1.32	-1.5	68.34	20.8566	-2.5875	0.3801
307	SLU 28	-1.31	-1.45	68.33	20.8492	-2.5874	0.379
307	SLU 29	-1.31	-1.51	67.92	20.7255	-2.5718	0.3747
307	SLU 30	-1.3	-1.45	67.91	20.7181	-2.5718	0.3736
307	SLU 31	-1.36	-1.47	73.94	22.553	-2.8008	0.3948
307	SLU 32	-1.41	-1.59	75.23	22.9571	-2.8489	0.4065
307	SLU 33	-1.4	-1.53	75.22	22.9496	-2.8488	0.4054
307	SLU 34	-1.38	-1.5	74.8	22.8136	-2.8332	0.3992
307	SLU 35	-1.43	-1.61	76.09	23.2177	-2.8813	0.4109
307	SLU 36	-1.42	-1.55	76.08	23.2102	-2.8813	0.4098
307	SLU 37	-1.41	-1.61	75.67	23.0866	-2.8656	0.4055
307	SLU 38	-1.4	-1.56	75.66	23.0791	-2.8656	0.4044
307	SLU 39	-1.42	-1.61	77.27	23.5773	-2.9267	0.4098
307	SLU 40	-1.41	-1.56	77.26	23.5699	-2.9267	0.4087
307	SLU 41	-1.44	-1.63	78.13	23.8379	-2.9591	0.4142
307	SLU 42	-1.43	-1.58	78.12	23.8304	-2.9591	0.4131
307	SLU 43	-1.4	-1.78	74.42	22.7011	-2.8225	0.3947
307	SLU 44	-1.38	-1.68	74.41	22.6887	-2.8225	0.3928
307	SLU 45	-1.43	-1.79	75.7	23.0927	-2.8706	0.4045
307	SLU 46	-1.42	-1.74	75.7	23.0853	-2.8706	0.4034
307	SLU 47	-1.4	-1.71	75.27	22.9493	-2.8549	0.3972
307	SLU 48	-1.45	-1.82	76.56	23.3533	-2.903	0.409
307	SLU 49	-1.44	-1.76	76.56	23.3459	-2.903	0.4079
307	SLU 50	-1.43	-1.82	76.14	23.2222	-2.8874	0.4035
307	SLU 51	-1.42	-1.77	76.14	23.2148	-2.8874	0.4024
307	SLU 52	-1.49	-1.79	82.16	25.0497	-3.1163	0.4236
307	SLU 53	-1.54	-1.9	83.45	25.4538	-3.1644	0.4353
307	SLU 54	-1.53	-1.84	83.45	25.4463	-3.1644	0.4342
307	SLU 55	-1.5	-1.81	83.02	25.3103	-3.1488	0.428
307	SLU 56	-1.55	-1.92	84.31	25.7143	-3.1968	0.4397
307	SLU 57	-1.54	-1.87	84.31	25.7069	-3.1968	0.4386
307	SLU 58	-1.54	-1.93	83.89	25.5833	-3.1812	0.4343
307	SLU 59	-1.53	-1.87	83.89	25.5758	-3.1812	0.4332
307	SLU 60	-1.55	-1.93	85.49	26.074	-3.2423	0.4386
307	SLU 61	-1.54	-1.87	85.49	26.0665	-3.2423	0.4375
307	SLU 62	-1.56	-1.95	86.35	26.3346	-3.2747	0.4431
307	SLU 63	-1.55	-1.89	86.35	26.3271	-3.2747	0.442
307	SLU 64	-1.56	-1.85	81.51	24.8709	-3.0882	0.4439
307	SLU 65	-1.54	-1.76	81.5	24.8585	-3.0882	0.4421
307	SLU 66	-1.59	-1.87	82.79	25.2625	-3.1363	0.4538
307	SLU 67	-1.58	-1.82	82.78	25.2551	-3.1363	0.4527
307	SLU 68	-1.56	-1.78	82.36	25.119	-3.1206	0.4465
307	SLU 69	-1.6	-1.89	83.65	25.5231	-3.1687	0.4582
307	SLU 70	-1.59	-1.84	83.64	25.5157	-3.1687	0.4571
307	SLU 71	-1.59	-1.9	83.23	25.392	-3.1531	0.4528
307	SLU 72	-1.58	-1.84	83.22	25.3846	-3.1531	0.4517
307	SLU 73	-1.64	-1.86	89.24	27.2195	-3.382	0.4729
307	SLU 74	-1.69	-1.98	90.54	27.6235	-3.4301	0.4846
307	SLU 75	-1.68	-1.92	90.53	27.6161	-3.4301	0.4835
307	SLU 76	-1.66	-1.89	90.1	27.4801	-3.4145	0.4773
307	SLU 77	-1.71	-2	91.4	27.8841	-3.4626	0.489
307	SLU 78	-1.7	-1.94	91.39	27.8767	-3.4625	0.4879
307	SLU 79	-1.69	-2	90.98	27.753	-3.4469	0.4836
307	SLU 80	-1.68	-1.95	90.97	27.7456	-3.4469	0.4825
307	SLU 81	-1.7	-2	92.58	28.2438	-3.508	0.4879
307	SLU 82	-1.69	-1.95	92.57	28.2363	-3.508	0.4868
307	SLU 83	-1.72	-2.02	93.44	28.5043	-3.5404	0.4923
307	SLU 84	-1.71	-1.97	93.43	28.4969	-3.5404	0.4912
307	SLE RA 1	-1.16	-1.41	61.14	18.6546	-2.3172	0.3306
307	SLE RA 2	-1.15	-1.35	61.13	18.6463	-2.3172	0.3294
307	SLE RA 3	-1.18	-1.42	61.99	18.9157	-2.3492	0.3372
307	SLE RA 4	-1.18	-1.38	61.99	18.9107	-2.3492	0.3365
307	SLE RA 5	-1.16	-1.36	61.71	18.82	-2.3388	0.3324
307	SLE RA 6	-1.19	-1.44	62.57	19.0894	-2.3708	0.3402
307	SLE RA 7	-1.19	-1.4	62.56	19.0844	-2.3708	0.3394

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLE RA 8	-1.18	-1.44	62.29	19.002	-2.3604	0.3365
307	SLE RA 9	-1.18	-1.4	62.28	18.997	-2.3604	0.3358
307	SLE RA 10	-1.22	-1.42	66.3	20.2203	-2.513	0.35
307	SLE RA 11	-1.25	-1.49	67.16	20.4897	-2.5451	0.3578
307	SLE RA 12	-1.25	-1.45	67.16	20.4847	-2.5451	0.357
307	SLE RA 13	-1.23	-1.43	66.87	20.394	-2.5347	0.3529
307	SLE RA 14	-1.26	-1.51	67.73	20.6634	-2.5667	0.3607
307	SLE RA 15	-1.26	-1.47	67.73	20.6584	-2.5667	0.36
307	SLE RA 16	-1.25	-1.51	67.45	20.576	-2.5563	0.3571
307	SLE RA 17	-1.25	-1.47	67.45	20.5711	-2.5563	0.3563
307	SLE RA 18	-1.26	-1.51	68.52	20.9032	-2.597	0.36
307	SLE RA 19	-1.26	-1.47	68.52	20.8982	-2.597	0.3592
307	SLE RA 20	-1.27	-1.52	69.09	21.0769	-2.6186	0.3629
307	SLE RA 21	-1.27	-1.49	69.09	21.0719	-2.6186	0.3622
307	SLE FR 1	-1.16	-1.41	61.14	18.6546	-2.3172	0.3306
307	SLE FR 2	-1.16	-1.4	61.14	18.6529	-2.3172	0.3304
307	SLE FR 3	-1.17	-1.41	61.37	18.724	-2.3258	0.3318
307	SLE FR 4	-1.19	-1.43	63.35	19.3275	-2.4011	0.3392
307	SLE FR 5	-1.2	-1.44	63.58	19.3986	-2.4098	0.3406
307	SLE FR 6	-1.21	-1.46	64.83	19.7789	-2.4571	0.3453
307	SLE QP 1	-1.16	-1.41	61.14	18.6546	-2.3172	0.3306
307	SLE QP 2	-1.19	-1.44	63.35	19.3291	-2.4011	0.3394
307	SLD 1	4.22	-1.13	67.17	20.3636	-2.5026	-1.44
307	SLD 2	4.83	-1.5	66.85	20.2676	-2.4923	-1.6542
307	SLD 3	4.35	-2.77	66.43	20.2494	-2.4789	-1.5415
307	SLD 4	4.96	-3.14	66.11	20.1534	-2.4685	-1.7558
307	SLD 5	0.13	1.21	65.68	19.8297	-2.4694	-0.0022
307	SLD 6	0.53	0.97	65.47	19.7668	-2.4626	-0.1427
307	SLD 7	0.56	-4.26	63.21	19.4491	-2.3903	-0.3408
307	SLD 8	0.96	-4.51	63	19.3862	-2.3835	-0.4813
307	SLD 9	-3.34	1.63	63.71	19.2721	-2.4187	1.1602
307	SLD 10	-2.94	1.39	63.5	19.2091	-2.4119	1.0197
307	SLD 11	-2.91	-3.85	61.24	18.8915	-2.3396	0.8216
307	SLD 12	-2.51	-4.09	61.03	18.8286	-2.3328	0.6811
307	SLD 13	-7.34	0.26	60.6	18.5048	-2.3337	2.4347
307	SLD 14	-6.73	-0.11	60.28	18.4088	-2.3234	2.2204
307	SLD 15	-7.21	-1.38	59.86	18.3907	-2.31	2.3331
307	SLD 16	-6.6	-1.75	59.54	18.2946	-2.2996	2.1189
307	SLV 1	11.47	-0.77	72.25	21.7439	-2.6376	-3.8257
307	SLV 2	12.89	-1.63	71.5	21.5203	-2.6135	-4.3247
307	SLV 3	11.77	-4.51	70.57	21.4851	-2.5838	-4.0577
307	SLV 4	13.19	-5.37	69.82	21.2614	-2.5597	-4.5567
307	SLV 5	1.91	4.58	68.7	20.4847	-2.5577	-0.4723
307	SLV 6	2.82	4.03	68.22	20.3406	-2.5421	-0.7939
307	SLV 7	2.91	-7.88	63.1	19.6218	-2.3786	-1.2456
307	SLV 8	3.82	-8.44	62.62	19.4777	-2.3631	-1.5672
307	SLV 9	-6.2	5.56	64.09	19.1806	-2.4392	2.2461
307	SLV 10	-5.29	5.01	63.61	19.0365	-2.4236	1.9245
307	SLV 11	-5.21	-6.91	58.49	18.3177	-2.2601	1.4728
307	SLV 12	-4.29	-7.46	58.01	18.1736	-2.2446	1.1512
307	SLV 13	-15.57	2.49	56.89	17.3968	-2.2425	5.2356
307	SLV 14	-14.15	1.63	56.14	17.1732	-2.2184	4.7366
307	SLV 15	-15.27	-1.25	55.21	17.138	-2.1888	5.0036
307	SLV 16	-13.85	-2.11	54.46	16.9143	-2.1647	4.5046
307	CRTFP Ux+	0	0	0	0	0	0
307	CRTFP Ux-	0	0	0	0	0	0
307	CRTFP Uy+	0	0	0	0	0	0
307	CRTFP Uy-	0	0	0	0	0	0
308	SLU 1	-0.87	-1.03	45.34	12.5875	0.366	0.2742
308	SLU 2	-0.86	-0.96	45.34	12.581	0.3658	0.2698
308	SLU 3	-0.89	-1.04	46.31	12.8583	0.3741	0.2818
308	SLU 4	-0.89	-1	46.31	12.8544	0.374	0.2792
308	SLU 5	-0.87	-0.97	45.99	12.7621	0.3712	0.2737
308	SLU 6	-0.9	-1.06	46.97	13.0394	0.3794	0.2857
308	SLU 7	-0.9	-1.01	46.97	13.0355	0.3793	0.2831
308	SLU 8	-0.89	-1.06	46.65	12.9497	0.3767	0.282
308	SLU 9	-0.89	-1.02	46.65	12.9458	0.3766	0.2794
308	SLU 10	-0.94	-1.03	51.28	14.2311	0.4137	0.2955
308	SLU 11	-0.97	-1.11	52.26	14.5084	0.4219	0.3074
308	SLU 12	-0.97	-1.07	52.26	14.5045	0.4218	0.3048
308	SLU 13	-0.95	-1.05	51.94	14.4122	0.419	0.2994
308	SLU 14	-0.99	-1.13	52.92	14.6895	0.4273	0.3114
308	SLU 15	-0.98	-1.09	52.92	14.6856	0.4272	0.3087
308	SLU 16	-0.97	-1.13	52.6	14.5998	0.4246	0.3077
308	SLU 17	-0.97	-1.09	52.6	14.5959	0.4245	0.305
308	SLU 18	-0.98	-1.13	53.83	14.9448	0.4344	0.3108
308	SLU 19	-0.98	-1.09	53.83	14.9409	0.4343	0.3082
308	SLU 20	-1	-1.15	54.49	15.1259	0.4398	0.3148
308	SLU 21	-0.99	-1.11	54.49	15.122	0.4396	0.3121
308	SLU 22	-0.99	-1.08	50.72	14.0886	0.4106	0.3118
308	SLU 23	-0.98	-1.01	50.72	14.0822	0.4104	0.3074
308	SLU 24	-1.01	-1.09	51.7	14.3594	0.4186	0.3193
308	SLU 25	-1.01	-1.05	51.7	14.3556	0.4185	0.3167
308	SLU 26	-0.99	-1.02	51.38	14.2633	0.4158	0.3113
308	SLU 27	-1.03	-1.11	52.36	14.5405	0.424	0.3232
308	SLU 28	-1.02	-1.06	52.36	14.5367	0.4239	0.3206
308	SLU 29	-1.01	-1.11	52.04	14.4508	0.4213	0.3196
308	SLU 30	-1.01	-1.07	52.04	14.4469	0.4212	0.3169
308	SLU 31	-1.06	-1.08	56.67	15.7323	0.4583	0.333
308	SLU 32	-1.09	-1.16	57.64	16.0095	0.4665	0.345

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLU 33	-1.09	-1.12	57.64	16.0057	0.4664	0.3424
308	SLU 34	-1.07	-1.09	57.33	15.9134	0.4636	0.3369
308	SLU 35	-1.11	-1.18	58.3	16.1906	0.4718	0.3489
308	SLU 36	-1.1	-1.14	58.3	16.1868	0.4717	0.3463
308	SLU 37	-1.09	-1.18	57.98	16.1009	0.4692	0.3452
308	SLU 38	-1.09	-1.14	57.98	16.097	0.469	0.3426
308	SLU 39	-1.11	-1.18	59.22	16.4459	0.479	0.3484
308	SLU 40	-1.1	-1.14	59.22	16.442	0.4788	0.3458
308	SLU 41	-1.12	-1.2	59.87	16.627	0.4843	0.3523
308	SLU 42	-1.11	-1.16	59.87	16.6231	0.4842	0.3497
308	SLU 43	-1.09	-1.32	57.09	15.849	0.4606	0.3436
308	SLU 44	-1.07	-1.25	57.09	15.8426	0.4604	0.3392
308	SLU 45	-1.11	-1.33	58.07	16.1199	0.4686	0.3512
308	SLU 46	-1.1	-1.29	58.07	16.116	0.4685	0.3485
308	SLU 47	-1.09	-1.27	57.75	16.0237	0.4657	0.3431
308	SLU 48	-1.12	-1.35	58.72	16.301	0.474	0.3551
308	SLU 49	-1.12	-1.31	58.72	16.2971	0.4738	0.3524
308	SLU 50	-1.11	-1.35	58.41	16.2112	0.4713	0.3514
308	SLU 51	-1.1	-1.31	58.41	16.2074	0.4712	0.3488
308	SLU 52	-1.16	-1.32	63.04	17.4927	0.5082	0.3648
308	SLU 53	-1.19	-1.4	64.01	17.77	0.5165	0.3768
308	SLU 54	-1.19	-1.36	64.01	17.7661	0.5163	0.3742
308	SLU 55	-1.17	-1.34	63.7	17.6738	0.5136	0.3688
308	SLU 56	-1.21	-1.42	64.67	17.9511	0.5218	0.3807
308	SLU 57	-1.2	-1.38	64.67	17.9472	0.5217	0.3781
308	SLU 58	-1.19	-1.43	64.35	17.8613	0.5191	0.3771
308	SLU 59	-1.19	-1.38	64.35	17.8575	0.519	0.3744
308	SLU 60	-1.2	-1.42	65.59	18.2063	0.5289	0.3802
308	SLU 61	-1.2	-1.38	65.59	18.2025	0.5288	0.3776
308	SLU 62	-1.22	-1.44	66.24	18.3874	0.5343	0.3841
308	SLU 63	-1.21	-1.4	66.24	18.3836	0.5342	0.3815
308	SLU 64	-1.21	-1.37	62.48	17.3502	0.5051	0.3811
308	SLU 65	-1.2	-1.3	62.48	17.3437	0.5049	0.3767
308	SLU 66	-1.23	-1.38	63.45	17.621	0.5132	0.3887
308	SLU 67	-1.22	-1.34	63.45	17.6171	0.513	0.3861
308	SLU 68	-1.21	-1.31	63.14	17.5248	0.5103	0.3807
308	SLU 69	-1.24	-1.4	64.11	17.8021	0.5185	0.3926
308	SLU 70	-1.24	-1.35	64.11	17.7982	0.5184	0.39
308	SLU 71	-1.23	-1.4	63.79	17.7124	0.5158	0.389
308	SLU 72	-1.23	-1.36	63.79	17.7085	0.5157	0.3863
308	SLU 73	-1.28	-1.37	68.42	18.9938	0.5528	0.4024
308	SLU 74	-1.31	-1.45	69.4	19.2711	0.561	0.4144
308	SLU 75	-1.31	-1.41	69.4	19.2672	0.5609	0.4117
308	SLU 76	-1.29	-1.39	69.08	19.1749	0.5581	0.4063
308	SLU 77	-1.33	-1.47	70.06	19.4522	0.5664	0.4183
308	SLU 78	-1.32	-1.43	70.06	19.4483	0.5662	0.4157
308	SLU 79	-1.31	-1.48	69.74	19.3625	0.5637	0.4146
308	SLU 80	-1.31	-1.43	69.74	19.3586	0.5636	0.412
308	SLU 81	-1.32	-1.47	70.97	19.7075	0.5735	0.4178
308	SLU 82	-1.32	-1.43	70.97	19.7036	0.5734	0.4151
308	SLU 83	-1.34	-1.49	71.63	19.8885	0.5788	0.4217
308	SLU 84	-1.33	-1.45	71.63	19.8847	0.5787	0.4191
308	SLE RA 1	-0.9	-1.04	46.88	13.0164	0.3788	0.2849
308	SLE RA 2	-0.89	-0.99	46.88	13.0121	0.3786	0.282
308	SLE RA 3	-0.92	-1.05	47.53	13.1969	0.3841	0.29
308	SLE RA 4	-0.91	-1.02	47.53	13.1943	0.384	0.2882
308	SLE RA 5	-0.9	-1.01	47.31	13.1328	0.3822	0.2846
308	SLE RA 6	-0.93	-1.06	47.96	13.3176	0.3877	0.2926
308	SLE RA 7	-0.92	-1.03	47.96	13.3151	0.3876	0.2908
308	SLE RA 8	-0.92	-1.06	47.75	13.2578	0.3859	0.2901
308	SLE RA 9	-0.91	-1.04	47.75	13.2552	0.3858	0.2884
308	SLE RA 10	-0.95	-1.04	50.84	14.1121	0.4105	0.2991
308	SLE RA 11	-0.97	-1.1	51.49	14.297	0.416	0.3071
308	SLE RA 12	-0.97	-1.07	51.49	14.2944	0.4159	0.3053
308	SLE RA 13	-0.96	-1.05	51.28	14.2329	0.4141	0.3017
308	SLE RA 14	-0.98	-1.11	51.93	14.4177	0.4196	0.3097
308	SLE RA 15	-0.98	-1.08	51.93	14.4151	0.4195	0.3079
308	SLE RA 16	-0.97	-1.11	51.72	14.3579	0.4178	0.3072
308	SLE RA 17	-0.97	-1.08	51.72	14.3553	0.4177	0.3055
308	SLE RA 18	-0.98	-1.11	52.54	14.5879	0.4243	0.3094
308	SLE RA 19	-0.98	-1.08	52.54	14.5853	0.4243	0.3076
308	SLE RA 20	-0.99	-1.12	52.98	14.7086	0.4279	0.312
308	SLE RA 21	-0.98	-1.09	52.98	14.706	0.4278	0.3102
308	SLE FR 1	-0.9	-1.04	46.88	13.0164	0.3788	0.2849
308	SLE FR 2	-0.9	-1.03	46.88	13.0155	0.3788	0.2843
308	SLE FR 3	-0.91	-1.05	47.05	13.0647	0.3802	0.286
308	SLE FR 4	-0.92	-1.05	48.57	13.487	0.3924	0.2917
308	SLE FR 5	-0.93	-1.07	48.75	13.5361	0.3939	0.2933
308	SLE FR 6	-0.94	-1.08	49.71	13.8021	0.4016	0.2971
308	SLE QP 1	-0.9	-1.04	46.88	13.0164	0.3788	0.2849
308	SLE QP 2	-0.93	-1.06	48.57	13.4878	0.3924	0.2923
308	SLD 1	3.34	-0.81	50.89	14.021	0.425	-0.9876
308	SLD 2	3.83	-1.07	50.67	13.9631	0.4227	-1.1285
308	SLD 3	3.45	-2.11	50.34	13.9587	0.4203	-1.0124
308	SLD 4	3.93	-2.38	50.12	13.9008	0.418	-1.1534
308	SLD 5	0.12	1.05	50.14	13.7526	0.4099	-0.029
308	SLD 6	0.43	0.87	49.99	13.7147	0.4084	-0.1214
308	SLD 7	0.45	-3.32	48.32	13.5448	0.394	-0.1117
308	SLD 8	0.77	-3.49	48.17	13.5068	0.3925	-0.2041
308	SLD 9	-2.62	1.36	48.98	13.4688	0.3924	0.7887

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLD 10	-2.31	1.19	48.83	13.4308	0.3909	0.6963
308	SLD 11	-2.28	-3	47.16	13.261	0.3765	0.7059
308	SLD 12	-1.97	-3.17	47.01	13.223	0.375	0.6135
308	SLD 13	-5.78	0.26	47.03	13.0749	0.3669	1.7379
308	SLD 14	-5.3	-0.01	46.81	13.0169	0.3646	1.5969
308	SLD 15	-5.68	-1.05	46.48	13.0125	0.3622	1.7131
308	SLD 16	-5.2	-1.32	46.26	12.9546	0.3599	1.5721
308	SLV 1	9.07	-0.5	53.97	14.7324	0.4685	-2.7016
308	SLV 2	10.19	-1.13	53.46	14.5975	0.4631	-3.0299
308	SLV 3	9.3	-3.48	52.73	14.5907	0.4577	-2.7593
308	SLV 4	10.42	-4.11	52.22	14.4558	0.4523	-3.0876
308	SLV 5	1.52	3.73	52.16	14.0993	0.4326	-0.4619
308	SLV 6	2.24	3.33	51.83	14.0124	0.4291	-0.6735
308	SLV 7	2.3	-6.2	48.03	13.627	0.3965	-0.6541
308	SLV 8	3.03	-6.6	47.7	13.5401	0.3931	-0.8657
308	SLV 9	-4.88	4.48	49.45	13.4356	0.3918	1.4502
308	SLV 10	-4.16	4.07	49.12	13.3486	0.3884	1.2386
308	SLV 11	-4.1	-5.45	45.32	12.9633	0.3558	1.258
308	SLV 12	-3.37	-5.86	44.99	12.8763	0.3523	1.0464
308	SLV 13	-12.27	1.98	44.93	12.5199	0.3326	3.6721
308	SLV 14	-11.15	1.36	44.42	12.3849	0.3272	3.3438
308	SLV 15	-12.04	-1	43.69	12.3782	0.3218	3.6144
308	SLV 16	-10.92	-1.62	43.18	12.2432	0.3164	3.2862
308	CRTFP Ux+	0	0	0	0	0	0
308	CRTFP Ux-	0	0	0	0	0	0
308	CRTFP Uy+	0	0	0	0	0	0
308	CRTFP Uy-	0	0	0	0	0	0
309	SLU 1	-0.81	-0.87	41.45	11.6913	0.0294	0.2535
309	SLU 2	-0.8	-0.8	41.46	11.6872	0.0292	0.2499
309	SLU 3	-0.83	-0.88	42.34	11.9413	0.0301	0.2606
309	SLU 4	-0.82	-0.84	42.35	11.9389	0.03	0.2584
309	SLU 5	-0.81	-0.82	42.06	11.855	0.0296	0.2534
309	SLU 6	-0.84	-0.89	42.94	12.1091	0.0305	0.2641
309	SLU 7	-0.84	-0.85	42.95	12.1067	0.0304	0.262
309	SLU 8	-0.83	-0.9	42.66	12.0268	0.0302	0.2606
309	SLU 9	-0.82	-0.86	42.66	12.0244	0.0301	0.2584
309	SLU 10	-0.87	-0.86	46.91	13.2233	0.0326	0.2738
309	SLU 11	-0.91	-0.93	47.79	13.4774	0.0336	0.2845
309	SLU 12	-0.9	-0.89	47.79	13.4749	0.0334	0.2823
309	SLU 13	-0.88	-0.87	47.51	13.3911	0.0331	0.2773
309	SLU 14	-0.92	-0.95	48.39	13.6451	0.034	0.288
309	SLU 15	-0.91	-0.91	48.39	13.6427	0.0339	0.2859
309	SLU 16	-0.91	-0.95	48.1	13.5629	0.0337	0.2845
309	SLU 17	-0.9	-0.91	48.11	13.5605	0.0336	0.2823
309	SLU 18	-0.92	-0.95	49.23	13.8856	0.0343	0.2876
309	SLU 19	-0.91	-0.91	49.24	13.8832	0.0342	0.2854
309	SLU 20	-0.93	-0.96	49.84	14.0534	0.0348	0.2912
309	SLU 21	-0.92	-0.92	49.84	14.051	0.0346	0.289
309	SLU 22	-0.92	-0.9	46.35	13.0754	0.0337	0.2886
309	SLU 23	-0.91	-0.83	46.35	13.0714	0.0335	0.285
309	SLU 24	-0.94	-0.91	47.23	13.3255	0.0344	0.2957
309	SLU 25	-0.94	-0.87	47.24	13.323	0.0343	0.2936
309	SLU 26	-0.92	-0.85	46.95	13.2392	0.0339	0.2886
309	SLU 27	-0.96	-0.92	47.83	13.4932	0.0348	0.2993
309	SLU 28	-0.95	-0.88	47.84	13.4908	0.0347	0.2971
309	SLU 29	-0.94	-0.93	47.55	13.411	0.0345	0.2958
309	SLU 30	-0.94	-0.89	47.55	13.4086	0.0344	0.2936
309	SLU 31	-0.99	-0.89	51.8	14.6074	0.0369	0.3089
309	SLU 32	-1.02	-0.97	52.68	14.8615	0.0378	0.3196
309	SLU 33	-1.01	-0.93	52.68	14.8591	0.0377	0.3175
309	SLU 34	-1	-0.91	52.4	14.7752	0.0374	0.3125
309	SLU 35	-1.03	-0.98	53.28	15.0293	0.0383	0.3232
309	SLU 36	-1.02	-0.94	53.28	15.0269	0.0382	0.321
309	SLU 37	-1.02	-0.99	52.99	14.947	0.038	0.3197
309	SLU 38	-1.01	-0.95	53	14.9446	0.0379	0.3175
309	SLU 39	-1.03	-0.98	54.13	15.2697	0.0386	0.3228
309	SLU 40	-1.02	-0.94	54.13	15.2673	0.0385	0.3206
309	SLU 41	-1.04	-1	54.73	15.4375	0.039	0.3264
309	SLU 42	-1.03	-0.96	54.73	15.4351	0.0389	0.3242
309	SLU 43	-1.01	-1.12	52.21	14.7241	0.0367	0.3175
309	SLU 44	-1	-1.05	52.22	14.7201	0.0365	0.3138
309	SLU 45	-1.04	-1.13	53.1	14.9741	0.0374	0.3245
309	SLU 46	-1.03	-1.09	53.11	14.9717	0.0373	0.3224
309	SLU 47	-1.01	-1.07	52.82	14.8879	0.037	0.3174
309	SLU 48	-1.05	-1.14	53.7	15.1419	0.0379	0.3281
309	SLU 49	-1.04	-1.1	53.71	15.1395	0.0378	0.3259
309	SLU 50	-1.04	-1.15	53.41	15.0597	0.0376	0.3246
309	SLU 51	-1.03	-1.11	53.42	15.0572	0.0375	0.3224
309	SLU 52	-1.08	-1.11	57.67	16.2561	0.04	0.3377
309	SLU 53	-1.11	-1.18	58.55	16.5102	0.0409	0.3484
309	SLU 54	-1.1	-1.14	58.55	16.5078	0.0408	0.3463
309	SLU 55	-1.09	-1.12	58.27	16.4239	0.0404	0.3413
309	SLU 56	-1.12	-1.2	59.15	16.678	0.0413	0.352
309	SLU 57	-1.12	-1.16	59.15	16.6755	0.0412	0.3498
309	SLU 58	-1.11	-1.2	58.86	16.5957	0.041	0.3485
309	SLU 59	-1.1	-1.16	58.86	16.5933	0.0409	0.3463
309	SLU 60	-1.12	-1.2	59.99	16.9184	0.0417	0.3516
309	SLU 61	-1.11	-1.16	60	16.916	0.0415	0.3494
309	SLU 62	-1.13	-1.21	60.59	17.0862	0.0421	0.3552
309	SLU 63	-1.13	-1.17	60.6	17.0838	0.042	0.353

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLU 64	-1.13	-1.15	57.11	16.1082	0.041	0.3526
309	SLU 65	-1.11	-1.08	57.11	16.1042	0.0408	0.349
309	SLU 66	-1.15	-1.16	57.99	16.3583	0.0417	0.3597
309	SLU 67	-1.14	-1.12	58	16.3559	0.0416	0.3575
309	SLU 68	-1.13	-1.1	57.71	16.272	0.0412	0.3526
309	SLU 69	-1.16	-1.17	58.59	16.5261	0.0422	0.3633
309	SLU 70	-1.15	-1.13	58.6	16.5237	0.042	0.3611
309	SLU 71	-1.15	-1.18	58.31	16.4438	0.0419	0.3598
309	SLU 72	-1.14	-1.14	58.31	16.4414	0.0418	0.3576
309	SLU 73	-1.19	-1.14	62.56	17.6402	0.0443	0.3729
309	SLU 74	-1.22	-1.21	63.44	17.8943	0.0452	0.3836
309	SLU 75	-1.22	-1.17	63.44	17.8919	0.0451	0.3814
309	SLU 76	-1.2	-1.15	63.16	17.808	0.0447	0.3765
309	SLU 77	-1.24	-1.23	64.04	18.0621	0.0456	0.3872
309	SLU 78	-1.23	-1.19	64.04	18.0597	0.0455	0.385
309	SLU 79	-1.22	-1.23	63.75	17.9798	0.0453	0.3837
309	SLU 80	-1.22	-1.2	63.76	17.9774	0.0452	0.3815
309	SLU 81	-1.23	-1.23	64.89	18.3025	0.0459	0.3868
309	SLU 82	-1.23	-1.19	64.89	18.3001	0.0458	0.3846
309	SLU 83	-1.25	-1.25	65.49	18.4703	0.0464	0.3903
309	SLU 84	-1.24	-1.21	65.49	18.4679	0.0463	0.3882
309	SLE RA 1	-0.84	-0.88	42.85	12.0867	0.0306	0.2635
309	SLE RA 2	-0.83	-0.83	42.86	12.0841	0.0305	0.2611
309	SLE RA 3	-0.86	-0.88	43.44	12.2534	0.0311	0.2682
309	SLE RA 4	-0.85	-0.86	43.45	12.2518	0.031	0.2668
309	SLE RA 5	-0.84	-0.84	43.26	12.1959	0.0308	0.2635
309	SLE RA 6	-0.86	-0.89	43.84	12.3653	0.0314	0.2706
309	SLE RA 7	-0.86	-0.87	43.85	12.3637	0.0313	0.2692
309	SLE RA 8	-0.86	-0.9	43.65	12.3104	0.0312	0.2683
309	SLE RA 9	-0.85	-0.87	43.66	12.3088	0.0311	0.2668
309	SLE RA 10	-0.88	-0.87	46.49	13.1081	0.0328	0.277
309	SLE RA 11	-0.91	-0.92	47.07	13.2775	0.0334	0.2842
309	SLE RA 12	-0.9	-0.89	47.08	13.2758	0.0333	0.2827
309	SLE RA 13	-0.89	-0.88	46.89	13.2199	0.0331	0.2794
309	SLE RA 14	-0.91	-0.93	47.48	13.3893	0.0337	0.2866
309	SLE RA 15	-0.91	-0.9	47.48	13.3877	0.0336	0.2851
309	SLE RA 16	-0.91	-0.93	47.28	13.3345	0.0335	0.2842
309	SLE RA 17	-0.9	-0.91	47.29	13.3329	0.0334	0.2828
309	SLE RA 18	-0.91	-0.93	48.04	13.5496	0.0339	0.2863
309	SLE RA 19	-0.91	-0.91	48.04	13.548	0.0338	0.2848
309	SLE RA 20	-0.92	-0.94	48.44	13.6615	0.0342	0.2887
309	SLE RA 21	-0.92	-0.91	48.44	13.6599	0.0341	0.2872
309	SLE FR 1	-0.84	-0.88	42.85	12.0867	0.0306	0.2635
309	SLE FR 2	-0.84	-0.87	42.85	12.0862	0.0306	0.263
309	SLE FR 3	-0.84	-0.88	43.01	12.1315	0.0307	0.2645
309	SLE FR 4	-0.86	-0.89	44.41	12.5251	0.0316	0.2699
309	SLE FR 5	-0.87	-0.9	44.57	12.5703	0.0317	0.2713
309	SLE FR 6	-0.88	-0.9	45.45	12.8182	0.0322	0.2749
309	SLE QP 1	-0.84	-0.88	42.85	12.0867	0.0306	0.2635
309	SLE QP 2	-0.86	-0.89	44.41	12.5256	0.0316	0.2703
309	SLD 1	3.15	-0.6	46.08	12.8889	0.0443	-0.9501
309	SLD 2	3.6	-0.83	45.9	12.8406	0.0438	-1.0863
309	SLD 3	3.25	-1.85	45.59	12.8361	0.0437	-0.98
309	SLD 4	3.7	-2.08	45.41	12.7878	0.0431	-1.1162
309	SLD 5	0.12	1.12	45.68	12.7232	0.0364	-0.0263
309	SLD 6	0.41	0.97	45.56	12.6916	0.0361	-0.1156
309	SLD 7	0.44	-3.03	44.06	12.5473	0.0344	-0.1258
309	SLD 8	0.73	-3.18	43.93	12.5156	0.034	-0.2151
309	SLD 9	-2.46	1.39	44.88	12.5356	0.0292	0.7558
309	SLD 10	-2.16	1.24	44.76	12.5039	0.0288	0.6665
309	SLD 11	-2.14	-2.76	43.25	12.3596	0.0271	0.6563
309	SLD 12	-1.84	-2.91	43.13	12.328	0.0267	0.567
309	SLD 13	-5.42	0.29	43.41	12.2634	0.02	1.6569
309	SLD 14	-4.97	0.06	43.22	12.2151	0.0195	1.5207
309	SLD 15	-5.33	-0.95	42.92	12.2106	0.0194	1.627
309	SLD 16	-4.88	-1.18	42.73	12.1623	0.0189	1.4908
309	SLV 1	8.53	-0.26	48.31	13.3732	0.0613	-2.585
309	SLV 2	9.58	-0.79	47.87	13.2607	0.0601	-2.9022
309	SLV 3	8.75	-3.09	47.2	13.253	0.0599	-2.6538
309	SLV 4	9.8	-3.62	46.77	13.1405	0.0586	-2.971
309	SLV 5	1.44	3.69	47.33	12.9816	0.0429	-0.4273
309	SLV 6	2.11	3.34	47.05	12.9091	0.0421	-0.6317
309	SLV 7	2.18	-5.75	43.64	12.5808	0.0381	-0.6567
309	SLV 8	2.85	-6.1	43.36	12.5084	0.0373	-0.8611
309	SLV 9	-4.58	4.31	45.45	12.5428	0.0259	1.4018
309	SLV 10	-3.9	3.97	45.17	12.4703	0.025	1.1974
309	SLV 11	-3.84	-5.13	41.77	12.1421	0.0211	1.1724
309	SLV 12	-3.16	-5.47	41.49	12.0696	0.0203	0.968
309	SLV 13	-11.52	1.84	42.05	11.9107	0.0045	3.5117
309	SLV 14	-10.47	1.3	41.62	11.7982	0.0033	3.1945
309	SLV 15	-11.3	-0.99	40.94	11.7905	0.0031	3.4429
309	SLV 16	-10.25	-1.53	40.51	11.678	0.0018	3.1257
309	CRTFP Ux+	0	0	0	0	0	0
309	CRTFP Ux-	0	0	0	0	0	0
309	CRTFP Uy+	0	0	0	0	0	0
309	CRTFP Uy-	0	0	0	0	0	0
310	SLU 1	-0.8	-0.76	40.54	11.4249	0.0157	0.2501
310	SLU 2	-0.78	-0.69	40.55	11.4233	0.0155	0.2466
310	SLU 3	-0.82	-0.76	41.4	11.6684	0.0161	0.2571
310	SLU 4	-0.81	-0.72	41.41	11.6674	0.0159	0.2549

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLU 5	-0.8	-0.7	41.14	11.5872	0.0157	0.2501
310	SLU 6	-0.83	-0.77	41.99	11.8323	0.0163	0.2606
310	SLU 7	-0.82	-0.73	42	11.8313	0.0161	0.2584
310	SLU 8	-0.82	-0.78	41.71	11.7527	0.0161	0.2571
310	SLU 9	-0.81	-0.74	41.72	11.7518	0.016	0.255
310	SLU 10	-0.86	-0.74	45.9	12.9311	0.0168	0.2701
310	SLU 11	-0.89	-0.8	46.75	13.1762	0.0174	0.2806
310	SLU 12	-0.89	-0.77	46.76	13.1752	0.0172	0.2785
310	SLU 13	-0.87	-0.75	46.49	13.095	0.017	0.2736
310	SLU 14	-0.9	-0.82	47.34	13.3401	0.0176	0.2841
310	SLU 15	-0.9	-0.78	47.35	13.3391	0.0175	0.282
310	SLU 16	-0.89	-0.82	47.06	13.2606	0.0174	0.2807
310	SLU 17	-0.89	-0.79	47.07	13.2596	0.0173	0.2786
310	SLU 18	-0.9	-0.82	48.18	13.5789	0.0176	0.2838
310	SLU 19	-0.9	-0.78	48.18	13.578	0.0174	0.2816
310	SLU 20	-0.91	-0.83	48.76	13.7428	0.0178	0.2873
310	SLU 21	-0.91	-0.79	48.77	13.7419	0.0176	0.2851
310	SLU 22	-0.91	-0.77	45.3	12.7691	0.0181	0.2848
310	SLU 23	-0.9	-0.71	45.31	12.7675	0.0179	0.2812
310	SLU 24	-0.93	-0.78	46.16	13.0126	0.0185	0.2917
310	SLU 25	-0.92	-0.74	46.17	13.0116	0.0184	0.2896
310	SLU 26	-0.91	-0.72	45.9	12.9315	0.0181	0.2847
310	SLU 27	-0.94	-0.79	46.75	13.1765	0.0187	0.2952
310	SLU 28	-0.93	-0.75	46.76	13.1756	0.0186	0.2931
310	SLU 29	-0.93	-0.8	46.47	13.097	0.0185	0.2918
310	SLU 30	-0.92	-0.76	46.48	13.096	0.0184	0.2896
310	SLU 31	-0.97	-0.75	50.66	14.2754	0.0192	0.3048
310	SLU 32	-1	-0.82	51.51	14.5204	0.0198	0.3153
310	SLU 33	-1	-0.78	51.52	14.5194	0.0197	0.3131
310	SLU 34	-0.98	-0.77	51.24	14.4393	0.0194	0.3083
310	SLU 35	-1.01	-0.83	52.1	14.6843	0.02	0.3188
310	SLU 36	-1.01	-0.8	52.1	14.6834	0.0199	0.3166
310	SLU 37	-1	-0.84	51.82	14.6048	0.0198	0.3153
310	SLU 38	-1	-0.8	51.83	14.6038	0.0197	0.3132
310	SLU 39	-1.01	-0.84	52.93	14.9232	0.02	0.3184
310	SLU 40	-1.01	-0.8	52.94	14.9222	0.0199	0.3163
310	SLU 41	-1.02	-0.85	53.52	15.0871	0.0202	0.3219
310	SLU 42	-1.02	-0.81	53.53	15.0861	0.0201	0.3198
310	SLU 43	-1	-0.98	51.07	14.3915	0.0196	0.3133
310	SLU 44	-0.99	-0.91	51.08	14.3899	0.0194	0.3097
310	SLU 45	-1.02	-0.98	51.93	14.635	0.0199	0.3202
310	SLU 46	-1.01	-0.94	51.94	14.634	0.0198	0.3181
310	SLU 47	-1	-0.92	51.67	14.5538	0.0196	0.3132
310	SLU 48	-1.03	-0.99	52.52	14.7989	0.0201	0.3237
310	SLU 49	-1.02	-0.95	52.53	14.7979	0.02	0.3216
310	SLU 50	-1.02	-1	52.24	14.7193	0.02	0.3203
310	SLU 51	-1.01	-0.96	52.25	14.7184	0.0198	0.3182
310	SLU 52	-1.06	-0.96	56.43	15.8977	0.0207	0.3333
310	SLU 53	-1.09	-1.03	57.28	16.1428	0.0212	0.3438
310	SLU 54	-1.09	-0.99	57.29	16.1418	0.0211	0.3417
310	SLU 55	-1.07	-0.97	57.02	16.0616	0.0209	0.3368
310	SLU 56	-1.1	-1.04	57.87	16.3067	0.0215	0.3473
310	SLU 57	-1.1	-1	57.88	16.3057	0.0213	0.3452
310	SLU 58	-1.09	-1.05	57.59	16.2271	0.0213	0.3438
310	SLU 59	-1.09	-1.01	57.6	16.2262	0.0212	0.3417
310	SLU 60	-1.1	-1.04	58.71	16.5455	0.0214	0.3469
310	SLU 61	-1.1	-1	58.71	16.5446	0.0213	0.3448
310	SLU 62	-1.11	-1.05	59.29	16.7094	0.0216	0.3504
310	SLU 63	-1.11	-1.01	59.3	16.7085	0.0215	0.3483
310	SLU 64	-1.11	-0.99	55.83	15.7357	0.022	0.3479
310	SLU 65	-1.1	-0.93	55.84	15.7341	0.0218	0.3444
310	SLU 66	-1.13	-1	56.69	15.9792	0.0224	0.3549
310	SLU 67	-1.12	-0.96	56.7	15.9782	0.0222	0.3527
310	SLU 68	-1.11	-0.94	56.43	15.8981	0.022	0.3479
310	SLU 69	-1.14	-1.01	57.28	16.1431	0.0226	0.3584
310	SLU 70	-1.13	-0.97	57.29	16.1421	0.0225	0.3562
310	SLU 71	-1.13	-1.02	57	16.0636	0.0224	0.3549
310	SLU 72	-1.12	-0.98	57.01	16.0626	0.0223	0.3528
310	SLU 73	-1.17	-0.97	61.19	17.2419	0.0231	0.3679
310	SLU 74	-1.2	-1.04	62.04	17.487	0.0237	0.3784
310	SLU 75	-1.2	-1	62.05	17.486	0.0236	0.3763
310	SLU 76	-1.18	-0.99	61.77	17.4059	0.0233	0.3714
310	SLU 77	-1.22	-1.06	62.63	17.6509	0.0239	0.3819
310	SLU 78	-1.21	-1.02	62.63	17.65	0.0238	0.3798
310	SLU 79	-1.2	-1.06	62.35	17.5714	0.0237	0.3785
310	SLU 80	-1.2	-1.02	62.36	17.5704	0.0236	0.3764
310	SLU 81	-1.21	-1.06	63.46	17.8897	0.0239	0.3816
310	SLU 82	-1.21	-1.02	63.47	17.8888	0.0237	0.3795
310	SLU 83	-1.22	-1.07	64.05	18.0537	0.0241	0.3851
310	SLU 84	-1.22	-1.03	64.06	18.0527	0.0239	0.3829
310	SLE RA 1	-0.83	-0.76	41.9	11.809	0.0164	0.26
310	SLE RA 2	-0.82	-0.72	41.91	11.8079	0.0162	0.2577
310	SLE RA 3	-0.84	-0.76	42.47	11.9713	0.0166	0.2647
310	SLE RA 4	-0.84	-0.74	42.48	11.9706	0.0166	0.2632
310	SLE RA 5	-0.83	-0.73	42.3	11.9172	0.0164	0.26
310	SLE RA 6	-0.85	-0.77	42.87	12.0806	0.0168	0.267
310	SLE RA 7	-0.85	-0.75	42.87	12.0799	0.0167	0.2656
310	SLE RA 8	-0.84	-0.78	42.68	12.0275	0.0167	0.2647
310	SLE RA 9	-0.84	-0.75	42.69	12.0269	0.0166	0.2633
310	SLE RA 10	-0.87	-0.75	45.47	12.8131	0.0171	0.2734

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLE RA 11	-0.89	-0.79	46.04	12.9765	0.0175	0.2804
310	SLE RA 12	-0.89	-0.77	46.04	12.9759	0.0174	0.2789
310	SLE RA 13	-0.88	-0.76	45.86	12.9224	0.0173	0.2757
310	SLE RA 14	-0.9	-0.8	46.43	13.0858	0.0176	0.2827
310	SLE RA 15	-0.89	-0.78	46.44	13.0851	0.0176	0.2813
310	SLE RA 16	-0.89	-0.81	46.25	13.0327	0.0175	0.2804
310	SLE RA 17	-0.89	-0.78	46.25	13.0321	0.0174	0.279
310	SLE RA 18	-0.9	-0.8	46.99	13.245	0.0176	0.2825
310	SLE RA 19	-0.89	-0.78	47	13.2443	0.0176	0.281
310	SLE RA 20	-0.91	-0.81	47.38	13.3543	0.0178	0.2848
310	SLE RA 21	-0.9	-0.79	47.39	13.3536	0.0177	0.2834
310	SLE FR 1	-0.83	-0.76	41.9	11.809	0.0164	0.26
310	SLE FR 2	-0.83	-0.75	41.9	11.8088	0.0164	0.2595
310	SLE FR 3	-0.83	-0.76	42.05	11.8527	0.0164	0.261
310	SLE FR 4	-0.85	-0.77	43.43	12.2396	0.0167	0.2663
310	SLE FR 5	-0.85	-0.78	43.58	12.2835	0.0168	0.2677
310	SLE FR 6	-0.86	-0.78	44.44	12.527	0.017	0.2712
310	SLE QP 1	-0.83	-0.76	41.9	11.809	0.0164	0.26
310	SLE QP 2	-0.85	-0.77	43.43	12.2398	0.0168	0.2668
310	SLD 1	3.15	-0.43	44.66	12.4797	0.0277	-0.9501
310	SLD 2	3.6	-0.63	44.49	12.4372	0.0272	-1.0857
310	SLD 3	3.24	-1.68	44.18	12.4264	0.0284	-0.9801
310	SLD 4	3.69	-1.89	44.01	12.3839	0.0279	-1.1157
310	SLD 5	0.12	1.27	44.56	12.4001	0.0191	-0.0287
310	SLD 6	0.42	1.13	44.45	12.3723	0.0188	-0.1176
310	SLD 7	0.45	-2.91	42.94	12.2225	0.0213	-0.1287
310	SLD 8	0.74	-3.04	42.83	12.1947	0.021	-0.2176
310	SLD 9	-2.44	1.5	44.02	12.2849	0.0125	0.7511
310	SLD 10	-2.14	1.36	43.91	12.2571	0.0122	0.6622
310	SLD 11	-2.12	-2.68	42.4	12.1073	0.0147	0.6511
310	SLD 12	-1.82	-2.82	42.29	12.0794	0.0144	0.5622
310	SLD 13	-5.39	0.34	42.84	12.0956	0.0056	1.6492
310	SLD 14	-4.94	0.13	42.68	12.0532	0.0052	1.5136
310	SLD 15	-5.29	-0.92	42.36	12.0423	0.0063	1.6192
310	SLD 16	-4.85	-1.12	42.19	11.9999	0.0058	1.4836
310	SLV 1	8.5	0	46.3	12.7989	0.0423	-2.5802
310	SLV 2	9.55	-0.48	45.91	12.7	0.0413	-2.896
310	SLV 3	8.72	-2.85	45.2	12.6775	0.0439	-2.6494
310	SLV 4	9.77	-3.33	44.81	12.5786	0.0428	-2.9652
310	SLV 5	1.44	3.87	46.03	12.6087	0.0223	-0.428
310	SLV 6	2.11	3.56	45.77	12.5449	0.0216	-0.6316
310	SLV 7	2.18	-5.64	42.35	12.204	0.0274	-0.6586
310	SLV 8	2.85	-5.95	42.1	12.1403	0.0267	-0.8622
310	SLV 9	-4.55	4.41	44.75	12.3393	0.0068	1.3957
310	SLV 10	-3.88	4.1	44.5	12.2756	0.0061	1.1921
310	SLV 11	-3.81	-5.11	41.08	11.9346	0.0119	1.1651
310	SLV 12	-3.14	-5.42	40.83	11.8709	0.0112	0.9615
310	SLV 13	-11.47	1.79	42.04	11.9009	-0.0093	3.4987
310	SLV 14	-10.42	1.31	41.66	11.8021	-0.0104	3.1829
310	SLV 15	-11.24	-1.07	40.94	11.7795	-0.0077	3.4295
310	SLV 16	-10.2	-1.55	40.55	11.6807	-0.0088	3.1137
310	CRTFP Ux+	0	0	0	0	0	0
310	CRTFP Ux-	0	0	0	0	0	0
310	CRTFP Uy+	0	0	0	0	0	0
310	CRTFP Uy-	0	0	0	0	0	0
311	SLU 1	-0.78	-0.65	40.26	11.3434	-0.0026	0.2457
311	SLU 2	-0.77	-0.58	40.28	11.3445	-0.0029	0.2423
311	SLU 3	-0.8	-0.65	41.12	11.5849	-0.0027	0.2526
311	SLU 4	-0.8	-0.61	41.13	11.5856	-0.0029	0.2505
311	SLU 5	-0.78	-0.59	40.86	11.5077	-0.003	0.2457
311	SLU 6	-0.81	-0.66	41.7	11.7481	-0.0028	0.256
311	SLU 7	-0.81	-0.62	41.71	11.7488	-0.003	0.2539
311	SLU 8	-0.8	-0.67	41.43	11.6697	-0.0028	0.2526
311	SLU 9	-0.8	-0.63	41.44	11.6704	-0.003	0.2505
311	SLU 10	-0.84	-0.61	45.62	12.8528	-0.0044	0.2653
311	SLU 11	-0.88	-0.68	46.46	13.0931	-0.0042	0.2756
311	SLU 12	-0.87	-0.64	46.47	13.0938	-0.0044	0.2735
311	SLU 13	-0.85	-0.62	46.21	13.0159	-0.0045	0.2687
311	SLU 14	-0.89	-0.69	47.05	13.2563	-0.0043	0.279
311	SLU 15	-0.88	-0.65	47.06	13.257	-0.0045	0.2769
311	SLU 16	-0.88	-0.7	46.77	13.178	-0.0044	0.2756
311	SLU 17	-0.87	-0.66	46.78	13.1787	-0.0045	0.2735
311	SLU 18	-0.89	-0.69	47.89	13.498	-0.0048	0.2787
311	SLU 19	-0.88	-0.65	47.91	13.4987	-0.0049	0.2766
311	SLU 20	-0.9	-0.7	48.48	13.6612	-0.0049	0.2821
311	SLU 21	-0.89	-0.66	48.49	13.6619	-0.005	0.28
311	SLU 22	-0.89	-0.65	44.97	12.6726	-0.0027	0.2798
311	SLU 23	-0.88	-0.58	44.99	12.6737	-0.0029	0.2763
311	SLU 24	-0.91	-0.65	45.83	12.9141	-0.0027	0.2866
311	SLU 25	-0.91	-0.61	45.84	12.9148	-0.0029	0.2845
311	SLU 26	-0.89	-0.6	45.57	12.8369	-0.003	0.2797
311	SLU 27	-0.92	-0.66	46.41	13.0773	-0.0028	0.29
311	SLU 28	-0.92	-0.62	46.42	13.078	-0.003	0.2879
311	SLU 29	-0.91	-0.67	46.14	12.9989	-0.0029	0.2866
311	SLU 30	-0.91	-0.63	46.15	12.9996	-0.003	0.2845
311	SLU 31	-0.95	-0.62	50.33	14.1819	-0.0044	0.2994
311	SLU 32	-0.98	-0.68	51.17	14.4223	-0.0043	0.3096
311	SLU 33	-0.98	-0.64	51.18	14.423	-0.0044	0.3076
311	SLU 34	-0.96	-0.63	50.92	14.3451	-0.0045	0.3028
311	SLU 35	-1	-0.69	51.75	14.5855	-0.0044	0.3131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLU 36	-0.99	-0.65	51.77	14.5862	-0.0045	0.311
311	SLU 37	-0.98	-0.7	51.48	14.5072	-0.0044	0.3097
311	SLU 38	-0.98	-0.66	51.49	14.5078	-0.0045	0.3076
311	SLU 39	-0.99	-0.69	52.6	14.8272	-0.0048	0.3127
311	SLU 40	-0.99	-0.66	52.61	14.8279	-0.005	0.3106
311	SLU 41	-1.01	-0.7	53.19	14.9904	-0.0049	0.3161
311	SLU 42	-1	-0.67	53.2	14.991	-0.0051	0.3141
311	SLU 43	-0.98	-0.84	50.72	14.2907	-0.0034	0.3078
311	SLU 44	-0.97	-0.77	50.74	14.2918	-0.0037	0.3043
311	SLU 45	-1	-0.84	51.58	14.5322	-0.0035	0.3146
311	SLU 46	-0.99	-0.8	51.59	14.5329	-0.0036	0.3125
311	SLU 47	-0.98	-0.79	51.33	14.455	-0.0038	0.3077
311	SLU 48	-1.01	-0.85	52.16	14.6954	-0.0036	0.318
311	SLU 49	-1	-0.81	52.18	14.6961	-0.0037	0.3159
311	SLU 50	-1	-0.86	51.89	14.617	-0.0036	0.3146
311	SLU 51	-0.99	-0.82	51.9	14.6177	-0.0038	0.3125
311	SLU 52	-1.04	-0.81	56.09	15.8001	-0.0052	0.3274
311	SLU 53	-1.07	-0.87	56.92	16.0404	-0.005	0.3377
311	SLU 54	-1.07	-0.83	56.94	16.0411	-0.0051	0.3356
311	SLU 55	-1.05	-0.82	56.67	15.9632	-0.0053	0.3308
311	SLU 56	-1.08	-0.88	57.51	16.2036	-0.0051	0.3411
311	SLU 57	-1.08	-0.84	57.52	16.2043	-0.0053	0.339
311	SLU 58	-1.07	-0.89	57.23	16.1253	-0.0051	0.3377
311	SLU 59	-1.07	-0.85	57.25	16.126	-0.0053	0.3356
311	SLU 60	-1.08	-0.88	58.35	16.4453	-0.0056	0.3407
311	SLU 61	-1.08	-0.85	58.37	16.446	-0.0057	0.3387
311	SLU 62	-1.09	-0.89	58.94	16.6085	-0.0057	0.3442
311	SLU 63	-1.09	-0.86	58.95	16.6092	-0.0058	0.3421
311	SLU 64	-1.09	-0.84	55.43	15.6199	-0.0034	0.3418
311	SLU 65	-1.08	-0.78	55.45	15.621	-0.0037	0.3384
311	SLU 66	-1.11	-0.84	56.29	15.8614	-0.0035	0.3486
311	SLU 67	-1.1	-0.8	56.3	15.8621	-0.0037	0.3466
311	SLU 68	-1.09	-0.79	56.04	15.7842	-0.0038	0.3418
311	SLU 69	-1.12	-0.85	56.87	16.0246	-0.0036	0.3521
311	SLU 70	-1.11	-0.81	56.89	16.0253	-0.0038	0.35
311	SLU 71	-1.11	-0.86	56.6	15.9462	-0.0036	0.3487
311	SLU 72	-1.1	-0.82	56.61	15.9469	-0.0038	0.3466
311	SLU 73	-1.15	-0.81	60.8	17.1292	-0.0052	0.3614
311	SLU 74	-1.18	-0.87	61.63	17.3696	-0.005	0.3717
311	SLU 75	-1.18	-0.84	61.65	17.3703	-0.0052	0.3696
311	SLU 76	-1.16	-0.82	61.38	17.2924	-0.0053	0.3648
311	SLU 77	-1.19	-0.88	62.22	17.5328	-0.0051	0.3751
311	SLU 78	-1.19	-0.85	62.23	17.5335	-0.0053	0.373
311	SLU 79	-1.18	-0.89	61.94	17.4545	-0.0052	0.3717
311	SLU 80	-1.18	-0.86	61.96	17.4551	-0.0053	0.3696
311	SLU 81	-1.19	-0.89	63.06	17.7745	-0.0056	0.3748
311	SLU 82	-1.19	-0.85	63.08	17.7752	-0.0057	0.3727
311	SLU 83	-1.2	-0.9	63.65	17.9377	-0.0057	0.3782
311	SLU 84	-1.2	-0.86	63.66	17.9383	-0.0058	0.3761
311	SLE RA 1	-0.81	-0.65	41.6	11.7231	-0.0026	0.2555
311	SLE RA 2	-0.81	-0.6	41.62	11.7239	-0.0028	0.2532
311	SLE RA 3	-0.83	-0.65	42.18	11.8842	-0.0027	0.26
311	SLE RA 4	-0.82	-0.62	42.18	11.8846	-0.0028	0.2586
311	SLE RA 5	-0.81	-0.61	42.01	11.8327	-0.0029	0.2554
311	SLE RA 6	-0.83	-0.65	42.57	11.993	-0.0028	0.2623
311	SLE RA 7	-0.83	-0.63	42.57	11.9934	-0.0029	0.2609
311	SLE RA 8	-0.83	-0.66	42.38	11.9407	-0.0028	0.26
311	SLE RA 9	-0.82	-0.63	42.39	11.9412	-0.0029	0.2586
311	SLE RA 10	-0.85	-0.63	45.18	12.7294	-0.0038	0.2685
311	SLE RA 11	-0.88	-0.67	45.74	12.8897	-0.0037	0.2754
311	SLE RA 12	-0.87	-0.64	45.75	12.8901	-0.0038	0.274
311	SLE RA 13	-0.86	-0.63	45.57	12.8382	-0.0039	0.2708
311	SLE RA 14	-0.88	-0.67	46.13	12.9984	-0.0038	0.2777
311	SLE RA 15	-0.88	-0.65	46.14	12.9989	-0.0039	0.2763
311	SLE RA 16	-0.88	-0.68	45.95	12.9462	-0.0038	0.2754
311	SLE RA 17	-0.87	-0.66	45.95	12.9467	-0.0039	0.274
311	SLE RA 18	-0.88	-0.68	46.69	13.1596	-0.0041	0.2774
311	SLE RA 19	-0.88	-0.65	46.7	13.16	-0.0042	0.276
311	SLE RA 20	-0.89	-0.68	47.08	13.2683	-0.0041	0.2797
311	SLE RA 21	-0.89	-0.66	47.09	13.2688	-0.0042	0.2783
311	SLE FR 1	-0.81	-0.65	41.6	11.7231	-0.0026	0.2555
311	SLE FR 2	-0.81	-0.64	41.61	11.7233	-0.0027	0.255
311	SLE FR 3	-0.82	-0.65	41.76	11.7667	-0.0027	0.2564
311	SLE FR 4	-0.83	-0.65	43.13	12.1542	-0.0031	0.2616
311	SLE FR 5	-0.84	-0.66	43.29	12.1976	-0.0031	0.263
311	SLE FR 6	-0.85	-0.66	44.15	12.4414	-0.0034	0.2664
311	SLE QP 1	-0.81	-0.65	41.6	11.7231	-0.0026	0.2555
311	SLE QP 2	-0.83	-0.66	43.13	12.1541	-0.0031	0.2621
311	SLD 1	3.15	-0.24	43.98	12.2904	0.0068	-0.9515
311	SLD 2	3.6	-0.42	43.83	12.2526	0.0064	-1.0866
311	SLD 3	3.25	-1.51	43.47	12.2298	0.0078	-0.9817
311	SLD 4	3.69	-1.69	43.32	12.1921	0.0074	-1.1168
311	SLD 5	0.14	1.42	44.18	12.2935	-0.0016	-0.0322
311	SLD 6	0.43	1.3	44.08	12.2688	-0.0019	-0.1208
311	SLD 7	0.46	-2.8	42.49	12.0916	0.0018	-0.1328
311	SLD 8	0.75	-2.92	42.39	12.0669	0.0016	-0.2214
311	SLD 9	-2.42	1.61	43.87	12.2412	-0.0077	0.7455
311	SLD 10	-2.12	1.49	43.77	12.2165	-0.008	0.6569
311	SLD 11	-2.1	-2.61	42.18	12.0394	-0.0043	0.6449
311	SLD 12	-1.8	-2.73	42.08	12.0146	-0.0045	0.5564

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLD 13	-5.36	0.38	42.94	12.1161	-0.0136	1.6409
311	SLD 14	-4.91	0.2	42.78	12.0783	-0.014	1.5058
311	SLD 15	-5.26	-0.89	42.43	12.0555	-0.0125	1.6107
311	SLD 16	-4.82	-1.07	42.28	12.0178	-0.0129	1.4756
311	SLV 1	8.49	0.27	45.1	12.4708	0.02	-2.5772
311	SLV 2	9.53	-0.15	44.75	12.3829	0.0191	-2.8918
311	SLV 3	8.71	-2.61	43.95	12.3329	0.0224	-2.6467
311	SLV 4	9.75	-3.03	43.6	12.245	0.0215	-2.9614
311	SLV 5	1.44	4.06	45.52	12.4734	0.0004	-0.43
311	SLV 6	2.12	3.79	45.29	12.4168	-0.0002	-0.6328
311	SLV 7	2.19	-5.54	41.7	12.0137	0.0083	-0.6619
311	SLV 8	2.86	-5.81	41.47	11.957	0.0078	-0.8646
311	SLV 9	-4.53	4.5	44.79	12.3511	-0.0139	1.3888
311	SLV 10	-3.86	4.23	44.56	12.2945	-0.0145	1.186
311	SLV 11	-3.78	-5.1	40.97	11.8914	-0.0059	1.1569
311	SLV 12	-3.11	-5.38	40.74	11.8347	-0.0065	0.9542
311	SLV 13	-11.42	1.72	42.66	12.0631	-0.0276	3.4855
311	SLV 14	-10.38	1.3	42.31	11.9752	-0.0285	3.1708
311	SLV 15	-11.19	-1.16	41.51	11.9252	-0.0252	3.4159
311	SLV 16	-10.15	-1.58	41.16	11.8373	-0.0261	3.1013
311	CRTFP Ux+	0	0	0	0	0	0
311	CRTFP Ux-	0	0	0	0	0	0
311	CRTFP Uy+	0	0	0	0	0	0
311	CRTFP Uy-	0	0	0	0	0	0
312	SLU 1	-0.77	-0.54	40.68	11.49	-0.0224	0.2406
312	SLU 2	-0.75	-0.48	40.71	11.4942	-0.0227	0.2372
312	SLU 3	-0.79	-0.54	41.55	11.7352	-0.023	0.2472
312	SLU 4	-0.78	-0.5	41.57	11.7377	-0.0232	0.2452
312	SLU 5	-0.77	-0.49	41.31	11.6604	-0.0231	0.2405
312	SLU 6	-0.8	-0.55	42.15	11.9015	-0.0234	0.2505
312	SLU 7	-0.79	-0.51	42.16	11.904	-0.0236	0.2485
312	SLU 8	-0.79	-0.56	41.87	11.8225	-0.0233	0.2472
312	SLU 9	-0.78	-0.52	41.89	11.825	-0.0235	0.2452
312	SLU 10	-0.83	-0.5	46.16	13.0374	-0.0272	0.2596
312	SLU 11	-0.86	-0.56	47	13.2785	-0.0275	0.2697
312	SLU 12	-0.85	-0.52	47.02	13.281	-0.0277	0.2676
312	SLU 13	-0.84	-0.51	46.76	13.2037	-0.0277	0.2629
312	SLU 14	-0.87	-0.57	47.6	13.4447	-0.028	0.273
312	SLU 15	-0.86	-0.53	47.61	13.4472	-0.0281	0.2709
312	SLU 16	-0.86	-0.58	47.32	13.3658	-0.0278	0.2696
312	SLU 17	-0.85	-0.54	47.34	13.3683	-0.028	0.2676
312	SLU 18	-0.87	-0.57	48.47	13.6946	-0.0289	0.2726
312	SLU 19	-0.86	-0.53	48.49	13.6971	-0.0291	0.2706
312	SLU 20	-0.88	-0.58	49.06	13.8609	-0.0293	0.2759
312	SLU 21	-0.87	-0.54	49.08	13.8634	-0.0295	0.2739
312	SLU 22	-0.87	-0.53	45.44	12.8346	-0.0251	0.2739
312	SLU 23	-0.86	-0.47	45.47	12.8388	-0.0254	0.2705
312	SLU 24	-0.89	-0.53	46.31	13.0798	-0.0257	0.2806
312	SLU 25	-0.89	-0.49	46.33	13.0824	-0.0258	0.2786
312	SLU 26	-0.87	-0.47	46.06	13.0051	-0.0258	0.2739
312	SLU 27	-0.9	-0.53	46.9	13.2461	-0.0261	0.2839
312	SLU 28	-0.9	-0.5	46.92	13.2486	-0.0263	0.2819
312	SLU 29	-0.89	-0.55	46.62	13.1671	-0.026	0.2805
312	SLU 30	-0.89	-0.51	46.64	13.1696	-0.0261	0.2785
312	SLU 31	-0.93	-0.49	50.92	14.382	-0.0299	0.293
312	SLU 32	-0.96	-0.55	51.76	14.6231	-0.0302	0.303
312	SLU 33	-0.96	-0.51	51.78	14.6256	-0.0304	0.301
312	SLU 34	-0.94	-0.5	51.51	14.5483	-0.0303	0.2963
312	SLU 35	-0.97	-0.56	52.35	14.7894	-0.0306	0.3063
312	SLU 36	-0.97	-0.52	52.37	14.7919	-0.0308	0.3043
312	SLU 37	-0.96	-0.57	52.07	14.7104	-0.0305	0.303
312	SLU 38	-0.96	-0.53	52.09	14.7129	-0.0307	0.301
312	SLU 39	-0.97	-0.56	53.22	15.0393	-0.0316	0.306
312	SLU 40	-0.97	-0.52	53.24	15.0418	-0.0317	0.304
312	SLU 41	-0.98	-0.57	53.82	15.2055	-0.032	0.3093
312	SLU 42	-0.98	-0.53	53.84	15.208	-0.0322	0.3073
312	SLU 43	-0.96	-0.71	51.26	14.476	-0.0283	0.3013
312	SLU 44	-0.95	-0.64	51.29	14.4802	-0.0285	0.2979
312	SLU 45	-0.98	-0.7	52.13	14.7212	-0.0288	0.308
312	SLU 46	-0.97	-0.67	52.14	14.7237	-0.029	0.3059
312	SLU 47	-0.96	-0.65	51.88	14.6464	-0.0289	0.3012
312	SLU 48	-0.99	-0.71	52.72	14.8875	-0.0293	0.3113
312	SLU 49	-0.98	-0.67	52.74	14.89	-0.0294	0.3092
312	SLU 50	-0.98	-0.72	52.44	14.8085	-0.0291	0.3079
312	SLU 51	-0.97	-0.69	52.46	14.811	-0.0293	0.3059
312	SLU 52	-1.02	-0.66	56.74	16.0234	-0.033	0.3204
312	SLU 53	-1.05	-0.72	57.58	16.2645	-0.0334	0.3304
312	SLU 54	-1.04	-0.69	57.59	16.267	-0.0335	0.3284
312	SLU 55	-1.03	-0.67	57.33	16.1897	-0.0335	0.3237
312	SLU 56	-1.06	-0.73	58.17	16.4307	-0.0338	0.3337
312	SLU 57	-1.05	-0.69	58.19	16.4332	-0.0339	0.3317
312	SLU 58	-1.05	-0.74	57.89	16.3517	-0.0336	0.3304
312	SLU 59	-1.04	-0.71	57.91	16.3543	-0.0338	0.3283
312	SLU 60	-1.06	-0.73	59.04	16.6806	-0.0347	0.3334
312	SLU 61	-1.05	-0.7	59.06	16.6831	-0.0349	0.3313
312	SLU 62	-1.07	-0.74	59.64	16.8469	-0.0352	0.3367
312	SLU 63	-1.06	-0.71	59.65	16.8494	-0.0353	0.3347
312	SLU 64	-1.06	-0.69	56.01	15.8206	-0.0309	0.3347
312	SLU 65	-1.05	-0.63	56.04	15.8248	-0.0312	0.3313
312	SLU 66	-1.09	-0.69	56.88	16.0658	-0.0315	0.3413

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
312	SLU 67	-1.08	-0.65	56.9	16.0683	-0.0317	0.3393
312	SLU 68	-1.06	-0.64	56.64	15.991	-0.0316	0.3346
312	SLU 69	-1.1	-0.7	57.47	16.2321	-0.0319	0.3446
312	SLU 70	-1.09	-0.66	57.49	16.2346	-0.0321	0.3426
312	SLU 71	-1.09	-0.71	57.2	16.1531	-0.0318	0.3413
312	SLU 72	-1.08	-0.67	57.22	16.1556	-0.032	0.3393
312	SLU 73	-1.13	-0.65	61.49	17.368	-0.0357	0.3537
312	SLU 74	-1.16	-0.71	62.33	17.6091	-0.036	0.3638
312	SLU 75	-1.15	-0.67	62.35	17.6116	-0.0362	0.3617
312	SLU 76	-1.14	-0.66	62.09	17.5343	-0.0362	0.357
312	SLU 77	-1.17	-0.72	62.93	17.7753	-0.0365	0.3671
312	SLU 78	-1.16	-0.68	62.94	17.7779	-0.0366	0.365
312	SLU 79	-1.16	-0.73	62.65	17.6964	-0.0363	0.3637
312	SLU 80	-1.15	-0.69	62.67	17.6989	-0.0365	0.3617
312	SLU 81	-1.17	-0.72	63.8	18.0252	-0.0374	0.3667
312	SLU 82	-1.16	-0.69	63.82	18.0278	-0.0376	0.3647
312	SLU 83	-1.18	-0.73	64.39	18.1915	-0.0378	0.37
312	SLU 84	-1.17	-0.69	64.41	18.194	-0.038	0.368
312	SLE RA 1	-0.8	-0.54	42.04	11.8742	-0.0232	0.2501
312	SLE RA 2	-0.79	-0.49	42.06	11.877	-0.0234	0.2479
312	SLE RA 3	-0.81	-0.53	42.62	12.0377	-0.0236	0.2545
312	SLE RA 4	-0.81	-0.51	42.63	12.0393	-0.0237	0.2532
312	SLE RA 5	-0.8	-0.5	42.46	11.9878	-0.0237	0.2501
312	SLE RA 6	-0.82	-0.54	43.02	12.1485	-0.0239	0.2567
312	SLE RA 7	-0.81	-0.52	43.03	12.1502	-0.024	0.2554
312	SLE RA 8	-0.81	-0.55	42.83	12.0958	-0.0238	0.2545
312	SLE RA 9	-0.81	-0.52	42.84	12.0975	-0.0239	0.2532
312	SLE RA 10	-0.84	-0.51	45.69	12.9058	-0.0264	0.2628
312	SLE RA 11	-0.86	-0.55	46.25	13.0665	-0.0266	0.2695
312	SLE RA 12	-0.85	-0.52	46.27	13.0682	-0.0267	0.2681
312	SLE RA 13	-0.84	-0.51	46.09	13.0166	-0.0267	0.265
312	SLE RA 14	-0.86	-0.55	46.65	13.1773	-0.0269	0.2717
312	SLE RA 15	-0.86	-0.53	46.66	13.179	-0.027	0.2704
312	SLE RA 16	-0.86	-0.56	46.47	13.1247	-0.0268	0.2695
312	SLE RA 17	-0.85	-0.54	46.48	13.1264	-0.0269	0.2681
312	SLE RA 18	-0.86	-0.56	47.23	13.3439	-0.0275	0.2715
312	SLE RA 19	-0.86	-0.53	47.24	13.3456	-0.0276	0.2701
312	SLE RA 20	-0.87	-0.56	47.63	13.4548	-0.0278	0.2737
312	SLE RA 21	-0.87	-0.54	47.64	13.4564	-0.0279	0.2723
312	SLE FR 1	-0.8	-0.54	42.04	11.8742	-0.0232	0.2501
312	SLE FR 2	-0.79	-0.53	42.04	11.8747	-0.0232	0.2497
312	SLE FR 3	-0.8	-0.54	42.2	11.9185	-0.0233	0.251
312	SLE FR 4	-0.81	-0.53	43.6	12.3157	-0.0245	0.2561
312	SLE FR 5	-0.82	-0.54	43.76	12.3594	-0.0246	0.2574
312	SLE FR 6	-0.83	-0.55	44.64	12.609	-0.0254	0.2608
312	SLE QP 1	-0.8	-0.54	42.04	11.8742	-0.0232	0.2501
312	SLE QP 2	-0.82	-0.54	43.6	12.3151	-0.0245	0.2565
312	SLD 1	3.15	-0.06	44.12	12.3235	-0.0155	-0.9538
312	SLD 2	3.6	-0.22	43.98	12.2893	-0.0157	-1.0883
312	SLD 3	3.25	-1.34	43.57	12.2488	-0.014	-0.984
312	SLD 4	3.7	-1.5	43.43	12.2146	-0.0143	-1.1186
312	SLD 5	0.15	1.57	44.6	12.4369	-0.0239	-0.0367
312	SLD 6	0.44	1.47	44.51	12.4145	-0.0241	-0.1249
312	SLD 7	0.47	-2.69	42.79	12.1881	-0.0191	-0.1377
312	SLD 8	0.76	-2.8	42.7	12.1656	-0.0193	-0.2259
312	SLD 9	-2.4	1.71	44.5	12.4645	-0.0297	0.7389
312	SLD 10	-2.1	1.61	44.41	12.4421	-0.0299	0.6507
312	SLD 11	-2.07	-2.55	42.68	12.2157	-0.0249	0.638
312	SLD 12	-1.78	-2.65	42.59	12.1933	-0.0251	0.5498
312	SLD 13	-5.33	0.41	43.76	12.4156	-0.0347	1.6316
312	SLD 14	-4.88	0.26	43.62	12.3814	-0.035	1.4971
312	SLD 15	-5.23	-0.87	43.22	12.3409	-0.0333	1.6014
312	SLD 16	-4.79	-1.02	43.08	12.3067	-0.0335	1.4668
312	SLV 1	8.47	0.54	44.8	12.3312	-0.0033	-2.575
312	SLV 2	9.51	0.18	44.47	12.2516	-0.004	-2.8884
312	SLV 3	8.7	-2.37	43.56	12.1613	0	-2.6448
312	SLV 4	9.73	-2.73	43.24	12.0816	-0.0006	-2.9582
312	SLV 5	1.45	4.26	45.89	12.5914	-0.0231	-0.4331
312	SLV 6	2.12	4.03	45.68	12.54	-0.0235	-0.6351
312	SLV 7	2.2	-5.44	41.77	12.0249	-0.012	-0.6658
312	SLV 8	2.87	-5.68	41.56	11.9736	-0.0124	-0.8677
312	SLV 9	-4.5	4.59	45.64	12.6566	-0.0366	1.3808
312	SLV 10	-3.83	4.36	45.43	12.6052	-0.037	1.1788
312	SLV 11	-3.75	-5.11	41.52	12.0901	-0.0255	1.1481
312	SLV 12	-3.09	-5.35	41.31	12.0388	-0.0259	0.9462
312	SLV 13	-11.37	1.65	43.96	12.5486	-0.0484	3.4713
312	SLV 14	-10.33	1.29	43.63	12.4689	-0.049	3.1579
312	SLV 15	-11.14	-1.26	42.72	12.3786	-0.045	3.4015
312	SLV 16	-10.11	-1.62	42.4	12.299	-0.0457	3.0881
312	CRTFP Ux+	0	0	0	0	0	0
312	CRTFP Ux-	0	0	0	0	0	0
312	CRTFP Uy+	0	0	0	0	0	0
312	CRTFP Uy-	0	0	0	0	0	0
313	SLU 1	-0.75	-0.44	41.78	11.8624	-0.0409	0.2346
313	SLU 2	-0.74	-0.38	41.82	11.8699	-0.0412	0.2313
313	SLU 3	-0.77	-0.44	42.68	12.1169	-0.042	0.2411
313	SLU 4	-0.76	-0.4	42.7	12.1214	-0.0421	0.2391
313	SLU 5	-0.75	-0.39	42.43	12.043	-0.042	0.2345
313	SLU 6	-0.78	-0.44	43.29	12.29	-0.0427	0.2443
313	SLU 7	-0.77	-0.41	43.32	12.2945	-0.0429	0.2423

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
313	SLU 8	-0.77	-0.46	43.01	12.2086	-0.0424	0.241
313	SLU 9	-0.76	-0.42	43.03	12.2131	-0.0426	0.239
313	SLU 10	-0.81	-0.39	47.48	13.482	-0.0486	0.253
313	SLU 11	-0.84	-0.45	48.34	13.729	-0.0493	0.2628
313	SLU 12	-0.83	-0.41	48.36	13.7335	-0.0495	0.2608
313	SLU 13	-0.82	-0.4	48.09	13.6551	-0.0493	0.2562
313	SLU 14	-0.85	-0.45	48.95	13.9021	-0.05	0.266
313	SLU 15	-0.84	-0.42	48.98	13.9066	-0.0502	0.264
313	SLU 16	-0.84	-0.47	48.67	13.8207	-0.0498	0.2627
313	SLU 17	-0.83	-0.43	48.69	13.8252	-0.0499	0.2607
313	SLU 18	-0.85	-0.46	49.86	14.1655	-0.0514	0.2656
313	SLU 19	-0.84	-0.42	49.89	14.1699	-0.0516	0.2636
313	SLU 20	-0.86	-0.46	50.48	14.3385	-0.0522	0.2688
313	SLU 21	-0.85	-0.43	50.5	14.343	-0.0523	0.2668
313	SLU 22	-0.85	-0.42	46.67	13.2527	-0.0461	0.2672
313	SLU 23	-0.84	-0.36	46.71	13.2602	-0.0464	0.2639
313	SLU 24	-0.87	-0.41	47.57	13.5072	-0.0471	0.2736
313	SLU 25	-0.87	-0.38	47.59	13.5117	-0.0473	0.2717
313	SLU 26	-0.85	-0.36	47.33	13.4333	-0.0471	0.2671
313	SLU 27	-0.88	-0.42	48.18	13.6803	-0.0479	0.2768
313	SLU 28	-0.88	-0.38	48.21	13.6848	-0.048	0.2749
313	SLU 29	-0.87	-0.43	47.9	13.5989	-0.0476	0.2736
313	SLU 30	-0.87	-0.4	47.92	13.6034	-0.0477	0.2716
313	SLU 31	-0.91	-0.37	52.37	14.8723	-0.0537	0.2856
313	SLU 32	-0.94	-0.42	53.23	15.1193	-0.0545	0.2953
313	SLU 33	-0.93	-0.39	53.25	15.1238	-0.0546	0.2934
313	SLU 34	-0.92	-0.37	52.99	15.0454	-0.0545	0.2888
313	SLU 35	-0.95	-0.43	53.84	15.2924	-0.0552	0.2985
313	SLU 36	-0.94	-0.39	53.87	15.2969	-0.0554	0.2966
313	SLU 37	-0.94	-0.44	53.56	15.211	-0.0549	0.2953
313	SLU 38	-0.93	-0.41	53.58	15.2155	-0.0551	0.2933
313	SLU 39	-0.95	-0.43	54.75	15.5557	-0.0566	0.2982
313	SLU 40	-0.94	-0.4	54.78	15.5602	-0.0568	0.2962
313	SLU 41	-0.96	-0.44	55.37	15.7288	-0.0573	0.3014
313	SLU 42	-0.95	-0.4	55.39	15.7333	-0.0575	0.2994
313	SLU 43	-0.94	-0.58	52.64	14.9445	-0.0515	0.2938
313	SLU 44	-0.93	-0.52	52.68	14.952	-0.0517	0.2905
313	SLU 45	-0.96	-0.58	53.53	15.199	-0.0525	0.3003
313	SLU 46	-0.95	-0.54	53.56	15.2035	-0.0526	0.2983
313	SLU 47	-0.94	-0.53	53.29	15.1251	-0.0525	0.2937
313	SLU 48	-0.97	-0.58	54.15	15.3721	-0.0532	0.3035
313	SLU 49	-0.96	-0.55	54.17	15.3766	-0.0534	0.3015
313	SLU 50	-0.96	-0.6	53.86	15.2907	-0.0529	0.3002
313	SLU 51	-0.95	-0.56	53.89	15.2952	-0.0531	0.2982
313	SLU 52	-0.99	-0.53	58.34	16.5641	-0.0591	0.3122
313	SLU 53	-1.03	-0.59	59.19	16.8111	-0.0598	0.322
313	SLU 54	-1.02	-0.55	59.22	16.8156	-0.06	0.32
313	SLU 55	-1	-0.54	58.95	16.7372	-0.0598	0.3154
313	SLU 56	-1.04	-0.59	59.81	16.9842	-0.0605	0.3252
313	SLU 57	-1.03	-0.56	59.83	16.9887	-0.0607	0.3232
313	SLU 58	-1.03	-0.61	59.52	16.9028	-0.0603	0.3219
313	SLU 59	-1.02	-0.57	59.55	16.9073	-0.0604	0.3199
313	SLU 60	-1.03	-0.6	60.72	17.2475	-0.0619	0.3248
313	SLU 61	-1.03	-0.56	60.74	17.252	-0.0621	0.3229
313	SLU 62	-1.04	-0.6	61.33	17.4206	-0.0627	0.328
313	SLU 63	-1.04	-0.57	61.36	17.4251	-0.0628	0.3261
313	SLU 64	-1.04	-0.56	57.53	16.3348	-0.0566	0.3264
313	SLU 65	-1.03	-0.5	57.57	16.3423	-0.0569	0.3231
313	SLU 66	-1.06	-0.55	58.43	16.5893	-0.0576	0.3329
313	SLU 67	-1.05	-0.52	58.45	16.5938	-0.0578	0.3309
313	SLU 68	-1.04	-0.5	58.18	16.5153	-0.0576	0.3263
313	SLU 69	-1.07	-0.56	59.04	16.7624	-0.0584	0.3361
313	SLU 70	-1.06	-0.52	59.06	16.7668	-0.0585	0.3341
313	SLU 71	-1.06	-0.57	58.76	16.6809	-0.0581	0.3328
313	SLU 72	-1.05	-0.54	58.78	16.6854	-0.0583	0.3308
313	SLU 73	-1.1	-0.51	63.23	17.9544	-0.0642	0.3448
313	SLU 74	-1.13	-0.56	64.08	18.2014	-0.065	0.3546
313	SLU 75	-1.12	-0.53	64.11	18.2059	-0.0651	0.3526
313	SLU 76	-1.11	-0.52	63.84	18.1274	-0.065	0.348
313	SLU 77	-1.14	-0.57	64.7	18.3745	-0.0657	0.3578
313	SLU 78	-1.13	-0.53	64.72	18.3789	-0.0659	0.3558
313	SLU 79	-1.13	-0.58	64.42	18.2931	-0.0654	0.3545
313	SLU 80	-1.12	-0.55	64.44	18.2975	-0.0656	0.3525
313	SLU 81	-1.14	-0.57	65.61	18.6378	-0.0671	0.3574
313	SLU 82	-1.13	-0.54	65.64	18.6423	-0.0673	0.3554
313	SLU 83	-1.15	-0.58	66.23	18.8109	-0.0678	0.3606
313	SLU 84	-1.14	-0.54	66.25	18.8154	-0.068	0.3586
313	SLE RA 1	-0.78	-0.44	43.18	12.2597	-0.0424	0.2439
313	SLE RA 2	-0.77	-0.39	43.2	12.2646	-0.0426	0.2417
313	SLE RA 3	-0.79	-0.43	43.78	12.4293	-0.0431	0.2482
313	SLE RA 4	-0.79	-0.41	43.79	12.4323	-0.0432	0.2469
313	SLE RA 5	-0.78	-0.4	43.61	12.38	-0.0431	0.2438
313	SLE RA 6	-0.8	-0.44	44.18	12.5447	-0.0436	0.2504
313	SLE RA 7	-0.79	-0.41	44.2	12.5477	-0.0437	0.249
313	SLE RA 8	-0.79	-0.44	44	12.4904	-0.0434	0.2482
313	SLE RA 9	-0.79	-0.42	44.01	12.4934	-0.0435	0.2468
313	SLE RA 10	-0.82	-0.4	46.98	13.3394	-0.0475	0.2562
313	SLE RA 11	-0.84	-0.44	47.55	13.5041	-0.048	0.2627
313	SLE RA 12	-0.83	-0.41	47.56	13.5071	-0.0481	0.2614
313	SLE RA 13	-0.82	-0.41	47.39	13.4548	-0.048	0.2583

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
313	SLE RA 14	-0.84	-0.44	47.96	13.6195	-0.0485	0.2648
313	SLE RA 15	-0.84	-0.42	47.97	13.6224	-0.0486	0.2635
313	SLE RA 16	-0.84	-0.45	47.77	13.5652	-0.0483	0.2626
313	SLE RA 17	-0.83	-0.43	47.78	13.5682	-0.0484	0.2613
313	SLE RA 18	-0.84	-0.44	48.57	13.795	-0.0494	0.2646
313	SLE RA 19	-0.84	-0.42	48.58	13.798	-0.0495	0.2633
313	SLE RA 20	-0.85	-0.45	48.98	13.9104	-0.0499	0.2667
313	SLE RA 21	-0.85	-0.43	48.99	13.9134	-0.05	0.2654
313	SLE FR 1	-0.78	-0.44	43.18	12.2597	-0.0424	0.2439
313	SLE FR 2	-0.78	-0.43	43.18	12.2607	-0.0425	0.2435
313	SLE FR 3	-0.78	-0.44	43.34	12.3058	-0.0426	0.2448
313	SLE FR 4	-0.8	-0.43	44.8	12.7213	-0.0446	0.2497
313	SLE FR 5	-0.8	-0.44	44.96	12.7664	-0.0447	0.251
313	SLE FR 6	-0.81	-0.44	45.87	13.0273	-0.0459	0.2542
313	SLE QP 1	-0.78	-0.44	43.18	12.2597	-0.0424	0.2439
313	SLE QP 2	-0.8	-0.44	44.79	12.7203	-0.0445	0.2501
313	SLD 1	3.16	0.11	44.93	12.6534	-0.0358	-0.9567
313	SLD 2	3.6	-0.02	44.8	12.6216	-0.036	-1.0906
313	SLD 3	3.25	-1.18	44.33	12.5588	-0.034	-0.9869
313	SLD 4	3.7	-1.31	44.2	12.5271	-0.0342	-1.1208
313	SLD 5	0.16	1.71	45.77	12.8492	-0.0446	-0.0422
313	SLD 6	0.45	1.62	45.68	12.8284	-0.0447	-0.13
313	SLD 7	0.49	-2.6	43.77	12.5341	-0.0386	-0.1431
313	SLD 8	0.78	-2.68	43.68	12.5133	-0.0388	-0.2309
313	SLD 9	-2.37	1.81	45.9	12.9273	-0.0503	0.7311
313	SLD 10	-2.08	1.72	45.82	12.9065	-0.0504	0.6433
313	SLD 11	-2.05	-2.5	43.91	12.6121	-0.0443	0.6302
313	SLD 12	-1.76	-2.58	43.82	12.5913	-0.0445	0.5424
313	SLD 13	-5.29	0.44	45.39	12.9135	-0.0548	1.6211
313	SLD 14	-4.85	0.31	45.26	12.8817	-0.055	1.4872
313	SLD 15	-5.19	-0.86	44.79	12.8189	-0.053	1.5908
313	SLD 16	-4.75	-0.98	44.66	12.7872	-0.0533	1.4569
313	SLV 1	8.46	0.8	45.09	12.5599	-0.024	-2.5732
313	SLV 2	9.49	0.5	44.78	12.486	-0.0245	-2.8851
313	SLV 3	8.68	-2.14	43.73	12.3448	-0.02	-2.643
313	SLV 4	9.71	-2.44	43.42	12.2709	-0.0205	-2.9549
313	SLV 5	1.46	4.44	46.99	13.0112	-0.0444	-0.4374
313	SLV 6	2.13	4.25	46.8	12.9636	-0.0448	-0.6384
313	SLV 7	2.21	-5.36	42.46	12.294	-0.0309	-0.6699
313	SLV 8	2.87	-5.55	42.27	12.2464	-0.0312	-0.8709
313	SLV 9	-4.46	4.68	47.32	13.1941	-0.0578	1.3711
313	SLV 10	-3.8	4.48	47.12	13.1465	-0.0581	1.1701
313	SLV 11	-3.72	-5.13	42.79	12.477	-0.0443	1.1386
313	SLV 12	-3.06	-5.32	42.59	12.4293	-0.0446	0.9376
313	SLV 13	-11.3	1.57	46.16	13.1697	-0.0686	3.4551
313	SLV 14	-10.27	1.27	45.86	13.0958	-0.0691	3.1432
313	SLV 15	-11.08	-1.37	44.8	12.9545	-0.0645	3.3853
313	SLV 16	-10.05	-1.67	44.5	12.8806	-0.065	3.0735
313	CRTFP Ux+	0	0	0	0	0	0
313	CRTFP Ux-	0	0	0	0	0	0
313	CRTFP Uy+	0	0	0	0	0	0
313	CRTFP Uy-	0	0	0	0	0	0
314	SLU 1	-1.85	-0.91	113.63	36.4534	-8.6148	0.5596
314	SLU 2	-1.83	-0.75	113.77	36.492	-8.6287	0.5615
314	SLU 3	-1.9	-0.89	116.1	37.2426	-8.804	0.5781
314	SLU 4	-1.89	-0.8	116.18	37.2658	-8.8124	0.5792
314	SLU 5	-1.85	-0.77	115.46	37.0317	-8.7591	0.5688
314	SLU 6	-1.93	-0.9	117.78	37.7823	-8.9344	0.5853
314	SLU 7	-1.91	-0.81	117.87	37.8055	-8.9427	0.5865
314	SLU 8	-1.9	-0.94	117.01	37.5328	-8.8754	0.5742
314	SLU 9	-1.89	-0.85	117.09	37.5559	-8.8838	0.5753
314	SLU 10	-2	-0.76	129.38	41.5064	-9.8431	0.6179
314	SLU 11	-2.07	-0.89	131.7	42.257	-10.0184	0.6345
314	SLU 12	-2.06	-0.8	131.78	42.2802	-10.0268	0.6356
314	SLU 13	-2.02	-0.77	131.06	42.0461	-9.9734	0.6252
314	SLU 14	-2.1	-0.91	133.39	42.7967	-10.1487	0.6417
314	SLU 15	-2.08	-0.81	133.47	42.8199	-10.1571	0.6428
314	SLU 16	-2.07	-0.94	132.61	42.5472	-10.0898	0.6305
314	SLU 17	-2.06	-0.85	132.7	42.5703	-10.0982	0.6317
314	SLU 18	-2.1	-0.92	135.93	43.6168	-10.3496	0.6402
314	SLU 19	-2.08	-0.82	136.01	43.64	-10.358	0.6413
314	SLU 20	-2.12	-0.93	137.62	44.1565	-10.4799	0.6474
314	SLU 21	-2.11	-0.84	137.7	44.1797	-10.4883	0.6486
314	SLU 22	-2.11	-0.82	127	40.7429	-9.6375	0.652
314	SLU 23	-2.09	-0.66	127.14	40.7815	-9.6514	0.6539
314	SLU 24	-2.16	-0.8	129.46	41.5321	-9.8267	0.6705
314	SLU 25	-2.15	-0.7	129.54	41.5553	-9.8351	0.6716
314	SLU 26	-2.11	-0.68	128.82	41.3212	-9.7817	0.6612
314	SLU 27	-2.19	-0.81	131.15	42.0718	-9.9571	0.6777
314	SLU 28	-2.17	-0.72	131.23	42.095	-9.9654	0.6788
314	SLU 29	-2.16	-0.85	130.37	41.8223	-9.8981	0.6665
314	SLU 30	-2.15	-0.75	130.46	41.8454	-9.9065	0.6677
314	SLU 31	-2.25	-0.67	142.74	45.7959	-10.8658	0.7103
314	SLU 32	-2.33	-0.8	145.07	46.5465	-11.0411	0.7268
314	SLU 33	-2.32	-0.71	145.15	46.5697	-11.0495	0.728
314	SLU 34	-2.28	-0.68	144.43	46.3356	-10.9961	0.7175
314	SLU 35	-2.36	-0.82	146.75	47.0862	-11.1714	0.7341
314	SLU 36	-2.34	-0.72	146.83	47.1094	-11.1798	0.7352
314	SLU 37	-2.33	-0.85	145.98	46.8367	-11.1125	0.7229
314	SLU 38	-2.31	-0.76	146.06	46.8598	-11.1208	0.724

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
314	SLU 39	-2.35	-0.82	149.29	47.9063	-11.3723	0.7326
314	SLU 40	-2.34	-0.73	149.37	47.9295	-11.3806	0.7337
314	SLU 41	-2.38	-0.84	150.98	48.446	-11.5026	0.7398
314	SLU 42	-2.36	-0.75	151.06	48.4692	-11.511	0.7409
314	SLU 43	-2.32	-1.21	143.14	45.9187	-10.8486	0.6959
314	SLU 44	-2.3	-1.06	143.28	45.9573	-10.8625	0.6978
314	SLU 45	-2.37	-1.19	145.6	46.708	-11.0378	0.7143
314	SLU 46	-2.36	-1.1	145.69	46.7311	-11.0462	0.7154
314	SLU 47	-2.32	-1.07	144.97	46.497	-10.9929	0.705
314	SLU 48	-2.4	-1.21	147.29	47.2476	-11.1682	0.7216
314	SLU 49	-2.38	-1.11	147.37	47.2708	-11.1765	0.7227
314	SLU 50	-2.37	-1.24	146.52	46.9981	-11.1092	0.7104
314	SLU 51	-2.36	-1.15	146.6	47.0213	-11.1176	0.7115
314	SLU 52	-2.47	-1.06	158.88	50.9717	-12.0769	0.7541
314	SLU 53	-2.54	-1.2	161.21	51.7223	-12.2522	0.7707
314	SLU 54	-2.53	-1.1	161.29	51.7455	-12.2606	0.7718
314	SLU 55	-2.49	-1.08	160.57	51.5114	-12.2072	0.7614
314	SLU 56	-2.57	-1.21	162.9	52.262	-12.3825	0.7779
314	SLU 57	-2.55	-1.12	162.98	52.2852	-12.3909	0.7791
314	SLU 58	-2.54	-1.25	162.12	52.0125	-12.3236	0.7667
314	SLU 59	-2.53	-1.16	162.21	52.0357	-12.332	0.7679
314	SLU 60	-2.56	-1.22	165.44	53.0821	-12.5834	0.7764
314	SLU 61	-2.55	-1.13	165.52	53.1053	-12.5918	0.7775
314	SLU 62	-2.59	-1.24	167.12	53.6218	-12.7137	0.7837
314	SLU 63	-2.57	-1.14	167.21	53.645	-12.7221	0.7848
314	SLU 64	-2.58	-1.12	156.51	50.2082	-11.8713	0.7883
314	SLU 65	-2.55	-0.97	156.64	50.2468	-11.8852	0.7901
314	SLU 66	-2.63	-1.1	158.97	50.9975	-12.0605	0.8067
314	SLU 67	-2.61	-1.01	159.05	51.0206	-12.0689	0.8078
314	SLU 68	-2.58	-0.98	158.33	50.7865	-12.0155	0.7974
314	SLU 69	-2.66	-1.12	160.66	51.5371	-12.1908	0.8139
314	SLU 70	-2.64	-1.02	160.74	51.5603	-12.1992	0.8151
314	SLU 71	-2.63	-1.15	159.88	51.2876	-12.1319	0.8028
314	SLU 72	-2.61	-1.06	159.96	51.3108	-12.1403	0.8039
314	SLU 73	-2.72	-0.97	172.25	55.2612	-13.0996	0.8465
314	SLU 74	-2.8	-1.11	174.57	56.0118	-13.2749	0.8631
314	SLU 75	-2.78	-1.01	174.66	56.035	-13.2833	0.8642
314	SLU 76	-2.75	-0.99	173.94	55.8009	-13.2299	0.8538
314	SLU 77	-2.82	-1.12	176.26	56.5515	-13.4052	0.8703
314	SLU 78	-2.81	-1.03	176.34	56.5747	-13.4136	0.8714
314	SLU 79	-2.8	-1.16	175.49	56.302	-13.3463	0.8591
314	SLU 80	-2.78	-1.06	175.57	56.3252	-13.3546	0.8603
314	SLU 81	-2.82	-1.13	178.8	57.3716	-13.6061	0.8688
314	SLU 82	-2.81	-1.04	178.88	57.3948	-13.6144	0.8699
314	SLU 83	-2.85	-1.14	180.49	57.9113	-13.7364	0.876
314	SLU 84	-2.83	-1.05	180.57	57.9345	-13.7448	0.8772
314	SLE RA 1	-1.93	-0.88	117.45	37.679	-8.907	0.586
314	SLE RA 2	-1.91	-0.78	117.54	37.7047	-8.9163	0.5873
314	SLE RA 3	-1.96	-0.87	119.09	38.2051	-9.0332	0.5983
314	SLE RA 4	-1.95	-0.81	119.15	38.2206	-9.0387	0.5991
314	SLE RA 5	-1.93	-0.79	118.67	38.0645	-9.0032	0.5921
314	SLE RA 6	-1.98	-0.88	120.22	38.5649	-9.12	0.6032
314	SLE RA 7	-1.97	-0.82	120.27	38.5804	-9.1256	0.6039
314	SLE RA 8	-1.96	-0.9	119.7	38.3985	-9.0807	0.5957
314	SLE RA 9	-1.95	-0.84	119.76	38.414	-9.0863	0.5965
314	SLE RA 10	-2.02	-0.78	127.95	41.0476	-9.7259	0.6249
314	SLE RA 11	-2.07	-0.87	129.5	41.548	-9.8427	0.6359
314	SLE RA 12	-2.06	-0.81	129.55	41.5635	-9.8483	0.6367
314	SLE RA 13	-2.04	-0.79	129.07	41.4074	-9.8127	0.6297
314	SLE RA 14	-2.09	-0.88	130.62	41.9078	-9.9296	0.6408
314	SLE RA 15	-2.08	-0.82	130.68	41.9233	-9.9352	0.6415
314	SLE RA 16	-2.07	-0.91	130.11	41.7415	-9.8903	0.6333
314	SLE RA 17	-2.06	-0.84	130.16	41.7569	-9.8959	0.634
314	SLE RA 18	-2.09	-0.89	132.31	42.4546	-10.0635	0.6397
314	SLE RA 19	-2.08	-0.83	132.37	42.47	-10.0691	0.6405
314	SLE RA 20	-2.11	-0.9	133.44	42.8144	-10.1504	0.6446
314	SLE RA 21	-2.1	-0.84	133.49	42.8298	-10.156	0.6453
314	SLE FR 1	-1.93	-0.88	117.45	37.679	-8.907	0.586
314	SLE FR 2	-1.92	-0.86	117.47	37.6841	-8.9088	0.5863
314	SLE FR 3	-1.93	-0.89	117.9	37.8229	-8.9417	0.588
314	SLE FR 4	-1.97	-0.86	121.93	39.1168	-9.2558	0.6024
314	SLE FR 5	-1.98	-0.89	122.36	39.2556	-9.2887	0.6041
314	SLE FR 6	-2.01	-0.89	124.88	40.0668	-9.4852	0.6129
314	SLE QP 1	-1.93	-0.88	117.45	37.679	-8.907	0.586
314	SLE QP 2	-1.98	-0.89	121.91	39.1116	-9.2539	0.6022
314	SLD 1	8.23	1.21	121.27	38.7484	-9.0619	-2.6458
314	SLD 2	9.36	0.96	120.96	38.6547	-9.0434	-3.0302
314	SLD 3	8.47	-2.18	119.54	38.2971	-8.9152	-2.9438
314	SLD 4	9.61	-2.43	119.23	38.2034	-8.8967	-3.3282
314	SLD 5	0.51	4.94	124.4	39.7038	-9.422	0.1481
314	SLD 6	1.25	4.77	124.19	39.6424	-9.4099	-0.1039
314	SLD 7	1.33	-6.38	118.63	38.1994	-8.9332	-0.8453
314	SLD 8	2.07	-6.54	118.43	38.1381	-8.9211	-1.0973
314	SLD 9	-6.03	4.77	125.4	40.0852	-9.5868	2.3016
314	SLD 10	-5.28	4.61	125.19	40.0238	-9.5747	2.0496
314	SLD 11	-5.21	-6.54	119.63	38.5809	-9.098	1.3082
314	SLD 12	-4.46	-6.71	119.43	38.5195	-9.0859	1.0562
314	SLD 13	-13.56	0.66	124.6	40.0199	-9.6111	4.5325
314	SLD 14	-12.43	0.41	124.28	39.9262	-9.5926	4.1481
314	SLD 15	-13.31	-2.73	122.87	39.5686	-9.4645	4.2345

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
314	SLD 16	-12.18	-2.98	122.55	39.4749	-9.446	3.8501
314	SLV 1	21.9	3.92	120.35	38.2447	-8.7994	-7.0042
314	SLV 2	24.53	3.34	119.61	38.0266	-8.7563	-7.8994
314	SLV 3	22.47	-3.81	116.42	37.2194	-8.4662	-7.6837
314	SLV 4	25.1	-4.39	115.69	37.0013	-8.4232	-8.5789
314	SLV 5	3.87	12.38	127.52	40.4441	-9.6302	-0.495
314	SLV 6	5.57	12	127.05	40.3036	-9.6025	-1.0719
314	SLV 7	5.76	-13.38	114.44	37.0265	-8.5198	-2.76
314	SLV 8	7.46	-13.76	113.97	36.886	-8.492	-3.3369
314	SLV 9	-11.41	11.99	129.86	41.3373	-10.0158	4.5412
314	SLV 10	-9.71	11.61	129.39	41.1968	-9.9881	3.9643
314	SLV 11	-9.52	-13.77	116.77	37.9197	-8.9054	2.2762
314	SLV 12	-7.82	-14.15	116.3	37.7792	-8.8776	1.6993
314	SLV 13	-29.05	2.62	128.13	41.222	-10.0847	9.7832
314	SLV 14	-26.42	2.04	127.4	41.0039	-10.0416	8.888
314	SLV 15	-28.49	-5.11	124.21	40.1967	-9.7516	9.1037
314	SLV 16	-25.85	-5.69	123.48	39.9786	-9.7085	8.2085
314	CRTFP Ux+	0	0	0	0	0	0
314	CRTFP Ux-	0	0	0	0	0	0
314	CRTFP Uy+	0	0	0	0	0	0
314	CRTFP Uy-	0	0	0	0	0	0
317	SLU 1	-0.49	-0.2	30.09	9.0548	4.0295	0.1856
317	SLU 2	-0.48	-0.16	30.13	9.0643	4.0347	0.178
317	SLU 3	-0.5	-0.19	30.75	9.2515	4.117	0.1891
317	SLU 4	-0.5	-0.17	30.77	9.2573	4.1202	0.1845
317	SLU 5	-0.49	-0.16	30.58	9.1988	4.0948	0.1806
317	SLU 6	-0.51	-0.2	31.2	9.386	4.1772	0.1917
317	SLU 7	-0.5	-0.17	31.22	9.3917	4.1803	0.1871
317	SLU 8	-0.5	-0.21	30.99	9.3237	4.1497	0.1908
317	SLU 9	-0.5	-0.18	31.02	9.3294	4.1529	0.1862
317	SLU 10	-0.52	-0.16	34.3	10.3234	4.5921	0.1923
317	SLU 11	-0.54	-0.19	34.92	10.5106	4.6744	0.2033
317	SLU 12	-0.54	-0.17	34.94	10.5163	4.6776	0.1988
317	SLU 13	-0.53	-0.16	34.75	10.4579	4.6522	0.1948
317	SLU 14	-0.55	-0.2	35.37	10.6451	4.7345	0.2059
317	SLU 15	-0.55	-0.17	35.39	10.6508	4.7377	0.2014
317	SLU 16	-0.54	-0.21	35.16	10.5828	4.7071	0.205
317	SLU 17	-0.54	-0.18	35.19	10.5885	4.7102	0.2005
317	SLU 18	-0.55	-0.2	36.05	10.8535	4.8257	0.206
317	SLU 19	-0.55	-0.17	36.07	10.8592	4.8288	0.2014
317	SLU 20	-0.56	-0.2	36.5	10.9879	4.8858	0.2085
317	SLU 21	-0.55	-0.18	36.52	10.9936	4.889	0.204
317	SLU 22	-0.55	-0.17	33.65	10.1241	4.5047	0.2039
317	SLU 23	-0.55	-0.13	33.68	10.1336	4.5099	0.1963
317	SLU 24	-0.57	-0.17	34.3	10.3208	4.5922	0.2074
317	SLU 25	-0.56	-0.14	34.32	10.3265	4.5954	0.2028
317	SLU 26	-0.55	-0.14	34.13	10.268	4.57	0.1989
317	SLU 27	-0.57	-0.17	34.75	10.4552	4.6524	0.21
317	SLU 28	-0.57	-0.15	34.77	10.461	4.6555	0.2054
317	SLU 29	-0.57	-0.18	34.54	10.393	4.6249	0.209
317	SLU 30	-0.56	-0.16	34.57	10.3987	4.6281	0.2045
317	SLU 31	-0.59	-0.13	37.85	11.3927	5.0673	0.2105
317	SLU 32	-0.61	-0.16	38.47	11.5799	5.1496	0.2216
317	SLU 33	-0.61	-0.14	38.49	11.5856	5.1528	0.2171
317	SLU 34	-0.6	-0.13	38.3	11.5271	5.1274	0.2131
317	SLU 35	-0.62	-0.17	38.92	11.7143	5.2097	0.2242
317	SLU 36	-0.61	-0.14	38.94	11.72	5.2129	0.2197
317	SLU 37	-0.61	-0.18	38.71	11.652	5.1823	0.2233
317	SLU 38	-0.61	-0.15	38.74	11.6577	5.1854	0.2188
317	SLU 39	-0.62	-0.17	39.6	11.9227	5.3009	0.2242
317	SLU 40	-0.61	-0.15	39.62	11.9284	5.304	0.2197
317	SLU 41	-0.62	-0.17	40.05	12.0572	5.361	0.2268
317	SLU 42	-0.62	-0.15	40.07	12.0629	5.3642	0.2223
317	SLU 43	-0.61	-0.27	37.91	11.4047	5.0754	0.235
317	SLU 44	-0.6	-0.23	37.94	11.4142	5.0806	0.2274
317	SLU 45	-0.62	-0.26	38.56	11.6014	5.163	0.2385
317	SLU 46	-0.62	-0.24	38.58	11.6071	5.1661	0.234
317	SLU 47	-0.61	-0.23	38.39	11.5486	5.1408	0.23
317	SLU 48	-0.63	-0.27	39.01	11.7358	5.2231	0.2411
317	SLU 49	-0.62	-0.24	39.03	11.7416	5.2262	0.2365
317	SLU 50	-0.62	-0.28	38.8	11.6736	5.1956	0.2402
317	SLU 51	-0.62	-0.25	38.83	11.6793	5.1988	0.2356
317	SLU 52	-0.65	-0.23	42.11	12.6733	5.638	0.2417
317	SLU 53	-0.67	-0.26	42.73	12.8605	5.7203	0.2528
317	SLU 54	-0.66	-0.24	42.75	12.8662	5.7235	0.2482
317	SLU 55	-0.65	-0.23	42.56	12.8077	5.6981	0.2443
317	SLU 56	-0.67	-0.27	43.18	12.9949	5.7805	0.2553
317	SLU 57	-0.67	-0.24	43.2	13.0006	5.7836	0.2508
317	SLU 58	-0.67	-0.28	42.97	12.9326	5.753	0.2544
317	SLU 59	-0.66	-0.25	43	12.9383	5.7562	0.2499
317	SLU 60	-0.67	-0.27	43.86	13.2033	5.8716	0.2554
317	SLU 61	-0.67	-0.24	43.88	13.209	5.8748	0.2508
317	SLU 62	-0.68	-0.27	44.31	13.3378	5.9317	0.2579
317	SLU 63	-0.68	-0.25	44.33	13.3435	5.9349	0.2534
317	SLU 64	-0.68	-0.24	41.46	12.4739	5.5506	0.2533
317	SLU 65	-0.67	-0.2	41.5	12.4834	5.5558	0.2457
317	SLU 66	-0.69	-0.24	42.11	12.6706	5.6382	0.2568
317	SLU 67	-0.69	-0.21	42.13	12.6764	5.6413	0.2522
317	SLU 68	-0.68	-0.21	41.95	12.6179	5.616	0.2483
317	SLU 69	-0.7	-0.24	42.56	12.8051	5.6983	0.2594

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
317	SLU 70	-0.69	-0.22	42.58	12.8108	5.7014	0.2548
317	SLU 71	-0.69	-0.25	42.36	12.7428	5.6708	0.2585
317	SLU 72	-0.69	-0.23	42.38	12.7485	5.674	0.2539
317	SLU 73	-0.71	-0.2	45.66	13.7425	6.1132	0.26
317	SLU 74	-0.73	-0.23	46.28	13.9297	6.1955	0.271
317	SLU 75	-0.73	-0.21	46.3	13.9354	6.1987	0.2665
317	SLU 76	-0.72	-0.2	46.11	13.877	6.1733	0.2625
317	SLU 77	-0.74	-0.24	46.73	14.0641	6.2557	0.2736
317	SLU 78	-0.74	-0.21	46.75	14.0699	6.2588	0.2691
317	SLU 79	-0.73	-0.25	46.52	14.0019	6.2282	0.2727
317	SLU 80	-0.73	-0.22	46.55	14.0076	6.2313	0.2682
317	SLU 81	-0.74	-0.24	47.41	14.2726	6.3468	0.2736
317	SLU 82	-0.74	-0.22	47.43	14.2783	6.35	0.2691
317	SLU 83	-0.75	-0.24	47.86	14.407	6.4069	0.2762
317	SLU 84	-0.74	-0.22	47.88	14.4127	6.4101	0.2717
317	SLE RA 1	-0.51	-0.19	31.11	9.3603	4.1652	0.1908
317	SLE RA 2	-0.5	-0.17	31.14	9.3667	4.1687	0.1858
317	SLE RA 3	-0.51	-0.19	31.55	9.4915	4.2236	0.1931
317	SLE RA 4	-0.51	-0.17	31.56	9.4953	4.2257	0.1901
317	SLE RA 5	-0.51	-0.17	31.44	9.4563	4.2088	0.1875
317	SLE RA 6	-0.52	-0.19	31.84	9.5811	4.2637	0.1949
317	SLE RA 7	-0.52	-0.18	31.86	9.5849	4.2658	0.1918
317	SLE RA 8	-0.51	-0.2	31.71	9.5396	4.2454	0.1943
317	SLE RA 9	-0.51	-0.18	31.72	9.5434	4.2475	0.1912
317	SLE RA 10	-0.53	-0.16	33.91	10.206	4.5403	0.1953
317	SLE RA 11	-0.54	-0.19	34.32	10.3308	4.5952	0.2027
317	SLE RA 12	-0.54	-0.17	34.34	10.3347	4.5973	0.1996
317	SLE RA 13	-0.54	-0.17	34.21	10.2957	4.5804	0.197
317	SLE RA 14	-0.55	-0.19	34.62	10.4205	4.6353	0.2044
317	SLE RA 15	-0.55	-0.17	34.64	10.4243	4.6374	0.2013
317	SLE RA 16	-0.54	-0.2	34.49	10.379	4.617	0.2038
317	SLE RA 17	-0.54	-0.18	34.5	10.3828	4.6191	0.2007
317	SLE RA 18	-0.55	-0.19	35.08	10.5594	4.6961	0.2044
317	SLE RA 19	-0.55	-0.17	35.09	10.5632	4.6982	0.2014
317	SLE RA 20	-0.55	-0.19	35.38	10.6491	4.7361	0.2061
317	SLE RA 21	-0.55	-0.18	35.39	10.6529	4.7382	0.2031
317	SLE FR 1	-0.51	-0.19	31.11	9.3603	4.1652	0.1908
317	SLE FR 2	-0.5	-0.19	31.11	9.3616	4.1659	0.1898
317	SLE FR 3	-0.51	-0.19	31.23	9.3962	4.1813	0.1915
317	SLE FR 4	-0.52	-0.19	32.31	9.7213	4.3252	0.1939
317	SLE FR 5	-0.52	-0.19	32.42	9.7559	4.3405	0.1956
317	SLE FR 6	-0.53	-0.19	33.09	9.9599	4.4306	0.1976
317	SLE QP 1	-0.51	-0.19	31.11	9.3603	4.1652	0.1908
317	SLE QP 2	-0.52	-0.19	32.3	9.72	4.3245	0.1949
317	SLD 1	2.1	0.35	31.98	9.5512	4.2853	-0.7175
317	SLD 2	2.39	0.3	31.91	9.5312	4.2747	-0.804
317	SLD 3	2.16	-0.52	31.51	9.4572	4.2223	-0.615
317	SLD 4	2.45	-0.57	31.43	9.4372	4.2117	-0.7015
317	SLD 5	0.12	1.31	32.93	9.8155	4.4102	-0.2189
317	SLD 6	0.31	1.27	32.88	9.8024	4.4032	-0.2756
317	SLD 7	0.33	-1.61	31.36	9.5022	4.2002	0.1228
317	SLD 8	0.52	-1.64	31.31	9.4891	4.1932	0.0661
317	SLD 9	-1.56	1.26	33.29	9.951	4.4557	0.3237
317	SLD 10	-1.37	1.23	33.24	9.9379	4.4488	0.267
317	SLD 11	-1.34	-1.66	31.72	9.6377	4.2457	0.6654
317	SLD 12	-1.15	-1.69	31.67	9.6246	4.2388	0.6087
317	SLD 13	-3.49	0.19	33.17	10.0029	4.4372	1.0912
317	SLD 14	-3.2	0.14	33.09	9.9829	4.4266	1.0048
317	SLD 15	-3.43	-0.69	32.69	9.9089	4.3742	1.1937
317	SLD 16	-3.13	-0.74	32.62	9.8889	4.3636	1.1073
317	SLV 1	5.6	1.05	31.54	9.3215	4.2305	-1.9361
317	SLV 2	6.28	0.94	31.36	9.275	4.2059	-2.1375
317	SLV 3	5.75	-0.94	30.47	9.1077	4.0875	-1.7026
317	SLV 4	6.43	-1.05	30.29	9.0611	4.0629	-1.904
317	SLV 5	0.97	3.22	33.73	9.9329	4.5175	-0.7638
317	SLV 6	1.41	3.15	33.61	9.9029	4.5016	-0.8936
317	SLV 7	1.47	-3.42	30.16	9.22	4.0407	0.0144
317	SLV 8	1.91	-3.49	30.04	9.19	4.0248	-0.1154
317	SLV 9	-2.95	3.11	34.56	10.2501	4.6241	0.5051
317	SLV 10	-2.51	3.03	34.44	10.2201	4.6083	0.3753
317	SLV 11	-2.45	-3.53	30.99	9.5372	4.1474	1.2834
317	SLV 12	-2.01	-3.61	30.87	9.5072	4.1315	1.1536
317	SLV 13	-7.47	0.67	34.31	10.379	4.5861	2.2938
317	SLV 14	-6.79	0.55	34.13	10.3324	4.5615	2.0924
317	SLV 15	-7.32	-1.32	33.24	10.1651	4.4431	2.5272
317	SLV 16	-6.64	-1.44	33.06	10.1185	4.4184	2.3258
317	CRTFP Ux+	0	0	0	0	0	0
317	CRTFP Ux-	0	0	0	0	0	0
317	CRTFP Uy+	0	0	0	0	0	0
317	CRTFP Uy-	0	0	0	0	0	0
319	SLU 1	0.13	-0.49	73.85	9.4019	12.0995	0.0323
319	SLU 2	0.12	-0.38	73.96	9.4116	12.1221	0.0169
319	SLU 3	0.14	-0.47	75.45	9.6044	12.3631	0.0282
319	SLU 4	0.13	-0.41	75.52	9.6102	12.3766	0.019
319	SLU 5	0.12	-0.39	75.03	9.5448	12.2991	0.0171
319	SLU 6	0.14	-0.48	76.52	9.7375	12.5401	0.0283
319	SLU 7	0.13	-0.42	76.59	9.7433	12.5537	0.0191
319	SLU 8	0.13	-0.5	75.99	9.6682	12.4536	0.0326
319	SLU 9	0.13	-0.44	76.05	9.6741	12.4672	0.0234
319	SLU 10	0.1	-0.34	84.02	10.6972	13.7826	0.0103

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
319	SLU 11	0.12	-0.44	85.51	10.8899	14.0236	0.0215
319	SLU 12	0.12	-0.37	85.58	10.8957	14.0371	0.0123
319	SLU 13	0.11	-0.35	85.09	10.8303	13.9596	0.0104
319	SLU 14	0.12	-0.44	86.58	11.0231	14.2007	0.0216
319	SLU 15	0.12	-0.38	86.65	11.0289	14.2142	0.0124
319	SLU 16	0.12	-0.46	86.05	10.9538	14.1141	0.0259
319	SLU 17	0.11	-0.4	86.11	10.9596	14.1277	0.0167
319	SLU 18	0.11	-0.43	88.22	11.2385	14.4717	0.0228
319	SLU 19	0.1	-0.37	88.29	11.2443	14.4852	0.0135
319	SLU 20	0.11	-0.44	89.29	11.3716	14.6487	0.0229
319	SLU 21	0.1	-0.38	89.36	11.3774	14.6623	0.0137
319	SLU 22	0.16	-0.42	82.53	10.5086	13.5211	0.0143
319	SLU 23	0.15	-0.32	82.64	10.5183	13.5437	-0.0011
319	SLU 24	0.17	-0.41	84.13	10.711	13.7847	0.0102
319	SLU 25	0.16	-0.35	84.2	10.7168	13.7982	0.001
319	SLU 26	0.15	-0.32	83.71	10.6514	13.7207	-0.0009
319	SLU 27	0.17	-0.42	85.2	10.8441	13.9618	0.0103
319	SLU 28	0.16	-0.35	85.27	10.85	13.9753	0.0011
319	SLU 29	0.17	-0.44	84.67	10.7749	13.8752	0.0146
319	SLU 30	0.16	-0.37	84.73	10.7807	13.8888	0.0053
319	SLU 31	0.13	-0.28	92.7	11.8038	15.2042	-0.0078
319	SLU 32	0.15	-0.37	94.19	11.9966	15.4452	0.0035
319	SLU 33	0.15	-0.31	94.26	12.0024	15.4587	-0.0057
319	SLU 34	0.14	-0.29	93.77	11.937	15.3812	-0.0076
319	SLU 35	0.15	-0.38	95.26	12.1297	15.6223	0.0036
319	SLU 36	0.15	-0.32	95.33	12.1355	15.6358	-0.0056
319	SLU 37	0.15	-0.4	94.73	12.0604	15.5357	0.0079
319	SLU 38	0.14	-0.34	94.8	12.0663	15.5493	-0.0013
319	SLU 39	0.14	-0.37	96.9	12.3451	15.8933	0.0047
319	SLU 40	0.13	-0.31	96.97	12.3509	15.9068	-0.0045
319	SLU 41	0.14	-0.38	97.97	12.4783	16.0703	0.0049
319	SLU 42	0.13	-0.31	98.04	12.4841	16.0839	-0.0043
319	SLU 43	0.16	-0.66	93.03	11.8431	15.2419	0.0482
319	SLU 44	0.15	-0.55	93.14	11.8528	15.2645	0.0328
319	SLU 45	0.17	-0.64	94.63	12.0455	15.5055	0.0441
319	SLU 46	0.16	-0.58	94.7	12.0513	15.5191	0.0348
319	SLU 47	0.15	-0.56	94.21	11.9859	15.4416	0.033
319	SLU 48	0.17	-0.65	95.7	12.1787	15.6826	0.0442
319	SLU 49	0.16	-0.58	95.76	12.1845	15.6961	0.035
319	SLU 50	0.16	-0.67	95.17	12.1094	15.5961	0.0485
319	SLU 51	0.16	-0.6	95.23	12.1152	15.6096	0.0392
319	SLU 52	0.13	-0.51	103.2	13.1384	16.925	0.0261
319	SLU 53	0.15	-0.6	104.69	13.3311	17.166	0.0374
319	SLU 54	0.14	-0.54	104.76	13.3369	17.1796	0.0282
319	SLU 55	0.13	-0.52	104.27	13.2715	17.1021	0.0263
319	SLU 56	0.15	-0.61	105.76	13.4642	17.3431	0.0375
319	SLU 57	0.15	-0.55	105.83	13.47	17.3566	0.0283
319	SLU 58	0.15	-0.63	105.23	13.395	17.2566	0.0418
319	SLU 59	0.14	-0.57	105.29	13.4008	17.2701	0.0326
319	SLU 60	0.14	-0.6	107.4	13.6796	17.6141	0.0386
319	SLU 61	0.13	-0.54	107.47	13.6854	17.6276	0.0294
319	SLU 62	0.14	-0.61	108.47	13.8128	17.7912	0.0388
319	SLU 63	0.13	-0.55	108.54	13.8186	17.8047	0.0295
319	SLU 64	0.19	-0.59	101.71	12.9497	16.6635	0.0302
319	SLU 65	0.18	-0.48	101.82	12.9594	16.6861	0.0148
319	SLU 66	0.2	-0.58	103.31	13.1522	16.9271	0.026
319	SLU 67	0.19	-0.51	103.38	13.158	16.9407	0.0168
319	SLU 68	0.18	-0.49	102.89	13.0926	16.8632	0.0149
319	SLU 69	0.2	-0.58	104.38	13.2853	17.1042	0.0262
319	SLU 70	0.19	-0.52	104.45	13.2911	17.1177	0.017
319	SLU 71	0.19	-0.6	103.85	13.216	17.0177	0.0304
319	SLU 72	0.19	-0.54	103.91	13.2219	17.0312	0.0212
319	SLU 73	0.16	-0.45	111.88	14.245	18.3466	0.0081
319	SLU 74	0.18	-0.54	113.37	14.4377	18.5876	0.0194
319	SLU 75	0.17	-0.48	113.44	14.4435	18.6012	0.0101
319	SLU 76	0.17	-0.45	112.95	14.3781	18.5237	0.0082
319	SLU 77	0.18	-0.55	114.44	14.5709	18.7647	0.0195
319	SLU 78	0.18	-0.48	114.51	14.5767	18.7782	0.0103
319	SLU 79	0.18	-0.57	113.91	14.5016	18.6782	0.0237
319	SLU 80	0.17	-0.5	113.97	14.5074	18.6917	0.0145
319	SLU 81	0.17	-0.54	116.08	14.7863	19.0357	0.0206
319	SLU 82	0.16	-0.47	116.15	14.7921	19.0492	0.0114
319	SLU 83	0.17	-0.54	117.15	14.9194	19.2128	0.0207
319	SLU 84	0.16	-0.48	117.22	14.9252	19.2263	0.0115
319	SLE RA 1	0.14	-0.47	76.33	9.7181	12.5057	0.0272
319	SLE RA 2	0.13	-0.4	76.4	9.7246	12.5207	0.0169
319	SLE RA 3	0.14	-0.46	77.4	9.8531	12.6814	0.0244
319	SLE RA 4	0.14	-0.42	77.44	9.8569	12.6904	0.0183
319	SLE RA 5	0.13	-0.4	77.12	9.8133	12.6388	0.017
319	SLE RA 6	0.15	-0.46	78.11	9.9418	12.7994	0.0245
319	SLE RA 7	0.14	-0.42	78.15	9.9457	12.8085	0.0184
319	SLE RA 8	0.14	-0.48	77.76	9.8957	12.7418	0.0273
319	SLE RA 9	0.14	-0.44	77.8	9.8995	12.7508	0.0212
319	SLE RA 10	0.12	-0.37	83.11	10.5816	13.6277	0.0125
319	SLE RA 11	0.13	-0.43	84.11	10.7101	13.7884	0.02
319	SLE RA 12	0.13	-0.39	84.15	10.714	13.7974	0.0138
319	SLE RA 13	0.12	-0.38	83.82	10.6704	13.7458	0.0126
319	SLE RA 14	0.13	-0.44	84.82	10.7989	13.9064	0.02
319	SLE RA 15	0.13	-0.4	84.86	10.8028	13.9155	0.0139
319	SLE RA 16	0.13	-0.45	84.46	10.7527	13.8488	0.0229

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
319	SLE RA 17	0.13	-0.41	84.51	10.7566	13.8578	0.0167
319	SLE RA 18	0.12	-0.43	85.91	10.9425	14.0871	0.0208
319	SLE RA 19	0.12	-0.39	85.96	10.9463	14.0961	0.0146
319	SLE RA 20	0.12	-0.44	86.63	11.0312	14.2052	0.0209
319	SLE RA 21	0.12	-0.4	86.67	11.0351	14.2142	0.0147
319	SLE FR 1	0.14	-0.47	76.33	9.7181	12.5057	0.0272
319	SLE FR 2	0.14	-0.45	76.35	9.7194	12.5087	0.0251
319	SLE FR 3	0.14	-0.47	76.62	9.7536	12.5529	0.0272
319	SLE FR 4	0.13	-0.44	79.22	10.0867	12.9831	0.0232
319	SLE FR 5	0.13	-0.46	79.49	10.1209	13.0273	0.0253
319	SLE FR 6	0.13	-0.45	81.12	10.3303	13.2964	0.024
319	SLE QP 1	0.14	-0.47	76.33	9.7181	12.5057	0.0272
319	SLE QP 2	0.13	-0.46	79.21	10.0854	12.9801	0.0253
319	SLD 1	7.2	0.42	79.51	10.0991	13.1736	-1.0568
319	SLD 2	7.97	0.5	79.65	10.1183	13.1851	-1.1624
319	SLD 3	7.07	-1.73	78.11	9.9928	12.9021	-0.6975
319	SLD 4	7.84	-1.65	78.26	10.012	12.9135	-0.8031
319	SLD 5	2.33	3.05	81.39	10.2473	13.4479	-0.8256
319	SLD 6	2.83	3.11	81.49	10.2599	13.4554	-0.8948
319	SLD 7	1.87	-4.12	76.73	9.8931	12.5428	0.3722
319	SLD 8	2.37	-4.07	76.83	9.9057	12.5504	0.303
319	SLD 9	-2.1	3.15	81.58	10.2652	13.4098	-0.2525
319	SLD 10	-1.6	3.2	81.68	10.2778	13.4173	-0.3217
319	SLD 11	-2.56	-4.02	76.92	9.911	12.5048	0.9453
319	SLD 12	-2.06	-3.97	77.02	9.9236	12.5123	0.8761
319	SLD 13	-7.57	0.74	80.15	10.1588	13.0467	0.8536
319	SLD 14	-6.8	0.81	80.3	10.1781	13.0581	0.748
319	SLD 15	-7.71	-1.41	78.76	10.0526	12.7751	1.2129
319	SLD 16	-6.94	-1.34	78.91	10.0718	12.7866	1.1073
319	SLV 1	16.67	1.53	79.86	10.114	13.4234	-2.4947
319	SLV 2	18.46	1.71	80.21	10.1588	13.4501	-2.7407
319	SLV 3	16.35	-3.37	76.69	9.8724	12.8071	-1.6767
319	SLV 4	18.14	-3.19	77.03	9.9172	12.8338	-1.9228
319	SLV 5	5.27	7.54	84.15	10.4527	14.0432	-1.929
319	SLV 6	6.42	7.65	84.38	10.4816	14.0604	-2.0875
319	SLV 7	4.21	-8.79	73.58	9.6474	11.9888	0.7976
319	SLV 8	5.36	-8.67	73.8	9.6762	12.006	0.6391
319	SLV 9	-5.1	7.76	84.61	10.4946	13.9541	-0.5886
319	SLV 10	-3.94	7.87	84.83	10.5235	13.9714	-0.7471
319	SLV 11	-6.16	-8.57	74.03	9.6893	11.8997	2.138
319	SLV 12	-5	-8.45	74.26	9.7182	11.917	1.9795
319	SLV 13	-17.88	2.27	81.38	10.2537	13.1264	1.9733
319	SLV 14	-16.08	2.45	81.72	10.2985	13.1531	1.7272
319	SLV 15	-18.19	-2.63	78.2	10.0121	12.5101	2.7912
319	SLV 16	-16.4	-2.45	78.55	10.0569	12.5368	2.5452
319	CRTFP Ux+	0	0	0	0	0	0
319	CRTFP Ux-	0	0	0	0	0	0
319	CRTFP Uy+	0	0	0	0	0	0
319	CRTFP Uy-	0	0	0	0	0	0
321	SLU 1	0.11	-0.39	41.41	12.5005	0.0351	-0.0396
321	SLU 2	0.11	-0.33	41.46	12.5117	0.0353	-0.0377
321	SLU 3	0.12	-0.39	42.31	12.7691	0.0359	-0.0416
321	SLU 4	0.11	-0.35	42.34	12.7758	0.036	-0.0404
321	SLU 5	0.11	-0.34	42.06	12.6884	0.0358	-0.0384
321	SLU 6	0.12	-0.39	42.9	12.9459	0.0364	-0.0424
321	SLU 7	0.12	-0.36	42.93	12.9525	0.0366	-0.0412
321	SLU 8	0.12	-0.41	42.6	12.854	0.0362	-0.0412
321	SLU 9	0.11	-0.37	42.63	12.8606	0.0363	-0.04
321	SLU 10	0.1	-0.32	47.07	14.2115	0.0411	-0.0364
321	SLU 11	0.11	-0.38	47.91	14.469	0.0417	-0.0404
321	SLU 12	0.11	-0.34	47.94	14.4757	0.0418	-0.0392
321	SLU 13	0.1	-0.33	47.66	14.3882	0.0416	-0.0372
321	SLU 14	0.12	-0.38	48.51	14.6457	0.0422	-0.0411
321	SLU 15	0.11	-0.35	48.54	14.6524	0.0424	-0.04
321	SLU 16	0.11	-0.4	48.21	14.5538	0.042	-0.0399
321	SLU 17	0.11	-0.36	48.24	14.5605	0.0421	-0.0388
321	SLU 18	0.1	-0.38	49.42	14.9288	0.0433	-0.0379
321	SLU 19	0.1	-0.34	49.45	14.9355	0.0435	-0.0367
321	SLU 20	0.11	-0.38	50.01	15.1056	0.0439	-0.0386
321	SLU 21	0.1	-0.35	50.04	15.1123	0.044	-0.0375
321	SLU 22	0.14	-0.37	46.28	13.9708	0.0393	-0.0474
321	SLU 23	0.13	-0.31	46.33	13.982	0.0396	-0.0454
321	SLU 24	0.14	-0.37	47.17	14.2394	0.0401	-0.0493
321	SLU 25	0.14	-0.33	47.2	14.2461	0.0403	-0.0481
321	SLU 26	0.13	-0.31	46.92	14.1587	0.0401	-0.0462
321	SLU 27	0.14	-0.37	47.77	14.4162	0.0407	-0.0501
321	SLU 28	0.14	-0.33	47.8	14.4228	0.0408	-0.0489
321	SLU 29	0.14	-0.38	47.47	14.3243	0.0404	-0.0489
321	SLU 30	0.14	-0.34	47.5	14.331	0.0406	-0.0477
321	SLU 31	0.12	-0.3	51.93	15.6818	0.0453	-0.0442
321	SLU 32	0.14	-0.36	52.78	15.9393	0.0459	-0.0481
321	SLU 33	0.13	-0.32	52.81	15.946	0.0461	-0.0469
321	SLU 34	0.13	-0.3	52.53	15.8585	0.0459	-0.0449
321	SLU 35	0.14	-0.36	53.37	16.116	0.0465	-0.0489
321	SLU 36	0.13	-0.32	53.4	16.1227	0.0466	-0.0477
321	SLU 37	0.13	-0.37	53.07	16.0241	0.0462	-0.0477
321	SLU 38	0.13	-0.33	53.1	16.0308	0.0464	-0.0465
321	SLU 39	0.13	-0.36	54.29	16.3992	0.0476	-0.0456
321	SLU 40	0.12	-0.32	54.32	16.4058	0.0477	-0.0444
321	SLU 41	0.13	-0.36	54.88	16.5759	0.0481	-0.0464

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
321	SLU 42	0.13	-0.32	54.91	16.5826	0.0483	-0.0452
321	SLU 43	0.14	-0.52	52.17	15.7466	0.0441	-0.0489
321	SLU 44	0.13	-0.45	52.22	15.7577	0.0444	-0.0469
321	SLU 45	0.14	-0.51	53.06	16.0152	0.045	-0.0508
321	SLU 46	0.14	-0.48	53.09	16.0219	0.0451	-0.0496
321	SLU 47	0.13	-0.46	52.81	15.9344	0.0449	-0.0477
321	SLU 48	0.15	-0.52	53.66	16.1919	0.0455	-0.0516
321	SLU 49	0.14	-0.48	53.69	16.1986	0.0456	-0.0504
321	SLU 50	0.14	-0.53	53.36	16.1	0.0452	-0.0504
321	SLU 51	0.14	-0.49	53.39	16.1067	0.0454	-0.0492
321	SLU 52	0.13	-0.45	57.82	17.4575	0.0501	-0.0457
321	SLU 53	0.14	-0.5	58.67	17.715	0.0507	-0.0496
321	SLU 54	0.14	-0.47	58.7	17.7217	0.0509	-0.0484
321	SLU 55	0.13	-0.45	58.42	17.6343	0.0507	-0.0464
321	SLU 56	0.14	-0.51	59.26	17.8917	0.0513	-0.0504
321	SLU 57	0.14	-0.47	59.29	17.8984	0.0514	-0.0492
321	SLU 58	0.14	-0.52	58.96	17.7998	0.051	-0.0492
321	SLU 59	0.13	-0.48	58.99	17.8065	0.0512	-0.048
321	SLU 60	0.13	-0.5	60.18	18.1749	0.0524	-0.0471
321	SLU 61	0.13	-0.47	60.21	18.1816	0.0525	-0.0459
321	SLU 62	0.13	-0.51	60.77	18.3516	0.0529	-0.0479
321	SLU 63	0.13	-0.47	60.8	18.3583	0.0531	-0.0467
321	SLU 64	0.16	-0.49	57.04	17.2169	0.0484	-0.0566
321	SLU 65	0.15	-0.43	57.08	17.228	0.0486	-0.0546
321	SLU 66	0.17	-0.49	57.93	17.4855	0.0492	-0.0586
321	SLU 67	0.16	-0.45	57.96	17.4922	0.0493	-0.0574
321	SLU 68	0.16	-0.44	57.68	17.4047	0.0492	-0.0554
321	SLU 69	0.17	-0.5	58.52	17.6622	0.0498	-0.0593
321	SLU 70	0.17	-0.46	58.55	17.6689	0.0499	-0.0581
321	SLU 71	0.17	-0.51	58.22	17.5703	0.0495	-0.0581
321	SLU 72	0.16	-0.47	58.25	17.577	0.0496	-0.057
321	SLU 73	0.15	-0.42	62.69	18.9278	0.0544	-0.0534
321	SLU 74	0.16	-0.48	63.53	19.1853	0.055	-0.0573
321	SLU 75	0.16	-0.44	63.56	19.192	0.0551	-0.0561
321	SLU 76	0.15	-0.43	63.28	19.1046	0.0549	-0.0542
321	SLU 77	0.16	-0.49	64.13	19.362	0.0555	-0.0581
321	SLU 78	0.16	-0.45	64.16	19.3687	0.0557	-0.0569
321	SLU 79	0.16	-0.5	63.83	19.2701	0.0553	-0.0569
321	SLU 80	0.16	-0.46	63.86	19.2768	0.0554	-0.0557
321	SLU 81	0.15	-0.48	65.04	19.6452	0.0566	-0.0548
321	SLU 82	0.15	-0.44	65.07	19.6519	0.0568	-0.0537
321	SLU 83	0.16	-0.49	65.64	19.8219	0.0572	-0.0556
321	SLU 84	0.15	-0.45	65.67	19.8286	0.0573	-0.0544
321	SLE RA 1	0.12	-0.39	42.8	12.9206	0.0363	-0.0418
321	SLE RA 2	0.11	-0.34	42.84	12.928	0.0364	-0.0405
321	SLE RA 3	0.12	-0.38	43.4	13.0997	0.0368	-0.0431
321	SLE RA 4	0.12	-0.36	43.42	13.1041	0.0369	-0.0424
321	SLE RA 5	0.12	-0.35	43.23	13.0458	0.0368	-0.041
321	SLE RA 6	0.12	-0.39	43.8	13.2175	0.0372	-0.0437
321	SLE RA 7	0.12	-0.36	43.82	13.222	0.0373	-0.0429
321	SLE RA 8	0.12	-0.39	43.6	13.1562	0.037	-0.0429
321	SLE RA 9	0.12	-0.37	43.62	13.1607	0.0371	-0.0421
321	SLE RA 10	0.11	-0.34	46.57	14.0613	0.0403	-0.0397
321	SLE RA 11	0.12	-0.38	47.14	14.2329	0.0407	-0.0423
321	SLE RA 12	0.12	-0.35	47.16	14.2374	0.0408	-0.0415
321	SLE RA 13	0.11	-0.34	46.97	14.1791	0.0407	-0.0402
321	SLE RA 14	0.12	-0.38	47.53	14.3507	0.0411	-0.0428
321	SLE RA 15	0.12	-0.36	47.55	14.3552	0.0411	-0.0421
321	SLE RA 16	0.12	-0.39	47.33	14.2895	0.0409	-0.042
321	SLE RA 17	0.12	-0.36	47.35	14.2939	0.041	-0.0413
321	SLE RA 18	0.11	-0.38	48.14	14.5395	0.0418	-0.0407
321	SLE RA 19	0.11	-0.35	48.16	14.5439	0.0419	-0.0399
321	SLE RA 20	0.12	-0.38	48.54	14.6573	0.0422	-0.0412
321	SLE RA 21	0.11	-0.36	48.56	14.6618	0.0422	-0.0404
321	SLE FR 1	0.12	-0.39	42.8	12.9206	0.0363	-0.0418
321	SLE FR 2	0.12	-0.38	42.81	12.9221	0.0363	-0.0416
321	SLE FR 3	0.12	-0.39	42.96	12.9677	0.0364	-0.042
321	SLE FR 4	0.12	-0.37	44.41	13.4077	0.038	-0.0412
321	SLE FR 5	0.12	-0.38	44.56	13.4534	0.0381	-0.0417
321	SLE FR 6	0.12	-0.38	45.47	13.73	0.039	-0.0412
321	SLE QP 1	0.12	-0.39	42.8	12.9206	0.0363	-0.0418
321	SLE QP 2	0.12	-0.38	44.41	13.4063	0.0379	-0.0415
321	SLD 1	4.2	0.33	44.3	13.3905	0.0439	-1.3345
321	SLD 2	4.64	0.42	44.41	13.4215	0.0435	-1.4714
321	SLD 3	4.12	-0.91	43.64	13.2576	0.0423	-1.3073
321	SLD 4	4.55	-0.82	43.75	13.2886	0.0419	-1.4442
321	SLD 5	1.39	1.68	45.35	13.5976	0.0422	-0.4463
321	SLD 6	1.68	1.74	45.43	13.6179	0.0419	-0.536
321	SLD 7	1.11	-2.42	43.16	13.1546	0.0369	-0.3556
321	SLD 8	1.4	-2.36	43.23	13.1749	0.0366	-0.4454
321	SLD 9	-1.16	1.6	45.58	13.6376	0.0392	0.3624
321	SLD 10	-0.88	1.66	45.66	13.6579	0.039	0.2727
321	SLD 11	-1.44	-2.51	43.38	13.1946	0.034	0.4531
321	SLD 12	-1.16	-2.45	43.46	13.2149	0.0337	0.3633
321	SLD 13	-4.32	0.05	45.06	13.5239	0.034	1.3612
321	SLD 14	-3.88	0.14	45.17	13.5549	0.0336	1.2243
321	SLD 15	-4.4	-1.18	44.4	13.391	0.0324	1.3884
321	SLD 16	-3.97	-1.09	44.52	13.422	0.032	1.2515
321	SLV 1	9.67	1.24	44.13	13.3652	0.0518	-3.0655
321	SLV 2	10.68	1.45	44.39	13.4374	0.0508	-3.3844

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
321	SLV 3	9.48	-1.57	42.63	13.0632	0.0482	-3.003
321	SLV 4	10.49	-1.36	42.9	13.1354	0.0472	-3.3219
321	SLV 5	3.1	4.32	46.55	13.8396	0.0478	-0.9886
321	SLV 6	3.75	4.46	46.72	13.8862	0.0471	-1.1941
321	SLV 7	2.46	-5.03	41.56	12.8328	0.0357	-0.7802
321	SLV 8	3.11	-4.89	41.73	12.8793	0.0351	-0.9857
321	SLV 9	-2.88	4.13	47.08	13.9332	0.0408	0.9027
321	SLV 10	-2.22	4.26	47.25	13.9798	0.0402	0.6973
321	SLV 11	-3.52	-5.22	42.1	12.9263	0.0288	1.1111
321	SLV 12	-2.86	-5.08	42.26	12.9729	0.0281	0.9056
321	SLV 13	-10.26	0.59	45.92	13.6771	0.0287	3.2389
321	SLV 14	-9.24	0.8	46.18	13.7494	0.0277	2.9201
321	SLV 15	-10.45	-2.21	44.42	13.3751	0.0251	3.3015
321	SLV 16	-9.43	-2	44.68	13.4473	0.0241	2.9826
321	CRTFP Ux+	0	0	0	0	0	0
321	CRTFP Ux-	0	0	0	0	0	0
321	CRTFP Uy+	0	0	0	0	0	0
321	CRTFP Uy-	0	0	0	0	0	0
322	SLU 1	0.12	-0.47	41.01	12.2118	0.0202	-0.0427
322	SLU 2	0.12	-0.4	41.05	12.2202	0.0205	-0.0406
322	SLU 3	0.13	-0.47	41.89	12.4735	0.0207	-0.0447
322	SLU 4	0.12	-0.43	41.91	12.4786	0.0209	-0.0435
322	SLU 5	0.12	-0.41	41.63	12.3924	0.0208	-0.0414
322	SLU 6	0.13	-0.47	42.48	12.6457	0.0211	-0.0455
322	SLU 7	0.13	-0.44	42.5	12.6508	0.0212	-0.0443
322	SLU 8	0.13	-0.48	42.18	12.5561	0.0209	-0.0443
322	SLU 9	0.12	-0.45	42.2	12.5612	0.021	-0.0431
322	SLU 10	0.11	-0.4	46.56	13.8692	0.0244	-0.0398
322	SLU 11	0.12	-0.46	47.4	14.1225	0.0247	-0.0438
322	SLU 12	0.12	-0.43	47.42	14.1275	0.0248	-0.0426
322	SLU 13	0.11	-0.41	47.14	14.0413	0.0247	-0.0406
322	SLU 14	0.13	-0.47	47.98	14.2946	0.025	-0.0446
322	SLU 15	0.12	-0.43	48.01	14.2997	0.0251	-0.0434
322	SLU 16	0.12	-0.48	47.69	14.205	0.0248	-0.0434
322	SLU 17	0.12	-0.44	47.71	14.2101	0.025	-0.0422
322	SLU 18	0.12	-0.47	48.88	14.5674	0.0258	-0.0414
322	SLU 19	0.11	-0.43	48.9	14.5725	0.026	-0.0402
322	SLU 20	0.12	-0.47	49.46	14.7395	0.0262	-0.0422
322	SLU 21	0.11	-0.44	49.49	14.7446	0.0263	-0.041
322	SLU 22	0.15	-0.45	45.82	13.6472	0.0227	-0.0508
322	SLU 23	0.14	-0.39	45.86	13.6557	0.0229	-0.0487
322	SLU 24	0.15	-0.45	46.7	13.909	0.0232	-0.0528
322	SLU 25	0.15	-0.41	46.73	13.9141	0.0233	-0.0516
322	SLU 26	0.14	-0.4	46.45	13.8278	0.0233	-0.0496
322	SLU 27	0.15	-0.46	47.29	14.0811	0.0235	-0.0536
322	SLU 28	0.15	-0.42	47.31	14.0862	0.0237	-0.0524
322	SLU 29	0.15	-0.47	46.99	13.9915	0.0234	-0.0524
322	SLU 30	0.15	-0.43	47.02	13.9966	0.0235	-0.0512
322	SLU 31	0.14	-0.39	51.37	15.3046	0.0269	-0.0479
322	SLU 32	0.15	-0.45	52.21	15.5579	0.0271	-0.0519
322	SLU 33	0.14	-0.41	52.24	15.563	0.0273	-0.0507
322	SLU 34	0.14	-0.4	51.96	15.4768	0.0272	-0.0487
322	SLU 35	0.15	-0.46	52.8	15.7301	0.0275	-0.0528
322	SLU 36	0.15	-0.42	52.82	15.7351	0.0276	-0.0515
322	SLU 37	0.15	-0.47	52.5	15.6405	0.0273	-0.0515
322	SLU 38	0.14	-0.43	52.53	15.6455	0.0274	-0.0503
322	SLU 39	0.14	-0.45	53.69	16.0028	0.0283	-0.0495
322	SLU 40	0.14	-0.41	53.71	16.0079	0.0284	-0.0483
322	SLU 41	0.14	-0.46	54.28	16.175	0.0286	-0.0503
322	SLU 42	0.14	-0.42	54.3	16.1801	0.0288	-0.0491
322	SLU 43	0.15	-0.61	51.66	15.3832	0.0255	-0.0527
322	SLU 44	0.14	-0.55	51.7	15.3916	0.0257	-0.0507
322	SLU 45	0.16	-0.61	52.54	15.6449	0.026	-0.0547
322	SLU 46	0.15	-0.57	52.57	15.65	0.0261	-0.0535
322	SLU 47	0.15	-0.56	52.29	15.5638	0.026	-0.0515
322	SLU 48	0.16	-0.62	53.13	15.8171	0.0263	-0.0555
322	SLU 49	0.16	-0.58	53.15	15.8222	0.0264	-0.0543
322	SLU 50	0.16	-0.63	52.83	15.7275	0.0261	-0.0543
322	SLU 51	0.15	-0.59	52.85	15.7326	0.0263	-0.0531
322	SLU 52	0.14	-0.55	57.21	17.0405	0.0296	-0.0498
322	SLU 53	0.15	-0.61	58.05	17.2939	0.0299	-0.0539
322	SLU 54	0.15	-0.57	58.08	17.2989	0.03	-0.0526
322	SLU 55	0.14	-0.56	57.79	17.2127	0.03	-0.0506
322	SLU 56	0.16	-0.62	58.64	17.466	0.0302	-0.0547
322	SLU 57	0.15	-0.58	58.66	17.4711	0.0304	-0.0534
322	SLU 58	0.15	-0.63	58.34	17.3764	0.0301	-0.0534
322	SLU 59	0.15	-0.59	58.36	17.3815	0.0302	-0.0522
322	SLU 60	0.15	-0.61	59.53	17.7388	0.0311	-0.0515
322	SLU 61	0.14	-0.57	59.55	17.7438	0.0312	-0.0502
322	SLU 62	0.15	-0.62	60.12	17.9109	0.0314	-0.0523
322	SLU 63	0.14	-0.58	60.14	17.916	0.0315	-0.051
322	SLU 64	0.18	-0.6	56.47	16.8186	0.0279	-0.0608
322	SLU 65	0.17	-0.54	56.51	16.8271	0.0282	-0.0588
322	SLU 66	0.18	-0.6	57.35	17.0804	0.0284	-0.0628
322	SLU 67	0.18	-0.56	57.38	17.0854	0.0286	-0.0616
322	SLU 68	0.17	-0.54	57.1	16.9992	0.0285	-0.0596
322	SLU 69	0.18	-0.61	57.94	17.2525	0.0288	-0.0637
322	SLU 70	0.18	-0.57	57.96	17.2576	0.0289	-0.0624
322	SLU 71	0.18	-0.62	57.64	17.1629	0.0286	-0.0624
322	SLU 72	0.18	-0.58	57.67	17.168	0.0287	-0.0612

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
322	SLU 73	0.16	-0.53	62.02	18.476	0.0321	-0.0579
322	SLU 74	0.18	-0.6	62.86	18.7293	0.0324	-0.062
322	SLU 75	0.17	-0.56	62.89	18.7344	0.0325	-0.0607
322	SLU 76	0.17	-0.54	62.61	18.6481	0.0324	-0.0587
322	SLU 77	0.18	-0.6	63.45	18.9014	0.0327	-0.0628
322	SLU 78	0.18	-0.57	63.47	18.9065	0.0328	-0.0616
322	SLU 79	0.18	-0.61	63.15	18.8118	0.0325	-0.0616
322	SLU 80	0.17	-0.58	63.18	18.8169	0.0327	-0.0603
322	SLU 81	0.17	-0.6	64.34	19.1742	0.0335	-0.0596
322	SLU 82	0.17	-0.56	64.37	19.1793	0.0337	-0.0583
322	SLU 83	0.17	-0.61	64.93	19.3464	0.0339	-0.0604
322	SLU 84	0.17	-0.57	64.95	19.3514	0.034	-0.0591
322	SLE RA 1	0.13	-0.46	42.38	12.6219	0.0209	-0.045
322	SLE RA 2	0.13	-0.42	42.41	12.6275	0.0211	-0.0436
322	SLE RA 3	0.13	-0.46	42.97	12.7964	0.0213	-0.0464
322	SLE RA 4	0.13	-0.44	42.99	12.7998	0.0214	-0.0455
322	SLE RA 5	0.13	-0.43	42.8	12.7423	0.0213	-0.0442
322	SLE RA 6	0.14	-0.47	43.36	12.9112	0.0215	-0.0469
322	SLE RA 7	0.13	-0.44	43.38	12.9146	0.0216	-0.0461
322	SLE RA 8	0.13	-0.47	43.16	12.8514	0.0214	-0.0461
322	SLE RA 9	0.13	-0.45	43.18	12.8548	0.0215	-0.0453
322	SLE RA 10	0.12	-0.42	46.08	13.7268	0.0237	-0.0431
322	SLE RA 11	0.13	-0.46	46.64	13.8957	0.0239	-0.0458
322	SLE RA 12	0.13	-0.44	46.66	13.8991	0.024	-0.045
322	SLE RA 13	0.12	-0.43	46.47	13.8416	0.0239	-0.0436
322	SLE RA 14	0.13	-0.47	47.03	14.0105	0.0241	-0.0463
322	SLE RA 15	0.13	-0.44	47.05	14.0139	0.0242	-0.0455
322	SLE RA 16	0.13	-0.47	46.84	13.9507	0.024	-0.0455
322	SLE RA 17	0.13	-0.45	46.85	13.9541	0.0241	-0.0447
322	SLE RA 18	0.13	-0.46	47.63	14.1923	0.0247	-0.0442
322	SLE RA 19	0.12	-0.44	47.65	14.1957	0.0248	-0.0433
322	SLE RA 20	0.13	-0.47	48.02	14.3071	0.0249	-0.0447
322	SLE RA 21	0.12	-0.44	48.04	14.3105	0.025	-0.0439
322	SLE FR 1	0.13	-0.46	42.38	12.6219	0.0209	-0.045
322	SLE FR 2	0.13	-0.46	42.39	12.623	0.021	-0.0447
322	SLE FR 3	0.13	-0.47	42.54	12.6678	0.021	-0.0452
322	SLE FR 4	0.13	-0.46	43.96	13.0942	0.0221	-0.0445
322	SLE FR 5	0.13	-0.47	44.11	13.1389	0.0222	-0.045
322	SLE FR 6	0.13	-0.46	45.01	13.4071	0.0228	-0.0446
322	SLE QP 1	0.13	-0.46	42.38	12.6219	0.0209	-0.045
322	SLE QP 2	0.13	-0.46	43.96	13.093	0.0221	-0.0447
322	SLD 1	4.25	0.3	43.64	13.0218	0.0284	-1.3388
322	SLD 2	4.69	0.42	43.77	13.057	0.028	-1.476
322	SLD 3	4.17	-0.92	43.02	12.9087	0.0269	-1.312
322	SLD 4	4.61	-0.81	43.15	12.9439	0.0265	-1.4492
322	SLD 5	1.41	1.61	44.77	13.237	0.0263	-0.4492
322	SLD 6	1.7	1.69	44.86	13.2601	0.026	-0.5392
322	SLD 7	1.13	-2.48	42.72	12.8598	0.0213	-0.3598
322	SLD 8	1.42	-2.41	42.8	12.8829	0.0211	-0.4498
322	SLD 9	-1.17	1.48	45.11	13.3031	0.0231	0.3603
322	SLD 10	-0.88	1.56	45.2	13.3262	0.0228	0.2703
322	SLD 11	-1.45	-2.61	43.05	12.9259	0.0181	0.4497
322	SLD 12	-1.16	-2.54	43.14	12.949	0.0178	0.3598
322	SLD 13	-4.35	-0.12	44.76	13.2422	0.0177	1.3597
322	SLD 14	-3.91	0	44.89	13.2774	0.0172	1.2225
322	SLD 15	-4.44	-1.35	44.15	13.129	0.0162	1.3865
322	SLD 16	-4	-1.23	44.28	13.1642	0.0157	1.2493
322	SLV 1	9.78	1.3	43.19	12.9229	0.0368	-3.0713
322	SLV 2	10.8	1.57	43.49	13.0049	0.0358	-3.3909
322	SLV 3	9.58	-1.5	41.79	12.6656	0.0334	-3.0096
322	SLV 4	10.61	-1.23	42.09	12.7477	0.0324	-3.3292
322	SLV 5	3.14	4.26	45.8	13.418	0.0318	-0.9913
322	SLV 6	3.8	4.43	45.99	13.4708	0.0312	-1.1972
322	SLV 7	2.49	-5.06	41.13	12.5606	0.0205	-0.7856
322	SLV 8	3.16	-4.89	41.32	12.6134	0.0199	-0.9915
322	SLV 9	-2.9	3.96	46.59	13.5726	0.0243	0.902
322	SLV 10	-2.24	4.13	46.78	13.6255	0.0236	0.6961
322	SLV 11	-3.54	-5.36	41.92	12.7152	0.013	1.1077
322	SLV 12	-2.88	-5.18	42.12	12.7681	0.0123	0.9018
322	SLV 13	-10.35	0.3	45.82	13.4384	0.0117	3.2397
322	SLV 14	-9.33	0.57	46.13	13.5204	0.0107	2.9201
322	SLV 15	-10.55	-2.5	44.42	13.1812	0.0083	3.3014
322	SLV 16	-9.52	-2.22	44.73	13.2632	0.0073	2.9818
322	CRTFP Ux+	0	0	0	0	0	0
322	CRTFP Ux-	0	0	0	0	0	0
322	CRTFP Uy+	0	0	0	0	0	0
322	CRTFP Uy-	0	0	0	0	0	0
323	SLU 1	0.13	-0.54	40.44	11.9909	0.0124	-0.0458
323	SLU 2	0.13	-0.48	40.47	11.9965	0.0126	-0.0437
323	SLU 3	0.14	-0.54	41.31	12.2475	0.0127	-0.0479
323	SLU 4	0.14	-0.5	41.33	12.2508	0.0128	-0.0467
323	SLU 5	0.13	-0.49	41.05	12.1652	0.0128	-0.0445
323	SLU 6	0.14	-0.55	41.89	12.4162	0.0129	-0.0488
323	SLU 7	0.14	-0.51	41.91	12.4195	0.013	-0.0475
323	SLU 8	0.14	-0.56	41.59	12.3283	0.0128	-0.0475
323	SLU 9	0.13	-0.52	41.61	12.3317	0.0129	-0.0462
323	SLU 10	0.12	-0.48	45.86	13.6022	0.0154	-0.0432
323	SLU 11	0.14	-0.55	46.7	13.8531	0.0155	-0.0474
323	SLU 12	0.13	-0.51	46.72	13.8565	0.0156	-0.0462
323	SLU 13	0.13	-0.49	46.44	13.7709	0.0156	-0.044

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
323	SLU 14	0.14	-0.56	47.28	14.0218	0.0157	-0.0483
323	SLU 15	0.13	-0.52	47.3	14.0252	0.0159	-0.047
323	SLU 16	0.13	-0.57	46.98	13.9339	0.0156	-0.047
323	SLU 17	0.13	-0.53	47	13.9373	0.0158	-0.0457
323	SLU 18	0.13	-0.55	48.14	14.2847	0.0164	-0.0451
323	SLU 19	0.12	-0.51	48.16	14.288	0.0166	-0.0438
323	SLU 20	0.13	-0.56	48.72	14.4534	0.0166	-0.0459
323	SLU 21	0.13	-0.52	48.74	14.4567	0.0168	-0.0447
323	SLU 22	0.16	-0.54	45.19	13.4006	0.0137	-0.0543
323	SLU 23	0.15	-0.47	45.22	13.4062	0.014	-0.0522
323	SLU 24	0.16	-0.54	46.06	13.6572	0.014	-0.0565
323	SLU 25	0.16	-0.5	46.07	13.6605	0.0142	-0.0552
323	SLU 26	0.15	-0.48	45.8	13.5749	0.0142	-0.0531
323	SLU 27	0.17	-0.55	46.63	13.8259	0.0142	-0.0573
323	SLU 28	0.16	-0.51	46.65	13.8292	0.0144	-0.056
323	SLU 29	0.16	-0.55	46.34	13.738	0.0141	-0.056
323	SLU 30	0.16	-0.52	46.36	13.7414	0.0143	-0.0548
323	SLU 31	0.15	-0.48	50.61	15.0118	0.0168	-0.0517
323	SLU 32	0.16	-0.54	51.45	15.2628	0.0169	-0.056
323	SLU 33	0.16	-0.5	51.47	15.2662	0.017	-0.0547
323	SLU 34	0.15	-0.49	51.19	15.1806	0.017	-0.0526
323	SLU 35	0.16	-0.55	52.02	15.4315	0.0171	-0.0568
323	SLU 36	0.16	-0.51	52.04	15.4349	0.0172	-0.0555
323	SLU 37	0.16	-0.56	51.73	15.3436	0.017	-0.0555
323	SLU 38	0.16	-0.52	51.75	15.347	0.0171	-0.0543
323	SLU 39	0.15	-0.55	52.89	15.6944	0.0178	-0.0536
323	SLU 40	0.15	-0.51	52.91	15.6977	0.0179	-0.0523
323	SLU 41	0.16	-0.55	53.46	15.8631	0.018	-0.0545
323	SLU 42	0.15	-0.52	53.48	15.8664	0.0181	-0.0532
323	SLU 43	0.16	-0.7	50.95	15.1048	0.0156	-0.0566
323	SLU 44	0.16	-0.64	50.98	15.1105	0.0158	-0.0545
323	SLU 45	0.17	-0.7	51.81	15.3614	0.0159	-0.0588
323	SLU 46	0.17	-0.67	51.83	15.3648	0.016	-0.0575
323	SLU 47	0.16	-0.65	51.55	15.2792	0.016	-0.0554
323	SLU 48	0.17	-0.71	52.39	15.5301	0.0161	-0.0596
323	SLU 49	0.17	-0.68	52.41	15.5335	0.0162	-0.0583
323	SLU 50	0.17	-0.72	52.1	15.4423	0.016	-0.0583
323	SLU 51	0.16	-0.68	52.12	15.4456	0.0161	-0.0571
323	SLU 52	0.15	-0.65	56.37	16.7161	0.0187	-0.054
323	SLU 53	0.17	-0.71	57.2	16.967	0.0187	-0.0583
323	SLU 54	0.16	-0.67	57.22	16.9704	0.0189	-0.057
323	SLU 55	0.16	-0.66	56.94	16.8848	0.0189	-0.0549
323	SLU 56	0.17	-0.72	57.78	17.1357	0.0189	-0.0591
323	SLU 57	0.17	-0.68	57.8	17.1391	0.0191	-0.0578
323	SLU 58	0.17	-0.73	57.49	17.0479	0.0189	-0.0578
323	SLU 59	0.16	-0.69	57.51	17.0513	0.019	-0.0566
323	SLU 60	0.16	-0.71	58.65	17.3986	0.0197	-0.0559
323	SLU 61	0.16	-0.67	58.67	17.402	0.0198	-0.0546
323	SLU 62	0.16	-0.72	59.22	17.5673	0.0199	-0.0568
323	SLU 63	0.16	-0.68	59.24	17.5707	0.02	-0.0555
323	SLU 64	0.19	-0.7	55.69	16.5145	0.017	-0.0652
323	SLU 65	0.18	-0.63	55.72	16.5202	0.0172	-0.063
323	SLU 66	0.2	-0.7	56.56	16.7711	0.0173	-0.0673
323	SLU 67	0.19	-0.66	56.58	16.7745	0.0174	-0.066
323	SLU 68	0.18	-0.64	56.3	16.6889	0.0174	-0.0639
323	SLU 69	0.2	-0.71	57.14	16.9398	0.0175	-0.0681
323	SLU 70	0.19	-0.67	57.16	16.9432	0.0176	-0.0669
323	SLU 71	0.19	-0.72	56.84	16.8519	0.0174	-0.0669
323	SLU 72	0.19	-0.68	56.86	16.8553	0.0175	-0.0656
323	SLU 73	0.18	-0.64	61.11	18.1258	0.0201	-0.0625
323	SLU 74	0.19	-0.71	61.95	18.3767	0.0201	-0.0668
323	SLU 75	0.19	-0.67	61.97	18.3801	0.0203	-0.0655
323	SLU 76	0.18	-0.65	61.69	18.2945	0.0203	-0.0634
323	SLU 77	0.19	-0.72	62.53	18.5454	0.0203	-0.0676
323	SLU 78	0.19	-0.68	62.55	18.5488	0.0205	-0.0664
323	SLU 79	0.19	-0.73	62.23	18.4576	0.0202	-0.0663
323	SLU 80	0.19	-0.69	62.25	18.4609	0.0204	-0.0651
323	SLU 81	0.18	-0.71	63.39	18.8083	0.021	-0.0644
323	SLU 82	0.18	-0.67	63.41	18.8117	0.0212	-0.0632
323	SLU 83	0.19	-0.72	63.97	18.977	0.0212	-0.0653
323	SLU 84	0.18	-0.68	63.99	18.9804	0.0214	-0.064
323	SLE RA 1	0.14	-0.54	41.8	12.3937	0.0128	-0.0483
323	SLE RA 2	0.14	-0.5	41.82	12.3974	0.0129	-0.0468
323	SLE RA 3	0.14	-0.54	42.38	12.5647	0.013	-0.0497
323	SLE RA 4	0.14	-0.51	42.39	12.567	0.013	-0.0488
323	SLE RA 5	0.14	-0.5	42.2	12.5099	0.013	-0.0474
323	SLE RA 6	0.15	-0.55	42.76	12.6772	0.0131	-0.0502
323	SLE RA 7	0.14	-0.52	42.77	12.6794	0.0132	-0.0494
323	SLE RA 8	0.14	-0.55	42.56	12.6186	0.013	-0.0494
323	SLE RA 9	0.14	-0.53	42.58	12.6209	0.0131	-0.0485
323	SLE RA 10	0.13	-0.5	45.41	13.4678	0.0148	-0.0465
323	SLE RA 11	0.14	-0.54	45.97	13.6351	0.0149	-0.0493
323	SLE RA 12	0.14	-0.52	45.98	13.6374	0.0149	-0.0485
323	SLE RA 13	0.14	-0.51	45.8	13.5803	0.0149	-0.0471
323	SLE RA 14	0.14	-0.55	46.35	13.7476	0.015	-0.0499
323	SLE RA 15	0.14	-0.52	46.37	13.7498	0.0151	-0.049
323	SLE RA 16	0.14	-0.56	46.16	13.689	0.0149	-0.049
323	SLE RA 17	0.14	-0.53	46.17	13.6913	0.015	-0.0482
323	SLE RA 18	0.14	-0.55	46.93	13.9228	0.0155	-0.0478
323	SLE RA 19	0.13	-0.52	46.94	13.9251	0.0156	-0.0469

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
323	SLE RA 20	0.14	-0.55	47.31	14.0353	0.0156	-0.0483
323	SLE RA 21	0.14	-0.53	47.33	14.0376	0.0157	-0.0475
323	SLE FR 1	0.14	-0.54	41.8	12.3937	0.0128	-0.0483
323	SLE FR 2	0.14	-0.53	41.8	12.3944	0.0128	-0.048
323	SLE FR 3	0.14	-0.54	41.95	12.4387	0.0128	-0.0485
323	SLE FR 4	0.14	-0.53	43.34	12.8532	0.0136	-0.0478
323	SLE FR 5	0.14	-0.54	43.49	12.8974	0.0136	-0.0483
323	SLE FR 6	0.14	-0.54	44.36	13.1583	0.0141	-0.048
323	SLE QP 1	0.14	-0.54	41.8	12.3937	0.0128	-0.0483
323	SLE QP 2	0.14	-0.54	43.34	12.8524	0.0136	-0.0481
323	SLD 1	4.28	0.28	42.78	12.7181	0.0207	-1.3455
323	SLD 2	4.72	0.42	42.93	12.7575	0.0203	-1.4832
323	SLD 3	4.19	-0.94	42.21	12.6238	0.0193	-1.3188
323	SLD 4	4.64	-0.79	42.36	12.6631	0.0189	-1.4565
323	SLD 5	1.43	1.53	44.01	12.9482	0.0178	-0.4534
323	SLD 6	1.72	1.62	44.1	12.974	0.0176	-0.5437
323	SLD 7	1.15	-2.53	42.11	12.6338	0.0133	-0.3643
323	SLD 8	1.44	-2.44	42.21	12.6596	0.013	-0.4546
323	SLD 9	-1.16	1.35	44.47	13.0453	0.0141	0.3584
323	SLD 10	-0.87	1.45	44.56	13.071	0.0138	0.2681
323	SLD 11	-1.44	-2.7	42.57	12.7309	0.0096	0.4474
323	SLD 12	-1.15	-2.61	42.67	12.7567	0.0093	0.3571
323	SLD 13	-4.36	-0.29	44.32	13.0417	0.0082	1.3603
323	SLD 14	-3.91	-0.15	44.46	13.081	0.0078	1.2225
323	SLD 15	-4.44	-1.51	43.75	12.9474	0.0068	1.387
323	SLD 16	-4	-1.36	43.89	12.9867	0.0064	1.2493
323	SLV 1	9.82	1.35	42.02	12.5353	0.0302	-3.0824
323	SLV 2	10.85	1.68	42.35	12.6268	0.0293	-3.4033
323	SLV 3	9.62	-1.43	40.73	12.3209	0.0271	-3.021
323	SLV 4	10.65	-1.09	41.06	12.4125	0.0262	-3.3418
323	SLV 5	3.16	4.17	44.84	13.0666	0.0234	-0.9964
323	SLV 6	3.82	4.38	45.06	13.1256	0.0228	-1.2032
323	SLV 7	2.51	-5.07	40.54	12.3521	0.0131	-0.7915
323	SLV 8	3.18	-4.85	40.75	12.4111	0.0125	-0.9982
323	SLV 9	-2.9	3.77	45.92	13.2938	0.0147	0.902
323	SLV 10	-2.24	3.98	46.14	13.3528	0.014	0.6953
323	SLV 11	-3.54	-5.47	41.62	12.5792	0.0043	1.1069
323	SLV 12	-2.88	-5.25	41.83	12.6382	0.0037	0.9002
323	SLV 13	-10.38	0.01	45.61	13.2924	0.001	3.2456
323	SLV 14	-9.35	0.34	45.95	13.3839	0	2.9247
323	SLV 15	-10.57	-2.76	44.32	13.078	-0.0021	3.307
323	SLV 16	-9.54	-2.43	44.66	13.1696	-0.0031	2.9862
323	CRTFP Ux+	0	0	0	0	0	0
323	CRTFP Ux-	0	0	0	0	0	0
323	CRTFP Uy+	0	0	0	0	0	0
323	CRTFP Uy-	0	0	0	0	0	0
324	SLU 1	0.14	-0.61	40.22	11.8969	-0.0003	-0.0491
324	SLU 2	0.14	-0.55	40.24	11.8997	-0.0001	-0.0469
324	SLU 3	0.15	-0.62	41.08	12.1514	-0.0004	-0.0513
324	SLU 4	0.15	-0.58	41.1	12.153	-0.0002	-0.05
324	SLU 5	0.14	-0.56	40.82	12.067	-0.0001	-0.0477
324	SLU 6	0.15	-0.63	41.66	12.3187	-0.0004	-0.0522
324	SLU 7	0.15	-0.59	41.67	12.3204	-0.0002	-0.0509
324	SLU 8	0.15	-0.63	41.37	12.2315	-0.0004	-0.0508
324	SLU 9	0.14	-0.6	41.38	12.2332	-0.0002	-0.0495
324	SLU 10	0.13	-0.56	45.57	13.4795	0.0009	-0.0467
324	SLU 11	0.15	-0.63	46.4	13.7312	0.0006	-0.0511
324	SLU 12	0.14	-0.59	46.42	13.7329	0.0008	-0.0498
324	SLU 13	0.14	-0.57	46.14	13.6469	0.0009	-0.0476
324	SLU 14	0.15	-0.64	46.98	13.8986	0.0006	-0.052
324	SLU 15	0.15	-0.6	46.99	13.9002	0.0008	-0.0507
324	SLU 16	0.15	-0.65	46.69	13.8114	0.0006	-0.0507
324	SLU 17	0.14	-0.61	46.7	13.8131	0.0008	-0.0494
324	SLU 18	0.14	-0.63	47.82	14.1538	0.0011	-0.0488
324	SLU 19	0.14	-0.6	47.84	14.1555	0.0012	-0.0475
324	SLU 20	0.14	-0.65	48.39	14.3211	0.0011	-0.0497
324	SLU 21	0.14	-0.61	48.41	14.3228	0.0012	-0.0484
324	SLU 22	0.17	-0.62	44.95	13.298	-0.0007	-0.058
324	SLU 23	0.16	-0.55	44.97	13.3008	-0.0005	-0.0558
324	SLU 24	0.18	-0.62	45.81	13.5525	-0.0007	-0.0602
324	SLU 25	0.17	-0.58	45.82	13.5542	-0.0006	-0.0589
324	SLU 26	0.17	-0.56	45.54	13.4681	-0.0005	-0.0567
324	SLU 27	0.18	-0.63	46.38	13.7198	-0.0007	-0.0611
324	SLU 28	0.17	-0.59	46.4	13.7215	-0.0006	-0.0598
324	SLU 29	0.17	-0.64	46.09	13.6327	-0.0007	-0.0598
324	SLU 30	0.17	-0.6	46.11	13.6344	-0.0006	-0.0585
324	SLU 31	0.16	-0.57	50.29	14.8806	0.0005	-0.0557
324	SLU 32	0.17	-0.64	51.13	15.1323	0.0003	-0.0601
324	SLU 33	0.17	-0.6	51.15	15.134	0.0004	-0.0588
324	SLU 34	0.16	-0.58	50.86	15.048	0.0005	-0.0566
324	SLU 35	0.18	-0.65	51.7	15.2997	0.0003	-0.061
324	SLU 36	0.17	-0.61	51.72	15.3014	0.0004	-0.0597
324	SLU 37	0.17	-0.65	51.41	15.2125	0.0003	-0.0596
324	SLU 38	0.17	-0.62	51.43	15.2142	0.0004	-0.0583
324	SLU 39	0.17	-0.64	52.55	15.5549	0.0007	-0.0578
324	SLU 40	0.16	-0.6	52.56	15.5566	0.0009	-0.0565
324	SLU 41	0.17	-0.65	53.12	15.7223	0.0007	-0.0587
324	SLU 42	0.17	-0.61	53.13	15.7239	0.0009	-0.0574
324	SLU 43	0.18	-0.79	50.67	14.9855	-0.0003	-0.0607
324	SLU 44	0.17	-0.73	50.69	14.9883	-0.0001	-0.0585

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
324	SLU 45	0.18	-0.8	51.53	15.24	-0.0003	-0.0629
324	SLU 46	0.18	-0.76	51.54	15.2417	-0.0002	-0.0616
324	SLU 47	0.17	-0.74	51.26	15.1557	-0.0001	-0.0594
324	SLU 48	0.19	-0.81	52.1	15.4074	-0.0004	-0.0638
324	SLU 49	0.18	-0.77	52.12	15.4091	-0.0002	-0.0625
324	SLU 50	0.18	-0.82	51.81	15.3202	-0.0003	-0.0625
324	SLU 51	0.18	-0.78	51.83	15.3219	-0.0002	-0.0612
324	SLU 52	0.17	-0.74	56.01	16.5682	0.0009	-0.0583
324	SLU 53	0.18	-0.81	56.85	16.8199	0.0006	-0.0628
324	SLU 54	0.18	-0.77	56.86	16.8216	0.0008	-0.0614
324	SLU 55	0.17	-0.76	56.58	16.7355	0.0009	-0.0592
324	SLU 56	0.18	-0.82	57.42	16.9872	0.0006	-0.0636
324	SLU 57	0.18	-0.78	57.44	16.9889	0.0008	-0.0623
324	SLU 58	0.18	-0.83	57.13	16.9001	0.0007	-0.0623
324	SLU 59	0.18	-0.79	57.15	16.9017	0.0008	-0.061
324	SLU 60	0.17	-0.82	58.27	17.2425	0.0011	-0.0605
324	SLU 61	0.17	-0.78	58.28	17.2441	0.0012	-0.0591
324	SLU 62	0.18	-0.83	58.84	17.4098	0.0011	-0.0614
324	SLU 63	0.17	-0.79	58.85	17.4115	0.0012	-0.06
324	SLU 64	0.2	-0.8	55.39	16.3867	-0.0007	-0.0697
324	SLU 65	0.2	-0.73	55.42	16.3895	-0.0005	-0.0675
324	SLU 66	0.21	-0.8	56.26	16.6412	-0.0007	-0.0719
324	SLU 67	0.21	-0.76	56.27	16.6428	-0.0006	-0.0706
324	SLU 68	0.2	-0.74	55.99	16.5568	-0.0005	-0.0684
324	SLU 69	0.21	-0.81	56.83	16.8085	-0.0007	-0.0728
324	SLU 70	0.21	-0.77	56.84	16.8102	-0.0006	-0.0715
324	SLU 71	0.21	-0.82	56.54	16.7213	-0.0007	-0.0715
324	SLU 72	0.2	-0.78	56.55	16.723	-0.0006	-0.0701
324	SLU 73	0.19	-0.75	60.74	17.9693	0.0005	-0.0673
324	SLU 74	0.21	-0.82	61.58	18.221	0.0003	-0.0717
324	SLU 75	0.2	-0.78	61.59	18.2227	0.0004	-0.0704
324	SLU 76	0.2	-0.76	61.31	18.1367	0.0005	-0.0682
324	SLU 77	0.21	-0.83	62.15	18.3884	0.0003	-0.0726
324	SLU 78	0.21	-0.79	62.16	18.39	0.0004	-0.0713
324	SLU 79	0.21	-0.84	61.86	18.3012	0.0003	-0.0713
324	SLU 80	0.2	-0.8	61.87	18.3029	0.0004	-0.07
324	SLU 81	0.2	-0.82	62.99	18.6436	0.0007	-0.0694
324	SLU 82	0.2	-0.78	63.01	18.6453	0.0009	-0.0681
324	SLU 83	0.2	-0.83	63.57	18.8109	0.0007	-0.0703
324	SLU 84	0.2	-0.79	63.58	18.8126	0.0009	-0.069
324	SLE RA 1	0.15	-0.61	41.57	12.2972	-0.0004	-0.0516
324	SLE RA 2	0.15	-0.57	41.59	12.299	-0.0003	-0.0502
324	SLE RA 3	0.15	-0.62	42.15	12.4668	-0.0005	-0.0531
324	SLE RA 4	0.15	-0.59	42.16	12.468	-0.0004	-0.0522
324	SLE RA 5	0.15	-0.58	41.97	12.4106	-0.0003	-0.0507
324	SLE RA 6	0.16	-0.62	42.53	12.5784	-0.0005	-0.0537
324	SLE RA 7	0.15	-0.6	42.54	12.5795	-0.0004	-0.0528
324	SLE RA 8	0.15	-0.63	42.33	12.5203	-0.0005	-0.0528
324	SLE RA 9	0.15	-0.6	42.34	12.5214	-0.0004	-0.0519
324	SLE RA 10	0.14	-0.58	45.13	13.3523	0.0004	-0.05
324	SLE RA 11	0.15	-0.63	45.69	13.5201	0.0002	-0.053
324	SLE RA 12	0.15	-0.6	45.7	13.5212	0.0003	-0.0521
324	SLE RA 13	0.15	-0.59	45.52	13.4638	0.0004	-0.0506
324	SLE RA 14	0.16	-0.63	46.07	13.6316	0.0002	-0.0536
324	SLE RA 15	0.15	-0.61	46.08	13.6328	0.0003	-0.0527
324	SLE RA 16	0.15	-0.64	45.88	13.5735	0.0002	-0.0527
324	SLE RA 17	0.15	-0.61	45.89	13.5747	0.0003	-0.0518
324	SLE RA 18	0.15	-0.63	46.64	13.8018	0.0005	-0.0515
324	SLE RA 19	0.15	-0.6	46.65	13.8029	0.0006	-0.0506
324	SLE RA 20	0.15	-0.64	47.02	13.9134	0.0005	-0.0521
324	SLE RA 21	0.15	-0.61	47.03	13.9145	0.0006	-0.0512
324	SLE FR 1	0.15	-0.61	41.57	12.2972	-0.0004	-0.0516
324	SLE FR 2	0.15	-0.6	41.57	12.2975	-0.0004	-0.0513
324	SLE FR 3	0.15	-0.62	41.72	12.3418	-0.0004	-0.0519
324	SLE FR 4	0.15	-0.61	43.09	12.7489	-0.0001	-0.0513
324	SLE FR 5	0.15	-0.62	43.24	12.7932	-0.0002	-0.0518
324	SLE FR 6	0.15	-0.62	44.1	13.0495	0	-0.0515
324	SLE QP 1	0.15	-0.61	41.57	12.2972	-0.0004	-0.0516
324	SLE QP 2	0.15	-0.62	43.09	12.7486	-0.0002	-0.0516
324	SLD 1	4.3	0.25	42.27	12.5403	0.0081	-1.3519
324	SLD 2	4.74	0.42	42.42	12.5841	0.0076	-1.4901
324	SLD 3	4.21	-0.95	41.74	12.4613	0.007	-1.3253
324	SLD 4	4.66	-0.78	41.89	12.505	0.0066	-1.4635
324	SLD 5	1.44	1.44	43.62	12.7983	0.004	-0.4574
324	SLD 6	1.73	1.55	43.72	12.8269	0.0037	-0.548
324	SLD 7	1.16	-2.58	41.85	12.5347	0.0005	-0.3688
324	SLD 8	1.45	-2.47	41.96	12.5633	0.0002	-0.4594
324	SLD 9	-1.15	1.23	44.22	12.9338	-0.0005	0.3563
324	SLD 10	-0.86	1.34	44.33	12.9625	-0.0008	0.2657
324	SLD 11	-1.43	-2.79	42.46	12.6702	-0.004	0.4448
324	SLD 12	-1.14	-2.68	42.56	12.6989	-0.0043	0.3542
324	SLD 13	-4.36	-0.45	44.29	12.9921	-0.0069	1.3604
324	SLD 14	-3.91	-0.28	44.45	13.0359	-0.0073	1.2222
324	SLD 15	-4.44	-1.66	43.76	12.9131	-0.0079	1.3869
324	SLD 16	-4	-1.49	43.92	12.9568	-0.0084	1.2487
324	SLV 1	9.85	1.39	41.14	12.2589	0.019	-3.0927
324	SLV 2	10.88	1.78	41.51	12.3608	0.018	-3.4146
324	SLV 3	9.65	-1.36	39.94	12.0792	0.0166	-3.0316
324	SLV 4	10.69	-0.97	40.31	12.181	0.0156	-3.3535
324	SLV 5	3.17	4.08	44.26	12.8567	0.0094	-1.0012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
324	SLV 6	3.84	4.33	44.5	12.9223	0.0088	-1.2086
324	SLV 7	2.53	-5.07	40.26	12.2576	0.0014	-0.7975
324	SLV 8	3.2	-4.82	40.5	12.3233	0.0007	-1.0049
324	SLV 9	-2.9	3.58	45.68	13.1739	-0.0011	0.9017
324	SLV 10	-2.23	3.84	45.92	13.2395	-0.0017	0.6943
324	SLV 11	-3.54	-5.57	41.68	12.5748	-0.0091	1.1055
324	SLV 12	-2.87	-5.32	41.92	12.6404	-0.0097	0.898
324	SLV 13	-10.39	-0.27	45.87	13.3161	-0.0159	3.2503
324	SLV 14	-9.35	0.12	46.24	13.418	-0.0169	2.9285
324	SLV 15	-10.58	-3.01	44.67	13.1364	-0.0183	3.3115
324	SLV 16	-9.55	-2.62	45.04	13.2382	-0.0194	2.9896
324	CRTFP Ux+	0	0	0	0	0	0
324	CRTFP Ux-	0	0	0	0	0	0
324	CRTFP Uy+	0	0	0	0	0	0
324	CRTFP Uy-	0	0	0	0	0	0
325	SLU 1	0.15	-0.68	40.45	11.967	-0.0142	-0.0522
325	SLU 2	0.15	-0.62	40.46	11.9671	-0.014	-0.0499
325	SLU 3	0.16	-0.69	41.32	12.2235	-0.0146	-0.0545
325	SLU 4	0.16	-0.65	41.33	12.2236	-0.0145	-0.0531
325	SLU 5	0.15	-0.63	41.04	12.1358	-0.0143	-0.0508
325	SLU 6	0.16	-0.7	41.89	12.3922	-0.0148	-0.0555
325	SLU 7	0.16	-0.66	41.9	12.3923	-0.0147	-0.0541
325	SLU 8	0.16	-0.71	41.6	12.3044	-0.0147	-0.0541
325	SLU 9	0.15	-0.67	41.61	12.3044	-0.0146	-0.0527
325	SLU 10	0.14	-0.64	45.78	13.5451	-0.0151	-0.05
325	SLU 11	0.16	-0.71	46.63	13.8015	-0.0157	-0.0547
325	SLU 12	0.15	-0.68	46.64	13.8016	-0.0156	-0.0533
325	SLU 13	0.15	-0.66	46.36	13.7138	-0.0153	-0.051
325	SLU 14	0.16	-0.73	47.21	13.9702	-0.0159	-0.0556
325	SLU 15	0.16	-0.69	47.22	13.9703	-0.0158	-0.0542
325	SLU 16	0.16	-0.73	46.92	13.8824	-0.0158	-0.0542
325	SLU 17	0.15	-0.69	46.93	13.8825	-0.0157	-0.0528
325	SLU 18	0.15	-0.72	48.04	14.2213	-0.0158	-0.0524
325	SLU 19	0.15	-0.68	48.05	14.2214	-0.0157	-0.051
325	SLU 20	0.15	-0.73	48.62	14.39	-0.016	-0.0533
325	SLU 21	0.15	-0.69	48.63	14.3901	-0.0159	-0.0519
325	SLU 22	0.18	-0.7	45.21	13.3816	-0.0165	-0.0616
325	SLU 23	0.17	-0.63	45.23	13.3818	-0.0163	-0.0593
325	SLU 24	0.19	-0.7	46.08	13.6382	-0.0168	-0.064
325	SLU 25	0.18	-0.66	46.09	13.6383	-0.0167	-0.0626
325	SLU 26	0.18	-0.65	45.81	13.5505	-0.0165	-0.0603
325	SLU 27	0.19	-0.72	46.66	13.8069	-0.0171	-0.0649
325	SLU 28	0.19	-0.68	46.67	13.8069	-0.0169	-0.0635
325	SLU 29	0.19	-0.72	46.37	13.719	-0.0169	-0.0635
325	SLU 30	0.18	-0.68	46.38	13.7191	-0.0168	-0.0621
325	SLU 31	0.17	-0.66	50.55	14.9598	-0.0173	-0.0595
325	SLU 32	0.19	-0.73	51.4	15.2162	-0.0179	-0.0641
325	SLU 33	0.18	-0.69	51.41	15.2163	-0.0178	-0.0627
325	SLU 34	0.18	-0.67	51.13	15.1285	-0.0176	-0.0604
325	SLU 35	0.19	-0.74	51.98	15.3849	-0.0181	-0.065
325	SLU 36	0.19	-0.7	51.99	15.385	-0.018	-0.0636
325	SLU 37	0.19	-0.75	51.69	15.297	-0.018	-0.0636
325	SLU 38	0.18	-0.71	51.7	15.2971	-0.0179	-0.0623
325	SLU 39	0.18	-0.73	52.81	15.636	-0.018	-0.0618
325	SLU 40	0.17	-0.69	52.82	15.636	-0.0179	-0.0604
325	SLU 41	0.18	-0.75	53.39	15.8046	-0.0182	-0.0628
325	SLU 42	0.18	-0.71	53.4	15.8047	-0.0181	-0.0614
325	SLU 43	0.19	-0.89	50.95	15.0721	-0.0177	-0.0646
325	SLU 44	0.18	-0.82	50.96	15.0722	-0.0175	-0.0623
325	SLU 45	0.2	-0.89	51.81	15.3286	-0.0181	-0.067
325	SLU 46	0.19	-0.85	51.82	15.3287	-0.018	-0.0656
325	SLU 47	0.18	-0.83	51.54	15.2409	-0.0178	-0.0633
325	SLU 48	0.2	-0.9	52.39	15.4973	-0.0183	-0.0679
325	SLU 49	0.19	-0.86	52.4	15.4974	-0.0182	-0.0665
325	SLU 50	0.19	-0.91	52.1	15.4094	-0.0182	-0.0665
325	SLU 51	0.19	-0.87	52.11	15.4095	-0.0181	-0.0651
325	SLU 52	0.18	-0.84	56.28	16.6502	-0.0186	-0.0625
325	SLU 53	0.19	-0.92	57.13	16.9066	-0.0192	-0.0671
325	SLU 54	0.19	-0.88	57.14	16.9067	-0.0191	-0.0657
325	SLU 55	0.18	-0.86	56.86	16.8189	-0.0189	-0.0634
325	SLU 56	0.2	-0.93	57.71	17.0753	-0.0194	-0.068
325	SLU 57	0.19	-0.89	57.72	17.0754	-0.0193	-0.0666
325	SLU 58	0.19	-0.93	57.42	16.9874	-0.0193	-0.0666
325	SLU 59	0.19	-0.9	57.43	16.9875	-0.0192	-0.0653
325	SLU 60	0.19	-0.92	58.54	17.3264	-0.0193	-0.0648
325	SLU 61	0.18	-0.88	58.55	17.3265	-0.0192	-0.0634
325	SLU 62	0.19	-0.93	59.12	17.4951	-0.0195	-0.0657
325	SLU 63	0.19	-0.89	59.13	17.4951	-0.0194	-0.0644
325	SLU 64	0.22	-0.9	55.71	16.4867	-0.02	-0.0741
325	SLU 65	0.21	-0.83	55.73	16.4868	-0.0198	-0.0718
325	SLU 66	0.22	-0.91	56.58	16.7432	-0.0203	-0.0764
325	SLU 67	0.22	-0.87	56.59	16.7433	-0.0202	-0.075
325	SLU 68	0.21	-0.85	56.31	16.6555	-0.02	-0.0727
325	SLU 69	0.23	-0.92	57.16	16.9119	-0.0206	-0.0773
325	SLU 70	0.22	-0.88	57.17	16.912	-0.0204	-0.0759
325	SLU 71	0.22	-0.92	56.87	16.8241	-0.0204	-0.0759
325	SLU 72	0.22	-0.89	56.88	16.8242	-0.0203	-0.0746
325	SLU 73	0.21	-0.86	61.05	18.0649	-0.0208	-0.0719
325	SLU 74	0.22	-0.93	61.9	18.3213	-0.0214	-0.0765
325	SLU 75	0.22	-0.89	61.91	18.3214	-0.0213	-0.0751

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
325	SLU 76	0.21	-0.87	61.62	18.2336	-0.0211	-0.0728
325	SLU 77	0.23	-0.94	62.48	18.49	-0.0217	-0.0774
325	SLU 78	0.22	-0.9	62.49	18.49	-0.0215	-0.0761
325	SLU 79	0.22	-0.95	62.18	18.4021	-0.0215	-0.0761
325	SLU 80	0.22	-0.91	62.19	18.4022	-0.0214	-0.0747
325	SLU 81	0.22	-0.93	63.31	18.741	-0.0215	-0.0742
325	SLU 82	0.21	-0.89	63.32	18.7411	-0.0214	-0.0729
325	SLU 83	0.22	-0.95	63.89	18.9097	-0.0218	-0.0752
325	SLU 84	0.21	-0.91	63.9	18.9098	-0.0216	-0.0738
325	SLE RA 1	0.16	-0.69	41.81	12.3712	-0.0149	-0.0549
325	SLE RA 2	0.16	-0.64	41.82	12.3713	-0.0147	-0.0534
325	SLE RA 3	0.17	-0.69	42.39	12.5422	-0.0151	-0.0564
325	SLE RA 4	0.16	-0.67	42.4	12.5423	-0.015	-0.0555
325	SLE RA 5	0.16	-0.65	42.2	12.4837	-0.0149	-0.054
325	SLE RA 6	0.17	-0.7	42.77	12.6547	-0.0153	-0.0571
325	SLE RA 7	0.16	-0.67	42.78	12.6547	-0.0152	-0.0562
325	SLE RA 8	0.16	-0.71	42.58	12.5961	-0.0152	-0.0561
325	SLE RA 9	0.16	-0.68	42.58	12.5961	-0.0151	-0.0552
325	SLE RA 10	0.16	-0.66	45.37	13.4233	-0.0155	-0.0535
325	SLE RA 11	0.16	-0.71	45.93	13.5942	-0.0158	-0.0565
325	SLE RA 12	0.16	-0.68	45.94	13.5943	-0.0158	-0.0556
325	SLE RA 13	0.16	-0.67	45.75	13.5357	-0.0156	-0.0541
325	SLE RA 14	0.17	-0.72	46.32	13.7067	-0.016	-0.0572
325	SLE RA 15	0.16	-0.69	46.32	13.7067	-0.0159	-0.0562
325	SLE RA 16	0.16	-0.72	46.12	13.6481	-0.0159	-0.0562
325	SLE RA 17	0.16	-0.7	46.13	13.6482	-0.0158	-0.0553
325	SLE RA 18	0.16	-0.71	46.87	13.874	-0.0159	-0.055
325	SLE RA 19	0.16	-0.69	46.88	13.8741	-0.0158	-0.0541
325	SLE RA 20	0.16	-0.72	47.26	13.9865	-0.0161	-0.0556
325	SLE RA 21	0.16	-0.69	47.26	13.9866	-0.016	-0.0547
325	SLE FR 1	0.16	-0.69	41.81	12.3712	-0.0149	-0.0549
325	SLE FR 2	0.16	-0.68	41.81	12.3712	-0.0148	-0.0546
325	SLE FR 3	0.16	-0.69	41.96	12.4162	-0.0149	-0.0551
325	SLE FR 4	0.16	-0.69	43.33	12.8221	-0.0152	-0.0546
325	SLE FR 5	0.16	-0.7	43.48	12.867	-0.0152	-0.0552
325	SLE FR 6	0.16	-0.7	44.34	13.1226	-0.0154	-0.055
325	SLE QP 1	0.16	-0.69	41.81	12.3712	-0.0149	-0.0549
325	SLE QP 2	0.16	-0.7	43.33	12.822	-0.0152	-0.0549
325	SLD 1	4.31	0.22	42.19	12.5258	-0.0057	-1.358
325	SLD 2	4.76	0.42	42.37	12.5747	-0.0062	-1.4967
325	SLD 3	4.23	-0.97	41.69	12.4565	-0.0064	-1.3317
325	SLD 4	4.67	-0.78	41.86	12.5054	-0.0069	-1.4703
325	SLD 5	1.45	1.36	43.72	12.8296	-0.0112	-0.4612
325	SLD 6	1.74	1.48	43.84	12.8616	-0.0115	-0.5521
325	SLD 7	1.18	-2.63	42.04	12.5986	-0.0135	-0.3733
325	SLD 8	1.47	-2.5	42.15	12.6306	-0.0138	-0.4642
325	SLD 9	-1.15	1.11	44.5	13.0135	-0.0166	0.3543
325	SLD 10	-0.85	1.23	44.62	13.0455	-0.0169	0.2634
325	SLD 11	-1.42	-2.88	42.82	12.7825	-0.0188	0.4423
325	SLD 12	-1.13	-2.75	42.93	12.8145	-0.0191	0.3514
325	SLD 13	-4.35	-0.61	44.79	13.1387	-0.0235	1.3604
325	SLD 14	-3.91	-0.42	44.97	13.1875	-0.024	1.2218
325	SLD 15	-4.44	-1.81	44.29	13.0694	-0.0242	1.3868
325	SLD 16	-3.99	-1.62	44.46	13.1182	-0.0247	1.2482
325	SLV 1	9.87	1.42	40.65	12.1269	0.007	-3.1027
325	SLV 2	10.9	1.87	41.06	12.2405	0.0059	-3.4256
325	SLV 3	9.68	-1.3	39.51	11.9694	0.0054	-3.042
325	SLV 4	10.71	-0.85	39.92	12.0831	0.0043	-3.3649
325	SLV 5	3.18	3.99	44.19	12.8327	-0.006	-1.0058
325	SLV 6	3.85	4.28	44.45	12.906	-0.0067	-1.2138
325	SLV 7	2.55	-5.08	40.38	12.3078	-0.0112	-0.8033
325	SLV 8	3.21	-4.79	40.64	12.3811	-0.0119	-1.0114
325	SLV 9	-2.89	3.4	46.02	13.263	-0.0185	0.9016
325	SLV 10	-2.23	3.69	46.28	13.3362	-0.0192	0.6935
325	SLV 11	-3.53	-5.67	42.2	12.7381	-0.0237	1.104
325	SLV 12	-2.86	-5.38	42.47	12.8113	-0.0244	0.8959
325	SLV 13	-10.39	-0.54	46.74	13.561	-0.0347	3.255
325	SLV 14	-9.36	-0.09	47.15	13.6747	-0.0358	2.9321
325	SLV 15	-10.58	-3.26	45.6	13.4035	-0.0362	3.3157
325	SLV 16	-9.55	-2.81	46.01	13.5172	-0.0374	2.9928
325	CRTFP Ux+	0	0	0	0	0	0
325	CRTFP Ux-	0	0	0	0	0	0
325	CRTFP Uy+	0	0	0	0	0	0
325	CRTFP Uy-	0	0	0	0	0	0
326	SLU 1	0.16	-0.76	41.07	12.1877	-0.0257	-0.0548
326	SLU 2	0.15	-0.69	41.08	12.1854	-0.0255	-0.0525
326	SLU 3	0.17	-0.76	41.95	12.4501	-0.0264	-0.0573
326	SLU 4	0.16	-0.72	41.96	12.4487	-0.0263	-0.0558
326	SLU 5	0.16	-0.7	41.66	12.3579	-0.026	-0.0534
326	SLU 6	0.17	-0.78	42.54	12.6226	-0.0268	-0.0582
326	SLU 7	0.17	-0.74	42.55	12.6212	-0.0267	-0.0568
326	SLU 8	0.17	-0.78	42.24	12.5327	-0.0266	-0.0568
326	SLU 9	0.16	-0.74	42.25	12.5313	-0.0265	-0.0554
326	SLU 10	0.15	-0.72	46.45	13.7844	-0.0284	-0.0528
326	SLU 11	0.17	-0.8	47.33	14.0491	-0.0292	-0.0576
326	SLU 12	0.16	-0.76	47.34	14.0477	-0.0291	-0.0562
326	SLU 13	0.16	-0.74	47.04	13.9569	-0.0288	-0.0538
326	SLU 14	0.17	-0.81	47.92	14.2216	-0.0297	-0.0586
326	SLU 15	0.17	-0.77	47.92	14.2202	-0.0295	-0.0571
326	SLU 16	0.17	-0.82	47.62	14.1317	-0.0294	-0.0571

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
326	SLU 17	0.16	-0.78	47.62	14.1304	-0.0293	-0.0557
326	SLU 18	0.16	-0.8	48.75	14.472	-0.0298	-0.0553
326	SLU 19	0.16	-0.76	48.75	14.4706	-0.0297	-0.0539
326	SLU 20	0.16	-0.82	49.34	14.6445	-0.0302	-0.0563
326	SLU 21	0.16	-0.78	49.34	14.6431	-0.0301	-0.0549
326	SLU 22	0.19	-0.78	45.93	13.6362	-0.0295	-0.0647
326	SLU 23	0.18	-0.71	45.94	13.6339	-0.0293	-0.0623
326	SLU 24	0.2	-0.79	46.82	13.8986	-0.0302	-0.0672
326	SLU 25	0.19	-0.75	46.82	13.8972	-0.03	-0.0657
326	SLU 26	0.19	-0.73	46.53	13.8064	-0.0297	-0.0633
326	SLU 27	0.2	-0.8	47.41	14.0711	-0.0306	-0.0681
326	SLU 28	0.2	-0.76	47.41	14.0697	-0.0305	-0.0667
326	SLU 29	0.2	-0.81	47.11	13.9812	-0.0304	-0.0667
326	SLU 30	0.19	-0.77	47.11	13.9799	-0.0303	-0.0653
326	SLU 31	0.18	-0.75	51.32	15.2329	-0.0322	-0.0627
326	SLU 32	0.2	-0.82	52.2	15.4976	-0.033	-0.0675
326	SLU 33	0.19	-0.78	52.2	15.4962	-0.0329	-0.0661
326	SLU 34	0.19	-0.76	51.91	15.4054	-0.0326	-0.0637
326	SLU 35	0.2	-0.83	52.78	15.6701	-0.0335	-0.0685
326	SLU 36	0.2	-0.79	52.79	15.6687	-0.0333	-0.067
326	SLU 37	0.2	-0.84	52.48	15.5802	-0.0332	-0.067
326	SLU 38	0.19	-0.8	52.49	15.5789	-0.0331	-0.0656
326	SLU 39	0.19	-0.83	53.61	15.9205	-0.0336	-0.0652
326	SLU 40	0.19	-0.79	53.62	15.9191	-0.0335	-0.0638
326	SLU 41	0.19	-0.84	54.2	16.093	-0.034	-0.0662
326	SLU 42	0.19	-0.8	54.21	16.0916	-0.0339	-0.0648
326	SLU 43	0.2	-0.97	51.72	15.3474	-0.0321	-0.0679
326	SLU 44	0.19	-0.91	51.73	15.3451	-0.0319	-0.0655
326	SLU 45	0.21	-0.98	52.61	15.6097	-0.0328	-0.0703
326	SLU 46	0.2	-0.94	52.61	15.6084	-0.0327	-0.0689
326	SLU 47	0.2	-0.92	52.32	15.5176	-0.0324	-0.0665
326	SLU 48	0.21	-1	53.19	15.7823	-0.0332	-0.0713
326	SLU 49	0.21	-0.96	53.2	15.7809	-0.0331	-0.0699
326	SLU 50	0.21	-1	52.89	15.6924	-0.033	-0.0699
326	SLU 51	0.2	-0.96	52.9	15.691	-0.0329	-0.0684
326	SLU 52	0.19	-0.94	57.11	16.9441	-0.0348	-0.0659
326	SLU 53	0.21	-1.01	57.98	17.2087	-0.0356	-0.0707
326	SLU 54	0.2	-0.97	57.99	17.2074	-0.0355	-0.0692
326	SLU 55	0.19	-0.95	57.69	17.1166	-0.0352	-0.0668
326	SLU 56	0.21	-1.03	58.57	17.3813	-0.0361	-0.0716
326	SLU 57	0.2	-0.99	58.57	17.3799	-0.036	-0.0702
326	SLU 58	0.2	-1.04	58.27	17.2914	-0.0358	-0.0702
326	SLU 59	0.2	-1	58.28	17.29	-0.0357	-0.0688
326	SLU 60	0.2	-1.02	59.4	17.6317	-0.0362	-0.0684
326	SLU 61	0.19	-0.98	59.41	17.6303	-0.0361	-0.067
326	SLU 62	0.2	-1.04	59.99	17.8042	-0.0366	-0.0694
326	SLU 63	0.2	-1	59.99	17.8028	-0.0365	-0.0679
326	SLU 64	0.23	-1	56.59	16.7959	-0.0359	-0.0778
326	SLU 65	0.22	-0.93	56.59	16.7936	-0.0357	-0.0754
326	SLU 66	0.24	-1.01	57.47	17.0582	-0.0366	-0.0802
326	SLU 67	0.23	-0.96	57.48	17.0569	-0.0365	-0.0788
326	SLU 68	0.22	-0.94	57.18	16.9661	-0.0362	-0.0764
326	SLU 69	0.24	-1.02	58.06	17.2308	-0.037	-0.0812
326	SLU 70	0.24	-0.98	58.06	17.2294	-0.0369	-0.0798
326	SLU 71	0.24	-1.03	57.76	17.1409	-0.0368	-0.0798
326	SLU 72	0.23	-0.99	57.77	17.1395	-0.0367	-0.0783
326	SLU 73	0.22	-0.96	61.97	18.3926	-0.0386	-0.0757
326	SLU 74	0.24	-1.04	62.85	18.6573	-0.0394	-0.0806
326	SLU 75	0.23	-1	62.85	18.6559	-0.0393	-0.0791
326	SLU 76	0.22	-0.98	62.56	18.5651	-0.039	-0.0767
326	SLU 77	0.24	-1.05	63.43	18.8298	-0.0399	-0.0815
326	SLU 78	0.23	-1.01	63.44	18.8284	-0.0398	-0.0801
326	SLU 79	0.23	-1.06	63.14	18.7399	-0.0396	-0.0801
326	SLU 80	0.23	-1.02	63.14	18.7385	-0.0395	-0.0787
326	SLU 81	0.23	-1.04	64.27	19.0802	-0.04	-0.0783
326	SLU 82	0.22	-1	64.27	19.0788	-0.0399	-0.0768
326	SLU 83	0.23	-1.06	64.85	19.2527	-0.0404	-0.0793
326	SLU 84	0.23	-1.02	64.86	19.2513	-0.0403	-0.0778
326	SLE RA 1	0.17	-0.76	42.46	12.6015	-0.0268	-0.0577
326	SLE RA 2	0.17	-0.72	42.46	12.6	-0.0267	-0.0561
326	SLE RA 3	0.17	-0.77	43.05	12.7765	-0.0272	-0.0593
326	SLE RA 4	0.17	-0.74	43.05	12.7755	-0.0272	-0.0583
326	SLE RA 5	0.17	-0.73	42.86	12.715	-0.027	-0.0567
326	SLE RA 6	0.18	-0.78	43.44	12.8915	-0.0275	-0.0599
326	SLE RA 7	0.17	-0.75	43.44	12.8906	-0.0274	-0.059
326	SLE RA 8	0.17	-0.78	43.24	12.8316	-0.0274	-0.059
326	SLE RA 9	0.17	-0.75	43.24	12.8307	-0.0273	-0.058
326	SLE RA 10	0.16	-0.74	46.05	13.666	-0.0286	-0.0563
326	SLE RA 11	0.17	-0.79	46.63	13.8425	-0.0291	-0.0595
326	SLE RA 12	0.17	-0.76	46.64	13.8416	-0.0291	-0.0586
326	SLE RA 13	0.17	-0.75	46.44	13.781	-0.0289	-0.057
326	SLE RA 14	0.18	-0.8	47.02	13.9575	-0.0294	-0.0602
326	SLE RA 15	0.17	-0.77	47.03	13.9566	-0.0294	-0.0592
326	SLE RA 16	0.17	-0.8	46.82	13.8976	-0.0293	-0.0592
326	SLE RA 17	0.17	-0.78	46.83	13.8967	-0.0292	-0.0582
326	SLE RA 18	0.17	-0.79	47.58	14.1244	-0.0295	-0.058
326	SLE RA 19	0.17	-0.77	47.58	14.1235	-0.0294	-0.057
326	SLE RA 20	0.17	-0.8	47.97	14.2394	-0.0298	-0.0586
326	SLE RA 21	0.17	-0.78	47.97	14.2385	-0.0297	-0.0577
326	SLE FR 1	0.17	-0.76	42.46	12.6015	-0.0268	-0.0577

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
326	SLE FR 2	0.17	-0.75	42.46	12.6012	-0.0268	-0.0574
326	SLE FR 3	0.17	-0.77	42.61	12.6476	-0.0269	-0.0579
326	SLE FR 4	0.17	-0.76	44	13.0581	-0.0276	-0.0575
326	SLE FR 5	0.17	-0.78	44.15	13.1044	-0.0277	-0.058
326	SLE FR 6	0.17	-0.78	45.02	13.363	-0.0282	-0.0578
326	SLE QP 1	0.17	-0.76	42.46	12.6015	-0.0268	-0.0577
326	SLE QP 2	0.17	-0.77	43.99	13.0584	-0.0276	-0.0578
326	SLD 1	4.32	0.19	42.5	12.658	-0.0171	-1.364
326	SLD 2	4.76	0.4	42.7	12.7127	-0.0177	-1.5031
326	SLD 3	4.24	-1	42.01	12.592	-0.0167	-1.3378
326	SLD 4	4.68	-0.78	42.2	12.6468	-0.0172	-1.4769
326	SLD 5	1.46	1.27	44.27	13.0285	-0.0251	-0.4647
326	SLD 6	1.75	1.42	44.39	13.0644	-0.0254	-0.5559
326	SLD 7	1.19	-2.67	42.61	12.8088	-0.0235	-0.3773
326	SLD 8	1.48	-2.53	42.74	12.8447	-0.0239	-0.4685
326	SLD 9	-1.14	0.99	45.25	13.2722	-0.0313	0.3529
326	SLD 10	-0.85	1.13	45.38	13.308	-0.0317	0.2617
326	SLD 11	-1.41	-2.96	43.6	13.0524	-0.0298	0.4404
326	SLD 12	-1.12	-2.82	43.72	13.0883	-0.0302	0.3492
326	SLD 13	-4.34	-0.76	45.79	13.47	-0.038	1.3614
326	SLD 14	-3.9	-0.55	45.98	13.5248	-0.0386	1.2222
326	SLD 15	-4.42	-1.95	45.29	13.4041	-0.0376	1.3876
326	SLD 16	-3.98	-1.73	45.48	13.4589	-0.0381	1.2485
326	SLV 1	9.87	1.44	40.49	12.1194	-0.003	-3.1129
326	SLV 2	10.91	1.94	40.94	12.2469	-0.0043	-3.4369
326	SLV 3	9.68	-1.26	39.36	11.9696	-0.002	-3.0525
326	SLV 4	10.72	-0.76	39.81	12.0971	-0.0033	-3.3765
326	SLV 5	3.19	3.89	44.57	12.9819	-0.0216	-1.0101
326	SLV 6	3.86	4.22	44.86	13.064	-0.0225	-1.2189
326	SLV 7	2.56	-5.09	40.82	12.4827	-0.0181	-0.8088
326	SLV 8	3.23	-4.77	41.11	12.5648	-0.0189	-1.0176
326	SLV 9	-2.89	3.23	46.88	13.552	-0.0363	0.9021
326	SLV 10	-2.22	3.55	47.17	13.6341	-0.0371	0.6932
326	SLV 11	-3.52	-5.76	43.13	13.0528	-0.0328	1.1034
326	SLV 12	-2.85	-5.44	43.42	13.1349	-0.0336	0.8946
326	SLV 13	-10.38	-0.78	48.17	14.0197	-0.052	3.261
326	SLV 14	-9.34	-0.28	48.62	14.1472	-0.0532	2.9369
326	SLV 15	-10.57	-3.48	47.05	13.87	-0.0509	3.3214
326	SLV 16	-9.53	-2.98	47.5	13.9974	-0.0522	2.9973
326	CRTFP Ux+	0	0	0	0	0	0
326	CRTFP Ux-	0	0	0	0	0	0
326	CRTFP Uy+	0	0	0	0	0	0
326	CRTFP Uy-	0	0	0	0	0	0
327	SLU 1	0.14	-0.7	35.93	10.5403	0.9166	-0.0291
327	SLU 2	0.14	-0.64	35.93	10.5366	0.9167	-0.0285
327	SLU 3	0.15	-0.7	36.71	10.7684	0.9363	-0.031
327	SLU 4	0.15	-0.67	36.71	10.7662	0.9364	-0.0306
327	SLU 5	0.14	-0.65	36.45	10.6866	0.9298	-0.029
327	SLU 6	0.15	-0.72	37.22	10.9183	0.9494	-0.0315
327	SLU 7	0.15	-0.68	37.23	10.9161	0.9495	-0.0311
327	SLU 8	0.15	-0.72	36.96	10.8401	0.9428	-0.0301
327	SLU 9	0.15	-0.69	36.96	10.838	0.9429	-0.0298
327	SLU 10	0.14	-0.67	40.63	11.9155	1.0366	-0.0279
327	SLU 11	0.15	-0.74	41.4	12.1473	1.0562	-0.0304
327	SLU 12	0.15	-0.7	41.4	12.1451	1.0563	-0.03
327	SLU 13	0.14	-0.69	41.14	12.0655	1.0497	-0.0284
327	SLU 14	0.15	-0.75	41.92	12.2972	1.0693	-0.0309
327	SLU 15	0.15	-0.72	41.92	12.295	1.0694	-0.0305
327	SLU 16	0.15	-0.76	41.66	12.219	1.0627	-0.0295
327	SLU 17	0.15	-0.72	41.66	12.2169	1.0628	-0.0291
327	SLU 18	0.14	-0.75	42.64	12.5101	1.0879	-0.0282
327	SLU 19	0.14	-0.71	42.64	12.5079	1.088	-0.0279
327	SLU 20	0.15	-0.76	43.15	12.6601	1.101	-0.0287
327	SLU 21	0.14	-0.72	43.15	12.6579	1.101	-0.0284
327	SLU 22	0.17	-0.72	40.21	11.8002	1.0253	-0.037
327	SLU 23	0.16	-0.66	40.21	11.7966	1.0254	-0.0365
327	SLU 24	0.18	-0.73	40.99	12.0283	1.045	-0.0389
327	SLU 25	0.17	-0.7	40.99	12.0261	1.0451	-0.0386
327	SLU 26	0.17	-0.68	40.73	11.9465	1.0385	-0.037
327	SLU 27	0.18	-0.74	41.5	12.1783	1.0581	-0.0394
327	SLU 28	0.18	-0.71	41.51	12.1761	1.0582	-0.0391
327	SLU 29	0.18	-0.75	41.24	12.1001	1.0515	-0.038
327	SLU 30	0.17	-0.71	41.24	12.0979	1.0515	-0.0377
327	SLU 31	0.16	-0.7	44.91	13.1755	1.1453	-0.0358
327	SLU 32	0.18	-0.77	45.68	13.4072	1.1649	-0.0383
327	SLU 33	0.17	-0.73	45.68	13.405	1.165	-0.0379
327	SLU 34	0.17	-0.71	45.42	13.3254	1.1584	-0.0363
327	SLU 35	0.18	-0.78	46.2	13.5572	1.178	-0.0388
327	SLU 36	0.18	-0.74	46.2	13.555	1.1781	-0.0384
327	SLU 37	0.18	-0.78	45.93	13.479	1.1713	-0.0374
327	SLU 38	0.17	-0.75	45.94	13.4768	1.1714	-0.0371
327	SLU 39	0.17	-0.77	46.92	13.7701	1.1965	-0.0362
327	SLU 40	0.17	-0.74	46.92	13.7679	1.1966	-0.0358
327	SLU 41	0.17	-0.79	47.43	13.92	1.2096	-0.0367
327	SLU 42	0.17	-0.75	47.43	13.9178	1.2097	-0.0363
327	SLU 43	0.18	-0.89	45.24	13.2704	1.1543	-0.0351
327	SLU 44	0.17	-0.84	45.25	13.2667	1.1544	-0.0346
327	SLU 45	0.19	-0.9	46.02	13.4985	1.1741	-0.037
327	SLU 46	0.18	-0.87	46.02	13.4963	1.1741	-0.0367
327	SLU 47	0.17	-0.85	45.76	13.4167	1.1675	-0.0351

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
327	SLU 48	0.19	-0.92	46.54	13.6484	1.1871	-0.0375
327	SLU 49	0.18	-0.88	46.54	13.6462	1.1872	-0.0371
327	SLU 50	0.18	-0.92	46.27	13.5702	1.1805	-0.0361
327	SLU 51	0.18	-0.89	46.28	13.5681	1.1806	-0.0358
327	SLU 52	0.17	-0.87	49.94	14.6456	1.2743	-0.0339
327	SLU 53	0.19	-0.94	50.71	14.8774	1.294	-0.0364
327	SLU 54	0.18	-0.9	50.72	14.8752	1.294	-0.036
327	SLU 55	0.17	-0.88	50.46	14.7956	1.2874	-0.0344
327	SLU 56	0.19	-0.95	51.23	15.0273	1.307	-0.0369
327	SLU 57	0.18	-0.92	51.23	15.0251	1.3071	-0.0365
327	SLU 58	0.18	-0.96	50.97	14.9491	1.3004	-0.0355
327	SLU 59	0.18	-0.92	50.97	14.947	1.3005	-0.0352
327	SLU 60	0.18	-0.94	51.95	15.2402	1.3256	-0.0343
327	SLU 61	0.17	-0.91	51.95	15.238	1.3257	-0.0339
327	SLU 62	0.18	-0.96	52.46	15.3902	1.3387	-0.0347
327	SLU 63	0.18	-0.92	52.47	15.388	1.3388	-0.0344
327	SLU 64	0.21	-0.92	49.52	14.5303	1.263	-0.043
327	SLU 65	0.2	-0.86	49.53	14.5267	1.2631	-0.0425
327	SLU 66	0.21	-0.93	50.3	14.7584	1.2827	-0.0449
327	SLU 67	0.21	-0.9	50.3	14.7562	1.2828	-0.0446
327	SLU 68	0.2	-0.88	50.04	14.6766	1.2762	-0.043
327	SLU 69	0.21	-0.94	50.82	14.9084	1.2958	-0.0454
327	SLU 70	0.21	-0.91	50.82	14.9062	1.2959	-0.0451
327	SLU 71	0.21	-0.95	50.55	14.8302	1.2892	-0.044
327	SLU 72	0.21	-0.91	50.56	14.828	1.2893	-0.0437
327	SLU 73	0.2	-0.9	54.22	15.9056	1.383	-0.0419
327	SLU 74	0.21	-0.96	54.99	16.1373	1.4026	-0.0443
327	SLU 75	0.21	-0.93	55	16.1351	1.4027	-0.044
327	SLU 76	0.2	-0.91	54.73	16.0555	1.3961	-0.0424
327	SLU 77	0.21	-0.98	55.51	16.2873	1.4157	-0.0448
327	SLU 78	0.21	-0.94	55.51	16.2851	1.4158	-0.0445
327	SLU 79	0.21	-0.98	55.25	16.2091	1.4091	-0.0434
327	SLU 80	0.21	-0.95	55.25	16.2069	1.4092	-0.0431
327	SLU 81	0.21	-0.97	56.23	16.5002	1.4343	-0.0422
327	SLU 82	0.2	-0.94	56.23	16.498	1.4343	-0.0418
327	SLU 83	0.21	-0.98	56.74	16.6501	1.4473	-0.0427
327	SLU 84	0.2	-0.95	56.74	16.6479	1.4474	-0.0423
327	SLE RA 1	0.15	-0.7	37.15	10.9003	0.9476	-0.0314
327	SLE RA 2	0.15	-0.66	37.16	10.8978	0.9477	-0.031
327	SLE RA 3	0.16	-0.71	37.67	11.0523	0.9608	-0.0326
327	SLE RA 4	0.15	-0.69	37.67	11.0509	0.9609	-0.0324
327	SLE RA 5	0.15	-0.67	37.5	10.9978	0.9565	-0.0313
327	SLE RA 6	0.16	-0.72	38.02	11.1523	0.9695	-0.0329
327	SLE RA 7	0.16	-0.69	38.02	11.1508	0.9696	-0.0327
327	SLE RA 8	0.16	-0.72	37.84	11.1002	0.9651	-0.032
327	SLE RA 9	0.15	-0.7	37.84	11.0987	0.9652	-0.0318
327	SLE RA 10	0.15	-0.69	40.28	11.8171	1.0277	-0.0306
327	SLE RA 11	0.16	-0.73	40.8	11.9716	1.0407	-0.0322
327	SLE RA 12	0.15	-0.71	40.8	11.9701	1.0408	-0.032
327	SLE RA 13	0.15	-0.7	40.63	11.9171	1.0364	-0.0309
327	SLE RA 14	0.16	-0.74	41.15	12.0716	1.0495	-0.0325
327	SLE RA 15	0.16	-0.72	41.15	12.0701	1.0495	-0.0323
327	SLE RA 16	0.16	-0.74	40.97	12.0194	1.045	-0.0316
327	SLE RA 17	0.15	-0.72	40.97	12.018	1.0451	-0.0314
327	SLE RA 18	0.15	-0.74	41.62	12.2135	1.0618	-0.0308
327	SLE RA 19	0.15	-0.71	41.62	12.212	1.0619	-0.0306
327	SLE RA 20	0.15	-0.74	41.97	12.3135	1.0705	-0.0311
327	SLE RA 21	0.15	-0.72	41.97	12.312	1.0706	-0.0309
327	SLE FR 1	0.15	-0.7	37.15	10.9003	0.9476	-0.0314
327	SLE FR 2	0.15	-0.7	37.15	10.8998	0.9476	-0.0313
327	SLE FR 3	0.15	-0.71	37.29	10.9402	0.9511	-0.0315
327	SLE FR 4	0.15	-0.71	38.5	11.2937	0.9819	-0.0311
327	SLE FR 5	0.15	-0.72	38.63	11.3342	0.9854	-0.0313
327	SLE FR 6	0.15	-0.72	39.39	11.5569	1.0047	-0.0311
327	SLE QP 1	0.15	-0.7	37.15	10.9003	0.9476	-0.0314
327	SLE QP 2	0.15	-0.71	38.49	11.2942	0.9819	-0.0312
327	SLD 1	3.71	0.13	36.9	10.8616	0.9479	-1.1583
327	SLD 2	4.09	0.33	37.08	10.9131	0.9522	-1.2818
327	SLD 3	3.63	-0.88	36.46	10.8039	0.9374	-1.1138
327	SLD 4	4.02	-0.67	36.65	10.8554	0.9418	-1.2373
327	SLD 5	1.26	1.03	38.64	11.2428	0.9868	-0.4149
327	SLD 6	1.51	1.16	38.76	11.2765	0.9896	-0.4959
327	SLD 7	1.02	-2.32	37.19	11.0505	0.9519	-0.2665
327	SLD 8	1.27	-2.19	37.31	11.0843	0.9548	-0.3475
327	SLD 9	-0.97	0.77	39.68	11.5042	1.009	0.2851
327	SLD 10	-0.72	0.9	39.8	11.538	1.0119	0.2041
327	SLD 11	-1.2	-2.59	38.23	11.3119	0.9742	0.4335
327	SLD 12	-0.95	-2.46	38.34	11.3457	0.977	0.3525
327	SLD 13	-3.71	-0.75	40.34	11.7331	1.022	1.1749
327	SLD 14	-3.33	-0.55	40.53	11.7846	1.0264	1.0514
327	SLD 15	-3.78	-1.76	39.91	11.6754	1.0116	1.2194
327	SLD 16	-3.4	-1.56	40.09	11.7269	1.0159	1.0959
327	SLV 1	8.46	1.23	34.75	10.28	0.9019	-2.6665
327	SLV 2	9.35	1.7	35.17	10.4	0.912	-2.9542
327	SLV 3	8.3	-1.06	33.76	10.1491	0.8782	-2.565
327	SLV 4	9.19	-0.59	34.18	10.2691	0.8884	-2.8527
327	SLV 5	2.74	3.27	38.79	11.1679	0.9921	-0.9263
327	SLV 6	3.31	3.57	39.07	11.2452	0.9986	-1.1117
327	SLV 7	2.2	-4.37	35.5	10.7314	0.9131	-0.5878
327	SLV 8	2.77	-4.07	35.78	10.8088	0.9197	-0.7732

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
327	SLV 9	-2.47	2.65	41.21	11.7797	1.0441	0.7108
327	SLV 10	-1.89	2.95	41.49	11.857	1.0506	0.5254
327	SLV 11	-3.01	-4.99	37.92	11.3433	0.9652	1.0493
327	SLV 12	-2.43	-4.69	38.2	11.4206	0.9717	0.8639
327	SLV 13	-8.89	-0.84	42.81	12.3194	1.0754	2.7903
327	SLV 14	-8	-0.37	43.23	12.4394	1.0855	2.5026
327	SLV 15	-9.05	-3.13	41.82	12.1885	1.0517	2.8918
327	SLV 16	-8.16	-2.66	42.24	12.3084	1.0619	2.6041
327	CRTFP Ux+	0	0	0	0	0	0
327	CRTFP Ux-	0	0	0	0	0	0
327	CRTFP Uy+	0	0	0	0	0	0
327	CRTFP Uy-	0	0	0	0	0	0
328	SLU 1	0.1	-0.48	24.35	6.901	0.5782	-0.0189
328	SLU 2	0.09	-0.44	24.35	6.8978	0.5782	-0.0184
328	SLU 3	0.1	-0.48	24.88	7.051	0.5907	-0.0201
328	SLU 4	0.1	-0.46	24.88	7.0491	0.5907	-0.0198
328	SLU 5	0.1	-0.45	24.7	6.9964	0.5865	-0.0188
328	SLU 6	0.1	-0.49	25.23	7.1495	0.599	-0.0204
328	SLU 7	0.1	-0.47	25.23	7.1476	0.599	-0.0201
328	SLU 8	0.1	-0.5	25.05	7.098	0.5948	-0.0195
328	SLU 9	0.1	-0.47	25.05	7.0962	0.5948	-0.0193
328	SLU 10	0.09	-0.47	27.53	7.7996	0.6537	-0.018
328	SLU 11	0.1	-0.51	28.06	7.9527	0.6662	-0.0196
328	SLU 12	0.1	-0.49	28.06	7.9508	0.6662	-0.0193
328	SLU 13	0.1	-0.47	27.88	7.8981	0.662	-0.0183
328	SLU 14	0.1	-0.52	28.41	8.0512	0.6745	-0.0199
328	SLU 15	0.1	-0.5	28.41	8.0493	0.6745	-0.0196
328	SLU 16	0.1	-0.52	28.23	7.9997	0.6703	-0.019
328	SLU 17	0.1	-0.5	28.23	7.9979	0.6703	-0.0188
328	SLU 18	0.1	-0.52	28.89	8.1891	0.686	-0.0182
328	SLU 19	0.1	-0.49	28.89	8.1872	0.686	-0.0179
328	SLU 20	0.1	-0.52	29.24	8.2877	0.6943	-0.0185
328	SLU 21	0.1	-0.5	29.24	8.2858	0.6943	-0.0182
328	SLU 22	0.12	-0.5	27.26	7.7296	0.6472	-0.024
328	SLU 23	0.11	-0.46	27.26	7.7265	0.6472	-0.0236
328	SLU 24	0.12	-0.51	27.79	7.8796	0.6597	-0.0252
328	SLU 25	0.12	-0.48	27.79	7.8777	0.6597	-0.0249
328	SLU 26	0.11	-0.47	27.61	7.825	0.6555	-0.0239
328	SLU 27	0.12	-0.51	28.14	7.9781	0.668	-0.0255
328	SLU 28	0.12	-0.49	28.14	7.9763	0.668	-0.0253
328	SLU 29	0.12	-0.52	27.96	7.9267	0.6638	-0.0246
328	SLU 30	0.12	-0.49	27.97	7.9248	0.6638	-0.0244
328	SLU 31	0.11	-0.49	30.44	8.6282	0.7227	-0.0231
328	SLU 32	0.12	-0.53	30.97	8.7813	0.7352	-0.0247
328	SLU 33	0.12	-0.51	30.97	8.7794	0.7352	-0.0245
328	SLU 34	0.11	-0.49	30.79	8.7267	0.731	-0.0234
328	SLU 35	0.12	-0.54	31.32	8.8798	0.7435	-0.025
328	SLU 36	0.12	-0.52	31.32	8.878	0.7435	-0.0248
328	SLU 37	0.12	-0.54	31.14	8.8284	0.7393	-0.0242
328	SLU 38	0.12	-0.52	31.14	8.8265	0.7393	-0.0239
328	SLU 39	0.12	-0.54	31.8	9.0177	0.755	-0.0233
328	SLU 40	0.11	-0.51	31.8	9.0159	0.755	-0.023
328	SLU 41	0.12	-0.54	32.15	9.1163	0.7633	-0.0236
328	SLU 42	0.12	-0.52	32.15	9.1144	0.7633	-0.0234
328	SLU 43	0.12	-0.61	30.66	8.6871	0.7279	-0.0228
328	SLU 44	0.12	-0.58	30.66	8.684	0.728	-0.0223
328	SLU 45	0.13	-0.62	31.19	8.8371	0.7405	-0.024
328	SLU 46	0.12	-0.6	31.19	8.8353	0.7405	-0.0237
328	SLU 47	0.12	-0.59	31.01	8.7826	0.7363	-0.0227
328	SLU 48	0.13	-0.63	31.54	8.9357	0.7488	-0.0243
328	SLU 49	0.13	-0.61	31.54	8.9338	0.7488	-0.024
328	SLU 50	0.13	-0.63	31.36	8.8842	0.7446	-0.0234
328	SLU 51	0.12	-0.61	31.36	8.8824	0.7446	-0.0232
328	SLU 52	0.12	-0.6	33.84	9.5857	0.8034	-0.0219
328	SLU 53	0.13	-0.65	34.37	9.7388	0.816	-0.0235
328	SLU 54	0.12	-0.62	34.37	9.737	0.816	-0.0232
328	SLU 55	0.12	-0.61	34.19	9.6843	0.8117	-0.0222
328	SLU 56	0.13	-0.66	34.72	9.8374	0.8243	-0.0238
328	SLU 57	0.13	-0.63	34.72	9.8355	0.8243	-0.0236
328	SLU 58	0.13	-0.66	34.54	9.7859	0.82	-0.0229
328	SLU 59	0.12	-0.64	34.54	9.7841	0.82	-0.0227
328	SLU 60	0.12	-0.65	35.2	9.9753	0.8358	-0.0221
328	SLU 61	0.12	-0.63	35.2	9.9734	0.8358	-0.0218
328	SLU 62	0.12	-0.66	35.55	10.0738	0.8441	-0.0224
328	SLU 63	0.12	-0.64	35.55	10.072	0.8441	-0.0221
328	SLU 64	0.14	-0.64	33.57	9.5158	0.797	-0.0279
328	SLU 65	0.14	-0.6	33.57	9.5127	0.797	-0.0275
328	SLU 66	0.14	-0.64	34.1	9.6658	0.8095	-0.0291
328	SLU 67	0.14	-0.62	34.1	9.6639	0.8095	-0.0289
328	SLU 68	0.14	-0.61	33.92	9.6112	0.8053	-0.0278
328	SLU 69	0.15	-0.65	34.45	9.7643	0.8178	-0.0294
328	SLU 70	0.14	-0.63	34.45	9.7624	0.8178	-0.0292
328	SLU 71	0.14	-0.65	34.27	9.7128	0.8136	-0.0285
328	SLU 72	0.14	-0.63	34.27	9.711	0.8136	-0.0283
328	SLU 73	0.14	-0.62	36.75	10.4144	0.8725	-0.027
328	SLU 74	0.14	-0.67	37.28	10.5675	0.885	-0.0286
328	SLU 75	0.14	-0.64	37.28	10.5656	0.885	-0.0284
328	SLU 76	0.14	-0.63	37.1	10.5129	0.8808	-0.0273
328	SLU 77	0.15	-0.68	37.63	10.666	0.8933	-0.0289
328	SLU 78	0.14	-0.65	37.63	10.6642	0.8933	-0.0287

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
328	SLU 79	0.14	-0.68	37.45	10.6146	0.8891	-0.0281
328	SLU 80	0.14	-0.66	37.45	10.6127	0.8891	-0.0278
328	SLU 81	0.14	-0.67	38.11	10.8039	0.9048	-0.0272
328	SLU 82	0.14	-0.65	38.11	10.8021	0.9048	-0.0269
328	SLU 83	0.14	-0.68	38.46	10.9025	0.9131	-0.0275
328	SLU 84	0.14	-0.66	38.46	10.9006	0.9131	-0.0273
328	SLE RA 1	0.1	-0.48	25.18	7.1377	0.5979	-0.0203
328	SLE RA 2	0.1	-0.46	25.18	7.1356	0.5979	-0.02
328	SLE RA 3	0.11	-0.49	25.54	7.2377	0.6062	-0.0211
328	SLE RA 4	0.1	-0.47	25.54	7.2365	0.6063	-0.021
328	SLE RA 5	0.1	-0.46	25.42	7.2013	0.6034	-0.0203
328	SLE RA 6	0.11	-0.49	25.77	7.3034	0.6118	-0.0214
328	SLE RA 7	0.11	-0.48	25.77	7.3022	0.6118	-0.0212
328	SLE RA 8	0.11	-0.5	25.65	7.2691	0.609	-0.0208
328	SLE RA 9	0.1	-0.48	25.65	7.2678	0.609	-0.0206
328	SLE RA 10	0.1	-0.48	27.3	7.7368	0.6482	-0.0197
328	SLE RA 11	0.11	-0.51	27.65	7.8388	0.6566	-0.0208
328	SLE RA 12	0.1	-0.49	27.66	7.8376	0.6566	-0.0206
328	SLE RA 13	0.1	-0.48	27.54	7.8025	0.6537	-0.0199
328	SLE RA 14	0.11	-0.51	27.89	7.9045	0.6621	-0.021
328	SLE RA 15	0.11	-0.5	27.89	7.9033	0.6621	-0.0209
328	SLE RA 16	0.11	-0.51	27.77	7.8702	0.6593	-0.0204
328	SLE RA 17	0.1	-0.5	27.77	7.869	0.6593	-0.0203
328	SLE RA 18	0.1	-0.51	28.21	7.9965	0.6698	-0.0199
328	SLE RA 19	0.1	-0.49	28.21	7.9952	0.6698	-0.0197
328	SLE RA 20	0.1	-0.51	28.44	8.0622	0.6753	-0.0201
328	SLE RA 21	0.1	-0.5	28.44	8.0609	0.6753	-0.0199
328	SLE FR 1	0.1	-0.48	25.18	7.1377	0.5979	-0.0203
328	SLE FR 2	0.1	-0.48	25.18	7.1373	0.5979	-0.0203
328	SLE FR 3	0.1	-0.49	25.28	7.164	0.6001	-0.0204
328	SLE FR 4	0.1	-0.49	26.09	7.3949	0.6195	-0.0201
328	SLE FR 5	0.1	-0.49	26.18	7.4216	0.6217	-0.0203
328	SLE FR 6	0.1	-0.5	26.7	7.5671	0.6338	-0.0201
328	SLE QP 1	0.1	-0.48	25.18	7.1377	0.5979	-0.0203
328	SLE QP 2	0.1	-0.49	26.09	7.3953	0.6195	-0.0202
328	SLD 1	2.47	0.07	24.86	7.0668	0.5921	-0.747
328	SLD 2	2.72	0.22	24.99	7.1028	0.5951	-0.8269
328	SLD 3	2.42	-0.59	24.55	7.0269	0.5854	-0.7192
328	SLD 4	2.68	-0.45	24.68	7.0629	0.5884	-0.7991
328	SLD 5	0.84	0.66	26.16	7.3509	0.6209	-0.2662
328	SLD 6	1.01	0.76	26.24	7.3745	0.6229	-0.3185
328	SLD 7	0.68	-1.56	25.14	7.2179	0.5985	-0.1736
328	SLD 8	0.85	-1.46	25.23	7.2414	0.6005	-0.2259
328	SLD 9	-0.64	0.48	26.95	7.5492	0.6384	0.1855
328	SLD 10	-0.48	0.57	27.04	7.5728	0.6404	0.1332
328	SLD 11	-0.8	-1.74	25.94	7.4162	0.616	0.2781
328	SLD 12	-0.63	-1.65	26.02	7.4397	0.618	0.2258
328	SLD 13	-2.47	-0.53	27.5	7.7278	0.6505	0.7587
328	SLD 14	-2.21	-0.39	27.63	7.7638	0.6535	0.6788
328	SLD 15	-2.52	-1.2	27.2	7.6879	0.6438	0.7865
328	SLD 16	-2.26	-1.06	27.33	7.7238	0.6468	0.7066
328	SLV 1	5.63	0.81	23.19	6.6253	0.5553	-1.7195
328	SLV 2	6.23	1.14	23.49	6.709	0.5622	-1.9056
328	SLV 3	5.53	-0.71	22.5	6.5348	0.54	-1.6561
328	SLV 4	6.12	-0.38	22.8	6.6185	0.547	-1.8422
328	SLV 5	1.82	2.14	26.21	7.2872	0.6221	-0.5941
328	SLV 6	2.21	2.36	26.41	7.3412	0.6266	-0.714
328	SLV 7	1.47	-2.91	23.92	6.9855	0.5713	-0.3828
328	SLV 8	1.85	-2.7	24.11	7.0394	0.5758	-0.5027
328	SLV 9	-1.64	1.72	28.07	7.7513	0.6631	0.4623
328	SLV 10	-1.26	1.93	28.27	7.8052	0.6676	0.3424
328	SLV 11	-2	-3.34	25.77	7.4495	0.6123	0.6736
328	SLV 12	-1.62	-3.13	25.97	7.5035	0.6168	0.5537
328	SLV 13	-5.91	-0.61	29.38	8.1721	0.6919	1.8018
328	SLV 14	-5.32	-0.28	29.68	8.2559	0.6989	1.6157
328	SLV 15	-6.02	-2.13	28.69	8.0816	0.6767	1.8652
328	SLV 16	-5.43	-1.79	28.99	8.1653	0.6836	1.6791
328	CRTFP Ux+	0	0	0	0	0	0
328	CRTFP Ux-	0	0	0	0	0	0
328	CRTFP Uy+	0	0	0	0	0	0
328	CRTFP Uy-	0	0	0	0	0	0
329	SLU 1	0.19	-0.88	45.2	14.3205	-1.1072	-0.0834
329	SLU 2	0.18	-0.81	45.2	14.3127	-1.1069	-0.0788
329	SLU 3	0.19	-0.89	46.19	14.6334	-1.1316	-0.0866
329	SLU 4	0.19	-0.85	46.19	14.6288	-1.1314	-0.0838
329	SLU 5	0.18	-0.82	45.85	14.5181	-1.123	-0.0804
329	SLU 6	0.2	-0.91	46.85	14.8388	-1.1477	-0.0881
329	SLU 7	0.19	-0.87	46.84	14.8341	-1.1475	-0.0853
329	SLU 8	0.19	-0.91	46.51	14.7312	-1.1394	-0.0865
329	SLU 9	0.19	-0.87	46.51	14.7266	-1.1392	-0.0837
329	SLU 10	0.18	-0.86	51.1	16.1819	-1.2512	-0.0803
329	SLU 11	0.2	-0.94	52.09	16.5027	-1.2759	-0.088
329	SLU 12	0.19	-0.9	52.09	16.498	-1.2757	-0.0853
329	SLU 13	0.18	-0.87	51.75	16.3873	-1.2673	-0.0818
329	SLU 14	0.2	-0.96	52.74	16.708	-1.292	-0.0896
329	SLU 15	0.19	-0.92	52.74	16.7034	-1.2918	-0.0868
329	SLU 16	0.19	-0.96	52.41	16.6005	-1.2837	-0.0879
329	SLU 17	0.19	-0.92	52.4	16.5958	-1.2835	-0.0852
329	SLU 18	0.19	-0.95	53.63	16.9908	-1.3133	-0.0855
329	SLU 19	0.18	-0.91	53.62	16.9861	-1.3131	-0.0828

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
329	SLU 20	0.19	-0.97	54.28	17.1962	-1.3295	-0.087
329	SLU 21	0.19	-0.92	54.28	17.1915	-1.3293	-0.0843
329	SLU 22	0.22	-0.92	50.64	16.0485	-1.2415	-0.0961
329	SLU 23	0.21	-0.85	50.63	16.0406	-1.2412	-0.0915
329	SLU 24	0.23	-0.93	51.63	16.3614	-1.2659	-0.0993
329	SLU 25	0.22	-0.89	51.62	16.3567	-1.2657	-0.0965
329	SLU 26	0.22	-0.87	51.29	16.246	-1.2573	-0.0931
329	SLU 27	0.23	-0.95	52.28	16.5668	-1.282	-0.1008
329	SLU 28	0.23	-0.91	52.28	16.5621	-1.2818	-0.098
329	SLU 29	0.23	-0.95	51.94	16.4592	-1.2737	-0.0992
329	SLU 30	0.22	-0.91	51.94	16.4545	-1.2735	-0.0964
329	SLU 31	0.21	-0.9	56.53	17.9099	-1.3855	-0.093
329	SLU 32	0.23	-0.98	57.52	18.2306	-1.4102	-0.1007
329	SLU 33	0.22	-0.94	57.52	18.2259	-1.41	-0.098
329	SLU 34	0.22	-0.92	57.18	18.1152	-1.4016	-0.0945
329	SLU 35	0.23	-1	58.17	18.436	-1.4263	-0.1023
329	SLU 36	0.23	-0.96	58.17	18.4313	-1.4261	-0.0995
329	SLU 37	0.23	-1	57.84	18.3284	-1.418	-0.1006
329	SLU 38	0.22	-0.96	57.84	18.3237	-1.4178	-0.0979
329	SLU 39	0.22	-0.99	59.06	18.7188	-1.4476	-0.0982
329	SLU 40	0.22	-0.95	59.06	18.7141	-1.4474	-0.0955
329	SLU 41	0.22	-1.01	59.71	18.9241	-1.4637	-0.0998
329	SLU 42	0.22	-0.97	59.71	18.9195	-1.4635	-0.097
329	SLU 43	0.23	-1.13	56.9	18.0242	-1.3933	-0.1041
329	SLU 44	0.22	-1.06	56.9	18.0164	-1.393	-0.0995
329	SLU 45	0.24	-1.14	57.89	18.3372	-1.4177	-0.1072
329	SLU 46	0.23	-1.1	57.89	18.3325	-1.4175	-0.1045
329	SLU 47	0.23	-1.08	57.55	18.2218	-1.4091	-0.101
329	SLU 48	0.24	-1.16	58.54	18.5425	-1.4338	-0.1088
329	SLU 49	0.24	-1.12	58.54	18.5378	-1.4337	-0.106
329	SLU 50	0.24	-1.16	58.21	18.4349	-1.4256	-0.1071
329	SLU 51	0.23	-1.12	58.21	18.4303	-1.4254	-0.1044
329	SLU 52	0.22	-1.11	62.79	19.8856	-1.5373	-0.101
329	SLU 53	0.24	-1.19	63.79	20.2064	-1.562	-0.1087
329	SLU 54	0.23	-1.15	63.78	20.2017	-1.5618	-0.106
329	SLU 55	0.23	-1.12	63.45	20.091	-1.5534	-0.1025
329	SLU 56	0.24	-1.21	64.44	20.4118	-1.5781	-0.1102
329	SLU 57	0.24	-1.17	64.44	20.4071	-1.5779	-0.1075
329	SLU 58	0.24	-1.21	64.11	20.3042	-1.5698	-0.1086
329	SLU 59	0.23	-1.17	64.1	20.2995	-1.5697	-0.1059
329	SLU 60	0.23	-1.2	65.33	20.6945	-1.5995	-0.1062
329	SLU 61	0.23	-1.16	65.32	20.6898	-1.5993	-0.1034
329	SLU 62	0.23	-1.22	65.98	20.8999	-1.6156	-0.1077
329	SLU 63	0.23	-1.17	65.98	20.8952	-1.6154	-0.105
329	SLU 64	0.26	-1.17	62.34	19.7522	-1.5276	-0.1168
329	SLU 65	0.26	-1.1	62.33	19.7444	-1.5273	-0.1122
329	SLU 66	0.27	-1.18	63.32	20.0651	-1.552	-0.1199
329	SLU 67	0.27	-1.14	63.32	20.0604	-1.5518	-0.1172
329	SLU 68	0.26	-1.12	62.98	19.9497	-1.5434	-0.1137
329	SLU 69	0.28	-1.2	63.98	20.2705	-1.5681	-0.1215
329	SLU 70	0.27	-1.16	63.97	20.2658	-1.5679	-0.1187
329	SLU 71	0.27	-1.2	63.64	20.1629	-1.5598	-0.1198
329	SLU 72	0.27	-1.16	63.64	20.1582	-1.5596	-0.1171
329	SLU 73	0.26	-1.15	68.23	21.6136	-1.6716	-0.1137
329	SLU 74	0.27	-1.23	69.22	21.9343	-1.6963	-0.1214
329	SLU 75	0.27	-1.19	69.22	21.9296	-1.6961	-0.1187
329	SLU 76	0.26	-1.17	68.88	21.819	-1.6877	-0.1152
329	SLU 77	0.28	-1.25	69.87	22.1397	-1.7124	-0.1229
329	SLU 78	0.27	-1.21	69.87	22.135	-1.7122	-0.1202
329	SLU 79	0.27	-1.25	69.54	22.0321	-1.7041	-0.1213
329	SLU 80	0.27	-1.21	69.54	22.0274	-1.7039	-0.1186
329	SLU 81	0.27	-1.24	70.76	22.4225	-1.7337	-0.1189
329	SLU 82	0.26	-1.2	70.76	22.4178	-1.7335	-0.1162
329	SLU 83	0.27	-1.26	71.41	22.6279	-1.7499	-0.1204
329	SLU 84	0.26	-1.22	71.41	22.6232	-1.7497	-0.1177
329	SLE RA 1	0.2	-0.89	46.76	14.8142	-1.1456	-0.0871
329	SLE RA 2	0.19	-0.84	46.75	14.809	-1.1454	-0.084
329	SLE RA 3	0.2	-0.9	47.42	15.0228	-1.1618	-0.0891
329	SLE RA 4	0.2	-0.87	47.41	15.0197	-1.1617	-0.0873
329	SLE RA 5	0.19	-0.85	47.19	14.9459	-1.1561	-0.085
329	SLE RA 6	0.2	-0.91	47.85	15.1597	-1.1726	-0.0902
329	SLE RA 7	0.2	-0.88	47.85	15.1566	-1.1725	-0.0883
329	SLE RA 8	0.2	-0.91	47.63	15.088	-1.1671	-0.0891
329	SLE RA 9	0.2	-0.89	47.63	15.0849	-1.1669	-0.0872
329	SLE RA 10	0.19	-0.88	50.68	16.0551	-1.2416	-0.085
329	SLE RA 11	0.2	-0.93	51.35	16.269	-1.258	-0.0901
329	SLE RA 12	0.2	-0.9	51.34	16.2659	-1.2579	-0.0883
329	SLE RA 13	0.19	-0.89	51.12	16.1921	-1.2523	-0.086
329	SLE RA 14	0.2	-0.94	51.78	16.4059	-1.2688	-0.0911
329	SLE RA 15	0.2	-0.92	51.78	16.4028	-1.2686	-0.0893
329	SLE RA 16	0.2	-0.95	51.56	16.3342	-1.2633	-0.0901
329	SLE RA 17	0.2	-0.92	51.56	16.3311	-1.2631	-0.0882
329	SLE RA 18	0.2	-0.94	52.37	16.5944	-1.283	-0.0885
329	SLE RA 19	0.19	-0.91	52.37	16.5913	-1.2829	-0.0866
329	SLE RA 20	0.2	-0.95	52.81	16.7313	-1.2937	-0.0895
329	SLE RA 21	0.2	-0.92	52.81	16.7282	-1.2936	-0.0876
329	SLE FR 1	0.2	-0.89	46.76	14.8142	-1.1456	-0.0871
329	SLE FR 2	0.19	-0.88	46.76	14.8132	-1.1455	-0.0864
329	SLE FR 3	0.2	-0.9	46.93	14.869	-1.1499	-0.0875
329	SLE FR 4	0.2	-0.9	48.44	15.3472	-1.1868	-0.0869

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
329	SLE FR 5	0.2	-0.91	48.62	15.403	-1.1911	-0.0879
329	SLE FR 6	0.2	-0.92	49.56	15.7043	-1.2143	-0.0878
329	SLE QP 1	0.2	-0.89	46.76	14.8142	-1.1456	-0.0871
329	SLE QP 2	0.2	-0.91	48.44	15.3483	-1.1868	-0.0875
329	SLD 1	4.53	0.11	45.81	14.5489	-1.1066	-1.5168
329	SLD 2	4.99	0.39	46.07	14.6298	-1.1137	-1.6665
329	SLD 3	4.44	-1.1	45.24	14.4534	-1.0914	-1.5397
329	SLD 4	4.91	-0.83	45.5	14.5343	-1.0985	-1.6894
329	SLD 5	1.54	1.2	48.47	15.2389	-1.1846	-0.4549
329	SLD 6	1.85	1.38	48.64	15.292	-1.1892	-0.5531
329	SLD 7	1.26	-2.86	46.57	14.9205	-1.1338	-0.5312
329	SLD 8	1.56	-2.68	46.74	14.9736	-1.1384	-0.6294
329	SLD 9	-1.17	0.87	50.14	15.723	-1.2352	0.4545
329	SLD 10	-0.86	1.05	50.31	15.776	-1.2398	0.3563
329	SLD 11	-1.46	-3.19	48.24	15.4045	-1.1844	0.3781
329	SLD 12	-1.15	-3.01	48.41	15.4576	-1.189	0.28
329	SLD 13	-4.52	-0.98	51.38	16.1623	-1.2751	1.5145
329	SLD 14	-4.05	-0.71	51.64	16.2432	-1.2822	1.3647
329	SLD 15	-4.6	-2.2	50.81	16.0667	-1.2599	1.4916
329	SLD 16	-4.14	-1.93	51.07	16.1477	-1.267	1.3418
329	SLV 1	10.33	1.45	42.27	13.4745	-0.9987	-3.4309
329	SLV 2	11.41	2.08	42.87	13.6629	-1.0151	-3.7797
329	SLV 3	10.13	-1.32	40.98	13.258	-0.9641	-3.4844
329	SLV 4	11.22	-0.69	41.58	13.4464	-0.9806	-3.8331
329	SLV 5	3.35	3.89	48.44	15.082	-1.1799	-0.9494
329	SLV 6	4.05	4.3	48.83	15.2034	-1.1905	-1.1742
329	SLV 7	2.69	-5.34	44.14	14.3604	-1.0648	-1.1275
329	SLV 8	3.39	-4.93	44.53	14.4818	-1.0754	-1.3523
329	SLV 9	-3	3.12	52.35	16.2147	-1.2982	1.1773
329	SLV 10	-2.3	3.53	52.74	16.3361	-1.3088	0.9525
329	SLV 11	-3.66	-6.11	48.05	15.4931	-1.1831	0.9993
329	SLV 12	-2.96	-5.7	48.44	15.6145	-1.1937	0.7745
329	SLV 13	-10.82	-1.12	55.3	17.2501	-1.393	3.6582
329	SLV 14	-9.74	-0.49	55.9	17.4386	-1.4095	3.3094
329	SLV 15	-11.02	-3.89	54.01	17.0336	-1.3585	3.6048
329	SLV 16	-9.94	-3.26	54.61	17.2221	-1.3749	3.256
329	CRTFP Ux+	0	0	0	0	0	0
329	CRTFP Ux-	0	0	0	0	0	0
329	CRTFP Uy+	0	0	0	0	0	0
329	CRTFP Uy-	0	0	0	0	0	0
330	SLU 1	0.14	-0.59	31.9	10.3132	-0.8994	-0.063
330	SLU 2	0.13	-0.54	31.9	10.3074	-0.8991	-0.0595
330	SLU 3	0.14	-0.6	32.6	10.5394	-0.9192	-0.0653
330	SLU 4	0.14	-0.57	32.6	10.5359	-0.9191	-0.0632
330	SLU 5	0.13	-0.55	32.36	10.4557	-0.9122	-0.0606
330	SLU 6	0.14	-0.61	33.07	10.6877	-0.9323	-0.0665
330	SLU 7	0.14	-0.58	33.06	10.6842	-0.9322	-0.0644
330	SLU 8	0.14	-0.61	32.83	10.6097	-0.9256	-0.0653
330	SLU 9	0.14	-0.58	32.83	10.6062	-0.9254	-0.0632
330	SLU 10	0.13	-0.58	36.06	11.6482	-1.0164	-0.0606
330	SLU 11	0.14	-0.64	36.76	11.8802	-1.0365	-0.0664
330	SLU 12	0.14	-0.6	36.76	11.8767	-1.0363	-0.0643
330	SLU 13	0.13	-0.59	36.52	11.7965	-1.0294	-0.0617
330	SLU 14	0.14	-0.65	37.23	12.0285	-1.0496	-0.0676
330	SLU 15	0.14	-0.62	37.22	12.025	-1.0494	-0.0655
330	SLU 16	0.14	-0.65	36.99	11.9505	-1.0428	-0.0664
330	SLU 17	0.14	-0.62	36.98	11.947	-1.0426	-0.0643
330	SLU 18	0.14	-0.64	37.85	12.2286	-1.0669	-0.0646
330	SLU 19	0.13	-0.61	37.84	12.2251	-1.0667	-0.0625
330	SLU 20	0.14	-0.65	38.31	12.3769	-1.0799	-0.0657
330	SLU 21	0.13	-0.62	38.3	12.3734	-1.0798	-0.0636
330	SLU 22	0.16	-0.62	35.76	11.5612	-1.0085	-0.0724
330	SLU 23	0.15	-0.57	35.75	11.5554	-1.0082	-0.0689
330	SLU 24	0.17	-0.63	36.46	11.7874	-1.0283	-0.0747
330	SLU 25	0.16	-0.6	36.46	11.784	-1.0282	-0.0727
330	SLU 26	0.16	-0.58	36.21	11.7037	-1.0213	-0.0701
330	SLU 27	0.17	-0.64	36.92	11.9357	-1.0414	-0.0759
330	SLU 28	0.16	-0.61	36.92	11.9322	-1.0413	-0.0738
330	SLU 29	0.16	-0.64	36.68	11.8577	-1.0347	-0.0747
330	SLU 30	0.16	-0.61	36.68	11.8542	-1.0345	-0.0726
330	SLU 31	0.15	-0.6	39.91	12.8962	-1.1254	-0.07
330	SLU 32	0.17	-0.66	40.62	13.1282	-1.1456	-0.0759
330	SLU 33	0.16	-0.63	40.61	13.1247	-1.1454	-0.0738
330	SLU 34	0.16	-0.62	40.37	13.0445	-1.1385	-0.0712
330	SLU 35	0.17	-0.67	41.08	13.2765	-1.1586	-0.077
330	SLU 36	0.17	-0.64	41.08	13.273	-1.1585	-0.0749
330	SLU 37	0.17	-0.68	40.84	13.1985	-1.1519	-0.0758
330	SLU 38	0.16	-0.65	40.84	13.195	-1.1517	-0.0737
330	SLU 39	0.16	-0.67	41.7	13.4766	-1.1759	-0.074
330	SLU 40	0.16	-0.64	41.7	13.4731	-1.1758	-0.0719
330	SLU 41	0.16	-0.68	42.16	13.6249	-1.189	-0.0752
330	SLU 42	0.16	-0.65	42.16	13.6214	-1.1889	-0.0731
330	SLU 43	0.17	-0.76	40.15	12.9792	-1.1318	-0.0786
330	SLU 44	0.16	-0.71	40.15	12.9735	-1.1316	-0.0751
330	SLU 45	0.17	-0.77	40.85	13.2055	-1.1517	-0.081
330	SLU 46	0.17	-0.74	40.85	13.202	-1.1515	-0.0789
330	SLU 47	0.16	-0.72	40.61	13.1217	-1.1447	-0.0763
330	SLU 48	0.18	-0.78	41.32	13.3537	-1.1648	-0.0821
330	SLU 49	0.17	-0.75	41.31	13.3503	-1.1646	-0.08
330	SLU 50	0.17	-0.78	41.08	13.2758	-1.158	-0.0809

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
330	SLU 51	0.17	-0.75	41.07	13.2723	-1.1579	-0.0788
330	SLU 52	0.16	-0.74	44.3	14.3143	-1.2488	-0.0762
330	SLU 53	0.17	-0.8	45.01	14.5463	-1.2689	-0.0821
330	SLU 54	0.17	-0.77	45.01	14.5428	-1.2687	-0.08
330	SLU 55	0.16	-0.76	44.77	14.4625	-1.2619	-0.0774
330	SLU 56	0.18	-0.81	45.48	14.6945	-1.282	-0.0832
330	SLU 57	0.17	-0.78	45.47	14.6911	-1.2818	-0.0811
330	SLU 58	0.17	-0.82	45.24	14.6166	-1.2752	-0.082
330	SLU 59	0.17	-0.79	45.23	14.6131	-1.2751	-0.08
330	SLU 60	0.17	-0.81	46.09	14.8947	-1.2993	-0.0802
330	SLU 61	0.16	-0.78	46.09	14.8912	-1.2991	-0.0781
330	SLU 62	0.17	-0.82	46.56	15.0429	-1.3124	-0.0814
330	SLU 63	0.17	-0.79	46.55	15.0395	-1.3122	-0.0793
330	SLU 64	0.19	-0.79	44.01	14.2273	-1.2409	-0.0881
330	SLU 65	0.19	-0.74	44	14.2215	-1.2407	-0.0846
330	SLU 66	0.2	-0.8	44.71	14.4535	-1.2608	-0.0904
330	SLU 67	0.19	-0.77	44.7	14.45	-1.2606	-0.0883
330	SLU 68	0.19	-0.75	44.46	14.3697	-1.2537	-0.0857
330	SLU 69	0.2	-0.81	45.17	14.6017	-1.2739	-0.0916
330	SLU 70	0.2	-0.78	45.17	14.5983	-1.2737	-0.0895
330	SLU 71	0.2	-0.81	44.93	14.5238	-1.2671	-0.0904
330	SLU 72	0.19	-0.78	44.93	14.5203	-1.2669	-0.0883
330	SLU 73	0.19	-0.77	48.16	15.5623	-1.3579	-0.0857
330	SLU 74	0.2	-0.83	48.87	15.7943	-1.378	-0.0915
330	SLU 75	0.19	-0.8	48.86	15.7908	-1.3778	-0.0894
330	SLU 76	0.19	-0.78	48.62	15.7105	-1.371	-0.0868
330	SLU 77	0.2	-0.84	49.33	15.9425	-1.3911	-0.0927
330	SLU 78	0.2	-0.81	49.33	15.9391	-1.3909	-0.0906
330	SLU 79	0.2	-0.85	49.09	15.8646	-1.3843	-0.0915
330	SLU 80	0.19	-0.82	49.09	15.8611	-1.3842	-0.0894
330	SLU 81	0.19	-0.84	49.95	16.1427	-1.4084	-0.0897
330	SLU 82	0.19	-0.81	49.95	16.1392	-1.4082	-0.0876
330	SLU 83	0.2	-0.85	50.41	16.2909	-1.4215	-0.0908
330	SLU 84	0.19	-0.82	50.41	16.2875	-1.4213	-0.0887
330	SLE RA 1	0.14	-0.6	33.01	10.6698	-0.9306	-0.0657
330	SLE RA 2	0.14	-0.57	33	10.6659	-0.9304	-0.0633
330	SLE RA 3	0.15	-0.61	33.47	10.8206	-0.9438	-0.0672
330	SLE RA 4	0.14	-0.59	33.47	10.8183	-0.9437	-0.0658
330	SLE RA 5	0.14	-0.57	33.31	10.7647	-0.9391	-0.0641
330	SLE RA 6	0.15	-0.61	33.78	10.9194	-0.9525	-0.068
330	SLE RA 7	0.15	-0.59	33.78	10.9171	-0.9524	-0.0666
330	SLE RA 8	0.15	-0.62	33.62	10.8674	-0.948	-0.0672
330	SLE RA 9	0.14	-0.6	33.62	10.8651	-0.9479	-0.0658
330	SLE RA 10	0.14	-0.59	35.77	11.5598	-1.0085	-0.0641
330	SLE RA 11	0.15	-0.63	36.25	11.7144	-1.0219	-0.068
330	SLE RA 12	0.14	-0.61	36.24	11.7121	-1.0218	-0.0666
330	SLE RA 13	0.14	-0.6	36.08	11.6586	-1.0173	-0.0648
330	SLE RA 14	0.15	-0.64	36.55	11.8133	-1.0307	-0.0687
330	SLE RA 15	0.15	-0.62	36.55	11.811	-1.0306	-0.0673
330	SLE RA 16	0.15	-0.64	36.4	11.7613	-1.0262	-0.0679
330	SLE RA 17	0.14	-0.62	36.39	11.759	-1.0261	-0.0666
330	SLE RA 18	0.14	-0.63	36.97	11.9467	-1.0422	-0.0667
330	SLE RA 19	0.14	-0.61	36.96	11.9444	-1.0421	-0.0653
330	SLE RA 20	0.14	-0.64	37.27	12.0455	-1.0509	-0.0675
330	SLE RA 21	0.14	-0.62	37.27	12.0432	-1.0508	-0.0661
330	SLE FR 1	0.14	-0.6	33.01	10.6698	-0.9306	-0.0657
330	SLE FR 2	0.14	-0.59	33	10.669	-0.9305	-0.0652
330	SLE FR 3	0.14	-0.6	33.13	10.7093	-0.9341	-0.066
330	SLE FR 4	0.14	-0.6	34.19	11.0521	-0.964	-0.0655
330	SLE FR 5	0.14	-0.61	34.32	11.0924	-0.9676	-0.0663
330	SLE FR 6	0.14	-0.62	34.99	11.3082	-0.9864	-0.0662
330	SLE QP 1	0.14	-0.6	33.01	10.6698	-0.9306	-0.0657
330	SLE QP 2	0.14	-0.61	34.19	11.0528	-0.9641	-0.066
330	SLD 1	3.15	0.07	32.06	10.3744	-0.8984	-1.0943
330	SLD 2	3.47	0.27	32.26	10.4372	-0.9043	-1.2016
330	SLD 3	3.09	-0.77	31.64	10.2862	-0.8856	-1.112
330	SLD 4	3.41	-0.57	31.83	10.349	-0.8914	-1.2193
330	SLD 5	1.08	0.84	34.17	10.972	-0.9628	-0.3285
330	SLD 6	1.29	0.97	34.3	11.0132	-0.9666	-0.3989
330	SLD 7	0.88	-1.97	32.74	10.6778	-0.92	-0.3876
330	SLD 8	1.09	-1.84	32.87	10.719	-0.9239	-0.4579
330	SLD 9	-0.81	0.62	35.51	11.3867	-1.0043	0.326
330	SLD 10	-0.59	0.75	35.64	11.4279	-1.0081	0.2556
330	SLD 11	-1.01	-2.19	34.09	11.0925	-0.9615	0.2669
330	SLD 12	-0.79	-2.06	34.22	11.1337	-0.9653	0.1966
330	SLD 13	-3.13	-0.65	36.55	11.7567	-1.0367	1.0873
330	SLD 14	-2.81	-0.45	36.75	11.8195	-1.0425	0.9801
330	SLD 15	-3.19	-1.49	36.13	11.6685	-1.0239	1.0696
330	SLD 16	-2.87	-1.29	36.32	11.7313	-1.0297	0.9623
330	SLV 1	7.18	0.96	29.2	9.4622	-0.81	-2.4715
330	SLV 2	7.93	1.43	29.65	9.6085	-0.8236	-2.7214
330	SLV 3	7.04	-0.96	28.23	9.2623	-0.781	-2.5127
330	SLV 4	7.79	-0.5	28.68	9.4085	-0.7946	-2.7626
330	SLV 5	2.33	2.7	34.08	10.8537	-0.9596	-0.6821
330	SLV 6	2.82	2.99	34.38	10.948	-0.9683	-0.8431
330	SLV 7	1.87	-3.71	30.86	10.1872	-0.8627	-0.8195
330	SLV 8	2.36	-3.41	31.15	10.2815	-0.8715	-0.9805
330	SLV 9	-2.07	2.19	37.24	11.8242	-1.0566	0.8486
330	SLV 10	-1.59	2.49	37.53	11.9184	-1.0654	0.6875
330	SLV 11	-2.53	-4.21	34.01	11.1577	-0.9598	0.7111

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
330	SLV 12	-2.05	-3.91	34.3	11.252	-0.9686	0.5501
330	SLV 13	-7.51	-0.72	39.7	12.6971	-1.1336	2.6306
330	SLV 14	-6.76	-0.26	40.16	12.8434	-1.1472	2.3808
330	SLV 15	-7.65	-2.64	38.74	12.4972	-1.1045	2.5894
330	SLV 16	-6.9	-2.18	39.19	12.6435	-1.1181	2.3396
330	CRTFP Ux+	0	0	0	0	0	0
330	CRTFP Ux-	0	0	0	0	0	0
330	CRTFP Uy+	0	0	0	0	0	0
330	CRTFP Uy-	0	0	0	0	0	0
331	SLU 1	0.17	-0.65	38.04	12.3039	-0.0045	-0.057
331	SLU 2	0.16	-0.59	38.02	12.2974	-0.0044	-0.0546
331	SLU 3	0.18	-0.65	38.88	12.5749	-0.0048	-0.0596
331	SLU 4	0.17	-0.62	38.87	12.5711	-0.0047	-0.0581
331	SLU 5	0.16	-0.6	38.58	12.475	-0.0046	-0.0556
331	SLU 6	0.18	-0.67	39.43	12.7525	-0.0049	-0.0606
331	SLU 7	0.17	-0.63	39.42	12.7486	-0.0048	-0.0592
331	SLU 8	0.17	-0.67	39.14	12.659	-0.0048	-0.0591
331	SLU 9	0.17	-0.64	39.14	12.6551	-0.0047	-0.0576
331	SLU 10	0.16	-0.62	42.98	13.8946	-0.0049	-0.0547
331	SLU 11	0.18	-0.69	43.83	14.1721	-0.0052	-0.0598
331	SLU 12	0.17	-0.66	43.82	14.1682	-0.0052	-0.0583
331	SLU 13	0.17	-0.64	43.53	14.0721	-0.005	-0.0557
331	SLU 14	0.18	-0.71	44.38	14.3496	-0.0054	-0.0608
331	SLU 15	0.18	-0.67	44.38	14.3458	-0.0053	-0.0593
331	SLU 16	0.18	-0.71	44.1	14.2561	-0.0053	-0.0592
331	SLU 17	0.17	-0.67	44.09	14.2523	-0.0052	-0.0578
331	SLU 18	0.17	-0.7	45.12	14.5855	-0.0052	-0.0573
331	SLU 19	0.17	-0.67	45.11	14.5816	-0.0052	-0.0558
331	SLU 20	0.17	-0.71	45.67	14.7631	-0.0053	-0.0583
331	SLU 21	0.17	-0.68	45.66	14.7592	-0.0053	-0.0568
331	SLU 22	0.2	-0.67	42.65	13.7977	-0.0056	-0.0676
331	SLU 23	0.19	-0.62	42.64	13.7913	-0.0055	-0.0651
331	SLU 24	0.21	-0.68	43.49	14.0688	-0.0059	-0.0702
331	SLU 25	0.2	-0.65	43.48	14.0649	-0.0058	-0.0687
331	SLU 26	0.2	-0.63	43.19	13.9688	-0.0057	-0.0661
331	SLU 27	0.21	-0.7	44.04	14.2463	-0.006	-0.0712
331	SLU 28	0.21	-0.66	44.04	14.2425	-0.0059	-0.0697
331	SLU 29	0.21	-0.7	43.76	14.1528	-0.0059	-0.0696
331	SLU 30	0.2	-0.66	43.75	14.149	-0.0058	-0.0681
331	SLU 31	0.19	-0.65	47.6	15.3884	-0.006	-0.0653
331	SLU 32	0.21	-0.72	48.45	15.6659	-0.0063	-0.0703
331	SLU 33	0.2	-0.69	48.44	15.6621	-0.0063	-0.0688
331	SLU 34	0.2	-0.67	48.15	15.566	-0.0061	-0.0663
331	SLU 35	0.21	-0.74	49	15.8435	-0.0065	-0.0714
331	SLU 36	0.21	-0.7	48.99	15.8396	-0.0064	-0.0699
331	SLU 37	0.21	-0.74	48.71	15.75	-0.0064	-0.0698
331	SLU 38	0.2	-0.7	48.71	15.7461	-0.0063	-0.0683
331	SLU 39	0.2	-0.73	49.73	16.0793	-0.0063	-0.0678
331	SLU 40	0.2	-0.69	49.72	16.0755	-0.0063	-0.0663
331	SLU 41	0.2	-0.74	50.28	16.2569	-0.0064	-0.0688
331	SLU 42	0.2	-0.71	50.28	16.253	-0.0064	-0.0674
331	SLU 43	0.21	-0.83	47.86	15.4828	-0.0055	-0.0705
331	SLU 44	0.2	-0.77	47.85	15.4764	-0.0054	-0.0681
331	SLU 45	0.22	-0.84	48.7	15.7539	-0.0057	-0.0731
331	SLU 46	0.21	-0.8	48.7	15.75	-0.0057	-0.0716
331	SLU 47	0.2	-0.78	48.41	15.654	-0.0055	-0.0691
331	SLU 48	0.22	-0.85	49.26	15.9315	-0.0059	-0.0741
331	SLU 49	0.21	-0.82	49.25	15.9276	-0.0058	-0.0726
331	SLU 50	0.21	-0.85	48.97	15.838	-0.0058	-0.0726
331	SLU 51	0.21	-0.82	48.96	15.8341	-0.0057	-0.0711
331	SLU 52	0.2	-0.81	52.81	17.0736	-0.0059	-0.0682
331	SLU 53	0.22	-0.88	53.66	17.351	-0.0062	-0.0733
331	SLU 54	0.21	-0.84	53.65	17.3472	-0.0062	-0.0718
331	SLU 55	0.21	-0.82	53.36	17.2511	-0.006	-0.0692
331	SLU 56	0.22	-0.89	54.21	17.5286	-0.0063	-0.0743
331	SLU 57	0.22	-0.85	54.21	17.5247	-0.0063	-0.0728
331	SLU 58	0.22	-0.89	53.93	17.4351	-0.0062	-0.0727
331	SLU 59	0.21	-0.86	53.92	17.4313	-0.0062	-0.0713
331	SLU 60	0.21	-0.88	54.94	17.7645	-0.0062	-0.0708
331	SLU 61	0.21	-0.85	54.94	17.7606	-0.0061	-0.0693
331	SLU 62	0.21	-0.9	55.5	17.942	-0.0063	-0.0718
331	SLU 63	0.21	-0.86	55.49	17.9382	-0.0063	-0.0703
331	SLU 64	0.24	-0.86	52.48	16.9767	-0.0066	-0.0811
331	SLU 65	0.23	-0.8	52.47	16.9703	-0.0065	-0.0786
331	SLU 66	0.25	-0.87	53.32	17.2477	-0.0068	-0.0837
331	SLU 67	0.24	-0.83	53.31	17.2439	-0.0068	-0.0822
331	SLU 68	0.24	-0.81	53.02	17.1478	-0.0066	-0.0796
331	SLU 69	0.25	-0.88	53.87	17.4253	-0.007	-0.0847
331	SLU 70	0.25	-0.84	53.87	17.4215	-0.0069	-0.0832
331	SLU 71	0.25	-0.88	53.59	17.3318	-0.0069	-0.0831
331	SLU 72	0.24	-0.85	53.58	17.328	-0.0068	-0.0816
331	SLU 73	0.23	-0.84	57.42	18.5674	-0.007	-0.0788
331	SLU 74	0.25	-0.91	58.27	18.8449	-0.0073	-0.0838
331	SLU 75	0.24	-0.87	58.27	18.841	-0.0073	-0.0823
331	SLU 76	0.24	-0.85	57.98	18.745	-0.0071	-0.0798
331	SLU 77	0.25	-0.92	58.83	19.0225	-0.0074	-0.0849
331	SLU 78	0.25	-0.88	58.82	19.0186	-0.0074	-0.0834
331	SLU 79	0.25	-0.92	58.54	18.929	-0.0073	-0.0833
331	SLU 80	0.24	-0.89	58.54	18.9251	-0.0073	-0.0818
331	SLU 81	0.24	-0.91	59.56	19.2583	-0.0073	-0.0813

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
331	SLU 82	0.24	-0.88	59.55	19.2545	-0.0072	-0.0798
331	SLU 83	0.24	-0.93	60.11	19.4359	-0.0074	-0.0823
331	SLU 84	0.24	-0.89	60.11	19.432	-0.0074	-0.0809
331	SLE RA 1	0.18	-0.65	39.35	12.7307	-0.0048	-0.0601
331	SLE RA 2	0.17	-0.61	39.35	12.7264	-0.0048	-0.0584
331	SLE RA 3	0.18	-0.66	39.91	12.9114	-0.005	-0.0618
331	SLE RA 4	0.18	-0.64	39.91	12.9088	-0.005	-0.0608
331	SLE RA 5	0.17	-0.62	39.72	12.8448	-0.0049	-0.0591
331	SLE RA 6	0.18	-0.67	40.28	13.0298	-0.0051	-0.0625
331	SLE RA 7	0.18	-0.64	40.28	13.0272	-0.005	-0.0615
331	SLE RA 8	0.18	-0.67	40.09	12.9674	-0.005	-0.0614
331	SLE RA 9	0.18	-0.65	40.09	12.9649	-0.005	-0.0604
331	SLE RA 10	0.17	-0.64	42.65	13.7912	-0.0051	-0.0585
331	SLE RA 11	0.18	-0.69	43.22	13.9761	-0.0053	-0.0619
331	SLE RA 12	0.18	-0.66	43.21	13.9736	-0.0053	-0.0609
331	SLE RA 13	0.18	-0.65	43.02	13.9095	-0.0052	-0.0592
331	SLE RA 14	0.18	-0.69	43.59	14.0945	-0.0054	-0.0626
331	SLE RA 15	0.18	-0.67	43.58	14.0919	-0.0054	-0.0616
331	SLE RA 16	0.18	-0.7	43.4	14.0322	-0.0053	-0.0615
331	SLE RA 17	0.18	-0.67	43.39	14.0296	-0.0053	-0.0605
331	SLE RA 18	0.18	-0.69	44.07	14.2518	-0.0053	-0.0602
331	SLE RA 19	0.18	-0.67	44.07	14.2492	-0.0053	-0.0592
331	SLE RA 20	0.18	-0.7	44.44	14.3701	-0.0054	-0.0609
331	SLE RA 21	0.18	-0.68	44.44	14.3676	-0.0053	-0.0599
331	SLE FR 1	0.18	-0.65	39.35	12.7307	-0.0048	-0.0601
331	SLE FR 2	0.18	-0.65	39.35	12.7298	-0.0048	-0.0597
331	SLE FR 3	0.18	-0.66	39.5	12.778	-0.0049	-0.0603
331	SLE FR 4	0.18	-0.66	40.77	13.1861	-0.005	-0.0598
331	SLE FR 5	0.18	-0.67	40.92	13.2343	-0.005	-0.0604
331	SLE FR 6	0.18	-0.67	41.71	13.4912	-0.0051	-0.0601
331	SLE QP 1	0.18	-0.65	39.35	12.7307	-0.0048	-0.0601
331	SLE QP 2	0.18	-0.66	40.77	13.187	-0.005	-0.0601
331	SLD 1	3.73	0.1	37.95	12.285	0.0037	-1.3055
331	SLD 2	4.11	0.34	38.21	12.3629	0.0031	-1.4388
331	SLD 3	3.66	-0.9	37.4	12.16	0.0053	-1.2806
331	SLD 4	4.04	-0.65	37.65	12.2379	0.0047	-1.4139
331	SLD 5	1.28	1.03	40.72	13.0921	-0.0047	-0.4479
331	SLD 6	1.53	1.19	40.88	13.1432	-0.0051	-0.5353
331	SLD 7	1.05	-2.29	38.88	12.6755	0.0006	-0.3647
331	SLD 8	1.3	-2.13	39.04	12.7265	0.0003	-0.4521
331	SLD 9	-0.94	0.8	42.5	13.6475	-0.0102	0.3319
331	SLD 10	-0.69	0.96	42.66	13.6985	-0.0106	0.2445
331	SLD 11	-1.18	-2.52	40.66	13.2308	-0.0049	0.415
331	SLD 12	-0.93	-2.36	40.82	13.2819	-0.0053	0.3277
331	SLD 13	-3.69	-0.68	43.89	14.1361	-0.0147	1.2937
331	SLD 14	-3.31	-0.43	44.14	14.214	-0.0153	1.1604
331	SLD 15	-3.76	-1.67	43.33	14.0111	-0.0131	1.3186
331	SLD 16	-3.38	-1.43	43.59	14.089	-0.0137	1.1853
331	SLV 1	8.49	1.1	34.16	11.0718	0.0154	-2.973
331	SLV 2	9.38	1.66	34.75	11.2533	0.0141	-3.2834
331	SLV 3	8.33	-1.18	32.91	10.7887	0.0191	-2.9155
331	SLV 4	9.22	-0.61	33.49	10.9701	0.0177	-3.226
331	SLV 5	2.77	3.21	40.59	12.9507	-0.0041	-0.9676
331	SLV 6	3.34	3.58	40.96	13.0676	-0.005	-1.1677
331	SLV 7	2.22	-4.36	36.41	12.0068	0.008	-0.7762
331	SLV 8	2.79	-4	36.79	12.1237	0.0071	-0.9762
331	SLV 9	-2.44	2.67	44.75	14.2503	-0.0171	0.856
331	SLV 10	-1.86	3.03	45.13	14.3672	-0.0179	0.6559
331	SLV 11	-2.98	-4.91	40.58	13.3064	-0.005	1.0475
331	SLV 12	-2.41	-4.54	40.95	13.4233	-0.0058	0.8474
331	SLV 13	-8.86	-0.72	48.05	15.4039	-0.0277	3.1058
331	SLV 14	-7.97	-0.15	48.63	15.5853	-0.029	2.7953
331	SLV 15	-9.02	-2.99	46.79	15.1207	-0.0241	3.1632
331	SLV 16	-8.13	-2.42	47.38	15.3022	-0.0254	2.8528
331	CRTFP Ux+	0	0	0	0	0	0
331	CRTFP Ux-	0	0	0	0	0	0
331	CRTFP Uy+	0	0	0	0	0	0
331	CRTFP Uy-	0	0	0	0	0	0
332	SLU 1	0.12	-0.39	24.95	8.0974	1.5498	-0.0165
332	SLU 2	0.11	-0.35	24.94	8.0939	1.5492	-0.0173
332	SLU 3	0.12	-0.39	25.5	8.2764	1.5841	-0.018
332	SLU 4	0.12	-0.37	25.5	8.2742	1.5838	-0.0184
332	SLU 5	0.11	-0.36	25.31	8.2111	1.5718	-0.0175
332	SLU 6	0.12	-0.4	25.87	8.3936	1.6067	-0.0182
332	SLU 7	0.12	-0.38	25.86	8.3915	1.6064	-0.0187
332	SLU 8	0.12	-0.4	25.68	8.3319	1.595	-0.017
332	SLU 9	0.12	-0.38	25.67	8.3298	1.5947	-0.0174
332	SLU 10	0.11	-0.37	28.19	9.1442	1.751	-0.016
332	SLU 11	0.12	-0.42	28.75	9.3267	1.7859	-0.0168
332	SLU 12	0.12	-0.39	28.75	9.3246	1.7856	-0.0172
332	SLU 13	0.12	-0.38	28.55	9.2614	1.7737	-0.0163
332	SLU 14	0.13	-0.42	29.12	9.444	1.8085	-0.017
332	SLU 15	0.12	-0.4	29.11	9.4418	1.8082	-0.0174
332	SLU 16	0.12	-0.43	28.93	9.3823	1.7968	-0.0158
332	SLU 17	0.12	-0.4	28.92	9.3801	1.7965	-0.0162
332	SLU 18	0.12	-0.42	29.59	9.5979	1.8381	-0.0148
332	SLU 19	0.12	-0.4	29.58	9.5958	1.8377	-0.0152
332	SLU 20	0.12	-0.43	29.95	9.7152	1.8607	-0.015
332	SLU 21	0.12	-0.41	29.95	9.713	1.8604	-0.0154
332	SLU 22	0.14	-0.4	27.99	9.083	1.7383	-0.0228

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
332	SLU 23	0.13	-0.37	27.98	9.0795	1.7377	-0.0235
332	SLU 24	0.14	-0.41	28.54	9.262	1.7726	-0.0242
332	SLU 25	0.14	-0.39	28.53	9.2599	1.7723	-0.0247
332	SLU 26	0.14	-0.37	28.34	9.1967	1.7603	-0.0237
332	SLU 27	0.15	-0.42	28.9	9.3793	1.7952	-0.0245
332	SLU 28	0.14	-0.39	28.9	9.3771	1.7949	-0.0249
332	SLU 29	0.14	-0.42	28.72	9.3175	1.7835	-0.0232
332	SLU 30	0.14	-0.4	28.71	9.3154	1.7832	-0.0237
332	SLU 31	0.13	-0.39	31.23	10.1298	1.9395	-0.0223
332	SLU 32	0.14	-0.43	31.79	10.3123	1.9744	-0.023
332	SLU 33	0.14	-0.41	31.78	10.3102	1.9741	-0.0234
332	SLU 34	0.14	-0.4	31.59	10.2471	1.9622	-0.0225
332	SLU 35	0.15	-0.44	32.15	10.4296	1.997	-0.0232
332	SLU 36	0.14	-0.42	32.15	10.4274	1.9967	-0.0237
332	SLU 37	0.14	-0.44	31.96	10.3679	1.9853	-0.022
332	SLU 38	0.14	-0.42	31.96	10.3657	1.985	-0.0224
332	SLU 39	0.14	-0.44	32.63	10.5835	2.0266	-0.021
332	SLU 40	0.14	-0.41	32.62	10.5814	2.0262	-0.0215
332	SLU 41	0.14	-0.44	32.99	10.7008	2.0492	-0.0212
332	SLU 42	0.14	-0.42	32.99	10.6986	2.0489	-0.0217
332	SLU 43	0.15	-0.5	31.39	10.1887	1.9501	-0.0194
332	SLU 44	0.14	-0.46	31.38	10.1852	1.9495	-0.0201
332	SLU 45	0.15	-0.5	31.95	10.3677	1.9844	-0.0208
332	SLU 46	0.15	-0.48	31.94	10.3655	1.9841	-0.0212
332	SLU 47	0.14	-0.47	31.75	10.3024	1.9721	-0.0203
332	SLU 48	0.15	-0.51	32.31	10.4849	2.007	-0.021
332	SLU 49	0.15	-0.49	32.31	10.4828	2.0067	-0.0215
332	SLU 50	0.15	-0.51	32.12	10.4232	1.9953	-0.0198
332	SLU 51	0.15	-0.49	32.12	10.4211	1.995	-0.0202
332	SLU 52	0.14	-0.48	34.63	11.2355	2.1513	-0.0188
332	SLU 53	0.15	-0.53	35.19	11.418	2.1862	-0.0196
332	SLU 54	0.15	-0.5	35.19	11.4159	2.1859	-0.02
332	SLU 55	0.14	-0.49	35	11.3527	2.174	-0.0191
332	SLU 56	0.15	-0.53	35.56	11.5353	2.2088	-0.0198
332	SLU 57	0.15	-0.51	35.55	11.5331	2.2085	-0.0202
332	SLU 58	0.15	-0.54	35.37	11.4736	2.1971	-0.0186
332	SLU 59	0.15	-0.51	35.37	11.4714	2.1968	-0.019
332	SLU 60	0.15	-0.53	36.03	11.6892	2.2384	-0.0176
332	SLU 61	0.14	-0.51	36.03	11.6871	2.238	-0.018
332	SLU 62	0.15	-0.54	36.4	11.8065	2.261	-0.0178
332	SLU 63	0.15	-0.52	36.39	11.8043	2.2607	-0.0183
332	SLU 64	0.17	-0.51	34.43	11.1743	2.1386	-0.0256
332	SLU 65	0.16	-0.48	34.42	11.1708	2.138	-0.0263
332	SLU 66	0.17	-0.52	34.98	11.3533	2.1729	-0.0271
332	SLU 67	0.17	-0.5	34.98	11.3512	2.1726	-0.0275
332	SLU 68	0.16	-0.48	34.79	11.288	2.1606	-0.0266
332	SLU 69	0.17	-0.53	35.35	11.4706	2.1955	-0.0273
332	SLU 70	0.17	-0.5	35.34	11.4684	2.1952	-0.0277
332	SLU 71	0.17	-0.53	35.16	11.4088	2.1838	-0.0261
332	SLU 72	0.17	-0.51	35.15	11.4067	2.1835	-0.0265
332	SLU 73	0.16	-0.5	37.67	12.2211	2.3398	-0.0251
332	SLU 74	0.17	-0.54	38.23	12.4036	2.3747	-0.0258
332	SLU 75	0.17	-0.52	38.23	12.4015	2.3744	-0.0263
332	SLU 76	0.16	-0.51	38.03	12.3384	2.3625	-0.0253
332	SLU 77	0.17	-0.55	38.6	12.5209	2.3973	-0.0261
332	SLU 78	0.17	-0.53	38.59	12.5187	2.397	-0.0265
332	SLU 79	0.17	-0.55	38.41	12.4592	2.3856	-0.0248
332	SLU 80	0.17	-0.53	38.4	12.457	2.3853	-0.0253
332	SLU 81	0.17	-0.55	39.07	12.6748	2.4269	-0.0238
332	SLU 82	0.16	-0.52	39.07	12.6727	2.4266	-0.0243
332	SLU 83	0.17	-0.56	39.44	12.7921	2.4495	-0.0241
332	SLU 84	0.17	-0.53	39.43	12.7899	2.4492	-0.0245
332	SLE RA 1	0.12	-0.39	25.82	8.379	1.6036	-0.0183
332	SLE RA 2	0.12	-0.37	25.81	8.3766	1.6033	-0.0188
332	SLE RA 3	0.13	-0.4	26.19	8.4983	1.6265	-0.0193
332	SLE RA 4	0.12	-0.38	26.18	8.4969	1.6263	-0.0196
332	SLE RA 5	0.12	-0.37	26.05	8.4548	1.6183	-0.019
332	SLE RA 6	0.13	-0.4	26.43	8.5765	1.6416	-0.0194
332	SLE RA 7	0.13	-0.39	26.43	8.5751	1.6414	-0.0197
332	SLE RA 8	0.13	-0.4	26.3	8.5354	1.6338	-0.0186
332	SLE RA 9	0.12	-0.39	26.3	8.5339	1.6336	-0.0189
332	SLE RA 10	0.12	-0.38	27.98	9.0769	1.7378	-0.018
332	SLE RA 11	0.13	-0.41	28.35	9.1986	1.761	-0.0185
332	SLE RA 12	0.13	-0.4	28.35	9.1971	1.7608	-0.0188
332	SLE RA 13	0.12	-0.39	28.22	9.155	1.7529	-0.0181
332	SLE RA 14	0.13	-0.42	28.59	9.2767	1.7761	-0.0186
332	SLE RA 15	0.13	-0.4	28.59	9.2753	1.7759	-0.0189
332	SLE RA 16	0.13	-0.42	28.47	9.2356	1.7683	-0.0178
332	SLE RA 17	0.12	-0.4	28.47	9.2342	1.7681	-0.0181
332	SLE RA 18	0.12	-0.41	28.91	9.3794	1.7958	-0.0171
332	SLE RA 19	0.12	-0.4	28.91	9.3779	1.7956	-0.0174
332	SLE RA 20	0.13	-0.42	29.15	9.4575	1.8109	-0.0173
332	SLE RA 21	0.12	-0.4	29.15	9.4561	1.8107	-0.0176
332	SLE FR 1	0.12	-0.39	25.82	8.379	1.6036	-0.0183
332	SLE FR 2	0.12	-0.39	25.82	8.3786	1.6036	-0.0184
332	SLE FR 3	0.12	-0.39	25.91	8.4103	1.6097	-0.0184
332	SLE FR 4	0.12	-0.39	26.74	8.6787	1.6612	-0.0181
332	SLE FR 5	0.12	-0.4	26.84	8.7104	1.6673	-0.018
332	SLE FR 6	0.12	-0.4	27.36	8.8792	1.6997	-0.0177
332	SLE QP 1	0.12	-0.39	25.82	8.379	1.6036	-0.0183

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
332	SLE QP 2	0.12	-0.4	26.75	8.6791	1.6613	-0.018
332	SLD 1	2.45	0.08	24.76	8.046	1.5397	-0.8588
332	SLD 2	2.7	0.25	24.93	8.0981	1.5504	-0.9566
332	SLD 3	2.4	-0.57	24.37	7.9528	1.5158	-0.8055
332	SLD 4	2.65	-0.4	24.54	8.0049	1.5265	-0.9033
332	SLD 5	0.85	0.71	26.71	8.6212	1.6591	-0.3337
332	SLD 6	1.01	0.82	26.82	8.6553	1.6661	-0.3979
332	SLD 7	0.69	-1.47	25.41	8.3107	1.5796	-0.1559
332	SLD 8	0.86	-1.36	25.52	8.3449	1.5866	-0.2201
332	SLD 9	-0.61	0.57	27.97	9.0134	1.736	0.1841
332	SLD 10	-0.45	0.68	28.08	9.0476	1.743	0.12
332	SLD 11	-0.77	-1.62	26.67	8.7029	1.6565	0.3619
332	SLD 12	-0.6	-1.51	26.78	8.7371	1.6635	0.2978
332	SLD 13	-2.41	-0.39	28.95	9.3533	1.7961	0.8674
332	SLD 14	-2.16	-0.23	29.13	9.4054	1.8067	0.7695
332	SLD 15	-2.45	-1.05	28.56	9.2602	1.7722	0.9207
332	SLD 16	-2.2	-0.88	28.74	9.3123	1.7829	0.8229
332	SLV 1	5.57	0.71	22.08	7.1942	1.3759	-1.9833
332	SLV 2	6.15	1.1	22.48	7.3155	1.4007	-2.2111
332	SLV 3	5.46	-0.78	21.19	6.9832	1.3219	-1.8619
332	SLV 4	6.04	-0.39	21.6	7.1045	1.3467	-2.0896
332	SLV 5	1.82	2.13	26.62	8.5327	1.6533	-0.7526
332	SLV 6	2.2	2.38	26.88	8.6109	1.6693	-0.8994
332	SLV 7	1.46	-2.84	23.67	7.8295	1.4733	-0.3476
332	SLV 8	1.84	-2.59	23.93	7.9077	1.4893	-0.4944
332	SLV 9	-1.59	1.79	29.56	9.4506	1.8333	0.4585
332	SLV 10	-1.21	2.04	29.82	9.5287	1.8493	0.3117
332	SLV 11	-1.95	-3.18	26.61	8.7474	1.6533	0.8635
332	SLV 12	-1.57	-2.93	26.88	8.8256	1.6693	0.7167
332	SLV 13	-5.8	-0.41	31.89	10.2537	1.9759	2.0537
332	SLV 14	-5.21	-0.02	32.3	10.375	2.0007	1.8259
332	SLV 15	-5.9	-1.9	31.01	10.0428	1.9219	2.1752
332	SLV 16	-5.32	-1.51	31.42	10.1641	1.9467	1.9474
332	CRTFP Ux+	0	0	0	0	0	0
332	CRTFP Ux-	0	0	0	0	0	0
332	CRTFP Uy+	0	0	0	0	0	0
332	CRTFP Uy-	0	0	0	0	0	0
334	SLU 1	0.33	-0.81	59.45	10.294	-0.4231	-0.0516
334	SLU 2	0.32	-0.72	59.42	10.2899	-0.4213	-0.049
334	SLU 3	0.35	-0.82	60.77	10.5226	-0.4337	-0.0537
334	SLU 4	0.34	-0.77	60.75	10.5201	-0.4326	-0.0522
334	SLU 5	0.32	-0.74	60.29	10.4403	-0.4282	-0.05
334	SLU 6	0.35	-0.83	61.64	10.673	-0.4406	-0.0547
334	SLU 7	0.34	-0.78	61.63	10.6706	-0.4395	-0.0532
334	SLU 8	0.34	-0.84	61.2	10.5949	-0.4368	-0.0535
334	SLU 9	0.34	-0.79	61.18	10.5924	-0.4357	-0.052
334	SLU 10	0.32	-0.77	67.14	11.6255	-0.4697	-0.0495
334	SLU 11	0.35	-0.87	68.5	11.8582	-0.4821	-0.0542
334	SLU 12	0.34	-0.81	68.48	11.8557	-0.481	-0.0527
334	SLU 13	0.33	-0.79	68.02	11.7759	-0.4766	-0.0505
334	SLU 14	0.36	-0.88	69.37	12.0086	-0.489	-0.0552
334	SLU 15	0.35	-0.83	69.35	12.0062	-0.4879	-0.0536
334	SLU 16	0.35	-0.89	68.92	11.9305	-0.4852	-0.054
334	SLU 17	0.34	-0.84	68.9	11.928	-0.4841	-0.0525
334	SLU 18	0.34	-0.88	70.48	12.2019	-0.4922	-0.0522
334	SLU 19	0.33	-0.83	70.47	12.1995	-0.4912	-0.0507
334	SLU 20	0.34	-0.89	71.36	12.3524	-0.4991	-0.0532
334	SLU 21	0.34	-0.84	71.34	12.3499	-0.498	-0.0517
334	SLU 22	0.39	-0.83	66.7	11.5497	-0.4799	-0.06
334	SLU 23	0.37	-0.75	66.67	11.5456	-0.4781	-0.0574
334	SLU 24	0.4	-0.84	68.02	11.7783	-0.4905	-0.0621
334	SLU 25	0.39	-0.79	68	11.7759	-0.4894	-0.0606
334	SLU 26	0.38	-0.77	67.54	11.6961	-0.485	-0.0584
334	SLU 27	0.41	-0.86	68.89	11.9288	-0.4974	-0.0631
334	SLU 28	0.4	-0.81	68.88	11.9263	-0.4963	-0.0616
334	SLU 29	0.4	-0.87	68.44	11.8506	-0.4936	-0.0619
334	SLU 30	0.39	-0.82	68.43	11.8482	-0.4925	-0.0604
334	SLU 31	0.38	-0.8	74.39	12.8812	-0.5265	-0.0579
334	SLU 32	0.41	-0.89	75.75	13.1139	-0.5389	-0.0626
334	SLU 33	0.4	-0.84	75.73	13.1114	-0.5378	-0.061
334	SLU 34	0.38	-0.82	75.26	13.0316	-0.5333	-0.0589
334	SLU 35	0.41	-0.91	76.62	13.2644	-0.5458	-0.0635
334	SLU 36	0.4	-0.86	76.6	13.2619	-0.5447	-0.062
334	SLU 37	0.4	-0.92	76.17	13.1862	-0.542	-0.0624
334	SLU 38	0.4	-0.87	76.15	13.1837	-0.5409	-0.0609
334	SLU 39	0.39	-0.9	77.73	13.4577	-0.549	-0.0606
334	SLU 40	0.39	-0.85	77.72	13.4552	-0.5479	-0.0591
334	SLU 41	0.4	-0.92	78.61	13.6081	-0.5559	-0.0616
334	SLU 42	0.39	-0.87	78.59	13.6057	-0.5548	-0.0601
334	SLU 43	0.41	-1.04	74.8	12.9516	-0.5306	-0.0642
334	SLU 44	0.4	-0.95	74.77	12.9475	-0.5288	-0.0616
334	SLU 45	0.43	-1.05	76.12	13.1802	-0.5412	-0.0663
334	SLU 46	0.42	-1	76.1	13.1778	-0.5401	-0.0648
334	SLU 47	0.4	-0.97	75.64	13.098	-0.5356	-0.0626
334	SLU 48	0.43	-1.07	76.99	13.3307	-0.548	-0.0673
334	SLU 49	0.42	-1.01	76.98	13.3282	-0.547	-0.0658
334	SLU 50	0.42	-1.07	76.54	13.2525	-0.5443	-0.0661
334	SLU 51	0.42	-1.02	76.53	13.2501	-0.5432	-0.0646
334	SLU 52	0.4	-1	82.49	14.2831	-0.5772	-0.0621
334	SLU 53	0.43	-1.1	83.85	14.5158	-0.5896	-0.0668

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
334	SLU 54	0.42	-1.05	83.83	14.5134	-0.5885	-0.0653
334	SLU 55	0.41	-1.02	83.37	14.4336	-0.584	-0.0631
334	SLU 56	0.44	-1.12	84.72	14.6663	-0.5964	-0.0678
334	SLU 57	0.43	-1.06	84.7	14.6638	-0.5953	-0.0662
334	SLU 58	0.43	-1.12	84.27	14.5881	-0.5927	-0.0666
334	SLU 59	0.42	-1.07	84.25	14.5857	-0.5916	-0.0651
334	SLU 60	0.42	-1.11	85.83	14.8596	-0.5997	-0.0648
334	SLU 61	0.41	-1.06	85.82	14.8571	-0.5986	-0.0633
334	SLU 62	0.43	-1.13	86.71	15.01	-0.6066	-0.0658
334	SLU 63	0.42	-1.07	86.69	15.0076	-0.6055	-0.0643
334	SLU 64	0.47	-1.07	82.05	14.2073	-0.5874	-0.0726
334	SLU 65	0.45	-0.98	82.02	14.2033	-0.5856	-0.07
334	SLU 66	0.48	-1.08	83.37	14.436	-0.598	-0.0747
334	SLU 67	0.47	-1.03	83.35	14.4335	-0.5969	-0.0732
334	SLU 68	0.46	-1	82.89	14.3537	-0.5924	-0.071
334	SLU 69	0.49	-1.09	84.24	14.5864	-0.6048	-0.0757
334	SLU 70	0.48	-1.04	84.22	14.584	-0.6037	-0.0742
334	SLU 71	0.48	-1.1	83.79	14.5083	-0.6011	-0.0745
334	SLU 72	0.47	-1.05	83.78	14.5058	-0.6	-0.073
334	SLU 73	0.46	-1.03	89.74	15.5388	-0.634	-0.0705
334	SLU 74	0.49	-1.13	91.09	15.7715	-0.6464	-0.0752
334	SLU 75	0.48	-1.07	91.08	15.7691	-0.6453	-0.0736
334	SLU 76	0.46	-1.05	90.61	15.6893	-0.6408	-0.0715
334	SLU 77	0.49	-1.14	91.97	15.922	-0.6532	-0.0761
334	SLU 78	0.48	-1.09	91.95	15.9196	-0.6521	-0.0746
334	SLU 79	0.48	-1.15	91.52	15.8438	-0.6495	-0.075
334	SLU 80	0.48	-1.1	91.5	15.8414	-0.6484	-0.0735
334	SLU 81	0.47	-1.14	93.08	16.1153	-0.6565	-0.0732
334	SLU 82	0.47	-1.09	93.06	16.1129	-0.6554	-0.0717
334	SLU 83	0.48	-1.15	93.96	16.2658	-0.6633	-0.0742
334	SLU 84	0.47	-1.1	93.94	16.2633	-0.6623	-0.0727
334	SLE RA 1	0.35	-0.81	61.52	10.6527	-0.4393	-0.054
334	SLE RA 2	0.34	-0.76	61.5	10.65	-0.4381	-0.0523
334	SLE RA 3	0.36	-0.82	62.4	10.8052	-0.4464	-0.0554
334	SLE RA 4	0.35	-0.79	62.39	10.8035	-0.4457	-0.0544
334	SLE RA 5	0.34	-0.77	62.08	10.7503	-0.4427	-0.0529
334	SLE RA 6	0.36	-0.83	62.98	10.9055	-0.451	-0.0561
334	SLE RA 7	0.35	-0.8	62.97	10.9038	-0.4503	-0.055
334	SLE RA 8	0.36	-0.84	62.68	10.8534	-0.4485	-0.0553
334	SLE RA 9	0.35	-0.8	62.67	10.8517	-0.4478	-0.0543
334	SLE RA 10	0.34	-0.79	66.65	11.5404	-0.4704	-0.0526
334	SLE RA 11	0.36	-0.85	67.55	11.6955	-0.4787	-0.0557
334	SLE RA 12	0.35	-0.82	67.54	11.6939	-0.4779	-0.0547
334	SLE RA 13	0.35	-0.8	67.23	11.6407	-0.475	-0.0532
334	SLE RA 14	0.36	-0.87	68.13	11.7958	-0.4832	-0.0564
334	SLE RA 15	0.36	-0.83	68.12	11.7942	-0.4825	-0.0553
334	SLE RA 16	0.36	-0.87	67.83	11.7437	-0.4807	-0.0556
334	SLE RA 17	0.35	-0.84	67.82	11.7421	-0.48	-0.0546
334	SLE RA 18	0.35	-0.86	68.88	11.9247	-0.4854	-0.0544
334	SLE RA 19	0.35	-0.83	68.87	11.9231	-0.4847	-0.0534
334	SLE RA 20	0.36	-0.87	69.46	12.025	-0.49	-0.0551
334	SLE RA 21	0.35	-0.84	69.45	12.0234	-0.4893	-0.0541
334	SLE FR 1	0.35	-0.81	61.52	10.6527	-0.4393	-0.054
334	SLE FR 2	0.35	-0.8	61.52	10.6522	-0.4391	-0.0536
334	SLE FR 3	0.35	-0.82	61.75	10.6929	-0.4412	-0.0542
334	SLE FR 4	0.35	-0.82	63.72	11.0338	-0.4529	-0.0538
334	SLE FR 5	0.35	-0.83	63.96	11.0745	-0.455	-0.0544
334	SLE FR 6	0.35	-0.84	65.2	11.2887	-0.4624	-0.0542
334	SLE QP 1	0.35	-0.81	61.52	10.6527	-0.4393	-0.054
334	SLE QP 2	0.35	-0.83	63.73	11.0343	-0.4532	-0.0541
334	SLD 1	5.85	0.31	58.52	10.155	-0.2937	-1.0245
334	SLD 2	6.45	0.73	58.98	10.2299	-0.3056	-1.1218
334	SLD 3	5.74	-1.24	57.42	9.9861	-0.2593	-1.0397
334	SLD 4	6.34	-0.81	57.89	10.061	-0.2712	-1.137
334	SLD 5	2.06	1.78	63.75	11.0134	-0.4553	-0.3048
334	SLD 6	2.45	2.06	64.05	11.0625	-0.4631	-0.3687
334	SLD 7	1.69	-3.37	60.09	10.4504	-0.3408	-0.3555
334	SLD 8	2.09	-3.09	60.39	10.4994	-0.3486	-0.4193
334	SLD 9	-1.39	1.43	67.06	11.5692	-0.5577	0.3111
334	SLD 10	-0.99	1.71	67.37	11.6183	-0.5655	0.2473
334	SLD 11	-1.76	-3.71	63.4	11.0062	-0.4432	0.2605
334	SLD 12	-1.36	-3.43	63.71	11.0553	-0.451	0.1966
334	SLD 13	-5.65	-0.85	69.57	12.0077	-0.6351	1.0288
334	SLD 14	-5.04	-0.42	70.03	12.0826	-0.647	0.9314
334	SLD 15	-5.76	-2.39	68.47	11.8388	-0.6007	1.0136
334	SLD 16	-5.15	-1.96	68.94	11.9136	-0.6126	0.9162
334	SLV 1	13.21	1.79	51.5	8.9706	-0.0788	-2.3239
334	SLV 2	14.62	2.78	52.58	9.1449	-0.1065	-2.5507
334	SLV 3	12.96	-1.73	49.02	8.5881	-0.001	-2.3594
334	SLV 4	14.37	-0.74	50.1	8.7624	-0.0287	-2.5862
334	SLV 5	4.35	5.12	63.64	10.9654	-0.4541	-0.6422
334	SLV 6	5.26	5.76	64.34	11.0777	-0.4719	-0.7883
334	SLV 7	3.51	-6.6	55.36	9.6903	-0.1948	-0.7605
334	SLV 8	4.41	-5.96	56.05	9.8026	-0.2126	-0.9066
334	SLV 9	-3.72	4.31	71.4	12.2661	-0.6937	0.7984
334	SLV 10	-2.81	4.95	72.1	12.3784	-0.7115	0.6523
334	SLV 11	-4.56	-7.41	63.12	10.991	-0.4344	0.6801
334	SLV 12	-3.65	-6.77	63.81	11.1033	-0.4522	0.534
334	SLV 13	-13.67	-0.92	77.36	13.3063	-0.8776	2.478
334	SLV 14	-12.26	0.07	78.44	13.4806	-0.9053	2.2512

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
334	SLV 15	-13.92	-4.43	74.88	12.9237	-0.7998	2.4425
334	SLV 16	-12.51	-3.44	75.95	13.098	-0.8275	2.2157
334	CRTFP Ux+	0	0	0	0	0	0
334	CRTFP Ux-	0	0	0	0	0	0
334	CRTFP Uy+	0	0	0	0	0	0
334	CRTFP Uy-	0	0	0	0	0	0
336	SLU 1	0.15	-0.35	28.66	8.5983	-1.7628	-0.0739
336	SLU 2	0.15	-0.31	28.64	8.6018	-1.7618	-0.0695
336	SLU 3	0.16	-0.35	29.3	8.7879	-1.8021	-0.0764
336	SLU 4	0.16	-0.33	29.29	8.79	-1.8015	-0.0738
336	SLU 5	0.15	-0.32	29.07	8.7264	-1.7877	-0.0709
336	SLU 6	0.16	-0.36	29.72	8.9124	-1.828	-0.0778
336	SLU 7	0.16	-0.34	29.71	8.9145	-1.8274	-0.0752
336	SLU 8	0.16	-0.36	29.5	8.8473	-1.8146	-0.0767
336	SLU 9	0.15	-0.34	29.49	8.8495	-1.8139	-0.0741
336	SLU 10	0.15	-0.33	32.35	9.7035	-1.9898	-0.0713
336	SLU 11	0.16	-0.37	33.01	9.8895	-2.0301	-0.0782
336	SLU 12	0.16	-0.35	33	9.8917	-2.0295	-0.0756
336	SLU 13	0.15	-0.34	32.78	9.828	-2.0156	-0.0728
336	SLU 14	0.16	-0.38	33.43	10.014	-2.0559	-0.0796
336	SLU 15	0.16	-0.36	33.42	10.0162	-2.0553	-0.077
336	SLU 16	0.16	-0.38	33.21	9.9489	-2.0425	-0.0785
336	SLU 17	0.16	-0.36	33.2	9.9511	-2.0419	-0.0759
336	SLU 18	0.15	-0.38	33.96	10.172	-2.0885	-0.0764
336	SLU 19	0.15	-0.35	33.95	10.1742	-2.0879	-0.0739
336	SLU 20	0.16	-0.39	34.38	10.2965	-2.1144	-0.0778
336	SLU 21	0.15	-0.36	34.37	10.2987	-2.1137	-0.0753
336	SLU 22	0.18	-0.36	32.16	9.6416	-1.9783	-0.0835
336	SLU 23	0.17	-0.32	32.15	9.6452	-1.9773	-0.0791
336	SLU 24	0.19	-0.36	32.8	9.8312	-2.0176	-0.0859
336	SLU 25	0.18	-0.34	32.79	9.8334	-2.017	-0.0834
336	SLU 26	0.18	-0.32	32.57	9.7697	-2.0031	-0.0805
336	SLU 27	0.19	-0.37	33.22	9.9558	-2.0435	-0.0873
336	SLU 28	0.18	-0.34	33.21	9.9579	-2.0428	-0.0848
336	SLU 29	0.18	-0.37	33	9.8907	-2.03	-0.0863
336	SLU 30	0.18	-0.35	33	9.8928	-2.0294	-0.0837
336	SLU 31	0.17	-0.34	35.86	10.7468	-2.2052	-0.0809
336	SLU 32	0.19	-0.38	36.51	10.9329	-2.2455	-0.0878
336	SLU 33	0.18	-0.36	36.5	10.935	-2.2449	-0.0852
336	SLU 34	0.18	-0.34	36.28	10.8714	-2.2311	-0.0823
336	SLU 35	0.19	-0.39	36.93	11.0574	-2.2714	-0.0892
336	SLU 36	0.19	-0.36	36.92	11.0595	-2.2708	-0.0866
336	SLU 37	0.19	-0.39	36.71	10.9923	-2.258	-0.0881
336	SLU 38	0.18	-0.37	36.71	10.9944	-2.2574	-0.0855
336	SLU 39	0.18	-0.39	37.46	11.2154	-2.304	-0.086
336	SLU 40	0.18	-0.36	37.45	11.2175	-2.3033	-0.0834
336	SLU 41	0.18	-0.39	37.88	11.3399	-2.3298	-0.0874
336	SLU 42	0.18	-0.37	37.87	11.3421	-2.3292	-0.0849
336	SLU 43	0.19	-0.45	36.06	10.82	-2.2178	-0.0927
336	SLU 44	0.18	-0.41	36.04	10.8236	-2.2168	-0.0884
336	SLU 45	0.2	-0.45	36.7	11.0096	-2.2571	-0.0952
336	SLU 46	0.19	-0.43	36.69	11.0118	-2.2565	-0.0926
336	SLU 47	0.19	-0.42	36.46	10.9481	-2.2426	-0.0898
336	SLU 48	0.2	-0.46	37.12	11.1341	-2.283	-0.0966
336	SLU 49	0.19	-0.44	37.11	11.1363	-2.2823	-0.094
336	SLU 50	0.19	-0.46	36.9	11.0691	-2.2695	-0.0955
336	SLU 51	0.19	-0.44	36.89	11.0712	-2.2689	-0.0929
336	SLU 52	0.19	-0.43	39.75	11.9252	-2.4447	-0.0902
336	SLU 53	0.2	-0.47	40.41	12.1113	-2.4851	-0.097
336	SLU 54	0.19	-0.45	40.4	12.1134	-2.4844	-0.0944
336	SLU 55	0.19	-0.44	40.17	12.0498	-2.4706	-0.0916
336	SLU 56	0.2	-0.48	40.83	12.2358	-2.5109	-0.0984
336	SLU 57	0.2	-0.46	40.82	12.2379	-2.5103	-0.0958
336	SLU 58	0.2	-0.49	40.61	12.1707	-2.4975	-0.0973
336	SLU 59	0.19	-0.46	40.6	12.1728	-2.4969	-0.0948
336	SLU 60	0.19	-0.48	41.36	12.3938	-2.5435	-0.0953
336	SLU 61	0.19	-0.46	41.35	12.3959	-2.5428	-0.0927
336	SLU 62	0.19	-0.49	41.78	12.5183	-2.5693	-0.0967
336	SLU 63	0.19	-0.46	41.77	12.5204	-2.5687	-0.0941
336	SLU 64	0.22	-0.46	39.56	11.8634	-2.4333	-0.1023
336	SLU 65	0.21	-0.42	39.55	11.867	-2.4322	-0.098
336	SLU 66	0.22	-0.46	40.2	12.053	-2.4726	-0.1048
336	SLU 67	0.22	-0.44	40.19	12.0551	-2.4719	-0.1022
336	SLU 68	0.21	-0.42	39.97	11.9915	-2.4581	-0.0994
336	SLU 69	0.22	-0.47	40.62	12.1775	-2.4984	-0.1062
336	SLU 70	0.22	-0.44	40.61	12.1797	-2.4978	-0.1036
336	SLU 71	0.22	-0.47	40.4	12.1124	-2.485	-0.1051
336	SLU 72	0.22	-0.45	40.39	12.1146	-2.4844	-0.1025
336	SLU 73	0.21	-0.44	43.25	12.9686	-2.6602	-0.0998
336	SLU 74	0.22	-0.48	43.91	13.1546	-2.7005	-0.1066
336	SLU 75	0.22	-0.46	43.9	13.1568	-2.6999	-0.104
336	SLU 76	0.21	-0.45	43.68	13.0931	-2.6861	-0.1012
336	SLU 77	0.23	-0.49	44.33	13.2791	-2.7264	-0.108
336	SLU 78	0.22	-0.47	44.32	13.2813	-2.7258	-0.1054
336	SLU 79	0.22	-0.49	44.11	13.214	-2.713	-0.1069
336	SLU 80	0.22	-0.47	44.1	13.2162	-2.7123	-0.1043
336	SLU 81	0.22	-0.49	44.86	13.4371	-2.7589	-0.1049
336	SLU 82	0.21	-0.46	44.85	13.4393	-2.7583	-0.1023
336	SLU 83	0.22	-0.49	45.28	13.5617	-2.7848	-0.1063
336	SLU 84	0.22	-0.47	45.27	13.5638	-2.7842	-0.1037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
336	SLE RA 1	0.16	-0.35	29.66	8.8964	-1.8244	-0.0766
336	SLE RA 2	0.16	-0.32	29.65	8.8988	-1.8237	-0.0737
336	SLE RA 3	0.16	-0.35	30.09	9.0228	-1.8506	-0.0783
336	SLE RA 4	0.16	-0.34	30.08	9.0242	-1.8502	-0.0765
336	SLE RA 5	0.16	-0.33	29.93	8.9818	-1.8409	-0.0747
336	SLE RA 6	0.17	-0.36	30.37	9.1058	-1.8678	-0.0792
336	SLE RA 7	0.16	-0.34	30.36	9.1072	-1.8674	-0.0775
336	SLE RA 8	0.16	-0.36	30.22	9.0624	-1.8589	-0.0785
336	SLE RA 9	0.16	-0.34	30.22	9.0638	-1.8585	-0.0767
336	SLE RA 10	0.16	-0.34	32.12	9.6332	-1.9757	-0.0749
336	SLE RA 11	0.17	-0.37	32.56	9.7572	-2.0026	-0.0795
336	SLE RA 12	0.16	-0.35	32.55	9.7586	-2.0021	-0.0777
336	SLE RA 13	0.16	-0.34	32.4	9.7162	-1.9929	-0.0759
336	SLE RA 14	0.17	-0.37	32.84	9.8402	-2.0198	-0.0804
336	SLE RA 15	0.16	-0.36	32.83	9.8416	-2.0194	-0.0787
336	SLE RA 16	0.16	-0.37	32.7	9.7968	-2.0109	-0.0797
336	SLE RA 17	0.16	-0.36	32.69	9.7982	-2.0104	-0.078
336	SLE RA 18	0.16	-0.37	33.2	9.9455	-2.0415	-0.0783
336	SLE RA 19	0.16	-0.35	33.19	9.947	-2.0411	-0.0766
336	SLE RA 20	0.16	-0.37	33.48	10.0285	-2.0587	-0.0793
336	SLE RA 21	0.16	-0.36	33.47	10.03	-2.0583	-0.0775
336	SLE FR 1	0.16	-0.35	29.66	8.8964	-1.8244	-0.0766
336	SLE FR 2	0.16	-0.34	29.66	8.8968	-1.8243	-0.076
336	SLE FR 3	0.16	-0.35	29.77	8.9296	-1.8313	-0.077
336	SLE FR 4	0.16	-0.35	30.72	9.2116	-1.8894	-0.0765
336	SLE FR 5	0.16	-0.36	30.83	9.2443	-1.8964	-0.0775
336	SLE FR 6	0.16	-0.36	31.43	9.4209	-1.9329	-0.0775
336	SLE QP 1	0.16	-0.35	29.66	8.8964	-1.8244	-0.0766
336	SLE QP 2	0.16	-0.36	30.72	9.2111	-1.8895	-0.0771
336	SLD 1	2.93	0.22	28.04	8.5299	-1.7216	-1.011
336	SLD 2	3.23	0.45	28.27	8.5889	-1.7357	-1.101
336	SLD 3	2.88	-0.56	27.51	8.3822	-1.6886	-1.0479
336	SLD 4	3.18	-0.32	27.74	8.4413	-1.7027	-1.1379
336	SLD 5	1.02	0.95	30.68	9.2202	-1.8867	-0.2854
336	SLD 6	1.22	1.1	30.83	9.2589	-1.8959	-0.3444
336	SLD 7	0.84	-1.63	28.92	8.728	-1.7767	-0.4082
336	SLD 8	1.03	-1.48	29.07	8.7667	-1.7859	-0.4672
336	SLD 9	-0.71	0.77	32.38	9.6556	-1.9931	0.313
336	SLD 10	-0.52	0.92	32.53	9.6943	-2.0024	0.254
336	SLD 11	-0.9	-1.81	30.62	9.1633	-1.8831	0.1902
336	SLD 12	-0.7	-1.66	30.76	9.202	-1.8924	0.1312
336	SLD 13	-2.85	-0.39	33.7	9.981	-2.0764	0.9836
336	SLD 14	-2.56	-0.16	33.93	10.04	-2.0905	0.8936
336	SLD 15	-2.91	-1.16	33.18	9.8333	-2.0434	0.9468
336	SLD 16	-2.61	-0.93	33.4	9.8923	-2.0575	0.8568
336	SLV 1	6.64	0.96	24.43	7.6117	-1.4953	-2.2625
336	SLV 2	7.34	1.5	24.96	7.7492	-1.5282	-2.4721
336	SLV 3	6.51	-0.8	23.23	7.2773	-1.4206	-2.3469
336	SLV 4	7.21	-0.26	23.76	7.4148	-1.4535	-2.5565
336	SLV 5	2.18	2.62	30.56	9.2148	-1.8789	-0.5686
336	SLV 6	2.63	2.96	30.9	9.3034	-1.9001	-0.7037
336	SLV 7	1.75	-3.25	26.57	8.1001	-1.6299	-0.85
336	SLV 8	2.2	-2.9	26.91	8.1887	-1.6511	-0.9851
336	SLV 9	-1.88	2.19	34.54	10.2335	-2.128	0.8308
336	SLV 10	-1.43	2.54	34.88	10.3221	-2.1492	0.6957
336	SLV 11	-2.31	-3.68	30.54	9.1188	-1.879	0.5495
336	SLV 12	-1.86	-3.33	30.88	9.2074	-1.9001	0.4144
336	SLV 13	-6.89	-0.45	37.68	11.0074	-2.3256	2.4023
336	SLV 14	-6.19	0.09	38.21	11.1449	-2.3585	2.1927
336	SLV 15	-7.02	-2.21	36.49	10.673	-2.2509	2.3179
336	SLV 16	-6.32	-1.67	37.01	10.8105	-2.2837	2.1082
336	CRTFP Ux+	0	0	0	0	0	0
336	CRTFP Ux-	0	0	0	0	0	0
336	CRTFP Uy+	0	0	0	0	0	0
336	CRTFP Uy-	0	0	0	0	0	0
337	SLU 1	0.23	-0.42	39.91	10.9886	0.0597	-0.0763
337	SLU 2	0.22	-0.37	39.88	11.0014	0.0598	-0.074
337	SLU 3	0.24	-0.43	40.8	11.2289	0.061	-0.0796
337	SLU 4	0.23	-0.4	40.78	11.2366	0.0611	-0.0782
337	SLU 5	0.22	-0.38	40.47	11.1593	0.0607	-0.0753
337	SLU 6	0.24	-0.44	41.38	11.3868	0.0619	-0.081
337	SLU 7	0.24	-0.41	41.37	11.3945	0.062	-0.0796
337	SLU 8	0.23	-0.44	41.08	11.3045	0.0615	-0.079
337	SLU 9	0.23	-0.41	41.06	11.3122	0.0616	-0.0776
337	SLU 10	0.22	-0.39	45.03	12.3914	0.0685	-0.0746
337	SLU 11	0.24	-0.45	45.94	12.6189	0.0697	-0.0802
337	SLU 12	0.23	-0.42	45.93	12.6266	0.0698	-0.0788
337	SLU 13	0.23	-0.4	45.61	12.5493	0.0694	-0.0759
337	SLU 14	0.24	-0.46	46.53	12.7769	0.0706	-0.0815
337	SLU 15	0.24	-0.43	46.51	12.7845	0.0707	-0.0801
337	SLU 16	0.24	-0.47	46.22	12.6945	0.0701	-0.0796
337	SLU 17	0.23	-0.43	46.21	12.7022	0.0702	-0.0782
337	SLU 18	0.23	-0.46	47.26	12.9743	0.072	-0.0771
337	SLU 19	0.23	-0.42	47.24	12.982	0.0721	-0.0757
337	SLU 20	0.23	-0.47	47.84	13.1323	0.0729	-0.0785
337	SLU 21	0.23	-0.43	47.83	13.1399	0.073	-0.0771
337	SLU 22	0.27	-0.43	44.78	12.3097	0.0673	-0.0895
337	SLU 23	0.26	-0.37	44.75	12.3225	0.0675	-0.0872
337	SLU 24	0.28	-0.43	45.67	12.55	0.0687	-0.0928
337	SLU 25	0.27	-0.4	45.65	12.5577	0.0688	-0.0914

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
337	SLU 26	0.26	-0.38	45.34	12.4804	0.0684	-0.0885
337	SLU 27	0.28	-0.44	46.25	12.708	0.0696	-0.0941
337	SLU 28	0.27	-0.41	46.24	12.7156	0.0697	-0.0927
337	SLU 29	0.27	-0.45	45.95	12.6256	0.0691	-0.0922
337	SLU 30	0.27	-0.42	45.93	12.6333	0.0692	-0.0908
337	SLU 31	0.26	-0.4	49.9	13.7125	0.0761	-0.0877
337	SLU 32	0.28	-0.45	50.81	13.94	0.0773	-0.0933
337	SLU 33	0.27	-0.42	50.8	13.9477	0.0774	-0.092
337	SLU 34	0.26	-0.41	50.48	13.8705	0.077	-0.0891
337	SLU 35	0.28	-0.46	51.4	14.098	0.0782	-0.0947
337	SLU 36	0.28	-0.43	51.38	14.1057	0.0783	-0.0933
337	SLU 37	0.28	-0.47	51.1	14.0156	0.0778	-0.0927
337	SLU 38	0.27	-0.44	51.08	14.0233	0.0779	-0.0913
337	SLU 39	0.27	-0.46	52.13	14.2955	0.0796	-0.0903
337	SLU 40	0.26	-0.43	52.11	14.3031	0.0797	-0.0889
337	SLU 41	0.27	-0.47	52.72	14.4534	0.0806	-0.0916
337	SLU 42	0.27	-0.44	52.7	14.4611	0.0806	-0.0902
337	SLU 43	0.28	-0.55	50.21	13.8322	0.075	-0.0947
337	SLU 44	0.27	-0.5	50.18	13.845	0.0751	-0.0924
337	SLU 45	0.29	-0.55	51.1	14.0725	0.0763	-0.098
337	SLU 46	0.29	-0.52	51.08	14.0802	0.0764	-0.0966
337	SLU 47	0.28	-0.51	50.77	14.0029	0.076	-0.0937
337	SLU 48	0.3	-0.56	51.68	14.2305	0.0772	-0.0994
337	SLU 49	0.29	-0.53	51.67	14.2381	0.0773	-0.098
337	SLU 50	0.29	-0.57	51.38	14.1481	0.0768	-0.0974
337	SLU 51	0.29	-0.54	51.36	14.1558	0.0769	-0.096
337	SLU 52	0.28	-0.52	55.33	15.235	0.0837	-0.0929
337	SLU 53	0.29	-0.58	56.24	15.4625	0.085	-0.0986
337	SLU 54	0.29	-0.54	56.23	15.4702	0.0851	-0.0972
337	SLU 55	0.28	-0.53	55.91	15.393	0.0847	-0.0943
337	SLU 56	0.3	-0.59	56.83	15.6205	0.0859	-0.0999
337	SLU 57	0.29	-0.55	56.81	15.6281	0.086	-0.0985
337	SLU 58	0.29	-0.59	56.52	15.5381	0.0854	-0.0979
337	SLU 59	0.29	-0.56	56.51	15.5458	0.0855	-0.0966
337	SLU 60	0.29	-0.58	57.56	15.818	0.0873	-0.0955
337	SLU 61	0.28	-0.55	57.54	15.8256	0.0874	-0.0941
337	SLU 62	0.29	-0.59	58.14	15.9759	0.0882	-0.0968
337	SLU 63	0.29	-0.56	58.13	15.9836	0.0883	-0.0955
337	SLU 64	0.32	-0.55	55.08	15.1533	0.0826	-0.1079
337	SLU 65	0.31	-0.5	55.06	15.1661	0.0827	-0.1056
337	SLU 66	0.33	-0.56	55.97	15.3937	0.084	-0.1112
337	SLU 67	0.33	-0.52	55.95	15.4013	0.084	-0.1098
337	SLU 68	0.32	-0.51	55.64	15.3241	0.0836	-0.1069
337	SLU 69	0.33	-0.57	56.56	15.5516	0.0849	-0.1125
337	SLU 70	0.33	-0.53	56.54	15.5593	0.085	-0.1111
337	SLU 71	0.33	-0.57	56.25	15.4692	0.0844	-0.1106
337	SLU 72	0.32	-0.54	56.24	15.4769	0.0845	-0.1092
337	SLU 73	0.32	-0.52	60.2	16.5561	0.0914	-0.1061
337	SLU 74	0.33	-0.58	61.12	16.7837	0.0926	-0.1117
337	SLU 75	0.33	-0.55	61.1	16.7913	0.0927	-0.1103
337	SLU 76	0.32	-0.53	60.79	16.7141	0.0923	-0.1074
337	SLU 77	0.34	-0.59	61.7	16.9416	0.0935	-0.1131
337	SLU 78	0.33	-0.56	61.68	16.9493	0.0936	-0.1117
337	SLU 79	0.33	-0.6	61.4	16.8593	0.0931	-0.1111
337	SLU 80	0.33	-0.56	61.38	16.8669	0.0931	-0.1097
337	SLU 81	0.32	-0.59	62.43	17.1391	0.0949	-0.1087
337	SLU 82	0.32	-0.55	62.42	17.1467	0.095	-0.1073
337	SLU 83	0.33	-0.6	63.02	17.297	0.0958	-0.11
337	SLU 84	0.32	-0.56	63	17.3047	0.0959	-0.1086
337	SLE RA 1	0.24	-0.42	41.3	11.3661	0.0619	-0.0801
337	SLE RA 2	0.23	-0.39	41.28	11.3746	0.062	-0.0785
337	SLE RA 3	0.24	-0.43	41.89	11.5263	0.0628	-0.0823
337	SLE RA 4	0.24	-0.41	41.88	11.5314	0.0628	-0.0814
337	SLE RA 5	0.24	-0.4	41.67	11.4799	0.0626	-0.0794
337	SLE RA 6	0.25	-0.43	42.28	11.6316	0.0634	-0.0832
337	SLE RA 7	0.24	-0.41	42.27	11.6367	0.0634	-0.0823
337	SLE RA 8	0.24	-0.44	42.08	11.5767	0.0631	-0.0819
337	SLE RA 9	0.24	-0.42	42.07	11.5818	0.0631	-0.0809
337	SLE RA 10	0.23	-0.4	44.71	12.3013	0.0677	-0.0789
337	SLE RA 11	0.25	-0.44	45.32	12.4529	0.0685	-0.0827
337	SLE RA 12	0.24	-0.42	45.31	12.4581	0.0686	-0.0817
337	SLE RA 13	0.24	-0.41	45.1	12.4066	0.0683	-0.0798
337	SLE RA 14	0.25	-0.45	45.71	12.5582	0.0691	-0.0836
337	SLE RA 15	0.25	-0.43	45.7	12.5633	0.0692	-0.0826
337	SLE RA 16	0.24	-0.45	45.51	12.5033	0.0688	-0.0822
337	SLE RA 17	0.24	-0.43	45.5	12.5084	0.0689	-0.0813
337	SLE RA 18	0.24	-0.45	46.2	12.6899	0.0701	-0.0806
337	SLE RA 19	0.24	-0.43	46.19	12.695	0.0701	-0.0797
337	SLE RA 20	0.24	-0.45	46.59	12.7952	0.0707	-0.0815
337	SLE RA 21	0.24	-0.43	46.58	12.8003	0.0707	-0.0806
337	SLE FR 1	0.24	-0.42	41.3	11.3661	0.0619	-0.0801
337	SLE FR 2	0.24	-0.42	41.3	11.3678	0.0619	-0.0798
337	SLE FR 3	0.24	-0.43	41.46	11.4082	0.0621	-0.0804
337	SLE FR 4	0.24	-0.42	42.77	11.7649	0.0643	-0.0799
337	SLE FR 5	0.24	-0.43	42.93	11.8053	0.0646	-0.0806
337	SLE FR 6	0.24	-0.43	43.75	12.028	0.066	-0.0803
337	SLE QP 1	0.24	-0.42	41.3	11.3661	0.0619	-0.0801
337	SLE QP 2	0.24	-0.43	42.77	11.7632	0.0643	-0.0802
337	SLD 1	4.23	0.38	38.79	10.9448	0.0692	-1.477
337	SLD 2	4.66	0.72	39.12	11.0229	0.0693	-1.6273

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
337	SLD 3	4.15	-0.72	38.03	10.7153	0.0678	-1.448
337	SLD 4	4.58	-0.37	38.36	10.7934	0.0679	-1.5983
337	SLD 5	1.48	1.42	42.68	11.8519	0.0678	-0.5165
337	SLD 6	1.76	1.64	42.89	11.9031	0.0679	-0.615
337	SLD 7	1.21	-2.25	40.13	11.0868	0.0633	-0.4199
337	SLD 8	1.49	-2.02	40.35	11.1381	0.0633	-0.5184
337	SLD 9	-1.02	1.16	45.19	12.3883	0.0653	0.3579
337	SLD 10	-0.73	1.39	45.41	12.4396	0.0654	0.2594
337	SLD 11	-1.29	-2.51	42.65	11.6233	0.0607	0.4546
337	SLD 12	-1	-2.28	42.86	11.6745	0.0608	0.3561
337	SLD 13	-4.1	-0.49	47.18	12.733	0.0607	1.4378
337	SLD 14	-3.67	-0.14	47.51	12.8111	0.0608	1.2875
337	SLD 15	-4.18	-1.58	46.42	12.5035	0.0594	1.4668
337	SLD 16	-3.75	-1.24	46.74	12.5816	0.0595	1.3165
337	SLV 1	9.57	1.43	33.44	9.84	0.0757	-3.347
337	SLV 2	10.57	2.24	34.2	10.022	0.0759	-3.697
337	SLV 3	9.38	-1.08	31.71	9.3197	0.0725	-3.2803
337	SLV 4	10.38	-0.27	32.47	9.5018	0.0727	-3.6303
337	SLV 5	3.15	3.79	42.46	11.944	0.0725	-1.1012
337	SLV 6	3.8	4.31	42.95	12.0613	0.0727	-1.3267
337	SLV 7	2.52	-4.56	36.7	10.2097	0.0619	-0.8789
337	SLV 8	3.17	-4.04	37.19	10.3271	0.062	-1.1044
337	SLV 9	-2.69	3.18	48.35	13.1994	0.0666	0.9439
337	SLV 10	-2.05	3.7	48.84	13.3167	0.0668	0.7184
337	SLV 11	-3.32	-5.17	42.59	11.4651	0.056	1.1662
337	SLV 12	-2.67	-4.65	43.08	11.5824	0.0561	0.9407
337	SLV 13	-9.9	-0.59	53.07	14.0246	0.0559	3.4698
337	SLV 14	-8.9	0.22	53.83	14.2067	0.0562	3.1199
337	SLV 15	-10.09	-3.1	51.34	13.5044	0.0527	3.5365
337	SLV 16	-9.09	-2.29	52.1	13.6864	0.053	3.1865
337	CRTFP Ux+	0	0	0	0	0	0
337	CRTFP Ux-	0	0	0	0	0	0
337	CRTFP Uy+	0	0	0	0	0	0
337	CRTFP Uy-	0	0	0	0	0	0
338	SLU 1	0.23	-0.33	37.98	9.2864	0.0668	-0.0784
338	SLU 2	0.23	-0.28	37.95	9.3066	0.067	-0.0764
338	SLU 3	0.24	-0.33	38.83	9.4863	0.0684	-0.0817
338	SLU 4	0.24	-0.31	38.81	9.4984	0.0685	-0.0806
338	SLU 5	0.23	-0.29	38.51	9.438	0.068	-0.0777
338	SLU 6	0.25	-0.34	39.38	9.6178	0.0694	-0.0831
338	SLU 7	0.24	-0.31	39.36	9.6299	0.0695	-0.0819
338	SLU 8	0.24	-0.35	39.09	9.5493	0.0689	-0.0811
338	SLU 9	0.24	-0.32	39.07	9.5614	0.069	-0.0799
338	SLU 10	0.23	-0.3	42.82	10.4566	0.0767	-0.0768
338	SLU 11	0.24	-0.35	43.69	10.6363	0.0781	-0.0821
338	SLU 12	0.24	-0.32	43.67	10.6484	0.0782	-0.0809
338	SLU 13	0.23	-0.31	43.37	10.588	0.0777	-0.0781
338	SLU 14	0.25	-0.36	44.25	10.7678	0.0791	-0.0835
338	SLU 15	0.24	-0.33	44.23	10.7799	0.0792	-0.0823
338	SLU 16	0.24	-0.36	43.96	10.6993	0.0786	-0.0815
338	SLU 17	0.24	-0.33	43.94	10.7115	0.0787	-0.0803
338	SLU 18	0.24	-0.35	44.93	10.9292	0.0807	-0.0789
338	SLU 19	0.23	-0.32	44.91	10.9413	0.0808	-0.0777
338	SLU 20	0.24	-0.36	45.49	11.0607	0.0817	-0.0803
338	SLU 21	0.24	-0.33	45.47	11.0728	0.0818	-0.0791
338	SLU 22	0.27	-0.32	42.61	10.3836	0.0756	-0.0916
338	SLU 23	0.26	-0.28	42.57	10.4038	0.0757	-0.0897
338	SLU 24	0.28	-0.33	43.45	10.5835	0.0771	-0.095
338	SLU 25	0.28	-0.3	43.43	10.5956	0.0772	-0.0938
338	SLU 26	0.27	-0.29	43.13	10.5353	0.0768	-0.091
338	SLU 27	0.29	-0.34	44.01	10.715	0.0782	-0.0964
338	SLU 28	0.28	-0.31	43.99	10.7271	0.0783	-0.0952
338	SLU 29	0.28	-0.34	43.72	10.6466	0.0777	-0.0944
338	SLU 30	0.28	-0.32	43.7	10.6587	0.0778	-0.0932
338	SLU 31	0.27	-0.29	47.44	11.5538	0.0854	-0.09
338	SLU 32	0.28	-0.34	48.32	11.7335	0.0868	-0.0954
338	SLU 33	0.28	-0.31	48.3	11.7456	0.0869	-0.0942
338	SLU 34	0.27	-0.3	48	11.6853	0.0864	-0.0914
338	SLU 35	0.29	-0.35	48.87	11.865	0.0879	-0.0968
338	SLU 36	0.28	-0.32	48.85	11.8771	0.0879	-0.0956
338	SLU 37	0.28	-0.36	48.58	11.7966	0.0873	-0.0948
338	SLU 38	0.28	-0.33	48.56	11.8087	0.0874	-0.0936
338	SLU 39	0.27	-0.35	49.56	12.0265	0.0894	-0.0922
338	SLU 40	0.27	-0.32	49.54	12.0386	0.0895	-0.091
338	SLU 41	0.28	-0.35	50.11	12.1579	0.0904	-0.0936
338	SLU 42	0.27	-0.33	50.09	12.1701	0.0905	-0.0924
338	SLU 43	0.29	-0.43	47.79	11.6961	0.0839	-0.0973
338	SLU 44	0.28	-0.39	47.76	11.7163	0.0841	-0.0953
338	SLU 45	0.3	-0.43	48.64	11.896	0.0855	-0.1007
338	SLU 46	0.3	-0.41	48.62	11.9081	0.0856	-0.0995
338	SLU 47	0.29	-0.39	48.32	11.8478	0.0851	-0.0967
338	SLU 48	0.3	-0.44	49.19	12.0275	0.0865	-0.1021
338	SLU 49	0.3	-0.41	49.17	12.0396	0.0866	-0.1009
338	SLU 50	0.3	-0.45	48.9	11.959	0.086	-0.1
338	SLU 51	0.29	-0.42	48.88	11.9712	0.0861	-0.0989
338	SLU 52	0.28	-0.4	52.63	12.8663	0.0937	-0.0957
338	SLU 53	0.3	-0.45	53.5	13.046	0.0951	-0.1011
338	SLU 54	0.3	-0.42	53.48	13.0581	0.0952	-0.0999
338	SLU 55	0.29	-0.41	53.18	12.9978	0.0948	-0.0971
338	SLU 56	0.3	-0.46	54.06	13.1775	0.0962	-0.1025

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
338	SLU 57	0.3	-0.43	54.04	13.1896	0.0963	-0.1013
338	SLU 58	0.3	-0.46	53.77	13.1091	0.0957	-0.1004
338	SLU 59	0.3	-0.44	53.75	13.1212	0.0958	-0.0992
338	SLU 60	0.29	-0.45	54.74	13.339	0.0977	-0.0979
338	SLU 61	0.29	-0.42	54.72	13.3511	0.0978	-0.0967
338	SLU 62	0.3	-0.46	55.3	13.4704	0.0988	-0.0992
338	SLU 63	0.29	-0.43	55.28	13.4825	0.0989	-0.098
338	SLU 64	0.33	-0.43	52.41	12.7933	0.0926	-0.1106
338	SLU 65	0.32	-0.38	52.38	12.8135	0.0928	-0.1086
338	SLU 66	0.34	-0.43	53.26	12.9932	0.0942	-0.114
338	SLU 67	0.33	-0.4	53.24	13.0053	0.0943	-0.1128
338	SLU 68	0.33	-0.39	52.94	12.945	0.0938	-0.11
338	SLU 69	0.34	-0.44	53.81	13.1247	0.0952	-0.1154
338	SLU 70	0.34	-0.41	53.8	13.1368	0.0953	-0.1142
338	SLU 71	0.34	-0.44	53.53	13.0563	0.0947	-0.1133
338	SLU 72	0.33	-0.42	53.51	13.0684	0.0948	-0.1121
338	SLU 73	0.32	-0.4	57.25	13.9635	0.1025	-0.109
338	SLU 74	0.34	-0.44	58.13	14.1432	0.1039	-0.1144
338	SLU 75	0.34	-0.42	58.11	14.1553	0.104	-0.1132
338	SLU 76	0.33	-0.4	57.81	14.095	0.1035	-0.1104
338	SLU 77	0.34	-0.45	58.68	14.2747	0.1049	-0.1157
338	SLU 78	0.34	-0.42	58.66	14.2868	0.105	-0.1146
338	SLU 79	0.34	-0.46	58.39	14.2063	0.1044	-0.1137
338	SLU 80	0.33	-0.43	58.37	14.2184	0.1045	-0.1125
338	SLU 81	0.33	-0.45	59.37	14.4362	0.1065	-0.1111
338	SLU 82	0.33	-0.42	59.35	14.4483	0.1066	-0.11
338	SLU 83	0.33	-0.45	59.92	14.5677	0.1075	-0.1125
338	SLU 84	0.33	-0.43	59.9	14.5798	0.1076	-0.1113
338	SLE RA 1	0.24	-0.33	39.3	9.5999	0.0693	-0.0821
338	SLE RA 2	0.24	-0.3	39.28	9.6133	0.0694	-0.0808
338	SLE RA 3	0.25	-0.33	39.87	9.7331	0.0704	-0.0844
338	SLE RA 4	0.25	-0.31	39.85	9.7412	0.0704	-0.0836
338	SLE RA 5	0.24	-0.3	39.65	9.701	0.0701	-0.0817
338	SLE RA 6	0.25	-0.34	40.24	9.8208	0.0711	-0.0853
338	SLE RA 7	0.25	-0.32	40.22	9.8289	0.0711	-0.0845
338	SLE RA 8	0.25	-0.34	40.04	9.7752	0.0707	-0.084
338	SLE RA 9	0.25	-0.32	40.03	9.7832	0.0708	-0.0832
338	SLE RA 10	0.24	-0.31	42.53	10.38	0.0759	-0.0811
338	SLE RA 11	0.25	-0.34	43.11	10.4998	0.0768	-0.0847
338	SLE RA 12	0.25	-0.32	43.1	10.5079	0.0769	-0.0839
338	SLE RA 13	0.24	-0.31	42.9	10.4676	0.0766	-0.082
338	SLE RA 14	0.25	-0.35	43.48	10.5875	0.0775	-0.0856
338	SLE RA 15	0.25	-0.33	43.47	10.5955	0.0776	-0.0848
338	SLE RA 16	0.25	-0.35	43.29	10.5418	0.0772	-0.0842
338	SLE RA 17	0.25	-0.33	43.28	10.5499	0.0772	-0.0834
338	SLE RA 18	0.25	-0.34	43.94	10.6951	0.0786	-0.0825
338	SLE RA 19	0.24	-0.32	43.93	10.7032	0.0786	-0.0817
338	SLE RA 20	0.25	-0.35	44.31	10.7828	0.0793	-0.0834
338	SLE RA 21	0.25	-0.33	44.3	10.7908	0.0793	-0.0826
338	SLE FR 1	0.24	-0.33	39.3	9.5999	0.0693	-0.0821
338	SLE FR 2	0.24	-0.32	39.3	9.6026	0.0694	-0.0819
338	SLE FR 3	0.24	-0.33	39.45	9.6349	0.0696	-0.0825
338	SLE FR 4	0.24	-0.33	40.69	9.9311	0.0721	-0.082
338	SLE FR 5	0.25	-0.33	40.84	9.9635	0.0724	-0.0826
338	SLE FR 6	0.24	-0.34	41.62	10.1475	0.074	-0.0823
338	SLE QP 1	0.24	-0.33	39.3	9.5999	0.0693	-0.0821
338	SLE QP 2	0.24	-0.33	40.69	9.9284	0.0721	-0.0823
338	SLD 1	4.23	0.45	36.59	9.2977	0.077	-1.4791
338	SLD 2	4.66	0.81	36.91	9.3656	0.0773	-1.6298
338	SLD 3	4.15	-0.64	35.84	9.054	0.0751	-1.4498
338	SLD 4	4.58	-0.28	36.17	9.1218	0.0754	-1.6004
338	SLD 5	1.49	1.48	40.54	10.0969	0.0764	-0.5191
338	SLD 6	1.77	1.71	40.75	10.1414	0.0765	-0.6179
338	SLD 7	1.21	-2.13	38.05	9.2843	0.0701	-0.4212
338	SLD 8	1.5	-1.89	38.26	9.3288	0.0703	-0.5199
338	SLD 9	-1.01	1.23	43.13	10.5281	0.0739	0.3554
338	SLD 10	-0.72	1.46	43.34	10.5726	0.0741	0.2566
338	SLD 11	-1.28	-2.38	40.64	9.7155	0.0677	0.4534
338	SLD 12	-1	-2.14	40.85	9.76	0.0679	0.3546
338	SLD 13	-4.09	-0.39	45.22	10.735	0.0688	1.4359
338	SLD 14	-3.66	-0.03	45.54	10.8029	0.0691	1.2852
338	SLD 15	-4.17	-1.47	44.47	10.4913	0.0669	1.4653
338	SLD 16	-3.74	-1.11	44.79	10.5591	0.0672	1.3146
338	SLV 1	9.57	1.46	31.07	8.4448	0.0836	-3.3492
338	SLV 2	10.57	2.3	31.82	8.6029	0.0842	-3.7001
338	SLV 3	9.38	-1.01	29.38	7.8905	0.0792	-3.2817
338	SLV 4	10.38	-0.17	30.12	8.0486	0.0798	-3.6325
338	SLV 5	3.16	3.8	40.25	10.2967	0.082	-1.1044
338	SLV 6	3.8	4.34	40.73	10.3986	0.0824	-1.3305
338	SLV 7	2.52	-4.42	34.6	8.4492	0.0675	-0.8792
338	SLV 8	3.17	-3.88	35.08	8.5511	0.0679	-1.1053
338	SLV 9	-2.68	3.21	46.3	11.3058	0.0763	0.9408
338	SLV 10	-2.03	3.75	46.78	11.4077	0.0767	0.7147
338	SLV 11	-3.32	-5	40.66	9.4583	0.0618	1.166
338	SLV 12	-2.67	-4.46	41.14	9.5602	0.0622	0.9399
338	SLV 13	-9.9	-0.5	51.26	11.8083	0.0644	3.468
338	SLV 14	-8.89	0.34	52.01	11.9664	0.065	3.1172
338	SLV 15	-10.09	-2.96	49.57	11.254	0.06	3.5356
338	SLV 16	-9.08	-2.12	50.32	11.4121	0.0606	3.1847
338	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
338	CRTFP Ux-	0	0	0	0	0	0
338	CRTFP Uy+	0	0	0	0	0	0
338	CRTFP Uy-	0	0	0	0	0	0
339	SLU 1	0.24	-0.24	36.01	7.6358	0.0635	-0.0798
339	SLU 2	0.23	-0.2	35.97	7.6621	0.0636	-0.0781
339	SLU 3	0.25	-0.24	36.81	7.7963	0.065	-0.0832
339	SLU 4	0.24	-0.22	36.79	7.8121	0.065	-0.0823
339	SLU 5	0.23	-0.21	36.5	7.7677	0.0646	-0.0795
339	SLU 6	0.25	-0.25	37.33	7.9019	0.066	-0.0846
339	SLU 7	0.25	-0.23	37.31	7.9177	0.066	-0.0837
339	SLU 8	0.24	-0.26	37.06	7.847	0.0655	-0.0825
339	SLU 9	0.24	-0.23	37.04	7.8628	0.0655	-0.0816
339	SLU 10	0.23	-0.21	40.55	8.5793	0.0728	-0.0783
339	SLU 11	0.25	-0.25	41.39	8.7136	0.0742	-0.0834
339	SLU 12	0.24	-0.23	41.37	8.7293	0.0743	-0.0824
339	SLU 13	0.24	-0.22	41.08	8.6849	0.0738	-0.0797
339	SLU 14	0.25	-0.26	41.91	8.8192	0.0752	-0.0848
339	SLU 15	0.25	-0.23	41.89	8.8349	0.0753	-0.0838
339	SLU 16	0.25	-0.26	41.64	8.7643	0.0747	-0.0827
339	SLU 17	0.24	-0.24	41.62	8.78	0.0748	-0.0817
339	SLU 18	0.24	-0.25	42.55	8.9462	0.0767	-0.08
339	SLU 19	0.23	-0.23	42.53	8.9619	0.0767	-0.079
339	SLU 20	0.24	-0.26	43.08	9.0518	0.0777	-0.0814
339	SLU 21	0.24	-0.24	43.06	9.0676	0.0777	-0.0804
339	SLU 22	0.27	-0.23	40.37	8.5144	0.0719	-0.0931
339	SLU 23	0.27	-0.19	40.34	8.5406	0.072	-0.0915
339	SLU 24	0.28	-0.23	41.17	8.6749	0.0734	-0.0965
339	SLU 25	0.28	-0.21	41.15	8.6906	0.0734	-0.0956
339	SLU 26	0.27	-0.2	40.86	8.6462	0.073	-0.0929
339	SLU 27	0.29	-0.24	41.7	8.7805	0.0744	-0.0979
339	SLU 28	0.29	-0.22	41.68	8.7962	0.0744	-0.097
339	SLU 29	0.28	-0.24	41.42	8.7256	0.0739	-0.0959
339	SLU 30	0.28	-0.22	41.4	8.7413	0.0739	-0.0949
339	SLU 31	0.27	-0.2	44.92	9.4579	0.0812	-0.0916
339	SLU 32	0.29	-0.24	45.75	9.5921	0.0826	-0.0967
339	SLU 33	0.28	-0.21	45.73	9.6079	0.0827	-0.0957
339	SLU 34	0.27	-0.2	45.44	9.5635	0.0822	-0.093
339	SLU 35	0.29	-0.24	46.28	9.6977	0.0836	-0.0981
339	SLU 36	0.29	-0.22	46.26	9.7135	0.0837	-0.0971
339	SLU 37	0.28	-0.25	46	9.6428	0.0831	-0.096
339	SLU 38	0.28	-0.23	45.98	9.6586	0.0832	-0.0951
339	SLU 39	0.28	-0.24	46.92	9.8247	0.085	-0.0933
339	SLU 40	0.27	-0.21	46.9	9.8405	0.0851	-0.0923
339	SLU 41	0.28	-0.25	47.44	9.9303	0.086	-0.0947
339	SLU 42	0.28	-0.22	47.42	9.9461	0.0861	-0.0937
339	SLU 43	0.29	-0.32	45.32	9.6254	0.0796	-0.0991
339	SLU 44	0.29	-0.28	45.28	9.6516	0.0798	-0.0975
339	SLU 45	0.3	-0.32	46.11	9.7859	0.0811	-0.1026
339	SLU 46	0.3	-0.3	46.09	9.8016	0.0812	-0.1016
339	SLU 47	0.29	-0.29	45.8	9.7572	0.0808	-0.0989
339	SLU 48	0.31	-0.33	46.64	9.8915	0.0821	-0.104
339	SLU 49	0.3	-0.31	46.62	9.9072	0.0822	-0.103
339	SLU 50	0.3	-0.33	46.36	9.8366	0.0816	-0.1019
339	SLU 51	0.3	-0.31	46.34	9.8523	0.0817	-0.1009
339	SLU 52	0.29	-0.29	49.86	10.5689	0.089	-0.0977
339	SLU 53	0.3	-0.33	50.69	10.7031	0.0904	-0.1027
339	SLU 54	0.3	-0.3	50.67	10.7189	0.0904	-0.1018
339	SLU 55	0.29	-0.29	50.38	10.6745	0.09	-0.0991
339	SLU 56	0.31	-0.33	51.22	10.8087	0.0914	-0.1041
339	SLU 57	0.31	-0.31	51.2	10.8245	0.0914	-0.1032
339	SLU 58	0.3	-0.34	50.94	10.7538	0.0909	-0.1021
339	SLU 59	0.3	-0.32	50.92	10.7696	0.0909	-0.1011
339	SLU 60	0.3	-0.33	51.86	10.9357	0.0928	-0.0993
339	SLU 61	0.29	-0.3	51.84	10.9515	0.0929	-0.0984
339	SLU 62	0.3	-0.34	52.38	11.0413	0.0938	-0.1007
339	SLU 63	0.3	-0.31	52.36	11.0571	0.0939	-0.0998
339	SLU 64	0.33	-0.31	49.68	10.5039	0.088	-0.1124
339	SLU 65	0.33	-0.27	49.64	10.5301	0.0882	-0.1108
339	SLU 66	0.34	-0.31	50.48	10.6644	0.0895	-0.1159
339	SLU 67	0.34	-0.29	50.46	10.6801	0.0896	-0.1149
339	SLU 68	0.33	-0.28	50.17	10.6358	0.0892	-0.1122
339	SLU 69	0.35	-0.32	51	10.77	0.0905	-0.1173
339	SLU 70	0.34	-0.29	50.98	10.7857	0.0906	-0.1163
339	SLU 71	0.34	-0.32	50.73	10.7151	0.09	-0.1152
339	SLU 72	0.34	-0.3	50.71	10.7309	0.0901	-0.1143
339	SLU 73	0.33	-0.27	54.22	11.4474	0.0974	-0.111
339	SLU 74	0.34	-0.31	55.06	11.5817	0.0987	-0.1161
339	SLU 75	0.34	-0.29	55.04	11.5974	0.0988	-0.1151
339	SLU 76	0.33	-0.28	54.75	11.553	0.0984	-0.1124
339	SLU 77	0.35	-0.32	55.58	11.6873	0.0997	-0.1175
339	SLU 78	0.34	-0.3	55.56	11.703	0.0998	-0.1165
339	SLU 79	0.34	-0.33	55.31	11.6324	0.0993	-0.1154
339	SLU 80	0.34	-0.3	55.29	11.6481	0.0993	-0.1144
339	SLU 81	0.33	-0.31	56.22	11.8143	0.1012	-0.1127
339	SLU 82	0.33	-0.29	56.2	11.83	0.1013	-0.1117
339	SLU 83	0.34	-0.32	56.75	11.9199	0.1022	-0.1141
339	SLU 84	0.33	-0.3	56.73	11.9356	0.1023	-0.1131
339	SLE RA 1	0.25	-0.24	37.26	7.8868	0.0659	-0.0836
339	SLE RA 2	0.24	-0.21	37.23	7.9043	0.066	-0.0825
339	SLE RA 3	0.25	-0.24	37.79	7.9938	0.0669	-0.0859

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
339	SLE RA 4	0.25	-0.22	37.77	8.0043	0.0669	-0.0852
339	SLE RA 5	0.25	-0.22	37.58	7.9747	0.0666	-0.0834
339	SLE RA 6	0.26	-0.24	38.14	8.0642	0.0675	-0.0868
339	SLE RA 7	0.25	-0.23	38.12	8.0747	0.0676	-0.0862
339	SLE RA 8	0.25	-0.25	37.96	8.0276	0.0672	-0.0854
339	SLE RA 9	0.25	-0.23	37.94	8.0381	0.0673	-0.0848
339	SLE RA 10	0.24	-0.22	40.29	8.5158	0.0721	-0.0826
339	SLE RA 11	0.25	-0.24	40.84	8.6053	0.073	-0.086
339	SLE RA 12	0.25	-0.23	40.83	8.6158	0.0731	-0.0853
339	SLE RA 13	0.25	-0.22	40.64	8.5862	0.0728	-0.0835
339	SLE RA 14	0.26	-0.25	41.19	8.6757	0.0737	-0.0869
339	SLE RA 15	0.26	-0.23	41.18	8.6862	0.0737	-0.0863
339	SLE RA 16	0.25	-0.25	41.01	8.6392	0.0734	-0.0855
339	SLE RA 17	0.25	-0.24	40.99	8.6496	0.0734	-0.0849
339	SLE RA 18	0.25	-0.24	41.62	8.7604	0.0747	-0.0837
339	SLE RA 19	0.25	-0.23	41.6	8.7709	0.0747	-0.0831
339	SLE RA 20	0.25	-0.25	41.97	8.8308	0.0753	-0.0846
339	SLE RA 21	0.25	-0.23	41.95	8.8413	0.0754	-0.084
339	SLE FR 1	0.25	-0.24	37.26	7.8868	0.0659	-0.0836
339	SLE FR 2	0.25	-0.23	37.25	7.8903	0.0659	-0.0833
339	SLE FR 3	0.25	-0.24	37.4	7.915	0.0661	-0.0839
339	SLE FR 4	0.25	-0.24	38.56	8.1524	0.0685	-0.0834
339	SLE FR 5	0.25	-0.24	38.7	8.1771	0.0688	-0.084
339	SLE FR 6	0.25	-0.24	39.44	8.3236	0.0703	-0.0836
339	SLE QP 1	0.25	-0.24	37.26	7.8868	0.0659	-0.0836
339	SLE QP 2	0.25	-0.24	38.56	8.1489	0.0685	-0.0836
339	SLD 1	4.23	0.5	34.32	7.6948	0.0745	-1.4802
339	SLD 2	4.66	0.88	34.63	7.7513	0.0748	-1.6311
339	SLD 3	4.15	-0.56	33.6	7.4356	0.0725	-1.4505
339	SLD 4	4.58	-0.19	33.91	7.4921	0.0728	-1.6014
339	SLD 5	1.49	1.54	38.34	8.3957	0.0733	-0.5208
339	SLD 6	1.78	1.78	38.54	8.4327	0.0734	-0.6197
339	SLD 7	1.21	-2.02	35.92	7.5318	0.0666	-0.4218
339	SLD 8	1.5	-1.78	36.12	7.5689	0.0668	-0.5207
339	SLD 9	-1	1.3	41.01	8.729	0.0702	0.3535
339	SLD 10	-0.72	1.54	41.21	8.766	0.0704	0.2546
339	SLD 11	-1.28	-2.26	38.59	7.8651	0.0636	0.4525
339	SLD 12	-1	-2.02	38.79	7.9021	0.0638	0.3536
339	SLD 13	-4.09	-0.29	43.22	8.8057	0.0642	1.4342
339	SLD 14	-3.65	0.08	43.53	8.8622	0.0645	1.2833
339	SLD 15	-4.17	-1.36	42.49	8.5465	0.0622	1.4638
339	SLD 16	-3.74	-0.99	42.81	8.6031	0.0625	1.313
339	SLV 1	9.57	1.47	28.61	7.0792	0.0825	-3.3498
339	SLV 2	10.57	2.34	29.34	7.2108	0.0832	-3.7012
339	SLV 3	9.37	-0.96	26.97	6.4872	0.0779	-3.2816
339	SLV 4	10.38	-0.09	27.7	6.6188	0.0786	-3.633
339	SLV 5	3.16	3.82	37.94	8.7031	0.0796	-1.1064
339	SLV 6	3.81	4.38	38.41	8.788	0.08	-1.3329
339	SLV 7	2.52	-4.3	32.47	6.7299	0.0642	-0.879
339	SLV 8	3.17	-3.74	32.94	6.8147	0.0646	-1.1055
339	SLV 9	-2.67	3.26	44.19	9.4831	0.0724	0.9382
339	SLV 10	-2.02	3.82	44.66	9.5679	0.0728	0.7118
339	SLV 11	-3.32	-4.86	38.72	7.5099	0.057	1.1657
339	SLV 12	-2.67	-4.3	39.19	7.5947	0.0574	0.9392
339	SLV 13	-9.89	-0.39	49.43	9.679	0.0585	3.4658
339	SLV 14	-8.88	0.48	50.16	9.8106	0.0591	3.1144
339	SLV 15	-10.08	-2.82	47.79	9.087	0.0538	3.534
339	SLV 16	-9.07	-1.95	48.52	9.2187	0.0545	3.1826
339	CRTFP Ux+	0	0	0	0	0	0
339	CRTFP Ux-	0	0	0	0	0	0
339	CRTFP Uy+	0	0	0	0	0	0
339	CRTFP Uy-	0	0	0	0	0	0
340	SLU 1	0.24	-0.16	34.24	6.1853	0.0534	-0.0808
340	SLU 2	0.23	-0.13	34.21	6.216	0.0535	-0.0796
340	SLU 3	0.25	-0.16	35	6.3111	0.0547	-0.0843
340	SLU 4	0.25	-0.14	34.98	6.3294	0.0548	-0.0836
340	SLU 5	0.24	-0.14	34.7	6.2987	0.0544	-0.081
340	SLU 6	0.25	-0.17	35.5	6.3938	0.0555	-0.0858
340	SLU 7	0.25	-0.15	35.47	6.4122	0.0556	-0.085
340	SLU 8	0.25	-0.18	35.24	6.3508	0.0551	-0.0836
340	SLU 9	0.24	-0.16	35.21	6.3692	0.0552	-0.0829
340	SLU 10	0.23	-0.13	38.53	6.9285	0.0614	-0.0795
340	SLU 11	0.25	-0.16	39.32	7.0236	0.0625	-0.0843
340	SLU 12	0.25	-0.14	39.3	7.042	0.0626	-0.0835
340	SLU 13	0.24	-0.13	39.02	7.0113	0.0622	-0.0809
340	SLU 14	0.25	-0.17	39.82	7.1064	0.0634	-0.0857
340	SLU 15	0.25	-0.15	39.8	7.1247	0.0634	-0.0849
340	SLU 16	0.25	-0.17	39.56	7.0634	0.063	-0.0836
340	SLU 17	0.24	-0.15	39.54	7.0818	0.063	-0.0828
340	SLU 18	0.24	-0.16	40.42	7.2033	0.0647	-0.0807
340	SLU 19	0.24	-0.14	40.4	7.2217	0.0647	-0.08
340	SLU 20	0.24	-0.16	40.92	7.2861	0.0655	-0.0821
340	SLU 21	0.24	-0.14	40.89	7.3044	0.0656	-0.0814
340	SLU 22	0.28	-0.14	38.37	6.8708	0.0606	-0.0941
340	SLU 23	0.27	-0.11	38.34	6.9014	0.0607	-0.0929
340	SLU 24	0.29	-0.14	39.13	6.9965	0.0618	-0.0976
340	SLU 25	0.28	-0.12	39.11	7.0148	0.0619	-0.0969
340	SLU 26	0.28	-0.12	38.83	6.9841	0.0615	-0.0943
340	SLU 27	0.29	-0.15	39.63	7.0792	0.0627	-0.0991
340	SLU 28	0.29	-0.13	39.6	7.0976	0.0627	-0.0983

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
340	SLU 29	0.29	-0.16	39.37	7.0362	0.0623	-0.0969
340	SLU 30	0.28	-0.14	39.34	7.0546	0.0623	-0.0962
340	SLU 31	0.27	-0.11	42.66	7.6139	0.0685	-0.0928
340	SLU 32	0.29	-0.14	43.45	7.709	0.0697	-0.0976
340	SLU 33	0.29	-0.12	43.43	7.7274	0.0697	-0.0968
340	SLU 34	0.28	-0.11	43.15	7.6967	0.0694	-0.0942
340	SLU 35	0.29	-0.15	43.95	7.7918	0.0705	-0.099
340	SLU 36	0.29	-0.13	43.93	7.8101	0.0706	-0.0982
340	SLU 37	0.29	-0.15	43.69	7.7488	0.0701	-0.0969
340	SLU 38	0.28	-0.13	43.67	7.7672	0.0702	-0.0961
340	SLU 39	0.28	-0.14	44.55	7.8887	0.0718	-0.094
340	SLU 40	0.28	-0.12	44.53	7.9071	0.0718	-0.0933
340	SLU 41	0.28	-0.14	45.05	7.9715	0.0726	-0.0954
340	SLU 42	0.28	-0.12	45.02	7.9898	0.0727	-0.0947
340	SLU 43	0.3	-0.22	43.1	7.806	0.067	-0.1005
340	SLU 44	0.29	-0.19	43.06	7.8366	0.0671	-0.0993
340	SLU 45	0.31	-0.22	43.86	7.9317	0.0683	-0.104
340	SLU 46	0.3	-0.2	43.83	7.95	0.0683	-0.1033
340	SLU 47	0.3	-0.19	43.56	7.9193	0.068	-0.1007
340	SLU 48	0.31	-0.22	44.35	8.0144	0.0691	-0.1054
340	SLU 49	0.31	-0.2	44.33	8.0328	0.0692	-0.1047
340	SLU 50	0.3	-0.23	44.09	7.9714	0.0687	-0.1033
340	SLU 51	0.3	-0.21	44.07	7.9898	0.0688	-0.1026
340	SLU 52	0.29	-0.18	47.39	8.5491	0.075	-0.0992
340	SLU 53	0.31	-0.21	48.18	8.6442	0.0761	-0.1039
340	SLU 54	0.3	-0.2	48.16	8.6626	0.0762	-0.1032
340	SLU 55	0.3	-0.19	47.88	8.6319	0.0758	-0.1006
340	SLU 56	0.31	-0.22	48.68	8.727	0.077	-0.1054
340	SLU 57	0.31	-0.2	48.65	8.7453	0.077	-0.1046
340	SLU 58	0.31	-0.23	48.42	8.684	0.0766	-0.1032
340	SLU 59	0.3	-0.21	48.39	8.7024	0.0766	-0.1025
340	SLU 60	0.3	-0.21	49.28	8.8239	0.0782	-0.1004
340	SLU 61	0.29	-0.19	49.25	8.8423	0.0783	-0.0996
340	SLU 62	0.3	-0.22	49.77	8.9067	0.0791	-0.1018
340	SLU 63	0.3	-0.2	49.75	8.925	0.0791	-0.1011
340	SLU 64	0.34	-0.2	47.23	8.4914	0.0741	-0.1138
340	SLU 65	0.33	-0.17	47.19	8.522	0.0742	-0.1126
340	SLU 66	0.35	-0.2	47.99	8.6171	0.0754	-0.1173
340	SLU 67	0.34	-0.18	47.96	8.6354	0.0755	-0.1166
340	SLU 68	0.34	-0.17	47.69	8.6047	0.0751	-0.114
340	SLU 69	0.35	-0.2	48.48	8.6998	0.0763	-0.1187
340	SLU 70	0.35	-0.18	48.46	8.7182	0.0763	-0.118
340	SLU 71	0.34	-0.21	48.22	8.6568	0.0758	-0.1166
340	SLU 72	0.34	-0.19	48.2	8.6752	0.0759	-0.1159
340	SLU 73	0.33	-0.16	51.52	9.2346	0.0821	-0.1125
340	SLU 74	0.35	-0.19	52.31	9.3297	0.0833	-0.1172
340	SLU 75	0.34	-0.18	52.29	9.348	0.0833	-0.1165
340	SLU 76	0.34	-0.17	52.01	9.3173	0.0829	-0.1139
340	SLU 77	0.35	-0.2	52.81	9.4124	0.0841	-0.1187
340	SLU 78	0.35	-0.18	52.78	9.4308	0.0842	-0.1179
340	SLU 79	0.34	-0.21	52.55	9.3694	0.0837	-0.1165
340	SLU 80	0.34	-0.19	52.52	9.3878	0.0838	-0.1158
340	SLU 81	0.34	-0.19	53.41	9.5093	0.0854	-0.1137
340	SLU 82	0.33	-0.17	53.38	9.5277	0.0854	-0.1129
340	SLU 83	0.34	-0.2	53.9	9.5921	0.0862	-0.1151
340	SLU 84	0.34	-0.18	53.88	9.6104	0.0863	-0.1144
340	SLE RA 1	0.25	-0.16	35.42	6.3812	0.0555	-0.0846
340	SLE RA 2	0.25	-0.14	35.4	6.4016	0.0555	-0.0838
340	SLE RA 3	0.26	-0.16	35.93	6.465	0.0563	-0.087
340	SLE RA 4	0.25	-0.14	35.91	6.4772	0.0563	-0.0865
340	SLE RA 5	0.25	-0.14	35.73	6.4567	0.0561	-0.0847
340	SLE RA 6	0.26	-0.16	36.26	6.5201	0.0569	-0.0879
340	SLE RA 7	0.26	-0.15	36.24	6.5324	0.0569	-0.0874
340	SLE RA 8	0.25	-0.17	36.09	6.4915	0.0566	-0.0865
340	SLE RA 9	0.25	-0.15	36.07	6.5037	0.0566	-0.086
340	SLE RA 10	0.25	-0.13	38.28	6.8766	0.0608	-0.0837
340	SLE RA 11	0.26	-0.15	38.81	6.94	0.0615	-0.0869
340	SLE RA 12	0.25	-0.14	38.79	6.9523	0.0616	-0.0864
340	SLE RA 13	0.25	-0.14	38.61	6.9318	0.0613	-0.0847
340	SLE RA 14	0.26	-0.16	39.14	6.9952	0.0621	-0.0878
340	SLE RA 15	0.26	-0.15	39.13	7.0074	0.0621	-0.0874
340	SLE RA 16	0.26	-0.16	38.97	6.9665	0.0618	-0.0864
340	SLE RA 17	0.25	-0.15	38.95	6.9788	0.0619	-0.086
340	SLE RA 18	0.25	-0.15	39.54	7.0598	0.0629	-0.0845
340	SLE RA 19	0.25	-0.14	39.53	7.0721	0.063	-0.084
340	SLE RA 20	0.25	-0.16	39.87	7.115	0.0635	-0.0855
340	SLE RA 21	0.25	-0.14	39.86	7.1272	0.0636	-0.085
340	SLE FR 1	0.25	-0.16	35.42	6.3812	0.0555	-0.0846
340	SLE FR 2	0.25	-0.15	35.42	6.3853	0.0555	-0.0844
340	SLE FR 3	0.25	-0.16	35.56	6.4032	0.0557	-0.085
340	SLE FR 4	0.25	-0.15	36.65	6.5889	0.0577	-0.0844
340	SLE FR 5	0.25	-0.16	36.79	6.6068	0.0579	-0.085
340	SLE FR 6	0.25	-0.16	37.48	6.7205	0.0592	-0.0846
340	SLE QP 1	0.25	-0.16	35.42	6.3812	0.0555	-0.0846
340	SLE QP 2	0.25	-0.16	36.66	6.5848	0.0577	-0.0846
340	SLD 1	4.23	0.56	32.23	6.2748	0.0655	-1.4804
340	SLD 2	4.67	0.95	32.54	6.3205	0.0657	-1.6314
340	SLD 3	4.15	-0.5	31.53	5.9984	0.0637	-1.4505
340	SLD 4	4.58	-0.11	31.83	6.0441	0.0639	-1.6015
340	SLD 5	1.5	1.6	36.35	6.903	0.0627	-0.5219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
340	SLD 6	1.78	1.86	36.54	6.9329	0.0628	-0.6208
340	SLD 7	1.21	-1.94	34	5.9814	0.0568	-0.4222
340	SLD 8	1.5	-1.68	34.2	6.0114	0.0569	-0.5211
340	SLD 9	-1	1.37	39.12	7.1582	0.0585	0.352
340	SLD 10	-0.71	1.63	39.32	7.1881	0.0586	0.253
340	SLD 11	-1.28	-2.17	36.77	6.2366	0.0526	0.4517
340	SLD 12	-1	-1.91	36.97	6.2666	0.0527	0.3527
340	SLD 13	-4.08	-0.2	41.49	7.1255	0.0515	1.4323
340	SLD 14	-3.65	0.19	41.79	7.1712	0.0517	1.2813
340	SLD 15	-4.17	-1.26	40.78	6.849	0.0497	1.4622
340	SLD 16	-3.73	-0.87	41.09	6.8947	0.0499	1.3112
340	SLV 1	9.56	1.49	26.27	5.8534	0.076	-3.349
340	SLV 2	10.57	2.39	26.98	5.9599	0.0764	-3.7007
340	SLV 3	9.37	-0.93	24.68	5.2189	0.0718	-3.2803
340	SLV 4	10.38	-0.03	25.39	5.3254	0.0723	-3.632
340	SLV 5	3.17	3.86	35.84	7.3093	0.0693	-1.1076
340	SLV 6	3.82	4.44	36.3	7.378	0.0697	-1.3342
340	SLV 7	2.51	-4.22	30.53	5.1943	0.0556	-0.8785
340	SLV 8	3.16	-3.64	30.98	5.263	0.0559	-1.1051
340	SLV 9	-2.66	3.32	42.34	7.9066	0.0595	0.9359
340	SLV 10	-2.01	3.91	42.79	7.9752	0.0598	0.7093
340	SLV 11	-3.32	-4.75	37.02	5.7916	0.0458	1.165
340	SLV 12	-2.67	-4.17	37.48	5.8602	0.0461	0.9384
340	SLV 13	-9.88	-0.28	47.93	7.8442	0.0431	3.4628
340	SLV 14	-8.87	0.62	48.64	7.9506	0.0436	3.1111
340	SLV 15	-10.07	-2.71	46.34	7.2097	0.039	3.5315
340	SLV 16	-9.06	-1.8	47.05	7.3161	0.0395	3.1799
340	CRTFP Ux+	0	0	0	0	0	0
340	CRTFP Ux-	0	0	0	0	0	0
340	CRTFP Uy+	0	0	0	0	0	0
340	CRTFP Uy-	0	0	0	0	0	0
341	SLU 1	0.24	-0.09	32.85	5.03	0.0393	-0.0817
341	SLU 2	0.24	-0.06	32.8	5.0631	0.0394	-0.0808
341	SLU 3	0.25	-0.09	33.57	5.128	0.0402	-0.0852
341	SLU 4	0.25	-0.07	33.55	5.1478	0.0403	-0.0848
341	SLU 5	0.24	-0.06	33.28	5.1276	0.04	-0.0823
341	SLU 6	0.25	-0.09	34.04	5.1924	0.0408	-0.0867
341	SLU 7	0.25	-0.07	34.02	5.2123	0.0409	-0.0862
341	SLU 8	0.25	-0.1	33.79	5.1589	0.0406	-0.0845
341	SLU 9	0.25	-0.08	33.77	5.1788	0.0406	-0.084
341	SLU 10	0.24	-0.05	36.92	5.6124	0.0453	-0.0805
341	SLU 11	0.25	-0.08	37.69	5.6772	0.0461	-0.0849
341	SLU 12	0.25	-0.06	37.66	5.6971	0.0462	-0.0844
341	SLU 13	0.24	-0.05	37.39	5.6768	0.0459	-0.082
341	SLU 14	0.25	-0.08	38.16	5.7417	0.0467	-0.0864
341	SLU 15	0.25	-0.06	38.13	5.7615	0.0468	-0.0859
341	SLU 16	0.25	-0.09	37.91	5.7081	0.0465	-0.0842
341	SLU 17	0.25	-0.07	37.89	5.728	0.0465	-0.0837
341	SLU 18	0.24	-0.07	38.72	5.8147	0.0477	-0.0812
341	SLU 19	0.24	-0.05	38.7	5.8345	0.0478	-0.0807
341	SLU 20	0.24	-0.08	39.2	5.8791	0.0484	-0.0826
341	SLU 21	0.24	-0.06	39.17	5.899	0.0484	-0.0821
341	SLU 22	0.28	-0.06	36.79	5.561	0.0446	-0.0949
341	SLU 23	0.28	-0.03	36.75	5.5941	0.0447	-0.0941
341	SLU 24	0.29	-0.06	37.51	5.6589	0.0455	-0.0985
341	SLU 25	0.29	-0.04	37.49	5.6788	0.0455	-0.098
341	SLU 26	0.28	-0.04	37.22	5.6585	0.0453	-0.0955
341	SLU 27	0.29	-0.07	37.99	5.7233	0.0461	-0.0999
341	SLU 28	0.29	-0.05	37.96	5.7432	0.0462	-0.0994
341	SLU 29	0.29	-0.07	37.74	5.6898	0.0458	-0.0978
341	SLU 30	0.29	-0.06	37.71	5.7097	0.0459	-0.0973
341	SLU 31	0.28	-0.02	40.86	6.1433	0.0506	-0.0938
341	SLU 32	0.29	-0.05	41.63	6.2082	0.0514	-0.0982
341	SLU 33	0.29	-0.03	41.6	6.228	0.0514	-0.0977
341	SLU 34	0.28	-0.03	41.34	6.2077	0.0512	-0.0952
341	SLU 35	0.29	-0.05	42.1	6.2726	0.052	-0.0996
341	SLU 36	0.29	-0.04	42.08	6.2924	0.0521	-0.0991
341	SLU 37	0.29	-0.06	41.85	6.2391	0.0517	-0.0975
341	SLU 38	0.29	-0.04	41.83	6.2589	0.0518	-0.097
341	SLU 39	0.28	-0.05	42.67	6.3456	0.053	-0.0945
341	SLU 40	0.28	-0.03	42.64	6.3655	0.0531	-0.094
341	SLU 41	0.28	-0.05	43.14	6.41	0.0536	-0.0959
341	SLU 42	0.28	-0.03	43.12	6.4299	0.0537	-0.0954
341	SLU 43	0.3	-0.12	41.35	6.357	0.0493	-0.1016
341	SLU 44	0.3	-0.09	41.31	6.3901	0.0493	-0.1008
341	SLU 45	0.31	-0.12	42.07	6.455	0.0502	-0.1052
341	SLU 46	0.31	-0.1	42.05	6.4748	0.0502	-0.1047
341	SLU 47	0.3	-0.1	41.78	6.4546	0.05	-0.1022
341	SLU 48	0.31	-0.13	42.55	6.5194	0.0508	-0.1066
341	SLU 49	0.31	-0.11	42.52	6.5392	0.0509	-0.1061
341	SLU 50	0.31	-0.13	42.3	6.4859	0.0505	-0.1045
341	SLU 51	0.31	-0.12	42.27	6.5057	0.0506	-0.104
341	SLU 52	0.3	-0.08	45.42	6.9394	0.0552	-0.1005
341	SLU 53	0.31	-0.11	46.19	7.0042	0.0561	-0.1049
341	SLU 54	0.31	-0.09	46.16	7.0241	0.0561	-0.1044
341	SLU 55	0.3	-0.09	45.9	7.0038	0.0559	-0.1019
341	SLU 56	0.31	-0.12	46.66	7.0686	0.0567	-0.1063
341	SLU 57	0.31	-0.1	46.64	7.0885	0.0568	-0.1058
341	SLU 58	0.31	-0.12	46.41	7.0351	0.0564	-0.1042
341	SLU 59	0.31	-0.11	46.39	7.055	0.0565	-0.1037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
341	SLU 60	0.3	-0.11	47.23	7.1416	0.0577	-0.1012
341	SLU 61	0.3	-0.09	47.2	7.1615	0.0577	-0.1007
341	SLU 62	0.3	-0.11	47.7	7.2061	0.0583	-0.1026
341	SLU 63	0.3	-0.09	47.68	7.2259	0.0584	-0.1021
341	SLU 64	0.34	-0.1	45.29	6.888	0.0546	-0.1149
341	SLU 65	0.34	-0.07	45.25	6.9211	0.0546	-0.1141
341	SLU 66	0.35	-0.1	46.01	6.9859	0.0555	-0.1184
341	SLU 67	0.35	-0.08	45.99	7.0057	0.0555	-0.118
341	SLU 68	0.34	-0.07	45.72	6.9855	0.0553	-0.1155
341	SLU 69	0.35	-0.1	46.49	7.0503	0.0561	-0.1199
341	SLU 70	0.35	-0.08	46.46	7.0702	0.0561	-0.1194
341	SLU 71	0.35	-0.11	46.24	7.0168	0.0558	-0.1177
341	SLU 72	0.34	-0.09	46.21	7.0367	0.0559	-0.1172
341	SLU 73	0.33	-0.06	49.36	7.4703	0.0605	-0.1137
341	SLU 74	0.35	-0.08	50.13	7.5351	0.0614	-0.1181
341	SLU 75	0.35	-0.07	50.1	7.555	0.0614	-0.1176
341	SLU 76	0.34	-0.06	49.84	7.5347	0.0612	-0.1152
341	SLU 77	0.35	-0.09	50.6	7.5996	0.062	-0.1196
341	SLU 78	0.35	-0.07	50.58	7.6194	0.062	-0.1191
341	SLU 79	0.35	-0.1	50.35	7.5661	0.0617	-0.1174
341	SLU 80	0.34	-0.08	50.33	7.5859	0.0618	-0.1169
341	SLU 81	0.34	-0.08	51.17	7.6726	0.063	-0.1144
341	SLU 82	0.34	-0.06	51.14	7.6924	0.063	-0.1139
341	SLU 83	0.34	-0.09	51.64	7.737	0.0636	-0.1158
341	SLU 84	0.34	-0.07	51.62	7.7569	0.0637	-0.1154
341	SLE RA 1	0.25	-0.08	33.97	5.1817	0.0408	-0.0854
341	SLE RA 2	0.25	-0.06	33.94	5.2038	0.0409	-0.0849
341	SLE RA 3	0.26	-0.08	34.45	5.247	0.0414	-0.0878
341	SLE RA 4	0.26	-0.07	34.44	5.2603	0.0414	-0.0875
341	SLE RA 5	0.25	-0.06	34.26	5.2468	0.0413	-0.0859
341	SLE RA 6	0.26	-0.08	34.77	5.29	0.0418	-0.0888
341	SLE RA 7	0.26	-0.07	34.75	5.3032	0.0419	-0.0885
341	SLE RA 8	0.26	-0.09	34.6	5.2676	0.0416	-0.0874
341	SLE RA 9	0.26	-0.08	34.59	5.2809	0.0417	-0.087
341	SLE RA 10	0.25	-0.05	36.69	5.57	0.0448	-0.0847
341	SLE RA 11	0.26	-0.07	37.2	5.6132	0.0454	-0.0876
341	SLE RA 12	0.26	-0.06	37.18	5.6264	0.0454	-0.0873
341	SLE RA 13	0.25	-0.06	37	5.6129	0.0452	-0.0856
341	SLE RA 14	0.26	-0.08	37.51	5.6561	0.0458	-0.0886
341	SLE RA 15	0.26	-0.06	37.5	5.6694	0.0458	-0.0882
341	SLE RA 16	0.26	-0.08	37.35	5.6338	0.0456	-0.0871
341	SLE RA 17	0.26	-0.07	37.33	5.647	0.0456	-0.0868
341	SLE RA 18	0.25	-0.07	37.89	5.7048	0.0464	-0.0851
341	SLE RA 19	0.25	-0.06	37.88	5.7181	0.0465	-0.0848
341	SLE RA 20	0.25	-0.07	38.21	5.7478	0.0468	-0.0861
341	SLE RA 21	0.25	-0.06	38.19	5.761	0.0469	-0.0858
341	SLE FR 1	0.25	-0.08	33.97	5.1817	0.0408	-0.0854
341	SLE FR 2	0.25	-0.08	33.97	5.1861	0.0408	-0.0853
341	SLE FR 3	0.25	-0.08	34.1	5.1989	0.041	-0.0858
341	SLE FR 4	0.25	-0.07	35.14	5.3431	0.0425	-0.0852
341	SLE FR 5	0.25	-0.08	35.27	5.3558	0.0427	-0.0857
341	SLE FR 6	0.25	-0.08	35.93	5.4433	0.0436	-0.0853
341	SLE QP 1	0.25	-0.08	33.97	5.1817	0.0408	-0.0854
341	SLE QP 2	0.25	-0.08	35.15	5.3387	0.0425	-0.0854
341	SLD 1	4.23	0.62	30.47	5.1208	0.0527	-1.48
341	SLD 2	4.66	1.03	30.77	5.1576	0.0528	-1.631
341	SLD 3	4.14	-0.45	29.78	4.8288	0.0514	-1.4499
341	SLD 4	4.58	-0.04	30.08	4.8655	0.0515	-1.6009
341	SLD 5	1.5	1.68	34.74	5.7097	0.0476	-0.5225
341	SLD 6	1.78	1.95	34.94	5.7338	0.0476	-0.6215
341	SLD 7	1.21	-1.88	32.44	4.7362	0.0432	-0.4223
341	SLD 8	1.49	-1.62	32.63	4.7603	0.0432	-0.5212
341	SLD 9	-0.99	1.46	37.66	5.917	0.0418	0.3505
341	SLD 10	-0.71	1.73	37.86	5.9411	0.0418	0.2515
341	SLD 11	-1.28	-2.1	35.36	4.9435	0.0374	0.4508
341	SLD 12	-1	-1.84	35.56	4.9676	0.0374	0.3518
341	SLD 13	-4.07	-0.11	40.22	5.8118	0.0335	1.4302
341	SLD 14	-3.64	0.29	40.52	5.8485	0.0336	1.2792
341	SLD 15	-4.16	-1.18	39.53	5.5198	0.0322	1.4603
341	SLD 16	-3.73	-0.77	39.83	5.5565	0.0323	1.3093
341	SLV 1	9.56	1.52	24.17	4.8237	0.0665	-3.3471
341	SLV 2	10.57	2.48	24.87	4.9092	0.0666	-3.6988
341	SLV 3	9.36	-0.92	22.61	4.1509	0.0634	-3.2779
341	SLV 4	10.37	0.04	23.31	4.2365	0.0635	-3.6296
341	SLV 5	3.17	3.94	34.11	6.1898	0.0543	-1.1082
341	SLV 6	3.82	4.55	34.56	6.245	0.0544	-1.3348
341	SLV 7	2.51	-4.19	28.89	3.9472	0.0441	-0.8777
341	SLV 8	3.16	-3.58	29.35	4.0023	0.0442	-1.1043
341	SLV 9	-2.65	3.43	40.95	6.675	0.0408	0.9336
341	SLV 10	-2	4.04	41.4	6.7301	0.0409	0.707
341	SLV 11	-3.32	-4.71	35.74	4.4323	0.0306	1.1641
341	SLV 12	-2.67	-4.09	36.19	4.4875	0.0307	0.9375
341	SLV 13	-9.87	-0.19	46.99	6.4409	0.0215	3.4589
341	SLV 14	-8.86	0.76	47.69	6.5264	0.0216	3.1072
341	SLV 15	-10.06	-2.63	45.42	5.7681	0.0184	3.528
341	SLV 16	-9.06	-1.68	46.12	5.8536	0.0185	3.1764
341	CRTFP Ux+	0	0	0	0	0	0
341	CRTFP Ux-	0	0	0	0	0	0
341	CRTFP Uy+	0	0	0	0	0	0
341	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
342	SLU 1	0.24	-0.02	31.91	4.2281	0.0225	-0.0823
342	SLU 2	0.24	0.01	31.87	4.2618	0.0225	-0.0819
342	SLU 3	0.25	-0.02	32.62	4.3068	0.023	-0.086
342	SLU 4	0.25	0	32.59	4.327	0.023	-0.0857
342	SLU 5	0.25	0.01	32.33	4.3135	0.0229	-0.0834
342	SLU 6	0.26	-0.02	33.08	4.3584	0.0234	-0.0874
342	SLU 7	0.26	0	33.05	4.3786	0.0234	-0.0872
342	SLU 8	0.25	-0.03	32.83	4.3314	0.0232	-0.0852
342	SLU 9	0.25	-0.01	32.81	4.3517	0.0233	-0.085
342	SLU 10	0.24	0.03	35.84	4.697	0.0261	-0.0814
342	SLU 11	0.25	0.01	36.59	4.742	0.0266	-0.0854
342	SLU 12	0.25	0.02	36.56	4.7622	0.0266	-0.0852
342	SLU 13	0.24	0.03	36.3	4.7487	0.0265	-0.0828
342	SLU 14	0.26	0	37.05	4.7936	0.027	-0.0869
342	SLU 15	0.26	0.02	37.02	4.8139	0.027	-0.0866
342	SLU 16	0.25	-0.01	36.8	4.7667	0.0268	-0.0847
342	SLU 17	0.25	0.01	36.78	4.7869	0.0268	-0.0845
342	SLU 18	0.24	0.01	37.59	4.8499	0.0276	-0.0816
342	SLU 19	0.24	0.03	37.56	4.8701	0.0277	-0.0813
342	SLU 20	0.25	0.01	38.05	4.9015	0.028	-0.083
342	SLU 21	0.24	0.02	38.02	4.9217	0.028	-0.0828
342	SLU 22	0.28	0.01	35.73	4.6512	0.0256	-0.0955
342	SLU 23	0.28	0.04	35.69	4.6849	0.0256	-0.0951
342	SLU 24	0.29	0.02	36.43	4.7299	0.0261	-0.0991
342	SLU 25	0.29	0.03	36.41	4.7501	0.0261	-0.0989
342	SLU 26	0.28	0.04	36.15	4.7366	0.026	-0.0966
342	SLU 27	0.29	0.01	36.89	4.7815	0.0265	-0.1006
342	SLU 28	0.29	0.03	36.87	4.8017	0.0265	-0.1004
342	SLU 29	0.29	0.01	36.65	4.7546	0.0263	-0.0984
342	SLU 30	0.29	0.02	36.62	4.7748	0.0264	-0.0982
342	SLU 31	0.28	0.06	39.66	5.1201	0.0292	-0.0946
342	SLU 32	0.29	0.04	40.4	5.1651	0.0297	-0.0986
342	SLU 33	0.29	0.05	40.38	5.1853	0.0297	-0.0984
342	SLU 34	0.28	0.06	40.12	5.1718	0.0296	-0.096
342	SLU 35	0.29	0.03	40.86	5.2167	0.0301	-0.1001
342	SLU 36	0.29	0.05	40.84	5.237	0.0301	-0.0998
342	SLU 37	0.29	0.03	40.62	5.1898	0.0299	-0.0979
342	SLU 38	0.29	0.04	40.6	5.21	0.0299	-0.0976
342	SLU 39	0.28	0.04	41.4	5.273	0.0307	-0.0948
342	SLU 40	0.28	0.06	41.38	5.2932	0.0307	-0.0945
342	SLU 41	0.28	0.04	41.86	5.3246	0.0311	-0.0962
342	SLU 42	0.28	0.06	41.84	5.3448	0.0311	-0.096
342	SLU 43	0.3	-0.03	40.18	5.3515	0.0282	-0.1025
342	SLU 44	0.3	-0.01	40.14	5.3852	0.0282	-0.1021
342	SLU 45	0.31	-0.03	40.88	5.4302	0.0287	-0.1061
342	SLU 46	0.31	-0.01	40.86	5.4504	0.0287	-0.1059
342	SLU 47	0.3	-0.01	40.6	5.4369	0.0286	-0.1036
342	SLU 48	0.32	-0.04	41.34	5.4818	0.0291	-0.1076
342	SLU 49	0.32	-0.02	41.32	5.502	0.0291	-0.1073
342	SLU 50	0.31	-0.04	41.1	5.4548	0.0289	-0.1054
342	SLU 51	0.31	-0.03	41.07	5.475	0.029	-0.1052
342	SLU 52	0.3	0.02	44.11	5.8204	0.0318	-0.1016
342	SLU 53	0.31	-0.01	44.85	5.8654	0.0323	-0.1056
342	SLU 54	0.31	0.01	44.83	5.8856	0.0323	-0.1054
342	SLU 55	0.3	0.01	44.57	5.8721	0.0322	-0.103
342	SLU 56	0.32	-0.02	45.31	5.917	0.0327	-0.107
342	SLU 57	0.31	0	45.29	5.9372	0.0327	-0.1068
342	SLU 58	0.31	-0.02	45.07	5.89	0.0325	-0.1049
342	SLU 59	0.31	-0.01	45.04	5.9102	0.0325	-0.1046
342	SLU 60	0.3	0	45.85	5.9732	0.0333	-0.1017
342	SLU 61	0.3	0.01	45.83	5.9935	0.0334	-0.1015
342	SLU 62	0.3	-0.01	46.31	6.0249	0.0337	-0.1032
342	SLU 63	0.3	0.01	46.29	6.0451	0.0337	-0.103
342	SLU 64	0.34	0	44	5.7746	0.0313	-0.1157
342	SLU 65	0.34	0.03	43.95	5.8083	0.0313	-0.1153
342	SLU 66	0.35	0	44.7	5.8533	0.0318	-0.1193
342	SLU 67	0.35	0.02	44.67	5.8735	0.0318	-0.1191
342	SLU 68	0.34	0.02	44.41	5.86	0.0317	-0.1167
342	SLU 69	0.35	0	45.16	5.9049	0.0322	-0.1208
342	SLU 70	0.35	0.01	45.13	5.9251	0.0322	-0.1205
342	SLU 71	0.35	-0.01	44.91	5.8779	0.032	-0.1186
342	SLU 72	0.35	0.01	44.89	5.8981	0.032	-0.1184
342	SLU 73	0.34	0.05	47.93	6.2435	0.0349	-0.1148
342	SLU 74	0.35	0.02	48.67	6.2885	0.0354	-0.1188
342	SLU 75	0.35	0.04	48.64	6.3087	0.0354	-0.1186
342	SLU 76	0.34	0.04	48.38	6.2952	0.0353	-0.1162
342	SLU 77	0.35	0.02	49.13	6.3401	0.0358	-0.1202
342	SLU 78	0.35	0.03	49.1	6.3603	0.0358	-0.12
342	SLU 79	0.35	0.01	48.89	6.3131	0.0356	-0.1181
342	SLU 80	0.35	0.03	48.86	6.3334	0.0356	-0.1178
342	SLU 81	0.34	0.03	49.67	6.3964	0.0364	-0.1149
342	SLU 82	0.34	0.04	49.64	6.4166	0.0364	-0.1147
342	SLU 83	0.34	0.02	50.13	6.448	0.0368	-0.1164
342	SLU 84	0.34	0.04	50.1	6.4682	0.0368	-0.1161
342	SLE RA 1	0.25	-0.01	33	4.349	0.0234	-0.0861
342	SLE RA 2	0.25	0.01	32.98	4.3715	0.0234	-0.0858
342	SLE RA 3	0.26	-0.01	33.47	4.4015	0.0237	-0.0885
342	SLE RA 4	0.26	0	33.46	4.4149	0.0238	-0.0884
342	SLE RA 5	0.25	0.01	33.28	4.4059	0.0237	-0.0868
342	SLE RA 6	0.26	-0.01	33.78	4.4359	0.024	-0.0895

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
342	SLE RA 7	0.26	0	33.76	4.4494	0.024	-0.0893
342	SLE RA 8	0.26	-0.01	33.62	4.4179	0.0239	-0.088
342	SLE RA 9	0.26	0	33.6	4.4314	0.0239	-0.0879
342	SLE RA 10	0.25	0.02	35.62	4.6616	0.0258	-0.0855
342	SLE RA 11	0.26	0.01	36.12	4.6916	0.0261	-0.0882
342	SLE RA 12	0.26	0.02	36.1	4.7051	0.0261	-0.088
342	SLE RA 13	0.25	0.02	35.93	4.6961	0.0261	-0.0864
342	SLE RA 14	0.26	0	36.43	4.726	0.0264	-0.0891
342	SLE RA 15	0.26	0.02	36.41	4.7395	0.0264	-0.089
342	SLE RA 16	0.26	0	36.26	4.708	0.0263	-0.0877
342	SLE RA 17	0.26	0.01	36.25	4.7215	0.0263	-0.0875
342	SLE RA 18	0.25	0.01	36.79	4.7635	0.0268	-0.0856
342	SLE RA 19	0.25	0.02	36.77	4.777	0.0268	-0.0854
342	SLE RA 20	0.25	0.01	37.09	4.7979	0.0271	-0.0866
342	SLE RA 21	0.25	0.02	37.08	4.8114	0.0271	-0.0864
342	SLE FR 1	0.25	-0.01	33	4.349	0.0234	-0.0861
342	SLE FR 2	0.25	-0.01	33	4.3535	0.0234	-0.086
342	SLE FR 3	0.25	-0.01	33.13	4.3628	0.0235	-0.0865
342	SLE FR 4	0.25	0	34.13	4.4779	0.0244	-0.0859
342	SLE FR 5	0.25	0	34.26	4.4871	0.0245	-0.0863
342	SLE FR 6	0.25	0	34.9	4.5563	0.0251	-0.0858
342	SLE QP 1	0.25	-0.01	33	4.349	0.0234	-0.0861
342	SLE QP 2	0.25	0	34.14	4.4734	0.0244	-0.0859
342	SLD 1	4.23	0.69	29.12	4.2789	0.0377	-1.4791
342	SLD 2	4.66	1.13	29.42	4.3094	0.0376	-1.63
342	SLD 3	4.14	-0.4	28.44	3.9775	0.037	-1.4488
342	SLD 4	4.57	0.03	28.74	4.0081	0.0368	-1.5997
342	SLD 5	1.5	1.78	33.62	4.8667	0.0296	-0.5229
342	SLD 6	1.79	2.07	33.82	4.8867	0.0295	-0.6219
342	SLD 7	1.21	-1.85	31.33	3.8621	0.0271	-0.4221
342	SLD 8	1.49	-1.57	31.53	3.8821	0.027	-0.521
342	SLD 9	-0.99	1.56	36.74	5.0646	0.0219	0.3491
342	SLD 10	-0.7	1.85	36.94	5.0846	0.0217	0.2502
342	SLD 11	-1.28	-2.07	34.46	4.06	0.0194	0.45
342	SLD 12	-1	-1.79	34.66	4.08	0.0193	0.3511
342	SLD 13	-4.07	-0.04	39.54	4.9387	0.012	1.4278
342	SLD 14	-3.63	0.39	39.84	4.9692	0.0119	1.2769
342	SLD 15	-4.16	-1.13	38.85	4.6373	0.0113	1.4581
342	SLD 16	-3.72	-0.7	39.16	4.6678	0.0111	1.3072
342	SLV 1	9.55	1.59	22.37	4.0137	0.0556	-3.344
342	SLV 2	10.56	2.6	23.08	4.0849	0.0552	-3.6955
342	SLV 3	9.35	-0.9	20.82	3.3177	0.0539	-3.2745
342	SLV 4	10.36	0.11	21.53	3.3888	0.0535	-3.626
342	SLV 5	3.18	4.08	32.84	5.3789	0.0365	-1.1083
342	SLV 6	3.83	4.73	33.3	5.4247	0.0362	-1.3348
342	SLV 7	2.5	-4.22	27.67	3.0588	0.0307	-0.8765
342	SLV 8	3.15	-3.57	28.12	3.1046	0.0305	-1.103
342	SLV 9	-2.64	3.57	40.16	5.8421	0.0184	0.9311
342	SLV 10	-1.99	4.22	40.61	5.888	0.0181	0.7046
342	SLV 11	-3.32	-4.74	34.98	3.522	0.0127	1.1629
342	SLV 12	-2.67	-4.09	35.44	3.5679	0.0124	0.9364
342	SLV 13	-9.85	-0.12	46.75	5.5579	-0.0046	3.4541
342	SLV 14	-8.84	0.89	47.46	5.629	-0.005	3.1026
342	SLV 15	-10.05	-2.61	45.2	4.8619	-0.0063	3.5236
342	SLV 16	-9.04	-1.6	45.9	4.933	-0.0067	3.1721
342	CRTFP Ux+	0	0	0	0	0	0
342	CRTFP Ux-	0	0	0	0	0	0
342	CRTFP Uy+	0	0	0	0	0	0
342	CRTFP Uy-	0	0	0	0	0	0
343	SLU 1	0.24	0.05	31.51	3.8191	0.0038	-0.0828
343	SLU 2	0.24	0.08	31.47	3.8517	0.0038	-0.0828
343	SLU 3	0.25	0.05	32.21	3.8879	0.0039	-0.0865
343	SLU 4	0.25	0.07	32.18	3.9075	0.0039	-0.0865
343	SLU 5	0.25	0.08	31.92	3.8967	0.0039	-0.0843
343	SLU 6	0.26	0.05	32.66	3.933	0.004	-0.088
343	SLU 7	0.26	0.07	32.64	3.9525	0.0039	-0.088
343	SLU 8	0.25	0.04	32.42	3.9092	0.004	-0.0858
343	SLU 9	0.25	0.06	32.39	3.9287	0.004	-0.0858
343	SLU 10	0.24	0.11	35.37	4.2274	0.0048	-0.0821
343	SLU 11	0.25	0.08	36.11	4.2637	0.0049	-0.0858
343	SLU 12	0.25	0.1	36.09	4.2832	0.0049	-0.0858
343	SLU 13	0.25	0.11	35.83	4.2724	0.0049	-0.0836
343	SLU 14	0.26	0.08	36.56	4.3087	0.005	-0.0872
343	SLU 15	0.26	0.1	36.54	4.3282	0.005	-0.0872
343	SLU 16	0.25	0.07	36.32	4.2849	0.005	-0.085
343	SLU 17	0.25	0.09	36.3	4.3044	0.005	-0.085
343	SLU 18	0.24	0.09	37.09	4.3559	0.0053	-0.0818
343	SLU 19	0.24	0.11	37.06	4.3754	0.0053	-0.0818
343	SLU 20	0.25	0.09	37.54	4.4009	0.0053	-0.0832
343	SLU 21	0.25	0.11	37.52	4.4204	0.0053	-0.0833
343	SLU 22	0.28	0.09	35.27	4.1864	0.0045	-0.0959
343	SLU 23	0.28	0.12	35.23	4.219	0.0044	-0.0959
343	SLU 24	0.29	0.09	35.97	4.2552	0.0045	-0.0996
343	SLU 25	0.29	0.11	35.94	4.2748	0.0045	-0.0996
343	SLU 26	0.29	0.12	35.68	4.264	0.0045	-0.0974
343	SLU 27	0.3	0.09	36.42	4.3003	0.0046	-0.1011
343	SLU 28	0.3	0.11	36.4	4.3198	0.0046	-0.1011
343	SLU 29	0.29	0.08	36.18	4.2765	0.0046	-0.0989
343	SLU 30	0.29	0.1	36.15	4.296	0.0046	-0.0989
343	SLU 31	0.28	0.15	39.13	4.5947	0.0054	-0.0952

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
343	SLU 32	0.29	0.12	39.87	4.631	0.0055	-0.0989
343	SLU 33	0.29	0.14	39.85	4.6505	0.0055	-0.0989
343	SLU 34	0.28	0.15	39.59	4.6397	0.0055	-0.0967
343	SLU 35	0.29	0.12	40.32	4.676	0.0056	-0.1003
343	SLU 36	0.3	0.14	40.3	4.6955	0.0056	-0.1003
343	SLU 37	0.29	0.11	40.08	4.6522	0.0056	-0.0981
343	SLU 38	0.29	0.13	40.06	4.6717	0.0056	-0.0981
343	SLU 39	0.28	0.13	40.85	4.7232	0.0059	-0.0949
343	SLU 40	0.28	0.15	40.82	4.7427	0.0059	-0.0949
343	SLU 41	0.28	0.13	41.3	4.7682	0.006	-0.0964
343	SLU 42	0.28	0.15	41.28	4.7877	0.0059	-0.0964
343	SLU 43	0.3	0.05	39.68	4.8389	0.0048	-0.1032
343	SLU 44	0.3	0.08	39.64	4.8715	0.0048	-0.1032
343	SLU 45	0.31	0.06	40.37	4.9078	0.0048	-0.1068
343	SLU 46	0.31	0.07	40.35	4.9273	0.0048	-0.1069
343	SLU 47	0.31	0.08	40.09	4.9165	0.0048	-0.1047
343	SLU 48	0.32	0.05	40.83	4.9528	0.0049	-0.1083
343	SLU 49	0.32	0.07	40.8	4.9723	0.0049	-0.1083
343	SLU 50	0.31	0.04	40.58	4.929	0.0049	-0.1061
343	SLU 51	0.31	0.06	40.56	4.9485	0.0049	-0.1061
343	SLU 52	0.3	0.11	43.54	5.2472	0.0058	-0.1025
343	SLU 53	0.31	0.09	44.28	5.2835	0.0058	-0.1061
343	SLU 54	0.31	0.1	44.25	5.303	0.0058	-0.1061
343	SLU 55	0.31	0.11	43.99	5.2922	0.0058	-0.1039
343	SLU 56	0.32	0.08	44.73	5.3285	0.0059	-0.1076
343	SLU 57	0.32	0.1	44.7	5.348	0.0059	-0.1076
343	SLU 58	0.31	0.07	44.49	5.3047	0.0059	-0.1054
343	SLU 59	0.31	0.09	44.46	5.3242	0.0059	-0.1054
343	SLU 60	0.3	0.09	45.25	5.3757	0.0062	-0.1021
343	SLU 61	0.3	0.11	45.23	5.3952	0.0062	-0.1021
343	SLU 62	0.31	0.09	45.71	5.4207	0.0063	-0.1036
343	SLU 63	0.31	0.11	45.68	5.4402	0.0063	-0.1036
343	SLU 64	0.34	0.09	43.44	5.2062	0.0054	-0.1163
343	SLU 65	0.34	0.12	43.4	5.2388	0.0054	-0.1163
343	SLU 66	0.35	0.09	44.13	5.2751	0.0055	-0.12
343	SLU 67	0.35	0.11	44.11	5.2946	0.0054	-0.12
343	SLU 68	0.35	0.12	43.85	5.2838	0.0055	-0.1178
343	SLU 69	0.36	0.09	44.59	5.3201	0.0055	-0.1214
343	SLU 70	0.36	0.11	44.56	5.3396	0.0055	-0.1214
343	SLU 71	0.35	0.08	44.34	5.2963	0.0055	-0.1192
343	SLU 72	0.35	0.1	44.32	5.3158	0.0055	-0.1192
343	SLU 73	0.34	0.15	47.3	5.6145	0.0064	-0.1156
343	SLU 74	0.35	0.12	48.04	5.6508	0.0065	-0.1192
343	SLU 75	0.35	0.14	48.01	5.6703	0.0064	-0.1192
343	SLU 76	0.34	0.15	47.75	5.6595	0.0065	-0.117
343	SLU 77	0.35	0.12	48.49	5.6958	0.0065	-0.1207
343	SLU 78	0.36	0.14	48.46	5.7153	0.0065	-0.1207
343	SLU 79	0.35	0.11	48.25	5.672	0.0065	-0.1185
343	SLU 80	0.35	0.13	48.22	5.6915	0.0065	-0.1185
343	SLU 81	0.34	0.13	49.01	5.743	0.0068	-0.1152
343	SLU 82	0.34	0.15	48.99	5.7625	0.0068	-0.1153
343	SLU 83	0.34	0.13	49.47	5.788	0.0069	-0.1167
343	SLU 84	0.34	0.15	49.44	5.8075	0.0069	-0.1167
343	SLE RA 1	0.25	0.06	32.59	3.9241	0.004	-0.0866
343	SLE RA 2	0.25	0.08	32.56	3.9458	0.004	-0.0866
343	SLE RA 3	0.26	0.06	33.05	3.9699	0.0041	-0.089
343	SLE RA 4	0.26	0.08	33.03	3.983	0.004	-0.089
343	SLE RA 5	0.26	0.08	32.86	3.9758	0.0041	-0.0876
343	SLE RA 6	0.26	0.06	33.35	4	0.0041	-0.09
343	SLE RA 7	0.26	0.07	33.34	4.013	0.0041	-0.09
343	SLE RA 8	0.26	0.06	33.19	3.9841	0.0041	-0.0885
343	SLE RA 9	0.26	0.07	33.17	3.9971	0.0041	-0.0885
343	SLE RA 10	0.25	0.1	35.16	4.1962	0.0047	-0.0861
343	SLE RA 11	0.26	0.08	35.65	4.2204	0.0047	-0.0885
343	SLE RA 12	0.26	0.1	35.64	4.2334	0.0047	-0.0885
343	SLE RA 13	0.26	0.1	35.46	4.2263	0.0047	-0.0871
343	SLE RA 14	0.26	0.08	35.95	4.2504	0.0048	-0.0895
343	SLE RA 15	0.26	0.09	35.94	4.2635	0.0048	-0.0895
343	SLE RA 16	0.26	0.08	35.79	4.2346	0.0048	-0.088
343	SLE RA 17	0.26	0.09	35.78	4.2476	0.0048	-0.088
343	SLE RA 18	0.25	0.09	36.3	4.2819	0.005	-0.0859
343	SLE RA 19	0.25	0.1	36.29	4.2949	0.005	-0.0859
343	SLE RA 20	0.26	0.09	36.61	4.3119	0.005	-0.0869
343	SLE RA 21	0.26	0.1	36.59	4.3249	0.005	-0.0869
343	SLE FR 1	0.25	0.06	32.59	3.9241	0.004	-0.0866
343	SLE FR 2	0.25	0.07	32.58	3.9284	0.004	-0.0866
343	SLE FR 3	0.26	0.06	32.71	3.9361	0.004	-0.087
343	SLE FR 4	0.25	0.07	33.7	4.0358	0.0043	-0.0864
343	SLE FR 5	0.25	0.07	33.82	4.0434	0.0043	-0.0868
343	SLE FR 6	0.25	0.08	34.45	4.103	0.0045	-0.0862
343	SLE QP 1	0.25	0.06	32.59	3.9241	0.004	-0.0866
343	SLE QP 2	0.25	0.07	33.7	4.0314	0.0043	-0.0864
343	SLD 1	4.22	0.78	28.24	3.7767	0.0212	-1.4775
343	SLD 2	4.66	1.25	28.55	3.8047	0.0208	-1.6283
343	SLD 3	4.13	-0.35	27.55	3.4754	0.0215	-1.4471
343	SLD 4	4.57	0.12	27.86	3.5034	0.0211	-1.5978
343	SLD 5	1.5	1.91	33.05	4.4071	0.0089	-0.5231
343	SLD 6	1.79	2.22	33.26	4.4254	0.0087	-0.6219
343	SLD 7	1.2	-1.85	30.76	3.4026	0.0101	-0.4216
343	SLD 8	1.49	-1.55	30.96	3.4209	0.0098	-0.5204

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
343	SLD 9	-0.98	1.69	36.44	4.6419	-0.0012	0.3477
343	SLD 10	-0.7	1.99	36.65	4.6602	-0.0014	0.2489
343	SLD 11	-1.28	-2.08	34.15	3.6374	-0.0001	0.4492
343	SLD 12	-1	-1.77	34.35	3.6558	-0.0003	0.3504
343	SLD 13	-4.06	0.02	39.54	4.5595	-0.0125	1.4251
343	SLD 14	-3.63	0.49	39.85	4.5874	-0.0129	1.2743
343	SLD 15	-4.15	-1.11	38.86	4.2581	-0.0122	1.4556
343	SLD 16	-3.72	-0.64	39.17	4.2861	-0.0126	1.3048
343	SLV 1	9.54	1.7	20.89	3.4313	0.0438	-3.3399
343	SLV 2	10.55	2.79	21.62	3.4964	0.0429	-3.691
343	SLV 3	9.33	-0.88	19.34	2.7345	0.0446	-3.2699
343	SLV 4	10.34	0.21	20.06	2.7996	0.0436	-3.621
343	SLV 5	3.18	4.28	32.1	4.897	0.0152	-1.1081
343	SLV 6	3.83	4.98	32.57	4.9389	0.0145	-1.3343
343	SLV 7	2.49	-4.31	26.9	2.5743	0.0177	-0.8748
343	SLV 8	3.14	-3.61	27.37	2.6163	0.0171	-1.1011
343	SLV 9	-2.63	3.75	40.03	5.4466	-0.0085	0.9284
343	SLV 10	-1.98	4.45	40.5	5.4885	-0.0091	0.7021
343	SLV 11	-3.32	-4.84	34.84	3.1239	-0.0059	1.1616
343	SLV 12	-2.67	-4.14	35.31	3.1659	-0.0065	0.9353
343	SLV 13	-9.83	-0.07	47.35	5.2632	-0.035	3.4483
343	SLV 14	-8.82	1.02	48.07	5.3284	-0.036	3.0972
343	SLV 15	-10.04	-2.65	45.79	4.5664	-0.0343	3.5182
343	SLV 16	-9.03	-1.56	46.51	4.6316	-0.0352	3.1671
343	CRTFP Ux+	0	0	0	0	0	0
343	CRTFP Ux-	0	0	0	0	0	0
343	CRTFP Uy+	0	0	0	0	0	0
343	CRTFP Uy-	0	0	0	0	0	0
344	SLU 1	0.24	0.12	31.7	3.8375	-0.0165	-0.0831
344	SLU 2	0.25	0.15	31.66	3.8674	-0.0166	-0.0835
344	SLU 3	0.25	0.12	32.4	3.9069	-0.017	-0.0868
344	SLU 4	0.26	0.14	32.37	3.9248	-0.017	-0.087
344	SLU 5	0.25	0.15	32.11	3.9125	-0.0168	-0.085
344	SLU 6	0.26	0.12	32.86	3.952	-0.0173	-0.0883
344	SLU 7	0.26	0.14	32.83	3.97	-0.0173	-0.0885
344	SLU 8	0.25	0.11	32.61	3.9278	-0.0171	-0.086
344	SLU 9	0.25	0.13	32.59	3.9457	-0.0171	-0.0863
344	SLU 10	0.24	0.19	35.57	4.2425	-0.0184	-0.0826
344	SLU 11	0.25	0.16	36.31	4.282	-0.0188	-0.0859
344	SLU 12	0.25	0.18	36.29	4.2999	-0.0188	-0.0861
344	SLU 13	0.25	0.19	36.03	4.2877	-0.0187	-0.084
344	SLU 14	0.26	0.16	36.77	4.3272	-0.0191	-0.0873
344	SLU 15	0.26	0.18	36.75	4.3451	-0.0191	-0.0876
344	SLU 16	0.25	0.15	36.53	4.3029	-0.0189	-0.0851
344	SLU 17	0.25	0.17	36.5	4.3209	-0.0189	-0.0854
344	SLU 18	0.24	0.17	37.29	4.3734	-0.0191	-0.0818
344	SLU 19	0.24	0.2	37.27	4.3913	-0.0191	-0.082
344	SLU 20	0.25	0.17	37.75	4.4185	-0.0194	-0.0833
344	SLU 21	0.25	0.19	37.72	4.4365	-0.0194	-0.0835
344	SLU 22	0.28	0.16	35.48	4.2056	-0.0186	-0.0961
344	SLU 23	0.28	0.2	35.44	4.2355	-0.0187	-0.0965
344	SLU 24	0.29	0.17	36.18	4.275	-0.0191	-0.0998
344	SLU 25	0.29	0.19	36.16	4.293	-0.0191	-0.1
344	SLU 26	0.29	0.2	35.9	4.2807	-0.0189	-0.098
344	SLU 27	0.3	0.16	36.64	4.3202	-0.0193	-0.1013
344	SLU 28	0.3	0.19	36.61	4.3381	-0.0194	-0.1015
344	SLU 29	0.29	0.16	36.39	4.2959	-0.0192	-0.099
344	SLU 30	0.29	0.18	36.37	4.3139	-0.0192	-0.0993
344	SLU 31	0.28	0.24	39.35	4.6107	-0.0205	-0.0956
344	SLU 32	0.29	0.21	40.1	4.6502	-0.0209	-0.0989
344	SLU 33	0.29	0.23	40.07	4.6681	-0.0209	-0.0991
344	SLU 34	0.29	0.24	39.81	4.6558	-0.0208	-0.0971
344	SLU 35	0.29	0.2	40.55	4.6953	-0.0212	-0.1004
344	SLU 36	0.3	0.23	40.53	4.7132	-0.0212	-0.1006
344	SLU 37	0.29	0.2	40.31	4.6711	-0.021	-0.0981
344	SLU 38	0.29	0.22	40.28	4.689	-0.021	-0.0984
344	SLU 39	0.28	0.22	41.07	4.7415	-0.0212	-0.0948
344	SLU 40	0.28	0.24	41.05	4.7595	-0.0212	-0.095
344	SLU 41	0.28	0.22	41.53	4.7867	-0.0215	-0.0963
344	SLU 42	0.28	0.24	41.5	4.8046	-0.0215	-0.0965
344	SLU 43	0.3	0.14	39.91	4.8625	-0.0208	-0.1035
344	SLU 44	0.31	0.17	39.87	4.8924	-0.0208	-0.1039
344	SLU 45	0.31	0.14	40.61	4.9319	-0.0212	-0.1072
344	SLU 46	0.32	0.16	40.59	4.9499	-0.0213	-0.1075
344	SLU 47	0.31	0.17	40.33	4.9376	-0.0211	-0.1054
344	SLU 48	0.32	0.14	41.07	4.9771	-0.0215	-0.1087
344	SLU 49	0.32	0.16	41.04	4.995	-0.0215	-0.109
344	SLU 50	0.31	0.13	40.82	4.9528	-0.0213	-0.1065
344	SLU 51	0.31	0.15	40.8	4.9708	-0.0213	-0.1067
344	SLU 52	0.3	0.21	43.79	5.2676	-0.0226	-0.103
344	SLU 53	0.31	0.18	44.53	5.3071	-0.023	-0.1063
344	SLU 54	0.31	0.2	44.5	5.325	-0.0231	-0.1066
344	SLU 55	0.31	0.21	44.24	5.3127	-0.0229	-0.1045
344	SLU 56	0.32	0.18	44.98	5.3522	-0.0233	-0.1078
344	SLU 57	0.32	0.2	44.96	5.3701	-0.0233	-0.108
344	SLU 58	0.31	0.17	44.74	5.328	-0.0231	-0.1056
344	SLU 59	0.31	0.19	44.71	5.3459	-0.0231	-0.1058
344	SLU 60	0.3	0.19	45.5	5.3984	-0.0234	-0.1022
344	SLU 61	0.3	0.22	45.48	5.4164	-0.0234	-0.1025
344	SLU 62	0.31	0.19	45.96	5.4436	-0.0236	-0.1037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
344	SLU 63	0.31	0.21	45.94	5.4615	-0.0236	-0.104
344	SLU 64	0.34	0.18	43.69	5.2307	-0.0229	-0.1166
344	SLU 65	0.34	0.22	43.65	5.2606	-0.0229	-0.117
344	SLU 66	0.35	0.19	44.39	5.3001	-0.0233	-0.1203
344	SLU 67	0.35	0.21	44.37	5.318	-0.0234	-0.1205
344	SLU 68	0.35	0.22	44.11	5.3057	-0.0232	-0.1184
344	SLU 69	0.36	0.18	44.85	5.3452	-0.0236	-0.1217
344	SLU 70	0.36	0.21	44.83	5.3631	-0.0236	-0.122
344	SLU 71	0.35	0.18	44.61	5.321	-0.0234	-0.1195
344	SLU 72	0.35	0.2	44.58	5.3389	-0.0234	-0.1197
344	SLU 73	0.34	0.26	47.57	5.6357	-0.0247	-0.116
344	SLU 74	0.35	0.23	48.31	5.6752	-0.0251	-0.1193
344	SLU 75	0.35	0.25	48.28	5.6931	-0.0252	-0.1196
344	SLU 76	0.35	0.26	48.02	5.6808	-0.025	-0.1175
344	SLU 77	0.35	0.22	48.76	5.7203	-0.0254	-0.1208
344	SLU 78	0.36	0.25	48.74	5.7383	-0.0254	-0.1211
344	SLU 79	0.35	0.22	48.52	5.6961	-0.0252	-0.1186
344	SLU 80	0.35	0.24	48.5	5.714	-0.0252	-0.1188
344	SLU 81	0.34	0.24	49.29	5.7666	-0.0255	-0.1153
344	SLU 82	0.34	0.26	49.26	5.7845	-0.0255	-0.1155
344	SLU 83	0.34	0.24	49.74	5.8117	-0.0257	-0.1167
344	SLU 84	0.34	0.26	49.72	5.8296	-0.0257	-0.117
344	SLE RA 1	0.25	0.13	32.78	3.9427	-0.0171	-0.0868
344	SLE RA 2	0.26	0.15	32.75	3.9626	-0.0172	-0.0871
344	SLE RA 3	0.26	0.13	33.25	3.9889	-0.0174	-0.0893
344	SLE RA 4	0.26	0.15	33.23	4.0009	-0.0175	-0.0894
344	SLE RA 5	0.26	0.15	33.06	3.9927	-0.0173	-0.0881
344	SLE RA 6	0.26	0.13	33.55	4.019	-0.0176	-0.0903
344	SLE RA 7	0.27	0.15	33.53	4.031	-0.0176	-0.0904
344	SLE RA 8	0.26	0.13	33.39	4.0029	-0.0175	-0.0888
344	SLE RA 9	0.26	0.14	33.37	4.0148	-0.0175	-0.0889
344	SLE RA 10	0.25	0.18	35.36	4.2127	-0.0184	-0.0865
344	SLE RA 11	0.26	0.16	35.86	4.239	-0.0186	-0.0887
344	SLE RA 12	0.26	0.17	35.84	4.251	-0.0187	-0.0888
344	SLE RA 13	0.26	0.18	35.67	4.2428	-0.0185	-0.0874
344	SLE RA 14	0.26	0.16	36.16	4.2691	-0.0188	-0.0896
344	SLE RA 15	0.26	0.17	36.14	4.2811	-0.0188	-0.0898
344	SLE RA 16	0.26	0.15	36	4.253	-0.0187	-0.0882
344	SLE RA 17	0.26	0.17	35.98	4.2649	-0.0187	-0.0883
344	SLE RA 18	0.25	0.17	36.51	4.3	-0.0189	-0.0859
344	SLE RA 19	0.25	0.18	36.49	4.3119	-0.0189	-0.0861
344	SLE RA 20	0.26	0.17	36.81	4.33	-0.019	-0.0869
344	SLE RA 21	0.26	0.18	36.8	4.342	-0.019	-0.0871
344	SLE FR 1	0.25	0.13	32.78	3.9427	-0.0171	-0.0868
344	SLE FR 2	0.25	0.13	32.77	3.9467	-0.0171	-0.0869
344	SLE FR 3	0.26	0.13	32.9	3.9547	-0.0172	-0.0872
344	SLE FR 4	0.25	0.15	33.89	4.0539	-0.0177	-0.0866
344	SLE FR 5	0.26	0.14	34.02	4.0619	-0.0177	-0.0869
344	SLE FR 6	0.25	0.15	34.64	4.1213	-0.018	-0.0864
344	SLE QP 1	0.25	0.13	32.78	3.9427	-0.0171	-0.0868
344	SLE QP 2	0.25	0.14	33.9	4.0499	-0.0176	-0.0865
344	SLD 1	4.22	0.08	27.86	3.6361	0.0039	-1.4754
344	SLD 2	4.65	0.58	28.19	3.6661	0.0032	-1.6259
344	SLD 3	4.13	-1.11	27.16	3.3451	0.0048	-1.4447
344	SLD 4	4.56	-0.6	27.49	3.375	0.0041	-1.5952
344	SLD 5	1.51	1.83	33.09	4.3619	-0.0124	-0.523
344	SLD 6	1.79	2.16	33.3	4.3815	-0.0129	-0.6217
344	SLD 7	1.2	-2.12	30.76	3.3917	-0.0094	-0.4206
344	SLD 8	1.48	-1.79	30.97	3.4113	-0.0099	-0.5193
344	SLD 9	-0.97	2.07	36.82	4.6884	-0.0254	0.3463
344	SLD 10	-0.69	2.4	37.04	4.7081	-0.0259	0.2476
344	SLD 11	-1.28	-1.88	34.49	3.7183	-0.0224	0.4486
344	SLD 12	-1	-1.55	34.71	3.7379	-0.0229	0.3499
344	SLD 13	-4.05	0.88	40.31	4.7247	-0.0394	1.4222
344	SLD 14	-3.62	1.39	40.64	4.7546	-0.0401	1.2716
344	SLD 15	-4.14	-0.3	39.61	4.4337	-0.0385	1.4529
344	SLD 16	-3.71	0.2	39.94	4.4636	-0.0392	1.3023
344	SLV 1	9.53	-0.04	19.74	3.0776	0.0327	-3.3346
344	SLV 2	10.54	1.14	20.5	3.1473	0.0311	-3.6852
344	SLV 3	9.31	-2.74	18.16	2.4046	0.0348	-3.264
344	SLV 4	10.32	-1.57	18.92	2.4743	0.0332	-3.6147
344	SLV 5	3.18	3.98	31.92	4.7669	-0.0054	-1.1076
344	SLV 6	3.84	4.74	32.41	4.8119	-0.0064	-1.3335
344	SLV 7	2.48	-5.02	26.64	2.5236	0.0015	-0.8724
344	SLV 8	3.13	-4.27	27.13	2.5685	0.0004	-1.0984
344	SLV 9	-2.62	4.55	40.66	5.5313	-0.0357	0.9253
344	SLV 10	-1.97	5.3	41.15	5.5762	-0.0368	0.6993
344	SLV 11	-3.33	-4.46	35.39	3.2879	-0.0289	1.1605
344	SLV 12	-2.68	-3.7	35.88	3.3328	-0.0299	0.9345
344	SLV 13	-9.82	1.85	48.88	5.6254	-0.0685	3.4416
344	SLV 14	-8.8	3.02	49.64	5.6951	-0.0701	3.091
344	SLV 15	-10.03	-0.85	47.3	4.9524	-0.0664	3.5122
344	SLV 16	-9.02	0.32	48.06	5.0221	-0.068	3.1615
344	CRTFP Ux+	0	0	0	0	0	0
344	CRTFP Ux-	0	0	0	0	0	0
344	CRTFP Uy+	0	0	0	0	0	0
344	CRTFP Uy-	0	0	0	0	0	0
345	SLU 1	0.24	0.18	32.52	4.3228	-0.0386	-0.0831
345	SLU 2	0.25	0.23	32.48	4.3488	-0.0387	-0.0838
345	SLU 3	0.25	0.19	33.24	4.4042	-0.0396	-0.0868

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
345	SLU 4	0.26	0.22	33.22	4.4197	-0.0397	-0.0872
345	SLU 5	0.25	0.23	32.95	4.4014	-0.0393	-0.0853
345	SLU 6	0.26	0.19	33.71	4.4568	-0.0402	-0.0883
345	SLU 7	0.26	0.21	33.69	4.4724	-0.0403	-0.0887
345	SLU 8	0.25	0.18	33.46	4.4281	-0.0399	-0.086
345	SLU 9	0.25	0.21	33.44	4.4436	-0.0399	-0.0865
345	SLU 10	0.24	0.28	36.5	4.7873	-0.0436	-0.0827
345	SLU 11	0.25	0.24	37.26	4.8427	-0.0445	-0.0857
345	SLU 12	0.25	0.26	37.23	4.8583	-0.0445	-0.0861
345	SLU 13	0.25	0.28	36.97	4.8399	-0.0442	-0.0842
345	SLU 14	0.26	0.24	37.73	4.8953	-0.0451	-0.0872
345	SLU 15	0.26	0.26	37.7	4.9109	-0.0451	-0.0876
345	SLU 16	0.25	0.23	37.47	4.8666	-0.0447	-0.0849
345	SLU 17	0.25	0.26	37.45	4.8822	-0.0448	-0.0854
345	SLU 18	0.24	0.25	38.26	4.9493	-0.0456	-0.0815
345	SLU 19	0.24	0.28	38.23	4.9649	-0.0456	-0.082
345	SLU 20	0.24	0.25	38.73	5.0019	-0.0462	-0.083
345	SLU 21	0.25	0.28	38.7	5.0175	-0.0462	-0.0834
345	SLU 22	0.28	0.23	36.41	4.7537	-0.0437	-0.0959
345	SLU 23	0.28	0.28	36.37	4.7797	-0.0438	-0.0967
345	SLU 24	0.29	0.24	37.13	4.8351	-0.0447	-0.0997
345	SLU 25	0.29	0.27	37.11	4.8507	-0.0447	-0.1001
345	SLU 26	0.29	0.28	36.84	4.8323	-0.0444	-0.0982
345	SLU 27	0.3	0.24	37.6	4.8877	-0.0453	-0.1011
345	SLU 28	0.3	0.27	37.58	4.9033	-0.0453	-0.1016
345	SLU 29	0.29	0.23	37.35	4.859	-0.0449	-0.0989
345	SLU 30	0.29	0.26	37.32	4.8746	-0.0449	-0.0994
345	SLU 31	0.28	0.33	40.38	5.2182	-0.0486	-0.0956
345	SLU 32	0.29	0.29	41.15	5.2737	-0.0495	-0.0986
345	SLU 33	0.29	0.32	41.12	5.2892	-0.0496	-0.099
345	SLU 34	0.29	0.33	40.85	5.2709	-0.0492	-0.0971
345	SLU 35	0.29	0.29	41.62	5.3263	-0.0501	-0.1001
345	SLU 36	0.3	0.32	41.59	5.3418	-0.0502	-0.1005
345	SLU 37	0.29	0.28	41.36	5.2976	-0.0498	-0.0978
345	SLU 38	0.29	0.31	41.34	5.3131	-0.0498	-0.0983
345	SLU 39	0.28	0.3	42.14	5.3802	-0.0506	-0.0944
345	SLU 40	0.28	0.33	42.12	5.3958	-0.0506	-0.0949
345	SLU 41	0.28	0.3	42.61	5.4329	-0.0512	-0.0959
345	SLU 42	0.28	0.33	42.59	5.4484	-0.0513	-0.0963
345	SLU 43	0.3	0.22	40.95	5.4719	-0.0485	-0.1036
345	SLU 44	0.31	0.26	40.91	5.4978	-0.0486	-0.1043
345	SLU 45	0.31	0.22	41.67	5.5533	-0.0495	-0.1073
345	SLU 46	0.32	0.25	41.64	5.5688	-0.0495	-0.1077
345	SLU 47	0.31	0.26	41.38	5.5505	-0.0492	-0.1058
345	SLU 48	0.32	0.22	42.14	5.6059	-0.0501	-0.1088
345	SLU 49	0.32	0.25	42.11	5.6215	-0.0502	-0.1092
345	SLU 50	0.31	0.21	41.88	5.5772	-0.0497	-0.1065
345	SLU 51	0.31	0.24	41.86	5.5927	-0.0498	-0.107
345	SLU 52	0.3	0.31	44.92	5.9364	-0.0534	-0.1032
345	SLU 53	0.31	0.27	45.68	5.9918	-0.0543	-0.1062
345	SLU 54	0.31	0.3	45.66	6.0074	-0.0544	-0.1066
345	SLU 55	0.31	0.31	45.39	5.989	-0.054	-0.1047
345	SLU 56	0.32	0.27	46.15	6.0444	-0.055	-0.1077
345	SLU 57	0.32	0.3	46.13	6.06	-0.055	-0.1081
345	SLU 58	0.31	0.26	45.9	6.0157	-0.0546	-0.1054
345	SLU 59	0.31	0.29	45.87	6.0313	-0.0546	-0.1059
345	SLU 60	0.3	0.29	46.68	6.0984	-0.0554	-0.102
345	SLU 61	0.3	0.32	46.66	6.114	-0.0555	-0.1025
345	SLU 62	0.3	0.29	47.15	6.151	-0.056	-0.1035
345	SLU 63	0.31	0.31	47.12	6.1666	-0.0561	-0.1039
345	SLU 64	0.34	0.27	44.83	5.9028	-0.0535	-0.1164
345	SLU 65	0.34	0.32	44.79	5.9288	-0.0536	-0.1172
345	SLU 66	0.35	0.28	45.56	5.9842	-0.0545	-0.1202
345	SLU 67	0.35	0.3	45.53	5.9998	-0.0546	-0.1206
345	SLU 68	0.35	0.31	45.26	5.9814	-0.0542	-0.1187
345	SLU 69	0.36	0.27	46.02	6.0368	-0.0552	-0.1216
345	SLU 70	0.36	0.3	46	6.0524	-0.0552	-0.1221
345	SLU 71	0.35	0.27	45.77	6.0081	-0.0548	-0.1194
345	SLU 72	0.35	0.29	45.75	6.0237	-0.0548	-0.1199
345	SLU 73	0.34	0.37	48.81	6.3673	-0.0585	-0.1161
345	SLU 74	0.35	0.33	49.57	6.4227	-0.0594	-0.1191
345	SLU 75	0.35	0.35	49.55	6.4383	-0.0594	-0.1195
345	SLU 76	0.35	0.36	49.28	6.42	-0.0591	-0.1176
345	SLU 77	0.35	0.32	50.04	6.4754	-0.06	-0.1206
345	SLU 78	0.36	0.35	50.02	6.4909	-0.06	-0.121
345	SLU 79	0.35	0.32	49.79	6.4466	-0.0596	-0.1183
345	SLU 80	0.35	0.34	49.76	6.4622	-0.0597	-0.1188
345	SLU 81	0.34	0.34	50.57	6.5293	-0.0605	-0.1149
345	SLU 82	0.34	0.37	50.54	6.5449	-0.0605	-0.1154
345	SLU 83	0.34	0.34	51.04	6.582	-0.0611	-0.1164
345	SLU 84	0.34	0.37	51.01	6.5975	-0.0611	-0.1168
345	SLE RA 1	0.25	0.2	33.63	4.4459	-0.0401	-0.0867
345	SLE RA 2	0.26	0.23	33.61	4.4632	-0.0401	-0.0872
345	SLE RA 3	0.26	0.2	34.11	4.5002	-0.0407	-0.0892
345	SLE RA 4	0.26	0.22	34.1	4.5106	-0.0408	-0.0895
345	SLE RA 5	0.26	0.23	33.92	4.4983	-0.0405	-0.0882
345	SLE RA 6	0.26	0.2	34.43	4.5353	-0.0412	-0.0902
345	SLE RA 7	0.27	0.22	34.41	4.5456	-0.0412	-0.0905
345	SLE RA 8	0.26	0.19	34.26	4.5161	-0.0409	-0.0887
345	SLE RA 9	0.26	0.21	34.24	4.5265	-0.0409	-0.089

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
345	SLE RA 10	0.25	0.26	36.28	4.7556	-0.0434	-0.0865
345	SLE RA 11	0.26	0.23	36.79	4.7925	-0.044	-0.0885
345	SLE RA 12	0.26	0.25	36.77	4.8029	-0.044	-0.0888
345	SLE RA 13	0.26	0.26	36.6	4.7907	-0.0438	-0.0875
345	SLE RA 14	0.26	0.23	37.1	4.8276	-0.0444	-0.0895
345	SLE RA 15	0.26	0.25	37.09	4.838	-0.0444	-0.0898
345	SLE RA 16	0.26	0.23	36.93	4.8085	-0.0441	-0.088
345	SLE RA 17	0.26	0.25	36.92	4.8188	-0.0442	-0.0883
345	SLE RA 18	0.25	0.24	37.46	4.8636	-0.0447	-0.0857
345	SLE RA 19	0.25	0.26	37.44	4.874	-0.0447	-0.086
345	SLE RA 20	0.25	0.24	37.77	4.8987	-0.0451	-0.0867
345	SLE RA 21	0.26	0.26	37.75	4.9091	-0.0451	-0.087
345	SLE FR 1	0.25	0.2	33.63	4.4459	-0.0401	-0.0867
345	SLE FR 2	0.25	0.2	33.63	4.4494	-0.0401	-0.0868
345	SLE FR 3	0.26	0.19	33.76	4.46	-0.0402	-0.0871
345	SLE FR 4	0.25	0.22	34.77	4.5747	-0.0415	-0.0865
345	SLE FR 5	0.25	0.21	34.9	4.5853	-0.0416	-0.0868
345	SLE FR 6	0.25	0.22	35.54	4.6548	-0.0424	-0.0862
345	SLE QP 1	0.25	0.2	33.63	4.4459	-0.0401	-0.0867
345	SLE QP 2	0.25	0.21	34.78	4.5712	-0.0415	-0.0864
345	SLD 1	4.21	0.12	28.01	3.8834	-0.0145	-1.4726
345	SLD 2	4.65	0.68	28.36	3.9208	-0.0155	-1.623
345	SLD 3	4.12	-1.13	27.29	3.6113	-0.0129	-1.4416
345	SLD 4	4.55	-0.58	27.64	3.6487	-0.0139	-1.5919
345	SLD 5	1.51	1.99	33.78	4.7709	-0.0357	-0.5227
345	SLD 6	1.79	2.35	34.01	4.7955	-0.0364	-0.6212
345	SLD 7	1.19	-2.19	31.38	3.8639	-0.0302	-0.4191
345	SLD 8	1.48	-1.83	31.61	3.8884	-0.0309	-0.5177
345	SLD 9	-0.97	2.25	37.95	5.254	-0.0521	0.3448
345	SLD 10	-0.68	2.61	38.18	5.2786	-0.0527	0.2463
345	SLD 11	-1.29	-1.93	35.55	4.347	-0.0466	0.4484
345	SLD 12	-1	-1.57	35.78	4.3715	-0.0472	0.3498
345	SLD 13	-4.04	1	41.92	5.4937	-0.069	1.419
345	SLD 14	-3.61	1.55	42.27	5.5312	-0.07	1.2687
345	SLD 15	-4.14	-0.26	41.2	5.2216	-0.0674	1.4501
345	SLD 16	-3.7	0.3	41.55	5.259	-0.0684	1.2998
345	SLV 1	9.51	-0.03	18.91	2.9574	0.0216	-3.3283
345	SLV 2	10.52	1.26	19.73	3.0445	0.0193	-3.6784
345	SLV 3	9.29	-2.88	17.27	2.3291	0.0254	-3.2569
345	SLV 4	10.3	-1.6	18.09	2.4163	0.0231	-3.6071
345	SLV 5	3.19	4.25	32.35	5.025	-0.0279	-1.1069
345	SLV 6	3.84	5.08	32.88	5.0811	-0.0294	-1.3325
345	SLV 7	2.46	-5.27	26.91	2.9307	-0.0152	-0.8691
345	SLV 8	3.11	-4.45	27.44	2.9869	-0.0167	-1.0947
345	SLV 9	-2.61	4.86	42.12	6.1556	-0.0662	0.9218
345	SLV 10	-1.95	5.69	42.65	6.2118	-0.0677	0.6962
345	SLV 11	-3.33	-4.66	36.68	4.0614	-0.0535	1.1597
345	SLV 12	-2.68	-3.83	37.21	4.1175	-0.055	0.934
345	SLV 13	-9.8	2.02	51.47	6.7262	-0.106	3.4342
345	SLV 14	-8.79	3.3	52.29	6.8133	-0.1083	3.0841
345	SLV 15	-10.01	-0.84	49.83	6.0979	-0.1022	3.5056
345	SLV 16	-9	0.45	50.65	6.1851	-0.1045	3.1554
345	CRTFP Ux+	0	0	0	0	0	0
345	CRTFP Ux-	0	0	0	0	0	0
345	CRTFP Uy+	0	0	0	0	0	0
345	CRTFP Uy-	0	0	0	0	0	0
346	SLU 1	0.24	0.24	34.03	5.3201	-0.0625	-0.0827
346	SLU 2	0.25	0.3	34	5.3409	-0.0626	-0.0838
346	SLU 3	0.25	0.25	34.79	5.426	-0.0641	-0.0864
346	SLU 4	0.25	0.28	34.77	5.4385	-0.0641	-0.0871
346	SLU 5	0.25	0.3	34.49	5.4092	-0.0635	-0.0853
346	SLU 6	0.26	0.25	35.29	5.4942	-0.0651	-0.0879
346	SLU 7	0.26	0.28	35.27	5.5067	-0.0651	-0.0886
346	SLU 8	0.25	0.24	35.02	5.4565	-0.0645	-0.0857
346	SLU 9	0.25	0.27	35	5.469	-0.0645	-0.0863
346	SLU 10	0.24	0.36	38.2	5.9128	-0.0707	-0.0826
346	SLU 11	0.25	0.31	39	5.9979	-0.0722	-0.0852
346	SLU 12	0.25	0.34	38.98	6.0104	-0.0722	-0.0858
346	SLU 13	0.25	0.36	38.7	5.9811	-0.0717	-0.084
346	SLU 14	0.25	0.31	39.5	6.0662	-0.0732	-0.0867
346	SLU 15	0.26	0.34	39.47	6.0787	-0.0732	-0.0873
346	SLU 16	0.25	0.3	39.23	6.0285	-0.0726	-0.0844
346	SLU 17	0.25	0.33	39.21	6.041	-0.0726	-0.0851
346	SLU 18	0.24	0.32	40.04	6.1371	-0.0741	-0.0809
346	SLU 19	0.24	0.36	40.02	6.1496	-0.0741	-0.0816
346	SLU 20	0.24	0.32	40.54	6.2053	-0.0751	-0.0824
346	SLU 21	0.24	0.36	40.52	6.2178	-0.0751	-0.0831
346	SLU 22	0.28	0.3	38.12	5.8819	-0.0707	-0.0954
346	SLU 23	0.28	0.36	38.08	5.9027	-0.0708	-0.0966
346	SLU 24	0.29	0.31	38.88	5.9878	-0.0723	-0.0992
346	SLU 25	0.29	0.34	38.86	6.0003	-0.0723	-0.0998
346	SLU 26	0.29	0.36	38.58	5.9709	-0.0718	-0.098
346	SLU 27	0.29	0.31	39.37	6.056	-0.0733	-0.1006
346	SLU 28	0.3	0.34	39.35	6.0685	-0.0733	-0.1013
346	SLU 29	0.29	0.3	39.11	6.0183	-0.0727	-0.0984
346	SLU 30	0.29	0.33	39.08	6.0308	-0.0727	-0.0991
346	SLU 31	0.28	0.42	42.29	6.4746	-0.0789	-0.0953
346	SLU 32	0.29	0.37	43.09	6.5597	-0.0804	-0.0979
346	SLU 33	0.29	0.4	43.07	6.5722	-0.0805	-0.0986
346	SLU 34	0.28	0.42	42.78	6.5429	-0.0799	-0.0968

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
346	SLU 35	0.29	0.37	43.58	6.6279	-0.0814	-0.0994
346	SLU 36	0.29	0.4	43.56	6.6404	-0.0815	-0.1001
346	SLU 37	0.28	0.36	43.31	6.5902	-0.0808	-0.0971
346	SLU 38	0.29	0.39	43.29	6.6027	-0.0809	-0.0978
346	SLU 39	0.27	0.38	44.13	6.6989	-0.0823	-0.0936
346	SLU 40	0.28	0.42	44.11	6.7114	-0.0823	-0.0943
346	SLU 41	0.28	0.38	44.62	6.7671	-0.0833	-0.0951
346	SLU 42	0.28	0.42	44.6	6.7796	-0.0833	-0.0958
346	SLU 43	0.3	0.29	42.84	6.7235	-0.0784	-0.1032
346	SLU 44	0.31	0.35	42.81	6.7443	-0.0785	-0.1043
346	SLU 45	0.31	0.3	43.6	6.8294	-0.08	-0.1069
346	SLU 46	0.31	0.33	43.58	6.8419	-0.08	-0.1075
346	SLU 47	0.31	0.35	43.3	6.8126	-0.0795	-0.1057
346	SLU 48	0.32	0.3	44.1	6.8976	-0.081	-0.1084
346	SLU 49	0.32	0.33	44.07	6.9102	-0.081	-0.109
346	SLU 50	0.31	0.29	43.83	6.8599	-0.0804	-0.1061
346	SLU 51	0.31	0.32	43.81	6.8725	-0.0804	-0.1068
346	SLU 52	0.3	0.41	47.01	7.3163	-0.0866	-0.103
346	SLU 53	0.31	0.36	47.81	7.4013	-0.0881	-0.1056
346	SLU 54	0.31	0.39	47.79	7.4138	-0.0882	-0.1063
346	SLU 55	0.31	0.41	47.51	7.3845	-0.0876	-0.1045
346	SLU 56	0.31	0.36	48.3	7.4696	-0.0891	-0.1071
346	SLU 57	0.32	0.39	48.28	7.4821	-0.0891	-0.1078
346	SLU 58	0.31	0.35	48.04	7.4319	-0.0885	-0.1049
346	SLU 59	0.31	0.38	48.01	7.4444	-0.0885	-0.1055
346	SLU 60	0.3	0.37	48.85	7.5405	-0.09	-0.1014
346	SLU 61	0.3	0.41	48.83	7.553	-0.09	-0.102
346	SLU 62	0.3	0.37	49.35	7.6087	-0.091	-0.1028
346	SLU 63	0.3	0.41	49.32	7.6213	-0.091	-0.1035
346	SLU 64	0.34	0.35	46.93	7.2853	-0.0866	-0.1159
346	SLU 65	0.34	0.41	46.89	7.3061	-0.0867	-0.117
346	SLU 66	0.35	0.36	47.69	7.3912	-0.0882	-0.1196
346	SLU 67	0.35	0.39	47.67	7.4037	-0.0883	-0.1203
346	SLU 68	0.35	0.41	47.39	7.3744	-0.0877	-0.1185
346	SLU 69	0.35	0.36	48.18	7.4594	-0.0892	-0.1211
346	SLU 70	0.36	0.39	48.16	7.4719	-0.0893	-0.1218
346	SLU 71	0.35	0.35	47.92	7.4217	-0.0886	-0.1189
346	SLU 72	0.35	0.38	47.89	7.4342	-0.0887	-0.1195
346	SLU 73	0.34	0.47	51.1	7.878	-0.0948	-0.1157
346	SLU 74	0.35	0.42	51.9	7.9631	-0.0963	-0.1184
346	SLU 75	0.35	0.45	51.88	7.9756	-0.0964	-0.119
346	SLU 76	0.34	0.47	51.59	7.9463	-0.0958	-0.1172
346	SLU 77	0.35	0.42	52.39	8.0313	-0.0973	-0.1198
346	SLU 78	0.35	0.45	52.37	8.0439	-0.0974	-0.1205
346	SLU 79	0.34	0.41	52.12	7.9936	-0.0967	-0.1176
346	SLU 80	0.35	0.44	52.1	8.0062	-0.0968	-0.1183
346	SLU 81	0.33	0.43	52.94	8.1023	-0.0982	-0.1141
346	SLU 82	0.34	0.47	52.92	8.1148	-0.0983	-0.1148
346	SLU 83	0.34	0.43	53.43	8.1705	-0.0992	-0.1156
346	SLU 84	0.34	0.47	53.41	8.183	-0.0993	-0.1162
346	SLE RA 1	0.25	0.26	35.2	5.4806	-0.0648	-0.0863
346	SLE RA 2	0.26	0.29	35.18	5.4945	-0.0649	-0.0871
346	SLE RA 3	0.26	0.26	35.71	5.5512	-0.0659	-0.0888
346	SLE RA 4	0.26	0.28	35.69	5.5595	-0.0659	-0.0893
346	SLE RA 5	0.26	0.29	35.51	5.54	-0.0655	-0.0881
346	SLE RA 6	0.26	0.26	36.04	5.5967	-0.0665	-0.0898
346	SLE RA 7	0.26	0.28	36.02	5.605	-0.0666	-0.0903
346	SLE RA 8	0.26	0.25	35.86	5.5716	-0.0661	-0.0883
346	SLE RA 9	0.26	0.28	35.84	5.5799	-0.0662	-0.0888
346	SLE RA 10	0.25	0.33	37.98	5.8758	-0.0703	-0.0862
346	SLE RA 11	0.26	0.3	38.51	5.9325	-0.0713	-0.088
346	SLE RA 12	0.26	0.32	38.5	5.9408	-0.0713	-0.0884
346	SLE RA 13	0.26	0.33	38.31	5.9213	-0.0709	-0.0872
346	SLE RA 14	0.26	0.3	38.84	5.978	-0.072	-0.089
346	SLE RA 15	0.26	0.32	38.83	5.9863	-0.072	-0.0894
346	SLE RA 16	0.26	0.29	38.66	5.9528	-0.0716	-0.0875
346	SLE RA 17	0.26	0.32	38.65	5.9612	-0.0716	-0.0879
346	SLE RA 18	0.25	0.31	39.21	6.0253	-0.0725	-0.0851
346	SLE RA 19	0.25	0.34	39.19	6.0336	-0.0726	-0.0856
346	SLE RA 20	0.25	0.31	39.54	6.0708	-0.0732	-0.0861
346	SLE RA 21	0.25	0.34	39.52	6.0791	-0.0732	-0.0866
346	SLE FR 1	0.25	0.26	35.2	5.4806	-0.0648	-0.0863
346	SLE FR 2	0.25	0.26	35.2	5.4834	-0.0648	-0.0865
346	SLE FR 3	0.25	0.26	35.33	5.4988	-0.0651	-0.0867
346	SLE FR 4	0.25	0.28	36.4	5.6468	-0.0671	-0.0861
346	SLE FR 5	0.25	0.27	36.53	5.6622	-0.0674	-0.0864
346	SLE FR 6	0.25	0.28	37.2	5.7529	-0.0687	-0.0857
346	SLE QP 1	0.25	0.26	35.2	5.4806	-0.0648	-0.0863
346	SLE QP 2	0.25	0.27	36.4	5.644	-0.0671	-0.086
346	SLD 1	4.2	0.16	28.72	4.5504	-0.034	-1.4693
346	SLD 2	4.64	0.77	29.11	4.6017	-0.0353	-1.6194
346	SLD 3	4.11	-1.17	27.96	4.3012	-0.0315	-1.4377
346	SLD 4	4.54	-0.57	28.35	4.3525	-0.0329	-1.5878
346	SLD 5	1.51	2.16	35.18	5.6847	-0.0606	-0.5221
346	SLD 6	1.79	2.55	35.43	5.7183	-0.0615	-0.6206
346	SLD 7	1.18	-2.29	32.65	4.8541	-0.0526	-0.4169
346	SLD 8	1.47	-1.9	32.91	4.8877	-0.0534	-0.5154
346	SLD 9	-0.97	2.44	39.9	6.4003	-0.0808	0.3434
346	SLD 10	-0.68	2.84	40.16	6.4339	-0.0817	0.245
346	SLD 11	-1.29	-2.01	37.37	5.5696	-0.0728	0.4486

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
346	SLD 12	-1	-1.61	37.63	5.6032	-0.0737	0.3502
346	SLD 13	-4.04	1.11	44.46	6.9355	-0.1014	1.4159
346	SLD 14	-3.6	1.72	44.84	6.9868	-0.1027	1.2657
346	SLD 15	-4.13	-0.22	43.7	6.6863	-0.099	1.4474
346	SLD 16	-3.7	0.38	44.09	6.7376	-0.1003	1.2973
346	SLV 1	9.49	-0.02	18.4	3.08	0.0105	-3.321
346	SLV 2	10.5	1.39	19.3	3.1994	0.0075	-3.6707
346	SLV 3	9.27	-3.06	16.68	2.5066	0.0161	-3.2485
346	SLV 4	10.28	-1.65	17.58	2.626	0.013	-3.5982
346	SLV 5	3.19	4.55	33.45	5.7238	-0.0517	-1.1062
346	SLV 6	3.84	5.46	34.03	5.8007	-0.0537	-1.3315
346	SLV 7	2.44	-5.58	27.73	3.8127	-0.0332	-0.8646
346	SLV 8	3.1	-4.67	28.31	3.8896	-0.0352	-1.0899
346	SLV 9	-2.59	5.22	44.5	7.3984	-0.0991	0.918
346	SLV 10	-1.94	6.13	45.08	7.4753	-0.1011	0.6926
346	SLV 11	-3.34	-4.92	38.77	5.4873	-0.0805	1.1596
346	SLV 12	-2.68	-4.01	39.36	5.5642	-0.0825	0.9342
346	SLV 13	-9.78	2.2	55.22	8.662	-0.1473	3.4262
346	SLV 14	-8.77	3.61	56.13	8.7813	-0.1504	3.0765
346	SLV 15	-10	-0.84	53.51	8.0886	-0.1417	3.4987
346	SLV 16	-8.99	0.57	54.41	8.208	-0.1448	3.149
346	CRTFP Ux+	0	0	0	0	0	0
346	CRTFP Ux-	0	0	0	0	0	0
346	CRTFP Uy+	0	0	0	0	0	0
346	CRTFP Uy-	0	0	0	0	0	0
347	SLU 1	0.24	0.29	36.28	6.8783	-0.0877	-0.0821
347	SLU 2	0.24	0.36	36.25	6.8931	-0.0878	-0.0835
347	SLU 3	0.25	0.3	37.1	7.0227	-0.09	-0.0858
347	SLU 4	0.25	0.34	37.08	7.0315	-0.09	-0.0866
347	SLU 5	0.25	0.36	36.78	6.9858	-0.0892	-0.085
347	SLU 6	0.25	0.3	37.63	7.1154	-0.0914	-0.0873
347	SLU 7	0.26	0.34	37.61	7.1243	-0.0914	-0.0881
347	SLU 8	0.25	0.29	37.34	7.0638	-0.0905	-0.085
347	SLU 9	0.25	0.33	37.32	7.0727	-0.0906	-0.0859
347	SLU 10	0.24	0.43	40.75	7.6749	-0.0994	-0.0821
347	SLU 11	0.25	0.37	41.6	7.8045	-0.1016	-0.0844
347	SLU 12	0.25	0.41	41.58	7.8133	-0.1016	-0.0852
347	SLU 13	0.24	0.43	41.28	7.7676	-0.1008	-0.0835
347	SLU 14	0.25	0.37	42.13	7.8972	-0.103	-0.0858
347	SLU 15	0.25	0.41	42.11	7.9061	-0.103	-0.0867
347	SLU 16	0.24	0.36	41.84	7.8456	-0.1021	-0.0836
347	SLU 17	0.25	0.4	41.82	7.8545	-0.1022	-0.0844
347	SLU 18	0.23	0.39	42.71	7.9952	-0.1043	-0.08
347	SLU 19	0.24	0.43	42.69	8.004	-0.1043	-0.0809
347	SLU 20	0.24	0.39	43.24	8.0879	-0.1057	-0.0815
347	SLU 21	0.24	0.43	43.22	8.0968	-0.1057	-0.0824
347	SLU 22	0.28	0.35	40.67	7.6456	-0.0993	-0.0946
347	SLU 23	0.28	0.43	40.63	7.6604	-0.0994	-0.096
347	SLU 24	0.29	0.36	41.48	7.79	-0.1016	-0.0983
347	SLU 25	0.29	0.41	41.46	7.7989	-0.1016	-0.0992
347	SLU 26	0.28	0.43	41.16	7.7531	-0.1008	-0.0975
347	SLU 27	0.29	0.36	42.01	7.8827	-0.103	-0.0998
347	SLU 28	0.29	0.41	41.99	7.8916	-0.103	-0.1007
347	SLU 29	0.28	0.35	41.72	7.8311	-0.1021	-0.0976
347	SLU 30	0.29	0.4	41.7	7.84	-0.1022	-0.0984
347	SLU 31	0.28	0.49	45.13	8.4422	-0.111	-0.0946
347	SLU 32	0.28	0.43	45.99	8.5718	-0.1132	-0.0969
347	SLU 33	0.29	0.48	45.97	8.5806	-0.1132	-0.0978
347	SLU 34	0.28	0.49	45.66	8.5349	-0.1124	-0.0961
347	SLU 35	0.29	0.43	46.52	8.6645	-0.1146	-0.0984
347	SLU 36	0.29	0.48	46.5	8.6734	-0.1146	-0.0993
347	SLU 37	0.28	0.42	46.23	8.6129	-0.1137	-0.0961
347	SLU 38	0.28	0.47	46.21	8.6218	-0.1138	-0.097
347	SLU 39	0.27	0.45	47.1	8.7625	-0.1159	-0.0926
347	SLU 40	0.27	0.49	47.08	8.7713	-0.1159	-0.0934
347	SLU 41	0.27	0.45	47.63	8.8552	-0.1173	-0.0941
347	SLU 42	0.28	0.49	47.61	8.8641	-0.1173	-0.0949
347	SLU 43	0.3	0.35	45.66	8.6788	-0.1101	-0.1024
347	SLU 44	0.3	0.42	45.63	8.6935	-0.1102	-0.1038
347	SLU 45	0.31	0.36	46.48	8.8231	-0.1123	-0.1061
347	SLU 46	0.31	0.4	46.46	8.832	-0.1124	-0.107
347	SLU 47	0.31	0.42	46.16	8.7863	-0.1116	-0.1053
347	SLU 48	0.31	0.36	47.01	8.9159	-0.1137	-0.1076
347	SLU 49	0.32	0.4	46.99	8.9247	-0.1138	-0.1084
347	SLU 50	0.31	0.35	46.72	8.8643	-0.1129	-0.1053
347	SLU 51	0.31	0.39	46.7	8.8731	-0.1129	-0.1062
347	SLU 52	0.3	0.49	50.13	9.4753	-0.1218	-0.1024
347	SLU 53	0.31	0.43	50.99	9.6049	-0.1239	-0.1047
347	SLU 54	0.31	0.47	50.96	9.6138	-0.124	-0.1055
347	SLU 55	0.3	0.49	50.66	9.568	-0.1232	-0.1039
347	SLU 56	0.31	0.43	51.51	9.6976	-0.1253	-0.1062
347	SLU 57	0.31	0.47	51.49	9.7065	-0.1254	-0.107
347	SLU 58	0.3	0.42	51.22	9.646	-0.1245	-0.1039
347	SLU 59	0.31	0.46	51.2	9.6549	-0.1245	-0.1048
347	SLU 60	0.29	0.45	52.1	9.7956	-0.1266	-0.1003
347	SLU 61	0.3	0.49	52.08	9.8044	-0.1267	-0.1012
347	SLU 62	0.3	0.45	52.63	9.8883	-0.128	-0.1018
347	SLU 63	0.3	0.49	52.61	9.8972	-0.1281	-0.1027
347	SLU 64	0.33	0.42	50.05	9.4461	-0.1217	-0.1149
347	SLU 65	0.34	0.49	50.01	9.4608	-0.1218	-0.1164

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
347	SLU 66	0.35	0.43	50.87	9.5904	-0.1239	-0.1187
347	SLU 67	0.35	0.47	50.85	9.5993	-0.124	-0.1195
347	SLU 68	0.34	0.49	50.54	9.5536	-0.1232	-0.1178
347	SLU 69	0.35	0.43	51.4	9.6832	-0.1253	-0.1201
347	SLU 70	0.35	0.47	51.37	9.692	-0.1254	-0.121
347	SLU 71	0.34	0.42	51.11	9.6316	-0.1245	-0.1179
347	SLU 72	0.35	0.46	51.09	9.6404	-0.1245	-0.1187
347	SLU 73	0.34	0.56	54.52	10.2426	-0.1334	-0.1149
347	SLU 74	0.34	0.5	55.37	10.3722	-0.1355	-0.1172
347	SLU 75	0.34	0.54	55.35	10.3811	-0.1356	-0.1181
347	SLU 76	0.34	0.56	55.05	10.3353	-0.1348	-0.1164
347	SLU 77	0.35	0.5	55.9	10.465	-0.1369	-0.1187
347	SLU 78	0.35	0.54	55.88	10.4738	-0.137	-0.1196
347	SLU 79	0.34	0.49	55.61	10.4133	-0.1361	-0.1165
347	SLU 80	0.34	0.53	55.59	10.4222	-0.1361	-0.1173
347	SLU 81	0.33	0.52	56.48	10.5629	-0.1382	-0.1129
347	SLU 82	0.33	0.56	56.46	10.5718	-0.1383	-0.1138
347	SLU 83	0.33	0.52	57.01	10.6556	-0.1396	-0.1144
347	SLU 84	0.34	0.56	56.99	10.6645	-0.1397	-0.1152
347	SLE RA 1	0.25	0.31	37.54	7.0976	-0.0911	-0.0857
347	SLE RA 2	0.25	0.35	37.51	7.1074	-0.0911	-0.0866
347	SLE RA 3	0.26	0.31	38.08	7.1938	-0.0925	-0.0881
347	SLE RA 4	0.26	0.34	38.07	7.1997	-0.0926	-0.0887
347	SLE RA 5	0.26	0.35	37.87	7.1692	-0.0921	-0.0876
347	SLE RA 6	0.26	0.31	38.43	7.2556	-0.0935	-0.0891
347	SLE RA 7	0.26	0.34	38.42	7.2615	-0.0935	-0.0897
347	SLE RA 8	0.25	0.31	38.24	7.2212	-0.0929	-0.0876
347	SLE RA 9	0.26	0.34	38.23	7.2271	-0.093	-0.0882
347	SLE RA 10	0.25	0.4	40.51	7.6286	-0.0988	-0.0857
347	SLE RA 11	0.25	0.36	41.08	7.715	-0.1003	-0.0872
347	SLE RA 12	0.26	0.39	41.07	7.7209	-0.1003	-0.0878
347	SLE RA 13	0.25	0.4	40.87	7.6904	-0.0998	-0.0866
347	SLE RA 14	0.26	0.36	41.43	7.7768	-0.1012	-0.0882
347	SLE RA 15	0.26	0.39	41.42	7.7827	-0.1012	-0.0887
347	SLE RA 16	0.25	0.35	41.24	7.7424	-0.1006	-0.0867
347	SLE RA 17	0.25	0.38	41.23	7.7483	-0.1007	-0.0872
347	SLE RA 18	0.25	0.37	41.82	7.8421	-0.1021	-0.0843
347	SLE RA 19	0.25	0.4	41.81	7.848	-0.1021	-0.0849
347	SLE RA 20	0.25	0.37	42.18	7.904	-0.103	-0.0853
347	SLE RA 21	0.25	0.4	42.16	7.9099	-0.1031	-0.0858
347	SLE FR 1	0.25	0.31	37.54	7.0976	-0.0911	-0.0857
347	SLE FR 2	0.25	0.32	37.53	7.0995	-0.0911	-0.0858
347	SLE FR 3	0.25	0.31	37.68	7.1223	-0.0914	-0.086
347	SLE FR 4	0.25	0.34	38.82	7.3229	-0.0944	-0.0854
347	SLE FR 5	0.25	0.33	38.96	7.3457	-0.0947	-0.0856
347	SLE FR 6	0.25	0.34	39.68	7.4698	-0.0966	-0.085
347	SLE QP 1	0.25	0.31	37.54	7.0976	-0.0911	-0.0857
347	SLE QP 2	0.25	0.33	38.82	7.3209	-0.0944	-0.0852
347	SLD 1	4.19	0.2	30.03	5.6746	-0.0542	-1.4654
347	SLD 2	4.63	0.86	30.46	5.7468	-0.0559	-1.6154
347	SLD 3	4.09	-1.23	29.21	5.4434	-0.0511	-1.4332
347	SLD 4	4.53	-0.56	29.64	5.5156	-0.0527	-1.5832
347	SLD 5	1.5	2.33	37.34	7.1649	-0.0868	-0.5216
347	SLD 6	1.79	2.76	37.63	7.2121	-0.0879	-0.6199
347	SLD 7	1.17	-2.42	34.62	6.3942	-0.0763	-0.414
347	SLD 8	1.46	-1.98	34.91	6.4415	-0.0774	-0.5124
347	SLD 9	-0.96	2.63	42.73	8.2004	-0.1113	0.3419
347	SLD 10	-0.68	3.07	43.02	8.2476	-0.1124	0.2436
347	SLD 11	-1.29	-2.11	40.02	7.4297	-0.1009	0.4494
347	SLD 12	-1.01	-1.67	40.3	7.477	-0.1019	0.3511
347	SLD 13	-4.03	1.22	48	9.1263	-0.136	1.4127
347	SLD 14	-3.6	1.88	48.43	9.1984	-0.1377	1.2627
347	SLD 15	-4.13	-0.21	47.18	8.8951	-0.1329	1.4449
347	SLD 16	-3.7	0.46	47.61	8.9672	-0.1345	1.2949
347	SLV 1	9.47	-0.02	18.21	3.4624	-0.0003	-3.313
347	SLV 2	10.48	1.53	19.22	3.6303	-0.0042	-3.6623
347	SLV 3	9.24	-3.26	16.37	2.9335	0.0069	-3.2389
347	SLV 4	10.26	-1.71	17.37	3.1015	0.003	-3.5883
347	SLV 5	3.19	4.87	35.27	6.9365	-0.0765	-1.1057
347	SLV 6	3.84	5.87	35.92	7.0447	-0.0789	-1.3308
347	SLV 7	2.43	-5.93	29.11	5.1737	-0.0524	-0.8589
347	SLV 8	3.08	-4.93	29.76	5.282	-0.0548	-1.084
347	SLV 9	-2.58	5.59	47.88	9.3599	-0.1339	0.9135
347	SLV 10	-1.93	6.58	48.53	9.4681	-0.1364	0.6884
347	SLV 11	-3.34	-5.21	41.73	7.5971	-0.1098	1.1603
347	SLV 12	-2.69	-4.22	42.37	7.7054	-0.1123	0.9352
347	SLV 13	-9.76	2.37	60.27	11.5404	-0.1918	3.4178
347	SLV 14	-8.75	3.91	61.28	11.7083	-0.1956	3.0684
347	SLV 15	-9.99	-0.87	58.42	11.0116	-0.1846	3.4918
347	SLV 16	-8.98	0.67	59.43	11.1795	-0.1884	3.1425
347	CRTFP Ux+	0	0	0	0	0	0
347	CRTFP Ux-	0	0	0	0	0	0
347	CRTFP Uy+	0	0	0	0	0	0
347	CRTFP Uy-	0	0	0	0	0	0
348	SLU 1	0.23	0.32	39.3	9.0437	-0.1136	-0.0812
348	SLU 2	0.24	0.41	39.27	9.0516	-0.1137	-0.0829
348	SLU 3	0.25	0.34	40.2	9.2415	-0.1165	-0.0849
348	SLU 4	0.25	0.39	40.18	9.2463	-0.1165	-0.086
348	SLU 5	0.25	0.41	39.85	9.1785	-0.1155	-0.0844
348	SLU 6	0.25	0.34	40.77	9.3685	-0.1183	-0.0864

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
348	SLU 7	0.25	0.39	40.75	9.3732	-0.1183	-0.0874
348	SLU 8	0.24	0.33	40.45	9.2976	-0.1172	-0.0841
348	SLU 9	0.25	0.38	40.44	9.3023	-0.1173	-0.0852
348	SLU 10	0.24	0.48	44.17	10.1259	-0.1288	-0.0814
348	SLU 11	0.24	0.41	45.1	10.3159	-0.1316	-0.0834
348	SLU 12	0.25	0.46	45.08	10.3206	-0.1316	-0.0844
348	SLU 13	0.24	0.48	44.75	10.2529	-0.1306	-0.0828
348	SLU 14	0.25	0.41	45.67	10.4428	-0.1334	-0.0848
348	SLU 15	0.25	0.46	45.66	10.4475	-0.1334	-0.0858
348	SLU 16	0.24	0.4	45.36	10.3719	-0.1323	-0.0826
348	SLU 17	0.24	0.45	45.34	10.3766	-0.1324	-0.0836
348	SLU 18	0.23	0.43	46.3	10.5784	-0.1352	-0.079
348	SLU 19	0.23	0.48	46.29	10.5832	-0.1352	-0.08
348	SLU 20	0.23	0.43	46.88	10.7054	-0.137	-0.0804
348	SLU 21	0.24	0.48	46.86	10.7101	-0.137	-0.0815
348	SLU 22	0.27	0.4	44.08	10.0974	-0.1286	-0.0936
348	SLU 23	0.28	0.48	44.05	10.1052	-0.1287	-0.0953
348	SLU 24	0.28	0.41	44.98	10.2952	-0.1315	-0.0973
348	SLU 25	0.29	0.46	44.96	10.2999	-0.1316	-0.0983
348	SLU 26	0.28	0.48	44.63	10.2322	-0.1305	-0.0968
348	SLU 27	0.29	0.41	45.56	10.4221	-0.1333	-0.0988
348	SLU 28	0.29	0.46	45.54	10.4269	-0.1334	-0.0998
348	SLU 29	0.28	0.4	45.24	10.3512	-0.1323	-0.0965
348	SLU 30	0.28	0.45	45.22	10.356	-0.1323	-0.0975
348	SLU 31	0.27	0.56	48.95	11.1796	-0.1438	-0.0937
348	SLU 32	0.28	0.48	49.88	11.3695	-0.1466	-0.0957
348	SLU 33	0.28	0.53	49.86	11.3742	-0.1467	-0.0967
348	SLU 34	0.28	0.56	49.53	11.3065	-0.1456	-0.0952
348	SLU 35	0.28	0.48	50.46	11.4965	-0.1484	-0.0972
348	SLU 36	0.29	0.53	50.44	11.5012	-0.1485	-0.0982
348	SLU 37	0.28	0.47	50.14	11.4256	-0.1474	-0.0949
348	SLU 38	0.28	0.52	50.12	11.4303	-0.1474	-0.096
348	SLU 39	0.26	0.5	51.09	11.6321	-0.1502	-0.0913
348	SLU 40	0.27	0.55	51.07	11.6368	-0.1503	-0.0924
348	SLU 41	0.27	0.5	51.66	11.759	-0.152	-0.0928
348	SLU 42	0.27	0.55	51.65	11.7638	-0.1521	-0.0938
348	SLU 43	0.29	0.4	49.45	11.3956	-0.1425	-0.1013
348	SLU 44	0.3	0.48	49.42	11.4034	-0.1426	-0.1031
348	SLU 45	0.3	0.41	50.35	11.5934	-0.1454	-0.105
348	SLU 46	0.31	0.46	50.33	11.5981	-0.1454	-0.1061
348	SLU 47	0.3	0.48	50	11.5304	-0.1444	-0.1045
348	SLU 48	0.31	0.41	50.92	11.7203	-0.1472	-0.1065
348	SLU 49	0.31	0.46	50.9	11.7251	-0.1472	-0.1075
348	SLU 50	0.3	0.4	50.61	11.6494	-0.1461	-0.1043
348	SLU 51	0.31	0.45	50.59	11.6542	-0.1462	-0.1053
348	SLU 52	0.3	0.56	54.32	12.4778	-0.1577	-0.1015
348	SLU 53	0.3	0.48	55.25	12.6677	-0.1605	-0.1035
348	SLU 54	0.3	0.53	55.23	12.6724	-0.1605	-0.1045
348	SLU 55	0.3	0.56	54.9	12.6047	-0.1595	-0.1029
348	SLU 56	0.3	0.48	55.83	12.7947	-0.1623	-0.1049
348	SLU 57	0.31	0.53	55.81	12.7994	-0.1623	-0.106
348	SLU 58	0.3	0.47	55.51	12.7238	-0.1612	-0.1027
348	SLU 59	0.3	0.52	55.49	12.7285	-0.1613	-0.1037
348	SLU 60	0.29	0.5	56.45	12.9303	-0.1641	-0.0991
348	SLU 61	0.29	0.55	56.44	12.935	-0.1641	-0.1001
348	SLU 62	0.29	0.5	57.03	13.0572	-0.1659	-0.1006
348	SLU 63	0.3	0.56	57.01	13.062	-0.1659	-0.1016
348	SLU 64	0.33	0.47	54.23	12.4492	-0.1575	-0.1137
348	SLU 65	0.33	0.55	54.2	12.4571	-0.1576	-0.1154
348	SLU 66	0.34	0.48	55.13	12.647	-0.1604	-0.1174
348	SLU 67	0.34	0.53	55.11	12.6518	-0.1605	-0.1184
348	SLU 68	0.34	0.55	54.78	12.584	-0.1594	-0.1169
348	SLU 69	0.34	0.48	55.71	12.774	-0.1622	-0.1189
348	SLU 70	0.35	0.53	55.69	12.7787	-0.1623	-0.1199
348	SLU 71	0.34	0.47	55.39	12.7031	-0.1612	-0.1166
348	SLU 72	0.34	0.52	55.37	12.7078	-0.1612	-0.1177
348	SLU 73	0.33	0.63	59.11	13.5314	-0.1727	-0.1138
348	SLU 74	0.34	0.55	60.03	13.7214	-0.1755	-0.1158
348	SLU 75	0.34	0.61	60.01	13.7261	-0.1756	-0.1169
348	SLU 76	0.34	0.63	59.68	13.6584	-0.1746	-0.1153
348	SLU 77	0.34	0.56	60.61	13.8483	-0.1773	-0.1173
348	SLU 78	0.34	0.61	60.59	13.853	-0.1774	-0.1183
348	SLU 79	0.33	0.54	60.29	13.7774	-0.1763	-0.1151
348	SLU 80	0.34	0.6	60.27	13.7822	-0.1763	-0.1161
348	SLU 81	0.32	0.58	61.24	13.984	-0.1791	-0.1115
348	SLU 82	0.33	0.63	61.22	13.9887	-0.1792	-0.1125
348	SLU 83	0.33	0.58	61.81	14.1109	-0.1809	-0.1129
348	SLU 84	0.33	0.63	61.8	14.1156	-0.181	-0.114
348	SLE RA 1	0.24	0.34	40.67	9.3447	-0.1179	-0.0847
348	SLE RA 2	0.25	0.4	40.65	9.35	-0.1179	-0.0859
348	SLE RA 3	0.25	0.35	41.26	9.4766	-0.1198	-0.0872
348	SLE RA 4	0.25	0.39	41.25	9.4798	-0.1198	-0.0879
348	SLE RA 5	0.25	0.4	41.03	9.4346	-0.1191	-0.0869
348	SLE RA 6	0.25	0.35	41.65	9.5613	-0.121	-0.0882
348	SLE RA 7	0.26	0.39	41.64	9.5644	-0.121	-0.0889
348	SLE RA 8	0.25	0.35	41.44	9.514	-0.1203	-0.0867
348	SLE RA 9	0.25	0.38	41.42	9.5172	-0.1203	-0.0874
348	SLE RA 10	0.25	0.45	43.91	10.0662	-0.128	-0.0848
348	SLE RA 11	0.25	0.4	44.53	10.1928	-0.1299	-0.0862
348	SLE RA 12	0.25	0.44	44.52	10.196	-0.1299	-0.0869

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
348	SLE RA 13	0.25	0.45	44.3	10.1508	-0.1292	-0.0858
348	SLE RA 14	0.25	0.4	44.92	10.2775	-0.1311	-0.0871
348	SLE RA 15	0.25	0.44	44.9	10.2806	-0.1311	-0.0878
348	SLE RA 16	0.25	0.4	44.71	10.2302	-0.1304	-0.0857
348	SLE RA 17	0.25	0.43	44.69	10.2334	-0.1304	-0.0863
348	SLE RA 18	0.24	0.42	45.34	10.3679	-0.1323	-0.0833
348	SLE RA 19	0.24	0.45	45.32	10.3711	-0.1323	-0.0839
348	SLE RA 20	0.24	0.42	45.72	10.4525	-0.1335	-0.0842
348	SLE RA 21	0.25	0.45	45.71	10.4557	-0.1335	-0.0849
348	SLE FR 1	0.24	0.34	40.67	9.3447	-0.1179	-0.0847
348	SLE FR 2	0.25	0.36	40.66	9.3458	-0.1179	-0.085
348	SLE FR 3	0.25	0.34	40.82	9.3786	-0.1184	-0.0851
348	SLE FR 4	0.24	0.38	42.06	9.6527	-0.1222	-0.0845
348	SLE FR 5	0.24	0.37	42.22	9.6855	-0.1227	-0.0847
348	SLE FR 6	0.24	0.38	43	9.8563	-0.1251	-0.084
348	SLE QP 1	0.24	0.34	40.67	9.3447	-0.1179	-0.0847
348	SLE QP 2	0.24	0.37	42.07	9.6517	-0.1222	-0.0843
348	SLD 1	4.18	0.22	31.95	7.292	-0.0747	-1.4613
348	SLD 2	4.62	0.94	32.44	7.3923	-0.0766	-1.6112
348	SLD 3	4.08	-1.29	31.05	7.061	-0.0709	-1.4281
348	SLD 4	4.51	-0.57	31.54	7.1612	-0.0729	-1.578
348	SLD 5	1.5	2.48	40.3	9.2763	-0.1133	-0.5211
348	SLD 6	1.79	2.96	40.62	9.342	-0.1146	-0.6194
348	SLD 7	1.16	-2.55	37.32	8.5063	-0.1007	-0.4104
348	SLD 8	1.45	-2.08	37.64	8.572	-0.102	-0.5087
348	SLD 9	-0.96	2.81	46.5	10.7314	-0.1424	0.3401
348	SLD 10	-0.67	3.29	46.82	10.7971	-0.1437	0.2418
348	SLD 11	-1.3	-2.23	43.51	9.9613	-0.1298	0.4508
348	SLD 12	-1.01	-1.75	43.83	10.0271	-0.1311	0.3525
348	SLD 13	-4.03	1.3	52.6	12.1421	-0.1715	1.4094
348	SLD 14	-3.59	2.03	53.08	12.2424	-0.1735	1.2595
348	SLD 15	-4.13	-0.21	51.7	11.9111	-0.1678	1.4426
348	SLD 16	-3.69	0.51	52.19	12.0114	-0.1697	1.2927
348	SLV 1	9.45	-0.03	18.36	4.1221	-0.0109	-3.3045
348	SLV 2	10.46	1.66	19.49	4.3556	-0.0155	-3.6537
348	SLV 3	9.22	-3.47	16.33	3.5969	-0.0022	-3.2283
348	SLV 4	10.23	-1.78	17.46	3.8305	-0.0068	-3.5775
348	SLV 5	3.19	5.17	37.84	8.749	-0.1012	-1.1057
348	SLV 6	3.84	6.26	38.57	8.8995	-0.1041	-1.3307
348	SLV 7	2.41	-6.29	31.07	6.9986	-0.0722	-0.8519
348	SLV 8	3.06	-5.2	31.8	7.1491	-0.0752	-1.0769
348	SLV 9	-2.57	5.94	52.33	12.1543	-0.1692	0.9083
348	SLV 10	-1.92	7.02	53.06	12.3048	-0.1722	0.6833
348	SLV 11	-3.35	-5.53	45.57	10.4039	-0.1402	1.1621
348	SLV 12	-2.7	-4.44	46.3	10.5544	-0.1432	0.9371
348	SLV 13	-9.74	2.51	66.68	15.4729	-0.2376	3.4089
348	SLV 14	-8.73	4.2	67.81	15.7064	-0.2422	3.0597
348	SLV 15	-9.98	-0.93	64.65	14.9478	-0.2289	3.4851
348	SLV 16	-8.96	0.76	65.78	15.1813	-0.2335	3.1359
348	CRTFP Ux+	0	0	0	0	0	0
348	CRTFP Ux-	0	0	0	0	0	0
348	CRTFP Uy+	0	0	0	0	0	0
348	CRTFP Uy-	0	0	0	0	0	0
349	SLU 1	0.2	0.3	36.91	10.0779	0.9428	-0.0777
349	SLU 2	0.2	0.38	36.89	10.0788	0.9421	-0.0818
349	SLU 3	0.21	0.31	37.76	10.3048	0.9643	-0.0812
349	SLU 4	0.21	0.36	37.75	10.3054	0.9638	-0.0837
349	SLU 5	0.21	0.38	37.44	10.2244	0.9559	-0.0831
349	SLU 6	0.21	0.31	38.31	10.4503	0.9781	-0.0825
349	SLU 7	0.22	0.36	38.29	10.4509	0.9777	-0.0849
349	SLU 8	0.21	0.3	38.01	10.3689	0.9705	-0.0803
349	SLU 9	0.21	0.35	37.99	10.3695	0.97	-0.0827
349	SLU 10	0.2	0.45	41.52	11.3136	1.0596	-0.0823
349	SLU 11	0.2	0.37	42.39	11.5396	1.0818	-0.0817
349	SLU 12	0.21	0.42	42.38	11.5401	1.0814	-0.0841
349	SLU 13	0.2	0.45	42.07	11.4591	1.0735	-0.0836
349	SLU 14	0.21	0.38	42.94	11.6851	1.0957	-0.083
349	SLU 15	0.21	0.43	42.92	11.6857	1.0952	-0.0854
349	SLU 16	0.2	0.37	42.64	11.6037	1.0881	-0.0807
349	SLU 17	0.21	0.42	42.62	11.6043	1.0876	-0.0832
349	SLU 18	0.19	0.39	43.53	11.8418	1.1108	-0.0784
349	SLU 19	0.2	0.44	43.52	11.8424	1.1103	-0.0809
349	SLU 20	0.2	0.39	44.08	11.9874	1.1246	-0.0797
349	SLU 21	0.2	0.44	44.06	11.9879	1.1241	-0.0821
349	SLU 22	0.23	0.36	41.44	11.2882	1.0575	-0.0901
349	SLU 23	0.24	0.44	41.42	11.2892	1.0568	-0.0942
349	SLU 24	0.24	0.37	42.29	11.5151	1.079	-0.0936
349	SLU 25	0.24	0.42	42.27	11.5157	1.0785	-0.096
349	SLU 26	0.24	0.45	41.96	11.4347	1.0706	-0.0955
349	SLU 27	0.24	0.37	42.83	11.6607	1.0928	-0.0948
349	SLU 28	0.25	0.42	42.82	11.6612	1.0924	-0.0973
349	SLU 29	0.24	0.36	42.53	11.5793	1.0852	-0.0926
349	SLU 30	0.24	0.41	42.52	11.5798	1.0847	-0.0951
349	SLU 31	0.23	0.51	46.05	12.5239	1.1743	-0.0947
349	SLU 32	0.23	0.44	46.92	12.7499	1.1965	-0.0941
349	SLU 33	0.24	0.49	46.9	12.7505	1.1961	-0.0965
349	SLU 34	0.24	0.51	46.59	12.6695	1.1882	-0.096
349	SLU 35	0.24	0.44	47.47	12.8954	1.2104	-0.0953
349	SLU 36	0.24	0.49	47.45	12.896	1.2099	-0.0978
349	SLU 37	0.23	0.43	47.16	12.814	1.2028	-0.0931

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
349	SLU 38	0.24	0.48	47.15	12.8146	1.2023	-0.0956
349	SLU 39	0.22	0.46	48.06	13.0521	1.2255	-0.0908
349	SLU 40	0.23	0.51	48.04	13.0527	1.225	-0.0932
349	SLU 41	0.23	0.46	48.6	13.1977	1.2393	-0.0921
349	SLU 42	0.23	0.51	48.59	13.1983	1.2388	-0.0945
349	SLU 43	0.25	0.36	46.44	12.6862	1.1863	-0.0968
349	SLU 44	0.25	0.45	46.41	12.6872	1.1856	-0.1009
349	SLU 45	0.26	0.37	47.29	12.9132	1.2078	-0.1002
349	SLU 46	0.26	0.42	47.27	12.9138	1.2073	-0.1027
349	SLU 47	0.26	0.45	46.96	12.8328	1.1994	-0.1021
349	SLU 48	0.26	0.37	47.83	13.0587	1.2216	-0.1015
349	SLU 49	0.26	0.42	47.82	13.0593	1.2212	-0.104
349	SLU 50	0.26	0.36	47.53	12.9773	1.214	-0.0993
349	SLU 51	0.26	0.41	47.52	12.9779	1.2136	-0.1018
349	SLU 52	0.25	0.51	51.04	13.922	1.3031	-0.1014
349	SLU 53	0.25	0.44	51.92	14.148	1.3253	-0.1007
349	SLU 54	0.26	0.49	51.9	14.1485	1.3249	-0.1032
349	SLU 55	0.25	0.51	51.59	14.0675	1.317	-0.1026
349	SLU 56	0.26	0.44	52.46	14.2935	1.3392	-0.102
349	SLU 57	0.26	0.49	52.45	14.2941	1.3387	-0.1045
349	SLU 58	0.25	0.43	52.16	14.2121	1.3316	-0.0998
349	SLU 59	0.26	0.48	52.15	14.2127	1.3311	-0.1023
349	SLU 60	0.24	0.46	53.05	14.4502	1.3543	-0.0975
349	SLU 61	0.25	0.51	53.04	14.4508	1.3538	-0.0999
349	SLU 62	0.25	0.46	53.6	14.5957	1.3681	-0.0987
349	SLU 63	0.25	0.51	53.58	14.5963	1.3677	-0.1012
349	SLU 64	0.28	0.43	50.96	13.8966	1.301	-0.1091
349	SLU 65	0.28	0.51	50.94	13.8975	1.3003	-0.1132
349	SLU 66	0.29	0.44	51.81	14.1235	1.3225	-0.1126
349	SLU 67	0.29	0.49	51.8	14.1241	1.322	-0.1151
349	SLU 68	0.29	0.51	51.48	14.0431	1.3141	-0.1145
349	SLU 69	0.29	0.44	52.36	14.269	1.3363	-0.1139
349	SLU 70	0.3	0.49	52.34	14.2696	1.3359	-0.1164
349	SLU 71	0.29	0.43	52.06	14.1876	1.3287	-0.1117
349	SLU 72	0.29	0.48	52.04	14.1882	1.3283	-0.1142
349	SLU 73	0.28	0.58	55.57	15.1323	1.4178	-0.1137
349	SLU 74	0.28	0.51	56.44	15.3583	1.44	-0.1131
349	SLU 75	0.29	0.56	56.43	15.3589	1.4396	-0.1156
349	SLU 76	0.28	0.58	56.12	15.2779	1.4317	-0.115
349	SLU 77	0.29	0.51	56.99	15.5038	1.4539	-0.1144
349	SLU 78	0.29	0.56	56.97	15.5044	1.4534	-0.1169
349	SLU 79	0.28	0.5	56.69	15.4224	1.4463	-0.1122
349	SLU 80	0.29	0.55	56.67	15.423	1.4458	-0.1147
349	SLU 81	0.27	0.52	57.58	15.6605	1.469	-0.1098
349	SLU 82	0.28	0.57	57.56	15.6611	1.4685	-0.1123
349	SLU 83	0.28	0.53	58.13	15.8061	1.4828	-0.1111
349	SLU 84	0.28	0.58	58.11	15.8067	1.4824	-0.1136
349	SLE RA 1	0.21	0.31	38.21	10.4237	0.9756	-0.0812
349	SLE RA 2	0.21	0.37	38.19	10.4243	0.9751	-0.084
349	SLE RA 3	0.21	0.32	38.77	10.575	0.9899	-0.0836
349	SLE RA 4	0.22	0.35	38.76	10.5753	0.9896	-0.0852
349	SLE RA 5	0.21	0.37	38.56	10.5213	0.9843	-0.0848
349	SLE RA 6	0.22	0.32	39.14	10.672	0.9991	-0.0844
349	SLE RA 7	0.22	0.36	39.13	10.6724	0.9988	-0.0861
349	SLE RA 8	0.21	0.32	38.94	10.6177	0.994	-0.0829
349	SLE RA 9	0.21	0.35	38.93	10.6181	0.9937	-0.0846
349	SLE RA 10	0.21	0.42	41.28	11.2475	1.0535	-0.0843
349	SLE RA 11	0.21	0.37	41.86	11.3981	1.0683	-0.0839
349	SLE RA 12	0.21	0.4	41.85	11.3985	1.068	-0.0855
349	SLE RA 13	0.21	0.42	41.64	11.3445	1.0627	-0.0852
349	SLE RA 14	0.21	0.37	42.22	11.4952	1.0775	-0.0847
349	SLE RA 15	0.22	0.4	42.21	11.4956	1.0772	-0.0864
349	SLE RA 16	0.21	0.36	42.02	11.4409	1.0724	-0.0833
349	SLE RA 17	0.21	0.39	42.01	11.4413	1.0721	-0.0849
349	SLE RA 18	0.2	0.38	42.62	11.5996	1.0875	-0.0817
349	SLE RA 19	0.21	0.41	42.61	11.6	1.0872	-0.0833
349	SLE RA 20	0.21	0.38	42.98	11.6967	1.0968	-0.0826
349	SLE RA 21	0.21	0.41	42.97	11.6971	1.0965	-0.0842
349	SLE FR 1	0.21	0.31	38.21	10.4237	0.9756	-0.0812
349	SLE FR 2	0.21	0.33	38.2	10.4238	0.9755	-0.0818
349	SLE FR 3	0.21	0.31	38.35	10.4625	0.9793	-0.0816
349	SLE FR 4	0.21	0.34	39.53	10.7766	1.0091	-0.0819
349	SLE FR 5	0.21	0.33	39.68	10.8153	1.0129	-0.0817
349	SLE FR 6	0.21	0.35	40.41	11.0117	1.0316	-0.0815
349	SLE QP 1	0.21	0.31	38.21	10.4237	0.9756	-0.0812
349	SLE QP 2	0.21	0.33	39.53	10.7765	1.0092	-0.0814
349	SLD 1	3.6	0.19	29.57	8.0248	0.7661	-1.2735
349	SLD 2	3.97	0.87	30.04	8.1399	0.7778	-1.4223
349	SLD 3	3.51	-1.18	28.72	7.8033	0.7446	-1.2089
349	SLD 4	3.88	-0.5	29.19	7.9184	0.7563	-1.3577
349	SLD 5	1.29	2.25	37.75	10.2664	0.9668	-0.5105
349	SLD 6	1.54	2.69	38.06	10.3419	0.9744	-0.608
349	SLD 7	0.99	-2.32	34.91	9.5281	0.8951	-0.2952
349	SLD 8	1.24	-1.87	35.22	9.6036	0.9028	-0.3927
349	SLD 9	-0.83	2.54	43.85	11.9493	1.1156	0.23
349	SLD 10	-0.58	2.98	44.15	12.0248	1.1232	0.1325
349	SLD 11	-1.13	-2.02	41	11.211	1.0439	0.4453
349	SLD 12	-0.88	-1.58	41.31	11.2865	1.0516	0.3478
349	SLD 13	-3.47	1.17	49.88	13.6345	1.2621	1.1949
349	SLD 14	-3.09	1.85	50.35	13.7496	1.2737	1.0462

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
349	SLD 15	-3.56	-0.2	49.02	13.413	1.2406	1.2595
349	SLD 16	-3.18	0.48	49.49	13.5281	1.2522	1.1108
349	SLV 1	8.14	-0.04	16.19	4.3293	0.4396	-2.868
349	SLV 2	9.01	1.54	17.28	4.5973	0.4668	-3.2144
349	SLV 3	7.93	-3.16	14.25	3.827	0.3909	-2.721
349	SLV 4	8.8	-1.58	15.35	4.0951	0.4181	-3.0674
349	SLV 5	2.75	4.67	35.27	9.5579	0.9075	-1.0807
349	SLV 6	3.31	5.69	35.98	9.7306	0.925	-1.3039
349	SLV 7	2.06	-5.71	28.83	7.8837	0.7451	-0.5906
349	SLV 8	2.62	-4.69	29.53	8.0565	0.7627	-0.8138
349	SLV 9	-2.21	5.36	49.53	13.4964	1.2557	0.6511
349	SLV 10	-1.65	6.38	50.24	13.6692	1.2732	0.4279
349	SLV 11	-2.9	-5.02	43.08	11.8223	1.0933	1.1412
349	SLV 12	-2.33	-4.01	43.79	11.9951	1.1109	0.918
349	SLV 13	-8.39	2.25	63.71	17.4578	1.6003	2.9046
349	SLV 14	-7.52	3.82	64.81	17.7259	1.6275	2.5582
349	SLV 15	-8.6	-0.87	61.78	16.9556	1.5516	3.0517
349	SLV 16	-7.72	0.71	62.87	17.2236	1.5788	2.7053
349	CRTFP Ux+	0	0	0	0	0	0
349	CRTFP Ux-	0	0	0	0	0	0
349	CRTFP Uy+	0	0	0	0	0	0
349	CRTFP Uy-	0	0	0	0	0	0
351	SLU 1	0.29	0.43	57.4	12.8491	12.4812	-0.1724
351	SLU 2	0.3	0.56	57.37	12.8434	12.4709	-0.2053
351	SLU 3	0.3	0.45	58.73	13.1446	12.7671	-0.1795
351	SLU 4	0.31	0.53	58.71	13.1411	12.7609	-0.1992
351	SLU 5	0.3	0.57	58.22	13.0331	12.6554	-0.2069
351	SLU 6	0.3	0.45	59.58	13.3343	12.9516	-0.1811
351	SLU 7	0.31	0.53	59.56	13.3309	12.9454	-0.2008
351	SLU 8	0.3	0.44	59.11	13.2286	12.8502	-0.1757
351	SLU 9	0.3	0.52	59.09	13.2252	12.844	-0.1954
351	SLU 10	0.29	0.67	64.6	14.4542	14.034	-0.228
351	SLU 11	0.29	0.55	65.96	14.7554	14.3301	-0.2022
351	SLU 12	0.3	0.63	65.94	14.752	14.3239	-0.2219
351	SLU 13	0.3	0.67	65.45	14.644	14.2184	-0.2296
351	SLU 14	0.3	0.55	66.82	14.9451	14.5146	-0.2038
351	SLU 15	0.31	0.63	66.79	14.9417	14.5084	-0.2235
351	SLU 16	0.29	0.54	66.35	14.8394	14.4132	-0.1984
351	SLU 17	0.3	0.62	66.32	14.836	14.407	-0.2181
351	SLU 18	0.28	0.58	67.74	15.1503	14.7141	-0.2049
351	SLU 19	0.28	0.66	67.71	15.1469	14.7079	-0.2246
351	SLU 20	0.28	0.58	68.59	15.3401	14.8986	-0.2065
351	SLU 21	0.29	0.66	68.57	15.3366	14.8924	-0.2262
351	SLU 22	0.33	0.53	64.48	14.426	14.007	-0.206
351	SLU 23	0.34	0.66	64.44	14.4202	13.9967	-0.2389
351	SLU 24	0.34	0.55	65.8	14.7214	14.2928	-0.2131
351	SLU 25	0.35	0.63	65.78	14.718	14.2867	-0.2328
351	SLU 26	0.35	0.66	65.29	14.61	14.1812	-0.2405
351	SLU 27	0.35	0.55	66.66	14.9111	14.4773	-0.2147
351	SLU 28	0.36	0.63	66.63	14.9077	14.4711	-0.2344
351	SLU 29	0.34	0.53	66.18	14.8055	14.376	-0.2092
351	SLU 30	0.35	0.61	66.16	14.802	14.3698	-0.2289
351	SLU 31	0.34	0.76	71.67	16.0311	15.5597	-0.2616
351	SLU 32	0.34	0.65	73.03	16.3322	15.8559	-0.2358
351	SLU 33	0.35	0.73	73.01	16.3288	15.8497	-0.2555
351	SLU 34	0.34	0.76	72.52	16.2208	15.7442	-0.2632
351	SLU 35	0.34	0.65	73.89	16.522	16.0403	-0.2374
351	SLU 36	0.35	0.73	73.86	16.5185	16.0342	-0.2571
351	SLU 37	0.33	0.64	73.42	16.4163	15.939	-0.232
351	SLU 38	0.34	0.71	73.39	16.4128	15.9328	-0.2517
351	SLU 39	0.32	0.68	74.81	16.7272	16.2399	-0.2385
351	SLU 40	0.33	0.75	74.78	16.7237	16.2337	-0.2582
351	SLU 41	0.33	0.68	75.66	16.9169	16.4244	-0.2401
351	SLU 42	0.33	0.76	75.64	16.9135	16.4182	-0.2598
351	SLU 43	0.36	0.53	72.2	16.1632	15.7025	-0.2127
351	SLU 44	0.37	0.66	72.16	16.1575	15.6922	-0.2455
351	SLU 45	0.37	0.55	73.53	16.4587	15.9883	-0.2197
351	SLU 46	0.38	0.63	73.5	16.4552	15.9822	-0.2394
351	SLU 47	0.37	0.66	73.02	16.3472	15.8767	-0.2471
351	SLU 48	0.37	0.55	74.38	16.6484	16.1728	-0.2213
351	SLU 49	0.38	0.63	74.36	16.645	16.1666	-0.241
351	SLU 50	0.37	0.54	73.91	16.5427	16.0715	-0.2159
351	SLU 51	0.37	0.61	73.89	16.5393	16.0653	-0.2356
351	SLU 52	0.36	0.76	79.39	17.7683	17.2552	-0.2682
351	SLU 53	0.36	0.65	80.76	18.0695	17.5514	-0.2425
351	SLU 54	0.37	0.73	80.74	18.0661	17.5452	-0.2622
351	SLU 55	0.37	0.76	80.25	17.9581	17.4397	-0.2698
351	SLU 56	0.37	0.65	81.61	18.2592	17.7358	-0.2441
351	SLU 57	0.38	0.73	81.59	18.2558	17.7297	-0.2638
351	SLU 58	0.36	0.64	81.14	18.1535	17.6345	-0.2386
351	SLU 59	0.37	0.71	81.12	18.1501	17.6283	-0.2583
351	SLU 60	0.35	0.68	82.53	18.4644	17.9354	-0.2451
351	SLU 61	0.36	0.75	82.51	18.461	17.9292	-0.2648
351	SLU 62	0.35	0.68	83.39	18.6542	18.1199	-0.2467
351	SLU 63	0.36	0.76	83.36	18.6507	18.1137	-0.2664
351	SLU 64	0.4	0.63	79.27	17.7401	17.2283	-0.2462
351	SLU 65	0.41	0.76	79.23	17.7344	17.218	-0.2791
351	SLU 66	0.41	0.65	80.6	18.0355	17.5141	-0.2533
351	SLU 67	0.42	0.72	80.58	18.0321	17.5079	-0.273
351	SLU 68	0.42	0.76	80.09	17.9241	17.4024	-0.2807

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
351	SLU 69	0.42	0.65	81.45	18.2253	17.6986	-0.2549
351	SLU 70	0.43	0.72	81.43	18.2218	17.6924	-0.2746
351	SLU 71	0.41	0.63	80.98	18.1196	17.5972	-0.2495
351	SLU 72	0.42	0.71	80.96	18.1161	17.591	-0.2692
351	SLU 73	0.41	0.86	86.47	19.3452	18.781	-0.3018
351	SLU 74	0.41	0.75	87.83	19.6464	19.0771	-0.276
351	SLU 75	0.42	0.82	87.81	19.6429	19.0709	-0.2957
351	SLU 76	0.41	0.86	87.32	19.5349	18.9655	-0.3034
351	SLU 77	0.41	0.75	88.69	19.8361	19.2616	-0.2776
351	SLU 78	0.42	0.83	88.66	19.8326	19.2554	-0.2973
351	SLU 79	0.41	0.73	88.21	19.7304	19.1602	-0.2722
351	SLU 80	0.41	0.81	88.19	19.7269	19.1541	-0.2919
351	SLU 81	0.39	0.77	89.6	20.0413	19.4611	-0.2787
351	SLU 82	0.4	0.85	89.58	20.0378	19.455	-0.2984
351	SLU 83	0.4	0.78	90.46	20.231	19.6456	-0.2803
351	SLU 84	0.4	0.85	90.44	20.2276	19.6394	-0.3
351	SLE RA 1	0.3	0.46	59.42	13.2997	12.9172	-0.182
351	SLE RA 2	0.31	0.55	59.4	13.2958	12.9103	-0.2039
351	SLE RA 3	0.31	0.47	60.31	13.4966	13.1077	-0.1867
351	SLE RA 4	0.31	0.53	60.29	13.4943	13.1036	-0.1999
351	SLE RA 5	0.31	0.55	59.97	13.4223	13.0333	-0.205
351	SLE RA 6	0.31	0.47	60.88	13.6231	13.2307	-0.1878
351	SLE RA 7	0.32	0.53	60.86	13.6208	13.2266	-0.201
351	SLE RA 8	0.31	0.46	60.56	13.5526	13.1632	-0.1842
351	SLE RA 9	0.31	0.52	60.55	13.5503	13.159	-0.1973
351	SLE RA 10	0.3	0.62	64.22	14.3697	13.9523	-0.2191
351	SLE RA 11	0.3	0.54	65.13	14.5705	14.1497	-0.2019
351	SLE RA 12	0.31	0.59	65.11	14.5682	14.1456	-0.215
351	SLE RA 13	0.31	0.62	64.79	14.4962	14.0753	-0.2202
351	SLE RA 14	0.31	0.54	65.7	14.697	14.2727	-0.203
351	SLE RA 15	0.31	0.59	65.68	14.6947	14.2686	-0.2161
351	SLE RA 16	0.3	0.53	65.39	14.6265	14.2052	-0.1993
351	SLE RA 17	0.31	0.58	65.37	14.6242	14.201	-0.2125
351	SLE RA 18	0.29	0.56	66.31	14.8338	14.4058	-0.2037
351	SLE RA 19	0.3	0.61	66.3	14.8315	14.4016	-0.2168
351	SLE RA 20	0.3	0.56	66.88	14.9603	14.5287	-0.2047
351	SLE RA 21	0.3	0.61	66.87	14.958	14.5246	-0.2179
351	SLE FR 1	0.3	0.46	59.42	13.2997	12.9172	-0.182
351	SLE FR 2	0.3	0.48	59.42	13.2989	12.9158	-0.1864
351	SLE FR 3	0.3	0.46	59.65	13.3503	12.9664	-0.1825
351	SLE FR 4	0.3	0.51	61.49	13.7591	13.3624	-0.1929
351	SLE FR 5	0.3	0.49	61.72	13.8105	13.4129	-0.189
351	SLE FR 6	0.3	0.51	62.87	14.0667	13.6615	-0.1929
351	SLE QP 1	0.3	0.46	59.42	13.2997	12.9172	-0.182
351	SLE QP 2	0.3	0.49	61.49	13.7599	13.3638	-0.1885
351	SLD 1	5.25	0.27	45.67	10.1963	10.0553	-1.4902
351	SLD 2	5.82	1.29	46.43	10.3516	10.2208	-1.864
351	SLD 3	5.1	-1.76	44.29	9.9161	9.754	-0.9793
351	SLD 4	5.67	-0.74	45.05	10.0714	9.9195	-1.3531
351	SLD 5	1.91	3.33	58.7	13.0881	12.7988	-1.2874
351	SLD 6	2.28	4	59.2	13.1899	12.9073	-1.5325
351	SLD 7	1.41	-3.46	54.11	12.1542	11.7944	0.4156
351	SLD 8	1.78	-2.78	54.6	12.256	11.9028	0.1705
351	SLD 9	-1.19	3.77	68.38	15.2638	14.8247	-0.5475
351	SLD 10	-0.82	4.44	68.88	15.3656	14.9331	-0.7926
351	SLD 11	-1.69	-3.02	63.79	14.3299	13.8202	1.1554
351	SLD 12	-1.32	-2.35	64.28	14.4317	13.9287	0.9103
351	SLD 13	-5.07	1.73	77.93	17.4484	16.8081	0.9761
351	SLD 14	-4.51	2.75	78.69	17.6037	16.9735	0.6022
351	SLD 15	-5.22	-0.31	76.55	17.1682	16.5067	1.487
351	SLD 16	-4.66	0.71	77.32	17.3235	16.6722	1.1131
351	SLV 1	11.88	-0.08	24.41	5.4107	5.6108	-3.2178
351	SLV 2	13.2	2.3	26.19	5.7725	5.9963	-4.0885
351	SLV 3	11.54	-4.72	21.29	4.7752	4.9279	-2.0558
351	SLV 4	12.85	-2.33	23.06	5.1369	5.3133	-2.9265
351	SLV 5	4.07	6.93	54.8	12.1568	12.0074	-2.7096
351	SLV 6	4.91	8.47	55.94	12.3899	12.2557	-3.2708
351	SLV 7	2.92	-8.51	44.39	10.0382	9.7308	1.1635
351	SLV 8	3.77	-6.97	45.53	10.2713	9.9791	0.6024
351	SLV 9	-3.18	7.95	77.45	17.2485	16.7484	-0.9795
351	SLV 10	-2.33	9.49	78.6	17.4816	16.9967	-1.5406
351	SLV 11	-4.32	-7.49	67.04	15.1299	14.4718	2.8937
351	SLV 12	-3.47	-5.95	68.18	15.363	14.7202	2.3326
351	SLV 13	-12.26	3.32	99.92	22.3829	21.4142	2.5495
351	SLV 14	-10.94	5.7	101.7	22.7446	21.7996	1.6788
351	SLV 15	-12.6	-1.31	96.8	21.7473	20.7313	3.7115
351	SLV 16	-11.29	1.07	98.57	22.1091	21.1167	2.8407
351	CRTFP Ux+	0	0	0	0	0	0
351	CRTFP Ux-	0	0	0	0	0	0
351	CRTFP Uy+	0	0	0	0	0	0
351	CRTFP Uy-	0	0	0	0	0	0
411	SLU 1	0.07	-0.18	29.88	0.8136	9.4137	0.0594
411	SLU 2	0.06	-0.13	29.93	0.8146	9.428	0.0441
411	SLU 3	0.07	-0.17	30.53	0.8311	9.6143	0.057
411	SLU 4	0.07	-0.14	30.56	0.8318	9.6228	0.0479
411	SLU 5	0.07	-0.13	30.36	0.8262	9.5612	0.0449
411	SLU 6	0.07	-0.17	30.96	0.8427	9.7474	0.0578
411	SLU 7	0.07	-0.15	30.99	0.8434	9.756	0.0486
411	SLU 8	0.07	-0.18	30.74	0.8368	9.68	0.0608
411	SLU 9	0.07	-0.15	30.77	0.8374	9.6886	0.0517

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
411	SLU 10	0.06	-0.11	34.01	0.926	10.7061	0.0381
411	SLU 11	0.07	-0.15	34.62	0.9425	10.8924	0.051
411	SLU 12	0.07	-0.13	34.64	0.9431	10.9009	0.0419
411	SLU 13	0.06	-0.12	34.44	0.9376	10.8393	0.0389
411	SLU 14	0.07	-0.15	35.05	0.9541	11.0255	0.0517
411	SLU 15	0.07	-0.13	35.07	0.9547	11.0341	0.0426
411	SLU 16	0.07	-0.16	34.83	0.9481	10.9581	0.0548
411	SLU 17	0.06	-0.14	34.86	0.9488	10.9667	0.0457
411	SLU 18	0.06	-0.15	35.72	0.9727	11.2396	0.0508
411	SLU 19	0.06	-0.12	35.75	0.9733	11.2482	0.0416
411	SLU 20	0.06	-0.15	36.15	0.9843	11.3727	0.0515
411	SLU 21	0.06	-0.13	36.18	0.9849	11.3813	0.0424
411	SLU 22	0.08	-0.15	33.4	0.9093	10.5046	0.0485
411	SLU 23	0.08	-0.1	33.44	0.9103	10.5189	0.0333
411	SLU 24	0.09	-0.14	34.05	0.9269	10.7051	0.0462
411	SLU 25	0.08	-0.11	34.07	0.9275	10.7137	0.037
411	SLU 26	0.08	-0.1	33.87	0.9219	10.652	0.034
411	SLU 27	0.09	-0.14	34.48	0.9385	10.8383	0.0469
411	SLU 28	0.09	-0.12	34.5	0.9391	10.8468	0.0378
411	SLU 29	0.09	-0.15	34.26	0.9325	10.7709	0.05
411	SLU 30	0.08	-0.12	34.28	0.9331	10.7794	0.0408
411	SLU 31	0.07	-0.08	37.53	1.0217	11.797	0.0273
411	SLU 32	0.08	-0.12	38.13	1.0382	11.9832	0.0402
411	SLU 33	0.08	-0.1	38.16	1.0389	11.9918	0.031
411	SLU 34	0.08	-0.09	37.96	1.0333	11.9301	0.028
411	SLU 35	0.08	-0.12	38.56	1.0498	12.1164	0.0409
411	SLU 36	0.08	-0.1	38.59	1.0505	12.1249	0.0318
411	SLU 37	0.08	-0.13	38.35	1.0439	12.049	0.044
411	SLU 38	0.08	-0.11	38.37	1.0445	12.0575	0.0348
411	SLU 39	0.08	-0.12	39.24	1.0684	12.3305	0.0399
411	SLU 40	0.07	-0.09	39.26	1.069	12.339	0.0308
411	SLU 41	0.08	-0.12	39.67	1.08	12.4636	0.0407
411	SLU 42	0.08	-0.1	39.69	1.0806	12.4722	0.0315
411	SLU 43	0.08	-0.24	37.64	1.0248	11.8639	0.0809
411	SLU 44	0.08	-0.19	37.69	1.0259	11.8781	0.0656
411	SLU 45	0.09	-0.23	38.29	1.0424	12.0644	0.0785
411	SLU 46	0.09	-0.21	38.32	1.043	12.073	0.0694
411	SLU 47	0.08	-0.2	38.12	1.0375	12.0113	0.0664
411	SLU 48	0.09	-0.23	38.72	1.054	12.1975	0.0793
411	SLU 49	0.09	-0.21	38.75	1.0546	12.2061	0.0701
411	SLU 50	0.09	-0.24	38.5	1.048	12.1301	0.0824
411	SLU 51	0.08	-0.22	38.53	1.0486	12.1387	0.0732
411	SLU 52	0.08	-0.18	41.77	1.1372	13.1563	0.0596
411	SLU 53	0.08	-0.21	42.38	1.1538	13.3425	0.0725
411	SLU 54	0.08	-0.19	42.4	1.1544	13.3511	0.0634
411	SLU 55	0.08	-0.18	42.2	1.1488	13.2894	0.0604
411	SLU 56	0.08	-0.22	42.81	1.1654	13.4756	0.0733
411	SLU 57	0.08	-0.19	42.83	1.166	13.4842	0.0641
411	SLU 58	0.08	-0.23	42.59	1.1594	13.4082	0.0764
411	SLU 59	0.08	-0.2	42.62	1.16	13.4168	0.0672
411	SLU 60	0.08	-0.21	43.48	1.1839	13.6897	0.0723
411	SLU 61	0.07	-0.19	43.51	1.1845	13.6983	0.0632
411	SLU 62	0.08	-0.22	43.91	1.1955	13.8229	0.073
411	SLU 63	0.08	-0.19	43.94	1.1961	13.8314	0.0639
411	SLU 64	0.1	-0.21	41.16	1.1205	12.9547	0.07
411	SLU 65	0.09	-0.16	41.2	1.1216	12.969	0.0548
411	SLU 66	0.1	-0.2	41.81	1.1381	13.1552	0.0677
411	SLU 67	0.1	-0.18	41.83	1.1387	13.1638	0.0585
411	SLU 68	0.1	-0.17	41.63	1.1332	13.1021	0.0555
411	SLU 69	0.1	-0.2	42.24	1.1497	13.2884	0.0684
411	SLU 70	0.1	-0.18	42.26	1.1503	13.2969	0.0593
411	SLU 71	0.1	-0.21	42.02	1.1437	13.221	0.0715
411	SLU 72	0.1	-0.19	42.04	1.1444	13.2295	0.0624
411	SLU 73	0.09	-0.15	45.29	1.2329	14.2471	0.0488
411	SLU 74	0.1	-0.18	45.89	1.2495	14.4333	0.0617
411	SLU 75	0.1	-0.16	45.92	1.2501	14.4419	0.0525
411	SLU 76	0.09	-0.15	45.72	1.2445	14.3802	0.0495
411	SLU 77	0.1	-0.19	46.32	1.2611	14.5665	0.0624
411	SLU 78	0.1	-0.16	46.35	1.2617	14.575	0.0533
411	SLU 79	0.1	-0.2	46.11	1.2551	14.4991	0.0655
411	SLU 80	0.09	-0.17	46.13	1.2557	14.5077	0.0564
411	SLU 81	0.09	-0.18	47	1.2796	14.7806	0.0615
411	SLU 82	0.09	-0.16	47.02	1.2803	14.7891	0.0523
411	SLU 83	0.09	-0.19	47.43	1.2912	14.9137	0.0622
411	SLU 84	0.09	-0.16	47.45	1.2919	14.9223	0.0531
411	SLE RA 1	0.07	-0.17	30.89	0.8409	9.7254	0.0563
411	SLE RA 2	0.07	-0.14	30.92	0.8416	9.7349	0.0461
411	SLE RA 3	0.07	-0.16	31.32	0.8526	9.8591	0.0547
411	SLE RA 4	0.07	-0.15	31.34	0.853	9.8648	0.0486
411	SLE RA 5	0.07	-0.14	31.2	0.8493	9.8237	0.0466
411	SLE RA 6	0.08	-0.16	31.61	0.8604	9.9479	0.0552
411	SLE RA 7	0.07	-0.15	31.62	0.8608	9.9536	0.0491
411	SLE RA 8	0.07	-0.17	31.46	0.8564	9.9029	0.0572
411	SLE RA 9	0.07	-0.15	31.48	0.8568	9.9086	0.0511
411	SLE RA 10	0.07	-0.13	33.64	0.9159	10.587	0.0421
411	SLE RA 11	0.07	-0.15	34.05	0.9269	10.7112	0.0507
411	SLE RA 12	0.07	-0.13	34.06	0.9273	10.7169	0.0446
411	SLE RA 13	0.07	-0.13	33.93	0.9236	10.6758	0.0426
411	SLE RA 14	0.07	-0.15	34.33	0.9346	10.7999	0.0512
411	SLE RA 15	0.07	-0.14	34.35	0.935	10.8056	0.0451

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
411	SLE RA 16	0.07	-0.16	34.19	0.9306	10.755	0.0532
411	SLE RA 17	0.07	-0.14	34.2	0.931	10.7607	0.0471
411	SLE RA 18	0.07	-0.15	34.78	0.947	10.9427	0.0505
411	SLE RA 19	0.07	-0.13	34.8	0.9474	10.9484	0.0444
411	SLE RA 20	0.07	-0.15	35.07	0.9547	11.0314	0.051
411	SLE RA 21	0.07	-0.13	35.08	0.9551	11.0371	0.0449
411	SLE FR 1	0.07	-0.17	30.89	0.8409	9.7254	0.0563
411	SLE FR 2	0.07	-0.16	30.89	0.8411	9.7273	0.0542
411	SLE FR 3	0.07	-0.17	31	0.844	9.7609	0.0565
411	SLE FR 4	0.07	-0.16	32.06	0.8729	10.0925	0.0525
411	SLE FR 5	0.07	-0.16	32.17	0.8758	10.1261	0.0547
411	SLE FR 6	0.07	-0.16	32.84	0.8939	10.334	0.0534
411	SLE QP 1	0.07	-0.17	30.89	0.8409	9.7254	0.0563
411	SLE QP 2	0.07	-0.16	32.06	0.8727	10.0906	0.0545
411	SLD 1	2.94	0.19	32.37	0.8811	10.2169	-0.1522
411	SLD 2	3.24	0.21	32.42	0.8824	10.2256	-0.1678
411	SLD 3	2.88	-0.71	31.87	0.8696	10.0562	0.1618
411	SLD 4	3.18	-0.69	31.92	0.8709	10.065	0.1462
411	SLD 5	0.96	1.29	32.9	0.8925	10.3705	-0.4809
411	SLD 6	1.16	1.31	32.93	0.8933	10.3763	-0.4912
411	SLD 7	0.77	-1.69	31.23	0.8541	9.8351	0.5657
411	SLD 8	0.97	-1.67	31.27	0.855	9.8408	0.5555
411	SLD 9	-0.83	1.35	32.85	0.8905	10.3403	-0.4464
411	SLD 10	-0.63	1.36	32.88	0.8913	10.3461	-0.4567
411	SLD 11	-1.02	-1.63	31.18	0.8522	9.8049	0.6003
411	SLD 12	-0.82	-1.62	31.21	0.853	9.8106	0.59
411	SLD 13	-3.04	0.36	32.19	0.8746	10.1162	-0.0371
411	SLD 14	-2.74	0.38	32.24	0.8758	10.125	-0.0527
411	SLD 15	-3.1	-0.53	31.69	0.8631	9.9556	0.2769
411	SLD 16	-2.79	-0.51	31.74	0.8643	9.9643	0.2613
411	SLV 1	6.77	0.62	32.78	0.892	10.3806	-0.4193
411	SLV 2	7.47	0.68	32.9	0.895	10.4009	-0.4557
411	SLV 3	6.64	-1.41	31.64	0.8659	10.0157	0.2956
411	SLV 4	7.34	-1.36	31.76	0.8688	10.036	0.2592
411	SLV 5	2.16	3.15	33.97	0.9176	10.7275	-1.1657
411	SLV 6	2.61	3.19	34.05	0.9196	10.7406	-1.1891
411	SLV 7	1.72	-3.63	30.19	0.8305	9.5112	1.2174
411	SLV 8	2.17	-3.6	30.27	0.8324	9.5243	1.194
411	SLV 9	-2.03	3.28	33.85	0.913	10.6569	-1.0849
411	SLV 10	-1.58	3.31	33.92	0.9149	10.67	-1.1084
411	SLV 11	-2.47	-3.51	30.06	0.8259	9.4406	1.2982
411	SLV 12	-2.02	-3.48	30.14	0.8278	9.4537	1.2747
411	SLV 13	-7.2	1.04	32.35	0.8766	10.1452	-0.1501
411	SLV 14	-6.5	1.09	32.47	0.8796	10.1655	-0.1865
411	SLV 15	-7.33	-1	31.22	0.8505	9.7803	0.5648
411	SLV 16	-6.63	-0.95	31.33	0.8535	9.8006	0.5284
411	CRTFP Ux+	0	0	0	0	0	0
411	CRTFP Ux-	0	0	0	0	0	0
411	CRTFP Uy+	0	0	0	0	0	0
411	CRTFP Uy-	0	0	0	0	0	0
414	SLU 1	-1.12	-0.92	58.43	1.5778	-0.3718	0.005
414	SLU 2	-1.11	-0.83	58.39	1.5771	-0.3733	0.0054
414	SLU 3	-1.16	-0.93	59.72	1.6128	-0.3796	0.0052
414	SLU 4	-1.15	-0.88	59.7	1.6124	-0.3805	0.0054
414	SLU 5	-1.13	-0.85	59.25	1.6002	-0.3789	0.0055
414	SLU 6	-1.17	-0.94	60.57	1.6359	-0.3853	0.0053
414	SLU 7	-1.16	-0.89	60.55	1.6354	-0.3861	0.0055
414	SLU 8	-1.16	-0.95	60.14	1.624	-0.3831	0.0051
414	SLU 9	-1.15	-0.9	60.12	1.6235	-0.384	0.0054
414	SLU 10	-1.21	-0.91	66.02	1.7833	-0.4321	0.0055
414	SLU 11	-1.26	-1	67.35	1.819	-0.4384	0.0053
414	SLU 12	-1.25	-0.95	67.33	1.8185	-0.4393	0.0056
414	SLU 13	-1.23	-0.92	66.88	1.8063	-0.4378	0.0056
414	SLU 14	-1.28	-1.01	68.2	1.842	-0.4441	0.0054
414	SLU 15	-1.27	-0.96	68.18	1.8416	-0.4449	0.0056
414	SLU 16	-1.26	-1.02	67.77	1.8301	-0.4419	0.0052
414	SLU 17	-1.25	-0.97	67.75	1.8297	-0.4428	0.0055
414	SLU 18	-1.27	-1.02	69.33	1.8723	-0.4559	0.0052
414	SLU 19	-1.26	-0.97	69.31	1.8719	-0.4568	0.0054
414	SLU 20	-1.29	-1.04	70.18	1.8954	-0.4615	0.0052
414	SLU 21	-1.28	-0.98	70.16	1.895	-0.4624	0.0055
414	SLU 22	-1.28	-0.96	65.55	1.7708	-0.4162	0.006
414	SLU 23	-1.27	-0.87	65.51	1.77	-0.4176	0.0064
414	SLU 24	-1.31	-0.97	66.84	1.8057	-0.4239	0.0062
414	SLU 25	-1.3	-0.92	66.82	1.8053	-0.4248	0.0064
414	SLU 26	-1.28	-0.89	66.37	1.7931	-0.4232	0.0064
414	SLU 27	-1.33	-0.98	67.7	1.8288	-0.4296	0.0062
414	SLU 28	-1.32	-0.93	67.68	1.8283	-0.4304	0.0065
414	SLU 29	-1.31	-0.99	67.26	1.8169	-0.4274	0.0061
414	SLU 30	-1.3	-0.94	67.24	1.8164	-0.4283	0.0063
414	SLU 31	-1.37	-0.94	73.15	1.9762	-0.4764	0.0065
414	SLU 32	-1.42	-1.04	74.47	2.0119	-0.4827	0.0063
414	SLU 33	-1.41	-0.99	74.45	2.0114	-0.4836	0.0065
414	SLU 34	-1.38	-0.96	74	1.9992	-0.4821	0.0065
414	SLU 35	-1.43	-1.05	75.33	2.0349	-0.4884	0.0063
414	SLU 36	-1.42	-1	75.31	2.0345	-0.4893	0.0066
414	SLU 37	-1.42	-1.06	74.89	2.023	-0.4863	0.0062
414	SLU 38	-1.41	-1.01	74.87	2.0226	-0.4871	0.0064
414	SLU 39	-1.43	-1.06	76.45	2.0653	-0.5002	0.0061
414	SLU 40	-1.42	-1.01	76.43	2.0648	-0.5011	0.0064

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
414	SLU 41	-1.44	-1.08	77.31	2.0883	-0.5058	0.0062
414	SLU 42	-1.43	-1.02	77.29	2.0879	-0.5067	0.0064
414	SLU 43	-1.41	-1.18	73.51	1.985	-0.4682	0.0062
414	SLU 44	-1.39	-1.1	73.48	1.9843	-0.4697	0.0066
414	SLU 45	-1.44	-1.19	74.8	2.02	-0.476	0.0064
414	SLU 46	-1.43	-1.14	74.78	2.0196	-0.4769	0.0066
414	SLU 47	-1.41	-1.11	74.33	2.0074	-0.4753	0.0066
414	SLU 48	-1.46	-1.21	75.66	2.0431	-0.4816	0.0064
414	SLU 49	-1.45	-1.16	75.64	2.0426	-0.4825	0.0067
414	SLU 50	-1.44	-1.21	75.22	2.0312	-0.4795	0.0063
414	SLU 51	-1.43	-1.16	75.2	2.0307	-0.4804	0.0065
414	SLU 52	-1.49	-1.17	81.11	2.1905	-0.5285	0.0067
414	SLU 53	-1.54	-1.26	82.43	2.2262	-0.5348	0.0065
414	SLU 54	-1.53	-1.21	82.41	2.2257	-0.5357	0.0067
414	SLU 55	-1.51	-1.18	81.97	2.2135	-0.5341	0.0068
414	SLU 56	-1.56	-1.28	83.29	2.2492	-0.5404	0.0066
414	SLU 57	-1.55	-1.23	83.27	2.2488	-0.5413	0.0068
414	SLU 58	-1.54	-1.28	82.85	2.2373	-0.5383	0.0064
414	SLU 59	-1.53	-1.23	82.83	2.2369	-0.5392	0.0067
414	SLU 60	-1.55	-1.28	84.41	2.2796	-0.5522	0.0064
414	SLU 61	-1.54	-1.23	84.39	2.2791	-0.5531	0.0066
414	SLU 62	-1.57	-1.3	85.27	2.3026	-0.5579	0.0064
414	SLU 63	-1.56	-1.25	85.25	2.3022	-0.5588	0.0067
414	SLU 64	-1.56	-1.22	80.63	2.178	-0.5125	0.0071
414	SLU 65	-1.55	-1.14	80.6	2.1772	-0.514	0.0075
414	SLU 66	-1.6	-1.23	81.92	2.2129	-0.5203	0.0073
414	SLU 67	-1.59	-1.18	81.91	2.2125	-0.5212	0.0076
414	SLU 68	-1.57	-1.15	81.46	2.2003	-0.5196	0.0076
414	SLU 69	-1.61	-1.25	82.78	2.236	-0.5259	0.0074
414	SLU 70	-1.6	-1.19	82.76	2.2355	-0.5268	0.0076
414	SLU 71	-1.6	-1.25	82.35	2.2241	-0.5238	0.0073
414	SLU 72	-1.59	-1.2	82.33	2.2236	-0.5247	0.0075
414	SLU 73	-1.65	-1.21	88.23	2.3834	-0.5728	0.0077
414	SLU 74	-1.7	-1.3	89.56	2.4191	-0.5791	0.0075
414	SLU 75	-1.69	-1.25	89.54	2.4186	-0.58	0.0077
414	SLU 76	-1.67	-1.22	89.09	2.4064	-0.5784	0.0077
414	SLU 77	-1.72	-1.32	90.41	2.4421	-0.5847	0.0075
414	SLU 78	-1.71	-1.27	90.39	2.4417	-0.5856	0.0078
414	SLU 79	-1.7	-1.32	89.98	2.4302	-0.5826	0.0074
414	SLU 80	-1.69	-1.27	89.96	2.4298	-0.5835	0.0076
414	SLU 81	-1.71	-1.32	91.53	2.4725	-0.5966	0.0073
414	SLU 82	-1.7	-1.27	91.51	2.472	-0.5974	0.0075
414	SLU 83	-1.73	-1.34	92.39	2.4955	-0.6022	0.0074
414	SLU 84	-1.72	-1.29	92.37	2.4951	-0.6031	0.0076
414	SLE RA 1	-1.17	-0.93	60.46	1.633	-0.3845	0.0053
414	SLE RA 2	-1.16	-0.87	60.44	1.6325	-0.3855	0.0055
414	SLE RA 3	-1.19	-0.94	61.32	1.6563	-0.3897	0.0054
414	SLE RA 4	-1.18	-0.9	61.31	1.656	-0.3903	0.0056
414	SLE RA 5	-1.17	-0.88	61.01	1.6478	-0.3892	0.0056
414	SLE RA 6	-1.2	-0.95	61.89	1.6716	-0.3934	0.0055
414	SLE RA 7	-1.2	-0.91	61.88	1.6713	-0.394	0.0056
414	SLE RA 8	-1.19	-0.95	61.6	1.6637	-0.392	0.0054
414	SLE RA 9	-1.19	-0.92	61.59	1.6634	-0.3926	0.0055
414	SLE RA 10	-1.23	-0.92	65.53	1.7699	-0.4247	0.0056
414	SLE RA 11	-1.26	-0.98	66.41	1.7937	-0.4289	0.0055
414	SLE RA 12	-1.25	-0.95	66.4	1.7934	-0.4295	0.0057
414	SLE RA 13	-1.24	-0.93	66.1	1.7853	-0.4284	0.0057
414	SLE RA 14	-1.27	-0.99	66.98	1.8091	-0.4327	0.0055
414	SLE RA 15	-1.26	-0.96	66.97	1.8088	-0.4332	0.0057
414	SLE RA 16	-1.26	-1	66.69	1.8011	-0.4312	0.0054
414	SLE RA 17	-1.25	-0.96	66.68	1.8008	-0.4318	0.0056
414	SLE RA 18	-1.27	-1	67.73	1.8293	-0.4405	0.0054
414	SLE RA 19	-1.26	-0.96	67.71	1.829	-0.4411	0.0056
414	SLE RA 20	-1.28	-1.01	68.3	1.8447	-0.4443	0.0054
414	SLE RA 21	-1.27	-0.97	68.29	1.8444	-0.4449	0.0056
414	SLE FR 1	-1.17	-0.93	60.46	1.633	-0.3845	0.0053
414	SLE FR 2	-1.17	-0.92	60.46	1.6329	-0.3847	0.0053
414	SLE FR 3	-1.17	-0.94	60.69	1.6391	-0.386	0.0053
414	SLE FR 4	-1.2	-0.94	62.64	1.6918	-0.4015	0.0054
414	SLE FR 5	-1.2	-0.96	62.87	1.698	-0.4028	0.0053
414	SLE FR 6	-1.22	-0.97	64.09	1.7311	-0.4125	0.0053
414	SLE QP 1	-1.17	-0.93	60.46	1.633	-0.3845	0.0053
414	SLE QP 2	-1.2	-0.95	62.64	1.6919	-0.4013	0.0053
414	SLD 1	3.98	-0.45	68.79	1.8537	-0.2207	-0.1314
414	SLD 2	4.55	-0.88	68.37	1.8436	-0.227	-0.1397
414	SLD 3	4.1	-2.03	67.79	1.8312	-0.2453	-0.1348
414	SLD 4	4.68	-2.46	67.38	1.8211	-0.2516	-0.1431
414	SLD 5	0.06	1.67	66.07	1.7762	-0.3087	-0.029
414	SLD 6	0.44	1.39	65.8	1.7696	-0.3128	-0.0345
414	SLD 7	0.48	-3.59	62.75	1.7014	-0.3907	-0.0405
414	SLD 8	0.86	-3.87	62.47	1.6948	-0.3948	-0.0459
414	SLD 9	-3.25	1.97	62.81	1.6889	-0.4078	0.0565
414	SLD 10	-2.87	1.69	62.53	1.6823	-0.4119	0.0511
414	SLD 11	-2.84	-3.29	59.48	1.6141	-0.4898	0.0451
414	SLD 12	-2.46	-3.57	59.21	1.6075	-0.4939	0.0396
414	SLD 13	-7.08	0.56	57.9	1.5626	-0.551	0.1538
414	SLD 14	-6.5	0.13	57.49	1.5525	-0.5573	0.1454
414	SLD 15	-6.95	-1.02	56.91	1.5402	-0.5756	0.1503
414	SLD 16	-6.38	-1.45	56.49	1.53	-0.5819	0.142
414	SLV 1	10.91	0.16	76.99	2.0695	0.0204	-0.3144

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
414	SLV 2	12.26	-0.83	76.02	2.0459	0.0057	-0.3339
414	SLV 3	11.2	-3.43	74.73	2.0186	-0.0354	-0.3223
414	SLV 4	12.54	-4.43	73.76	1.9951	-0.05	-0.3417
414	SLV 5	1.77	5	70.54	1.8863	-0.1877	-0.0753
414	SLV 6	2.63	4.36	69.92	1.8711	-0.1971	-0.0878
414	SLV 7	2.73	-6.97	63	1.7168	-0.3736	-0.1016
414	SLV 8	3.59	-7.61	62.38	1.7016	-0.3831	-0.1141
414	SLV 9	-5.99	5.71	62.9	1.6821	-0.4196	0.1247
414	SLV 10	-5.12	5.07	62.28	1.6669	-0.429	0.1122
414	SLV 11	-5.03	-6.26	55.36	1.5126	-0.6055	0.0984
414	SLV 12	-4.17	-6.9	54.74	1.4974	-0.615	0.0859
414	SLV 13	-14.94	2.52	51.52	1.3887	-0.7526	0.3524
414	SLV 14	-13.6	1.53	50.55	1.3651	-0.7672	0.3329
414	SLV 15	-14.65	-1.07	49.26	1.3378	-0.8084	0.3445
414	SLV 16	-13.31	-2.06	48.29	1.3142	-0.823	0.3251
414	CRTFP Ux+	0	0	0	0	0	0
414	CRTFP Ux-	0	0	0	0	0	0
414	CRTFP Uy+	0	0	0	0	0	0
414	CRTFP Uy-	0	0	0	0	0	0
418	SLU 1	0.29	-0.8	58.59	1.5817	0.361	0.0024
418	SLU 2	0.28	-0.72	58.56	1.5812	0.3625	0.002
418	SLU 3	0.31	-0.81	59.89	1.6169	0.3676	0.0023
418	SLU 4	0.3	-0.76	59.87	1.6165	0.3685	0.0021
418	SLU 5	0.29	-0.74	59.42	1.6042	0.367	0.002
418	SLU 6	0.31	-0.83	60.75	1.6399	0.3721	0.0024
418	SLU 7	0.3	-0.78	60.73	1.6396	0.373	0.0021
418	SLU 8	0.3	-0.84	60.3	1.6278	0.3699	0.0024
418	SLU 9	0.3	-0.79	60.28	1.6275	0.3709	0.0022
418	SLU 10	0.29	-0.77	66.17	1.7867	0.4167	0.0024
418	SLU 11	0.31	-0.86	67.5	1.8223	0.4218	0.0027
418	SLU 12	0.3	-0.81	67.48	1.822	0.4227	0.0024
418	SLU 13	0.29	-0.78	67.03	1.8097	0.4212	0.0024
418	SLU 14	0.31	-0.88	68.36	1.8454	0.4263	0.0027
418	SLU 15	0.31	-0.83	68.34	1.8451	0.4272	0.0024
418	SLU 16	0.31	-0.89	67.91	1.8333	0.4242	0.0028
418	SLU 17	0.3	-0.84	67.9	1.833	0.4251	0.0025
418	SLU 18	0.3	-0.87	69.46	1.8752	0.4384	0.0029
418	SLU 19	0.29	-0.82	69.44	1.8749	0.4393	0.0027
418	SLU 20	0.3	-0.89	70.32	1.8983	0.4429	0.0029
418	SLU 21	0.3	-0.84	70.3	1.898	0.4438	0.0027
418	SLU 22	0.34	-0.83	65.74	1.7753	0.3989	0.0022
418	SLU 23	0.33	-0.75	65.71	1.7748	0.4004	0.0018
418	SLU 24	0.36	-0.84	67.04	1.8105	0.4056	0.0021
418	SLU 25	0.35	-0.79	67.03	1.8101	0.4065	0.0019
418	SLU 26	0.34	-0.76	66.57	1.7978	0.4049	0.0018
418	SLU 27	0.36	-0.86	67.9	1.8335	0.4101	0.0022
418	SLU 28	0.36	-0.81	67.88	1.8332	0.411	0.0019
418	SLU 29	0.35	-0.87	67.45	1.8214	0.4079	0.0023
418	SLU 30	0.35	-0.81	67.44	1.8211	0.4088	0.002
418	SLU 31	0.34	-0.79	73.32	1.9803	0.4546	0.0022
418	SLU 32	0.36	-0.89	74.65	2.0159	0.4598	0.0025
418	SLU 33	0.35	-0.84	74.64	2.0156	0.4607	0.0022
418	SLU 34	0.34	-0.81	74.18	2.0033	0.4591	0.0022
418	SLU 35	0.37	-0.91	75.51	2.039	0.4643	0.0025
418	SLU 36	0.36	-0.86	75.49	2.0387	0.4652	0.0022
418	SLU 37	0.36	-0.92	75.06	2.0269	0.4621	0.0026
418	SLU 38	0.35	-0.86	75.05	2.0266	0.463	0.0023
418	SLU 39	0.35	-0.9	76.61	2.0688	0.4764	0.0027
418	SLU 40	0.34	-0.85	76.6	2.0685	0.4773	0.0025
418	SLU 41	0.35	-0.92	77.47	2.0919	0.4809	0.0027
418	SLU 42	0.35	-0.87	77.45	2.0916	0.4818	0.0025
418	SLU 43	0.36	-1.04	73.71	1.9898	0.4562	0.0032
418	SLU 44	0.35	-0.95	73.68	1.9893	0.4577	0.0028
418	SLU 45	0.38	-1.05	75.01	2.025	0.4629	0.0031
418	SLU 46	0.37	-0.99	75	2.0247	0.4638	0.0029
418	SLU 47	0.36	-0.97	74.54	2.0124	0.4622	0.0028
418	SLU 48	0.38	-1.06	75.87	2.048	0.4674	0.0031
418	SLU 49	0.38	-1.01	75.85	2.0477	0.4683	0.0029
418	SLU 50	0.37	-1.07	75.42	2.0359	0.4652	0.0032
418	SLU 51	0.37	-1.02	75.41	2.0356	0.4661	0.003
418	SLU 52	0.36	-1	81.29	2.1948	0.512	0.0031
418	SLU 53	0.38	-1.1	82.62	2.2305	0.5171	0.0035
418	SLU 54	0.37	-1.04	82.61	2.2302	0.518	0.0032
418	SLU 55	0.36	-1.02	82.15	2.2178	0.5165	0.0032
418	SLU 56	0.38	-1.11	83.48	2.2535	0.5216	0.0035
418	SLU 57	0.38	-1.06	83.46	2.2532	0.5225	0.0032
418	SLU 58	0.38	-1.12	83.03	2.2414	0.5194	0.0036
418	SLU 59	0.37	-1.07	83.02	2.2411	0.5204	0.0033
418	SLU 60	0.37	-1.11	84.58	2.2834	0.5337	0.0037
418	SLU 61	0.36	-1.05	84.57	2.2831	0.5346	0.0035
418	SLU 62	0.37	-1.12	85.44	2.3064	0.5382	0.0037
418	SLU 63	0.37	-1.07	85.42	2.3061	0.5391	0.0035
418	SLU 64	0.41	-1.06	80.86	2.1834	0.4942	0.003
418	SLU 65	0.4	-0.98	80.84	2.1829	0.4957	0.0026
418	SLU 66	0.43	-1.07	82.16	2.2186	0.5008	0.0029
418	SLU 67	0.42	-1.02	82.15	2.2183	0.5017	0.0027
418	SLU 68	0.41	-0.99	81.69	2.2059	0.5002	0.0026
418	SLU 69	0.43	-1.09	83.02	2.2416	0.5053	0.003
418	SLU 70	0.43	-1.04	83.01	2.2413	0.5062	0.0027
418	SLU 71	0.43	-1.1	82.58	2.2295	0.5032	0.003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
418	SLU 72	0.42	-1.05	82.56	2.2292	0.5041	0.0028
418	SLU 73	0.41	-1.03	88.45	2.3884	0.5499	0.003
418	SLU 74	0.43	-1.12	89.78	2.4241	0.5551	0.0033
418	SLU 75	0.42	-1.07	89.76	2.4238	0.556	0.003
418	SLU 76	0.41	-1.04	89.3	2.4114	0.5544	0.003
418	SLU 77	0.44	-1.14	90.63	2.4471	0.5596	0.0033
418	SLU 78	0.43	-1.09	90.62	2.4468	0.5605	0.003
418	SLU 79	0.43	-1.15	90.19	2.435	0.5574	0.0034
418	SLU 80	0.42	-1.1	90.17	2.4347	0.5583	0.0031
418	SLU 81	0.42	-1.13	91.73	2.477	0.5716	0.0035
418	SLU 82	0.41	-1.08	91.72	2.4767	0.5726	0.0033
418	SLU 83	0.42	-1.15	92.59	2.5	0.5761	0.0035
418	SLU 84	0.42	-1.1	92.58	2.4997	0.577	0.0033
418	SLE RA 1	0.31	-0.81	60.63	1.637	0.3718	0.0024
418	SLE RA 2	0.3	-0.75	60.61	1.6367	0.3728	0.0021
418	SLE RA 3	0.32	-0.82	61.5	1.6604	0.3762	0.0023
418	SLE RA 4	0.31	-0.78	61.49	1.6602	0.3768	0.0021
418	SLE RA 5	0.3	-0.77	61.18	1.652	0.3758	0.0021
418	SLE RA 6	0.32	-0.83	62.07	1.6758	0.3792	0.0023
418	SLE RA 7	0.32	-0.8	62.06	1.6756	0.3798	0.0022
418	SLE RA 8	0.31	-0.84	61.77	1.6677	0.3778	0.0024
418	SLE RA 9	0.31	-0.8	61.76	1.6675	0.3784	0.0022
418	SLE RA 10	0.3	-0.79	65.69	1.7736	0.409	0.0023
418	SLE RA 11	0.32	-0.85	66.57	1.7974	0.4124	0.0025
418	SLE RA 12	0.31	-0.82	66.56	1.7972	0.413	0.0024
418	SLE RA 13	0.31	-0.8	66.26	1.789	0.412	0.0023
418	SLE RA 14	0.32	-0.86	67.14	1.8128	0.4154	0.0026
418	SLE RA 15	0.32	-0.83	67.13	1.8126	0.416	0.0024
418	SLE RA 16	0.32	-0.87	66.85	1.8047	0.4139	0.0026
418	SLE RA 17	0.31	-0.83	66.84	1.8045	0.4145	0.0024
418	SLE RA 18	0.31	-0.86	67.88	1.8327	0.4234	0.0027
418	SLE RA 19	0.31	-0.82	67.87	1.8325	0.424	0.0025
418	SLE RA 20	0.31	-0.87	68.45	1.8481	0.4264	0.0027
418	SLE RA 21	0.31	-0.84	68.44	1.8479	0.427	0.0025
418	SLE FR 1	0.31	-0.81	60.63	1.637	0.3718	0.0024
418	SLE FR 2	0.31	-0.8	60.63	1.6369	0.372	0.0023
418	SLE FR 3	0.31	-0.82	60.86	1.6431	0.373	0.0024
418	SLE FR 4	0.31	-0.81	62.8	1.6956	0.3875	0.0024
418	SLE FR 5	0.31	-0.83	63.03	1.7019	0.3885	0.0025
418	SLE FR 6	0.31	-0.84	64.25	1.7348	0.3976	0.0025
418	SLE QP 1	0.31	-0.81	60.63	1.637	0.3718	0.0024
418	SLE QP 2	0.31	-0.83	62.8	1.6957	0.3873	0.0025
418	SLD 1	5.84	0.31	57.77	1.5627	0.4902	-0.141
418	SLD 2	6.42	0.74	58.19	1.5732	0.4831	-0.1499
418	SLD 3	5.73	-1.25	56.8	1.5409	0.5153	-0.1374
418	SLD 4	6.31	-0.82	57.23	1.5514	0.5082	-0.1463
418	SLD 5	2.03	1.81	62.68	1.687	0.3813	-0.0444
418	SLD 6	2.42	2.09	62.96	1.6939	0.3766	-0.0502
418	SLD 7	1.66	-3.4	59.46	1.6143	0.4651	-0.0325
418	SLD 8	2.05	-3.12	59.74	1.6212	0.4605	-0.0383
418	SLD 9	-1.43	1.47	65.87	1.7702	0.3141	0.0433
418	SLD 10	-1.04	1.75	66.15	1.7771	0.3095	0.0374
418	SLD 11	-1.8	-3.74	62.64	1.6975	0.398	0.0552
418	SLD 12	-1.41	-3.46	62.92	1.7044	0.3933	0.0493
418	SLD 13	-5.69	-0.83	68.38	1.8401	0.2664	0.1513
418	SLD 14	-5.11	-0.4	68.81	1.8505	0.2593	0.1423
418	SLD 15	-5.81	-2.39	67.41	1.8182	0.2915	0.1548
418	SLD 16	-5.22	-1.97	67.84	1.8287	0.2844	0.1459
418	SLV 1	13.24	1.79	50.98	1.3837	0.6289	-0.3329
418	SLV 2	14.6	2.79	51.98	1.4081	0.6123	-0.3537
418	SLV 3	12.98	-1.77	48.79	1.3343	0.6859	-0.3247
418	SLV 4	14.35	-0.77	49.78	1.3587	0.6694	-0.3455
418	SLV 5	4.34	5.18	62.41	1.6729	0.3761	-0.107
418	SLV 6	5.22	5.83	63.05	1.6886	0.3655	-0.1204
418	SLV 7	3.49	-6.68	55.1	1.5081	0.5662	-0.0797
418	SLV 8	4.37	-6.03	55.75	1.5238	0.5556	-0.0931
418	SLV 9	-3.75	4.38	69.86	1.8676	0.219	0.098
418	SLV 10	-2.87	5.02	70.5	1.8833	0.2084	0.0846
418	SLV 11	-4.6	-7.48	62.56	1.7028	0.4091	0.1253
418	SLV 12	-3.72	-6.84	63.2	1.7186	0.3985	0.1119
418	SLV 13	-13.73	-0.88	75.82	2.0327	0.1052	0.3505
418	SLV 14	-12.36	0.11	76.82	2.0571	0.0887	0.3297
418	SLV 15	-13.99	-4.44	73.63	1.9833	0.1623	0.3587
418	SLV 16	-12.62	-3.45	74.63	2.0077	0.1457	0.3379
418	CRTFP Ux+	0	0	0	0	0	0
418	CRTFP Ux-	0	0	0	0	0	0
418	CRTFP Uy+	0	0	0	0	0	0
418	CRTFP Uy-	0	0	0	0	0	0
419	SLU 1	0.19	0.28	35.56	0.9388	9.7601	-0.1052
419	SLU 2	0.2	0.37	35.54	0.9384	9.7498	-0.1341
419	SLU 3	0.2	0.29	36.38	0.9603	9.9788	-0.1091
419	SLU 4	0.2	0.34	36.36	0.96	9.9726	-0.1264
419	SLU 5	0.2	0.37	36.06	0.9522	9.8909	-0.1345
419	SLU 6	0.21	0.3	36.9	0.9741	10.1199	-0.1095
419	SLU 7	0.21	0.35	36.89	0.9738	10.1137	-0.1269
419	SLU 8	0.2	0.29	36.61	0.9664	10.0423	-0.106
419	SLU 9	0.2	0.34	36.6	0.9661	10.0361	-0.1234
419	SLU 10	0.19	0.43	40	1.0558	10.9525	-0.1572
419	SLU 11	0.2	0.36	40.84	1.0777	11.1815	-0.1322
419	SLU 12	0.2	0.41	40.83	1.0774	11.1753	-0.1495

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLU 13	0.2	0.43	40.52	1.0696	11.0936	-0.1576
419	SLU 14	0.2	0.36	41.36	1.0915	11.3225	-0.1326
419	SLU 15	0.21	0.41	41.35	1.0912	11.3164	-0.15
419	SLU 16	0.2	0.35	41.07	1.0838	11.2449	-0.1292
419	SLU 17	0.2	0.4	41.06	1.0835	11.2388	-0.1465
419	SLU 18	0.19	0.38	41.93	1.1065	11.4782	-0.1382
419	SLU 19	0.19	0.43	41.92	1.1063	11.472	-0.1555
419	SLU 20	0.19	0.38	42.46	1.1203	11.6193	-0.1387
419	SLU 21	0.19	0.43	42.45	1.1201	11.6131	-0.156
419	SLU 22	0.22	0.35	39.92	1.0537	10.9327	-0.128
419	SLU 23	0.23	0.43	39.9	1.0532	10.9225	-0.1569
419	SLU 24	0.23	0.36	40.74	1.0752	11.1514	-0.1319
419	SLU 25	0.23	0.41	40.73	1.0749	11.1453	-0.1492
419	SLU 26	0.23	0.43	40.43	1.067	11.0635	-0.1573
419	SLU 27	0.23	0.36	41.27	1.089	11.2925	-0.1324
419	SLU 28	0.24	0.41	41.25	1.0887	11.2864	-0.1497
419	SLU 29	0.23	0.35	40.97	1.0813	11.2149	-0.1289
419	SLU 30	0.23	0.4	40.96	1.081	11.2087	-0.1462
419	SLU 31	0.22	0.5	44.36	1.1707	12.1251	-0.18
419	SLU 32	0.23	0.42	45.2	1.1926	12.3541	-0.155
419	SLU 33	0.23	0.47	45.19	1.1923	12.3479	-0.1724
419	SLU 34	0.23	0.5	44.89	1.1844	12.2662	-0.1805
419	SLU 35	0.23	0.43	45.73	1.2064	12.4952	-0.1555
419	SLU 36	0.23	0.47	45.72	1.2061	12.489	-0.1728
419	SLU 37	0.23	0.42	45.44	1.1987	12.4176	-0.152
419	SLU 38	0.23	0.47	45.42	1.1984	12.4114	-0.1693
419	SLU 39	0.22	0.44	46.3	1.2214	12.6508	-0.161
419	SLU 40	0.22	0.49	46.28	1.2212	12.6447	-0.1784
419	SLU 41	0.22	0.44	46.82	1.2352	12.7919	-0.1615
419	SLU 42	0.22	0.49	46.81	1.2349	12.7858	-0.1788
419	SLU 43	0.24	0.35	44.73	1.181	12.2861	-0.1289
419	SLU 44	0.25	0.43	44.71	1.1806	12.2758	-0.1578
419	SLU 45	0.25	0.36	45.55	1.2025	12.5048	-0.1328
419	SLU 46	0.25	0.41	45.53	1.2023	12.4986	-0.1501
419	SLU 47	0.25	0.43	45.23	1.1944	12.4169	-0.1582
419	SLU 48	0.25	0.36	46.07	1.2163	12.6458	-0.1332
419	SLU 49	0.26	0.41	46.06	1.2161	12.6397	-0.1506
419	SLU 50	0.25	0.35	45.78	1.2086	12.5682	-0.1298
419	SLU 51	0.25	0.4	45.77	1.2084	12.5621	-0.1471
419	SLU 52	0.24	0.5	49.17	1.298	13.4784	-0.1809
419	SLU 53	0.25	0.42	50.01	1.3199	13.7074	-0.1559
419	SLU 54	0.25	0.47	50	1.3197	13.7013	-0.1733
419	SLU 55	0.25	0.5	49.7	1.3118	13.6195	-0.1814
419	SLU 56	0.25	0.43	50.54	1.3337	13.8485	-0.1564
419	SLU 57	0.25	0.48	50.52	1.3335	13.8423	-0.1737
419	SLU 58	0.24	0.42	50.24	1.326	13.7709	-0.1529
419	SLU 59	0.25	0.47	50.23	1.3258	13.7647	-0.1702
419	SLU 60	0.24	0.44	51.1	1.3488	14.0042	-0.1619
419	SLU 61	0.24	0.49	51.09	1.3485	13.998	-0.1793
419	SLU 62	0.24	0.44	51.63	1.3626	14.1453	-0.1624
419	SLU 63	0.24	0.49	51.62	1.3623	14.1391	-0.1797
419	SLU 64	0.27	0.41	49.09	1.2959	13.4587	-0.1517
419	SLU 65	0.28	0.49	49.07	1.2955	13.4484	-0.1806
419	SLU 66	0.28	0.42	49.91	1.3174	13.6774	-0.1556
419	SLU 67	0.28	0.47	49.9	1.3172	13.6712	-0.173
419	SLU 68	0.28	0.49	49.6	1.3093	13.5895	-0.1811
419	SLU 69	0.28	0.42	50.44	1.3312	13.8185	-0.1561
419	SLU 70	0.29	0.47	50.42	1.3309	13.8123	-0.1734
419	SLU 71	0.28	0.41	50.14	1.3235	13.7409	-0.1526
419	SLU 72	0.28	0.46	50.13	1.3233	13.7347	-0.1699
419	SLU 73	0.27	0.56	53.53	1.4129	14.6511	-0.2037
419	SLU 74	0.28	0.49	54.37	1.4348	14.8801	-0.1788
419	SLU 75	0.28	0.54	54.36	1.4346	14.8739	-0.1961
419	SLU 76	0.28	0.56	54.06	1.4267	14.7922	-0.2042
419	SLU 77	0.28	0.49	54.9	1.4486	15.0212	-0.1792
419	SLU 78	0.28	0.54	54.89	1.4484	15.015	-0.1965
419	SLU 79	0.27	0.48	54.61	1.4409	14.9436	-0.1757
419	SLU 80	0.28	0.53	54.59	1.4407	14.9374	-0.1931
419	SLU 81	0.27	0.51	55.47	1.4637	15.1768	-0.1848
419	SLU 82	0.27	0.56	55.46	1.4634	15.1706	-0.2021
419	SLU 83	0.27	0.51	55.99	1.4775	15.3179	-0.1852
419	SLU 84	0.27	0.56	55.98	1.4772	15.3117	-0.2025
419	SLE RA 1	0.2	0.3	36.8	0.9716	10.0951	-0.1117
419	SLE RA 2	0.2	0.36	36.79	0.9713	10.0883	-0.131
419	SLE RA 3	0.21	0.31	37.35	0.9859	10.2409	-0.1143
419	SLE RA 4	0.21	0.34	37.34	0.9858	10.2368	-0.1259
419	SLE RA 5	0.21	0.36	37.14	0.9805	10.1823	-0.1312
419	SLE RA 6	0.21	0.31	37.7	0.9951	10.335	-0.1146
419	SLE RA 7	0.21	0.34	37.69	0.995	10.3309	-0.1262
419	SLE RA 8	0.21	0.3	37.51	0.99	10.2833	-0.1123
419	SLE RA 9	0.21	0.34	37.5	0.9898	10.2791	-0.1238
419	SLE RA 10	0.2	0.4	39.77	1.0496	10.8901	-0.1464
419	SLE RA 11	0.2	0.35	40.33	1.0642	11.0427	-0.1297
419	SLE RA 12	0.21	0.39	40.32	1.064	11.0386	-0.1413
419	SLE RA 13	0.2	0.4	40.12	1.0588	10.9841	-0.1467
419	SLE RA 14	0.21	0.35	40.68	1.0734	11.1368	-0.13
419	SLE RA 15	0.21	0.39	40.67	1.0732	11.1327	-0.1416
419	SLE RA 16	0.2	0.35	40.48	1.0683	11.085	-0.1277
419	SLE RA 17	0.21	0.38	40.47	1.0681	11.0809	-0.1393
419	SLE RA 18	0.2	0.37	41.06	1.0834	11.2405	-0.1337

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLE RA 19	0.2	0.4	41.05	1.0833	11.2364	-0.1453
419	SLE RA 20	0.2	0.37	41.41	1.0926	11.3346	-0.134
419	SLE RA 21	0.2	0.4	41.4	1.0925	11.3305	-0.1456
419	SLE FR 1	0.2	0.3	36.8	0.9716	10.0951	-0.1117
419	SLE FR 2	0.2	0.31	36.8	0.9716	10.0938	-0.1156
419	SLE FR 3	0.2	0.3	36.94	0.9753	10.1328	-0.1118
419	SLE FR 4	0.2	0.33	38.08	1.0051	10.4374	-0.1222
419	SLE FR 5	0.2	0.32	38.22	1.0088	10.4764	-0.1184
419	SLE FR 6	0.2	0.33	38.93	1.0275	10.6678	-0.1227
419	SLE QP 1	0.2	0.3	36.8	0.9716	10.0951	-0.1117
419	SLE QP 2	0.2	0.32	38.08	1.0052	10.4388	-0.1183
419	SLD 1	3.41	0.18	28.4	0.7499	7.9449	-0.4121
419	SLD 2	3.76	0.84	28.84	0.7605	8.0675	-0.6512
419	SLD 3	3.33	-1.14	27.59	0.7309	7.7264	0.0533
419	SLD 4	3.68	-0.49	28.04	0.7415	7.8491	-0.1859
419	SLD 5	1.23	2.17	36.32	0.9556	10.0001	-0.8697
419	SLD 6	1.46	2.61	36.61	0.9625	10.0805	-1.0265
419	SLD 7	0.95	-2.25	33.63	0.8922	9.272	0.6815
419	SLD 8	1.17	-1.82	33.92	0.8991	9.3523	0.5247
419	SLD 9	-0.77	2.46	42.24	1.1112	11.5252	-0.7613
419	SLD 10	-0.54	2.89	42.53	1.1182	11.6055	-0.9181
419	SLD 11	-1.06	-1.96	39.55	1.0478	10.797	0.7899
419	SLD 12	-0.83	-1.53	39.84	1.0548	10.8774	0.6331
419	SLD 13	-3.28	1.13	48.12	1.2688	13.0284	-0.0507
419	SLD 14	-2.93	1.79	48.57	1.2794	13.1511	-0.2899
419	SLD 15	-3.36	-0.2	47.32	1.2498	12.81	0.4146
419	SLD 16	-3.01	0.46	47.76	1.2604	12.9326	0.1755
419	SLV 1	7.71	-0.04	15.39	0.4072	4.5949	-0.7917
419	SLV 2	8.53	1.49	16.43	0.4319	4.8805	-1.3487
419	SLV 3	7.51	-3.06	13.56	0.3641	4.1	0.267
419	SLV 4	8.33	-1.53	14.6	0.3888	4.3856	-0.29
419	SLV 5	2.61	4.52	33.87	0.887	9.387	-1.8301
419	SLV 6	3.14	5.51	34.54	0.9029	9.571	-2.1891
419	SLV 7	1.95	-5.53	27.77	0.7432	7.7374	1.699
419	SLV 8	2.48	-4.55	28.44	0.759	7.9214	1.34
419	SLV 9	-2.08	5.19	47.72	1.2513	12.9561	-1.5766
419	SLV 10	-1.55	6.18	48.39	1.2672	13.1401	-1.9356
419	SLV 11	-2.74	-4.87	41.62	1.1075	11.3065	1.9525
419	SLV 12	-2.21	-3.88	42.29	1.1233	11.4905	1.5935
419	SLV 13	-7.93	2.17	61.56	1.6216	16.4919	0.0534
419	SLV 14	-7.11	3.7	62.6	1.6462	16.7775	-0.5036
419	SLV 15	-8.13	-0.85	59.73	1.5784	15.997	1.1121
419	SLV 16	-7.31	0.69	60.77	1.6031	16.2826	0.5551
419	CRTFP Ux+	0	0	0	0	0	0
419	CRTFP Ux-	0	0	0	0	0	0
419	CRTFP Uy+	0	0	0	0	0	0
419	CRTFP Uy-	0	0	0	0	0	0
421	SLU 1	-0.64	-0.06	33.28	0.8652	-6.1925	0.001
421	SLU 2	-0.64	0.02	33.25	0.8646	-6.1834	0.0204
421	SLU 3	-0.66	-0.06	34.04	0.8849	-6.3304	0.0017
421	SLU 4	-0.66	-0.01	34.02	0.8846	-6.3249	0.0134
421	SLU 5	-0.65	0.01	33.74	0.8773	-6.2724	0.0202
421	SLU 6	-0.67	-0.06	34.53	0.8976	-6.4194	0.0015
421	SLU 7	-0.67	-0.02	34.51	0.8973	-6.414	0.0132
421	SLU 8	-0.66	-0.07	34.26	0.8906	-6.3706	0.0006
421	SLU 9	-0.66	-0.02	34.24	0.8902	-6.3651	0.0123
421	SLU 10	-0.69	0.02	37.42	0.9725	-6.9435	0.0241
421	SLU 11	-0.71	-0.05	38.21	0.9928	-7.0905	0.0054
421	SLU 12	-0.71	-0.01	38.19	0.9925	-7.085	0.017
421	SLU 13	-0.7	0.02	37.91	0.9852	-7.0325	0.0239
421	SLU 14	-0.72	-0.05	38.7	1.0055	-7.1795	0.0052
421	SLU 15	-0.72	-0.01	38.68	1.0052	-7.1741	0.0168
421	SLU 16	-0.71	-0.06	38.43	0.9985	-7.1306	0.0043
421	SLU 17	-0.71	-0.01	38.41	0.9981	-7.1252	0.0159
421	SLU 18	-0.71	-0.05	39.23	1.0193	-7.2783	0.0062
421	SLU 19	-0.71	0	39.21	1.019	-7.2728	0.0179
421	SLU 20	-0.72	-0.05	39.72	1.032	-7.3673	0.006
421	SLU 21	-0.72	0	39.7	1.0317	-7.3619	0.0177
421	SLU 22	-0.72	-0.05	37.37	0.9713	-6.936	0.0065
421	SLU 23	-0.72	0.03	37.34	0.9707	-6.927	0.0259
421	SLU 24	-0.74	-0.05	38.13	0.991	-7.0739	0.0072
421	SLU 25	-0.74	0	38.11	0.9906	-7.0685	0.0188
421	SLU 26	-0.73	0.03	37.83	0.9834	-7.016	0.0257
421	SLU 27	-0.75	-0.05	38.62	1.0037	-7.163	0.007
421	SLU 28	-0.75	0	38.61	1.0034	-7.1575	0.0187
421	SLU 29	-0.74	-0.05	38.35	0.9967	-7.1141	0.0061
421	SLU 30	-0.74	-0.01	38.34	0.9963	-7.1087	0.0178
421	SLU 31	-0.78	0.04	41.51	1.0786	-7.687	0.0296
421	SLU 32	-0.8	-0.04	42.3	1.0989	-7.834	0.0108
421	SLU 33	-0.8	0.01	42.28	1.0986	-7.8286	0.0225
421	SLU 34	-0.79	0.04	42	1.0913	-7.7761	0.0294
421	SLU 35	-0.81	-0.04	42.79	1.1116	-7.9231	0.0107
421	SLU 36	-0.81	0.01	42.77	1.1113	-7.9176	0.0223
421	SLU 37	-0.8	-0.04	42.52	1.1046	-7.8742	0.0098
421	SLU 38	-0.8	0	42.5	1.1042	-7.8687	0.0214
421	SLU 39	-0.8	-0.04	43.32	1.1254	-8.0218	0.0117
421	SLU 40	-0.8	0.01	43.3	1.1251	-8.0164	0.0233
421	SLU 41	-0.81	-0.04	43.81	1.1381	-8.1109	0.0115
421	SLU 42	-0.81	0.01	43.8	1.1378	-8.1054	0.0232
421	SLU 43	-0.8	-0.09	41.86	1.0883	-7.7953	-0.0006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
421	SLU 44	-0.8	-0.01	41.83	1.0877	-7.7862	0.0188
421	SLU 45	-0.82	-0.09	42.62	1.1081	-7.9332	0.0001
421	SLU 46	-0.82	-0.04	42.6	1.1077	-7.9278	0.0118
421	SLU 47	-0.81	-0.01	42.32	1.1004	-7.8753	0.0186
421	SLU 48	-0.83	-0.09	43.11	1.1208	-8.0222	-0.0001
421	SLU 49	-0.83	-0.04	43.1	1.1204	-8.0168	0.0116
421	SLU 50	-0.82	-0.09	42.84	1.1137	-7.9734	-0.001
421	SLU 51	-0.82	-0.04	42.82	1.1134	-7.9679	0.0107
421	SLU 52	-0.85	0	46	1.1956	-8.5463	0.0225
421	SLU 53	-0.87	-0.08	46.79	1.216	-8.6933	0.0038
421	SLU 54	-0.87	-0.03	46.77	1.2156	-8.6878	0.0154
421	SLU 55	-0.86	0	46.49	1.2083	-8.6353	0.0223
421	SLU 56	-0.88	-0.08	47.28	1.2287	-8.7823	0.0036
421	SLU 57	-0.88	-0.03	47.26	1.2283	-8.7769	0.0152
421	SLU 58	-0.87	-0.08	47.01	1.2216	-8.7334	0.0027
421	SLU 59	-0.87	-0.03	46.99	1.2213	-8.728	0.0143
421	SLU 60	-0.88	-0.07	47.81	1.2425	-8.8811	0.0046
421	SLU 61	-0.88	-0.03	47.79	1.2421	-8.8756	0.0163
421	SLU 62	-0.89	-0.07	48.3	1.2552	-8.9701	0.0044
421	SLU 63	-0.89	-0.03	48.28	1.2548	-8.9647	0.0161
421	SLU 64	-0.89	-0.07	45.95	1.1944	-8.5388	0.0049
421	SLU 65	-0.89	0.01	45.92	1.1938	-8.5298	0.0243
421	SLU 66	-0.91	-0.07	46.71	1.2142	-8.6767	0.0056
421	SLU 67	-0.91	-0.03	46.7	1.2138	-8.6713	0.0173
421	SLU 68	-0.9	0	46.41	1.2065	-8.6188	0.0241
421	SLU 69	-0.92	-0.07	47.21	1.2269	-8.7658	0.0054
421	SLU 70	-0.92	-0.03	47.19	1.2265	-8.7604	0.0171
421	SLU 71	-0.91	-0.08	46.93	1.2198	-8.7169	0.0045
421	SLU 72	-0.91	-0.03	46.92	1.2195	-8.7115	0.0162
421	SLU 73	-0.94	0.01	50.09	1.3017	-9.2898	0.028
421	SLU 74	-0.96	-0.06	50.88	1.3221	-9.4368	0.0093
421	SLU 75	-0.96	-0.02	50.86	1.3217	-9.4314	0.0209
421	SLU 76	-0.95	0.01	50.58	1.3144	-9.3789	0.0278
421	SLU 77	-0.97	-0.06	51.37	1.3348	-9.5259	0.0091
421	SLU 78	-0.97	-0.02	51.35	1.3344	-9.5204	0.0207
421	SLU 79	-0.96	-0.07	51.1	1.3277	-9.477	0.0082
421	SLU 80	-0.96	-0.02	51.08	1.3274	-9.4716	0.0198
421	SLU 81	-0.96	-0.06	51.9	1.3486	-9.6246	0.0101
421	SLU 82	-0.96	-0.01	51.89	1.3482	-9.6192	0.0218
421	SLU 83	-0.97	-0.06	52.39	1.3613	-9.7137	0.0099
421	SLU 84	-0.97	-0.01	52.38	1.3609	-9.7082	0.0216
421	SLE RA 1	-0.66	-0.06	34.45	0.8955	-6.4049	0.0026
421	SLE RA 2	-0.66	-0.01	34.43	0.8951	-6.3989	0.0155
421	SLE RA 3	-0.68	-0.06	34.96	0.9086	-6.4969	0.003
421	SLE RA 4	-0.68	-0.03	34.94	0.9084	-6.4932	0.0108
421	SLE RA 5	-0.67	-0.01	34.75	0.9035	-6.4582	0.0154
421	SLE RA 6	-0.68	-0.06	35.28	0.9171	-6.5562	0.0029
421	SLE RA 7	-0.68	-0.03	35.27	0.9169	-6.5526	0.0107
421	SLE RA 8	-0.68	-0.06	35.1	0.9124	-6.5236	0.0023
421	SLE RA 9	-0.68	-0.03	35.09	0.9122	-6.52	0.0101
421	SLE RA 10	-0.7	0	37.21	0.967	-6.9056	0.0179
421	SLE RA 11	-0.71	-0.05	37.73	0.9806	-7.0036	0.0055
421	SLE RA 12	-0.71	-0.02	37.72	0.9803	-6.9999	0.0132
421	SLE RA 13	-0.71	0	37.53	0.9755	-6.9649	0.0178
421	SLE RA 14	-0.72	-0.05	38.06	0.9891	-7.0629	0.0053
421	SLE RA 15	-0.72	-0.02	38.05	0.9888	-7.0593	0.0131
421	SLE RA 16	-0.71	-0.06	37.88	0.9843	-7.0304	0.0047
421	SLE RA 17	-0.71	-0.02	37.87	0.9841	-7.0267	0.0125
421	SLE RA 18	-0.71	-0.05	38.42	0.9982	-7.1288	0.006
421	SLE RA 19	-0.71	-0.02	38.4	0.998	-7.1252	0.0138
421	SLE RA 20	-0.72	-0.05	38.74	1.0067	-7.1882	0.0059
421	SLE RA 21	-0.72	-0.02	38.73	1.0065	-7.1845	0.0137
421	SLE FR 1	-0.66	-0.06	34.45	0.8955	-6.4049	0.0026
421	SLE FR 2	-0.66	-0.05	34.44	0.8954	-6.4037	0.0051
421	SLE FR 3	-0.67	-0.06	34.58	0.8989	-6.4287	0.0025
421	SLE FR 4	-0.68	-0.05	35.63	0.9262	-6.6209	0.0062
421	SLE FR 5	-0.68	-0.06	35.77	0.9297	-6.6458	0.0035
421	SLE FR 6	-0.69	-0.05	36.43	0.9469	-6.7669	0.0043
421	SLE QP 1	-0.66	-0.06	34.45	0.8955	-6.4049	0.0026
421	SLE QP 2	-0.68	-0.06	35.64	0.9263	-6.6221	0.0036
421	SLD 1	2.01	0.41	45.81	1.1886	-8.4031	0.0859
421	SLD 2	2.32	-0.18	45.4	1.1793	-8.3259	-0.0692
421	SLD 3	2.09	-0.82	45.04	1.171	-8.2611	-0.2202
421	SLD 4	2.4	-1.41	44.63	1.1616	-8.1838	-0.3753
421	SLD 5	-0.04	2.04	39.93	1.0334	-7.3855	0.5201
421	SLD 6	0.16	1.65	39.66	1.0273	-7.3349	0.4184
421	SLD 7	0.21	-2.03	37.36	0.9746	-6.9121	-0.5002
421	SLD 8	0.41	-2.42	37.1	0.9685	-6.8615	-0.6019
421	SLD 9	-1.77	2.31	34.18	0.8841	-6.3827	0.6091
421	SLD 10	-1.57	1.92	33.91	0.878	-6.332	0.5074
421	SLD 11	-1.52	-1.77	31.62	0.8253	-5.9093	-0.4112
421	SLD 12	-1.32	-2.15	31.35	0.8192	-5.8586	-0.5129
421	SLD 13	-3.75	1.29	26.65	0.691	-5.0603	0.3825
421	SLD 14	-3.44	0.7	26.24	0.6816	-4.983	0.2274
421	SLD 15	-3.68	0.07	25.88	0.6733	-4.9183	0.0764
421	SLD 16	-3.37	-0.52	25.47	0.664	-4.841	-0.0787
421	SLV 1	5.62	0.98	59.41	1.5396	-10.7846	0.1857
421	SLV 2	6.33	-0.39	58.45	1.5177	-10.6046	-0.1756
421	SLV 3	5.79	-1.8	57.66	1.4995	-10.4625	-0.511
421	SLV 4	6.51	-3.18	56.71	1.4777	-10.2825	-0.8723

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
421	SLV 5	0.82	4.71	45.58	1.1748	-8.3903	1.1771
421	SLV 6	1.28	3.83	44.97	1.1608	-8.2744	0.9443
421	SLV 7	1.41	-4.56	39.76	1.0412	-7.3167	-1.1452
421	SLV 8	1.86	-5.45	39.15	1.0272	-7.2007	-1.378
421	SLV 9	-3.22	5.34	32.13	0.8254	-6.0435	1.3852
421	SLV 10	-2.76	4.45	31.52	0.8114	-5.9275	1.1524
421	SLV 11	-2.64	-3.94	26.31	0.6918	-4.9698	-0.9371
421	SLV 12	-2.18	-4.83	25.69	0.6778	-4.8538	-1.1699
421	SLV 13	-7.86	3.06	14.57	0.3749	-2.9617	0.8794
421	SLV 14	-7.15	1.69	13.62	0.3531	-2.7817	0.5182
421	SLV 15	-7.69	0.28	12.82	0.3349	-2.6396	0.1828
421	SLV 16	-6.97	-1.1	11.87	0.313	-2.4596	-0.1785
421	CRTFP Ux+	0	0	0	0	0	0
421	CRTFP Ux-	0	0	0	0	0	0
421	CRTFP Uy+	0	0	0	0	0	0
421	CRTFP Uy-	0	0	0	0	0	0
425	SLU 1	0.08	-0.21	34.51	-0.0262	10.2119	0.0731
425	SLU 2	0.07	-0.16	34.55	-0.0264	10.2254	0.0548
425	SLU 3	0.08	-0.2	35.25	-0.0268	10.4255	0.0704
425	SLU 4	0.08	-0.17	35.28	-0.0269	10.4336	0.0595
425	SLU 5	0.08	-0.16	35.04	-0.0269	10.3656	0.0557
425	SLU 6	0.08	-0.2	35.75	-0.0274	10.5657	0.0713
425	SLU 7	0.08	-0.17	35.77	-0.0275	10.5738	0.0604
425	SLU 8	0.08	-0.21	35.49	-0.0273	10.4923	0.0749
425	SLU 9	0.08	-0.18	35.52	-0.0274	10.5004	0.064
425	SLU 10	0.07	-0.14	39.27	-0.0301	11.6008	0.048
425	SLU 11	0.08	-0.18	39.97	-0.0305	11.8009	0.0636
425	SLU 12	0.08	-0.15	40	-0.0307	11.8089	0.0526
425	SLU 13	0.07	-0.14	39.76	-0.0307	11.7409	0.0489
425	SLU 14	0.08	-0.18	40.46	-0.0311	11.9411	0.0645
425	SLU 15	0.08	-0.15	40.49	-0.0312	11.9491	0.0535
425	SLU 16	0.08	-0.19	40.21	-0.031	11.8677	0.068
425	SLU 17	0.08	-0.16	40.24	-0.0311	11.8757	0.0571
425	SLU 18	0.07	-0.18	41.25	-0.0315	12.1768	0.0633
425	SLU 19	0.07	-0.15	41.28	-0.0316	12.1848	0.0523
425	SLU 20	0.08	-0.18	41.74	-0.032	12.3169	0.0642
425	SLU 21	0.07	-0.15	41.77	-0.0322	12.325	0.0532
425	SLU 22	0.09	-0.17	38.57	-0.0292	11.3827	0.0608
425	SLU 23	0.09	-0.12	38.61	-0.0294	11.3962	0.0426
425	SLU 24	0.1	-0.16	39.31	-0.0299	11.5963	0.0582
425	SLU 25	0.1	-0.13	39.34	-0.03	11.6044	0.0472
425	SLU 26	0.09	-0.12	39.1	-0.03	11.5364	0.0435
425	SLU 27	0.1	-0.17	39.81	-0.0304	11.7365	0.0591
425	SLU 28	0.1	-0.14	39.83	-0.0305	11.7446	0.0482
425	SLU 29	0.1	-0.18	39.55	-0.0303	11.6631	0.0627
425	SLU 30	0.1	-0.15	39.58	-0.0305	11.6712	0.0517
425	SLU 31	0.09	-0.1	43.33	-0.0332	12.7716	0.0357
425	SLU 32	0.1	-0.15	44.03	-0.0336	12.9717	0.0513
425	SLU 33	0.09	-0.11	44.06	-0.0337	12.9798	0.0404
425	SLU 34	0.09	-0.1	43.82	-0.0337	12.9117	0.0366
425	SLU 35	0.1	-0.15	44.52	-0.0341	13.1119	0.0522
425	SLU 36	0.1	-0.12	44.55	-0.0343	13.1199	0.0413
425	SLU 37	0.1	-0.16	44.27	-0.0341	13.0385	0.0558
425	SLU 38	0.09	-0.13	44.3	-0.0342	13.0466	0.0449
425	SLU 39	0.09	-0.14	45.31	-0.0345	13.3476	0.051
425	SLU 40	0.09	-0.11	45.34	-0.0347	13.3556	0.0401
425	SLU 41	0.09	-0.15	45.8	-0.0351	13.4877	0.0519
425	SLU 42	0.09	-0.12	45.83	-0.0352	13.4958	0.041
425	SLU 43	0.1	-0.28	43.47	-0.033	12.8741	0.0992
425	SLU 44	0.09	-0.23	43.51	-0.0332	12.8875	0.0809
425	SLU 45	0.1	-0.27	44.22	-0.0336	13.0877	0.0965
425	SLU 46	0.1	-0.24	44.24	-0.0337	13.0957	0.0856
425	SLU 47	0.09	-0.23	44	-0.0337	13.0277	0.0818
425	SLU 48	0.1	-0.28	44.71	-0.0342	13.2279	0.0975
425	SLU 49	0.1	-0.25	44.73	-0.0343	13.2359	0.0865
425	SLU 50	0.1	-0.29	44.45	-0.0341	13.1545	0.101
425	SLU 51	0.1	-0.26	44.48	-0.0342	13.1625	0.0901
425	SLU 52	0.09	-0.21	48.23	-0.0369	14.2629	0.0741
425	SLU 53	0.1	-0.25	48.93	-0.0373	14.463	0.0897
425	SLU 54	0.09	-0.22	48.96	-0.0375	14.4711	0.0787
425	SLU 55	0.09	-0.21	48.72	-0.0374	14.4031	0.075
425	SLU 56	0.1	-0.26	49.43	-0.0379	14.6032	0.0906
425	SLU 57	0.1	-0.23	49.45	-0.038	14.6113	0.0797
425	SLU 58	0.1	-0.27	49.17	-0.0378	14.5298	0.0942
425	SLU 59	0.09	-0.24	49.2	-0.0379	14.5379	0.0832
425	SLU 60	0.09	-0.25	50.21	-0.0383	14.8389	0.0894
425	SLU 61	0.09	-0.22	50.24	-0.0384	14.847	0.0784
425	SLU 62	0.09	-0.26	50.7	-0.0388	14.9791	0.0903
425	SLU 63	0.09	-0.23	50.73	-0.039	14.9872	0.0794
425	SLU 64	0.11	-0.25	47.53	-0.036	14.0449	0.0869
425	SLU 65	0.11	-0.19	47.57	-0.0362	14.0584	0.0687
425	SLU 66	0.12	-0.24	48.28	-0.0367	14.2585	0.0843
425	SLU 67	0.11	-0.21	48.3	-0.0368	14.2665	0.0733
425	SLU 68	0.11	-0.2	48.06	-0.0368	14.1985	0.0696
425	SLU 69	0.12	-0.24	48.77	-0.0372	14.3987	0.0852
425	SLU 70	0.12	-0.21	48.79	-0.0373	14.4067	0.0743
425	SLU 71	0.12	-0.25	48.51	-0.0371	14.3253	0.0888
425	SLU 72	0.11	-0.22	48.54	-0.0373	14.3333	0.0778
425	SLU 73	0.1	-0.18	52.29	-0.04	15.4337	0.0618
425	SLU 74	0.11	-0.22	52.99	-0.0404	15.6338	0.0774

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
425	SLU 75	0.11	-0.19	53.02	-0.0405	15.6419	0.0665
425	SLU 76	0.11	-0.18	52.78	-0.0405	15.5739	0.0628
425	SLU 77	0.12	-0.22	53.49	-0.0409	15.774	0.0784
425	SLU 78	0.11	-0.19	53.51	-0.0411	15.7821	0.0674
425	SLU 79	0.11	-0.23	53.23	-0.0409	15.7007	0.0819
425	SLU 80	0.11	-0.2	53.26	-0.041	15.7087	0.071
425	SLU 81	0.11	-0.22	54.27	-0.0413	16.0097	0.0771
425	SLU 82	0.1	-0.19	54.3	-0.0415	16.0178	0.0662
425	SLU 83	0.11	-0.22	54.76	-0.0419	16.1499	0.0781
425	SLU 84	0.11	-0.19	54.79	-0.042	16.158	0.0671
425	SLE RA 1	0.08	-0.2	35.67	-0.027	10.5465	0.0696
425	SLE RA 2	0.08	-0.16	35.7	-0.0272	10.5554	0.0574
425	SLE RA 3	0.09	-0.19	36.17	-0.0275	10.6888	0.0678
425	SLE RA 4	0.08	-0.17	36.18	-0.0275	10.6942	0.0605
425	SLE RA 5	0.08	-0.16	36.03	-0.0275	10.6489	0.058
425	SLE RA 6	0.09	-0.19	36.49	-0.0278	10.7823	0.0684
425	SLE RA 7	0.09	-0.17	36.51	-0.0279	10.7877	0.0611
425	SLE RA 8	0.09	-0.2	36.32	-0.0278	10.7334	0.0708
425	SLE RA 9	0.08	-0.18	36.34	-0.0279	10.7387	0.0635
425	SLE RA 10	0.08	-0.15	38.84	-0.0297	11.4723	0.0528
425	SLE RA 11	0.08	-0.18	39.31	-0.0299	11.6058	0.0632
425	SLE RA 12	0.08	-0.16	39.33	-0.03	11.6111	0.0559
425	SLE RA 13	0.08	-0.15	39.17	-0.03	11.5658	0.0534
425	SLE RA 14	0.08	-0.18	39.64	-0.0303	11.6992	0.0638
425	SLE RA 15	0.08	-0.16	39.66	-0.0304	11.7046	0.0566
425	SLE RA 16	0.08	-0.19	39.47	-0.0303	11.6503	0.0662
425	SLE RA 17	0.08	-0.17	39.49	-0.0303	11.6557	0.0589
425	SLE RA 18	0.08	-0.18	40.16	-0.0306	11.8563	0.063
425	SLE RA 19	0.08	-0.16	40.18	-0.0307	11.8617	0.0557
425	SLE RA 20	0.08	-0.18	40.49	-0.031	11.9498	0.0637
425	SLE RA 21	0.08	-0.16	40.51	-0.031	11.9552	0.0564
425	SLE FR 1	0.08	-0.2	35.67	-0.027	10.5465	0.0696
425	SLE FR 2	0.08	-0.19	35.68	-0.0271	10.5483	0.0671
425	SLE FR 3	0.08	-0.2	35.8	-0.0272	10.5838	0.0698
425	SLE FR 4	0.08	-0.18	37.02	-0.0281	10.9412	0.0652
425	SLE FR 5	0.08	-0.19	37.15	-0.0282	10.9768	0.0679
425	SLE FR 6	0.08	-0.19	37.92	-0.0288	11.2014	0.0663
425	SLE QP 1	0.08	-0.2	35.67	-0.027	10.5465	0.0696
425	SLE QP 2	0.08	-0.19	37.02	-0.0281	10.9394	0.0676
425	SLD 1	3.36	0.22	37.37	-0.0282	11.0835	-0.0746
425	SLD 2	3.69	0.25	37.42	-0.0283	11.0914	-0.0829
425	SLD 3	3.3	-0.84	36.89	-0.0247	10.9449	0.297
425	SLD 4	3.62	-0.81	36.95	-0.0248	10.9529	0.2887
425	SLD 5	1.11	1.54	37.83	-0.0334	11.1913	-0.5372
425	SLD 6	1.32	1.56	37.87	-0.0335	11.1966	-0.5426
425	SLD 7	0.89	-2	36.25	-0.0218	10.7295	0.7015
425	SLD 8	1.1	-1.98	36.29	-0.0218	10.7347	0.6961
425	SLD 9	-0.94	1.6	37.75	-0.0344	11.1441	-0.5608
425	SLD 10	-0.73	1.62	37.78	-0.0344	11.1493	-0.5663
425	SLD 11	-1.16	-1.94	36.17	-0.0227	10.6823	0.6778
425	SLD 12	-0.94	-1.92	36.2	-0.0228	10.6875	0.6724
425	SLD 13	-3.46	0.43	37.09	-0.0314	10.926	-0.1535
425	SLD 14	-3.14	0.45	37.14	-0.0315	10.9339	-0.1618
425	SLD 15	-3.53	-0.63	36.61	-0.0279	10.7874	0.2181
425	SLD 16	-3.2	-0.61	36.67	-0.028	10.7954	0.2098
425	SLV 1	7.76	0.75	37.82	-0.0282	11.2719	-0.2536
425	SLV 2	8.52	0.81	37.95	-0.0284	11.2905	-0.2729
425	SLV 3	7.61	-1.67	36.74	-0.0203	10.9569	0.5925
425	SLV 4	8.37	-1.61	36.87	-0.0205	10.9754	0.5732
425	SLV 5	2.48	3.75	38.87	-0.0401	11.5138	-1.3086
425	SLV 6	2.97	3.79	38.95	-0.0403	11.5258	-1.3211
425	SLV 7	1.98	-4.31	35.28	-0.0137	10.4636	1.5116
425	SLV 8	2.47	-4.27	35.36	-0.0139	10.4755	1.4992
425	SLV 9	-2.31	3.89	38.68	-0.0423	11.4033	-1.3639
425	SLV 10	-1.82	3.93	38.76	-0.0425	11.4152	-1.3764
425	SLV 11	-2.81	-4.17	35.08	-0.0159	10.3531	1.4563
425	SLV 12	-2.32	-4.13	35.16	-0.0161	10.365	1.4439
425	SLV 13	-8.2	1.22	37.17	-0.0357	10.9034	-0.4379
425	SLV 14	-7.45	1.29	37.29	-0.0359	10.922	-0.4573
425	SLV 15	-8.35	-1.19	36.09	-0.0277	10.5884	0.4081
425	SLV 16	-7.6	-1.13	36.22	-0.028	10.6069	0.3888
425	CRTFP Ux+	0	0	0	0	0	0
425	CRTFP Ux-	0	0	0	0	0	0
425	CRTFP Uy+	0	0	0	0	0	0
425	CRTFP Uy-	0	0	0	0	0	0
428	SLU 1	-1.17	-1.05	66.1	-0.0599	-0.4089	-0.0281
428	SLU 2	-1.15	-0.95	66.07	-0.0596	-0.4103	-0.0273
428	SLU 3	-1.2	-1.06	67.57	-0.061	-0.4176	-0.029
428	SLU 4	-1.19	-1	67.55	-0.0609	-0.4184	-0.0285
428	SLU 5	-1.17	-0.96	67.04	-0.0606	-0.4165	-0.0277
428	SLU 6	-1.22	-1.07	68.54	-0.062	-0.4238	-0.0294
428	SLU 7	-1.21	-1.01	68.52	-0.0618	-0.4247	-0.0289
428	SLU 8	-1.2	-1.08	68.04	-0.0618	-0.4214	-0.029
428	SLU 9	-1.19	-1.02	68.02	-0.0616	-0.4222	-0.0285
428	SLU 10	-1.25	-1.03	74.72	-0.067	-0.4758	-0.0304
428	SLU 11	-1.3	-1.14	76.21	-0.0684	-0.4831	-0.0321
428	SLU 12	-1.29	-1.08	76.19	-0.0682	-0.4839	-0.0316
428	SLU 13	-1.27	-1.04	75.68	-0.0679	-0.482	-0.0308
428	SLU 14	-1.32	-1.15	77.18	-0.0693	-0.4893	-0.0325
428	SLU 15	-1.31	-1.09	77.16	-0.0692	-0.4902	-0.032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
428	SLU 16	-1.3	-1.16	76.68	-0.0691	-0.4869	-0.0321
428	SLU 17	-1.29	-1.1	76.66	-0.069	-0.4877	-0.0316
428	SLU 18	-1.31	-1.16	78.45	-0.0704	-0.5024	-0.0326
428	SLU 19	-1.3	-1.1	78.43	-0.0702	-0.5033	-0.0321
428	SLU 20	-1.33	-1.18	79.42	-0.0713	-0.5087	-0.033
428	SLU 21	-1.32	-1.12	79.4	-0.0712	-0.5095	-0.0325
428	SLU 22	-1.33	-1.09	74.19	-0.0659	-0.458	-0.0322
428	SLU 23	-1.31	-0.99	74.16	-0.0657	-0.4594	-0.0314
428	SLU 24	-1.36	-1.1	75.66	-0.0671	-0.4667	-0.033
428	SLU 25	-1.35	-1.04	75.64	-0.0669	-0.4676	-0.0325
428	SLU 26	-1.33	-1.01	75.13	-0.0666	-0.4657	-0.0318
428	SLU 27	-1.38	-1.12	76.63	-0.068	-0.4729	-0.0334
428	SLU 28	-1.37	-1.06	76.61	-0.0679	-0.4738	-0.0329
428	SLU 29	-1.36	-1.12	76.13	-0.0678	-0.4705	-0.033
428	SLU 30	-1.35	-1.06	76.11	-0.0677	-0.4713	-0.0325
428	SLU 31	-1.42	-1.07	82.8	-0.0731	-0.5249	-0.0345
428	SLU 32	-1.46	-1.18	84.3	-0.0745	-0.5322	-0.0361
428	SLU 33	-1.46	-1.12	84.28	-0.0743	-0.5331	-0.0356
428	SLU 34	-1.43	-1.09	83.77	-0.074	-0.5312	-0.0349
428	SLU 35	-1.48	-1.2	85.27	-0.0754	-0.5385	-0.0365
428	SLU 36	-1.47	-1.14	85.25	-0.0753	-0.5393	-0.036
428	SLU 37	-1.46	-1.2	84.77	-0.0752	-0.536	-0.0362
428	SLU 38	-1.46	-1.14	84.75	-0.0751	-0.5369	-0.0356
428	SLU 39	-1.47	-1.2	86.54	-0.0765	-0.5516	-0.0366
428	SLU 40	-1.47	-1.14	86.52	-0.0763	-0.5524	-0.0361
428	SLU 41	-1.49	-1.22	87.51	-0.0774	-0.5578	-0.0371
428	SLU 42	-1.48	-1.16	87.49	-0.0773	-0.5587	-0.0366
428	SLU 43	-1.46	-1.35	83.16	-0.0757	-0.5147	-0.0352
428	SLU 44	-1.45	-1.25	83.13	-0.0755	-0.5161	-0.0344
428	SLU 45	-1.49	-1.36	84.63	-0.0769	-0.5234	-0.036
428	SLU 46	-1.48	-1.3	84.61	-0.0767	-0.5242	-0.0355
428	SLU 47	-1.46	-1.26	84.1	-0.0764	-0.5223	-0.0348
428	SLU 48	-1.51	-1.37	85.59	-0.0778	-0.5296	-0.0364
428	SLU 49	-1.5	-1.31	85.57	-0.0777	-0.5305	-0.0359
428	SLU 50	-1.49	-1.38	85.09	-0.0776	-0.5272	-0.036
428	SLU 51	-1.48	-1.32	85.08	-0.0775	-0.528	-0.0355
428	SLU 52	-1.55	-1.33	91.77	-0.0829	-0.5816	-0.0375
428	SLU 53	-1.6	-1.44	93.27	-0.0843	-0.5889	-0.0391
428	SLU 54	-1.59	-1.38	93.25	-0.0841	-0.5897	-0.0386
428	SLU 55	-1.57	-1.34	92.74	-0.0838	-0.5878	-0.0379
428	SLU 56	-1.61	-1.45	94.24	-0.0852	-0.5951	-0.0395
428	SLU 57	-1.6	-1.39	94.22	-0.0851	-0.596	-0.039
428	SLU 58	-1.6	-1.46	93.74	-0.085	-0.5927	-0.0391
428	SLU 59	-1.59	-1.4	93.72	-0.0849	-0.5935	-0.0386
428	SLU 60	-1.61	-1.46	95.51	-0.0863	-0.6083	-0.0396
428	SLU 61	-1.6	-1.4	95.49	-0.0861	-0.6091	-0.0391
428	SLU 62	-1.62	-1.48	96.47	-0.0872	-0.6145	-0.0401
428	SLU 63	-1.61	-1.42	96.46	-0.0871	-0.6154	-0.0395
428	SLU 64	-1.62	-1.39	91.25	-0.0818	-0.5638	-0.0393
428	SLU 65	-1.61	-1.29	91.22	-0.0816	-0.5652	-0.0384
428	SLU 66	-1.66	-1.4	92.72	-0.083	-0.5725	-0.0401
428	SLU 67	-1.65	-1.34	92.7	-0.0828	-0.5734	-0.0396
428	SLU 68	-1.62	-1.31	92.19	-0.0825	-0.5715	-0.0388
428	SLU 69	-1.67	-1.42	93.68	-0.0839	-0.5788	-0.0405
428	SLU 70	-1.66	-1.36	93.66	-0.0838	-0.5796	-0.04
428	SLU 71	-1.66	-1.42	93.18	-0.0837	-0.5763	-0.0401
428	SLU 72	-1.65	-1.36	93.17	-0.0836	-0.5772	-0.0396
428	SLU 73	-1.71	-1.37	99.86	-0.0889	-0.6307	-0.0415
428	SLU 74	-1.76	-1.48	101.36	-0.0903	-0.638	-0.0432
428	SLU 75	-1.75	-1.42	101.34	-0.0902	-0.6389	-0.0427
428	SLU 76	-1.73	-1.39	100.83	-0.0899	-0.637	-0.0419
428	SLU 77	-1.77	-1.5	102.33	-0.0913	-0.6443	-0.0436
428	SLU 78	-1.77	-1.44	102.31	-0.0911	-0.6451	-0.0431
428	SLU 79	-1.76	-1.5	101.83	-0.0911	-0.6418	-0.0432
428	SLU 80	-1.75	-1.44	101.81	-0.0909	-0.6427	-0.0427
428	SLU 81	-1.77	-1.5	103.6	-0.0923	-0.6574	-0.0437
428	SLU 82	-1.76	-1.44	103.58	-0.0922	-0.6582	-0.0432
428	SLU 83	-1.79	-1.52	104.56	-0.0933	-0.6636	-0.0441
428	SLU 84	-1.78	-1.46	104.54	-0.0931	-0.6645	-0.0436
428	SLE RA 1	-1.21	-1.06	68.41	-0.0616	-0.4229	-0.0293
428	SLE RA 2	-1.2	-0.99	68.39	-0.0614	-0.4238	-0.0287
428	SLE RA 3	-1.23	-1.07	69.39	-0.0624	-0.4287	-0.0298
428	SLE RA 4	-1.23	-1.03	69.38	-0.0623	-0.4293	-0.0295
428	SLE RA 5	-1.21	-1	69.04	-0.0621	-0.428	-0.029
428	SLE RA 6	-1.25	-1.08	70.04	-0.063	-0.4329	-0.0301
428	SLE RA 7	-1.24	-1.04	70.02	-0.0629	-0.4334	-0.0298
428	SLE RA 8	-1.23	-1.08	69.7	-0.0629	-0.4312	-0.0299
428	SLE RA 9	-1.23	-1.04	69.69	-0.0628	-0.4318	-0.0295
428	SLE RA 10	-1.27	-1.05	74.16	-0.0664	-0.4675	-0.0308
428	SLE RA 11	-1.3	-1.12	75.15	-0.0673	-0.4724	-0.0319
428	SLE RA 12	-1.3	-1.08	75.14	-0.0672	-0.4729	-0.0316
428	SLE RA 13	-1.28	-1.06	74.8	-0.067	-0.4717	-0.0311
428	SLE RA 14	-1.31	-1.13	75.8	-0.0679	-0.4765	-0.0322
428	SLE RA 15	-1.31	-1.09	75.79	-0.0678	-0.4771	-0.0319
428	SLE RA 16	-1.3	-1.14	75.47	-0.0678	-0.4749	-0.0319
428	SLE RA 17	-1.3	-1.1	75.45	-0.0677	-0.4755	-0.0316
428	SLE RA 18	-1.31	-1.13	76.65	-0.0686	-0.4853	-0.0323
428	SLE RA 19	-1.3	-1.09	76.63	-0.0685	-0.4859	-0.0319
428	SLE RA 20	-1.32	-1.15	77.29	-0.0692	-0.4895	-0.0325
428	SLE RA 21	-1.32	-1.11	77.28	-0.0692	-0.49	-0.0322

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
428	SLE FR 1	-1.21	-1.06	68.41	-0.0616	-0.4229	-0.0293
428	SLE FR 2	-1.21	-1.05	68.41	-0.0616	-0.4231	-0.0292
428	SLE FR 3	-1.22	-1.06	68.67	-0.0618	-0.4246	-0.0294
428	SLE FR 4	-1.24	-1.07	70.88	-0.0637	-0.4418	-0.0301
428	SLE FR 5	-1.25	-1.09	71.14	-0.064	-0.4433	-0.0303
428	SLE FR 6	-1.26	-1.1	72.53	-0.0651	-0.4541	-0.0308
428	SLE QP 1	-1.21	-1.06	68.41	-0.0616	-0.4229	-0.0293
428	SLE QP 2	-1.24	-1.08	70.88	-0.0637	-0.4416	-0.0302
428	SLD 1	4.73	-0.49	77.67	-0.0762	-0.2324	-0.0126
428	SLD 2	5.35	-0.98	77.25	-0.0739	-0.2396	-0.001
428	SLD 3	4.87	-2.33	76.74	-0.0682	-0.2617	-0.0102
428	SLD 4	5.48	-2.83	76.32	-0.066	-0.2689	0.0014
428	SLD 5	0.23	1.98	74.4	-0.0799	-0.3332	-0.0307
428	SLD 6	0.64	1.65	74.12	-0.0785	-0.3379	-0.0231
428	SLD 7	0.69	-4.16	71.31	-0.0533	-0.4307	-0.0226
428	SLD 8	1.1	-4.49	71.04	-0.0519	-0.4354	-0.015
428	SLD 9	-3.58	2.32	70.73	-0.0755	-0.4478	-0.0454
428	SLD 10	-3.17	2	70.46	-0.0741	-0.4525	-0.0378
428	SLD 11	-3.12	-3.82	67.65	-0.0489	-0.5453	-0.0373
428	SLD 12	-2.71	-4.14	67.37	-0.0475	-0.55	-0.0297
428	SLD 13	-7.97	0.66	65.45	-0.0614	-0.6144	-0.0618
428	SLD 14	-7.35	0.17	65.03	-0.0592	-0.6216	-0.0502
428	SLD 15	-7.83	-1.18	64.52	-0.0535	-0.6436	-0.0594
428	SLD 16	-7.21	-1.68	64.1	-0.0512	-0.6508	-0.0478
428	SLV 1	12.72	0.25	86.71	-0.0928	0.0468	0.011
428	SLV 2	14.16	-0.91	85.73	-0.0876	0.0301	0.038
428	SLV 3	13.04	-3.95	84.61	-0.0747	-0.0195	0.0166
428	SLV 4	14.48	-5.11	83.64	-0.0695	-0.0362	0.0437
428	SLV 5	2.22	5.88	78.98	-0.1007	-0.1916	-0.0311
428	SLV 6	3.14	5.14	78.35	-0.0974	-0.2023	-0.0137
428	SLV 7	3.28	-8.11	71.99	-0.0405	-0.4128	-0.0122
428	SLV 8	4.21	-8.85	71.36	-0.0371	-0.4235	0.0052
428	SLV 9	-6.69	6.69	70.41	-0.0903	-0.4597	-0.0656
428	SLV 10	-5.76	5.94	69.78	-0.0869	-0.4705	-0.0482
428	SLV 11	-5.63	-7.3	63.41	-0.03	-0.6809	-0.0467
428	SLV 12	-4.7	-8.05	62.78	-0.0267	-0.6917	-0.0293
428	SLV 13	-16.96	2.94	58.13	-0.0579	-0.847	-0.104
428	SLV 14	-15.52	1.78	57.15	-0.0527	-0.8637	-0.077
428	SLV 15	-16.64	-1.25	56.03	-0.0398	-0.9134	-0.0984
428	SLV 16	-15.2	-2.41	55.06	-0.0346	-0.9301	-0.0714
428	CRTFP Ux+	0	0	0	0	0	0
428	CRTFP Ux-	0	0	0	0	0	0
428	CRTFP Uy+	0	0	0	0	0	0
428	CRTFP Uy-	0	0	0	0	0	0
432	SLU 1	0.3	-0.91	66.24	-0.0624	0.3852	0.0043
432	SLU 2	0.3	-0.81	66.22	-0.0621	0.3866	0.0036
432	SLU 3	0.32	-0.93	67.71	-0.0638	0.3921	0.0044
432	SLU 4	0.31	-0.86	67.7	-0.0636	0.393	0.004
432	SLU 5	0.3	-0.83	67.18	-0.0632	0.3912	0.0036
432	SLU 6	0.32	-0.94	68.68	-0.0648	0.3968	0.0045
432	SLU 7	0.32	-0.88	68.66	-0.0646	0.3976	0.004
432	SLU 8	0.32	-0.95	68.17	-0.0645	0.3944	0.0044
432	SLU 9	0.31	-0.89	68.16	-0.0643	0.3953	0.0039
432	SLU 10	0.3	-0.87	74.83	-0.07	0.4449	0.0033
432	SLU 11	0.32	-0.98	76.32	-0.0716	0.4505	0.0042
432	SLU 12	0.32	-0.92	76.31	-0.0714	0.4514	0.0038
432	SLU 13	0.3	-0.89	75.79	-0.071	0.4496	0.0034
432	SLU 14	0.33	-1	77.29	-0.0726	0.4551	0.0042
432	SLU 15	0.32	-0.94	77.27	-0.0724	0.456	0.0038
432	SLU 16	0.32	-1.01	76.78	-0.0723	0.4528	0.0041
432	SLU 17	0.31	-0.95	76.77	-0.0721	0.4536	0.0037
432	SLU 18	0.31	-0.99	78.54	-0.0736	0.4685	0.004
432	SLU 19	0.3	-0.93	78.53	-0.0734	0.4694	0.0035
432	SLU 20	0.31	-1.01	79.5	-0.0746	0.4732	0.004
432	SLU 21	0.31	-0.95	79.49	-0.0744	0.474	0.0036
432	SLU 22	0.36	-0.94	74.35	-0.069	0.4245	0.0051
432	SLU 23	0.35	-0.84	74.33	-0.0688	0.426	0.0044
432	SLU 24	0.37	-0.95	75.83	-0.0704	0.4315	0.0053
432	SLU 25	0.37	-0.89	75.81	-0.0702	0.4324	0.0048
432	SLU 26	0.36	-0.86	75.3	-0.0698	0.4306	0.0044
432	SLU 27	0.38	-0.97	76.79	-0.0714	0.4362	0.0053
432	SLU 28	0.37	-0.91	76.78	-0.0712	0.437	0.0049
432	SLU 29	0.37	-0.98	76.28	-0.0711	0.4338	0.0052
432	SLU 30	0.36	-0.92	76.27	-0.0709	0.4347	0.0048
432	SLU 31	0.35	-0.9	82.94	-0.0766	0.4843	0.0042
432	SLU 32	0.38	-1.01	84.44	-0.0782	0.4899	0.005
432	SLU 33	0.37	-0.95	84.42	-0.078	0.4907	0.0046
432	SLU 34	0.36	-0.92	83.91	-0.0776	0.489	0.0042
432	SLU 35	0.38	-1.03	85.4	-0.0792	0.4945	0.0051
432	SLU 36	0.38	-0.97	85.39	-0.0791	0.4954	0.0046
432	SLU 37	0.37	-1.04	84.89	-0.0789	0.4922	0.005
432	SLU 38	0.37	-0.98	84.88	-0.0787	0.493	0.0045
432	SLU 39	0.36	-1.02	86.65	-0.0802	0.5079	0.0048
432	SLU 40	0.36	-0.96	86.64	-0.08	0.5088	0.0043
432	SLU 41	0.37	-1.04	87.62	-0.0812	0.5125	0.0048
432	SLU 42	0.36	-0.98	87.6	-0.0811	0.5134	0.0044
432	SLU 43	0.38	-1.18	83.33	-0.0789	0.4872	0.0053
432	SLU 44	0.37	-1.08	83.31	-0.0786	0.4886	0.0046
432	SLU 45	0.39	-1.19	84.8	-0.0802	0.4942	0.0054
432	SLU 46	0.39	-1.13	84.79	-0.08	0.4951	0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLU 47	0.37	-1.1	84.27	-0.0796	0.4933	0.0046
432	SLU 48	0.4	-1.21	85.77	-0.0812	0.4988	0.0055
432	SLU 49	0.39	-1.15	85.75	-0.0811	0.4997	0.005
432	SLU 50	0.39	-1.22	85.26	-0.0809	0.4965	0.0054
432	SLU 51	0.38	-1.16	85.25	-0.0808	0.4973	0.0049
432	SLU 52	0.37	-1.13	91.92	-0.0864	0.547	0.0043
432	SLU 53	0.39	-1.24	93.41	-0.088	0.5526	0.0052
432	SLU 54	0.39	-1.18	93.4	-0.0879	0.5534	0.0048
432	SLU 55	0.38	-1.15	92.88	-0.0874	0.5516	0.0044
432	SLU 56	0.4	-1.26	94.38	-0.089	0.5572	0.0052
432	SLU 57	0.39	-1.2	94.36	-0.0889	0.558	0.0048
432	SLU 58	0.39	-1.27	93.87	-0.0887	0.5548	0.0051
432	SLU 59	0.39	-1.21	93.86	-0.0886	0.5557	0.0047
432	SLU 60	0.38	-1.26	95.63	-0.09	0.5706	0.005
432	SLU 61	0.38	-1.2	95.62	-0.0899	0.5714	0.0045
432	SLU 62	0.39	-1.28	96.59	-0.0911	0.5752	0.005
432	SLU 63	0.38	-1.22	96.58	-0.0909	0.5761	0.0046
432	SLU 64	0.43	-1.21	91.44	-0.0855	0.5266	0.0061
432	SLU 65	0.42	-1.11	91.42	-0.0852	0.528	0.0054
432	SLU 66	0.44	-1.22	92.92	-0.0868	0.5336	0.0062
432	SLU 67	0.44	-1.16	92.9	-0.0867	0.5344	0.0058
432	SLU 68	0.43	-1.13	92.39	-0.0863	0.5326	0.0054
432	SLU 69	0.45	-1.24	93.88	-0.0879	0.5382	0.0063
432	SLU 70	0.44	-1.18	93.87	-0.0877	0.5391	0.0059
432	SLU 71	0.44	-1.25	93.37	-0.0876	0.5359	0.0062
432	SLU 72	0.44	-1.19	93.36	-0.0874	0.5367	0.0058
432	SLU 73	0.43	-1.16	100.03	-0.093	0.5864	0.0052
432	SLU 74	0.45	-1.27	101.53	-0.0946	0.5919	0.006
432	SLU 75	0.44	-1.21	101.51	-0.0945	0.5928	0.0056
432	SLU 76	0.43	-1.18	101	-0.0941	0.591	0.0052
432	SLU 77	0.45	-1.29	102.49	-0.0957	0.5966	0.0061
432	SLU 78	0.45	-1.23	102.48	-0.0955	0.5974	0.0056
432	SLU 79	0.45	-1.3	101.98	-0.0954	0.5942	0.006
432	SLU 80	0.44	-1.24	101.97	-0.0952	0.5951	0.0055
432	SLU 81	0.44	-1.29	103.74	-0.0966	0.61	0.0058
432	SLU 82	0.43	-1.23	103.73	-0.0965	0.6108	0.0053
432	SLU 83	0.44	-1.31	104.71	-0.0977	0.6146	0.0058
432	SLU 84	0.44	-1.25	104.69	-0.0975	0.6154	0.0054
432	SLE RA 1	0.32	-0.92	68.56	-0.0643	0.3964	0.0045
432	SLE RA 2	0.31	-0.86	68.54	-0.0641	0.3974	0.004
432	SLE RA 3	0.33	-0.93	69.54	-0.0652	0.4011	0.0046
432	SLE RA 4	0.33	-0.89	69.53	-0.0651	0.4016	0.0043
432	SLE RA 5	0.32	-0.87	69.19	-0.0648	0.4005	0.0041
432	SLE RA 6	0.33	-0.94	70.18	-0.0659	0.4042	0.0046
432	SLE RA 7	0.33	-0.9	70.17	-0.0658	0.4047	0.0044
432	SLE RA 8	0.33	-0.95	69.84	-0.0657	0.4026	0.0046
432	SLE RA 9	0.32	-0.91	69.84	-0.0656	0.4032	0.0043
432	SLE RA 10	0.32	-0.89	74.28	-0.0693	0.4363	0.0039
432	SLE RA 11	0.33	-0.97	75.28	-0.0704	0.44	0.0045
432	SLE RA 12	0.33	-0.93	75.27	-0.0703	0.4405	0.0042
432	SLE RA 13	0.32	-0.9	74.93	-0.07	0.4394	0.0039
432	SLE RA 14	0.33	-0.98	75.92	-0.0711	0.4431	0.0045
432	SLE RA 15	0.33	-0.94	75.91	-0.071	0.4436	0.0042
432	SLE RA 16	0.33	-0.99	75.58	-0.0709	0.4415	0.0044
432	SLE RA 17	0.33	-0.94	75.58	-0.0708	0.4421	0.0041
432	SLE RA 18	0.32	-0.97	76.76	-0.0717	0.452	0.0043
432	SLE RA 19	0.32	-0.93	76.75	-0.0716	0.4526	0.004
432	SLE RA 20	0.33	-0.99	77.4	-0.0724	0.4551	0.0043
432	SLE RA 21	0.32	-0.95	77.39	-0.0723	0.4557	0.004
432	SLE FR 1	0.32	-0.92	68.56	-0.0643	0.3964	0.0045
432	SLE FR 2	0.32	-0.91	68.55	-0.0643	0.3966	0.0044
432	SLE FR 3	0.32	-0.93	68.81	-0.0646	0.3976	0.0045
432	SLE FR 4	0.32	-0.92	71.01	-0.0665	0.4133	0.0043
432	SLE FR 5	0.32	-0.94	71.27	-0.0668	0.4143	0.0045
432	SLE FR 6	0.32	-0.95	72.66	-0.068	0.4242	0.0044
432	SLE QP 1	0.32	-0.92	68.56	-0.0643	0.3964	0.0045
432	SLE QP 2	0.32	-0.94	71.02	-0.0665	0.4131	0.0044
432	SLD 1	6.66	0.38	65.44	-0.0576	0.5227	0.0312
432	SLD 2	7.3	0.87	65.88	-0.0597	0.5145	0.0426
432	SLD 3	6.54	-1.45	64.54	-0.05	0.5529	0.0297
432	SLD 4	7.17	-0.95	64.97	-0.0521	0.5448	0.0411
432	SLD 5	2.3	2.14	70.63	-0.0749	0.4015	0.0127
432	SLD 6	2.72	2.46	70.92	-0.0763	0.3962	0.0201
432	SLD 7	1.88	-3.95	67.63	-0.0497	0.5024	0.0078
432	SLD 8	2.29	-3.62	67.91	-0.0511	0.497	0.0152
432	SLD 9	-1.65	1.75	74.12	-0.0819	0.3291	-0.0063
432	SLD 10	-1.24	2.07	74.4	-0.0833	0.3238	0.0011
432	SLD 11	-2.08	-4.34	71.11	-0.0567	0.43	-0.0113
432	SLD 12	-1.66	-4.01	71.4	-0.0581	0.4247	-0.0038
432	SLD 13	-6.53	-0.93	77.06	-0.0809	0.2814	-0.0322
432	SLD 14	-5.89	-0.43	77.49	-0.083	0.2732	-0.0208
432	SLD 15	-6.66	-2.75	76.16	-0.0734	0.3117	-0.0337
432	SLD 16	-6.02	-2.25	76.59	-0.0755	0.3035	-0.0223
432	SLV 1	15.15	2.08	57.94	-0.0453	0.6705	0.0671
432	SLV 2	16.63	3.24	58.95	-0.0502	0.6515	0.0936
432	SLV 3	14.86	-2.07	55.9	-0.0282	0.7391	0.0636
432	SLV 4	16.34	-0.91	56.91	-0.0331	0.7201	0.0901
432	SLV 5	4.96	6.07	70.02	-0.0853	0.3896	0.0239
432	SLV 6	5.91	6.82	70.67	-0.0885	0.3773	0.041
432	SLV 7	3.98	-7.78	63.21	-0.0282	0.6182	0.0124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLV 8	4.93	-7.04	63.86	-0.0314	0.6059	0.0295
432	SLV 9	-4.29	5.16	78.17	-0.1017	0.2202	-0.0206
432	SLV 10	-3.34	5.91	78.82	-0.1049	0.2079	-0.0035
432	SLV 11	-5.27	-8.7	71.37	-0.0446	0.4489	-0.0321
432	SLV 12	-4.32	-7.95	72.02	-0.0478	0.4366	-0.015
432	SLV 13	-15.69	-0.96	85.12	-0.0999	0.1061	-0.0812
432	SLV 14	-14.22	0.2	86.14	-0.1049	0.087	-0.0547
432	SLV 15	-15.99	-5.12	83.08	-0.0828	0.1747	-0.0847
432	SLV 16	-14.51	-3.96	84.1	-0.0878	0.1556	-0.0582
432	CRTFP Ux+	0	0	0	0	0	0
432	CRTFP Ux-	0	0	0	0	0	0
432	CRTFP Uy+	0	0	0	0	0	0
432	CRTFP Uy-	0	0	0	0	0	0
433	SLU 1	0.25	0.33	39.34	-0.0636	9.6608	-0.1158
433	SLU 2	0.25	0.42	39.32	-0.0634	9.65	-0.1494
433	SLU 3	0.26	0.34	40.24	-0.0652	9.8727	-0.1201
433	SLU 4	0.26	0.4	40.23	-0.0651	9.8663	-0.1402
433	SLU 5	0.25	0.43	39.9	-0.0645	9.7863	-0.1498
433	SLU 6	0.26	0.34	40.81	-0.0663	10.009	-0.1205
433	SLU 7	0.26	0.4	40.8	-0.0661	10.0025	-0.1406
433	SLU 8	0.26	0.33	40.49	-0.0658	9.9333	-0.1166
433	SLU 9	0.26	0.39	40.48	-0.0656	9.9268	-0.1367
433	SLU 10	0.25	0.5	44.24	-0.0718	10.8237	-0.1765
433	SLU 11	0.26	0.42	45.16	-0.0736	11.0464	-0.1472
433	SLU 12	0.26	0.48	45.15	-0.0735	11.0399	-0.1673
433	SLU 13	0.25	0.5	44.82	-0.0729	10.96	-0.1769
433	SLU 14	0.26	0.42	45.74	-0.0747	11.1827	-0.1475
433	SLU 15	0.26	0.48	45.73	-0.0746	11.1762	-0.1677
433	SLU 16	0.25	0.41	45.41	-0.0742	11.107	-0.1437
433	SLU 17	0.26	0.47	45.4	-0.0741	11.1005	-0.1638
433	SLU 18	0.25	0.44	46.37	-0.0757	11.3375	-0.1545
433	SLU 19	0.25	0.5	46.36	-0.0755	11.331	-0.1747
433	SLU 20	0.25	0.44	46.94	-0.0767	11.4737	-0.1549
433	SLU 21	0.25	0.5	46.93	-0.0766	11.4673	-0.175
433	SLU 22	0.28	0.4	44.15	-0.0717	10.8048	-0.1414
433	SLU 23	0.28	0.5	44.13	-0.0715	10.7941	-0.175
433	SLU 24	0.29	0.41	45.05	-0.0733	11.0168	-0.1457
433	SLU 25	0.29	0.47	45.04	-0.0732	11.0103	-0.1658
433	SLU 26	0.29	0.5	44.71	-0.0726	10.9303	-0.1754
433	SLU 27	0.3	0.41	45.63	-0.0744	11.153	-0.1461
433	SLU 28	0.3	0.47	45.62	-0.0742	11.1466	-0.1662
433	SLU 29	0.29	0.4	45.31	-0.0739	11.0774	-0.1422
433	SLU 30	0.29	0.46	45.3	-0.0737	11.0709	-0.1623
433	SLU 31	0.28	0.57	49.06	-0.0799	11.9678	-0.2021
433	SLU 32	0.29	0.49	49.97	-0.0817	12.1904	-0.1728
433	SLU 33	0.29	0.55	49.96	-0.0816	12.184	-0.1929
433	SLU 34	0.28	0.58	49.63	-0.081	12.104	-0.2025
433	SLU 35	0.29	0.49	50.55	-0.0828	12.3267	-0.1731
433	SLU 36	0.29	0.55	50.54	-0.0827	12.3202	-0.1933
433	SLU 37	0.29	0.48	50.23	-0.0823	12.251	-0.1693
433	SLU 38	0.29	0.54	50.22	-0.0822	12.2446	-0.1894
433	SLU 39	0.28	0.51	51.18	-0.0838	12.4815	-0.1801
433	SLU 40	0.28	0.57	51.17	-0.0836	12.4751	-0.2003
433	SLU 41	0.28	0.51	51.76	-0.0848	12.6178	-0.1805
433	SLU 42	0.28	0.57	51.75	-0.0847	12.6113	-0.2006
433	SLU 43	0.31	0.4	49.49	-0.08	12.1668	-0.1418
433	SLU 44	0.31	0.5	49.47	-0.0797	12.156	-0.1754
433	SLU 45	0.32	0.41	50.39	-0.0815	12.3787	-0.1461
433	SLU 46	0.32	0.47	50.38	-0.0814	12.3722	-0.1662
433	SLU 47	0.31	0.5	50.05	-0.0808	12.2923	-0.1758
433	SLU 48	0.32	0.41	50.96	-0.0826	12.515	-0.1464
433	SLU 49	0.32	0.47	50.95	-0.0825	12.5085	-0.1666
433	SLU 50	0.32	0.4	50.64	-0.0821	12.4393	-0.1426
433	SLU 51	0.32	0.46	50.63	-0.082	12.4328	-0.1627
433	SLU 52	0.31	0.57	54.39	-0.0881	13.3297	-0.2024
433	SLU 53	0.32	0.49	55.31	-0.09	13.5524	-0.1731
433	SLU 54	0.32	0.55	55.3	-0.0898	13.5459	-0.1933
433	SLU 55	0.31	0.58	54.97	-0.0892	13.4659	-0.2028
433	SLU 56	0.32	0.49	55.89	-0.091	13.6886	-0.1735
433	SLU 57	0.32	0.55	55.88	-0.0909	13.6822	-0.1937
433	SLU 58	0.32	0.48	55.56	-0.0905	13.613	-0.1696
433	SLU 59	0.32	0.54	55.55	-0.0904	13.6065	-0.1898
433	SLU 60	0.31	0.51	56.52	-0.092	13.8435	-0.1805
433	SLU 61	0.31	0.57	56.51	-0.0918	13.837	-0.2006
433	SLU 62	0.31	0.51	57.09	-0.0931	13.9797	-0.1809
433	SLU 63	0.31	0.57	57.08	-0.0929	13.9733	-0.201
433	SLU 64	0.34	0.47	54.3	-0.0881	13.3108	-0.1674
433	SLU 65	0.34	0.57	54.28	-0.0878	13.3001	-0.201
433	SLU 66	0.35	0.49	55.2	-0.0896	13.5228	-0.1717
433	SLU 67	0.35	0.54	55.19	-0.0895	13.5163	-0.1918
433	SLU 68	0.35	0.57	54.86	-0.0889	13.4363	-0.2014
433	SLU 69	0.36	0.49	55.78	-0.0907	13.659	-0.172
433	SLU 70	0.36	0.55	55.77	-0.0906	13.6526	-0.1922
433	SLU 71	0.35	0.48	55.46	-0.0902	13.5833	-0.1682
433	SLU 72	0.35	0.53	55.45	-0.0901	13.5769	-0.1883
433	SLU 73	0.34	0.65	59.21	-0.0962	14.4737	-0.2281
433	SLU 74	0.35	0.56	60.12	-0.098	14.6964	-0.1987
433	SLU 75	0.35	0.62	60.11	-0.0979	14.69	-0.2189
433	SLU 76	0.35	0.65	59.78	-0.0973	14.61	-0.2284
433	SLU 77	0.36	0.56	60.7	-0.0991	14.8327	-0.1991

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
433	SLU 78	0.36	0.62	60.69	-0.099	14.8262	-0.2193
433	SLU 79	0.35	0.55	60.38	-0.0986	14.757	-0.1953
433	SLU 80	0.35	0.61	60.37	-0.0985	14.7506	-0.2154
433	SLU 81	0.34	0.58	61.33	-0.1001	14.9875	-0.2061
433	SLU 82	0.34	0.64	61.32	-0.0999	14.9811	-0.2262
433	SLU 83	0.35	0.59	61.91	-0.1012	15.1238	-0.2065
433	SLU 84	0.35	0.64	61.9	-0.101	15.1173	-0.2266
433	SLE RA 1	0.26	0.35	40.71	-0.066	9.9877	-0.1231
433	SLE RA 2	0.26	0.41	40.7	-0.0658	9.9805	-0.1455
433	SLE RA 3	0.26	0.36	41.31	-0.067	10.1289	-0.126
433	SLE RA 4	0.26	0.4	41.31	-0.0669	10.1246	-0.1394
433	SLE RA 5	0.26	0.41	41.09	-0.0665	10.0713	-0.1458
433	SLE RA 6	0.27	0.36	41.7	-0.0677	10.2198	-0.1262
433	SLE RA 7	0.27	0.4	41.69	-0.0676	10.2155	-0.1397
433	SLE RA 8	0.26	0.35	41.48	-0.0674	10.1693	-0.1237
433	SLE RA 9	0.26	0.39	41.48	-0.0673	10.165	-0.1371
433	SLE RA 10	0.26	0.46	43.98	-0.0714	10.7629	-0.1636
433	SLE RA 11	0.26	0.41	44.59	-0.0726	10.9114	-0.144
433	SLE RA 12	0.26	0.45	44.59	-0.0725	10.9071	-0.1575
433	SLE RA 13	0.26	0.47	44.37	-0.0721	10.8538	-0.1638
433	SLE RA 14	0.27	0.41	44.98	-0.0733	11.0022	-0.1443
433	SLE RA 15	0.27	0.45	44.97	-0.0732	10.9979	-0.1577
433	SLE RA 16	0.26	0.4	44.76	-0.073	10.9518	-0.1417
433	SLE RA 17	0.26	0.44	44.76	-0.0729	10.9475	-0.1551
433	SLE RA 18	0.26	0.42	45.4	-0.074	11.1054	-0.1489
433	SLE RA 19	0.26	0.46	45.39	-0.0739	11.1011	-0.1624
433	SLE RA 20	0.26	0.42	45.78	-0.0747	11.1963	-0.1492
433	SLE RA 21	0.26	0.46	45.78	-0.0746	11.192	-0.1626
433	SLE FR 1	0.26	0.35	40.71	-0.066	9.9877	-0.1231
433	SLE FR 2	0.26	0.36	40.71	-0.0659	9.9862	-0.1276
433	SLE FR 3	0.26	0.35	40.87	-0.0662	10.024	-0.1232
433	SLE FR 4	0.26	0.38	42.12	-0.0683	10.3216	-0.1354
433	SLE FR 5	0.26	0.37	42.27	-0.0686	10.3593	-0.131
433	SLE FR 6	0.26	0.39	43.06	-0.07	10.5466	-0.136
433	SLE QP 1	0.26	0.35	40.71	-0.066	9.9877	-0.1231
433	SLE QP 2	0.26	0.37	42.12	-0.0684	10.323	-0.1309
433	SLD 1	3.91	0.21	31.42	-0.0505	7.8975	-0.0745
433	SLD 2	4.27	0.98	31.86	-0.0532	8.0039	-0.3421
433	SLD 3	3.83	-1.34	30.64	-0.0453	7.7154	0.4676
433	SLD 4	4.19	-0.57	31.08	-0.048	7.8218	0.2
433	SLD 5	1.41	2.54	40.03	-0.0704	9.8527	-0.8885
433	SLD 6	1.65	3.04	40.31	-0.0722	9.9224	-1.064
433	SLD 7	1.14	-2.63	37.4	-0.053	9.2456	0.9184
433	SLD 8	1.38	-2.13	37.69	-0.0548	9.3153	0.743
433	SLD 9	-0.86	2.87	46.55	-0.0819	11.3307	-1.0047
433	SLD 10	-0.63	3.37	46.83	-0.0837	11.4004	-1.1802
433	SLD 11	-1.13	-2.3	43.92	-0.0645	10.7236	0.8022
433	SLD 12	-0.9	-1.8	44.21	-0.0663	10.7933	0.6268
433	SLD 13	-3.67	1.32	53.16	-0.0887	12.8242	-0.4618
433	SLD 14	-3.31	2.08	53.6	-0.0914	12.9306	-0.7294
433	SLD 15	-3.76	-0.24	52.37	-0.0835	12.6421	0.0803
433	SLD 16	-3.39	0.53	52.81	-0.0862	12.7485	-0.1873
433	SLV 1	8.79	-0.06	17.07	-0.0263	4.6404	0.0172
433	SLV 2	9.64	1.74	18.09	-0.0327	4.8882	-0.6062
433	SLV 3	8.61	-3.58	15.28	-0.0145	4.2278	1.2504
433	SLV 4	9.45	-1.79	16.3	-0.0209	4.4756	0.6271
433	SLV 5	2.95	5.28	37.13	-0.0726	9.2014	-1.8496
433	SLV 6	3.5	6.44	37.79	-0.0766	9.361	-2.2513
433	SLV 7	2.33	-6.47	31.19	-0.0332	7.826	2.2613
433	SLV 8	2.88	-5.32	31.84	-0.0373	7.9856	1.8596
433	SLV 9	-2.37	6.06	52.39	-0.0994	12.6604	-2.1214
433	SLV 10	-1.82	7.22	53.05	-0.1035	12.82	-2.5231
433	SLV 11	-2.98	-5.7	46.45	-0.0601	11.285	1.9895
433	SLV 12	-2.44	-4.54	47.1	-0.0642	11.4446	1.5878
433	SLV 13	-8.94	2.53	67.93	-0.1158	16.1704	-0.8888
433	SLV 14	-8.09	4.33	68.96	-0.1222	16.4182	-1.5122
433	SLV 15	-9.12	-0.99	66.15	-0.104	15.7578	0.3444
433	SLV 16	-8.28	0.8	67.17	-0.1104	16.0055	-0.2789
433	CRTFP Ux+	0	0	0	0	0	0
433	CRTFP Ux-	0	0	0	0	0	0
433	CRTFP Uy+	0	0	0	0	0	0
433	CRTFP Uy-	0	0	0	0	0	0
435	SLU 1	-0.68	-0.08	36.14	-0.0727	-5.6204	-0.0227
435	SLU 2	-0.68	0.01	36.12	-0.0723	-5.6112	-0.0002
435	SLU 3	-0.7	-0.08	36.97	-0.0744	-5.742	-0.0226
435	SLU 4	-0.7	-0.03	36.95	-0.0742	-5.7365	-0.0091
435	SLU 5	-0.69	0.01	36.65	-0.0735	-5.6895	-0.0008
435	SLU 6	-0.71	-0.08	37.5	-0.0756	-5.8204	-0.0232
435	SLU 7	-0.71	-0.03	37.49	-0.0754	-5.8148	-0.0097
435	SLU 8	-0.7	-0.09	37.21	-0.075	-5.7771	-0.0239
435	SLU 9	-0.7	-0.03	37.19	-0.0748	-5.7716	-0.0104
435	SLU 10	-0.73	0.02	40.63	-0.0818	-6.2878	0.002
435	SLU 11	-0.76	-0.07	41.48	-0.0838	-6.4187	-0.0204
435	SLU 12	-0.75	-0.02	41.47	-0.0837	-6.4131	-0.0069
435	SLU 13	-0.74	0.02	41.16	-0.0829	-6.3662	0.0014
435	SLU 14	-0.77	-0.07	42.01	-0.085	-6.497	-0.021
435	SLU 15	-0.76	-0.02	42	-0.0848	-6.4915	-0.0075
435	SLU 16	-0.76	-0.08	41.72	-0.0844	-6.4538	-0.0217
435	SLU 17	-0.75	-0.02	41.7	-0.0842	-6.4482	-0.0082
435	SLU 18	-0.76	-0.07	42.59	-0.0861	-6.5871	-0.0195

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
435	SLU 19	-0.76	-0.01	42.57	-0.0859	-6.5815	-0.006
435	SLU 20	-0.77	-0.07	43.12	-0.0873	-6.6654	-0.0201
435	SLU 21	-0.77	-0.02	43.11	-0.0871	-6.6599	-0.0066
435	SLU 22	-0.77	-0.07	40.58	-0.0817	-6.2817	-0.0195
435	SLU 23	-0.77	0.02	40.55	-0.0814	-6.2724	0.003
435	SLU 24	-0.79	-0.07	41.41	-0.0835	-6.4033	-0.0194
435	SLU 25	-0.79	-0.01	41.39	-0.0833	-6.3977	-0.0059
435	SLU 26	-0.78	0.02	41.09	-0.0826	-6.3508	0.0024
435	SLU 27	-0.8	-0.07	41.94	-0.0847	-6.4816	-0.02
435	SLU 28	-0.8	-0.01	41.92	-0.0845	-6.4761	-0.0065
435	SLU 29	-0.79	-0.07	41.64	-0.0841	-6.4383	-0.0207
435	SLU 30	-0.79	-0.02	41.63	-0.0839	-6.4328	-0.0072
435	SLU 31	-0.82	0.03	45.07	-0.0909	-6.9491	0.0052
435	SLU 32	-0.85	-0.06	45.92	-0.0929	-7.0799	-0.0172
435	SLU 33	-0.84	0	45.9	-0.0927	-7.0744	-0.0037
435	SLU 34	-0.83	0.03	45.6	-0.092	-7.0274	0.0046
435	SLU 35	-0.86	-0.06	46.45	-0.0941	-7.1583	-0.0178
435	SLU 36	-0.86	0	46.43	-0.0939	-7.1528	-0.0043
435	SLU 37	-0.85	-0.06	46.15	-0.0935	-7.115	-0.0185
435	SLU 38	-0.85	-0.01	46.14	-0.0933	-7.1095	-0.005
435	SLU 39	-0.85	-0.05	47.03	-0.0952	-7.2483	-0.0164
435	SLU 40	-0.85	0	47.01	-0.095	-7.2428	-0.0029
435	SLU 41	-0.86	-0.06	47.56	-0.0964	-7.3267	-0.017
435	SLU 42	-0.86	0	47.54	-0.0962	-7.3211	-0.0035
435	SLU 43	-0.86	-0.11	45.47	-0.0913	-7.0798	-0.0306
435	SLU 44	-0.85	-0.02	45.44	-0.091	-7.0706	-0.0081
435	SLU 45	-0.88	-0.11	46.29	-0.0931	-7.2014	-0.0305
435	SLU 46	-0.87	-0.06	46.28	-0.0929	-7.1959	-0.017
435	SLU 47	-0.86	-0.02	45.97	-0.0922	-7.1489	-0.0087
435	SLU 48	-0.89	-0.11	46.82	-0.0942	-7.2798	-0.0311
435	SLU 49	-0.88	-0.06	46.81	-0.0941	-7.2742	-0.0176
435	SLU 50	-0.88	-0.12	46.53	-0.0937	-7.2365	-0.0318
435	SLU 51	-0.87	-0.06	46.51	-0.0935	-7.2309	-0.0183
435	SLU 52	-0.91	-0.01	49.95	-0.1005	-7.7472	-0.0059
435	SLU 53	-0.93	-0.1	50.8	-0.1025	-7.8781	-0.0283
435	SLU 54	-0.93	-0.05	50.79	-0.1023	-7.8725	-0.0148
435	SLU 55	-0.92	-0.01	50.48	-0.1016	-7.8256	-0.0065
435	SLU 56	-0.94	-0.1	51.33	-0.1037	-7.9564	-0.0289
435	SLU 57	-0.94	-0.05	51.32	-0.1035	-7.9509	-0.0154
435	SLU 58	-0.93	-0.11	51.04	-0.1031	-7.9131	-0.0296
435	SLU 59	-0.93	-0.05	51.02	-0.1029	-7.9076	-0.0161
435	SLU 60	-0.94	-0.1	51.91	-0.1048	-8.0465	-0.0274
435	SLU 61	-0.93	-0.04	51.9	-0.1046	-8.0409	-0.0139
435	SLU 62	-0.95	-0.1	52.44	-0.106	-8.1248	-0.028
435	SLU 63	-0.94	-0.04	52.43	-0.1058	-8.1193	-0.0145
435	SLU 64	-0.95	-0.1	49.9	-0.1004	-7.741	-0.0274
435	SLU 65	-0.94	-0.01	49.88	-0.1001	-7.7318	-0.0049
435	SLU 66	-0.97	-0.1	50.73	-0.1022	-7.8627	-0.0273
435	SLU 67	-0.96	-0.04	50.71	-0.102	-7.8571	-0.0138
435	SLU 68	-0.95	-0.01	50.41	-0.1013	-7.8102	-0.0055
435	SLU 69	-0.98	-0.1	51.26	-0.1033	-7.941	-0.0279
435	SLU 70	-0.97	-0.04	51.24	-0.1032	-7.9355	-0.0144
435	SLU 71	-0.97	-0.1	50.96	-0.1028	-7.8977	-0.0286
435	SLU 72	-0.96	-0.05	50.95	-0.1026	-7.8922	-0.0151
435	SLU 73	-1	0	54.39	-0.1096	-8.4085	-0.0027
435	SLU 74	-1.02	-0.09	55.24	-0.1116	-8.5393	-0.0251
435	SLU 75	-1.02	-0.03	55.22	-0.1114	-8.5338	-0.0116
435	SLU 76	-1.01	0	54.92	-0.1107	-8.4868	-0.0033
435	SLU 77	-1.03	-0.09	55.77	-0.1128	-8.6177	-0.0257
435	SLU 78	-1.03	-0.03	55.76	-0.1126	-8.6122	-0.0122
435	SLU 79	-1.02	-0.09	55.48	-0.1122	-8.5744	-0.0264
435	SLU 80	-1.02	-0.04	55.46	-0.112	-8.5689	-0.0129
435	SLU 81	-1.03	-0.08	56.35	-0.1139	-8.7077	-0.0243
435	SLU 82	-1.02	-0.03	56.33	-0.1137	-8.7022	-0.0108
435	SLU 83	-1.04	-0.09	56.88	-0.1151	-8.7861	-0.0249
435	SLU 84	-1.03	-0.03	56.86	-0.1149	-8.7805	-0.0114
435	SLE RA 1	-0.71	-0.08	37.41	-0.0752	-5.8093	-0.0218
435	SLE RA 2	-0.7	-0.02	37.39	-0.075	-5.8032	-0.0068
435	SLE RA 3	-0.72	-0.08	37.96	-0.0764	-5.8904	-0.0217
435	SLE RA 4	-0.72	-0.04	37.95	-0.0763	-5.8867	-0.0127
435	SLE RA 5	-0.71	-0.02	37.75	-0.0758	-5.8554	-0.0072
435	SLE RA 6	-0.73	-0.08	38.32	-0.0772	-5.9426	-0.0221
435	SLE RA 7	-0.73	-0.04	38.31	-0.0771	-5.9389	-0.0131
435	SLE RA 8	-0.72	-0.08	38.12	-0.0768	-5.9138	-0.0226
435	SLE RA 9	-0.72	-0.04	38.11	-0.0767	-5.9101	-0.0136
435	SLE RA 10	-0.74	-0.01	40.4	-0.0813	-6.2543	-0.0053
435	SLE RA 11	-0.76	-0.07	40.97	-0.0827	-6.3415	-0.0202
435	SLE RA 12	-0.76	-0.03	40.96	-0.0826	-6.3378	-0.0112
435	SLE RA 13	-0.75	-0.01	40.76	-0.0821	-6.3065	-0.0057
435	SLE RA 14	-0.77	-0.07	41.32	-0.0835	-6.3937	-0.0206
435	SLE RA 15	-0.76	-0.04	41.31	-0.0834	-6.3901	-0.0116
435	SLE RA 16	-0.76	-0.07	41.13	-0.0831	-6.3649	-0.0211
435	SLE RA 17	-0.76	-0.04	41.12	-0.083	-6.3612	-0.0121
435	SLE RA 18	-0.76	-0.07	41.71	-0.0842	-6.4538	-0.0197
435	SLE RA 19	-0.76	-0.03	41.7	-0.0841	-6.4501	-0.0107
435	SLE RA 20	-0.77	-0.07	42.06	-0.085	-6.506	-0.0201
435	SLE RA 21	-0.77	-0.03	42.05	-0.0849	-6.5023	-0.0111
435	SLE FR 1	-0.71	-0.08	37.41	-0.0752	-5.8093	-0.0218
435	SLE FR 2	-0.71	-0.07	37.41	-0.0752	-5.8081	-0.0188
435	SLE FR 3	-0.71	-0.08	37.55	-0.0756	-5.8302	-0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
435	SLE FR 4	-0.72	-0.06	38.7	-0.0779	-6.0014	-0.0182
435	SLE FR 5	-0.73	-0.08	38.84	-0.0783	-6.0235	-0.0213
435	SLE FR 6	-0.73	-0.07	39.56	-0.0797	-6.1315	-0.0207
435	SLE QP 1	-0.71	-0.08	37.41	-0.0752	-5.8093	-0.0218
435	SLE QP 2	-0.72	-0.07	38.7	-0.0779	-6.0027	-0.0212
435	SLD 1	2.32	0.46	49.66	-0.1034	-7.5687	0.3676
435	SLD 2	2.62	-0.22	49.27	-0.1005	-7.5076	0.1981
435	SLD 3	2.37	-0.96	48.92	-0.0979	-7.4597	0.0141
435	SLD 4	2.68	-1.64	48.53	-0.095	-7.3986	-0.1555
435	SLD 5	0.05	2.36	43.17	-0.0945	-6.6485	0.6618
435	SLD 6	0.25	1.91	42.91	-0.0926	-6.6085	0.5507
435	SLD 7	0.24	-2.37	40.72	-0.0761	-6.2854	-0.5166
435	SLD 8	0.44	-2.82	40.47	-0.0742	-6.2454	-0.6278
435	SLD 9	-1.89	2.67	36.93	-0.0817	-5.7599	0.5855
435	SLD 10	-1.68	2.22	36.68	-0.0798	-5.7199	0.4743
435	SLD 11	-1.7	-2.06	34.49	-0.0633	-5.3968	-0.593
435	SLD 12	-1.5	-2.51	34.23	-0.0614	-5.3568	-0.7041
435	SLD 13	-4.13	1.49	28.87	-0.0609	-4.6067	0.1132
435	SLD 14	-3.82	0.81	28.48	-0.058	-4.5456	-0.0564
435	SLD 15	-4.07	0.07	28.13	-0.0553	-4.4977	-0.2404
435	SLD 16	-3.77	-0.61	27.74	-0.0525	-4.4366	-0.4099
435	SLV 1	6.39	1.13	64.32	-0.1373	-9.6633	0.8764
435	SLV 2	7.1	-0.46	63.41	-0.1306	-9.5209	0.4815
435	SLV 3	6.52	-2.1	62.65	-0.1248	-9.416	0.0718
435	SLV 4	7.24	-3.69	61.74	-0.1181	-9.2737	-0.3232
435	SLV 5	1.09	5.46	49.07	-0.1159	-7.5003	1.5365
435	SLV 6	1.55	4.43	48.48	-0.1116	-7.4086	1.282
435	SLV 7	1.53	-5.3	43.52	-0.0742	-6.6762	-1.1457
435	SLV 8	1.98	-6.33	42.93	-0.0699	-6.5845	-1.4002
435	SLV 9	-3.43	6.18	34.47	-0.086	-5.4208	1.3579
435	SLV 10	-2.97	5.15	33.88	-0.0817	-5.3291	1.1034
435	SLV 11	-3	-4.58	28.92	-0.0443	-4.5967	-1.3244
435	SLV 12	-2.54	-5.61	28.33	-0.04	-4.505	-1.5789
435	SLV 13	-8.68	3.54	15.66	-0.0378	-2.7316	0.2809
435	SLV 14	-7.97	1.95	14.75	-0.0311	-2.5893	-0.1141
435	SLV 15	-8.55	0.31	13.99	-0.0252	-2.4844	-0.5238
435	SLV 16	-7.84	-1.28	13.08	-0.0186	-2.342	-0.9187
435	CRTFP Ux+	0	0	0	0	0	0
435	CRTFP Ux-	0	0	0	0	0	0
435	CRTFP Uy+	0	0	0	0	0	0
435	CRTFP Uy-	0	0	0	0	0	0
439	SLU 1	0.06	-0.21	33.79	-0.0159	9.6439	0.0735
439	SLU 2	0.05	-0.16	33.82	-0.0161	9.6545	0.0553
439	SLU 3	0.06	-0.2	34.51	-0.0163	9.8422	0.0709
439	SLU 4	0.06	-0.17	34.53	-0.0165	9.8486	0.0599
439	SLU 5	0.05	-0.16	34.3	-0.0165	9.7828	0.0562
439	SLU 6	0.06	-0.2	34.99	-0.0168	9.9705	0.0718
439	SLU 7	0.06	-0.17	35.01	-0.0169	9.9769	0.0609
439	SLU 8	0.06	-0.21	34.73	-0.0167	9.9005	0.0753
439	SLU 9	0.06	-0.18	34.76	-0.0169	9.9069	0.0644
439	SLU 10	0.05	-0.14	38.43	-0.0186	10.9416	0.0489
439	SLU 11	0.06	-0.18	39.12	-0.0189	11.1293	0.0646
439	SLU 12	0.06	-0.15	39.15	-0.019	11.1357	0.0536
439	SLU 13	0.05	-0.14	38.91	-0.0191	11.0699	0.0498
439	SLU 14	0.06	-0.18	39.6	-0.0193	11.2576	0.0655
439	SLU 15	0.06	-0.15	39.62	-0.0194	11.264	0.0545
439	SLU 16	0.06	-0.2	39.34	-0.0193	11.1876	0.069
439	SLU 17	0.06	-0.16	39.37	-0.0194	11.194	0.058
439	SLU 18	0.05	-0.18	40.37	-0.0195	11.4826	0.0645
439	SLU 19	0.05	-0.15	40.39	-0.0197	11.489	0.0535
439	SLU 20	0.06	-0.18	40.85	-0.0199	11.6109	0.0654
439	SLU 21	0.05	-0.15	40.87	-0.0201	11.6173	0.0544
439	SLU 22	0.07	-0.17	37.76	-0.0178	10.7402	0.0615
439	SLU 23	0.07	-0.12	37.8	-0.0179	10.7508	0.0432
439	SLU 24	0.07	-0.17	38.49	-0.0182	10.9385	0.0588
439	SLU 25	0.07	-0.13	38.51	-0.0183	10.9449	0.0479
439	SLU 26	0.07	-0.12	38.27	-0.0183	10.8791	0.0441
439	SLU 27	0.08	-0.17	38.96	-0.0186	11.0668	0.0598
439	SLU 28	0.07	-0.14	38.98	-0.0187	11.0732	0.0488
439	SLU 29	0.07	-0.18	38.71	-0.0186	10.9968	0.0633
439	SLU 30	0.07	-0.15	38.73	-0.0187	11.0032	0.0523
439	SLU 31	0.06	-0.1	42.41	-0.0205	12.0379	0.0369
439	SLU 32	0.07	-0.15	43.1	-0.0207	12.2256	0.0525
439	SLU 33	0.07	-0.12	43.12	-0.0208	12.232	0.0415
439	SLU 34	0.07	-0.11	42.88	-0.0209	12.1662	0.0378
439	SLU 35	0.07	-0.15	43.57	-0.0211	12.3539	0.0534
439	SLU 36	0.07	-0.12	43.6	-0.0212	12.3603	0.0425
439	SLU 37	0.07	-0.16	43.32	-0.0211	12.2839	0.0569
439	SLU 38	0.07	-0.13	43.34	-0.0212	12.2903	0.046
439	SLU 39	0.07	-0.15	44.35	-0.0214	12.5789	0.0524
439	SLU 40	0.06	-0.12	44.37	-0.0215	12.5853	0.0414
439	SLU 41	0.07	-0.15	44.82	-0.0218	12.7072	0.0533
439	SLU 42	0.07	-0.12	44.84	-0.0219	12.7136	0.0424
439	SLU 43	0.07	-0.28	42.56	-0.0201	12.1612	0.0997
439	SLU 44	0.06	-0.23	42.59	-0.0203	12.1718	0.0814
439	SLU 45	0.07	-0.27	43.28	-0.0205	12.3595	0.0971
439	SLU 46	0.07	-0.24	43.31	-0.0206	12.3659	0.0861
439	SLU 47	0.07	-0.23	43.07	-0.0207	12.3001	0.0824
439	SLU 48	0.08	-0.28	43.76	-0.0209	12.4878	0.098
439	SLU 49	0.07	-0.25	43.78	-0.021	12.4942	0.0871

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
439	SLU 50	0.07	-0.29	43.51	-0.0209	12.4178	0.1015
439	SLU 51	0.07	-0.26	43.53	-0.021	12.4242	0.0906
439	SLU 52	0.06	-0.21	47.21	-0.0228	13.4589	0.0751
439	SLU 53	0.07	-0.26	47.9	-0.023	13.6466	0.0907
439	SLU 54	0.07	-0.23	47.92	-0.0231	13.653	0.0798
439	SLU 55	0.07	-0.21	47.68	-0.0232	13.5872	0.076
439	SLU 56	0.07	-0.26	48.37	-0.0234	13.7749	0.0917
439	SLU 57	0.07	-0.23	48.39	-0.0235	13.7813	0.0807
439	SLU 58	0.07	-0.27	48.12	-0.0234	13.7049	0.0952
439	SLU 59	0.07	-0.24	48.14	-0.0235	13.7113	0.0842
439	SLU 60	0.07	-0.26	49.15	-0.0237	13.9999	0.0906
439	SLU 61	0.06	-0.23	49.17	-0.0238	14.0063	0.0797
439	SLU 62	0.07	-0.26	49.62	-0.0241	14.1282	0.0916
439	SLU 63	0.07	-0.23	49.64	-0.0242	14.1346	0.0806
439	SLU 64	0.08	-0.25	46.53	-0.0219	13.2575	0.0876
439	SLU 65	0.08	-0.2	46.57	-0.0221	13.2681	0.0694
439	SLU 66	0.09	-0.24	47.26	-0.0223	13.4558	0.085
439	SLU 67	0.08	-0.21	47.28	-0.0224	13.4622	0.0741
439	SLU 68	0.08	-0.2	47.04	-0.0225	13.3964	0.0703
439	SLU 69	0.09	-0.24	47.73	-0.0227	13.5841	0.0859
439	SLU 70	0.09	-0.21	47.76	-0.0228	13.5905	0.075
439	SLU 71	0.09	-0.25	47.48	-0.0227	13.5141	0.0895
439	SLU 72	0.08	-0.22	47.5	-0.0228	13.5205	0.0785
439	SLU 73	0.08	-0.18	51.18	-0.0246	14.5552	0.063
439	SLU 74	0.08	-0.22	51.87	-0.0248	14.7429	0.0787
439	SLU 75	0.08	-0.19	51.89	-0.025	14.7493	0.0677
439	SLU 76	0.08	-0.18	51.66	-0.025	14.6835	0.064
439	SLU 77	0.09	-0.22	52.35	-0.0253	14.8712	0.0796
439	SLU 78	0.08	-0.19	52.37	-0.0254	14.8776	0.0686
439	SLU 79	0.09	-0.23	52.09	-0.0252	14.8012	0.0831
439	SLU 80	0.08	-0.2	52.11	-0.0254	14.8076	0.0722
439	SLU 81	0.08	-0.22	53.12	-0.0255	15.0962	0.0786
439	SLU 82	0.08	-0.19	53.14	-0.0256	15.1026	0.0676
439	SLU 83	0.08	-0.22	53.6	-0.0259	15.2245	0.0795
439	SLU 84	0.08	-0.19	53.62	-0.026	15.2309	0.0685
439	SLE RA 1	0.06	-0.2	34.92	-0.0165	9.9571	0.0701
439	SLE RA 2	0.06	-0.16	34.95	-0.0166	9.9642	0.0579
439	SLE RA 3	0.06	-0.19	35.41	-0.0167	10.0893	0.0683
439	SLE RA 4	0.06	-0.17	35.42	-0.0168	10.0936	0.061
439	SLE RA 5	0.06	-0.16	35.26	-0.0169	10.0497	0.0585
439	SLE RA 6	0.06	-0.19	35.72	-0.017	10.1749	0.0689
439	SLE RA 7	0.06	-0.17	35.74	-0.0171	10.1791	0.0616
439	SLE RA 8	0.06	-0.2	35.55	-0.017	10.1282	0.0713
439	SLE RA 9	0.06	-0.18	35.57	-0.0171	10.1324	0.064
439	SLE RA 10	0.06	-0.15	38.02	-0.0183	10.8223	0.0537
439	SLE RA 11	0.06	-0.18	38.48	-0.0184	10.9474	0.0641
439	SLE RA 12	0.06	-0.16	38.49	-0.0185	10.9517	0.0568
439	SLE RA 13	0.06	-0.15	38.34	-0.0185	10.9078	0.0543
439	SLE RA 14	0.06	-0.18	38.8	-0.0187	11.0329	0.0647
439	SLE RA 15	0.06	-0.16	38.81	-0.0188	11.0372	0.0574
439	SLE RA 16	0.06	-0.19	38.63	-0.0187	10.9863	0.0671
439	SLE RA 17	0.06	-0.17	38.64	-0.0188	10.9905	0.0598
439	SLE RA 18	0.06	-0.18	39.31	-0.0189	11.1829	0.064
439	SLE RA 19	0.06	-0.16	39.33	-0.0189	11.1872	0.0567
439	SLE RA 20	0.06	-0.18	39.63	-0.0191	11.2685	0.0646
439	SLE RA 21	0.06	-0.16	39.64	-0.0192	11.2727	0.0573
439	SLE FR 1	0.06	-0.2	34.92	-0.0165	9.9571	0.0701
439	SLE FR 2	0.06	-0.19	34.93	-0.0165	9.9585	0.0676
439	SLE FR 3	0.06	-0.2	35.05	-0.0166	9.9913	0.0703
439	SLE FR 4	0.06	-0.19	36.24	-0.0172	10.3263	0.0658
439	SLE FR 5	0.06	-0.19	36.37	-0.0173	10.3591	0.0685
439	SLE FR 6	0.06	-0.19	37.12	-0.0177	10.57	0.067
439	SLE QP 1	0.06	-0.2	34.92	-0.0165	9.9571	0.0701
439	SLE QP 2	0.06	-0.19	36.24	-0.0172	10.3249	0.0683
439	SLD 1	3.19	0.23	36.57	-0.0178	10.4576	-0.0747
439	SLD 2	3.48	0.25	36.62	-0.0179	10.4646	-0.0832
439	SLD 3	3.13	-0.84	36.2	-0.0148	10.3587	0.2969
439	SLD 4	3.42	-0.81	36.25	-0.0149	10.3657	0.2885
439	SLD 5	1.04	1.54	36.89	-0.0218	10.5134	-0.5368
439	SLD 6	1.22	1.56	36.92	-0.0219	10.518	-0.5423
439	SLD 7	0.84	-2	35.66	-0.012	10.1838	0.702
439	SLD 8	1.03	-1.98	35.69	-0.012	10.1884	0.6965
439	SLD 9	-0.91	1.6	36.78	-0.0223	10.4613	-0.56
439	SLD 10	-0.72	1.62	36.82	-0.0224	10.4659	-0.5655
439	SLD 11	-1.1	-1.94	35.56	-0.0125	10.1318	0.6788
439	SLD 12	-0.92	-1.93	35.59	-0.0125	10.1364	0.6733
439	SLD 13	-3.3	0.42	36.23	-0.0194	10.284	-0.152
439	SLD 14	-3.01	0.45	36.28	-0.0195	10.291	-0.1604
439	SLD 15	-3.36	-0.64	35.86	-0.0165	10.1852	0.2197
439	SLD 16	-3.07	-0.61	35.91	-0.0166	10.1922	0.2112
439	SLV 1	7.38	0.75	36.99	-0.0185	10.6324	-0.2548
439	SLV 2	8.05	0.82	37.11	-0.0187	10.6487	-0.2744
439	SLV 3	7.25	-1.67	36.16	-0.0118	10.4071	0.5914
439	SLV 4	7.92	-1.6	36.27	-0.012	10.4234	0.5718
439	SLV 5	2.34	3.75	37.71	-0.0277	10.756	-1.3086
439	SLV 6	2.77	3.79	37.79	-0.0278	10.7665	-1.3213
439	SLV 7	1.9	-4.32	34.92	-0.0054	10.005	1.5119
439	SLV 8	2.33	-4.27	35	-0.0055	10.0156	1.4993
439	SLV 9	-2.21	3.89	37.48	-0.0288	10.6342	-1.3628
439	SLV 10	-1.78	3.93	37.55	-0.0289	10.6447	-1.3754

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
439	SLV 11	-2.65	-4.18	34.69	-0.0066	9.8832	1.4578
439	SLV 12	-2.23	-4.14	34.76	-0.0067	9.8937	1.4451
439	SLV 13	-7.8	1.22	36.2	-0.0224	10.2263	-0.4352
439	SLV 14	-7.13	1.28	36.32	-0.0225	10.2427	-0.4549
439	SLV 15	-7.93	-1.2	35.36	-0.0157	10.001	0.4109
439	SLV 16	-7.27	-1.14	35.48	-0.0159	10.0174	0.3913
439	CRTFP Ux+	0	0	0	0	0	0
439	CRTFP Ux-	0	0	0	0	0	0
439	CRTFP Uy+	0	0	0	0	0	0
439	CRTFP Uy-	0	0	0	0	0	0
442	SLU 1	-1.03	-1.01	64.54	-0.0415	-0.3844	-0.0237
442	SLU 2	-1.02	-0.91	64.51	-0.0413	-0.3855	-0.023
442	SLU 3	-1.06	-1.02	65.97	-0.0422	-0.3928	-0.0244
442	SLU 4	-1.05	-0.96	65.96	-0.0421	-0.3935	-0.024
442	SLU 5	-1.03	-0.93	65.45	-0.042	-0.3915	-0.0233
442	SLU 6	-1.07	-1.04	66.92	-0.0429	-0.3987	-0.0248
442	SLU 7	-1.07	-0.98	66.9	-0.0428	-0.3994	-0.0244
442	SLU 8	-1.06	-1.05	66.42	-0.0428	-0.3963	-0.0244
442	SLU 9	-1.05	-0.99	66.41	-0.0427	-0.3969	-0.024
442	SLU 10	-1.11	-0.99	72.97	-0.046	-0.4481	-0.0258
442	SLU 11	-1.15	-1.1	74.43	-0.0469	-0.4553	-0.0272
442	SLU 12	-1.14	-1.04	74.42	-0.0468	-0.456	-0.0268
442	SLU 13	-1.12	-1.01	73.91	-0.0467	-0.454	-0.0262
442	SLU 14	-1.16	-1.12	75.37	-0.0475	-0.4613	-0.0276
442	SLU 15	-1.16	-1.06	75.36	-0.0474	-0.4619	-0.0272
442	SLU 16	-1.15	-1.12	74.88	-0.0475	-0.4588	-0.0272
442	SLU 17	-1.14	-1.06	74.86	-0.0474	-0.4595	-0.0268
442	SLU 18	-1.15	-1.12	76.62	-0.0482	-0.4738	-0.0277
442	SLU 19	-1.15	-1.06	76.6	-0.0481	-0.4745	-0.0273
442	SLU 20	-1.17	-1.14	77.56	-0.0488	-0.4797	-0.0281
442	SLU 21	-1.16	-1.08	77.54	-0.0487	-0.4804	-0.0277
442	SLU 22	-1.17	-1.05	72.48	-0.0451	-0.4311	-0.0275
442	SLU 23	-1.16	-0.95	72.45	-0.0449	-0.4322	-0.0268
442	SLU 24	-1.2	-1.06	73.91	-0.0458	-0.4395	-0.0282
442	SLU 25	-1.19	-1	73.9	-0.0457	-0.4401	-0.0278
442	SLU 26	-1.18	-0.97	73.39	-0.0456	-0.4382	-0.0272
442	SLU 27	-1.22	-1.08	74.86	-0.0465	-0.4454	-0.0286
442	SLU 28	-1.21	-1.02	74.84	-0.0464	-0.4461	-0.0282
442	SLU 29	-1.2	-1.09	74.36	-0.0464	-0.443	-0.0282
442	SLU 30	-1.2	-1.03	74.35	-0.0463	-0.4436	-0.0278
442	SLU 31	-1.25	-1.03	80.91	-0.0496	-0.4948	-0.0296
442	SLU 32	-1.29	-1.14	82.37	-0.0505	-0.502	-0.0311
442	SLU 33	-1.28	-1.08	82.36	-0.0504	-0.5027	-0.0307
442	SLU 34	-1.26	-1.05	81.85	-0.0503	-0.5007	-0.03
442	SLU 35	-1.3	-1.15	83.31	-0.0512	-0.508	-0.0314
442	SLU 36	-1.3	-1.09	83.3	-0.0511	-0.5086	-0.031
442	SLU 37	-1.29	-1.16	82.82	-0.0511	-0.5055	-0.031
442	SLU 38	-1.28	-1.1	82.8	-0.051	-0.5062	-0.0306
442	SLU 39	-1.3	-1.16	84.56	-0.0518	-0.5205	-0.0315
442	SLU 40	-1.29	-1.1	84.54	-0.0517	-0.5211	-0.0311
442	SLU 41	-1.31	-1.18	85.5	-0.0525	-0.5264	-0.0319
442	SLU 42	-1.3	-1.12	85.48	-0.0523	-0.5271	-0.0315
442	SLU 43	-1.29	-1.3	81.18	-0.0527	-0.4837	-0.0295
442	SLU 44	-1.28	-1.2	81.15	-0.0525	-0.4849	-0.0288
442	SLU 45	-1.32	-1.31	82.61	-0.0534	-0.4921	-0.0302
442	SLU 46	-1.31	-1.25	82.6	-0.0533	-0.4928	-0.0298
442	SLU 47	-1.29	-1.22	82.09	-0.0532	-0.4908	-0.0291
442	SLU 48	-1.33	-1.33	83.55	-0.0541	-0.498	-0.0306
442	SLU 49	-1.33	-1.27	83.54	-0.054	-0.4987	-0.0301
442	SLU 50	-1.32	-1.34	83.06	-0.054	-0.4956	-0.0302
442	SLU 51	-1.31	-1.28	83.04	-0.0539	-0.4963	-0.0297
442	SLU 52	-1.37	-1.28	89.61	-0.0572	-0.5474	-0.0316
442	SLU 53	-1.41	-1.39	91.07	-0.0581	-0.5547	-0.033
442	SLU 54	-1.4	-1.33	91.05	-0.058	-0.5553	-0.0326
442	SLU 55	-1.38	-1.3	90.55	-0.0579	-0.5533	-0.032
442	SLU 56	-1.42	-1.41	92.01	-0.0588	-0.5606	-0.0334
442	SLU 57	-1.42	-1.35	92	-0.0586	-0.5613	-0.033
442	SLU 58	-1.41	-1.41	91.52	-0.0587	-0.5582	-0.033
442	SLU 59	-1.4	-1.35	91.5	-0.0586	-0.5588	-0.0326
442	SLU 60	-1.41	-1.41	93.26	-0.0594	-0.5731	-0.0335
442	SLU 61	-1.41	-1.35	93.24	-0.0593	-0.5738	-0.0331
442	SLU 62	-1.43	-1.43	94.2	-0.06	-0.579	-0.0338
442	SLU 63	-1.42	-1.37	94.18	-0.0599	-0.5797	-0.0334
442	SLU 64	-1.43	-1.34	89.12	-0.0563	-0.5304	-0.0333
442	SLU 65	-1.42	-1.24	89.09	-0.0561	-0.5315	-0.0326
442	SLU 66	-1.46	-1.35	90.55	-0.057	-0.5388	-0.034
442	SLU 67	-1.45	-1.29	90.54	-0.0569	-0.5395	-0.0336
442	SLU 68	-1.44	-1.26	90.03	-0.0568	-0.5375	-0.0329
442	SLU 69	-1.48	-1.37	91.49	-0.0577	-0.5447	-0.0344
442	SLU 70	-1.47	-1.31	91.48	-0.0576	-0.5454	-0.034
442	SLU 71	-1.46	-1.38	91	-0.0576	-0.5423	-0.034
442	SLU 72	-1.46	-1.32	90.98	-0.0575	-0.543	-0.0336
442	SLU 73	-1.51	-1.32	97.55	-0.0608	-0.5941	-0.0354
442	SLU 74	-1.55	-1.43	99.01	-0.0617	-0.6013	-0.0369
442	SLU 75	-1.54	-1.37	98.99	-0.0616	-0.602	-0.0364
442	SLU 76	-1.52	-1.34	98.49	-0.0615	-0.6	-0.0358
442	SLU 77	-1.56	-1.45	99.95	-0.0624	-0.6073	-0.0372
442	SLU 78	-1.56	-1.39	99.94	-0.0623	-0.6079	-0.0368
442	SLU 79	-1.55	-1.45	99.46	-0.0623	-0.6048	-0.0368
442	SLU 80	-1.54	-1.39	99.44	-0.0622	-0.6055	-0.0364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
442	SLU 81	-1.56	-1.45	101.2	-0.063	-0.6198	-0.0373
442	SLU 82	-1.55	-1.39	101.18	-0.0629	-0.6205	-0.0369
442	SLU 83	-1.57	-1.47	102.14	-0.0637	-0.6257	-0.0377
442	SLU 84	-1.56	-1.41	102.12	-0.0636	-0.6264	-0.0373
442	SLE RA 1	-1.07	-1.03	66.81	-0.0425	-0.3978	-0.0248
442	SLE RA 2	-1.06	-0.96	66.79	-0.0424	-0.3985	-0.0243
442	SLE RA 3	-1.09	-1.03	67.76	-0.043	-0.4033	-0.0253
442	SLE RA 4	-1.09	-0.99	67.75	-0.0429	-0.4038	-0.025
442	SLE RA 5	-1.07	-0.97	67.42	-0.0428	-0.4025	-0.0245
442	SLE RA 6	-1.1	-1.04	68.39	-0.0434	-0.4073	-0.0255
442	SLE RA 7	-1.1	-1	68.38	-0.0434	-0.4077	-0.0252
442	SLE RA 8	-1.09	-1.05	68.06	-0.0434	-0.4057	-0.0252
442	SLE RA 9	-1.09	-1.01	68.05	-0.0433	-0.4061	-0.025
442	SLE RA 10	-1.12	-1.01	72.43	-0.0455	-0.4402	-0.0262
442	SLE RA 11	-1.15	-1.08	73.4	-0.0461	-0.445	-0.0271
442	SLE RA 12	-1.14	-1.04	73.39	-0.046	-0.4455	-0.0269
442	SLE RA 13	-1.13	-1.02	73.05	-0.046	-0.4442	-0.0264
442	SLE RA 14	-1.16	-1.09	74.03	-0.0466	-0.449	-0.0274
442	SLE RA 15	-1.15	-1.05	74.02	-0.0465	-0.4494	-0.0271
442	SLE RA 16	-1.15	-1.1	73.7	-0.0465	-0.4474	-0.0271
442	SLE RA 17	-1.14	-1.06	73.69	-0.0465	-0.4478	-0.0268
442	SLE RA 18	-1.15	-1.1	74.86	-0.047	-0.4573	-0.0275
442	SLE RA 19	-1.15	-1.06	74.85	-0.0469	-0.4578	-0.0272
442	SLE RA 20	-1.16	-1.11	75.49	-0.0474	-0.4613	-0.0277
442	SLE RA 21	-1.16	-1.07	75.48	-0.0473	-0.4617	-0.0274
442	SLE FR 1	-1.07	-1.03	66.81	-0.0425	-0.3978	-0.0248
442	SLE FR 2	-1.07	-1.01	66.8	-0.0425	-0.3979	-0.0247
442	SLE FR 3	-1.07	-1.03	67.06	-0.0427	-0.3993	-0.0248
442	SLE FR 4	-1.09	-1.03	69.22	-0.0438	-0.4158	-0.0255
442	SLE FR 5	-1.1	-1.05	69.47	-0.044	-0.4172	-0.0257
442	SLE FR 6	-1.11	-1.06	70.83	-0.0447	-0.4275	-0.0261
442	SLE QP 1	-1.07	-1.03	66.81	-0.0425	-0.3978	-0.0248
442	SLE QP 2	-1.09	-1.05	69.22	-0.0439	-0.4156	-0.0256
442	SLD 1	4.76	-0.44	75.68	-0.0535	-0.2066	-0.0033
442	SLD 2	5.32	-0.93	75.33	-0.0514	-0.2136	0.01
442	SLD 3	4.89	-2.28	75	-0.046	-0.2368	-0.0002
442	SLD 4	5.44	-2.78	74.64	-0.0439	-0.2438	0.013
442	SLD 5	0.37	2.02	72.27	-0.0585	-0.3059	-0.0259
442	SLD 6	0.73	1.7	72.04	-0.0571	-0.3105	-0.0172
442	SLD 7	0.8	-4.13	69.97	-0.0335	-0.4065	-0.0157
442	SLD 8	1.16	-4.45	69.74	-0.0322	-0.4111	-0.007
442	SLD 9	-3.35	2.36	68.7	-0.0556	-0.4201	-0.0441
442	SLD 10	-2.98	2.03	68.47	-0.0542	-0.4247	-0.0355
442	SLD 11	-2.92	-3.79	66.41	-0.0306	-0.5208	-0.0339
442	SLD 12	-2.56	-4.12	66.18	-0.0292	-0.5254	-0.0253
442	SLD 13	-7.63	0.68	63.8	-0.0438	-0.5874	-0.0641
442	SLD 14	-7.08	0.19	63.45	-0.0417	-0.5945	-0.0509
442	SLD 15	-7.51	-1.16	63.11	-0.0363	-0.6176	-0.0611
442	SLD 16	-6.95	-1.66	62.76	-0.0342	-0.6247	-0.0479
442	SLV 1	12.61	0.32	84.31	-0.0665	0.0724	0.0267
442	SLV 2	13.9	-0.84	83.49	-0.0615	0.0561	0.0575
442	SLV 3	12.9	-3.88	82.75	-0.0495	0.0039	0.0337
442	SLV 4	14.19	-5.04	81.93	-0.0446	-0.0125	0.0645
442	SLV 5	2.35	5.93	76.26	-0.0772	-0.1624	-0.0259
442	SLV 6	3.18	5.19	75.73	-0.074	-0.173	-0.006
442	SLV 7	3.33	-8.07	71.06	-0.0207	-0.3909	-0.0024
442	SLV 8	4.16	-8.82	70.53	-0.0175	-0.4014	0.0174
442	SLV 9	-6.35	6.72	67.92	-0.0702	-0.4298	-0.0686
442	SLV 10	-5.52	5.98	67.39	-0.067	-0.4404	-0.0487
442	SLV 11	-5.37	-7.28	62.72	-0.0137	-0.6583	-0.0451
442	SLV 12	-4.54	-8.03	62.19	-0.0105	-0.6688	-0.0253
442	SLV 13	-16.38	2.94	56.51	-0.0431	-0.8188	-0.1157
442	SLV 14	-15.09	1.79	55.69	-0.0382	-0.8352	-0.0849
442	SLV 15	-16.09	-1.26	54.95	-0.0262	-0.8873	-0.1086
442	SLV 16	-14.8	-2.41	54.13	-0.0213	-0.9037	-0.0778
442	CRTFP Ux+	0	0	0	0	0	0
442	CRTFP Ux-	0	0	0	0	0	0
446	SLU 1	0.31	-0.88	64.57	-0.0457	0.3483	-0.0035
446	SLU 2	0.3	-0.78	64.55	-0.0455	0.3494	-0.004
446	SLU 3	0.32	-0.89	66.01	-0.0467	0.3545	-0.0035
446	SLU 4	0.32	-0.83	66	-0.0466	0.3552	-0.0038
446	SLU 5	0.31	-0.8	65.49	-0.0463	0.3534	-0.0041
446	SLU 6	0.32	-0.91	66.94	-0.0475	0.3585	-0.0035
446	SLU 7	0.32	-0.85	66.93	-0.0474	0.3592	-0.0039
446	SLU 8	0.32	-0.92	66.44	-0.0473	0.3563	-0.0036
446	SLU 9	0.31	-0.86	66.43	-0.0472	0.357	-0.0039
446	SLU 10	0.31	-0.83	72.96	-0.0509	0.4028	-0.0049
446	SLU 11	0.33	-0.95	74.41	-0.0521	0.4079	-0.0043
446	SLU 12	0.32	-0.89	74.4	-0.052	0.4085	-0.0047
446	SLU 13	0.31	-0.85	73.9	-0.0517	0.4068	-0.005
446	SLU 14	0.33	-0.97	75.35	-0.0529	0.4119	-0.0044
446	SLU 15	0.33	-0.9	75.34	-0.0527	0.4125	-0.0047
446	SLU 16	0.32	-0.97	74.85	-0.0527	0.4097	-0.0045
446	SLU 17	0.32	-0.91	74.84	-0.0526	0.4103	-0.0048
446	SLU 18	0.32	-0.96	76.58	-0.0534	0.4246	-0.0047
446	SLU 19	0.31	-0.9	76.57	-0.0533	0.4252	-0.005
446	SLU 20	0.32	-0.98	77.51	-0.0542	0.4286	-0.0048
446	SLU 21	0.32	-0.92	77.5	-0.0541	0.4292	-0.0051
446	SLU 22	0.36	-0.91	72.51	-0.0501	0.3826	-0.0033
446	SLU 23	0.35	-0.81	72.5	-0.05	0.3837	-0.0038

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
446	SLU 24	0.37	-0.92	73.95	-0.0511	0.3888	-0.0032
446	SLU 25	0.37	-0.86	73.94	-0.051	0.3894	-0.0036
446	SLU 26	0.36	-0.83	73.43	-0.0507	0.3877	-0.0039
446	SLU 27	0.38	-0.94	74.89	-0.0519	0.3928	-0.0033
446	SLU 28	0.37	-0.88	74.88	-0.0518	0.3934	-0.0037
446	SLU 29	0.37	-0.95	74.38	-0.0517	0.3906	-0.0034
446	SLU 30	0.37	-0.89	74.38	-0.0516	0.3912	-0.0037
446	SLU 31	0.36	-0.86	80.9	-0.0553	0.4371	-0.0047
446	SLU 32	0.38	-0.97	82.36	-0.0565	0.4422	-0.0041
446	SLU 33	0.37	-0.91	82.35	-0.0564	0.4428	-0.0044
446	SLU 34	0.36	-0.88	81.84	-0.0561	0.4411	-0.0047
446	SLU 35	0.38	-0.99	83.29	-0.0573	0.4462	-0.0042
446	SLU 36	0.38	-0.93	83.28	-0.0572	0.4468	-0.0045
446	SLU 37	0.38	-1	82.79	-0.0571	0.444	-0.0043
446	SLU 38	0.37	-0.94	82.78	-0.057	0.4446	-0.0046
446	SLU 39	0.37	-0.98	84.52	-0.0578	0.4589	-0.0045
446	SLU 40	0.36	-0.92	84.51	-0.0577	0.4595	-0.0048
446	SLU 41	0.37	-1	85.46	-0.0586	0.4629	-0.0046
446	SLU 42	0.37	-0.94	85.45	-0.0585	0.4635	-0.0049
446	SLU 43	0.38	-1.14	81.21	-0.0579	0.4411	-0.0046
446	SLU 44	0.37	-1.04	81.2	-0.0577	0.4421	-0.0051
446	SLU 45	0.39	-1.15	82.65	-0.0589	0.4473	-0.0046
446	SLU 46	0.39	-1.09	82.64	-0.0588	0.4479	-0.0049
446	SLU 47	0.38	-1.06	82.14	-0.0585	0.4461	-0.0052
446	SLU 48	0.4	-1.17	83.59	-0.0597	0.4513	-0.0046
446	SLU 49	0.4	-1.11	83.58	-0.0596	0.4519	-0.005
446	SLU 50	0.39	-1.18	83.09	-0.0595	0.4491	-0.0047
446	SLU 51	0.39	-1.12	83.08	-0.0594	0.4497	-0.0051
446	SLU 52	0.38	-1.09	89.61	-0.0631	0.4955	-0.006
446	SLU 53	0.4	-1.2	91.06	-0.0643	0.5007	-0.0054
446	SLU 54	0.4	-1.14	91.05	-0.0642	0.5013	-0.0058
446	SLU 55	0.39	-1.11	90.54	-0.0639	0.4995	-0.0061
446	SLU 56	0.41	-1.22	92	-0.0651	0.5046	-0.0055
446	SLU 57	0.4	-1.16	91.99	-0.065	0.5053	-0.0058
446	SLU 58	0.4	-1.23	91.49	-0.0649	0.5025	-0.0056
446	SLU 59	0.39	-1.17	91.49	-0.0648	0.5031	-0.0059
446	SLU 60	0.39	-1.21	93.22	-0.0656	0.5173	-0.0058
446	SLU 61	0.39	-1.15	93.21	-0.0655	0.518	-0.0061
446	SLU 62	0.4	-1.23	94.16	-0.0664	0.5213	-0.0059
446	SLU 63	0.39	-1.17	94.15	-0.0663	0.522	-0.0062
446	SLU 64	0.43	-1.17	89.16	-0.0624	0.4754	-0.0044
446	SLU 65	0.43	-1.06	89.14	-0.0622	0.4764	-0.0049
446	SLU 66	0.44	-1.18	90.6	-0.0633	0.4815	-0.0044
446	SLU 67	0.44	-1.12	90.59	-0.0632	0.4822	-0.0047
446	SLU 68	0.43	-1.08	90.08	-0.063	0.4804	-0.005
446	SLU 69	0.45	-1.2	91.53	-0.0641	0.4855	-0.0044
446	SLU 70	0.45	-1.14	91.52	-0.064	0.4862	-0.0048
446	SLU 71	0.44	-1.2	91.03	-0.0639	0.4834	-0.0045
446	SLU 72	0.44	-1.14	91.02	-0.0638	0.484	-0.0048
446	SLU 73	0.43	-1.12	97.55	-0.0675	0.5298	-0.0058
446	SLU 74	0.45	-1.23	99	-0.0687	0.5349	-0.0052
446	SLU 75	0.45	-1.17	98.99	-0.0686	0.5356	-0.0056
446	SLU 76	0.44	-1.14	98.49	-0.0683	0.5338	-0.0059
446	SLU 77	0.46	-1.25	99.94	-0.0695	0.5389	-0.0053
446	SLU 78	0.45	-1.19	99.93	-0.0694	0.5396	-0.0056
446	SLU 79	0.45	-1.26	99.44	-0.0693	0.5367	-0.0054
446	SLU 80	0.45	-1.2	99.43	-0.0692	0.5374	-0.0057
446	SLU 81	0.44	-1.24	101.17	-0.07	0.5516	-0.0056
446	SLU 82	0.44	-1.18	101.16	-0.0699	0.5523	-0.0059
446	SLU 83	0.45	-1.26	102.1	-0.0708	0.5556	-0.0057
446	SLU 84	0.44	-1.2	102.09	-0.0707	0.5563	-0.006
446	SLE RA 1	0.32	-0.89	66.84	-0.047	0.3581	-0.0034
446	SLE RA 2	0.32	-0.82	66.83	-0.0469	0.3588	-0.0038
446	SLE RA 3	0.33	-0.9	67.8	-0.0476	0.3623	-0.0034
446	SLE RA 4	0.33	-0.86	67.79	-0.0476	0.3627	-0.0036
446	SLE RA 5	0.32	-0.84	67.45	-0.0474	0.3615	-0.0038
446	SLE RA 6	0.33	-0.91	68.42	-0.0482	0.3649	-0.0034
446	SLE RA 7	0.33	-0.87	68.41	-0.0481	0.3653	-0.0037
446	SLE RA 8	0.33	-0.92	68.09	-0.048	0.3635	-0.0035
446	SLE RA 9	0.33	-0.88	68.08	-0.048	0.3639	-0.0037
446	SLE RA 10	0.32	-0.86	72.43	-0.0504	0.3944	-0.0043
446	SLE RA 11	0.33	-0.93	73.4	-0.0512	0.3978	-0.004
446	SLE RA 12	0.33	-0.89	73.39	-0.0511	0.3983	-0.0042
446	SLE RA 13	0.33	-0.87	73.06	-0.051	0.3971	-0.0044
446	SLE RA 14	0.34	-0.95	74.02	-0.0517	0.4005	-0.004
446	SLE RA 15	0.34	-0.91	74.02	-0.0517	0.4009	-0.0042
446	SLE RA 16	0.33	-0.95	73.69	-0.0516	0.399	-0.0041
446	SLE RA 17	0.33	-0.91	73.68	-0.0516	0.3995	-0.0043
446	SLE RA 18	0.33	-0.94	74.84	-0.0521	0.409	-0.0042
446	SLE RA 19	0.32	-0.9	74.84	-0.052	0.4094	-0.0045
446	SLE RA 20	0.33	-0.95	75.47	-0.0526	0.4116	-0.0043
446	SLE RA 21	0.33	-0.91	75.46	-0.0526	0.4121	-0.0045
446	SLE FR 1	0.32	-0.89	66.84	-0.047	0.3581	-0.0034
446	SLE FR 2	0.32	-0.88	66.83	-0.047	0.3583	-0.0035
446	SLE FR 3	0.32	-0.9	67.09	-0.0472	0.3592	-0.0034
446	SLE FR 4	0.32	-0.89	69.24	-0.0485	0.3735	-0.0037
446	SLE FR 5	0.32	-0.91	69.49	-0.0487	0.3744	-0.0037
446	SLE FR 6	0.32	-0.92	70.84	-0.0496	0.3835	-0.0038
446	SLE QP 1	0.32	-0.89	66.84	-0.047	0.3581	-0.0034
446	SLE QP 2	0.32	-0.91	69.24	-0.0485	0.3734	-0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
446	SLD 1	6.5	0.39	63.9	-0.0421	0.4724	0.0311
446	SLD 2	7.06	0.89	64.27	-0.0441	0.4642	0.0442
446	SLD 3	6.38	-1.44	63.22	-0.0351	0.504	0.0296
446	SLD 4	6.94	-0.94	63.6	-0.0371	0.4958	0.0427
446	SLD 5	2.26	2.17	68.6	-0.0569	0.3566	0.0067
446	SLD 6	2.63	2.49	68.84	-0.0582	0.3513	0.0153
446	SLD 7	1.85	-3.92	66.34	-0.0335	0.4619	0.0017
446	SLD 8	2.22	-3.6	66.58	-0.0348	0.4566	0.0103
446	SLD 9	-1.58	1.79	71.89	-0.0622	0.2902	-0.0176
446	SLD 10	-1.21	2.11	72.14	-0.0635	0.2849	-0.009
446	SLD 11	-1.99	-4.3	69.63	-0.0389	0.3955	-0.0226
446	SLD 12	-1.61	-3.98	69.88	-0.0402	0.3901	-0.014
446	SLD 13	-6.3	-0.87	74.88	-0.06	0.2509	-0.05
446	SLD 14	-5.73	-0.38	75.25	-0.062	0.2428	-0.0369
446	SLD 15	-6.42	-2.7	74.2	-0.053	0.2825	-0.0515
446	SLD 16	-5.85	-2.2	74.58	-0.0549	0.2744	-0.0384
446	SLV 1	14.76	2.08	56.73	-0.0333	0.606	0.0777
446	SLV 2	16.09	3.23	57.59	-0.0379	0.5871	0.1082
446	SLV 3	14.48	-2.08	55.19	-0.0174	0.6776	0.0742
446	SLV 4	15.81	-0.93	56.06	-0.022	0.6587	0.1048
446	SLV 5	4.85	6.1	67.66	-0.0672	0.3378	0.0207
446	SLV 6	5.7	6.85	68.22	-0.0702	0.3256	0.0404
446	SLV 7	3.92	-7.77	62.55	-0.0143	0.5765	0.0092
446	SLV 8	4.77	-7.02	63.11	-0.0173	0.5643	0.0289
446	SLV 9	-4.13	5.21	75.37	-0.0798	0.1825	-0.0362
446	SLV 10	-3.27	5.96	75.93	-0.0828	0.1703	-0.0165
446	SLV 11	-5.06	-8.66	70.26	-0.0268	0.4211	-0.0477
446	SLV 12	-4.21	-7.91	70.81	-0.0298	0.4089	-0.028
446	SLV 13	-15.16	-0.88	82.42	-0.075	0.0881	-0.1121
446	SLV 14	-13.84	0.27	83.28	-0.0797	0.0692	-0.0815
446	SLV 15	-15.44	-5.05	80.89	-0.0592	0.1597	-0.1155
446	SLV 16	-14.12	-3.89	81.75	-0.0638	0.1408	-0.085
446	CRTFP Ux+	0	0	0	0	0	0
446	CRTFP Ux-	0	0	0	0	0	0
446	CRTFP Uy+	0	0	0	0	0	0
446	CRTFP Uy-	0	0	0	0	0	0
447	SLU 1	0.29	0.32	37.75	-0.0383	8.4498	-0.115
447	SLU 2	0.29	0.42	37.74	-0.0381	8.4408	-0.1486
447	SLU 3	0.3	0.34	38.61	-0.0392	8.6313	-0.1192
447	SLU 4	0.3	0.39	38.61	-0.0391	8.6258	-0.1394
447	SLU 5	0.29	0.42	38.29	-0.0387	8.5568	-0.149
447	SLU 6	0.3	0.34	39.16	-0.0399	8.7473	-0.1196
447	SLU 7	0.3	0.39	39.16	-0.0398	8.7419	-0.1397
447	SLU 8	0.3	0.33	38.85	-0.0396	8.6819	-0.1157
447	SLU 9	0.3	0.38	38.85	-0.0395	8.6765	-0.1359
447	SLU 10	0.29	0.5	42.46	-0.043	9.4554	-0.1756
447	SLU 11	0.3	0.41	43.33	-0.0441	9.6459	-0.1462
447	SLU 12	0.3	0.47	43.32	-0.044	9.6405	-0.1664
447	SLU 13	0.29	0.5	43.01	-0.0437	9.5715	-0.176
447	SLU 14	0.31	0.41	43.88	-0.0448	9.762	-0.1466
447	SLU 15	0.31	0.47	43.87	-0.0447	9.7566	-0.1668
447	SLU 16	0.3	0.4	43.57	-0.0445	9.6966	-0.1427
447	SLU 17	0.3	0.46	43.56	-0.0444	9.6911	-0.1629
447	SLU 18	0.29	0.43	44.49	-0.0453	9.8993	-0.1536
447	SLU 19	0.29	0.49	44.48	-0.0452	9.8939	-0.1738
447	SLU 20	0.3	0.43	45.04	-0.046	10.0154	-0.154
447	SLU 21	0.3	0.49	45.03	-0.0459	10.0099	-0.1741
447	SLU 22	0.32	0.4	42.37	-0.043	9.4386	-0.1405
447	SLU 23	0.32	0.49	42.36	-0.0427	9.4296	-0.1741
447	SLU 24	0.34	0.41	43.23	-0.0439	9.6201	-0.1447
447	SLU 25	0.33	0.47	43.22	-0.0438	9.6147	-0.1648
447	SLU 26	0.33	0.49	42.91	-0.0434	9.5456	-0.1744
447	SLU 27	0.34	0.41	43.78	-0.0446	9.7362	-0.145
447	SLU 28	0.34	0.47	43.77	-0.0445	9.7307	-0.1652
447	SLU 29	0.33	0.4	43.47	-0.0443	9.6707	-0.1412
447	SLU 30	0.33	0.46	43.46	-0.0442	9.6653	-0.1614
447	SLU 31	0.32	0.57	47.07	-0.0477	10.4442	-0.2011
447	SLU 32	0.34	0.49	47.94	-0.0488	10.6347	-0.1717
447	SLU 33	0.34	0.54	47.94	-0.0487	10.6293	-0.1919
447	SLU 34	0.33	0.57	47.62	-0.0483	10.5603	-0.2015
447	SLU 35	0.34	0.49	48.49	-0.0495	10.7508	-0.1721
447	SLU 36	0.34	0.54	48.49	-0.0494	10.7454	-0.1923
447	SLU 37	0.34	0.48	48.18	-0.0492	10.6854	-0.1682
447	SLU 38	0.34	0.53	48.18	-0.0491	10.68	-0.1884
447	SLU 39	0.33	0.51	49.1	-0.05	10.8881	-0.1791
447	SLU 40	0.33	0.56	49.1	-0.0499	10.8827	-0.1993
447	SLU 41	0.33	0.51	49.65	-0.0507	11.0042	-0.1795
447	SLU 42	0.33	0.57	49.65	-0.0505	10.9987	-0.1996
447	SLU 43	0.36	0.4	47.49	-0.0482	10.6457	-0.1407
447	SLU 44	0.36	0.49	47.48	-0.0479	10.6367	-0.1743
447	SLU 45	0.37	0.41	48.36	-0.0491	10.8272	-0.1449
447	SLU 46	0.37	0.47	48.35	-0.049	10.8218	-0.1651
447	SLU 47	0.36	0.49	48.03	-0.0486	10.7527	-0.1747
447	SLU 48	0.38	0.41	48.91	-0.0498	10.9433	-0.1453
447	SLU 49	0.38	0.47	48.9	-0.0497	10.9378	-0.1655
447	SLU 50	0.37	0.4	48.6	-0.0495	10.8779	-0.1415
447	SLU 51	0.37	0.46	48.59	-0.0494	10.8724	-0.1616
447	SLU 52	0.36	0.57	52.2	-0.0529	11.6513	-0.2014
447	SLU 53	0.38	0.49	53.07	-0.054	11.8419	-0.172
447	SLU 54	0.37	0.54	53.06	-0.0539	11.8364	-0.1922

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLU 55	0.37	0.57	52.75	-0.0535	11.7674	-0.2017
447	SLU 56	0.38	0.49	53.62	-0.0547	11.9579	-0.1723
447	SLU 57	0.38	0.54	53.61	-0.0546	11.9525	-0.1925
447	SLU 58	0.38	0.48	53.31	-0.0544	11.8925	-0.1685
447	SLU 59	0.37	0.53	53.3	-0.0543	11.8871	-0.1887
447	SLU 60	0.37	0.51	54.23	-0.0552	12.0952	-0.1794
447	SLU 61	0.37	0.56	54.22	-0.0551	12.0898	-0.1995
447	SLU 62	0.37	0.51	54.78	-0.0559	12.2113	-0.1797
447	SLU 63	0.37	0.56	54.77	-0.0557	12.2059	-0.1999
447	SLU 64	0.4	0.47	52.11	-0.0528	11.6346	-0.1662
447	SLU 65	0.4	0.57	52.1	-0.0526	11.6255	-0.1998
447	SLU 66	0.41	0.48	52.97	-0.0538	11.816	-0.1704
447	SLU 67	0.41	0.54	52.97	-0.0537	11.8106	-0.1906
447	SLU 68	0.4	0.57	52.65	-0.0533	11.7415	-0.2002
447	SLU 69	0.41	0.48	53.52	-0.0545	11.9321	-0.1708
447	SLU 70	0.41	0.54	53.52	-0.0543	11.9266	-0.191
447	SLU 71	0.41	0.47	53.21	-0.0542	11.8667	-0.1669
447	SLU 72	0.41	0.53	53.21	-0.0541	11.8612	-0.1871
447	SLU 73	0.4	0.64	56.81	-0.0575	12.6401	-0.2269
447	SLU 74	0.41	0.56	57.69	-0.0587	12.8307	-0.1975
447	SLU 75	0.41	0.62	57.68	-0.0586	12.8252	-0.2176
447	SLU 76	0.4	0.64	57.37	-0.0582	12.7562	-0.2272
447	SLU 77	0.42	0.56	58.24	-0.0594	12.9467	-0.1978
447	SLU 78	0.42	0.62	58.23	-0.0593	12.9413	-0.218
447	SLU 79	0.41	0.55	57.93	-0.0591	12.8813	-0.194
447	SLU 80	0.41	0.61	57.92	-0.059	12.8759	-0.2142
447	SLU 81	0.4	0.58	58.85	-0.0599	13.084	-0.2048
447	SLU 82	0.4	0.64	58.84	-0.0597	13.0786	-0.225
447	SLU 83	0.41	0.58	59.4	-0.0605	13.2001	-0.2052
447	SLU 84	0.41	0.64	59.39	-0.0604	13.1947	-0.2254
447	SLE RA 1	0.3	0.34	39.07	-0.0396	8.7323	-0.1223
447	SLE RA 2	0.3	0.41	39.06	-0.0395	8.7263	-0.1447
447	SLE RA 3	0.31	0.35	39.65	-0.0403	8.8533	-0.1251
447	SLE RA 4	0.3	0.39	39.64	-0.0402	8.8497	-0.1385
447	SLE RA 5	0.3	0.41	39.43	-0.0399	8.8037	-0.1449
447	SLE RA 6	0.31	0.35	40.01	-0.0407	8.9307	-0.1253
447	SLE RA 7	0.31	0.39	40.01	-0.0406	8.9271	-0.1388
447	SLE RA 8	0.31	0.35	39.8	-0.0405	8.8871	-0.1227
447	SLE RA 9	0.3	0.38	39.8	-0.0404	8.8835	-0.1362
447	SLE RA 10	0.3	0.46	42.21	-0.0428	9.4027	-0.1627
447	SLE RA 11	0.31	0.4	42.79	-0.0435	9.5297	-0.1431
447	SLE RA 12	0.31	0.44	42.78	-0.0434	9.5261	-0.1565
447	SLE RA 13	0.3	0.46	42.57	-0.0432	9.4801	-0.1629
447	SLE RA 14	0.31	0.4	43.15	-0.044	9.6071	-0.1433
447	SLE RA 15	0.31	0.44	43.15	-0.0439	9.6035	-0.1568
447	SLE RA 16	0.31	0.4	42.95	-0.0438	9.5635	-0.1408
447	SLE RA 17	0.31	0.44	42.94	-0.0437	9.5599	-0.1542
447	SLE RA 18	0.3	0.42	43.56	-0.0443	9.6987	-0.148
447	SLE RA 19	0.3	0.46	43.56	-0.0442	9.695	-0.1615
447	SLE RA 20	0.31	0.42	43.93	-0.0447	9.776	-0.1482
447	SLE RA 21	0.3	0.46	43.92	-0.0447	9.7724	-0.1617
447	SLE FR 1	0.3	0.34	39.07	-0.0396	8.7323	-0.1223
447	SLE FR 2	0.3	0.36	39.07	-0.0396	8.7311	-0.1267
447	SLE FR 3	0.3	0.35	39.22	-0.0398	8.7633	-0.1223
447	SLE FR 4	0.3	0.38	40.42	-0.041	9.021	-0.1345
447	SLE FR 5	0.3	0.37	40.56	-0.0412	9.0532	-0.1301
447	SLE FR 6	0.3	0.38	41.32	-0.042	9.2155	-0.1351
447	SLE QP 1	0.3	0.34	39.07	-0.0396	8.7323	-0.1223
447	SLE QP 2	0.3	0.37	40.42	-0.041	9.0222	-0.13
447	SLD 1	3.83	0.2	30.17	-0.0304	6.9375	-0.0734
447	SLD 2	4.15	0.97	30.53	-0.0328	7.0111	-0.3416
447	SLD 3	3.76	-1.35	29.53	-0.0256	6.8202	0.4702
447	SLD 4	4.08	-0.58	29.89	-0.0281	6.8939	0.2021
447	SLD 5	1.41	2.54	38.24	-0.0446	8.5615	-0.8898
447	SLD 6	1.62	3.04	38.48	-0.0462	8.6098	-1.0656
447	SLD 7	1.17	-2.64	36.13	-0.0288	8.1708	0.9222
447	SLD 8	1.38	-2.14	36.36	-0.0304	8.219	0.7464
447	SLD 9	-0.78	2.87	44.47	-0.0516	9.8254	-1.0064
447	SLD 10	-0.57	3.38	44.71	-0.0532	9.8737	-1.1822
447	SLD 11	-1.02	-2.31	42.36	-0.0359	9.4347	0.8056
447	SLD 12	-0.81	-1.8	42.6	-0.0375	9.483	0.6299
447	SLD 13	-3.48	1.31	50.94	-0.054	11.1506	-0.462
447	SLD 14	-3.16	2.08	51.3	-0.0564	11.2242	-0.7302
447	SLD 15	-3.55	-0.24	50.31	-0.0492	11.0333	0.0816
447	SLD 16	-3.23	0.53	50.67	-0.0517	11.107	-0.1865
447	SLV 1	8.56	-0.06	16.41	-0.0159	4.1394	0.0184
447	SLV 2	9.3	1.73	17.24	-0.0216	4.3109	-0.6061
447	SLV 3	8.4	-3.6	14.97	-0.0052	3.8737	1.2552
447	SLV 4	9.14	-1.8	15.8	-0.0109	4.0452	0.6307
447	SLV 5	2.91	5.29	35.25	-0.0488	7.9308	-1.8536
447	SLV 6	3.38	6.45	35.79	-0.0524	8.0414	-2.2561
447	SLV 7	2.35	-6.49	30.46	-0.013	7.0451	2.2688
447	SLV 8	2.82	-5.34	30.99	-0.0167	7.1557	1.8664
447	SLV 9	-2.22	6.07	49.84	-0.0653	10.8888	-2.1263
447	SLV 10	-1.75	7.23	50.38	-0.069	10.9993	-2.5288
447	SLV 11	-2.78	-5.71	45.04	-0.0296	10.0031	1.9961
447	SLV 12	-2.31	-4.56	45.58	-0.0333	10.1136	1.5937
447	SLV 13	-8.54	2.54	65.03	-0.0712	13.9992	-0.8906
447	SLV 14	-7.8	4.33	65.87	-0.0769	14.1708	-1.5151
447	SLV 15	-8.7	-1	63.59	-0.0605	13.7335	0.3461

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLV 16	-7.96	0.8	64.43	-0.0661	13.9051	-0.2784
447	CRTFP Ux+	0	0	0	0	0	0
447	CRTFP Ux-	0	0	0	0	0	0
447	CRTFP Uy+	0	0	0	0	0	0
447	CRTFP Uy-	0	0	0	0	0	0
449	SLU 1	-0.61	-0.09	34.4	-0.0451	-4.5442	-0.0255
449	SLU 2	-0.6	0	34.38	-0.0448	-4.5366	-0.0029
449	SLU 3	-0.63	-0.09	35.18	-0.0462	-4.6394	-0.0255
449	SLU 4	-0.62	-0.04	35.17	-0.046	-4.6348	-0.0119
449	SLU 5	-0.61	0	34.88	-0.0456	-4.5976	-0.0035
449	SLU 6	-0.64	-0.09	35.69	-0.0469	-4.7004	-0.0261
449	SLU 7	-0.63	-0.04	35.68	-0.0468	-4.6958	-0.0126
449	SLU 8	-0.63	-0.1	35.4	-0.0466	-4.6663	-0.0268
449	SLU 9	-0.62	-0.04	35.39	-0.0464	-4.6617	-0.0132
449	SLU 10	-0.65	0.01	38.67	-0.0505	-5.074	-0.001
449	SLU 11	-0.68	-0.08	39.47	-0.0518	-5.1768	-0.0236
449	SLU 12	-0.67	-0.03	39.46	-0.0517	-5.1722	-0.01
449	SLU 13	-0.66	0	39.17	-0.0512	-5.1351	-0.0016
449	SLU 14	-0.69	-0.09	39.97	-0.0526	-5.2379	-0.0242
449	SLU 15	-0.68	-0.03	39.96	-0.0524	-5.2333	-0.0106
449	SLU 16	-0.68	-0.09	39.69	-0.0522	-5.2038	-0.0249
449	SLU 17	-0.67	-0.03	39.68	-0.0521	-5.1992	-0.0113
449	SLU 18	-0.68	-0.08	40.53	-0.0532	-5.312	-0.0228
449	SLU 19	-0.67	-0.03	40.52	-0.053	-5.3074	-0.0092
449	SLU 20	-0.69	-0.08	41.03	-0.0539	-5.3731	-0.0234
449	SLU 21	-0.68	-0.03	41.02	-0.0538	-5.3685	-0.0099
449	SLU 22	-0.69	-0.08	38.62	-0.0505	-5.0687	-0.0227
449	SLU 23	-0.68	0.01	38.6	-0.0503	-5.061	-0.0001
449	SLU 24	-0.71	-0.08	39.4	-0.0516	-5.1638	-0.0227
449	SLU 25	-0.7	-0.02	39.39	-0.0514	-5.1592	-0.0091
449	SLU 26	-0.69	0.01	39.11	-0.051	-5.122	-0.0007
449	SLU 27	-0.72	-0.08	39.91	-0.0523	-5.2248	-0.0233
449	SLU 28	-0.71	-0.03	39.9	-0.0522	-5.2202	-0.0097
449	SLU 29	-0.71	-0.08	39.63	-0.052	-5.1907	-0.024
449	SLU 30	-0.7	-0.03	39.62	-0.0518	-5.1861	-0.0104
449	SLU 31	-0.73	0.02	42.89	-0.0559	-5.5985	0.0018
449	SLU 32	-0.76	-0.07	43.69	-0.0573	-5.7013	-0.0208
449	SLU 33	-0.75	-0.02	43.68	-0.0571	-5.6967	-0.0072
449	SLU 34	-0.74	0.02	43.39	-0.0567	-5.6595	0.0012
449	SLU 35	-0.77	-0.07	44.19	-0.058	-5.7623	-0.0214
449	SLU 36	-0.76	-0.02	44.18	-0.0578	-5.7577	-0.0078
449	SLU 37	-0.76	-0.08	43.91	-0.0577	-5.7282	-0.0221
449	SLU 38	-0.75	-0.02	43.9	-0.0575	-5.7236	-0.0085
449	SLU 39	-0.76	-0.07	44.75	-0.0586	-5.8365	-0.02
449	SLU 40	-0.75	-0.01	44.74	-0.0585	-5.8319	-0.0064
449	SLU 41	-0.77	-0.07	45.25	-0.0593	-5.8975	-0.0206
449	SLU 42	-0.76	-0.01	45.24	-0.0592	-5.8929	-0.007
449	SLU 43	-0.77	-0.12	43.27	-0.0568	-5.7277	-0.0341
449	SLU 44	-0.76	-0.03	43.25	-0.0565	-5.72	-0.0115
449	SLU 45	-0.79	-0.12	44.06	-0.0578	-5.8228	-0.0341
449	SLU 46	-0.78	-0.07	44.05	-0.0577	-5.8182	-0.0205
449	SLU 47	-0.77	-0.04	43.76	-0.0572	-5.7811	-0.0122
449	SLU 48	-0.79	-0.13	44.56	-0.0586	-5.8839	-0.0347
449	SLU 49	-0.79	-0.07	44.55	-0.0584	-5.8793	-0.0212
449	SLU 50	-0.79	-0.13	44.28	-0.0582	-5.8498	-0.0354
449	SLU 51	-0.78	-0.07	44.27	-0.0581	-5.8452	-0.0218
449	SLU 52	-0.8	-0.02	47.54	-0.0622	-6.2575	-0.0096
449	SLU 53	-0.83	-0.12	48.34	-0.0635	-6.3603	-0.0322
449	SLU 54	-0.83	-0.06	48.33	-0.0634	-6.3557	-0.0186
449	SLU 55	-0.81	-0.03	48.05	-0.0629	-6.3185	-0.0103
449	SLU 56	-0.84	-0.12	48.85	-0.0642	-6.4213	-0.0328
449	SLU 57	-0.84	-0.06	48.84	-0.0641	-6.4167	-0.0193
449	SLU 58	-0.83	-0.12	48.57	-0.0639	-6.3872	-0.0335
449	SLU 59	-0.83	-0.07	48.56	-0.0638	-6.3826	-0.0199
449	SLU 60	-0.84	-0.11	49.4	-0.0649	-6.4955	-0.0314
449	SLU 61	-0.83	-0.06	49.39	-0.0647	-6.4909	-0.0178
449	SLU 62	-0.84	-0.11	49.9	-0.0656	-6.5565	-0.032
449	SLU 63	-0.84	-0.06	49.89	-0.0654	-6.5519	-0.0185
449	SLU 64	-0.85	-0.11	47.49	-0.0622	-6.2521	-0.0313
449	SLU 65	-0.84	-0.02	47.48	-0.0619	-6.2445	-0.0087
449	SLU 66	-0.87	-0.11	48.28	-0.0633	-6.3473	-0.0313
449	SLU 67	-0.86	-0.06	48.27	-0.0631	-6.3427	-0.0177
449	SLU 68	-0.85	-0.02	47.98	-0.0627	-6.3055	-0.0093
449	SLU 69	-0.87	-0.11	48.78	-0.064	-6.4083	-0.0319
449	SLU 70	-0.87	-0.06	48.77	-0.0638	-6.4037	-0.0184
449	SLU 71	-0.87	-0.12	48.5	-0.0637	-6.3742	-0.0326
449	SLU 72	-0.86	-0.06	48.49	-0.0635	-6.3696	-0.019
449	SLU 73	-0.88	-0.01	51.76	-0.0676	-6.7819	-0.0068
449	SLU 74	-0.91	-0.1	52.56	-0.0689	-6.8847	-0.0294
449	SLU 75	-0.91	-0.05	52.55	-0.0688	-6.8801	-0.0158
449	SLU 76	-0.89	-0.01	52.27	-0.0683	-6.843	-0.0074
449	SLU 77	-0.92	-0.1	53.07	-0.0697	-6.9458	-0.03
449	SLU 78	-0.92	-0.05	53.06	-0.0695	-6.9412	-0.0164
449	SLU 79	-0.91	-0.11	52.79	-0.0693	-6.9117	-0.0307
449	SLU 80	-0.91	-0.05	52.78	-0.0692	-6.9071	-0.0171
449	SLU 81	-0.92	-0.1	53.62	-0.0703	-7.0199	-0.0286
449	SLU 82	-0.91	-0.04	53.61	-0.0701	-7.0153	-0.015
449	SLU 83	-0.92	-0.1	54.12	-0.071	-7.081	-0.0292
449	SLU 84	-0.92	-0.05	54.11	-0.0709	-7.0764	-0.0157
449	SLE RA 1	-0.63	-0.09	35.6	-0.0466	-4.6941	-0.0247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
449	SLE RA 2	-0.63	-0.03	35.59	-0.0465	-4.689	-0.0096
449	SLE RA 3	-0.65	-0.09	36.13	-0.0474	-4.7575	-0.0247
449	SLE RA 4	-0.64	-0.05	36.12	-0.0473	-4.7544	-0.0156
449	SLE RA 5	-0.63	-0.03	35.93	-0.047	-4.7296	-0.0101
449	SLE RA 6	-0.65	-0.09	36.46	-0.0478	-4.7982	-0.0251
449	SLE RA 7	-0.65	-0.05	36.46	-0.0477	-4.7951	-0.0161
449	SLE RA 8	-0.65	-0.09	36.28	-0.0476	-4.7754	-0.0255
449	SLE RA 9	-0.64	-0.06	36.27	-0.0475	-4.7724	-0.0165
449	SLE RA 10	-0.66	-0.02	38.45	-0.0502	-5.0473	-0.0084
449	SLE RA 11	-0.68	-0.08	38.99	-0.0511	-5.1158	-0.0234
449	SLE RA 12	-0.67	-0.05	38.98	-0.051	-5.1127	-0.0144
449	SLE RA 13	-0.67	-0.02	38.79	-0.0507	-5.088	-0.0088
449	SLE RA 14	-0.68	-0.08	39.32	-0.0516	-5.1565	-0.0238
449	SLE RA 15	-0.68	-0.05	39.31	-0.0515	-5.1534	-0.0148
449	SLE RA 16	-0.68	-0.09	39.13	-0.0514	-5.1338	-0.0243
449	SLE RA 17	-0.67	-0.05	39.13	-0.0513	-5.1307	-0.0152
449	SLE RA 18	-0.68	-0.08	39.69	-0.052	-5.2059	-0.0229
449	SLE RA 19	-0.68	-0.04	39.68	-0.0519	-5.2029	-0.0138
449	SLE RA 20	-0.69	-0.08	40.02	-0.0525	-5.2466	-0.0233
449	SLE RA 21	-0.68	-0.05	40.02	-0.0524	-5.2436	-0.0143
449	SLE FR 1	-0.63	-0.09	35.6	-0.0466	-4.6941	-0.0247
449	SLE FR 2	-0.63	-0.08	35.6	-0.0466	-4.693	-0.0217
449	SLE FR 3	-0.64	-0.09	35.74	-0.0468	-4.7103	-0.0249
449	SLE FR 4	-0.65	-0.07	36.83	-0.0482	-4.8466	-0.0211
449	SLE FR 5	-0.65	-0.09	36.96	-0.0485	-4.8639	-0.0243
449	SLE FR 6	-0.66	-0.08	37.65	-0.0493	-4.95	-0.0238
449	SLE QP 1	-0.63	-0.09	35.6	-0.0466	-4.6941	-0.0247
449	SLE QP 2	-0.65	-0.09	36.83	-0.0483	-4.8476	-0.0242
449	SLD 1	2.29	0.45	47.17	-0.065	-6.0641	0.366
449	SLD 2	2.55	-0.23	46.86	-0.0625	-6.0277	0.196
449	SLD 3	2.34	-0.97	46.59	-0.06	-6.002	0.011
449	SLD 4	2.59	-1.66	46.28	-0.0574	-5.9656	-0.159
449	SLD 5	0.12	2.35	40.87	-0.0614	-5.3132	0.6616
449	SLD 6	0.29	1.9	40.66	-0.0597	-5.2894	0.5501
449	SLD 7	0.27	-2.39	38.93	-0.0446	-5.1062	-0.5218
449	SLD 8	0.44	-2.83	38.73	-0.0429	-5.0824	-0.6332
449	SLD 9	-1.74	2.66	34.93	-0.0536	-4.6129	0.5849
449	SLD 10	-1.57	2.21	34.73	-0.0519	-4.589	0.4735
449	SLD 11	-1.58	-2.08	33	-0.0368	-4.4059	-0.5984
449	SLD 12	-1.41	-2.52	32.79	-0.0351	-4.382	-0.7099
449	SLD 13	-3.89	1.48	27.38	-0.0391	-3.7296	0.1107
449	SLD 14	-3.63	0.8	27.07	-0.0365	-3.6933	-0.0593
449	SLD 15	-3.84	0.06	26.8	-0.0341	-3.6675	-0.2443
449	SLD 16	-3.58	-0.62	26.49	-0.0315	-3.6312	-0.4143
449	SLV 1	6.22	1.12	61	-0.0873	-7.6922	0.8767
449	SLV 2	6.82	-0.48	60.28	-0.0813	-7.6075	0.4808
449	SLV 3	6.33	-2.11	59.68	-0.0759	-7.5507	0.0687
449	SLV 4	6.93	-3.71	58.96	-0.0699	-7.4661	-0.3272
449	SLV 5	1.14	5.46	46.21	-0.0783	-5.9301	1.5397
449	SLV 6	1.53	4.43	45.74	-0.0745	-5.8755	1.2846
449	SLV 7	1.51	-5.33	41.81	-0.0403	-5.4586	-1.1536
449	SLV 8	1.89	-6.36	41.34	-0.0364	-5.4041	-1.4087
449	SLV 9	-3.19	6.18	32.32	-0.0601	-4.2912	1.3604
449	SLV 10	-2.8	5.15	31.85	-0.0562	-4.2366	1.1053
449	SLV 11	-2.83	-4.6	27.92	-0.0221	-3.8197	-1.3329
449	SLV 12	-2.44	-5.63	27.45	-0.0182	-3.7652	-1.588
449	SLV 13	-8.23	3.54	14.7	-0.0266	-2.2292	0.2789
449	SLV 14	-7.63	1.94	13.98	-0.0206	-2.1445	-0.117
449	SLV 15	-8.12	0.3	13.38	-0.0152	-2.0877	-0.5291
449	SLV 16	-7.52	-1.29	12.66	-0.0092	-2.0031	-0.925
449	CRTFP Ux+	0	0	0	0	0	0
449	CRTFP Ux-	0	0	0	0	0	0
449	CRTFP Uy+	0	0	0	0	0	0
449	CRTFP Uy-	0	0	0	0	0	0
451	SLU 1	-1.35	-0.96	111.05	2.2339	-0.3506	-0.0854
451	SLU 2	-1.33	-0.79	111.13	2.2291	-0.3524	-0.0841
451	SLU 3	-1.38	-0.93	113.47	2.2872	-0.3575	-0.0885
451	SLU 4	-1.37	-0.83	113.52	2.2843	-0.3586	-0.0877
451	SLU 5	-1.34	-0.8	112.77	2.2615	-0.3572	-0.0861
451	SLU 6	-1.39	-0.95	115.11	2.3196	-0.3623	-0.0905
451	SLU 7	-1.38	-0.85	115.16	2.3167	-0.3634	-0.0897
451	SLU 8	-1.37	-0.99	114.33	2.2988	-0.3603	-0.0894
451	SLU 9	-1.36	-0.89	114.38	2.2959	-0.3613	-0.0886
451	SLU 10	-1.44	-0.8	126.42	2.5397	-0.4013	-0.0942
451	SLU 11	-1.49	-0.95	128.77	2.5977	-0.4064	-0.0986
451	SLU 12	-1.48	-0.85	128.82	2.5948	-0.4075	-0.0978
451	SLU 13	-1.45	-0.82	128.06	2.5721	-0.4061	-0.0962
451	SLU 14	-1.5	-0.96	130.41	2.6301	-0.4112	-0.1006
451	SLU 15	-1.49	-0.86	130.45	2.6272	-0.4123	-0.0998
451	SLU 16	-1.48	-1	129.62	2.6093	-0.4092	-0.0995
451	SLU 17	-1.47	-0.9	129.67	2.6064	-0.4102	-0.0987
451	SLU 18	-1.5	-0.98	132.9	2.6776	-0.4205	-0.0999
451	SLU 19	-1.49	-0.88	132.95	2.6747	-0.4215	-0.0991
451	SLU 20	-1.52	-0.99	134.54	2.71	-0.4253	-0.1018
451	SLU 21	-1.51	-0.89	134.58	2.7071	-0.4264	-0.101
451	SLU 22	-1.52	-0.86	124.21	2.5205	-0.3859	-0.099
451	SLU 23	-1.51	-0.69	124.29	2.5157	-0.3877	-0.0976
451	SLU 24	-1.56	-0.84	126.64	2.5738	-0.3928	-0.102
451	SLU 25	-1.55	-0.74	126.68	2.5709	-0.3938	-0.1012
451	SLU 26	-1.52	-0.71	125.93	2.5481	-0.3925	-0.0996

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
451	SLU 27	-1.57	-0.85	128.27	2.6062	-0.3976	-0.104
451	SLU 28	-1.56	-0.75	128.32	2.6033	-0.3986	-0.1032
451	SLU 29	-1.55	-0.89	127.49	2.5854	-0.3955	-0.1029
451	SLU 30	-1.54	-0.79	127.54	2.5825	-0.3966	-0.1021
451	SLU 31	-1.62	-0.71	139.58	2.8263	-0.4366	-0.1077
451	SLU 32	-1.67	-0.85	141.93	2.8843	-0.4417	-0.1121
451	SLU 33	-1.66	-0.75	141.98	2.8814	-0.4427	-0.1113
451	SLU 34	-1.63	-0.72	141.22	2.8587	-0.4414	-0.1097
451	SLU 35	-1.68	-0.87	143.57	2.9167	-0.4465	-0.1141
451	SLU 36	-1.67	-0.77	143.62	2.9138	-0.4476	-0.1133
451	SLU 37	-1.66	-0.91	142.78	2.8959	-0.4444	-0.113
451	SLU 38	-1.65	-0.8	142.83	2.893	-0.4455	-0.1122
451	SLU 39	-1.68	-0.88	146.06	2.9642	-0.4557	-0.1134
451	SLU 40	-1.67	-0.78	146.11	2.9613	-0.4568	-0.1126
451	SLU 41	-1.7	-0.9	147.7	2.9966	-0.4606	-0.1154
451	SLU 42	-1.68	-0.79	147.75	2.9937	-0.4616	-0.1146
451	SLU 43	-1.69	-1.28	139.85	2.8059	-0.4437	-0.1064
451	SLU 44	-1.67	-1.11	139.93	2.801	-0.4455	-0.1051
451	SLU 45	-1.72	-1.25	142.28	2.8591	-0.4506	-0.1095
451	SLU 46	-1.71	-1.15	142.32	2.8562	-0.4516	-0.1087
451	SLU 47	-1.68	-1.12	141.57	2.8334	-0.4503	-0.1071
451	SLU 48	-1.74	-1.27	143.92	2.8915	-0.4554	-0.1115
451	SLU 49	-1.72	-1.17	143.96	2.8886	-0.4565	-0.1107
451	SLU 50	-1.72	-1.31	143.13	2.8707	-0.4534	-0.1104
451	SLU 51	-1.7	-1.21	143.18	2.8678	-0.4544	-0.1096
451	SLU 52	-1.78	-1.12	155.23	3.1116	-0.4944	-0.1152
451	SLU 53	-1.83	-1.27	157.57	3.1696	-0.4995	-0.1196
451	SLU 54	-1.82	-1.17	157.62	3.1667	-0.5005	-0.1188
451	SLU 55	-1.8	-1.14	156.86	3.144	-0.4992	-0.1172
451	SLU 56	-1.85	-1.28	159.21	3.2021	-0.5043	-0.1216
451	SLU 57	-1.84	-1.18	159.26	3.1992	-0.5054	-0.1208
451	SLU 58	-1.83	-1.32	158.42	3.1812	-0.5023	-0.1205
451	SLU 59	-1.82	-1.22	158.47	3.1783	-0.5033	-0.1197
451	SLU 60	-1.85	-1.3	161.7	3.2495	-0.5136	-0.1209
451	SLU 61	-1.84	-1.2	161.75	3.2466	-0.5146	-0.1201
451	SLU 62	-1.86	-1.31	163.34	3.2819	-0.5184	-0.1228
451	SLU 63	-1.85	-1.21	163.39	3.279	-0.5195	-0.122
451	SLU 64	-1.87	-1.18	153.01	3.0924	-0.479	-0.12
451	SLU 65	-1.85	-1.01	153.09	3.0876	-0.4807	-0.1186
451	SLU 66	-1.9	-1.16	155.44	3.1457	-0.4858	-0.123
451	SLU 67	-1.89	-1.06	155.49	3.1428	-0.4869	-0.1222
451	SLU 68	-1.86	-1.03	154.73	3.12	-0.4856	-0.1206
451	SLU 69	-1.91	-1.17	157.08	3.1781	-0.4907	-0.125
451	SLU 70	-1.9	-1.07	157.13	3.1752	-0.4917	-0.1242
451	SLU 71	-1.89	-1.21	156.29	3.1573	-0.4886	-0.1239
451	SLU 72	-1.88	-1.11	156.34	3.1544	-0.4897	-0.1231
451	SLU 73	-1.96	-1.03	168.39	3.3982	-0.5297	-0.1287
451	SLU 74	-2.01	-1.17	170.73	3.4562	-0.5348	-0.1331
451	SLU 75	-2	-1.07	170.78	3.4533	-0.5358	-0.1323
451	SLU 76	-1.97	-1.04	170.03	3.4306	-0.5345	-0.1307
451	SLU 77	-2.02	-1.19	172.37	3.4887	-0.5396	-0.1351
451	SLU 78	-2.01	-1.09	172.42	3.4858	-0.5406	-0.1343
451	SLU 79	-2	-1.23	171.58	3.4678	-0.5375	-0.134
451	SLU 80	-1.99	-1.12	171.63	3.4649	-0.5386	-0.1332
451	SLU 81	-2.02	-1.2	174.86	3.5361	-0.5488	-0.1344
451	SLU 82	-2.01	-1.1	174.91	3.5332	-0.5499	-0.1336
451	SLU 83	-2.04	-1.22	176.5	3.5685	-0.5537	-0.1364
451	SLU 84	-2.03	-1.12	176.55	3.5656	-0.5547	-0.1356
451	SLE RA 1	-1.4	-0.93	114.81	2.3158	-0.3607	-0.0893
451	SLE RA 2	-1.38	-0.82	114.86	2.3126	-0.3619	-0.0884
451	SLE RA 3	-1.42	-0.91	116.43	2.3513	-0.3653	-0.0913
451	SLE RA 4	-1.41	-0.85	116.46	2.3494	-0.366	-0.0908
451	SLE RA 5	-1.39	-0.83	115.96	2.3342	-0.3651	-0.0897
451	SLE RA 6	-1.43	-0.92	117.52	2.3729	-0.3685	-0.0927
451	SLE RA 7	-1.42	-0.86	117.55	2.371	-0.3692	-0.0921
451	SLE RA 8	-1.41	-0.95	117	2.359	-0.3671	-0.092
451	SLE RA 9	-1.41	-0.88	117.03	2.3571	-0.3678	-0.0914
451	SLE RA 10	-1.46	-0.83	125.06	2.5196	-0.3945	-0.0951
451	SLE RA 11	-1.49	-0.92	126.62	2.5583	-0.3979	-0.0981
451	SLE RA 12	-1.49	-0.86	126.65	2.5564	-0.3986	-0.0975
451	SLE RA 13	-1.47	-0.84	126.15	2.5412	-0.3977	-0.0965
451	SLE RA 14	-1.5	-0.93	127.71	2.58	-0.4011	-0.0994
451	SLE RA 15	-1.49	-0.87	127.75	2.578	-0.4018	-0.0989
451	SLE RA 16	-1.49	-0.96	127.19	2.5661	-0.3997	-0.0987
451	SLE RA 17	-1.48	-0.89	127.22	2.5641	-0.4004	-0.0981
451	SLE RA 18	-1.5	-0.94	129.38	2.6116	-0.4073	-0.0989
451	SLE RA 19	-1.5	-0.88	129.41	2.6097	-0.408	-0.0984
451	SLE RA 20	-1.51	-0.95	130.47	2.6332	-0.4105	-0.1002
451	SLE RA 21	-1.5	-0.89	130.5	2.6313	-0.4112	-0.0997
451	SLE FR 1	-1.4	-0.93	114.81	2.3158	-0.3607	-0.0893
451	SLE FR 2	-1.39	-0.91	114.82	2.3152	-0.3609	-0.0891
451	SLE FR 3	-1.4	-0.93	115.25	2.3245	-0.362	-0.0898
451	SLE FR 4	-1.43	-0.91	119.19	2.4039	-0.3749	-0.092
451	SLE FR 5	-1.43	-0.94	119.62	2.4132	-0.3759	-0.0927
451	SLE FR 6	-1.45	-0.94	122.09	2.4637	-0.384	-0.0941
451	SLE QP 1	-1.4	-0.93	114.81	2.3158	-0.3607	-0.0893
451	SLE QP 2	-1.43	-0.93	119.18	2.4045	-0.3747	-0.0922
451	SLD 1	8.56	1.33	116.75	2.1475	-0.3666	-0.245
451	SLD 2	9.43	1.07	116.52	2.1511	-0.369	-0.2222
451	SLD 3	8.76	-2.33	116.09	2.2649	-0.3523	-0.2348

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
451	SLD 4	9.64	-2.6	115.86	2.2685	-0.3547	-0.212
451	SLD 5	1.1	5.35	119.48	2.1487	-0.3936	-0.1576
451	SLD 6	1.68	5.18	119.33	2.1511	-0.3951	-0.1427
451	SLD 7	1.78	-6.87	117.31	2.5401	-0.3458	-0.1235
451	SLD 8	2.36	-7.04	117.15	2.5425	-0.3473	-0.1085
451	SLD 9	-5.21	5.17	121.21	2.2666	-0.402	-0.0759
451	SLD 10	-4.64	5	121.05	2.269	-0.4035	-0.0609
451	SLD 11	-4.53	-7.05	119.03	2.658	-0.3542	-0.0417
451	SLD 12	-3.96	-7.22	118.88	2.6604	-0.3558	-0.0268
451	SLD 13	-12.5	0.73	122.5	2.5406	-0.3947	0.0276
451	SLD 14	-11.62	0.47	122.26	2.5442	-0.3971	0.0504
451	SLD 15	-12.29	-2.93	121.84	2.658	-0.3803	0.0378
451	SLD 16	-11.42	-3.2	121.61	2.6616	-0.3827	0.0606
451	SLV 1	21.94	4.25	113.46	1.807	-0.3554	-0.4492
451	SLV 2	23.98	3.63	112.93	1.8154	-0.361	-0.3961
451	SLV 3	22.41	-4.1	111.97	2.073	-0.3227	-0.4258
451	SLV 4	24.45	-4.72	111.43	2.0815	-0.3283	-0.3727
451	SLV 5	4.52	13.39	119.82	1.8203	-0.4176	-0.2439
451	SLV 6	5.83	12.99	119.48	1.8258	-0.4212	-0.2097
451	SLV 7	6.09	-14.44	114.84	2.7071	-0.3085	-0.166
451	SLV 8	7.4	-14.84	114.5	2.7126	-0.3121	-0.1317
451	SLV 9	-10.26	12.97	123.86	2.0965	-0.4373	-0.0526
451	SLV 10	-8.94	12.57	123.52	2.102	-0.4409	-0.0184
451	SLV 11	-8.69	-14.86	118.88	2.9833	-0.3281	0.0253
451	SLV 12	-7.37	-15.26	118.53	2.9888	-0.3317	0.0595
451	SLV 13	-27.3	2.85	126.93	2.7276	-0.421	0.1883
451	SLV 14	-25.26	2.23	126.39	2.736	-0.4266	0.2414
451	SLV 15	-26.83	-5.5	125.43	2.9937	-0.3883	0.2117
451	SLV 16	-24.79	-6.12	124.89	3.0021	-0.3939	0.2648
451	CRTFP Ux+	0	0	0	0	0	0
451	CRTFP Ux-	0	0	0	0	0	0
451	CRTFP Uy+	0	0	0	0	0	0
451	CRTFP Uy-	0	0	0	0	0	0
453	SLU 1	0.03	-0.21	33.4	-0.0064	9.4669	0.0735
453	SLU 2	0.03	-0.16	33.43	-0.0066	9.4755	0.0552
453	SLU 3	0.03	-0.2	34.12	-0.0066	9.6596	0.0709
453	SLU 4	0.03	-0.17	34.14	-0.0067	9.6647	0.0599
453	SLU 5	0.03	-0.16	33.9	-0.0068	9.5984	0.0562
453	SLU 6	0.04	-0.2	34.58	-0.0069	9.7825	0.0718
453	SLU 7	0.03	-0.17	34.6	-0.007	9.7877	0.0608
453	SLU 8	0.03	-0.21	34.33	-0.0069	9.7128	0.0753
453	SLU 9	0.03	-0.18	34.35	-0.007	9.7179	0.0644
453	SLU 10	0.03	-0.14	37.98	-0.0079	10.7281	0.0494
453	SLU 11	0.03	-0.18	38.67	-0.0079	10.9123	0.065
453	SLU 12	0.03	-0.15	38.69	-0.008	10.9174	0.0541
453	SLU 13	0.03	-0.14	38.44	-0.0081	10.8511	0.0503
453	SLU 14	0.04	-0.19	39.13	-0.0081	11.0352	0.0659
453	SLU 15	0.03	-0.16	39.15	-0.0082	11.0403	0.055
453	SLU 16	0.03	-0.2	38.88	-0.0082	10.9655	0.0694
453	SLU 17	0.03	-0.17	38.9	-0.0083	10.9706	0.0585
453	SLU 18	0.03	-0.18	39.9	-0.0082	11.2565	0.0651
453	SLU 19	0.03	-0.15	39.92	-0.0083	11.2616	0.0542
453	SLU 20	0.03	-0.19	40.36	-0.0085	11.3794	0.066
453	SLU 21	0.03	-0.16	40.38	-0.0086	11.3845	0.0551
453	SLU 22	0.04	-0.17	37.34	-0.007	10.5387	0.0616
453	SLU 23	0.04	-0.12	37.37	-0.0072	10.5472	0.0433
453	SLU 24	0.04	-0.17	38.06	-0.0072	10.7314	0.0589
453	SLU 25	0.04	-0.13	38.07	-0.0073	10.7365	0.048
453	SLU 26	0.04	-0.12	37.83	-0.0075	10.6701	0.0442
453	SLU 27	0.05	-0.17	38.52	-0.0075	10.8543	0.0599
453	SLU 28	0.04	-0.14	38.54	-0.0076	10.8594	0.0489
453	SLU 29	0.04	-0.18	38.26	-0.0075	10.7845	0.0634
453	SLU 30	0.04	-0.15	38.28	-0.0076	10.7896	0.0524
453	SLU 31	0.04	-0.1	41.92	-0.0085	11.7999	0.0374
453	SLU 32	0.04	-0.15	42.6	-0.0085	11.984	0.0531
453	SLU 33	0.04	-0.12	42.62	-0.0086	11.9891	0.0421
453	SLU 34	0.04	-0.11	42.38	-0.0087	11.9228	0.0383
453	SLU 35	0.04	-0.15	43.07	-0.0087	12.1069	0.054
453	SLU 36	0.04	-0.12	43.08	-0.0088	12.1121	0.043
453	SLU 37	0.04	-0.16	42.81	-0.0088	12.0372	0.0575
453	SLU 38	0.04	-0.13	42.83	-0.0089	12.0423	0.0466
453	SLU 39	0.04	-0.15	43.83	-0.0089	12.3282	0.0532
453	SLU 40	0.04	-0.12	43.85	-0.009	12.3333	0.0422
453	SLU 41	0.04	-0.15	44.3	-0.0091	12.4511	0.0541
453	SLU 42	0.04	-0.12	44.32	-0.0092	12.4562	0.0431
453	SLU 43	0.03	-0.28	42.08	-0.0082	11.9396	0.0996
453	SLU 44	0.03	-0.23	42.11	-0.0083	11.9481	0.0814
453	SLU 45	0.04	-0.27	42.79	-0.0083	12.1323	0.097
453	SLU 46	0.04	-0.24	42.81	-0.0084	12.1374	0.0861
453	SLU 47	0.03	-0.23	42.57	-0.0086	12.071	0.0823
453	SLU 48	0.04	-0.28	43.26	-0.0086	12.2552	0.0979
453	SLU 49	0.04	-0.25	43.27	-0.0087	12.2603	0.087
453	SLU 50	0.04	-0.29	43	-0.0086	12.1854	0.1014
453	SLU 51	0.04	-0.26	43.02	-0.0087	12.1905	0.0905
453	SLU 52	0.03	-0.21	46.65	-0.0096	13.2008	0.0755
453	SLU 53	0.04	-0.26	47.34	-0.0096	13.3849	0.0911
453	SLU 54	0.04	-0.23	47.36	-0.0097	13.39	0.0802
453	SLU 55	0.03	-0.22	47.12	-0.0098	13.3237	0.0764
453	SLU 56	0.04	-0.26	47.8	-0.0098	13.5078	0.0921
453	SLU 57	0.04	-0.23	47.82	-0.0099	13.513	0.0811

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
453	SLU 58	0.04	-0.27	47.55	-0.0099	13.4381	0.0956
453	SLU 59	0.04	-0.24	47.57	-0.01	13.4432	0.0846
453	SLU 60	0.03	-0.26	48.57	-0.01	13.7291	0.0912
453	SLU 61	0.03	-0.23	48.59	-0.0101	13.7342	0.0803
453	SLU 62	0.04	-0.26	49.03	-0.0102	13.852	0.0921
453	SLU 63	0.04	-0.23	49.05	-0.0103	13.8571	0.0812
453	SLU 64	0.04	-0.25	46.01	-0.0088	13.0113	0.0877
453	SLU 65	0.04	-0.2	46.04	-0.0089	13.0198	0.0694
453	SLU 66	0.05	-0.24	46.73	-0.0089	13.204	0.0851
453	SLU 67	0.05	-0.21	46.75	-0.009	13.2091	0.0741
453	SLU 68	0.04	-0.2	46.5	-0.0092	13.1428	0.0704
453	SLU 69	0.05	-0.24	47.19	-0.0092	13.3269	0.086
453	SLU 70	0.05	-0.21	47.21	-0.0093	13.332	0.075
453	SLU 71	0.05	-0.25	46.94	-0.0093	13.2572	0.0895
453	SLU 72	0.05	-0.22	46.96	-0.0094	13.2623	0.0786
453	SLU 73	0.04	-0.18	50.59	-0.0102	14.2725	0.0636
453	SLU 74	0.05	-0.22	51.27	-0.0102	14.4567	0.0792
453	SLU 75	0.05	-0.19	51.29	-0.0103	14.4618	0.0683
453	SLU 76	0.04	-0.18	51.05	-0.0104	14.3954	0.0645
453	SLU 77	0.05	-0.23	51.74	-0.0105	14.5796	0.0801
453	SLU 78	0.05	-0.19	51.76	-0.0106	14.5847	0.0692
453	SLU 79	0.05	-0.24	51.48	-0.0105	14.5098	0.0836
453	SLU 80	0.05	-0.2	51.5	-0.0106	14.5149	0.0727
453	SLU 81	0.04	-0.22	52.51	-0.0106	14.8008	0.0793
453	SLU 82	0.04	-0.19	52.52	-0.0107	14.806	0.0684
453	SLU 83	0.05	-0.23	52.97	-0.0108	14.9238	0.0802
453	SLU 84	0.04	-0.2	52.99	-0.0109	14.9289	0.0693
453	SLE RA 1	0.03	-0.2	34.53	-0.0066	9.7732	0.0701
453	SLE RA 2	0.03	-0.16	34.55	-0.0067	9.7788	0.0579
453	SLE RA 3	0.03	-0.19	35.01	-0.0067	9.9016	0.0683
453	SLE RA 4	0.03	-0.17	35.02	-0.0068	9.905	0.061
453	SLE RA 5	0.03	-0.16	34.86	-0.0069	9.8608	0.0585
453	SLE RA 6	0.04	-0.19	35.31	-0.0069	9.9836	0.0689
453	SLE RA 7	0.03	-0.17	35.33	-0.007	9.987	0.0616
453	SLE RA 8	0.04	-0.2	35.15	-0.0069	9.9371	0.0713
453	SLE RA 9	0.03	-0.18	35.16	-0.007	9.9405	0.064
453	SLE RA 10	0.03	-0.15	37.58	-0.0076	10.614	0.054
453	SLE RA 11	0.03	-0.18	38.04	-0.0076	10.7367	0.0644
453	SLE RA 12	0.03	-0.16	38.05	-0.0076	10.7401	0.0571
453	SLE RA 13	0.03	-0.15	37.89	-0.0077	10.6959	0.0546
453	SLE RA 14	0.04	-0.18	38.35	-0.0077	10.8187	0.065
453	SLE RA 15	0.03	-0.16	38.36	-0.0078	10.8221	0.0577
453	SLE RA 16	0.04	-0.19	38.18	-0.0078	10.7722	0.0674
453	SLE RA 17	0.03	-0.17	38.19	-0.0078	10.7756	0.0601
453	SLE RA 18	0.03	-0.18	38.86	-0.0078	10.9662	0.0645
453	SLE RA 19	0.03	-0.16	38.87	-0.0079	10.9696	0.0572
453	SLE RA 20	0.03	-0.18	39.17	-0.008	11.0481	0.0651
453	SLE RA 21	0.03	-0.16	39.18	-0.008	11.0515	0.0578
453	SLE FR 1	0.03	-0.2	34.53	-0.0066	9.7732	0.0701
453	SLE FR 2	0.03	-0.19	34.53	-0.0066	9.7743	0.0676
453	SLE FR 3	0.03	-0.2	34.65	-0.0067	9.8059	0.0703
453	SLE FR 4	0.03	-0.19	35.83	-0.007	10.1322	0.066
453	SLE FR 5	0.03	-0.19	35.95	-0.007	10.1638	0.0686
453	SLE FR 6	0.03	-0.19	36.69	-0.0072	10.3697	0.0673
453	SLE QP 1	0.03	-0.2	34.53	-0.0066	9.7732	0.0701
453	SLE QP 2	0.03	-0.19	35.83	-0.007	10.1311	0.0684
453	SLD 1	3.01	0.23	36.13	-0.0079	10.2457	-0.076
453	SLD 2	3.26	0.26	36.18	-0.008	10.2529	-0.0847
453	SLD 3	2.96	-0.83	35.85	-0.0053	10.1739	0.2955
453	SLD 4	3.21	-0.81	35.9	-0.0054	10.1811	0.2868
453	SLD 5	0.96	1.54	36.33	-0.0112	10.273	-0.5368
453	SLD 6	1.12	1.56	36.36	-0.0112	10.2777	-0.5425
453	SLD 7	0.79	-2	35.4	-0.0025	10.0338	0.7016
453	SLD 8	0.95	-1.98	35.43	-0.0025	10.0385	0.6958
453	SLD 9	-0.89	1.6	36.22	-0.0114	10.2236	-0.559
453	SLD 10	-0.73	1.62	36.25	-0.0114	10.2283	-0.5648
453	SLD 11	-1.05	-1.94	35.29	-0.0027	9.9844	0.6793
453	SLD 12	-0.89	-1.93	35.32	-0.0027	9.9891	0.6736
453	SLD 13	-3.14	0.42	35.76	-0.0086	10.081	-0.15
453	SLD 14	-2.9	0.45	35.81	-0.0086	10.0882	-0.1587
453	SLD 15	-3.19	-0.64	35.48	-0.006	10.0093	0.2215
453	SLD 16	-2.95	-0.62	35.53	-0.006	10.0164	0.2128
453	SLV 1	7	0.76	36.52	-0.0091	10.3975	-0.2579
453	SLV 2	7.57	0.83	36.63	-0.0092	10.4141	-0.2781
453	SLV 3	6.89	-1.66	35.88	-0.0032	10.2333	0.588
453	SLV 4	7.46	-1.59	36	-0.0033	10.2499	0.5677
453	SLV 5	2.2	3.75	36.98	-0.0165	10.4571	-1.3089
453	SLV 6	2.56	3.79	37.05	-0.0166	10.4679	-1.322
453	SLV 7	1.82	-4.31	34.86	0.0031	9.9098	1.5107
453	SLV 8	2.19	-4.27	34.93	0.0031	9.9206	1.4976
453	SLV 9	-2.12	3.88	36.72	-0.017	10.3416	-1.3608
453	SLV 10	-1.76	3.93	36.79	-0.0171	10.3523	-1.3739
453	SLV 11	-2.5	-4.18	34.6	0.0027	9.7943	1.4588
453	SLV 12	-2.13	-4.14	34.68	0.0026	9.805	1.4457
453	SLV 13	-7.39	1.21	35.66	-0.0107	10.0122	-0.4309
453	SLV 14	-6.83	1.27	35.77	-0.0108	10.0289	-0.4512
453	SLV 15	-7.51	-1.21	35.02	-0.0048	9.848	0.4149
453	SLV 16	-6.94	-1.15	35.14	-0.0049	9.8647	0.3947
453	CRTFP Ux+	0	0	0	0	0	0
453	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
453	CRTFP Uy+	0	0	0	0	0	0
453	CRTFP Uy-	0	0	0	0	0	0
457	SLU 1	-0.92	-0.98	63.45	-0.0287	-0.3604	-0.0192
457	SLU 2	-0.91	-0.88	63.43	-0.0286	-0.3613	-0.0187
457	SLU 3	-0.94	-0.99	64.87	-0.0291	-0.3685	-0.0199
457	SLU 4	-0.94	-0.93	64.86	-0.029	-0.369	-0.0196
457	SLU 5	-0.92	-0.89	64.36	-0.029	-0.3669	-0.019
457	SLU 6	-0.96	-1	65.8	-0.0296	-0.3741	-0.0202
457	SLU 7	-0.95	-0.94	65.78	-0.0295	-0.3746	-0.0198
457	SLU 8	-0.94	-1.01	65.3	-0.0296	-0.3717	-0.0198
457	SLU 9	-0.94	-0.95	65.29	-0.0296	-0.3722	-0.0195
457	SLU 10	-0.98	-0.95	71.77	-0.0313	-0.4209	-0.0212
457	SLU 11	-1.02	-1.06	73.21	-0.0318	-0.4281	-0.0224
457	SLU 12	-1.01	-1	73.2	-0.0318	-0.4286	-0.0221
457	SLU 13	-1	-0.97	72.7	-0.0318	-0.4265	-0.0215
457	SLU 14	-1.03	-1.07	74.14	-0.0323	-0.4338	-0.0227
457	SLU 15	-1.03	-1.01	74.13	-0.0322	-0.4343	-0.0224
457	SLU 16	-1.02	-1.08	73.64	-0.0324	-0.4313	-0.0223
457	SLU 17	-1.01	-1.02	73.63	-0.0323	-0.4318	-0.022
457	SLU 18	-1.02	-1.08	75.37	-0.0326	-0.4457	-0.0228
457	SLU 19	-1.02	-1.02	75.36	-0.0325	-0.4462	-0.0225
457	SLU 20	-1.03	-1.1	76.29	-0.0331	-0.4513	-0.0231
457	SLU 21	-1.03	-1.04	76.28	-0.033	-0.4518	-0.0228
457	SLU 22	-1.04	-1.01	71.31	-0.0306	-0.4047	-0.0227
457	SLU 23	-1.03	-0.91	71.29	-0.0304	-0.4055	-0.0222
457	SLU 24	-1.07	-1.02	72.73	-0.031	-0.4128	-0.0234
457	SLU 25	-1.06	-0.96	72.71	-0.0309	-0.4133	-0.023
457	SLU 26	-1.05	-0.93	72.21	-0.0309	-0.4112	-0.0224
457	SLU 27	-1.08	-1.04	73.65	-0.0315	-0.4184	-0.0236
457	SLU 28	-1.07	-0.98	73.64	-0.0314	-0.4189	-0.0233
457	SLU 29	-1.07	-1.05	73.16	-0.0315	-0.416	-0.0232
457	SLU 30	-1.06	-0.99	73.14	-0.0314	-0.4165	-0.0229
457	SLU 31	-1.11	-0.99	79.63	-0.0332	-0.4652	-0.0247
457	SLU 32	-1.14	-1.09	81.07	-0.0337	-0.4724	-0.0259
457	SLU 33	-1.13	-1.03	81.06	-0.0337	-0.4729	-0.0256
457	SLU 34	-1.12	-1	80.55	-0.0337	-0.4708	-0.025
457	SLU 35	-1.15	-1.11	81.99	-0.0342	-0.4781	-0.0261
457	SLU 36	-1.15	-1.05	81.98	-0.0341	-0.4785	-0.0258
457	SLU 37	-1.14	-1.12	81.5	-0.0342	-0.4756	-0.0258
457	SLU 38	-1.14	-1.06	81.49	-0.0342	-0.4761	-0.0254
457	SLU 39	-1.14	-1.12	83.22	-0.0345	-0.49	-0.0263
457	SLU 40	-1.14	-1.06	83.21	-0.0344	-0.4905	-0.026
457	SLU 41	-1.16	-1.13	84.15	-0.0349	-0.4956	-0.0266
457	SLU 42	-1.15	-1.07	84.14	-0.0349	-0.4961	-0.0262
457	SLU 43	-1.15	-1.26	79.79	-0.0366	-0.4534	-0.0238
457	SLU 44	-1.14	-1.16	79.77	-0.0365	-0.4542	-0.0233
457	SLU 45	-1.18	-1.27	81.21	-0.0371	-0.4614	-0.0245
457	SLU 46	-1.17	-1.21	81.2	-0.037	-0.4619	-0.0241
457	SLU 47	-1.16	-1.18	80.7	-0.037	-0.4598	-0.0235
457	SLU 48	-1.19	-1.28	82.14	-0.0375	-0.467	-0.0247
457	SLU 49	-1.19	-1.22	82.13	-0.0375	-0.4675	-0.0244
457	SLU 50	-1.18	-1.29	81.64	-0.0376	-0.4646	-0.0243
457	SLU 51	-1.17	-1.23	81.63	-0.0375	-0.4651	-0.024
457	SLU 52	-1.22	-1.23	88.12	-0.0393	-0.5139	-0.0258
457	SLU 53	-1.25	-1.34	89.56	-0.0398	-0.5211	-0.027
457	SLU 54	-1.25	-1.28	89.54	-0.0397	-0.5216	-0.0267
457	SLU 55	-1.23	-1.25	89.04	-0.0397	-0.5195	-0.0261
457	SLU 56	-1.26	-1.36	90.48	-0.0403	-0.5267	-0.0272
457	SLU 57	-1.26	-1.3	90.47	-0.0402	-0.5272	-0.0269
457	SLU 58	-1.25	-1.36	89.98	-0.0403	-0.5243	-0.0269
457	SLU 59	-1.25	-1.3	89.97	-0.0402	-0.5248	-0.0265
457	SLU 60	-1.25	-1.36	91.71	-0.0405	-0.5386	-0.0274
457	SLU 61	-1.25	-1.3	91.7	-0.0405	-0.5391	-0.0271
457	SLU 62	-1.27	-1.38	92.64	-0.041	-0.5442	-0.0277
457	SLU 63	-1.26	-1.32	92.62	-0.0409	-0.5447	-0.0273
457	SLU 64	-1.27	-1.3	87.65	-0.0385	-0.4977	-0.0273
457	SLU 65	-1.27	-1.2	87.63	-0.0384	-0.4985	-0.0267
457	SLU 66	-1.3	-1.3	89.07	-0.0389	-0.5057	-0.0279
457	SLU 67	-1.29	-1.24	89.06	-0.0389	-0.5062	-0.0276
457	SLU 68	-1.28	-1.21	88.55	-0.0389	-0.5041	-0.027
457	SLU 69	-1.31	-1.32	89.99	-0.0394	-0.5113	-0.0282
457	SLU 70	-1.31	-1.26	89.98	-0.0393	-0.5118	-0.0279
457	SLU 71	-1.3	-1.33	89.5	-0.0395	-0.5089	-0.0278
457	SLU 72	-1.3	-1.27	89.49	-0.0394	-0.5094	-0.0275
457	SLU 73	-1.34	-1.27	95.97	-0.0411	-0.5582	-0.0293
457	SLU 74	-1.37	-1.38	97.41	-0.0417	-0.5654	-0.0304
457	SLU 75	-1.37	-1.32	97.4	-0.0416	-0.5659	-0.0301
457	SLU 76	-1.35	-1.28	96.9	-0.0416	-0.5638	-0.0295
457	SLU 77	-1.38	-1.39	98.33	-0.0422	-0.571	-0.0307
457	SLU 78	-1.38	-1.33	98.32	-0.0421	-0.5715	-0.0304
457	SLU 79	-1.37	-1.4	97.84	-0.0422	-0.5686	-0.0303
457	SLU 80	-1.37	-1.34	97.83	-0.0421	-0.5691	-0.03
457	SLU 81	-1.38	-1.4	99.57	-0.0424	-0.5829	-0.0309
457	SLU 82	-1.37	-1.34	99.55	-0.0424	-0.5834	-0.0305
457	SLU 83	-1.39	-1.41	100.49	-0.0429	-0.5885	-0.0311
457	SLU 84	-1.39	-1.35	100.48	-0.0428	-0.589	-0.0308
457	SLE RA 1	-0.95	-0.99	65.7	-0.0292	-0.3731	-0.0202
457	SLE RA 2	-0.95	-0.92	65.68	-0.0291	-0.3736	-0.0199
457	SLE RA 3	-0.97	-0.99	66.64	-0.0295	-0.3784	-0.0207
457	SLE RA 4	-0.97	-0.95	66.63	-0.0295	-0.3788	-0.0204

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
457	SLE RA 5	-0.96	-0.93	66.3	-0.0295	-0.3774	-0.02
457	SLE RA 6	-0.98	-1	67.26	-0.0298	-0.3822	-0.0208
457	SLE RA 7	-0.98	-0.96	67.25	-0.0298	-0.3825	-0.0206
457	SLE RA 8	-0.97	-1.01	66.93	-0.0298	-0.3806	-0.0206
457	SLE RA 9	-0.97	-0.97	66.92	-0.0298	-0.3809	-0.0204
457	SLE RA 10	-1	-0.97	71.24	-0.031	-0.4134	-0.0215
457	SLE RA 11	-1.02	-1.04	72.2	-0.0313	-0.4182	-0.0223
457	SLE RA 12	-1.02	-1	72.2	-0.0313	-0.4186	-0.0221
457	SLE RA 13	-1.01	-0.98	71.86	-0.0313	-0.4172	-0.0217
457	SLE RA 14	-1.03	-1.05	72.82	-0.0316	-0.422	-0.0225
457	SLE RA 15	-1.02	-1.01	72.81	-0.0316	-0.4223	-0.0223
457	SLE RA 16	-1.02	-1.06	72.49	-0.0317	-0.4204	-0.0223
457	SLE RA 17	-1.02	-1.02	72.48	-0.0316	-0.4207	-0.022
457	SLE RA 18	-1.02	-1.06	73.64	-0.0318	-0.4299	-0.0226
457	SLE RA 19	-1.02	-1.02	73.63	-0.0318	-0.4302	-0.0224
457	SLE RA 20	-1.03	-1.07	74.26	-0.0321	-0.4337	-0.0228
457	SLE RA 21	-1.03	-1.03	74.25	-0.0321	-0.434	-0.0226
457	SLE FR 1	-0.95	-0.99	65.7	-0.0292	-0.3731	-0.0202
457	SLE FR 2	-0.95	-0.98	65.69	-0.0292	-0.3732	-0.0201
457	SLE FR 3	-0.96	-0.99	65.94	-0.0293	-0.3746	-0.0203
457	SLE FR 4	-0.97	-1	68.08	-0.03	-0.3902	-0.0209
457	SLE FR 5	-0.98	-1.01	68.33	-0.0301	-0.3916	-0.021
457	SLE FR 6	-0.99	-1.02	69.67	-0.0305	-0.4015	-0.0214
457	SLE QP 1	-0.95	-0.99	65.7	-0.0292	-0.3731	-0.0202
457	SLE QP 2	-0.97	-1.01	68.08	-0.03	-0.3901	-0.0209
457	SLD 1	4.76	-0.39	74.3	-0.0378	-0.181	0.0027
457	SLD 2	5.24	-0.88	74.01	-0.0357	-0.1879	0.0169
457	SLD 3	4.87	-2.23	73.83	-0.0306	-0.2123	0.0064
457	SLD 4	5.35	-2.73	73.55	-0.0285	-0.2192	0.0206
457	SLD 5	0.49	2.06	70.7	-0.0436	-0.2787	-0.0219
457	SLD 6	0.81	1.74	70.51	-0.0422	-0.2833	-0.0126
457	SLD 7	0.87	-4.09	69.15	-0.0197	-0.383	-0.0097
457	SLD 8	1.18	-4.41	68.96	-0.0183	-0.3875	-0.0004
457	SLD 9	-3.13	2.39	67.2	-0.0417	-0.3927	-0.0414
457	SLD 10	-2.81	2.07	67.01	-0.0403	-0.3973	-0.0321
457	SLD 11	-2.75	-3.76	65.65	-0.0178	-0.497	-0.0293
457	SLD 12	-2.44	-4.08	65.46	-0.0164	-0.5015	-0.02
457	SLD 13	-7.3	0.71	62.61	-0.0315	-0.5611	-0.0624
457	SLD 14	-6.82	0.21	62.33	-0.0294	-0.568	-0.0482
457	SLD 15	-7.19	-1.14	62.15	-0.0243	-0.5923	-0.0588
457	SLD 16	-6.71	-1.63	61.86	-0.0222	-0.5993	-0.0446
457	SLV 1	12.44	0.39	82.6	-0.0481	0.0981	0.0345
457	SLV 2	13.56	-0.76	81.93	-0.0433	0.0821	0.0676
457	SLV 3	12.7	-3.81	81.55	-0.0318	0.0271	0.0429
457	SLV 4	13.82	-4.97	80.88	-0.027	0.011	0.076
457	SLV 5	2.47	5.98	74.15	-0.0609	-0.1331	-0.0227
457	SLV 6	3.19	5.24	73.72	-0.0578	-0.1435	-0.0014
457	SLV 7	3.33	-8.03	70.64	-0.0067	-0.37	0.0052
457	SLV 8	4.05	-8.77	70.21	-0.0036	-0.3804	0.0265
457	SLV 9	-5.99	6.75	65.95	-0.0564	-0.3999	-0.0684
457	SLV 10	-5.27	6.01	65.52	-0.0533	-0.4103	-0.0471
457	SLV 11	-5.13	-7.26	62.44	-0.0022	-0.6368	-0.0405
457	SLV 12	-4.41	-8	62.01	0.0009	-0.6472	-0.0192
457	SLV 13	-15.76	2.95	55.28	-0.033	-0.7913	-0.1178
457	SLV 14	-14.65	1.8	54.61	-0.0282	-0.8073	-0.0848
457	SLV 15	-15.5	-1.26	54.23	-0.0167	-0.8623	-0.1094
457	SLV 16	-14.39	-2.41	53.56	-0.0119	-0.8784	-0.0764
457	CRTFP Ux+	0	0	0	0	0	0
457	CRTFP Ux-	0	0	0	0	0	0
461	SLU 1	0.34	-0.85	63.32	-0.035	0.312	-0.0095
461	SLU 2	0.34	-0.75	63.31	-0.0349	0.3127	-0.0099
461	SLU 3	0.36	-0.86	64.73	-0.0357	0.3174	-0.0096
461	SLU 4	0.36	-0.8	64.72	-0.0357	0.3178	-0.0098
461	SLU 5	0.35	-0.77	64.22	-0.0355	0.3161	-0.01
461	SLU 6	0.36	-0.88	65.64	-0.0364	0.3208	-0.0097
461	SLU 7	0.36	-0.82	65.64	-0.0363	0.3212	-0.01
461	SLU 8	0.36	-0.89	65.15	-0.0363	0.3188	-0.0098
461	SLU 9	0.35	-0.83	65.14	-0.0362	0.3192	-0.01
461	SLU 10	0.35	-0.8	71.57	-0.0386	0.3612	-0.0112
461	SLU 11	0.37	-0.91	73	-0.0395	0.3659	-0.0109
461	SLU 12	0.37	-0.85	72.99	-0.0394	0.3663	-0.0112
461	SLU 13	0.36	-0.82	72.49	-0.0393	0.3646	-0.0114
461	SLU 14	0.38	-0.93	73.91	-0.0402	0.3693	-0.0111
461	SLU 15	0.37	-0.87	73.9	-0.0401	0.3697	-0.0113
461	SLU 16	0.37	-0.94	73.41	-0.0401	0.3672	-0.0111
461	SLU 17	0.37	-0.88	73.41	-0.04	0.3677	-0.0114
461	SLU 18	0.36	-0.92	75.13	-0.0404	0.3813	-0.0114
461	SLU 19	0.36	-0.86	75.12	-0.0403	0.3817	-0.0116
461	SLU 20	0.37	-0.94	76.04	-0.041	0.3847	-0.0116
461	SLU 21	0.37	-0.88	76.03	-0.041	0.3851	-0.0118
461	SLU 22	0.4	-0.87	71.15	-0.038	0.3413	-0.0097
461	SLU 23	0.39	-0.77	71.14	-0.0379	0.342	-0.0101
461	SLU 24	0.41	-0.88	72.56	-0.0388	0.3466	-0.0099
461	SLU 25	0.41	-0.82	72.55	-0.0387	0.3471	-0.0101
461	SLU 26	0.4	-0.79	72.05	-0.0385	0.3453	-0.0103
461	SLU 27	0.42	-0.9	73.47	-0.0394	0.35	-0.01
461	SLU 28	0.41	-0.84	73.47	-0.0393	0.3504	-0.0103
461	SLU 29	0.41	-0.91	72.98	-0.0393	0.348	-0.0101
461	SLU 30	0.41	-0.85	72.97	-0.0392	0.3484	-0.0103
461	SLU 31	0.41	-0.82	79.4	-0.0417	0.3904	-0.0115

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
461	SLU 32	0.42	-0.93	80.82	-0.0425	0.3951	-0.0112
461	SLU 33	0.42	-0.87	80.82	-0.0424	0.3956	-0.0114
461	SLU 34	0.41	-0.84	80.32	-0.0423	0.3938	-0.0117
461	SLU 35	0.43	-0.95	81.74	-0.0432	0.3985	-0.0114
461	SLU 36	0.43	-0.89	81.73	-0.0431	0.3989	-0.0116
461	SLU 37	0.42	-0.96	81.24	-0.0431	0.3965	-0.0114
461	SLU 38	0.42	-0.9	81.24	-0.043	0.3969	-0.0117
461	SLU 39	0.41	-0.94	82.95	-0.0434	0.4105	-0.0117
461	SLU 40	0.41	-0.88	82.95	-0.0433	0.4109	-0.0119
461	SLU 41	0.42	-0.96	83.87	-0.044	0.4139	-0.0118
461	SLU 42	0.42	-0.9	83.86	-0.044	0.4143	-0.0121
461	SLU 43	0.43	-1.1	79.63	-0.0445	0.3956	-0.0122
461	SLU 44	0.43	-1	79.62	-0.0444	0.3963	-0.0126
461	SLU 45	0.44	-1.11	81.04	-0.0452	0.401	-0.0123
461	SLU 46	0.44	-1.05	81.04	-0.0451	0.4014	-0.0125
461	SLU 47	0.43	-1.01	80.53	-0.045	0.3997	-0.0128
461	SLU 48	0.45	-1.13	81.96	-0.0459	0.4044	-0.0125
461	SLU 49	0.45	-1.07	81.95	-0.0458	0.4048	-0.0127
461	SLU 50	0.44	-1.13	81.46	-0.0458	0.4023	-0.0125
461	SLU 51	0.44	-1.07	81.45	-0.0457	0.4028	-0.0128
461	SLU 52	0.44	-1.04	87.89	-0.0481	0.4448	-0.0139
461	SLU 53	0.46	-1.16	89.31	-0.049	0.4495	-0.0137
461	SLU 54	0.45	-1.09	89.3	-0.0489	0.4499	-0.0139
461	SLU 55	0.44	-1.06	88.8	-0.0488	0.4482	-0.0141
461	SLU 56	0.46	-1.17	90.22	-0.0496	0.4529	-0.0138
461	SLU 57	0.46	-1.11	90.22	-0.0495	0.4533	-0.0141
461	SLU 58	0.45	-1.18	89.72	-0.0495	0.4508	-0.0139
461	SLU 59	0.45	-1.12	89.72	-0.0495	0.4512	-0.0141
461	SLU 60	0.45	-1.17	91.44	-0.0498	0.4649	-0.0141
461	SLU 61	0.45	-1.11	91.43	-0.0498	0.4653	-0.0144
461	SLU 62	0.45	-1.18	92.35	-0.0505	0.4682	-0.0143
461	SLU 63	0.45	-1.12	92.35	-0.0504	0.4687	-0.0145
461	SLU 64	0.48	-1.12	87.46	-0.0475	0.4248	-0.0125
461	SLU 65	0.48	-1.02	87.45	-0.0474	0.4255	-0.0129
461	SLU 66	0.49	-1.13	88.87	-0.0482	0.4302	-0.0126
461	SLU 67	0.49	-1.07	88.86	-0.0482	0.4307	-0.0128
461	SLU 68	0.48	-1.04	88.36	-0.048	0.4289	-0.013
461	SLU 69	0.5	-1.15	89.78	-0.0489	0.4336	-0.0128
461	SLU 70	0.5	-1.09	89.78	-0.0488	0.434	-0.013
461	SLU 71	0.49	-1.16	89.29	-0.0488	0.4316	-0.0128
461	SLU 72	0.49	-1.1	89.28	-0.0487	0.432	-0.0131
461	SLU 73	0.49	-1.07	95.71	-0.0511	0.474	-0.0142
461	SLU 74	0.51	-1.18	97.14	-0.052	0.4787	-0.0139
461	SLU 75	0.51	-1.12	97.13	-0.0519	0.4791	-0.0142
461	SLU 76	0.5	-1.09	96.63	-0.0518	0.4774	-0.0144
461	SLU 77	0.51	-1.2	98.05	-0.0526	0.4821	-0.0141
461	SLU 78	0.51	-1.14	98.04	-0.0526	0.4825	-0.0144
461	SLU 79	0.51	-1.21	97.55	-0.0525	0.4801	-0.0142
461	SLU 80	0.5	-1.15	97.55	-0.0525	0.4805	-0.0144
461	SLU 81	0.5	-1.19	99.27	-0.0529	0.4941	-0.0144
461	SLU 82	0.5	-1.13	99.26	-0.0528	0.4945	-0.0146
461	SLU 83	0.51	-1.21	100.18	-0.0535	0.4975	-0.0146
461	SLU 84	0.5	-1.15	100.18	-0.0534	0.4979	-0.0148
461	SLE RA 1	0.36	-0.86	65.56	-0.0359	0.3204	-0.0095
461	SLE RA 2	0.36	-0.79	65.55	-0.0358	0.3208	-0.0098
461	SLE RA 3	0.37	-0.86	66.5	-0.0364	0.324	-0.0096
461	SLE RA 4	0.37	-0.82	66.49	-0.0363	0.3243	-0.0098
461	SLE RA 5	0.36	-0.8	66.16	-0.0362	0.3231	-0.0099
461	SLE RA 6	0.37	-0.88	67.11	-0.0368	0.3262	-0.0097
461	SLE RA 7	0.37	-0.84	67.1	-0.0367	0.3265	-0.0099
461	SLE RA 8	0.37	-0.88	66.77	-0.0367	0.3249	-0.0098
461	SLE RA 9	0.37	-0.84	66.77	-0.0367	0.3251	-0.0099
461	SLE RA 10	0.36	-0.82	71.06	-0.0383	0.3532	-0.0107
461	SLE RA 11	0.38	-0.9	72.01	-0.0389	0.3563	-0.0105
461	SLE RA 12	0.37	-0.86	72	-0.0388	0.3566	-0.0107
461	SLE RA 13	0.37	-0.83	71.67	-0.0387	0.3554	-0.0108
461	SLE RA 14	0.38	-0.91	72.62	-0.0393	0.3585	-0.0106
461	SLE RA 15	0.38	-0.87	72.61	-0.0392	0.3588	-0.0108
461	SLE RA 16	0.38	-0.91	72.29	-0.0392	0.3572	-0.0107
461	SLE RA 17	0.37	-0.87	72.28	-0.0392	0.3575	-0.0108
461	SLE RA 18	0.37	-0.9	73.43	-0.0394	0.3666	-0.0108
461	SLE RA 19	0.37	-0.86	73.42	-0.0394	0.3668	-0.011
461	SLE RA 20	0.37	-0.92	74.04	-0.0399	0.3688	-0.0109
461	SLE RA 21	0.37	-0.87	74.03	-0.0398	0.3691	-0.0111
461	SLE FR 1	0.36	-0.86	65.56	-0.0359	0.3204	-0.0095
461	SLE FR 2	0.36	-0.84	65.55	-0.0359	0.3205	-0.0096
461	SLE FR 3	0.36	-0.86	65.8	-0.036	0.3213	-0.0096
461	SLE FR 4	0.36	-0.86	67.92	-0.0369	0.3343	-0.01
461	SLE FR 5	0.36	-0.88	68.16	-0.0371	0.3351	-0.01
461	SLE FR 6	0.36	-0.88	69.49	-0.0377	0.3435	-0.0102
461	SLE QP 1	0.36	-0.86	65.56	-0.0359	0.3204	-0.0095
461	SLE QP 2	0.36	-0.87	67.92	-0.0369	0.3342	-0.0099
461	SLD 1	6.34	0.41	62.75	-0.0324	0.4228	0.0286
461	SLD 2	6.83	0.91	63.06	-0.0344	0.4147	0.0428
461	SLD 3	6.23	-1.42	62.28	-0.0258	0.4558	0.0268
461	SLD 4	6.72	-0.92	62.59	-0.0277	0.4477	0.041
461	SLD 5	2.24	2.2	67.02	-0.0453	0.3121	0.0019
461	SLD 6	2.56	2.52	67.22	-0.0466	0.3068	0.0112
461	SLD 7	1.86	-3.89	65.46	-0.0232	0.4222	-0.0042
461	SLD 8	2.19	-3.57	65.66	-0.0244	0.4169	0.0051

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
461	SLD 9	-1.46	1.83	70.17	-0.0494	0.2515	-0.025
461	SLD 10	-1.14	2.15	70.37	-0.0507	0.2462	-0.0157
461	SLD 11	-1.84	-4.26	68.61	-0.0273	0.3616	-0.031
461	SLD 12	-1.52	-3.94	68.81	-0.0286	0.3563	-0.0217
461	SLD 13	-6	-0.82	73.24	-0.0462	0.2208	-0.0608
461	SLD 14	-5.5	-0.32	73.55	-0.0481	0.2127	-0.0467
461	SLD 15	-6.11	-2.65	72.77	-0.0395	0.2538	-0.0627
461	SLD 16	-5.61	-2.15	73.08	-0.0415	0.2457	-0.0485
461	SLV 1	14.34	2.07	55.81	-0.0261	0.5423	0.0803
461	SLV 2	15.49	3.23	56.53	-0.0307	0.5235	0.1133
461	SLV 3	14.08	-2.09	54.75	-0.0111	0.6172	0.0761
461	SLV 4	15.23	-0.94	55.47	-0.0156	0.5984	0.1092
461	SLV 5	4.75	6.13	65.77	-0.0558	0.2863	0.0177
461	SLV 6	5.5	6.87	66.23	-0.0587	0.2742	0.039
461	SLV 7	3.88	-7.75	62.23	-0.0056	0.536	0.0039
461	SLV 8	4.63	-7.01	62.7	-0.0085	0.5238	0.0252
461	SLV 9	-3.9	5.26	73.13	-0.0654	0.1446	-0.0451
461	SLV 10	-3.16	6.01	73.6	-0.0683	0.1325	-0.0238
461	SLV 11	-4.77	-8.61	69.6	-0.0152	0.3943	-0.0588
461	SLV 12	-4.03	-7.87	70.06	-0.0181	0.3822	-0.0376
461	SLV 13	-14.51	-0.8	80.36	-0.0583	0.0701	-0.129
461	SLV 14	-13.36	0.35	81.08	-0.0628	0.0512	-0.096
461	SLV 15	-14.77	-4.97	79.3	-0.0432	0.145	-0.1331
461	SLV 16	-13.62	-3.81	80.02	-0.0477	0.1261	-0.1001
461	CRTFP Ux+	0	0	0	0	0	0
461	CRTFP Ux-	0	0	0	0	0	0
462	SLU 1	0.35	0.32	36.96	-0.0129	7.8667	-0.1141
462	SLU 2	0.34	0.42	36.96	-0.0127	7.8594	-0.1478
462	SLU 3	0.36	0.33	37.8	-0.0132	8.0333	-0.1183
462	SLU 4	0.35	0.39	37.8	-0.0131	8.0289	-0.1385
462	SLU 5	0.35	0.42	37.49	-0.013	7.9652	-0.1481
462	SLU 6	0.36	0.33	38.34	-0.0135	8.1391	-0.1187
462	SLU 7	0.36	0.39	38.34	-0.0134	8.1348	-0.1389
462	SLU 8	0.36	0.32	38.03	-0.0134	8.0784	-0.1148
462	SLU 9	0.35	0.38	38.03	-0.0133	8.074	-0.135
462	SLU 10	0.35	0.49	41.57	-0.0141	8.8006	-0.1748
462	SLU 11	0.37	0.41	42.42	-0.0146	8.9745	-0.1453
462	SLU 12	0.36	0.47	42.42	-0.0145	8.9701	-0.1655
462	SLU 13	0.36	0.49	42.11	-0.0144	8.9065	-0.1751
462	SLU 14	0.37	0.41	42.96	-0.0149	9.0803	-0.1457
462	SLU 15	0.37	0.47	42.95	-0.0148	9.076	-0.1658
462	SLU 16	0.37	0.4	42.65	-0.0148	9.0196	-0.1418
462	SLU 17	0.36	0.46	42.65	-0.0147	9.0152	-0.162
462	SLU 18	0.36	0.43	43.56	-0.0149	9.2113	-0.1527
462	SLU 19	0.36	0.49	43.55	-0.0148	9.2069	-0.1729
462	SLU 20	0.37	0.43	44.09	-0.0151	9.3171	-0.1531
462	SLU 21	0.36	0.49	44.09	-0.015	9.3128	-0.1732
462	SLU 22	0.39	0.39	41.49	-0.0141	8.784	-0.1395
462	SLU 23	0.38	0.49	41.48	-0.014	8.7767	-0.1731
462	SLU 24	0.4	0.4	42.33	-0.0144	8.9506	-0.1437
462	SLU 25	0.39	0.46	42.33	-0.0143	8.9462	-0.1639
462	SLU 26	0.39	0.49	42.02	-0.0142	8.8825	-0.1735
462	SLU 27	0.4	0.41	42.87	-0.0147	9.0564	-0.1441
462	SLU 28	0.4	0.46	42.86	-0.0146	9.0521	-0.1642
462	SLU 29	0.4	0.39	42.56	-0.0147	8.9957	-0.1402
462	SLU 30	0.39	0.45	42.56	-0.0146	8.9913	-0.1604
462	SLU 31	0.39	0.57	46.1	-0.0153	9.7179	-0.2001
462	SLU 32	0.41	0.48	46.95	-0.0158	9.8918	-0.1707
462	SLU 33	0.4	0.54	46.94	-0.0157	9.8874	-0.1909
462	SLU 34	0.4	0.57	46.64	-0.0156	9.8238	-0.2005
462	SLU 35	0.41	0.48	47.48	-0.0161	9.9976	-0.1711
462	SLU 36	0.41	0.54	47.48	-0.016	9.9933	-0.1912
462	SLU 37	0.41	0.47	47.18	-0.0161	9.9369	-0.1672
462	SLU 38	0.4	0.53	47.17	-0.016	9.9325	-0.1874
462	SLU 39	0.4	0.5	48.08	-0.0161	10.1286	-0.1781
462	SLU 40	0.4	0.56	48.08	-0.016	10.1242	-0.1983
462	SLU 41	0.41	0.5	48.62	-0.0164	10.2344	-0.1784
462	SLU 42	0.4	0.56	48.62	-0.0163	10.2301	-0.1986
462	SLU 43	0.44	0.39	46.5	-0.0163	9.9122	-0.1397
462	SLU 44	0.43	0.49	46.49	-0.0161	9.9049	-0.1733
462	SLU 45	0.45	0.4	47.34	-0.0166	10.0788	-0.1439
462	SLU 46	0.44	0.46	47.34	-0.0165	10.0744	-0.164
462	SLU 47	0.44	0.49	47.03	-0.0164	10.0107	-0.1737
462	SLU 48	0.45	0.4	47.88	-0.0169	10.1846	-0.1442
462	SLU 49	0.45	0.46	47.87	-0.0168	10.1802	-0.1644
462	SLU 50	0.45	0.39	47.57	-0.0169	10.1238	-0.1404
462	SLU 51	0.44	0.45	47.57	-0.0168	10.1195	-0.1606
462	SLU 52	0.44	0.56	51.11	-0.0175	10.8461	-0.2003
462	SLU 53	0.46	0.48	51.96	-0.018	11.02	-0.1709
462	SLU 54	0.45	0.54	51.95	-0.0179	11.0156	-0.191
462	SLU 55	0.45	0.57	51.65	-0.0178	10.952	-0.2006
462	SLU 56	0.46	0.48	52.49	-0.0183	11.1258	-0.1712
462	SLU 57	0.46	0.54	52.49	-0.0182	11.1215	-0.1914
462	SLU 58	0.46	0.47	52.19	-0.0182	11.0651	-0.1674
462	SLU 59	0.45	0.53	52.18	-0.0181	11.0607	-0.1875
462	SLU 60	0.45	0.5	53.09	-0.0183	11.2568	-0.1783
462	SLU 61	0.45	0.56	53.09	-0.0182	11.2524	-0.1984
462	SLU 62	0.46	0.5	53.63	-0.0186	11.3626	-0.1786
462	SLU 63	0.45	0.56	53.63	-0.0185	11.3582	-0.1988
462	SLU 64	0.48	0.46	51.03	-0.0176	10.8295	-0.1651

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
462	SLU 65	0.47	0.56	51.02	-0.0174	10.8222	-0.1987
462	SLU 66	0.49	0.48	51.87	-0.0179	10.9961	-0.1693
462	SLU 67	0.48	0.53	51.86	-0.0178	10.9917	-0.1894
462	SLU 68	0.48	0.56	51.56	-0.0177	10.928	-0.199
462	SLU 69	0.49	0.48	52.4	-0.0182	11.1019	-0.1696
462	SLU 70	0.49	0.53	52.4	-0.0181	11.0976	-0.1898
462	SLU 71	0.49	0.47	52.1	-0.0181	11.0412	-0.1658
462	SLU 72	0.48	0.52	52.09	-0.018	11.0368	-0.1859
462	SLU 73	0.48	0.64	55.64	-0.0188	11.7634	-0.2257
462	SLU 74	0.5	0.55	56.48	-0.0193	11.9373	-0.1963
462	SLU 75	0.49	0.61	56.48	-0.0192	11.9329	-0.2164
462	SLU 76	0.49	0.64	56.17	-0.0191	11.8693	-0.226
462	SLU 77	0.5	0.55	57.02	-0.0196	12.0431	-0.1966
462	SLU 78	0.5	0.61	57.02	-0.0195	12.0388	-0.2168
462	SLU 79	0.5	0.54	56.71	-0.0195	11.9824	-0.1928
462	SLU 80	0.49	0.6	56.71	-0.0194	11.978	-0.2129
462	SLU 81	0.49	0.57	57.62	-0.0195	12.1741	-0.2036
462	SLU 82	0.49	0.63	57.62	-0.0194	12.1697	-0.2238
462	SLU 83	0.5	0.57	58.16	-0.0198	12.2799	-0.204
462	SLU 84	0.49	0.63	58.15	-0.0197	12.2755	-0.2241
462	SLE RA 1	0.36	0.34	38.26	-0.0132	8.1287	-0.1214
462	SLE RA 2	0.35	0.41	38.25	-0.0131	8.1239	-0.1438
462	SLE RA 3	0.37	0.35	38.82	-0.0134	8.2398	-0.1242
462	SLE RA 4	0.36	0.39	38.81	-0.0134	8.2369	-0.1376
462	SLE RA 5	0.36	0.41	38.61	-0.0133	8.1945	-0.144
462	SLE RA 6	0.37	0.35	39.17	-0.0136	8.3104	-0.1244
462	SLE RA 7	0.37	0.39	39.17	-0.0136	8.3075	-0.1379
462	SLE RA 8	0.37	0.34	38.97	-0.0136	8.2699	-0.1219
462	SLE RA 9	0.36	0.38	38.97	-0.0135	8.267	-0.1353
462	SLE RA 10	0.36	0.46	41.33	-0.014	8.7514	-0.1618
462	SLE RA 11	0.37	0.4	41.89	-0.0144	8.8673	-0.1422
462	SLE RA 12	0.37	0.44	41.89	-0.0143	8.8644	-0.1556
462	SLE RA 13	0.36	0.46	41.69	-0.0142	8.8219	-0.162
462	SLE RA 14	0.38	0.4	42.25	-0.0146	8.9379	-0.1424
462	SLE RA 15	0.37	0.44	42.25	-0.0145	8.935	-0.1559
462	SLE RA 16	0.37	0.39	42.05	-0.0145	8.8974	-0.1399
462	SLE RA 17	0.37	0.43	42.05	-0.0145	8.8945	-0.1533
462	SLE RA 18	0.37	0.41	42.65	-0.0146	9.0251	-0.1471
462	SLE RA 19	0.36	0.45	42.65	-0.0145	9.0222	-0.1606
462	SLE RA 20	0.37	0.41	43.01	-0.0147	9.0957	-0.1473
462	SLE RA 21	0.37	0.45	43.01	-0.0147	9.0928	-0.1608
462	SLE FR 1	0.36	0.34	38.26	-0.0132	8.1287	-0.1214
462	SLE FR 2	0.36	0.35	38.26	-0.0132	8.1278	-0.1259
462	SLE FR 3	0.36	0.34	38.4	-0.0133	8.157	-0.1215
462	SLE FR 4	0.36	0.38	39.57	-0.0136	8.3967	-0.1336
462	SLE FR 5	0.36	0.36	39.72	-0.0137	8.4259	-0.1292
462	SLE FR 6	0.36	0.38	40.45	-0.0139	8.5769	-0.1343
462	SLE QP 1	0.36	0.34	38.26	-0.0132	8.1287	-0.1214
462	SLE QP 2	0.36	0.36	39.57	-0.0136	8.3977	-0.1291
462	SLD 1	3.78	0.2	29.54	-0.0103	6.4781	-0.0724
462	SLD 2	4.05	0.97	29.83	-0.0124	6.5253	-0.3409
462	SLD 3	3.71	-1.36	29.04	-0.006	6.4129	0.4724
462	SLD 4	3.98	-0.59	29.33	-0.0082	6.46	0.2039
462	SLD 5	1.45	2.54	37.27	-0.0187	7.9124	-0.8906
462	SLD 6	1.63	3.04	37.46	-0.0201	7.9434	-1.0667
462	SLD 7	1.2	-2.65	35.61	-0.0045	7.6948	0.9254
462	SLD 8	1.38	-2.15	35.8	-0.0059	7.7258	0.7493
462	SLD 9	-0.66	2.87	43.35	-0.0213	9.0696	-1.0076
462	SLD 10	-0.48	3.38	43.54	-0.0227	9.1005	-1.1836
462	SLD 11	-0.91	-2.32	41.69	-0.0071	8.852	0.8085
462	SLD 12	-0.73	-1.81	41.88	-0.0086	8.8829	0.6324
462	SLD 13	-3.26	1.31	49.82	-0.0191	10.3353	-0.4621
462	SLD 14	-2.99	2.08	50.11	-0.0212	10.3825	-0.7307
462	SLD 15	-3.33	-0.24	49.32	-0.0148	10.27	0.0827
462	SLD 16	-3.06	0.53	49.61	-0.017	10.3172	-0.1859
462	SLV 1	8.36	-0.07	16.08	-0.0056	3.9036	0.0198
462	SLV 2	9	1.73	16.74	-0.0107	4.0135	-0.6057
462	SLV 3	8.19	-3.61	14.94	0.004	3.7552	1.2592
462	SLV 4	8.83	-1.81	15.61	-0.0011	3.8651	0.6337
462	SLV 5	2.9	5.29	34.13	-0.025	7.2557	-1.8566
462	SLV 6	3.32	6.45	34.55	-0.0282	7.3265	-2.2596
462	SLV 7	2.34	-6.51	30.36	0.0071	6.7609	2.2749
462	SLV 8	2.76	-5.35	30.79	0.0039	6.8317	1.8718
462	SLV 9	-2.04	6.08	48.36	-0.0311	9.9637	-2.1301
462	SLV 10	-1.62	7.23	48.79	-0.0344	10.0345	-2.5332
462	SLV 11	-2.6	-5.73	44.59	0.001	9.4689	2.0014
462	SLV 12	-2.18	-4.57	45.02	-0.0023	9.5397	1.5983
462	SLV 13	-8.11	2.54	63.54	-0.0262	12.9303	-0.892
462	SLV 14	-7.47	4.33	64.21	-0.0312	13.0402	-1.5174
462	SLV 15	-8.28	-1	62.41	-0.0166	12.7818	0.3475
462	SLV 16	-7.64	0.79	63.07	-0.0216	12.8917	-0.278
462	CRTFP Ux+	0	0	0	0	0	0
462	CRTFP Ux-	0	0	0	0	0	0
462	CRTFP Uy+	0	0	0	0	0	0
462	CRTFP Uy-	0	0	0	0	0	0
464	SLU 1	-0.54	-0.1	33.45	-0.0195	-3.9964	-0.0282
464	SLU 2	-0.53	-0.01	33.44	-0.0193	-3.9903	-0.0055
464	SLU 3	-0.56	-0.1	34.21	-0.02	-4.078	-0.0282
464	SLU 4	-0.55	-0.05	34.2	-0.0199	-4.0744	-0.0146
464	SLU 5	-0.54	-0.02	33.92	-0.0197	-4.0423	-0.0062

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
464	SLU 6	-0.56	-0.11	34.69	-0.0203	-4.1301	-0.0289
464	SLU 7	-0.56	-0.05	34.69	-0.0202	-4.1264	-0.0153
464	SLU 8	-0.56	-0.11	34.42	-0.0202	-4.1005	-0.0295
464	SLU 9	-0.55	-0.05	34.41	-0.0201	-4.0968	-0.0159
464	SLU 10	-0.57	-0.01	37.61	-0.0215	-4.46	-0.0039
464	SLU 11	-0.6	-0.1	38.38	-0.0221	-4.5478	-0.0266
464	SLU 12	-0.59	-0.04	38.37	-0.022	-4.5441	-0.013
464	SLU 13	-0.58	-0.01	38.09	-0.0218	-4.5121	-0.0046
464	SLU 14	-0.6	-0.1	38.87	-0.0225	-4.5998	-0.0273
464	SLU 15	-0.6	-0.04	38.86	-0.0224	-4.5961	-0.0137
464	SLU 16	-0.6	-0.1	38.59	-0.0224	-4.5702	-0.0279
464	SLU 17	-0.59	-0.05	38.59	-0.0222	-4.5666	-0.0143
464	SLU 18	-0.6	-0.09	39.41	-0.0226	-4.6675	-0.0258
464	SLU 19	-0.59	-0.04	39.4	-0.0225	-4.6638	-0.0123
464	SLU 20	-0.61	-0.1	39.89	-0.0229	-4.7195	-0.0265
464	SLU 21	-0.6	-0.04	39.89	-0.0228	-4.7158	-0.013
464	SLU 22	-0.61	-0.09	37.56	-0.0215	-4.4541	-0.0257
464	SLU 23	-0.6	0	37.55	-0.0213	-4.448	-0.003
464	SLU 24	-0.62	-0.09	38.32	-0.022	-4.5357	-0.0257
464	SLU 25	-0.62	-0.04	38.31	-0.0218	-4.532	-0.0121
464	SLU 26	-0.61	0	38.03	-0.0217	-4.5	-0.0037
464	SLU 27	-0.63	-0.09	38.8	-0.0223	-4.5877	-0.0264
464	SLU 28	-0.63	-0.04	38.8	-0.0222	-4.5841	-0.0128
464	SLU 29	-0.63	-0.1	38.53	-0.0222	-4.5582	-0.027
464	SLU 30	-0.62	-0.04	38.52	-0.0221	-4.5545	-0.0135
464	SLU 31	-0.64	0.01	41.72	-0.0235	-4.9177	-0.0014
464	SLU 32	-0.66	-0.08	42.49	-0.0241	-5.0054	-0.0241
464	SLU 33	-0.66	-0.03	42.49	-0.024	-5.0018	-0.0105
464	SLU 34	-0.65	0	42.21	-0.0238	-4.9697	-0.0021
464	SLU 35	-0.67	-0.09	42.98	-0.0245	-5.0575	-0.0248
464	SLU 36	-0.66	-0.03	42.97	-0.0243	-5.0538	-0.0112
464	SLU 37	-0.66	-0.09	42.7	-0.0243	-5.0279	-0.0254
464	SLU 38	-0.66	-0.04	42.7	-0.0242	-5.0242	-0.0118
464	SLU 39	-0.67	-0.08	43.52	-0.0246	-5.1252	-0.0234
464	SLU 40	-0.66	-0.03	43.51	-0.0245	-5.1215	-0.0098
464	SLU 41	-0.67	-0.08	44	-0.0249	-5.1772	-0.024
464	SLU 42	-0.67	-0.03	44	-0.0248	-5.1735	-0.0105
464	SLU 43	-0.68	-0.14	42.07	-0.0247	-5.0385	-0.0375
464	SLU 44	-0.67	-0.05	42.06	-0.0245	-5.0323	-0.0148
464	SLU 45	-0.7	-0.14	42.83	-0.0252	-5.1201	-0.0375
464	SLU 46	-0.69	-0.08	42.82	-0.025	-5.1164	-0.0239
464	SLU 47	-0.68	-0.05	42.55	-0.0249	-5.0844	-0.0155
464	SLU 48	-0.7	-0.14	43.32	-0.0255	-5.1721	-0.0382
464	SLU 49	-0.7	-0.09	43.31	-0.0254	-5.1684	-0.0246
464	SLU 50	-0.7	-0.14	43.04	-0.0254	-5.1425	-0.0388
464	SLU 51	-0.69	-0.09	43.04	-0.0253	-5.1388	-0.0252
464	SLU 52	-0.71	-0.04	46.23	-0.0267	-5.5021	-0.0132
464	SLU 53	-0.73	-0.13	47	-0.0273	-5.5898	-0.0359
464	SLU 54	-0.73	-0.08	47	-0.0272	-5.5861	-0.0223
464	SLU 55	-0.72	-0.04	46.72	-0.027	-5.5541	-0.0139
464	SLU 56	-0.74	-0.13	47.49	-0.0277	-5.6418	-0.0366
464	SLU 57	-0.74	-0.08	47.48	-0.0275	-5.6382	-0.023
464	SLU 58	-0.74	-0.14	47.22	-0.0275	-5.6123	-0.0372
464	SLU 59	-0.73	-0.08	47.21	-0.0274	-5.6086	-0.0236
464	SLU 60	-0.74	-0.13	48.03	-0.0278	-5.7095	-0.0351
464	SLU 61	-0.73	-0.07	48.02	-0.0277	-5.7058	-0.0216
464	SLU 62	-0.74	-0.13	48.52	-0.0281	-5.7616	-0.0358
464	SLU 63	-0.74	-0.08	48.51	-0.028	-5.7579	-0.0223
464	SLU 64	-0.75	-0.13	46.18	-0.0267	-5.4961	-0.035
464	SLU 65	-0.74	-0.04	46.17	-0.0265	-5.49	-0.0123
464	SLU 66	-0.76	-0.13	46.94	-0.0271	-5.5777	-0.035
464	SLU 67	-0.76	-0.07	46.94	-0.027	-5.574	-0.0214
464	SLU 68	-0.74	-0.04	46.66	-0.0268	-5.542	-0.013
464	SLU 69	-0.77	-0.13	47.43	-0.0275	-5.6298	-0.0357
464	SLU 70	-0.76	-0.08	47.42	-0.0274	-5.6261	-0.0221
464	SLU 71	-0.76	-0.13	47.15	-0.0274	-5.6002	-0.0363
464	SLU 72	-0.76	-0.08	47.15	-0.0273	-5.5965	-0.0228
464	SLU 73	-0.78	-0.03	50.34	-0.0286	-5.9597	-0.0107
464	SLU 74	-0.8	-0.12	51.11	-0.0293	-6.0475	-0.0334
464	SLU 75	-0.8	-0.07	51.11	-0.0292	-6.0438	-0.0198
464	SLU 76	-0.78	-0.03	50.83	-0.029	-6.0118	-0.0114
464	SLU 77	-0.81	-0.12	51.6	-0.0296	-6.0995	-0.0341
464	SLU 78	-0.8	-0.07	51.6	-0.0295	-6.0958	-0.0205
464	SLU 79	-0.8	-0.12	51.33	-0.0295	-6.0699	-0.0347
464	SLU 80	-0.8	-0.07	51.32	-0.0294	-6.0662	-0.0211
464	SLU 81	-0.8	-0.12	52.14	-0.0298	-6.1672	-0.0327
464	SLU 82	-0.8	-0.06	52.14	-0.0296	-6.1635	-0.0191
464	SLU 83	-0.81	-0.12	52.63	-0.0301	-6.2192	-0.0333
464	SLU 84	-0.81	-0.06	52.62	-0.03	-6.2155	-0.0198
464	SLE RA 1	-0.56	-0.1	34.62	-0.0201	-4.1272	-0.0274
464	SLE RA 2	-0.55	-0.04	34.61	-0.02	-4.1231	-0.0124
464	SLE RA 3	-0.57	-0.1	35.13	-0.0204	-4.1816	-0.0275
464	SLE RA 4	-0.57	-0.06	35.12	-0.0203	-4.1791	-0.0184
464	SLE RA 5	-0.56	-0.04	34.94	-0.0202	-4.1578	-0.0128
464	SLE RA 6	-0.58	-0.1	35.45	-0.0206	-4.2163	-0.0279
464	SLE RA 7	-0.57	-0.07	35.45	-0.0205	-4.2138	-0.0189
464	SLE RA 8	-0.57	-0.1	35.27	-0.0206	-4.1966	-0.0284
464	SLE RA 9	-0.57	-0.07	35.26	-0.0205	-4.1941	-0.0193
464	SLE RA 10	-0.58	-0.03	37.4	-0.0214	-4.4363	-0.0113
464	SLE RA 11	-0.6	-0.1	37.91	-0.0218	-4.4948	-0.0264

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
464	SLE RA 12	-0.59	-0.06	37.91	-0.0218	-4.4923	-0.0174
464	SLE RA 13	-0.58	-0.04	37.72	-0.0216	-4.471	-0.0117
464	SLE RA 14	-0.6	-0.1	38.23	-0.0221	-4.5295	-0.0269
464	SLE RA 15	-0.6	-0.06	38.23	-0.022	-4.527	-0.0178
464	SLE RA 16	-0.6	-0.1	38.05	-0.022	-4.5097	-0.0273
464	SLE RA 17	-0.59	-0.06	38.05	-0.0219	-4.5073	-0.0182
464	SLE RA 18	-0.6	-0.09	38.59	-0.0221	-4.5746	-0.0259
464	SLE RA 19	-0.59	-0.06	38.59	-0.0221	-4.5721	-0.0169
464	SLE RA 20	-0.6	-0.09	38.92	-0.0224	-4.6093	-0.0264
464	SLE RA 21	-0.6	-0.06	38.91	-0.0223	-4.6068	-0.0173
464	SLE FR 1	-0.56	-0.1	34.62	-0.0201	-4.1272	-0.0274
464	SLE FR 2	-0.56	-0.09	34.62	-0.0201	-4.1264	-0.0244
464	SLE FR 3	-0.56	-0.1	34.75	-0.0202	-4.1411	-0.0276
464	SLE FR 4	-0.57	-0.09	35.81	-0.0207	-4.2606	-0.024
464	SLE FR 5	-0.57	-0.1	35.94	-0.0208	-4.2753	-0.0272
464	SLE FR 6	-0.58	-0.1	36.61	-0.0211	-4.3509	-0.0267
464	SLE QP 1	-0.56	-0.1	34.62	-0.0201	-4.1272	-0.0274
464	SLE QP 2	-0.57	-0.1	35.81	-0.0207	-4.2614	-0.027
464	SLD 1	2.26	0.44	45.78	-0.0292	-5.2977	0.3644
464	SLD 2	2.48	-0.25	45.55	-0.0269	-5.2813	0.1941
464	SLD 3	2.31	-0.98	45.34	-0.0246	-5.2646	0.0085
464	SLD 4	2.52	-1.67	45.1	-0.0223	-5.2483	-0.1619
464	SLD 5	0.17	2.34	39.52	-0.0307	-4.6253	0.6606
464	SLD 6	0.32	1.89	39.36	-0.0292	-4.6146	0.549
464	SLD 7	0.32	-2.4	38.04	-0.0153	-4.5151	-0.526
464	SLD 8	0.46	-2.85	37.88	-0.0138	-4.5044	-0.6377
464	SLD 9	-1.61	2.65	33.74	-0.0276	-4.0184	0.5837
464	SLD 10	-1.46	2.2	33.58	-0.0261	-4.0077	0.472
464	SLD 11	-1.46	-2.09	32.26	-0.0123	-3.9082	-0.6029
464	SLD 12	-1.32	-2.54	32.11	-0.0107	-3.8975	-0.7146
464	SLD 13	-3.67	1.48	26.52	-0.0191	-3.2745	0.1079
464	SLD 14	-3.45	0.79	26.28	-0.0168	-3.2582	-0.0624
464	SLD 15	-3.62	0.05	26.08	-0.0145	-3.2415	-0.2481
464	SLD 16	-3.41	-0.64	25.84	-0.0122	-3.2251	-0.4184
464	SLV 1	6.06	1.11	59.13	-0.0405	-6.6859	0.8767
464	SLV 2	6.57	-0.49	58.58	-0.0351	-6.6478	0.48
464	SLV 3	6.16	-2.13	58.12	-0.0301	-6.6092	0.0665
464	SLV 4	6.67	-3.73	57.57	-0.0246	-6.5711	-0.3302
464	SLV 5	1.17	5.45	44.43	-0.0434	-5.1117	1.5413
464	SLV 6	1.5	4.42	44.08	-0.0399	-5.0871	1.2856
464	SLV 7	1.51	-5.35	41.07	-0.0086	-4.8559	-1.1594
464	SLV 8	1.84	-6.38	40.71	-0.0051	-4.8314	-1.4151
464	SLV 9	-2.99	6.18	30.91	-0.0363	-3.6914	1.3611
464	SLV 10	-2.66	5.15	30.56	-0.0328	-3.6669	1.1055
464	SLV 11	-2.65	-4.62	27.55	-0.0015	-3.4357	-1.3396
464	SLV 12	-2.32	-5.65	27.19	0.002	-3.4111	-1.5952
464	SLV 13	-7.81	3.53	14.05	-0.0168	-1.9517	0.2763
464	SLV 14	-7.3	1.94	13.5	-0.0114	-1.9137	-0.1204
464	SLV 15	-7.71	0.29	13.04	-0.0063	-1.875	-0.5339
464	SLV 16	-7.2	-1.3	12.49	-0.0009	-1.8369	-0.9307
464	CRTFP Ux+	0	0	0	0	0	0
464	CRTFP Ux-	0	0	0	0	0	0
464	CRTFP Uy+	0	0	0	0	0	0
464	CRTFP Uy-	0	0	0	0	0	0
467	SLU 1	0.01	-0.21	33.31	0.0004	9.6386	0.0726
467	SLU 2	0	-0.15	33.33	0.0002	9.6454	0.0544
467	SLU 3	0.01	-0.2	34.02	0.0004	9.8347	0.07
467	SLU 4	0.01	-0.17	34.04	0.0003	9.8388	0.0591
467	SLU 5	0.01	-0.16	33.79	0.0001	9.7694	0.0553
467	SLU 6	0.01	-0.2	34.48	0.0002	9.9586	0.0709
467	SLU 7	0.01	-0.17	34.49	0.0001	9.9627	0.06
467	SLU 8	0.01	-0.21	34.22	0.0001	9.8864	0.0744
467	SLU 9	0.01	-0.18	34.24	0	9.8905	0.0635
467	SLU 10	0.01	-0.14	37.85	-0.0001	10.9142	0.0489
467	SLU 11	0.01	-0.18	38.54	0.0001	11.1034	0.0645
467	SLU 12	0.01	-0.15	38.56	0	11.1075	0.0536
467	SLU 13	0.01	-0.14	38.31	-0.0002	11.0381	0.0498
467	SLU 14	0.01	-0.19	39	0	11.2273	0.0654
467	SLU 15	0.01	-0.15	39.01	-0.0001	11.2315	0.0545
467	SLU 16	0.01	-0.2	38.74	-0.0001	11.1551	0.0689
467	SLU 17	0.01	-0.16	38.76	-0.0002	11.1593	0.058
467	SLU 18	0.01	-0.18	39.77	0	11.451	0.0648
467	SLU 19	0.01	-0.15	39.78	-0.0001	11.4552	0.0539
467	SLU 20	0.01	-0.19	40.22	-0.0001	11.5749	0.0657
467	SLU 21	0.01	-0.16	40.24	-0.0002	11.5791	0.0548
467	SLU 22	0.01	-0.17	37.24	0.0007	10.732	0.0607
467	SLU 23	0.01	-0.12	37.26	0.0005	10.7389	0.0425
467	SLU 24	0.02	-0.16	37.95	0.0007	10.9281	0.0581
467	SLU 25	0.01	-0.13	37.97	0.0006	10.9322	0.0472
467	SLU 26	0.01	-0.12	37.72	0.0004	10.8628	0.0434
467	SLU 27	0.02	-0.17	38.41	0.0006	11.052	0.059
467	SLU 28	0.02	-0.14	38.42	0.0005	11.0562	0.0481
467	SLU 29	0.02	-0.18	38.15	0.0004	10.9798	0.0625
467	SLU 30	0.02	-0.15	38.17	0.0003	10.984	0.0516
467	SLU 31	0.01	-0.1	41.78	0.0002	12.0076	0.037
467	SLU 32	0.02	-0.15	42.47	0.0004	12.1968	0.0526
467	SLU 33	0.02	-0.12	42.49	0.0003	12.201	0.0417
467	SLU 34	0.02	-0.11	42.24	0.0001	12.1315	0.0379
467	SLU 35	0.02	-0.15	42.93	0.0003	12.3208	0.0535
467	SLU 36	0.02	-0.12	42.95	0.0002	12.3249	0.0426

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
467	SLU 37	0.02	-0.16	42.67	0.0002	12.2486	0.057
467	SLU 38	0.02	-0.13	42.69	0.0001	12.2527	0.0461
467	SLU 39	0.02	-0.15	43.7	0.0003	12.5444	0.0529
467	SLU 40	0.01	-0.12	43.71	0.0002	12.5486	0.042
467	SLU 41	0.02	-0.15	44.15	0.0002	12.6684	0.0538
467	SLU 42	0.02	-0.12	44.17	0.0001	12.6725	0.0429
467	SLU 43	0.01	-0.28	41.95	0.0004	12.1552	0.0985
467	SLU 44	0	-0.23	41.98	0.0002	12.1621	0.0803
467	SLU 45	0.01	-0.27	42.67	0.0004	12.3514	0.0959
467	SLU 46	0.01	-0.24	42.68	0.0003	12.3555	0.0849
467	SLU 47	0.01	-0.23	42.43	0.0001	12.286	0.0812
467	SLU 48	0.01	-0.27	43.12	0.0002	12.4753	0.0968
467	SLU 49	0.01	-0.24	43.14	0.0001	12.4794	0.0858
467	SLU 50	0.01	-0.28	42.87	0.0001	12.4031	0.1003
467	SLU 51	0.01	-0.25	42.88	0	12.4072	0.0893
467	SLU 52	0.01	-0.21	46.5	-0.0001	13.4308	0.0748
467	SLU 53	0.01	-0.26	47.19	0.0001	13.6201	0.0904
467	SLU 54	0.01	-0.23	47.2	0	13.6242	0.0795
467	SLU 55	0.01	-0.21	46.96	-0.0002	13.5548	0.0757
467	SLU 56	0.01	-0.26	47.65	0	13.744	0.0913
467	SLU 57	0.01	-0.23	47.66	-0.0001	13.7481	0.0804
467	SLU 58	0.01	-0.27	47.39	-0.0001	13.6718	0.0948
467	SLU 59	0.01	-0.24	47.4	-0.0002	13.6759	0.0839
467	SLU 60	0.01	-0.26	48.41	0	13.9677	0.0907
467	SLU 61	0.01	-0.23	48.43	-0.0001	13.9718	0.0797
467	SLU 62	0.01	-0.26	48.87	-0.0001	14.0916	0.0915
467	SLU 63	0.01	-0.23	48.88	-0.0002	14.0958	0.0806
467	SLU 64	0.01	-0.25	45.88	0.0007	13.2487	0.0866
467	SLU 65	0.01	-0.19	45.91	0.0005	13.2556	0.0684
467	SLU 66	0.02	-0.24	46.6	0.0007	13.4448	0.084
467	SLU 67	0.01	-0.21	46.61	0.0006	13.4489	0.073
467	SLU 68	0.01	-0.2	46.37	0.0004	13.3795	0.0693
467	SLU 69	0.02	-0.24	47.05	0.0006	13.5687	0.0849
467	SLU 70	0.02	-0.21	47.07	0.0005	13.5728	0.0739
467	SLU 71	0.02	-0.25	46.8	0.0004	13.4965	0.0884
467	SLU 72	0.02	-0.22	46.81	0.0003	13.5006	0.0774
467	SLU 73	0.01	-0.18	50.43	0.0002	14.5243	0.0629
467	SLU 74	0.02	-0.22	51.12	0.0004	14.7135	0.0785
467	SLU 75	0.02	-0.19	51.13	0.0003	14.7176	0.0676
467	SLU 76	0.02	-0.18	50.89	0.0001	14.6482	0.0638
467	SLU 77	0.02	-0.22	51.58	0.0003	14.8374	0.0794
467	SLU 78	0.02	-0.19	51.59	0.0002	14.8416	0.0685
467	SLU 79	0.02	-0.23	51.32	0.0002	14.7652	0.0829
467	SLU 80	0.02	-0.2	51.33	0.0001	14.7694	0.072
467	SLU 81	0.02	-0.22	52.34	0.0003	15.0611	0.0788
467	SLU 82	0.01	-0.19	52.36	0.0002	15.0653	0.0678
467	SLU 83	0.02	-0.23	52.8	0.0002	15.185	0.0796
467	SLU 84	0.02	-0.19	52.81	0.0001	15.1892	0.0687
467	SLE RA 1	0.01	-0.2	34.43	0.0004	9.951	0.0692
467	SLE RA 2	0.01	-0.16	34.45	0.0003	9.9556	0.0571
467	SLE RA 3	0.01	-0.19	34.91	0.0004	10.0817	0.0675
467	SLE RA 4	0.01	-0.17	34.92	0.0004	10.0845	0.0602
467	SLE RA 5	0.01	-0.16	34.75	0.0003	10.0382	0.0577
467	SLE RA 6	0.01	-0.19	35.21	0.0004	10.1643	0.0681
467	SLE RA 7	0.01	-0.17	35.22	0.0003	10.1671	0.0608
467	SLE RA 8	0.01	-0.2	35.04	0.0003	10.1162	0.0704
467	SLE RA 9	0.01	-0.18	35.05	0.0002	10.119	0.0631
467	SLE RA 10	0.01	-0.15	37.46	0.0002	10.8014	0.0534
467	SLE RA 11	0.01	-0.18	37.92	0.0003	10.9275	0.0638
467	SLE RA 12	0.01	-0.16	37.93	0.0002	10.9303	0.0565
467	SLE RA 13	0.01	-0.15	37.77	0.0001	10.884	0.054
467	SLE RA 14	0.01	-0.18	38.23	0.0002	11.0101	0.0644
467	SLE RA 15	0.01	-0.16	38.24	0.0001	11.0129	0.0571
467	SLE RA 16	0.01	-0.19	38.05	0.0001	10.962	0.0668
467	SLE RA 17	0.01	-0.17	38.06	0	10.9648	0.0595
467	SLE RA 18	0.01	-0.18	38.74	0.0002	11.1593	0.064
467	SLE RA 19	0.01	-0.16	38.75	0.0001	11.162	0.0567
467	SLE RA 20	0.01	-0.18	39.04	0.0001	11.2419	0.0646
467	SLE RA 21	0.01	-0.16	39.05	0	11.2446	0.0573
467	SLE FR 1	0.01	-0.2	34.43	0.0004	9.951	0.0692
467	SLE FR 2	0.01	-0.19	34.43	0.0004	9.9519	0.0668
467	SLE FR 3	0.01	-0.2	34.55	0.0004	9.984	0.0695
467	SLE FR 4	0.01	-0.18	35.73	0.0003	10.3144	0.0652
467	SLE FR 5	0.01	-0.19	35.85	0.0003	10.3465	0.0679
467	SLE FR 6	0.01	-0.19	36.58	0.0003	10.5551	0.0666
467	SLE QP 1	0.01	-0.2	34.43	0.0004	9.951	0.0692
467	SLE QP 2	0.01	-0.19	35.72	0.0004	10.3135	0.0677
467	SLD 1	2.86	0.23	35.99	-0.0011	10.4062	-0.0786
467	SLD 2	3.06	0.26	36.03	-0.0012	10.4141	-0.0877
467	SLD 3	2.81	-0.83	35.79	0.0014	10.3531	0.2926
467	SLD 4	3.02	-0.8	35.83	0.0013	10.3609	0.2835
467	SLD 5	0.89	1.54	36.1	-0.0038	10.4205	-0.5376
467	SLD 6	1.02	1.56	36.13	-0.0038	10.4257	-0.5436
467	SLD 7	0.75	-2	35.43	0.0044	10.2433	0.6998
467	SLD 8	0.89	-1.98	35.46	0.0044	10.2484	0.6938
467	SLD 9	-0.87	1.6	35.99	-0.0036	10.3785	-0.5585
467	SLD 10	-0.74	1.61	36.02	-0.0037	10.3836	-0.5645
467	SLD 11	-1.01	-1.94	35.32	0.0046	10.2013	0.6789
467	SLD 12	-0.87	-1.92	35.35	0.0045	10.2064	0.6729
467	SLD 13	-3	0.42	35.61	-0.0006	10.266	-0.1482

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
467	SLD 14	-2.8	0.44	35.66	-0.0006	10.2739	-0.1573
467	SLD 15	-3.04	-0.65	35.41	0.0019	10.2129	0.223
467	SLD 16	-2.84	-0.62	35.46	0.0018	10.2207	0.2139
467	SLV 1	6.67	0.77	36.34	-0.0029	10.5296	-0.263
467	SLV 2	7.14	0.84	36.45	-0.0031	10.5478	-0.2842
467	SLV 3	6.57	-1.65	35.87	0.0027	10.4071	0.5822
467	SLV 4	7.05	-1.58	35.98	0.0025	10.4253	0.561
467	SLV 5	2.07	3.75	36.59	-0.0091	10.561	-1.3098
467	SLV 6	2.37	3.79	36.66	-0.0092	10.5727	-1.3235
467	SLV 7	1.75	-4.31	35.05	0.0096	10.1526	1.5076
467	SLV 8	2.06	-4.26	35.12	0.0095	10.1643	1.4939
467	SLV 9	-2.04	3.88	36.33	-0.0087	10.4626	-1.3586
467	SLV 10	-1.73	3.92	36.4	-0.0088	10.4744	-1.3723
467	SLV 11	-2.36	-4.18	34.79	0.0099	10.0542	1.4588
467	SLV 12	-2.05	-4.13	34.86	0.0098	10.0659	1.4451
467	SLV 13	-7.03	1.2	35.46	-0.0018	10.2016	-0.4257
467	SLV 14	-6.56	1.26	35.57	-0.0019	10.2199	-0.4469
467	SLV 15	-7.13	-1.22	35	0.0038	10.0791	0.4195
467	SLV 16	-6.65	-1.15	35.11	0.0037	10.0973	0.3983
467	CRTFP Ux+	0	0	0	0	0	0
467	CRTFP Ux-	0	0	0	0	0	0
467	CRTFP Uy+	0	0	0	0	0	0
467	CRTFP Uy-	0	0	0	0	0	0
471	SLU 1	-0.83	-0.94	62.71	-0.0194	-0.3368	-0.0149
471	SLU 2	-0.82	-0.84	62.69	-0.0193	-0.3374	-0.0145
471	SLU 3	-0.85	-0.95	64.12	-0.0196	-0.3445	-0.0155
471	SLU 4	-0.85	-0.89	64.11	-0.0195	-0.3449	-0.0152
471	SLU 5	-0.84	-0.86	63.6	-0.0196	-0.3427	-0.0147
471	SLU 6	-0.86	-0.96	65.03	-0.0199	-0.3499	-0.0157
471	SLU 7	-0.86	-0.9	65.02	-0.0199	-0.3502	-0.0155
471	SLU 8	-0.85	-0.97	64.53	-0.02	-0.3475	-0.0153
471	SLU 9	-0.85	-0.91	64.52	-0.02	-0.3478	-0.0151
471	SLU 10	-0.88	-0.91	70.97	-0.0206	-0.3942	-0.0167
471	SLU 11	-0.91	-1.02	72.4	-0.0208	-0.4014	-0.0176
471	SLU 12	-0.91	-0.96	72.39	-0.0208	-0.4017	-0.0174
471	SLU 13	-0.9	-0.92	71.88	-0.0209	-0.3995	-0.0169
471	SLU 14	-0.92	-1.03	73.31	-0.0212	-0.4067	-0.0178
471	SLU 15	-0.92	-0.97	73.3	-0.0211	-0.407	-0.0176
471	SLU 16	-0.91	-1.04	72.81	-0.0213	-0.4043	-0.0175
471	SLU 17	-0.91	-0.98	72.8	-0.0213	-0.4046	-0.0173
471	SLU 18	-0.91	-1.04	74.54	-0.0212	-0.4181	-0.018
471	SLU 19	-0.91	-0.98	74.53	-0.0211	-0.4184	-0.0178
471	SLU 20	-0.93	-1.05	75.45	-0.0215	-0.4234	-0.0182
471	SLU 21	-0.92	-0.99	75.44	-0.0215	-0.4237	-0.018
471	SLU 22	-0.93	-0.97	70.53	-0.02	-0.3788	-0.018
471	SLU 23	-0.93	-0.87	70.51	-0.0199	-0.3793	-0.0176
471	SLU 24	-0.96	-0.98	71.94	-0.0202	-0.3865	-0.0185
471	SLU 25	-0.95	-0.92	71.92	-0.0201	-0.3868	-0.0183
471	SLU 26	-0.94	-0.89	71.42	-0.0202	-0.3846	-0.0178
471	SLU 27	-0.97	-1	72.85	-0.0205	-0.3918	-0.0187
471	SLU 28	-0.97	-0.94	72.84	-0.0205	-0.3921	-0.0185
471	SLU 29	-0.96	-1	72.35	-0.0206	-0.3894	-0.0184
471	SLU 30	-0.95	-0.94	72.34	-0.0206	-0.3897	-0.0181
471	SLU 31	-0.99	-0.94	78.79	-0.0212	-0.4362	-0.0197
471	SLU 32	-1.02	-1.05	80.22	-0.0214	-0.4433	-0.0207
471	SLU 33	-1.01	-0.99	80.21	-0.0214	-0.4437	-0.0205
471	SLU 34	-1	-0.96	79.7	-0.0215	-0.4415	-0.0199
471	SLU 35	-1.03	-1.06	81.13	-0.0218	-0.4487	-0.0209
471	SLU 36	-1.03	-1	81.12	-0.0217	-0.449	-0.0207
471	SLU 37	-1.02	-1.07	80.63	-0.0219	-0.4463	-0.0205
471	SLU 38	-1.02	-1.01	80.62	-0.0218	-0.4466	-0.0203
471	SLU 39	-1.02	-1.07	82.35	-0.0218	-0.46	-0.0211
471	SLU 40	-1.02	-1.01	82.34	-0.0217	-0.4603	-0.0208
471	SLU 41	-1.03	-1.09	83.27	-0.0221	-0.4653	-0.0213
471	SLU 42	-1.03	-1.03	83.26	-0.0221	-0.4656	-0.021
471	SLU 43	-1.04	-1.21	78.84	-0.025	-0.4235	-0.0183
471	SLU 44	-1.04	-1.11	78.82	-0.0249	-0.424	-0.018
471	SLU 45	-1.06	-1.22	80.25	-0.0252	-0.4312	-0.0189
471	SLU 46	-1.06	-1.16	80.24	-0.0252	-0.4315	-0.0187
471	SLU 47	-1.05	-1.13	79.73	-0.0252	-0.4293	-0.0182
471	SLU 48	-1.08	-1.24	81.16	-0.0255	-0.4365	-0.0191
471	SLU 49	-1.07	-1.18	81.15	-0.0255	-0.4368	-0.0189
471	SLU 50	-1.06	-1.24	80.66	-0.0257	-0.4341	-0.0188
471	SLU 51	-1.06	-1.18	80.65	-0.0256	-0.4344	-0.0185
471	SLU 52	-1.1	-1.18	87.1	-0.0262	-0.4809	-0.0201
471	SLU 53	-1.12	-1.29	88.53	-0.0265	-0.4881	-0.0211
471	SLU 54	-1.12	-1.23	88.52	-0.0264	-0.4884	-0.0208
471	SLU 55	-1.11	-1.2	88.01	-0.0265	-0.4862	-0.0203
471	SLU 56	-1.14	-1.3	89.44	-0.0268	-0.4934	-0.0213
471	SLU 57	-1.13	-1.24	89.43	-0.0268	-0.4937	-0.021
471	SLU 58	-1.13	-1.31	88.94	-0.0269	-0.491	-0.0209
471	SLU 59	-1.12	-1.25	88.93	-0.0269	-0.4913	-0.0207
471	SLU 60	-1.13	-1.31	90.67	-0.0268	-0.5047	-0.0214
471	SLU 61	-1.12	-1.25	90.66	-0.0267	-0.505	-0.0212
471	SLU 62	-1.14	-1.32	91.58	-0.0271	-0.51	-0.0216
471	SLU 63	-1.14	-1.26	91.57	-0.0271	-0.5104	-0.0214
471	SLU 64	-1.15	-1.24	86.66	-0.0256	-0.4654	-0.0214
471	SLU 65	-1.14	-1.14	86.64	-0.0255	-0.466	-0.021
471	SLU 66	-1.17	-1.25	88.07	-0.0258	-0.4732	-0.022
471	SLU 67	-1.17	-1.19	88.06	-0.0257	-0.4735	-0.0217

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
471	SLU 68	-1.15	-1.16	87.55	-0.0258	-0.4713	-0.0212
471	SLU 69	-1.18	-1.27	88.98	-0.0261	-0.4785	-0.0222
471	SLU 70	-1.18	-1.21	88.97	-0.0261	-0.4788	-0.0219
471	SLU 71	-1.17	-1.28	88.48	-0.0262	-0.4761	-0.0218
471	SLU 72	-1.17	-1.22	88.47	-0.0262	-0.4764	-0.0216
471	SLU 73	-1.2	-1.21	94.92	-0.0268	-0.5228	-0.0232
471	SLU 74	-1.23	-1.32	96.35	-0.027	-0.53	-0.0241
471	SLU 75	-1.23	-1.26	96.34	-0.027	-0.5303	-0.0239
471	SLU 76	-1.21	-1.23	95.83	-0.0271	-0.5281	-0.0234
471	SLU 77	-1.24	-1.33	97.26	-0.0274	-0.5353	-0.0243
471	SLU 78	-1.24	-1.27	97.25	-0.0273	-0.5356	-0.0241
471	SLU 79	-1.23	-1.34	96.76	-0.0275	-0.5329	-0.024
471	SLU 80	-1.23	-1.28	96.75	-0.0275	-0.5332	-0.0237
471	SLU 81	-1.23	-1.34	98.49	-0.0274	-0.5467	-0.0245
471	SLU 82	-1.23	-1.28	98.48	-0.0273	-0.547	-0.0242
471	SLU 83	-1.24	-1.36	99.4	-0.0277	-0.552	-0.0247
471	SLU 84	-1.24	-1.3	99.39	-0.0277	-0.5523	-0.0245
471	SLE RA 1	-0.86	-0.95	64.94	-0.0195	-0.3488	-0.0158
471	SLE RA 2	-0.86	-0.88	64.93	-0.0195	-0.3492	-0.0155
471	SLE RA 3	-0.87	-0.95	65.88	-0.0197	-0.354	-0.0162
471	SLE RA 4	-0.87	-0.91	65.87	-0.0197	-0.3542	-0.016
471	SLE RA 5	-0.86	-0.89	65.54	-0.0197	-0.3527	-0.0157
471	SLE RA 6	-0.88	-0.97	66.49	-0.0199	-0.3575	-0.0163
471	SLE RA 7	-0.88	-0.93	66.48	-0.0199	-0.3577	-0.0161
471	SLE RA 8	-0.87	-0.97	66.16	-0.02	-0.3559	-0.0161
471	SLE RA 9	-0.87	-0.93	66.15	-0.02	-0.3561	-0.0159
471	SLE RA 10	-0.9	-0.93	70.45	-0.0203	-0.3871	-0.017
471	SLE RA 11	-0.91	-1	71.4	-0.0205	-0.3919	-0.0176
471	SLE RA 12	-0.91	-0.96	71.39	-0.0205	-0.3921	-0.0174
471	SLE RA 13	-0.9	-0.94	71.06	-0.0206	-0.3906	-0.0171
471	SLE RA 14	-0.92	-1.01	72.01	-0.0207	-0.3954	-0.0177
471	SLE RA 15	-0.92	-0.97	72	-0.0207	-0.3956	-0.0176
471	SLE RA 16	-0.91	-1.02	71.68	-0.0208	-0.3938	-0.0175
471	SLE RA 17	-0.91	-0.98	71.67	-0.0208	-0.394	-0.0173
471	SLE RA 18	-0.92	-1.01	72.83	-0.0207	-0.403	-0.0178
471	SLE RA 19	-0.91	-0.97	72.82	-0.0207	-0.4032	-0.0177
471	SLE RA 20	-0.92	-1.02	73.44	-0.021	-0.4065	-0.018
471	SLE RA 21	-0.92	-0.98	73.43	-0.0209	-0.4067	-0.0178
471	SLE FR 1	-0.86	-0.95	64.94	-0.0195	-0.3488	-0.0158
471	SLE FR 2	-0.86	-0.94	64.94	-0.0195	-0.3489	-0.0157
471	SLE FR 3	-0.86	-0.95	65.18	-0.0196	-0.3502	-0.0158
471	SLE FR 4	-0.87	-0.96	67.31	-0.0199	-0.3651	-0.0164
471	SLE FR 5	-0.88	-0.97	67.55	-0.02	-0.3665	-0.0165
471	SLE FR 6	-0.89	-0.98	68.88	-0.0201	-0.3759	-0.0168
471	SLE QP 1	-0.86	-0.95	64.94	-0.0195	-0.3488	-0.0158
471	SLE QP 2	-0.88	-0.97	67.31	-0.0199	-0.3651	-0.0164
471	SLD 1	4.74	-0.33	73.33	-0.0263	-0.1557	0.006
471	SLD 2	5.14	-0.83	73.11	-0.0243	-0.1625	0.0206
471	SLD 3	4.83	-2.18	73.08	-0.0194	-0.1882	0.0101
471	SLD 4	5.24	-2.67	72.85	-0.0174	-0.195	0.0246
471	SLD 5	0.59	2.11	69.54	-0.0327	-0.2517	-0.0184
471	SLD 6	0.85	1.78	69.39	-0.0313	-0.2562	-0.0088
471	SLD 7	0.91	-4.04	68.69	-0.0096	-0.3601	-0.005
471	SLD 8	1.18	-4.37	68.55	-0.0083	-0.3646	0.0046
471	SLD 9	-2.93	2.43	66.07	-0.0315	-0.3656	-0.0374
471	SLD 10	-2.66	2.1	65.92	-0.0302	-0.37	-0.0279
471	SLD 11	-2.61	-3.72	65.22	-0.0085	-0.4739	-0.024
471	SLD 12	-2.34	-4.05	65.07	-0.0071	-0.4784	-0.0144
471	SLD 13	-6.99	0.73	61.76	-0.0224	-0.5351	-0.0574
471	SLD 14	-6.58	0.24	61.54	-0.0204	-0.5419	-0.0429
471	SLD 15	-6.89	-1.11	61.51	-0.0155	-0.5677	-0.0534
471	SLD 16	-6.49	-1.61	61.28	-0.0135	-0.5744	-0.0388
471	SLV 1	12.25	0.46	81.39	-0.0347	0.1239	0.0363
471	SLV 2	13.19	-0.69	80.87	-0.03	0.108	0.0702
471	SLV 3	12.47	-3.74	80.81	-0.0191	0.0499	0.0454
471	SLV 4	13.41	-4.89	80.29	-0.0143	0.0341	0.0794
471	SLV 5	2.56	6.03	72.5	-0.0489	-0.1035	-0.0204
471	SLV 6	3.17	5.29	72.16	-0.0458	-0.1137	0.0015
471	SLV 7	3.3	-7.98	70.57	0.0033	-0.35	0.0103
471	SLV 8	3.91	-8.72	70.23	0.0063	-0.3602	0.0321
471	SLV 9	-5.66	6.78	64.38	-0.0461	-0.37	-0.0649
471	SLV 10	-5.06	6.04	64.05	-0.0431	-0.3802	-0.0431
471	SLV 11	-4.92	-7.23	62.45	0.006	-0.6164	-0.0343
471	SLV 12	-4.31	-7.97	62.12	0.0091	-0.6266	-0.0124
471	SLV 13	-15.16	2.95	54.33	-0.0255	-0.7642	-0.1122
471	SLV 14	-14.22	1.81	53.81	-0.0207	-0.78	-0.0783
471	SLV 15	-14.94	-1.25	53.75	-0.0098	-0.8381	-0.103
471	SLV 16	-14	-2.4	53.23	-0.0051	-0.854	-0.0691
471	CRTFP Ux+	0	0	0	0	0	0
471	CRTFP Ux-	0	0	0	0	0	0
475	SLU 1	0.41	-0.81	62.34	-0.0282	0.2762	-0.0137
475	SLU 2	0.41	-0.71	62.33	-0.0281	0.2765	-0.0139
475	SLU 3	0.42	-0.82	63.73	-0.0288	0.2808	-0.0139
475	SLU 4	0.42	-0.76	63.73	-0.0288	0.281	-0.014
475	SLU 5	0.41	-0.73	63.23	-0.0287	0.2793	-0.0142
475	SLU 6	0.43	-0.84	64.63	-0.0294	0.2835	-0.0141
475	SLU 7	0.43	-0.78	64.62	-0.0294	0.2837	-0.0143
475	SLU 8	0.42	-0.85	64.13	-0.0293	0.2816	-0.0141
475	SLU 9	0.42	-0.79	64.13	-0.0293	0.2819	-0.0143
475	SLU 10	0.43	-0.76	70.5	-0.0308	0.3202	-0.0156

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
475	SLU 11	0.44	-0.87	71.9	-0.0315	0.3244	-0.0155
475	SLU 12	0.44	-0.81	71.89	-0.0314	0.3246	-0.0157
475	SLU 13	0.44	-0.78	71.39	-0.0314	0.3229	-0.0158
475	SLU 14	0.45	-0.89	72.79	-0.032	0.3272	-0.0157
475	SLU 15	0.45	-0.83	72.79	-0.032	0.3274	-0.0159
475	SLU 16	0.44	-0.9	72.3	-0.032	0.3253	-0.0158
475	SLU 17	0.44	-0.83	72.29	-0.032	0.3255	-0.0159
475	SLU 18	0.44	-0.88	74	-0.032	0.3385	-0.016
475	SLU 19	0.44	-0.82	74	-0.032	0.3387	-0.0162
475	SLU 20	0.45	-0.9	74.9	-0.0326	0.3413	-0.0163
475	SLU 21	0.44	-0.84	74.9	-0.0325	0.3415	-0.0164
475	SLU 22	0.46	-0.83	70.09	-0.0303	0.3004	-0.0143
475	SLU 23	0.46	-0.73	70.08	-0.0303	0.3007	-0.0146
475	SLU 24	0.48	-0.84	71.48	-0.0309	0.305	-0.0145
475	SLU 25	0.48	-0.78	71.48	-0.0309	0.3052	-0.0147
475	SLU 26	0.47	-0.75	70.98	-0.0308	0.3035	-0.0148
475	SLU 27	0.48	-0.86	72.38	-0.0315	0.3077	-0.0148
475	SLU 28	0.48	-0.8	72.37	-0.0315	0.3079	-0.0149
475	SLU 29	0.48	-0.87	71.88	-0.0314	0.3059	-0.0148
475	SLU 30	0.48	-0.81	71.88	-0.0314	0.3061	-0.015
475	SLU 31	0.48	-0.78	78.25	-0.0329	0.3444	-0.0163
475	SLU 32	0.5	-0.89	79.65	-0.0336	0.3486	-0.0162
475	SLU 33	0.5	-0.83	79.64	-0.0335	0.3489	-0.0163
475	SLU 34	0.49	-0.8	79.14	-0.0335	0.3471	-0.0165
475	SLU 35	0.51	-0.91	80.54	-0.0341	0.3514	-0.0164
475	SLU 36	0.51	-0.85	80.54	-0.0341	0.3516	-0.0166
475	SLU 37	0.5	-0.91	80.05	-0.0341	0.3495	-0.0164
475	SLU 38	0.5	-0.85	80.04	-0.0341	0.3497	-0.0166
475	SLU 39	0.49	-0.9	81.75	-0.0341	0.3628	-0.0167
475	SLU 40	0.49	-0.84	81.75	-0.0341	0.363	-0.0169
475	SLU 41	0.5	-0.92	82.65	-0.0347	0.3655	-0.0169
475	SLU 42	0.5	-0.86	82.65	-0.0346	0.3657	-0.0171
475	SLU 43	0.51	-1.05	78.38	-0.0359	0.3507	-0.0175
475	SLU 44	0.51	-0.95	78.38	-0.0359	0.3511	-0.0178
475	SLU 45	0.53	-1.06	79.77	-0.0366	0.3553	-0.0177
475	SLU 46	0.53	-1	79.77	-0.0365	0.3555	-0.0179
475	SLU 47	0.52	-0.97	79.27	-0.0365	0.3538	-0.018
475	SLU 48	0.53	-1.08	80.67	-0.0371	0.3581	-0.018
475	SLU 49	0.53	-1.02	80.67	-0.0371	0.3583	-0.0181
475	SLU 50	0.53	-1.09	80.18	-0.0371	0.3562	-0.018
475	SLU 51	0.53	-1.03	80.17	-0.037	0.3564	-0.0182
475	SLU 52	0.53	-1	86.54	-0.0385	0.3947	-0.0195
475	SLU 53	0.55	-1.11	87.94	-0.0392	0.399	-0.0194
475	SLU 54	0.55	-1.04	87.94	-0.0392	0.3992	-0.0195
475	SLU 55	0.54	-1.01	87.44	-0.0391	0.3975	-0.0197
475	SLU 56	0.55	-1.12	88.84	-0.0398	0.4017	-0.0196
475	SLU 57	0.55	-1.06	88.83	-0.0397	0.4019	-0.0198
475	SLU 58	0.55	-1.13	88.34	-0.0397	0.3998	-0.0197
475	SLU 59	0.55	-1.07	88.34	-0.0397	0.4001	-0.0198
475	SLU 60	0.54	-1.12	90.05	-0.0397	0.4131	-0.0199
475	SLU 61	0.54	-1.05	90.05	-0.0397	0.4133	-0.0201
475	SLU 62	0.55	-1.13	90.95	-0.0403	0.4158	-0.0201
475	SLU 63	0.55	-1.07	90.94	-0.0403	0.416	-0.0203
475	SLU 64	0.57	-1.07	86.13	-0.038	0.3749	-0.0182
475	SLU 65	0.57	-0.97	86.13	-0.038	0.3753	-0.0185
475	SLU 66	0.58	-1.08	87.52	-0.0387	0.3795	-0.0184
475	SLU 67	0.58	-1.02	87.52	-0.0386	0.3797	-0.0186
475	SLU 68	0.57	-0.99	87.02	-0.0386	0.378	-0.0187
475	SLU 69	0.59	-1.1	88.42	-0.0392	0.3823	-0.0186
475	SLU 70	0.59	-1.04	88.42	-0.0392	0.3825	-0.0188
475	SLU 71	0.58	-1.11	87.93	-0.0392	0.3804	-0.0187
475	SLU 72	0.58	-1.05	87.92	-0.0392	0.3806	-0.0188
475	SLU 73	0.59	-1.02	94.29	-0.0407	0.4189	-0.0201
475	SLU 74	0.6	-1.13	95.69	-0.0413	0.4232	-0.0201
475	SLU 75	0.6	-1.06	95.69	-0.0413	0.4234	-0.0202
475	SLU 76	0.59	-1.03	95.19	-0.0412	0.4217	-0.0204
475	SLU 77	0.61	-1.14	96.59	-0.0419	0.4259	-0.0203
475	SLU 78	0.61	-1.08	96.58	-0.0419	0.4261	-0.0204
475	SLU 79	0.6	-1.15	96.09	-0.0418	0.4241	-0.0203
475	SLU 80	0.6	-1.09	96.09	-0.0418	0.4243	-0.0205
475	SLU 81	0.6	-1.14	97.8	-0.0418	0.4373	-0.0206
475	SLU 82	0.6	-1.07	97.8	-0.0418	0.4375	-0.0207
475	SLU 83	0.6	-1.15	98.7	-0.0424	0.44	-0.0208
475	SLU 84	0.6	-1.09	98.69	-0.0424	0.4402	-0.021
475	SLE RA 1	0.42	-0.82	64.55	-0.0288	0.2831	-0.0139
475	SLE RA 2	0.42	-0.75	64.55	-0.0288	0.2833	-0.014
475	SLE RA 3	0.43	-0.83	65.48	-0.0292	0.2862	-0.014
475	SLE RA 4	0.43	-0.79	65.48	-0.0292	0.2863	-0.0141
475	SLE RA 5	0.43	-0.76	65.15	-0.0291	0.2851	-0.0142
475	SLE RA 6	0.44	-0.84	66.08	-0.0296	0.288	-0.0141
475	SLE RA 7	0.44	-0.8	66.07	-0.0296	0.2881	-0.0143
475	SLE RA 8	0.43	-0.84	65.75	-0.0296	0.2867	-0.0142
475	SLE RA 9	0.43	-0.8	65.75	-0.0295	0.2869	-0.0143
475	SLE RA 10	0.44	-0.78	69.99	-0.0305	0.3124	-0.0151
475	SLE RA 11	0.45	-0.86	70.92	-0.031	0.3153	-0.0151
475	SLE RA 12	0.45	-0.82	70.92	-0.031	0.3154	-0.0152
475	SLE RA 13	0.44	-0.79	70.59	-0.0309	0.3142	-0.0153
475	SLE RA 14	0.45	-0.87	71.52	-0.0314	0.3171	-0.0152
475	SLE RA 15	0.45	-0.83	71.52	-0.0313	0.3172	-0.0154
475	SLE RA 16	0.45	-0.87	71.19	-0.0313	0.3158	-0.0153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
475	SLE RA 17	0.45	-0.83	71.19	-0.0313	0.316	-0.0154
475	SLE RA 18	0.44	-0.86	72.33	-0.0313	0.3247	-0.0154
475	SLE RA 19	0.44	-0.82	72.33	-0.0313	0.3248	-0.0155
475	SLE RA 20	0.45	-0.87	72.93	-0.0317	0.3265	-0.0156
475	SLE RA 21	0.45	-0.83	72.93	-0.0317	0.3266	-0.0157
475	SLE FR 1	0.42	-0.82	64.55	-0.0288	0.2831	-0.0139
475	SLE FR 2	0.42	-0.81	64.55	-0.0288	0.2831	-0.0139
475	SLE FR 3	0.43	-0.82	64.79	-0.029	0.2838	-0.0139
475	SLE FR 4	0.43	-0.82	66.89	-0.0296	0.2956	-0.0144
475	SLE FR 5	0.43	-0.84	67.13	-0.0297	0.2963	-0.0144
475	SLE FR 6	0.43	-0.84	68.44	-0.0301	0.3039	-0.0146
475	SLE QP 1	0.42	-0.82	64.55	-0.0288	0.2831	-0.0139
475	SLE QP 2	0.43	-0.83	66.89	-0.0296	0.2956	-0.0143
475	SLD 1	6.2	0.43	61.84	-0.0266	0.3738	0.0244
475	SLD 2	6.62	0.92	62.09	-0.0285	0.3657	0.0391
475	SLD 3	6.1	-1.4	61.57	-0.0202	0.4084	0.0223
475	SLD 4	6.52	-0.9	61.82	-0.0221	0.4003	0.037
475	SLD 5	2.24	2.23	65.74	-0.038	0.268	-0.0021
475	SLD 6	2.52	2.55	65.9	-0.0393	0.2627	0.0075
475	SLD 7	1.9	-3.86	64.83	-0.0167	0.3833	-0.0091
475	SLD 8	2.17	-3.54	65	-0.018	0.378	0.0005
475	SLD 9	-1.31	1.87	68.78	-0.0411	0.2131	-0.0291
475	SLD 10	-1.04	2.2	68.94	-0.0424	0.2078	-0.0195
475	SLD 11	-1.66	-4.22	67.87	-0.0199	0.3284	-0.0361
475	SLD 12	-1.38	-3.9	68.03	-0.0211	0.3232	-0.0265
475	SLD 13	-5.66	-0.76	71.96	-0.037	0.1908	-0.0656
475	SLD 14	-5.24	-0.27	72.21	-0.0389	0.1828	-0.051
475	SLD 15	-5.76	-2.59	71.68	-0.0306	0.2254	-0.0677
475	SLD 16	-5.34	-2.1	71.93	-0.0325	0.2174	-0.0531
475	SLV 1	13.93	2.07	55.07	-0.0224	0.4795	0.0763
475	SLV 2	14.9	3.22	55.65	-0.0268	0.4607	0.1104
475	SLV 3	13.69	-2.09	54.45	-0.0079	0.558	0.0715
475	SLV 4	14.66	-0.94	55.03	-0.0124	0.5392	0.1056
475	SLV 5	4.67	6.15	64.18	-0.0486	0.2349	0.0143
475	SLV 6	5.3	6.89	64.55	-0.0514	0.2228	0.0362
475	SLV 7	3.88	-7.72	62.12	-0.0004	0.4966	-0.0017
475	SLV 8	4.51	-6.98	62.49	-0.0032	0.4845	0.0202
475	SLV 9	-3.65	5.31	71.28	-0.0559	0.1067	-0.0489
475	SLV 10	-3.02	6.05	71.66	-0.0587	0.0946	-0.0269
475	SLV 11	-4.44	-8.56	69.22	-0.0077	0.3683	-0.0649
475	SLV 12	-3.81	-7.82	69.59	-0.0106	0.3562	-0.0429
475	SLV 13	-13.8	-0.72	78.74	-0.0467	0.052	-0.1343
475	SLV 14	-12.83	0.43	79.32	-0.0512	0.0332	-0.1002
475	SLV 15	-14.04	-4.88	78.12	-0.0323	0.1304	-0.139
475	SLV 16	-13.07	-3.74	78.71	-0.0367	0.1117	-0.1049
475	CRTFP Ux+	0	0	0	0	0	0
475	CRTFP Ux-	0	0	0	0	0	0
476	SLU 1	0.42	0.32	36.94	0.0109	7.8784	-0.1134
476	SLU 2	0.41	0.41	36.94	0.011	7.8729	-0.147
476	SLU 3	0.43	0.33	37.78	0.0112	8.0449	-0.1175
476	SLU 4	0.43	0.39	37.78	0.0112	8.0416	-0.1377
476	SLU 5	0.42	0.41	37.48	0.0111	7.978	-0.1473
476	SLU 6	0.44	0.33	38.32	0.0113	8.15	-0.1179
476	SLU 7	0.43	0.39	38.32	0.0113	8.1467	-0.138
476	SLU 8	0.43	0.32	38.01	0.0111	8.0886	-0.114
476	SLU 9	0.43	0.38	38.01	0.0112	8.0853	-0.1342
476	SLU 10	0.43	0.49	41.57	0.0129	8.822	-0.1739
476	SLU 11	0.45	0.4	42.41	0.0131	8.994	-0.1445
476	SLU 12	0.44	0.46	42.41	0.0131	8.9907	-0.1646
476	SLU 13	0.44	0.49	42.1	0.013	8.9271	-0.1742
476	SLU 14	0.45	0.41	42.94	0.0132	9.0991	-0.1448
476	SLU 15	0.45	0.46	42.94	0.0132	9.0958	-0.165
476	SLU 16	0.45	0.39	42.64	0.013	9.0377	-0.141
476	SLU 17	0.45	0.45	42.64	0.0131	9.0344	-0.1611
476	SLU 18	0.44	0.43	43.55	0.0136	9.2342	-0.1519
476	SLU 19	0.44	0.48	43.55	0.0137	9.2309	-0.172
476	SLU 20	0.45	0.43	44.09	0.0137	9.3393	-0.1522
476	SLU 21	0.45	0.48	44.09	0.0138	9.336	-0.1723
476	SLU 22	0.46	0.39	41.48	0.0129	8.8037	-0.1387
476	SLU 23	0.46	0.48	41.48	0.013	8.7982	-0.1722
476	SLU 24	0.47	0.4	42.32	0.0131	8.9703	-0.1428
476	SLU 25	0.47	0.46	42.32	0.0132	8.967	-0.163
476	SLU 26	0.46	0.49	42.02	0.0131	8.9033	-0.1726
476	SLU 27	0.48	0.4	42.86	0.0132	9.0754	-0.1431
476	SLU 28	0.48	0.46	42.86	0.0133	9.0721	-0.1633
476	SLU 29	0.48	0.39	42.55	0.0131	9.0139	-0.1393
476	SLU 30	0.47	0.45	42.55	0.0131	9.0106	-0.1595
476	SLU 31	0.47	0.56	46.11	0.0149	9.7473	-0.1992
476	SLU 32	0.49	0.48	46.95	0.015	9.9193	-0.1697
476	SLU 33	0.49	0.53	46.95	0.0151	9.916	-0.1899
476	SLU 34	0.48	0.56	46.64	0.015	9.8524	-0.1995
476	SLU 35	0.5	0.48	47.48	0.0151	10.0244	-0.1701
476	SLU 36	0.5	0.54	47.48	0.0152	10.0211	-0.1902
476	SLU 37	0.49	0.47	47.17	0.015	9.963	-0.1663
476	SLU 38	0.49	0.52	47.17	0.015	9.9597	-0.1864
476	SLU 39	0.49	0.5	48.09	0.0156	10.1595	-0.1771
476	SLU 40	0.48	0.56	48.09	0.0157	10.1562	-0.1973
476	SLU 41	0.49	0.5	48.62	0.0157	10.2646	-0.1775
476	SLU 42	0.49	0.56	48.62	0.0158	10.2613	-0.1976
476	SLU 43	0.53	0.39	46.47	0.0135	9.9247	-0.1387

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
476	SLU 44	0.52	0.48	46.47	0.0136	9.9192	-0.1723
476	SLU 45	0.54	0.4	47.31	0.0138	10.0912	-0.1429
476	SLU 46	0.54	0.46	47.31	0.0138	10.0879	-0.163
476	SLU 47	0.53	0.48	47	0.0137	10.0243	-0.1726
476	SLU 48	0.55	0.4	47.84	0.0139	10.1963	-0.1432
476	SLU 49	0.54	0.46	47.84	0.0139	10.193	-0.1634
476	SLU 50	0.54	0.39	47.54	0.0137	10.1349	-0.1394
476	SLU 51	0.54	0.45	47.54	0.0138	10.1316	-0.1595
476	SLU 52	0.54	0.56	51.1	0.0155	10.8682	-0.1992
476	SLU 53	0.56	0.48	51.94	0.0157	11.0403	-0.1698
476	SLU 54	0.55	0.53	51.94	0.0157	11.037	-0.19
476	SLU 55	0.55	0.56	51.63	0.0156	10.9733	-0.1996
476	SLU 56	0.56	0.48	52.47	0.0158	11.1454	-0.1702
476	SLU 57	0.56	0.53	52.47	0.0158	11.1421	-0.1903
476	SLU 58	0.56	0.47	52.16	0.0156	11.0839	-0.1663
476	SLU 59	0.56	0.52	52.16	0.0157	11.0806	-0.1865
476	SLU 60	0.55	0.5	53.08	0.0162	11.2805	-0.1772
476	SLU 61	0.55	0.55	53.08	0.0163	11.2772	-0.1974
476	SLU 62	0.56	0.5	53.61	0.0163	11.3856	-0.1775
476	SLU 63	0.56	0.55	53.61	0.0164	11.3823	-0.1977
476	SLU 64	0.57	0.46	51.01	0.0155	10.85	-0.164
476	SLU 65	0.57	0.56	51.01	0.0156	10.8445	-0.1976
476	SLU 66	0.58	0.47	51.85	0.0157	11.0165	-0.1682
476	SLU 67	0.58	0.53	51.85	0.0158	11.0132	-0.1883
476	SLU 68	0.57	0.56	51.54	0.0157	10.9496	-0.1979
476	SLU 69	0.59	0.47	52.38	0.0158	11.1216	-0.1685
476	SLU 70	0.59	0.53	52.38	0.0159	11.1183	-0.1886
476	SLU 71	0.59	0.46	52.08	0.0157	11.0602	-0.1647
476	SLU 72	0.58	0.52	52.08	0.0157	11.0569	-0.1848
476	SLU 73	0.58	0.63	55.64	0.0175	11.7936	-0.2245
476	SLU 74	0.6	0.55	56.48	0.0176	11.9656	-0.1951
476	SLU 75	0.6	0.6	56.48	0.0177	11.9623	-0.2152
476	SLU 76	0.59	0.63	56.17	0.0176	11.8987	-0.2248
476	SLU 77	0.61	0.55	57.01	0.0177	12.0707	-0.1954
476	SLU 78	0.61	0.61	57.01	0.0178	12.0674	-0.2156
476	SLU 79	0.6	0.54	56.7	0.0176	12.0093	-0.1916
476	SLU 80	0.6	0.59	56.7	0.0176	12.006	-0.2117
476	SLU 81	0.6	0.57	57.62	0.0182	12.2058	-0.2025
476	SLU 82	0.59	0.63	57.62	0.0183	12.2025	-0.2226
476	SLU 83	0.6	0.57	58.15	0.0183	12.3109	-0.2028
476	SLU 84	0.6	0.63	58.15	0.0184	12.3076	-0.223
476	SLE RA 1	0.43	0.34	38.24	0.0115	8.1428	-0.1206
476	SLE RA 2	0.43	0.4	38.24	0.0116	8.1391	-0.143
476	SLE RA 3	0.44	0.35	38.8	0.0116	8.2538	-0.1234
476	SLE RA 4	0.44	0.38	38.8	0.0117	8.2516	-0.1368
476	SLE RA 5	0.43	0.4	38.6	0.0116	8.2092	-0.1432
476	SLE RA 6	0.44	0.35	39.16	0.0117	8.3239	-0.1236
476	SLE RA 7	0.44	0.38	39.16	0.0118	8.3217	-0.137
476	SLE RA 8	0.44	0.34	38.95	0.0116	8.2829	-0.121
476	SLE RA 9	0.44	0.38	38.95	0.0116	8.2807	-0.1345
476	SLE RA 10	0.44	0.45	41.32	0.0128	8.7718	-0.1609
476	SLE RA 11	0.45	0.4	41.88	0.0129	8.8865	-0.1413
476	SLE RA 12	0.45	0.43	41.88	0.013	8.8843	-0.1548
476	SLE RA 13	0.44	0.45	41.68	0.0129	8.8419	-0.1612
476	SLE RA 14	0.45	0.4	42.24	0.013	8.9566	-0.1416
476	SLE RA 15	0.45	0.44	42.24	0.013	8.9544	-0.155
476	SLE RA 16	0.45	0.39	42.04	0.0129	8.9156	-0.139
476	SLE RA 17	0.45	0.43	42.04	0.0129	8.9134	-0.1524
476	SLE RA 18	0.45	0.41	42.65	0.0133	9.0467	-0.1463
476	SLE RA 19	0.44	0.45	42.65	0.0133	9.0445	-0.1597
476	SLE RA 20	0.45	0.41	43	0.0133	9.1167	-0.1465
476	SLE RA 21	0.45	0.45	43	0.0134	9.1145	-0.1599
476	SLE FR 1	0.43	0.34	38.24	0.0115	8.1428	-0.1206
476	SLE FR 2	0.43	0.35	38.24	0.0115	8.1421	-0.1251
476	SLE FR 3	0.43	0.34	38.38	0.0115	8.1708	-0.1207
476	SLE FR 4	0.43	0.37	39.56	0.012	8.4132	-0.1328
476	SLE FR 5	0.44	0.36	39.7	0.012	8.442	-0.1284
476	SLE FR 6	0.44	0.37	40.44	0.0124	8.5947	-0.1334
476	SLE QP 1	0.43	0.34	38.24	0.0115	8.1428	-0.1206
476	SLE QP 2	0.43	0.36	39.56	0.012	8.414	-0.1283
476	SLD 1	3.75	0.19	29.52	0.0082	6.4963	-0.0713
476	SLD 2	3.98	0.97	29.74	0.0063	6.5227	-0.3402
476	SLD 3	3.67	-1.36	29.14	0.012	6.4636	0.4744
476	SLD 4	3.91	-0.59	29.36	0.0101	6.49	0.2054
476	SLD 5	1.51	2.54	37.09	0.0055	7.8836	-0.891
476	SLD 6	1.66	3.04	37.23	0.0042	7.9008	-1.0673
476	SLD 7	1.24	-2.66	35.82	0.0181	7.7746	0.9279
476	SLD 8	1.4	-2.15	35.97	0.0168	7.7918	0.7516
476	SLD 9	-0.53	2.87	43.16	0.0072	9.0361	-1.0082
476	SLD 10	-0.37	3.38	43.3	0.0059	9.0533	-1.1845
476	SLD 11	-0.79	-2.32	41.89	0.0198	8.9271	0.8107
476	SLD 12	-0.64	-1.82	42.04	0.0185	8.9443	0.6344
476	SLD 13	-3.04	1.31	49.76	0.0139	10.338	-0.462
476	SLD 14	-2.8	2.08	49.98	0.012	10.3643	-0.731
476	SLD 15	-3.11	-0.25	49.38	0.0177	10.3053	0.0836
476	SLD 16	-2.88	0.52	49.6	0.0158	10.3316	-0.1853
476	SLV 1	8.18	-0.07	16.05	0.0033	3.9261	0.0212
476	SLV 2	8.73	1.72	16.57	-0.0012	3.9874	-0.6051
476	SLV 3	8	-3.62	15.19	0.0118	3.8503	1.2626
476	SLV 4	8.55	-1.82	15.71	0.0074	3.9116	0.6362

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
476	SLV 5	2.94	5.3	33.73	-0.0028	7.172	-1.8583
476	SLV 6	3.29	6.46	34.06	-0.0057	7.2115	-2.2619
476	SLV 7	2.34	-6.52	30.85	0.0257	6.9193	2.2796
476	SLV 8	2.69	-5.36	31.19	0.0228	6.9588	1.8759
476	SLV 9	-1.82	6.08	47.94	0.0012	9.8691	-2.1325
476	SLV 10	-1.47	7.24	48.27	-0.0017	9.9086	-2.5362
476	SLV 11	-2.42	-5.74	45.06	0.0297	9.6164	2.0053
476	SLV 12	-2.07	-4.58	45.4	0.0268	9.6559	1.6017
476	SLV 13	-7.68	2.54	63.42	0.0166	12.9163	-0.8928
476	SLV 14	-7.13	4.34	63.94	0.0122	12.9776	-1.5192
476	SLV 15	-7.86	-1.01	62.56	0.0252	12.8405	0.3485
476	SLV 16	-7.31	0.79	63.07	0.0207	12.9018	-0.2778
476	CRTFP Ux+	0	0	0	0	0	0
476	CRTFP Ux-	0	0	0	0	0	0
476	CRTFP Uy+	0	0	0	0	0	0
476	CRTFP Uy-	0	0	0	0	0	0
478	SLU 1	-0.48	-0.12	33.21	0.0031	-3.9248	-0.0307
478	SLU 2	-0.47	-0.03	33.2	0.0033	-3.9201	-0.0081
478	SLU 3	-0.49	-0.12	33.96	0.0032	-4.0046	-0.0308
478	SLU 4	-0.49	-0.06	33.96	0.0033	-4.0018	-0.0173
478	SLU 5	-0.48	-0.03	33.69	0.0033	-3.9707	-0.0088
478	SLU 6	-0.5	-0.12	34.45	0.0032	-4.0551	-0.0316
478	SLU 7	-0.5	-0.06	34.44	0.0033	-4.0523	-0.018
478	SLU 8	-0.5	-0.12	34.17	0.0032	-4.0259	-0.0322
478	SLU 9	-0.49	-0.07	34.17	0.0033	-4.023	-0.0186
478	SLU 10	-0.5	-0.02	37.36	0.0043	-4.3867	-0.0068
478	SLU 11	-0.53	-0.11	38.12	0.0042	-4.4711	-0.0295
478	SLU 12	-0.52	-0.06	38.12	0.0043	-4.4683	-0.0159
478	SLU 13	-0.51	-0.02	37.84	0.0043	-4.4372	-0.0075
478	SLU 14	-0.53	-0.11	38.6	0.0042	-4.5216	-0.0302
478	SLU 15	-0.53	-0.06	38.6	0.0043	-4.5188	-0.0167
478	SLU 16	-0.53	-0.12	38.33	0.0041	-4.4924	-0.0308
478	SLU 17	-0.52	-0.06	38.33	0.0042	-4.4896	-0.0173
478	SLU 18	-0.53	-0.11	39.15	0.0045	-4.5913	-0.0288
478	SLU 19	-0.52	-0.05	39.14	0.0046	-4.5885	-0.0152
478	SLU 20	-0.53	-0.11	39.63	0.0046	-4.6418	-0.0295
478	SLU 21	-0.53	-0.06	39.63	0.0047	-4.639	-0.016
478	SLU 22	-0.54	-0.11	37.31	0.0042	-4.379	-0.0285
478	SLU 23	-0.53	-0.02	37.3	0.0044	-4.3743	-0.0059
478	SLU 24	-0.55	-0.11	38.06	0.0043	-4.4588	-0.0287
478	SLU 25	-0.55	-0.05	38.06	0.0044	-4.456	-0.0151
478	SLU 26	-0.54	-0.02	37.78	0.0044	-4.4249	-0.0067
478	SLU 27	-0.56	-0.11	38.55	0.0043	-4.5093	-0.0294
478	SLU 28	-0.55	-0.05	38.54	0.0044	-4.5065	-0.0158
478	SLU 29	-0.55	-0.11	38.27	0.0042	-4.4801	-0.03
478	SLU 30	-0.55	-0.06	38.27	0.0043	-4.4772	-0.0164
478	SLU 31	-0.56	-0.01	41.46	0.0054	-4.8409	-0.0046
478	SLU 32	-0.58	-0.1	42.22	0.0053	-4.9253	-0.0273
478	SLU 33	-0.58	-0.05	42.22	0.0054	-4.9225	-0.0138
478	SLU 34	-0.57	-0.01	41.94	0.0054	-4.8914	-0.0053
478	SLU 35	-0.59	-0.1	42.7	0.0053	-4.9758	-0.0281
478	SLU 36	-0.58	-0.05	42.7	0.0054	-4.973	-0.0145
478	SLU 37	-0.58	-0.11	42.43	0.0052	-4.9466	-0.0287
478	SLU 38	-0.58	-0.05	42.43	0.0053	-4.9438	-0.0151
478	SLU 39	-0.58	-0.1	43.25	0.0056	-5.0455	-0.0266
478	SLU 40	-0.58	-0.04	43.24	0.0057	-5.0427	-0.0131
478	SLU 41	-0.59	-0.1	43.73	0.0056	-5.096	-0.0274
478	SLU 42	-0.58	-0.05	43.72	0.0057	-5.0932	-0.0138
478	SLU 43	-0.61	-0.15	41.77	0.0037	-4.9466	-0.0406
478	SLU 44	-0.6	-0.06	41.76	0.0039	-4.9419	-0.0181
478	SLU 45	-0.62	-0.15	42.52	0.0038	-5.0263	-0.0408
478	SLU 46	-0.61	-0.1	42.52	0.0039	-5.0235	-0.0272
478	SLU 47	-0.6	-0.07	42.24	0.0039	-4.9924	-0.0188
478	SLU 48	-0.63	-0.16	43	0.0038	-5.0768	-0.0415
478	SLU 49	-0.62	-0.1	43	0.0039	-5.074	-0.028
478	SLU 50	-0.62	-0.16	42.73	0.0037	-5.0476	-0.0421
478	SLU 51	-0.61	-0.11	42.73	0.0038	-5.0448	-0.0286
478	SLU 52	-0.63	-0.06	45.92	0.0049	-5.4084	-0.0167
478	SLU 53	-0.65	-0.15	46.68	0.0048	-5.4928	-0.0394
478	SLU 54	-0.64	-0.09	46.68	0.0049	-5.49	-0.0259
478	SLU 55	-0.63	-0.06	46.4	0.0049	-5.4589	-0.0175
478	SLU 56	-0.66	-0.15	47.16	0.0048	-5.5433	-0.0402
478	SLU 57	-0.65	-0.1	47.16	0.0049	-5.5405	-0.0266
478	SLU 58	-0.65	-0.15	46.89	0.0047	-5.5141	-0.0408
478	SLU 59	-0.65	-0.1	46.88	0.0048	-5.5113	-0.0272
478	SLU 60	-0.65	-0.15	47.7	0.0051	-5.613	-0.0387
478	SLU 61	-0.65	-0.09	47.7	0.0052	-5.6102	-0.0252
478	SLU 62	-0.66	-0.15	48.19	0.0051	-5.6635	-0.0395
478	SLU 63	-0.65	-0.09	48.18	0.0052	-5.6607	-0.0259
478	SLU 64	-0.66	-0.14	45.86	0.0048	-5.4008	-0.0385
478	SLU 65	-0.65	-0.05	45.86	0.0049	-5.3961	-0.0159
478	SLU 66	-0.68	-0.14	46.62	0.0049	-5.4805	-0.0386
478	SLU 67	-0.67	-0.09	46.62	0.005	-5.4777	-0.0251
478	SLU 68	-0.66	-0.06	46.34	0.005	-5.4466	-0.0166
478	SLU 69	-0.68	-0.15	47.1	0.0049	-5.531	-0.0393
478	SLU 70	-0.68	-0.09	47.1	0.005	-5.5282	-0.0258
478	SLU 71	-0.68	-0.15	46.83	0.0048	-5.5018	-0.0399
478	SLU 72	-0.67	-0.1	46.83	0.0049	-5.499	-0.0264
478	SLU 73	-0.68	-0.05	50.02	0.0059	-5.8626	-0.0146
478	SLU 74	-0.71	-0.14	50.78	0.0059	-5.947	-0.0373

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
478	SLU 75	-0.7	-0.08	50.77	0.006	-5.9442	-0.0237
478	SLU 76	-0.69	-0.05	50.5	0.0059	-5.9131	-0.0153
478	SLU 77	-0.72	-0.14	51.26	0.0059	-5.9975	-0.038
478	SLU 78	-0.71	-0.09	51.26	0.006	-5.9947	-0.0245
478	SLU 79	-0.71	-0.14	50.99	0.0058	-5.9683	-0.0386
478	SLU 80	-0.7	-0.09	50.98	0.0059	-5.9655	-0.0251
478	SLU 81	-0.71	-0.14	51.8	0.0062	-6.0672	-0.0366
478	SLU 82	-0.7	-0.08	51.8	0.0063	-6.0644	-0.023
478	SLU 83	-0.72	-0.14	52.28	0.0062	-6.1177	-0.0373
478	SLU 84	-0.71	-0.08	52.28	0.0063	-6.1149	-0.0238
478	SLE RA 1	-0.5	-0.11	34.38	0.0034	-4.0546	-0.0301
478	SLE RA 2	-0.49	-0.05	34.38	0.0035	-4.0515	-0.015
478	SLE RA 3	-0.51	-0.11	34.88	0.0035	-4.1078	-0.0302
478	SLE RA 4	-0.5	-0.08	34.88	0.0036	-4.1059	-0.0211
478	SLE RA 5	-0.5	-0.05	34.7	0.0036	-4.0852	-0.0155
478	SLE RA 6	-0.51	-0.12	35.21	0.0035	-4.1414	-0.0306
478	SLE RA 7	-0.51	-0.08	35.2	0.0036	-4.1396	-0.0216
478	SLE RA 8	-0.51	-0.12	35.02	0.0035	-4.122	-0.031
478	SLE RA 9	-0.5	-0.08	35.02	0.0035	-4.1201	-0.022
478	SLE RA 10	-0.51	-0.05	37.15	0.0042	-4.3625	-0.0141
478	SLE RA 11	-0.53	-0.11	37.65	0.0042	-4.4188	-0.0293
478	SLE RA 12	-0.52	-0.07	37.65	0.0042	-4.4169	-0.0202
478	SLE RA 13	-0.52	-0.05	37.47	0.0042	-4.3962	-0.0146
478	SLE RA 14	-0.53	-0.11	37.98	0.0042	-4.4525	-0.0298
478	SLE RA 15	-0.53	-0.07	37.97	0.0042	-4.4506	-0.0207
478	SLE RA 16	-0.53	-0.11	37.79	0.0041	-4.433	-0.0302
478	SLE RA 17	-0.52	-0.08	37.79	0.0042	-4.4311	-0.0211
478	SLE RA 18	-0.53	-0.11	38.34	0.0044	-4.4989	-0.0288
478	SLE RA 19	-0.52	-0.07	38.34	0.0044	-4.497	-0.0198
478	SLE RA 20	-0.53	-0.11	38.66	0.0044	-4.5326	-0.0293
478	SLE RA 21	-0.53	-0.07	38.66	0.0045	-4.5307	-0.0203
478	SLE FR 1	-0.5	-0.11	34.38	0.0034	-4.0546	-0.0301
478	SLE FR 2	-0.5	-0.1	34.38	0.0035	-4.054	-0.0271
478	SLE FR 3	-0.5	-0.11	34.51	0.0034	-4.0681	-0.0303
478	SLE FR 4	-0.51	-0.1	35.57	0.0037	-4.1873	-0.0267
478	SLE FR 5	-0.51	-0.11	35.7	0.0037	-4.2014	-0.0299
478	SLE FR 6	-0.51	-0.11	36.36	0.0039	-4.2768	-0.0294
478	SLE QP 1	-0.5	-0.11	34.38	0.0034	-4.0546	-0.0301
478	SLE QP 2	-0.51	-0.11	35.57	0.0037	-4.1879	-0.0297
478	SLD 1	2.25	0.42	45.41	0.0032	-5.2077	0.105
478	SLD 2	2.43	-0.26	45.24	0.0054	-5.2075	-0.0656
478	SLD 3	2.29	-1	45.09	0.0075	-5.1682	-0.2515
478	SLD 4	2.47	-1.69	44.92	0.0096	-5.1679	-0.4221
478	SLD 5	0.22	2.33	39.04	-0.0032	-4.5539	0.5817
478	SLD 6	0.34	1.88	38.93	-0.0018	-4.5538	0.4698
478	SLD 7	0.36	-2.42	37.96	0.0109	-4.422	-0.6066
478	SLD 8	0.48	-2.87	37.85	0.0123	-4.4218	-0.7184
478	SLD 9	-1.5	2.64	33.28	-0.0048	-3.954	0.659
478	SLD 10	-1.38	2.19	33.17	-0.0034	-3.9538	0.5472
478	SLD 11	-1.36	-2.1	32.21	0.0093	-3.8221	-0.5292
478	SLD 12	-1.24	-2.55	32.09	0.0107	-3.8219	-0.6411
478	SLD 13	-3.49	1.46	26.22	-0.0022	-3.2079	0.3627
478	SLD 14	-3.3	0.78	26.05	0	-3.2076	0.1921
478	SLD 15	-3.44	0.04	25.89	0.0021	-3.1683	0.0062
478	SLD 16	-3.26	-0.65	25.72	0.0042	-3.1681	-0.1644
478	SLV 1	5.93	1.09	58.59	0.0028	-6.5739	0.273
478	SLV 2	6.36	-0.51	58.2	0.0077	-6.5732	-0.1243
478	SLV 3	6.03	-2.15	57.85	0.0124	-6.482	-0.5383
478	SLV 4	6.46	-3.75	57.46	0.0173	-6.4813	-0.9356
478	SLV 5	1.2	5.44	43.66	-0.012	-5.0432	1.36
478	SLV 6	1.48	4.41	43.41	-0.0088	-5.0427	1.104
478	SLV 7	1.53	-5.36	41.2	0.02	-4.7369	-1.3443
478	SLV 8	1.8	-6.39	40.94	0.0232	-4.7365	-1.6003
478	SLV 9	-2.82	6.17	30.19	-0.0158	-3.6393	1.541
478	SLV 10	-2.55	5.14	29.93	-0.0126	-3.6389	1.2849
478	SLV 11	-2.49	-4.63	27.73	0.0162	-3.3331	-1.1634
478	SLV 12	-2.22	-5.66	27.47	0.0194	-3.3326	-1.4194
478	SLV 13	-7.47	3.53	13.68	-0.0099	-1.8945	0.8762
478	SLV 14	-7.05	1.93	13.28	-0.0049	-1.8938	0.4789
478	SLV 15	-7.37	0.28	12.94	-0.0003	-1.8026	0.0649
478	SLV 16	-6.95	-1.32	12.54	0.0047	-1.8019	-0.3324
478	CRTFP Ux+	0	0	0	0	0	0
478	CRTFP Ux-	0	0	0	0	0	0
478	CRTFP Uy+	0	0	0	0	0	0
478	CRTFP Uy-	0	0	0	0	0	0
481	SLU 1	-0.01	-0.19	31.03	-0.383	9.4291	0.0655
481	SLU 2	-0.01	-0.14	31.05	-0.3833	9.4343	0.0486
481	SLU 3	0	-0.18	31.7	-0.3912	9.6235	0.0631
481	SLU 4	0	-0.15	31.71	-0.3914	9.6266	0.053
481	SLU 5	0	-0.14	31.47	-0.3886	9.557	0.0495
481	SLU 6	0	-0.18	32.12	-0.3965	9.7462	0.0639
481	SLU 7	0	-0.15	32.13	-0.3967	9.7493	0.0538
481	SLU 8	0	-0.19	31.88	-0.3935	9.6746	0.0672
481	SLU 9	0	-0.16	31.89	-0.3937	9.6777	0.057
481	SLU 10	0	-0.13	35.25	-0.4354	10.6773	0.0438
481	SLU 11	0	-0.17	35.9	-0.4432	10.8665	0.0583
481	SLU 12	0	-0.14	35.91	-0.4434	10.8696	0.0481
481	SLU 13	0	-0.13	35.68	-0.4406	10.8	0.0446
481	SLU 14	0	-0.17	36.32	-0.4485	10.9893	0.0591
481	SLU 15	0	-0.14	36.33	-0.4487	10.9923	0.049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
481	SLU 16	0	-0.18	36.08	-0.4456	10.9176	0.0624
481	SLU 17	0	-0.15	36.09	-0.4458	10.9207	0.0522
481	SLU 18	0	-0.17	37.04	-0.4573	11.2049	0.0587
481	SLU 19	0	-0.14	37.05	-0.4575	11.208	0.0485
481	SLU 20	0	-0.17	37.46	-0.4626	11.3276	0.0595
481	SLU 21	0	-0.14	37.47	-0.4628	11.3307	0.0493
481	SLU 22	0	-0.15	34.7	-0.428	10.5091	0.0544
481	SLU 23	0	-0.11	34.72	-0.4283	10.5142	0.0375
481	SLU 24	0	-0.15	35.37	-0.4362	10.7034	0.052
481	SLU 25	0	-0.12	35.38	-0.4364	10.7065	0.0418
481	SLU 26	0	-0.11	35.14	-0.4336	10.637	0.0383
481	SLU 27	0	-0.15	35.79	-0.4414	10.8262	0.0528
481	SLU 28	0	-0.12	35.8	-0.4417	10.8293	0.0426
481	SLU 29	0	-0.16	35.55	-0.4385	10.7545	0.056
481	SLU 30	0	-0.13	35.56	-0.4387	10.7576	0.0459
481	SLU 31	0	-0.09	38.93	-0.4804	11.7573	0.0327
481	SLU 32	0.01	-0.13	39.57	-0.4882	11.9465	0.0471
481	SLU 33	0	-0.11	39.58	-0.4884	11.9496	0.037
481	SLU 34	0	-0.1	39.35	-0.4856	11.88	0.0335
481	SLU 35	0.01	-0.14	40	-0.4935	12.0692	0.048
481	SLU 36	0.01	-0.11	40.01	-0.4937	12.0723	0.0378
481	SLU 37	0.01	-0.15	39.75	-0.4905	11.9976	0.0512
481	SLU 38	0.01	-0.12	39.76	-0.4908	12.0007	0.0411
481	SLU 39	0	-0.14	40.71	-0.5023	12.2849	0.0475
481	SLU 40	0	-0.11	40.72	-0.5025	12.288	0.0374
481	SLU 41	0.01	-0.14	41.13	-0.5076	12.4076	0.0483
481	SLU 42	0.01	-0.11	41.14	-0.5078	12.4107	0.0382
481	SLU 43	-0.01	-0.25	39.08	-0.4825	11.8876	0.089
481	SLU 44	-0.01	-0.21	39.1	-0.4828	11.8927	0.0721
481	SLU 45	-0.01	-0.25	39.75	-0.4907	12.0819	0.0866
481	SLU 46	-0.01	-0.22	39.76	-0.4909	12.085	0.0764
481	SLU 47	-0.01	-0.21	39.52	-0.4881	12.0155	0.0729
481	SLU 48	0	-0.25	40.17	-0.4959	12.2047	0.0874
481	SLU 49	0	-0.22	40.18	-0.4961	12.2078	0.0773
481	SLU 50	0	-0.26	39.93	-0.493	12.133	0.0907
481	SLU 51	0	-0.23	39.94	-0.4932	12.1361	0.0805
481	SLU 52	-0.01	-0.19	43.3	-0.5348	13.1358	0.0673
481	SLU 53	0	-0.23	43.95	-0.5427	13.325	0.0818
481	SLU 54	0	-0.2	43.96	-0.5429	13.3281	0.0716
481	SLU 55	0	-0.19	43.73	-0.5401	13.2585	0.0681
481	SLU 56	0	-0.24	44.37	-0.5479	13.4477	0.0826
481	SLU 57	0	-0.21	44.38	-0.5482	13.4508	0.0724
481	SLU 58	0	-0.24	44.13	-0.545	13.3761	0.0858
481	SLU 59	0	-0.22	44.14	-0.5452	13.3792	0.0757
481	SLU 60	0	-0.23	45.09	-0.5568	13.6634	0.0821
481	SLU 61	0	-0.21	45.1	-0.557	13.6665	0.072
481	SLU 62	0	-0.24	45.51	-0.5621	13.7861	0.083
481	SLU 63	0	-0.21	45.52	-0.5623	13.7892	0.0728
481	SLU 64	0	-0.22	42.75	-0.5275	12.9675	0.0779
481	SLU 65	-0.01	-0.17	42.77	-0.5278	12.9727	0.061
481	SLU 66	0	-0.21	43.42	-0.5356	13.1619	0.0754
481	SLU 67	0	-0.19	43.43	-0.5359	13.165	0.0653
481	SLU 68	0	-0.18	43.19	-0.5331	13.0954	0.0618
481	SLU 69	0	-0.22	43.84	-0.5409	13.2846	0.0763
481	SLU 70	0	-0.19	43.85	-0.5411	13.2877	0.0661
481	SLU 71	0	-0.23	43.6	-0.538	13.213	0.0795
481	SLU 72	0	-0.2	43.61	-0.5382	13.2161	0.0694
481	SLU 73	0	-0.16	46.98	-0.5798	14.2158	0.0562
481	SLU 74	0	-0.2	47.62	-0.5877	14.405	0.0706
481	SLU 75	0	-0.17	47.63	-0.5879	14.408	0.0605
481	SLU 76	0	-0.16	47.4	-0.5851	14.3385	0.057
481	SLU 77	0.01	-0.2	48.05	-0.5929	14.5277	0.0714
481	SLU 78	0	-0.17	48.06	-0.5931	14.5308	0.0613
481	SLU 79	0.01	-0.21	47.8	-0.59	14.456	0.0747
481	SLU 80	0.01	-0.18	47.81	-0.5902	14.4591	0.0646
481	SLU 81	0	-0.2	48.76	-0.6018	14.7433	0.071
481	SLU 82	0	-0.17	48.77	-0.602	14.7464	0.0609
481	SLU 83	0	-0.2	49.18	-0.607	14.8661	0.0718
481	SLU 84	0	-0.18	49.19	-0.6073	14.8692	0.0617
481	SLE RA 1	0	-0.18	32.08	-0.3958	9.7377	0.0624
481	SLE RA 2	-0.01	-0.15	32.09	-0.3961	9.7411	0.0511
481	SLE RA 3	0	-0.17	32.52	-0.4013	9.8673	0.0607
481	SLE RA 4	0	-0.15	32.53	-0.4014	9.8693	0.054
481	SLE RA 5	0	-0.15	32.37	-0.3996	9.8229	0.0516
481	SLE RA 6	0	-0.17	32.81	-0.4048	9.9491	0.0613
481	SLE RA 7	0	-0.16	32.81	-0.405	9.9511	0.0545
481	SLE RA 8	0	-0.18	32.64	-0.4029	9.9013	0.0635
481	SLE RA 9	0	-0.16	32.65	-0.403	9.9034	0.0567
481	SLE RA 10	0	-0.14	34.9	-0.4308	10.5698	0.0479
481	SLE RA 11	0	-0.16	35.33	-0.436	10.696	0.0575
481	SLE RA 12	0	-0.14	35.33	-0.4361	10.698	0.0508
481	SLE RA 13	0	-0.14	35.18	-0.4343	10.6516	0.0484
481	SLE RA 14	0	-0.17	35.61	-0.4395	10.7778	0.0581
481	SLE RA 15	0	-0.15	35.62	-0.4396	10.7798	0.0513
481	SLE RA 16	0	-0.17	35.45	-0.4376	10.73	0.0602
481	SLE RA 17	0	-0.15	35.45	-0.4377	10.7321	0.0535
481	SLE RA 18	0	-0.16	36.08	-0.4454	10.9215	0.0578
481	SLE RA 19	0	-0.15	36.09	-0.4455	10.9236	0.051
481	SLE RA 20	0	-0.17	36.37	-0.4489	11.0034	0.0583
481	SLE RA 21	0	-0.15	36.37	-0.449	11.0054	0.0516

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
481	SLE FR 1	0	-0.18	32.08	-0.3958	9.7377	0.0624
481	SLE FR 2	0	-0.17	32.08	-0.3959	9.7384	0.0601
481	SLE FR 3	0	-0.18	32.19	-0.3973	9.7704	0.0626
481	SLE FR 4	0	-0.17	33.28	-0.4108	10.0935	0.0587
481	SLE FR 5	0	-0.17	33.39	-0.4121	10.1256	0.0612
481	SLE FR 6	0	-0.17	34.08	-0.4206	10.3296	0.0601
481	SLE QP 1	0	-0.18	32.08	-0.3958	9.7377	0.0624
481	SLE QP 2	0	-0.17	33.28	-0.4107	10.0928	0.061
481	SLD 1	2.56	0.22	33.5	-0.4143	10.1593	-0.0485
481	SLD 2	2.71	0.25	33.54	-0.4149	10.1674	-0.0555
481	SLD 3	2.52	-0.76	33.37	-0.411	10.1211	0.2964
481	SLD 4	2.68	-0.73	33.41	-0.4116	10.1292	0.2893
481	SLD 5	0.79	1.44	33.54	-0.4167	10.1692	-0.4936
481	SLD 6	0.89	1.45	33.56	-0.4171	10.1745	-0.4982
481	SLD 7	0.68	-1.85	33.1	-0.4057	10.042	0.6558
481	SLD 8	0.78	-1.83	33.13	-0.406	10.0473	0.6512
481	SLD 9	-0.78	1.48	33.43	-0.4154	10.1384	-0.5292
481	SLD 10	-0.68	1.5	33.46	-0.4158	10.1437	-0.5339
481	SLD 11	-0.9	-1.8	33	-0.4043	10.0111	0.6202
481	SLD 12	-0.79	-1.78	33.03	-0.4047	10.0164	0.6155
481	SLD 13	-2.69	0.39	33.15	-0.4098	10.0565	-0.1673
481	SLD 14	-2.53	0.41	33.2	-0.4104	10.0646	-0.1744
481	SLD 15	-2.72	-0.6	33.02	-0.4065	10.0183	0.1775
481	SLD 16	-2.56	-0.57	33.07	-0.4071	10.0264	0.1704
481	SLV 1	5.98	0.73	33.78	-0.419	10.2481	-0.1844
481	SLV 2	6.35	0.79	33.88	-0.4204	10.2669	-0.2009
481	SLV 3	5.91	-1.52	33.49	-0.4114	10.1592	0.6007
481	SLV 4	6.27	-1.45	33.58	-0.4128	10.1781	0.5842
481	SLV 5	1.85	3.49	33.87	-0.4244	10.271	-1.2006
481	SLV 6	2.09	3.53	33.93	-0.4253	10.2831	-1.2112
481	SLV 7	1.59	-3.99	32.87	-0.3992	9.9747	1.4165
481	SLV 8	1.82	-3.95	32.93	-0.4001	9.9869	1.4059
481	SLV 9	-1.83	3.6	33.63	-0.4213	10.1988	-1.2839
481	SLV 10	-1.59	3.64	33.69	-0.4222	10.211	-1.2946
481	SLV 11	-2.09	-3.88	32.63	-0.3961	9.9026	1.3331
481	SLV 12	-1.86	-3.84	32.69	-0.397	9.9147	1.3225
481	SLV 13	-6.28	1.1	32.98	-0.4086	10.0076	-0.4623
481	SLV 14	-5.91	1.17	33.08	-0.41	10.0264	-0.4788
481	SLV 15	-6.36	-1.14	32.68	-0.401	9.9187	0.3228
481	SLV 16	-5.99	-1.08	32.78	-0.4024	9.9376	0.3063
481	CRTFP Ux+	0	0	0	0	0	0
481	CRTFP Ux-	0	0	0	0	0	0
481	CRTFP Uy+	0	0	0	0	0	0
481	CRTFP Uy-	0	0	0	0	0	0
485	SLU 1	-0.76	-0.9	62.22	-0.0123	-0.3135	-0.0108
485	SLU 2	-0.76	-0.8	62.2	-0.0123	-0.3138	-0.0106
485	SLU 3	-0.78	-0.91	63.62	-0.0123	-0.321	-0.0113
485	SLU 4	-0.78	-0.85	63.61	-0.0123	-0.3211	-0.0111
485	SLU 5	-0.77	-0.82	63.11	-0.0125	-0.3188	-0.0107
485	SLU 6	-0.79	-0.92	64.53	-0.0126	-0.326	-0.0115
485	SLU 7	-0.79	-0.86	64.52	-0.0126	-0.3261	-0.0113
485	SLU 8	-0.78	-0.93	64.02	-0.0128	-0.3236	-0.0111
485	SLU 9	-0.78	-0.87	64.01	-0.0127	-0.3237	-0.011
485	SLU 10	-0.81	-0.87	70.46	-0.0123	-0.3679	-0.0124
485	SLU 11	-0.83	-0.97	71.88	-0.0124	-0.3751	-0.0131
485	SLU 12	-0.83	-0.91	71.87	-0.0124	-0.3752	-0.0129
485	SLU 13	-0.82	-0.88	71.37	-0.0126	-0.3729	-0.0125
485	SLU 14	-0.84	-0.99	72.79	-0.0127	-0.3801	-0.0132
485	SLU 15	-0.84	-0.93	72.78	-0.0126	-0.3802	-0.0131
485	SLU 16	-0.83	-1	72.28	-0.0128	-0.3777	-0.0129
485	SLU 17	-0.83	-0.94	72.27	-0.0128	-0.3778	-0.0128
485	SLU 18	-0.83	-0.99	74.02	-0.0124	-0.3909	-0.0134
485	SLU 19	-0.83	-0.93	74.01	-0.0124	-0.391	-0.0132
485	SLU 20	-0.84	-1.01	74.92	-0.0126	-0.3959	-0.0135
485	SLU 21	-0.84	-0.95	74.91	-0.0126	-0.396	-0.0134
485	SLU 22	-0.85	-0.93	70.03	-0.0119	-0.3532	-0.0134
485	SLU 23	-0.85	-0.83	70.02	-0.0118	-0.3534	-0.0131
485	SLU 24	-0.87	-0.94	71.44	-0.0119	-0.3606	-0.0139
485	SLU 25	-0.87	-0.88	71.43	-0.0119	-0.3607	-0.0137
485	SLU 26	-0.86	-0.85	70.92	-0.0121	-0.3584	-0.0133
485	SLU 27	-0.88	-0.95	72.34	-0.0121	-0.3656	-0.014
485	SLU 28	-0.88	-0.89	72.33	-0.0121	-0.3657	-0.0138
485	SLU 29	-0.87	-0.96	71.84	-0.0123	-0.3632	-0.0137
485	SLU 30	-0.87	-0.9	71.83	-0.0123	-0.3633	-0.0135
485	SLU 31	-0.9	-0.89	78.28	-0.0119	-0.4075	-0.0149
485	SLU 32	-0.92	-1	79.7	-0.012	-0.4147	-0.0156
485	SLU 33	-0.92	-0.94	79.69	-0.012	-0.4148	-0.0155
485	SLU 34	-0.91	-0.91	79.18	-0.0121	-0.4125	-0.0151
485	SLU 35	-0.93	-1.02	80.6	-0.0122	-0.4197	-0.0158
485	SLU 36	-0.93	-0.96	80.59	-0.0122	-0.4198	-0.0156
485	SLU 37	-0.92	-1.02	80.1	-0.0124	-0.4173	-0.0155
485	SLU 38	-0.92	-0.96	80.09	-0.0124	-0.4174	-0.0153
485	SLU 39	-0.92	-1.02	81.83	-0.012	-0.4305	-0.0159
485	SLU 40	-0.92	-0.96	81.82	-0.012	-0.4306	-0.0158
485	SLU 41	-0.93	-1.04	82.74	-0.0122	-0.4355	-0.0161
485	SLU 42	-0.93	-0.98	82.73	-0.0122	-0.4356	-0.0159
485	SLU 43	-0.96	-1.16	78.2	-0.0161	-0.394	-0.0132
485	SLU 44	-0.96	-1.06	78.19	-0.0161	-0.3943	-0.013
485	SLU 45	-0.98	-1.17	79.61	-0.0162	-0.4014	-0.0137
485	SLU 46	-0.98	-1.11	79.6	-0.0162	-0.4016	-0.0135

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
485	SLU 47	-0.97	-1.08	79.09	-0.0163	-0.3993	-0.0131
485	SLU 48	-0.99	-1.19	80.51	-0.0164	-0.4064	-0.0138
485	SLU 49	-0.99	-1.13	80.5	-0.0164	-0.4066	-0.0137
485	SLU 50	-0.98	-1.19	80.01	-0.0166	-0.404	-0.0135
485	SLU 51	-0.98	-1.13	80	-0.0166	-0.4042	-0.0134
485	SLU 52	-1.01	-1.13	86.45	-0.0162	-0.4484	-0.0147
485	SLU 53	-1.03	-1.23	87.87	-0.0163	-0.4555	-0.0155
485	SLU 54	-1.03	-1.17	87.86	-0.0162	-0.4557	-0.0153
485	SLU 55	-1.02	-1.14	87.35	-0.0164	-0.4534	-0.0149
485	SLU 56	-1.04	-1.25	88.77	-0.0165	-0.4606	-0.0156
485	SLU 57	-1.04	-1.19	88.76	-0.0165	-0.4607	-0.0155
485	SLU 58	-1.03	-1.26	88.27	-0.0167	-0.4582	-0.0153
485	SLU 59	-1.03	-1.2	88.26	-0.0167	-0.4583	-0.0151
485	SLU 60	-1.03	-1.25	90	-0.0162	-0.4713	-0.0158
485	SLU 61	-1.03	-1.19	89.99	-0.0162	-0.4715	-0.0156
485	SLU 62	-1.04	-1.27	90.91	-0.0165	-0.4763	-0.0159
485	SLU 63	-1.04	-1.21	90.9	-0.0165	-0.4765	-0.0158
485	SLU 64	-1.05	-1.19	86.02	-0.0157	-0.4337	-0.0158
485	SLU 65	-1.05	-1.09	86	-0.0157	-0.4339	-0.0155
485	SLU 66	-1.07	-1.2	87.42	-0.0157	-0.4411	-0.0162
485	SLU 67	-1.07	-1.14	87.42	-0.0157	-0.4412	-0.0161
485	SLU 68	-1.06	-1.11	86.91	-0.0159	-0.4389	-0.0157
485	SLU 69	-1.08	-1.21	88.33	-0.016	-0.4461	-0.0164
485	SLU 70	-1.08	-1.15	88.32	-0.016	-0.4462	-0.0162
485	SLU 71	-1.07	-1.22	87.82	-0.0162	-0.4437	-0.0161
485	SLU 72	-1.07	-1.16	87.82	-0.0161	-0.4438	-0.0159
485	SLU 73	-1.1	-1.16	94.26	-0.0157	-0.488	-0.0173
485	SLU 74	-1.12	-1.26	95.68	-0.0158	-0.4952	-0.018
485	SLU 75	-1.12	-1.2	95.68	-0.0158	-0.4953	-0.0179
485	SLU 76	-1.11	-1.17	95.17	-0.016	-0.493	-0.0174
485	SLU 77	-1.13	-1.28	96.59	-0.0161	-0.5002	-0.0182
485	SLU 78	-1.13	-1.22	96.58	-0.016	-0.5003	-0.018
485	SLU 79	-1.12	-1.29	96.08	-0.0162	-0.4978	-0.0179
485	SLU 80	-1.12	-1.23	96.08	-0.0162	-0.4979	-0.0177
485	SLU 81	-1.12	-1.28	97.82	-0.0158	-0.511	-0.0183
485	SLU 82	-1.12	-1.22	97.81	-0.0158	-0.5111	-0.0182
485	SLU 83	-1.13	-1.3	98.72	-0.016	-0.516	-0.0185
485	SLU 84	-1.13	-1.24	98.71	-0.016	-0.5161	-0.0183
485	SLE RA 1	-0.79	-0.91	64.45	-0.0122	-0.3249	-0.0116
485	SLE RA 2	-0.79	-0.84	64.44	-0.0121	-0.325	-0.0114
485	SLE RA 3	-0.8	-0.91	65.39	-0.0122	-0.3298	-0.0119
485	SLE RA 4	-0.8	-0.88	65.38	-0.0122	-0.3299	-0.0118
485	SLE RA 5	-0.79	-0.85	65.04	-0.0123	-0.3284	-0.0115
485	SLE RA 6	-0.81	-0.92	65.99	-0.0124	-0.3331	-0.012
485	SLE RA 7	-0.81	-0.89	65.98	-0.0123	-0.3332	-0.0119
485	SLE RA 8	-0.8	-0.93	65.65	-0.0125	-0.3315	-0.0118
485	SLE RA 9	-0.8	-0.89	65.65	-0.0125	-0.3316	-0.0117
485	SLE RA 10	-0.82	-0.89	69.95	-0.0122	-0.3611	-0.0126
485	SLE RA 11	-0.83	-0.96	70.89	-0.0123	-0.3659	-0.0131
485	SLE RA 12	-0.83	-0.92	70.89	-0.0122	-0.366	-0.013
485	SLE RA 13	-0.83	-0.9	70.55	-0.0124	-0.3644	-0.0127
485	SLE RA 14	-0.84	-0.97	71.5	-0.0124	-0.3692	-0.0132
485	SLE RA 15	-0.84	-0.93	71.49	-0.0124	-0.3693	-0.0131
485	SLE RA 16	-0.84	-0.97	71.16	-0.0125	-0.3676	-0.013
485	SLE RA 17	-0.83	-0.93	71.15	-0.0125	-0.3677	-0.0129
485	SLE RA 18	-0.83	-0.97	72.32	-0.0122	-0.3764	-0.0133
485	SLE RA 19	-0.83	-0.93	72.31	-0.0122	-0.3765	-0.0132
485	SLE RA 20	-0.84	-0.98	72.92	-0.0124	-0.3797	-0.0134
485	SLE RA 21	-0.84	-0.94	72.91	-0.0124	-0.3798	-0.0133
485	SLE FR 1	-0.79	-0.91	64.45	-0.0122	-0.3249	-0.0116
485	SLE FR 2	-0.79	-0.9	64.45	-0.0122	-0.3249	-0.0115
485	SLE FR 3	-0.79	-0.91	64.69	-0.0122	-0.3262	-0.0116
485	SLE FR 4	-0.8	-0.92	66.81	-0.0122	-0.3404	-0.0121
485	SLE FR 5	-0.8	-0.93	67.05	-0.0122	-0.3417	-0.0121
485	SLE FR 6	-0.81	-0.94	68.38	-0.0122	-0.3506	-0.0124
485	SLE QP 1	-0.79	-0.91	64.45	-0.0122	-0.3249	-0.0116
485	SLE QP 2	-0.8	-0.93	66.81	-0.0122	-0.3403	-0.0121
485	SLD 1	4.7	-0.28	72.7	-0.0177	-0.1305	0.0073
485	SLD 2	5.03	-0.77	72.54	-0.0157	-0.1372	0.0217
485	SLD 3	4.78	-2.12	72.6	-0.0112	-0.1644	0.0114
485	SLD 4	5.11	-2.62	72.44	-0.0092	-0.1711	0.0258
485	SLD 5	0.67	2.15	68.76	-0.0241	-0.2248	-0.015
485	SLD 6	0.88	1.83	68.65	-0.0228	-0.2292	-0.0056
485	SLD 7	0.94	-4	68.43	-0.0023	-0.3377	-0.0014
485	SLD 8	1.15	-4.32	68.32	-0.001	-0.3421	0.008
485	SLD 9	-2.76	2.46	65.3	-0.0234	-0.3385	-0.0322
485	SLD 10	-2.54	2.14	65.2	-0.0221	-0.3429	-0.0228
485	SLD 11	-2.48	-3.69	64.97	-0.0015	-0.4515	-0.0186
485	SLD 12	-2.27	-4.01	64.87	-0.0002	-0.4558	-0.0091
485	SLD 13	-6.71	0.76	61.18	-0.0152	-0.5096	-0.05
485	SLD 14	-6.38	0.27	61.02	-0.0132	-0.5163	-0.0356
485	SLD 15	-6.63	-1.09	61.09	-0.0086	-0.5435	-0.0459
485	SLD 16	-6.3	-1.58	60.92	-0.0066	-0.5502	-0.0315
485	SLV 1	12.06	0.53	80.58	-0.025	0.1496	0.0335
485	SLV 2	12.82	-0.62	80.2	-0.0203	0.134	0.067
485	SLV 3	12.25	-3.67	80.35	-0.0101	0.0725	0.0428
485	SLV 4	13.01	-4.82	79.97	-0.0055	0.0569	0.0763
485	SLV 5	2.64	6.07	71.36	-0.0393	-0.0738	-0.0184
485	SLV 6	3.13	5.34	71.12	-0.0364	-0.0838	0.0032
485	SLV 7	3.27	-7.93	70.58	0.0102	-0.3307	0.0128

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
485	SLV 8	3.76	-8.66	70.34	0.0132	-0.3407	0.0344
485	SLV 9	-5.36	6.8	63.28	-0.0375	-0.3399	-0.0585
485	SLV 10	-4.88	6.07	63.04	-0.0345	-0.35	-0.0369
485	SLV 11	-4.73	-7.2	62.51	0.012	-0.5968	-0.0274
485	SLV 12	-4.24	-7.93	62.26	0.015	-0.6069	-0.0058
485	SLV 13	-14.62	2.96	53.65	-0.0189	-0.7376	-0.1005
485	SLV 14	-13.86	1.82	53.28	-0.0143	-0.7532	-0.067
485	SLV 15	-14.43	-1.24	53.42	-0.0041	-0.8147	-0.0912
485	SLV 16	-13.67	-2.38	53.04	0.0006	-0.8302	-0.0576
485	CRTFP Ux+	0	0	0	0	0	0
485	CRTFP Ux-	0	0	0	0	0	0
489	SLU 1	0.49	-0.78	61.53	-0.0237	0.2407	-0.016
489	SLU 2	0.49	-0.68	61.53	-0.0237	0.2407	-0.0162
489	SLU 3	0.51	-0.78	62.91	-0.0242	0.2445	-0.0163
489	SLU 4	0.51	-0.72	62.9	-0.0242	0.2445	-0.0164
489	SLU 5	0.5	-0.69	62.41	-0.0242	0.2428	-0.0165
489	SLU 6	0.51	-0.8	63.78	-0.0248	0.2466	-0.0166
489	SLU 7	0.51	-0.74	63.78	-0.0248	0.2466	-0.0167
489	SLU 8	0.51	-0.81	63.29	-0.0247	0.2449	-0.0166
489	SLU 9	0.51	-0.75	63.29	-0.0247	0.2449	-0.0167
489	SLU 10	0.52	-0.72	69.62	-0.0255	0.2796	-0.018
489	SLU 11	0.54	-0.83	71	-0.0261	0.2834	-0.0181
489	SLU 12	0.54	-0.76	71	-0.0261	0.2834	-0.0182
489	SLU 13	0.53	-0.73	70.5	-0.0261	0.2817	-0.0183
489	SLU 14	0.55	-0.84	71.88	-0.0266	0.2855	-0.0183
489	SLU 15	0.54	-0.78	71.88	-0.0266	0.2855	-0.0184
489	SLU 16	0.54	-0.85	71.39	-0.0266	0.2838	-0.0184
489	SLU 17	0.54	-0.79	71.38	-0.0266	0.2838	-0.0184
489	SLU 18	0.53	-0.83	73.1	-0.0263	0.2963	-0.0186
489	SLU 19	0.53	-0.77	73.1	-0.0263	0.2963	-0.0187
489	SLU 20	0.54	-0.85	73.98	-0.0269	0.2984	-0.0188
489	SLU 21	0.54	-0.79	73.97	-0.0269	0.2984	-0.0189
489	SLU 22	0.55	-0.79	69.23	-0.0252	0.26	-0.017
489	SLU 23	0.55	-0.69	69.22	-0.0252	0.2599	-0.0171
489	SLU 24	0.57	-0.8	70.6	-0.0257	0.2638	-0.0172
489	SLU 25	0.56	-0.74	70.6	-0.0257	0.2638	-0.0173
489	SLU 26	0.56	-0.71	70.1	-0.0257	0.2621	-0.0174
489	SLU 27	0.57	-0.82	71.48	-0.0262	0.2659	-0.0175
489	SLU 28	0.57	-0.76	71.48	-0.0262	0.2659	-0.0176
489	SLU 29	0.57	-0.83	70.99	-0.0262	0.2642	-0.0175
489	SLU 30	0.57	-0.77	70.98	-0.0262	0.2642	-0.0176
489	SLU 31	0.58	-0.73	77.32	-0.027	0.2988	-0.0189
489	SLU 32	0.6	-0.84	78.7	-0.0276	0.3027	-0.019
489	SLU 33	0.6	-0.78	78.69	-0.0276	0.3027	-0.0191
489	SLU 34	0.59	-0.75	78.2	-0.0276	0.3009	-0.0192
489	SLU 35	0.6	-0.86	79.58	-0.0281	0.3048	-0.0193
489	SLU 36	0.6	-0.8	79.57	-0.0281	0.3048	-0.0194
489	SLU 37	0.6	-0.87	79.08	-0.0281	0.3031	-0.0193
489	SLU 38	0.6	-0.81	79.08	-0.0281	0.3031	-0.0194
489	SLU 39	0.59	-0.85	80.79	-0.0278	0.3155	-0.0195
489	SLU 40	0.59	-0.79	80.79	-0.0278	0.3155	-0.0196
489	SLU 41	0.6	-0.87	81.67	-0.0283	0.3176	-0.0198
489	SLU 42	0.6	-0.81	81.67	-0.0283	0.3176	-0.0199
489	SLU 43	0.62	-1	77.35	-0.0303	0.3063	-0.0205
489	SLU 44	0.62	-0.9	77.35	-0.0303	0.3063	-0.0207
489	SLU 45	0.63	-1.01	78.73	-0.0308	0.3101	-0.0208
489	SLU 46	0.63	-0.95	78.72	-0.0308	0.3101	-0.0209
489	SLU 47	0.63	-0.92	78.23	-0.0308	0.3084	-0.021
489	SLU 48	0.64	-1.03	79.61	-0.0314	0.3123	-0.0211
489	SLU 49	0.64	-0.97	79.6	-0.0314	0.3122	-0.0212
489	SLU 50	0.63	-1.04	79.11	-0.0313	0.3106	-0.0211
489	SLU 51	0.63	-0.98	79.11	-0.0313	0.3105	-0.0212
489	SLU 52	0.65	-0.94	85.45	-0.0321	0.3452	-0.0225
489	SLU 53	0.66	-1.05	86.82	-0.0327	0.349	-0.0226
489	SLU 54	0.66	-0.99	86.82	-0.0327	0.349	-0.0227
489	SLU 55	0.66	-0.96	86.32	-0.0327	0.3473	-0.0228
489	SLU 56	0.67	-1.07	87.7	-0.0332	0.3511	-0.0228
489	SLU 57	0.67	-1.01	87.7	-0.0332	0.3511	-0.0229
489	SLU 58	0.67	-1.08	87.21	-0.0332	0.3494	-0.0228
489	SLU 59	0.66	-1.02	87.21	-0.0332	0.3494	-0.0229
489	SLU 60	0.66	-1.06	88.92	-0.0329	0.3619	-0.0231
489	SLU 61	0.66	-1	88.92	-0.0329	0.3619	-0.0232
489	SLU 62	0.67	-1.08	89.8	-0.0334	0.364	-0.0233
489	SLU 63	0.67	-1.02	89.8	-0.0334	0.364	-0.0234
489	SLU 64	0.68	-1.02	85.05	-0.0318	0.3256	-0.0215
489	SLU 65	0.68	-0.92	85.04	-0.0318	0.3256	-0.0216
489	SLU 66	0.69	-1.03	86.42	-0.0323	0.3294	-0.0217
489	SLU 67	0.69	-0.97	86.42	-0.0323	0.3294	-0.0218
489	SLU 68	0.68	-0.94	85.92	-0.0323	0.3277	-0.0219
489	SLU 69	0.7	-1.05	87.3	-0.0328	0.3315	-0.022
489	SLU 70	0.7	-0.98	87.3	-0.0328	0.3315	-0.0221
489	SLU 71	0.69	-1.05	86.81	-0.0328	0.3298	-0.022
489	SLU 72	0.69	-0.99	86.8	-0.0328	0.3298	-0.0221
489	SLU 73	0.71	-0.96	93.14	-0.0336	0.3644	-0.0234
489	SLU 74	0.72	-1.07	94.52	-0.0342	0.3683	-0.0235
489	SLU 75	0.72	-1.01	94.52	-0.0342	0.3683	-0.0236
489	SLU 76	0.71	-0.98	94.02	-0.0342	0.3666	-0.0237
489	SLU 77	0.73	-1.09	95.4	-0.0347	0.3704	-0.0238
489	SLU 78	0.73	-1.03	95.39	-0.0347	0.3704	-0.0239
489	SLU 79	0.72	-1.1	94.9	-0.0347	0.3687	-0.0238

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
489	SLU 80	0.72	-1.04	94.9	-0.0347	0.3687	-0.0239
489	SLU 81	0.72	-1.08	96.62	-0.0344	0.3811	-0.024
489	SLU 82	0.72	-1.02	96.61	-0.0344	0.3811	-0.0241
489	SLU 83	0.73	-1.1	97.49	-0.0349	0.3832	-0.0243
489	SLU 84	0.73	-1.04	97.49	-0.0349	0.3832	-0.0244
489	SLE RA 1	0.51	-0.78	63.73	-0.0241	0.2462	-0.0163
489	SLE RA 2	0.51	-0.71	63.73	-0.0241	0.2462	-0.0164
489	SLE RA 3	0.52	-0.79	64.65	-0.0245	0.2488	-0.0165
489	SLE RA 4	0.52	-0.75	64.64	-0.0245	0.2487	-0.0165
489	SLE RA 5	0.51	-0.73	64.31	-0.0245	0.2476	-0.0166
489	SLE RA 6	0.52	-0.8	65.23	-0.0248	0.2502	-0.0167
489	SLE RA 7	0.52	-0.76	65.23	-0.0248	0.2502	-0.0167
489	SLE RA 8	0.52	-0.8	64.9	-0.0248	0.249	-0.0167
489	SLE RA 9	0.52	-0.76	64.9	-0.0248	0.249	-0.0167
489	SLE RA 10	0.53	-0.74	69.13	-0.0253	0.2721	-0.0176
489	SLE RA 11	0.54	-0.81	70.04	-0.0257	0.2747	-0.0177
489	SLE RA 12	0.54	-0.77	70.04	-0.0257	0.2747	-0.0177
489	SLE RA 13	0.53	-0.75	69.71	-0.0257	0.2735	-0.0178
489	SLE RA 14	0.54	-0.83	70.63	-0.0261	0.2761	-0.0178
489	SLE RA 15	0.54	-0.78	70.63	-0.0261	0.2761	-0.0179
489	SLE RA 16	0.54	-0.83	70.3	-0.026	0.275	-0.0178
489	SLE RA 17	0.54	-0.79	70.3	-0.026	0.2749	-0.0179
489	SLE RA 18	0.54	-0.82	71.44	-0.0259	0.2832	-0.018
489	SLE RA 19	0.54	-0.78	71.44	-0.0259	0.2832	-0.0181
489	SLE RA 20	0.54	-0.83	72.03	-0.0262	0.2847	-0.0182
489	SLE RA 21	0.54	-0.79	72.03	-0.0262	0.2846	-0.0182
489	SLE FR 1	0.51	-0.78	63.73	-0.0241	0.2462	-0.0163
489	SLE FR 2	0.51	-0.77	63.73	-0.0241	0.2462	-0.0163
489	SLE FR 3	0.51	-0.79	63.97	-0.0243	0.2468	-0.0164
489	SLE FR 4	0.52	-0.78	66.04	-0.0246	0.2573	-0.0168
489	SLE FR 5	0.52	-0.8	66.28	-0.0248	0.2579	-0.0169
489	SLE FR 6	0.52	-0.8	67.59	-0.025	0.2647	-0.0172
489	SLE QP 1	0.51	-0.78	63.73	-0.0241	0.2462	-0.0163
489	SLE QP 2	0.52	-0.79	66.04	-0.0246	0.2573	-0.0168
489	SLD 1	6.09	0.45	61.08	-0.0231	0.3254	0.0191
489	SLD 2	6.43	0.94	61.27	-0.025	0.3173	0.0337
489	SLD 3	6	-1.37	60.97	-0.0169	0.3617	0.0169
489	SLD 4	6.34	-0.88	61.16	-0.0188	0.3536	0.0314
489	SLD 5	2.27	2.26	64.69	-0.0332	0.2241	-0.0052
489	SLD 6	2.49	2.58	64.82	-0.0344	0.2189	0.0044
489	SLD 7	1.96	-3.82	64.32	-0.0126	0.3451	-0.0127
489	SLD 8	2.18	-3.5	64.45	-0.0139	0.3398	-0.0032
489	SLD 9	-1.15	1.92	67.64	-0.0354	0.1748	-0.0304
489	SLD 10	-0.93	2.24	67.77	-0.0367	0.1696	-0.0209
489	SLD 11	-1.46	-4.17	67.27	-0.0148	0.2958	-0.038
489	SLD 12	-1.24	-3.85	67.4	-0.0161	0.2905	-0.0285
489	SLD 13	-5.31	-0.7	70.93	-0.0305	0.161	-0.0651
489	SLD 14	-4.97	-0.21	71.12	-0.0324	0.153	-0.0505
489	SLD 15	-5.4	-2.53	70.82	-0.0243	0.1973	-0.0673
489	SLD 16	-5.06	-2.04	71.01	-0.0262	0.1893	-0.0528
489	SLV 1	13.55	2.07	54.43	-0.0208	0.4175	0.0673
489	SLV 2	14.34	3.21	54.88	-0.0252	0.3987	0.1012
489	SLV 3	13.34	-2.09	54.18	-0.0068	0.4998	0.0621
489	SLV 4	14.13	-0.95	54.62	-0.0112	0.481	0.0961
489	SLV 5	4.61	6.18	62.87	-0.0439	0.1837	0.0104
489	SLV 6	5.12	6.91	63.16	-0.0468	0.1716	0.0323
489	SLV 7	3.9	-7.68	62.02	0.0027	0.4582	-0.0068
489	SLV 8	4.41	-6.95	62.31	-0.0002	0.4461	0.0151
489	SLV 9	-3.38	5.36	69.78	-0.0491	0.0685	-0.0487
489	SLV 10	-2.87	6.1	70.07	-0.052	0.0565	-0.0268
489	SLV 11	-4.09	-8.5	68.93	-0.0025	0.343	-0.0659
489	SLV 12	-3.58	-7.76	69.22	-0.0053	0.3309	-0.044
489	SLV 13	-13.1	-0.64	77.47	-0.0381	0.0336	-0.1297
489	SLV 14	-12.31	0.5	77.91	-0.0425	0.0148	-0.0958
489	SLV 15	-13.31	-4.8	77.21	-0.0241	0.1159	-0.1349
489	SLV 16	-12.52	-3.65	77.66	-0.0285	0.0972	-0.1009
489	CRTFP Ux+	0	0	0	0	0	0
489	CRTFP Ux-	0	0	0	0	0	0
490	SLU 1	0.5	0.31	37.62	0.0313	8.427	-0.1127
490	SLU 2	0.49	0.41	37.62	0.0314	8.4232	-0.1462
490	SLU 3	0.51	0.33	38.48	0.0321	8.6068	-0.1168
490	SLU 4	0.51	0.38	38.48	0.0321	8.6045	-0.1369
490	SLU 5	0.5	0.41	38.16	0.0318	8.536	-0.1465
490	SLU 6	0.52	0.33	39.02	0.0325	8.7197	-0.1172
490	SLU 7	0.52	0.38	39.02	0.0326	8.7174	-0.1372
490	SLU 8	0.51	0.32	38.7	0.0322	8.6527	-0.1133
490	SLU 9	0.51	0.37	38.7	0.0322	8.6504	-0.1334
490	SLU 10	0.52	0.49	42.35	0.0362	9.4533	-0.1731
490	SLU 11	0.54	0.4	43.21	0.0368	9.637	-0.1437
490	SLU 12	0.54	0.46	43.21	0.0369	9.6347	-0.1638
490	SLU 13	0.53	0.49	42.9	0.0366	9.5662	-0.1734
490	SLU 14	0.55	0.4	43.75	0.0372	9.7499	-0.144
490	SLU 15	0.55	0.46	43.75	0.0373	9.7476	-0.1641
490	SLU 16	0.54	0.39	43.43	0.0369	9.6829	-0.1402
490	SLU 17	0.54	0.45	43.44	0.037	9.6806	-0.1603
490	SLU 18	0.54	0.42	44.38	0.0381	9.8987	-0.1511
490	SLU 19	0.53	0.48	44.38	0.0381	9.8964	-0.1712
490	SLU 20	0.54	0.42	44.92	0.0385	10.0116	-0.1514
490	SLU 21	0.54	0.48	44.92	0.0386	10.0093	-0.1715
490	SLU 22	0.55	0.39	42.26	0.036	9.4322	-0.1379

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
490	SLU 23	0.54	0.48	42.27	0.0361	9.4283	-0.1713
490	SLU 24	0.56	0.4	43.12	0.0368	9.612	-0.142
490	SLU 25	0.56	0.45	43.12	0.0369	9.6097	-0.1621
490	SLU 26	0.55	0.48	42.81	0.0366	9.5412	-0.1717
490	SLU 27	0.57	0.4	43.66	0.0372	9.7248	-0.1423
490	SLU 28	0.57	0.46	43.66	0.0373	9.7225	-0.1624
490	SLU 29	0.57	0.39	43.35	0.0369	9.6579	-0.1385
490	SLU 30	0.56	0.44	43.35	0.0369	9.6556	-0.1586
490	SLU 31	0.57	0.56	47	0.0409	10.4585	-0.1982
490	SLU 32	0.59	0.47	47.85	0.0415	10.6422	-0.1689
490	SLU 33	0.59	0.53	47.85	0.0416	10.6399	-0.189
490	SLU 34	0.58	0.56	47.54	0.0413	10.5714	-0.1985
490	SLU 35	0.6	0.47	48.39	0.042	10.755	-0.1692
490	SLU 36	0.6	0.53	48.4	0.042	10.7527	-0.1893
490	SLU 37	0.59	0.46	48.08	0.0416	10.6881	-0.1654
490	SLU 38	0.59	0.52	48.08	0.0417	10.6858	-0.1855
490	SLU 39	0.59	0.49	49.02	0.0428	10.9039	-0.1763
490	SLU 40	0.58	0.55	49.03	0.0429	10.9016	-0.1963
490	SLU 41	0.6	0.49	49.57	0.0432	11.0167	-0.1766
490	SLU 42	0.59	0.55	49.57	0.0433	11.0144	-0.1967
490	SLU 43	0.63	0.38	47.31	0.0391	10.6104	-0.1379
490	SLU 44	0.63	0.48	47.32	0.0392	10.6066	-0.1714
490	SLU 45	0.64	0.4	48.17	0.0399	10.7902	-0.142
490	SLU 46	0.64	0.45	48.17	0.0399	10.788	-0.1621
490	SLU 47	0.63	0.48	47.86	0.0396	10.7195	-0.1717
490	SLU 48	0.65	0.4	48.71	0.0403	10.9031	-0.1423
490	SLU 49	0.65	0.45	48.71	0.0403	10.9008	-0.1624
490	SLU 50	0.65	0.39	48.4	0.0399	10.8362	-0.1385
490	SLU 51	0.64	0.44	48.4	0.04	10.8339	-0.1586
490	SLU 52	0.65	0.56	52.05	0.0439	11.6368	-0.1982
490	SLU 53	0.67	0.47	52.9	0.0446	11.8204	-0.1689
490	SLU 54	0.67	0.53	52.9	0.0447	11.8181	-0.189
490	SLU 55	0.66	0.56	52.59	0.0444	11.7497	-0.1986
490	SLU 56	0.68	0.47	53.44	0.045	11.9333	-0.1692
490	SLU 57	0.68	0.53	53.44	0.0451	11.931	-0.1893
490	SLU 58	0.67	0.46	53.13	0.0447	11.8664	-0.1654
490	SLU 59	0.67	0.52	53.13	0.0447	11.8641	-0.1855
490	SLU 60	0.67	0.49	54.07	0.0459	12.0821	-0.1763
490	SLU 61	0.67	0.55	54.07	0.0459	12.0798	-0.1964
490	SLU 62	0.68	0.49	54.61	0.0463	12.195	-0.1766
490	SLU 63	0.67	0.55	54.62	0.0463	12.1927	-0.1967
490	SLU 64	0.68	0.46	51.96	0.0438	11.6156	-0.163
490	SLU 65	0.68	0.55	51.96	0.0439	11.6118	-0.1965
490	SLU 66	0.7	0.47	52.81	0.0446	11.7954	-0.1672
490	SLU 67	0.69	0.52	52.82	0.0446	11.7931	-0.1873
490	SLU 68	0.68	0.55	52.5	0.0443	11.7247	-0.1968
490	SLU 69	0.7	0.47	53.36	0.045	11.9083	-0.1675
490	SLU 70	0.7	0.53	53.36	0.0451	11.906	-0.1876
490	SLU 71	0.7	0.46	53.04	0.0447	11.8414	-0.1637
490	SLU 72	0.69	0.51	53.04	0.0447	11.8391	-0.1838
490	SLU 73	0.7	0.63	56.69	0.0487	12.642	-0.2234
490	SLU 74	0.72	0.54	57.55	0.0493	12.8256	-0.194
490	SLU 75	0.72	0.6	57.55	0.0494	12.8233	-0.2141
490	SLU 76	0.71	0.63	57.23	0.0491	12.7549	-0.2237
490	SLU 77	0.73	0.54	58.09	0.0497	12.9385	-0.1944
490	SLU 78	0.73	0.6	58.09	0.0498	12.9362	-0.2145
490	SLU 79	0.72	0.53	57.77	0.0494	12.8716	-0.1906
490	SLU 80	0.72	0.59	57.77	0.0495	12.8693	-0.2106
490	SLU 81	0.72	0.56	58.72	0.0506	13.0873	-0.2014
490	SLU 82	0.72	0.62	58.72	0.0506	13.085	-0.2215
490	SLU 83	0.73	0.56	59.26	0.051	13.2002	-0.2018
490	SLU 84	0.72	0.62	59.26	0.0511	13.1979	-0.2218
490	SLE RA 1	0.51	0.33	38.95	0.0327	8.7142	-0.1199
490	SLE RA 2	0.51	0.4	38.95	0.0327	8.7116	-0.1422
490	SLE RA 3	0.52	0.34	39.52	0.0332	8.834	-0.1226
490	SLE RA 4	0.52	0.38	39.52	0.0332	8.8325	-0.136
490	SLE RA 5	0.51	0.4	39.31	0.033	8.7869	-0.1424
490	SLE RA 6	0.53	0.34	39.88	0.0335	8.9093	-0.1229
490	SLE RA 7	0.53	0.38	39.88	0.0335	8.9078	-0.1362
490	SLE RA 8	0.52	0.34	39.67	0.0332	8.8647	-0.1203
490	SLE RA 9	0.52	0.37	39.67	0.0333	8.8631	-0.1337
490	SLE RA 10	0.53	0.45	42.1	0.0359	9.3984	-0.1601
490	SLE RA 11	0.54	0.39	42.67	0.0363	9.5208	-0.1406
490	SLE RA 12	0.54	0.43	42.67	0.0364	9.5193	-0.154
490	SLE RA 13	0.53	0.45	42.46	0.0362	9.4737	-0.1603
490	SLE RA 14	0.55	0.39	43.03	0.0366	9.5961	-0.1408
490	SLE RA 15	0.54	0.43	43.03	0.0367	9.5946	-0.1542
490	SLE RA 16	0.54	0.39	42.82	0.0364	9.5515	-0.1382
490	SLE RA 17	0.54	0.42	42.82	0.0364	9.5499	-0.1516
490	SLE RA 18	0.54	0.41	43.45	0.0372	9.6953	-0.1455
490	SLE RA 19	0.54	0.45	43.45	0.0372	9.6938	-0.1589
490	SLE RA 20	0.54	0.41	43.81	0.0375	9.7706	-0.1457
490	SLE RA 21	0.54	0.45	43.82	0.0375	9.769	-0.1591
490	SLE FR 1	0.51	0.33	38.95	0.0327	8.7142	-0.1199
490	SLE FR 2	0.51	0.35	38.95	0.0327	8.7137	-0.1244
490	SLE FR 3	0.51	0.33	39.09	0.0328	8.7443	-0.12
490	SLE FR 4	0.52	0.37	40.3	0.034	9.008	-0.132
490	SLE FR 5	0.52	0.36	40.44	0.0341	9.0386	-0.1277
490	SLE FR 6	0.53	0.37	41.2	0.0349	9.2047	-0.1327
490	SLE QP 1	0.51	0.33	38.95	0.0327	8.7142	-0.1199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
490	SLE QP 2	0.52	0.36	40.3	0.034	9.0085	-0.1276
490	SLD 1	3.74	0.19	30.05	0.0243	6.9549	-0.0703
490	SLD 2	3.94	0.96	30.21	0.0226	6.9653	-0.3395
490	SLD 3	3.66	-1.37	29.77	0.0276	6.9169	0.4759
490	SLD 4	3.86	-0.6	29.93	0.0259	6.9273	0.2067
490	SLD 5	1.58	2.53	37.62	0.0264	8.4482	-0.8908
490	SLD 6	1.71	3.04	37.73	0.0253	8.4551	-1.0673
490	SLD 7	1.3	-2.66	36.69	0.0374	8.3215	0.9296
490	SLD 8	1.43	-2.16	36.79	0.0363	8.3284	0.7531
490	SLD 9	-0.39	2.87	43.8	0.0318	9.6887	-1.0083
490	SLD 10	-0.25	3.38	43.91	0.0307	9.6955	-1.1847
490	SLD 11	-0.67	-2.33	42.87	0.0428	9.562	0.8121
490	SLD 12	-0.54	-1.82	42.98	0.0417	9.5688	0.6357
490	SLD 13	-2.82	1.31	50.66	0.0422	11.0897	-0.4618
490	SLD 14	-2.62	2.08	50.83	0.0405	11.1002	-0.731
490	SLD 15	-2.9	-0.25	50.38	0.0455	11.0517	0.0843
490	SLD 16	-2.7	0.52	50.55	0.0438	11.0622	-0.1849
490	SLV 1	8.05	-0.08	16.3	0.0113	4.2023	0.0226
490	SLV 2	8.52	1.72	16.69	0.0073	4.2266	-0.6043
490	SLV 3	7.86	-3.63	15.66	0.0188	4.1141	1.2651
490	SLV 4	8.32	-1.83	16.05	0.0148	4.1384	0.6381
490	SLV 5	3	5.3	34	0.0166	7.6963	-1.8589
490	SLV 6	3.3	6.46	34.25	0.014	7.7119	-2.2629
490	SLV 7	2.34	-6.53	31.87	0.0415	7.4022	2.2826
490	SLV 8	2.64	-5.37	32.12	0.0389	7.4179	1.8785
490	SLV 9	-1.6	6.08	48.48	0.0291	10.5992	-2.1337
490	SLV 10	-1.3	7.24	48.73	0.0266	10.6148	-2.5377
490	SLV 11	-2.26	-5.74	46.34	0.054	10.3051	2.0078
490	SLV 12	-1.96	-4.59	46.59	0.0515	10.3208	1.6038
490	SLV 13	-7.28	2.54	64.55	0.0532	13.8786	-0.8933
490	SLV 14	-6.82	4.34	64.93	0.0493	13.903	-1.5202
490	SLV 15	-7.48	-1.01	63.91	0.0607	13.7904	0.3491
490	SLV 16	-7.01	0.79	64.29	0.0568	13.8147	-0.2778
490	CRTFP Ux+	0	0	0	0	0	0
490	CRTFP Ux-	0	0	0	0	0	0
490	CRTFP Uy+	0	0	0	0	0	0
490	CRTFP Uy-	0	0	0	0	0	0
497	SLU 1	-0.44	-0.13	33.59	0.022	-4.2712	-0.0332
497	SLU 2	-0.43	-0.04	33.59	0.0221	-4.2679	-0.0107
497	SLU 3	-0.45	-0.13	34.36	0.0225	-4.3594	-0.0334
497	SLU 4	-0.45	-0.08	34.36	0.0226	-4.3573	-0.0199
497	SLU 5	-0.44	-0.04	34.08	0.0224	-4.3234	-0.0115
497	SLU 6	-0.46	-0.13	34.84	0.0228	-4.4149	-0.0342
497	SLU 7	-0.46	-0.08	34.84	0.0229	-4.4129	-0.0207
497	SLU 8	-0.46	-0.14	34.56	0.0226	-4.3823	-0.0347
497	SLU 9	-0.45	-0.08	34.56	0.0226	-4.3803	-0.0212
497	SLU 10	-0.46	-0.03	37.82	0.0257	-4.7877	-0.0097
497	SLU 11	-0.48	-0.13	38.58	0.0261	-4.8792	-0.0324
497	SLU 12	-0.47	-0.07	38.58	0.0262	-4.8772	-0.0189
497	SLU 13	-0.47	-0.04	38.3	0.026	-4.8433	-0.0104
497	SLU 14	-0.49	-0.13	39.07	0.0264	-4.9348	-0.0331
497	SLU 15	-0.48	-0.07	39.07	0.0265	-4.9327	-0.0196
497	SLU 16	-0.48	-0.13	38.79	0.0262	-4.9022	-0.0337
497	SLU 17	-0.48	-0.08	38.79	0.0262	-4.9002	-0.0202
497	SLU 18	-0.48	-0.12	39.63	0.0271	-5.0139	-0.0317
497	SLU 19	-0.47	-0.07	39.63	0.0272	-5.0119	-0.0182
497	SLU 20	-0.49	-0.13	40.11	0.0274	-5.0694	-0.0325
497	SLU 21	-0.48	-0.07	40.11	0.0275	-5.0674	-0.019
497	SLU 22	-0.49	-0.12	37.76	0.0256	-4.7776	-0.0313
497	SLU 23	-0.48	-0.03	37.76	0.0257	-4.7743	-0.0088
497	SLU 24	-0.5	-0.12	38.53	0.0261	-4.8657	-0.0315
497	SLU 25	-0.5	-0.07	38.53	0.0262	-4.8637	-0.018
497	SLU 26	-0.49	-0.03	38.25	0.026	-4.8298	-0.0096
497	SLU 27	-0.51	-0.12	39.01	0.0264	-4.9213	-0.0323
497	SLU 28	-0.5	-0.07	39.01	0.0265	-4.9193	-0.0188
497	SLU 29	-0.5	-0.13	38.73	0.0262	-4.8887	-0.0329
497	SLU 30	-0.5	-0.07	38.73	0.0263	-4.8867	-0.0194
497	SLU 31	-0.51	-0.03	41.99	0.0293	-5.2941	-0.0078
497	SLU 32	-0.53	-0.12	42.75	0.0297	-5.3856	-0.0305
497	SLU 33	-0.52	-0.06	42.75	0.0298	-5.3836	-0.017
497	SLU 34	-0.52	-0.03	42.47	0.0296	-5.3496	-0.0086
497	SLU 35	-0.53	-0.12	43.24	0.03	-5.4411	-0.0313
497	SLU 36	-0.53	-0.07	43.24	0.0301	-5.4391	-0.0178
497	SLU 37	-0.53	-0.12	42.96	0.0298	-5.4086	-0.0318
497	SLU 38	-0.52	-0.07	42.96	0.0299	-5.4065	-0.0183
497	SLU 39	-0.53	-0.11	43.8	0.0307	-5.5203	-0.0298
497	SLU 40	-0.52	-0.06	43.8	0.0308	-5.5182	-0.0164
497	SLU 41	-0.53	-0.12	44.28	0.031	-5.5758	-0.0306
497	SLU 42	-0.53	-0.06	44.28	0.0311	-5.5738	-0.0171
497	SLU 43	-0.56	-0.17	42.24	0.0273	-5.379	-0.0438
497	SLU 44	-0.55	-0.08	42.24	0.0274	-5.3756	-0.0213
497	SLU 45	-0.57	-0.17	43	0.0279	-5.4671	-0.044
497	SLU 46	-0.57	-0.12	43	0.0279	-5.4651	-0.0305
497	SLU 47	-0.56	-0.08	42.72	0.0277	-5.4312	-0.0221
497	SLU 48	-0.58	-0.17	43.49	0.0282	-5.5227	-0.0448
497	SLU 49	-0.57	-0.12	43.49	0.0282	-5.5206	-0.0313
497	SLU 50	-0.57	-0.18	43.21	0.0279	-5.4901	-0.0453
497	SLU 51	-0.57	-0.12	43.21	0.028	-5.4881	-0.0318
497	SLU 52	-0.58	-0.08	46.46	0.031	-5.8955	-0.0203
497	SLU 53	-0.6	-0.17	47.23	0.0315	-5.987	-0.0429

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
497	SLU 54	-0.59	-0.11	47.23	0.0315	-5.9849	-0.0295
497	SLU 55	-0.58	-0.08	46.95	0.0313	-5.951	-0.021
497	SLU 56	-0.6	-0.17	47.72	0.0318	-6.0425	-0.0437
497	SLU 57	-0.6	-0.12	47.72	0.0318	-6.0405	-0.0302
497	SLU 58	-0.6	-0.17	47.44	0.0315	-6.0099	-0.0443
497	SLU 59	-0.59	-0.12	47.44	0.0316	-6.0079	-0.0308
497	SLU 60	-0.59	-0.16	48.27	0.0324	-6.1216	-0.0423
497	SLU 61	-0.59	-0.11	48.27	0.0325	-6.1196	-0.0288
497	SLU 62	-0.6	-0.17	48.76	0.0328	-6.1772	-0.0431
497	SLU 63	-0.6	-0.11	48.76	0.0328	-6.1752	-0.0296
497	SLU 64	-0.61	-0.16	46.41	0.0309	-5.8854	-0.0419
497	SLU 65	-0.6	-0.07	46.41	0.0311	-5.882	-0.0194
497	SLU 66	-0.62	-0.16	47.17	0.0315	-5.9735	-0.0421
497	SLU 67	-0.61	-0.11	47.17	0.0316	-5.9715	-0.0286
497	SLU 68	-0.61	-0.08	46.89	0.0314	-5.9376	-0.0202
497	SLU 69	-0.63	-0.17	47.66	0.0318	-6.029	-0.0429
497	SLU 70	-0.62	-0.11	47.66	0.0319	-6.027	-0.0294
497	SLU 71	-0.62	-0.17	47.38	0.0315	-5.9965	-0.0435
497	SLU 72	-0.62	-0.11	47.38	0.0316	-5.9944	-0.03
497	SLU 73	-0.62	-0.07	50.63	0.0347	-6.4019	-0.0184
497	SLU 74	-0.64	-0.16	51.4	0.0351	-6.4933	-0.0411
497	SLU 75	-0.64	-0.1	51.4	0.0352	-6.4913	-0.0276
497	SLU 76	-0.63	-0.07	51.12	0.035	-6.4574	-0.0192
497	SLU 77	-0.65	-0.16	51.89	0.0354	-6.5489	-0.0419
497	SLU 78	-0.65	-0.11	51.89	0.0355	-6.5469	-0.0284
497	SLU 79	-0.65	-0.16	51.61	0.0351	-6.5163	-0.0424
497	SLU 80	-0.64	-0.11	51.61	0.0352	-6.5143	-0.0289
497	SLU 81	-0.64	-0.16	52.44	0.0361	-6.628	-0.0404
497	SLU 82	-0.64	-0.1	52.44	0.0361	-6.626	-0.0269
497	SLU 83	-0.65	-0.16	52.93	0.0364	-6.6836	-0.0412
497	SLU 84	-0.65	-0.1	52.93	0.0364	-6.6815	-0.0277
497	SLE RA 1	-0.46	-0.13	34.78	0.023	-4.4159	-0.0327
497	SLE RA 2	-0.45	-0.07	34.78	0.0231	-4.4137	-0.0177
497	SLE RA 3	-0.46	-0.13	35.29	0.0234	-4.4747	-0.0328
497	SLE RA 4	-0.46	-0.09	35.29	0.0234	-4.4733	-0.0238
497	SLE RA 5	-0.46	-0.07	35.11	0.0233	-4.4507	-0.0182
497	SLE RA 6	-0.47	-0.13	35.62	0.0236	-4.5117	-0.0333
497	SLE RA 7	-0.47	-0.09	35.62	0.0236	-4.5103	-0.0243
497	SLE RA 8	-0.47	-0.13	35.43	0.0234	-4.49	-0.0337
497	SLE RA 9	-0.46	-0.1	35.43	0.0235	-4.4886	-0.0247
497	SLE RA 10	-0.47	-0.06	37.6	0.0255	-4.7602	-0.017
497	SLE RA 11	-0.48	-0.12	38.11	0.0258	-4.8212	-0.0321
497	SLE RA 12	-0.48	-0.09	38.11	0.0258	-4.8199	-0.0231
497	SLE RA 13	-0.47	-0.07	37.92	0.0257	-4.7973	-0.0175
497	SLE RA 14	-0.49	-0.13	38.43	0.026	-4.8583	-0.0326
497	SLE RA 15	-0.48	-0.09	38.43	0.026	-4.8569	-0.0236
497	SLE RA 16	-0.48	-0.13	38.25	0.0258	-4.8365	-0.033
497	SLE RA 17	-0.48	-0.09	38.25	0.0259	-4.8352	-0.024
497	SLE RA 18	-0.48	-0.12	38.81	0.0264	-4.911	-0.0317
497	SLE RA 19	-0.48	-0.09	38.81	0.0265	-4.9097	-0.0227
497	SLE RA 20	-0.48	-0.12	39.13	0.0266	-4.948	-0.0322
497	SLE RA 21	-0.48	-0.09	39.13	0.0267	-4.9467	-0.0232
497	SLE FR 1	-0.46	-0.13	34.78	0.023	-4.4159	-0.0327
497	SLE FR 2	-0.46	-0.11	34.78	0.023	-4.4155	-0.0297
497	SLE FR 3	-0.46	-0.13	34.91	0.0231	-4.4307	-0.0329
497	SLE FR 4	-0.46	-0.11	35.99	0.024	-4.564	-0.0294
497	SLE FR 5	-0.47	-0.13	36.12	0.0241	-4.5793	-0.0326
497	SLE FR 6	-0.47	-0.12	36.79	0.0247	-4.6635	-0.0322
497	SLE QP 1	-0.46	-0.13	34.78	0.023	-4.4159	-0.0327
497	SLE QP 2	-0.46	-0.13	35.99	0.024	-4.5644	-0.0324
497	SLD 1	2.24	0.41	45.92	0.0298	-5.6433	0.1018
497	SLD 2	2.39	-0.28	45.81	0.0318	-5.6556	-0.0689
497	SLD 3	2.28	-1.02	45.69	0.0337	-5.7052	-0.2547
497	SLD 4	2.43	-1.7	45.58	0.0357	-5.7175	-0.4253
497	SLD 5	0.25	2.32	39.33	0.0195	-4.792	0.5788
497	SLD 6	0.35	1.87	39.26	0.0208	-4.8001	0.4669
497	SLD 7	0.4	-2.43	38.58	0.0325	-4.9984	-0.6093
497	SLD 8	0.5	-2.88	38.5	0.0337	-5.0065	-0.7212
497	SLD 9	-1.43	2.63	33.47	0.0143	-4.1224	0.6565
497	SLD 10	-1.33	2.18	33.4	0.0156	-4.1305	0.5446
497	SLD 11	-1.28	-2.12	32.72	0.0272	-4.3288	-0.5316
497	SLD 12	-1.18	-2.57	32.65	0.0285	-4.3369	-0.6435
497	SLD 13	-3.36	1.45	26.39	0.0124	-3.4113	0.3606
497	SLD 14	-3.21	0.76	26.28	0.0144	-3.4237	0.19
497	SLD 15	-3.32	0.03	26.17	0.0163	-3.4733	0.0042
497	SLD 16	-3.17	-0.66	26.06	0.0182	-3.4856	-0.1665
497	SLV 1	5.86	1.07	59.22	0.0377	-7.0901	0.269
497	SLV 2	6.21	-0.52	58.97	0.0423	-7.1188	-0.1284
497	SLV 3	5.96	-2.17	58.7	0.0465	-7.2324	-0.5422
497	SLV 4	6.31	-3.77	58.45	0.0511	-7.2612	-0.9397
497	SLV 5	1.21	5.43	43.79	0.014	-5.1013	1.3569
497	SLV 6	1.44	4.39	43.63	0.017	-5.1199	1.1007
497	SLV 7	1.56	-5.38	42.06	0.0433	-5.5758	-1.3472
497	SLV 8	1.79	-6.41	41.89	0.0463	-5.5943	-1.6033
497	SLV 9	-2.72	6.16	30.08	0.0018	-3.5346	1.5386
497	SLV 10	-2.49	5.13	29.92	0.0047	-3.5531	1.2825
497	SLV 11	-2.37	-4.65	28.35	0.0311	-4.009	-1.1654
497	SLV 12	-2.14	-5.68	28.18	0.034	-4.0275	-1.4216
497	SLV 13	-7.24	3.52	13.53	-0.003	-1.8677	0.8749
497	SLV 14	-6.89	1.92	13.27	0.0015	-1.8964	0.4775

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
497	SLV 15	-7.13	0.27	13.01	0.0057	-2.01	0.0637
497	SLV 16	-6.79	-1.33	12.75	0.0103	-2.0388	-0.3337
497	CRTFP Ux+	0	0	0	0	0	0
497	CRTFP Ux-	0	0	0	0	0	0
497	CRTFP Uy+	0	0	0	0	0	0
497	CRTFP Uy-	0	0	0	0	0	0
500	SLU 1	-0.04	-0.55	93.11	5.0939	45.4684	0.2763
500	SLU 2	-0.04	-0.4	93.14	5.0926	45.4842	0.2034
500	SLU 3	-0.03	-0.52	95.1	5.2064	46.4396	0.2651
500	SLU 4	-0.04	-0.44	95.12	5.2056	46.4491	0.2214
500	SLU 5	-0.03	-0.41	94.41	5.1628	46.1039	0.2063
500	SLU 6	-0.03	-0.53	96.37	5.2766	47.0593	0.268
500	SLU 7	-0.03	-0.44	96.39	5.2758	47.0688	0.2242
500	SLU 8	-0.02	-0.56	95.64	5.2344	46.7078	0.282
500	SLU 9	-0.02	-0.47	95.66	5.2336	46.7172	0.2383
500	SLU 10	-0.03	-0.36	105.7	5.7895	51.5746	0.1823
500	SLU 11	-0.02	-0.48	107.66	5.9034	52.53	0.244
500	SLU 12	-0.02	-0.4	107.68	5.9026	52.5395	0.2002
500	SLU 13	-0.02	-0.37	106.96	5.8598	52.1943	0.1851
500	SLU 14	-0.01	-0.49	108.93	5.9736	53.1497	0.2468
500	SLU 15	-0.01	-0.4	108.95	5.9728	53.1592	0.2031
500	SLU 16	-0.01	-0.52	108.2	5.9313	52.7982	0.2608
500	SLU 17	-0.01	-0.43	108.22	5.9305	52.8077	0.2171
500	SLU 18	-0.02	-0.49	111.04	6.0896	54.169	0.2461
500	SLU 19	-0.02	-0.4	111.06	6.0888	54.1785	0.2024
500	SLU 20	-0.01	-0.49	112.31	6.1598	54.7887	0.2489
500	SLU 21	-0.01	-0.41	112.33	6.159	54.7982	0.2052
500	SLU 22	-0.03	-0.45	104.13	5.7168	50.8087	0.2272
500	SLU 23	-0.04	-0.3	104.16	5.7154	50.8244	0.1543
500	SLU 24	-0.03	-0.43	106.12	5.8292	51.7798	0.216
500	SLU 25	-0.03	-0.34	106.14	5.8284	51.7893	0.1723
500	SLU 26	-0.03	-0.31	105.43	5.7856	51.4441	0.1572
500	SLU 27	-0.02	-0.43	107.39	5.8995	52.3995	0.2188
500	SLU 28	-0.02	-0.35	107.41	5.8987	52.409	0.1751
500	SLU 29	-0.02	-0.46	106.66	5.8572	52.048	0.2329
500	SLU 30	-0.02	-0.37	106.68	5.8564	52.0575	0.1891
500	SLU 31	-0.02	-0.26	116.72	6.4124	56.9148	0.1332
500	SLU 32	-0.01	-0.39	118.68	6.5262	57.8703	0.1949
500	SLU 33	-0.01	-0.3	118.7	6.5254	57.8797	0.1511
500	SLU 34	-0.01	-0.27	117.98	6.4826	57.5345	0.136
500	SLU 35	0	-0.39	119.95	6.5964	58.4899	0.1977
500	SLU 36	0	-0.3	119.97	6.5956	58.4994	0.154
500	SLU 37	0	-0.42	119.22	6.5541	58.1384	0.2117
500	SLU 38	0	-0.33	119.24	6.5533	58.1479	0.168
500	SLU 39	-0.01	-0.39	122.06	6.7124	59.5093	0.197
500	SLU 40	-0.01	-0.3	122.08	6.7116	59.5187	0.1533
500	SLU 41	0	-0.4	123.33	6.7826	60.1289	0.1998
500	SLU 42	0	-0.31	123.35	6.7818	60.1384	0.1561
500	SLU 43	-0.06	-0.74	117.26	6.4086	57.278	0.376
500	SLU 44	-0.06	-0.6	117.29	6.4072	57.2938	0.3032
500	SLU 45	-0.05	-0.72	119.26	6.5211	58.2492	0.3648
500	SLU 46	-0.05	-0.63	119.28	6.5203	58.2587	0.3211
500	SLU 47	-0.05	-0.6	118.56	6.4774	57.9135	0.306
500	SLU 48	-0.04	-0.73	120.53	6.5913	58.8689	0.3677
500	SLU 49	-0.04	-0.64	120.55	6.5905	58.8783	0.324
500	SLU 50	-0.04	-0.76	119.8	6.549	58.5174	0.3817
500	SLU 51	-0.04	-0.67	119.82	6.5482	58.5268	0.338
500	SLU 52	-0.04	-0.56	129.85	7.1042	63.3842	0.282
500	SLU 53	-0.03	-0.68	131.81	7.218	64.3396	0.3437
500	SLU 54	-0.04	-0.59	131.83	7.2172	64.3491	0.3
500	SLU 55	-0.03	-0.56	131.12	7.1744	64.0039	0.2848
500	SLU 56	-0.03	-0.69	133.08	7.2882	64.9593	0.3465
500	SLU 57	-0.03	-0.6	133.1	7.2874	64.9688	0.3028
500	SLU 58	-0.02	-0.72	132.35	7.246	64.6078	0.3605
500	SLU 59	-0.02	-0.63	132.37	7.2452	64.6173	0.3168
500	SLU 60	-0.03	-0.69	135.2	7.4042	65.9786	0.3458
500	SLU 61	-0.04	-0.6	135.22	7.4034	65.9881	0.3021
500	SLU 62	-0.03	-0.69	136.46	7.4744	66.5983	0.3486
500	SLU 63	-0.03	-0.6	136.49	7.4736	66.6078	0.3049
500	SLU 64	-0.05	-0.65	128.28	7.0314	62.6183	0.3269
500	SLU 65	-0.05	-0.5	128.31	7.03	62.634	0.254
500	SLU 66	-0.04	-0.62	130.28	7.1439	63.5894	0.3157
500	SLU 67	-0.04	-0.54	130.3	7.1431	63.5989	0.272
500	SLU 68	-0.04	-0.51	129.58	7.1003	63.2537	0.2569
500	SLU 69	-0.03	-0.63	131.55	7.2141	64.2091	0.3186
500	SLU 70	-0.03	-0.54	131.57	7.2133	64.2186	0.2749
500	SLU 71	-0.03	-0.66	130.82	7.1718	63.8576	0.3326
500	SLU 72	-0.03	-0.57	130.84	7.171	63.8671	0.2889
500	SLU 73	-0.04	-0.46	140.87	7.727	68.7244	0.2329
500	SLU 74	-0.03	-0.58	142.83	7.8408	69.6799	0.2946
500	SLU 75	-0.03	-0.5	142.85	7.84	69.6893	0.2509
500	SLU 76	-0.03	-0.46	142.14	7.7972	69.3441	0.2357
500	SLU 77	-0.02	-0.59	144.1	7.9111	70.2995	0.2974
500	SLU 78	-0.02	-0.5	144.12	7.9102	70.309	0.2537
500	SLU 79	-0.02	-0.62	143.37	7.8688	69.948	0.3114
500	SLU 80	-0.02	-0.53	143.39	7.868	69.9575	0.2677
500	SLU 81	-0.03	-0.59	146.22	8.027	71.3189	0.2967
500	SLU 82	-0.03	-0.5	146.24	8.0262	71.3283	0.253
500	SLU 83	-0.02	-0.59	147.48	8.0973	71.9385	0.2995
500	SLU 84	-0.02	-0.51	147.51	8.0964	71.948	0.2558

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
500	SLE RA 1	-0.04	-0.52	96.25	5.2719	46.9942	0.2623
500	SLE RA 2	-0.04	-0.42	96.28	5.271	47.0047	0.2137
500	SLE RA 3	-0.04	-0.5	97.59	5.3469	47.6417	0.2548
500	SLE RA 4	-0.04	-0.45	97.6	5.3463	47.648	0.2257
500	SLE RA 5	-0.03	-0.43	97.12	5.3178	47.4178	0.2156
500	SLE RA 6	-0.03	-0.51	98.43	5.3937	48.0548	0.2567
500	SLE RA 7	-0.03	-0.45	98.45	5.3932	48.0611	0.2276
500	SLE RA 8	-0.03	-0.53	97.95	5.3655	47.8205	0.266
500	SLE RA 9	-0.03	-0.47	97.96	5.365	47.8268	0.2369
500	SLE RA 10	-0.03	-0.39	104.65	5.7356	51.065	0.1996
500	SLE RA 11	-0.02	-0.48	105.96	5.8115	51.702	0.2407
500	SLE RA 12	-0.03	-0.42	105.97	5.811	51.7082	0.2116
500	SLE RA 13	-0.02	-0.4	105.49	5.7824	51.4781	0.2015
500	SLE RA 14	-0.02	-0.48	106.8	5.8583	52.1151	0.2426
500	SLE RA 15	-0.02	-0.42	106.82	5.8578	52.1214	0.2135
500	SLE RA 16	-0.02	-0.5	106.32	5.8301	51.8807	0.2519
500	SLE RA 17	-0.02	-0.44	106.33	5.8296	51.887	0.2228
500	SLE RA 18	-0.02	-0.48	108.21	5.9356	52.7946	0.2421
500	SLE RA 19	-0.03	-0.42	108.23	5.9351	52.8009	0.213
500	SLE RA 20	-0.02	-0.48	109.06	5.9825	53.2077	0.244
500	SLE RA 21	-0.02	-0.42	109.07	5.9819	53.214	0.2149
500	SLE FR 1	-0.04	-0.52	96.25	5.2719	46.9942	0.2623
500	SLE FR 2	-0.04	-0.5	96.26	5.2717	46.9963	0.2525
500	SLE FR 3	-0.04	-0.52	96.59	5.2906	47.1595	0.263
500	SLE FR 4	-0.04	-0.49	99.85	5.4708	48.7364	0.2465
500	SLE FR 5	-0.03	-0.51	100.18	5.4897	48.8996	0.257
500	SLE FR 6	-0.03	-0.5	102.23	5.6038	49.8944	0.2522
500	SLE QP 1	-0.04	-0.52	96.25	5.2719	46.9942	0.2623
500	SLE QP 2	-0.04	-0.51	99.84	5.471	48.7343	0.2562
500	SLD 1	7.48	0.7	100.38	5.4127	48.9695	-0.7645
500	SLD 2	7.86	0.77	100.47	5.4139	49.0087	-0.8089
500	SLD 3	7.58	-2.27	100.06	5.4743	48.7968	0.721
500	SLD 4	7.96	-2.21	100.15	5.4755	48.836	0.6766
500	SLD 5	2	4.36	100.47	5.3599	49.0598	-2.2952
500	SLD 6	2.25	4.41	100.53	5.3606	49.0855	-2.3243
500	SLD 7	2.33	-5.57	99.4	5.5653	48.4842	2.6566
500	SLD 8	2.58	-5.53	99.47	5.566	48.5099	2.6275
500	SLD 9	-2.65	4.51	100.22	5.376	48.9588	-2.1151
500	SLD 10	-2.4	4.55	100.28	5.3768	48.9845	-2.1442
500	SLD 11	-2.32	-5.42	99.15	5.5814	48.3831	2.8367
500	SLD 12	-2.07	-5.38	99.21	5.5822	48.4088	2.8076
500	SLD 13	-8.03	1.2	99.53	5.4665	48.6327	-0.1642
500	SLD 14	-7.65	1.26	99.63	5.4677	48.6719	-0.2086
500	SLD 15	-7.93	-1.78	99.21	5.5281	48.46	1.3213
500	SLD 16	-7.55	-1.72	99.3	5.5293	48.4992	1.2769
500	SLV 1	17.54	2.23	101.1	5.3366	49.2827	-2.0852
500	SLV 2	18.44	2.38	101.32	5.3394	49.3739	-2.1886
500	SLV 3	17.77	-4.55	100.35	5.4769	48.882	1.2972
500	SLV 4	18.67	-4.4	100.57	5.4797	48.9733	1.1937
500	SLV 5	4.74	10.58	101.31	5.2174	49.4908	-5.5583
500	SLV 6	5.31	10.67	101.45	5.2192	49.5496	-5.6249
500	SLV 7	5.5	-12.03	98.82	5.6851	48.1552	5.7162
500	SLV 8	6.08	-11.94	98.97	5.6869	48.214	5.6496
500	SLV 9	-6.15	10.93	100.72	5.2551	49.2546	-5.1371
500	SLV 10	-5.57	11.02	100.86	5.2569	49.3134	-5.2038
500	SLV 11	-5.38	-11.69	98.23	5.7228	47.919	6.1374
500	SLV 12	-4.81	-11.59	98.37	5.7246	47.9779	6.0707
500	SLV 13	-18.74	3.39	99.11	5.4623	48.4954	-0.6813
500	SLV 14	-17.84	3.54	99.33	5.4651	48.5867	-0.7847
500	SLV 15	-18.51	-3.39	98.37	5.6026	48.0947	2.7011
500	SLV 16	-17.61	-3.25	98.59	5.6054	48.186	2.5976
500	CRTFP Ux+	0	0	0	0	0	0
500	CRTFP Ux-	0	0	0	0	0	0
500	CRTFP Uy+	0	0	0	0	0	0
500	CRTFP Uy-	0	0	0	0	0	0
502	SLU 1	-0.75	-1.63	188.97	12.0817	26.4458	0.2685
502	SLU 2	-0.75	-1.34	189.01	12.0744	26.4487	0.2292
502	SLU 3	-0.76	-1.59	193.17	12.3679	27.0601	0.2625
502	SLU 4	-0.76	-1.41	193.2	12.3635	27.0618	0.2389
502	SLU 5	-0.75	-1.36	191.77	12.2525	26.8532	0.2334
502	SLU 6	-0.75	-1.62	195.94	12.546	27.4646	0.2667
502	SLU 7	-0.75	-1.44	195.96	12.5416	27.4663	0.2431
502	SLU 8	-0.74	-1.68	194.5	12.438	27.2548	0.2769
502	SLU 9	-0.74	-1.51	194.52	12.4335	27.2565	0.2533
502	SLU 10	-0.78	-1.38	215.01	13.7885	30.2379	0.2377
502	SLU 11	-0.78	-1.64	219.17	14.082	30.8494	0.2711
502	SLU 12	-0.78	-1.46	219.2	14.0776	30.8511	0.2475
502	SLU 13	-0.77	-1.41	217.77	13.9666	30.6424	0.2419
502	SLU 14	-0.78	-1.66	221.94	14.2601	31.2538	0.2753
502	SLU 15	-0.78	-1.49	221.96	14.2557	31.2556	0.2517
502	SLU 16	-0.77	-1.73	220.5	14.1521	31.044	0.2854
502	SLU 17	-0.77	-1.55	220.52	14.1476	31.0458	0.2618
502	SLU 18	-0.79	-1.69	226.11	14.5304	31.859	0.2807
502	SLU 19	-0.79	-1.52	226.13	14.526	31.8607	0.2571
502	SLU 20	-0.79	-1.72	228.87	14.7086	32.2635	0.2849
502	SLU 21	-0.78	-1.55	228.9	14.7042	32.2652	0.2613
502	SLU 22	-0.82	-1.48	211.83	13.6606	29.7974	0.2454
502	SLU 23	-0.81	-1.18	211.87	13.6532	29.8003	0.2061
502	SLU 24	-0.82	-1.44	216.04	13.9468	30.4118	0.2394
502	SLU 25	-0.82	-1.26	216.06	13.9423	30.4135	0.2158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
502	SLU 26	-0.81	-1.21	214.64	13.8313	30.2048	0.2103
502	SLU 27	-0.82	-1.46	218.8	14.1249	30.8163	0.2436
502	SLU 28	-0.82	-1.29	218.83	14.1205	30.818	0.22
502	SLU 29	-0.81	-1.53	217.36	14.0168	30.6064	0.2538
502	SLU 30	-0.81	-1.35	217.39	14.0124	30.6082	0.2302
502	SLU 31	-0.84	-1.23	237.87	15.3673	33.5896	0.2146
502	SLU 32	-0.85	-1.48	242.04	15.6609	34.201	0.248
502	SLU 33	-0.85	-1.31	242.06	15.6565	34.2027	0.2244
502	SLU 34	-0.84	-1.26	240.64	15.5454	33.9941	0.2188
502	SLU 35	-0.84	-1.51	244.8	15.839	34.6055	0.2522
502	SLU 36	-0.84	-1.34	244.83	15.8346	34.6072	0.2286
502	SLU 37	-0.83	-1.58	243.36	15.7309	34.3957	0.2623
502	SLU 38	-0.83	-1.4	243.39	15.7265	34.3974	0.2387
502	SLU 39	-0.85	-1.54	248.97	16.1093	35.2106	0.2576
502	SLU 40	-0.85	-1.37	249	16.1049	35.2124	0.234
502	SLU 41	-0.85	-1.57	251.74	16.2874	35.6151	0.2618
502	SLU 42	-0.85	-1.39	251.76	16.283	35.6169	0.2382
502	SLU 43	-0.96	-2.17	237.82	15.1649	33.2304	0.3569
502	SLU 44	-0.95	-1.88	237.86	15.1576	33.2333	0.3176
502	SLU 45	-0.96	-2.13	242.03	15.4511	33.8447	0.351
502	SLU 46	-0.96	-1.95	242.05	15.4467	33.8464	0.3274
502	SLU 47	-0.95	-1.9	240.63	15.3357	33.6378	0.3218
502	SLU 48	-0.96	-2.16	244.79	15.6292	34.2492	0.3552
502	SLU 49	-0.96	-1.98	244.82	15.6248	34.2509	0.3316
502	SLU 50	-0.95	-2.22	243.35	15.5211	34.0394	0.3653
502	SLU 51	-0.95	-2.05	243.38	15.5167	34.0411	0.3418
502	SLU 52	-0.98	-1.92	263.86	16.8717	37.0225	0.3262
502	SLU 53	-0.99	-2.18	268.02	17.1652	37.634	0.3595
502	SLU 54	-0.99	-2	268.05	17.1608	37.6357	0.336
502	SLU 55	-0.98	-1.95	266.62	17.0498	37.427	0.3304
502	SLU 56	-0.98	-2.2	270.79	17.3433	38.0384	0.3637
502	SLU 57	-0.98	-2.03	270.81	17.3389	38.0402	0.3401
502	SLU 58	-0.97	-2.27	269.35	17.2353	37.8286	0.3739
502	SLU 59	-0.97	-2.09	269.37	17.2308	37.8304	0.3503
502	SLU 60	-0.99	-2.23	274.96	17.6136	38.6436	0.3691
502	SLU 61	-0.99	-2.06	274.99	17.6092	38.6453	0.3456
502	SLU 62	-0.99	-2.26	277.73	17.7918	39.0481	0.3733
502	SLU 63	-0.99	-2.09	277.75	17.7873	39.0498	0.3498
502	SLU 64	-1.02	-2.02	260.68	16.7438	36.582	0.3338
502	SLU 65	-1.02	-1.72	260.72	16.7364	36.5849	0.2945
502	SLU 66	-1.03	-1.98	264.89	17.03	37.1964	0.3279
502	SLU 67	-1.02	-1.8	264.91	17.0255	37.1981	0.3043
502	SLU 68	-1.01	-1.75	263.49	16.9145	36.9894	0.2987
502	SLU 69	-1.02	-2	267.66	17.2081	37.6009	0.3321
502	SLU 70	-1.02	-1.83	267.68	17.2037	37.6026	0.3085
502	SLU 71	-1.01	-2.07	266.21	17.1	37.391	0.3422
502	SLU 72	-1.01	-1.89	266.24	17.0956	37.3928	0.3186
502	SLU 73	-1.04	-1.77	286.72	18.4505	40.3742	0.3031
502	SLU 74	-1.05	-2.02	290.89	18.7441	40.9856	0.3364
502	SLU 75	-1.05	-1.85	290.91	18.7397	40.9873	0.3128
502	SLU 76	-1.04	-1.8	289.49	18.6286	40.7787	0.3073
502	SLU 77	-1.05	-2.05	293.65	18.9222	41.3901	0.3406
502	SLU 78	-1.05	-1.88	293.68	18.9178	41.3918	0.317
502	SLU 79	-1.04	-2.12	292.21	18.8141	41.1803	0.3508
502	SLU 80	-1.04	-1.94	292.24	18.8097	41.182	0.3272
502	SLU 81	-1.06	-2.08	297.82	19.1925	41.9952	0.346
502	SLU 82	-1.06	-1.91	297.85	19.1881	41.997	0.3225
502	SLU 83	-1.05	-2.11	300.59	19.3706	42.3997	0.3502
502	SLU 84	-1.05	-1.93	300.61	19.3662	42.4015	0.3267
502	SLE RA 1	-0.77	-1.58	195.5	12.5328	27.4034	0.2619
502	SLE RA 2	-0.77	-1.39	195.53	12.5279	27.4053	0.2357
502	SLE RA 3	-0.77	-1.56	198.3	12.7236	27.813	0.2579
502	SLE RA 4	-0.77	-1.44	198.32	12.7207	27.8141	0.2422
502	SLE RA 5	-0.77	-1.41	197.37	12.6467	27.675	0.2385
502	SLE RA 6	-0.77	-1.58	200.15	12.8424	28.0826	0.2607
502	SLE RA 7	-0.77	-1.46	200.16	12.8394	28.0838	0.245
502	SLE RA 8	-0.76	-1.62	199.19	12.7703	27.9427	0.2675
502	SLE RA 9	-0.76	-1.5	199.2	12.7674	27.9439	0.2517
502	SLE RA 10	-0.79	-1.42	212.86	13.6707	29.9315	0.2414
502	SLE RA 11	-0.79	-1.59	215.64	13.8664	30.3391	0.2636
502	SLE RA 12	-0.79	-1.47	215.65	13.8634	30.3403	0.2479
502	SLE RA 13	-0.78	-1.44	214.7	13.7894	30.2012	0.2442
502	SLE RA 14	-0.79	-1.61	217.48	13.9851	30.6088	0.2664
502	SLE RA 15	-0.79	-1.49	217.5	13.9822	30.6099	0.2507
502	SLE RA 16	-0.78	-1.65	216.52	13.913	30.4689	0.2732
502	SLE RA 17	-0.78	-1.53	216.54	13.9101	30.4701	0.2574
502	SLE RA 18	-0.8	-1.63	220.26	14.1653	31.0122	0.27
502	SLE RA 19	-0.79	-1.51	220.28	14.1624	31.0134	0.2543
502	SLE RA 20	-0.79	-1.65	222.11	14.284	31.2819	0.2728
502	SLE RA 21	-0.79	-1.53	222.12	14.2811	31.283	0.2571
502	SLE FR 1	-0.77	-1.58	195.5	12.5328	27.4034	0.2619
502	SLE FR 2	-0.77	-1.54	195.51	12.5318	27.4038	0.2566
502	SLE FR 3	-0.77	-1.59	196.24	12.5803	27.5113	0.263
502	SLE FR 4	-0.78	-1.56	202.93	13.0216	28.4864	0.2591
502	SLE FR 5	-0.78	-1.6	203.67	13.0701	28.5939	0.2654
502	SLE FR 6	-0.78	-1.61	207.88	13.3491	29.2078	0.2659
502	SLE QP 1	-0.77	-1.58	195.5	12.5328	27.4034	0.2619
502	SLE QP 2	-0.78	-1.6	202.93	13.0226	28.4861	0.2643
502	SLD 1	15.07	2.2	196.65	12.3347	26.9239	-1.2379
502	SLD 2	15.85	1.8	196.42	12.3333	26.8695	-1.1399

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
502	SLD 3	15.28	-4.06	197.73	12.5713	27.1282	-0.318
502	SLD 4	16.05	-4.46	197.5	12.5699	27.0738	-0.2199
502	SLD 5	3.53	9.11	199.45	12.4576	27.7172	-1.5991
502	SLD 6	4.04	8.84	199.3	12.4568	27.6816	-1.5348
502	SLD 7	4.21	-11.76	203.04	13.2462	28.3982	1.4675
502	SLD 8	4.72	-12.02	202.9	13.2453	28.3626	1.5318
502	SLD 9	-6.27	8.83	202.96	12.7998	28.6095	-1.0032
502	SLD 10	-5.77	8.56	202.81	12.7989	28.5739	-0.9389
502	SLD 11	-5.59	-12.04	206.56	13.5884	29.2905	2.0635
502	SLD 12	-5.09	-12.3	206.41	13.5875	29.2549	2.1277
502	SLD 13	-17.61	1.27	208.36	13.4752	29.8983	0.7486
502	SLD 14	-16.83	0.86	208.13	13.4739	29.8439	0.8466
502	SLD 15	-17.4	-4.99	209.44	13.7118	30.1026	1.6685
502	SLD 16	-16.63	-5.4	209.21	13.7104	30.0482	1.7666
502	SLV 1	36.3	7.1	188.25	11.4201	24.8333	-3.2197
502	SLV 2	38.1	6.16	187.72	11.417	24.7067	-2.9914
502	SLV 3	36.77	-7.16	190.71	11.9571	25.3	-1.1249
502	SLV 4	38.57	-8.1	190.19	11.954	25.1734	-0.8966
502	SLV 5	9.31	22.79	194.88	11.7279	26.7043	-3.9973
502	SLV 6	10.47	22.19	194.54	11.7259	26.6227	-3.8502
502	SLV 7	10.9	-24.72	203.09	13.5179	28.2597	2.9853
502	SLV 8	12.06	-25.33	202.75	13.5159	28.1782	3.1325
502	SLV 9	-13.61	22.13	203.1	12.5292	28.7939	-2.6038
502	SLV 10	-12.45	21.53	202.76	12.5272	28.7124	-2.4567
502	SLV 11	-12.03	-25.38	211.32	14.3192	30.3494	4.3788
502	SLV 12	-10.87	-25.99	210.98	14.3172	30.2678	4.5259
502	SLV 13	-40.13	4.9	215.67	14.0911	31.7987	1.4252
502	SLV 14	-38.33	3.96	215.15	14.088	31.6721	1.6535
502	SLV 15	-39.65	-9.35	218.14	14.6282	32.2654	3.52
502	SLV 16	-37.85	-10.29	217.61	14.625	32.1388	3.7483
502	CRTFP Ux+	0	0	0	0	0	0
502	CRTFP Ux-	0	0	0	0	0	0
502	CRTFP Uy+	0	0	0	0	0	0
502	CRTFP Uy-	0	0	0	0	0	0
503	SLU 1	-0.19	-0.79	107.32	2.6351	5.3407	0.0631
503	SLU 2	-0.19	-0.62	107.36	2.6315	5.342	0.0549
503	SLU 3	-0.19	-0.77	109.62	2.7123	5.4576	0.0624
503	SLU 4	-0.19	-0.66	109.64	2.7101	5.4584	0.0575
503	SLU 5	-0.18	-0.63	108.85	2.6758	5.421	0.056
503	SLU 6	-0.18	-0.78	111.11	2.7566	5.5366	0.0635
503	SLU 7	-0.18	-0.67	111.13	2.7544	5.5374	0.0586
503	SLU 8	-0.18	-0.81	110.31	2.7237	5.4988	0.0653
503	SLU 9	-0.18	-0.71	110.33	2.7215	5.4995	0.0603
503	SLU 10	-0.19	-0.6	121.61	3.09	6.0561	0.0599
503	SLU 11	-0.18	-0.75	123.87	3.1708	6.1717	0.0674
503	SLU 12	-0.18	-0.65	123.89	3.1687	6.1725	0.0625
503	SLU 13	-0.18	-0.61	123.1	3.1343	6.1351	0.061
503	SLU 14	-0.17	-0.76	125.36	3.2151	6.2507	0.0685
503	SLU 15	-0.17	-0.66	125.38	3.2129	6.2515	0.0636
503	SLU 16	-0.17	-0.79	124.56	3.1822	6.2129	0.0703
503	SLU 17	-0.17	-0.69	124.58	3.1801	6.2136	0.0654
503	SLU 18	-0.18	-0.76	127.69	3.2902	6.3609	0.0703
503	SLU 19	-0.18	-0.66	127.71	3.288	6.3616	0.0653
503	SLU 20	-0.18	-0.78	129.18	3.3345	6.4399	0.0714
503	SLU 21	-0.18	-0.67	129.2	3.3323	6.4407	0.0664
503	SLU 22	-0.2	-0.69	119.81	3.0666	5.9662	0.0612
503	SLU 23	-0.2	-0.52	119.84	3.063	5.9675	0.0529
503	SLU 24	-0.2	-0.67	122.11	3.1438	6.0831	0.0605
503	SLU 25	-0.2	-0.56	122.12	3.1416	6.0839	0.0555
503	SLU 26	-0.19	-0.53	121.34	3.1073	6.0465	0.054
503	SLU 27	-0.19	-0.68	123.6	3.1881	6.1621	0.0616
503	SLU 28	-0.19	-0.57	123.62	3.1859	6.1629	0.0566
503	SLU 29	-0.18	-0.71	122.79	3.1552	6.1243	0.0633
503	SLU 30	-0.18	-0.61	122.81	3.153	6.125	0.0584
503	SLU 31	-0.19	-0.5	134.1	3.5215	6.6816	0.0579
503	SLU 32	-0.19	-0.65	136.36	3.6023	6.7972	0.0655
503	SLU 33	-0.19	-0.55	136.38	3.6001	6.798	0.0605
503	SLU 34	-0.19	-0.51	135.59	3.5658	6.7606	0.059
503	SLU 35	-0.18	-0.66	137.85	3.6466	6.8762	0.0666
503	SLU 36	-0.18	-0.56	137.87	3.6444	6.877	0.0616
503	SLU 37	-0.18	-0.7	137.05	3.6137	6.8384	0.0683
503	SLU 38	-0.18	-0.59	137.07	3.6115	6.8391	0.0634
503	SLU 39	-0.19	-0.67	140.18	3.7217	6.9864	0.0683
503	SLU 40	-0.19	-0.56	140.2	3.7195	6.9871	0.0634
503	SLU 41	-0.18	-0.68	141.67	3.7659	7.0654	0.0694
503	SLU 42	-0.18	-0.57	141.69	3.7638	7.0662	0.0644
503	SLU 43	-0.25	-1.06	135.24	3.2778	6.7285	0.0827
503	SLU 44	-0.25	-0.89	135.27	3.2741	6.7298	0.0745
503	SLU 45	-0.24	-1.04	137.53	3.3549	6.8454	0.0821
503	SLU 46	-0.24	-0.93	137.55	3.3527	6.8461	0.0771
503	SLU 47	-0.24	-0.9	136.76	3.3184	6.8088	0.0756
503	SLU 48	-0.23	-1.05	139.02	3.3992	6.9244	0.0831
503	SLU 49	-0.23	-0.94	139.04	3.397	6.9252	0.0782
503	SLU 50	-0.23	-1.08	138.22	3.3663	6.8865	0.0849
503	SLU 51	-0.23	-0.98	138.24	3.3641	6.8873	0.08
503	SLU 52	-0.24	-0.87	149.53	3.7326	7.4439	0.0795
503	SLU 53	-0.24	-1.02	151.79	3.8134	7.5595	0.0871
503	SLU 54	-0.24	-0.92	151.81	3.8113	7.5602	0.0821
503	SLU 55	-0.23	-0.88	151.02	3.7769	7.5229	0.0806
503	SLU 56	-0.23	-1.03	153.28	3.8577	7.6385	0.0881

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
503	SLU 57	-0.23	-0.93	153.3	3.8555	7.6393	0.0832
503	SLU 58	-0.22	-1.06	152.48	3.8249	7.6006	0.0899
503	SLU 59	-0.22	-0.96	152.5	3.8227	7.6014	0.085
503	SLU 60	-0.24	-1.03	155.6	3.9328	7.7486	0.0899
503	SLU 61	-0.24	-0.93	155.62	3.9306	7.7494	0.0849
503	SLU 62	-0.23	-1.05	157.1	3.9771	7.8276	0.091
503	SLU 63	-0.23	-0.94	157.11	3.9749	7.8284	0.086
503	SLU 64	-0.25	-0.96	147.73	3.7092	7.354	0.0808
503	SLU 65	-0.25	-0.79	147.76	3.7056	7.3553	0.0725
503	SLU 66	-0.25	-0.94	150.02	3.7864	7.4709	0.0801
503	SLU 67	-0.25	-0.83	150.04	3.7842	7.4716	0.0751
503	SLU 68	-0.25	-0.8	149.25	3.7499	7.4343	0.0736
503	SLU 69	-0.24	-0.95	151.51	3.8307	7.5499	0.0812
503	SLU 70	-0.24	-0.84	151.53	3.8285	7.5507	0.0762
503	SLU 71	-0.24	-0.98	150.71	3.7978	7.512	0.0829
503	SLU 72	-0.24	-0.88	150.73	3.7956	7.5128	0.078
503	SLU 73	-0.25	-0.77	162.01	4.1641	8.0694	0.0775
503	SLU 74	-0.24	-0.92	164.28	4.2449	8.185	0.0851
503	SLU 75	-0.25	-0.82	164.3	4.2427	8.1857	0.0801
503	SLU 76	-0.24	-0.78	163.51	4.2084	8.1484	0.0786
503	SLU 77	-0.24	-0.93	165.77	4.2892	8.264	0.0862
503	SLU 78	-0.24	-0.83	165.79	4.287	8.2648	0.0812
503	SLU 79	-0.23	-0.97	164.96	4.2563	8.2261	0.0879
503	SLU 80	-0.23	-0.86	164.98	4.2541	8.2269	0.083
503	SLU 81	-0.25	-0.94	168.09	4.3643	8.3741	0.0879
503	SLU 82	-0.25	-0.83	168.11	4.3621	8.3749	0.083
503	SLU 83	-0.24	-0.95	169.58	4.4086	8.4531	0.089
503	SLU 84	-0.24	-0.84	169.6	4.4064	8.4539	0.0841
503	SLE RA 1	-0.19	-0.76	110.89	2.7584	5.5194	0.0626
503	SLE RA 2	-0.19	-0.65	110.91	2.756	5.5203	0.0571
503	SLE RA 3	-0.19	-0.74	112.42	2.8099	5.5974	0.0621
503	SLE RA 4	-0.19	-0.68	112.43	2.8084	5.5979	0.0588
503	SLE RA 5	-0.19	-0.65	111.91	2.7855	5.573	0.0578
503	SLE RA 6	-0.19	-0.75	113.42	2.8394	5.65	0.0628
503	SLE RA 7	-0.19	-0.68	113.43	2.8379	5.6506	0.0595
503	SLE RA 8	-0.18	-0.78	112.88	2.8175	5.6248	0.064
503	SLE RA 9	-0.18	-0.71	112.89	2.816	5.6253	0.0607
503	SLE RA 10	-0.19	-0.63	120.42	3.0617	5.9964	0.0604
503	SLE RA 11	-0.19	-0.73	121.92	3.1156	6.0734	0.0654
503	SLE RA 12	-0.19	-0.66	121.94	3.1141	6.0739	0.0621
503	SLE RA 13	-0.19	-0.64	121.41	3.0912	6.049	0.0611
503	SLE RA 14	-0.18	-0.74	122.92	3.1451	6.1261	0.0662
503	SLE RA 15	-0.18	-0.67	122.93	3.1436	6.1266	0.0629
503	SLE RA 16	-0.18	-0.76	122.38	3.1232	6.1009	0.0673
503	SLE RA 17	-0.18	-0.69	122.4	3.1217	6.1014	0.064
503	SLE RA 18	-0.19	-0.74	124.47	3.1951	6.1995	0.0673
503	SLE RA 19	-0.19	-0.68	124.48	3.1937	6.2	0.064
503	SLE RA 20	-0.18	-0.75	125.46	3.2246	6.2522	0.0681
503	SLE RA 21	-0.18	-0.68	125.48	3.2232	6.2527	0.0648
503	SLE FR 1	-0.19	-0.76	110.89	2.7584	5.5194	0.0626
503	SLE FR 2	-0.19	-0.74	110.9	2.7579	5.5196	0.0615
503	SLE FR 3	-0.19	-0.76	111.29	2.7702	5.5405	0.0629
503	SLE FR 4	-0.19	-0.73	114.97	2.8889	5.7236	0.0629
503	SLE FR 5	-0.19	-0.76	115.36	2.9012	5.7445	0.0643
503	SLE FR 6	-0.19	-0.75	117.68	2.9768	5.8595	0.0649
503	SLE QP 1	-0.19	-0.76	110.89	2.7584	5.5194	0.0626
503	SLE QP 2	-0.19	-0.76	114.96	2.8894	5.7235	0.064
503	SLD 1	8.75	0.84	114.52	2.5349	5.5374	-0.06
503	SLD 2	9.2	0.79	114.52	2.5301	5.5245	-0.0481
503	SLD 3	8.87	-2.68	114.02	2.6255	5.5702	0.1138
503	SLD 4	9.32	-2.73	114.02	2.6207	5.5573	0.1257
503	SLD 5	2.23	5.07	115.58	2.6465	5.6203	-0.2389
503	SLD 6	2.53	5.04	115.58	2.6433	5.6118	-0.231
503	SLD 7	2.62	-6.66	113.93	2.9485	5.7295	0.3403
503	SLD 8	2.92	-6.7	113.93	2.9454	5.721	0.3482
503	SLD 9	-3.3	5.19	116	2.8335	5.7259	-0.2202
503	SLD 10	-3.01	5.15	116	2.8303	5.7175	-0.2123
503	SLD 11	-2.91	-6.55	114.35	3.1355	5.8351	0.359
503	SLD 12	-2.62	-6.58	114.35	3.1324	5.8267	0.3669
503	SLD 13	-9.7	1.22	115.91	3.1582	5.8896	0.0023
503	SLD 14	-9.25	1.17	115.91	3.1534	5.8767	0.0142
503	SLD 15	-9.59	-2.3	115.41	3.2488	5.9224	0.1761
503	SLD 16	-9.14	-2.35	115.41	3.244	5.9095	0.188
503	SLV 1	20.72	2.86	113.91	2.0605	5.2888	-0.2206
503	SLV 2	21.77	2.75	113.91	2.0493	5.2587	-0.1928
503	SLV 3	21	-5.16	112.76	2.2704	5.3637	0.1751
503	SLV 4	22.04	-5.27	112.77	2.2592	5.3336	0.2029
503	SLV 5	5.49	12.51	116.38	2.3242	5.4846	-0.6263
503	SLV 6	6.17	12.43	116.38	2.317	5.4653	-0.6084
503	SLV 7	6.39	-14.22	112.57	3.0241	5.7343	0.6927
503	SLV 8	7.07	-14.29	112.57	3.0169	5.7149	0.7106
503	SLV 9	-7.45	12.78	117.36	2.762	5.732	-0.5826
503	SLV 10	-6.78	12.7	117.36	2.7548	5.7126	-0.5647
503	SLV 11	-6.55	-13.94	113.54	3.4619	5.9817	0.7364
503	SLV 12	-5.88	-14.02	113.55	3.4546	5.9623	0.7543
503	SLV 13	-22.43	3.76	117.16	3.5196	6.1133	-0.0749
503	SLV 14	-21.38	3.65	117.16	3.5084	6.0833	-0.0471
503	SLV 15	-22.16	-4.26	116.01	3.7296	6.1882	0.3208
503	SLV 16	-21.11	-4.37	116.02	3.7184	6.1582	0.3486
503	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
503	CRTFP Ux-	0	0	0	0	0	0
503	CRTFP Uy+	0	0	0	0	0	0
503	CRTFP Uy-	0	0	0	0	0	0
506	SLU 1	-0.71	-0.86	61.92	-0.0069	-0.2906	-0.0071
506	SLU 2	-0.71	-0.76	61.91	-0.0069	-0.2905	-0.0069
506	SLU 3	-0.73	-0.87	63.33	-0.0069	-0.2977	-0.0074
506	SLU 4	-0.73	-0.81	63.32	-0.0068	-0.2976	-0.0073
506	SLU 5	-0.72	-0.78	62.8	-0.007	-0.2952	-0.007
506	SLU 6	-0.74	-0.88	64.22	-0.007	-0.3024	-0.0075
506	SLU 7	-0.74	-0.82	64.22	-0.007	-0.3023	-0.0074
506	SLU 8	-0.74	-0.89	63.72	-0.0072	-0.3	-0.0073
506	SLU 9	-0.74	-0.83	63.71	-0.0072	-0.2999	-0.0072
506	SLU 10	-0.76	-0.82	70.18	-0.0061	-0.3419	-0.0083
506	SLU 11	-0.77	-0.93	71.6	-0.006	-0.3491	-0.0088
506	SLU 12	-0.77	-0.87	71.59	-0.006	-0.349	-0.0087
506	SLU 13	-0.77	-0.84	71.08	-0.0062	-0.3466	-0.0084
506	SLU 14	-0.79	-0.94	72.5	-0.0062	-0.3538	-0.0089
506	SLU 15	-0.78	-0.88	72.49	-0.0062	-0.3537	-0.0088
506	SLU 16	-0.78	-0.95	71.99	-0.0064	-0.3514	-0.0087
506	SLU 17	-0.78	-0.89	71.98	-0.0064	-0.3513	-0.0086
506	SLU 18	-0.77	-0.95	73.74	-0.0057	-0.364	-0.0091
506	SLU 19	-0.77	-0.89	73.73	-0.0057	-0.364	-0.009
506	SLU 20	-0.79	-0.96	74.64	-0.0059	-0.3687	-0.0092
506	SLU 21	-0.78	-0.9	74.63	-0.0059	-0.3687	-0.0091
506	SLU 22	-0.79	-0.89	69.76	-0.0057	-0.3279	-0.0091
506	SLU 23	-0.79	-0.79	69.75	-0.0057	-0.3278	-0.0089
506	SLU 24	-0.81	-0.89	71.17	-0.0056	-0.335	-0.0094
506	SLU 25	-0.81	-0.83	71.16	-0.0056	-0.3349	-0.0093
506	SLU 26	-0.8	-0.8	70.65	-0.0058	-0.3325	-0.009
506	SLU 27	-0.82	-0.91	72.07	-0.0058	-0.3397	-0.0095
506	SLU 28	-0.82	-0.85	72.06	-0.0058	-0.3397	-0.0094
506	SLU 29	-0.81	-0.92	71.56	-0.006	-0.3373	-0.0093
506	SLU 30	-0.81	-0.86	71.55	-0.006	-0.3373	-0.0092
506	SLU 31	-0.83	-0.85	78.02	-0.0048	-0.3792	-0.0103
506	SLU 32	-0.85	-0.95	79.44	-0.0048	-0.3864	-0.0108
506	SLU 33	-0.85	-0.89	79.43	-0.0048	-0.3864	-0.0107
506	SLU 34	-0.84	-0.86	78.92	-0.005	-0.3839	-0.0104
506	SLU 35	-0.86	-0.97	80.34	-0.0049	-0.3911	-0.0109
506	SLU 36	-0.86	-0.91	80.33	-0.0049	-0.3911	-0.0108
506	SLU 37	-0.86	-0.98	79.83	-0.0052	-0.3887	-0.0106
506	SLU 38	-0.86	-0.92	79.82	-0.0051	-0.3887	-0.0105
506	SLU 39	-0.85	-0.97	81.58	-0.0045	-0.4013	-0.0111
506	SLU 40	-0.85	-0.91	81.57	-0.0045	-0.4013	-0.011
506	SLU 41	-0.86	-0.99	82.48	-0.0046	-0.4061	-0.0112
506	SLU 42	-0.86	-0.93	82.47	-0.0046	-0.406	-0.011
506	SLU 43	-0.9	-1.12	77.81	-0.0094	-0.3649	-0.0086
506	SLU 44	-0.9	-1.02	77.8	-0.0094	-0.3648	-0.0084
506	SLU 45	-0.92	-1.12	79.22	-0.0094	-0.372	-0.0089
506	SLU 46	-0.92	-1.06	79.21	-0.0093	-0.372	-0.0088
506	SLU 47	-0.91	-1.03	78.69	-0.0095	-0.3696	-0.0085
506	SLU 48	-0.93	-1.13	80.11	-0.0095	-0.3767	-0.009
506	SLU 49	-0.93	-1.08	80.1	-0.0095	-0.3767	-0.0089
506	SLU 50	-0.92	-1.14	79.6	-0.0097	-0.3743	-0.0087
506	SLU 51	-0.92	-1.08	79.59	-0.0097	-0.3743	-0.0086
506	SLU 52	-0.94	-1.08	86.07	-0.0086	-0.4163	-0.0098
506	SLU 53	-0.96	-1.18	87.49	-0.0085	-0.4234	-0.0103
506	SLU 54	-0.96	-1.12	87.48	-0.0085	-0.4234	-0.0102
506	SLU 55	-0.95	-1.09	86.96	-0.0087	-0.421	-0.0098
506	SLU 56	-0.97	-1.19	88.38	-0.0087	-0.4281	-0.0104
506	SLU 57	-0.97	-1.13	88.38	-0.0087	-0.4281	-0.0103
506	SLU 58	-0.97	-1.2	87.88	-0.0089	-0.4258	-0.0101
506	SLU 59	-0.96	-1.14	87.87	-0.0089	-0.4257	-0.01
506	SLU 60	-0.96	-1.2	89.63	-0.0082	-0.4384	-0.0105
506	SLU 61	-0.96	-1.14	89.62	-0.0082	-0.4383	-0.0104
506	SLU 62	-0.97	-1.21	90.52	-0.0084	-0.4431	-0.0106
506	SLU 63	-0.97	-1.15	90.52	-0.0084	-0.443	-0.0105
506	SLU 64	-0.98	-1.14	85.65	-0.0082	-0.4023	-0.0105
506	SLU 65	-0.98	-1.04	85.64	-0.0082	-0.4022	-0.0104
506	SLU 66	-1	-1.14	87.06	-0.0081	-0.4094	-0.0109
506	SLU 67	-1	-1.09	87.05	-0.0081	-0.4093	-0.0108
506	SLU 68	-0.99	-1.05	86.53	-0.0083	-0.4069	-0.0104
506	SLU 69	-1.01	-1.16	87.95	-0.0083	-0.4141	-0.011
506	SLU 70	-1.01	-1.1	87.95	-0.0083	-0.414	-0.0109
506	SLU 71	-1	-1.17	87.45	-0.0085	-0.4117	-0.0107
506	SLU 72	-1	-1.11	87.44	-0.0085	-0.4116	-0.0106
506	SLU 73	-1.02	-1.1	93.91	-0.0073	-0.4536	-0.0117
506	SLU 74	-1.04	-1.2	95.33	-0.0073	-0.4608	-0.0123
506	SLU 75	-1.04	-1.14	95.32	-0.0073	-0.4607	-0.0122
506	SLU 76	-1.03	-1.11	94.81	-0.0075	-0.4583	-0.0118
506	SLU 77	-1.05	-1.22	96.23	-0.0074	-0.4655	-0.0124
506	SLU 78	-1.05	-1.16	96.22	-0.0074	-0.4654	-0.0122
506	SLU 79	-1.04	-1.23	95.72	-0.0077	-0.4631	-0.0121
506	SLU 80	-1.04	-1.17	95.71	-0.0076	-0.4631	-0.012
506	SLU 81	-1.04	-1.22	97.47	-0.007	-0.4757	-0.0125
506	SLU 82	-1.04	-1.16	97.46	-0.007	-0.4757	-0.0124
506	SLU 83	-1.05	-1.24	98.37	-0.0071	-0.4804	-0.0126
506	SLU 84	-1.05	-1.18	98.36	-0.0071	-0.4804	-0.0125
506	SLE RA 1	-0.74	-0.87	64.16	-0.0066	-0.3012	-0.0077
506	SLE RA 2	-0.74	-0.8	64.15	-0.0065	-0.3012	-0.0076
506	SLE RA 3	-0.75	-0.87	65.1	-0.0065	-0.306	-0.0079

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
506	SLE RA 4	-0.75	-0.83	65.09	-0.0065	-0.3059	-0.0078
506	SLE RA 5	-0.74	-0.81	64.75	-0.0066	-0.3043	-0.0076
506	SLE RA 6	-0.76	-0.88	65.7	-0.0066	-0.3091	-0.008
506	SLE RA 7	-0.76	-0.84	65.69	-0.0066	-0.3091	-0.0079
506	SLE RA 8	-0.75	-0.89	65.36	-0.0068	-0.3075	-0.0078
506	SLE RA 9	-0.75	-0.85	65.35	-0.0068	-0.3075	-0.0077
506	SLE RA 10	-0.76	-0.84	69.67	-0.006	-0.3355	-0.0085
506	SLE RA 11	-0.78	-0.91	70.61	-0.006	-0.3402	-0.0088
506	SLE RA 12	-0.78	-0.87	70.61	-0.006	-0.3402	-0.0087
506	SLE RA 13	-0.77	-0.85	70.27	-0.0061	-0.3386	-0.0085
506	SLE RA 14	-0.78	-0.92	71.21	-0.0061	-0.3434	-0.0089
506	SLE RA 15	-0.78	-0.88	71.21	-0.0061	-0.3433	-0.0088
506	SLE RA 16	-0.78	-0.93	70.87	-0.0062	-0.3418	-0.0087
506	SLE RA 17	-0.78	-0.89	70.87	-0.0062	-0.3418	-0.0086
506	SLE RA 18	-0.78	-0.93	72.04	-0.0058	-0.3502	-0.009
506	SLE RA 19	-0.78	-0.89	72.04	-0.0058	-0.3502	-0.0089
506	SLE RA 20	-0.78	-0.94	72.64	-0.0059	-0.3533	-0.009
506	SLE RA 21	-0.78	-0.9	72.63	-0.0059	-0.3533	-0.009
506	SLE FR 1	-0.74	-0.87	64.16	-0.0066	-0.3012	-0.0077
506	SLE FR 2	-0.74	-0.86	64.16	-0.0066	-0.3012	-0.0076
506	SLE FR 3	-0.74	-0.87	64.4	-0.0066	-0.3025	-0.0077
506	SLE FR 4	-0.75	-0.87	66.52	-0.0063	-0.3159	-0.008
506	SLE FR 5	-0.75	-0.89	66.77	-0.0064	-0.3172	-0.0081
506	SLE FR 6	-0.76	-0.9	68.1	-0.0062	-0.3257	-0.0083
506	SLE QP 1	-0.74	-0.87	64.16	-0.0066	-0.3012	-0.0077
506	SLE QP 2	-0.75	-0.89	66.53	-0.0063	-0.3159	-0.0081
506	SLD 1	4.66	-0.23	72.42	-0.0088	-0.1055	0.0072
506	SLD 2	4.91	-0.72	72.32	-0.0069	-0.1121	0.0209
506	SLD 3	4.73	-2.07	72.23	-0.0029	-0.1409	0.011
506	SLD 4	4.98	-2.56	72.13	-0.001	-0.1475	0.0248
506	SLD 5	0.72	2.19	68.61	-0.0164	-0.198	-0.0118
506	SLD 6	0.89	1.87	68.54	-0.0152	-0.2023	-0.0028
506	SLD 7	0.96	-3.95	67.96	0.0034	-0.3158	0.0011
506	SLD 8	1.12	-4.27	67.89	0.0046	-0.3202	0.0101
506	SLD 9	-2.62	2.49	65.16	-0.0173	-0.3117	-0.0262
506	SLD 10	-2.46	2.17	65.09	-0.016	-0.316	-0.0172
506	SLD 11	-2.38	-3.64	64.51	0.0025	-0.4295	-0.0134
506	SLD 12	-2.22	-3.96	64.45	0.0038	-0.4338	-0.0044
506	SLD 13	-6.48	0.78	60.93	-0.0117	-0.4844	-0.0409
506	SLD 14	-6.23	0.29	60.83	-0.0098	-0.491	-0.0272
506	SLD 15	-6.41	-1.06	60.73	-0.0057	-0.5197	-0.037
506	SLD 16	-6.16	-1.55	60.63	-0.0038	-0.5263	-0.0233
506	SLV 1	11.9	0.59	80.31	-0.0118	0.1754	0.0278
506	SLV 2	12.49	-0.55	80.07	-0.0073	0.16	0.0597
506	SLV 3	12.07	-3.6	79.86	0.0017	0.0949	0.0365
506	SLV 4	12.65	-4.74	79.63	0.0061	0.0795	0.0685
506	SLV 5	2.69	6.11	71.37	-0.0291	-0.0438	-0.0161
506	SLV 6	3.07	5.38	71.22	-0.0263	-0.0537	0.0045
506	SLV 7	3.25	-7.87	69.89	0.0157	-0.3121	0.0131
506	SLV 8	3.63	-8.6	69.74	0.0186	-0.322	0.0337
506	SLV 9	-5.12	6.82	63.31	-0.0312	-0.3098	-0.0499
506	SLV 10	-4.75	6.09	63.16	-0.0283	-0.3197	-0.0292
506	SLV 11	-4.57	-7.15	61.83	0.0136	-0.5781	-0.0206
506	SLV 12	-4.19	-7.89	61.68	0.0165	-0.588	0
506	SLV 13	-14.15	2.96	53.42	-0.0188	-0.7113	-0.0847
506	SLV 14	-13.57	1.83	53.19	-0.0143	-0.7267	-0.0527
506	SLV 15	-13.99	-1.23	52.98	-0.0053	-0.7918	-0.0759
506	SLV 16	-13.4	-2.37	52.75	-0.0009	-0.8072	-0.0439
506	CRTFP Ux+	0	0	0	0	0	0
506	CRTFP Ux-	0	0	0	0	0	0
510	SLU 1	0.58	-0.74	60.85	-0.0202	0.2056	-0.0165
510	SLU 2	0.58	-0.64	60.84	-0.0202	0.2052	-0.0166
510	SLU 3	0.6	-0.74	62.21	-0.0207	0.2086	-0.0168
510	SLU 4	0.6	-0.68	62.2	-0.0207	0.2084	-0.0169
510	SLU 5	0.59	-0.65	61.71	-0.0207	0.2067	-0.0169
510	SLU 6	0.61	-0.76	63.07	-0.0212	0.2101	-0.0171
510	SLU 7	0.61	-0.7	63.07	-0.0212	0.2099	-0.0171
510	SLU 8	0.6	-0.77	62.58	-0.0212	0.2086	-0.0171
510	SLU 9	0.6	-0.71	62.57	-0.0212	0.2083	-0.0171
510	SLU 10	0.62	-0.67	68.89	-0.0214	0.2394	-0.0184
510	SLU 11	0.64	-0.78	70.26	-0.0218	0.2428	-0.0185
510	SLU 12	0.64	-0.72	70.25	-0.0219	0.2426	-0.0186
510	SLU 13	0.63	-0.69	69.76	-0.0219	0.2409	-0.0186
510	SLU 14	0.65	-0.8	71.12	-0.0223	0.2443	-0.0188
510	SLU 15	0.65	-0.74	71.12	-0.0224	0.2441	-0.0189
510	SLU 16	0.64	-0.81	70.63	-0.0223	0.2428	-0.0188
510	SLU 17	0.64	-0.75	70.62	-0.0224	0.2425	-0.0188
510	SLU 18	0.64	-0.79	72.35	-0.0218	0.2544	-0.019
510	SLU 19	0.64	-0.73	72.35	-0.0219	0.2542	-0.0191
510	SLU 20	0.65	-0.81	73.21	-0.0223	0.2559	-0.0193
510	SLU 21	0.65	-0.75	73.21	-0.0224	0.2557	-0.0193
510	SLU 22	0.64	-0.75	68.51	-0.0212	0.2199	-0.0176
510	SLU 23	0.64	-0.65	68.5	-0.0212	0.2195	-0.0177
510	SLU 24	0.66	-0.76	69.86	-0.0217	0.2229	-0.0178
510	SLU 25	0.66	-0.7	69.86	-0.0217	0.2227	-0.0179
510	SLU 26	0.65	-0.67	69.36	-0.0217	0.221	-0.0179
510	SLU 27	0.67	-0.77	70.73	-0.0222	0.2244	-0.0181
510	SLU 28	0.67	-0.71	70.72	-0.0222	0.2242	-0.0182
510	SLU 29	0.67	-0.78	70.23	-0.0222	0.2229	-0.0181
510	SLU 30	0.67	-0.72	70.23	-0.0222	0.2226	-0.0181

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
510	SLU 31	0.68	-0.68	76.55	-0.0224	0.2537	-0.0194
510	SLU 32	0.7	-0.79	77.91	-0.0228	0.2571	-0.0196
510	SLU 33	0.7	-0.73	77.91	-0.0228	0.2569	-0.0196
510	SLU 34	0.69	-0.7	77.41	-0.0229	0.2552	-0.0196
510	SLU 35	0.71	-0.81	78.78	-0.0233	0.2586	-0.0198
510	SLU 36	0.71	-0.75	78.77	-0.0234	0.2584	-0.0199
510	SLU 37	0.71	-0.82	78.28	-0.0233	0.2571	-0.0198
510	SLU 38	0.71	-0.76	78.28	-0.0234	0.2568	-0.0199
510	SLU 39	0.7	-0.8	80.01	-0.0228	0.2687	-0.02
510	SLU 40	0.7	-0.74	80	-0.0229	0.2685	-0.0201
510	SLU 41	0.71	-0.82	80.87	-0.0233	0.2702	-0.0203
510	SLU 42	0.71	-0.76	80.86	-0.0234	0.27	-0.0203
510	SLU 43	0.73	-0.95	76.48	-0.0259	0.2624	-0.0212
510	SLU 44	0.73	-0.85	76.47	-0.0259	0.262	-0.0212
510	SLU 45	0.75	-0.96	77.84	-0.0264	0.2654	-0.0214
510	SLU 46	0.75	-0.9	77.83	-0.0264	0.2652	-0.0215
510	SLU 47	0.74	-0.87	77.34	-0.0264	0.2635	-0.0215
510	SLU 48	0.76	-0.98	78.7	-0.0269	0.2669	-0.0217
510	SLU 49	0.76	-0.92	78.7	-0.0269	0.2667	-0.0217
510	SLU 50	0.75	-0.99	78.21	-0.0269	0.2653	-0.0217
510	SLU 51	0.75	-0.93	78.2	-0.0269	0.2651	-0.0217
510	SLU 52	0.77	-0.89	84.52	-0.0271	0.2962	-0.023
510	SLU 53	0.79	-1	85.89	-0.0275	0.2996	-0.0232
510	SLU 54	0.79	-0.94	85.88	-0.0276	0.2994	-0.0232
510	SLU 55	0.78	-0.91	85.39	-0.0276	0.2976	-0.0232
510	SLU 56	0.8	-1.01	86.75	-0.028	0.3011	-0.0234
510	SLU 57	0.8	-0.95	86.75	-0.0281	0.3008	-0.0235
510	SLU 58	0.79	-1.02	86.26	-0.0281	0.2995	-0.0234
510	SLU 59	0.79	-0.96	86.25	-0.0281	0.2993	-0.0235
510	SLU 60	0.79	-1.01	87.98	-0.0275	0.3112	-0.0236
510	SLU 61	0.79	-0.95	87.98	-0.0276	0.311	-0.0237
510	SLU 62	0.8	-1.02	88.84	-0.0281	0.3127	-0.0239
510	SLU 63	0.8	-0.96	88.84	-0.0281	0.3125	-0.0239
510	SLU 64	0.8	-0.97	84.14	-0.0269	0.2767	-0.0222
510	SLU 65	0.8	-0.86	84.13	-0.0269	0.2763	-0.0223
510	SLU 66	0.81	-0.97	85.49	-0.0274	0.2797	-0.0225
510	SLU 67	0.81	-0.91	85.49	-0.0274	0.2795	-0.0225
510	SLU 68	0.81	-0.88	84.99	-0.0274	0.2778	-0.0225
510	SLU 69	0.82	-0.99	86.36	-0.0279	0.2812	-0.0227
510	SLU 70	0.82	-0.93	86.35	-0.0279	0.281	-0.0228
510	SLU 71	0.82	-1	85.86	-0.0279	0.2796	-0.0227
510	SLU 72	0.82	-0.94	85.86	-0.0279	0.2794	-0.0228
510	SLU 73	0.84	-0.9	92.18	-0.0281	0.3105	-0.024
510	SLU 74	0.85	-1.01	93.54	-0.0285	0.3139	-0.0242
510	SLU 75	0.85	-0.95	93.54	-0.0286	0.3137	-0.0242
510	SLU 76	0.85	-0.92	93.04	-0.0286	0.312	-0.0243
510	SLU 77	0.86	-1.03	94.41	-0.029	0.3154	-0.0244
510	SLU 78	0.86	-0.97	94.4	-0.0291	0.3151	-0.0245
510	SLU 79	0.86	-1.04	93.91	-0.0291	0.3138	-0.0244
510	SLU 80	0.86	-0.98	93.91	-0.0291	0.3136	-0.0245
510	SLU 81	0.85	-1.02	95.64	-0.0285	0.3255	-0.0246
510	SLU 82	0.85	-0.96	95.63	-0.0286	0.3253	-0.0247
510	SLU 83	0.86	-1.03	96.5	-0.029	0.327	-0.0249
510	SLU 84	0.86	-0.97	96.49	-0.0291	0.3268	-0.025
510	SLE RA 1	0.6	-0.74	63.04	-0.0205	0.2097	-0.0168
510	SLE RA 2	0.6	-0.67	63.03	-0.0205	0.2094	-0.0169
510	SLE RA 3	0.61	-0.74	63.94	-0.0208	0.2117	-0.017
510	SLE RA 4	0.61	-0.7	63.94	-0.0208	0.2115	-0.0171
510	SLE RA 5	0.61	-0.68	63.61	-0.0208	0.2104	-0.0171
510	SLE RA 6	0.62	-0.76	64.52	-0.0211	0.2127	-0.0172
510	SLE RA 7	0.62	-0.72	64.51	-0.0211	0.2125	-0.0172
510	SLE RA 8	0.61	-0.76	64.19	-0.0211	0.2117	-0.0172
510	SLE RA 9	0.61	-0.72	64.19	-0.0212	0.2115	-0.0172
510	SLE RA 10	0.62	-0.7	68.4	-0.0213	0.2322	-0.018
510	SLE RA 11	0.64	-0.77	69.31	-0.0216	0.2345	-0.0182
510	SLE RA 12	0.64	-0.73	69.31	-0.0216	0.2343	-0.0182
510	SLE RA 13	0.63	-0.71	68.97	-0.0216	0.2332	-0.0182
510	SLE RA 14	0.64	-0.78	69.88	-0.0219	0.2355	-0.0183
510	SLE RA 15	0.64	-0.74	69.88	-0.0219	0.2353	-0.0184
510	SLE RA 16	0.64	-0.79	69.55	-0.0219	0.2344	-0.0183
510	SLE RA 17	0.64	-0.75	69.55	-0.0219	0.2343	-0.0184
510	SLE RA 18	0.64	-0.77	70.7	-0.0216	0.2422	-0.0185
510	SLE RA 19	0.64	-0.73	70.7	-0.0216	0.2421	-0.0185
510	SLE RA 20	0.64	-0.79	71.28	-0.0219	0.2432	-0.0187
510	SLE RA 21	0.64	-0.75	71.28	-0.0219	0.2431	-0.0187
510	SLE FR 1	0.6	-0.74	63.04	-0.0205	0.2097	-0.0168
510	SLE FR 2	0.6	-0.73	63.04	-0.0205	0.2096	-0.0168
510	SLE FR 3	0.6	-0.74	63.27	-0.0206	0.2101	-0.0169
510	SLE FR 4	0.61	-0.74	65.34	-0.0208	0.2194	-0.0173
510	SLE FR 5	0.61	-0.75	65.57	-0.0209	0.2198	-0.0174
510	SLE FR 6	0.62	-0.76	66.87	-0.021	0.226	-0.0177
510	SLE QP 1	0.6	-0.74	63.04	-0.0205	0.2097	-0.0168
510	SLE QP 2	0.61	-0.75	65.34	-0.0208	0.2194	-0.0173
510	SLD 1	6.01	0.48	60.52	-0.0207	0.2777	0.0136
510	SLD 2	6.27	0.97	60.65	-0.0226	0.2696	0.0276
510	SLD 3	5.93	-1.34	60.36	-0.0147	0.3157	0.0113
510	SLD 4	6.19	-0.86	60.49	-0.0166	0.3077	0.0253
510	SLD 5	2.31	2.3	64.11	-0.0295	0.1806	-0.0071
510	SLD 6	2.48	2.62	64.19	-0.0307	0.1753	0.0021
510	SLD 7	2.03	-3.78	63.58	-0.0095	0.3075	-0.0147

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
510	SLD 8	2.21	-3.46	63.67	-0.0108	0.3022	-0.0055
510	SLD 9	-0.99	1.96	67.01	-0.0308	0.1367	-0.0292
510	SLD 10	-0.81	2.28	67.09	-0.032	0.1314	-0.02
510	SLD 11	-1.26	-4.12	66.48	-0.0108	0.2636	-0.0367
510	SLD 12	-1.09	-3.8	66.57	-0.0121	0.2583	-0.0276
510	SLD 13	-4.97	-0.64	70.18	-0.025	0.1312	-0.06
510	SLD 14	-4.71	-0.16	70.32	-0.0269	0.1231	-0.0459
510	SLD 15	-5.05	-2.47	70.03	-0.019	0.1693	-0.0622
510	SLD 16	-4.79	-1.98	70.16	-0.0209	0.1612	-0.0482
510	SLV 1	13.24	2.07	54.05	-0.0204	0.3565	0.0549
510	SLV 2	13.85	3.21	54.36	-0.0248	0.3378	0.0875
510	SLV 3	13.05	-2.08	53.69	-0.0068	0.4429	0.0497
510	SLV 4	13.66	-0.94	54	-0.0112	0.4242	0.0824
510	SLV 5	4.58	6.2	62.45	-0.0405	0.1327	0.0066
510	SLV 6	4.98	6.93	62.65	-0.0434	0.1206	0.0276
510	SLV 7	3.95	-7.64	61.24	0.0048	0.4208	-0.0107
510	SLV 8	4.34	-6.91	61.44	0.002	0.4087	0.0104
510	SLV 9	-3.12	5.41	69.24	-0.0436	0.0301	-0.045
510	SLV 10	-2.73	6.14	69.44	-0.0464	0.0181	-0.024
510	SLV 11	-3.76	-8.43	68.02	0.0018	0.3183	-0.0622
510	SLV 12	-3.36	-7.7	68.22	-0.0011	0.3062	-0.0412
510	SLV 13	-12.44	-0.56	76.68	-0.0304	0.0147	-0.117
510	SLV 14	-11.83	0.58	76.98	-0.0348	-0.0041	-0.0844
510	SLV 15	-12.63	-4.71	76.31	-0.0168	0.1011	-0.1222
510	SLV 16	-12.02	-3.57	76.62	-0.0212	0.0824	-0.0896
510	CRTFP Ux+	0	0	0	0	0	0
510	CRTFP Ux-	0	0	0	0	0	0
510	CRTFP Uy+	0	0	0	0	0	0
510	CRTFP Uy-	0	0	0	0	0	0
511	SLU 1	0.59	0.31	38.85	0.0463	9.4196	-0.1121
511	SLU 2	0.58	0.41	38.86	0.0464	9.4174	-0.1455
511	SLU 3	0.6	0.32	39.74	0.0475	9.6238	-0.1162
511	SLU 4	0.6	0.38	39.74	0.0475	9.6225	-0.1363
511	SLU 5	0.59	0.41	39.42	0.0471	9.5451	-0.1458
511	SLU 6	0.61	0.32	40.3	0.0481	9.7515	-0.1166
511	SLU 7	0.61	0.38	40.3	0.0482	9.7502	-0.1366
511	SLU 8	0.6	0.31	39.97	0.0476	9.675	-0.1128
511	SLU 9	0.6	0.37	39.97	0.0477	9.6737	-0.1328
511	SLU 10	0.62	0.48	43.77	0.0532	10.5891	-0.1723
511	SLU 11	0.64	0.4	44.65	0.0543	10.7955	-0.143
511	SLU 12	0.64	0.46	44.66	0.0543	10.7942	-0.1631
511	SLU 13	0.63	0.48	44.33	0.0539	10.7168	-0.1726
511	SLU 14	0.65	0.4	45.21	0.0549	10.9232	-0.1434
511	SLU 15	0.65	0.46	45.22	0.055	10.9219	-0.1634
511	SLU 16	0.64	0.39	44.89	0.0545	10.8468	-0.1396
511	SLU 17	0.64	0.45	44.89	0.0545	10.8454	-0.1596
511	SLU 18	0.64	0.42	45.87	0.0561	11.0935	-0.1504
511	SLU 19	0.63	0.48	45.88	0.0561	11.0921	-0.1704
511	SLU 20	0.65	0.42	46.43	0.0567	11.2212	-0.1507
511	SLU 21	0.64	0.48	46.44	0.0568	11.2199	-0.1707
511	SLU 22	0.64	0.38	43.68	0.0531	10.5639	-0.1372
511	SLU 23	0.64	0.48	43.69	0.0532	10.5617	-0.1705
511	SLU 24	0.66	0.39	44.57	0.0542	10.7681	-0.1413
511	SLU 25	0.66	0.45	44.57	0.0543	10.7668	-0.1613
511	SLU 26	0.65	0.48	44.24	0.0538	10.6894	-0.1709
511	SLU 27	0.67	0.4	45.12	0.0549	10.8958	-0.1416
511	SLU 28	0.67	0.45	45.13	0.0549	10.8945	-0.1616
511	SLU 29	0.66	0.38	44.8	0.0544	10.8194	-0.1378
511	SLU 30	0.66	0.44	44.8	0.0544	10.818	-0.1578
511	SLU 31	0.68	0.55	48.6	0.06	11.7334	-0.1973
511	SLU 32	0.7	0.47	49.48	0.061	11.9398	-0.1681
511	SLU 33	0.69	0.53	49.48	0.0611	11.9385	-0.1881
511	SLU 34	0.69	0.55	49.16	0.0606	11.8611	-0.1977
511	SLU 35	0.71	0.47	50.04	0.0617	12.0676	-0.1684
511	SLU 36	0.7	0.53	50.04	0.0617	12.0662	-0.1884
511	SLU 37	0.7	0.46	49.71	0.0612	11.9911	-0.1646
511	SLU 38	0.7	0.52	49.72	0.0612	11.9898	-0.1846
511	SLU 39	0.69	0.49	50.7	0.0628	12.2378	-0.1755
511	SLU 40	0.69	0.55	50.7	0.0628	12.2365	-0.1955
511	SLU 41	0.7	0.49	51.26	0.0635	12.3655	-0.1758
511	SLU 42	0.7	0.55	51.26	0.0635	12.3642	-0.1958
511	SLU 43	0.74	0.38	48.85	0.0579	11.8531	-0.1372
511	SLU 44	0.74	0.48	48.86	0.058	11.8509	-0.1705
511	SLU 45	0.76	0.39	49.74	0.0591	12.0573	-0.1413
511	SLU 46	0.76	0.45	49.74	0.0591	12.056	-0.1613
511	SLU 47	0.75	0.48	49.42	0.0587	11.9786	-0.1709
511	SLU 48	0.77	0.39	50.3	0.0597	12.185	-0.1416
511	SLU 49	0.77	0.45	50.3	0.0598	12.1837	-0.1616
511	SLU 50	0.76	0.38	49.97	0.0592	12.1086	-0.1378
511	SLU 51	0.76	0.44	49.98	0.0593	12.1072	-0.1578
511	SLU 52	0.77	0.55	53.78	0.0648	13.0226	-0.1973
511	SLU 53	0.79	0.47	54.66	0.0659	13.229	-0.1681
511	SLU 54	0.79	0.53	54.66	0.0659	13.2277	-0.1881
511	SLU 55	0.78	0.55	54.33	0.0655	13.1503	-0.1977
511	SLU 56	0.8	0.47	55.21	0.0665	13.3568	-0.1684
511	SLU 57	0.8	0.53	55.22	0.0666	13.3554	-0.1884
511	SLU 58	0.8	0.46	54.89	0.066	13.2803	-0.1646
511	SLU 59	0.79	0.52	54.89	0.0661	13.279	-0.1846
511	SLU 60	0.79	0.49	55.88	0.0676	13.527	-0.1755
511	SLU 61	0.79	0.55	55.88	0.0677	13.5257	-0.1955

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
511	SLU 62	0.8	0.49	56.43	0.0683	13.6547	-0.1758
511	SLU 63	0.8	0.55	56.44	0.0683	13.6534	-0.1958
511	SLU 64	0.8	0.45	53.68	0.0647	12.9975	-0.1623
511	SLU 65	0.8	0.55	53.69	0.0647	12.9952	-0.1956
511	SLU 66	0.82	0.46	54.57	0.0658	13.2017	-0.1664
511	SLU 67	0.81	0.52	54.57	0.0658	13.2003	-0.1864
511	SLU 68	0.81	0.55	54.25	0.0654	13.123	-0.1959
511	SLU 69	0.82	0.46	55.13	0.0665	13.3294	-0.1667
511	SLU 70	0.82	0.52	55.13	0.0665	13.328	-0.1867
511	SLU 71	0.82	0.45	54.8	0.066	13.2529	-0.1629
511	SLU 72	0.82	0.51	54.8	0.066	13.2516	-0.1829
511	SLU 73	0.83	0.62	58.6	0.0715	14.167	-0.2224
511	SLU 74	0.85	0.54	59.48	0.0726	14.3734	-0.1932
511	SLU 75	0.85	0.6	59.49	0.0726	14.372	-0.2132
511	SLU 76	0.84	0.62	59.16	0.0722	14.2947	-0.2227
511	SLU 77	0.86	0.54	60.04	0.0733	14.5011	-0.1935
511	SLU 78	0.86	0.6	60.04	0.0733	14.4998	-0.2135
511	SLU 79	0.85	0.53	59.71	0.0728	14.4246	-0.1897
511	SLU 80	0.85	0.59	59.72	0.0728	14.4233	-0.2097
511	SLU 81	0.85	0.56	60.7	0.0744	14.6713	-0.2005
511	SLU 82	0.85	0.62	60.71	0.0744	14.67	-0.2205
511	SLU 83	0.86	0.56	61.26	0.075	14.7991	-0.2008
511	SLU 84	0.86	0.62	61.26	0.0751	14.7977	-0.2209
511	SLE RA 1	0.6	0.33	40.23	0.0483	9.7465	-0.1193
511	SLE RA 2	0.6	0.4	40.24	0.0483	9.7451	-0.1415
511	SLE RA 3	0.61	0.34	40.82	0.049	9.8827	-0.122
511	SLE RA 4	0.61	0.38	40.83	0.049	9.8818	-0.1354
511	SLE RA 5	0.61	0.4	40.61	0.0487	9.8302	-0.1417
511	SLE RA 6	0.62	0.34	41.2	0.0495	9.9678	-0.1222
511	SLE RA 7	0.62	0.38	41.2	0.0495	9.9669	-0.1356
511	SLE RA 8	0.61	0.33	40.98	0.0491	9.9168	-0.1197
511	SLE RA 9	0.61	0.37	40.98	0.0492	9.916	-0.1331
511	SLE RA 10	0.62	0.45	43.51	0.0528	10.5262	-0.1594
511	SLE RA 11	0.64	0.39	44.1	0.0536	10.6638	-0.1399
511	SLE RA 12	0.64	0.43	44.1	0.0536	10.6629	-0.1532
511	SLE RA 13	0.63	0.45	43.89	0.0533	10.6114	-0.1596
511	SLE RA 14	0.64	0.39	44.47	0.054	10.749	-0.1401
511	SLE RA 15	0.64	0.43	44.47	0.054	10.7481	-0.1534
511	SLE RA 16	0.64	0.38	44.25	0.0537	10.698	-0.1376
511	SLE RA 17	0.64	0.42	44.26	0.0537	10.6971	-0.1509
511	SLE RA 18	0.64	0.4	44.91	0.0547	10.8625	-0.1448
511	SLE RA 19	0.63	0.44	44.92	0.0548	10.8616	-0.1582
511	SLE RA 20	0.64	0.41	45.29	0.0552	10.9476	-0.145
511	SLE RA 21	0.64	0.44	45.29	0.0552	10.9467	-0.1584
511	SLE FR 1	0.6	0.33	40.23	0.0483	9.7465	-0.1193
511	SLE FR 2	0.6	0.35	40.23	0.0483	9.7463	-0.1238
511	SLE FR 3	0.6	0.33	40.38	0.0484	9.7806	-0.1194
511	SLE FR 4	0.61	0.37	41.64	0.0502	10.081	-0.1314
511	SLE FR 5	0.61	0.35	41.79	0.0504	10.1154	-0.127
511	SLE FR 6	0.62	0.37	42.57	0.0515	10.3045	-0.1321
511	SLE QP 1	0.6	0.33	40.23	0.0483	9.7465	-0.1193
511	SLE QP 2	0.61	0.35	41.64	0.0502	10.0813	-0.127
511	SLD 1	3.76	0.19	31.02	0.036	7.7107	-0.0693
511	SLD 2	3.92	0.96	31.13	0.0345	7.7097	-0.3386
511	SLD 3	3.67	-1.37	30.81	0.0387	7.7682	0.4769
511	SLD 4	3.83	-0.6	30.93	0.0373	7.7672	0.2076
511	SLD 5	1.67	2.53	38.74	0.042	9.2831	-0.8902
511	SLD 6	1.77	3.04	38.82	0.041	9.2825	-1.0668
511	SLD 7	1.36	-2.67	38.06	0.0513	9.4747	0.9305
511	SLD 8	1.47	-2.16	38.13	0.0503	9.4741	0.7539
511	SLD 9	-0.24	2.87	45.14	0.0501	10.6885	-1.0079
511	SLD 10	-0.14	3.38	45.22	0.0491	10.6879	-1.1844
511	SLD 11	-0.55	-2.33	44.46	0.0594	10.8802	0.8128
511	SLD 12	-0.44	-1.82	44.53	0.0584	10.8795	0.6363
511	SLD 13	-2.61	1.31	52.34	0.0632	12.3954	-0.4615
511	SLD 14	-2.44	2.08	52.46	0.0617	12.3945	-0.7309
511	SLD 15	-2.7	-0.25	52.14	0.0659	12.4529	0.0847
511	SLD 16	-2.53	0.52	52.26	0.0644	12.452	-0.1846
511	SLV 1	7.97	-0.08	16.78	0.017	4.5349	0.0241
511	SLV 2	8.35	1.72	17.05	0.0135	4.5326	-0.6032
511	SLV 3	7.76	-3.63	16.31	0.0233	4.6669	1.2668
511	SLV 4	8.14	-1.83	16.58	0.0198	4.6647	0.6395
511	SLV 5	3.07	5.3	34.85	0.0313	8.2175	-1.8582
511	SLV 6	3.32	6.46	35.02	0.029	8.216	-2.2625
511	SLV 7	2.37	-6.54	33.27	0.0523	8.6577	2.2838
511	SLV 8	2.62	-5.38	33.45	0.0501	8.6562	1.8796
511	SLV 9	-1.39	6.08	49.82	0.0503	11.5064	-2.1335
511	SLV 10	-1.15	7.24	50	0.0481	11.5049	-2.5378
511	SLV 11	-2.09	-5.75	48.25	0.0714	11.9466	2.0086
511	SLV 12	-1.85	-4.59	48.42	0.0692	11.9452	1.6043
511	SLV 13	-6.91	2.54	66.69	0.0806	15.498	-0.8934
511	SLV 14	-6.53	4.34	66.97	0.0771	15.4957	-1.5207
511	SLV 15	-7.12	-1.01	66.22	0.0869	15.6301	0.3492
511	SLV 16	-6.74	0.79	66.49	0.0834	15.6278	-0.2781
511	CRTFP Ux+	0	0	0	0	0	0
511	CRTFP Ux-	0	0	0	0	0	0
511	CRTFP Uy+	0	0	0	0	0	0
511	CRTFP Uy-	0	0	0	0	0	0
513	SLU 1	-0.43	-0.14	34.46	0.0356	-4.9658	-0.0356
513	SLU 2	-0.43	-0.05	34.46	0.0357	-4.9637	-0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
513	SLU 3	-0.44	-0.14	35.24	0.0364	-5.0709	-0.0359
513	SLU 4	-0.44	-0.09	35.25	0.0365	-5.0697	-0.0225
513	SLU 5	-0.43	-0.06	34.96	0.0362	-5.0298	-0.0142
513	SLU 6	-0.45	-0.15	35.74	0.037	-5.137	-0.0368
513	SLU 7	-0.45	-0.09	35.74	0.037	-5.1357	-0.0234
513	SLU 8	-0.45	-0.15	35.45	0.0366	-5.0979	-0.0373
513	SLU 9	-0.44	-0.1	35.46	0.0367	-5.0967	-0.0239
513	SLU 10	-0.45	-0.05	38.82	0.0411	-5.5836	-0.0126
513	SLU 11	-0.46	-0.14	39.61	0.0419	-5.6908	-0.0352
513	SLU 12	-0.46	-0.09	39.61	0.042	-5.6895	-0.0218
513	SLU 13	-0.46	-0.05	39.32	0.0416	-5.6497	-0.0134
513	SLU 14	-0.47	-0.14	40.11	0.0424	-5.7568	-0.036
513	SLU 15	-0.47	-0.09	40.11	0.0425	-5.7556	-0.0226
513	SLU 16	-0.47	-0.15	39.82	0.0421	-5.7178	-0.0366
513	SLU 17	-0.46	-0.09	39.82	0.0421	-5.7165	-0.0232
513	SLU 18	-0.46	-0.14	40.69	0.0434	-5.8513	-0.0346
513	SLU 19	-0.46	-0.09	40.69	0.0434	-5.8501	-0.0212
513	SLU 20	-0.47	-0.14	41.19	0.0439	-5.9174	-0.0354
513	SLU 21	-0.47	-0.09	41.19	0.0439	-5.9161	-0.022
513	SLU 22	-0.48	-0.14	38.76	0.041	-5.5705	-0.0341
513	SLU 23	-0.47	-0.05	38.77	0.0411	-5.5684	-0.0118
513	SLU 24	-0.49	-0.14	39.55	0.0419	-5.6756	-0.0344
513	SLU 25	-0.48	-0.08	39.55	0.042	-5.6743	-0.021
513	SLU 26	-0.48	-0.05	39.26	0.0416	-5.6345	-0.0126
513	SLU 27	-0.49	-0.14	40.05	0.0424	-5.7416	-0.0352
513	SLU 28	-0.49	-0.09	40.05	0.0425	-5.7404	-0.0218
513	SLU 29	-0.49	-0.14	39.76	0.042	-5.7026	-0.0357
513	SLU 30	-0.49	-0.09	39.76	0.0421	-5.7014	-0.0224
513	SLU 31	-0.49	-0.04	43.13	0.0466	-6.1883	-0.011
513	SLU 32	-0.51	-0.13	43.91	0.0474	-6.2954	-0.0337
513	SLU 33	-0.5	-0.08	43.91	0.0474	-6.2942	-0.0203
513	SLU 34	-0.5	-0.05	43.63	0.0471	-6.2543	-0.0119
513	SLU 35	-0.51	-0.14	44.41	0.0479	-6.3615	-0.0345
513	SLU 36	-0.51	-0.08	44.41	0.0479	-6.3603	-0.0211
513	SLU 37	-0.51	-0.14	44.12	0.0475	-6.3225	-0.035
513	SLU 38	-0.51	-0.09	44.13	0.0476	-6.3212	-0.0216
513	SLU 39	-0.51	-0.13	44.99	0.0488	-6.456	-0.0331
513	SLU 40	-0.5	-0.08	45	0.0489	-6.4547	-0.0197
513	SLU 41	-0.51	-0.14	45.49	0.0493	-6.522	-0.0339
513	SLU 42	-0.51	-0.08	45.5	0.0494	-6.5208	-0.0205
513	SLU 43	-0.55	-0.19	43.32	0.0444	-6.2482	-0.0469
513	SLU 44	-0.54	-0.1	43.32	0.0445	-6.2461	-0.0246
513	SLU 45	-0.56	-0.19	44.1	0.0452	-6.3533	-0.0472
513	SLU 46	-0.56	-0.14	44.11	0.0453	-6.3521	-0.0338
513	SLU 47	-0.55	-0.1	43.82	0.045	-6.3122	-0.0254
513	SLU 48	-0.56	-0.19	44.6	0.0458	-6.4194	-0.048
513	SLU 49	-0.56	-0.14	44.61	0.0458	-6.4181	-0.0346
513	SLU 50	-0.56	-0.2	44.32	0.0454	-6.3803	-0.0485
513	SLU 51	-0.56	-0.14	44.32	0.0454	-6.3791	-0.0351
513	SLU 52	-0.56	-0.1	47.68	0.0499	-6.866	-0.0238
513	SLU 53	-0.58	-0.19	48.47	0.0507	-6.9732	-0.0464
513	SLU 54	-0.58	-0.13	48.47	0.0508	-6.9719	-0.033
513	SLU 55	-0.57	-0.1	48.18	0.0504	-6.9321	-0.0246
513	SLU 56	-0.59	-0.19	48.97	0.0512	-7.0392	-0.0472
513	SLU 57	-0.58	-0.14	48.97	0.0513	-7.038	-0.0339
513	SLU 58	-0.58	-0.19	48.68	0.0509	-7.0002	-0.0478
513	SLU 59	-0.58	-0.14	48.68	0.0509	-6.999	-0.0344
513	SLU 60	-0.58	-0.18	49.55	0.0522	-7.1337	-0.0458
513	SLU 61	-0.57	-0.13	49.55	0.0522	-7.1325	-0.0324
513	SLU 62	-0.58	-0.19	50.05	0.0527	-7.1998	-0.0466
513	SLU 63	-0.58	-0.13	50.05	0.0527	-7.1985	-0.0333
513	SLU 64	-0.59	-0.18	47.62	0.0498	-6.8529	-0.0453
513	SLU 65	-0.59	-0.09	47.63	0.0499	-6.8508	-0.023
513	SLU 66	-0.6	-0.18	48.41	0.0507	-6.958	-0.0456
513	SLU 67	-0.6	-0.13	48.41	0.0508	-6.9568	-0.0322
513	SLU 68	-0.59	-0.1	48.13	0.0504	-6.9169	-0.0238
513	SLU 69	-0.61	-0.19	48.91	0.0512	-7.0241	-0.0464
513	SLU 70	-0.61	-0.13	48.91	0.0513	-7.0228	-0.033
513	SLU 71	-0.6	-0.19	48.62	0.0508	-6.985	-0.047
513	SLU 72	-0.6	-0.14	48.62	0.0509	-6.9838	-0.0336
513	SLU 73	-0.61	-0.09	51.99	0.0554	-7.4707	-0.0223
513	SLU 74	-0.62	-0.18	52.77	0.0562	-7.5779	-0.0449
513	SLU 75	-0.62	-0.13	52.77	0.0562	-7.5766	-0.0315
513	SLU 76	-0.61	-0.09	52.49	0.0559	-7.5368	-0.0231
513	SLU 77	-0.63	-0.18	53.27	0.0567	-7.6439	-0.0457
513	SLU 78	-0.63	-0.13	53.27	0.0567	-7.6427	-0.0323
513	SLU 79	-0.62	-0.19	52.98	0.0563	-7.6049	-0.0462
513	SLU 80	-0.62	-0.13	52.99	0.0564	-7.6036	-0.0328
513	SLU 81	-0.62	-0.18	53.86	0.0576	-7.7384	-0.0443
513	SLU 82	-0.62	-0.12	53.86	0.0577	-7.7372	-0.0309
513	SLU 83	-0.63	-0.18	54.35	0.0581	-7.8045	-0.0451
513	SLU 84	-0.62	-0.13	54.36	0.0582	-7.8032	-0.0317
513	SLE RA 1	-0.44	-0.14	35.69	0.0371	-5.1385	-0.0352
513	SLE RA 2	-0.44	-0.08	35.69	0.0372	-5.1372	-0.0203
513	SLE RA 3	-0.45	-0.14	36.21	0.0377	-5.2086	-0.0354
513	SLE RA 4	-0.45	-0.11	36.21	0.0377	-5.2078	-0.0265
513	SLE RA 5	-0.45	-0.08	36.02	0.0375	-5.1812	-0.0209
513	SLE RA 6	-0.46	-0.14	36.54	0.0381	-5.2527	-0.0359
513	SLE RA 7	-0.45	-0.11	36.55	0.0381	-5.2518	-0.027
513	SLE RA 8	-0.45	-0.15	36.35	0.0378	-5.2266	-0.0363

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
513	SLE RA 9	-0.45	-0.11	36.35	0.0378	-5.2258	-0.0274
513	SLE RA 10	-0.46	-0.08	38.6	0.0408	-5.5504	-0.0198
513	SLE RA 11	-0.47	-0.14	39.12	0.0413	-5.6219	-0.0349
513	SLE RA 12	-0.46	-0.1	39.12	0.0414	-5.621	-0.026
513	SLE RA 13	-0.46	-0.08	38.93	0.0412	-5.5945	-0.0204
513	SLE RA 14	-0.47	-0.14	39.45	0.0417	-5.6659	-0.0355
513	SLE RA 15	-0.47	-0.11	39.45	0.0417	-5.6651	-0.0265
513	SLE RA 16	-0.47	-0.14	39.26	0.0414	-5.6399	-0.0358
513	SLE RA 17	-0.47	-0.11	39.26	0.0415	-5.6391	-0.0269
513	SLE RA 18	-0.46	-0.14	39.84	0.0423	-5.7289	-0.0345
513	SLE RA 19	-0.46	-0.1	39.84	0.0424	-5.7281	-0.0256
513	SLE RA 20	-0.47	-0.14	40.17	0.0427	-5.7729	-0.0351
513	SLE RA 21	-0.47	-0.11	40.18	0.0427	-5.7721	-0.0261
513	SLE FR 1	-0.44	-0.14	35.69	0.0371	-5.1385	-0.0352
513	SLE FR 2	-0.44	-0.13	35.69	0.0371	-5.1383	-0.0322
513	SLE FR 3	-0.45	-0.14	35.82	0.0373	-5.1562	-0.0354
513	SLE FR 4	-0.45	-0.13	36.93	0.0387	-5.3154	-0.032
513	SLE FR 5	-0.45	-0.14	37.07	0.0388	-5.3333	-0.0352
513	SLE FR 6	-0.45	-0.14	37.76	0.0397	-5.4337	-0.0349
513	SLE QP 1	-0.44	-0.14	35.69	0.0371	-5.1385	-0.0352
513	SLE QP 2	-0.45	-0.14	36.93	0.0387	-5.3157	-0.035
513	SLD 1	2.23	0.39	47.14	0.0494	-6.603	0.0983
513	SLD 2	2.35	-0.3	47.08	0.0511	-6.6244	-0.0723
513	SLD 3	2.28	-1.03	46.97	0.0528	-6.6838	-0.2575
513	SLD 4	2.4	-1.72	46.91	0.0546	-6.7052	-0.4281
513	SLD 5	0.26	2.3	40.26	0.0364	-5.5754	0.5751
513	SLD 6	0.33	1.85	40.22	0.0375	-5.5895	0.4632
513	SLD 7	0.43	-2.44	39.7	0.0478	-5.8449	-0.6112
513	SLD 8	0.5	-2.89	39.66	0.049	-5.8589	-0.723
513	SLD 9	-1.41	2.61	34.2	0.0284	-4.7724	0.653
513	SLD 10	-1.33	2.16	34.17	0.0296	-4.7864	0.5412
513	SLD 11	-1.23	-2.13	33.64	0.0398	-5.0418	-0.5332
513	SLD 12	-1.16	-2.58	33.61	0.041	-5.0559	-0.6451
513	SLD 13	-3.3	1.44	26.95	0.0228	-3.9261	0.3581
513	SLD 14	-3.18	0.75	26.9	0.0246	-3.9475	0.1875
513	SLD 15	-3.25	0.01	26.79	0.0262	-4.0069	0.0023
513	SLD 16	-3.13	-0.67	26.73	0.028	-4.0283	-0.1683
513	SLV 1	5.82	1.05	60.81	0.0638	-8.3299	0.2646
513	SLV 2	6.1	-0.54	60.68	0.0679	-8.3797	-0.1327
513	SLV 3	5.94	-2.18	60.42	0.0716	-8.5151	-0.5453
513	SLV 4	6.22	-3.78	60.29	0.0757	-8.5649	-0.9427
513	SLV 5	1.21	5.4	44.71	0.0337	-5.9305	1.3517
513	SLV 6	1.38	4.37	44.63	0.0364	-5.9626	1.0957
513	SLV 7	1.6	-5.39	43.41	0.0596	-6.5478	-1.3481
513	SLV 8	1.78	-6.42	43.32	0.0623	-6.5799	-1.6041
513	SLV 9	-2.68	6.14	30.54	0.0151	-4.0514	1.5342
513	SLV 10	-2.5	5.11	30.46	0.0177	-4.0835	1.2781
513	SLV 11	-2.29	-4.65	29.24	0.041	-4.6687	-1.1657
513	SLV 12	-2.11	-5.68	29.16	0.0437	-4.7008	-1.4217
513	SLV 13	-7.12	3.5	13.58	0.0016	-2.0664	0.8727
513	SLV 14	-6.84	1.9	13.45	0.0058	-2.1162	0.4754
513	SLV 15	-7	0.26	13.19	0.0094	-2.2516	0.0627
513	SLV 16	-6.73	-1.34	13.06	0.0136	-2.3014	-0.3346
513	CRTFP Ux+	0	0	0	0	0	0
513	CRTFP Ux-	0	0	0	0	0	0
513	CRTFP Uy+	0	0	0	0	0	0
513	CRTFP Uy-	0	0	0	0	0	0
519	SLU 1	0.04	-0.23	40.28	0.49	12.5628	0.0758
519	SLU 2	0.04	-0.16	40.28	0.4898	12.5649	0.054
519	SLU 3	0.04	-0.22	41.15	0.5009	12.8261	0.0724
519	SLU 4	0.04	-0.18	41.15	0.5007	12.8274	0.0592
519	SLU 5	0.04	-0.17	40.83	0.4966	12.73	0.0548
519	SLU 6	0.05	-0.22	41.7	0.5077	12.9912	0.0732
519	SLU 7	0.05	-0.18	41.7	0.5075	12.9924	0.06
519	SLU 8	0.05	-0.23	41.37	0.5036	12.893	0.0774
519	SLU 9	0.05	-0.19	41.38	0.5035	12.8942	0.0643
519	SLU 10	0.05	-0.15	45.75	0.5571	14.2231	0.0474
519	SLU 11	0.05	-0.2	46.62	0.5682	14.4843	0.0658
519	SLU 12	0.05	-0.16	46.62	0.5681	14.4855	0.0527
519	SLU 13	0.05	-0.15	46.3	0.5639	14.3882	0.0482
519	SLU 14	0.06	-0.2	47.16	0.575	14.6493	0.0666
519	SLU 15	0.06	-0.16	47.17	0.5749	14.6506	0.0535
519	SLU 16	0.06	-0.21	46.84	0.5709	14.5511	0.0709
519	SLU 17	0.06	-0.18	46.85	0.5708	14.5524	0.0578
519	SLU 18	0.06	-0.2	48.09	0.5862	14.9316	0.0665
519	SLU 19	0.06	-0.16	48.09	0.5861	14.9329	0.0534
519	SLU 20	0.06	-0.2	48.64	0.593	15.0967	0.0673
519	SLU 21	0.06	-0.17	48.64	0.5929	15.098	0.0542
519	SLU 22	0.05	-0.18	45.1	0.5503	14.0254	0.0604
519	SLU 23	0.05	-0.12	45.11	0.55	14.0275	0.0386
519	SLU 24	0.05	-0.17	45.97	0.5611	14.2886	0.057
519	SLU 25	0.05	-0.14	45.98	0.561	14.2899	0.0438
519	SLU 26	0.05	-0.12	45.66	0.5568	14.1925	0.0394
519	SLU 27	0.05	-0.18	46.52	0.5679	14.4537	0.0578
519	SLU 28	0.05	-0.14	46.53	0.5678	14.455	0.0446
519	SLU 29	0.06	-0.19	46.2	0.5639	14.3555	0.062
519	SLU 30	0.05	-0.15	46.2	0.5637	14.3568	0.0489
519	SLU 31	0.06	-0.1	50.58	0.6174	15.6856	0.032
519	SLU 32	0.06	-0.16	51.44	0.6285	15.9468	0.0504
519	SLU 33	0.06	-0.12	51.45	0.6283	15.9481	0.0373

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
519	SLU 34	0.06	-0.11	51.13	0.6242	15.8507	0.0328
519	SLU 35	0.07	-0.16	51.99	0.6353	16.1119	0.0512
519	SLU 36	0.07	-0.12	52	0.6351	16.1131	0.0381
519	SLU 37	0.07	-0.17	51.67	0.6312	16.0136	0.0555
519	SLU 38	0.07	-0.13	51.67	0.6311	16.0149	0.0424
519	SLU 39	0.06	-0.16	52.92	0.6465	16.3941	0.0511
519	SLU 40	0.06	-0.12	52.92	0.6463	16.3954	0.038
519	SLU 41	0.07	-0.16	53.46	0.6533	16.5592	0.0519
519	SLU 42	0.07	-0.12	53.47	0.6531	16.5605	0.0388
519	SLU 43	0.05	-0.31	50.7	0.6163	15.8302	0.1039
519	SLU 44	0.05	-0.25	50.71	0.6161	15.8324	0.082
519	SLU 45	0.05	-0.3	51.58	0.6272	16.0935	0.1004
519	SLU 46	0.05	-0.26	51.58	0.6271	16.0948	0.0873
519	SLU 47	0.05	-0.25	51.26	0.6229	15.9974	0.0828
519	SLU 48	0.06	-0.3	52.12	0.634	16.2586	0.1012
519	SLU 49	0.06	-0.27	52.13	0.6339	16.2599	0.0881
519	SLU 50	0.06	-0.31	51.8	0.6299	16.1604	0.1055
519	SLU 51	0.06	-0.28	51.81	0.6298	16.1617	0.0923
519	SLU 52	0.06	-0.23	56.18	0.6835	17.4905	0.0755
519	SLU 53	0.06	-0.28	57.04	0.6945	17.7517	0.0939
519	SLU 54	0.06	-0.25	57.05	0.6944	17.7529	0.0808
519	SLU 55	0.06	-0.23	56.73	0.6903	17.6556	0.0763
519	SLU 56	0.07	-0.29	57.59	0.7013	17.9167	0.0947
519	SLU 57	0.07	-0.25	57.6	0.7012	17.918	0.0816
519	SLU 58	0.07	-0.3	57.27	0.6973	17.8185	0.0989
519	SLU 59	0.07	-0.26	57.27	0.6971	17.8198	0.0858
519	SLU 60	0.06	-0.28	58.52	0.7125	18.199	0.0946
519	SLU 61	0.06	-0.25	58.52	0.7124	18.2003	0.0814
519	SLU 62	0.07	-0.29	59.06	0.7193	18.3641	0.0953
519	SLU 63	0.07	-0.25	59.07	0.7192	18.3654	0.0822
519	SLU 64	0.06	-0.27	55.53	0.6766	17.2928	0.0885
519	SLU 65	0.05	-0.2	55.54	0.6764	17.2949	0.0666
519	SLU 66	0.06	-0.26	56.4	0.6875	17.5561	0.085
519	SLU 67	0.06	-0.22	56.41	0.6873	17.5573	0.0719
519	SLU 68	0.06	-0.21	56.09	0.6832	17.46	0.0674
519	SLU 69	0.06	-0.26	56.95	0.6943	17.7211	0.0858
519	SLU 70	0.06	-0.22	56.96	0.6941	17.7224	0.0727
519	SLU 71	0.06	-0.27	56.63	0.6902	17.6229	0.0901
519	SLU 72	0.06	-0.23	56.63	0.6901	17.6242	0.0769
519	SLU 73	0.07	-0.19	61.01	0.7437	18.953	0.0601
519	SLU 74	0.07	-0.24	61.87	0.7548	19.2142	0.0785
519	SLU 75	0.07	-0.2	61.88	0.7547	19.2155	0.0653
519	SLU 76	0.07	-0.19	61.56	0.7505	19.1181	0.0609
519	SLU 77	0.08	-0.24	62.42	0.7616	19.3793	0.0793
519	SLU 78	0.07	-0.2	62.42	0.7615	19.3805	0.0661
519	SLU 79	0.08	-0.25	62.1	0.7575	19.2811	0.0835
519	SLU 80	0.08	-0.22	62.1	0.7574	19.2823	0.0704
519	SLU 81	0.07	-0.24	63.34	0.7728	19.6616	0.0791
519	SLU 82	0.07	-0.2	63.35	0.7727	19.6628	0.066
519	SLU 83	0.08	-0.24	63.89	0.7796	19.8266	0.0799
519	SLU 84	0.08	-0.21	63.9	0.7795	19.8279	0.0668
519	SLE RA 1	0.04	-0.21	41.65	0.5072	12.9807	0.0714
519	SLE RA 2	0.04	-0.17	41.66	0.5071	12.9821	0.0569
519	SLE RA 3	0.04	-0.21	42.24	0.5145	13.1562	0.0691
519	SLE RA 4	0.04	-0.18	42.24	0.5144	13.1571	0.0604
519	SLE RA 5	0.04	-0.17	42.03	0.5116	13.0922	0.0574
519	SLE RA 6	0.05	-0.21	42.6	0.519	13.2663	0.0697
519	SLE RA 7	0.05	-0.18	42.6	0.5189	13.2671	0.0609
519	SLE RA 8	0.05	-0.22	42.39	0.5163	13.2008	0.0725
519	SLE RA 9	0.05	-0.19	42.39	0.5162	13.2016	0.0638
519	SLE RA 10	0.05	-0.16	45.31	0.552	14.0875	0.0525
519	SLE RA 11	0.05	-0.2	45.88	0.5594	14.2616	0.0648
519	SLE RA 12	0.05	-0.17	45.88	0.5593	14.2625	0.056
519	SLE RA 13	0.05	-0.16	45.67	0.5565	14.1976	0.053
519	SLE RA 14	0.05	-0.2	46.25	0.5639	14.3717	0.0653
519	SLE RA 15	0.05	-0.17	46.25	0.5638	14.3725	0.0566
519	SLE RA 16	0.05	-0.21	46.03	0.5612	14.3062	0.0681
519	SLE RA 17	0.05	-0.18	46.04	0.5611	14.3071	0.0594
519	SLE RA 18	0.05	-0.2	46.86	0.5714	14.5599	0.0652
519	SLE RA 19	0.05	-0.17	46.87	0.5713	14.5607	0.0565
519	SLE RA 20	0.05	-0.2	47.23	0.5759	14.6699	0.0658
519	SLE RA 21	0.05	-0.17	47.23	0.5758	14.6708	0.057
519	SLE FR 1	0.04	-0.21	41.65	0.5072	12.9807	0.0714
519	SLE FR 2	0.04	-0.21	41.66	0.5072	12.981	0.0685
519	SLE FR 3	0.04	-0.22	41.8	0.509	13.0247	0.0716
519	SLE FR 4	0.04	-0.2	43.22	0.5264	13.4547	0.0667
519	SLE FR 5	0.05	-0.21	43.36	0.5283	13.4985	0.0698
519	SLE FR 6	0.05	-0.21	44.26	0.5393	13.7703	0.0683
519	SLE QP 1	0.04	-0.21	41.65	0.5072	12.9807	0.0714
519	SLE QP 2	0.04	-0.21	43.22	0.5265	13.4545	0.0696
519	SLD 1	3.25	0.32	43.32	0.526	13.4774	-0.1733
519	SLD 2	3.38	0.35	43.36	0.526	13.4868	-0.1867
519	SLD 3	3.3	-0.97	43.53	0.5338	13.5465	0.2746
519	SLD 4	3.43	-0.93	43.57	0.5338	13.5559	0.2611
519	SLD 5	0.92	1.88	42.92	0.5145	13.3549	-0.6802
519	SLD 6	1.01	1.91	42.95	0.5145	13.361	-0.689
519	SLD 7	1.06	-2.39	43.63	0.5405	13.5852	0.8128
519	SLD 8	1.15	-2.36	43.65	0.5405	13.5913	0.8039
519	SLD 9	-1.06	1.94	42.78	0.5124	13.3176	-0.6648
519	SLD 10	-0.97	1.97	42.81	0.5125	13.3237	-0.6736

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
519	SLD 11	-0.92	-2.33	43.49	0.5384	13.5479	0.8281
519	SLD 12	-0.83	-2.3	43.51	0.5384	13.554	0.8193
519	SLD 13	-3.34	0.51	42.86	0.5191	13.353	-0.122
519	SLD 14	-3.21	0.55	42.9	0.5192	13.3624	-0.1355
519	SLD 15	-3.29	-0.77	43.08	0.5269	13.4221	0.3259
519	SLD 16	-3.16	-0.73	43.11	0.5269	13.4315	0.3124
519	SLV 1	7.55	0.98	43.47	0.5256	13.5098	-0.4845
519	SLV 2	7.85	1.07	43.55	0.5257	13.5316	-0.5159
519	SLV 3	7.65	-1.94	43.95	0.5433	13.6679	0.5352
519	SLV 4	7.95	-1.85	44.04	0.5434	13.6897	0.5038
519	SLV 5	2.09	4.55	42.54	0.4994	13.2275	-1.6378
519	SLV 6	2.29	4.61	42.6	0.4994	13.2415	-1.6581
519	SLV 7	2.42	-5.17	44.16	0.5583	13.7546	1.7612
519	SLV 8	2.62	-5.11	44.21	0.5584	13.7686	1.741
519	SLV 9	-2.53	4.69	42.22	0.4945	13.1403	-1.6019
519	SLV 10	-2.33	4.75	42.28	0.4946	13.1543	-1.6221
519	SLV 11	-2.2	-5.03	43.84	0.5535	13.6674	1.7972
519	SLV 12	-2.01	-4.97	43.89	0.5536	13.6814	1.777
519	SLV 13	-7.86	1.43	42.4	0.5095	13.2192	-0.3647
519	SLV 14	-7.56	1.52	42.48	0.5096	13.241	-0.396
519	SLV 15	-7.76	-1.49	42.88	0.5272	13.3773	0.6551
519	SLV 16	-7.46	-1.4	42.97	0.5273	13.3991	0.6237
519	CRTFP Ux+	0	0	0	0	0	0
519	CRTFP Ux-	0	0	0	0	0	0
519	CRTFP Uy+	0	0	0	0	0	0
519	CRTFP Uy-	0	0	0	0	0	0
522	SLU 1	-0.69	-0.83	61.76	-0.0035	-0.2678	-0.0038
522	SLU 2	-0.69	-0.73	61.75	-0.0035	-0.2675	-0.0036
522	SLU 3	-0.7	-0.83	63.17	-0.0034	-0.2746	-0.004
522	SLU 4	-0.7	-0.77	63.16	-0.0034	-0.2744	-0.0039
522	SLU 5	-0.7	-0.74	62.64	-0.0036	-0.2719	-0.0037
522	SLU 6	-0.71	-0.84	64.07	-0.0035	-0.279	-0.004
522	SLU 7	-0.71	-0.78	64.06	-0.0035	-0.2788	-0.0039
522	SLU 8	-0.71	-0.85	63.55	-0.0037	-0.2767	-0.0038
522	SLU 9	-0.71	-0.79	63.54	-0.0037	-0.2764	-0.0038
522	SLU 10	-0.72	-0.78	70.06	-0.0021	-0.3162	-0.0046
522	SLU 11	-0.74	-0.89	71.48	-0.002	-0.3234	-0.0049
522	SLU 12	-0.74	-0.83	71.47	-0.002	-0.3232	-0.0049
522	SLU 13	-0.73	-0.8	70.95	-0.0022	-0.3206	-0.0046
522	SLU 14	-0.75	-0.9	72.37	-0.0021	-0.3278	-0.005
522	SLU 15	-0.75	-0.84	72.36	-0.0021	-0.3276	-0.0049
522	SLU 16	-0.74	-0.91	71.86	-0.0023	-0.3254	-0.0048
522	SLU 17	-0.74	-0.85	71.85	-0.0023	-0.3252	-0.0047
522	SLU 18	-0.74	-0.91	73.63	-0.0015	-0.3375	-0.0051
522	SLU 19	-0.74	-0.85	73.62	-0.0015	-0.3373	-0.0051
522	SLU 20	-0.75	-0.92	74.53	-0.0016	-0.3419	-0.0052
522	SLU 21	-0.75	-0.86	74.52	-0.0016	-0.3417	-0.0051
522	SLU 22	-0.76	-0.85	69.65	-0.0018	-0.3029	-0.0051
522	SLU 23	-0.76	-0.75	69.64	-0.0017	-0.3025	-0.005
522	SLU 24	-0.77	-0.85	71.06	-0.0016	-0.3097	-0.0053
522	SLU 25	-0.77	-0.79	71.05	-0.0016	-0.3095	-0.0053
522	SLU 26	-0.77	-0.76	70.53	-0.0018	-0.307	-0.005
522	SLU 27	-0.78	-0.86	71.95	-0.0018	-0.3141	-0.0054
522	SLU 28	-0.78	-0.81	71.95	-0.0017	-0.3139	-0.0053
522	SLU 29	-0.78	-0.87	71.44	-0.002	-0.3118	-0.0052
522	SLU 30	-0.78	-0.81	71.43	-0.002	-0.3115	-0.0051
522	SLU 31	-0.79	-0.8	77.95	-0.0003	-0.3513	-0.006
522	SLU 32	-0.81	-0.91	79.37	-0.0002	-0.3585	-0.0063
522	SLU 33	-0.81	-0.85	79.36	-0.0002	-0.3582	-0.0062
522	SLU 34	-0.8	-0.82	78.84	-0.0004	-0.3557	-0.006
522	SLU 35	-0.82	-0.92	80.26	-0.0003	-0.3629	-0.0063
522	SLU 36	-0.82	-0.86	80.25	-0.0003	-0.3627	-0.0063
522	SLU 37	-0.81	-0.93	79.75	-0.0006	-0.3605	-0.0062
522	SLU 38	-0.81	-0.87	79.74	-0.0006	-0.3603	-0.0061
522	SLU 39	-0.81	-0.93	81.52	0.0002	-0.3726	-0.0065
522	SLU 40	-0.81	-0.87	81.51	0.0003	-0.3724	-0.0064
522	SLU 41	-0.82	-0.94	82.41	0.0001	-0.377	-0.0065
522	SLU 42	-0.82	-0.88	82.41	0.0002	-0.3768	-0.0065
522	SLU 43	-0.87	-1.07	77.59	-0.0052	-0.3361	-0.0044
522	SLU 44	-0.87	-0.97	77.58	-0.0051	-0.3358	-0.0043
522	SLU 45	-0.89	-1.07	79	-0.005	-0.3429	-0.0046
522	SLU 46	-0.89	-1.01	78.99	-0.005	-0.3427	-0.0046
522	SLU 47	-0.88	-0.98	78.47	-0.0052	-0.3402	-0.0043
522	SLU 48	-0.9	-1.08	79.89	-0.0052	-0.3474	-0.0047
522	SLU 49	-0.9	-1.03	79.88	-0.0051	-0.3471	-0.0046
522	SLU 50	-0.89	-1.09	79.37	-0.0054	-0.345	-0.0045
522	SLU 51	-0.89	-1.03	79.37	-0.0054	-0.3448	-0.0044
522	SLU 52	-0.9	-1.02	85.88	-0.0037	-0.3845	-0.0053
522	SLU 53	-0.92	-1.13	87.3	-0.0036	-0.3917	-0.0056
522	SLU 54	-0.92	-1.07	87.3	-0.0036	-0.3915	-0.0055
522	SLU 55	-0.92	-1.04	86.78	-0.0038	-0.389	-0.0053
522	SLU 56	-0.93	-1.14	88.2	-0.0037	-0.3961	-0.0056
522	SLU 57	-0.93	-1.08	88.19	-0.0037	-0.3959	-0.0056
522	SLU 58	-0.93	-1.15	87.68	-0.004	-0.3937	-0.0055
522	SLU 59	-0.93	-1.09	87.67	-0.0039	-0.3935	-0.0054
522	SLU 60	-0.92	-1.15	89.46	-0.0031	-0.4058	-0.0058
522	SLU 61	-0.92	-1.09	89.45	-0.0031	-0.4056	-0.0057
522	SLU 62	-0.93	-1.16	90.35	-0.0033	-0.4102	-0.0058
522	SLU 63	-0.93	-1.1	90.34	-0.0032	-0.41	-0.0058
522	SLU 64	-0.94	-1.09	85.48	-0.0034	-0.3712	-0.0058

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
522	SLU 65	-0.94	-0.99	85.46	-0.0034	-0.3709	-0.0057
522	SLU 66	-0.96	-1.09	86.89	-0.0033	-0.378	-0.006
522	SLU 67	-0.95	-1.03	86.88	-0.0033	-0.3778	-0.0059
522	SLU 68	-0.95	-1	86.36	-0.0035	-0.3753	-0.0057
522	SLU 69	-0.97	-1.11	87.78	-0.0034	-0.3824	-0.006
522	SLU 70	-0.97	-1.05	87.77	-0.0034	-0.3822	-0.006
522	SLU 71	-0.96	-1.11	87.26	-0.0036	-0.3801	-0.0059
522	SLU 72	-0.96	-1.05	87.25	-0.0036	-0.3798	-0.0058
522	SLU 73	-0.97	-1.04	93.77	-0.002	-0.4196	-0.0066
522	SLU 74	-0.99	-1.15	95.19	-0.0019	-0.4268	-0.007
522	SLU 75	-0.99	-1.09	95.19	-0.0019	-0.4266	-0.0069
522	SLU 76	-0.98	-1.06	94.66	-0.0021	-0.424	-0.0067
522	SLU 77	-1	-1.16	96.09	-0.002	-0.4312	-0.007
522	SLU 78	-1	-1.1	96.08	-0.002	-0.431	-0.0069
522	SLU 79	-1	-1.17	95.57	-0.0022	-0.4288	-0.0068
522	SLU 80	-0.99	-1.11	95.56	-0.0022	-0.4286	-0.0067
522	SLU 81	-0.99	-1.17	97.35	-0.0014	-0.4409	-0.0072
522	SLU 82	-0.99	-1.11	97.34	-0.0014	-0.4407	-0.0071
522	SLU 83	-1	-1.18	98.24	-0.0015	-0.4453	-0.0072
522	SLU 84	-1	-1.12	98.23	-0.0015	-0.4451	-0.0071
522	SLE RA 1	-0.71	-0.83	64.02	-0.003	-0.2779	-0.0041
522	SLE RA 2	-0.71	-0.77	64.01	-0.003	-0.2776	-0.0041
522	SLE RA 3	-0.72	-0.83	64.96	-0.0029	-0.2824	-0.0043
522	SLE RA 4	-0.72	-0.8	64.95	-0.0029	-0.2822	-0.0042
522	SLE RA 5	-0.71	-0.77	64.6	-0.0031	-0.2805	-0.0041
522	SLE RA 6	-0.72	-0.84	65.55	-0.003	-0.2853	-0.0043
522	SLE RA 7	-0.72	-0.8	65.55	-0.003	-0.2852	-0.0043
522	SLE RA 8	-0.72	-0.85	65.21	-0.0032	-0.2837	-0.0042
522	SLE RA 9	-0.72	-0.81	65.2	-0.0031	-0.2836	-0.0042
522	SLE RA 10	-0.73	-0.8	69.55	-0.002	-0.3101	-0.0047
522	SLE RA 11	-0.74	-0.87	70.5	-0.002	-0.3149	-0.0049
522	SLE RA 12	-0.74	-0.83	70.49	-0.002	-0.3147	-0.0049
522	SLE RA 13	-0.74	-0.81	70.14	-0.0021	-0.3131	-0.0047
522	SLE RA 14	-0.75	-0.88	71.09	-0.0021	-0.3178	-0.005
522	SLE RA 15	-0.75	-0.84	71.09	-0.0021	-0.3177	-0.0049
522	SLE RA 16	-0.74	-0.89	70.75	-0.0022	-0.3163	-0.0048
522	SLE RA 17	-0.74	-0.85	70.74	-0.0022	-0.3161	-0.0048
522	SLE RA 18	-0.74	-0.88	71.93	-0.0017	-0.3243	-0.0051
522	SLE RA 19	-0.74	-0.85	71.93	-0.0017	-0.3241	-0.005
522	SLE RA 20	-0.75	-0.89	72.53	-0.0017	-0.3272	-0.0051
522	SLE RA 21	-0.75	-0.85	72.52	-0.0017	-0.3271	-0.005
522	SLE FR 1	-0.71	-0.83	64.02	-0.003	-0.2779	-0.0041
522	SLE FR 2	-0.71	-0.82	64.02	-0.003	-0.2778	-0.0041
522	SLE FR 3	-0.71	-0.84	64.26	-0.003	-0.279	-0.0042
522	SLE FR 4	-0.72	-0.83	66.39	-0.0026	-0.2917	-0.0044
522	SLE FR 5	-0.72	-0.85	66.63	-0.0026	-0.293	-0.0044
522	SLE FR 6	-0.72	-0.86	67.97	-0.0023	-0.3011	-0.0046
522	SLE QP 1	-0.71	-0.83	64.02	-0.003	-0.2779	-0.0041
522	SLE QP 2	-0.72	-0.85	66.39	-0.0026	-0.2918	-0.0044
522	SLD 1	4.62	-0.18	71.99	-0.0038	-0.0806	0.0063
522	SLD 2	4.81	-0.67	71.95	-0.0021	-0.0871	0.0189
522	SLD 3	4.69	-2.02	72.34	0.001	-0.1176	0.0096
522	SLD 4	4.87	-2.5	72.3	0.0027	-0.1241	0.0222
522	SLD 5	0.75	2.23	67.55	-0.0106	-0.1713	-0.0084
522	SLD 6	0.87	1.91	67.52	-0.0095	-0.1755	-0.0002
522	SLD 7	0.97	-3.9	68.72	0.0055	-0.2944	0.0025
522	SLD 8	1.09	-4.22	68.69	0.0066	-0.2986	0.0108
522	SLD 9	-2.53	2.52	64.1	-0.0118	-0.2849	-0.0196
522	SLD 10	-2.41	2.2	64.07	-0.0107	-0.2892	-0.0113
522	SLD 11	-2.3	-3.6	65.26	0.0042	-0.408	-0.0087
522	SLD 12	-2.19	-3.92	65.24	0.0054	-0.4123	-0.0004
522	SLD 13	-6.31	0.81	60.49	-0.0079	-0.4595	-0.031
522	SLD 14	-6.13	0.32	60.44	-0.0062	-0.466	-0.0184
522	SLD 15	-6.24	-1.03	60.84	-0.0031	-0.4964	-0.0277
522	SLD 16	-6.06	-1.51	60.79	-0.0014	-0.503	-0.0151
522	SLV 1	11.77	0.65	79.5	-0.0049	0.2013	0.0207
522	SLV 2	12.2	-0.48	79.4	-0.001	0.1861	0.0501
522	SLV 3	11.93	-3.53	80.3	0.006	0.1171	0.0282
522	SLV 4	12.35	-4.66	80.19	0.0099	0.1019	0.0576
522	SLV 5	2.72	6.14	69.14	-0.0205	-0.0136	-0.0133
522	SLV 6	2.99	5.41	69.07	-0.018	-0.0234	0.0057
522	SLV 7	3.24	-7.8	71.79	0.0158	-0.2941	0.0116
522	SLV 8	3.52	-8.53	71.72	0.0184	-0.3039	0.0306
522	SLV 9	-4.95	6.84	61.06	-0.0236	-0.2796	-0.0394
522	SLV 10	-4.68	6.11	61	-0.021	-0.2894	-0.0205
522	SLV 11	-4.43	-7.11	63.71	0.0128	-0.5602	-0.0145
522	SLV 12	-4.15	-7.84	63.65	0.0153	-0.57	0.0044
522	SLV 13	-13.79	2.97	52.59	-0.0152	-0.6855	-0.0664
522	SLV 14	-13.37	1.84	52.49	-0.0112	-0.7007	-0.0371
522	SLV 15	-13.63	-1.21	53.38	-0.0043	-0.7697	-0.059
522	SLV 16	-13.21	-2.35	53.28	-0.0003	-0.7848	-0.0296
522	CRTFP Ux+	0	0	0	0	0	0
522	CRTFP Ux-	0	0	0	0	0	0
526	SLU 1	0.67	-0.69	60.28	-0.0166	0.1708	-0.0151
526	SLU 2	0.67	-0.59	60.27	-0.0167	0.17	-0.0151
526	SLU 3	0.69	-0.7	61.62	-0.017	0.173	-0.0153
526	SLU 4	0.69	-0.64	61.61	-0.0171	0.1726	-0.0154
526	SLU 5	0.68	-0.61	61.11	-0.0171	0.1709	-0.0153
526	SLU 6	0.7	-0.72	62.47	-0.0175	0.1739	-0.0156
526	SLU 7	0.7	-0.66	62.46	-0.0175	0.1734	-0.0156

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
526	SLU 8	0.69	-0.73	61.97	-0.0175	0.1725	-0.0155
526	SLU 9	0.69	-0.67	61.97	-0.0176	0.172	-0.0155
526	SLU 10	0.72	-0.63	68.29	-0.0171	0.1995	-0.0166
526	SLU 11	0.73	-0.73	69.64	-0.0175	0.2025	-0.0168
526	SLU 12	0.73	-0.67	69.64	-0.0175	0.2021	-0.0169
526	SLU 13	0.73	-0.64	69.14	-0.0176	0.2004	-0.0168
526	SLU 14	0.75	-0.75	70.49	-0.018	0.2034	-0.0171
526	SLU 15	0.75	-0.69	70.48	-0.018	0.203	-0.0171
526	SLU 16	0.74	-0.76	69.99	-0.018	0.202	-0.017
526	SLU 17	0.74	-0.7	69.99	-0.018	0.2016	-0.017
526	SLU 18	0.74	-0.74	71.74	-0.0173	0.2129	-0.0172
526	SLU 19	0.74	-0.68	71.73	-0.0173	0.2125	-0.0172
526	SLU 20	0.75	-0.76	72.59	-0.0177	0.2138	-0.0174
526	SLU 21	0.75	-0.7	72.58	-0.0178	0.2133	-0.0175
526	SLU 22	0.74	-0.7	67.91	-0.0171	0.1801	-0.0161
526	SLU 23	0.74	-0.6	67.9	-0.0171	0.1794	-0.0161
526	SLU 24	0.76	-0.71	69.25	-0.0175	0.1824	-0.0163
526	SLU 25	0.76	-0.65	69.25	-0.0175	0.1819	-0.0164
526	SLU 26	0.75	-0.62	68.75	-0.0176	0.1803	-0.0163
526	SLU 27	0.77	-0.73	70.1	-0.018	0.1833	-0.0166
526	SLU 28	0.77	-0.67	70.09	-0.018	0.1828	-0.0166
526	SLU 29	0.76	-0.74	69.6	-0.018	0.1819	-0.0165
526	SLU 30	0.76	-0.68	69.6	-0.0181	0.1814	-0.0165
526	SLU 31	0.79	-0.64	75.92	-0.0176	0.2089	-0.0176
526	SLU 32	0.8	-0.74	77.27	-0.018	0.2119	-0.0178
526	SLU 33	0.8	-0.68	77.27	-0.018	0.2115	-0.0179
526	SLU 34	0.8	-0.65	76.77	-0.0181	0.2098	-0.0178
526	SLU 35	0.82	-0.76	78.12	-0.0184	0.2128	-0.0181
526	SLU 36	0.82	-0.7	78.12	-0.0185	0.2123	-0.0181
526	SLU 37	0.81	-0.77	77.63	-0.0185	0.2114	-0.018
526	SLU 38	0.81	-0.71	77.62	-0.0185	0.2109	-0.018
526	SLU 39	0.81	-0.75	79.37	-0.0177	0.2223	-0.0182
526	SLU 40	0.81	-0.69	79.37	-0.0178	0.2219	-0.0182
526	SLU 41	0.82	-0.77	80.22	-0.0182	0.2232	-0.0184
526	SLU 42	0.82	-0.71	80.21	-0.0182	0.2227	-0.0185
526	SLU 43	0.84	-0.9	75.74	-0.0214	0.2188	-0.0193
526	SLU 44	0.84	-0.8	75.73	-0.0215	0.218	-0.0193
526	SLU 45	0.86	-0.91	77.08	-0.0218	0.221	-0.0195
526	SLU 46	0.86	-0.85	77.08	-0.0219	0.2206	-0.0195
526	SLU 47	0.86	-0.82	76.58	-0.022	0.2189	-0.0195
526	SLU 48	0.87	-0.92	77.93	-0.0223	0.2219	-0.0198
526	SLU 49	0.87	-0.86	77.93	-0.0224	0.2215	-0.0198
526	SLU 50	0.87	-0.93	77.44	-0.0224	0.2205	-0.0197
526	SLU 51	0.87	-0.87	77.43	-0.0224	0.2201	-0.0197
526	SLU 52	0.89	-0.83	83.76	-0.0219	0.2475	-0.0208
526	SLU 53	0.91	-0.94	85.11	-0.0223	0.2506	-0.021
526	SLU 54	0.91	-0.88	85.1	-0.0223	0.2501	-0.021
526	SLU 55	0.9	-0.85	84.6	-0.0224	0.2484	-0.021
526	SLU 56	0.92	-0.96	85.96	-0.0228	0.2514	-0.0212
526	SLU 57	0.92	-0.9	85.95	-0.0228	0.251	-0.0213
526	SLU 58	0.92	-0.97	85.46	-0.0228	0.25	-0.0212
526	SLU 59	0.92	-0.9	85.46	-0.0229	0.2496	-0.0212
526	SLU 60	0.91	-0.95	87.2	-0.0221	0.2609	-0.0214
526	SLU 61	0.91	-0.89	87.2	-0.0221	0.2605	-0.0214
526	SLU 62	0.92	-0.96	88.05	-0.0225	0.2618	-0.0216
526	SLU 63	0.92	-0.9	88.05	-0.0226	0.2614	-0.0216
526	SLU 64	0.91	-0.91	83.37	-0.0219	0.2281	-0.0203
526	SLU 65	0.91	-0.81	83.37	-0.022	0.2274	-0.0203
526	SLU 66	0.93	-0.91	84.72	-0.0223	0.2304	-0.0205
526	SLU 67	0.93	-0.85	84.71	-0.0224	0.23	-0.0205
526	SLU 68	0.93	-0.82	84.21	-0.0224	0.2283	-0.0205
526	SLU 69	0.94	-0.93	85.56	-0.0228	0.2313	-0.0207
526	SLU 70	0.94	-0.87	85.56	-0.0228	0.2308	-0.0208
526	SLU 71	0.94	-0.94	85.07	-0.0228	0.2299	-0.0207
526	SLU 72	0.94	-0.88	85.06	-0.0229	0.2294	-0.0207
526	SLU 73	0.96	-0.84	91.39	-0.0224	0.2569	-0.0218
526	SLU 74	0.98	-0.95	92.74	-0.0228	0.2599	-0.022
526	SLU 75	0.98	-0.89	92.74	-0.0228	0.2595	-0.022
526	SLU 76	0.97	-0.86	92.24	-0.0229	0.2578	-0.022
526	SLU 77	0.99	-0.96	93.59	-0.0233	0.2608	-0.0222
526	SLU 78	0.99	-0.9	93.58	-0.0233	0.2604	-0.0223
526	SLU 79	0.99	-0.97	93.09	-0.0233	0.2594	-0.0222
526	SLU 80	0.99	-0.91	93.09	-0.0233	0.259	-0.0222
526	SLU 81	0.98	-0.96	94.84	-0.0225	0.2703	-0.0224
526	SLU 82	0.98	-0.9	94.83	-0.0226	0.2699	-0.0224
526	SLU 83	0.99	-0.97	95.68	-0.023	0.2712	-0.0226
526	SLU 84	0.99	-0.91	95.68	-0.0231	0.2707	-0.0226
526	SLE RA 1	0.69	-0.7	62.46	-0.0167	0.1734	-0.0154
526	SLE RA 2	0.69	-0.63	62.45	-0.0168	0.1729	-0.0154
526	SLE RA 3	0.7	-0.7	63.35	-0.017	0.1749	-0.0155
526	SLE RA 4	0.7	-0.66	63.35	-0.017	0.1746	-0.0156
526	SLE RA 5	0.7	-0.64	63.02	-0.0171	0.1735	-0.0155
526	SLE RA 6	0.71	-0.71	63.92	-0.0173	0.1755	-0.0157
526	SLE RA 7	0.71	-0.67	63.91	-0.0174	0.1752	-0.0157
526	SLE RA 8	0.7	-0.72	63.59	-0.0174	0.1746	-0.0157
526	SLE RA 9	0.7	-0.68	63.58	-0.0174	0.1743	-0.0157
526	SLE RA 10	0.72	-0.65	67.8	-0.0171	0.1926	-0.0164
526	SLE RA 11	0.73	-0.72	68.7	-0.0173	0.1946	-0.0165
526	SLE RA 12	0.73	-0.68	68.7	-0.0174	0.1943	-0.0165
526	SLE RA 13	0.73	-0.66	68.37	-0.0174	0.1932	-0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
526	SLE RA 14	0.74	-0.73	69.27	-0.0176	0.1952	-0.0167
526	SLE RA 15	0.74	-0.69	69.26	-0.0177	0.1949	-0.0167
526	SLE RA 16	0.74	-0.74	68.94	-0.0177	0.1943	-0.0167
526	SLE RA 17	0.74	-0.7	68.93	-0.0177	0.194	-0.0167
526	SLE RA 18	0.73	-0.73	70.1	-0.0172	0.2015	-0.0168
526	SLE RA 19	0.73	-0.69	70.1	-0.0172	0.2012	-0.0168
526	SLE RA 20	0.74	-0.74	70.66	-0.0175	0.2021	-0.0169
526	SLE RA 21	0.74	-0.7	70.66	-0.0175	0.2018	-0.017
526	SLE FR 1	0.69	-0.7	62.46	-0.0167	0.1734	-0.0154
526	SLE FR 2	0.69	-0.68	62.46	-0.0167	0.1733	-0.0154
526	SLE FR 3	0.69	-0.7	62.68	-0.0169	0.1737	-0.0154
526	SLE FR 4	0.7	-0.69	64.75	-0.0169	0.1818	-0.0158
526	SLE FR 5	0.7	-0.71	64.97	-0.017	0.1821	-0.0159
526	SLE FR 6	0.71	-0.71	66.28	-0.017	0.1875	-0.0161
526	SLE QP 1	0.69	-0.7	62.46	-0.0167	0.1734	-0.0154
526	SLE QP 2	0.7	-0.71	64.75	-0.0169	0.1819	-0.0158
526	SLD 1	5.96	0.5	59.75	-0.018	0.2308	0.0084
526	SLD 2	6.15	0.99	59.82	-0.0198	0.2228	0.0214
526	SLD 3	5.89	-1.31	60.08	-0.0121	0.2708	0.0063
526	SLD 4	6.08	-0.83	60.15	-0.014	0.2627	0.0193
526	SLD 5	2.36	2.33	62.74	-0.0257	0.1374	-0.0076
526	SLD 6	2.48	2.65	62.79	-0.027	0.1321	0.0009
526	SLD 7	2.11	-3.73	63.83	-0.0062	0.2706	-0.0147
526	SLD 8	2.24	-3.41	63.88	-0.0075	0.2653	-0.0062
526	SLD 9	-0.83	2	65.62	-0.0263	0.0985	-0.0254
526	SLD 10	-0.71	2.32	65.67	-0.0275	0.0932	-0.0169
526	SLD 11	-1.08	-4.06	66.71	-0.0068	0.2316	-0.0325
526	SLD 12	-0.95	-3.74	66.76	-0.008	0.2263	-0.0239
526	SLD 13	-4.68	-0.58	69.35	-0.0197	0.101	-0.0509
526	SLD 14	-4.48	-0.1	69.42	-0.0216	0.093	-0.0379
526	SLD 15	-4.75	-2.4	69.68	-0.0139	0.141	-0.053
526	SLD 16	-4.56	-1.92	69.75	-0.0157	0.1329	-0.04
526	SLV 1	13	2.07	53.06	-0.0193	0.2971	0.0408
526	SLV 2	13.45	3.21	53.23	-0.0236	0.2783	0.0711
526	SLV 3	12.83	-2.07	53.8	-0.006	0.3879	0.036
526	SLV 4	13.28	-0.94	53.97	-0.0103	0.3691	0.0663
526	SLV 5	4.57	6.22	60.08	-0.037	0.082	0.0032
526	SLV 6	4.86	6.95	60.19	-0.0398	0.0699	0.0227
526	SLV 7	4	-7.59	62.56	0.0073	0.3846	-0.0127
526	SLV 8	4.29	-6.86	62.67	0.0045	0.3725	0.0068
526	SLV 9	-2.89	5.45	66.82	-0.0382	-0.0087	-0.0384
526	SLV 10	-2.6	6.18	66.93	-0.041	-0.0208	-0.0189
526	SLV 11	-3.46	-8.36	69.3	0.0061	0.2938	-0.0543
526	SLV 12	-3.17	-7.63	69.41	0.0033	0.2817	-0.0348
526	SLV 13	-11.87	-0.47	75.53	-0.0234	-0.0054	-0.0979
526	SLV 14	-11.43	0.66	75.7	-0.0277	-0.0241	-0.0676
526	SLV 15	-12.04	-4.62	76.27	-0.0101	0.0854	-0.1027
526	SLV 16	-11.6	-3.48	76.44	-0.0144	0.0666	-0.0724
526	CRTFP Ux+	0	0	0	0	0	0
526	CRTFP Ux-	0	0	0	0	0	0
526	CRTFP Uy+	0	0	0	0	0	0
526	CRTFP Uy-	0	0	0	0	0	0
527	SLU 1	0.67	0.31	40.44	0.0531	10.717	-0.1118
527	SLU 2	0.67	0.41	40.44	0.0532	10.7163	-0.145
527	SLU 3	0.69	0.32	41.36	0.0544	10.9532	-0.1159
527	SLU 4	0.69	0.38	41.37	0.0545	10.9529	-0.1358
527	SLU 5	0.68	0.41	41.02	0.054	10.8639	-0.1453
527	SLU 6	0.7	0.32	41.94	0.0552	11.1007	-0.1162
527	SLU 7	0.7	0.38	41.95	0.0552	11.1004	-0.1361
527	SLU 8	0.69	0.31	41.6	0.0547	11.012	-0.1125
527	SLU 9	0.69	0.37	41.6	0.0547	11.0116	-0.1324
527	SLU 10	0.72	0.48	45.59	0.0609	12.0703	-0.1717
527	SLU 11	0.74	0.4	46.51	0.0621	12.3072	-0.1426
527	SLU 12	0.73	0.46	46.51	0.0622	12.3069	-0.1625
527	SLU 13	0.73	0.48	46.17	0.0617	12.2179	-0.172
527	SLU 14	0.75	0.4	47.09	0.0629	12.4548	-0.143
527	SLU 15	0.75	0.46	47.09	0.063	12.4544	-0.1629
527	SLU 16	0.74	0.39	46.74	0.0624	12.366	-0.1392
527	SLU 17	0.74	0.45	46.75	0.0624	12.3656	-0.1591
527	SLU 18	0.74	0.42	47.79	0.0642	12.6513	-0.15
527	SLU 19	0.74	0.48	47.79	0.0642	12.6509	-0.1699
527	SLU 20	0.75	0.42	48.37	0.0649	12.7988	-0.1503
527	SLU 21	0.75	0.48	48.37	0.065	12.7984	-0.1702
527	SLU 22	0.74	0.38	45.49	0.0608	12.0407	-0.1368
527	SLU 23	0.74	0.48	45.5	0.0608	12.0401	-0.17
527	SLU 24	0.76	0.39	46.42	0.0621	12.277	-0.1409
527	SLU 25	0.75	0.45	46.42	0.0621	12.2766	-0.1608
527	SLU 26	0.75	0.48	46.08	0.0616	12.1876	-0.1703
527	SLU 27	0.77	0.39	47	0.0628	12.4245	-0.1412
527	SLU 28	0.77	0.45	47	0.0629	12.4241	-0.1611
527	SLU 29	0.76	0.38	46.65	0.0623	12.3358	-0.1374
527	SLU 30	0.76	0.44	46.66	0.0623	12.3354	-0.1573
527	SLU 31	0.78	0.55	50.64	0.0685	13.3941	-0.1967
527	SLU 32	0.8	0.47	51.56	0.0698	13.631	-0.1676
527	SLU 33	0.8	0.53	51.57	0.0698	13.6306	-0.1875
527	SLU 34	0.79	0.55	51.22	0.0693	13.5416	-0.197
527	SLU 35	0.81	0.47	52.14	0.0706	13.7785	-0.1679
527	SLU 36	0.81	0.53	52.15	0.0706	13.7781	-0.1878
527	SLU 37	0.8	0.46	51.8	0.07	13.6898	-0.1642
527	SLU 38	0.8	0.52	51.8	0.0701	13.6894	-0.1841

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
527	SLU 39	0.8	0.49	52.84	0.0718	13.975	-0.175
527	SLU 40	0.8	0.55	52.85	0.0718	13.9747	-0.1949
527	SLU 41	0.81	0.49	53.42	0.0726	14.1225	-0.1753
527	SLU 42	0.81	0.55	53.43	0.0726	14.1222	-0.1952
527	SLU 43	0.85	0.38	50.83	0.0664	13.4782	-0.1368
527	SLU 44	0.85	0.48	50.84	0.0665	13.4776	-0.17
527	SLU 45	0.87	0.39	51.76	0.0677	13.7145	-0.1409
527	SLU 46	0.87	0.45	51.76	0.0678	13.7141	-0.1608
527	SLU 47	0.86	0.48	51.42	0.0673	13.6251	-0.1703
527	SLU 48	0.88	0.39	52.34	0.0685	13.862	-0.1412
527	SLU 49	0.88	0.45	52.34	0.0686	13.8616	-0.1611
527	SLU 50	0.87	0.38	52	0.068	13.7732	-0.1375
527	SLU 51	0.87	0.44	52	0.068	13.7728	-0.1574
527	SLU 52	0.89	0.55	55.99	0.0742	14.8316	-0.1967
527	SLU 53	0.92	0.47	56.9	0.0755	15.0685	-0.1676
527	SLU 54	0.91	0.53	56.91	0.0755	15.0681	-0.1875
527	SLU 55	0.91	0.55	56.57	0.075	14.9791	-0.197
527	SLU 56	0.93	0.47	57.48	0.0762	15.216	-0.168
527	SLU 57	0.93	0.53	57.49	0.0763	15.2156	-0.1879
527	SLU 58	0.92	0.46	57.14	0.0757	15.1272	-0.1642
527	SLU 59	0.92	0.52	57.15	0.0757	15.1269	-0.1841
527	SLU 60	0.92	0.49	58.18	0.0775	15.4125	-0.175
527	SLU 61	0.91	0.55	58.19	0.0775	15.4121	-0.1949
527	SLU 62	0.93	0.49	58.76	0.0782	15.56	-0.1753
527	SLU 63	0.93	0.55	58.77	0.0783	15.5596	-0.1952
527	SLU 64	0.92	0.45	55.89	0.0741	14.802	-0.1618
527	SLU 65	0.91	0.55	55.9	0.0741	14.8013	-0.195
527	SLU 66	0.93	0.46	56.81	0.0754	15.0382	-0.1659
527	SLU 67	0.93	0.52	56.82	0.0754	15.0378	-0.1858
527	SLU 68	0.93	0.55	56.48	0.0749	14.9488	-0.1953
527	SLU 69	0.95	0.46	57.39	0.0762	15.1857	-0.1662
527	SLU 70	0.95	0.52	57.4	0.0762	15.1854	-0.1861
527	SLU 71	0.94	0.45	57.05	0.0756	15.097	-0.1624
527	SLU 72	0.94	0.51	57.05	0.0757	15.0966	-0.1823
527	SLU 73	0.96	0.62	61.04	0.0819	16.1553	-0.2217
527	SLU 74	0.98	0.54	61.96	0.0831	16.3922	-0.1926
527	SLU 75	0.98	0.6	61.96	0.0831	16.3919	-0.2125
527	SLU 76	0.97	0.62	61.62	0.0826	16.3029	-0.222
527	SLU 77	0.99	0.54	62.54	0.0839	16.5397	-0.1929
527	SLU 78	0.99	0.6	62.54	0.0839	16.5394	-0.2128
527	SLU 79	0.98	0.53	62.2	0.0833	16.451	-0.1891
527	SLU 80	0.98	0.59	62.2	0.0834	16.4506	-0.209
527	SLU 81	0.98	0.56	63.24	0.0851	16.7363	-0.2
527	SLU 82	0.98	0.62	63.24	0.0851	16.7359	-0.2199
527	SLU 83	0.99	0.56	63.82	0.0859	16.8838	-0.2003
527	SLU 84	0.99	0.62	63.82	0.0859	16.8834	-0.2202
527	SLE RA 1	0.69	0.33	41.88	0.0553	11.0952	-0.119
527	SLE RA 2	0.69	0.4	41.88	0.0553	11.0948	-0.1411
527	SLE RA 3	0.7	0.34	42.5	0.0562	11.2527	-0.1217
527	SLE RA 4	0.7	0.38	42.5	0.0562	11.2524	-0.135
527	SLE RA 5	0.7	0.4	42.27	0.0559	11.1931	-0.1413
527	SLE RA 6	0.71	0.34	42.88	0.0567	11.351	-0.1219
527	SLE RA 7	0.71	0.38	42.89	0.0567	11.3508	-0.1352
527	SLE RA 8	0.71	0.33	42.65	0.0563	11.2919	-0.1194
527	SLE RA 9	0.7	0.37	42.66	0.0564	11.2916	-0.1327
527	SLE RA 10	0.72	0.45	45.32	0.0605	11.9974	-0.1589
527	SLE RA 11	0.73	0.39	45.93	0.0613	12.1554	-0.1395
527	SLE RA 12	0.73	0.43	45.93	0.0613	12.1551	-0.1528
527	SLE RA 13	0.73	0.45	45.7	0.061	12.0958	-0.1591
527	SLE RA 14	0.74	0.39	46.31	0.0618	12.2537	-0.1397
527	SLE RA 15	0.74	0.43	46.32	0.0619	12.2535	-0.153
527	SLE RA 16	0.74	0.38	46.08	0.0615	12.1945	-0.1372
527	SLE RA 17	0.74	0.42	46.09	0.0615	12.1943	-0.1505
527	SLE RA 18	0.73	0.4	46.78	0.0627	12.3847	-0.1444
527	SLE RA 19	0.73	0.44	46.78	0.0627	12.3845	-0.1577
527	SLE RA 20	0.74	0.4	47.17	0.0632	12.4831	-0.1446
527	SLE RA 21	0.74	0.44	47.17	0.0632	12.4828	-0.1579
527	SLE FR 1	0.69	0.33	41.88	0.0553	11.0952	-0.119
527	SLE FR 2	0.69	0.34	41.88	0.0553	11.0951	-0.1234
527	SLE FR 3	0.69	0.33	42.03	0.0555	11.1345	-0.1191
527	SLE FR 4	0.7	0.37	43.35	0.0575	11.482	-0.131
527	SLE FR 5	0.71	0.35	43.5	0.0577	11.5214	-0.1267
527	SLE FR 6	0.71	0.37	44.33	0.059	11.7399	-0.1317
527	SLE QP 1	0.69	0.33	41.88	0.0553	11.0952	-0.119
527	SLE QP 2	0.7	0.35	43.35	0.0575	11.482	-0.1266
527	SLD 1	3.79	0.19	32.26	0.0412	8.745	-0.0685
527	SLD 2	3.91	0.96	32.34	0.0399	8.7368	-0.3379
527	SLD 3	3.69	-1.38	32.1	0.0434	8.8157	0.4774
527	SLD 4	3.82	-0.6	32.17	0.0421	8.8075	0.208
527	SLD 5	1.74	2.53	40.26	0.0495	10.5552	-0.8892
527	SLD 6	1.83	3.04	40.3	0.0487	10.5498	-1.0658
527	SLD 7	1.44	-2.67	39.72	0.0568	10.7908	0.9304
527	SLD 8	1.52	-2.16	39.76	0.056	10.7854	0.7538
527	SLD 9	-0.12	2.87	46.94	0.059	12.1787	-1.0071
527	SLD 10	-0.03	3.38	46.98	0.0582	12.1733	-1.1837
527	SLD 11	-0.42	-2.33	46.39	0.0664	12.4143	0.8126
527	SLD 12	-0.34	-1.82	46.44	0.0655	12.4089	0.636
527	SLD 13	-2.42	1.31	54.53	0.0729	14.1566	-0.4613
527	SLD 14	-2.29	2.08	54.6	0.0716	14.1484	-0.7306
527	SLD 15	-2.51	-0.25	54.36	0.0751	14.2273	0.0846

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
527	SLD 16	-2.38	0.52	54.44	0.0738	14.2191	-0.1848
527	SLV 1	7.91	-0.09	17.4	0.0194	5.0786	0.0256
527	SLV 2	8.21	1.71	17.57	0.0164	5.0595	-0.6018
527	SLV 3	7.7	-3.64	17.02	0.0244	5.2406	1.2675
527	SLV 4	8	-1.84	17.2	0.0214	5.2214	0.6401
527	SLV 5	3.13	5.3	36.11	0.039	9.3187	-1.8565
527	SLV 6	3.33	6.46	36.22	0.0371	9.3064	-2.2608
527	SLV 7	2.43	-6.54	34.85	0.0557	9.8585	2.2832
527	SLV 8	2.62	-5.38	34.96	0.0537	9.8461	1.8789
527	SLV 9	-1.22	6.08	51.74	0.0613	13.118	-2.1322
527	SLV 10	-1.02	7.24	51.85	0.0594	13.1056	-2.5365
527	SLV 11	-1.92	-5.75	50.48	0.0779	13.6577	2.0076
527	SLV 12	-1.73	-4.59	50.59	0.076	13.6453	1.6033
527	SLV 13	-6.59	2.54	69.5	0.0937	17.7427	-0.8933
527	SLV 14	-6.29	4.34	69.67	0.0907	17.7235	-1.5207
527	SLV 15	-6.8	-1.01	69.13	0.0987	17.9046	0.3486
527	SLV 16	-6.5	0.79	69.3	0.0956	17.8854	-0.2788
527	CRTFP Ux+	0	0	0	0	0	0
527	CRTFP Ux-	0	0	0	0	0	0
527	CRTFP Uy+	0	0	0	0	0	0
527	CRTFP Uy-	0	0	0	0	0	0
530	SLU 1	-0.46	-0.16	35.62	0.0415	-5.9141	-0.0381
530	SLU 2	-0.45	-0.07	35.62	0.0416	-5.9134	-0.016
530	SLU 3	-0.47	-0.16	36.44	0.0425	-6.0426	-0.0384
530	SLU 4	-0.47	-0.11	36.44	0.0426	-6.0421	-0.0252
530	SLU 5	-0.46	-0.07	36.14	0.0422	-5.9941	-0.0169
530	SLU 6	-0.47	-0.16	36.95	0.0431	-6.1232	-0.0393
530	SLU 7	-0.47	-0.11	36.95	0.0432	-6.1228	-0.0261
530	SLU 8	-0.47	-0.16	36.65	0.0427	-6.0754	-0.0398
530	SLU 9	-0.47	-0.11	36.65	0.0428	-6.075	-0.0266
530	SLU 10	-0.48	-0.07	40.16	0.0478	-6.6662	-0.0156
530	SLU 11	-0.49	-0.16	40.97	0.0487	-6.7954	-0.038
530	SLU 12	-0.49	-0.11	40.98	0.0488	-6.795	-0.0248
530	SLU 13	-0.48	-0.07	40.68	0.0484	-6.7469	-0.0164
530	SLU 14	-0.49	-0.16	41.49	0.0493	-6.8761	-0.0389
530	SLU 15	-0.49	-0.11	41.49	0.0494	-6.8757	-0.0256
530	SLU 16	-0.49	-0.16	41.19	0.0489	-6.8283	-0.0394
530	SLU 17	-0.49	-0.11	41.19	0.049	-6.8279	-0.0261
530	SLU 18	-0.49	-0.16	42.1	0.0504	-6.9895	-0.0375
530	SLU 19	-0.48	-0.1	42.11	0.0504	-6.9891	-0.0242
530	SLU 20	-0.49	-0.16	42.62	0.051	-7.0702	-0.0383
530	SLU 21	-0.49	-0.11	42.62	0.051	-7.0698	-0.0251
530	SLU 22	-0.5	-0.15	40.1	0.0477	-6.65	-0.0368
530	SLU 23	-0.5	-0.06	40.11	0.0478	-6.6494	-0.0147
530	SLU 24	-0.51	-0.15	40.92	0.0487	-6.7785	-0.0372
530	SLU 25	-0.51	-0.1	40.92	0.0488	-6.7781	-0.024
530	SLU 26	-0.5	-0.07	40.62	0.0484	-6.73	-0.0156
530	SLU 27	-0.52	-0.16	41.43	0.0493	-6.8592	-0.0381
530	SLU 28	-0.51	-0.11	41.44	0.0494	-6.8588	-0.0248
530	SLU 29	-0.51	-0.16	41.13	0.0489	-6.8114	-0.0386
530	SLU 30	-0.51	-0.11	41.14	0.049	-6.811	-0.0253
530	SLU 31	-0.52	-0.06	44.64	0.054	-7.4022	-0.0143
530	SLU 32	-0.53	-0.15	45.46	0.0549	-7.5314	-0.0368
530	SLU 33	-0.53	-0.1	45.46	0.055	-7.5309	-0.0235
530	SLU 34	-0.52	-0.07	45.16	0.0546	-7.4829	-0.0152
530	SLU 35	-0.54	-0.16	45.97	0.0556	-7.612	-0.0377
530	SLU 36	-0.54	-0.1	45.98	0.0556	-7.6116	-0.0244
530	SLU 37	-0.53	-0.16	45.67	0.0551	-7.5642	-0.0382
530	SLU 38	-0.53	-0.11	45.68	0.0552	-7.5638	-0.0249
530	SLU 39	-0.53	-0.15	46.58	0.0566	-7.7255	-0.0362
530	SLU 40	-0.53	-0.1	46.59	0.0566	-7.7251	-0.023
530	SLU 41	-0.53	-0.15	47.1	0.0572	-7.8062	-0.0371
530	SLU 42	-0.53	-0.1	47.1	0.0572	-7.8058	-0.0238
530	SLU 43	-0.58	-0.21	44.77	0.0518	-7.436	-0.0499
530	SLU 44	-0.58	-0.12	44.77	0.0519	-7.4353	-0.0278
530	SLU 45	-0.59	-0.21	45.58	0.0528	-7.5645	-0.0503
530	SLU 46	-0.59	-0.16	45.59	0.0529	-7.564	-0.037
530	SLU 47	-0.58	-0.12	45.29	0.0525	-7.516	-0.0287
530	SLU 48	-0.6	-0.21	46.1	0.0534	-7.6451	-0.0512
530	SLU 49	-0.6	-0.16	46.1	0.0535	-7.6447	-0.0379
530	SLU 50	-0.59	-0.21	45.8	0.053	-7.5973	-0.0517
530	SLU 51	-0.59	-0.16	45.8	0.0531	-7.5969	-0.0384
530	SLU 52	-0.6	-0.12	49.31	0.0581	-8.1881	-0.0274
530	SLU 53	-0.61	-0.21	50.12	0.0591	-8.3173	-0.0499
530	SLU 54	-0.61	-0.15	50.13	0.0591	-8.3169	-0.0366
530	SLU 55	-0.6	-0.12	49.83	0.0587	-8.2688	-0.0283
530	SLU 56	-0.62	-0.21	50.64	0.0597	-8.398	-0.0507
530	SLU 57	-0.62	-0.16	50.64	0.0597	-8.3975	-0.0375
530	SLU 58	-0.61	-0.21	50.34	0.0592	-8.3502	-0.0512
530	SLU 59	-0.61	-0.16	50.34	0.0593	-8.3497	-0.038
530	SLU 60	-0.61	-0.2	51.25	0.0607	-8.5114	-0.0493
530	SLU 61	-0.61	-0.15	51.25	0.0607	-8.511	-0.0361
530	SLU 62	-0.61	-0.21	51.77	0.0613	-8.5921	-0.0502
530	SLU 63	-0.61	-0.16	51.77	0.0613	-8.5917	-0.0369
530	SLU 64	-0.62	-0.2	49.25	0.058	-8.1719	-0.0487
530	SLU 65	-0.62	-0.11	49.26	0.0581	-8.1713	-0.0266
530	SLU 66	-0.63	-0.2	50.07	0.059	-8.3004	-0.0491
530	SLU 67	-0.63	-0.15	50.07	0.0591	-8.3	-0.0358
530	SLU 68	-0.63	-0.12	49.77	0.0587	-8.2519	-0.0275
530	SLU 69	-0.64	-0.21	50.58	0.0597	-8.3811	-0.0499

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
530	SLU 70	-0.64	-0.15	50.59	0.0597	-8.3807	-0.0367
530	SLU 71	-0.63	-0.21	50.28	0.0592	-8.3333	-0.0504
530	SLU 72	-0.63	-0.16	50.29	0.0593	-8.3329	-0.0372
530	SLU 73	-0.64	-0.11	53.79	0.0643	-8.9241	-0.0262
530	SLU 74	-0.65	-0.2	54.6	0.0653	-9.0532	-0.0486
530	SLU 75	-0.65	-0.15	54.61	0.0653	-9.0528	-0.0354
530	SLU 76	-0.65	-0.12	54.31	0.0649	-9.0048	-0.027
530	SLU 77	-0.66	-0.21	55.12	0.0659	-9.1339	-0.0495
530	SLU 78	-0.66	-0.15	55.12	0.0659	-9.1335	-0.0362
530	SLU 79	-0.66	-0.21	54.82	0.0655	-9.0861	-0.05
530	SLU 80	-0.65	-0.15	54.82	0.0655	-9.0857	-0.0367
530	SLU 81	-0.65	-0.2	55.73	0.0669	-9.2474	-0.0481
530	SLU 82	-0.65	-0.15	55.74	0.0669	-9.247	-0.0348
530	SLU 83	-0.66	-0.2	56.25	0.0675	-9.3281	-0.0489
530	SLU 84	-0.66	-0.15	56.25	0.0676	-9.3277	-0.0357
530	SLE RA 1	-0.47	-0.16	36.9	0.0433	-6.1244	-0.0377
530	SLE RA 2	-0.47	-0.1	36.9	0.0433	-6.1239	-0.023
530	SLE RA 3	-0.47	-0.16	37.44	0.0439	-6.21	-0.038
530	SLE RA 4	-0.47	-0.12	37.45	0.044	-6.2097	-0.0291
530	SLE RA 5	-0.47	-0.1	37.25	0.0437	-6.1777	-0.0236
530	SLE RA 6	-0.48	-0.16	37.79	0.0444	-6.2638	-0.0386
530	SLE RA 7	-0.48	-0.12	37.79	0.0444	-6.2635	-0.0297
530	SLE RA 8	-0.48	-0.16	37.59	0.0441	-6.2319	-0.0389
530	SLE RA 9	-0.48	-0.13	37.59	0.0441	-6.2317	-0.03
530	SLE RA 10	-0.48	-0.1	39.93	0.0475	-6.6258	-0.0227
530	SLE RA 11	-0.49	-0.16	40.47	0.0481	-6.7119	-0.0377
530	SLE RA 12	-0.49	-0.12	40.47	0.0481	-6.7116	-0.0288
530	SLE RA 13	-0.49	-0.1	40.27	0.0479	-6.6796	-0.0233
530	SLE RA 14	-0.49	-0.16	40.81	0.0485	-6.7657	-0.0383
530	SLE RA 15	-0.49	-0.12	40.82	0.0485	-6.7654	-0.0294
530	SLE RA 16	-0.49	-0.16	40.61	0.0482	-6.7338	-0.0386
530	SLE RA 17	-0.49	-0.12	40.62	0.0483	-6.7335	-0.0298
530	SLE RA 18	-0.49	-0.15	41.22	0.0492	-6.8413	-0.0373
530	SLE RA 19	-0.49	-0.12	41.22	0.0492	-6.8411	-0.0285
530	SLE RA 20	-0.49	-0.16	41.57	0.0496	-6.8951	-0.0379
530	SLE RA 21	-0.49	-0.12	41.57	0.0496	-6.8948	-0.0291
530	SLE FR 1	-0.47	-0.16	36.9	0.0433	-6.1244	-0.0377
530	SLE FR 2	-0.47	-0.14	36.9	0.0433	-6.1243	-0.0348
530	SLE FR 3	-0.47	-0.16	37.04	0.0434	-6.1459	-0.038
530	SLE FR 4	-0.47	-0.14	38.2	0.045	-6.3394	-0.0347
530	SLE FR 5	-0.48	-0.16	38.33	0.0452	-6.361	-0.0378
530	SLE FR 6	-0.48	-0.16	39.06	0.0462	-6.4828	-0.0375
530	SLE QP 1	-0.47	-0.16	36.9	0.0433	-6.1244	-0.0377
530	SLE QP 2	-0.47	-0.16	38.2	0.045	-6.3394	-0.0376
530	SLD 1	2.22	0.37	48.8	0.0582	-7.9176	0.0948
530	SLD 2	2.31	-0.31	48.8	0.0598	-7.9437	-0.0755
530	SLD 3	2.27	-1.05	48.63	0.061	-8.0075	-0.26
530	SLD 4	2.36	-1.73	48.63	0.0625	-8.0335	-0.4303
530	SLD 5	0.23	2.28	41.63	0.0445	-6.672	0.5705
530	SLD 6	0.29	1.83	41.63	0.0455	-6.6891	0.4588
530	SLD 7	0.42	-2.45	41.08	0.0538	-6.9714	-0.6121
530	SLD 8	0.48	-2.9	41.07	0.0548	-6.9885	-0.7238
530	SLD 9	-1.42	2.59	35.32	0.0353	-5.6904	0.6486
530	SLD 10	-1.36	2.14	35.32	0.0363	-5.7074	0.5369
530	SLD 11	-1.24	-2.14	34.77	0.0446	-5.9898	-0.534
530	SLD 12	-1.18	-2.59	34.76	0.0456	-6.0069	-0.6457
530	SLD 13	-3.31	1.42	27.76	0.0275	-4.6454	0.3551
530	SLD 14	-3.22	0.73	27.76	0.0291	-4.6714	0.1848
530	SLD 15	-3.25	0	27.6	0.0303	-4.7352	0.0003
530	SLD 16	-3.16	-0.69	27.59	0.0319	-4.7613	-0.17
530	SLV 1	5.82	1.03	63.01	0.076	-10.0346	0.2599
530	SLV 2	6.03	-0.56	63	0.0796	-10.0953	-0.1368
530	SLV 3	5.94	-2.2	62.62	0.0823	-10.2403	-0.5476
530	SLV 4	6.16	-3.79	62.61	0.0859	-10.301	-0.9443
530	SLV 5	1.19	5.38	46.23	0.0441	-7.1256	1.3447
530	SLV 6	1.32	4.35	46.22	0.0465	-7.1647	1.089
530	SLV 7	1.61	-5.39	44.94	0.0651	-7.8112	-1.347
530	SLV 8	1.74	-6.42	44.93	0.0675	-7.8503	-1.6027
530	SLV 9	-2.69	6.11	31.46	0.0226	-4.8286	1.5275
530	SLV 10	-2.55	5.08	31.45	0.0249	-4.8677	1.2718
530	SLV 11	-2.27	-4.66	30.17	0.0436	-5.5142	-1.1642
530	SLV 12	-2.13	-5.69	30.16	0.046	-5.5533	-1.4199
530	SLV 13	-7.1	3.48	13.78	0.0042	-2.3779	0.8691
530	SLV 14	-6.89	1.89	13.77	0.0078	-2.4386	0.4724
530	SLV 15	-6.98	0.25	13.39	0.0105	-2.5836	0.0616
530	SLV 16	-6.77	-1.34	13.38	0.0141	-2.6443	-0.3351
530	CRTFP Ux+	0	0	0	0	0	0
530	CRTFP Ux-	0	0	0	0	0	0
530	CRTFP Uy+	0	0	0	0	0	0
530	CRTFP Uy-	0	0	0	0	0	0
535	SLU 1	0.16	-0.24	42.25	-0.0151	13.0699	0.078
535	SLU 2	0.16	-0.17	42.25	-0.0155	13.0693	0.055
535	SLU 3	0.17	-0.23	43.17	-0.0151	13.3471	0.0744
535	SLU 4	0.17	-0.19	43.17	-0.0153	13.3467	0.0605
535	SLU 5	0.16	-0.17	42.83	-0.0155	13.2425	0.0558
535	SLU 6	0.17	-0.23	43.75	-0.0151	13.5203	0.0752
535	SLU 7	0.17	-0.19	43.75	-0.0153	13.5199	0.0614
535	SLU 8	0.17	-0.24	43.41	-0.0151	13.4164	0.0797
535	SLU 9	0.17	-0.2	43.41	-0.0153	13.416	0.0659
535	SLU 10	0.18	-0.15	48.02	-0.016	14.806	0.0485

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
535	SLU 11	0.19	-0.21	48.94	-0.0156	15.0838	0.0679
535	SLU 12	0.19	-0.17	48.94	-0.0158	15.0834	0.054
535	SLU 13	0.19	-0.16	48.6	-0.016	14.9793	0.0493
535	SLU 14	0.2	-0.21	49.52	-0.0156	15.257	0.0687
535	SLU 15	0.19	-0.17	49.52	-0.0158	15.2567	0.0549
535	SLU 16	0.19	-0.23	49.18	-0.0156	15.1531	0.0733
535	SLU 17	0.19	-0.19	49.18	-0.0158	15.1527	0.0594
535	SLU 18	0.19	-0.21	50.49	-0.0159	15.551	0.0688
535	SLU 19	0.19	-0.17	50.49	-0.0161	15.5506	0.0549
535	SLU 20	0.2	-0.22	51.07	-0.0159	15.7242	0.0696
535	SLU 21	0.2	-0.18	51.07	-0.0161	15.7238	0.0558
535	SLU 22	0.18	-0.19	47.37	-0.0147	14.6113	0.0618
535	SLU 23	0.18	-0.13	47.37	-0.0151	14.6107	0.0387
535	SLU 24	0.19	-0.18	48.29	-0.0146	14.8885	0.0581
535	SLU 25	0.19	-0.14	48.29	-0.0149	14.8881	0.0443
535	SLU 26	0.18	-0.13	47.95	-0.015	14.7839	0.0395
535	SLU 27	0.19	-0.18	48.87	-0.0146	15.0617	0.059
535	SLU 28	0.19	-0.14	48.87	-0.0148	15.0613	0.0451
535	SLU 29	0.19	-0.2	48.53	-0.0146	14.9578	0.0635
535	SLU 30	0.19	-0.16	48.53	-0.0149	14.9574	0.0496
535	SLU 31	0.2	-0.11	53.14	-0.0156	16.3475	0.0322
535	SLU 32	0.21	-0.16	54.06	-0.0152	16.6252	0.0516
535	SLU 33	0.21	-0.13	54.06	-0.0154	16.6249	0.0378
535	SLU 34	0.21	-0.11	53.72	-0.0156	16.5207	0.0331
535	SLU 35	0.22	-0.17	54.64	-0.0151	16.7985	0.0525
535	SLU 36	0.22	-0.13	54.64	-0.0154	16.7981	0.0386
535	SLU 37	0.21	-0.18	54.3	-0.0152	16.6946	0.057
535	SLU 38	0.21	-0.14	54.3	-0.0154	16.6942	0.0432
535	SLU 39	0.21	-0.17	55.61	-0.0155	17.0924	0.0525
535	SLU 40	0.21	-0.13	55.61	-0.0157	17.092	0.0387
535	SLU 41	0.22	-0.17	56.19	-0.0154	17.2657	0.0534
535	SLU 42	0.22	-0.13	56.19	-0.0156	17.2653	0.0395
535	SLU 43	0.2	-0.32	53.17	-0.0198	16.4624	0.107
535	SLU 44	0.2	-0.26	53.17	-0.0202	16.4617	0.0839
535	SLU 45	0.21	-0.31	54.09	-0.0198	16.7395	0.1034
535	SLU 46	0.21	-0.27	54.09	-0.02	16.7391	0.0895
535	SLU 47	0.21	-0.26	53.75	-0.0202	16.635	0.0848
535	SLU 48	0.21	-0.32	54.67	-0.0198	16.9128	0.1042
535	SLU 49	0.21	-0.28	54.67	-0.02	16.9124	0.0904
535	SLU 50	0.21	-0.33	54.33	-0.0198	16.8088	0.1087
535	SLU 51	0.21	-0.29	54.33	-0.02	16.8085	0.0949
535	SLU 52	0.22	-0.24	58.94	-0.0207	18.1985	0.0775
535	SLU 53	0.23	-0.3	59.86	-0.0203	18.4763	0.0969
535	SLU 54	0.23	-0.26	59.86	-0.0205	18.4759	0.083
535	SLU 55	0.23	-0.24	59.52	-0.0207	18.3717	0.0783
535	SLU 56	0.24	-0.3	60.44	-0.0203	18.6495	0.0977
535	SLU 57	0.24	-0.26	60.44	-0.0205	18.6491	0.0839
535	SLU 58	0.24	-0.31	60.1	-0.0203	18.5456	0.1022
535	SLU 59	0.23	-0.27	60.1	-0.0205	18.5452	0.0884
535	SLU 60	0.23	-0.3	61.41	-0.0206	18.9435	0.0978
535	SLU 61	0.23	-0.26	61.41	-0.0208	18.9431	0.0839
535	SLU 62	0.24	-0.3	61.99	-0.0206	19.1167	0.0986
535	SLU 63	0.24	-0.26	61.99	-0.0208	19.1163	0.0848
535	SLU 64	0.22	-0.28	58.29	-0.0194	18.0038	0.0908
535	SLU 65	0.22	-0.21	58.29	-0.0198	18.0032	0.0677
535	SLU 66	0.23	-0.27	59.21	-0.0193	18.281	0.0871
535	SLU 67	0.23	-0.23	59.21	-0.0196	18.2806	0.0733
535	SLU 68	0.23	-0.22	58.87	-0.0197	18.1764	0.0685
535	SLU 69	0.23	-0.27	59.79	-0.0193	18.4542	0.088
535	SLU 70	0.23	-0.23	59.79	-0.0195	18.4538	0.0741
535	SLU 71	0.23	-0.28	59.45	-0.0193	18.3503	0.0925
535	SLU 72	0.23	-0.24	59.45	-0.0196	18.3499	0.0786
535	SLU 73	0.24	-0.2	64.06	-0.0203	19.7399	0.0612
535	SLU 74	0.25	-0.25	64.98	-0.0199	20.0177	0.0806
535	SLU 75	0.25	-0.21	64.98	-0.0201	20.0173	0.0668
535	SLU 76	0.25	-0.2	64.64	-0.0203	19.9132	0.0621
535	SLU 77	0.26	-0.25	65.56	-0.0198	20.191	0.0815
535	SLU 78	0.26	-0.21	65.56	-0.0201	20.1906	0.0676
535	SLU 79	0.26	-0.27	65.22	-0.0199	20.087	0.086
535	SLU 80	0.26	-0.23	65.22	-0.0201	20.0867	0.0721
535	SLU 81	0.25	-0.25	66.53	-0.0202	20.4849	0.0815
535	SLU 82	0.25	-0.21	66.53	-0.0204	20.4845	0.0677
535	SLU 83	0.26	-0.26	67.11	-0.0201	20.6581	0.0824
535	SLU 84	0.26	-0.22	67.11	-0.0203	20.6577	0.0685
535	SLE RA 1	0.17	-0.22	43.71	-0.015	13.5103	0.0734
535	SLE RA 2	0.17	-0.18	43.71	-0.0153	13.5099	0.058
535	SLE RA 3	0.17	-0.22	44.33	-0.015	13.6951	0.071
535	SLE RA 4	0.17	-0.19	44.33	-0.0151	13.6948	0.0617
535	SLE RA 5	0.17	-0.18	44.1	-0.0152	13.6254	0.0586
535	SLE RA 6	0.17	-0.22	44.71	-0.015	13.8106	0.0715
535	SLE RA 7	0.17	-0.19	44.71	-0.0151	13.8103	0.0623
535	SLE RA 8	0.17	-0.23	44.49	-0.015	13.7413	0.0745
535	SLE RA 9	0.17	-0.2	44.49	-0.0151	13.741	0.0653
535	SLE RA 10	0.18	-0.17	47.56	-0.0156	14.6677	0.0537
535	SLE RA 11	0.19	-0.21	48.17	-0.0153	14.8529	0.0666
535	SLE RA 12	0.19	-0.18	48.17	-0.0155	14.8527	0.0574
535	SLE RA 13	0.18	-0.17	47.94	-0.0156	14.7832	0.0543
535	SLE RA 14	0.19	-0.21	48.56	-0.0153	14.9684	0.0672
535	SLE RA 15	0.19	-0.18	48.56	-0.0155	14.9682	0.058
535	SLE RA 16	0.19	-0.22	48.33	-0.0153	14.8991	0.0702

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
535	SLE RA 17	0.19	-0.19	48.33	-0.0155	14.8989	0.061
535	SLE RA 18	0.19	-0.21	49.21	-0.0155	15.1644	0.0672
535	SLE RA 19	0.19	-0.18	49.21	-0.0157	15.1641	0.058
535	SLE RA 20	0.19	-0.21	49.59	-0.0155	15.2799	0.0678
535	SLE RA 21	0.19	-0.18	49.59	-0.0156	15.2796	0.0586
535	SLE FR 1	0.17	-0.22	43.71	-0.015	13.5103	0.0734
535	SLE FR 2	0.17	-0.22	43.71	-0.0151	13.5102	0.0703
535	SLE FR 3	0.17	-0.23	43.87	-0.015	13.5565	0.0736
535	SLE FR 4	0.17	-0.21	45.36	-0.0152	14.0064	0.0685
535	SLE FR 5	0.17	-0.22	45.52	-0.0152	14.0527	0.0718
535	SLE FR 6	0.18	-0.22	46.46	-0.0153	14.3373	0.0703
535	SLE QP 1	0.17	-0.22	43.71	-0.015	13.5103	0.0734
535	SLE QP 2	0.17	-0.22	45.36	-0.0152	14.0065	0.0715
535	SLD 1	3.58	0.34	45.41	-0.019	14.0182	-0.1248
535	SLD 2	3.67	0.38	45.44	-0.0195	14.0247	-0.1373
535	SLD 3	3.62	-1.01	45.79	-0.0124	14.1318	0.3486
535	SLD 4	3.72	-0.97	45.82	-0.0129	14.1383	0.3361
535	SLD 5	1.11	1.99	44.8	-0.0263	13.8365	-0.7031
535	SLD 6	1.17	2.02	44.82	-0.0266	13.8407	-0.7113
535	SLD 7	1.26	-2.52	46.05	-0.0042	14.2154	0.8749
535	SLD 8	1.32	-2.49	46.07	-0.0045	14.2196	0.8667
535	SLD 9	-0.98	2.05	44.65	-0.0258	13.7934	-0.7236
535	SLD 10	-0.91	2.08	44.67	-0.0262	13.7977	-0.7318
535	SLD 11	-0.83	-2.46	45.9	-0.0037	14.1723	0.8544
535	SLD 12	-0.76	-2.43	45.92	-0.004	14.1766	0.8462
535	SLD 13	-3.37	0.54	44.91	-0.0174	13.8747	-0.193
535	SLD 14	-3.28	0.58	44.93	-0.018	13.8812	-0.2055
535	SLD 15	-3.33	-0.82	45.28	-0.0108	13.9884	0.2804
535	SLD 16	-3.23	-0.78	45.31	-0.0113	13.9949	0.2679
535	SLV 1	8.13	1.04	45.5	-0.024	14.037	-0.3732
535	SLV 2	8.36	1.14	45.56	-0.0252	14.0521	-0.4022
535	SLV 3	8.24	-2.04	46.35	-0.0089	14.2957	0.7047
535	SLV 4	8.47	-1.94	46.41	-0.0101	14.3108	0.6757
535	SLV 5	2.36	4.81	44.1	-0.0405	13.6207	-1.6916
535	SLV 6	2.51	4.87	44.13	-0.0413	13.6305	-1.7103
535	SLV 7	2.71	-5.45	46.94	0.0098	14.483	1.9012
535	SLV 8	2.86	-5.39	46.98	0.009	14.4927	1.8825
535	SLV 9	-2.52	4.95	43.74	-0.0394	13.5203	-1.7394
535	SLV 10	-2.37	5.01	43.78	-0.0402	13.53	-1.7581
535	SLV 11	-2.16	-5.31	46.59	0.0109	14.3826	1.8534
535	SLV 12	-2.02	-5.25	46.63	0.0102	14.3923	1.8347
535	SLV 13	-8.12	1.5	44.31	-0.0203	13.7022	-0.5326
535	SLV 14	-7.9	1.6	44.37	-0.0215	13.7173	-0.5616
535	SLV 15	-8.02	-1.58	45.17	-0.0052	13.9609	0.5453
535	SLV 16	-7.79	-1.48	45.22	-0.0064	13.976	0.5163
535	CRTFP Ux+	0	0	0	0	0	0
535	CRTFP Ux-	0	0	0	0	0	0
535	CRTFP Uy+	0	0	0	0	0	0
535	CRTFP Uy-	0	0	0	0	0	0
538	SLU 1	-0.68	-0.79	61.67	-0.0031	-0.2454	-0.0009
538	SLU 2	-0.68	-0.69	61.66	-0.003	-0.2447	-0.0008
538	SLU 3	-0.69	-0.79	63.08	-0.003	-0.2519	-0.001
538	SLU 4	-0.69	-0.73	63.07	-0.0029	-0.2515	-0.0009
538	SLU 5	-0.69	-0.7	62.55	-0.0031	-0.2488	-0.0008
538	SLU 6	-0.7	-0.8	63.97	-0.0031	-0.256	-0.001
538	SLU 7	-0.7	-0.75	63.96	-0.003	-0.2556	-0.0009
538	SLU 8	-0.7	-0.81	63.45	-0.0033	-0.2536	-0.0009
538	SLU 9	-0.7	-0.75	63.44	-0.0032	-0.2532	-0.0008
538	SLU 10	-0.71	-0.74	70.01	-0.0015	-0.2909	-0.0013
538	SLU 11	-0.72	-0.84	71.43	-0.0015	-0.298	-0.0015
538	SLU 12	-0.72	-0.78	71.43	-0.0015	-0.2976	-0.0014
538	SLU 13	-0.72	-0.75	70.9	-0.0016	-0.295	-0.0013
538	SLU 14	-0.73	-0.86	72.32	-0.0016	-0.3022	-0.0015
538	SLU 15	-0.73	-0.8	72.32	-0.0016	-0.3018	-0.0014
538	SLU 16	-0.73	-0.87	71.8	-0.0018	-0.2998	-0.0014
538	SLU 17	-0.73	-0.81	71.79	-0.0018	-0.2994	-0.0013
538	SLU 18	-0.72	-0.86	73.6	-0.001	-0.3113	-0.0016
538	SLU 19	-0.72	-0.8	73.6	-0.001	-0.3109	-0.0016
538	SLU 20	-0.73	-0.88	74.49	-0.0011	-0.3154	-0.0016
538	SLU 21	-0.73	-0.82	74.49	-0.0011	-0.315	-0.0016
538	SLU 22	-0.74	-0.8	69.62	-0.0013	-0.2782	-0.0016
538	SLU 23	-0.74	-0.71	69.6	-0.0012	-0.2776	-0.0015
538	SLU 24	-0.76	-0.81	71.03	-0.0012	-0.2847	-0.0017
538	SLU 25	-0.76	-0.75	71.02	-0.0011	-0.2843	-0.0016
538	SLU 26	-0.75	-0.72	70.49	-0.0013	-0.2817	-0.0015
538	SLU 27	-0.77	-0.82	71.92	-0.0013	-0.2889	-0.0016
538	SLU 28	-0.77	-0.76	71.91	-0.0012	-0.2885	-0.0016
538	SLU 29	-0.76	-0.83	71.39	-0.0015	-0.2865	-0.0016
538	SLU 30	-0.76	-0.77	71.39	-0.0014	-0.2861	-0.0015
538	SLU 31	-0.77	-0.76	77.96	0.0002	-0.3237	-0.002
538	SLU 32	-0.79	-0.86	79.38	0.0003	-0.3309	-0.0022
538	SLU 33	-0.79	-0.8	79.37	0.0003	-0.3305	-0.0021
538	SLU 34	-0.78	-0.77	78.85	0.0001	-0.3278	-0.002
538	SLU 35	-0.8	-0.87	80.27	0.0002	-0.335	-0.0022
538	SLU 36	-0.8	-0.82	80.26	0.0002	-0.3346	-0.0021
538	SLU 37	-0.79	-0.88	79.75	-0.0001	-0.3327	-0.0021
538	SLU 38	-0.79	-0.82	79.74	0	-0.3322	-0.002
538	SLU 39	-0.79	-0.88	81.55	0.0008	-0.3442	-0.0023
538	SLU 40	-0.79	-0.82	81.54	0.0008	-0.3438	-0.0023
538	SLU 41	-0.8	-0.89	82.44	0.0007	-0.3483	-0.0023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
538	SLU 42	-0.8	-0.83	82.43	0.0007	-0.3479	-0.0023
538	SLU 43	-0.86	-1.02	77.45	-0.0046	-0.3077	-0.0009
538	SLU 44	-0.86	-0.92	77.43	-0.0045	-0.307	-0.0008
538	SLU 45	-0.87	-1.02	78.86	-0.0045	-0.3142	-0.001
538	SLU 46	-0.87	-0.96	78.85	-0.0044	-0.3138	-0.001
538	SLU 47	-0.87	-0.93	78.32	-0.0046	-0.3112	-0.0008
538	SLU 48	-0.88	-1.03	79.75	-0.0046	-0.3183	-0.001
538	SLU 49	-0.88	-0.98	79.74	-0.0045	-0.3179	-0.0009
538	SLU 50	-0.88	-1.04	79.22	-0.0048	-0.316	-0.0009
538	SLU 51	-0.88	-0.98	79.22	-0.0047	-0.3156	-0.0009
538	SLU 52	-0.89	-0.97	85.79	-0.0031	-0.3532	-0.0014
538	SLU 53	-0.9	-1.07	87.21	-0.0031	-0.3604	-0.0015
538	SLU 54	-0.9	-1.01	87.2	-0.003	-0.36	-0.0015
538	SLU 55	-0.9	-0.98	86.68	-0.0032	-0.3573	-0.0014
538	SLU 56	-0.91	-1.09	88.1	-0.0032	-0.3645	-0.0015
538	SLU 57	-0.91	-1.03	88.09	-0.0031	-0.3641	-0.0015
538	SLU 58	-0.91	-1.1	87.58	-0.0034	-0.3621	-0.0014
538	SLU 59	-0.91	-1.04	87.57	-0.0033	-0.3617	-0.0014
538	SLU 60	-0.9	-1.09	89.38	-0.0025	-0.3737	-0.0017
538	SLU 61	-0.9	-1.03	89.37	-0.0025	-0.3733	-0.0016
538	SLU 62	-0.91	-1.11	90.27	-0.0027	-0.3778	-0.0016
538	SLU 63	-0.91	-1.05	90.26	-0.0026	-0.3774	-0.0016
538	SLU 64	-0.92	-1.03	85.39	-0.0028	-0.3406	-0.0016
538	SLU 65	-0.92	-0.94	85.38	-0.0027	-0.3399	-0.0015
538	SLU 66	-0.94	-1.04	86.8	-0.0027	-0.3471	-0.0017
538	SLU 67	-0.94	-0.98	86.8	-0.0026	-0.3467	-0.0016
538	SLU 68	-0.93	-0.95	86.27	-0.0028	-0.344	-0.0015
538	SLU 69	-0.95	-1.05	87.69	-0.0028	-0.3512	-0.0017
538	SLU 70	-0.95	-0.99	87.69	-0.0028	-0.3508	-0.0016
538	SLU 71	-0.94	-1.06	87.17	-0.003	-0.3488	-0.0016
538	SLU 72	-0.94	-1	87.16	-0.003	-0.3484	-0.0015
538	SLU 73	-0.95	-0.99	93.73	-0.0013	-0.3861	-0.0021
538	SLU 74	-0.97	-1.09	95.16	-0.0013	-0.3932	-0.0022
538	SLU 75	-0.97	-1.03	95.15	-0.0012	-0.3928	-0.0022
538	SLU 76	-0.96	-1	94.62	-0.0014	-0.3902	-0.0021
538	SLU 77	-0.98	-1.1	96.05	-0.0014	-0.3974	-0.0022
538	SLU 78	-0.98	-1.05	96.04	-0.0013	-0.397	-0.0022
538	SLU 79	-0.97	-1.11	95.52	-0.0016	-0.395	-0.0021
538	SLU 80	-0.97	-1.05	95.52	-0.0015	-0.3946	-0.0021
538	SLU 81	-0.97	-1.11	97.33	-0.0008	-0.4065	-0.0023
538	SLU 82	-0.97	-1.05	97.32	-0.0007	-0.4061	-0.0023
538	SLU 83	-0.98	-1.12	98.21	-0.0009	-0.4107	-0.0023
538	SLU 84	-0.98	-1.06	98.21	-0.0008	-0.4102	-0.0023
538	SLE RA 1	-0.69	-0.79	63.94	-0.0026	-0.2548	-0.0011
538	SLE RA 2	-0.69	-0.73	63.93	-0.0025	-0.2543	-0.001
538	SLE RA 3	-0.7	-0.79	64.88	-0.0025	-0.2591	-0.0011
538	SLE RA 4	-0.7	-0.76	64.88	-0.0024	-0.2588	-0.0011
538	SLE RA 5	-0.7	-0.74	64.52	-0.0026	-0.2571	-0.001
538	SLE RA 6	-0.71	-0.8	65.47	-0.0026	-0.2618	-0.0011
538	SLE RA 7	-0.71	-0.76	65.47	-0.0025	-0.2616	-0.0011
538	SLE RA 8	-0.71	-0.81	65.13	-0.0027	-0.2603	-0.0011
538	SLE RA 9	-0.71	-0.77	65.12	-0.0027	-0.26	-0.001
538	SLE RA 10	-0.72	-0.76	69.5	-0.0015	-0.2851	-0.0014
538	SLE RA 11	-0.73	-0.83	70.45	-0.0015	-0.2899	-0.0015
538	SLE RA 12	-0.73	-0.79	70.45	-0.0015	-0.2896	-0.0015
538	SLE RA 13	-0.72	-0.77	70.09	-0.0016	-0.2878	-0.0014
538	SLE RA 14	-0.73	-0.84	71.04	-0.0016	-0.2926	-0.0015
538	SLE RA 15	-0.73	-0.8	71.04	-0.0016	-0.2923	-0.0015
538	SLE RA 16	-0.73	-0.84	70.69	-0.0017	-0.291	-0.0014
538	SLE RA 17	-0.73	-0.81	70.69	-0.0017	-0.2908	-0.0014
538	SLE RA 18	-0.72	-0.84	71.9	-0.0012	-0.2987	-0.0016
538	SLE RA 19	-0.72	-0.8	71.89	-0.0012	-0.2985	-0.0016
538	SLE RA 20	-0.73	-0.85	72.49	-0.0013	-0.3015	-0.0016
538	SLE RA 21	-0.73	-0.81	72.48	-0.0012	-0.3012	-0.0015
538	SLE FR 1	-0.69	-0.79	63.94	-0.0026	-0.2548	-0.0011
538	SLE FR 2	-0.69	-0.78	63.94	-0.0025	-0.2547	-0.0011
538	SLE FR 3	-0.7	-0.8	64.18	-0.0026	-0.2559	-0.0011
538	SLE FR 4	-0.7	-0.79	66.32	-0.0021	-0.2679	-0.0012
538	SLE FR 5	-0.71	-0.81	66.56	-0.0022	-0.269	-0.0012
538	SLE FR 6	-0.71	-0.82	67.92	-0.0019	-0.2767	-0.0013
538	SLE QP 1	-0.69	-0.79	63.94	-0.0026	-0.2548	-0.0011
538	SLE QP 2	-0.7	-0.81	66.33	-0.0021	-0.2679	-0.0012
538	SLD 1	4.66	-0.13	71.87	-0.0015	-0.0558	0.0053
538	SLD 2	4.78	-0.62	71.87	-0.0001	-0.0623	0.0163
538	SLD 3	4.6	-1.96	72.33	0.0014	-0.0944	0.0076
538	SLD 4	4.71	-2.45	72.34	0.0028	-0.1009	0.0187
538	SLD 5	0.99	2.26	67.28	-0.0067	-0.1446	-0.0049
538	SLD 6	1.07	1.94	67.28	-0.0058	-0.1488	0.0024
538	SLD 7	0.76	-3.85	68.84	0.0032	-0.2733	0.0031
538	SLD 8	0.84	-4.16	68.84	0.0041	-0.2775	0.0104
538	SLD 9	-2.25	2.55	63.81	-0.0083	-0.2584	-0.0128
538	SLD 10	-2.17	2.23	63.82	-0.0074	-0.2626	-0.0055
538	SLD 11	-2.47	-3.56	65.37	0.0015	-0.3871	-0.0048
538	SLD 12	-2.39	-3.87	65.38	0.0024	-0.3913	0.0024
538	SLD 13	-6.12	0.83	60.31	-0.0071	-0.435	-0.0212
538	SLD 14	-6	0.35	60.32	-0.0057	-0.4415	-0.0101
538	SLD 15	-6.19	-1	60.78	-0.0041	-0.4736	-0.0188
538	SLD 16	-6.07	-1.48	60.79	-0.0028	-0.4801	-0.0077
538	SLV 1	11.85	0.71	79.3	-0.0001	0.2274	0.0141
538	SLV 2	12.12	-0.42	79.31	0.0031	0.2124	0.0398

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
538	SLV 3	11.69	-3.46	80.36	0.0066	0.1393	0.0195
538	SLV 4	11.97	-4.59	80.37	0.0098	0.1243	0.0453
538	SLV 5	3.25	6.17	68.6	-0.0122	0.0168	-0.0094
538	SLV 6	3.43	5.44	68.61	-0.0102	0.0071	0.0073
538	SLV 7	2.73	-7.74	72.15	0.0101	-0.2768	0.0088
538	SLV 8	2.91	-8.46	72.15	0.0122	-0.2864	0.0255
538	SLV 9	-4.31	6.85	60.5	-0.0165	-0.2495	-0.0279
538	SLV 10	-4.13	6.12	60.51	-0.0144	-0.2591	-0.0113
538	SLV 11	-4.84	-7.06	64.04	0.0059	-0.543	-0.0097
538	SLV 12	-4.66	-7.78	64.05	0.008	-0.5527	0.0069
538	SLV 13	-13.37	2.97	52.28	-0.0141	-0.6602	-0.0478
538	SLV 14	-13.1	1.85	52.29	-0.0109	-0.6752	-0.022
538	SLV 15	-13.53	-1.2	53.34	-0.0074	-0.7483	-0.0423
538	SLV 16	-13.25	-2.33	53.35	-0.0042	-0.7633	-0.0165
538	CRTFP Ux+	0	0	0	0	0	0
538	CRTFP Ux-	0	0	0	0	0	0
542	SLU 1	0.74	-0.65	59.83	-0.0118	0.1362	-0.0116
542	SLU 2	0.74	-0.55	59.82	-0.0119	0.135	-0.0116
542	SLU 3	0.76	-0.66	61.16	-0.0122	0.1377	-0.0118
542	SLU 4	0.76	-0.6	61.15	-0.0122	0.137	-0.0118
542	SLU 5	0.75	-0.57	60.65	-0.0124	0.1353	-0.0117
542	SLU 6	0.77	-0.67	61.99	-0.0126	0.1379	-0.012
542	SLU 7	0.77	-0.61	61.99	-0.0127	0.1372	-0.0119
542	SLU 8	0.77	-0.68	61.5	-0.0127	0.1367	-0.0119
542	SLU 9	0.77	-0.62	61.49	-0.0127	0.136	-0.0119
542	SLU 10	0.8	-0.58	67.84	-0.0116	0.1599	-0.0127
542	SLU 11	0.82	-0.68	69.18	-0.0118	0.1626	-0.0129
542	SLU 12	0.82	-0.62	69.17	-0.0119	0.1619	-0.0129
542	SLU 13	0.81	-0.6	68.67	-0.012	0.1602	-0.0128
542	SLU 14	0.83	-0.7	70.01	-0.0122	0.1628	-0.013
542	SLU 15	0.83	-0.64	70.01	-0.0123	0.1621	-0.013
542	SLU 16	0.82	-0.71	69.52	-0.0123	0.1616	-0.013
542	SLU 17	0.82	-0.65	69.51	-0.0124	0.1609	-0.013
542	SLU 18	0.82	-0.69	71.29	-0.0113	0.1717	-0.0131
542	SLU 19	0.82	-0.63	71.28	-0.0114	0.1711	-0.0131
542	SLU 20	0.83	-0.71	72.12	-0.0117	0.172	-0.0133
542	SLU 21	0.83	-0.65	72.12	-0.0118	0.1713	-0.0133
542	SLU 22	0.82	-0.65	67.46	-0.0117	0.1406	-0.0124
542	SLU 23	0.82	-0.56	67.45	-0.0117	0.1395	-0.0124
542	SLU 24	0.84	-0.66	68.79	-0.012	0.1421	-0.0126
542	SLU 25	0.84	-0.6	68.78	-0.0121	0.1415	-0.0126
542	SLU 26	0.83	-0.57	68.28	-0.0122	0.1398	-0.0125
542	SLU 27	0.85	-0.68	69.62	-0.0124	0.1424	-0.0128
542	SLU 28	0.85	-0.62	69.61	-0.0125	0.1417	-0.0128
542	SLU 29	0.84	-0.69	69.12	-0.0125	0.1411	-0.0127
542	SLU 30	0.84	-0.63	69.12	-0.0126	0.1405	-0.0127
542	SLU 31	0.87	-0.58	75.47	-0.0114	0.1644	-0.0135
542	SLU 32	0.89	-0.69	76.81	-0.0116	0.167	-0.0137
542	SLU 33	0.89	-0.63	76.8	-0.0117	0.1664	-0.0137
542	SLU 34	0.89	-0.6	76.3	-0.0118	0.1647	-0.0136
542	SLU 35	0.91	-0.7	77.64	-0.0121	0.1673	-0.0138
542	SLU 36	0.91	-0.64	77.64	-0.0121	0.1666	-0.0138
542	SLU 37	0.9	-0.71	77.15	-0.0121	0.166	-0.0138
542	SLU 38	0.9	-0.65	77.14	-0.0122	0.1654	-0.0138
542	SLU 39	0.9	-0.7	78.92	-0.0111	0.1762	-0.0139
542	SLU 40	0.9	-0.64	78.91	-0.0112	0.1755	-0.0139
542	SLU 41	0.91	-0.71	79.75	-0.0116	0.1765	-0.0141
542	SLU 42	0.91	-0.65	79.74	-0.0116	0.1758	-0.0141
542	SLU 43	0.94	-0.84	75.16	-0.0155	0.1755	-0.0148
542	SLU 44	0.94	-0.74	75.15	-0.0155	0.1744	-0.0148
542	SLU 45	0.96	-0.85	76.49	-0.0158	0.177	-0.015
542	SLU 46	0.96	-0.79	76.49	-0.0159	0.1763	-0.015
542	SLU 47	0.95	-0.76	75.98	-0.016	0.1746	-0.0149
542	SLU 48	0.97	-0.86	77.33	-0.0162	0.1772	-0.0152
542	SLU 49	0.97	-0.8	77.32	-0.0163	0.1766	-0.0151
542	SLU 50	0.96	-0.87	76.83	-0.0163	0.176	-0.0151
542	SLU 51	0.96	-0.81	76.82	-0.0164	0.1753	-0.0151
542	SLU 52	0.99	-0.77	83.17	-0.0152	0.1993	-0.0159
542	SLU 53	1.01	-0.88	84.51	-0.0154	0.2019	-0.0161
542	SLU 54	1.01	-0.82	84.51	-0.0155	0.2012	-0.0161
542	SLU 55	1.01	-0.79	84.01	-0.0156	0.1995	-0.016
542	SLU 56	1.03	-0.89	85.35	-0.0159	0.2021	-0.0162
542	SLU 57	1.03	-0.83	85.34	-0.0159	0.2015	-0.0162
542	SLU 58	1.02	-0.9	84.85	-0.0159	0.2009	-0.0162
542	SLU 59	1.02	-0.84	84.84	-0.016	0.2002	-0.0162
542	SLU 60	1.02	-0.89	86.62	-0.0149	0.2111	-0.0163
542	SLU 61	1.02	-0.83	86.62	-0.015	0.2104	-0.0163
542	SLU 62	1.03	-0.9	87.46	-0.0154	0.2113	-0.0165
542	SLU 63	1.03	-0.84	87.45	-0.0154	0.2106	-0.0165
542	SLU 64	1.01	-0.85	82.79	-0.0153	0.1799	-0.0156
542	SLU 65	1.01	-0.75	82.78	-0.0154	0.1788	-0.0156
542	SLU 66	1.03	-0.85	84.12	-0.0156	0.1814	-0.0158
542	SLU 67	1.03	-0.79	84.11	-0.0157	0.1808	-0.0158
542	SLU 68	1.03	-0.76	83.61	-0.0158	0.1791	-0.0157
542	SLU 69	1.05	-0.87	84.95	-0.016	0.1817	-0.016
542	SLU 70	1.05	-0.81	84.95	-0.0161	0.181	-0.016
542	SLU 71	1.04	-0.88	84.46	-0.0161	0.1804	-0.0159
542	SLU 72	1.04	-0.82	84.45	-0.0162	0.1798	-0.0159
542	SLU 73	1.07	-0.78	90.8	-0.015	0.2037	-0.0167
542	SLU 74	1.09	-0.88	92.14	-0.0153	0.2063	-0.0169

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
542	SLU 75	1.09	-0.82	92.14	-0.0153	0.2057	-0.0169
542	SLU 76	1.08	-0.79	91.63	-0.0154	0.204	-0.0168
542	SLU 77	1.1	-0.9	92.98	-0.0157	0.2066	-0.017
542	SLU 78	1.1	-0.84	92.97	-0.0157	0.2059	-0.017
542	SLU 79	1.1	-0.91	92.48	-0.0158	0.2054	-0.017
542	SLU 80	1.1	-0.85	92.47	-0.0158	0.2047	-0.017
542	SLU 81	1.09	-0.89	94.25	-0.0147	0.2155	-0.0171
542	SLU 82	1.09	-0.83	94.24	-0.0148	0.2149	-0.0171
542	SLU 83	1.11	-0.9	95.08	-0.0152	0.2158	-0.0173
542	SLU 84	1.11	-0.85	95.08	-0.0152	0.2151	-0.0173
542	SLE RA 1	0.76	-0.65	62.01	-0.0118	0.1374	-0.0118
542	SLE RA 2	0.76	-0.59	62	-0.0118	0.1367	-0.0118
542	SLE RA 3	0.78	-0.66	62.89	-0.012	0.1384	-0.012
542	SLE RA 4	0.78	-0.62	62.89	-0.0121	0.138	-0.012
542	SLE RA 5	0.77	-0.6	62.56	-0.0121	0.1369	-0.0119
542	SLE RA 6	0.79	-0.67	63.45	-0.0123	0.1386	-0.0121
542	SLE RA 7	0.79	-0.63	63.45	-0.0123	0.1382	-0.0121
542	SLE RA 8	0.78	-0.67	63.12	-0.0124	0.1378	-0.012
542	SLE RA 9	0.78	-0.63	63.11	-0.0124	0.1373	-0.012
542	SLE RA 10	0.8	-0.6	67.35	-0.0116	0.1533	-0.0125
542	SLE RA 11	0.81	-0.67	68.24	-0.0118	0.155	-0.0127
542	SLE RA 12	0.81	-0.63	68.24	-0.0118	0.1546	-0.0127
542	SLE RA 13	0.81	-0.61	67.9	-0.0119	0.1535	-0.0126
542	SLE RA 14	0.82	-0.68	68.8	-0.0121	0.1552	-0.0128
542	SLE RA 15	0.82	-0.64	68.79	-0.0121	0.1548	-0.0128
542	SLE RA 16	0.82	-0.69	68.47	-0.0121	0.1544	-0.0127
542	SLE RA 17	0.82	-0.65	68.46	-0.0121	0.1539	-0.0127
542	SLE RA 18	0.82	-0.68	69.65	-0.0114	0.1612	-0.0128
542	SLE RA 19	0.82	-0.64	69.64	-0.0115	0.1607	-0.0128
542	SLE RA 20	0.82	-0.69	70.2	-0.0117	0.1613	-0.0129
542	SLE RA 21	0.82	-0.65	70.2	-0.0118	0.1609	-0.0129
542	SLE FR 1	0.76	-0.65	62.01	-0.0118	0.1374	-0.0118
542	SLE FR 2	0.76	-0.64	62.01	-0.0118	0.1373	-0.0118
542	SLE FR 3	0.77	-0.66	62.23	-0.0119	0.1375	-0.0119
542	SLE FR 4	0.78	-0.65	64.3	-0.0117	0.1444	-0.0121
542	SLE FR 5	0.78	-0.66	64.52	-0.0118	0.1446	-0.0122
542	SLE FR 6	0.79	-0.67	65.83	-0.0116	0.1493	-0.0123
542	SLE QP 1	0.76	-0.65	62.01	-0.0118	0.1374	-0.0118
542	SLE QP 2	0.78	-0.66	64.3	-0.0117	0.1446	-0.0121
542	SLD 1	5.94	0.53	59.21	-0.0159	0.1851	0.0045
542	SLD 2	6.06	1.02	59.23	-0.0178	0.177	0.0161
542	SLD 3	5.87	-1.28	59.71	-0.0101	0.2271	0.0027
542	SLD 4	6	-0.8	59.73	-0.012	0.219	0.0143
542	SLD 5	2.41	2.36	62.01	-0.0214	0.0946	-0.0065
542	SLD 6	2.49	2.68	62.02	-0.0227	0.0893	0.0011
542	SLD 7	2.18	-3.68	63.68	-0.0021	0.2343	-0.0124
542	SLD 8	2.27	-3.37	63.69	-0.0033	0.229	-0.0048
542	SLD 9	-0.71	2.05	64.91	-0.0201	0.0601	-0.0194
542	SLD 10	-0.62	2.36	64.92	-0.0213	0.0548	-0.0118
542	SLD 11	-0.93	-4	66.58	-0.0007	0.1999	-0.0253
542	SLD 12	-0.85	-3.68	66.59	-0.0019	0.1945	-0.0178
542	SLD 13	-4.44	-0.52	68.87	-0.0114	0.0701	-0.0385
542	SLD 14	-4.31	-0.04	68.89	-0.0132	0.062	-0.027
542	SLD 15	-4.51	-2.34	69.37	-0.0056	0.1121	-0.0403
542	SLD 16	-4.38	-1.85	69.39	-0.0074	0.104	-0.0288
542	SLV 1	12.84	2.08	52.41	-0.0215	0.24	0.0268
542	SLV 2	13.14	3.2	52.44	-0.0258	0.2212	0.0537
542	SLV 3	12.69	-2.06	53.55	-0.0083	0.3354	0.0227
542	SLV 4	12.98	-0.93	53.59	-0.0126	0.3165	0.0496
542	SLV 5	4.59	6.23	58.99	-0.0339	0.0319	0.001
542	SLV 6	4.77	6.96	59.01	-0.0367	0.0197	0.0184
542	SLV 7	4.06	-7.54	62.8	0.0101	0.3496	-0.0124
542	SLV 8	4.25	-6.81	62.83	0.0073	0.3375	0.0049
542	SLV 9	-2.7	5.49	65.77	-0.0307	-0.0484	-0.0292
542	SLV 10	-2.51	6.22	65.8	-0.0335	-0.0605	-0.0118
542	SLV 11	-3.22	-8.28	69.59	0.0133	0.2694	-0.0426
542	SLV 12	-3.03	-7.55	69.61	0.0105	0.2572	-0.0253
542	SLV 13	-11.42	-0.39	75.01	-0.0108	-0.0274	-0.0739
542	SLV 14	-11.13	0.74	75.05	-0.0151	-0.0463	-0.047
542	SLV 15	-11.58	-4.52	76.16	0.0024	0.0679	-0.0779
542	SLV 16	-11.29	-3.4	76.19	-0.0019	0.0491	-0.051
542	CRTFP Ux+	0	0	0	0	0	0
542	CRTFP Ux-	0	0	0	0	0	0
542	CRTFP Uy+	0	0	0	0	0	0
542	CRTFP Uy-	0	0	0	0	0	0
543	SLU 1	0.75	0.31	42.05	0.0479	12.1236	-0.112
543	SLU 2	0.75	0.41	42.06	0.0479	12.1246	-0.145
543	SLU 3	0.77	0.33	43.02	0.0491	12.3949	-0.1161
543	SLU 4	0.77	0.38	43.02	0.0491	12.3955	-0.1359
543	SLU 5	0.76	0.41	42.67	0.0486	12.2939	-0.1453
543	SLU 6	0.78	0.33	43.62	0.0498	12.5642	-0.1164
543	SLU 7	0.78	0.38	43.63	0.0498	12.5648	-0.1362
543	SLU 8	0.77	0.32	43.26	0.0493	12.4621	-0.1127
543	SLU 9	0.77	0.37	43.27	0.0493	12.4627	-0.1324
543	SLU 10	0.8	0.48	47.44	0.0549	13.6741	-0.1717
543	SLU 11	0.82	0.4	48.4	0.056	13.9444	-0.1428
543	SLU 12	0.82	0.46	48.4	0.056	13.945	-0.1626
543	SLU 13	0.81	0.48	48.05	0.0556	13.8434	-0.172
543	SLU 14	0.84	0.4	49	0.0567	14.1136	-0.1431
543	SLU 15	0.84	0.46	49.01	0.0567	14.1142	-0.1629

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
543	SLU 16	0.83	0.39	48.64	0.0562	14.0116	-0.1394
543	SLU 17	0.83	0.45	48.65	0.0562	14.0122	-0.1591
543	SLU 18	0.83	0.42	49.74	0.0578	14.3372	-0.1502
543	SLU 19	0.82	0.48	49.74	0.0578	14.3378	-0.1699
543	SLU 20	0.84	0.42	50.34	0.0585	14.5064	-0.1505
543	SLU 21	0.84	0.48	50.35	0.0585	14.507	-0.1703
543	SLU 22	0.82	0.38	47.34	0.0548	13.6403	-0.137
543	SLU 23	0.82	0.48	47.35	0.0548	13.6413	-0.1699
543	SLU 24	0.84	0.4	48.3	0.0559	13.9115	-0.141
543	SLU 25	0.84	0.45	48.31	0.056	13.9122	-0.1608
543	SLU 26	0.83	0.48	47.95	0.0555	13.8105	-0.1702
543	SLU 27	0.85	0.4	48.91	0.0566	14.0808	-0.1414
543	SLU 28	0.85	0.45	48.91	0.0567	14.0814	-0.1611
543	SLU 29	0.85	0.39	48.55	0.0562	13.9788	-0.1376
543	SLU 30	0.85	0.44	48.55	0.0562	13.9794	-0.1574
543	SLU 31	0.87	0.55	52.73	0.0617	15.1907	-0.1966
543	SLU 32	0.89	0.47	53.68	0.0629	15.461	-0.1677
543	SLU 33	0.89	0.53	53.69	0.0629	15.4616	-0.1875
543	SLU 34	0.89	0.56	53.33	0.0624	15.36	-0.1969
543	SLU 35	0.91	0.47	54.29	0.0636	15.6303	-0.168
543	SLU 36	0.91	0.53	54.29	0.0636	15.6309	-0.1878
543	SLU 37	0.9	0.46	53.93	0.0631	15.5282	-0.1643
543	SLU 38	0.9	0.52	53.93	0.0631	15.5288	-0.1841
543	SLU 39	0.9	0.49	55.02	0.0646	15.8538	-0.1751
543	SLU 40	0.9	0.55	55.03	0.0647	15.8544	-0.1949
543	SLU 41	0.91	0.49	55.63	0.0653	16.023	-0.1754
543	SLU 42	0.91	0.55	55.63	0.0654	16.0236	-0.1952
543	SLU 43	0.95	0.38	52.85	0.0599	15.2407	-0.1371
543	SLU 44	0.95	0.48	52.86	0.0599	15.2417	-0.1701
543	SLU 45	0.97	0.4	53.82	0.0611	15.512	-0.1412
543	SLU 46	0.97	0.45	53.83	0.0611	15.5126	-0.161
543	SLU 47	0.96	0.48	53.47	0.0606	15.411	-0.1704
543	SLU 48	0.98	0.4	54.42	0.0618	15.6813	-0.1415
543	SLU 49	0.98	0.45	54.43	0.0618	15.6819	-0.1613
543	SLU 50	0.97	0.39	54.06	0.0613	15.5792	-0.1377
543	SLU 51	0.97	0.44	54.07	0.0613	15.5798	-0.1575
543	SLU 52	1	0.55	58.24	0.0669	16.7912	-0.1968
543	SLU 53	1.02	0.47	59.2	0.068	17.0615	-0.1679
543	SLU 54	1.02	0.53	59.21	0.068	17.0621	-0.1876
543	SLU 55	1.01	0.55	58.85	0.0676	16.9605	-0.1971
543	SLU 56	1.04	0.47	59.8	0.0687	17.2307	-0.1682
543	SLU 57	1.04	0.53	59.81	0.0687	17.2313	-0.188
543	SLU 58	1.03	0.46	59.44	0.0682	17.1287	-0.1644
543	SLU 59	1.03	0.52	59.45	0.0682	17.1293	-0.1842
543	SLU 60	1.03	0.49	60.54	0.0698	17.4543	-0.1752
543	SLU 61	1.02	0.55	60.55	0.0698	17.4549	-0.195
543	SLU 62	1.04	0.49	61.14	0.0705	17.6235	-0.1756
543	SLU 63	1.04	0.55	61.15	0.0705	17.6241	-0.1953
543	SLU 64	1.02	0.45	58.14	0.0668	16.7574	-0.162
543	SLU 65	1.02	0.55	58.15	0.0668	16.7584	-0.195
543	SLU 66	1.04	0.47	59.11	0.0679	17.0286	-0.1661
543	SLU 67	1.04	0.52	59.11	0.068	17.0293	-0.1859
543	SLU 68	1.03	0.55	58.76	0.0675	16.9276	-0.1953
543	SLU 69	1.05	0.47	59.71	0.0686	17.1979	-0.1664
543	SLU 70	1.05	0.52	59.72	0.0687	17.1985	-0.1862
543	SLU 71	1.05	0.46	59.35	0.0682	17.0959	-0.1627
543	SLU 72	1.05	0.51	59.36	0.0682	17.0965	-0.1824
543	SLU 73	1.07	0.62	63.53	0.0737	18.3078	-0.2217
543	SLU 74	1.09	0.54	64.49	0.0749	18.5781	-0.1928
543	SLU 75	1.09	0.6	64.49	0.0749	18.5787	-0.2126
543	SLU 76	1.09	0.63	64.14	0.0744	18.4771	-0.222
543	SLU 77	1.11	0.54	65.09	0.0756	18.7474	-0.1931
543	SLU 78	1.11	0.6	65.1	0.0756	18.748	-0.2129
543	SLU 79	1.1	0.53	64.73	0.0751	18.6453	-0.1894
543	SLU 80	1.1	0.59	64.74	0.0751	18.6459	-0.2091
543	SLU 81	1.1	0.56	65.83	0.0766	18.9709	-0.2002
543	SLU 82	1.1	0.62	65.83	0.0767	18.9715	-0.2199
543	SLU 83	1.11	0.56	66.43	0.0773	19.1401	-0.2005
543	SLU 84	1.11	0.62	66.44	0.0774	19.1407	-0.2203
543	SLE RA 1	0.77	0.33	43.56	0.0498	12.557	-0.1192
543	SLE RA 2	0.77	0.4	43.57	0.0499	12.5576	-0.1411
543	SLE RA 3	0.78	0.34	44.21	0.0506	12.7378	-0.1219
543	SLE RA 4	0.78	0.38	44.21	0.0507	12.7382	-0.1351
543	SLE RA 5	0.78	0.4	43.97	0.0503	12.6705	-0.1413
543	SLE RA 6	0.79	0.34	44.61	0.0511	12.8506	-0.1221
543	SLE RA 7	0.79	0.38	44.61	0.0511	12.851	-0.1353
543	SLE RA 8	0.79	0.34	44.37	0.0508	12.7826	-0.1196
543	SLE RA 9	0.79	0.37	44.37	0.0508	12.783	-0.1328
543	SLE RA 10	0.8	0.45	47.16	0.0545	13.5906	-0.1589
543	SLE RA 11	0.82	0.39	47.79	0.0552	13.7708	-0.1397
543	SLE RA 12	0.82	0.43	47.8	0.0553	13.7712	-0.1529
543	SLE RA 13	0.81	0.45	47.56	0.055	13.7034	-0.1591
543	SLE RA 14	0.83	0.39	48.2	0.0557	13.8836	-0.1399
543	SLE RA 15	0.83	0.43	48.2	0.0557	13.884	-0.1531
543	SLE RA 16	0.82	0.39	47.96	0.0554	13.8156	-0.1374
543	SLE RA 17	0.82	0.42	47.96	0.0554	13.816	-0.1506
543	SLE RA 18	0.82	0.41	48.69	0.0564	14.0326	-0.1446
543	SLE RA 19	0.82	0.44	48.69	0.0565	14.033	-0.1578
543	SLE RA 20	0.83	0.41	49.09	0.0569	14.1455	-0.1448
543	SLE RA 21	0.83	0.44	49.09	0.0569	14.1459	-0.158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
543	SLE FR 1	0.77	0.33	43.56	0.0498	12.557	-0.1192
543	SLE FR 2	0.77	0.35	43.56	0.0499	12.5571	-0.1236
543	SLE FR 3	0.77	0.33	43.72	0.05	12.6021	-0.1193
543	SLE FR 4	0.78	0.37	45.1	0.0518	12.9998	-0.1312
543	SLE FR 5	0.79	0.36	45.26	0.052	13.0448	-0.1269
543	SLE FR 6	0.79	0.37	46.12	0.0531	13.2948	-0.1319
543	SLE QP 1	0.77	0.33	43.56	0.0498	12.557	-0.1192
543	SLE QP 2	0.78	0.36	45.1	0.0518	12.9997	-0.1268
543	SLD 1	3.81	0.19	33.54	0.037	9.8676	-0.0681
543	SLD 2	3.91	0.96	33.57	0.0359	9.8562	-0.3374
543	SLD 3	3.73	-1.37	33.39	0.0384	9.9403	0.4771
543	SLD 4	3.82	-0.6	33.42	0.0373	9.9289	0.2078
543	SLD 5	1.8	2.53	41.86	0.0453	11.9518	-0.8882
543	SLD 6	1.86	3.04	41.88	0.0446	11.9443	-1.0647
543	SLD 7	1.53	-2.67	41.35	0.0502	12.1941	0.9291
543	SLD 8	1.59	-2.16	41.37	0.0495	12.1866	0.7526
543	SLD 9	-0.02	2.87	48.83	0.0541	13.8127	-1.0062
543	SLD 10	0.04	3.38	48.85	0.0534	13.8052	-1.1827
543	SLD 11	-0.29	-2.33	48.32	0.0591	14.055	0.8111
543	SLD 12	-0.23	-1.82	48.34	0.0583	14.0475	0.6346
543	SLD 13	-2.25	1.31	56.78	0.0663	16.0705	-0.4614
543	SLD 14	-2.16	2.08	56.81	0.0652	16.0591	-0.7307
543	SLD 15	-2.34	-0.25	56.62	0.0678	16.1432	0.0838
543	SLD 16	-2.24	0.53	56.66	0.0667	16.1318	-0.1855
543	SLV 1	7.87	-0.09	18.04	0.0171	5.6717	0.0266
543	SLV 2	8.08	1.71	18.13	0.0145	5.6451	-0.6005
543	SLV 3	7.68	-3.64	17.69	0.0204	5.8383	1.2669
543	SLV 4	7.89	-1.84	17.77	0.0179	5.8118	0.6398
543	SLV 5	3.16	5.29	37.51	0.0367	10.5531	-1.8539
543	SLV 6	3.3	6.45	37.56	0.0351	10.536	-2.2581
543	SLV 7	2.53	-6.53	36.32	0.0479	11.1086	2.2805
543	SLV 8	2.67	-5.37	36.38	0.0463	11.0915	1.8763
543	SLV 9	-1.1	6.08	53.82	0.0573	14.9079	-2.1299
543	SLV 10	-0.96	7.24	53.88	0.0557	14.8907	-2.5341
543	SLV 11	-1.73	-5.74	52.64	0.0685	15.4634	2.0045
543	SLV 12	-1.59	-4.58	52.69	0.0669	15.4462	1.6003
543	SLV 13	-6.32	2.55	72.43	0.0857	20.1876	-0.8934
543	SLV 14	-6.11	4.35	72.51	0.0832	20.161	-1.5205
543	SLV 15	-6.51	-1	72.07	0.0891	20.3542	0.347
543	SLV 16	-6.3	0.8	72.15	0.0866	20.3277	-0.2802
543	CRTFP Ux+	0	0	0	0	0	0
543	CRTFP Ux-	0	0	0	0	0	0
543	CRTFP Uy+	0	0	0	0	0	0
543	CRTFP Uy-	0	0	0	0	0	0
546	SLU 1	-0.51	-0.17	36.8	0.0359	-6.9878	-0.0404
546	SLU 2	-0.51	-0.08	36.8	0.0359	-6.9886	-0.0185
546	SLU 3	-0.52	-0.17	37.64	0.0368	-7.143	-0.0408
546	SLU 4	-0.52	-0.12	37.65	0.0368	-7.1435	-0.0277
546	SLU 5	-0.52	-0.09	37.34	0.0365	-7.0861	-0.0195
546	SLU 6	-0.53	-0.18	38.17	0.0373	-7.2405	-0.0417
546	SLU 7	-0.53	-0.12	38.18	0.0373	-7.241	-0.0286
546	SLU 8	-0.53	-0.18	37.86	0.0369	-7.1828	-0.0422
546	SLU 9	-0.53	-0.13	37.87	0.037	-7.1833	-0.0291
546	SLU 10	-0.54	-0.08	41.52	0.0412	-7.8884	-0.0184
546	SLU 11	-0.55	-0.17	42.35	0.0421	-8.0429	-0.0407
546	SLU 12	-0.55	-0.12	42.36	0.0421	-8.0433	-0.0276
546	SLU 13	-0.54	-0.09	42.05	0.0418	-7.9859	-0.0193
546	SLU 14	-0.56	-0.18	42.89	0.0426	-8.1403	-0.0416
546	SLU 15	-0.56	-0.12	42.89	0.0426	-8.1408	-0.0285
546	SLU 16	-0.55	-0.18	42.58	0.0422	-8.0826	-0.0421
546	SLU 17	-0.55	-0.13	42.58	0.0423	-8.0831	-0.029
546	SLU 18	-0.55	-0.17	43.53	0.0434	-8.2733	-0.0402
546	SLU 19	-0.55	-0.12	43.53	0.0435	-8.2737	-0.0271
546	SLU 20	-0.55	-0.17	44.06	0.044	-8.3708	-0.0411
546	SLU 21	-0.55	-0.12	44.07	0.044	-8.3712	-0.028
546	SLU 22	-0.56	-0.17	41.45	0.0412	-7.87	-0.0394
546	SLU 23	-0.56	-0.08	41.46	0.0413	-7.8707	-0.0176
546	SLU 24	-0.57	-0.17	42.3	0.0421	-8.0252	-0.0399
546	SLU 25	-0.57	-0.12	42.3	0.0422	-8.0257	-0.0268
546	SLU 26	-0.56	-0.08	41.99	0.0418	-7.9682	-0.0185
546	SLU 27	-0.58	-0.17	42.83	0.0427	-8.1227	-0.0408
546	SLU 28	-0.58	-0.12	42.84	0.0427	-8.1231	-0.0277
546	SLU 29	-0.57	-0.18	42.52	0.0423	-8.0649	-0.0413
546	SLU 30	-0.57	-0.12	42.53	0.0423	-8.0654	-0.0282
546	SLU 31	-0.58	-0.08	46.17	0.0466	-8.7706	-0.0175
546	SLU 32	-0.59	-0.17	47.01	0.0474	-8.925	-0.0397
546	SLU 33	-0.59	-0.12	47.02	0.0474	-8.9255	-0.0266
546	SLU 34	-0.59	-0.08	46.71	0.0471	-8.868	-0.0184
546	SLU 35	-0.6	-0.17	47.55	0.0479	-9.0225	-0.0406
546	SLU 36	-0.6	-0.12	47.55	0.048	-9.023	-0.0276
546	SLU 37	-0.6	-0.18	47.23	0.0476	-8.9647	-0.0411
546	SLU 38	-0.6	-0.12	47.24	0.0476	-8.9652	-0.028
546	SLU 39	-0.59	-0.17	48.19	0.0488	-9.1554	-0.0392
546	SLU 40	-0.59	-0.12	48.19	0.0488	-9.1559	-0.0261
546	SLU 41	-0.6	-0.17	48.72	0.0493	-9.2529	-0.0401
546	SLU 42	-0.6	-0.12	48.72	0.0494	-9.2534	-0.027
546	SLU 43	-0.65	-0.22	46.24	0.0448	-8.7817	-0.0528
546	SLU 44	-0.65	-0.14	46.24	0.0448	-8.7825	-0.031
546	SLU 45	-0.66	-0.22	47.08	0.0457	-8.9369	-0.0532
546	SLU 46	-0.66	-0.17	47.09	0.0457	-8.9374	-0.0401

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
546	SLU 47	-0.66	-0.14	46.78	0.0454	-8.88	-0.0319
546	SLU 48	-0.67	-0.23	47.62	0.0462	-9.0344	-0.0542
546	SLU 49	-0.67	-0.18	47.62	0.0463	-9.0349	-0.0411
546	SLU 50	-0.66	-0.23	47.3	0.0459	-8.9767	-0.0546
546	SLU 51	-0.66	-0.18	47.31	0.0459	-8.9772	-0.0415
546	SLU 52	-0.67	-0.14	50.96	0.0501	-9.6823	-0.0308
546	SLU 53	-0.69	-0.23	51.8	0.051	-9.8368	-0.0531
546	SLU 54	-0.69	-0.17	51.8	0.051	-9.8372	-0.04
546	SLU 55	-0.68	-0.14	51.49	0.0507	-9.7798	-0.0317
546	SLU 56	-0.69	-0.23	52.33	0.0515	-9.9342	-0.054
546	SLU 57	-0.69	-0.18	52.33	0.0516	-9.9347	-0.0409
546	SLU 58	-0.69	-0.23	52.02	0.0512	-9.8765	-0.0545
546	SLU 59	-0.69	-0.18	52.02	0.0512	-9.877	-0.0414
546	SLU 60	-0.68	-0.22	52.97	0.0523	-10.0672	-0.0526
546	SLU 61	-0.68	-0.17	52.97	0.0524	-10.0676	-0.0395
546	SLU 62	-0.69	-0.23	53.5	0.0529	-10.1647	-0.0535
546	SLU 63	-0.69	-0.17	53.51	0.0529	-10.1651	-0.0404
546	SLU 64	-0.69	-0.22	50.89	0.0501	-9.6638	-0.0519
546	SLU 65	-0.69	-0.13	50.9	0.0502	-9.6646	-0.03
546	SLU 66	-0.71	-0.22	51.74	0.051	-9.8191	-0.0523
546	SLU 67	-0.71	-0.17	51.74	0.0511	-9.8195	-0.0392
546	SLU 68	-0.7	-0.14	51.44	0.0507	-9.7621	-0.0309
546	SLU 69	-0.71	-0.23	52.27	0.0516	-9.9166	-0.0532
546	SLU 70	-0.71	-0.17	52.28	0.0516	-9.917	-0.0401
546	SLU 71	-0.71	-0.23	51.96	0.0512	-9.8588	-0.0537
546	SLU 72	-0.71	-0.18	51.97	0.0512	-9.8593	-0.0406
546	SLU 73	-0.72	-0.13	55.62	0.0555	-10.5645	-0.0299
546	SLU 74	-0.73	-0.22	56.45	0.0563	-10.7189	-0.0522
546	SLU 75	-0.73	-0.17	56.46	0.0564	-10.7194	-0.0391
546	SLU 76	-0.73	-0.14	56.15	0.056	-10.6619	-0.0308
546	SLU 77	-0.74	-0.23	56.99	0.0569	-10.8164	-0.0531
546	SLU 78	-0.74	-0.17	56.99	0.0569	-10.8169	-0.04
546	SLU 79	-0.73	-0.23	56.68	0.0565	-10.7586	-0.0535
546	SLU 80	-0.74	-0.18	56.68	0.0565	-10.7591	-0.0405
546	SLU 81	-0.73	-0.22	57.63	0.0577	-10.9493	-0.0517
546	SLU 82	-0.73	-0.17	57.63	0.0577	-10.9498	-0.0386
546	SLU 83	-0.74	-0.22	58.16	0.0582	-11.0468	-0.0526
546	SLU 84	-0.74	-0.17	58.17	0.0583	-11.0473	-0.0395
546	SLE RA 1	-0.52	-0.17	38.13	0.0374	-7.2399	-0.0401
546	SLE RA 2	-0.52	-0.11	38.13	0.0374	-7.2404	-0.0255
546	SLE RA 3	-0.53	-0.17	38.69	0.038	-7.3433	-0.0404
546	SLE RA 4	-0.53	-0.14	38.69	0.038	-7.3437	-0.0317
546	SLE RA 5	-0.53	-0.11	38.49	0.0378	-7.3054	-0.0262
546	SLE RA 6	-0.54	-0.17	39.05	0.0383	-7.4083	-0.041
546	SLE RA 7	-0.54	-0.14	39.05	0.0384	-7.4086	-0.0323
546	SLE RA 8	-0.53	-0.17	38.84	0.0381	-7.3698	-0.0413
546	SLE RA 9	-0.53	-0.14	38.84	0.0381	-7.3701	-0.0326
546	SLE RA 10	-0.54	-0.11	41.27	0.041	-7.8403	-0.0255
546	SLE RA 11	-0.55	-0.17	41.83	0.0415	-7.9432	-0.0403
546	SLE RA 12	-0.55	-0.14	41.83	0.0415	-7.9435	-0.0316
546	SLE RA 13	-0.55	-0.11	41.63	0.0413	-7.9053	-0.0261
546	SLE RA 14	-0.55	-0.17	42.19	0.0419	-8.0082	-0.0409
546	SLE RA 15	-0.55	-0.14	42.19	0.0419	-8.0085	-0.0322
546	SLE RA 16	-0.55	-0.18	41.98	0.0416	-7.9697	-0.0412
546	SLE RA 17	-0.55	-0.14	41.98	0.0417	-7.97	-0.0325
546	SLE RA 18	-0.55	-0.17	42.61	0.0424	-8.0968	-0.04
546	SLE RA 19	-0.55	-0.14	42.62	0.0425	-8.0971	-0.0312
546	SLE RA 20	-0.55	-0.17	42.97	0.0428	-8.1618	-0.0406
546	SLE RA 21	-0.55	-0.14	42.97	0.0428	-8.1621	-0.0318
546	SLE FR 1	-0.52	-0.17	38.13	0.0374	-7.2399	-0.0401
546	SLE FR 2	-0.52	-0.16	38.13	0.0374	-7.24	-0.0372
546	SLE FR 3	-0.53	-0.17	38.27	0.0375	-7.2659	-0.0403
546	SLE FR 4	-0.53	-0.16	39.47	0.0389	-7.4971	-0.0371
546	SLE FR 5	-0.53	-0.17	39.62	0.039	-7.5229	-0.0403
546	SLE FR 6	-0.53	-0.17	40.37	0.0399	-7.6683	-0.04
546	SLE QP 1	-0.52	-0.17	38.13	0.0374	-7.2399	-0.0401
546	SLE QP 2	-0.53	-0.17	39.47	0.0389	-7.4969	-0.0401
546	SLD 1	2.19	0.36	50.31	0.0509	-9.4074	0.0914
546	SLD 2	2.25	-0.33	50.35	0.0521	-9.4324	-0.0785
546	SLD 3	2.24	-1.06	50.51	0.0527	-9.4908	-0.2618
546	SLD 4	2.29	-1.74	50.54	0.0539	-9.5159	-0.4317
546	SLD 5	0.2	2.26	42.42	0.0396	-7.9391	0.5653
546	SLD 6	0.24	1.81	42.45	0.0404	-7.9555	0.4539
546	SLD 7	0.36	-2.46	43.07	0.0455	-8.2172	-0.6121
546	SLD 8	0.4	-2.91	43.1	0.0463	-8.2336	-0.7234
546	SLD 9	-1.46	2.57	35.85	0.0315	-6.7603	0.6433
546	SLD 10	-1.42	2.12	35.87	0.0323	-6.7767	0.5319
546	SLD 11	-1.3	-2.15	36.5	0.0374	-7.0384	-0.534
546	SLD 12	-1.26	-2.6	36.52	0.0382	-7.0548	-0.6454
546	SLD 13	-3.35	1.4	28.4	0.0239	-5.478	0.3516
546	SLD 14	-3.3	0.72	28.44	0.0251	-5.503	0.1817
546	SLD 15	-3.31	-0.01	28.6	0.0257	-5.5615	-0.0016
546	SLD 16	-3.25	-0.7	28.63	0.0269	-5.5865	-0.1715
546	SLV 1	5.82	1.01	64.84	0.0671	-11.9694	0.2552
546	SLV 2	5.96	-0.58	64.92	0.07	-12.0276	-0.1405
546	SLV 3	5.94	-2.21	65.29	0.0711	-12.1607	-0.5487
546	SLV 4	6.07	-3.8	65.38	0.074	-12.219	-0.9444
546	SLV 5	1.18	5.34	46.38	0.0408	-8.5384	1.3359
546	SLV 6	1.27	4.32	46.44	0.0426	-8.576	1.0809
546	SLV 7	1.56	-5.39	47.89	0.0542	-9.1762	-1.3437

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
546	SLV 8	1.65	-6.42	47.94	0.056	-9.2138	-1.5987
546	SLV 9	-2.71	6.08	31	0.0218	-5.7801	1.5186
546	SLV 10	-2.62	5.05	31.06	0.0236	-5.8176	1.2636
546	SLV 11	-2.33	-4.66	32.51	0.0352	-6.4179	-1.161
546	SLV 12	-2.24	-5.68	32.56	0.037	-6.4554	-1.416
546	SLV 13	-7.13	3.46	13.57	0.0038	-2.7749	0.8643
546	SLV 14	-7	1.87	13.65	0.0067	-2.8332	0.4686
546	SLV 15	-7.02	0.24	14.02	0.0079	-2.9663	0.0604
546	SLV 16	-6.88	-1.35	14.11	0.0107	-3.0245	-0.3353
546	CRTFP Ux+	0	0	0	0	0	0
546	CRTFP Ux-	0	0	0	0	0	0
546	CRTFP Uy+	0	0	0	0	0	0
546	CRTFP Uy-	0	0	0	0	0	0
551	SLU 1	0.23	-0.2	36.68	-1.0372	11.651	0.0758
551	SLU 2	0.23	-0.15	36.67	-1.0371	11.6481	0.0555
551	SLU 3	0.24	-0.19	37.49	-1.0598	11.9043	0.0728
551	SLU 4	0.24	-0.16	37.48	-1.0598	11.9025	0.0606
551	SLU 5	0.23	-0.15	37.18	-1.0513	11.807	0.0564
551	SLU 6	0.24	-0.2	38	-1.074	12.0631	0.0737
551	SLU 7	0.24	-0.16	37.99	-1.074	12.0614	0.0615
551	SLU 8	0.24	-0.21	37.7	-1.0656	11.9687	0.0775
551	SLU 9	0.24	-0.17	37.69	-1.0656	11.967	0.0654
551	SLU 10	0.26	-0.13	41.72	-1.1786	13.2237	0.0512
551	SLU 11	0.27	-0.18	42.54	-1.2013	13.4799	0.0684
551	SLU 12	0.27	-0.15	42.53	-1.2012	13.4781	0.0563
551	SLU 13	0.26	-0.13	42.23	-1.1928	13.3826	0.0521
551	SLU 14	0.27	-0.18	43.05	-1.2155	13.6387	0.0693
551	SLU 15	0.27	-0.15	43.04	-1.2155	13.637	0.0572
551	SLU 16	0.27	-0.19	42.75	-1.2071	13.5443	0.0732
551	SLU 17	0.27	-0.16	42.74	-1.2071	13.5426	0.061
551	SLU 18	0.27	-0.18	43.89	-1.2393	13.9019	0.0695
551	SLU 19	0.27	-0.15	43.88	-1.2392	13.9001	0.0574
551	SLU 20	0.28	-0.18	44.4	-1.2535	14.0607	0.0704
551	SLU 21	0.28	-0.15	44.39	-1.2535	14.059	0.0583
551	SLU 22	0.26	-0.16	41.17	-1.1626	13.0559	0.0626
551	SLU 23	0.26	-0.11	41.16	-1.1625	13.053	0.0424
551	SLU 24	0.27	-0.15	41.99	-1.1852	13.3092	0.0596
551	SLU 25	0.26	-0.12	41.98	-1.1852	13.3074	0.0475
551	SLU 26	0.26	-0.11	41.67	-1.1768	13.2119	0.0432
551	SLU 27	0.27	-0.16	42.5	-1.1995	13.468	0.0605
551	SLU 28	0.27	-0.12	42.49	-1.1994	13.4663	0.0483
551	SLU 29	0.27	-0.17	42.19	-1.191	13.3736	0.0644
551	SLU 30	0.27	-0.13	42.19	-1.191	13.3719	0.0522
551	SLU 31	0.29	-0.09	46.21	-1.304	14.6286	0.038
551	SLU 32	0.29	-0.14	47.03	-1.3267	14.8847	0.0552
551	SLU 33	0.29	-0.11	47.03	-1.3267	14.883	0.0431
551	SLU 34	0.29	-0.09	46.72	-1.3182	14.7874	0.0389
551	SLU 35	0.3	-0.14	47.54	-1.3409	15.0436	0.0561
551	SLU 36	0.3	-0.11	47.54	-1.3409	15.0418	0.044
551	SLU 37	0.3	-0.15	47.24	-1.3325	14.9492	0.06
551	SLU 38	0.3	-0.12	47.24	-1.3325	14.9474	0.0478
551	SLU 39	0.3	-0.14	48.38	-1.3647	15.3067	0.0563
551	SLU 40	0.3	-0.11	48.38	-1.3647	15.305	0.0442
551	SLU 41	0.3	-0.15	48.89	-1.3789	15.4656	0.0572
551	SLU 42	0.3	-0.11	48.89	-1.3789	15.4638	0.0451
551	SLU 43	0.29	-0.28	46.14	-1.3053	14.6647	0.103
551	SLU 44	0.29	-0.22	46.13	-1.3053	14.6618	0.0828
551	SLU 45	0.3	-0.27	46.95	-1.3279	14.9179	0.1
551	SLU 46	0.3	-0.23	46.95	-1.3279	14.9162	0.0879
551	SLU 47	0.29	-0.22	46.64	-1.3195	14.8206	0.0837
551	SLU 48	0.3	-0.27	47.46	-1.3422	15.0768	0.1009
551	SLU 49	0.3	-0.24	47.46	-1.3421	15.075	0.0888
551	SLU 50	0.3	-0.28	47.16	-1.3338	14.9824	0.1048
551	SLU 51	0.3	-0.25	47.16	-1.3337	14.9806	0.0927
551	SLU 52	0.32	-0.21	51.18	-1.4467	16.2374	0.0784
551	SLU 53	0.33	-0.25	52	-1.4694	16.4935	0.0957
551	SLU 54	0.33	-0.22	51.99	-1.4694	16.4918	0.0835
551	SLU 55	0.32	-0.21	51.69	-1.461	16.3962	0.0793
551	SLU 56	0.33	-0.26	52.51	-1.4836	16.6523	0.0965
551	SLU 57	0.33	-0.22	52.5	-1.4836	16.6506	0.0844
551	SLU 58	0.33	-0.27	52.21	-1.4752	16.5579	0.1004
551	SLU 59	0.33	-0.23	52.2	-1.4752	16.5562	0.0883
551	SLU 60	0.33	-0.26	53.35	-1.5074	16.9155	0.0968
551	SLU 61	0.33	-0.22	53.34	-1.5074	16.9138	0.0846
551	SLU 62	0.34	-0.26	53.86	-1.5216	17.0743	0.0977
551	SLU 63	0.34	-0.22	53.85	-1.5216	17.0726	0.0855
551	SLU 64	0.32	-0.24	50.64	-1.4307	16.0696	0.0898
551	SLU 65	0.32	-0.18	50.63	-1.4307	16.0667	0.0696
551	SLU 66	0.32	-0.23	51.45	-1.4534	16.3228	0.0868
551	SLU 67	0.32	-0.19	51.44	-1.4533	16.3211	0.0747
551	SLU 68	0.32	-0.18	51.14	-1.4449	16.2255	0.0705
551	SLU 69	0.33	-0.23	51.96	-1.4676	16.4816	0.0877
551	SLU 70	0.33	-0.2	51.95	-1.4676	16.4799	0.0756
551	SLU 71	0.33	-0.24	51.66	-1.4592	16.3872	0.0916
551	SLU 72	0.33	-0.21	51.65	-1.4592	16.3855	0.0795
551	SLU 73	0.35	-0.17	55.67	-1.5722	17.6422	0.0652
551	SLU 74	0.35	-0.21	56.49	-1.5948	17.8984	0.0825
551	SLU 75	0.35	-0.18	56.49	-1.5948	17.8966	0.0703
551	SLU 76	0.35	-0.17	56.18	-1.5864	17.8011	0.0661
551	SLU 77	0.36	-0.22	57	-1.6091	18.0572	0.0833

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
551	SLU 78	0.36	-0.18	57	-1.609	18.0555	0.0712
551	SLU 79	0.36	-0.23	56.7	-1.6007	17.9628	0.0872
551	SLU 80	0.36	-0.19	56.7	-1.6006	17.9611	0.0751
551	SLU 81	0.36	-0.22	57.85	-1.6328	18.3204	0.0836
551	SLU 82	0.36	-0.18	57.84	-1.6328	18.3186	0.0714
551	SLU 83	0.36	-0.22	58.36	-1.6471	18.4792	0.0845
551	SLU 84	0.36	-0.19	58.35	-1.647	18.4775	0.0723
551	SLE RA 1	0.24	-0.19	37.96	-1.073	12.0524	0.072
551	SLE RA 2	0.24	-0.15	37.96	-1.073	12.0505	0.0585
551	SLE RA 3	0.24	-0.19	38.5	-1.0881	12.2213	0.07
551	SLE RA 4	0.24	-0.16	38.5	-1.0881	12.2201	0.0619
551	SLE RA 5	0.24	-0.15	38.3	-1.0825	12.1564	0.0591
551	SLE RA 6	0.25	-0.19	38.84	-1.0976	12.3272	0.0706
551	SLE RA 7	0.25	-0.16	38.84	-1.0976	12.326	0.0625
551	SLE RA 8	0.25	-0.19	38.64	-1.092	12.2642	0.0732
551	SLE RA 9	0.25	-0.17	38.64	-1.092	12.2631	0.0651
551	SLE RA 10	0.26	-0.14	41.32	-1.1673	13.1009	0.0556
551	SLE RA 11	0.26	-0.18	41.87	-1.1824	13.2716	0.0671
551	SLE RA 12	0.26	-0.15	41.86	-1.1824	13.2705	0.059
551	SLE RA 13	0.26	-0.15	41.66	-1.1768	13.2068	0.0562
551	SLE RA 14	0.27	-0.18	42.21	-1.1919	13.3775	0.0677
551	SLE RA 15	0.27	-0.15	42.2	-1.1919	13.3764	0.0596
551	SLE RA 16	0.26	-0.19	42.01	-1.1863	13.3146	0.0703
551	SLE RA 17	0.26	-0.16	42	-1.1863	13.3134	0.0622
551	SLE RA 18	0.27	-0.18	42.77	-1.2077	13.553	0.0678
551	SLE RA 19	0.27	-0.16	42.77	-1.2077	13.5518	0.0597
551	SLE RA 20	0.27	-0.18	43.11	-1.2172	13.6589	0.0684
551	SLE RA 21	0.27	-0.16	43.11	-1.2172	13.6577	0.0603
551	SLE FR 1	0.24	-0.19	37.96	-1.073	12.0524	0.072
551	SLE FR 2	0.24	-0.18	37.96	-1.073	12.052	0.0693
551	SLE FR 3	0.24	-0.19	38.1	-1.0768	12.0948	0.0722
551	SLE FR 4	0.25	-0.18	39.4	-1.1134	12.5022	0.0681
551	SLE FR 5	0.25	-0.19	39.54	-1.1172	12.545	0.071
551	SLE FR 6	0.25	-0.19	40.37	-1.1404	12.8027	0.0699
551	SLE QP 1	0.24	-0.19	37.96	-1.073	12.0524	0.072
551	SLE QP 2	0.25	-0.19	39.41	-1.1134	12.5026	0.0707
551	SLD 1	3.26	0.3	39.37	-1.1156	12.4863	-0.0235
551	SLD 2	3.31	0.34	39.38	-1.1163	12.4889	-0.0333
551	SLD 3	3.3	-0.88	39.84	-1.1247	12.6277	0.3915
551	SLD 4	3.35	-0.85	39.85	-1.1253	12.6302	0.3816
551	SLD 5	1.08	1.75	38.69	-1.1002	12.2829	-0.5851
551	SLD 6	1.12	1.77	38.7	-1.1006	12.2845	-0.5915
551	SLD 7	1.21	-2.2	40.24	-1.1304	12.7541	0.798
551	SLD 8	1.25	-2.17	40.24	-1.1309	12.7557	0.7916
551	SLD 9	-0.75	1.8	38.57	-1.096	12.2495	-0.6501
551	SLD 10	-0.72	1.82	38.57	-1.0964	12.2511	-0.6566
551	SLD 11	-0.62	-2.15	40.11	-1.1262	12.7207	0.733
551	SLD 12	-0.59	-2.12	40.12	-1.1266	12.7223	0.7266
551	SLD 13	-2.86	0.47	38.96	-1.1015	12.375	-0.2401
551	SLD 14	-2.81	0.51	38.97	-1.1022	12.3775	-0.25
551	SLD 15	-2.82	-0.71	39.43	-1.1106	12.5163	0.1748
551	SLD 16	-2.77	-0.68	39.44	-1.1112	12.5189	0.165
551	SLV 1	7.3	0.92	39.34	-1.1188	12.4686	-0.1368
551	SLV 2	7.42	1	39.37	-1.1204	12.4744	-0.1597
551	SLV 3	7.39	-1.77	40.4	-1.1395	12.79	0.8079
551	SLV 4	7.51	-1.69	40.42	-1.141	12.7959	0.785
551	SLV 5	2.2	4.22	37.78	-1.0835	12.0038	-1.4204
551	SLV 6	2.28	4.27	37.8	-1.0845	12.0076	-1.4352
551	SLV 7	2.5	-4.77	41.3	-1.1523	13.0754	1.7287
551	SLV 8	2.58	-4.71	41.31	-1.1532	13.0792	1.7139
551	SLV 9	-2.09	4.34	37.5	-1.0736	11.926	-1.5724
551	SLV 10	-2.01	4.39	37.51	-1.0746	11.9298	-1.5872
551	SLV 11	-1.79	-4.65	41.01	-1.1424	12.9976	1.5767
551	SLV 12	-1.71	-4.6	41.03	-1.1433	13.0014	1.5619
551	SLV 13	-7.02	1.32	38.39	-1.0858	12.2093	-0.6435
551	SLV 14	-6.9	1.4	38.41	-1.0874	12.2152	-0.6664
551	SLV 15	-6.93	-1.38	39.44	-1.1065	12.5308	0.3012
551	SLV 16	-6.8	-1.3	39.47	-1.108	12.5366	0.2783
551	CRTFP Ux+	0	0	0	0	0	0
551	CRTFP Ux-	0	0	0	0	0	0
551	CRTFP Uy+	0	0	0	0	0	0
551	CRTFP Uy-	0	0	0	0	0	0
555	SLU 1	-0.58	-0.64	52.74	-1.4765	-0.1941	-0.0151
555	SLU 2	-0.58	-0.56	52.74	-1.4762	-0.1933	-0.0151
555	SLU 3	-0.59	-0.65	53.96	-1.5103	-0.1995	-0.0155
555	SLU 4	-0.59	-0.6	53.95	-1.5102	-0.199	-0.0155
555	SLU 5	-0.59	-0.57	53.5	-1.4975	-0.1966	-0.0153
555	SLU 6	-0.6	-0.66	54.71	-1.5316	-0.2028	-0.0157
555	SLU 7	-0.6	-0.61	54.71	-1.5315	-0.2023	-0.0157
555	SLU 8	-0.6	-0.67	54.26	-1.5191	-0.2008	-0.0156
555	SLU 9	-0.6	-0.61	54.26	-1.5189	-0.2003	-0.0156
555	SLU 10	-0.61	-0.6	59.92	-1.6764	-0.2311	-0.0159
555	SLU 11	-0.62	-0.69	61.14	-1.7106	-0.2372	-0.0163
555	SLU 12	-0.62	-0.64	61.14	-1.7104	-0.2368	-0.0163
555	SLU 13	-0.62	-0.61	60.68	-1.6977	-0.2344	-0.0161
555	SLU 14	-0.63	-0.7	61.9	-1.7319	-0.2406	-0.0165
555	SLU 15	-0.63	-0.65	61.9	-1.7317	-0.2401	-0.0165
555	SLU 16	-0.62	-0.71	61.45	-1.7193	-0.2385	-0.0164
555	SLU 17	-0.62	-0.66	61.45	-1.7191	-0.238	-0.0164
555	SLU 18	-0.62	-0.7	63.01	-1.7625	-0.2481	-0.0163

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
555	SLU 19	-0.62	-0.65	63.01	-1.7624	-0.2476	-0.0163
555	SLU 20	-0.63	-0.72	63.77	-1.7838	-0.2514	-0.0165
555	SLU 21	-0.63	-0.66	63.77	-1.7837	-0.2509	-0.0165
555	SLU 22	-0.63	-0.66	59.59	-1.667	-0.2207	-0.0166
555	SLU 23	-0.63	-0.57	59.59	-1.6667	-0.2199	-0.0166
555	SLU 24	-0.65	-0.66	60.8	-1.7008	-0.2261	-0.017
555	SLU 25	-0.65	-0.61	60.8	-1.7006	-0.2256	-0.017
555	SLU 26	-0.64	-0.58	60.34	-1.6879	-0.2232	-0.0168
555	SLU 27	-0.66	-0.67	61.56	-1.7221	-0.2294	-0.0172
555	SLU 28	-0.66	-0.62	61.56	-1.7219	-0.2289	-0.0172
555	SLU 29	-0.65	-0.68	61.11	-1.7095	-0.2274	-0.0171
555	SLU 30	-0.65	-0.63	61.11	-1.7094	-0.2269	-0.0171
555	SLU 31	-0.66	-0.61	66.77	-1.8669	-0.2577	-0.0174
555	SLU 32	-0.67	-0.7	67.99	-1.901	-0.2639	-0.0178
555	SLU 33	-0.67	-0.65	67.99	-1.9008	-0.2634	-0.0178
555	SLU 34	-0.67	-0.63	67.53	-1.8882	-0.261	-0.0176
555	SLU 35	-0.68	-0.71	68.75	-1.9223	-0.2672	-0.018
555	SLU 36	-0.68	-0.66	68.75	-1.9221	-0.2667	-0.018
555	SLU 37	-0.68	-0.72	68.3	-1.9098	-0.2652	-0.0179
555	SLU 38	-0.68	-0.67	68.29	-1.9096	-0.2647	-0.0179
555	SLU 39	-0.67	-0.72	69.86	-1.953	-0.2747	-0.0178
555	SLU 40	-0.67	-0.67	69.86	-1.9528	-0.2742	-0.0178
555	SLU 41	-0.68	-0.73	70.62	-1.9743	-0.278	-0.018
555	SLU 42	-0.68	-0.68	70.61	-1.9741	-0.2775	-0.018
555	SLU 43	-0.74	-0.83	66.22	-1.8542	-0.2432	-0.0192
555	SLU 44	-0.74	-0.75	66.21	-1.8539	-0.2424	-0.0191
555	SLU 45	-0.75	-0.84	67.43	-1.888	-0.2486	-0.0195
555	SLU 46	-0.75	-0.79	67.43	-1.8878	-0.2481	-0.0195
555	SLU 47	-0.75	-0.76	66.97	-1.8752	-0.2457	-0.0193
555	SLU 48	-0.76	-0.85	68.19	-1.9093	-0.2519	-0.0197
555	SLU 49	-0.76	-0.8	68.19	-1.9091	-0.2514	-0.0197
555	SLU 50	-0.75	-0.85	67.74	-1.8968	-0.2499	-0.0196
555	SLU 51	-0.75	-0.8	67.73	-1.8966	-0.2494	-0.0196
555	SLU 52	-0.76	-0.79	73.4	-2.0541	-0.2802	-0.0199
555	SLU 53	-0.78	-0.88	74.62	-2.0882	-0.2864	-0.0203
555	SLU 54	-0.78	-0.83	74.61	-2.088	-0.2859	-0.0203
555	SLU 55	-0.77	-0.8	74.16	-2.0754	-0.2835	-0.0202
555	SLU 56	-0.79	-0.89	75.38	-2.1095	-0.2897	-0.0205
555	SLU 57	-0.79	-0.84	75.37	-2.1093	-0.2892	-0.0205
555	SLU 58	-0.78	-0.9	74.93	-2.097	-0.2876	-0.0204
555	SLU 59	-0.78	-0.85	74.92	-2.0968	-0.2872	-0.0204
555	SLU 60	-0.77	-0.89	76.49	-2.1402	-0.2972	-0.0203
555	SLU 61	-0.77	-0.84	76.48	-2.14	-0.2967	-0.0203
555	SLU 62	-0.78	-0.9	77.25	-2.1615	-0.3005	-0.0205
555	SLU 63	-0.78	-0.85	77.24	-2.1613	-0.3	-0.0205
555	SLU 64	-0.79	-0.85	73.07	-2.0446	-0.2698	-0.0207
555	SLU 65	-0.79	-0.76	73.06	-2.0443	-0.269	-0.0206
555	SLU 66	-0.8	-0.85	74.28	-2.0784	-0.2752	-0.021
555	SLU 67	-0.8	-0.8	74.27	-2.0783	-0.2747	-0.021
555	SLU 68	-0.8	-0.77	73.82	-2.0656	-0.2723	-0.0209
555	SLU 69	-0.81	-0.86	75.04	-2.0997	-0.2785	-0.0212
555	SLU 70	-0.81	-0.81	75.03	-2.0996	-0.278	-0.0212
555	SLU 71	-0.81	-0.87	74.59	-2.0872	-0.2765	-0.0211
555	SLU 72	-0.81	-0.82	74.58	-2.087	-0.276	-0.0211
555	SLU 73	-0.82	-0.8	80.25	-2.2445	-0.3068	-0.0215
555	SLU 74	-0.83	-0.89	81.47	-2.2787	-0.313	-0.0218
555	SLU 75	-0.83	-0.84	81.46	-2.2785	-0.3125	-0.0218
555	SLU 76	-0.83	-0.81	81.01	-2.2658	-0.3101	-0.0217
555	SLU 77	-0.84	-0.9	82.23	-2.3	-0.3163	-0.022
555	SLU 78	-0.84	-0.85	82.22	-2.2998	-0.3158	-0.022
555	SLU 79	-0.83	-0.91	81.77	-2.2874	-0.3143	-0.0219
555	SLU 80	-0.83	-0.86	81.77	-2.2872	-0.3138	-0.0219
555	SLU 81	-0.83	-0.91	83.34	-2.3306	-0.3238	-0.0218
555	SLU 82	-0.83	-0.86	83.33	-2.3305	-0.3233	-0.0218
555	SLU 83	-0.84	-0.92	84.09	-2.3519	-0.3271	-0.0221
555	SLU 84	-0.84	-0.87	84.09	-2.3518	-0.3266	-0.022
555	SLE RA 1	-0.6	-0.65	54.7	-1.5309	-0.2017	-0.0156
555	SLE RA 2	-0.6	-0.59	54.7	-1.5307	-0.2011	-0.0155
555	SLE RA 3	-0.6	-0.65	55.51	-1.5535	-0.2053	-0.0158
555	SLE RA 4	-0.6	-0.62	55.51	-1.5534	-0.2049	-0.0158
555	SLE RA 5	-0.6	-0.6	55.2	-1.5449	-0.2034	-0.0157
555	SLE RA 6	-0.61	-0.66	56.01	-1.5677	-0.2075	-0.0159
555	SLE RA 7	-0.61	-0.62	56.01	-1.5676	-0.2072	-0.0159
555	SLE RA 8	-0.61	-0.66	55.71	-1.5593	-0.2061	-0.0159
555	SLE RA 9	-0.61	-0.63	55.71	-1.5592	-0.2058	-0.0158
555	SLE RA 10	-0.61	-0.62	59.49	-1.6642	-0.2263	-0.0161
555	SLE RA 11	-0.62	-0.68	60.3	-1.687	-0.2305	-0.0163
555	SLE RA 12	-0.62	-0.64	60.3	-1.6868	-0.2301	-0.0163
555	SLE RA 13	-0.62	-0.63	59.99	-1.6784	-0.2286	-0.0162
555	SLE RA 14	-0.63	-0.68	60.81	-1.7012	-0.2327	-0.0165
555	SLE RA 15	-0.63	-0.65	60.8	-1.701	-0.2324	-0.0165
555	SLE RA 16	-0.63	-0.69	60.5	-1.6928	-0.2313	-0.0164
555	SLE RA 17	-0.63	-0.66	60.5	-1.6927	-0.231	-0.0164
555	SLE RA 18	-0.62	-0.69	61.55	-1.7216	-0.2377	-0.0163
555	SLE RA 19	-0.62	-0.65	61.54	-1.7215	-0.2374	-0.0163
555	SLE RA 20	-0.63	-0.7	62.05	-1.7358	-0.2399	-0.0165
555	SLE RA 21	-0.63	-0.66	62.05	-1.7357	-0.2396	-0.0165
555	SLE FR 1	-0.6	-0.65	54.7	-1.5309	-0.2017	-0.0156
555	SLE FR 2	-0.6	-0.64	54.7	-1.5309	-0.2016	-0.0156
555	SLE FR 3	-0.6	-0.65	54.9	-1.5366	-0.2026	-0.0156

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
555	SLE FR 4	-0.6	-0.65	56.75	-1.5881	-0.2124	-0.0158
555	SLE FR 5	-0.61	-0.66	56.96	-1.5938	-0.2134	-0.0159
555	SLE FR 6	-0.61	-0.67	58.12	-1.6263	-0.2197	-0.016
555	SLE QP 1	-0.6	-0.65	54.7	-1.5309	-0.2017	-0.0156
555	SLE QP 2	-0.6	-0.66	56.75	-1.5881	-0.2125	-0.0158
555	SLD 1	3.98	-0.08	61.5	-1.7199	-0.0287	0.1118
555	SLD 2	4.04	-0.49	61.54	-1.7202	-0.0342	0.121
555	SLD 3	3.92	-1.64	61.95	-1.732	-0.0634	0.1135
555	SLD 4	3.98	-2.05	61.98	-1.7324	-0.0689	0.1227
555	SLD 5	0.85	1.96	57.5	-1.6092	-0.1038	0.0182
555	SLD 6	0.89	1.69	57.52	-1.6094	-0.1074	0.0243
555	SLD 7	0.65	-3.25	58.98	-1.6496	-0.2194	0.024
555	SLD 8	0.69	-3.52	59	-1.6499	-0.223	0.03
555	SLD 9	-1.9	2.2	54.51	-1.5264	-0.202	-0.0616
555	SLD 10	-1.86	1.93	54.53	-1.5266	-0.2056	-0.0556
555	SLD 11	-2.1	-3.01	55.99	-1.5668	-0.3176	-0.0559
555	SLD 12	-2.06	-3.28	56.01	-1.5671	-0.3212	-0.0498
555	SLD 13	-5.19	0.73	51.53	-1.4439	-0.3561	-0.1543
555	SLD 14	-5.13	0.32	51.56	-1.4443	-0.3616	-0.1451
555	SLD 15	-5.25	-0.83	51.97	-1.456	-0.3907	-0.1526
555	SLD 16	-5.19	-1.24	52	-1.4564	-0.3962	-0.1434
555	SLV 1	10.13	0.65	67.88	-1.8967	0.2166	0.2826
555	SLV 2	10.26	-0.31	67.96	-1.8975	0.2038	0.3041
555	SLV 3	9.99	-2.91	68.89	-1.9242	0.1375	0.2866
555	SLV 4	10.12	-3.87	68.96	-1.925	0.1246	0.3081
555	SLV 5	2.8	5.3	58.55	-1.6388	0.0385	0.0639
555	SLV 6	2.89	4.69	58.6	-1.6393	0.0302	0.0777
555	SLV 7	2.34	-6.57	61.91	-1.7306	-0.2253	0.0774
555	SLV 8	2.43	-7.19	61.96	-1.7311	-0.2336	0.0912
555	SLV 9	-3.63	5.87	51.55	-1.4452	-0.1914	-0.1228
555	SLV 10	-3.55	5.25	51.6	-1.4457	-0.1997	-0.109
555	SLV 11	-4.1	-6	54.91	-1.537	-0.4552	-0.1093
555	SLV 12	-4.01	-6.62	54.96	-1.5375	-0.4634	-0.0955
555	SLV 13	-11.33	2.55	44.54	-1.2512	-0.5496	-0.3397
555	SLV 14	-11.19	1.59	44.62	-1.2521	-0.5624	-0.3182
555	SLV 15	-11.47	-1.01	45.55	-1.2788	-0.6287	-0.3357
555	SLV 16	-11.33	-1.97	45.63	-1.2796	-0.6416	-0.3142
555	CRTFP Ux+	0	0	0	0	0	0
555	CRTFP Ux-	0	0	0	0	0	0
558	SLU 1	0.68	-0.52	51.06	-1.4286	0.0905	0.0136
558	SLU 2	0.68	-0.44	51.05	-1.4283	0.0893	0.0136
558	SLU 3	0.7	-0.52	52.19	-1.4603	0.0912	0.014
558	SLU 4	0.7	-0.47	52.19	-1.4602	0.0904	0.014
558	SLU 5	0.69	-0.45	51.75	-1.4482	0.089	0.0139
558	SLU 6	0.71	-0.54	52.9	-1.4802	0.0909	0.0143
558	SLU 7	0.71	-0.49	52.89	-1.48	0.0902	0.0143
558	SLU 8	0.7	-0.55	52.47	-1.4683	0.09	0.0142
558	SLU 9	0.7	-0.49	52.46	-1.4682	0.0892	0.0142
558	SLU 10	0.73	-0.46	57.95	-1.62	0.1072	0.0147
558	SLU 11	0.75	-0.55	59.09	-1.652	0.1091	0.015
558	SLU 12	0.75	-0.5	59.08	-1.6518	0.1083	0.015
558	SLU 13	0.74	-0.47	58.65	-1.6398	0.1069	0.0149
558	SLU 14	0.76	-0.56	59.79	-1.6718	0.1088	0.0153
558	SLU 15	0.76	-0.51	59.79	-1.6717	0.1081	0.0153
558	SLU 16	0.75	-0.57	59.37	-1.66	0.1079	0.0152
558	SLU 17	0.75	-0.52	59.36	-1.6598	0.1071	0.0152
558	SLU 18	0.75	-0.55	60.91	-1.7024	0.1161	0.0151
558	SLU 19	0.75	-0.5	60.91	-1.7022	0.1153	0.0151
558	SLU 20	0.76	-0.56	61.62	-1.7222	0.1158	0.0154
558	SLU 21	0.76	-0.51	61.61	-1.7221	0.1151	0.0154
558	SLU 22	0.74	-0.52	57.61	-1.6108	0.0905	0.0151
558	SLU 23	0.74	-0.44	57.6	-1.6105	0.0893	0.0151
558	SLU 24	0.76	-0.52	58.75	-1.6425	0.0912	0.0155
558	SLU 25	0.76	-0.47	58.74	-1.6424	0.0905	0.0155
558	SLU 26	0.76	-0.45	58.31	-1.6304	0.089	0.0154
558	SLU 27	0.77	-0.54	59.45	-1.6624	0.091	0.0158
558	SLU 28	0.77	-0.49	59.44	-1.6623	0.0902	0.0158
558	SLU 29	0.77	-0.55	59.02	-1.6505	0.09	0.0156
558	SLU 30	0.77	-0.5	59.01	-1.6504	0.0893	0.0157
558	SLU 31	0.8	-0.46	64.5	-1.8022	0.1072	0.0161
558	SLU 32	0.81	-0.55	65.64	-1.8342	0.1091	0.0165
558	SLU 33	0.81	-0.5	65.64	-1.834	0.1084	0.0165
558	SLU 34	0.81	-0.47	65.2	-1.8221	0.1069	0.0164
558	SLU 35	0.83	-0.56	66.35	-1.8541	0.1089	0.0168
558	SLU 36	0.83	-0.51	66.34	-1.8539	0.1081	0.0168
558	SLU 37	0.82	-0.57	65.92	-1.8422	0.1079	0.0167
558	SLU 38	0.82	-0.52	65.91	-1.842	0.1071	0.0167
558	SLU 39	0.82	-0.55	67.47	-1.8846	0.1161	0.0166
558	SLU 40	0.82	-0.5	67.46	-1.8844	0.1153	0.0166
558	SLU 41	0.83	-0.56	68.17	-1.9045	0.1158	0.0168
558	SLU 42	0.83	-0.51	68.16	-1.9043	0.1151	0.0168
558	SLU 43	0.86	-0.68	64.13	-1.7946	0.1177	0.0172
558	SLU 44	0.86	-0.59	64.12	-1.7944	0.1164	0.0172
558	SLU 45	0.88	-0.68	65.26	-1.8264	0.1183	0.0176
558	SLU 46	0.88	-0.63	65.26	-1.8262	0.1176	0.0176
558	SLU 47	0.87	-0.6	64.82	-1.8143	0.1161	0.0175
558	SLU 48	0.89	-0.69	65.97	-1.8463	0.1181	0.0179
558	SLU 49	0.89	-0.64	65.96	-1.8461	0.1173	0.0179
558	SLU 50	0.88	-0.7	65.54	-1.8344	0.1171	0.0178
558	SLU 51	0.88	-0.65	65.53	-1.8343	0.1164	0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
558	SLU 52	0.91	-0.61	71.02	-1.986	0.1343	0.0182
558	SLU 53	0.93	-0.7	72.16	-2.0181	0.1362	0.0186
558	SLU 54	0.93	-0.65	72.15	-2.0179	0.1355	0.0186
558	SLU 55	0.92	-0.63	71.72	-2.0059	0.134	0.0185
558	SLU 56	0.94	-0.71	72.87	-2.0379	0.136	0.0189
558	SLU 57	0.94	-0.66	72.86	-2.0378	0.1352	0.0189
558	SLU 58	0.93	-0.72	72.44	-2.0261	0.135	0.0188
558	SLU 59	0.93	-0.67	72.43	-2.0259	0.1343	0.0188
558	SLU 60	0.93	-0.71	73.98	-2.0684	0.1432	0.0187
558	SLU 61	0.93	-0.66	73.98	-2.0683	0.1425	0.0187
558	SLU 62	0.94	-0.72	74.69	-2.0883	0.143	0.0189
558	SLU 63	0.94	-0.67	74.68	-2.0882	0.1422	0.0189
558	SLU 64	0.92	-0.68	70.68	-1.9769	0.1177	0.0187
558	SLU 65	0.92	-0.59	70.67	-1.9766	0.1164	0.0187
558	SLU 66	0.94	-0.68	71.82	-2.0086	0.1184	0.0191
558	SLU 67	0.94	-0.63	71.81	-2.0085	0.1176	0.0191
558	SLU 68	0.94	-0.6	71.38	-1.9965	0.1162	0.019
558	SLU 69	0.95	-0.69	72.52	-2.0285	0.1181	0.0193
558	SLU 70	0.95	-0.64	72.51	-2.0284	0.1174	0.0194
558	SLU 71	0.95	-0.7	72.09	-2.0166	0.1172	0.0192
558	SLU 72	0.95	-0.65	72.09	-2.0165	0.1164	0.0192
558	SLU 73	0.98	-0.61	77.57	-2.1683	0.1343	0.0197
558	SLU 74	0.99	-0.7	78.71	-2.2003	0.1363	0.0201
558	SLU 75	0.99	-0.65	78.71	-2.2001	0.1355	0.0201
558	SLU 76	0.99	-0.63	78.27	-2.1882	0.1341	0.02
558	SLU 77	1.01	-0.72	79.42	-2.2202	0.136	0.0204
558	SLU 78	1.01	-0.66	79.41	-2.22	0.1352	0.0204
558	SLU 79	1	-0.72	78.99	-2.2083	0.135	0.0202
558	SLU 80	1	-0.67	78.98	-2.2081	0.1343	0.0203
558	SLU 81	1	-0.71	80.54	-2.2507	0.1432	0.0201
558	SLU 82	1	-0.66	80.53	-2.2505	0.1425	0.0201
558	SLU 83	1.01	-0.72	81.24	-2.2706	0.143	0.0204
558	SLU 84	1.01	-0.67	81.23	-2.2704	0.1422	0.0204
558	SLE RA 1	0.7	-0.52	52.93	-1.4806	0.0905	0.014
558	SLE RA 2	0.7	-0.46	52.92	-1.4805	0.0897	0.014
558	SLE RA 3	0.71	-0.52	53.69	-1.5018	0.091	0.0143
558	SLE RA 4	0.71	-0.49	53.68	-1.5017	0.0905	0.0143
558	SLE RA 5	0.7	-0.47	53.39	-1.4937	0.0895	0.0142
558	SLE RA 6	0.72	-0.53	54.16	-1.515	0.0908	0.0145
558	SLE RA 7	0.72	-0.5	54.15	-1.5149	0.0903	0.0145
558	SLE RA 8	0.71	-0.54	53.87	-1.5071	0.0902	0.0144
558	SLE RA 9	0.71	-0.5	53.87	-1.507	0.0897	0.0144
558	SLE RA 10	0.73	-0.48	57.52	-1.6082	0.1016	0.0147
558	SLE RA 11	0.74	-0.54	58.29	-1.6296	0.1029	0.015
558	SLE RA 12	0.74	-0.5	58.28	-1.6295	0.1024	0.015
558	SLE RA 13	0.74	-0.49	57.99	-1.6215	0.1014	0.0149
558	SLE RA 14	0.75	-0.55	58.76	-1.6428	0.1027	0.0152
558	SLE RA 15	0.75	-0.51	58.75	-1.6427	0.1022	0.0152
558	SLE RA 16	0.75	-0.55	58.47	-1.6349	0.1021	0.0151
558	SLE RA 17	0.75	-0.52	58.46	-1.6348	0.1016	0.0151
558	SLE RA 18	0.75	-0.54	59.5	-1.6632	0.1076	0.015
558	SLE RA 19	0.75	-0.51	59.5	-1.6631	0.1071	0.015
558	SLE RA 20	0.75	-0.55	59.97	-1.6764	0.1074	0.0152
558	SLE RA 21	0.75	-0.52	59.97	-1.6763	0.1069	0.0152
558	SLE FR 1	0.7	-0.52	52.93	-1.4806	0.0905	0.014
558	SLE FR 2	0.7	-0.51	52.93	-1.4806	0.0904	0.014
558	SLE FR 3	0.7	-0.52	53.12	-1.4859	0.0904	0.0141
558	SLE FR 4	0.71	-0.52	54.9	-1.5353	0.0955	0.0143
558	SLE FR 5	0.71	-0.53	55.09	-1.5407	0.0956	0.0144
558	SLE FR 6	0.72	-0.53	56.22	-1.5719	0.099	0.0145
558	SLE QP 1	0.7	-0.52	52.93	-1.4806	0.0905	0.014
558	SLE QP 2	0.71	-0.53	54.9	-1.5354	0.0956	0.0143
558	SLD 1	5.09	0.48	50.41	-1.414	0.1251	0.1426
558	SLD 2	5.15	0.89	50.38	-1.4143	0.1181	0.1524
558	SLD 3	5.03	-1.07	50.99	-1.4263	0.1628	0.1404
558	SLD 4	5.09	-0.66	50.95	-1.4266	0.1558	0.1503
558	SLD 5	2.1	2.05	52.69	-1.4803	0.0484	0.0543
558	SLD 6	2.14	2.32	52.67	-1.4805	0.0438	0.0608
558	SLD 7	1.91	-3.11	54.61	-1.5213	0.1743	0.0472
558	SLD 8	1.95	-2.84	54.58	-1.5215	0.1697	0.0536
558	SLD 9	-0.53	1.79	55.22	-1.5493	0.0215	-0.0249
558	SLD 10	-0.49	2.06	55.2	-1.5495	0.0169	-0.0185
558	SLD 11	-0.71	-3.38	57.14	-1.5903	0.1474	-0.0321
558	SLD 12	-0.67	-3.11	57.12	-1.5905	0.1428	-0.0257
558	SLD 13	-3.67	-0.4	58.85	-1.6442	0.0354	-0.1216
558	SLD 14	-3.61	0.02	58.82	-1.6444	0.0284	-0.1118
558	SLD 15	-3.73	-1.95	59.43	-1.6565	0.0732	-0.1237
558	SLD 16	-3.66	-1.53	59.39	-1.6567	0.0662	-0.1139
558	SLV 1	10.94	1.78	44.41	-1.2518	0.1648	0.3143
558	SLV 2	11.09	2.75	44.34	-1.2524	0.1485	0.3372
558	SLV 3	10.82	-1.75	45.72	-1.2798	0.2507	0.3094
558	SLV 4	10.96	-0.78	45.65	-1.2804	0.2344	0.3322
558	SLV 5	3.95	5.35	49.79	-1.4077	-0.0111	0.1079
558	SLV 6	4.04	5.97	49.74	-1.4081	-0.0216	0.1227
558	SLV 7	3.53	-6.41	54.15	-1.5011	0.2752	0.0914
558	SLV 8	3.62	-5.79	54.1	-1.5015	0.2647	0.1061
558	SLV 9	-2.2	4.74	55.71	-1.5693	-0.0735	-0.0774
558	SLV 10	-2.1	5.36	55.66	-1.5697	-0.084	-0.0627
558	SLV 11	-2.62	-7.03	60.07	-1.6626	0.2128	-0.094
558	SLV 12	-2.53	-6.41	60.02	-1.663	0.2023	-0.0793

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
558	SLV 13	-9.54	-0.27	64.16	-1.7903	-0.0432	-0.3035
558	SLV 14	-9.39	0.69	64.08	-1.791	-0.0595	-0.2807
558	SLV 15	-9.67	-3.8	65.47	-1.8183	0.0427	-0.3085
558	SLV 16	-9.52	-2.84	65.39	-1.819	0.0264	-0.2857
558	CRTFP Ux+	0	0	0	0	0	0
558	CRTFP Ux-	0	0	0	0	0	0
558	CRTFP Uy+	0	0	0	0	0	0
558	CRTFP Uy-	0	0	0	0	0	0
559	SLU 1	0.68	0.27	37.03	-1.0161	11.4312	-0.0777
559	SLU 2	0.68	0.35	37.04	-1.0163	11.4335	-0.1057
559	SLU 3	0.7	0.28	37.88	-1.0394	11.6899	-0.0806
559	SLU 4	0.7	0.33	37.89	-1.0395	11.6912	-0.0975
559	SLU 5	0.7	0.36	37.57	-1.0309	11.5948	-0.1057
559	SLU 6	0.72	0.29	38.41	-1.054	11.8512	-0.0806
559	SLU 7	0.71	0.33	38.42	-1.0542	11.8526	-0.0974
559	SLU 8	0.71	0.28	38.09	-1.0453	11.7539	-0.0776
559	SLU 9	0.71	0.32	38.1	-1.0455	11.7553	-0.0944
559	SLU 10	0.73	0.42	41.79	-1.1465	12.904	-0.1272
559	SLU 11	0.75	0.35	42.63	-1.1695	13.1603	-0.1022
559	SLU 12	0.75	0.4	42.64	-1.1697	13.1617	-0.119
559	SLU 13	0.75	0.42	42.32	-1.1611	13.0653	-0.1272
559	SLU 14	0.77	0.35	43.17	-1.1842	13.3217	-0.1021
559	SLU 15	0.76	0.4	43.17	-1.1843	13.3231	-0.1189
559	SLU 16	0.76	0.34	42.85	-1.1755	13.2244	-0.0991
559	SLU 17	0.76	0.39	42.85	-1.1756	13.2258	-0.1159
559	SLU 18	0.76	0.37	43.82	-1.202	13.5319	-0.1084
559	SLU 19	0.76	0.42	43.82	-1.2021	13.5333	-0.1252
559	SLU 20	0.77	0.37	44.35	-1.2166	13.6933	-0.1084
559	SLU 21	0.77	0.42	44.36	-1.2168	13.6946	-0.1252
559	SLU 22	0.75	0.34	41.7	-1.144	12.8724	-0.0972
559	SLU 23	0.75	0.42	41.71	-1.1442	12.8747	-0.1253
559	SLU 24	0.77	0.35	42.55	-1.1673	13.1311	-0.1002
559	SLU 25	0.77	0.39	42.56	-1.1674	13.1324	-0.1171
559	SLU 26	0.76	0.42	42.24	-1.1588	13.036	-0.1253
559	SLU 27	0.78	0.35	43.09	-1.1819	13.2924	-0.1002
559	SLU 28	0.78	0.39	43.09	-1.1821	13.2938	-0.117
559	SLU 29	0.77	0.34	42.77	-1.1732	13.1951	-0.0972
559	SLU 30	0.77	0.39	42.77	-1.1733	13.1965	-0.114
559	SLU 31	0.8	0.48	46.46	-1.2743	14.3452	-0.1468
559	SLU 32	0.82	0.41	47.31	-1.2974	14.6015	-0.1217
559	SLU 33	0.82	0.46	47.31	-1.2976	14.6029	-0.1386
559	SLU 34	0.81	0.48	47	-1.289	14.5065	-0.1468
559	SLU 35	0.83	0.41	47.84	-1.3121	14.7629	-0.1217
559	SLU 36	0.83	0.46	47.85	-1.3122	14.7643	-0.1385
559	SLU 37	0.82	0.4	47.52	-1.3033	14.6656	-0.1187
559	SLU 38	0.82	0.45	47.53	-1.3035	14.667	-0.1355
559	SLU 39	0.82	0.43	48.49	-1.3299	14.9731	-0.128
559	SLU 40	0.82	0.48	48.5	-1.33	14.9744	-0.1448
559	SLU 41	0.83	0.43	49.03	-1.3445	15.1345	-0.1279
559	SLU 42	0.83	0.48	49.03	-1.3446	15.1358	-0.1448
559	SLU 43	0.87	0.34	46.54	-1.277	14.3664	-0.0942
559	SLU 44	0.87	0.42	46.54	-1.2773	14.3687	-0.1223
559	SLU 45	0.89	0.35	47.39	-1.3004	14.6251	-0.0972
559	SLU 46	0.89	0.39	47.39	-1.3005	14.6265	-0.114
559	SLU 47	0.88	0.42	47.08	-1.2919	14.5301	-0.1222
559	SLU 48	0.9	0.35	47.92	-1.315	14.7865	-0.0972
559	SLU 49	0.9	0.39	47.93	-1.3151	14.7878	-0.114
559	SLU 50	0.89	0.34	47.6	-1.3063	14.6892	-0.0941
559	SLU 51	0.89	0.39	47.61	-1.3064	14.6905	-0.111
559	SLU 52	0.92	0.48	51.3	-1.4074	15.8392	-0.1438
559	SLU 53	0.94	0.41	52.14	-1.4305	16.0956	-0.1187
559	SLU 54	0.94	0.46	52.15	-1.4307	16.0969	-0.1356
559	SLU 55	0.93	0.48	51.83	-1.4221	16.0006	-0.1438
559	SLU 56	0.95	0.41	52.67	-1.4451	16.257	-0.1187
559	SLU 57	0.95	0.46	52.68	-1.4453	16.2583	-0.1355
559	SLU 58	0.94	0.4	52.35	-1.4364	16.1597	-0.1157
559	SLU 59	0.94	0.45	52.36	-1.4366	16.161	-0.1325
559	SLU 60	0.94	0.43	53.33	-1.463	16.4671	-0.125
559	SLU 61	0.94	0.48	53.33	-1.4631	16.4685	-0.1418
559	SLU 62	0.95	0.43	53.86	-1.4776	16.6285	-0.1249
559	SLU 63	0.95	0.48	53.86	-1.4777	16.6299	-0.1418
559	SLU 64	0.93	0.4	51.21	-1.4049	15.8076	-0.1138
559	SLU 65	0.93	0.48	51.22	-1.4052	15.8099	-0.1419
559	SLU 66	0.95	0.41	52.06	-1.4283	16.0663	-0.1168
559	SLU 67	0.95	0.45	52.07	-1.4284	16.0677	-0.1336
559	SLU 68	0.94	0.48	51.75	-1.4198	15.9713	-0.1418
559	SLU 69	0.96	0.41	52.59	-1.4429	16.2277	-0.1168
559	SLU 70	0.96	0.46	52.6	-1.443	16.229	-0.1336
559	SLU 71	0.96	0.4	52.27	-1.4342	16.1304	-0.1137
559	SLU 72	0.96	0.45	52.28	-1.4343	16.1317	-0.1306
559	SLU 73	0.98	0.54	55.97	-1.5353	17.2804	-0.1634
559	SLU 74	1	0.47	56.81	-1.5584	17.5368	-0.1383
559	SLU 75	1	0.52	56.82	-1.5586	17.5381	-0.1552
559	SLU 76	0.99	0.54	56.5	-1.5499	17.4418	-0.1634
559	SLU 77	1.01	0.47	57.35	-1.573	17.6982	-0.1383
559	SLU 78	1.01	0.52	57.35	-1.5732	17.6995	-0.1551
559	SLU 79	1.01	0.46	57.03	-1.5643	17.6009	-0.1353
559	SLU 80	1.01	0.51	57.03	-1.5645	17.6022	-0.1521
559	SLU 81	1	0.49	58	-1.5909	17.9083	-0.1446
559	SLU 82	1	0.54	58	-1.591	17.9097	-0.1614

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
559	SLU 83	1.02	0.49	58.53	-1.6055	18.0697	-0.1445
559	SLU 84	1.02	0.54	58.54	-1.6056	18.0711	-0.1614
559	SLE RA 1	0.7	0.29	38.36	-1.0526	11.843	-0.0833
559	SLE RA 2	0.7	0.35	38.37	-1.0528	11.8445	-0.102
559	SLE RA 3	0.72	0.3	38.93	-1.0682	12.0154	-0.0852
559	SLE RA 4	0.72	0.33	38.94	-1.0683	12.0163	-0.0965
559	SLE RA 5	0.71	0.35	38.73	-1.0625	11.9521	-0.1019
559	SLE RA 6	0.72	0.3	39.29	-1.0779	12.123	-0.0852
559	SLE RA 7	0.72	0.33	39.29	-1.078	12.1239	-0.0964
559	SLE RA 8	0.72	0.29	39.07	-1.0721	12.0581	-0.0832
559	SLE RA 9	0.72	0.32	39.08	-1.0722	12.059	-0.0944
559	SLE RA 10	0.74	0.39	41.54	-1.1395	12.8248	-0.1163
559	SLE RA 11	0.75	0.34	42.1	-1.1549	12.9957	-0.0996
559	SLE RA 12	0.75	0.37	42.1	-1.155	12.9966	-0.1108
559	SLE RA 13	0.74	0.39	41.89	-1.1493	12.9324	-0.1163
559	SLE RA 14	0.76	0.34	42.46	-1.1647	13.1033	-0.0996
559	SLE RA 15	0.76	0.37	42.46	-1.1648	13.1042	-0.1108
559	SLE RA 16	0.75	0.34	42.24	-1.1589	13.0385	-0.0975
559	SLE RA 17	0.75	0.37	42.25	-1.159	13.0394	-0.1088
559	SLE RA 18	0.75	0.35	42.89	-1.1766	13.2434	-0.1037
559	SLE RA 19	0.75	0.39	42.89	-1.1767	13.2443	-0.115
559	SLE RA 20	0.76	0.35	43.25	-1.1863	13.351	-0.1037
559	SLE RA 21	0.76	0.39	43.25	-1.1864	13.3519	-0.1149
559	SLE FR 1	0.7	0.29	38.36	-1.0526	11.843	-0.0833
559	SLE FR 2	0.7	0.3	38.37	-1.0526	11.8433	-0.087
559	SLE FR 3	0.71	0.29	38.51	-1.0565	11.886	-0.0832
559	SLE FR 4	0.72	0.32	39.72	-1.0898	12.2634	-0.0931
559	SLE FR 5	0.72	0.31	39.86	-1.0937	12.3061	-0.0894
559	SLE FR 6	0.73	0.32	40.63	-1.1146	12.5432	-0.0935
559	SLE QP 1	0.7	0.29	38.36	-1.0526	11.843	-0.0833
559	SLE QP 2	0.72	0.31	39.72	-1.0898	12.2631	-0.0894
559	SLD 1	3.27	0.16	29.52	-0.8104	9.2916	-0.0123
559	SLD 2	3.32	0.83	29.53	-0.8112	9.2828	-0.2418
559	SLD 3	3.22	-1.17	29.38	-0.8068	9.3452	0.4533
559	SLD 4	3.27	-0.51	29.39	-0.8075	9.3365	0.2237
559	SLD 5	1.56	2.17	36.87	-1.0114	11.2918	-0.7315
559	SLD 6	1.59	2.61	36.87	-1.0119	11.2861	-0.882
559	SLD 7	1.38	-2.28	36.41	-0.9992	11.4707	0.8203
559	SLD 8	1.41	-1.84	36.42	-0.9997	11.465	0.6698
559	SLD 9	0.03	2.46	43.03	-1.1799	13.0613	-0.8486
559	SLD 10	0.06	2.9	43.03	-1.1804	13.0555	-0.9991
559	SLD 11	-0.16	-1.99	42.57	-1.1677	13.2401	0.7032
559	SLD 12	-0.12	-1.55	42.58	-1.1682	13.2344	0.5527
559	SLD 13	-1.83	1.13	50.05	-1.3721	15.1897	-0.4025
559	SLD 14	-1.78	1.79	50.06	-1.3728	15.181	-0.6321
559	SLD 15	-1.89	-0.2	49.92	-1.3684	15.2434	0.063
559	SLD 16	-1.84	0.46	49.92	-1.3692	15.2346	-0.1665
559	SLV 1	6.69	-0.07	15.85	-0.436	5.31	0.1048
559	SLV 2	6.81	1.47	15.86	-0.4377	5.2897	-0.4298
559	SLV 3	6.57	-3.11	15.53	-0.4275	5.4336	1.1639
559	SLV 4	6.68	-1.57	15.54	-0.4292	5.4133	0.6293
559	SLV 5	2.68	4.54	33.04	-0.9063	9.9932	-1.5454
559	SLV 6	2.75	5.53	33.05	-0.9074	9.9801	-1.8899
559	SLV 7	2.26	-5.59	31.98	-0.8779	10.4053	1.985
559	SLV 8	2.34	-4.6	31.99	-0.879	10.3922	1.6404
559	SLV 9	-0.9	5.22	47.45	-1.3006	14.1341	-1.8192
559	SLV 10	-0.83	6.21	47.46	-1.3017	14.1209	-2.1638
559	SLV 11	-1.32	-4.91	46.4	-1.2722	14.5461	1.7111
559	SLV 12	-1.25	-3.92	46.41	-1.2733	14.533	1.3666
559	SLV 13	-5.25	2.19	63.9	-1.7504	19.1129	-0.8081
559	SLV 14	-5.13	3.73	63.92	-1.7521	19.0926	-1.3427
559	SLV 15	-5.37	-0.85	63.58	-1.7419	19.2365	0.251
559	SLV 16	-5.26	0.69	63.6	-1.7436	19.2162	-0.2836
559	CRTFP Ux+	0	0	0	0	0	0
559	CRTFP Ux-	0	0	0	0	0	0
559	CRTFP Uy+	0	0	0	0	0	0
559	CRTFP Uy-	0	0	0	0	0	0
611	SLU 1	-0.42	-0.13	27.33	-1.5188	-5.7767	-0.0547
611	SLU 2	-0.42	-0.07	27.33	-1.5192	-5.7783	-0.039
611	SLU 3	-0.43	-0.13	27.96	-1.5538	-5.9072	-0.0556
611	SLU 4	-0.43	-0.09	27.96	-1.554	-5.9081	-0.0462
611	SLU 5	-0.42	-0.07	27.73	-1.5412	-5.8603	-0.0401
611	SLU 6	-0.43	-0.13	28.35	-1.5758	-5.9891	-0.0567
611	SLU 7	-0.43	-0.1	28.36	-1.576	-5.9901	-0.0473
611	SLU 8	-0.43	-0.14	28.12	-1.5629	-5.9407	-0.0569
611	SLU 9	-0.43	-0.1	28.12	-1.5631	-5.9416	-0.0474
611	SLU 10	-0.44	-0.07	30.84	-1.7142	-6.5248	-0.0404
611	SLU 11	-0.45	-0.13	31.47	-1.7488	-6.6537	-0.057
611	SLU 12	-0.45	-0.09	31.47	-1.749	-6.6547	-0.0476
611	SLU 13	-0.45	-0.07	31.24	-1.7362	-6.6068	-0.0415
611	SLU 14	-0.46	-0.13	31.86	-1.7708	-6.7357	-0.0581
611	SLU 15	-0.46	-0.1	31.87	-1.771	-6.7367	-0.0487
611	SLU 16	-0.45	-0.14	31.63	-1.7579	-6.6872	-0.0582
611	SLU 17	-0.45	-0.1	31.63	-1.7581	-6.6882	-0.0488
611	SLU 18	-0.45	-0.13	32.34	-1.7974	-6.8432	-0.0566
611	SLU 19	-0.45	-0.09	32.35	-1.7976	-6.8441	-0.0472
611	SLU 20	-0.45	-0.13	32.74	-1.8194	-6.9252	-0.0577
611	SLU 21	-0.46	-0.1	32.74	-1.8196	-6.9261	-0.0483
611	SLU 22	-0.45	-0.13	30.8	-1.7116	-6.5109	-0.0563
611	SLU 23	-0.45	-0.07	30.81	-1.712	-6.5125	-0.0406

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
611	SLU 24	-0.46	-0.13	31.43	-1.7466	-6.6414	-0.0573
611	SLU 25	-0.46	-0.09	31.43	-1.7468	-6.6423	-0.0479
611	SLU 26	-0.46	-0.07	31.2	-1.734	-6.5945	-0.0417
611	SLU 27	-0.47	-0.13	31.83	-1.7686	-6.7234	-0.0584
611	SLU 28	-0.47	-0.09	31.83	-1.7688	-6.7243	-0.049
611	SLU 29	-0.47	-0.13	31.59	-1.7557	-6.6749	-0.0585
611	SLU 30	-0.47	-0.1	31.6	-1.7559	-6.6758	-0.0491
611	SLU 31	-0.48	-0.07	34.32	-1.907	-7.2591	-0.042
611	SLU 32	-0.49	-0.13	34.94	-1.9416	-7.3879	-0.0587
611	SLU 33	-0.49	-0.09	34.94	-1.9418	-7.3889	-0.0492
611	SLU 34	-0.48	-0.07	34.71	-1.929	-7.341	-0.0431
611	SLU 35	-0.49	-0.13	35.34	-1.9636	-7.4699	-0.0598
611	SLU 36	-0.49	-0.1	35.34	-1.9638	-7.4709	-0.0503
611	SLU 37	-0.49	-0.13	35.1	-1.9507	-7.4214	-0.0599
611	SLU 38	-0.49	-0.1	35.11	-1.9509	-7.4224	-0.0505
611	SLU 39	-0.49	-0.13	35.81	-1.9902	-7.5774	-0.0583
611	SLU 40	-0.49	-0.09	35.82	-1.9904	-7.5784	-0.0489
611	SLU 41	-0.49	-0.13	36.21	-2.0122	-7.6594	-0.0594
611	SLU 42	-0.49	-0.09	36.21	-2.0124	-7.6604	-0.05
611	SLU 43	-0.53	-0.17	34.33	-1.9084	-7.258	-0.0705
611	SLU 44	-0.53	-0.11	34.34	-1.9087	-7.2596	-0.0548
611	SLU 45	-0.54	-0.17	34.96	-1.9434	-7.3884	-0.0715
611	SLU 46	-0.54	-0.13	34.97	-1.9436	-7.3894	-0.0621
611	SLU 47	-0.54	-0.11	34.74	-1.9308	-7.3415	-0.0559
611	SLU 48	-0.55	-0.17	35.36	-1.9654	-7.4704	-0.0726
611	SLU 49	-0.55	-0.14	35.37	-1.9656	-7.4714	-0.0632
611	SLU 50	-0.54	-0.17	35.13	-1.9525	-7.4219	-0.0727
611	SLU 51	-0.54	-0.14	35.13	-1.9527	-7.4229	-0.0633
611	SLU 52	-0.55	-0.11	37.85	-2.1037	-8.0061	-0.0562
611	SLU 53	-0.56	-0.17	38.47	-2.1383	-8.135	-0.0729
611	SLU 54	-0.56	-0.13	38.48	-2.1385	-8.1359	-0.0634
611	SLU 55	-0.56	-0.11	38.25	-2.1258	-8.0881	-0.0573
611	SLU 56	-0.57	-0.17	38.87	-2.1604	-8.217	-0.074
611	SLU 57	-0.57	-0.14	38.88	-2.1606	-8.2179	-0.0645
611	SLU 58	-0.56	-0.18	38.64	-2.1475	-8.1685	-0.0741
611	SLU 59	-0.56	-0.14	38.64	-2.1477	-8.1694	-0.0647
611	SLU 60	-0.56	-0.17	39.35	-2.187	-8.3245	-0.0725
611	SLU 61	-0.56	-0.13	39.35	-2.1872	-8.3254	-0.0631
611	SLU 62	-0.57	-0.17	39.75	-2.209	-8.4064	-0.0736
611	SLU 63	-0.57	-0.14	39.75	-2.2092	-8.4074	-0.0642
611	SLU 64	-0.57	-0.17	37.81	-2.1012	-7.9922	-0.0721
611	SLU 65	-0.57	-0.1	37.81	-2.1015	-7.9938	-0.0564
611	SLU 66	-0.58	-0.17	38.44	-2.1361	-8.1227	-0.0731
611	SLU 67	-0.58	-0.13	38.44	-2.1363	-8.1236	-0.0637
611	SLU 68	-0.57	-0.11	38.21	-2.1236	-8.0758	-0.0575
611	SLU 69	-0.58	-0.17	38.83	-2.1582	-8.2046	-0.0742
611	SLU 70	-0.58	-0.13	38.84	-2.1584	-8.2056	-0.0648
611	SLU 71	-0.58	-0.17	38.6	-2.1453	-8.1561	-0.0743
611	SLU 72	-0.58	-0.14	38.6	-2.1455	-8.1571	-0.0649
611	SLU 73	-0.59	-0.11	41.32	-2.2965	-8.7403	-0.0578
611	SLU 74	-0.6	-0.17	41.95	-2.3311	-8.8692	-0.0745
611	SLU 75	-0.6	-0.13	41.95	-2.3313	-8.8702	-0.0651
611	SLU 76	-0.59	-0.11	41.72	-2.3186	-8.8223	-0.0589
611	SLU 77	-0.6	-0.17	42.34	-2.3532	-8.9512	-0.0756
611	SLU 78	-0.61	-0.14	42.35	-2.3534	-8.9522	-0.0662
611	SLU 79	-0.6	-0.17	42.11	-2.3403	-8.9027	-0.0757
611	SLU 80	-0.6	-0.14	42.11	-2.3405	-8.9037	-0.0663
611	SLU 81	-0.6	-0.17	42.82	-2.3797	-9.0587	-0.0741
611	SLU 82	-0.6	-0.13	42.83	-2.3799	-9.0596	-0.0647
611	SLU 83	-0.6	-0.17	43.22	-2.4018	-9.1407	-0.0752
611	SLU 84	-0.6	-0.13	43.22	-2.402	-9.1416	-0.0658
611	SLE RA 1	-0.43	-0.13	28.32	-1.5739	-5.9865	-0.0551
611	SLE RA 2	-0.43	-0.09	28.32	-1.5741	-5.9875	-0.0447
611	SLE RA 3	-0.43	-0.13	28.74	-1.5972	-6.0735	-0.0558
611	SLE RA 4	-0.43	-0.11	28.74	-1.5974	-6.0741	-0.0495
611	SLE RA 5	-0.43	-0.09	28.59	-1.5888	-6.0422	-0.0454
611	SLE RA 6	-0.44	-0.13	29	-1.6119	-6.1281	-0.0565
611	SLE RA 7	-0.44	-0.11	29.01	-1.6121	-6.1287	-0.0502
611	SLE RA 8	-0.44	-0.13	28.85	-1.6033	-6.0958	-0.0566
611	SLE RA 9	-0.44	-0.11	28.85	-1.6035	-6.0964	-0.0503
611	SLE RA 10	-0.44	-0.09	30.66	-1.7041	-6.4852	-0.0456
611	SLE RA 11	-0.45	-0.13	31.08	-1.7272	-6.5712	-0.0567
611	SLE RA 12	-0.45	-0.11	31.08	-1.7274	-6.5718	-0.0504
611	SLE RA 13	-0.45	-0.09	30.93	-1.7188	-6.5399	-0.0463
611	SLE RA 14	-0.45	-0.13	31.34	-1.7419	-6.6258	-0.0574
611	SLE RA 15	-0.45	-0.11	31.35	-1.7421	-6.6264	-0.0512
611	SLE RA 16	-0.45	-0.13	31.19	-1.7333	-6.5935	-0.0575
611	SLE RA 17	-0.45	-0.11	31.19	-1.7334	-6.5941	-0.0512
611	SLE RA 18	-0.45	-0.13	31.66	-1.7596	-6.6975	-0.0565
611	SLE RA 19	-0.45	-0.1	31.66	-1.7598	-6.6981	-0.0502
611	SLE RA 20	-0.45	-0.13	31.93	-1.7743	-6.7521	-0.0572
611	SLE RA 21	-0.45	-0.11	31.93	-1.7745	-6.7528	-0.0509
611	SLE FR 1	-0.43	-0.13	28.32	-1.5739	-5.9865	-0.0551
611	SLE FR 2	-0.43	-0.12	28.32	-1.574	-5.9867	-0.053
611	SLE FR 3	-0.43	-0.13	28.43	-1.5798	-6.0083	-0.0554
611	SLE FR 4	-0.43	-0.12	29.32	-1.6297	-6.2	-0.0534
611	SLE FR 5	-0.43	-0.13	29.43	-1.6355	-6.2216	-0.0558
611	SLE FR 6	-0.44	-0.13	29.99	-1.6668	-6.342	-0.0558
611	SLE QP 1	-0.43	-0.13	28.32	-1.5739	-5.9865	-0.0551
611	SLE QP 2	-0.43	-0.13	29.32	-1.6296	-6.1998	-0.0555

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
611	SLD 1	1.56	0.25	37.41	-2.0782	-7.8022	0.2692
611	SLD 2	1.58	-0.24	37.45	-2.0805	-7.8151	0.1466
611	SLD 3	1.59	-0.78	37.56	-2.0868	-7.8473	0.013
611	SLD 4	1.61	-1.27	37.61	-2.089	-7.8603	-0.1096
611	SLD 5	0.12	1.63	31.5	-1.7508	-6.6097	0.4521
611	SLD 6	0.13	1.31	31.53	-1.7523	-6.6182	0.3718
611	SLD 7	0.21	-1.79	32.02	-1.7794	-6.7602	-0.4016
611	SLD 8	0.23	-2.12	32.05	-1.7808	-6.7687	-0.482
611	SLD 9	-1.09	1.86	26.59	-1.4784	-5.6309	0.3709
611	SLD 10	-1.08	1.53	26.62	-1.4799	-5.6394	0.2906
611	SLD 11	-1	-1.57	27.11	-1.507	-5.7813	-0.4828
611	SLD 12	-0.98	-1.89	27.14	-1.5084	-5.7898	-0.5632
611	SLD 13	-2.48	1.01	21.04	-1.1702	-4.5393	-0.0015
611	SLD 14	-2.46	0.52	21.08	-1.1725	-4.5522	-0.1241
611	SLD 15	-2.45	-0.01	21.19	-1.1788	-4.5844	-0.2576
611	SLD 16	-2.43	-0.51	21.24	-1.181	-4.5974	-0.3802
611	SLV 1	4.23	0.73	48.24	-2.6795	-9.9503	0.6955
611	SLV 2	4.28	-0.43	48.35	-2.6847	-9.9805	0.41
611	SLV 3	4.3	-1.61	48.6	-2.6993	-10.0543	0.1125
611	SLV 4	4.35	-2.77	48.7	-2.7045	-10.0845	-0.173
611	SLV 5	0.86	3.88	34.44	-1.9137	-7.1619	1.1031
611	SLV 6	0.89	3.13	34.5	-1.917	-7.1814	0.9191
611	SLV 7	1.08	-3.92	35.63	-1.9797	-7.5087	-0.8401
611	SLV 8	1.11	-4.67	35.7	-1.983	-7.5282	-1.0241
611	SLV 9	-1.98	4.41	22.95	-1.2762	-4.8713	0.9131
611	SLV 10	-1.95	3.66	23.01	-1.2796	-4.8908	0.7291
611	SLV 11	-1.75	-3.39	24.14	-1.3422	-5.2181	-1.0302
611	SLV 12	-1.72	-4.13	24.21	-1.3456	-5.2376	-1.2142
611	SLV 13	-5.22	2.51	9.94	-0.5547	-2.315	0.062
611	SLV 14	-5.17	1.35	10.05	-0.56	-2.3452	-0.2236
611	SLV 15	-5.15	0.17	10.3	-0.5745	-2.419	-0.521
611	SLV 16	-5.1	-0.99	10.4	-0.5798	-2.4493	-0.8065
611	CRTFP Ux+	0	0	0	0	0	0
611	CRTFP Ux-	0	0	0	0	0	0
611	CRTFP Uy+	0	0	0	0	0	0
611	CRTFP Uy-	0	0	0	0	0	0
622	SLU 1	-0.89	-0.24	54.72	-0.0635	-1.5137	0.0022
622	SLU 2	-0.89	-0.12	54.74	-0.0626	-1.5142	0.0046
622	SLU 3	-0.91	-0.24	55.98	-0.064	-1.5485	0.0024
622	SLU 4	-0.91	-0.17	55.99	-0.0634	-1.5488	0.0038
622	SLU 5	-0.9	-0.12	55.53	-0.0632	-1.5361	0.0046
622	SLU 6	-0.92	-0.25	56.78	-0.0646	-1.5704	0.0024
622	SLU 7	-0.92	-0.18	56.78	-0.064	-1.5707	0.0038
622	SLU 8	-0.92	-0.25	56.31	-0.0649	-1.5575	0.0022
622	SLU 9	-0.92	-0.18	56.32	-0.0643	-1.5578	0.0036
622	SLU 10	-0.94	-0.12	61.79	-0.0732	-1.7101	0.0054
622	SLU 11	-0.96	-0.24	63.03	-0.0746	-1.7445	0.0032
622	SLU 12	-0.96	-0.17	63.04	-0.074	-1.7448	0.0047
622	SLU 13	-0.95	-0.12	62.58	-0.0738	-1.732	0.0054
622	SLU 14	-0.97	-0.25	63.83	-0.0752	-1.7664	0.0032
622	SLU 15	-0.97	-0.18	63.83	-0.0747	-1.7667	0.0047
622	SLU 16	-0.97	-0.25	63.36	-0.0755	-1.7535	0.0031
622	SLU 17	-0.97	-0.18	63.37	-0.0749	-1.7537	0.0045
622	SLU 18	-0.96	-0.24	64.79	-0.0787	-1.7936	0.0034
622	SLU 19	-0.96	-0.17	64.8	-0.0781	-1.7939	0.0048
622	SLU 20	-0.97	-0.25	65.59	-0.0794	-1.8155	0.0034
622	SLU 21	-0.97	-0.17	65.59	-0.0788	-1.8158	0.0048
622	SLU 22	-0.97	-0.24	61.69	-0.0689	-1.7072	0.0033
622	SLU 23	-0.97	-0.11	61.71	-0.068	-1.7076	0.0057
622	SLU 24	-0.99	-0.24	62.95	-0.0694	-1.742	0.0035
622	SLU 25	-0.99	-0.17	62.96	-0.0688	-1.7423	0.0049
622	SLU 26	-0.98	-0.12	62.5	-0.0686	-1.7295	0.0057
622	SLU 27	-1	-0.25	63.75	-0.07	-1.7639	0.0035
622	SLU 28	-1	-0.17	63.76	-0.0694	-1.7642	0.0049
622	SLU 29	-1	-0.25	63.28	-0.0703	-1.751	0.0033
622	SLU 30	-1	-0.17	63.29	-0.0697	-1.7512	0.0048
622	SLU 31	-1.02	-0.11	68.76	-0.0786	-1.9036	0.0066
622	SLU 32	-1.04	-0.24	70	-0.08	-1.9379	0.0044
622	SLU 33	-1.04	-0.17	70.01	-0.0794	-1.9382	0.0058
622	SLU 34	-1.03	-0.12	69.55	-0.0792	-1.9255	0.0066
622	SLU 35	-1.06	-0.25	70.8	-0.0806	-1.9598	0.0044
622	SLU 36	-1.05	-0.17	70.81	-0.0801	-1.9601	0.0058
622	SLU 37	-1.05	-0.25	70.33	-0.0809	-1.9469	0.0042
622	SLU 38	-1.05	-0.17	70.34	-0.0803	-1.9472	0.0056
622	SLU 39	-1.04	-0.24	71.76	-0.0841	-1.9871	0.0045
622	SLU 40	-1.04	-0.16	71.77	-0.0835	-1.9874	0.006
622	SLU 41	-1.05	-0.24	72.56	-0.0848	-2.009	0.0045
622	SLU 42	-1.05	-0.17	72.57	-0.0842	-2.0093	0.006
622	SLU 43	-1.13	-0.32	68.75	-0.0807	-1.9015	0.0025
622	SLU 44	-1.12	-0.19	68.76	-0.0798	-1.902	0.0048
622	SLU 45	-1.15	-0.32	70.01	-0.0812	-1.9363	0.0026
622	SLU 46	-1.15	-0.24	70.02	-0.0806	-1.9366	0.0041
622	SLU 47	-1.14	-0.2	69.56	-0.0804	-1.9239	0.0049
622	SLU 48	-1.16	-0.32	70.8	-0.0818	-1.9582	0.0027
622	SLU 49	-1.16	-0.25	70.81	-0.0812	-1.9585	0.0041
622	SLU 50	-1.16	-0.33	70.33	-0.0821	-1.9453	0.0025
622	SLU 51	-1.15	-0.25	70.34	-0.0815	-1.9456	0.0039
622	SLU 52	-1.17	-0.19	75.81	-0.0904	-2.0979	0.0057
622	SLU 53	-1.2	-0.32	77.06	-0.0918	-2.1323	0.0035
622	SLU 54	-1.2	-0.24	77.07	-0.0912	-2.1325	0.0049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	SLU 55	-1.19	-0.2	76.6	-0.091	-2.1198	0.0057
622	SLU 56	-1.21	-0.32	77.85	-0.0924	-2.1542	0.0035
622	SLU 57	-1.21	-0.25	77.86	-0.0919	-2.1544	0.0049
622	SLU 58	-1.21	-0.33	77.38	-0.0927	-2.1412	0.0033
622	SLU 59	-1.21	-0.25	77.39	-0.0921	-2.1415	0.0048
622	SLU 60	-1.2	-0.32	78.82	-0.0959	-2.1814	0.0037
622	SLU 61	-1.2	-0.24	78.83	-0.0953	-2.1817	0.0051
622	SLU 62	-1.21	-0.32	79.61	-0.0966	-2.2033	0.0037
622	SLU 63	-1.21	-0.25	79.62	-0.096	-2.2036	0.0051
622	SLU 64	-1.21	-0.31	75.72	-0.0861	-2.0949	0.0036
622	SLU 65	-1.2	-0.19	75.73	-0.0852	-2.0954	0.006
622	SLU 66	-1.23	-0.31	76.98	-0.0866	-2.1298	0.0038
622	SLU 67	-1.23	-0.24	76.99	-0.086	-2.13	0.0052
622	SLU 68	-1.22	-0.19	76.53	-0.0858	-2.1173	0.006
622	SLU 69	-1.24	-0.32	77.77	-0.0872	-2.1517	0.0038
622	SLU 70	-1.24	-0.25	77.78	-0.0867	-2.1519	0.0052
622	SLU 71	-1.24	-0.32	77.31	-0.0875	-2.1387	0.0036
622	SLU 72	-1.24	-0.25	77.32	-0.0869	-2.139	0.005
622	SLU 73	-1.26	-0.19	82.78	-0.0958	-2.2914	0.0068
622	SLU 74	-1.28	-0.31	84.03	-0.0972	-2.3257	0.0046
622	SLU 75	-1.28	-0.24	84.04	-0.0966	-2.326	0.0061
622	SLU 76	-1.27	-0.19	83.58	-0.0965	-2.3133	0.0068
622	SLU 77	-1.29	-0.32	84.82	-0.0978	-2.3476	0.0046
622	SLU 78	-1.29	-0.25	84.83	-0.0973	-2.3479	0.0061
622	SLU 79	-1.29	-0.32	84.36	-0.0981	-2.3347	0.0045
622	SLU 80	-1.29	-0.25	84.37	-0.0975	-2.335	0.0059
622	SLU 81	-1.28	-0.31	85.79	-0.1013	-2.3749	0.0048
622	SLU 82	-1.28	-0.24	85.8	-0.1007	-2.3752	0.0062
622	SLU 83	-1.29	-0.32	86.58	-0.102	-2.3968	0.0048
622	SLU 84	-1.29	-0.24	86.59	-0.1014	-2.3971	0.0062
622	SLE RA 1	-0.91	-0.24	56.71	-0.0651	-1.569	0.0025
622	SLE RA 2	-0.91	-0.16	56.72	-0.0644	-1.5693	0.0041
622	SLE RA 3	-0.92	-0.24	57.55	-0.0654	-1.5922	0.0026
622	SLE RA 4	-0.92	-0.19	57.56	-0.065	-1.5924	0.0036
622	SLE RA 5	-0.92	-0.16	57.25	-0.0649	-1.5839	0.0041
622	SLE RA 6	-0.93	-0.25	58.08	-0.0658	-1.6068	0.0026
622	SLE RA 7	-0.93	-0.2	58.09	-0.0654	-1.607	0.0036
622	SLE RA 8	-0.93	-0.25	57.77	-0.066	-1.5982	0.0025
622	SLE RA 9	-0.93	-0.2	57.78	-0.0656	-1.5984	0.0035
622	SLE RA 10	-0.94	-0.16	61.42	-0.0715	-1.6999	0.0047
622	SLE RA 11	-0.96	-0.24	62.25	-0.0724	-1.7228	0.0032
622	SLE RA 12	-0.96	-0.19	62.26	-0.072	-1.723	0.0042
622	SLE RA 13	-0.95	-0.16	61.95	-0.072	-1.7145	0.0047
622	SLE RA 14	-0.97	-0.25	62.78	-0.0729	-1.7374	0.0032
622	SLE RA 15	-0.97	-0.2	62.79	-0.0725	-1.7376	0.0042
622	SLE RA 16	-0.96	-0.25	62.47	-0.073	-1.7288	0.0031
622	SLE RA 17	-0.96	-0.2	62.48	-0.0727	-1.729	0.004
622	SLE RA 18	-0.96	-0.24	63.43	-0.0752	-1.7556	0.0033
622	SLE RA 19	-0.96	-0.19	63.43	-0.0748	-1.7558	0.0043
622	SLE RA 20	-0.97	-0.24	63.96	-0.0756	-1.7702	0.0033
622	SLE RA 21	-0.97	-0.2	63.96	-0.0752	-1.7704	0.0043
622	SLE FR 1	-0.91	-0.24	56.71	-0.0651	-1.569	0.0025
622	SLE FR 2	-0.91	-0.22	56.71	-0.065	-1.569	0.0028
622	SLE FR 3	-0.91	-0.24	56.92	-0.0653	-1.5748	0.0025
622	SLE FR 4	-0.92	-0.22	58.73	-0.068	-1.625	0.0031
622	SLE FR 5	-0.93	-0.24	58.94	-0.0683	-1.6308	0.0028
622	SLE FR 6	-0.93	-0.24	60.07	-0.0701	-1.6623	0.0029
622	SLE QP 1	-0.91	-0.24	56.71	-0.0651	-1.569	0.0025
622	SLE QP 2	-0.92	-0.24	58.73	-0.0681	-1.625	0.0028
622	SLD 1	3.15	0.51	74.64	-0.0621	-2.0481	0.0446
622	SLD 2	3.16	-0.46	74.74	-0.0551	-2.0505	0.0282
622	SLD 3	3.08	-1.51	74.94	-0.0443	-2.0562	0.004
622	SLD 4	3.09	-2.48	75.04	-0.0373	-2.0585	-0.0124
622	SLD 5	0.39	3.22	63.03	-0.0946	-1.7393	0.0798
622	SLD 6	0.4	2.59	63.09	-0.09	-1.7409	0.069
622	SLD 7	0.18	-3.51	64.03	-0.0352	-1.7661	-0.0555
622	SLD 8	0.19	-4.15	64.1	-0.0306	-1.7676	-0.0662
622	SLD 9	-2.03	3.67	53.36	-0.1056	-1.4823	0.0717
622	SLD 10	-2.03	3.03	53.42	-0.101	-1.4839	0.061
622	SLD 11	-2.25	-3.07	54.36	-0.0462	-1.509	-0.0635
622	SLD 12	-2.24	-3.7	54.43	-0.0417	-1.5106	-0.0743
622	SLD 13	-4.94	2	42.41	-0.0989	-1.1914	0.0179
622	SLD 14	-4.93	1.03	42.51	-0.0919	-1.1938	0.0015
622	SLD 15	-5.01	-0.02	42.71	-0.0811	-1.1994	-0.0227
622	SLD 16	-5	-0.99	42.81	-0.0741	-1.2018	-0.0391
622	SLV 1	8.6	1.45	95.98	-0.0521	-2.6153	0.0994
622	SLV 2	8.62	-0.82	96.21	-0.0358	-2.6208	0.0612
622	SLV 3	8.45	-3.15	96.67	-0.011	-2.6339	0.0069
622	SLV 4	8.47	-5.42	96.91	0.0053	-2.6395	-0.0312
622	SLV 5	2.15	7.63	68.81	-0.1284	-1.8929	0.1785
622	SLV 6	2.17	6.17	68.96	-0.1179	-1.8965	0.154
622	SLV 7	1.66	-7.7	71.13	0.0085	-1.9549	-0.1297
622	SLV 8	1.67	-9.16	71.28	0.019	-1.9585	-0.1543
622	SLV 9	-3.52	8.68	46.18	-0.1553	-1.2914	0.1598
622	SLV 10	-3.51	7.22	46.33	-0.1447	-1.295	0.1352
622	SLV 11	-4.02	-6.65	48.5	-0.0183	-1.3535	-0.1484
622	SLV 12	-4	-8.11	48.65	-0.0078	-1.357	-0.173
622	SLV 13	-10.32	4.94	20.55	-0.1415	-0.6105	0.0368
622	SLV 14	-10.3	2.67	20.78	-0.1252	-0.616	-0.0014
622	SLV 15	-10.47	0.34	21.24	-0.1005	-0.6291	-0.0557

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	SLV 16	-10.45	-1.93	21.48	-0.0841	-0.6346	-0.0939
622	CRTFP Ux+	0	0	0	0	0	0
622	CRTFP Ux-	0	0	0	0	0	0
622	CRTFP Uy+	0	0	0	0	0	0
622	CRTFP Uy-	0	0	0	0	0	0
623	SLU 1	-1.05	-0.24	64.31	-0.0796	0.016	0.008
623	SLU 2	-1.05	-0.1	64.33	-0.0784	0.016	0.0065
623	SLU 3	-1.08	-0.25	65.79	-0.0802	0.0165	0.0082
623	SLU 4	-1.08	-0.16	65.8	-0.0794	0.0165	0.0074
623	SLU 5	-1.07	-0.11	65.26	-0.0793	0.0163	0.0067
623	SLU 6	-1.09	-0.25	66.72	-0.081	0.0168	0.0084
623	SLU 7	-1.09	-0.17	66.74	-0.0803	0.0168	0.0075
623	SLU 8	-1.09	-0.26	66.17	-0.0813	0.0167	0.0083
623	SLU 9	-1.08	-0.17	66.19	-0.0806	0.0167	0.0074
623	SLU 10	-1.11	-0.1	72.67	-0.0914	0.0164	0.0072
623	SLU 11	-1.14	-0.24	74.13	-0.0932	0.017	0.0089
623	SLU 12	-1.14	-0.16	74.14	-0.0925	0.0169	0.008
623	SLU 13	-1.13	-0.11	73.6	-0.0923	0.0167	0.0073
623	SLU 14	-1.15	-0.25	75.06	-0.094	0.0173	0.009
623	SLU 15	-1.15	-0.16	75.07	-0.0933	0.0172	0.0082
623	SLU 16	-1.15	-0.25	74.51	-0.0943	0.0171	0.0089
623	SLU 17	-1.14	-0.17	74.52	-0.0936	0.0171	0.0081
623	SLU 18	-1.14	-0.24	76.22	-0.0982	0.0167	0.0089
623	SLU 19	-1.13	-0.16	76.24	-0.0975	0.0166	0.008
623	SLU 20	-1.15	-0.25	77.15	-0.0991	0.017	0.009
623	SLU 21	-1.15	-0.16	77.17	-0.0983	0.017	0.0082
623	SLU 22	-1.15	-0.23	72.54	-0.0863	0.0171	0.0088
623	SLU 23	-1.14	-0.09	72.56	-0.0851	0.017	0.0074
623	SLU 24	-1.17	-0.24	74.02	-0.0868	0.0175	0.0091
623	SLU 25	-1.17	-0.15	74.03	-0.0861	0.0175	0.0082
623	SLU 26	-1.16	-0.1	73.49	-0.0859	0.0173	0.0076
623	SLU 27	-1.19	-0.24	74.95	-0.0877	0.0179	0.0093
623	SLU 28	-1.19	-0.16	74.96	-0.0869	0.0178	0.0084
623	SLU 29	-1.18	-0.25	74.4	-0.088	0.0177	0.0091
623	SLU 30	-1.18	-0.16	74.41	-0.0872	0.0177	0.0083
623	SLU 31	-1.2	-0.09	80.9	-0.0981	0.0174	0.008
623	SLU 32	-1.23	-0.23	82.36	-0.0998	0.018	0.0097
623	SLU 33	-1.23	-0.15	82.37	-0.0991	0.0179	0.0089
623	SLU 34	-1.22	-0.1	81.83	-0.0989	0.0178	0.0082
623	SLU 35	-1.25	-0.24	83.29	-0.1007	0.0183	0.0099
623	SLU 36	-1.25	-0.15	83.3	-0.1	0.0183	0.009
623	SLU 37	-1.24	-0.24	82.74	-0.101	0.0182	0.0098
623	SLU 38	-1.24	-0.16	82.75	-0.1003	0.0181	0.0089
623	SLU 39	-1.23	-0.23	84.45	-0.1049	0.0177	0.0097
623	SLU 40	-1.23	-0.15	84.46	-0.1042	0.0177	0.0089
623	SLU 41	-1.25	-0.24	85.38	-0.1057	0.018	0.0099
623	SLU 42	-1.25	-0.15	85.39	-0.105	0.018	0.009
623	SLU 43	-1.33	-0.32	80.79	-0.1012	0.0205	0.0101
623	SLU 44	-1.33	-0.18	80.81	-0.1	0.0204	0.0086
623	SLU 45	-1.36	-0.32	82.27	-0.1018	0.021	0.0103
623	SLU 46	-1.36	-0.24	82.28	-0.1011	0.0209	0.0095
623	SLU 47	-1.35	-0.19	81.74	-0.1009	0.0208	0.0088
623	SLU 48	-1.38	-0.33	83.2	-0.1026	0.0213	0.0105
623	SLU 49	-1.38	-0.24	83.21	-0.1019	0.0213	0.0096
623	SLU 50	-1.37	-0.33	82.65	-0.1029	0.0212	0.0104
623	SLU 51	-1.37	-0.25	82.66	-0.1022	0.0211	0.0095
623	SLU 52	-1.39	-0.18	89.14	-0.113	0.0209	0.0093
623	SLU 53	-1.42	-0.32	90.6	-0.1148	0.0214	0.011
623	SLU 54	-1.42	-0.24	90.62	-0.1141	0.0214	0.0101
623	SLU 55	-1.41	-0.18	90.07	-0.1139	0.0212	0.0094
623	SLU 56	-1.44	-0.33	91.53	-0.1156	0.0217	0.0111
623	SLU 57	-1.44	-0.24	91.55	-0.1149	0.0217	0.0103
623	SLU 58	-1.43	-0.33	90.98	-0.1159	0.0216	0.011
623	SLU 59	-1.43	-0.25	91	-0.1152	0.0215	0.0101
623	SLU 60	-1.42	-0.32	92.7	-0.1198	0.0211	0.011
623	SLU 61	-1.42	-0.23	92.71	-0.1191	0.0211	0.0101
623	SLU 62	-1.44	-0.32	93.63	-0.1207	0.0215	0.0111
623	SLU 63	-1.43	-0.24	93.64	-0.1199	0.0214	0.0103
623	SLU 64	-1.43	-0.31	89.01	-0.1079	0.0215	0.0109
623	SLU 65	-1.43	-0.17	89.03	-0.1067	0.0215	0.0095
623	SLU 66	-1.45	-0.31	90.49	-0.1084	0.022	0.0112
623	SLU 67	-1.45	-0.23	90.5	-0.1077	0.022	0.0103
623	SLU 68	-1.44	-0.18	89.96	-0.1075	0.0218	0.0096
623	SLU 69	-1.47	-0.32	91.42	-0.1093	0.0223	0.0113
623	SLU 70	-1.47	-0.23	91.43	-0.1085	0.0223	0.0105
623	SLU 71	-1.46	-0.32	90.87	-0.1096	0.0222	0.0112
623	SLU 72	-1.46	-0.24	90.89	-0.1088	0.0221	0.0104
623	SLU 73	-1.49	-0.17	97.37	-0.1197	0.0219	0.0101
623	SLU 74	-1.51	-0.31	98.83	-0.1215	0.0224	0.0118
623	SLU 75	-1.51	-0.23	98.84	-0.1207	0.0224	0.011
623	SLU 76	-1.5	-0.17	98.3	-0.1205	0.0222	0.0103
623	SLU 77	-1.53	-0.32	99.76	-0.1223	0.0228	0.012
623	SLU 78	-1.53	-0.23	99.77	-0.1216	0.0227	0.0111
623	SLU 79	-1.52	-0.32	99.21	-0.1226	0.0226	0.0119
623	SLU 80	-1.52	-0.24	99.22	-0.1219	0.0226	0.011
623	SLU 81	-1.51	-0.31	100.92	-0.1265	0.0222	0.0118
623	SLU 82	-1.51	-0.22	100.94	-0.1258	0.0221	0.011
623	SLU 83	-1.53	-0.31	101.85	-0.1273	0.0225	0.012
623	SLU 84	-1.53	-0.23	101.87	-0.1266	0.0224	0.0111
623	SLE RA 1	-1.08	-0.24	66.66	-0.0815	0.0163	0.0082

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
623	SLE RA 2	-1.08	-0.15	66.68	-0.0807	0.0163	0.0073
623	SLE RA 3	-1.09	-0.24	67.65	-0.0819	0.0167	0.0084
623	SLE RA 4	-1.09	-0.19	67.66	-0.0814	0.0166	0.0078
623	SLE RA 5	-1.09	-0.15	67.3	-0.0813	0.0165	0.0074
623	SLE RA 6	-1.11	-0.25	68.27	-0.0824	0.0169	0.0085
623	SLE RA 7	-1.11	-0.19	68.28	-0.082	0.0168	0.0079
623	SLE RA 8	-1.1	-0.25	67.9	-0.0826	0.0168	0.0084
623	SLE RA 9	-1.1	-0.19	67.91	-0.0822	0.0167	0.0078
623	SLE RA 10	-1.12	-0.15	72.24	-0.0894	0.0166	0.0077
623	SLE RA 11	-1.13	-0.24	73.21	-0.0906	0.0169	0.0088
623	SLE RA 12	-1.13	-0.18	73.22	-0.0901	0.0169	0.0082
623	SLE RA 13	-1.13	-0.15	72.86	-0.09	0.0168	0.0078
623	SLE RA 14	-1.15	-0.24	73.83	-0.0911	0.0172	0.0089
623	SLE RA 15	-1.15	-0.19	73.84	-0.0906	0.0171	0.0083
623	SLE RA 16	-1.14	-0.25	73.46	-0.0913	0.0171	0.0088
623	SLE RA 17	-1.14	-0.19	73.47	-0.0908	0.017	0.0083
623	SLE RA 18	-1.13	-0.24	74.6	-0.0939	0.0168	0.0088
623	SLE RA 19	-1.13	-0.18	74.61	-0.0934	0.0167	0.0083
623	SLE RA 20	-1.15	-0.24	75.22	-0.0945	0.017	0.0089
623	SLE RA 21	-1.15	-0.19	75.23	-0.094	0.0169	0.0084
623	SLE FR 1	-1.08	-0.24	66.66	-0.0815	0.0163	0.0082
623	SLE FR 2	-1.08	-0.22	66.67	-0.0814	0.0163	0.008
623	SLE FR 3	-1.08	-0.24	66.91	-0.0817	0.0164	0.0083
623	SLE FR 4	-1.09	-0.22	69.05	-0.0851	0.0165	0.0082
623	SLE FR 5	-1.1	-0.24	69.29	-0.0855	0.0166	0.0084
623	SLE FR 6	-1.11	-0.24	70.63	-0.0877	0.0166	0.0085
623	SLE QP 1	-1.08	-0.24	66.66	-0.0815	0.0163	0.0082
623	SLE QP 2	-1.09	-0.24	69.05	-0.0852	0.0165	0.0084
623	SLD 1	3.74	0.62	86.85	-0.0781	0.0488	0.0007
623	SLD 2	3.75	-0.48	86.95	-0.0702	0.0494	0.0143
623	SLD 3	3.67	-1.69	87.2	-0.0549	0.0506	0.0219
623	SLD 4	3.68	-2.78	87.29	-0.0471	0.0511	0.0354
623	SLD 5	0.47	3.7	73.85	-0.1196	0.0234	-0.0284
623	SLD 6	0.48	2.99	73.92	-0.1145	0.0238	-0.0195
623	SLD 7	0.22	-3.97	74.99	-0.0424	0.0292	0.0421
623	SLD 8	0.23	-4.69	75.06	-0.0373	0.0296	0.051
623	SLD 9	-2.41	4.21	63.04	-0.1332	0.0033	-0.0342
623	SLD 10	-2.41	3.49	63.1	-0.1281	0.0037	-0.0253
623	SLD 11	-2.67	-3.47	64.17	-0.056	0.0091	0.0363
623	SLD 12	-2.66	-4.19	64.24	-0.0509	0.0095	0.0452
623	SLD 13	-5.87	2.3	50.8	-0.1234	-0.0182	-0.0186
623	SLD 14	-5.86	1.21	50.9	-0.1156	-0.0176	-0.0051
623	SLD 15	-5.94	-0.01	51.14	-0.1002	-0.0165	0.0025
623	SLD 16	-5.93	-1.1	51.24	-0.0924	-0.0159	0.0161
623	SLV 1	10.22	1.68	110.72	-0.0657	0.0922	-0.0088
623	SLV 2	10.24	-0.86	110.95	-0.0475	0.0936	0.0229
623	SLV 3	10.04	-3.56	111.51	-0.0123	0.0962	0.0392
623	SLV 4	10.07	-6.1	111.74	0.0059	0.0976	0.0709
623	SLV 5	2.56	8.73	80.31	-0.1635	0.0328	-0.075
623	SLV 6	2.58	7.09	80.46	-0.1517	0.0337	-0.0546
623	SLV 7	1.98	-8.75	82.95	0.0145	0.0463	0.085
623	SLV 8	1.99	-10.39	83.09	0.0262	0.0472	0.1054
623	SLV 9	-4.18	9.91	55	-0.1967	-0.0142	-0.0886
623	SLV 10	-4.16	8.27	55.14	-0.1849	-0.0134	-0.0682
623	SLV 11	-4.77	-7.57	57.64	-0.0188	-0.0008	0.0714
623	SLV 12	-4.75	-9.21	57.78	-0.007	0.0001	0.0918
623	SLV 13	-12.26	5.62	26.35	-0.1764	-0.0647	-0.0541
623	SLV 14	-12.23	3.08	26.58	-0.1582	-0.0633	-0.0225
623	SLV 15	-12.43	0.38	27.14	-0.123	-0.0606	-0.0061
623	SLV 16	-12.41	-2.17	27.37	-0.1048	-0.0593	0.0256
623	CRTFP Ux+	0	0	0	0	0	0
623	CRTFP Ux-	0	0	0	0	0	0
623	CRTFP Uy+	0	0	0	0	0	0
623	CRTFP Uy-	0	0	0	0	0	0
624	SLU 1	-1.04	-0.21	63.81	-0.0849	0.0137	0.0049
624	SLU 2	-1.04	-0.08	63.83	-0.0836	0.0137	0.0034
624	SLU 3	-1.07	-0.21	65.28	-0.0855	0.0141	0.0051
624	SLU 4	-1.07	-0.13	65.29	-0.0847	0.0141	0.0042
624	SLU 5	-1.06	-0.09	64.75	-0.0845	0.0139	0.0035
624	SLU 6	-1.09	-0.22	66.2	-0.0864	0.0144	0.0052
624	SLU 7	-1.09	-0.14	66.21	-0.0856	0.0144	0.0043
624	SLU 8	-1.08	-0.22	65.65	-0.0867	0.0143	0.0051
624	SLU 9	-1.08	-0.14	65.67	-0.0859	0.0142	0.0042
624	SLU 10	-1.1	-0.08	72.16	-0.0972	0.0138	0.0037
624	SLU 11	-1.13	-0.21	73.6	-0.0991	0.0143	0.0054
624	SLU 12	-1.13	-0.13	73.62	-0.0983	0.0143	0.0045
624	SLU 13	-1.12	-0.08	73.08	-0.0981	0.0141	0.0038
624	SLU 14	-1.15	-0.21	74.52	-0.1	0.0146	0.0055
624	SLU 15	-1.15	-0.13	74.54	-0.0992	0.0145	0.0046
624	SLU 16	-1.14	-0.22	73.98	-0.1003	0.0145	0.0054
624	SLU 17	-1.14	-0.14	73.99	-0.0995	0.0144	0.0045
624	SLU 18	-1.13	-0.21	75.71	-0.1043	0.014	0.0053
624	SLU 19	-1.13	-0.13	75.72	-0.1036	0.0139	0.0044
624	SLU 20	-1.15	-0.21	76.63	-0.1052	0.0142	0.0054
624	SLU 21	-1.15	-0.13	76.64	-0.1044	0.0142	0.0045
624	SLU 22	-1.14	-0.2	72.01	-0.0919	0.0145	0.0054
624	SLU 23	-1.14	-0.07	72.03	-0.0906	0.0144	0.0039
624	SLU 24	-1.17	-0.2	73.47	-0.0925	0.0149	0.0056
624	SLU 25	-1.16	-0.12	73.49	-0.0917	0.0148	0.0047
624	SLU 26	-1.16	-0.07	72.95	-0.0915	0.0147	0.004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLU 27	-1.18	-0.21	74.39	-0.0934	0.0152	0.0057
624	SLU 28	-1.18	-0.13	74.41	-0.0926	0.0151	0.0049
624	SLU 29	-1.17	-0.21	73.85	-0.0937	0.015	0.0056
624	SLU 30	-1.17	-0.13	73.86	-0.0929	0.015	0.0047
624	SLU 31	-1.2	-0.06	80.36	-0.1042	0.0146	0.0042
624	SLU 32	-1.23	-0.2	81.8	-0.1061	0.015	0.0059
624	SLU 33	-1.22	-0.12	81.81	-0.1053	0.015	0.005
624	SLU 34	-1.22	-0.07	81.28	-0.1051	0.0149	0.0043
624	SLU 35	-1.24	-0.2	82.72	-0.107	0.0153	0.006
624	SLU 36	-1.24	-0.12	82.73	-0.1062	0.0153	0.0051
624	SLU 37	-1.23	-0.2	82.18	-0.1072	0.0152	0.0059
624	SLU 38	-1.23	-0.13	82.19	-0.1065	0.0152	0.005
624	SLU 39	-1.22	-0.19	83.9	-0.1113	0.0147	0.0058
624	SLU 40	-1.22	-0.11	83.92	-0.1105	0.0147	0.0049
624	SLU 41	-1.24	-0.2	84.82	-0.1122	0.015	0.0059
624	SLU 42	-1.24	-0.12	84.84	-0.1114	0.015	0.005
624	SLU 43	-1.33	-0.28	80.15	-0.108	0.0176	0.0062
624	SLU 44	-1.32	-0.15	80.17	-0.1067	0.0175	0.0047
624	SLU 45	-1.35	-0.28	81.61	-0.1086	0.018	0.0064
624	SLU 46	-1.35	-0.2	81.62	-0.1078	0.0179	0.0055
624	SLU 47	-1.34	-0.15	81.09	-0.1076	0.0178	0.0048
624	SLU 48	-1.37	-0.29	82.53	-0.1095	0.0183	0.0065
624	SLU 49	-1.37	-0.21	82.54	-0.1087	0.0182	0.0056
624	SLU 50	-1.36	-0.29	81.99	-0.1097	0.0181	0.0064
624	SLU 51	-1.36	-0.21	82	-0.109	0.0181	0.0055
624	SLU 52	-1.38	-0.14	88.5	-0.1203	0.0177	0.0049
624	SLU 53	-1.41	-0.28	89.94	-0.1222	0.0181	0.0066
624	SLU 54	-1.41	-0.2	89.95	-0.1214	0.0181	0.0057
624	SLU 55	-1.4	-0.15	89.42	-0.1212	0.018	0.005
624	SLU 56	-1.43	-0.28	90.86	-0.1231	0.0184	0.0067
624	SLU 57	-1.43	-0.2	90.87	-0.1223	0.0184	0.0059
624	SLU 58	-1.42	-0.29	90.31	-0.1233	0.0183	0.0066
624	SLU 59	-1.42	-0.21	90.33	-0.1226	0.0183	0.0057
624	SLU 60	-1.41	-0.27	92.04	-0.1274	0.0178	0.0065
624	SLU 61	-1.41	-0.19	92.06	-0.1266	0.0178	0.0056
624	SLU 62	-1.43	-0.28	92.96	-0.1283	0.0181	0.0066
624	SLU 63	-1.43	-0.2	92.98	-0.1275	0.0181	0.0057
624	SLU 64	-1.42	-0.27	88.34	-0.1149	0.0183	0.0067
624	SLU 65	-1.42	-0.14	88.36	-0.1137	0.0183	0.0052
624	SLU 66	-1.45	-0.27	89.81	-0.1156	0.0187	0.0069
624	SLU 67	-1.45	-0.19	89.82	-0.1148	0.0187	0.006
624	SLU 68	-1.44	-0.14	89.28	-0.1146	0.0185	0.0053
624	SLU 69	-1.46	-0.27	90.73	-0.1164	0.019	0.007
624	SLU 70	-1.46	-0.2	90.74	-0.1157	0.019	0.0061
624	SLU 71	-1.46	-0.28	90.18	-0.1167	0.0189	0.0069
624	SLU 72	-1.45	-0.2	90.2	-0.116	0.0189	0.006
624	SLU 73	-1.48	-0.13	96.69	-0.1273	0.0184	0.0055
624	SLU 74	-1.51	-0.26	98.13	-0.1291	0.0189	0.0072
624	SLU 75	-1.51	-0.18	98.15	-0.1284	0.0189	0.0063
624	SLU 76	-1.5	-0.14	97.61	-0.1282	0.0187	0.0056
624	SLU 77	-1.52	-0.27	99.05	-0.13	0.0192	0.0073
624	SLU 78	-1.52	-0.19	99.07	-0.1293	0.0192	0.0064
624	SLU 79	-1.52	-0.27	98.51	-0.1303	0.0191	0.0072
624	SLU 80	-1.51	-0.19	98.52	-0.1296	0.019	0.0063
624	SLU 81	-1.51	-0.26	100.24	-0.1344	0.0186	0.0071
624	SLU 82	-1.5	-0.18	100.25	-0.1336	0.0185	0.0062
624	SLU 83	-1.52	-0.27	101.16	-0.1353	0.0189	0.0072
624	SLU 84	-1.52	-0.19	101.17	-0.1345	0.0188	0.0063
624	SLE RA 1	-1.07	-0.21	66.15	-0.0869	0.0139	0.0051
624	SLE RA 2	-1.07	-0.12	66.17	-0.086	0.0139	0.0041
624	SLE RA 3	-1.09	-0.21	67.13	-0.0873	0.0142	0.0052
624	SLE RA 4	-1.09	-0.16	67.14	-0.0868	0.0142	0.0046
624	SLE RA 5	-1.08	-0.12	66.78	-0.0866	0.0141	0.0041
624	SLE RA 6	-1.1	-0.21	67.74	-0.0879	0.0144	0.0053
624	SLE RA 7	-1.1	-0.16	67.75	-0.0874	0.0144	0.0047
624	SLE RA 8	-1.09	-0.22	67.38	-0.0881	0.0143	0.0052
624	SLE RA 9	-1.09	-0.16	67.39	-0.0876	0.0143	0.0046
624	SLE RA 10	-1.11	-0.12	71.72	-0.0951	0.014	0.0042
624	SLE RA 11	-1.13	-0.21	72.68	-0.0964	0.0143	0.0054
624	SLE RA 12	-1.13	-0.15	72.69	-0.0958	0.0143	0.0048
624	SLE RA 13	-1.12	-0.12	72.33	-0.0957	0.0142	0.0043
624	SLE RA 14	-1.14	-0.21	73.29	-0.0969	0.0145	0.0054
624	SLE RA 15	-1.14	-0.16	73.3	-0.0964	0.0145	0.0048
624	SLE RA 16	-1.13	-0.21	72.93	-0.0971	0.0144	0.0054
624	SLE RA 17	-1.13	-0.16	72.94	-0.0966	0.0144	0.0048
624	SLE RA 18	-1.13	-0.2	74.08	-0.0998	0.0141	0.0053
624	SLE RA 19	-1.13	-0.15	74.09	-0.0993	0.0141	0.0047
624	SLE RA 20	-1.14	-0.21	74.7	-0.1004	0.0143	0.0054
624	SLE RA 21	-1.14	-0.15	74.71	-0.0999	0.0143	0.0048
624	SLE FR 1	-1.07	-0.21	66.15	-0.0869	0.0139	0.0051
624	SLE FR 2	-1.07	-0.19	66.16	-0.0867	0.0139	0.0049
624	SLE FR 3	-1.08	-0.21	66.4	-0.0871	0.014	0.0051
624	SLE FR 4	-1.09	-0.19	68.54	-0.0906	0.014	0.0049
624	SLE FR 5	-1.09	-0.21	68.78	-0.091	0.0141	0.0052
624	SLE FR 6	-1.1	-0.21	70.12	-0.0934	0.014	0.0052
624	SLE QP 1	-1.07	-0.21	66.15	-0.0869	0.0139	0.0051
624	SLE QP 2	-1.09	-0.21	68.53	-0.0908	0.014	0.0051
624	SLD 1	3.76	0.61	85.23	-0.0832	0.0452	-0.0029
624	SLD 2	3.77	-0.42	85.31	-0.0759	0.0457	0.0105
624	SLD 3	3.68	-1.59	85.57	-0.0576	0.0468	0.0185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLD 4	3.69	-2.61	85.65	-0.0503	0.0472	0.032
624	SLD 5	0.48	3.55	73.01	-0.1286	0.0209	-0.0322
624	SLD 6	0.48	2.88	73.07	-0.1238	0.0212	-0.0234
624	SLD 7	0.23	-3.77	74.14	-0.0434	0.0261	0.0393
624	SLD 8	0.23	-4.45	74.2	-0.0385	0.0264	0.0481
624	SLD 9	-2.41	4.03	62.87	-0.143	0.0016	-0.0379
624	SLD 10	-2.4	3.36	62.92	-0.1382	0.0019	-0.029
624	SLD 11	-2.66	-3.3	64	-0.0578	0.0067	0.0337
624	SLD 12	-2.65	-3.97	64.05	-0.0529	0.007	0.0425
624	SLD 13	-5.87	2.2	51.42	-0.1312	-0.0193	-0.0217
624	SLD 14	-5.86	1.17	51.5	-0.1239	-0.0188	-0.0083
624	SLD 15	-5.95	0	51.76	-0.1057	-0.0177	-0.0003
624	SLD 16	-5.93	-1.02	51.84	-0.0983	-0.0173	0.0132
624	SLV 1	10.24	1.63	107.61	-0.07	0.0871	-0.0129
624	SLV 2	10.27	-0.76	107.79	-0.0528	0.0882	0.0184
624	SLV 3	10.07	-3.38	108.39	-0.0111	0.0907	0.0358
624	SLV 4	10.09	-5.76	108.58	0.006	0.0918	0.0671
624	SLV 5	2.57	8.34	79.03	-0.1767	0.0303	-0.0796
624	SLV 6	2.59	6.8	79.15	-0.1657	0.031	-0.0594
624	SLV 7	1.99	-8.34	81.65	0.0194	0.0423	0.0828
624	SLV 8	2.01	-9.87	81.77	0.0305	0.043	0.103
624	SLV 9	-4.18	9.46	55.29	-0.212	-0.015	-0.0927
624	SLV 10	-4.17	7.92	55.41	-0.201	-0.0143	-0.0726
624	SLV 11	-4.76	-7.22	57.92	-0.0158	-0.003	0.0696
624	SLV 12	-4.75	-8.76	58.04	-0.0048	-0.0023	0.0898
624	SLV 13	-12.27	5.35	28.49	-0.1876	-0.0639	-0.0569
624	SLV 14	-12.24	2.96	28.67	-0.1704	-0.0628	-0.0256
624	SLV 15	-12.44	0.34	29.27	-0.1287	-0.0603	-0.0081
624	SLV 16	-12.42	-2.04	29.46	-0.1116	-0.0591	0.0232
624	CRTFP Ux+	0	0	0	0	0	0
624	CRTFP Ux-	0	0	0	0	0	0
624	CRTFP Uy+	0	0	0	0	0	0
624	CRTFP Uy-	0	0	0	0	0	0
625	SLU 1	-1.04	-0.2	63.34	-0.0904	0.0141	0.0022
625	SLU 2	-1.03	-0.07	63.36	-0.0891	0.014	0.0007
625	SLU 3	-1.06	-0.2	64.79	-0.0911	0.0145	0.0023
625	SLU 4	-1.06	-0.12	64.81	-0.0903	0.0144	0.0014
625	SLU 5	-1.05	-0.08	64.27	-0.09	0.0143	0.0007
625	SLU 6	-1.08	-0.2	65.7	-0.092	0.0147	0.0024
625	SLU 7	-1.08	-0.13	65.72	-0.0912	0.0147	0.0015
625	SLU 8	-1.07	-0.21	65.16	-0.0923	0.0146	0.0023
625	SLU 9	-1.07	-0.13	65.18	-0.0915	0.0146	0.0014
625	SLU 10	-1.09	-0.07	71.68	-0.1033	0.0143	0.0006
625	SLU 11	-1.12	-0.19	73.11	-0.1053	0.0148	0.0022
625	SLU 12	-1.12	-0.12	73.12	-0.1045	0.0147	0.0013
625	SLU 13	-1.11	-0.07	72.59	-0.1042	0.0146	0.0007
625	SLU 14	-1.14	-0.2	74.02	-0.1062	0.015	0.0023
625	SLU 15	-1.14	-0.12	74.03	-0.1054	0.015	0.0014
625	SLU 16	-1.13	-0.2	73.48	-0.1065	0.0149	0.0022
625	SLU 17	-1.13	-0.13	73.49	-0.1057	0.0149	0.0013
625	SLU 18	-1.12	-0.19	75.23	-0.1107	0.0145	0.002
625	SLU 19	-1.12	-0.11	75.24	-0.1099	0.0145	0.0012
625	SLU 20	-1.14	-0.19	76.14	-0.1116	0.0148	0.0021
625	SLU 21	-1.14	-0.12	76.15	-0.1108	0.0147	0.0012
625	SLU 22	-1.13	-0.18	71.51	-0.0977	0.0149	0.0024
625	SLU 23	-1.13	-0.06	71.53	-0.0964	0.0149	0.0009
625	SLU 24	-1.16	-0.18	72.96	-0.0984	0.0153	0.0026
625	SLU 25	-1.16	-0.11	72.97	-0.0976	0.0153	0.0017
625	SLU 26	-1.15	-0.06	72.44	-0.0973	0.0151	0.001
625	SLU 27	-1.17	-0.19	73.87	-0.0993	0.0156	0.0026
625	SLU 28	-1.17	-0.11	73.88	-0.0985	0.0156	0.0017
625	SLU 29	-1.17	-0.19	73.33	-0.0996	0.0155	0.0025
625	SLU 30	-1.16	-0.12	73.34	-0.0988	0.0154	0.0016
625	SLU 31	-1.19	-0.05	79.85	-0.1106	0.0152	0.0008
625	SLU 32	-1.22	-0.18	81.28	-0.1126	0.0156	0.0025
625	SLU 33	-1.22	-0.1	81.29	-0.1118	0.0156	0.0016
625	SLU 34	-1.21	-0.06	80.76	-0.1115	0.0154	0.0009
625	SLU 35	-1.23	-0.18	82.19	-0.1135	0.0159	0.0025
625	SLU 36	-1.23	-0.11	82.2	-0.1127	0.0159	0.0017
625	SLU 37	-1.22	-0.19	81.65	-0.1138	0.0158	0.0025
625	SLU 38	-1.22	-0.11	81.66	-0.113	0.0157	0.0016
625	SLU 39	-1.22	-0.17	83.39	-0.118	0.0153	0.0023
625	SLU 40	-1.21	-0.1	83.41	-0.1172	0.0153	0.0014
625	SLU 41	-1.23	-0.18	84.31	-0.119	0.0156	0.0024
625	SLU 42	-1.23	-0.1	84.32	-0.1182	0.0156	0.0015
625	SLU 43	-1.31	-0.26	79.54	-0.115	0.018	0.0027
625	SLU 44	-1.31	-0.14	79.57	-0.1137	0.0179	0.0012
625	SLU 45	-1.34	-0.26	80.99	-0.1157	0.0184	0.0029
625	SLU 46	-1.34	-0.19	81.01	-0.1149	0.0184	0.002
625	SLU 47	-1.33	-0.14	80.48	-0.1146	0.0182	0.0013
625	SLU 48	-1.36	-0.27	81.9	-0.1166	0.0187	0.0029
625	SLU 49	-1.36	-0.19	81.92	-0.1158	0.0186	0.0021
625	SLU 50	-1.35	-0.27	81.36	-0.1169	0.0185	0.0029
625	SLU 51	-1.35	-0.2	81.38	-0.1161	0.0185	0.002
625	SLU 52	-1.37	-0.13	87.89	-0.1279	0.0182	0.0012
625	SLU 53	-1.4	-0.25	89.31	-0.1299	0.0187	0.0028
625	SLU 54	-1.4	-0.18	89.33	-0.1291	0.0187	0.0019
625	SLU 55	-1.39	-0.13	88.8	-0.1288	0.0185	0.0012
625	SLU 56	-1.42	-0.26	90.22	-0.1308	0.019	0.0029
625	SLU 57	-1.42	-0.18	90.24	-0.13	0.0189	0.002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
625	SLU 58	-1.41	-0.26	89.68	-0.1311	0.0188	0.0028
625	SLU 59	-1.41	-0.19	89.7	-0.1303	0.0188	0.0019
625	SLU 60	-1.4	-0.25	91.43	-0.1353	0.0184	0.0026
625	SLU 61	-1.4	-0.18	91.44	-0.1345	0.0184	0.0017
625	SLU 62	-1.42	-0.26	92.34	-0.1362	0.0187	0.0027
625	SLU 63	-1.42	-0.18	92.35	-0.1354	0.0187	0.0018
625	SLU 64	-1.41	-0.25	87.71	-0.1223	0.0188	0.003
625	SLU 65	-1.41	-0.12	87.73	-0.121	0.0188	0.0015
625	SLU 66	-1.43	-0.25	89.16	-0.123	0.0192	0.0031
625	SLU 67	-1.43	-0.17	89.18	-0.1222	0.0192	0.0022
625	SLU 68	-1.43	-0.13	88.65	-0.1219	0.0191	0.0016
625	SLU 69	-1.45	-0.25	90.07	-0.1239	0.0195	0.0032
625	SLU 70	-1.45	-0.18	90.09	-0.1231	0.0195	0.0023
625	SLU 71	-1.44	-0.25	89.53	-0.1242	0.0194	0.0031
625	SLU 72	-1.44	-0.18	89.55	-0.1234	0.0194	0.0022
625	SLU 73	-1.47	-0.11	96.05	-0.1352	0.0191	0.0014
625	SLU 74	-1.49	-0.24	97.48	-0.1372	0.0195	0.003
625	SLU 75	-1.49	-0.16	97.5	-0.1364	0.0195	0.0022
625	SLU 76	-1.48	-0.12	96.96	-0.1361	0.0194	0.0015
625	SLU 77	-1.51	-0.24	98.39	-0.1381	0.0198	0.0031
625	SLU 78	-1.51	-0.17	98.41	-0.1373	0.0198	0.0022
625	SLU 79	-1.5	-0.25	97.85	-0.1384	0.0197	0.003
625	SLU 80	-1.5	-0.17	97.87	-0.1376	0.0197	0.0021
625	SLU 81	-1.49	-0.24	99.6	-0.1426	0.0193	0.0029
625	SLU 82	-1.49	-0.16	99.61	-0.1418	0.0192	0.002
625	SLU 83	-1.51	-0.24	100.51	-0.1436	0.0195	0.0029
625	SLU 84	-1.51	-0.17	100.52	-0.1428	0.0195	0.002
625	SLE RA 1	-1.06	-0.19	65.67	-0.0925	0.0143	0.0022
625	SLE RA 2	-1.06	-0.11	65.69	-0.0916	0.0143	0.0012
625	SLE RA 3	-1.08	-0.19	66.64	-0.0929	0.0146	0.0023
625	SLE RA 4	-1.08	-0.14	66.65	-0.0924	0.0146	0.0017
625	SLE RA 5	-1.07	-0.11	66.3	-0.0922	0.0145	0.0013
625	SLE RA 6	-1.09	-0.2	67.25	-0.0936	0.0148	0.0024
625	SLE RA 7	-1.09	-0.15	67.26	-0.093	0.0147	0.0018
625	SLE RA 8	-1.09	-0.2	66.89	-0.0937	0.0147	0.0023
625	SLE RA 9	-1.09	-0.15	66.9	-0.0932	0.0147	0.0017
625	SLE RA 10	-1.1	-0.11	71.24	-0.1011	0.0145	0.0012
625	SLE RA 11	-1.12	-0.19	72.19	-0.1024	0.0148	0.0023
625	SLE RA 12	-1.12	-0.14	72.2	-0.1019	0.0147	0.0017
625	SLE RA 13	-1.11	-0.11	71.84	-0.1017	0.0147	0.0012
625	SLE RA 14	-1.13	-0.19	72.79	-0.103	0.015	0.0023
625	SLE RA 15	-1.13	-0.14	72.8	-0.1025	0.0149	0.0017
625	SLE RA 16	-1.13	-0.19	72.43	-0.1032	0.0149	0.0023
625	SLE RA 17	-1.13	-0.14	72.44	-0.1027	0.0149	0.0017
625	SLE RA 18	-1.12	-0.19	73.6	-0.106	0.0146	0.0022
625	SLE RA 19	-1.12	-0.14	73.61	-0.1055	0.0146	0.0016
625	SLE RA 20	-1.13	-0.19	74.2	-0.1066	0.0148	0.0022
625	SLE RA 21	-1.13	-0.14	74.21	-0.1061	0.0148	0.0016
625	SLE FR 1	-1.06	-0.19	65.67	-0.0925	0.0143	0.0022
625	SLE FR 2	-1.06	-0.18	65.68	-0.0923	0.0143	0.002
625	SLE FR 3	-1.07	-0.19	65.92	-0.0927	0.0144	0.0023
625	SLE FR 4	-1.08	-0.17	68.05	-0.0964	0.0144	0.002
625	SLE FR 5	-1.08	-0.19	68.29	-0.0968	0.0145	0.0022
625	SLE FR 6	-1.09	-0.19	69.64	-0.0992	0.0144	0.0022
625	SLE QP 1	-1.06	-0.19	65.67	-0.0925	0.0143	0.0022
625	SLE QP 2	-1.08	-0.19	68.05	-0.0965	0.0144	0.0022
625	SLD 1	3.77	0.59	83.66	-0.0884	0.0452	-0.0237
625	SLD 2	3.78	-0.37	83.72	-0.0815	0.0456	-0.0108
625	SLD 3	3.7	-1.51	84.01	-0.0604	0.0466	-0.003
625	SLD 4	3.71	-2.47	84.07	-0.0535	0.047	0.01
625	SLD 5	0.49	3.39	72.2	-0.1377	0.0215	-0.0394
625	SLD 6	0.49	2.76	72.24	-0.1332	0.0218	-0.0309
625	SLD 7	0.24	-3.59	73.35	-0.0445	0.026	0.0299
625	SLD 8	0.25	-4.22	73.39	-0.04	0.0263	0.0384
625	SLD 9	-2.41	3.84	62.71	-0.153	0.0025	-0.0339
625	SLD 10	-2.4	3.21	62.75	-0.1485	0.0027	-0.0254
625	SLD 11	-2.65	-3.14	63.86	-0.0599	0.007	0.0353
625	SLD 12	-2.65	-3.77	63.91	-0.0554	0.0073	0.0438
625	SLD 13	-5.87	2.09	52.03	-0.1395	-0.0182	-0.0056
625	SLD 14	-5.86	1.13	52.1	-0.1326	-0.0178	0.0074
625	SLD 15	-5.94	-0.01	52.38	-0.1116	-0.0168	0.0152
625	SLD 16	-5.93	-0.97	52.44	-0.1047	-0.0164	0.0282
625	SLV 1	10.26	1.56	104.58	-0.0739	0.0865	-0.0577
625	SLV 2	10.29	-0.68	104.73	-0.0579	0.0874	-0.0276
625	SLV 3	10.09	-3.21	105.38	-0.0097	0.0897	-0.0106
625	SLV 4	10.12	-5.45	105.54	0.0064	0.0906	0.0196
625	SLV 5	2.58	7.95	77.76	-0.19	0.0311	-0.0925
625	SLV 6	2.6	6.51	77.86	-0.1796	0.0317	-0.0731
625	SLV 7	2	-7.94	80.45	0.0242	0.0416	0.0647
625	SLV 8	2.02	-9.38	80.55	0.0345	0.0422	0.0842
625	SLV 9	-4.18	9	55.55	-0.2276	-0.0134	-0.0798
625	SLV 10	-4.16	7.56	55.65	-0.2173	-0.0129	-0.0603
625	SLV 11	-4.76	-6.89	58.25	-0.0134	-0.0029	0.0775
625	SLV 12	-4.74	-8.33	58.35	-0.0031	-0.0023	0.0969
625	SLV 13	-12.28	5.06	30.57	-0.1994	-0.0618	-0.0152
625	SLV 14	-12.25	2.83	30.72	-0.1834	-0.0609	0.015
625	SLV 15	-12.45	0.3	31.37	-0.1352	-0.0587	0.032
625	SLV 16	-12.42	-1.94	31.53	-0.1191	-0.0578	0.0622
625	CRTFP Ux+	0	0	0	0	0	0
625	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
625	CRTFP Uy+	0	0	0	0	0	0
625	CRTFP Uy-	0	0	0	0	0	0
626	SLU 1	-1.02	-0.19	62.84	-0.0962	0.0155	-0.0002
626	SLU 2	-1.02	-0.07	62.86	-0.0948	0.0154	-0.0017
626	SLU 3	-1.05	-0.19	64.27	-0.0969	0.0159	-0.0001
626	SLU 4	-1.05	-0.12	64.29	-0.0961	0.0159	-0.001
626	SLU 5	-1.04	-0.08	63.76	-0.0958	0.0157	-0.0016
626	SLU 6	-1.07	-0.2	65.17	-0.0979	0.0162	-0.0001
626	SLU 7	-1.07	-0.13	65.19	-0.0971	0.0162	-0.001
626	SLU 8	-1.06	-0.2	64.64	-0.0982	0.016	-0.0002
626	SLU 9	-1.06	-0.13	64.65	-0.0974	0.016	-0.0011
626	SLU 10	-1.08	-0.07	71.17	-0.1096	0.016	-0.002
626	SLU 11	-1.11	-0.19	72.58	-0.1118	0.0165	-0.0005
626	SLU 12	-1.11	-0.12	72.59	-0.1109	0.0164	-0.0013
626	SLU 13	-1.1	-0.07	72.07	-0.1106	0.0163	-0.002
626	SLU 14	-1.13	-0.19	73.48	-0.1128	0.0168	-0.0005
626	SLU 15	-1.13	-0.12	73.49	-0.1119	0.0167	-0.0013
626	SLU 16	-1.12	-0.2	72.94	-0.113	0.0166	-0.0006
626	SLU 17	-1.12	-0.13	72.96	-0.1122	0.0166	-0.0014
626	SLU 18	-1.11	-0.19	74.7	-0.1174	0.0163	-0.0008
626	SLU 19	-1.11	-0.12	74.71	-0.1165	0.0163	-0.0016
626	SLU 20	-1.13	-0.19	75.6	-0.1184	0.0166	-0.0007
626	SLU 21	-1.13	-0.12	75.62	-0.1176	0.0166	-0.0016
626	SLU 22	-1.12	-0.18	70.97	-0.1039	0.0166	-0.0002
626	SLU 23	-1.12	-0.06	71	-0.1025	0.0165	-0.0016
626	SLU 24	-1.14	-0.18	72.41	-0.1046	0.017	-0.0001
626	SLU 25	-1.14	-0.11	72.42	-0.1038	0.017	-0.001
626	SLU 26	-1.13	-0.06	71.9	-0.1035	0.0168	-0.0016
626	SLU 27	-1.16	-0.18	73.31	-0.1057	0.0173	-0.0001
626	SLU 28	-1.16	-0.11	73.32	-0.1048	0.0173	-0.0009
626	SLU 29	-1.15	-0.19	72.77	-0.1059	0.0172	-0.0002
626	SLU 30	-1.15	-0.12	72.79	-0.1051	0.0171	-0.001
626	SLU 31	-1.18	-0.05	79.3	-0.1173	0.0171	-0.002
626	SLU 32	-1.2	-0.17	80.71	-0.1195	0.0176	-0.0005
626	SLU 33	-1.2	-0.1	80.73	-0.1186	0.0176	-0.0013
626	SLU 34	-1.19	-0.06	80.2	-0.1184	0.0174	-0.002
626	SLU 35	-1.22	-0.18	81.61	-0.1205	0.0179	-0.0004
626	SLU 36	-1.22	-0.11	81.63	-0.1197	0.0178	-0.0013
626	SLU 37	-1.21	-0.18	81.08	-0.1208	0.0177	-0.0005
626	SLU 38	-1.21	-0.11	81.09	-0.1199	0.0177	-0.0014
626	SLU 39	-1.2	-0.17	82.84	-0.1251	0.0174	-0.0007
626	SLU 40	-1.2	-0.1	82.85	-0.1243	0.0174	-0.0016
626	SLU 41	-1.22	-0.17	83.74	-0.1261	0.0177	-0.0007
626	SLU 42	-1.22	-0.1	83.75	-0.1253	0.0177	-0.0016
626	SLU 43	-1.3	-0.26	78.9	-0.1224	0.0197	-0.0003
626	SLU 44	-1.3	-0.14	78.92	-0.121	0.0197	-0.0018
626	SLU 45	-1.32	-0.25	80.33	-0.1231	0.0201	-0.0002
626	SLU 46	-1.32	-0.18	80.35	-0.1223	0.0201	-0.0011
626	SLU 47	-1.32	-0.14	79.82	-0.122	0.02	-0.0017
626	SLU 48	-1.34	-0.26	81.23	-0.1241	0.0204	-0.0002
626	SLU 49	-1.34	-0.19	81.25	-0.1233	0.0204	-0.0011
626	SLU 50	-1.33	-0.26	80.7	-0.1244	0.0203	-0.0003
626	SLU 51	-1.33	-0.19	80.71	-0.1236	0.0203	-0.0011
626	SLU 52	-1.36	-0.13	87.23	-0.1358	0.0203	-0.0021
626	SLU 53	-1.38	-0.25	88.64	-0.138	0.0207	-0.0006
626	SLU 54	-1.38	-0.18	88.65	-0.1371	0.0207	-0.0014
626	SLU 55	-1.37	-0.14	88.13	-0.1368	0.0206	-0.0021
626	SLU 56	-1.4	-0.25	89.54	-0.139	0.021	-0.0006
626	SLU 57	-1.4	-0.18	89.55	-0.1381	0.021	-0.0014
626	SLU 58	-1.39	-0.26	89	-0.1393	0.0209	-0.0006
626	SLU 59	-1.39	-0.19	89.02	-0.1384	0.0209	-0.0015
626	SLU 60	-1.38	-0.25	90.76	-0.1436	0.0205	-0.0008
626	SLU 61	-1.38	-0.18	90.78	-0.1427	0.0205	-0.0017
626	SLU 62	-1.4	-0.25	91.66	-0.1446	0.0208	-0.0008
626	SLU 63	-1.4	-0.18	91.68	-0.1438	0.0208	-0.0017
626	SLU 64	-1.39	-0.24	87.03	-0.1301	0.0208	-0.0003
626	SLU 65	-1.39	-0.12	87.06	-0.1287	0.0208	-0.0017
626	SLU 66	-1.42	-0.24	88.47	-0.1308	0.0212	-0.0002
626	SLU 67	-1.42	-0.17	88.48	-0.13	0.0212	-0.0011
626	SLU 68	-1.41	-0.13	87.96	-0.1297	0.0211	-0.0017
626	SLU 69	-1.44	-0.24	89.37	-0.1319	0.0215	-0.0002
626	SLU 70	-1.44	-0.17	89.38	-0.131	0.0215	-0.001
626	SLU 71	-1.43	-0.25	88.83	-0.1321	0.0214	-0.0003
626	SLU 72	-1.43	-0.18	88.85	-0.1313	0.0214	-0.0011
626	SLU 73	-1.45	-0.12	95.36	-0.1435	0.0214	-0.0021
626	SLU 74	-1.48	-0.23	96.77	-0.1457	0.0218	-0.0006
626	SLU 75	-1.48	-0.16	96.79	-0.1449	0.0218	-0.0014
626	SLU 76	-1.47	-0.12	96.26	-0.1446	0.0217	-0.0021
626	SLU 77	-1.49	-0.24	97.67	-0.1467	0.0221	-0.0005
626	SLU 78	-1.49	-0.17	97.69	-0.1459	0.0221	-0.0014
626	SLU 79	-1.49	-0.24	97.14	-0.147	0.022	-0.0006
626	SLU 80	-1.49	-0.17	97.15	-0.1461	0.022	-0.0015
626	SLU 81	-1.48	-0.23	98.9	-0.1513	0.0217	-0.0008
626	SLU 82	-1.48	-0.16	98.91	-0.1505	0.0216	-0.0017
626	SLU 83	-1.49	-0.24	99.8	-0.1523	0.0219	-0.0008
626	SLU 84	-1.49	-0.17	99.81	-0.1515	0.0219	-0.0016
626	SLE RA 1	-1.05	-0.19	65.16	-0.0984	0.0158	-0.0002
626	SLE RA 2	-1.05	-0.11	65.18	-0.0974	0.0158	-0.0012
626	SLE RA 3	-1.07	-0.19	66.12	-0.0989	0.0161	-0.0002
626	SLE RA 4	-1.07	-0.14	66.13	-0.0983	0.016	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLE RA 5	-1.06	-0.11	65.78	-0.0981	0.0159	-0.0012
626	SLE RA 6	-1.08	-0.19	66.72	-0.0996	0.0163	-0.0002
626	SLE RA 7	-1.08	-0.14	66.73	-0.099	0.0162	-0.0007
626	SLE RA 8	-1.07	-0.19	66.36	-0.0997	0.0162	-0.0002
626	SLE RA 9	-1.07	-0.15	66.37	-0.0992	0.0162	-0.0008
626	SLE RA 10	-1.09	-0.11	70.71	-0.1073	0.0161	-0.0014
626	SLE RA 11	-1.11	-0.18	71.65	-0.1088	0.0164	-0.0004
626	SLE RA 12	-1.11	-0.14	71.66	-0.1082	0.0164	-0.001
626	SLE RA 13	-1.1	-0.11	71.31	-0.108	0.0163	-0.0014
626	SLE RA 14	-1.12	-0.19	72.25	-0.1094	0.0166	-0.0004
626	SLE RA 15	-1.12	-0.14	72.26	-0.1089	0.0166	-0.001
626	SLE RA 16	-1.11	-0.19	71.9	-0.1096	0.0166	-0.0004
626	SLE RA 17	-1.11	-0.14	71.91	-0.1091	0.0165	-0.001
626	SLE RA 18	-1.11	-0.18	73.07	-0.1125	0.0163	-0.0006
626	SLE RA 19	-1.11	-0.14	73.08	-0.112	0.0163	-0.0011
626	SLE RA 20	-1.12	-0.19	73.67	-0.1132	0.0165	-0.0006
626	SLE RA 21	-1.12	-0.14	73.68	-0.1126	0.0165	-0.0011
626	SLE FR 1	-1.05	-0.19	65.16	-0.0984	0.0158	-0.0002
626	SLE FR 2	-1.05	-0.17	65.16	-0.0982	0.0158	-0.0004
626	SLE FR 3	-1.06	-0.19	65.4	-0.0986	0.0159	-0.0002
626	SLE FR 4	-1.07	-0.17	67.54	-0.1024	0.0159	-0.0005
626	SLE FR 5	-1.07	-0.19	67.77	-0.1029	0.016	-0.0003
626	SLE FR 6	-1.08	-0.19	69.11	-0.1054	0.0161	-0.0004
626	SLE QP 1	-1.05	-0.19	65.16	-0.0984	0.0158	-0.0002
626	SLE QP 2	-1.07	-0.19	67.53	-0.1026	0.0159	-0.0003
626	SLD 1	3.79	0.55	82.06	-0.0936	0.0466	-0.0249
626	SLD 2	3.8	-0.34	82.11	-0.0872	0.047	-0.0127
626	SLD 3	3.72	-1.44	82.42	-0.0634	0.0478	-0.0056
626	SLD 4	3.73	-2.34	82.47	-0.057	0.0481	0.0066
626	SLD 5	0.5	3.22	71.34	-0.1469	0.0233	-0.0392
626	SLD 6	0.51	2.63	71.37	-0.1427	0.0236	-0.0311
626	SLD 7	0.25	-3.43	72.53	-0.0461	0.0272	0.0252
626	SLD 8	0.26	-4.02	72.57	-0.0419	0.0274	0.0332
626	SLD 9	-2.4	3.64	62.5	-0.1633	0.0045	-0.0339
626	SLD 10	-2.39	3.06	62.53	-0.1591	0.0047	-0.0259
626	SLD 11	-2.64	-3	63.69	-0.0625	0.0083	0.0305
626	SLD 12	-2.63	-3.59	63.73	-0.0583	0.0085	0.0385
626	SLD 13	-5.86	1.97	52.59	-0.1483	-0.0162	-0.0073
626	SLD 14	-5.85	1.07	52.65	-0.1418	-0.0159	0.0049
626	SLD 15	-5.94	-0.03	52.95	-0.118	-0.0151	0.012
626	SLD 16	-5.92	-0.93	53	-0.1116	-0.0148	0.0242
626	SLV 1	10.29	1.48	101.53	-0.0778	0.0878	-0.057
626	SLV 2	10.32	-0.61	101.65	-0.0629	0.0886	-0.0286
626	SLV 3	10.12	-3.07	102.37	-0.0083	0.0905	-0.0132
626	SLV 4	10.15	-5.16	102.49	0.0066	0.0912	0.0153
626	SLV 5	2.59	7.56	76.44	-0.2031	0.0333	-0.0887
626	SLV 6	2.61	6.22	76.52	-0.1935	0.0338	-0.0704
626	SLV 7	2.02	-7.58	79.23	0.0284	0.0422	0.0574
626	SLV 8	2.04	-8.93	79.31	0.0381	0.0427	0.0757
626	SLV 9	-4.18	8.55	55.75	-0.2433	-0.0109	-0.0764
626	SLV 10	-4.16	7.21	55.83	-0.2337	-0.0104	-0.0581
626	SLV 11	-4.75	-6.59	58.55	-0.0118	-0.0019	0.0697
626	SLV 12	-4.73	-7.93	58.63	-0.0021	-0.0014	0.0881
626	SLV 13	-12.29	4.78	32.57	-0.2118	-0.0594	-0.0159
626	SLV 14	-12.26	2.69	32.7	-0.1969	-0.0586	0.0125
626	SLV 15	-12.46	0.24	33.41	-0.1424	-0.0567	0.0279
626	SLV 16	-12.43	-1.85	33.54	-0.1274	-0.0559	0.0563
626	CRTFP Ux+	0	0	0	0	0	0
626	CRTFP Ux-	0	0	0	0	0	0
626	CRTFP Uy+	0	0	0	0	0	0
626	CRTFP Uy-	0	0	0	0	0	0
627	SLU 1	-1.01	-0.2	62.28	-0.1023	0.0172	-0.0023
627	SLU 2	-1.01	-0.09	62.3	-0.1008	0.0172	-0.0037
627	SLU 3	-1.03	-0.2	63.7	-0.1031	0.0176	-0.0023
627	SLU 4	-1.03	-0.13	63.71	-0.1023	0.0176	-0.0031
627	SLU 5	-1.03	-0.09	63.19	-0.1019	0.0175	-0.0037
627	SLU 6	-1.05	-0.2	64.59	-0.1042	0.0179	-0.0023
627	SLU 7	-1.05	-0.14	64.6	-0.1033	0.0179	-0.0031
627	SLU 8	-1.04	-0.21	64.06	-0.1045	0.0178	-0.0024
627	SLU 9	-1.04	-0.14	64.07	-0.1036	0.0178	-0.0032
627	SLU 10	-1.07	-0.09	70.58	-0.1164	0.0181	-0.0042
627	SLU 11	-1.09	-0.2	71.98	-0.1187	0.0186	-0.0028
627	SLU 12	-1.09	-0.13	71.99	-0.1178	0.0185	-0.0036
627	SLU 13	-1.08	-0.09	71.47	-0.1175	0.0184	-0.0042
627	SLU 14	-1.11	-0.2	72.87	-0.1198	0.0189	-0.0029
627	SLU 15	-1.11	-0.13	72.88	-0.1189	0.0189	-0.0036
627	SLU 16	-1.1	-0.21	72.34	-0.12	0.0187	-0.0029
627	SLU 17	-1.1	-0.14	72.35	-0.1192	0.0187	-0.0037
627	SLU 18	-1.09	-0.2	74.1	-0.1245	0.0185	-0.0032
627	SLU 19	-1.09	-0.13	74.12	-0.1236	0.0185	-0.0039
627	SLU 20	-1.11	-0.2	74.99	-0.1256	0.0188	-0.0032
627	SLU 21	-1.11	-0.13	75.01	-0.1247	0.0188	-0.004
627	SLU 22	-1.1	-0.18	70.37	-0.1105	0.0186	-0.0025
627	SLU 23	-1.1	-0.07	70.4	-0.109	0.0186	-0.0038
627	SLU 24	-1.13	-0.18	71.79	-0.1113	0.0191	-0.0024
627	SLU 25	-1.13	-0.12	71.81	-0.1104	0.019	-0.0032
627	SLU 26	-1.12	-0.08	71.29	-0.1101	0.0189	-0.0038
627	SLU 27	-1.14	-0.19	72.68	-0.1124	0.0194	-0.0024
627	SLU 28	-1.14	-0.12	72.7	-0.1115	0.0193	-0.0032
627	SLU 29	-1.14	-0.19	72.15	-0.1126	0.0192	-0.0025

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
627	SLU 30	-1.14	-0.13	72.17	-0.1118	0.0192	-0.0033
627	SLU 31	-1.16	-0.07	78.67	-0.1246	0.0195	-0.0044
627	SLU 32	-1.19	-0.18	80.07	-0.1268	0.02	-0.003
627	SLU 33	-1.19	-0.11	80.09	-0.126	0.02	-0.0038
627	SLU 34	-1.18	-0.08	79.56	-0.1256	0.0198	-0.0044
627	SLU 35	-1.2	-0.19	80.96	-0.1279	0.0203	-0.003
627	SLU 36	-1.2	-0.12	80.98	-0.127	0.0203	-0.0038
627	SLU 37	-1.19	-0.19	80.43	-0.1282	0.0201	-0.0031
627	SLU 38	-1.19	-0.12	80.44	-0.1273	0.0201	-0.0039
627	SLU 39	-1.19	-0.18	82.2	-0.1327	0.0199	-0.0033
627	SLU 40	-1.19	-0.11	82.21	-0.1318	0.0199	-0.0041
627	SLU 41	-1.2	-0.19	83.09	-0.1338	0.0202	-0.0033
627	SLU 42	-1.2	-0.12	83.1	-0.1329	0.0202	-0.0041
627	SLU 43	-1.28	-0.26	78.18	-0.1302	0.0218	-0.003
627	SLU 44	-1.28	-0.15	78.21	-0.1287	0.0218	-0.0043
627	SLU 45	-1.31	-0.26	79.61	-0.131	0.0223	-0.0029
627	SLU 46	-1.3	-0.2	79.62	-0.1302	0.0223	-0.0037
627	SLU 47	-1.3	-0.16	79.1	-0.1298	0.0221	-0.0043
627	SLU 48	-1.32	-0.27	80.5	-0.1321	0.0226	-0.0029
627	SLU 49	-1.32	-0.2	80.51	-0.1312	0.0226	-0.0037
627	SLU 50	-1.31	-0.27	79.97	-0.1324	0.0225	-0.003
627	SLU 51	-1.31	-0.21	79.98	-0.1315	0.0224	-0.0038
627	SLU 52	-1.34	-0.15	86.49	-0.1443	0.0227	-0.0049
627	SLU 53	-1.36	-0.26	87.88	-0.1466	0.0232	-0.0035
627	SLU 54	-1.36	-0.19	87.9	-0.1457	0.0232	-0.0043
627	SLU 55	-1.35	-0.16	87.38	-0.1454	0.0231	-0.0049
627	SLU 56	-1.38	-0.27	88.78	-0.1477	0.0235	-0.0035
627	SLU 57	-1.38	-0.2	88.79	-0.1468	0.0235	-0.0043
627	SLU 58	-1.37	-0.27	88.24	-0.1479	0.0234	-0.0036
627	SLU 59	-1.37	-0.2	88.26	-0.147	0.0234	-0.0044
627	SLU 60	-1.36	-0.26	90.01	-0.1524	0.0232	-0.0038
627	SLU 61	-1.36	-0.19	90.03	-0.1515	0.0232	-0.0046
627	SLU 62	-1.38	-0.27	90.9	-0.1535	0.0235	-0.0038
627	SLU 63	-1.38	-0.2	90.92	-0.1526	0.0235	-0.0046
627	SLU 64	-1.37	-0.25	86.28	-0.1384	0.0233	-0.0032
627	SLU 65	-1.37	-0.14	86.3	-0.1369	0.0232	-0.0045
627	SLU 66	-1.4	-0.25	87.7	-0.1392	0.0237	-0.0031
627	SLU 67	-1.4	-0.18	87.71	-0.1383	0.0237	-0.0039
627	SLU 68	-1.39	-0.14	87.19	-0.138	0.0235	-0.0045
627	SLU 69	-1.42	-0.25	88.59	-0.1403	0.024	-0.0031
627	SLU 70	-1.41	-0.19	88.6	-0.1394	0.024	-0.0039
627	SLU 71	-1.41	-0.26	88.06	-0.1405	0.0239	-0.0032
627	SLU 72	-1.41	-0.19	88.07	-0.1397	0.0239	-0.004
627	SLU 73	-1.43	-0.14	94.58	-0.1524	0.0242	-0.005
627	SLU 74	-1.46	-0.25	95.98	-0.1547	0.0246	-0.0036
627	SLU 75	-1.46	-0.18	95.99	-0.1539	0.0246	-0.0044
627	SLU 76	-1.45	-0.14	95.47	-0.1535	0.0245	-0.005
627	SLU 77	-1.47	-0.25	96.87	-0.1558	0.025	-0.0037
627	SLU 78	-1.47	-0.18	96.88	-0.1549	0.0249	-0.0044
627	SLU 79	-1.47	-0.26	96.34	-0.1561	0.0248	-0.0037
627	SLU 80	-1.46	-0.19	96.35	-0.1552	0.0248	-0.0045
627	SLU 81	-1.46	-0.25	98.1	-0.1606	0.0246	-0.004
627	SLU 82	-1.46	-0.18	98.12	-0.1597	0.0246	-0.0047
627	SLU 83	-1.47	-0.25	98.99	-0.1617	0.0249	-0.004
627	SLU 84	-1.47	-0.18	99.01	-0.1608	0.0249	-0.0048
627	SLE RA 1	-1.04	-0.19	64.59	-0.1046	0.0176	-0.0024
627	SLE RA 2	-1.04	-0.12	64.61	-0.1037	0.0176	-0.0033
627	SLE RA 3	-1.05	-0.19	65.54	-0.1052	0.0179	-0.0023
627	SLE RA 4	-1.05	-0.15	65.55	-0.1046	0.0179	-0.0029
627	SLE RA 5	-1.05	-0.12	65.2	-0.1044	0.0178	-0.0033
627	SLE RA 6	-1.06	-0.2	66.13	-0.1059	0.0181	-0.0024
627	SLE RA 7	-1.06	-0.15	66.14	-0.1053	0.0181	-0.0029
627	SLE RA 8	-1.06	-0.2	65.78	-0.1061	0.018	-0.0024
627	SLE RA 9	-1.06	-0.16	65.79	-0.1055	0.018	-0.0029
627	SLE RA 10	-1.07	-0.12	70.13	-0.114	0.0182	-0.0036
627	SLE RA 11	-1.09	-0.19	71.06	-0.1156	0.0185	-0.0027
627	SLE RA 12	-1.09	-0.15	71.07	-0.115	0.0185	-0.0032
627	SLE RA 13	-1.09	-0.12	70.72	-0.1148	0.0184	-0.0037
627	SLE RA 14	-1.1	-0.2	71.65	-0.1163	0.0187	-0.0027
627	SLE RA 15	-1.1	-0.15	71.66	-0.1157	0.0187	-0.0033
627	SLE RA 16	-1.1	-0.2	71.29	-0.1165	0.0186	-0.0028
627	SLE RA 17	-1.1	-0.16	71.31	-0.1159	0.0186	-0.0033
627	SLE RA 18	-1.09	-0.19	72.47	-0.1194	0.0185	-0.0029
627	SLE RA 19	-1.09	-0.15	72.48	-0.1189	0.0185	-0.0035
627	SLE RA 20	-1.1	-0.2	73.07	-0.1202	0.0187	-0.0029
627	SLE RA 21	-1.1	-0.15	73.08	-0.1196	0.0187	-0.0035
627	SLE FR 1	-1.04	-0.19	64.59	-0.1046	0.0176	-0.0024
627	SLE FR 2	-1.04	-0.18	64.59	-0.1044	0.0176	-0.0026
627	SLE FR 3	-1.04	-0.2	64.83	-0.1049	0.0177	-0.0024
627	SLE FR 4	-1.05	-0.18	66.96	-0.1089	0.0178	-0.0027
627	SLE FR 5	-1.06	-0.2	67.19	-0.1094	0.0179	-0.0026
627	SLE FR 6	-1.06	-0.19	68.53	-0.112	0.018	-0.0027
627	SLE QP 1	-1.04	-0.19	64.59	-0.1046	0.0176	-0.0024
627	SLE QP 2	-1.05	-0.19	66.95	-0.1091	0.0178	-0.0026
627	SLD 1	3.81	0.51	80.41	-0.0992	0.0485	-0.0253
627	SLD 2	3.82	-0.33	80.45	-0.0932	0.0488	-0.014
627	SLD 3	3.74	-1.39	80.78	-0.0667	0.0494	-0.008
627	SLD 4	3.75	-2.23	80.82	-0.0608	0.0497	0.0033
627	SLD 5	0.51	3.06	70.42	-0.1563	0.0256	-0.0375
627	SLD 6	0.52	2.51	70.45	-0.1524	0.0258	-0.0301

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
627	SLD 7	0.27	-3.29	71.66	-0.0483	0.0287	0.0199
627	SLD 8	0.28	-3.84	71.69	-0.0443	0.0289	0.0273
627	SLD 9	-2.39	3.46	62.22	-0.1738	0.0068	-0.0325
627	SLD 10	-2.38	2.91	62.25	-0.1699	0.007	-0.025
627	SLD 11	-2.63	-2.89	63.46	-0.0657	0.0099	0.025
627	SLD 12	-2.62	-3.44	63.49	-0.0618	0.0101	0.0324
627	SLD 13	-5.86	1.84	53.08	-0.1574	-0.014	-0.0084
627	SLD 14	-5.84	1	53.13	-0.1514	-0.0137	0.0029
627	SLD 15	-5.93	-0.06	53.46	-0.125	-0.0131	0.0089
627	SLD 16	-5.91	-0.9	53.5	-0.119	-0.0128	0.0202
627	SLV 1	10.32	1.39	98.44	-0.0817	0.0896	-0.0551
627	SLV 2	10.35	-0.56	98.54	-0.0678	0.0902	-0.0287
627	SLV 3	10.15	-2.95	99.31	-0.0073	0.0917	-0.0159
627	SLV 4	10.18	-4.9	99.41	0.0066	0.0924	0.0104
627	SLV 5	2.61	7.2	75.07	-0.2161	0.036	-0.0822
627	SLV 6	2.63	5.94	75.13	-0.2072	0.0364	-0.0653
627	SLV 7	2.05	-7.26	77.96	0.0319	0.0432	0.0483
627	SLV 8	2.07	-8.52	78.02	0.0409	0.0436	0.0653
627	SLV 9	-4.17	8.13	55.89	-0.259	-0.0079	-0.0704
627	SLV 10	-4.15	6.88	55.95	-0.2501	-0.0075	-0.0534
627	SLV 11	-4.73	-6.33	58.78	-0.011	-0.0007	0.0601
627	SLV 12	-4.71	-7.59	58.84	-0.0021	-0.0003	0.0771
627	SLV 13	-12.29	4.51	34.5	-0.2247	-0.0567	-0.0155
627	SLV 14	-12.25	2.56	34.6	-0.2109	-0.056	0.0108
627	SLV 15	-12.45	0.17	35.37	-0.1503	-0.0545	0.0236
627	SLV 16	-12.42	-1.78	35.47	-0.1365	-0.0539	0.05
627	CRTFP Ux+	0	0	0	0	0	0
627	CRTFP Ux-	0	0	0	0	0	0
627	CRTFP Uy+	0	0	0	0	0	0
627	CRTFP Uy-	0	0	0	0	0	0
628	SLU 1	-0.99	-0.22	61.66	-0.1088	0.019	-0.0042
628	SLU 2	-0.99	-0.11	61.68	-0.1073	0.019	-0.0053
628	SLU 3	-1.02	-0.21	63.06	-0.1098	0.0195	-0.0041
628	SLU 4	-1.02	-0.15	63.08	-0.1088	0.0195	-0.0048
628	SLU 5	-1.01	-0.12	62.56	-0.1085	0.0193	-0.0054
628	SLU 6	-1.03	-0.22	63.94	-0.1109	0.0198	-0.0042
628	SLU 7	-1.03	-0.16	63.96	-0.11	0.0198	-0.0049
628	SLU 8	-1.02	-0.22	63.42	-0.1112	0.0197	-0.0042
628	SLU 9	-1.02	-0.16	63.43	-0.1102	0.0197	-0.0049
628	SLU 10	-1.05	-0.11	69.92	-0.1236	0.0203	-0.006
628	SLU 11	-1.07	-0.22	71.3	-0.1261	0.0208	-0.0048
628	SLU 12	-1.07	-0.15	71.32	-0.1251	0.0208	-0.0055
628	SLU 13	-1.06	-0.12	70.8	-0.1248	0.0206	-0.0061
628	SLU 14	-1.09	-0.22	72.18	-0.1272	0.0211	-0.0049
628	SLU 15	-1.09	-0.16	72.2	-0.1263	0.0211	-0.0056
628	SLU 16	-1.08	-0.23	71.66	-0.1275	0.021	-0.005
628	SLU 17	-1.08	-0.16	71.67	-0.1265	0.021	-0.0057
628	SLU 18	-1.07	-0.22	73.43	-0.1321	0.0209	-0.0052
628	SLU 19	-1.07	-0.15	73.44	-0.1312	0.0209	-0.0059
628	SLU 20	-1.09	-0.22	74.31	-0.1333	0.0212	-0.0052
628	SLU 21	-1.09	-0.16	74.32	-0.1324	0.0212	-0.0059
628	SLU 22	-1.08	-0.2	69.69	-0.1175	0.0208	-0.0044
628	SLU 23	-1.08	-0.1	69.72	-0.116	0.0208	-0.0056
628	SLU 24	-1.11	-0.2	71.1	-0.1184	0.0213	-0.0044
628	SLU 25	-1.11	-0.14	71.12	-0.1175	0.0213	-0.0051
628	SLU 26	-1.1	-0.1	70.6	-0.1171	0.0211	-0.0057
628	SLU 27	-1.12	-0.2	71.98	-0.1196	0.0216	-0.0044
628	SLU 28	-1.12	-0.14	72	-0.1186	0.0216	-0.0051
628	SLU 29	-1.12	-0.21	71.45	-0.1198	0.0214	-0.0045
628	SLU 30	-1.12	-0.15	71.47	-0.1189	0.0214	-0.0052
628	SLU 31	-1.14	-0.1	77.96	-0.1323	0.0221	-0.0063
628	SLU 32	-1.16	-0.2	79.34	-0.1347	0.0226	-0.0051
628	SLU 33	-1.16	-0.14	79.36	-0.1338	0.0226	-0.0058
628	SLU 34	-1.16	-0.1	78.84	-0.1334	0.0224	-0.0064
628	SLU 35	-1.18	-0.21	80.22	-0.1359	0.0229	-0.0052
628	SLU 36	-1.18	-0.14	80.24	-0.1349	0.0229	-0.0059
628	SLU 37	-1.17	-0.21	79.69	-0.1361	0.0227	-0.0052
628	SLU 38	-1.17	-0.15	79.71	-0.1352	0.0227	-0.0059
628	SLU 39	-1.17	-0.2	81.47	-0.1408	0.0227	-0.0055
628	SLU 40	-1.16	-0.14	81.48	-0.1399	0.0227	-0.0062
628	SLU 41	-1.18	-0.21	82.35	-0.1419	0.023	-0.0055
628	SLU 42	-1.18	-0.15	82.36	-0.141	0.023	-0.0062
628	SLU 43	-1.26	-0.29	77.4	-0.1385	0.0241	-0.0053
628	SLU 44	-1.26	-0.18	77.42	-0.137	0.0241	-0.0065
628	SLU 45	-1.28	-0.28	78.8	-0.1394	0.0246	-0.0053
628	SLU 46	-1.28	-0.22	78.82	-0.1385	0.0246	-0.006
628	SLU 47	-1.27	-0.19	78.3	-0.1382	0.0244	-0.0065
628	SLU 48	-1.3	-0.29	79.68	-0.1406	0.0249	-0.0053
628	SLU 49	-1.3	-0.23	79.7	-0.1397	0.0249	-0.006
628	SLU 50	-1.29	-0.29	79.16	-0.1409	0.0248	-0.0054
628	SLU 51	-1.29	-0.23	79.17	-0.1399	0.0248	-0.0061
628	SLU 52	-1.31	-0.18	85.66	-0.1533	0.0254	-0.0072
628	SLU 53	-1.34	-0.29	87.04	-0.1557	0.0259	-0.006
628	SLU 54	-1.34	-0.22	87.06	-0.1548	0.0259	-0.0067
628	SLU 55	-1.33	-0.19	86.54	-0.1545	0.0257	-0.0072
628	SLU 56	-1.36	-0.29	87.92	-0.1569	0.0262	-0.006
628	SLU 57	-1.35	-0.23	87.94	-0.156	0.0262	-0.0067
628	SLU 58	-1.35	-0.3	87.4	-0.1572	0.0261	-0.0061
628	SLU 59	-1.35	-0.23	87.41	-0.1562	0.0261	-0.0068
628	SLU 60	-1.34	-0.29	89.17	-0.1618	0.026	-0.0063

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
628	SLU 61	-1.34	-0.22	89.19	-0.1609	0.026	-0.007
628	SLU 62	-1.36	-0.29	90.05	-0.163	0.0263	-0.0064
628	SLU 63	-1.36	-0.23	90.07	-0.1621	0.0263	-0.0071
628	SLU 64	-1.35	-0.27	85.44	-0.1472	0.0259	-0.0056
628	SLU 65	-1.35	-0.17	85.46	-0.1456	0.0259	-0.0068
628	SLU 66	-1.37	-0.27	86.84	-0.1481	0.0264	-0.0055
628	SLU 67	-1.37	-0.21	86.86	-0.1472	0.0264	-0.0063
628	SLU 68	-1.36	-0.17	86.34	-0.1468	0.0262	-0.0068
628	SLU 69	-1.39	-0.27	87.72	-0.1493	0.0267	-0.0056
628	SLU 70	-1.39	-0.21	87.74	-0.1483	0.0267	-0.0063
628	SLU 71	-1.38	-0.28	87.19	-0.1495	0.0265	-0.0057
628	SLU 72	-1.38	-0.22	87.21	-0.1486	0.0265	-0.0064
628	SLU 73	-1.41	-0.17	93.7	-0.1619	0.0272	-0.0075
628	SLU 74	-1.43	-0.27	95.08	-0.1644	0.0277	-0.0063
628	SLU 75	-1.43	-0.21	95.1	-0.1635	0.0277	-0.007
628	SLU 76	-1.42	-0.17	94.58	-0.1631	0.0275	-0.0075
628	SLU 77	-1.45	-0.28	95.96	-0.1656	0.028	-0.0063
628	SLU 78	-1.45	-0.21	95.98	-0.1646	0.028	-0.007
628	SLU 79	-1.44	-0.28	95.43	-0.1658	0.0278	-0.0064
628	SLU 80	-1.44	-0.22	95.45	-0.1649	0.0278	-0.0071
628	SLU 81	-1.43	-0.27	97.21	-0.1705	0.0278	-0.0066
628	SLU 82	-1.43	-0.21	97.22	-0.1695	0.0278	-0.0073
628	SLU 83	-1.45	-0.28	98.09	-0.1716	0.0281	-0.0067
628	SLU 84	-1.45	-0.21	98.1	-0.1707	0.0281	-0.0074
628	SLE RA 1	-1.02	-0.21	63.95	-0.1113	0.0195	-0.0042
628	SLE RA 2	-1.02	-0.14	63.97	-0.1103	0.0195	-0.005
628	SLE RA 3	-1.03	-0.21	64.89	-0.1119	0.0198	-0.0042
628	SLE RA 4	-1.03	-0.17	64.9	-0.1113	0.0198	-0.0047
628	SLE RA 5	-1.03	-0.14	64.56	-0.1111	0.0197	-0.005
628	SLE RA 6	-1.04	-0.21	65.48	-0.1127	0.0201	-0.0042
628	SLE RA 7	-1.04	-0.17	65.49	-0.1121	0.0201	-0.0047
628	SLE RA 8	-1.04	-0.22	65.13	-0.1129	0.02	-0.0043
628	SLE RA 9	-1.04	-0.18	65.14	-0.1122	0.0199	-0.0048
628	SLE RA 10	-1.06	-0.14	69.46	-0.1212	0.0204	-0.0055
628	SLE RA 11	-1.07	-0.21	70.38	-0.1228	0.0207	-0.0047
628	SLE RA 12	-1.07	-0.17	70.39	-0.1222	0.0207	-0.0052
628	SLE RA 13	-1.07	-0.15	70.05	-0.1219	0.0206	-0.0055
628	SLE RA 14	-1.08	-0.21	70.97	-0.1236	0.0209	-0.0047
628	SLE RA 15	-1.08	-0.17	70.98	-0.123	0.0209	-0.0052
628	SLE RA 16	-1.08	-0.22	70.62	-0.1237	0.0208	-0.0048
628	SLE RA 17	-1.08	-0.18	70.63	-0.1231	0.0208	-0.0052
628	SLE RA 18	-1.07	-0.21	71.8	-0.1268	0.0208	-0.0049
628	SLE RA 19	-1.07	-0.17	71.81	-0.1262	0.0208	-0.0054
628	SLE RA 20	-1.08	-0.22	72.39	-0.1276	0.021	-0.0049
628	SLE RA 21	-1.08	-0.17	72.4	-0.127	0.021	-0.0054
628	SLE FR 1	-1.02	-0.21	63.95	-0.1113	0.0195	-0.0042
628	SLE FR 2	-1.02	-0.2	63.96	-0.1111	0.0195	-0.0044
628	SLE FR 3	-1.02	-0.21	64.19	-0.1116	0.0196	-0.0042
628	SLE FR 4	-1.03	-0.2	66.31	-0.1158	0.0199	-0.0046
628	SLE FR 5	-1.04	-0.21	66.54	-0.1163	0.02	-0.0045
628	SLE FR 6	-1.04	-0.21	67.88	-0.1191	0.0202	-0.0046
628	SLE QP 1	-1.02	-0.21	63.95	-0.1113	0.0195	-0.0042
628	SLE QP 2	-1.03	-0.21	66.31	-0.116	0.0199	-0.0044
628	SLD 1	3.83	0.46	78.7	-0.0705	0.0505	-0.0251
628	SLD 2	3.85	-0.32	78.73	-0.065	0.0507	-0.0148
628	SLD 3	3.76	-1.36	79.08	-0.105	0.0512	-0.0103
628	SLD 4	3.78	-2.15	79.11	-0.0995	0.0515	0
628	SLD 5	0.53	2.9	69.44	-0.051	0.0279	-0.0348
628	SLD 6	0.54	2.39	69.46	-0.0474	0.0281	-0.0281
628	SLD 7	0.29	-3.19	70.71	-0.1659	0.0303	0.0143
628	SLD 8	0.3	-3.7	70.73	-0.1623	0.0305	0.0211
628	SLD 9	-2.37	3.28	61.88	-0.0696	0.0093	-0.03
628	SLD 10	-2.36	2.76	61.91	-0.066	0.0095	-0.0232
628	SLD 11	-2.61	-2.81	63.15	-0.1845	0.0117	0.0192
628	SLD 12	-2.6	-3.32	63.17	-0.1809	0.0119	0.0259
628	SLD 13	-5.84	1.72	53.5	-0.1324	-0.0117	-0.0089
628	SLD 14	-5.83	0.94	53.54	-0.127	-0.0114	0.0014
628	SLD 15	-5.91	-0.1	53.88	-0.1669	-0.0109	0.0059
628	SLD 16	-5.9	-0.89	53.92	-0.1614	-0.0107	0.0162
628	SLV 1	10.35	1.31	95.3	-0.0067	0.0915	-0.0522
628	SLV 2	10.38	-0.52	95.38	0.0061	0.0921	-0.0281
628	SLV 3	10.18	-2.85	96.19	-0.0858	0.0931	-0.0186
628	SLV 4	10.21	-4.68	96.26	-0.073	0.0937	0.0054
628	SLV 5	2.63	6.87	73.65	0.0345	0.0388	-0.0737
628	SLV 6	2.65	5.69	73.7	0.0427	0.0392	-0.0582
628	SLV 7	2.07	-7	76.6	-0.229	0.0443	0.038
628	SLV 8	2.09	-8.18	76.65	-0.2208	0.0447	0.0535
628	SLV 9	-4.16	7.75	55.96	-0.0112	-0.0049	-0.0623
628	SLV 10	-4.14	6.57	56.01	-0.0029	-0.0045	-0.0469
628	SLV 11	-4.71	-6.11	58.92	-0.2747	0.0006	0.0494
628	SLV 12	-4.69	-7.29	58.97	-0.2664	0.001	0.0648
628	SLV 13	-12.28	4.26	36.35	-0.159	-0.0539	-0.0143
628	SLV 14	-12.25	2.43	36.43	-0.1462	-0.0533	0.0098
628	SLV 15	-12.45	0.1	37.24	-0.238	-0.0523	0.0193
628	SLV 16	-12.41	-1.73	37.31	-0.2252	-0.0517	0.0433
628	CRTFP Ux+	0	0	0	0	0	0
628	CRTFP Ux-	0	0	0	0	0	0
628	CRTFP Uy+	0	0	0	0	0	0
628	CRTFP Uy-	0	0	0	0	0	0
629	SLU 1	-0.97	-0.24	60.97	-0.1158	0.0211	-0.0057

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLU 2	-0.97	-0.14	61	-0.1142	0.0211	-0.0067
629	SLU 3	-0.99	-0.24	62.36	-0.1168	0.0216	-0.0057
629	SLU 4	-0.99	-0.18	62.37	-0.1158	0.0216	-0.0063
629	SLU 5	-0.98	-0.15	61.87	-0.1154	0.0214	-0.0067
629	SLU 6	-1.01	-0.24	63.23	-0.118	0.0219	-0.0057
629	SLU 7	-1.01	-0.18	63.24	-0.1171	0.0219	-0.0063
629	SLU 8	-1	-0.25	62.71	-0.1183	0.0218	-0.0058
629	SLU 9	-1	-0.19	62.72	-0.1173	0.0218	-0.0064
629	SLU 10	-1.03	-0.15	69.19	-0.1313	0.0228	-0.0075
629	SLU 11	-1.05	-0.24	70.55	-0.1339	0.0233	-0.0065
629	SLU 12	-1.05	-0.18	70.56	-0.133	0.0233	-0.0071
629	SLU 13	-1.04	-0.15	70.05	-0.1325	0.0232	-0.0076
629	SLU 14	-1.07	-0.25	71.41	-0.1352	0.0237	-0.0066
629	SLU 15	-1.07	-0.19	71.43	-0.1342	0.0237	-0.0072
629	SLU 16	-1.06	-0.26	70.89	-0.1354	0.0235	-0.0066
629	SLU 17	-1.06	-0.2	70.91	-0.1344	0.0235	-0.0072
629	SLU 18	-1.05	-0.25	72.67	-0.1402	0.0236	-0.0069
629	SLU 19	-1.05	-0.19	72.68	-0.1393	0.0236	-0.0075
629	SLU 20	-1.07	-0.25	73.53	-0.1415	0.0239	-0.0069
629	SLU 21	-1.07	-0.19	73.55	-0.1405	0.0239	-0.0075
629	SLU 22	-1.06	-0.23	68.94	-0.125	0.0232	-0.0061
629	SLU 23	-1.06	-0.13	68.97	-0.1234	0.0232	-0.0071
629	SLU 24	-1.08	-0.23	70.33	-0.126	0.0237	-0.0061
629	SLU 25	-1.08	-0.17	70.35	-0.125	0.0237	-0.0067
629	SLU 26	-1.07	-0.13	69.84	-0.1246	0.0236	-0.0071
629	SLU 27	-1.1	-0.23	71.2	-0.1272	0.0241	-0.0061
629	SLU 28	-1.1	-0.17	71.21	-0.1263	0.0241	-0.0067
629	SLU 29	-1.09	-0.24	70.68	-0.1275	0.0239	-0.0062
629	SLU 30	-1.09	-0.18	70.69	-0.1265	0.0239	-0.0068
629	SLU 31	-1.12	-0.13	77.16	-0.1405	0.025	-0.0079
629	SLU 32	-1.14	-0.23	78.52	-0.1431	0.0255	-0.0069
629	SLU 33	-1.14	-0.17	78.53	-0.1421	0.0255	-0.0075
629	SLU 34	-1.13	-0.14	78.02	-0.1417	0.0253	-0.008
629	SLU 35	-1.16	-0.24	79.38	-0.1443	0.0258	-0.0069
629	SLU 36	-1.16	-0.18	79.4	-0.1434	0.0258	-0.0075
629	SLU 37	-1.15	-0.24	78.86	-0.1446	0.0257	-0.007
629	SLU 38	-1.15	-0.18	78.88	-0.1436	0.0257	-0.0076
629	SLU 39	-1.14	-0.24	80.64	-0.1494	0.0257	-0.0072
629	SLU 40	-1.14	-0.18	80.65	-0.1485	0.0257	-0.0078
629	SLU 41	-1.16	-0.24	81.51	-0.1507	0.0261	-0.0073
629	SLU 42	-1.16	-0.18	81.52	-0.1497	0.0261	-0.0079
629	SLU 43	-1.23	-0.32	76.53	-0.1474	0.0267	-0.0072
629	SLU 44	-1.23	-0.22	76.56	-0.1458	0.0267	-0.0082
629	SLU 45	-1.25	-0.32	77.92	-0.1484	0.0272	-0.0072
629	SLU 46	-1.25	-0.26	77.93	-0.1474	0.0272	-0.0078
629	SLU 47	-1.24	-0.22	77.42	-0.147	0.027	-0.0083
629	SLU 48	-1.27	-0.32	78.78	-0.1496	0.0275	-0.0073
629	SLU 49	-1.27	-0.26	78.8	-0.1487	0.0275	-0.0079
629	SLU 50	-1.26	-0.33	78.26	-0.1499	0.0273	-0.0074
629	SLU 51	-1.26	-0.27	78.28	-0.1489	0.0273	-0.008
629	SLU 52	-1.29	-0.22	84.74	-0.1629	0.0284	-0.0091
629	SLU 53	-1.31	-0.32	86.1	-0.1655	0.0289	-0.0081
629	SLU 54	-1.31	-0.26	86.12	-0.1645	0.0289	-0.0087
629	SLU 55	-1.3	-0.23	85.61	-0.1641	0.0288	-0.0091
629	SLU 56	-1.33	-0.33	86.97	-0.1667	0.0293	-0.0081
629	SLU 57	-1.33	-0.27	86.99	-0.1658	0.0293	-0.0087
629	SLU 58	-1.32	-0.33	86.45	-0.167	0.0291	-0.0082
629	SLU 59	-1.32	-0.27	86.47	-0.166	0.0291	-0.0088
629	SLU 60	-1.31	-0.32	88.22	-0.1718	0.0292	-0.0084
629	SLU 61	-1.31	-0.26	88.24	-0.1709	0.0292	-0.009
629	SLU 62	-1.33	-0.33	89.09	-0.1731	0.0295	-0.0085
629	SLU 63	-1.33	-0.27	89.11	-0.1721	0.0295	-0.0091
629	SLU 64	-1.32	-0.3	84.5	-0.1565	0.0288	-0.0076
629	SLU 65	-1.32	-0.2	84.53	-0.155	0.0288	-0.0086
629	SLU 66	-1.34	-0.3	85.89	-0.1576	0.0293	-0.0076
629	SLU 67	-1.34	-0.24	85.9	-0.1566	0.0293	-0.0082
629	SLU 68	-1.33	-0.21	85.39	-0.1562	0.0292	-0.0087
629	SLU 69	-1.36	-0.31	86.75	-0.1588	0.0297	-0.0077
629	SLU 70	-1.36	-0.25	86.77	-0.1579	0.0297	-0.0083
629	SLU 71	-1.35	-0.31	86.23	-0.159	0.0295	-0.0078
629	SLU 72	-1.35	-0.25	86.25	-0.1581	0.0295	-0.0084
629	SLU 73	-1.38	-0.21	92.71	-0.1721	0.0306	-0.0095
629	SLU 74	-1.4	-0.31	94.07	-0.1747	0.0311	-0.0085
629	SLU 75	-1.4	-0.25	94.09	-0.1737	0.0311	-0.0091
629	SLU 76	-1.39	-0.21	93.58	-0.1733	0.0309	-0.0095
629	SLU 77	-1.42	-0.31	94.94	-0.1759	0.0314	-0.0085
629	SLU 78	-1.42	-0.25	94.96	-0.175	0.0314	-0.0091
629	SLU 79	-1.41	-0.32	94.42	-0.1762	0.0313	-0.0086
629	SLU 80	-1.41	-0.26	94.44	-0.1752	0.0313	-0.0092
629	SLU 81	-1.4	-0.31	96.2	-0.181	0.0313	-0.0088
629	SLU 82	-1.4	-0.25	96.21	-0.18	0.0313	-0.0094
629	SLU 83	-1.42	-0.32	97.06	-0.1822	0.0317	-0.0089
629	SLU 84	-1.42	-0.26	97.08	-0.1813	0.0317	-0.0095
629	SLE RA 1	-1	-0.24	63.25	-0.1184	0.0217	-0.0058
629	SLE RA 2	-0.99	-0.17	63.27	-0.1173	0.0217	-0.0065
629	SLE RA 3	-1.01	-0.24	64.17	-0.1191	0.022	-0.0058
629	SLE RA 4	-1.01	-0.2	64.18	-0.1184	0.022	-0.0062
629	SLE RA 5	-1.01	-0.17	63.84	-0.1182	0.0219	-0.0065
629	SLE RA 6	-1.02	-0.24	64.75	-0.1199	0.0223	-0.0058
629	SLE RA 7	-1.02	-0.2	64.76	-0.1193	0.0223	-0.0062

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLE RA 8	-1.02	-0.24	64.4	-0.1201	0.0221	-0.0059
629	SLE RA 9	-1.02	-0.2	64.42	-0.1194	0.0221	-0.0063
629	SLE RA 10	-1.03	-0.17	68.72	-0.1287	0.0229	-0.007
629	SLE RA 11	-1.05	-0.24	69.63	-0.1305	0.0232	-0.0063
629	SLE RA 12	-1.05	-0.2	69.64	-0.1299	0.0232	-0.0067
629	SLE RA 13	-1.04	-0.18	69.3	-0.1296	0.0231	-0.0071
629	SLE RA 14	-1.06	-0.24	70.21	-0.1313	0.0234	-0.0064
629	SLE RA 15	-1.06	-0.2	70.22	-0.1307	0.0234	-0.0068
629	SLE RA 16	-1.05	-0.25	69.86	-0.1315	0.0233	-0.0064
629	SLE RA 17	-1.05	-0.21	69.87	-0.1308	0.0233	-0.0068
629	SLE RA 18	-1.05	-0.24	71.05	-0.1347	0.0234	-0.0066
629	SLE RA 19	-1.05	-0.2	71.06	-0.1341	0.0234	-0.007
629	SLE RA 20	-1.06	-0.24	71.62	-0.1355	0.0236	-0.0066
629	SLE RA 21	-1.06	-0.21	71.63	-0.1349	0.0236	-0.007
629	SLE FR 1	-1	-0.24	63.25	-0.1184	0.0217	-0.0058
629	SLE FR 2	-1	-0.22	63.25	-0.1182	0.0217	-0.0059
629	SLE FR 3	-1	-0.24	63.48	-0.1187	0.0218	-0.0058
629	SLE FR 4	-1.01	-0.22	65.59	-0.1231	0.0222	-0.0062
629	SLE FR 5	-1.02	-0.24	65.82	-0.1236	0.0223	-0.006
629	SLE FR 6	-1.02	-0.24	67.15	-0.1266	0.0225	-0.0062
629	SLE QP 1	-1	-0.24	63.25	-0.1184	0.0217	-0.0058
629	SLE QP 2	-1.01	-0.24	65.59	-0.1233	0.0222	-0.006
629	SLD 1	3.86	0.42	76.92	-0.0747	0.0526	-0.0244
629	SLD 2	3.87	-0.32	76.95	-0.0697	0.0528	-0.0151
629	SLD 3	3.79	-1.35	77.3	-0.1112	0.0531	-0.0124
629	SLD 4	3.8	-2.08	77.33	-0.1061	0.0534	-0.0031
629	SLD 5	0.55	2.76	68.41	-0.0544	0.0304	-0.0314
629	SLD 6	0.56	2.28	68.42	-0.0511	0.0306	-0.0253
629	SLD 7	0.32	-3.11	69.67	-0.1758	0.0323	0.0086
629	SLD 8	0.33	-3.59	69.69	-0.1725	0.0324	0.0147
629	SLD 9	-2.35	3.12	61.48	-0.0741	0.012	-0.0268
629	SLD 10	-2.34	2.63	61.5	-0.0708	0.0121	-0.0207
629	SLD 11	-2.59	-2.75	62.75	-0.1955	0.0138	0.0133
629	SLD 12	-2.58	-3.24	62.77	-0.1922	0.014	0.0194
629	SLD 13	-5.83	1.61	53.85	-0.1405	-0.009	-0.009
629	SLD 14	-5.81	0.87	53.87	-0.1354	-0.0087	0.0003
629	SLD 15	-5.9	-0.15	54.23	-0.1769	-0.0084	0.003
629	SLD 16	-5.88	-0.89	54.25	-0.1718	-0.0082	0.0123
629	SLV 1	10.38	1.23	92.11	-0.0067	0.0933	-0.0486
629	SLV 2	10.41	-0.49	92.17	0.0051	0.0939	-0.0269
629	SLV 3	10.21	-2.78	93	-0.0901	0.0946	-0.0212
629	SLV 4	10.25	-4.5	93.06	-0.0783	0.0952	0.0004
629	SLV 5	2.65	6.58	72.19	0.0361	0.0415	-0.064
629	SLV 6	2.67	5.48	72.22	0.0437	0.0419	-0.05
629	SLV 7	2.1	-6.79	75.15	-0.2418	0.0457	0.0271
629	SLV 8	2.12	-7.9	75.19	-0.2343	0.0461	0.0411
629	SLV 9	-4.15	7.42	55.99	-0.0123	-0.0017	-0.0531
629	SLV 10	-4.13	6.31	56.02	-0.0048	-0.0014	-0.0392
629	SLV 11	-4.69	-5.95	58.95	-0.2903	0.0025	0.038
629	SLV 12	-4.67	-7.06	58.99	-0.2827	0.0029	0.0519
629	SLV 13	-12.27	4.02	38.11	-0.1683	-0.0508	-0.0125
629	SLV 14	-12.24	2.3	38.17	-0.1565	-0.0502	0.0092
629	SLV 15	-12.43	0.01	39	-0.2516	-0.0495	0.0149
629	SLV 16	-12.4	-1.71	39.06	-0.2399	-0.0489	0.0365
629	CRTFP Ux+	0	0	0	0	0	0
629	CRTFP Ux-	0	0	0	0	0	0
629	CRTFP Uy+	0	0	0	0	0	0
629	CRTFP Uy-	0	0	0	0	0	0
630	SLU 1	-0.94	-0.27	60.21	-0.1231	0.0235	-0.0069
630	SLU 2	-0.94	-0.18	60.23	-0.1215	0.0235	-0.0077
630	SLU 3	-0.97	-0.27	61.58	-0.1243	0.0241	-0.0069
630	SLU 4	-0.97	-0.21	61.59	-0.1233	0.0241	-0.0074
630	SLU 5	-0.96	-0.18	61.09	-0.1228	0.0239	-0.0078
630	SLU 6	-0.98	-0.28	62.43	-0.1256	0.0244	-0.007
630	SLU 7	-0.98	-0.22	62.45	-0.1246	0.0244	-0.0075
630	SLU 8	-0.98	-0.28	61.92	-0.1258	0.0242	-0.0071
630	SLU 9	-0.97	-0.23	61.94	-0.1248	0.0242	-0.0076
630	SLU 10	-1	-0.19	68.35	-0.1395	0.0258	-0.0086
630	SLU 11	-1.02	-0.28	69.7	-0.1423	0.0263	-0.0078
630	SLU 12	-1.02	-0.22	69.71	-0.1413	0.0263	-0.0083
630	SLU 13	-1.01	-0.19	69.21	-0.1408	0.0261	-0.0087
630	SLU 14	-1.04	-0.29	70.55	-0.1436	0.0267	-0.0079
630	SLU 15	-1.04	-0.23	70.57	-0.1426	0.0267	-0.0084
630	SLU 16	-1.03	-0.29	70.04	-0.1438	0.0265	-0.008
630	SLU 17	-1.03	-0.23	70.05	-0.1428	0.0265	-0.0085
630	SLU 18	-1.02	-0.29	71.81	-0.1488	0.0267	-0.0082
630	SLU 19	-1.02	-0.23	71.82	-0.1478	0.0267	-0.0087
630	SLU 20	-1.04	-0.29	72.66	-0.1502	0.0271	-0.0083
630	SLU 21	-1.04	-0.23	72.68	-0.1492	0.0271	-0.0088
630	SLU 22	-1.03	-0.26	68.1	-0.1329	0.0261	-0.0074
630	SLU 23	-1.03	-0.17	68.12	-0.1312	0.0261	-0.0082
630	SLU 24	-1.06	-0.26	69.47	-0.134	0.0267	-0.0074
630	SLU 25	-1.06	-0.2	69.48	-0.133	0.0267	-0.0079
630	SLU 26	-1.05	-0.17	68.98	-0.1326	0.0265	-0.0083
630	SLU 27	-1.07	-0.27	70.32	-0.1354	0.027	-0.0075
630	SLU 28	-1.07	-0.21	70.34	-0.1344	0.027	-0.008
630	SLU 29	-1.06	-0.27	69.81	-0.1356	0.0268	-0.0076
630	SLU 30	-1.06	-0.22	69.82	-0.1346	0.0268	-0.0081
630	SLU 31	-1.09	-0.18	76.24	-0.1492	0.0284	-0.0091
630	SLU 32	-1.11	-0.27	77.59	-0.152	0.0289	-0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
630	SLU 33	-1.11	-0.21	77.6	-0.151	0.0289	-0.0088
630	SLU 34	-1.1	-0.18	77.1	-0.1506	0.0287	-0.0092
630	SLU 35	-1.13	-0.27	78.44	-0.1534	0.0293	-0.0084
630	SLU 36	-1.13	-0.22	78.46	-0.1524	0.0293	-0.0089
630	SLU 37	-1.12	-0.28	77.93	-0.1536	0.0291	-0.0085
630	SLU 38	-1.12	-0.22	77.94	-0.1526	0.0291	-0.0089
630	SLU 39	-1.11	-0.27	79.69	-0.1586	0.0293	-0.0087
630	SLU 40	-1.11	-0.22	79.71	-0.1576	0.0294	-0.0092
630	SLU 41	-1.13	-0.28	80.55	-0.1599	0.0297	-0.0088
630	SLU 42	-1.13	-0.22	80.57	-0.1589	0.0297	-0.0092
630	SLU 43	-1.2	-0.36	75.56	-0.1567	0.0297	-0.0089
630	SLU 44	-1.2	-0.26	75.59	-0.1551	0.0297	-0.0097
630	SLU 45	-1.22	-0.36	76.93	-0.1579	0.0302	-0.0089
630	SLU 46	-1.22	-0.3	76.95	-0.1569	0.0302	-0.0094
630	SLU 47	-1.21	-0.27	76.45	-0.1564	0.03	-0.0098
630	SLU 48	-1.24	-0.36	77.79	-0.1592	0.0306	-0.009
630	SLU 49	-1.24	-0.3	77.81	-0.1582	0.0306	-0.0094
630	SLU 50	-1.23	-0.37	77.28	-0.1594	0.0304	-0.009
630	SLU 51	-1.23	-0.31	77.29	-0.1584	0.0304	-0.0095
630	SLU 52	-1.25	-0.27	83.71	-0.173	0.0319	-0.0106
630	SLU 53	-1.28	-0.36	85.05	-0.1758	0.0325	-0.0098
630	SLU 54	-1.27	-0.31	85.07	-0.1748	0.0325	-0.0103
630	SLU 55	-1.27	-0.28	84.57	-0.1744	0.0323	-0.0107
630	SLU 56	-1.29	-0.37	85.91	-0.1772	0.0328	-0.0099
630	SLU 57	-1.29	-0.31	85.93	-0.1762	0.0328	-0.0103
630	SLU 58	-1.28	-0.38	85.4	-0.1774	0.0326	-0.0099
630	SLU 59	-1.28	-0.32	85.41	-0.1764	0.0326	-0.0104
630	SLU 60	-1.28	-0.37	87.16	-0.1824	0.0329	-0.0101
630	SLU 61	-1.28	-0.31	87.18	-0.1814	0.0329	-0.0106
630	SLU 62	-1.29	-0.38	88.02	-0.1838	0.0333	-0.0102
630	SLU 63	-1.29	-0.32	88.04	-0.1828	0.0333	-0.0107
630	SLU 64	-1.29	-0.35	83.45	-0.1665	0.0323	-0.0093
630	SLU 65	-1.28	-0.25	83.48	-0.1648	0.0323	-0.0101
630	SLU 66	-1.31	-0.35	84.82	-0.1676	0.0328	-0.0093
630	SLU 67	-1.31	-0.29	84.84	-0.1666	0.0328	-0.0098
630	SLU 68	-1.3	-0.26	84.34	-0.1662	0.0326	-0.0102
630	SLU 69	-1.32	-0.35	85.68	-0.169	0.0332	-0.0094
630	SLU 70	-1.32	-0.29	85.7	-0.168	0.0332	-0.0099
630	SLU 71	-1.32	-0.36	85.16	-0.1692	0.033	-0.0095
630	SLU 72	-1.32	-0.3	85.18	-0.1682	0.033	-0.01
630	SLU 73	-1.34	-0.26	91.6	-0.1828	0.0345	-0.011
630	SLU 74	-1.36	-0.35	92.94	-0.1856	0.0351	-0.0102
630	SLU 75	-1.36	-0.3	92.96	-0.1846	0.0351	-0.0107
630	SLU 76	-1.36	-0.27	92.46	-0.1842	0.0349	-0.0111
630	SLU 77	-1.38	-0.36	93.8	-0.187	0.0354	-0.0103
630	SLU 78	-1.38	-0.3	93.81	-0.186	0.0355	-0.0108
630	SLU 79	-1.37	-0.37	93.28	-0.1872	0.0353	-0.0104
630	SLU 80	-1.37	-0.31	93.3	-0.1862	0.0353	-0.0109
630	SLU 81	-1.36	-0.36	95.05	-0.1922	0.0355	-0.0106
630	SLU 82	-1.36	-0.3	95.07	-0.1912	0.0355	-0.0111
630	SLU 83	-1.38	-0.37	95.91	-0.1935	0.0359	-0.0107
630	SLU 84	-1.38	-0.31	95.92	-0.1925	0.0359	-0.0112
630	SLE RA 1	-0.97	-0.27	62.46	-0.1259	0.0242	-0.0071
630	SLE RA 2	-0.97	-0.21	62.48	-0.1248	0.0243	-0.0076
630	SLE RA 3	-0.98	-0.27	63.37	-0.1267	0.0246	-0.0071
630	SLE RA 4	-0.98	-0.23	63.39	-0.126	0.0246	-0.0074
630	SLE RA 5	-0.98	-0.21	63.05	-0.1257	0.0245	-0.0077
630	SLE RA 6	-1	-0.27	63.94	-0.1276	0.0249	-0.0071
630	SLE RA 7	-0.99	-0.23	63.96	-0.1269	0.0249	-0.0075
630	SLE RA 8	-0.99	-0.28	63.6	-0.1277	0.0247	-0.0072
630	SLE RA 9	-0.99	-0.24	63.61	-0.127	0.0247	-0.0075
630	SLE RA 10	-1.01	-0.21	67.89	-0.1368	0.0258	-0.0082
630	SLE RA 11	-1.02	-0.27	68.79	-0.1387	0.0261	-0.0077
630	SLE RA 12	-1.02	-0.24	68.8	-0.138	0.0261	-0.008
630	SLE RA 13	-1.02	-0.22	68.46	-0.1377	0.026	-0.0083
630	SLE RA 14	-1.03	-0.28	69.36	-0.1396	0.0264	-0.0077
630	SLE RA 15	-1.03	-0.24	69.37	-0.1389	0.0264	-0.0081
630	SLE RA 16	-1.03	-0.28	69.01	-0.1397	0.0262	-0.0078
630	SLE RA 17	-1.03	-0.24	69.03	-0.139	0.0262	-0.0081
630	SLE RA 18	-1.02	-0.28	70.19	-0.1431	0.0264	-0.0079
630	SLE RA 19	-1.02	-0.24	70.2	-0.1424	0.0264	-0.0082
630	SLE RA 20	-1.03	-0.28	70.76	-0.144	0.0266	-0.008
630	SLE RA 21	-1.03	-0.24	70.77	-0.1433	0.0266	-0.0083
630	SLE FR 1	-0.97	-0.27	62.46	-0.1259	0.0242	-0.0071
630	SLE FR 2	-0.97	-0.26	62.46	-0.1257	0.0242	-0.0072
630	SLE FR 3	-0.97	-0.27	62.69	-0.1263	0.0243	-0.0071
630	SLE FR 4	-0.99	-0.26	64.78	-0.1308	0.0249	-0.0074
630	SLE FR 5	-0.99	-0.27	65.01	-0.1314	0.025	-0.0073
630	SLE FR 6	-1	-0.27	66.33	-0.1345	0.0253	-0.0075
630	SLE QP 1	-0.97	-0.27	62.46	-0.1259	0.0242	-0.0071
630	SLE QP 2	-0.99	-0.27	64.78	-0.1311	0.0249	-0.0073
630	SLD 1	3.89	0.36	75.08	-0.0795	0.0547	-0.0234
630	SLD 2	3.9	-0.33	75.1	-0.0749	0.055	-0.015
630	SLD 3	3.82	-1.34	75.45	-0.1177	0.0553	-0.0142
630	SLD 4	3.83	-2.04	75.47	-0.1131	0.0555	-0.0058
630	SLD 5	0.58	2.63	67.3	-0.0584	0.033	-0.0276
630	SLD 6	0.59	2.18	67.31	-0.0554	0.0331	-0.0221
630	SLD 7	0.35	-3.06	68.55	-0.1858	0.0348	0.0031
630	SLD 8	0.36	-3.52	68.56	-0.1828	0.0349	0.0086
630	SLD 9	-2.33	2.97	61	-0.0793	0.0149	-0.0232

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
630	SLD 10	-2.32	2.52	61.02	-0.0763	0.015	-0.0178
630	SLD 11	-2.56	-2.72	62.25	-0.2067	0.0166	0.0075
630	SLD 12	-2.55	-3.18	62.26	-0.2037	0.0168	0.013
630	SLD 13	-5.8	1.5	54.09	-0.149	-0.0057	-0.0088
630	SLD 14	-5.79	0.8	54.11	-0.1444	-0.0055	-0.0005
630	SLD 15	-5.87	-0.21	54.46	-0.1872	-0.0052	0.0004
630	SLD 16	-5.86	-0.91	54.48	-0.1827	-0.005	0.0087
630	SLV 1	10.41	1.16	88.88	-0.0072	0.0948	-0.0446
630	SLV 2	10.44	-0.46	88.92	0.0035	0.0953	-0.0251
630	SLV 3	10.25	-2.73	89.75	-0.0946	0.096	-0.0236
630	SLV 4	10.28	-4.35	89.79	-0.084	0.0965	-0.0042
630	SLV 5	2.67	6.34	70.68	0.0369	0.0439	-0.0537
630	SLV 6	2.69	5.3	70.71	0.0438	0.0442	-0.0411
630	SLV 7	2.13	-6.64	73.59	-0.2546	0.048	0.0163
630	SLV 8	2.16	-7.68	73.61	-0.2478	0.0484	0.0288
630	SLV 9	-4.13	7.14	55.95	-0.0144	0.0014	-0.0435
630	SLV 10	-4.1	6.09	55.97	-0.0075	0.0018	-0.0309
630	SLV 11	-4.66	-5.84	58.86	-0.3059	0.0056	0.0265
630	SLV 12	-4.64	-6.88	58.88	-0.2991	0.0059	0.039
630	SLV 13	-12.25	3.81	39.77	-0.1782	-0.0467	-0.0105
630	SLV 14	-12.22	2.19	39.81	-0.1675	-0.0462	0.009
630	SLV 15	-12.41	-0.08	40.64	-0.2656	-0.0455	0.0105
630	SLV 16	-12.38	-1.7	40.68	-0.255	-0.045	0.03
630	CRTFP Ux+	0	0	0	0	0	0
630	CRTFP Ux-	0	0	0	0	0	0
630	CRTFP Uy+	0	0	0	0	0	0
630	CRTFP Uy-	0	0	0	0	0	0
631	SLU 1	-0.92	-0.31	59.35	-0.1309	0.0262	-0.0079
631	SLU 2	-0.91	-0.22	59.38	-0.1292	0.0263	-0.0086
631	SLU 3	-0.94	-0.31	60.7	-0.1322	0.0268	-0.008
631	SLU 4	-0.94	-0.25	60.72	-0.1311	0.0269	-0.0083
631	SLU 5	-0.93	-0.22	60.22	-0.1306	0.0267	-0.0087
631	SLU 6	-0.95	-0.31	61.55	-0.1336	0.0272	-0.0081
631	SLU 7	-0.95	-0.26	61.56	-0.1325	0.0272	-0.0085
631	SLU 8	-0.94	-0.32	61.04	-0.1338	0.027	-0.0082
631	SLU 9	-0.94	-0.27	61.06	-0.1327	0.027	-0.0085
631	SLU 10	-0.97	-0.23	67.41	-0.1481	0.0291	-0.0095
631	SLU 11	-0.99	-0.32	68.74	-0.1511	0.0297	-0.0089
631	SLU 12	-0.99	-0.27	68.75	-0.15	0.0297	-0.0093
631	SLU 13	-0.98	-0.24	68.26	-0.1495	0.0295	-0.0096
631	SLU 14	-1.01	-0.33	69.58	-0.1525	0.0301	-0.009
631	SLU 15	-1.01	-0.27	69.6	-0.1515	0.0301	-0.0094
631	SLU 16	-1	-0.33	69.07	-0.1527	0.0299	-0.0091
631	SLU 17	-1	-0.28	69.09	-0.1516	0.0299	-0.0094
631	SLU 18	-0.99	-0.33	70.83	-0.1579	0.0303	-0.0093
631	SLU 19	-0.99	-0.27	70.84	-0.1569	0.0303	-0.0096
631	SLU 20	-1.01	-0.33	71.67	-0.1594	0.0307	-0.0094
631	SLU 21	-1.01	-0.28	71.69	-0.1583	0.0307	-0.0097
631	SLU 22	-1	-0.3	67.15	-0.1413	0.0294	-0.0084
631	SLU 23	-1	-0.21	67.17	-0.1396	0.0294	-0.0091
631	SLU 24	-1.02	-0.3	68.5	-0.1426	0.03	-0.0085
631	SLU 25	-1.02	-0.24	68.51	-0.1415	0.03	-0.0089
631	SLU 26	-1.02	-0.22	68.02	-0.141	0.0298	-0.0092
631	SLU 27	-1.04	-0.31	69.34	-0.144	0.0304	-0.0086
631	SLU 28	-1.04	-0.25	69.35	-0.143	0.0304	-0.009
631	SLU 29	-1.03	-0.31	68.83	-0.1442	0.0302	-0.0087
631	SLU 30	-1.03	-0.26	68.85	-0.1431	0.0302	-0.009
631	SLU 31	-1.05	-0.22	75.2	-0.1585	0.0323	-0.01
631	SLU 32	-1.08	-0.31	76.53	-0.1615	0.0328	-0.0094
631	SLU 33	-1.08	-0.26	76.54	-0.1604	0.0328	-0.0098
631	SLU 34	-1.07	-0.23	76.05	-0.1599	0.0326	-0.0101
631	SLU 35	-1.09	-0.32	77.37	-0.1629	0.0332	-0.0095
631	SLU 36	-1.09	-0.26	77.39	-0.1619	0.0332	-0.0099
631	SLU 37	-1.08	-0.33	76.86	-0.1631	0.033	-0.0096
631	SLU 38	-1.08	-0.27	76.88	-0.1621	0.033	-0.0099
631	SLU 39	-1.08	-0.32	78.62	-0.1683	0.0334	-0.0098
631	SLU 40	-1.08	-0.27	78.64	-0.1673	0.0335	-0.0101
631	SLU 41	-1.09	-0.33	79.46	-0.1698	0.0338	-0.0099
631	SLU 42	-1.09	-0.27	79.48	-0.1687	0.0338	-0.0102
631	SLU 43	-1.16	-0.4	74.49	-0.1666	0.033	-0.0102
631	SLU 44	-1.16	-0.31	74.52	-0.1649	0.0331	-0.0108
631	SLU 45	-1.18	-0.4	75.84	-0.1679	0.0336	-0.0102
631	SLU 46	-1.18	-0.35	75.86	-0.1668	0.0337	-0.0106
631	SLU 47	-1.17	-0.32	75.36	-0.1663	0.0335	-0.0109
631	SLU 48	-1.2	-0.41	76.68	-0.1693	0.034	-0.0103
631	SLU 49	-1.2	-0.35	76.7	-0.1682	0.034	-0.0107
631	SLU 50	-1.19	-0.42	76.18	-0.1695	0.0338	-0.0104
631	SLU 51	-1.19	-0.36	76.19	-0.1684	0.0338	-0.0107
631	SLU 52	-1.21	-0.33	82.55	-0.1838	0.0359	-0.0117
631	SLU 53	-1.24	-0.42	83.87	-0.1868	0.0365	-0.0111
631	SLU 54	-1.24	-0.36	83.89	-0.1857	0.0365	-0.0115
631	SLU 55	-1.23	-0.33	83.39	-0.1852	0.0363	-0.0118
631	SLU 56	-1.25	-0.42	84.72	-0.1882	0.0369	-0.0112
631	SLU 57	-1.25	-0.37	84.73	-0.1872	0.0369	-0.0116
631	SLU 58	-1.24	-0.43	84.21	-0.1884	0.0367	-0.0113
631	SLU 59	-1.24	-0.37	84.22	-0.1873	0.0367	-0.0117
631	SLU 60	-1.24	-0.42	85.96	-0.1936	0.0371	-0.0115
631	SLU 61	-1.24	-0.37	85.98	-0.1926	0.0371	-0.0118
631	SLU 62	-1.25	-0.43	86.81	-0.1951	0.0375	-0.0116
631	SLU 63	-1.25	-0.38	86.82	-0.194	0.0375	-0.0119

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLU 64	-1.25	-0.4	82.28	-0.177	0.0362	-0.0107
631	SLU 65	-1.25	-0.3	82.31	-0.1753	0.0362	-0.0113
631	SLU 66	-1.27	-0.39	83.63	-0.1783	0.0368	-0.0107
631	SLU 67	-1.27	-0.34	83.65	-0.1772	0.0368	-0.0111
631	SLU 68	-1.26	-0.31	83.15	-0.1767	0.0366	-0.0114
631	SLU 69	-1.28	-0.4	84.47	-0.1797	0.0372	-0.0108
631	SLU 70	-1.28	-0.35	84.49	-0.1787	0.0372	-0.0112
631	SLU 71	-1.28	-0.41	83.97	-0.1799	0.037	-0.0109
631	SLU 72	-1.28	-0.35	83.98	-0.1788	0.037	-0.0112
631	SLU 73	-1.3	-0.32	90.34	-0.1942	0.0391	-0.0122
631	SLU 74	-1.32	-0.41	91.66	-0.1972	0.0396	-0.0116
631	SLU 75	-1.32	-0.35	91.68	-0.1961	0.0396	-0.012
631	SLU 76	-1.31	-0.32	91.18	-0.1956	0.0394	-0.0123
631	SLU 77	-1.34	-0.41	92.51	-0.1986	0.04	-0.0117
631	SLU 78	-1.34	-0.36	92.52	-0.1976	0.04	-0.0121
631	SLU 79	-1.33	-0.42	92	-0.1988	0.0398	-0.0118
631	SLU 80	-1.33	-0.37	92.01	-0.1978	0.0398	-0.0122
631	SLU 81	-1.32	-0.42	93.75	-0.204	0.0402	-0.012
631	SLU 82	-1.32	-0.36	93.77	-0.203	0.0403	-0.0123
631	SLU 83	-1.34	-0.42	94.6	-0.2055	0.0406	-0.0121
631	SLU 84	-1.34	-0.37	94.61	-0.2044	0.0406	-0.0124
631	SLE RA 1	-0.94	-0.31	61.58	-0.1339	0.0271	-0.0081
631	SLE RA 2	-0.94	-0.25	61.6	-0.1327	0.0272	-0.0085
631	SLE RA 3	-0.95	-0.31	62.48	-0.1347	0.0275	-0.0081
631	SLE RA 4	-0.95	-0.27	62.49	-0.134	0.0276	-0.0084
631	SLE RA 5	-0.95	-0.25	62.16	-0.1337	0.0274	-0.0086
631	SLE RA 6	-0.96	-0.31	63.04	-0.1357	0.0278	-0.0082
631	SLE RA 7	-0.96	-0.27	63.05	-0.135	0.0278	-0.0084
631	SLE RA 8	-0.96	-0.31	62.7	-0.1358	0.0277	-0.0082
631	SLE RA 9	-0.96	-0.28	62.72	-0.1351	0.0277	-0.0085
631	SLE RA 10	-0.98	-0.25	66.95	-0.1453	0.0291	-0.0091
631	SLE RA 11	-0.99	-0.31	67.84	-0.1473	0.0294	-0.0087
631	SLE RA 12	-0.99	-0.28	67.85	-0.1466	0.0294	-0.009
631	SLE RA 13	-0.98	-0.26	67.51	-0.1463	0.0293	-0.0092
631	SLE RA 14	-1	-0.32	68.4	-0.1483	0.0297	-0.0088
631	SLE RA 15	-1	-0.28	68.41	-0.1476	0.0297	-0.009
631	SLE RA 16	-1	-0.32	68.06	-0.1484	0.0296	-0.0088
631	SLE RA 17	-0.99	-0.29	68.07	-0.1477	0.0296	-0.0091
631	SLE RA 18	-0.99	-0.32	69.23	-0.1519	0.0299	-0.009
631	SLE RA 19	-0.99	-0.28	69.24	-0.1512	0.0299	-0.0092
631	SLE RA 20	-1	-0.32	69.79	-0.1528	0.0301	-0.009
631	SLE RA 21	-1	-0.29	69.8	-0.1522	0.0301	-0.0093
631	SLE FR 1	-0.94	-0.31	61.58	-0.1339	0.0271	-0.0081
631	SLE FR 2	-0.94	-0.29	61.58	-0.1336	0.0271	-0.0082
631	SLE FR 3	-0.94	-0.31	61.81	-0.1343	0.0272	-0.0081
631	SLE FR 4	-0.95	-0.3	63.88	-0.139	0.028	-0.0084
631	SLE FR 5	-0.96	-0.31	64.1	-0.1397	0.0281	-0.0084
631	SLE FR 6	-0.97	-0.31	65.41	-0.1429	0.0285	-0.0085
631	SLE QP 1	-0.94	-0.31	61.58	-0.1339	0.0271	-0.0081
631	SLE QP 2	-0.96	-0.31	63.88	-0.1393	0.028	-0.0084
631	SLD 1	3.92	0.31	73.17	-0.0847	0.0566	-0.0222
631	SLD 2	3.93	-0.34	73.18	-0.0806	0.0568	-0.0147
631	SLD 3	3.85	-1.36	73.53	-0.1246	0.0573	-0.0157
631	SLD 4	3.86	-2.01	73.54	-0.1205	0.0575	-0.0081
631	SLD 5	0.61	2.53	66.12	-0.063	0.0355	-0.0237
631	SLD 6	0.62	2.1	66.13	-0.0603	0.0356	-0.0188
631	SLD 7	0.38	-3.04	67.31	-0.1962	0.0378	-0.002
631	SLD 8	0.39	-3.47	67.32	-0.1935	0.0379	0.0029
631	SLD 9	-2.3	2.85	60.43	-0.0851	0.018	-0.0197
631	SLD 10	-2.29	2.42	60.44	-0.0824	0.0182	-0.0147
631	SLD 11	-2.53	-2.72	61.62	-0.2182	0.0203	0.0021
631	SLD 12	-2.52	-3.15	61.63	-0.2155	0.0204	0.007
631	SLD 13	-5.77	1.39	54.21	-0.1581	-0.0016	-0.0086
631	SLD 14	-5.76	0.74	54.22	-0.1539	-0.0014	-0.001
631	SLD 15	-5.84	-0.28	54.57	-0.198	-0.0009	-0.0021
631	SLD 16	-5.83	-0.93	54.58	-0.1939	-0.0007	0.0055
631	SLV 1	10.44	1.09	85.62	-0.0082	0.0951	-0.0405
631	SLV 2	10.48	-0.43	85.65	0.0015	0.0955	-0.0229
631	SLV 3	10.28	-2.71	86.46	-0.0995	0.0967	-0.0256
631	SLV 4	10.32	-4.24	86.48	-0.0899	0.0971	-0.0081
631	SLV 5	2.7	6.15	69.13	0.037	0.0456	-0.0436
631	SLV 6	2.72	5.16	69.15	0.0432	0.0459	-0.0322
631	SLV 7	2.17	-6.54	71.91	-0.2676	0.0509	0.006
631	SLV 8	2.19	-7.53	71.92	-0.2614	0.0512	0.0173
631	SLV 9	-4.1	6.91	55.83	-0.0172	0.0047	-0.034
631	SLV 10	-4.08	5.92	55.84	-0.011	0.005	-0.0227
631	SLV 11	-4.63	-5.78	58.6	-0.3217	0.01	0.0155
631	SLV 12	-4.61	-6.77	58.62	-0.3155	0.0103	0.0268
631	SLV 13	-12.23	3.62	41.27	-0.1887	-0.0412	-0.0086
631	SLV 14	-12.19	2.09	41.29	-0.179	-0.0408	0.0089
631	SLV 15	-12.39	-0.19	42.11	-0.28	-0.0396	0.0062
631	SLV 16	-12.35	-1.71	42.13	-0.2704	-0.0392	0.0238
631	CRTFP Ux+	0	0	0	0	0	0
631	CRTFP Ux-	0	0	0	0	0	0
631	CRTFP Uy+	0	0	0	0	0	0
631	CRTFP Uy-	0	0	0	0	0	0
632	SLU 1	-0.88	-0.35	58.41	-0.139	0.0288	-0.0087
632	SLU 2	-0.88	-0.26	58.44	-0.1372	0.0289	-0.0091
632	SLU 3	-0.9	-0.35	59.74	-0.1404	0.0294	-0.0088
632	SLU 4	-0.9	-0.3	59.75	-0.1393	0.0295	-0.009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
632	SLU 5	-0.9	-0.27	59.26	-0.1388	0.0293	-0.0093
632	SLU 6	-0.92	-0.36	60.57	-0.142	0.0299	-0.0089
632	SLU 7	-0.92	-0.3	60.58	-0.1409	0.0299	-0.0091
632	SLU 8	-0.91	-0.36	60.07	-0.1421	0.0296	-0.0089
632	SLU 9	-0.91	-0.31	60.08	-0.141	0.0297	-0.0092
632	SLU 10	-0.93	-0.28	66.36	-0.1571	0.0323	-0.01
632	SLU 11	-0.95	-0.37	67.66	-0.1603	0.0329	-0.0097
632	SLU 12	-0.95	-0.31	67.68	-0.1592	0.0329	-0.0099
632	SLU 13	-0.95	-0.29	67.19	-0.1587	0.0327	-0.0102
632	SLU 14	-0.97	-0.37	68.49	-0.1619	0.0333	-0.0098
632	SLU 15	-0.97	-0.32	68.51	-0.1608	0.0333	-0.01
632	SLU 16	-0.96	-0.38	67.99	-0.162	0.033	-0.0099
632	SLU 17	-0.96	-0.33	68.01	-0.1609	0.0331	-0.0101
632	SLU 18	-0.96	-0.38	69.73	-0.1675	0.0337	-0.01
632	SLU 19	-0.95	-0.32	69.75	-0.1664	0.0337	-0.0103
632	SLU 20	-0.97	-0.38	70.56	-0.169	0.0341	-0.0101
632	SLU 21	-0.97	-0.33	70.58	-0.1679	0.0341	-0.0104
632	SLU 22	-0.97	-0.34	66.08	-0.1501	0.0325	-0.0092
632	SLU 23	-0.97	-0.26	66.11	-0.1483	0.0325	-0.0097
632	SLU 24	-0.99	-0.34	67.41	-0.1515	0.0331	-0.0093
632	SLU 25	-0.99	-0.29	67.43	-0.1504	0.0331	-0.0095
632	SLU 26	-0.98	-0.26	66.94	-0.1499	0.0329	-0.0098
632	SLU 27	-1	-0.35	68.24	-0.1531	0.0335	-0.0094
632	SLU 28	-1	-0.3	68.26	-0.152	0.0336	-0.0097
632	SLU 29	-0.99	-0.36	67.74	-0.1532	0.0333	-0.0095
632	SLU 30	-0.99	-0.3	67.76	-0.1521	0.0333	-0.0097
632	SLU 31	-1.02	-0.27	74.03	-0.1682	0.0359	-0.0106
632	SLU 32	-1.04	-0.36	75.34	-0.1714	0.0365	-0.0102
632	SLU 33	-1.04	-0.31	75.35	-0.1703	0.0365	-0.0105
632	SLU 34	-1.03	-0.28	74.86	-0.1698	0.0363	-0.0107
632	SLU 35	-1.05	-0.37	76.17	-0.173	0.0369	-0.0103
632	SLU 36	-1.05	-0.32	76.18	-0.1719	0.037	-0.0106
632	SLU 37	-1.04	-0.38	75.67	-0.1731	0.0367	-0.0104
632	SLU 38	-1.04	-0.32	75.68	-0.172	0.0367	-0.0106
632	SLU 39	-1.04	-0.37	77.4	-0.1786	0.0373	-0.0105
632	SLU 40	-1.04	-0.32	77.42	-0.1775	0.0374	-0.0108
632	SLU 41	-1.05	-0.38	78.23	-0.1801	0.0378	-0.0107
632	SLU 42	-1.05	-0.32	78.25	-0.179	0.0378	-0.0109
632	SLU 43	-1.12	-0.46	73.3	-0.1769	0.0362	-0.0111
632	SLU 44	-1.12	-0.37	73.33	-0.1751	0.0362	-0.0116
632	SLU 45	-1.14	-0.46	74.63	-0.1783	0.0368	-0.0112
632	SLU 46	-1.14	-0.4	74.65	-0.1772	0.0369	-0.0114
632	SLU 47	-1.13	-0.37	74.16	-0.1767	0.0367	-0.0117
632	SLU 48	-1.15	-0.46	75.46	-0.1799	0.0372	-0.0113
632	SLU 49	-1.15	-0.41	75.48	-0.1788	0.0373	-0.0116
632	SLU 50	-1.15	-0.47	74.96	-0.18	0.037	-0.0114
632	SLU 51	-1.15	-0.42	74.98	-0.1789	0.037	-0.0116
632	SLU 52	-1.17	-0.39	81.25	-0.195	0.0397	-0.0125
632	SLU 53	-1.19	-0.47	82.55	-0.1982	0.0402	-0.0121
632	SLU 54	-1.19	-0.42	82.57	-0.1971	0.0403	-0.0124
632	SLU 55	-1.18	-0.39	82.08	-0.1966	0.0401	-0.0126
632	SLU 56	-1.2	-0.48	83.38	-0.1998	0.0407	-0.0122
632	SLU 57	-1.2	-0.43	83.4	-0.1987	0.0407	-0.0125
632	SLU 58	-1.2	-0.49	82.88	-0.1999	0.0404	-0.0123
632	SLU 59	-1.2	-0.43	82.9	-0.1988	0.0405	-0.0125
632	SLU 60	-1.19	-0.48	84.62	-0.2054	0.0411	-0.0124
632	SLU 61	-1.19	-0.43	84.64	-0.2043	0.0411	-0.0127
632	SLU 62	-1.21	-0.49	85.45	-0.2069	0.0415	-0.0126
632	SLU 63	-1.21	-0.44	85.47	-0.2058	0.0415	-0.0128
632	SLU 64	-1.2	-0.45	80.98	-0.188	0.0399	-0.0117
632	SLU 65	-1.2	-0.36	81	-0.1862	0.0399	-0.0121
632	SLU 66	-1.22	-0.45	82.3	-0.1894	0.0405	-0.0117
632	SLU 67	-1.22	-0.4	82.32	-0.1883	0.0405	-0.012
632	SLU 68	-1.22	-0.37	81.83	-0.1878	0.0403	-0.0122
632	SLU 69	-1.24	-0.46	83.13	-0.191	0.0409	-0.0118
632	SLU 70	-1.24	-0.4	83.15	-0.1899	0.0409	-0.0121
632	SLU 71	-1.23	-0.46	82.63	-0.1911	0.0407	-0.0119
632	SLU 72	-1.23	-0.41	82.65	-0.19	0.0407	-0.0122
632	SLU 73	-1.25	-0.38	88.93	-0.2061	0.0433	-0.013
632	SLU 74	-1.27	-0.47	90.23	-0.2093	0.0439	-0.0126
632	SLU 75	-1.27	-0.42	90.24	-0.2082	0.0439	-0.0129
632	SLU 76	-1.27	-0.39	89.75	-0.2077	0.0437	-0.0131
632	SLU 77	-1.29	-0.48	91.06	-0.2109	0.0443	-0.0127
632	SLU 78	-1.29	-0.42	91.07	-0.2098	0.0443	-0.013
632	SLU 79	-1.28	-0.48	90.56	-0.211	0.0441	-0.0128
632	SLU 80	-1.28	-0.43	90.57	-0.2099	0.0441	-0.0131
632	SLU 81	-1.27	-0.48	92.3	-0.2165	0.0447	-0.013
632	SLU 82	-1.27	-0.42	92.31	-0.2154	0.0448	-0.0132
632	SLU 83	-1.29	-0.48	93.13	-0.218	0.0451	-0.0131
632	SLU 84	-1.29	-0.43	93.14	-0.2169	0.0452	-0.0133
632	SLE RA 1	-0.91	-0.35	60.6	-0.1422	0.0299	-0.0089
632	SLE RA 2	-0.91	-0.29	60.62	-0.141	0.0299	-0.0091
632	SLE RA 3	-0.92	-0.35	61.49	-0.1431	0.0303	-0.0089
632	SLE RA 4	-0.92	-0.31	61.5	-0.1424	0.0303	-0.0091
632	SLE RA 5	-0.92	-0.29	61.17	-0.142	0.0302	-0.0092
632	SLE RA 6	-0.93	-0.35	62.04	-0.1442	0.0306	-0.009
632	SLE RA 7	-0.93	-0.32	62.05	-0.1434	0.0306	-0.0091
632	SLE RA 8	-0.93	-0.36	61.71	-0.1443	0.0304	-0.009
632	SLE RA 9	-0.92	-0.32	61.72	-0.1435	0.0304	-0.0092
632	SLE RA 10	-0.94	-0.3	65.9	-0.1543	0.0322	-0.0097

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
632	SLE RA 11	-0.95	-0.36	66.77	-0.1564	0.0326	-0.0095
632	SLE RA 12	-0.95	-0.32	66.78	-0.1557	0.0326	-0.0097
632	SLE RA 13	-0.95	-0.31	66.46	-0.1553	0.0324	-0.0098
632	SLE RA 14	-0.96	-0.36	67.32	-0.1574	0.0328	-0.0096
632	SLE RA 15	-0.96	-0.33	67.33	-0.1567	0.0328	-0.0097
632	SLE RA 16	-0.96	-0.37	66.99	-0.1575	0.0327	-0.0096
632	SLE RA 17	-0.96	-0.33	67	-0.1568	0.0327	-0.0098
632	SLE RA 18	-0.95	-0.37	68.15	-0.1612	0.0331	-0.0097
632	SLE RA 19	-0.95	-0.33	68.16	-0.1604	0.0331	-0.0099
632	SLE RA 20	-0.96	-0.37	68.7	-0.1622	0.0334	-0.0098
632	SLE RA 21	-0.96	-0.33	68.71	-0.1615	0.0334	-0.01
632	SLE FR 1	-0.91	-0.35	60.6	-0.1422	0.0299	-0.0089
632	SLE FR 2	-0.91	-0.34	60.61	-0.142	0.0299	-0.0089
632	SLE FR 3	-0.91	-0.35	60.82	-0.1426	0.03	-0.0089
632	SLE FR 4	-0.92	-0.34	62.87	-0.1476	0.0308	-0.0092
632	SLE FR 5	-0.92	-0.36	63.09	-0.1483	0.0309	-0.0092
632	SLE FR 6	-0.93	-0.36	64.38	-0.1517	0.0315	-0.0093
632	SLE QP 1	-0.91	-0.35	60.6	-0.1422	0.0299	-0.0089
632	SLE QP 2	-0.92	-0.35	62.87	-0.1479	0.0308	-0.0091
632	SLD 1	3.95	0.26	71.22	-0.0903	0.0582	-0.0209
632	SLD 2	3.97	-0.36	71.22	-0.0866	0.0583	-0.014
632	SLD 3	3.88	-1.38	71.54	-0.1319	0.0572	-0.0168
632	SLD 4	3.9	-2	71.55	-0.1282	0.0574	-0.0099
632	SLD 5	0.64	2.44	64.87	-0.0681	0.0405	-0.0201
632	SLD 6	0.65	2.03	64.87	-0.0657	0.0406	-0.0156
632	SLD 7	0.42	-3.05	65.97	-0.2069	0.0373	-0.0065
632	SLD 8	0.43	-3.45	65.97	-0.2045	0.0374	-0.0019
632	SLD 9	-2.27	2.75	59.76	-0.0913	0.0243	-0.0163
632	SLD 10	-2.26	2.34	59.76	-0.0889	0.0244	-0.0118
632	SLD 11	-2.49	-2.74	60.86	-0.2301	0.0211	-0.0027
632	SLD 12	-2.48	-3.14	60.86	-0.2277	0.0212	0.0018
632	SLD 13	-5.74	1.3	54.18	-0.1675	0.0043	-0.0083
632	SLD 14	-5.73	0.68	54.19	-0.1639	0.0044	-0.0014
632	SLD 15	-5.81	-0.35	54.51	-0.2092	0.0033	-0.0043
632	SLD 16	-5.79	-0.97	54.52	-0.2055	0.0035	0.0027
632	SLV 1	10.47	1.03	82.4	-0.0095	0.0949	-0.0365
632	SLV 2	10.51	-0.41	82.41	-0.001	0.0952	-0.0205
632	SLV 3	10.32	-2.71	83.17	-0.1047	0.0926	-0.0272
632	SLV 4	10.35	-4.16	83.18	-0.0961	0.093	-0.0111
632	SLV 5	2.73	6	67.56	0.0365	0.0534	-0.0343
632	SLV 6	2.75	5.07	67.56	0.042	0.0536	-0.0239
632	SLV 7	2.21	-6.5	70.12	-0.2808	0.0459	-0.0032
632	SLV 8	2.23	-7.43	70.13	-0.2753	0.0461	0.0072
632	SLV 9	-4.07	6.72	55.6	-0.0205	0.0155	-0.0255
632	SLV 10	-4.05	5.79	55.61	-0.015	0.0157	-0.0151
632	SLV 11	-4.59	-5.77	58.17	-0.3378	0.0081	0.0057
632	SLV 12	-4.57	-6.71	58.17	-0.3323	0.0083	0.016
632	SLV 13	-12.19	3.45	42.55	-0.1996	-0.0313	-0.0071
632	SLV 14	-12.16	2.01	42.56	-0.1911	-0.031	0.009
632	SLV 15	-12.35	-0.3	43.32	-0.2948	-0.0335	0.0022
632	SLV 16	-12.31	-1.74	43.33	-0.2862	-0.0332	0.0183
632	CRTFP Ux+	0	0	0	0	0	0
632	CRTFP Ux-	0	0	0	0	0	0
632	CRTFP Uy+	0	0	0	0	0	0
632	CRTFP Uy-	0	0	0	0	0	0
633	SLU 1	-0.84	-0.39	57.4	-0.1475	0.0298	-0.0092
633	SLU 2	-0.84	-0.31	57.42	-0.1456	0.0299	-0.0095
633	SLU 3	-0.87	-0.39	58.71	-0.149	0.0305	-0.0093
633	SLU 4	-0.86	-0.34	58.72	-0.1479	0.0305	-0.0094
633	SLU 5	-0.86	-0.31	58.24	-0.1473	0.0303	-0.0096
633	SLU 6	-0.88	-0.4	59.52	-0.1507	0.0309	-0.0094
633	SLU 7	-0.88	-0.35	59.54	-0.1495	0.0309	-0.0096
633	SLU 8	-0.87	-0.41	59.03	-0.1508	0.0306	-0.0095
633	SLU 9	-0.87	-0.36	59.04	-0.1497	0.0307	-0.0096
633	SLU 10	-0.89	-0.33	65.22	-0.1665	0.0337	-0.0103
633	SLU 11	-0.91	-0.42	66.51	-0.1699	0.0342	-0.0102
633	SLU 12	-0.91	-0.36	66.52	-0.1688	0.0343	-0.0103
633	SLU 13	-0.91	-0.34	66.04	-0.1682	0.0341	-0.0105
633	SLU 14	-0.93	-0.42	67.32	-0.1716	0.0346	-0.0103
633	SLU 15	-0.93	-0.37	67.34	-0.1705	0.0347	-0.0104
633	SLU 16	-0.92	-0.43	66.83	-0.1717	0.0344	-0.0103
633	SLU 17	-0.92	-0.38	66.84	-0.1706	0.0344	-0.0105
633	SLU 18	-0.91	-0.43	68.54	-0.1774	0.0352	-0.0105
633	SLU 19	-0.91	-0.37	68.56	-0.1762	0.0352	-0.0106
633	SLU 20	-0.93	-0.43	69.36	-0.179	0.0356	-0.0106
633	SLU 21	-0.93	-0.38	69.37	-0.1779	0.0356	-0.0107
633	SLU 22	-0.92	-0.39	64.94	-0.1593	0.0338	-0.0098
633	SLU 23	-0.92	-0.3	64.96	-0.1574	0.0339	-0.01
633	SLU 24	-0.94	-0.39	66.25	-0.1609	0.0344	-0.0098
633	SLU 25	-0.94	-0.34	66.26	-0.1597	0.0345	-0.01
633	SLU 26	-0.94	-0.31	65.78	-0.1591	0.0343	-0.0101
633	SLU 27	-0.96	-0.4	67.06	-0.1625	0.0349	-0.01
633	SLU 28	-0.96	-0.35	67.08	-0.1614	0.0349	-0.0101
633	SLU 29	-0.95	-0.41	66.57	-0.1626	0.0346	-0.01
633	SLU 30	-0.95	-0.35	66.59	-0.1615	0.0347	-0.0102
633	SLU 31	-0.97	-0.33	72.77	-0.1784	0.0376	-0.0109
633	SLU 32	-0.99	-0.41	74.05	-0.1818	0.0382	-0.0107
633	SLU 33	-0.99	-0.36	74.06	-0.1806	0.0382	-0.0108
633	SLU 34	-0.99	-0.33	73.58	-0.18	0.038	-0.011
633	SLU 35	-1.01	-0.42	74.86	-0.1834	0.0386	-0.0108

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
633	SLU 36	-1.01	-0.37	74.88	-0.1823	0.0387	-0.011
633	SLU 37	-1	-0.43	74.37	-0.1836	0.0384	-0.0109
633	SLU 38	-1	-0.38	74.39	-0.1824	0.0384	-0.011
633	SLU 39	-0.99	-0.42	76.09	-0.1892	0.0392	-0.011
633	SLU 40	-0.99	-0.37	76.1	-0.1881	0.0392	-0.0111
633	SLU 41	-1.01	-0.43	76.9	-0.1909	0.0396	-0.0111
633	SLU 42	-1.01	-0.38	76.91	-0.1897	0.0396	-0.0113
633	SLU 43	-1.07	-0.51	72.03	-0.1877	0.0374	-0.0118
633	SLU 44	-1.07	-0.43	72.06	-0.1858	0.0375	-0.012
633	SLU 45	-1.09	-0.51	73.34	-0.1892	0.038	-0.0119
633	SLU 46	-1.09	-0.46	73.35	-0.1881	0.0381	-0.012
633	SLU 47	-1.08	-0.43	72.87	-0.1874	0.0379	-0.0122
633	SLU 48	-1.1	-0.52	74.15	-0.1909	0.0384	-0.012
633	SLU 49	-1.1	-0.47	74.17	-0.1897	0.0385	-0.0121
633	SLU 50	-1.1	-0.53	73.66	-0.191	0.0382	-0.0121
633	SLU 51	-1.1	-0.48	73.68	-0.1898	0.0383	-0.0122
633	SLU 52	-1.12	-0.45	79.86	-0.2067	0.0412	-0.0129
633	SLU 53	-1.14	-0.54	81.14	-0.2101	0.0418	-0.0127
633	SLU 54	-1.14	-0.48	81.15	-0.209	0.0418	-0.0129
633	SLU 55	-1.13	-0.46	80.67	-0.2084	0.0416	-0.013
633	SLU 56	-1.15	-0.54	81.96	-0.2118	0.0422	-0.0129
633	SLU 57	-1.15	-0.49	81.97	-0.2106	0.0422	-0.013
633	SLU 58	-1.15	-0.55	81.46	-0.2119	0.042	-0.0129
633	SLU 59	-1.15	-0.5	81.48	-0.2108	0.042	-0.0131
633	SLU 60	-1.14	-0.55	83.18	-0.2176	0.0428	-0.013
633	SLU 61	-1.14	-0.49	83.19	-0.2164	0.0428	-0.0132
633	SLU 62	-1.15	-0.55	83.99	-0.2192	0.0432	-0.0132
633	SLU 63	-1.15	-0.5	84.01	-0.2181	0.0432	-0.0133
633	SLU 64	-1.15	-0.51	79.57	-0.1995	0.0414	-0.0123
633	SLU 65	-1.15	-0.42	79.6	-0.1976	0.0415	-0.0126
633	SLU 66	-1.17	-0.51	80.88	-0.201	0.042	-0.0124
633	SLU 67	-1.17	-0.46	80.9	-0.1999	0.0421	-0.0126
633	SLU 68	-1.16	-0.43	80.41	-0.1993	0.0419	-0.0127
633	SLU 69	-1.18	-0.52	81.7	-0.2027	0.0424	-0.0125
633	SLU 70	-1.18	-0.47	81.71	-0.2016	0.0425	-0.0127
633	SLU 71	-1.18	-0.53	81.21	-0.2028	0.0422	-0.0126
633	SLU 72	-1.18	-0.47	81.22	-0.2017	0.0422	-0.0127
633	SLU 73	-1.2	-0.45	87.4	-0.2186	0.0452	-0.0134
633	SLU 74	-1.22	-0.53	88.68	-0.222	0.0458	-0.0133
633	SLU 75	-1.22	-0.48	88.7	-0.2208	0.0458	-0.0134
633	SLU 76	-1.21	-0.45	88.21	-0.2202	0.0456	-0.0136
633	SLU 77	-1.23	-0.54	89.5	-0.2236	0.0462	-0.0134
633	SLU 78	-1.23	-0.49	89.51	-0.2225	0.0462	-0.0136
633	SLU 79	-1.23	-0.55	89.01	-0.2237	0.0459	-0.0135
633	SLU 80	-1.23	-0.5	89.02	-0.2226	0.046	-0.0136
633	SLU 81	-1.22	-0.54	90.72	-0.2294	0.0467	-0.0136
633	SLU 82	-1.22	-0.49	90.73	-0.2283	0.0468	-0.0137
633	SLU 83	-1.23	-0.55	91.53	-0.2311	0.0471	-0.0137
633	SLU 84	-1.23	-0.5	91.55	-0.2299	0.0472	-0.0138
633	SLE RA 1	-0.87	-0.39	59.55	-0.1509	0.031	-0.0094
633	SLE RA 2	-0.87	-0.34	59.57	-0.1496	0.031	-0.0095
633	SLE RA 3	-0.88	-0.39	60.43	-0.1519	0.0314	-0.0094
633	SLE RA 4	-0.88	-0.36	60.43	-0.1511	0.0314	-0.0095
633	SLE RA 5	-0.88	-0.34	60.11	-0.1507	0.0313	-0.0096
633	SLE RA 6	-0.89	-0.4	60.97	-0.153	0.0317	-0.0095
633	SLE RA 7	-0.89	-0.36	60.98	-0.1522	0.0317	-0.0096
633	SLE RA 8	-0.89	-0.4	60.64	-0.1531	0.0315	-0.0095
633	SLE RA 9	-0.89	-0.37	60.65	-0.1523	0.0315	-0.0096
633	SLE RA 10	-0.9	-0.35	64.77	-0.1636	0.0335	-0.0101
633	SLE RA 11	-0.91	-0.41	65.63	-0.1658	0.0339	-0.01
633	SLE RA 12	-0.91	-0.37	65.63	-0.1651	0.0339	-0.0101
633	SLE RA 13	-0.91	-0.36	65.31	-0.1647	0.0338	-0.0102
633	SLE RA 14	-0.92	-0.41	66.17	-0.1669	0.0342	-0.0101
633	SLE RA 15	-0.92	-0.38	66.18	-0.1662	0.0342	-0.0102
633	SLE RA 16	-0.92	-0.42	65.84	-0.167	0.034	-0.0101
633	SLE RA 17	-0.92	-0.38	65.85	-0.1663	0.034	-0.0102
633	SLE RA 18	-0.91	-0.42	66.98	-0.1708	0.0345	-0.0102
633	SLE RA 19	-0.91	-0.38	66.99	-0.17	0.0346	-0.0103
633	SLE RA 20	-0.92	-0.42	67.53	-0.1719	0.0348	-0.0103
633	SLE RA 21	-0.92	-0.39	67.54	-0.1711	0.0348	-0.0104
633	SLE FR 1	-0.87	-0.39	59.55	-0.1509	0.031	-0.0094
633	SLE FR 2	-0.87	-0.38	59.56	-0.1506	0.031	-0.0094
633	SLE FR 3	-0.87	-0.4	59.77	-0.1513	0.0311	-0.0094
633	SLE FR 4	-0.88	-0.39	61.79	-0.1566	0.032	-0.0097
633	SLE FR 5	-0.88	-0.4	62	-0.1573	0.0321	-0.0097
633	SLE FR 6	-0.89	-0.4	63.27	-0.1608	0.0327	-0.0098
633	SLE QP 1	-0.87	-0.39	59.55	-0.1509	0.031	-0.0094
633	SLE QP 2	-0.88	-0.4	61.78	-0.1569	0.032	-0.0096
633	SLD 1	3.99	0.21	69.29	-0.0962	0.0559	-0.0197
633	SLD 2	4	-0.38	69.29	-0.0929	0.0559	-0.0131
633	SLD 3	3.92	-1.42	69.58	-0.1395	0.0545	-0.0175
633	SLD 4	3.94	-2.01	69.58	-0.1363	0.0545	-0.011
633	SLD 5	0.68	2.36	63.59	-0.0735	0.0413	-0.017
633	SLD 6	0.69	1.98	63.59	-0.0713	0.0413	-0.0127
633	SLD 7	0.46	-3.08	64.57	-0.218	0.0366	-0.01
633	SLD 8	0.47	-3.46	64.57	-0.2159	0.0367	-0.0057
633	SLD 9	-2.23	2.66	59	-0.0978	0.0274	-0.0136
633	SLD 10	-2.22	2.27	59	-0.0957	0.0274	-0.0093
633	SLD 11	-2.45	-2.78	59.97	-0.2424	0.0227	-0.0065
633	SLD 12	-2.44	-3.16	59.97	-0.2403	0.0228	-0.0023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
633	SLD 13	-5.7	1.21	53.98	-0.1774	0.0095	-0.0082
633	SLD 14	-5.68	0.62	53.98	-0.1742	0.0096	-0.0017
633	SLD 15	-5.77	-0.43	54.28	-0.2208	0.0081	-0.0061
633	SLD 16	-5.75	-1.01	54.28	-0.2175	0.0082	0.0004
633	SLV 1	10.51	0.98	79.35	-0.0112	0.0879	-0.033
633	SLV 2	10.55	-0.39	79.35	-0.0036	0.0879	-0.0178
633	SLV 3	10.35	-2.74	80.03	-0.1102	0.0846	-0.0282
633	SLV 4	10.39	-4.11	80.03	-0.1027	0.0847	-0.013
633	SLV 5	2.76	5.89	66.02	0.0358	0.0537	-0.0266
633	SLV 6	2.79	5.01	66.02	0.0406	0.0538	-0.0168
633	SLV 7	2.25	-6.5	68.29	-0.2944	0.0428	-0.0104
633	SLV 8	2.27	-7.39	68.29	-0.2895	0.0429	-0.0007
633	SLV 9	-4.03	6.59	55.27	-0.0242	0.0212	-0.0186
633	SLV 10	-4.01	5.7	55.27	-0.0193	0.0212	-0.0088
633	SLV 11	-4.55	-5.81	57.55	-0.3544	0.0103	-0.0024
633	SLV 12	-4.53	-6.69	57.55	-0.3495	0.0103	0.0074
633	SLV 13	-12.15	3.31	43.53	-0.211	-0.0206	-0.0063
633	SLV 14	-12.11	1.93	43.53	-0.2035	-0.0205	0.0089
633	SLV 15	-12.31	-0.41	44.22	-0.3101	-0.0239	-0.0014
633	SLV 16	-12.27	-1.78	44.22	-0.3025	-0.0238	0.0138
633	CRTFP Ux+	0	0	0	0	0	0
633	CRTFP Ux-	0	0	0	0	0	0
633	CRTFP Uy+	0	0	0	0	0	0
633	CRTFP Uy-	0	0	0	0	0	0
634	SLU 1	-0.74	-0.41	52.12	-0.1442	0.7323	-0.003
634	SLU 2	-0.74	-0.33	52.14	-0.1424	0.7327	-0.0042
634	SLU 3	-0.76	-0.41	53.31	-0.1457	0.749	-0.0031
634	SLU 4	-0.76	-0.36	53.32	-0.1446	0.7492	-0.0038
634	SLU 5	-0.75	-0.33	52.88	-0.144	0.7431	-0.0042
634	SLU 6	-0.77	-0.41	54.05	-0.1473	0.7594	-0.0031
634	SLU 7	-0.77	-0.36	54.06	-0.1462	0.7596	-0.0038
634	SLU 8	-0.77	-0.42	53.6	-0.1474	0.7531	-0.0031
634	SLU 9	-0.77	-0.37	53.61	-0.1463	0.7533	-0.0038
634	SLU 10	-0.78	-0.35	59.23	-0.1627	0.8322	-0.0046
634	SLU 11	-0.8	-0.43	60.4	-0.166	0.8485	-0.0035
634	SLU 12	-0.8	-0.38	60.41	-0.1649	0.8487	-0.0042
634	SLU 13	-0.8	-0.36	59.97	-0.1643	0.8426	-0.0046
634	SLU 14	-0.81	-0.44	61.14	-0.1676	0.8589	-0.0035
634	SLU 15	-0.81	-0.39	61.15	-0.1666	0.8591	-0.0042
634	SLU 16	-0.81	-0.44	60.69	-0.1677	0.8526	-0.0034
634	SLU 17	-0.81	-0.4	60.7	-0.1666	0.8528	-0.0041
634	SLU 18	-0.8	-0.44	62.25	-0.1732	0.8745	-0.0036
634	SLU 19	-0.8	-0.39	62.26	-0.1721	0.8747	-0.0043
634	SLU 20	-0.81	-0.45	62.99	-0.1748	0.8848	-0.0036
634	SLU 21	-0.81	-0.4	63	-0.1737	0.8851	-0.0043
634	SLU 22	-0.81	-0.41	58.96	-0.1558	0.8287	-0.0035
634	SLU 23	-0.81	-0.33	58.98	-0.154	0.829	-0.0047
634	SLU 24	-0.83	-0.41	60.15	-0.1573	0.8453	-0.0036
634	SLU 25	-0.83	-0.36	60.16	-0.1562	0.8455	-0.0043
634	SLU 26	-0.82	-0.33	59.72	-0.1556	0.8394	-0.0047
634	SLU 27	-0.84	-0.41	60.89	-0.159	0.8557	-0.0036
634	SLU 28	-0.84	-0.36	60.9	-0.1579	0.8559	-0.0043
634	SLU 29	-0.84	-0.42	60.44	-0.1591	0.8494	-0.0036
634	SLU 30	-0.84	-0.37	60.46	-0.158	0.8496	-0.0043
634	SLU 31	-0.85	-0.35	66.07	-0.1743	0.9285	-0.0051
634	SLU 32	-0.87	-0.43	67.24	-0.1776	0.9448	-0.004
634	SLU 33	-0.87	-0.38	67.25	-0.1766	0.945	-0.0047
634	SLU 34	-0.87	-0.36	66.81	-0.1759	0.9389	-0.0051
634	SLU 35	-0.88	-0.44	67.98	-0.1793	0.9552	-0.004
634	SLU 36	-0.88	-0.39	67.99	-0.1782	0.9554	-0.0047
634	SLU 37	-0.88	-0.44	67.53	-0.1794	0.9489	-0.0039
634	SLU 38	-0.88	-0.4	67.55	-0.1783	0.9491	-0.0046
634	SLU 39	-0.87	-0.44	69.09	-0.1848	0.9708	-0.0041
634	SLU 40	-0.87	-0.39	69.1	-0.1837	0.971	-0.0048
634	SLU 41	-0.88	-0.45	69.83	-0.1864	0.9812	-0.0041
634	SLU 42	-0.88	-0.4	69.84	-0.1853	0.9814	-0.0048
634	SLU 43	-0.94	-0.53	65.41	-0.1834	0.919	-0.0038
634	SLU 44	-0.94	-0.45	65.43	-0.1816	0.9193	-0.0049
634	SLU 45	-0.96	-0.53	66.6	-0.185	0.9356	-0.0038
634	SLU 46	-0.96	-0.48	66.61	-0.1839	0.9359	-0.0045
634	SLU 47	-0.95	-0.45	66.17	-0.1832	0.9297	-0.0049
634	SLU 48	-0.97	-0.53	67.34	-0.1866	0.946	-0.0039
634	SLU 49	-0.97	-0.49	67.35	-0.1855	0.9462	-0.0046
634	SLU 50	-0.96	-0.54	66.89	-0.1867	0.9398	-0.0038
634	SLU 51	-0.96	-0.49	66.9	-0.1856	0.94	-0.0045
634	SLU 52	-0.98	-0.47	72.52	-0.2019	1.0188	-0.0053
634	SLU 53	-1	-0.55	73.69	-0.2053	1.0351	-0.0042
634	SLU 54	-1	-0.5	73.7	-0.2042	1.0353	-0.0049
634	SLU 55	-0.99	-0.48	73.26	-0.2036	1.0292	-0.0053
634	SLU 56	-1.01	-0.56	74.43	-0.2069	1.0455	-0.0042
634	SLU 57	-1.01	-0.51	74.44	-0.2058	1.0457	-0.0049
634	SLU 58	-1.01	-0.57	73.98	-0.207	1.0393	-0.0042
634	SLU 59	-1.01	-0.52	73.99	-0.2059	1.0395	-0.0049
634	SLU 60	-1	-0.56	75.54	-0.2124	1.0611	-0.0043
634	SLU 61	-1	-0.51	75.55	-0.2114	1.0613	-0.005
634	SLU 62	-1.01	-0.57	76.28	-0.2141	1.0715	-0.0043
634	SLU 63	-1.01	-0.52	76.29	-0.213	1.0717	-0.005
634	SLU 64	-1.01	-0.53	72.25	-0.1951	1.0153	-0.0043
634	SLU 65	-1.01	-0.45	72.27	-0.1932	1.0157	-0.0054
634	SLU 66	-1.03	-0.53	73.44	-0.1966	1.032	-0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
634	SLU 67	-1.03	-0.48	73.45	-0.1955	1.0322	-0.005
634	SLU 68	-1.02	-0.45	73.01	-0.1949	1.0261	-0.0054
634	SLU 69	-1.04	-0.53	74.18	-0.1982	1.0424	-0.0044
634	SLU 70	-1.04	-0.49	74.19	-0.1971	1.0426	-0.0051
634	SLU 71	-1.03	-0.54	73.73	-0.1983	1.0361	-0.0043
634	SLU 72	-1.03	-0.49	73.74	-0.1972	1.0363	-0.005
634	SLU 73	-1.05	-0.47	79.36	-0.2135	1.1152	-0.0058
634	SLU 74	-1.07	-0.55	80.53	-0.2169	1.1315	-0.0047
634	SLU 75	-1.07	-0.5	80.54	-0.2158	1.1317	-0.0054
634	SLU 76	-1.06	-0.48	80.1	-0.2152	1.1256	-0.0058
634	SLU 77	-1.08	-0.56	81.27	-0.2185	1.1419	-0.0047
634	SLU 78	-1.08	-0.51	81.28	-0.2174	1.1421	-0.0054
634	SLU 79	-1.08	-0.57	80.82	-0.2186	1.1356	-0.0047
634	SLU 80	-1.08	-0.52	80.83	-0.2175	1.1358	-0.0054
634	SLU 81	-1.07	-0.56	82.38	-0.2241	1.1575	-0.0048
634	SLU 82	-1.07	-0.51	82.39	-0.223	1.1577	-0.0055
634	SLU 83	-1.08	-0.57	83.12	-0.2257	1.1678	-0.0048
634	SLU 84	-1.08	-0.52	83.13	-0.2246	1.1681	-0.0055
634	SLE RA 1	-0.76	-0.41	54.07	-0.1475	0.7598	-0.0032
634	SLE RA 2	-0.76	-0.35	54.09	-0.1463	0.7601	-0.0039
634	SLE RA 3	-0.77	-0.41	54.87	-0.1485	0.7709	-0.0032
634	SLE RA 4	-0.77	-0.37	54.87	-0.1478	0.7711	-0.0037
634	SLE RA 5	-0.77	-0.36	54.58	-0.1474	0.767	-0.004
634	SLE RA 6	-0.78	-0.41	55.36	-0.1496	0.7779	-0.0032
634	SLE RA 7	-0.78	-0.38	55.37	-0.1489	0.778	-0.0037
634	SLE RA 8	-0.78	-0.41	55.06	-0.1497	0.7737	-0.0032
634	SLE RA 9	-0.78	-0.38	55.07	-0.1489	0.7738	-0.0037
634	SLE RA 10	-0.79	-0.37	58.81	-0.1598	0.8264	-0.0042
634	SLE RA 11	-0.8	-0.42	59.59	-0.1621	0.8373	-0.0035
634	SLE RA 12	-0.8	-0.39	59.6	-0.1613	0.8374	-0.0039
634	SLE RA 13	-0.8	-0.37	59.31	-0.1609	0.8333	-0.0042
634	SLE RA 14	-0.81	-0.43	60.09	-0.1631	0.8442	-0.0035
634	SLE RA 15	-0.81	-0.39	60.09	-0.1624	0.8443	-0.004
634	SLE RA 16	-0.81	-0.43	59.79	-0.1632	0.84	-0.0034
634	SLE RA 17	-0.81	-0.4	59.8	-0.1625	0.8402	-0.0039
634	SLE RA 18	-0.8	-0.43	60.83	-0.1668	0.8546	-0.0035
634	SLE RA 19	-0.8	-0.4	60.83	-0.1661	0.8547	-0.004
634	SLE RA 20	-0.81	-0.43	61.32	-0.1679	0.8615	-0.0035
634	SLE RA 21	-0.81	-0.4	61.33	-0.1672	0.8617	-0.004
634	SLE FR 1	-0.76	-0.41	54.07	-0.1475	0.7598	-0.0032
634	SLE FR 2	-0.76	-0.39	54.08	-0.1473	0.7599	-0.0033
634	SLE FR 3	-0.77	-0.41	54.27	-0.1479	0.7626	-0.0032
634	SLE FR 4	-0.77	-0.4	56.1	-0.1531	0.7883	-0.0034
634	SLE FR 5	-0.78	-0.41	56.3	-0.1537	0.791	-0.0033
634	SLE FR 6	-0.78	-0.42	57.45	-0.1572	0.8072	-0.0033
634	SLE QP 1	-0.76	-0.41	54.07	-0.1475	0.7598	-0.0032
634	SLE QP 2	-0.77	-0.41	56.1	-0.1533	0.7883	-0.0033
634	SLD 1	3.72	0.16	62.42	-0.0944	0.8922	-0.0302
634	SLD 2	3.73	-0.36	62.42	-0.0918	0.8921	-0.0173
634	SLD 3	3.66	-1.35	62.66	-0.1361	0.888	-0.0093
634	SLD 4	3.67	-1.86	62.66	-0.1335	0.8879	0.0036
634	SLD 5	0.66	2.13	57.64	-0.0728	0.826	-0.0453
634	SLD 6	0.67	1.79	57.64	-0.0711	0.8259	-0.0369
634	SLD 7	0.46	-2.88	58.42	-0.2118	0.8117	0.0244
634	SLD 8	0.47	-3.22	58.42	-0.2101	0.8117	0.0328
634	SLD 9	-2.02	2.39	53.78	-0.0965	0.7649	-0.0393
634	SLD 10	-2.01	2.05	53.78	-0.0947	0.7648	-0.0309
634	SLD 11	-2.22	-2.61	54.56	-0.2355	0.7507	0.0304
634	SLD 12	-2.21	-2.95	54.56	-0.2338	0.7506	0.0388
634	SLD 13	-5.22	1.04	49.54	-0.1731	0.6887	-0.0101
634	SLD 14	-5.21	0.52	49.54	-0.1705	0.6886	0.0027
634	SLD 15	-5.28	-0.46	49.78	-0.2148	0.6844	0.0108
634	SLD 16	-5.27	-0.98	49.78	-0.2122	0.6843	0.0236
634	SLV 1	9.73	0.87	70.89	-0.0118	1.0315	-0.0655
634	SLV 2	9.77	-0.33	70.9	-0.0057	1.0313	-0.0356
634	SLV 3	9.59	-2.56	71.44	-0.107	1.0215	-0.0179
634	SLV 4	9.63	-3.76	71.44	-0.101	1.0213	0.0121
634	SLV 5	2.59	5.37	59.71	0.0325	0.8764	-0.0994
634	SLV 6	2.61	4.59	59.71	0.0364	0.8763	-0.0801
634	SLV 7	2.11	-6.04	61.53	-0.2849	0.8431	0.0595
634	SLV 8	2.14	-6.81	61.53	-0.281	0.843	0.0788
634	SLV 9	-3.69	5.99	50.67	-0.0256	0.7336	-0.0853
634	SLV 10	-3.66	5.21	50.67	-0.0217	0.7334	-0.066
634	SLV 11	-4.16	-5.42	52.49	-0.343	0.7003	0.0735
634	SLV 12	-4.13	-6.19	52.49	-0.3391	0.7001	0.0928
634	SLV 13	-11.18	2.93	40.76	-0.2056	0.5553	-0.0186
634	SLV 14	-11.14	1.73	40.76	-0.1995	0.5551	0.0113
634	SLV 15	-11.32	-0.49	41.3	-0.3008	0.5453	0.029
634	SLV 16	-11.28	-1.69	41.31	-0.2948	0.5451	0.059
634	CRTFP Ux+	0	0	0	0	0	0
634	CRTFP Ux-	0	0	0	0	0	0
634	CRTFP Uy+	0	0	0	0	0	0
634	CRTFP Uy-	0	0	0	0	0	0
639	SLU 1	-1.73	-1.76	150.56	-9.1297	-10.4329	-0.2185
639	SLU 2	-1.73	-1.52	150.56	-9.124	-10.4298	-0.2022
639	SLU 3	-1.77	-1.77	154.02	-9.338	-10.6742	-0.2209
639	SLU 4	-1.77	-1.62	154.02	-9.3346	-10.6723	-0.2111
639	SLU 5	-1.76	-1.55	152.72	-9.2566	-10.5808	-0.2057
639	SLU 6	-1.8	-1.8	156.18	-9.4705	-10.8252	-0.2244
639	SLU 7	-1.8	-1.65	156.18	-9.4671	-10.8233	-0.2146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
639	SLU 8	-1.79	-1.82	154.88	-9.3948	-10.735	-0.2254
639	SLU 9	-1.79	-1.68	154.88	-9.3913	-10.7331	-0.2156
639	SLU 10	-1.81	-1.64	171.14	-10.3555	-11.869	-0.2143
639	SLU 11	-1.85	-1.88	174.6	-10.5695	-12.1134	-0.233
639	SLU 12	-1.85	-1.74	174.6	-10.5661	-12.1116	-0.2233
639	SLU 13	-1.84	-1.67	173.3	-10.4881	-12.0201	-0.2178
639	SLU 14	-1.88	-1.91	176.76	-10.702	-12.2645	-0.2365
639	SLU 15	-1.88	-1.77	176.76	-10.6986	-12.2626	-0.2267
639	SLU 16	-1.87	-1.94	175.46	-10.6263	-12.1743	-0.2376
639	SLU 17	-1.87	-1.79	175.46	-10.6228	-12.1724	-0.2278
639	SLU 18	-1.85	-1.93	179.96	-10.889	-12.489	-0.2358
639	SLU 19	-1.85	-1.78	179.96	-10.8856	-12.4871	-0.2261
639	SLU 20	-1.87	-1.96	182.12	-11.0215	-12.6401	-0.2393
639	SLU 21	-1.87	-1.81	182.12	-11.0181	-12.6382	-0.2295
639	SLU 22	-1.89	-1.79	170.24	-10.288	-11.7899	-0.2285
639	SLU 23	-1.89	-1.55	170.24	-10.2823	-11.7868	-0.2122
639	SLU 24	-1.93	-1.8	173.7	-10.4963	-12.0312	-0.2309
639	SLU 25	-1.93	-1.65	173.7	-10.4929	-12.0293	-0.2211
639	SLU 26	-1.92	-1.58	172.4	-10.4148	-11.9378	-0.2156
639	SLU 27	-1.96	-1.83	175.86	-10.6288	-12.1822	-0.2343
639	SLU 28	-1.96	-1.68	175.86	-10.6254	-12.1803	-0.2245
639	SLU 29	-1.95	-1.85	174.56	-10.553	-12.092	-0.2354
639	SLU 30	-1.95	-1.71	174.56	-10.5496	-12.0901	-0.2256
639	SLU 31	-1.97	-1.67	190.81	-11.5138	-13.2261	-0.2243
639	SLU 32	-2.01	-1.91	194.28	-11.7278	-13.4705	-0.243
639	SLU 33	-2.01	-1.77	194.28	-11.7244	-13.4686	-0.2332
639	SLU 34	-2	-1.7	192.97	-11.6463	-13.3771	-0.2277
639	SLU 35	-2.04	-1.94	196.44	-11.8603	-13.6215	-0.2465
639	SLU 36	-2.04	-1.8	196.44	-11.8569	-13.6196	-0.2367
639	SLU 37	-2.03	-1.97	195.14	-11.7845	-13.5313	-0.2475
639	SLU 38	-2.03	-1.82	195.13	-11.7811	-13.5294	-0.2377
639	SLU 39	-2.01	-1.96	199.64	-12.0473	-13.846	-0.2458
639	SLU 40	-2.01	-1.81	199.63	-12.0438	-13.8442	-0.236
639	SLU 41	-2.03	-1.99	201.8	-12.1798	-13.9971	-0.2493
639	SLU 42	-2.03	-1.84	201.79	-12.1764	-13.9952	-0.2395
639	SLU 43	-2.2	-2.28	188.98	-11.4715	-13.0975	-0.2807
639	SLU 44	-2.2	-2.04	188.98	-11.4658	-13.0943	-0.2643
639	SLU 45	-2.24	-2.29	192.44	-11.6798	-13.3388	-0.2831
639	SLU 46	-2.24	-2.14	192.44	-11.6764	-13.3369	-0.2733
639	SLU 47	-2.23	-2.07	191.14	-11.5984	-13.2454	-0.2678
639	SLU 48	-2.27	-2.32	194.6	-11.8123	-13.4898	-0.2865
639	SLU 49	-2.27	-2.17	194.6	-11.8089	-13.4879	-0.2767
639	SLU 50	-2.25	-2.34	193.3	-11.7366	-13.3996	-0.2876
639	SLU 51	-2.25	-2.19	193.3	-11.7331	-13.3977	-0.2778
639	SLU 52	-2.28	-2.15	209.56	-12.6973	-14.5336	-0.2765
639	SLU 53	-2.32	-2.4	213.02	-12.9113	-14.778	-0.2952
639	SLU 54	-2.32	-2.26	213.02	-12.9079	-14.7762	-0.2854
639	SLU 55	-2.31	-2.18	211.72	-12.8299	-14.6847	-0.2799
639	SLU 56	-2.35	-2.43	215.18	-13.0438	-14.9291	-0.2986
639	SLU 57	-2.35	-2.29	215.18	-13.0404	-14.9272	-0.2889
639	SLU 58	-2.33	-2.45	213.88	-12.9681	-14.8388	-0.2997
639	SLU 59	-2.33	-2.31	213.88	-12.9647	-14.837	-0.2899
639	SLU 60	-2.31	-2.44	218.38	-13.2308	-15.1536	-0.298
639	SLU 61	-2.31	-2.3	218.38	-13.2274	-15.1517	-0.2882
639	SLU 62	-2.34	-2.47	220.54	-13.3633	-15.3047	-0.3014
639	SLU 63	-2.34	-2.33	220.54	-13.3599	-15.3028	-0.2917
639	SLU 64	-2.36	-2.31	208.66	-12.6298	-14.4545	-0.2906
639	SLU 65	-2.36	-2.07	208.66	-12.6241	-14.4514	-0.2743
639	SLU 66	-2.4	-2.32	212.12	-12.8381	-14.6958	-0.293
639	SLU 67	-2.4	-2.17	212.12	-12.8347	-14.6939	-0.2832
639	SLU 68	-2.39	-2.1	210.82	-12.7566	-14.6024	-0.2778
639	SLU 69	-2.43	-2.35	214.28	-12.9706	-14.8468	-0.2965
639	SLU 70	-2.43	-2.2	214.28	-12.9672	-14.8449	-0.2867
639	SLU 71	-2.41	-2.37	212.98	-12.8948	-14.7566	-0.2975
639	SLU 72	-2.41	-2.22	212.98	-12.8914	-14.7547	-0.2877
639	SLU 73	-2.44	-2.18	229.23	-13.8556	-15.8907	-0.2864
639	SLU 74	-2.48	-2.43	232.7	-14.0696	-16.1351	-0.3051
639	SLU 75	-2.48	-2.29	232.7	-14.0662	-16.1332	-0.2954
639	SLU 76	-2.47	-2.21	231.39	-13.9881	-16.0417	-0.2899
639	SLU 77	-2.51	-2.46	234.86	-14.2021	-16.2861	-0.3086
639	SLU 78	-2.51	-2.32	234.86	-14.1987	-16.2842	-0.2988
639	SLU 79	-2.49	-2.48	233.56	-14.1263	-16.1959	-0.3097
639	SLU 80	-2.49	-2.34	233.56	-14.1229	-16.194	-0.2999
639	SLU 81	-2.47	-2.47	238.06	-14.3891	-16.5106	-0.3079
639	SLU 82	-2.47	-2.33	238.06	-14.3856	-16.5088	-0.2982
639	SLU 83	-2.5	-2.5	240.22	-14.5216	-16.6617	-0.3114
639	SLU 84	-2.5	-2.36	240.21	-14.5182	-16.6598	-0.3016
639	SLE RA 1	-1.78	-1.77	156.18	-9.4606	-10.8206	-0.2214
639	SLE RA 2	-1.78	-1.61	156.18	-9.4569	-10.8185	-0.2105
639	SLE RA 3	-1.81	-1.77	158.49	-9.5995	-10.9815	-0.223
639	SLE RA 4	-1.81	-1.68	158.49	-9.5972	-10.9802	-0.2164
639	SLE RA 5	-1.8	-1.63	157.62	-9.5452	-10.9192	-0.2128
639	SLE RA 6	-1.82	-1.79	159.93	-9.6879	-11.0821	-0.2253
639	SLE RA 7	-1.82	-1.7	159.93	-9.6856	-11.0809	-0.2187
639	SLE RA 8	-1.82	-1.81	159.06	-9.6373	-11.022	-0.226
639	SLE RA 9	-1.82	-1.71	159.06	-9.6351	-11.0207	-0.2194
639	SLE RA 10	-1.83	-1.69	169.9	-10.2779	-11.778	-0.2186
639	SLE RA 11	-1.86	-1.85	172.21	-10.4205	-11.941	-0.231
639	SLE RA 12	-1.86	-1.76	172.21	-10.4182	-11.9397	-0.2245
639	SLE RA 13	-1.85	-1.71	171.34	-10.3662	-11.8787	-0.2209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
639	SLE RA 14	-1.88	-1.87	173.65	-10.5089	-12.0417	-0.2334
639	SLE RA 15	-1.88	-1.77	173.65	-10.5066	-12.0404	-0.2268
639	SLE RA 16	-1.87	-1.89	172.78	-10.4583	-11.9815	-0.2341
639	SLE RA 17	-1.87	-1.79	172.78	-10.4561	-11.9803	-0.2275
639	SLE RA 18	-1.86	-1.88	175.78	-10.6335	-12.1914	-0.2329
639	SLE RA 19	-1.86	-1.78	175.78	-10.6312	-12.1901	-0.2264
639	SLE RA 20	-1.87	-1.9	177.22	-10.7218	-12.2921	-0.2352
639	SLE RA 21	-1.87	-1.8	177.22	-10.7196	-12.2908	-0.2287
639	SLE FR 1	-1.78	-1.77	156.18	-9.4606	-10.8206	-0.2214
639	SLE FR 2	-1.78	-1.74	156.18	-9.4599	-10.8202	-0.2192
639	SLE FR 3	-1.79	-1.78	156.76	-9.496	-10.8609	-0.2223
639	SLE FR 4	-1.8	-1.77	162.06	-9.8117	-11.2314	-0.2227
639	SLE FR 5	-1.81	-1.81	162.64	-9.8478	-11.2721	-0.2257
639	SLE FR 6	-1.82	-1.83	165.98	-10.0471	-11.506	-0.2271
639	SLE QP 1	-1.78	-1.77	156.18	-9.4606	-10.8206	-0.2214
639	SLE QP 2	-1.8	-1.8	162.06	-9.8125	-11.2318	-0.2248
639	SLD 1	11.41	-0.12	176.49	-10.4897	-11.8739	0.6753
639	SLD 2	11.47	-1.35	176.62	-10.4891	-11.8898	0.6256
639	SLD 3	11.23	-4.61	177.6	-10.6188	-12.0158	0.3694
639	SLD 4	11.3	-5.83	177.72	-10.6182	-12.0317	0.3197
639	SLD 5	2.41	5.72	164.69	-9.8199	-11.2063	0.5181
639	SLD 6	2.46	4.91	164.78	-9.8195	-11.2167	0.4855
639	SLD 7	1.83	-9.22	168.37	-10.2503	-11.6795	-0.5018
639	SLD 8	1.87	-10.03	168.46	-10.2499	-11.6899	-0.5344
639	SLD 9	-5.48	6.42	155.66	-9.3751	-10.7737	0.0847
639	SLD 10	-5.43	5.62	155.75	-9.3747	-10.7842	0.0521
639	SLD 11	-6.06	-8.52	159.34	-9.8055	-11.2469	-0.9352
639	SLD 12	-6.02	-9.32	159.43	-9.8051	-11.2574	-0.9678
639	SLD 13	-14.9	2.22	146.4	-9.0068	-10.4319	-0.7693
639	SLD 14	-14.84	1	146.52	-9.0062	-10.4478	-0.819
639	SLD 15	-15.08	-2.26	147.5	-9.1359	-10.5739	-1.0753
639	SLD 16	-15.01	-3.48	147.63	-9.1353	-10.5898	-1.125
639	SLV 1	29.09	1.98	195.86	-11.4014	-12.7382	1.8706
639	SLV 2	29.24	-0.87	196.16	-11.4	-12.7753	1.7548
639	SLV 3	28.68	-8.23	198.37	-11.6942	-13.0607	1.1737
639	SLV 4	28.84	-11.08	198.66	-11.6928	-13.0978	1.0579
639	SLV 5	8.05	15.31	168.35	-9.8453	-11.1882	1.4807
639	SLV 6	8.16	13.47	168.54	-9.8444	-11.2121	1.4061
639	SLV 7	6.7	-18.73	176.7	-10.8214	-12.2633	-0.8423
639	SLV 8	6.8	-20.57	176.9	-10.8205	-12.2872	-0.9169
639	SLV 9	-10.4	16.96	147.23	-8.8045	-10.1765	0.4673
639	SLV 10	-10.3	15.12	147.42	-8.8036	-10.2004	0.3927
639	SLV 11	-11.76	-17.08	155.58	-9.7806	-11.2516	-1.8558
639	SLV 12	-11.66	-18.92	155.78	-9.7797	-11.2754	-1.9304
639	SLV 13	-32.44	7.47	125.46	-7.9322	-9.3658	-1.5076
639	SLV 14	-32.28	4.62	125.76	-7.9308	-9.4029	-1.6234
639	SLV 15	-32.85	-2.74	127.96	-8.225	-9.6884	-2.2045
639	SLV 16	-32.69	-5.59	128.26	-8.2236	-9.7254	-2.3203
639	CRTFP Ux+	0	0	0	0	0	0
639	CRTFP Ux-	0	0	0	0	0	0
639	CRTFP Uy+	0	0	0	0	0	0
639	CRTFP Uy-	0	0	0	0	0	0
641	SLU 1	-0.27	-0.27	23.61	5.5921	-0.9694	0.057
641	SLU 2	-0.27	-0.24	23.61	5.5935	-0.9695	0.0586
641	SLU 3	-0.28	-0.27	24.16	5.7206	-0.9918	0.0586
641	SLU 4	-0.28	-0.25	24.16	5.7215	-0.9918	0.0595
641	SLU 5	-0.28	-0.24	23.95	5.6732	-0.9834	0.0594
641	SLU 6	-0.28	-0.28	24.49	5.8002	-1.0057	0.0595
641	SLU 7	-0.28	-0.26	24.49	5.8011	-1.0057	0.0604
641	SLU 8	-0.28	-0.28	24.29	5.7513	-0.9972	0.0588
641	SLU 9	-0.28	-0.26	24.29	5.7522	-0.9973	0.0597
641	SLU 10	-0.28	-0.25	26.86	6.3613	-1.103	0.061
641	SLU 11	-0.29	-0.29	27.4	6.4884	-1.1253	0.061
641	SLU 12	-0.29	-0.27	27.4	6.4893	-1.1254	0.0619
641	SLU 13	-0.29	-0.26	27.2	6.4409	-1.1169	0.0618
641	SLU 14	-0.29	-0.3	27.74	6.568	-1.1392	0.0619
641	SLU 15	-0.29	-0.27	27.74	6.5689	-1.1393	0.0628
641	SLU 16	-0.29	-0.3	27.53	6.5191	-1.1308	0.0612
641	SLU 17	-0.29	-0.28	27.53	6.52	-1.1308	0.0621
641	SLU 18	-0.29	-0.3	28.25	6.689	-1.1602	0.0605
641	SLU 19	-0.29	-0.28	28.25	6.6898	-1.1602	0.0614
641	SLU 20	-0.29	-0.3	28.59	6.7686	-1.1741	0.0613
641	SLU 21	-0.29	-0.28	28.59	6.7694	-1.1741	0.0623
641	SLU 22	-0.3	-0.28	26.71	6.3295	-1.0969	0.0633
641	SLU 23	-0.3	-0.24	26.72	6.3309	-1.097	0.0648
641	SLU 24	-0.3	-0.28	27.26	6.458	-1.1193	0.0648
641	SLU 25	-0.3	-0.26	27.26	6.4588	-1.1193	0.0658
641	SLU 26	-0.3	-0.24	27.05	6.4105	-1.1109	0.0657
641	SLU 27	-0.31	-0.28	27.6	6.5376	-1.1332	0.0657
641	SLU 28	-0.31	-0.26	27.6	6.5384	-1.1332	0.0666
641	SLU 29	-0.31	-0.29	27.39	6.4887	-1.1248	0.065
641	SLU 30	-0.31	-0.26	27.39	6.4895	-1.1248	0.0659
641	SLU 31	-0.31	-0.26	29.96	7.0987	-1.2305	0.0672
641	SLU 32	-0.32	-0.3	30.5	7.2258	-1.2528	0.0673
641	SLU 33	-0.32	-0.27	30.51	7.2266	-1.2529	0.0682
641	SLU 34	-0.31	-0.26	30.3	7.1783	-1.2444	0.0681
641	SLU 35	-0.32	-0.3	30.84	7.3054	-1.2667	0.0681
641	SLU 36	-0.32	-0.28	30.84	7.3062	-1.2668	0.0691
641	SLU 37	-0.32	-0.3	30.64	7.2565	-1.2583	0.0674
641	SLU 38	-0.32	-0.28	30.64	7.2573	-1.2583	0.0683

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
641	SLU 39	-0.31	-0.3	31.35	7.4263	-1.2877	0.0667
641	SLU 40	-0.31	-0.28	31.35	7.4272	-1.2877	0.0676
641	SLU 41	-0.32	-0.31	31.69	7.5059	-1.3016	0.0676
641	SLU 42	-0.32	-0.28	31.69	7.5068	-1.3016	0.0685
641	SLU 43	-0.34	-0.35	29.63	7.017	-1.2166	0.072
641	SLU 44	-0.34	-0.32	29.63	7.0184	-1.2166	0.0735
641	SLU 45	-0.35	-0.35	30.17	7.1455	-1.2389	0.0736
641	SLU 46	-0.35	-0.33	30.18	7.1463	-1.239	0.0745
641	SLU 47	-0.35	-0.32	29.97	7.098	-1.2305	0.0744
641	SLU 48	-0.35	-0.36	30.51	7.2251	-1.2528	0.0744
641	SLU 49	-0.35	-0.34	30.51	7.2259	-1.2529	0.0754
641	SLU 50	-0.35	-0.36	30.31	7.1762	-1.2444	0.0737
641	SLU 51	-0.35	-0.34	30.31	7.177	-1.2444	0.0747
641	SLU 52	-0.36	-0.33	32.88	7.7862	-1.3501	0.0759
641	SLU 53	-0.36	-0.37	33.42	7.9132	-1.3725	0.076
641	SLU 54	-0.36	-0.35	33.42	7.9141	-1.3725	0.0769
641	SLU 55	-0.36	-0.34	33.22	7.8658	-1.3641	0.0768
641	SLU 56	-0.37	-0.38	33.76	7.9929	-1.3864	0.0769
641	SLU 57	-0.37	-0.35	33.76	7.9937	-1.3864	0.0778
641	SLU 58	-0.37	-0.38	33.55	7.944	-1.3779	0.0761
641	SLU 59	-0.36	-0.36	33.55	7.9448	-1.3779	0.0771
641	SLU 60	-0.36	-0.38	34.27	8.1138	-1.4073	0.0754
641	SLU 61	-0.36	-0.36	34.27	8.1147	-1.4074	0.0763
641	SLU 62	-0.37	-0.38	34.61	8.1934	-1.4212	0.0763
641	SLU 63	-0.37	-0.36	34.61	8.1943	-1.4213	0.0772
641	SLU 64	-0.37	-0.36	32.73	7.7543	-1.3441	0.0782
641	SLU 65	-0.37	-0.32	32.74	7.7557	-1.3441	0.0798
641	SLU 66	-0.38	-0.36	33.28	7.8828	-1.3664	0.0798
641	SLU 67	-0.38	-0.34	33.28	7.8836	-1.3665	0.0807
641	SLU 68	-0.37	-0.32	33.07	7.8353	-1.358	0.0806
641	SLU 69	-0.38	-0.36	33.62	7.9624	-1.3803	0.0807
641	SLU 70	-0.38	-0.34	33.62	7.9633	-1.3804	0.0816
641	SLU 71	-0.38	-0.37	33.41	7.9135	-1.3719	0.08
641	SLU 72	-0.38	-0.34	33.41	7.9144	-1.3719	0.0809
641	SLU 73	-0.38	-0.34	35.98	8.5235	-1.4777	0.0822
641	SLU 74	-0.39	-0.38	36.52	8.6506	-1.5	0.0822
641	SLU 75	-0.39	-0.35	36.52	8.6514	-1.5	0.0831
641	SLU 76	-0.39	-0.34	36.32	8.6031	-1.4916	0.083
641	SLU 77	-0.39	-0.38	36.86	8.7302	-1.5139	0.0831
641	SLU 78	-0.39	-0.36	36.86	8.731	-1.5139	0.084
641	SLU 79	-0.39	-0.38	36.66	8.6813	-1.5054	0.0824
641	SLU 80	-0.39	-0.36	36.66	8.6822	-1.5054	0.0833
641	SLU 81	-0.39	-0.38	37.37	8.8512	-1.5348	0.0817
641	SLU 82	-0.39	-0.36	37.37	8.852	-1.5349	0.0826
641	SLU 83	-0.39	-0.39	37.71	8.9308	-1.5487	0.0825
641	SLU 84	-0.39	-0.36	37.71	8.9316	-1.5488	0.0835
641	SLE RA 1	-0.28	-0.27	24.5	5.8028	-1.0059	0.0588
641	SLE RA 2	-0.28	-0.25	24.5	5.8037	-1.0059	0.0598
641	SLE RA 3	-0.28	-0.27	24.86	5.8885	-1.0208	0.0599
641	SLE RA 4	-0.28	-0.26	24.86	5.889	-1.0208	0.0605
641	SLE RA 5	-0.28	-0.25	24.72	5.8568	-1.0152	0.0604
641	SLE RA 6	-0.29	-0.28	25.09	5.9415	-1.0301	0.0604
641	SLE RA 7	-0.29	-0.26	25.09	5.9421	-1.0301	0.0611
641	SLE RA 8	-0.28	-0.28	24.95	5.9089	-1.0244	0.06
641	SLE RA 9	-0.28	-0.27	24.95	5.9095	-1.0244	0.0606
641	SLE RA 10	-0.29	-0.26	26.66	6.3156	-1.0949	0.0614
641	SLE RA 11	-0.29	-0.29	27.02	6.4003	-1.1098	0.0615
641	SLE RA 12	-0.29	-0.27	27.03	6.4009	-1.1098	0.0621
641	SLE RA 13	-0.29	-0.26	26.89	6.3687	-1.1042	0.062
641	SLE RA 14	-0.29	-0.29	27.25	6.4534	-1.1191	0.062
641	SLE RA 15	-0.29	-0.27	27.25	6.454	-1.1191	0.0627
641	SLE RA 16	-0.29	-0.29	27.11	6.4208	-1.1134	0.0616
641	SLE RA 17	-0.29	-0.28	27.11	6.4214	-1.1135	0.0622
641	SLE RA 18	-0.29	-0.29	27.59	6.534	-1.133	0.0611
641	SLE RA 19	-0.29	-0.28	27.59	6.5346	-1.1331	0.0617
641	SLE RA 20	-0.29	-0.29	27.81	6.5871	-1.1423	0.0617
641	SLE RA 21	-0.29	-0.28	27.82	6.5877	-1.1423	0.0623
641	SLE FR 1	-0.28	-0.27	24.5	5.8028	-1.0059	0.0588
641	SLE FR 2	-0.28	-0.27	24.5	5.803	-1.0059	0.059
641	SLE FR 3	-0.28	-0.28	24.59	5.824	-1.0096	0.059
641	SLE FR 4	-0.28	-0.27	25.43	6.0224	-1.044	0.0597
641	SLE FR 5	-0.28	-0.28	25.52	6.0434	-1.0477	0.0597
641	SLE FR 6	-0.28	-0.28	26.04	6.1684	-1.0695	0.06
641	SLE QP 1	-0.28	-0.27	24.5	5.8028	-1.0059	0.0588
641	SLE QP 2	-0.28	-0.28	25.43	6.0222	-1.044	0.0595
641	SLD 1	1.79	-0.01	27.6	6.4961	-1.1291	-0.4433
641	SLD 2	1.79	-0.2	27.63	6.5025	-1.1303	-0.4503
641	SLD 3	1.77	-0.72	27.77	6.5211	-1.1362	-0.4696
641	SLD 4	1.77	-0.9	27.79	6.5275	-1.1373	-0.4766
641	SLD 5	0.38	0.9	25.82	6.1254	-1.0586	-0.0502
641	SLD 6	0.38	0.78	25.83	6.1296	-1.0594	-0.0548
641	SLD 7	0.29	-1.45	26.38	6.2085	-1.0822	-0.1379
641	SLD 8	0.29	-1.57	26.4	6.2127	-1.0829	-0.1425
641	SLD 9	-0.85	1.01	24.45	5.8316	-1.0051	0.2615
641	SLD 10	-0.85	0.89	24.47	5.8358	-1.0059	0.2569
641	SLD 11	-0.95	-1.34	25.02	5.9148	-1.0287	0.1738
641	SLD 12	-0.95	-1.46	25.03	5.919	-1.0294	0.1692
641	SLD 13	-2.33	0.34	23.06	5.5169	-0.9507	0.5956
641	SLD 14	-2.33	0.16	23.08	5.5233	-0.9519	0.5885
641	SLD 15	-2.36	-0.36	23.22	5.5418	-0.9578	0.5693

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
641	SLD 16	-2.36	-0.55	23.25	5.5482	-0.9589	0.5622
641	SLV 1	4.57	0.32	30.51	7.132	-1.2434	-1.1171
641	SLV 2	4.57	-0.1	30.58	7.1469	-1.246	-1.1335
641	SLV 3	4.51	-1.28	30.9	7.1888	-1.2594	-1.1771
641	SLV 4	4.51	-1.71	30.96	7.2038	-1.2621	-1.1935
641	SLV 5	1.27	2.41	26.36	6.2663	-1.079	-0.1997
641	SLV 6	1.27	2.13	26.4	6.2759	-1.0807	-0.2102
641	SLV 7	1.06	-2.94	27.64	6.4558	-1.1325	-0.3996
641	SLV 8	1.06	-3.21	27.68	6.4655	-1.1342	-0.4102
641	SLV 9	-1.62	2.65	23.17	5.5789	-0.9538	0.5292
641	SLV 10	-1.62	2.38	23.21	5.5885	-0.9555	0.5186
641	SLV 11	-1.84	-2.69	24.45	5.7684	-1.0073	0.3292
641	SLV 12	-1.84	-2.97	24.49	5.778	-1.009	0.3187
641	SLV 13	-5.07	1.15	19.89	4.8406	-0.826	1.3125
641	SLV 14	-5.07	0.72	19.95	4.8555	-0.8286	1.2961
641	SLV 15	-5.14	-0.46	20.27	4.8974	-0.842	1.2525
641	SLV 16	-5.14	-0.88	20.34	4.9124	-0.8447	1.2361
641	CRTFP Ux+	0	0	0	0	0	0
641	CRTFP Ux-	0	0	0	0	0	0
641	CRTFP Uy+	0	0	0	0	0	0
641	CRTFP Uy-	0	0	0	0	0	0
643	SLU 1	-0.62	-0.62	59.69	-0.0335	-0.2174	0.0186
643	SLU 2	-0.62	-0.53	59.69	-0.0299	-0.2174	0.0187
643	SLU 3	-0.64	-0.62	61.07	-0.0338	-0.2225	0.0192
643	SLU 4	-0.64	-0.56	61.07	-0.0317	-0.2225	0.0193
643	SLU 5	-0.63	-0.54	60.55	-0.0316	-0.2206	0.0191
643	SLU 6	-0.65	-0.63	61.93	-0.0355	-0.2257	0.0195
643	SLU 7	-0.65	-0.57	61.93	-0.0333	-0.2257	0.0196
643	SLU 8	-0.64	-0.64	61.41	-0.0368	-0.2237	0.0192
643	SLU 9	-0.64	-0.58	61.41	-0.0347	-0.2237	0.0193
643	SLU 10	-0.65	-0.57	67.91	-0.0227	-0.2486	0.0204
643	SLU 11	-0.66	-0.66	69.29	-0.0265	-0.2537	0.0208
643	SLU 12	-0.66	-0.6	69.29	-0.0244	-0.2537	0.0209
643	SLU 13	-0.66	-0.58	68.77	-0.0243	-0.2518	0.0207
643	SLU 14	-0.67	-0.67	70.15	-0.0282	-0.2568	0.0211
643	SLU 15	-0.67	-0.61	70.15	-0.0261	-0.2568	0.0212
643	SLU 16	-0.67	-0.68	69.63	-0.0295	-0.2549	0.0209
643	SLU 17	-0.67	-0.62	69.63	-0.0274	-0.2549	0.021
643	SLU 18	-0.66	-0.68	71.43	-0.0231	-0.2619	0.0209
643	SLU 19	-0.66	-0.62	71.43	-0.021	-0.262	0.021
643	SLU 20	-0.67	-0.69	72.29	-0.0248	-0.2651	0.0213
643	SLU 21	-0.67	-0.63	72.29	-0.0226	-0.2651	0.0213
643	SLU 22	-0.68	-0.62	67.52	-0.0168	-0.2463	0.021
643	SLU 23	-0.68	-0.53	67.52	-0.0133	-0.2463	0.0211
643	SLU 24	-0.69	-0.62	68.89	-0.0172	-0.2514	0.0216
643	SLU 25	-0.69	-0.57	68.89	-0.015	-0.2514	0.0217
643	SLU 26	-0.69	-0.54	68.37	-0.015	-0.2495	0.0214
643	SLU 27	-0.7	-0.63	69.75	-0.0188	-0.2546	0.0219
643	SLU 28	-0.7	-0.58	69.75	-0.0167	-0.2546	0.022
643	SLU 29	-0.7	-0.64	69.23	-0.0202	-0.2526	0.0216
643	SLU 30	-0.7	-0.59	69.23	-0.018	-0.2526	0.0217
643	SLU 31	-0.71	-0.57	75.74	-0.006	-0.2775	0.0228
643	SLU 32	-0.72	-0.66	77.11	-0.0099	-0.2826	0.0232
643	SLU 33	-0.72	-0.61	77.11	-0.0078	-0.2826	0.0233
643	SLU 34	-0.72	-0.58	76.59	-0.0077	-0.2807	0.0231
643	SLU 35	-0.73	-0.67	77.97	-0.0116	-0.2857	0.0235
643	SLU 36	-0.73	-0.62	77.97	-0.0094	-0.2858	0.0236
643	SLU 37	-0.73	-0.68	77.45	-0.0129	-0.2838	0.0233
643	SLU 38	-0.73	-0.63	77.45	-0.0108	-0.2838	0.0233
643	SLU 39	-0.72	-0.68	79.26	-0.0065	-0.2909	0.0233
643	SLU 40	-0.72	-0.62	79.26	-0.0043	-0.2909	0.0234
643	SLU 41	-0.73	-0.69	80.12	-0.0081	-0.294	0.0236
643	SLU 42	-0.73	-0.63	80.12	-0.006	-0.294	0.0237
643	SLU 43	-0.79	-0.81	74.92	-0.0493	-0.2727	0.0234
643	SLU 44	-0.79	-0.71	74.92	-0.0457	-0.2727	0.0235
643	SLU 45	-0.8	-0.81	76.29	-0.0496	-0.2778	0.024
643	SLU 46	-0.8	-0.75	76.29	-0.0474	-0.2778	0.024
643	SLU 47	-0.8	-0.72	75.77	-0.0474	-0.2759	0.0238
643	SLU 48	-0.81	-0.82	77.15	-0.0512	-0.281	0.0243
643	SLU 49	-0.81	-0.76	77.15	-0.0491	-0.281	0.0244
643	SLU 50	-0.81	-0.83	76.63	-0.0526	-0.279	0.024
643	SLU 51	-0.81	-0.77	76.63	-0.0504	-0.279	0.0241
643	SLU 52	-0.82	-0.75	83.14	-0.0384	-0.3039	0.0252
643	SLU 53	-0.83	-0.84	84.51	-0.0423	-0.309	0.0256
643	SLU 54	-0.83	-0.79	84.51	-0.0402	-0.309	0.0257
643	SLU 55	-0.83	-0.76	83.99	-0.0401	-0.3071	0.0255
643	SLU 56	-0.84	-0.85	85.37	-0.044	-0.3121	0.0259
643	SLU 57	-0.84	-0.8	85.37	-0.0418	-0.3122	0.026
643	SLU 58	-0.84	-0.87	84.85	-0.0453	-0.3102	0.0256
643	SLU 59	-0.84	-0.81	84.85	-0.0432	-0.3102	0.0257
643	SLU 60	-0.83	-0.86	86.66	-0.0389	-0.3172	0.0257
643	SLU 61	-0.83	-0.8	86.66	-0.0367	-0.3173	0.0258
643	SLU 62	-0.84	-0.87	87.52	-0.0405	-0.3204	0.026
643	SLU 63	-0.84	-0.82	87.52	-0.0384	-0.3204	0.0261
643	SLU 64	-0.85	-0.81	82.74	-0.0326	-0.3016	0.0258
643	SLU 65	-0.85	-0.71	82.74	-0.0291	-0.3016	0.0259
643	SLU 66	-0.86	-0.81	84.12	-0.0329	-0.3067	0.0263
643	SLU 67	-0.86	-0.75	84.12	-0.0308	-0.3067	0.0264
643	SLU 68	-0.86	-0.72	83.6	-0.0307	-0.3048	0.0262
643	SLU 69	-0.87	-0.82	84.98	-0.0346	-0.3099	0.0267

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
643	SLU 70	-0.87	-0.76	84.98	-0.0325	-0.3099	0.0267
643	SLU 71	-0.87	-0.83	84.46	-0.0359	-0.3079	0.0264
643	SLU 72	-0.87	-0.77	84.46	-0.0338	-0.3079	0.0265
643	SLU 73	-0.87	-0.75	90.96	-0.0218	-0.3328	0.0275
643	SLU 74	-0.89	-0.85	92.34	-0.0257	-0.3379	0.028
643	SLU 75	-0.89	-0.79	92.34	-0.0235	-0.3379	0.0281
643	SLU 76	-0.88	-0.76	91.82	-0.0234	-0.336	0.0279
643	SLU 77	-0.9	-0.86	93.2	-0.0273	-0.3411	0.0283
643	SLU 78	-0.9	-0.8	93.2	-0.0252	-0.3411	0.0284
643	SLU 79	-0.89	-0.87	92.68	-0.0287	-0.3391	0.028
643	SLU 80	-0.89	-0.81	92.68	-0.0265	-0.3391	0.0281
643	SLU 81	-0.89	-0.86	94.48	-0.0222	-0.3462	0.0281
643	SLU 82	-0.89	-0.81	94.48	-0.0201	-0.3462	0.0282
643	SLU 83	-0.89	-0.87	95.34	-0.0239	-0.3493	0.0284
643	SLU 84	-0.89	-0.82	95.34	-0.0217	-0.3493	0.0285
643	SLE RA 1	-0.64	-0.62	61.93	-0.0287	-0.2257	0.0193
643	SLE RA 2	-0.64	-0.56	61.93	-0.0264	-0.2257	0.0194
643	SLE RA 3	-0.65	-0.62	62.85	-0.029	-0.2291	0.0197
643	SLE RA 4	-0.65	-0.58	62.85	-0.0275	-0.2291	0.0197
643	SLE RA 5	-0.65	-0.57	62.5	-0.0275	-0.2278	0.0196
643	SLE RA 6	-0.66	-0.63	63.42	-0.0301	-0.2312	0.0199
643	SLE RA 7	-0.66	-0.59	63.42	-0.0286	-0.2312	0.0199
643	SLE RA 8	-0.65	-0.64	63.07	-0.031	-0.2299	0.0197
643	SLE RA 9	-0.65	-0.6	63.07	-0.0295	-0.2299	0.0198
643	SLE RA 10	-0.66	-0.58	67.41	-0.0215	-0.2465	0.0205
643	SLE RA 11	-0.67	-0.65	68.33	-0.0241	-0.2498	0.0208
643	SLE RA 12	-0.67	-0.61	68.33	-0.0227	-0.2498	0.0208
643	SLE RA 13	-0.66	-0.59	67.98	-0.0226	-0.2486	0.0207
643	SLE RA 14	-0.67	-0.65	68.9	-0.0252	-0.2519	0.021
643	SLE RA 15	-0.67	-0.62	68.9	-0.0238	-0.252	0.021
643	SLE RA 16	-0.67	-0.66	68.55	-0.0261	-0.2507	0.0208
643	SLE RA 17	-0.67	-0.62	68.55	-0.0247	-0.2507	0.0209
643	SLE RA 18	-0.66	-0.66	69.76	-0.0218	-0.2554	0.0208
643	SLE RA 19	-0.66	-0.62	69.76	-0.0204	-0.2554	0.0209
643	SLE RA 20	-0.67	-0.66	70.33	-0.0229	-0.2575	0.0211
643	SLE RA 21	-0.67	-0.63	70.33	-0.0215	-0.2575	0.0211
643	SLE FR 1	-0.64	-0.62	61.93	-0.0287	-0.2257	0.0193
643	SLE FR 2	-0.64	-0.61	61.93	-0.0283	-0.2257	0.0193
643	SLE FR 3	-0.64	-0.62	62.16	-0.0292	-0.2265	0.0194
643	SLE FR 4	-0.65	-0.62	64.28	-0.0262	-0.2346	0.0198
643	SLE FR 5	-0.65	-0.64	64.5	-0.0271	-0.2354	0.0198
643	SLE FR 6	-0.65	-0.64	65.84	-0.0253	-0.2405	0.0201
643	SLE QP 1	-0.64	-0.62	61.93	-0.0287	-0.2257	0.0193
643	SLE QP 2	-0.65	-0.63	64.28	-0.0267	-0.2346	0.0198
643	SLD 1	4.54	0.05	69.09	0.0611	-0.2298	0.0011
643	SLD 2	4.56	-0.38	69.15	0.0637	-0.2299	0.0059
643	SLD 3	4.47	-1.7	69.58	0.016	-0.2321	-0.0034
643	SLD 4	4.49	-2.13	69.65	0.0186	-0.2322	0.0014
643	SLD 5	1.01	2.31	64.96	0.0677	-0.2297	0.0202
643	SLD 6	1.02	2.03	65	0.0694	-0.2298	0.0233
643	SLD 7	0.78	-3.54	66.61	-0.0828	-0.2372	0.0051
643	SLD 8	0.79	-3.81	66.65	-0.0811	-0.2373	0.0083
643	SLD 9	-2.09	2.55	61.91	0.0278	-0.2318	0.0312
643	SLD 10	-2.07	2.27	61.95	0.0295	-0.2319	0.0344
643	SLD 11	-2.32	-3.29	63.55	-0.1227	-0.2394	0.0162
643	SLD 12	-2.3	-3.57	63.59	-0.121	-0.2395	0.0194
643	SLD 13	-5.78	0.86	58.9	-0.0719	-0.2369	0.0381
643	SLD 14	-5.76	0.44	58.97	-0.0693	-0.237	0.0429
643	SLD 15	-5.85	-0.89	59.4	-0.1171	-0.2392	0.0336
643	SLD 16	-5.83	-1.31	59.46	-0.1144	-0.2393	0.0384
643	SLV 1	11.47	0.9	75.56	0.1843	-0.2235	-0.024
643	SLV 2	11.52	-0.08	75.7	0.1904	-0.2238	-0.0129
643	SLV 3	11.31	-3.09	76.68	0.082	-0.2287	-0.0343
643	SLV 4	11.36	-4.08	76.82	0.0881	-0.229	-0.0231
643	SLV 5	3.22	6.05	65.93	0.1907	-0.2233	0.0203
643	SLV 6	3.26	5.42	66.03	0.1946	-0.2235	0.0275
643	SLV 7	2.69	-7.25	69.67	-0.1502	-0.2407	-0.0139
643	SLV 8	2.72	-7.89	69.77	-0.1463	-0.2408	-0.0068
643	SLV 9	-4.02	6.63	58.79	0.093	-0.2283	0.0463
643	SLV 10	-3.98	5.99	58.88	0.0969	-0.2285	0.0534
643	SLV 11	-4.55	-6.68	62.52	-0.248	-0.2457	0.0121
643	SLV 12	-4.52	-7.32	62.62	-0.244	-0.2458	0.0192
643	SLV 13	-12.66	2.81	51.73	-0.1414	-0.2402	0.0626
643	SLV 14	-12.61	1.82	51.88	-0.1353	-0.2405	0.0738
643	SLV 15	-12.82	-1.18	52.85	-0.2437	-0.2454	0.0524
643	SLV 16	-12.77	-2.17	53	-0.2376	-0.2457	0.0635
643	CRTFP Ux+	0	0	0	0	0	0
643	CRTFP Ux-	0	0	0	0	0	0
643	CRTFP Uy+	0	0	0	0	0	0
643	CRTFP Uy-	0	0	0	0	0	0
644	SLU 1	-0.59	-0.5	61.26	-0.303	-0.0129	0.0289
644	SLU 2	-0.59	-0.41	61.26	-0.2993	-0.013	0.0286
644	SLU 3	-0.6	-0.5	62.67	-0.3097	-0.0133	0.0297
644	SLU 4	-0.6	-0.44	62.67	-0.3075	-0.0133	0.0295
644	SLU 5	-0.6	-0.41	62.14	-0.3049	-0.0132	0.0291
644	SLU 6	-0.61	-0.5	63.55	-0.3153	-0.0135	0.0302
644	SLU 7	-0.61	-0.45	63.56	-0.3131	-0.0135	0.03
644	SLU 8	-0.6	-0.52	63.02	-0.3143	-0.0133	0.0299
644	SLU 9	-0.6	-0.46	63.02	-0.312	-0.0133	0.0297
644	SLU 10	-0.61	-0.43	69.74	-0.3293	-0.0162	0.0313

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
644	SLU 11	-0.62	-0.52	71.15	-0.3396	-0.0165	0.0324
644	SLU 12	-0.62	-0.47	71.15	-0.3374	-0.0165	0.0322
644	SLU 13	-0.62	-0.44	70.62	-0.3349	-0.0164	0.0318
644	SLU 14	-0.63	-0.53	72.03	-0.3453	-0.0167	0.0329
644	SLU 15	-0.63	-0.47	72.04	-0.343	-0.0167	0.0327
644	SLU 16	-0.63	-0.54	71.5	-0.3442	-0.0165	0.0326
644	SLU 17	-0.63	-0.49	71.5	-0.342	-0.0166	0.0324
644	SLU 18	-0.62	-0.54	73.37	-0.3458	-0.0175	0.0327
644	SLU 19	-0.62	-0.48	73.37	-0.3436	-0.0175	0.0326
644	SLU 20	-0.63	-0.55	74.25	-0.3514	-0.0177	0.0332
644	SLU 21	-0.63	-0.49	74.25	-0.3492	-0.0177	0.033
644	SLU 22	-0.64	-0.49	69.31	-0.3212	-0.0152	0.0322
644	SLU 23	-0.64	-0.39	69.31	-0.3175	-0.0153	0.032
644	SLU 24	-0.65	-0.48	70.72	-0.3278	-0.0156	0.033
644	SLU 25	-0.65	-0.43	70.72	-0.3256	-0.0156	0.0329
644	SLU 26	-0.65	-0.4	70.19	-0.3231	-0.0155	0.0324
644	SLU 27	-0.66	-0.49	71.6	-0.3335	-0.0158	0.0335
644	SLU 28	-0.66	-0.44	71.6	-0.3312	-0.0158	0.0334
644	SLU 29	-0.66	-0.5	71.07	-0.3324	-0.0156	0.0332
644	SLU 30	-0.66	-0.45	71.07	-0.3302	-0.0157	0.033
644	SLU 31	-0.66	-0.42	77.79	-0.3474	-0.0185	0.0346
644	SLU 32	-0.68	-0.51	79.2	-0.3578	-0.0188	0.0357
644	SLU 33	-0.68	-0.45	79.2	-0.3556	-0.0188	0.0355
644	SLU 34	-0.67	-0.43	78.67	-0.353	-0.0187	0.0351
644	SLU 35	-0.69	-0.52	80.08	-0.3634	-0.019	0.0362
644	SLU 36	-0.69	-0.46	80.08	-0.3612	-0.0191	0.036
644	SLU 37	-0.68	-0.53	79.55	-0.3623	-0.0188	0.0359
644	SLU 38	-0.68	-0.47	79.55	-0.3601	-0.0189	0.0357
644	SLU 39	-0.67	-0.53	81.42	-0.3639	-0.0198	0.0361
644	SLU 40	-0.67	-0.47	81.42	-0.3617	-0.0198	0.0359
644	SLU 41	-0.68	-0.53	82.3	-0.3696	-0.02	0.0365
644	SLU 42	-0.68	-0.48	82.3	-0.3673	-0.0201	0.0364
644	SLU 43	-0.74	-0.65	76.88	-0.3877	-0.0159	0.0364
644	SLU 44	-0.74	-0.56	76.88	-0.384	-0.016	0.0362
644	SLU 45	-0.76	-0.65	78.29	-0.3944	-0.0163	0.0372
644	SLU 46	-0.76	-0.59	78.29	-0.3922	-0.0164	0.0371
644	SLU 47	-0.75	-0.57	77.76	-0.3896	-0.0162	0.0366
644	SLU 48	-0.77	-0.66	79.17	-0.4	-0.0165	0.0377
644	SLU 49	-0.77	-0.6	79.17	-0.3978	-0.0166	0.0376
644	SLU 50	-0.76	-0.67	78.64	-0.399	-0.0164	0.0374
644	SLU 51	-0.76	-0.61	78.64	-0.3967	-0.0164	0.0372
644	SLU 52	-0.77	-0.59	85.36	-0.414	-0.0192	0.0388
644	SLU 53	-0.78	-0.68	86.77	-0.4243	-0.0195	0.0399
644	SLU 54	-0.78	-0.62	86.77	-0.4221	-0.0196	0.0397
644	SLU 55	-0.78	-0.6	86.24	-0.4196	-0.0195	0.0393
644	SLU 56	-0.79	-0.69	87.65	-0.43	-0.0197	0.0404
644	SLU 57	-0.79	-0.63	87.65	-0.4277	-0.0198	0.0402
644	SLU 58	-0.79	-0.7	87.12	-0.4289	-0.0196	0.0401
644	SLU 59	-0.79	-0.64	87.12	-0.4267	-0.0196	0.0399
644	SLU 60	-0.78	-0.69	88.99	-0.4305	-0.0205	0.0403
644	SLU 61	-0.78	-0.64	88.99	-0.4283	-0.0206	0.0401
644	SLU 62	-0.79	-0.7	89.87	-0.4361	-0.0207	0.0407
644	SLU 63	-0.79	-0.64	89.87	-0.4339	-0.0208	0.0406
644	SLU 64	-0.8	-0.64	84.92	-0.4059	-0.0183	0.0398
644	SLU 65	-0.8	-0.55	84.92	-0.4021	-0.0184	0.0395
644	SLU 66	-0.81	-0.64	86.34	-0.4125	-0.0186	0.0406
644	SLU 67	-0.81	-0.58	86.34	-0.4103	-0.0187	0.0404
644	SLU 68	-0.81	-0.56	85.81	-0.4078	-0.0186	0.04
644	SLU 69	-0.82	-0.65	87.22	-0.4181	-0.0188	0.0411
644	SLU 70	-0.82	-0.59	87.22	-0.4159	-0.0189	0.0409
644	SLU 71	-0.82	-0.66	86.69	-0.4171	-0.0187	0.0407
644	SLU 72	-0.82	-0.6	86.69	-0.4149	-0.0187	0.0406
644	SLU 73	-0.82	-0.57	93.4	-0.4321	-0.0216	0.0422
644	SLU 74	-0.83	-0.66	94.82	-0.4425	-0.0219	0.0432
644	SLU 75	-0.83	-0.61	94.82	-0.4402	-0.0219	0.0431
644	SLU 76	-0.83	-0.58	94.29	-0.4377	-0.0218	0.0426
644	SLU 77	-0.84	-0.67	95.7	-0.4481	-0.0221	0.0437
644	SLU 78	-0.84	-0.62	95.7	-0.4459	-0.0221	0.0436
644	SLU 79	-0.84	-0.68	95.17	-0.447	-0.0219	0.0434
644	SLU 80	-0.84	-0.63	95.17	-0.4448	-0.0219	0.0432
644	SLU 81	-0.83	-0.68	97.04	-0.4486	-0.0229	0.0436
644	SLU 82	-0.83	-0.62	97.04	-0.4464	-0.0229	0.0434
644	SLU 83	-0.84	-0.69	97.92	-0.4542	-0.0231	0.0441
644	SLU 84	-0.84	-0.63	97.92	-0.452	-0.0231	0.0439
644	SLE RA 1	-0.6	-0.5	63.56	-0.3082	-0.0135	0.0299
644	SLE RA 2	-0.6	-0.43	63.56	-0.3057	-0.0136	0.0297
644	SLE RA 3	-0.61	-0.49	64.5	-0.3127	-0.0138	0.0304
644	SLE RA 4	-0.61	-0.46	64.5	-0.3112	-0.0138	0.0303
644	SLE RA 5	-0.61	-0.44	64.15	-0.3095	-0.0137	0.03
644	SLE RA 6	-0.62	-0.5	65.09	-0.3164	-0.0139	0.0307
644	SLE RA 7	-0.62	-0.46	65.09	-0.3149	-0.014	0.0306
644	SLE RA 8	-0.61	-0.51	64.73	-0.3157	-0.0138	0.0305
644	SLE RA 9	-0.61	-0.47	64.73	-0.3142	-0.0139	0.0304
644	SLE RA 10	-0.62	-0.45	69.21	-0.3257	-0.0157	0.0315
644	SLE RA 11	-0.63	-0.51	70.15	-0.3326	-0.0159	0.0322
644	SLE RA 12	-0.63	-0.47	70.15	-0.3311	-0.016	0.0321
644	SLE RA 13	-0.62	-0.46	69.8	-0.3294	-0.0159	0.0318
644	SLE RA 14	-0.63	-0.52	70.74	-0.3364	-0.0161	0.0325
644	SLE RA 15	-0.63	-0.48	70.74	-0.3349	-0.0161	0.0324
644	SLE RA 16	-0.63	-0.53	70.39	-0.3357	-0.016	0.0323

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
644	SLE RA 17	-0.63	-0.49	70.39	-0.3342	-0.016	0.0322
644	SLE RA 18	-0.62	-0.52	71.63	-0.3367	-0.0166	0.0324
644	SLE RA 19	-0.62	-0.48	71.63	-0.3352	-0.0166	0.0323
644	SLE RA 20	-0.63	-0.53	72.22	-0.3405	-0.0167	0.0327
644	SLE RA 21	-0.63	-0.49	72.22	-0.339	-0.0168	0.0326
644	SLE FR 1	-0.6	-0.5	63.56	-0.3082	-0.0135	0.0299
644	SLE FR 2	-0.6	-0.48	63.56	-0.3077	-0.0136	0.0298
644	SLE FR 3	-0.6	-0.5	63.79	-0.3097	-0.0136	0.03
644	SLE FR 4	-0.61	-0.49	65.98	-0.3163	-0.0145	0.0306
644	SLE FR 5	-0.61	-0.51	66.22	-0.3183	-0.0145	0.0308
644	SLE FR 6	-0.61	-0.51	67.6	-0.3225	-0.0151	0.0311
644	SLE QP 1	-0.6	-0.5	63.56	-0.3082	-0.0135	0.0299
644	SLE QP 2	-0.61	-0.5	65.98	-0.3168	-0.0145	0.0306
644	SLD 1	4.67	0.21	70.13	-0.2197	0.0116	0.0377
644	SLD 2	4.69	-0.19	70.19	-0.2179	0.0119	0.0434
644	SLD 3	4.6	-1.56	70.62	-0.272	0.0133	0.0392
644	SLD 4	4.62	-1.96	70.67	-0.2702	0.0136	0.0449
644	SLD 5	1.08	2.48	66.48	-0.2086	-0.0093	0.0294
644	SLD 6	1.09	2.21	66.51	-0.2075	-0.0091	0.0332
644	SLD 7	0.84	-3.44	68.1	-0.383	-0.0036	0.0344
644	SLD 8	0.86	-3.71	68.14	-0.3818	-0.0034	0.0382
644	SLD 9	-2.08	2.7	63.82	-0.2517	-0.0255	0.023
644	SLD 10	-2.06	2.44	63.86	-0.2506	-0.0253	0.0268
644	SLD 11	-2.31	-3.22	65.45	-0.4261	-0.0199	0.028
644	SLD 12	-2.3	-3.48	65.48	-0.4249	-0.0197	0.0318
644	SLD 13	-5.84	0.95	61.29	-0.3633	-0.0425	0.0163
644	SLD 14	-5.82	0.55	61.34	-0.3616	-0.0422	0.0221
644	SLD 15	-5.91	-0.82	61.77	-0.4156	-0.0408	0.0178
644	SLD 16	-5.89	-1.22	61.83	-0.4139	-0.0405	0.0236
644	SLV 1	11.74	1.12	75.7	-0.0839	0.0465	0.0472
644	SLV 2	11.79	0.19	75.83	-0.0798	0.0473	0.0606
644	SLV 3	11.58	-2.93	76.81	-0.2024	0.0504	0.0507
644	SLV 4	11.63	-3.86	76.94	-0.1982	0.0512	0.0641
644	SLV 5	3.33	6.28	67.2	-0.0679	-0.0022	0.0281
644	SLV 6	3.37	5.68	67.28	-0.0653	-0.0017	0.0367
644	SLV 7	2.79	-7.21	70.88	-0.4628	0.0108	0.0395
644	SLV 8	2.82	-7.81	70.97	-0.4602	0.0113	0.0482
644	SLV 9	-4.04	6.8	60.99	-0.1734	-0.0402	0.013
644	SLV 10	-4.01	6.2	61.08	-0.1707	-0.0397	0.0217
644	SLV 11	-4.59	-6.69	64.68	-0.5682	-0.0272	0.0245
644	SLV 12	-4.55	-7.29	64.76	-0.5656	-0.0267	0.0332
644	SLV 13	-12.85	2.85	55.02	-0.4353	-0.0801	-0.0029
644	SLV 14	-12.79	1.92	55.15	-0.4312	-0.0793	0.0106
644	SLV 15	-13.01	-1.19	56.13	-0.5538	-0.0762	0.0006
644	SLV 16	-12.96	-2.13	56.26	-0.5496	-0.0755	0.014
644	CRTFP Ux+	0	0	0	0	0	0
644	CRTFP Ux-	0	0	0	0	0	0
644	CRTFP Uy+	0	0	0	0	0	0
644	CRTFP Uy-	0	0	0	0	0	0
645	SLU 1	-0.54	-0.33	61.55	-0.3508	-0.0051	0.0341
645	SLU 2	-0.54	-0.23	61.55	-0.3469	-0.0052	0.0338
645	SLU 3	-0.55	-0.32	62.97	-0.3588	-0.0052	0.035
645	SLU 4	-0.55	-0.26	62.97	-0.3565	-0.0053	0.0348
645	SLU 5	-0.55	-0.24	62.44	-0.3534	-0.0053	0.0343
645	SLU 6	-0.56	-0.32	63.86	-0.3652	-0.0053	0.0356
645	SLU 7	-0.56	-0.27	63.86	-0.3629	-0.0054	0.0354
645	SLU 8	-0.56	-0.34	63.32	-0.3636	-0.0052	0.0352
645	SLU 9	-0.56	-0.28	63.32	-0.3613	-0.0053	0.035
645	SLU 10	-0.56	-0.24	70.11	-0.3847	-0.0072	0.0369
645	SLU 11	-0.57	-0.33	71.53	-0.3966	-0.0072	0.0382
645	SLU 12	-0.57	-0.27	71.54	-0.3943	-0.0073	0.038
645	SLU 13	-0.57	-0.25	71	-0.3912	-0.0073	0.0375
645	SLU 14	-0.58	-0.33	72.42	-0.403	-0.0073	0.0388
645	SLU 15	-0.58	-0.28	72.42	-0.4007	-0.0074	0.0386
645	SLU 16	-0.58	-0.35	71.88	-0.4014	-0.0072	0.0384
645	SLU 17	-0.58	-0.29	71.88	-0.3991	-0.0073	0.0382
645	SLU 18	-0.57	-0.34	73.78	-0.4048	-0.0079	0.0386
645	SLU 19	-0.57	-0.29	73.78	-0.4025	-0.008	0.0384
645	SLU 20	-0.58	-0.35	74.67	-0.4112	-0.008	0.0392
645	SLU 21	-0.58	-0.29	74.67	-0.4089	-0.0081	0.039
645	SLU 22	-0.59	-0.29	69.65	-0.3757	-0.0063	0.038
645	SLU 23	-0.59	-0.2	69.66	-0.3719	-0.0064	0.0377
645	SLU 24	-0.6	-0.28	71.08	-0.3838	-0.0064	0.039
645	SLU 25	-0.6	-0.23	71.08	-0.3815	-0.0065	0.0388
645	SLU 26	-0.6	-0.21	70.54	-0.3783	-0.0065	0.0383
645	SLU 27	-0.61	-0.29	71.96	-0.3902	-0.0065	0.0395
645	SLU 28	-0.61	-0.23	71.96	-0.3879	-0.0066	0.0393
645	SLU 29	-0.61	-0.3	71.42	-0.3886	-0.0064	0.0392
645	SLU 30	-0.61	-0.25	71.43	-0.3863	-0.0065	0.039
645	SLU 31	-0.61	-0.21	78.22	-0.4097	-0.0084	0.0409
645	SLU 32	-0.62	-0.3	79.64	-0.4216	-0.0084	0.0421
645	SLU 33	-0.62	-0.24	79.64	-0.4193	-0.0085	0.0419
645	SLU 34	-0.62	-0.22	79.11	-0.4161	-0.0085	0.0414
645	SLU 35	-0.63	-0.3	80.53	-0.428	-0.0085	0.0427
645	SLU 36	-0.63	-0.25	80.53	-0.4257	-0.0086	0.0425
645	SLU 37	-0.63	-0.31	79.99	-0.4264	-0.0084	0.0423
645	SLU 38	-0.63	-0.26	79.99	-0.4241	-0.0085	0.0421
645	SLU 39	-0.62	-0.31	81.89	-0.4297	-0.0091	0.0425
645	SLU 40	-0.62	-0.25	81.89	-0.4274	-0.0092	0.0423
645	SLU 41	-0.63	-0.31	82.77	-0.4361	-0.0092	0.0431

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLU 42	-0.63	-0.26	82.77	-0.4339	-0.0093	0.0429
645	SLU 43	-0.69	-0.44	77.23	-0.4474	-0.0062	0.043
645	SLU 44	-0.69	-0.34	77.24	-0.4436	-0.0063	0.0426
645	SLU 45	-0.7	-0.43	78.66	-0.4555	-0.0064	0.0439
645	SLU 46	-0.7	-0.37	78.66	-0.4532	-0.0064	0.0437
645	SLU 47	-0.7	-0.35	78.12	-0.45	-0.0064	0.0432
645	SLU 48	-0.71	-0.43	79.54	-0.4619	-0.0064	0.0445
645	SLU 49	-0.71	-0.38	79.54	-0.4596	-0.0065	0.0443
645	SLU 50	-0.7	-0.45	79	-0.4603	-0.0064	0.0441
645	SLU 51	-0.7	-0.39	79.01	-0.458	-0.0064	0.0439
645	SLU 52	-0.71	-0.35	85.8	-0.4814	-0.0083	0.0458
645	SLU 53	-0.72	-0.44	87.22	-0.4933	-0.0084	0.0471
645	SLU 54	-0.72	-0.38	87.22	-0.491	-0.0084	0.0469
645	SLU 55	-0.72	-0.36	86.69	-0.4878	-0.0084	0.0464
645	SLU 56	-0.73	-0.44	88.11	-0.4997	-0.0084	0.0477
645	SLU 57	-0.73	-0.39	88.11	-0.4974	-0.0085	0.0475
645	SLU 58	-0.72	-0.46	87.57	-0.4981	-0.0084	0.0473
645	SLU 59	-0.72	-0.4	87.57	-0.4958	-0.0084	0.0471
645	SLU 60	-0.72	-0.45	89.46	-0.5014	-0.009	0.0475
645	SLU 61	-0.72	-0.4	89.47	-0.4991	-0.0091	0.0473
645	SLU 62	-0.72	-0.46	90.35	-0.5079	-0.0091	0.0481
645	SLU 63	-0.72	-0.4	90.35	-0.5056	-0.0092	0.0479
645	SLU 64	-0.74	-0.4	85.34	-0.4724	-0.0074	0.0469
645	SLU 65	-0.74	-0.31	85.34	-0.4686	-0.0075	0.0466
645	SLU 66	-0.75	-0.39	86.76	-0.4804	-0.0076	0.0478
645	SLU 67	-0.75	-0.34	86.76	-0.4781	-0.0076	0.0476
645	SLU 68	-0.75	-0.31	86.23	-0.475	-0.0076	0.0471
645	SLU 69	-0.76	-0.4	87.65	-0.4868	-0.0076	0.0484
645	SLU 70	-0.76	-0.34	87.65	-0.4846	-0.0077	0.0482
645	SLU 71	-0.75	-0.41	87.11	-0.4852	-0.0076	0.048
645	SLU 72	-0.75	-0.36	87.11	-0.4829	-0.0076	0.0478
645	SLU 73	-0.76	-0.32	93.9	-0.5064	-0.0095	0.0497
645	SLU 74	-0.77	-0.4	95.32	-0.5182	-0.0096	0.051
645	SLU 75	-0.77	-0.35	95.33	-0.5159	-0.0096	0.0508
645	SLU 76	-0.77	-0.33	94.79	-0.5128	-0.0096	0.0503
645	SLU 77	-0.78	-0.41	96.21	-0.5247	-0.0096	0.0516
645	SLU 78	-0.78	-0.35	96.21	-0.5224	-0.0097	0.0514
645	SLU 79	-0.77	-0.42	95.67	-0.523	-0.0096	0.0512
645	SLU 80	-0.77	-0.37	95.67	-0.5207	-0.0096	0.051
645	SLU 81	-0.77	-0.42	97.57	-0.5264	-0.0102	0.0514
645	SLU 82	-0.77	-0.36	97.57	-0.5241	-0.0103	0.0512
645	SLU 83	-0.77	-0.42	98.46	-0.5328	-0.0103	0.052
645	SLU 84	-0.77	-0.37	98.46	-0.5305	-0.0104	0.0518
645	SLE RA 1	-0.56	-0.32	63.86	-0.3579	-0.0054	0.0352
645	SLE RA 2	-0.56	-0.25	63.87	-0.3553	-0.0055	0.035
645	SLE RA 3	-0.56	-0.31	64.81	-0.3632	-0.0055	0.0358
645	SLE RA 4	-0.56	-0.27	64.81	-0.3617	-0.0056	0.0357
645	SLE RA 5	-0.56	-0.26	64.46	-0.3596	-0.0056	0.0354
645	SLE RA 6	-0.57	-0.31	65.4	-0.3675	-0.0056	0.0362
645	SLE RA 7	-0.57	-0.28	65.4	-0.366	-0.0056	0.0361
645	SLE RA 8	-0.57	-0.32	65.04	-0.3665	-0.0055	0.036
645	SLE RA 9	-0.57	-0.29	65.05	-0.3649	-0.0056	0.0358
645	SLE RA 10	-0.57	-0.26	69.57	-0.3805	-0.0068	0.0371
645	SLE RA 11	-0.58	-0.32	70.52	-0.3885	-0.0069	0.038
645	SLE RA 12	-0.58	-0.28	70.52	-0.3869	-0.0069	0.0378
645	SLE RA 13	-0.57	-0.27	70.16	-0.3848	-0.0069	0.0375
645	SLE RA 14	-0.58	-0.32	71.11	-0.3927	-0.0069	0.0383
645	SLE RA 15	-0.58	-0.28	71.11	-0.3912	-0.007	0.0382
645	SLE RA 16	-0.58	-0.33	70.75	-0.3917	-0.0069	0.0381
645	SLE RA 17	-0.58	-0.29	70.75	-0.3901	-0.0069	0.038
645	SLE RA 18	-0.57	-0.33	72.02	-0.3939	-0.0073	0.0382
645	SLE RA 19	-0.57	-0.29	72.02	-0.3924	-0.0074	0.0381
645	SLE RA 20	-0.58	-0.33	72.61	-0.3982	-0.0074	0.0386
645	SLE RA 21	-0.58	-0.29	72.61	-0.3966	-0.0074	0.0385
645	SLE FR 1	-0.56	-0.32	63.86	-0.3579	-0.0054	0.0352
645	SLE FR 2	-0.56	-0.3	63.86	-0.3574	-0.0054	0.0352
645	SLE FR 3	-0.56	-0.32	64.1	-0.3596	-0.0054	0.0354
645	SLE FR 4	-0.56	-0.31	66.31	-0.3682	-0.006	0.0361
645	SLE FR 5	-0.56	-0.32	66.55	-0.3704	-0.006	0.0363
645	SLE FR 6	-0.57	-0.32	67.94	-0.3759	-0.0064	0.0367
645	SLE QP 1	-0.56	-0.32	63.86	-0.3579	-0.0054	0.0352
645	SLE QP 2	-0.56	-0.32	66.31	-0.3687	-0.006	0.0361
645	SLD 1	4.72	0.43	69.57	-0.2587	0.0234	0.0452
645	SLD 2	4.74	0.05	69.61	-0.2577	0.0239	0.0504
645	SLD 3	4.65	-1.34	70.01	-0.3161	0.0256	0.0462
645	SLD 4	4.67	-1.71	70.06	-0.315	0.026	0.0514
645	SLD 5	1.12	2.65	66.61	-0.2489	-0.0005	0.0363
645	SLD 6	1.14	2.41	66.64	-0.2482	-0.0002	0.0397
645	SLD 7	0.89	-3.24	68.08	-0.4401	0.0067	0.0398
645	SLD 8	0.91	-3.49	68.11	-0.4394	0.007	0.0432
645	SLD 9	-2.03	2.85	64.51	-0.298	-0.019	0.029
645	SLD 10	-2.01	2.6	64.54	-0.2973	-0.0187	0.0324
645	SLD 11	-2.26	-3.05	65.98	-0.4891	-0.0117	0.0325
645	SLD 12	-2.25	-3.29	66.01	-0.4885	-0.0114	0.0359
645	SLD 13	-5.79	1.07	62.56	-0.4224	-0.038	0.0208
645	SLD 14	-5.77	0.7	62.61	-0.4213	-0.0376	0.026
645	SLD 15	-5.86	-0.69	63	-0.4797	-0.0358	0.0219
645	SLD 16	-5.84	-1.07	63.05	-0.4787	-0.0354	0.0271
645	SLV 1	11.78	1.37	73.95	-0.1062	0.0628	0.0574
645	SLV 2	11.84	0.5	74.05	-0.1038	0.0639	0.0695

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLV 3	11.62	-2.66	74.95	-0.2361	0.0678	0.0598
645	SLV 4	11.67	-3.53	75.06	-0.2337	0.0688	0.0719
645	SLV 5	3.38	6.45	67.06	-0.0934	0.007	0.0368
645	SLV 6	3.41	5.89	67.13	-0.0918	0.0076	0.0446
645	SLV 7	2.84	-6.98	70.41	-0.5263	0.0235	0.0447
645	SLV 8	2.87	-7.54	70.48	-0.5248	0.0241	0.0525
645	SLV 9	-4	6.9	62.14	-0.2126	-0.0361	0.0197
645	SLV 10	-3.96	6.34	62.21	-0.211	-0.0354	0.0275
645	SLV 11	-4.54	-6.53	65.49	-0.6456	-0.0196	0.0276
645	SLV 12	-4.5	-7.09	65.56	-0.644	-0.019	0.0354
645	SLV 13	-12.8	2.89	57.56	-0.5037	-0.0808	0.0003
645	SLV 14	-12.75	2.02	57.66	-0.5013	-0.0798	0.0124
645	SLV 15	-12.96	-1.14	58.56	-0.6336	-0.0759	0.0027
645	SLV 16	-12.91	-2.01	58.67	-0.6311	-0.0748	0.0148
645	CRTFP Ux+	0	0	0	0	0	0
645	CRTFP Ux-	0	0	0	0	0	0
645	CRTFP Uy+	0	0	0	0	0	0
645	CRTFP Uy-	0	0	0	0	0	0
646	SLU 1	-0.5	-0.14	61.56	-0.3992	0.0043	0.0337
646	SLU 2	-0.5	-0.05	61.57	-0.3953	0.0042	0.0334
646	SLU 3	-0.51	-0.13	62.99	-0.4086	0.0044	0.0347
646	SLU 4	-0.51	-0.07	62.99	-0.4063	0.0043	0.0345
646	SLU 5	-0.51	-0.05	62.46	-0.4025	0.0042	0.0339
646	SLU 6	-0.52	-0.13	63.87	-0.4159	0.0044	0.0352
646	SLU 7	-0.52	-0.07	63.88	-0.4135	0.0044	0.035
646	SLU 8	-0.51	-0.14	63.33	-0.4137	0.0044	0.0348
646	SLU 9	-0.51	-0.09	63.34	-0.4113	0.0043	0.0346
646	SLU 10	-0.52	-0.04	70.17	-0.441	0.0037	0.0365
646	SLU 11	-0.53	-0.12	71.59	-0.4544	0.0039	0.0378
646	SLU 12	-0.53	-0.07	71.6	-0.452	0.0038	0.0376
646	SLU 13	-0.52	-0.04	71.06	-0.4483	0.0038	0.0371
646	SLU 14	-0.54	-0.12	72.48	-0.4616	0.004	0.0384
646	SLU 15	-0.54	-0.07	72.48	-0.4593	0.0039	0.0382
646	SLU 16	-0.53	-0.14	71.94	-0.4594	0.0039	0.038
646	SLU 17	-0.53	-0.08	71.94	-0.4571	0.0039	0.0378
646	SLU 18	-0.52	-0.13	73.85	-0.4646	0.0036	0.0382
646	SLU 19	-0.52	-0.08	73.86	-0.4622	0.0036	0.038
646	SLU 20	-0.53	-0.13	74.74	-0.4718	0.0037	0.0388
646	SLU 21	-0.53	-0.08	74.74	-0.4694	0.0036	0.0386
646	SLU 22	-0.55	-0.09	69.68	-0.431	0.0045	0.0376
646	SLU 23	-0.55	0.01	69.69	-0.4271	0.0044	0.0373
646	SLU 24	-0.56	-0.07	71.11	-0.4405	0.0046	0.0386
646	SLU 25	-0.56	-0.02	71.11	-0.4381	0.0046	0.0384
646	SLU 26	-0.55	0	70.58	-0.4343	0.0045	0.0379
646	SLU 27	-0.56	-0.07	71.99	-0.4477	0.0047	0.0392
646	SLU 28	-0.56	-0.02	72	-0.4453	0.0046	0.039
646	SLU 29	-0.56	-0.09	71.45	-0.4455	0.0047	0.0388
646	SLU 30	-0.56	-0.04	71.46	-0.4432	0.0046	0.0386
646	SLU 31	-0.56	0.01	78.29	-0.4729	0.004	0.0405
646	SLU 32	-0.57	-0.07	79.71	-0.4862	0.0042	0.0417
646	SLU 33	-0.57	-0.01	79.72	-0.4839	0.0041	0.0416
646	SLU 34	-0.57	0.01	79.18	-0.4801	0.004	0.041
646	SLU 35	-0.58	-0.07	80.6	-0.4935	0.0042	0.0423
646	SLU 36	-0.58	-0.01	80.6	-0.4911	0.0041	0.0421
646	SLU 37	-0.58	-0.08	80.06	-0.4913	0.0042	0.0419
646	SLU 38	-0.58	-0.03	80.06	-0.4889	0.0041	0.0417
646	SLU 39	-0.57	-0.08	81.97	-0.4964	0.0039	0.0421
646	SLU 40	-0.57	-0.02	81.98	-0.494	0.0038	0.0419
646	SLU 41	-0.58	-0.08	82.86	-0.5036	0.0039	0.0427
646	SLU 42	-0.58	-0.02	82.86	-0.5013	0.0039	0.0425
646	SLU 43	-0.63	-0.2	77.25	-0.508	0.0055	0.0425
646	SLU 44	-0.63	-0.11	77.25	-0.5041	0.0054	0.0421
646	SLU 45	-0.65	-0.19	78.67	-0.5175	0.0056	0.0434
646	SLU 46	-0.65	-0.13	78.68	-0.5151	0.0055	0.0432
646	SLU 47	-0.64	-0.11	78.14	-0.5113	0.0054	0.0427
646	SLU 48	-0.65	-0.19	79.56	-0.5247	0.0056	0.044
646	SLU 49	-0.65	-0.13	79.56	-0.5223	0.0056	0.0438
646	SLU 50	-0.65	-0.2	79.02	-0.5225	0.0056	0.0436
646	SLU 51	-0.65	-0.15	79.02	-0.5202	0.0056	0.0434
646	SLU 52	-0.65	-0.1	85.86	-0.5499	0.0049	0.0453
646	SLU 53	-0.66	-0.18	87.27	-0.5632	0.0051	0.0466
646	SLU 54	-0.66	-0.13	87.28	-0.5609	0.005	0.0464
646	SLU 55	-0.66	-0.11	86.74	-0.5571	0.005	0.0459
646	SLU 56	-0.67	-0.18	88.16	-0.5705	0.0052	0.0471
646	SLU 57	-0.67	-0.13	88.17	-0.5681	0.0051	0.0469
646	SLU 58	-0.67	-0.2	87.62	-0.5683	0.0052	0.0467
646	SLU 59	-0.67	-0.14	87.63	-0.5659	0.0051	0.0465
646	SLU 60	-0.66	-0.19	89.54	-0.5734	0.0048	0.047
646	SLU 61	-0.66	-0.14	89.54	-0.571	0.0048	0.0468
646	SLU 62	-0.67	-0.19	90.42	-0.5806	0.0049	0.0475
646	SLU 63	-0.67	-0.14	90.43	-0.5783	0.0048	0.0473
646	SLU 64	-0.68	-0.15	85.37	-0.5399	0.0058	0.0464
646	SLU 65	-0.68	-0.06	85.37	-0.5359	0.0056	0.0461
646	SLU 66	-0.69	-0.13	86.79	-0.5493	0.0058	0.0474
646	SLU 67	-0.69	-0.08	86.8	-0.5469	0.0058	0.0472
646	SLU 68	-0.69	-0.06	86.26	-0.5432	0.0057	0.0466
646	SLU 69	-0.7	-0.13	87.68	-0.5565	0.0059	0.0479
646	SLU 70	-0.7	-0.08	87.68	-0.5542	0.0058	0.0477
646	SLU 71	-0.69	-0.15	87.14	-0.5544	0.0059	0.0475
646	SLU 72	-0.69	-0.1	87.14	-0.552	0.0058	0.0473

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
646	SLU 73	-0.7	-0.05	93.98	-0.5817	0.0052	0.0492
646	SLU 74	-0.71	-0.13	95.4	-0.5951	0.0054	0.0505
646	SLU 75	-0.71	-0.07	95.4	-0.5927	0.0053	0.0503
646	SLU 76	-0.7	-0.05	94.86	-0.5889	0.0052	0.0498
646	SLU 77	-0.71	-0.13	96.28	-0.6023	0.0054	0.0511
646	SLU 78	-0.71	-0.07	96.29	-0.5999	0.0053	0.0509
646	SLU 79	-0.71	-0.14	95.74	-0.6001	0.0054	0.0507
646	SLU 80	-0.71	-0.09	95.75	-0.5978	0.0053	0.0505
646	SLU 81	-0.7	-0.14	97.66	-0.6052	0.0051	0.0509
646	SLU 82	-0.7	-0.08	97.66	-0.6029	0.005	0.0507
646	SLU 83	-0.71	-0.14	98.54	-0.6125	0.0051	0.0515
646	SLU 84	-0.71	-0.08	98.55	-0.6101	0.0051	0.0513
646	SLE RA 1	-0.51	-0.12	63.88	-0.4083	0.0044	0.0348
646	SLE RA 2	-0.51	-0.06	63.89	-0.4057	0.0043	0.0346
646	SLE RA 3	-0.52	-0.12	64.83	-0.4146	0.0044	0.0355
646	SLE RA 4	-0.52	-0.08	64.84	-0.413	0.0044	0.0353
646	SLE RA 5	-0.52	-0.07	64.48	-0.4105	0.0043	0.035
646	SLE RA 6	-0.53	-0.12	65.42	-0.4194	0.0045	0.0358
646	SLE RA 7	-0.53	-0.08	65.43	-0.4178	0.0044	0.0357
646	SLE RA 8	-0.52	-0.13	65.06	-0.4179	0.0044	0.0356
646	SLE RA 9	-0.52	-0.09	65.07	-0.4164	0.0044	0.0354
646	SLE RA 10	-0.52	-0.06	69.62	-0.4362	0.004	0.0367
646	SLE RA 11	-0.53	-0.11	70.57	-0.4451	0.0041	0.0376
646	SLE RA 12	-0.53	-0.07	70.57	-0.4435	0.0041	0.0374
646	SLE RA 13	-0.53	-0.06	70.21	-0.441	0.004	0.0371
646	SLE RA 14	-0.54	-0.11	71.16	-0.4499	0.0041	0.0379
646	SLE RA 15	-0.54	-0.08	71.16	-0.4483	0.0041	0.0378
646	SLE RA 16	-0.53	-0.12	70.8	-0.4484	0.0041	0.0377
646	SLE RA 17	-0.53	-0.09	70.8	-0.4469	0.0041	0.0375
646	SLE RA 18	-0.53	-0.12	72.07	-0.4519	0.0039	0.0378
646	SLE RA 19	-0.53	-0.08	72.08	-0.4503	0.0039	0.0377
646	SLE RA 20	-0.53	-0.12	72.67	-0.4567	0.004	0.0382
646	SLE RA 21	-0.53	-0.08	72.67	-0.4551	0.0039	0.0381
646	SLE FR 1	-0.51	-0.12	63.88	-0.4083	0.0044	0.0348
646	SLE FR 2	-0.51	-0.11	63.88	-0.4078	0.0044	0.0348
646	SLE FR 3	-0.51	-0.12	64.12	-0.4102	0.0044	0.035
646	SLE FR 4	-0.52	-0.11	66.34	-0.4208	0.0042	0.0357
646	SLE FR 5	-0.52	-0.12	66.58	-0.4233	0.0043	0.0359
646	SLE FR 6	-0.52	-0.12	67.98	-0.4301	0.0042	0.0363
646	SLE QP 1	-0.51	-0.12	63.88	-0.4083	0.0044	0.0348
646	SLE QP 2	-0.52	-0.12	66.34	-0.4214	0.0042	0.0357
646	SLD 1	4.76	0.65	68.64	-0.2979	0.0351	0.0463
646	SLD 2	4.78	0.3	68.67	-0.2976	0.0356	0.0511
646	SLD 3	4.69	-1.11	69.03	-0.3604	0.0374	0.0458
646	SLD 4	4.71	-1.46	69.06	-0.3601	0.0379	0.0506
646	SLD 5	1.17	2.85	66.44	-0.2896	0.0099	0.0389
646	SLD 6	1.18	2.62	66.46	-0.2894	0.0102	0.042
646	SLD 7	0.93	-3.04	67.72	-0.4979	0.0176	0.0371
646	SLD 8	0.95	-3.26	67.74	-0.4977	0.018	0.0402
646	SLD 9	-1.98	3.02	64.94	-0.345	-0.0095	0.0312
646	SLD 10	-1.97	2.79	64.96	-0.3448	-0.0092	0.0344
646	SLD 11	-2.22	-2.87	66.22	-0.5533	-0.0017	0.0294
646	SLD 12	-2.2	-3.09	66.24	-0.5531	-0.0014	0.0326
646	SLD 13	-5.75	1.22	63.62	-0.4827	-0.0294	0.0209
646	SLD 14	-5.72	0.87	63.65	-0.4823	-0.0289	0.0257
646	SLD 15	-5.82	-0.55	64.01	-0.5451	-0.0271	0.0203
646	SLD 16	-5.79	-0.9	64.04	-0.5448	-0.0266	0.0251
646	SLV 1	11.82	1.63	71.74	-0.1278	0.0764	0.0606
646	SLV 2	11.87	0.82	71.8	-0.127	0.0776	0.0718
646	SLV 3	11.66	-2.39	72.61	-0.2694	0.0817	0.0593
646	SLV 4	11.71	-3.2	72.68	-0.2686	0.0829	0.0705
646	SLV 5	3.42	6.64	66.62	-0.1187	0.0176	0.0432
646	SLV 6	3.45	6.12	66.66	-0.1182	0.0184	0.0504
646	SLV 7	2.88	-6.77	69.54	-0.5906	0.0353	0.039
646	SLV 8	2.91	-7.29	69.58	-0.5901	0.0361	0.0462
646	SLV 9	-3.95	7.04	63.1	-0.2526	-0.0276	0.0253
646	SLV 10	-3.92	6.52	63.14	-0.2521	-0.0269	0.0325
646	SLV 11	-4.49	-6.37	66.02	-0.7245	-0.0099	0.0211
646	SLV 12	-4.46	-6.89	66.06	-0.724	-0.0092	0.0283
646	SLV 13	-12.75	2.95	60	-0.5741	-0.0744	0.001
646	SLV 14	-12.69	2.15	60.07	-0.5734	-0.0733	0.0121
646	SLV 15	-12.91	-1.07	60.87	-0.7157	-0.0691	-0.0003
646	SLV 16	-12.85	-1.87	60.94	-0.7149	-0.068	0.0109
646	CRTFP Ux+	0	0	0	0	0	0
646	CRTFP Ux-	0	0	0	0	0	0
646	CRTFP Uy+	0	0	0	0	0	0
646	CRTFP Uy-	0	0	0	0	0	0
647	SLU 1	-0.46	0.03	61.26	-0.4484	0.0145	0.0277
647	SLU 2	-0.46	0.12	61.28	-0.4444	0.0144	0.0275
647	SLU 3	-0.47	0.05	62.68	-0.4593	0.0148	0.0286
647	SLU 4	-0.47	0.1	62.69	-0.4568	0.0147	0.0284
647	SLU 5	-0.47	0.12	62.16	-0.4524	0.0146	0.0279
647	SLU 6	-0.48	0.05	63.57	-0.4673	0.015	0.029
647	SLU 7	-0.48	0.1	63.57	-0.4649	0.0149	0.0289
647	SLU 8	-0.47	0.03	63.03	-0.4646	0.0149	0.0287
647	SLU 9	-0.47	0.09	63.04	-0.4621	0.0148	0.0285
647	SLU 10	-0.47	0.14	69.87	-0.4982	0.0156	0.0301
647	SLU 11	-0.48	0.07	71.28	-0.5131	0.016	0.0312
647	SLU 12	-0.48	0.12	71.28	-0.5106	0.016	0.031
647	SLU 13	-0.48	0.14	70.75	-0.5063	0.0158	0.0305

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLU 14	-0.49	0.07	72.16	-0.5211	0.0162	0.0316
647	SLU 15	-0.49	0.13	72.16	-0.5187	0.0162	0.0315
647	SLU 16	-0.49	0.05	71.62	-0.5184	0.0161	0.0313
647	SLU 17	-0.49	0.11	71.63	-0.516	0.016	0.0311
647	SLU 18	-0.48	0.06	73.54	-0.5253	0.0162	0.0315
647	SLU 19	-0.48	0.12	73.54	-0.5229	0.0162	0.0313
647	SLU 20	-0.48	0.06	74.42	-0.5334	0.0164	0.0319
647	SLU 21	-0.49	0.12	74.43	-0.5309	0.0164	0.0318
647	SLU 22	-0.5	0.1	69.35	-0.4872	0.0163	0.0311
647	SLU 23	-0.5	0.19	69.36	-0.4832	0.0163	0.0308
647	SLU 24	-0.51	0.12	70.77	-0.4981	0.0167	0.0319
647	SLU 25	-0.51	0.18	70.78	-0.4956	0.0166	0.0318
647	SLU 26	-0.51	0.19	70.25	-0.4913	0.0165	0.0313
647	SLU 27	-0.52	0.12	71.65	-0.5061	0.0169	0.0324
647	SLU 28	-0.52	0.18	71.66	-0.5037	0.0168	0.0322
647	SLU 29	-0.51	0.11	71.12	-0.5034	0.0168	0.032
647	SLU 30	-0.51	0.16	71.12	-0.501	0.0167	0.0319
647	SLU 31	-0.51	0.22	77.95	-0.537	0.0175	0.0334
647	SLU 32	-0.52	0.15	79.36	-0.5519	0.0179	0.0345
647	SLU 33	-0.52	0.2	79.37	-0.5495	0.0179	0.0344
647	SLU 34	-0.52	0.22	78.84	-0.5451	0.0177	0.0339
647	SLU 35	-0.53	0.15	80.25	-0.56	0.0181	0.035
647	SLU 36	-0.53	0.2	80.25	-0.5575	0.0181	0.0348
647	SLU 37	-0.53	0.13	79.71	-0.5572	0.018	0.0346
647	SLU 38	-0.53	0.18	79.71	-0.5548	0.0179	0.0345
647	SLU 39	-0.52	0.14	81.62	-0.5641	0.0181	0.0348
647	SLU 40	-0.52	0.19	81.63	-0.5617	0.0181	0.0347
647	SLU 41	-0.53	0.14	82.51	-0.5722	0.0183	0.0353
647	SLU 42	-0.53	0.19	82.51	-0.5698	0.0183	0.0351
647	SLU 43	-0.58	0.01	76.87	-0.5696	0.0181	0.0349
647	SLU 44	-0.58	0.1	76.88	-0.5656	0.018	0.0346
647	SLU 45	-0.59	0.03	78.29	-0.5805	0.0185	0.0357
647	SLU 46	-0.59	0.09	78.3	-0.578	0.0184	0.0356
647	SLU 47	-0.59	0.1	77.77	-0.5737	0.0183	0.0351
647	SLU 48	-0.6	0.03	79.17	-0.5886	0.0187	0.0362
647	SLU 49	-0.6	0.09	79.18	-0.5861	0.0186	0.036
647	SLU 50	-0.6	0.02	78.64	-0.5858	0.0186	0.0358
647	SLU 51	-0.6	0.07	78.64	-0.5834	0.0185	0.0357
647	SLU 52	-0.6	0.13	85.47	-0.6194	0.0193	0.0372
647	SLU 53	-0.61	0.05	86.88	-0.6343	0.0197	0.0383
647	SLU 54	-0.61	0.11	86.89	-0.6319	0.0197	0.0382
647	SLU 55	-0.6	0.13	86.36	-0.6275	0.0195	0.0377
647	SLU 56	-0.61	0.06	87.76	-0.6424	0.0199	0.0388
647	SLU 57	-0.61	0.11	87.77	-0.6399	0.0199	0.0386
647	SLU 58	-0.61	0.04	87.23	-0.6396	0.0198	0.0384
647	SLU 59	-0.61	0.09	87.23	-0.6372	0.0197	0.0383
647	SLU 60	-0.6	0.05	89.14	-0.6465	0.0199	0.0386
647	SLU 61	-0.6	0.1	89.15	-0.6441	0.0199	0.0385
647	SLU 62	-0.61	0.05	90.03	-0.6546	0.0201	0.0391
647	SLU 63	-0.61	0.1	90.03	-0.6522	0.0201	0.0389
647	SLU 64	-0.62	0.09	84.96	-0.6085	0.02	0.0383
647	SLU 65	-0.62	0.18	84.97	-0.6044	0.0199	0.038
647	SLU 66	-0.63	0.11	86.38	-0.6193	0.0204	0.0391
647	SLU 67	-0.63	0.16	86.39	-0.6169	0.0203	0.0389
647	SLU 68	-0.63	0.18	85.85	-0.6125	0.0201	0.0385
647	SLU 69	-0.64	0.11	87.26	-0.6274	0.0206	0.0396
647	SLU 70	-0.64	0.16	87.27	-0.6249	0.0205	0.0394
647	SLU 71	-0.64	0.09	86.72	-0.6246	0.0204	0.0392
647	SLU 72	-0.64	0.14	86.73	-0.6222	0.0204	0.039
647	SLU 73	-0.64	0.2	93.56	-0.6582	0.0212	0.0406
647	SLU 74	-0.65	0.13	94.97	-0.6731	0.0216	0.0417
647	SLU 75	-0.65	0.18	94.98	-0.6707	0.0216	0.0415
647	SLU 76	-0.64	0.2	94.44	-0.6663	0.0214	0.0411
647	SLU 77	-0.65	0.13	95.85	-0.6812	0.0218	0.0422
647	SLU 78	-0.65	0.18	95.86	-0.6788	0.0218	0.042
647	SLU 79	-0.65	0.11	95.31	-0.6784	0.0217	0.0418
647	SLU 80	-0.65	0.17	95.32	-0.676	0.0216	0.0416
647	SLU 81	-0.64	0.12	97.23	-0.6853	0.0218	0.042
647	SLU 82	-0.64	0.17	97.24	-0.6829	0.0218	0.0418
647	SLU 83	-0.65	0.12	98.11	-0.6934	0.022	0.0425
647	SLU 84	-0.65	0.17	98.12	-0.691	0.022	0.0423
647	SLE RA 1	-0.47	0.05	63.58	-0.4595	0.015	0.0287
647	SLE RA 2	-0.47	0.11	63.58	-0.4568	0.0149	0.0285
647	SLE RA 3	-0.48	0.06	64.52	-0.4667	0.0152	0.0292
647	SLE RA 4	-0.48	0.1	64.53	-0.4651	0.0152	0.0291
647	SLE RA 5	-0.47	0.11	64.17	-0.4622	0.0151	0.0288
647	SLE RA 6	-0.48	0.06	65.11	-0.4721	0.0154	0.0296
647	SLE RA 7	-0.48	0.1	65.11	-0.4705	0.0153	0.0294
647	SLE RA 8	-0.48	0.05	64.75	-0.4703	0.0153	0.0293
647	SLE RA 9	-0.48	0.09	64.76	-0.4687	0.0152	0.0292
647	SLE RA 10	-0.48	0.13	69.31	-0.4927	0.0158	0.0303
647	SLE RA 11	-0.49	0.08	70.25	-0.5026	0.0161	0.031
647	SLE RA 12	-0.49	0.11	70.25	-0.501	0.016	0.0309
647	SLE RA 13	-0.48	0.13	69.9	-0.4981	0.0159	0.0306
647	SLE RA 14	-0.49	0.08	70.84	-0.508	0.0162	0.0313
647	SLE RA 15	-0.49	0.11	70.84	-0.5064	0.0162	0.0312
647	SLE RA 16	-0.49	0.07	70.48	-0.5062	0.0161	0.031
647	SLE RA 17	-0.49	0.1	70.48	-0.5045	0.0161	0.0309
647	SLE RA 18	-0.48	0.07	71.76	-0.5108	0.0162	0.0312
647	SLE RA 19	-0.48	0.11	71.76	-0.5091	0.0161	0.0311

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLE RA 20	-0.49	0.07	72.35	-0.5161	0.0163	0.0315
647	SLE RA 21	-0.49	0.11	72.35	-0.5145	0.0163	0.0314
647	SLE FR 1	-0.47	0.05	63.58	-0.4595	0.015	0.0287
647	SLE FR 2	-0.47	0.06	63.58	-0.459	0.015	0.0287
647	SLE FR 3	-0.47	0.05	63.81	-0.4617	0.0151	0.0288
647	SLE FR 4	-0.47	0.07	66.03	-0.4743	0.0153	0.0294
647	SLE FR 5	-0.48	0.06	66.27	-0.477	0.0154	0.0296
647	SLE FR 6	-0.48	0.06	67.67	-0.4851	0.0156	0.0299
647	SLE QP 1	-0.47	0.05	63.58	-0.4595	0.015	0.0287
647	SLE QP 2	-0.47	0.06	66.03	-0.4749	0.0154	0.0294
647	SLD 1	4.79	1.36	67.37	-0.3375	0.0458	0.0402
647	SLD 2	4.82	1.04	67.38	-0.3379	0.0463	0.0448
647	SLD 3	4.72	-0.41	67.69	-0.4052	0.048	0.0387
647	SLD 4	4.75	-0.73	67.71	-0.4056	0.0485	0.0433
647	SLD 5	1.21	3.19	65.93	-0.3309	0.0211	0.0341
647	SLD 6	1.22	2.98	65.94	-0.3311	0.0214	0.0372
647	SLD 7	0.98	-2.71	67.02	-0.5566	0.0283	0.0291
647	SLD 8	0.99	-2.92	67.03	-0.5569	0.0287	0.0321
647	SLD 9	-1.94	3.04	65.03	-0.3929	0.002	0.0268
647	SLD 10	-1.92	2.83	65.04	-0.3931	0.0024	0.0298
647	SLD 11	-2.17	-2.86	66.12	-0.6186	0.0093	0.0217
647	SLD 12	-2.16	-3.07	66.13	-0.6189	0.0096	0.0247
647	SLD 13	-5.7	0.85	64.35	-0.5442	-0.0178	0.0156
647	SLD 14	-5.67	0.53	64.37	-0.5446	-0.0173	0.0202
647	SLD 15	-5.77	-0.92	64.68	-0.6119	-0.0156	0.0141
647	SLD 16	-5.74	-1.24	64.69	-0.6123	-0.0151	0.0187
647	SLV 1	11.85	3.04	69.16	-0.149	0.0867	0.0546
647	SLV 2	11.9	2.29	69.19	-0.1499	0.0878	0.0653
647	SLV 3	11.68	-0.99	69.91	-0.3025	0.0916	0.0512
647	SLV 4	11.74	-1.74	69.94	-0.3034	0.0928	0.0619
647	SLV 5	3.46	7.2	65.83	-0.1442	0.0291	0.0403
647	SLV 6	3.49	6.71	65.85	-0.1448	0.0298	0.0473
647	SLV 7	2.92	-6.24	68.32	-0.6558	0.0455	0.0289
647	SLV 8	2.96	-6.72	68.34	-0.6564	0.0463	0.0358
647	SLV 9	-3.9	6.84	63.72	-0.2934	-0.0155	0.023
647	SLV 10	-3.87	6.35	63.74	-0.294	-0.0148	0.03
647	SLV 11	-4.44	-6.6	66.21	-0.805	0.0009	0.0116
647	SLV 12	-4.4	-7.08	66.23	-0.8056	0.0016	0.0185
647	SLV 13	-12.69	1.85	62.12	-0.6464	-0.0621	-0.003
647	SLV 14	-12.63	1.1	62.15	-0.6473	-0.0609	0.0077
647	SLV 15	-12.85	-2.18	62.87	-0.7998	-0.0571	-0.0065
647	SLV 16	-12.79	-2.93	62.9	-0.8008	-0.056	0.0043
647	CRTFP Ux+	0	0	0	0	0	0
647	CRTFP Ux-	0	0	0	0	0	0
647	CRTFP Uy+	0	0	0	0	0	0
647	CRTFP Uy-	0	0	0	0	0	0
648	SLU 1	-0.42	0.15	60.65	-0.4985	0.0241	0.0162
648	SLU 2	-0.42	0.24	60.67	-0.4944	0.024	0.016
648	SLU 3	-0.43	0.18	62.06	-0.5108	0.0247	0.0167
648	SLU 4	-0.43	0.23	62.06	-0.5083	0.0246	0.0166
648	SLU 5	-0.42	0.25	61.54	-0.5033	0.0243	0.0162
648	SLU 6	-0.43	0.18	62.93	-0.5197	0.025	0.017
648	SLU 7	-0.43	0.23	62.94	-0.5172	0.025	0.0169
648	SLU 8	-0.43	0.16	62.4	-0.5164	0.0248	0.0167
648	SLU 9	-0.43	0.21	62.41	-0.5139	0.0247	0.0166
648	SLU 10	-0.43	0.28	69.19	-0.5563	0.0269	0.0175
648	SLU 11	-0.44	0.21	70.58	-0.5728	0.0276	0.0183
648	SLU 12	-0.44	0.26	70.59	-0.5703	0.0275	0.0182
648	SLU 13	-0.43	0.28	70.06	-0.5653	0.0273	0.0178
648	SLU 14	-0.44	0.21	71.45	-0.5817	0.0279	0.0185
648	SLU 15	-0.44	0.27	71.46	-0.5792	0.0279	0.0184
648	SLU 16	-0.44	0.19	70.92	-0.5784	0.0277	0.0182
648	SLU 17	-0.44	0.25	70.93	-0.5759	0.0276	0.0181
648	SLU 18	-0.43	0.2	72.83	-0.5871	0.0282	0.0184
648	SLU 19	-0.43	0.26	72.84	-0.5846	0.0282	0.0183
648	SLU 20	-0.44	0.21	73.7	-0.596	0.0286	0.0186
648	SLU 21	-0.44	0.26	73.71	-0.5935	0.0285	0.0185
648	SLU 22	-0.45	0.24	68.65	-0.5444	0.0276	0.0184
648	SLU 23	-0.45	0.33	68.67	-0.5402	0.0276	0.0182
648	SLU 24	-0.46	0.27	70.06	-0.5567	0.0282	0.0189
648	SLU 25	-0.46	0.32	70.06	-0.5542	0.0282	0.0188
648	SLU 26	-0.46	0.34	69.54	-0.5492	0.0279	0.0184
648	SLU 27	-0.47	0.27	70.93	-0.5656	0.0286	0.0192
648	SLU 28	-0.47	0.32	70.94	-0.5631	0.0285	0.0191
648	SLU 29	-0.46	0.25	70.4	-0.5623	0.0283	0.0189
648	SLU 30	-0.47	0.3	70.41	-0.5598	0.0283	0.0188
648	SLU 31	-0.46	0.37	77.19	-0.6022	0.0305	0.0197
648	SLU 32	-0.47	0.3	78.58	-0.6187	0.0311	0.0205
648	SLU 33	-0.47	0.35	78.59	-0.6162	0.0311	0.0203
648	SLU 34	-0.47	0.37	78.06	-0.6111	0.0308	0.02
648	SLU 35	-0.48	0.3	79.45	-0.6276	0.0315	0.0207
648	SLU 36	-0.48	0.36	79.46	-0.6251	0.0314	0.0206
648	SLU 37	-0.48	0.28	78.92	-0.6242	0.0312	0.0204
648	SLU 38	-0.48	0.34	78.93	-0.6217	0.0312	0.0203
648	SLU 39	-0.47	0.29	80.83	-0.633	0.0318	0.0206
648	SLU 40	-0.47	0.35	80.84	-0.6305	0.0317	0.0205
648	SLU 41	-0.48	0.3	81.7	-0.6419	0.0321	0.0208
648	SLU 42	-0.48	0.35	81.71	-0.6394	0.0321	0.0207
648	SLU 43	-0.53	0.17	76.1	-0.6324	0.0301	0.0203
648	SLU 44	-0.53	0.26	76.12	-0.6282	0.03	0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLU 45	-0.54	0.19	77.51	-0.6446	0.0307	0.0208
648	SLU 46	-0.54	0.25	77.52	-0.6421	0.0306	0.0207
648	SLU 47	-0.53	0.26	76.99	-0.6371	0.0303	0.0203
648	SLU 48	-0.54	0.2	78.38	-0.6535	0.031	0.0211
648	SLU 49	-0.54	0.25	78.39	-0.651	0.031	0.021
648	SLU 50	-0.54	0.18	77.85	-0.6502	0.0307	0.0208
648	SLU 51	-0.54	0.23	77.86	-0.6477	0.0307	0.0207
648	SLU 52	-0.54	0.29	84.64	-0.6902	0.0329	0.0216
648	SLU 53	-0.55	0.23	86.03	-0.7066	0.0336	0.0224
648	SLU 54	-0.55	0.28	86.04	-0.7041	0.0335	0.0223
648	SLU 55	-0.55	0.3	85.52	-0.6991	0.0332	0.0219
648	SLU 56	-0.55	0.23	86.91	-0.7155	0.0339	0.0226
648	SLU 57	-0.55	0.28	86.91	-0.713	0.0339	0.0225
648	SLU 58	-0.55	0.21	86.38	-0.7122	0.0337	0.0223
648	SLU 59	-0.55	0.26	86.38	-0.7097	0.0336	0.0222
648	SLU 60	-0.54	0.22	88.28	-0.7209	0.0342	0.0225
648	SLU 61	-0.54	0.27	88.29	-0.7184	0.0342	0.0224
648	SLU 62	-0.55	0.22	89.16	-0.7298	0.0346	0.0227
648	SLU 63	-0.55	0.27	89.16	-0.7273	0.0345	0.0226
648	SLU 64	-0.57	0.26	84.1	-0.6782	0.0336	0.0225
648	SLU 65	-0.57	0.35	84.12	-0.6741	0.0336	0.0223
648	SLU 66	-0.57	0.28	85.51	-0.6905	0.0342	0.023
648	SLU 67	-0.57	0.34	85.52	-0.688	0.0342	0.0229
648	SLU 68	-0.57	0.35	84.99	-0.683	0.0339	0.0225
648	SLU 69	-0.58	0.29	86.38	-0.6994	0.0346	0.0233
648	SLU 70	-0.58	0.34	86.39	-0.6969	0.0345	0.0232
648	SLU 71	-0.58	0.27	85.85	-0.6961	0.0343	0.023
648	SLU 72	-0.58	0.32	85.86	-0.6936	0.0343	0.0229
648	SLU 73	-0.58	0.38	92.64	-0.736	0.0365	0.0238
648	SLU 74	-0.59	0.32	94.03	-0.7525	0.0371	0.0246
648	SLU 75	-0.59	0.37	94.04	-0.75	0.0371	0.0244
648	SLU 76	-0.58	0.39	93.52	-0.745	0.0368	0.0241
648	SLU 77	-0.59	0.32	94.91	-0.7614	0.0375	0.0248
648	SLU 78	-0.59	0.37	94.92	-0.7589	0.0374	0.0247
648	SLU 79	-0.59	0.3	94.38	-0.7581	0.0372	0.0245
648	SLU 80	-0.59	0.35	94.38	-0.7556	0.0372	0.0244
648	SLU 81	-0.58	0.31	96.28	-0.7668	0.0378	0.0247
648	SLU 82	-0.58	0.36	96.29	-0.7643	0.0377	0.0246
648	SLU 83	-0.59	0.31	97.16	-0.7757	0.0381	0.0249
648	SLU 84	-0.59	0.36	97.16	-0.7732	0.0381	0.0248
648	SLE RA 1	-0.43	0.18	62.94	-0.5116	0.0251	0.0168
648	SLE RA 2	-0.43	0.24	62.95	-0.5089	0.025	0.0167
648	SLE RA 3	-0.43	0.2	63.87	-0.5198	0.0255	0.0172
648	SLE RA 4	-0.43	0.23	63.88	-0.5181	0.0255	0.0171
648	SLE RA 5	-0.43	0.24	63.53	-0.5148	0.0253	0.0168
648	SLE RA 6	-0.44	0.2	64.46	-0.5258	0.0257	0.0173
648	SLE RA 7	-0.44	0.23	64.46	-0.5241	0.0257	0.0173
648	SLE RA 8	-0.43	0.18	64.1	-0.5235	0.0255	0.0171
648	SLE RA 9	-0.43	0.22	64.11	-0.5219	0.0255	0.0171
648	SLE RA 10	-0.43	0.26	68.63	-0.5502	0.027	0.0177
648	SLE RA 11	-0.44	0.22	69.56	-0.5611	0.0274	0.0182
648	SLE RA 12	-0.44	0.25	69.56	-0.5595	0.0274	0.0181
648	SLE RA 13	-0.44	0.26	69.21	-0.5561	0.0272	0.0179
648	SLE RA 14	-0.44	0.22	70.14	-0.5671	0.0277	0.0184
648	SLE RA 15	-0.44	0.26	70.14	-0.5654	0.0276	0.0183
648	SLE RA 16	-0.44	0.21	69.78	-0.5649	0.0275	0.0182
648	SLE RA 17	-0.44	0.24	69.79	-0.5632	0.0275	0.0181
648	SLE RA 18	-0.44	0.21	71.06	-0.5707	0.0279	0.0183
648	SLE RA 19	-0.44	0.25	71.06	-0.569	0.0278	0.0182
648	SLE RA 20	-0.44	0.21	71.64	-0.5766	0.0281	0.0184
648	SLE RA 21	-0.44	0.25	71.64	-0.5749	0.0281	0.0184
648	SLE FR 1	-0.43	0.18	62.94	-0.5116	0.0251	0.0168
648	SLE FR 2	-0.43	0.19	62.94	-0.5111	0.0251	0.0168
648	SLE FR 3	-0.43	0.18	63.17	-0.514	0.0252	0.0169
648	SLE FR 4	-0.43	0.2	65.37	-0.5288	0.0259	0.0172
648	SLE FR 5	-0.43	0.19	65.61	-0.5317	0.026	0.0173
648	SLE FR 6	-0.43	0.2	67	-0.5412	0.0265	0.0175
648	SLE QP 1	-0.43	0.18	62.94	-0.5116	0.0251	0.0168
648	SLE QP 2	-0.43	0.19	65.37	-0.5293	0.0259	0.0172
648	SLD 1	4.83	1.47	65.83	-0.3776	0.054	0.0272
648	SLD 2	4.85	1.17	65.83	-0.3787	0.0545	0.0319
648	SLD 3	4.76	-0.31	66.11	-0.4506	0.0556	0.0244
648	SLD 4	4.78	-0.61	66.11	-0.4518	0.0561	0.0291
648	SLD 5	1.25	3.33	65.09	-0.3728	0.0318	0.0237
648	SLD 6	1.26	3.13	65.09	-0.3735	0.0321	0.0268
648	SLD 7	1.02	-2.61	66.02	-0.6164	0.0372	0.0143
648	SLD 8	1.03	-2.8	66.02	-0.6171	0.0375	0.0173
648	SLD 9	-1.89	3.18	64.73	-0.4416	0.0144	0.0171
648	SLD 10	-1.88	2.99	64.73	-0.4423	0.0146	0.0202
648	SLD 11	-2.12	-2.75	65.66	-0.6852	0.0197	0.0077
648	SLD 12	-2.11	-2.95	65.66	-0.6859	0.02	0.0108
648	SLD 13	-5.64	0.99	64.63	-0.6069	-0.0043	0.0054
648	SLD 14	-5.62	0.69	64.63	-0.608	-0.0038	0.0101
648	SLD 15	-5.71	-0.79	64.91	-0.68	-0.0027	0.0026
648	SLD 16	-5.69	-1.09	64.91	-0.6811	-0.0022	0.0072
648	SLV 1	11.86	3.13	66.45	-0.1701	0.0918	0.0406
648	SLV 2	11.92	2.43	66.45	-0.1727	0.0928	0.0515
648	SLV 3	11.71	-0.92	67.09	-0.3358	0.0954	0.0342
648	SLV 4	11.76	-1.62	67.09	-0.3384	0.0964	0.045
648	SLV 5	3.49	7.34	64.73	-0.1699	0.04	0.0321

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLV 6	3.53	6.89	64.73	-0.1716	0.0406	0.0391
648	SLV 7	2.96	-6.17	66.86	-0.7221	0.0521	0.0107
648	SLV 8	3	-6.62	66.86	-0.7237	0.0528	0.0177
648	SLV 9	-3.86	7	63.89	-0.335	-0.001	0.0168
648	SLV 10	-3.82	6.55	63.89	-0.3366	-0.0003	0.0238
648	SLV 11	-4.39	-6.51	66.02	-0.8871	0.0112	-0.0047
648	SLV 12	-4.35	-6.96	66.02	-0.8888	0.0119	0.0024
648	SLV 13	-12.62	2	63.66	-0.7203	-0.0446	-0.0106
648	SLV 14	-12.57	1.3	63.66	-0.7229	-0.0436	0.0003
648	SLV 15	-12.78	-2.05	64.3	-0.886	-0.041	-0.017
648	SLV 16	-12.72	-2.75	64.29	-0.8886	-0.0399	-0.0061
648	CRTFP Ux+	0	0	0	0	0	0
648	CRTFP Ux-	0	0	0	0	0	0
648	CRTFP Uy+	0	0	0	0	0	0
648	CRTFP Uy-	0	0	0	0	0	0
649	SLU 1	-0.38	0.21	61.39	-0.0912	-0.2953	0.0021
649	SLU 2	-0.38	0.3	61.41	-0.0867	-0.2955	0.0025
649	SLU 3	-0.39	0.24	62.81	-0.0942	-0.3021	0.0025
649	SLU 4	-0.39	0.29	62.82	-0.0915	-0.3022	0.0027
649	SLU 5	-0.39	0.3	62.29	-0.0899	-0.2997	0.0026
649	SLU 6	-0.39	0.24	63.69	-0.0974	-0.3064	0.0025
649	SLU 7	-0.39	0.29	63.7	-0.0947	-0.3064	0.0027
649	SLU 8	-0.39	0.22	63.16	-0.0975	-0.3039	0.0022
649	SLU 9	-0.39	0.27	63.17	-0.0948	-0.3039	0.0024
649	SLU 10	-0.39	0.34	70.05	-0.0916	-0.3373	0.0027
649	SLU 11	-0.4	0.28	71.45	-0.0991	-0.3439	0.0027
649	SLU 12	-0.4	0.33	71.46	-0.0964	-0.344	0.0029
649	SLU 13	-0.39	0.34	70.93	-0.0948	-0.3415	0.0027
649	SLU 14	-0.4	0.28	72.33	-0.1023	-0.3482	0.0027
649	SLU 15	-0.4	0.33	72.34	-0.0996	-0.3482	0.0029
649	SLU 16	-0.4	0.26	71.8	-0.1024	-0.3457	0.0024
649	SLU 17	-0.4	0.31	71.81	-0.0997	-0.3458	0.0026
649	SLU 18	-0.39	0.27	73.73	-0.0982	-0.3551	0.0024
649	SLU 19	-0.39	0.32	73.74	-0.0955	-0.3552	0.0027
649	SLU 20	-0.4	0.27	74.62	-0.1013	-0.3593	0.0024
649	SLU 21	-0.4	0.33	74.63	-0.0987	-0.3594	0.0027
649	SLU 22	-0.41	0.31	69.47	-0.0825	-0.3334	0.0033
649	SLU 23	-0.41	0.4	69.48	-0.078	-0.3335	0.0037
649	SLU 24	-0.42	0.34	70.89	-0.0855	-0.3401	0.0036
649	SLU 25	-0.42	0.39	70.9	-0.0828	-0.3402	0.0039
649	SLU 26	-0.42	0.4	70.37	-0.0812	-0.3377	0.0037
649	SLU 27	-0.43	0.34	71.77	-0.0887	-0.3444	0.0036
649	SLU 28	-0.43	0.39	71.78	-0.086	-0.3444	0.0039
649	SLU 29	-0.42	0.32	71.24	-0.0889	-0.3419	0.0033
649	SLU 30	-0.42	0.37	71.25	-0.0862	-0.342	0.0036
649	SLU 31	-0.42	0.44	78.12	-0.0829	-0.3753	0.0039
649	SLU 32	-0.43	0.38	79.53	-0.0904	-0.3819	0.0038
649	SLU 33	-0.43	0.43	79.54	-0.0877	-0.382	0.004
649	SLU 34	-0.43	0.44	79.01	-0.0861	-0.3796	0.0039
649	SLU 35	-0.44	0.38	80.41	-0.0936	-0.3862	0.0038
649	SLU 36	-0.44	0.43	80.42	-0.0909	-0.3863	0.0041
649	SLU 37	-0.43	0.36	79.88	-0.0938	-0.3837	0.0035
649	SLU 38	-0.43	0.41	79.89	-0.0911	-0.3838	0.0038
649	SLU 39	-0.43	0.37	81.81	-0.0895	-0.3931	0.0036
649	SLU 40	-0.43	0.42	81.82	-0.0868	-0.3932	0.0038
649	SLU 41	-0.43	0.37	82.69	-0.0927	-0.3974	0.0036
649	SLU 42	-0.43	0.43	82.7	-0.09	-0.3974	0.0038
649	SLU 43	-0.48	0.24	77.04	-0.1215	-0.3709	0.0024
649	SLU 44	-0.48	0.33	77.05	-0.117	-0.371	0.0028
649	SLU 45	-0.49	0.26	78.46	-0.1245	-0.3777	0.0027
649	SLU 46	-0.49	0.32	78.47	-0.1218	-0.3777	0.003
649	SLU 47	-0.49	0.33	77.94	-0.1202	-0.3753	0.0028
649	SLU 48	-0.5	0.27	79.34	-0.1277	-0.3819	0.0027
649	SLU 49	-0.5	0.32	79.35	-0.125	-0.382	0.003
649	SLU 50	-0.49	0.25	78.81	-0.1279	-0.3794	0.0024
649	SLU 51	-0.49	0.3	78.82	-0.1252	-0.3795	0.0027
649	SLU 52	-0.49	0.37	85.69	-0.1219	-0.4128	0.003
649	SLU 53	-0.5	0.3	87.1	-0.1294	-0.4195	0.0029
649	SLU 54	-0.5	0.36	87.11	-0.1267	-0.4196	0.0031
649	SLU 55	-0.5	0.37	86.58	-0.1251	-0.4171	0.003
649	SLU 56	-0.51	0.31	87.98	-0.1326	-0.4237	0.0029
649	SLU 57	-0.51	0.36	87.99	-0.1299	-0.4238	0.0032
649	SLU 58	-0.5	0.29	87.45	-0.1328	-0.4213	0.0026
649	SLU 59	-0.5	0.34	87.46	-0.1301	-0.4213	0.0029
649	SLU 60	-0.5	0.3	89.38	-0.1285	-0.4307	0.0027
649	SLU 61	-0.5	0.35	89.39	-0.1258	-0.4307	0.0029
649	SLU 62	-0.5	0.3	90.26	-0.1317	-0.4349	0.0027
649	SLU 63	-0.5	0.35	90.27	-0.129	-0.435	0.0029
649	SLU 64	-0.52	0.34	85.12	-0.1128	-0.4089	0.0035
649	SLU 65	-0.52	0.43	85.13	-0.1083	-0.409	0.0039
649	SLU 66	-0.53	0.36	86.54	-0.1159	-0.4157	0.0039
649	SLU 67	-0.53	0.42	86.54	-0.1132	-0.4158	0.0041
649	SLU 68	-0.52	0.43	86.02	-0.1115	-0.4133	0.004
649	SLU 69	-0.53	0.37	87.42	-0.119	-0.4199	0.0039
649	SLU 70	-0.53	0.42	87.43	-0.1163	-0.42	0.0041
649	SLU 71	-0.53	0.35	86.88	-0.1192	-0.4175	0.0036
649	SLU 72	-0.53	0.4	86.89	-0.1165	-0.4175	0.0038
649	SLU 73	-0.53	0.47	93.77	-0.1132	-0.4509	0.0041
649	SLU 74	-0.53	0.41	95.17	-0.1208	-0.4575	0.0041
649	SLU 75	-0.53	0.46	95.18	-0.1181	-0.4576	0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLU 76	-0.53	0.47	94.66	-0.1164	-0.4551	0.0041
649	SLU 77	-0.54	0.41	96.06	-0.1239	-0.4618	0.0041
649	SLU 78	-0.54	0.46	96.07	-0.1212	-0.4618	0.0043
649	SLU 79	-0.54	0.39	95.52	-0.1241	-0.4593	0.0038
649	SLU 80	-0.54	0.44	95.53	-0.1214	-0.4593	0.004
649	SLU 81	-0.53	0.4	97.46	-0.1198	-0.4687	0.0038
649	SLU 82	-0.53	0.45	97.47	-0.1171	-0.4687	0.0041
649	SLU 83	-0.53	0.4	98.34	-0.123	-0.4729	0.0038
649	SLU 84	-0.53	0.45	98.35	-0.1203	-0.473	0.0041
649	SLE RA 1	-0.39	0.24	63.7	-0.0887	-0.3062	0.0025
649	SLE RA 2	-0.39	0.3	63.71	-0.0857	-0.3063	0.0027
649	SLE RA 3	-0.4	0.26	64.64	-0.0907	-0.3107	0.0027
649	SLE RA 4	-0.4	0.29	64.65	-0.0889	-0.3108	0.0028
649	SLE RA 5	-0.39	0.3	64.3	-0.0878	-0.3091	0.0027
649	SLE RA 6	-0.4	0.26	65.23	-0.0928	-0.3135	0.0027
649	SLE RA 7	-0.4	0.29	65.24	-0.091	-0.3136	0.0029
649	SLE RA 8	-0.4	0.24	64.88	-0.0929	-0.3119	0.0025
649	SLE RA 9	-0.4	0.28	64.88	-0.0911	-0.3119	0.0027
649	SLE RA 10	-0.4	0.33	69.47	-0.089	-0.3342	0.0029
649	SLE RA 11	-0.4	0.28	70.4	-0.094	-0.3386	0.0028
649	SLE RA 12	-0.4	0.32	70.41	-0.0922	-0.3386	0.003
649	SLE RA 13	-0.4	0.33	70.06	-0.0911	-0.337	0.0029
649	SLE RA 14	-0.4	0.29	70.99	-0.0961	-0.3414	0.0028
649	SLE RA 15	-0.4	0.32	71	-0.0943	-0.3415	0.003
649	SLE RA 16	-0.4	0.27	70.64	-0.0962	-0.3398	0.0026
649	SLE RA 17	-0.4	0.31	70.64	-0.0944	-0.3398	0.0028
649	SLE RA 18	-0.4	0.28	71.93	-0.0934	-0.346	0.0027
649	SLE RA 19	-0.4	0.31	71.93	-0.0916	-0.3461	0.0028
649	SLE RA 20	-0.4	0.28	72.52	-0.0955	-0.3489	0.0027
649	SLE RA 21	-0.4	0.32	72.52	-0.0937	-0.3489	0.0028
649	SLE FR 1	-0.39	0.24	63.7	-0.0887	-0.3062	0.0025
649	SLE FR 2	-0.39	0.25	63.7	-0.0881	-0.3062	0.0025
649	SLE FR 3	-0.39	0.24	63.93	-0.0895	-0.3073	0.0025
649	SLE FR 4	-0.39	0.26	66.17	-0.0895	-0.3182	0.0026
649	SLE FR 5	-0.39	0.25	66.4	-0.0909	-0.3193	0.0025
649	SLE FR 6	-0.39	0.26	67.81	-0.091	-0.3261	0.0026
649	SLE QP 1	-0.39	0.24	63.7	-0.0887	-0.3062	0.0025
649	SLE QP 2	-0.39	0.25	66.17	-0.0901	-0.3182	0.0025
649	SLD 1	4.99	1.56	65.55	0.0686	-0.2909	-0.0194
649	SLD 2	5.02	1.28	65.54	0.0666	-0.2905	-0.0159
649	SLD 3	4.92	-0.29	65.81	-0.01	-0.2919	-0.0334
649	SLD 4	4.95	-0.57	65.8	-0.012	-0.2914	-0.0299
649	SLD 5	1.32	3.5	65.6	0.0771	-0.3086	0.0165
649	SLD 6	1.34	3.31	65.59	0.0758	-0.3083	0.0188
649	SLD 7	1.09	-2.66	66.45	-0.185	-0.3118	-0.0301
649	SLD 8	1.11	-2.85	66.44	-0.1863	-0.3115	-0.0278
649	SLD 9	-1.89	3.35	65.89	0.0061	-0.3248	0.0328
649	SLD 10	-1.88	3.16	65.88	0.0048	-0.3245	0.0352
649	SLD 11	-2.13	-2.81	66.75	-0.256	-0.328	-0.0138
649	SLD 12	-2.11	-2.99	66.74	-0.2573	-0.3277	-0.0115
649	SLD 13	-5.73	1.07	66.54	-0.1682	-0.3449	0.0349
649	SLD 14	-5.71	0.79	66.52	-0.1702	-0.3444	0.0385
649	SLD 15	-5.8	-0.78	66.79	-0.2468	-0.3459	0.021
649	SLD 16	-5.78	-1.06	66.78	-0.2488	-0.3454	0.0245
649	SLV 1	12.2	3.26	64.74	0.2855	-0.2545	-0.0493
649	SLV 2	12.26	2.6	64.71	0.2808	-0.2534	-0.0411
649	SLV 3	12.04	-0.95	65.33	0.1073	-0.2567	-0.0811
649	SLV 4	12.1	-1.6	65.3	0.1026	-0.2556	-0.0729
649	SLV 5	3.62	7.65	64.85	0.2937	-0.2959	0.0338
649	SLV 6	3.66	7.23	64.83	0.2906	-0.2952	0.0391
649	SLV 7	3.08	-6.38	66.82	-0.3003	-0.3033	-0.0722
649	SLV 8	3.12	-6.8	66.8	-0.3034	-0.3026	-0.067
649	SLV 9	-3.91	7.3	65.54	0.1232	-0.3338	0.072
649	SLV 10	-3.87	6.88	65.52	0.1201	-0.333	0.0773
649	SLV 11	-4.44	-6.72	67.5	-0.4708	-0.3412	-0.0341
649	SLV 12	-4.41	-7.15	67.48	-0.4739	-0.3404	-0.0288
649	SLV 13	-12.89	2.11	67.03	-0.2828	-0.3807	0.0779
649	SLV 14	-12.83	1.45	67	-0.2875	-0.3796	0.0861
649	SLV 15	-13.05	-2.1	67.62	-0.461	-0.383	0.0461
649	SLV 16	-12.99	-2.76	67.59	-0.4657	-0.3818	0.0543
649	CRTFP Ux+	0	0	0	0	0	0
649	CRTFP Ux-	0	0	0	0	0	0
649	CRTFP Uy+	0	0	0	0	0	0
649	CRTFP Uy-	0	0	0	0	0	0
650	SLU 1	-0.2	0.07	29.96	-7.2297	0.0095	-0.0527
650	SLU 2	-0.2	0.12	29.97	-7.2292	0.0095	-0.0528
650	SLU 3	-0.21	0.09	30.66	-7.3963	0.0097	-0.0537
650	SLU 4	-0.21	0.11	30.66	-7.396	0.0097	-0.0538
650	SLU 5	-0.21	0.12	30.4	-7.3341	0.0096	-0.0535
650	SLU 6	-0.21	0.09	31.09	-7.5012	0.0098	-0.0545
650	SLU 7	-0.21	0.11	31.09	-7.5009	0.0098	-0.0545
650	SLU 8	-0.21	0.08	30.83	-7.4396	0.0097	-0.0542
650	SLU 9	-0.21	0.1	30.83	-7.4393	0.0097	-0.0542
650	SLU 10	-0.21	0.13	34.18	-8.2388	0.0107	-0.0545
650	SLU 11	-0.21	0.1	34.87	-8.4059	0.0109	-0.0555
650	SLU 12	-0.21	0.13	34.87	-8.4056	0.0109	-0.0556
650	SLU 13	-0.21	0.14	34.62	-8.3438	0.0108	-0.0553
650	SLU 14	-0.22	0.1	35.31	-8.5109	0.011	-0.0562
650	SLU 15	-0.22	0.13	35.31	-8.5106	0.011	-0.0563
650	SLU 16	-0.22	0.09	35.05	-8.4492	0.0109	-0.0559

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLU 17	-0.22	0.12	35.05	-8.4489	0.0109	-0.056
650	SLU 18	-0.21	0.1	35.99	-8.672	0.0112	-0.0552
650	SLU 19	-0.21	0.12	35.99	-8.6717	0.0112	-0.0553
650	SLU 20	-0.22	0.1	36.42	-8.777	0.0113	-0.056
650	SLU 21	-0.22	0.13	36.42	-8.7767	0.0113	-0.056
650	SLU 22	-0.22	0.12	33.87	-8.1596	0.0113	-0.0572
650	SLU 23	-0.22	0.16	33.88	-8.1591	0.0113	-0.0573
650	SLU 24	-0.23	0.13	34.57	-8.3262	0.0115	-0.0583
650	SLU 25	-0.23	0.16	34.57	-8.3259	0.0116	-0.0583
650	SLU 26	-0.23	0.17	34.31	-8.2641	0.0115	-0.058
650	SLU 27	-0.23	0.13	35	-8.4312	0.0116	-0.059
650	SLU 28	-0.23	0.16	35	-8.4309	0.0117	-0.059
650	SLU 29	-0.23	0.12	34.74	-8.3695	0.0115	-0.0587
650	SLU 30	-0.23	0.15	34.74	-8.3692	0.0115	-0.0587
650	SLU 31	-0.23	0.18	38.09	-9.1688	0.0126	-0.0591
650	SLU 32	-0.23	0.15	38.78	-9.3359	0.0127	-0.06
650	SLU 33	-0.23	0.18	38.79	-9.3356	0.0128	-0.0601
650	SLU 34	-0.23	0.18	38.53	-9.2737	0.0127	-0.0598
650	SLU 35	-0.24	0.15	39.22	-9.4408	0.0128	-0.0608
650	SLU 36	-0.24	0.18	39.22	-9.4405	0.0129	-0.0608
650	SLU 37	-0.23	0.14	38.96	-9.3791	0.0127	-0.0605
650	SLU 38	-0.23	0.17	38.96	-9.3788	0.0128	-0.0605
650	SLU 39	-0.23	0.15	39.9	-9.602	0.013	-0.0598
650	SLU 40	-0.23	0.17	39.9	-9.6017	0.0131	-0.0598
650	SLU 41	-0.23	0.15	40.33	-9.7069	0.0131	-0.0605
650	SLU 42	-0.23	0.17	40.33	-9.7066	0.0132	-0.0605
650	SLU 43	-0.26	0.08	37.61	-9.0798	0.0117	-0.067
650	SLU 44	-0.26	0.12	37.62	-9.0793	0.0117	-0.067
650	SLU 45	-0.26	0.09	38.31	-9.2464	0.0119	-0.068
650	SLU 46	-0.26	0.12	38.31	-9.2461	0.0119	-0.068
650	SLU 47	-0.26	0.12	38.05	-9.1842	0.0118	-0.0678
650	SLU 48	-0.27	0.09	38.74	-9.3513	0.012	-0.0687
650	SLU 49	-0.27	0.12	38.74	-9.351	0.012	-0.0688
650	SLU 50	-0.27	0.08	38.48	-9.2897	0.0119	-0.0684
650	SLU 51	-0.27	0.11	38.48	-9.2893	0.0119	-0.0685
650	SLU 52	-0.27	0.14	41.83	-10.0889	0.0129	-0.0688
650	SLU 53	-0.27	0.11	42.52	-10.256	0.0131	-0.0698
650	SLU 54	-0.27	0.13	42.52	-10.2557	0.0131	-0.0698
650	SLU 55	-0.27	0.14	42.26	-10.1939	0.013	-0.0695
650	SLU 56	-0.27	0.11	42.95	-10.361	0.0132	-0.0705
650	SLU 57	-0.27	0.14	42.96	-10.3607	0.0132	-0.0705
650	SLU 58	-0.27	0.1	42.7	-10.2993	0.0131	-0.0702
650	SLU 59	-0.27	0.12	42.7	-10.299	0.0131	-0.0702
650	SLU 60	-0.27	0.1	43.63	-10.5221	0.0134	-0.0695
650	SLU 61	-0.27	0.13	43.64	-10.5218	0.0134	-0.0695
650	SLU 62	-0.27	0.1	44.07	-10.6271	0.0135	-0.0702
650	SLU 63	-0.27	0.13	44.07	-10.6268	0.0135	-0.0703
650	SLU 64	-0.28	0.13	41.52	-10.0097	0.0135	-0.0715
650	SLU 65	-0.28	0.17	41.53	-10.0092	0.0135	-0.0716
650	SLU 66	-0.28	0.14	42.22	-10.1763	0.0137	-0.0725
650	SLU 67	-0.28	0.16	42.22	-10.176	0.0138	-0.0726
650	SLU 68	-0.28	0.17	41.96	-10.1141	0.0137	-0.0723
650	SLU 69	-0.28	0.14	42.65	-10.2812	0.0138	-0.0733
650	SLU 70	-0.28	0.17	42.65	-10.2809	0.0139	-0.0733
650	SLU 71	-0.28	0.13	42.39	-10.2196	0.0137	-0.073
650	SLU 72	-0.28	0.16	42.39	-10.2193	0.0137	-0.073
650	SLU 73	-0.28	0.19	45.74	-11.0189	0.0148	-0.0733
650	SLU 74	-0.29	0.16	46.43	-11.186	0.0149	-0.0743
650	SLU 75	-0.29	0.18	46.43	-11.1857	0.015	-0.0743
650	SLU 76	-0.29	0.19	46.18	-11.1238	0.0149	-0.0741
650	SLU 77	-0.29	0.16	46.87	-11.2909	0.015	-0.075
650	SLU 78	-0.29	0.18	46.87	-11.2906	0.0151	-0.0751
650	SLU 79	-0.29	0.15	46.61	-11.2292	0.0149	-0.0747
650	SLU 80	-0.29	0.17	46.61	-11.2289	0.015	-0.0748
650	SLU 81	-0.29	0.15	47.55	-11.4521	0.0152	-0.074
650	SLU 82	-0.29	0.18	47.55	-11.4518	0.0153	-0.0741
650	SLU 83	-0.29	0.15	47.98	-11.557	0.0153	-0.0748
650	SLU 84	-0.29	0.18	47.98	-11.5567	0.0154	-0.0748
650	SLE RA 1	-0.21	0.09	31.08	-7.4954	0.01	-0.054
650	SLE RA 2	-0.21	0.12	31.08	-7.4951	0.01	-0.0541
650	SLE RA 3	-0.21	0.1	31.54	-7.6065	0.0101	-0.0547
650	SLE RA 4	-0.21	0.11	31.54	-7.6063	0.0101	-0.0547
650	SLE RA 5	-0.21	0.12	31.37	-7.565	0.0101	-0.0545
650	SLE RA 6	-0.21	0.1	31.83	-7.6764	0.0102	-0.0552
650	SLE RA 7	-0.21	0.11	31.83	-7.6762	0.0102	-0.0552
650	SLE RA 8	-0.21	0.09	31.66	-7.6353	0.0101	-0.055
650	SLE RA 9	-0.21	0.11	31.66	-7.6351	0.0101	-0.055
650	SLE RA 10	-0.21	0.13	33.89	-8.1682	0.0108	-0.0552
650	SLE RA 11	-0.22	0.11	34.35	-8.2796	0.0109	-0.0559
650	SLE RA 12	-0.22	0.12	34.36	-8.2794	0.011	-0.0559
650	SLE RA 13	-0.22	0.13	34.18	-8.2381	0.0109	-0.0557
650	SLE RA 14	-0.22	0.11	34.64	-8.3495	0.011	-0.0564
650	SLE RA 15	-0.22	0.12	34.64	-8.3493	0.011	-0.0564
650	SLE RA 16	-0.22	0.1	34.47	-8.3084	0.0109	-0.0562
650	SLE RA 17	-0.22	0.12	34.47	-8.3082	0.0109	-0.0562
650	SLE RA 18	-0.22	0.1	35.1	-8.457	0.0111	-0.0557
650	SLE RA 19	-0.22	0.12	35.1	-8.4568	0.0112	-0.0557
650	SLE RA 20	-0.22	0.1	35.39	-8.5269	0.0112	-0.0562
650	SLE RA 21	-0.22	0.12	35.39	-8.5267	0.0112	-0.0562
650	SLE FR 1	-0.21	0.09	31.08	-7.4954	0.01	-0.054

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLE FR 2	-0.21	0.09	31.08	-7.4953	0.01	-0.054
650	SLE FR 3	-0.21	0.09	31.2	-7.5234	0.01	-0.0542
650	SLE FR 4	-0.21	0.1	32.29	-7.7838	0.0103	-0.0545
650	SLE FR 5	-0.21	0.09	32.4	-7.8119	0.0104	-0.0547
650	SLE FR 6	-0.21	0.1	33.09	-7.9762	0.0106	-0.0549
650	SLE QP 1	-0.21	0.09	31.08	-7.4954	0.01	-0.054
650	SLE QP 2	-0.21	0.09	32.29	-7.7839	0.0103	-0.0545
650	SLD 1	2.41	0.73	31.53	-7.6205	0.0218	0.6005
650	SLD 2	2.43	0.6	31.52	-7.6185	0.0218	0.6065
650	SLD 3	2.37	-0.18	31.73	-7.6881	0.0206	0.5908
650	SLD 4	2.39	-0.31	31.72	-7.6862	0.0207	0.5968
650	SLD 5	0.63	1.69	31.77	-7.6326	0.0155	0.1556
650	SLD 6	0.64	1.61	31.76	-7.6314	0.0156	0.1595
650	SLD 7	0.5	-1.35	32.41	-7.858	0.0116	0.1234
650	SLD 8	0.52	-1.43	32.41	-7.8568	0.0117	0.1273
650	SLD 9	-0.94	1.62	32.16	-7.711	0.009	-0.2363
650	SLD 10	-0.92	1.53	32.16	-7.7097	0.009	-0.2324
650	SLD 11	-1.06	-1.42	32.81	-7.9364	0.0051	-0.2685
650	SLD 12	-1.05	-1.5	32.8	-7.9351	0.0051	-0.2646
650	SLD 13	-2.82	0.49	32.85	-7.8816	0	-0.7058
650	SLD 14	-2.79	0.37	32.85	-7.8797	0.0001	-0.6999
650	SLD 15	-2.85	-0.42	33.05	-7.9492	-0.0012	-0.7155
650	SLD 16	-2.83	-0.54	33.04	-7.9473	-0.0011	-0.7095
650	SLV 1	5.91	1.55	30.53	-7.4019	0.037	1.4773
650	SLV 2	5.97	1.26	30.51	-7.3974	0.0372	1.4912
650	SLV 3	5.83	-0.52	30.97	-7.5556	0.0344	1.4549
650	SLV 4	5.88	-0.81	30.95	-7.5511	0.0345	1.4688
650	SLV 5	1.75	3.73	31.09	-7.437	0.0224	0.4365
650	SLV 6	1.78	3.54	31.08	-7.4341	0.0225	0.4455
650	SLV 7	1.46	-3.19	32.56	-7.9492	0.0135	0.362
650	SLV 8	1.49	-3.38	32.55	-7.9464	0.0136	0.371
650	SLV 9	-1.92	3.56	32.02	-7.6214	0.0071	-0.48
650	SLV 10	-1.88	3.37	32.01	-7.6185	0.0072	-0.471
650	SLV 11	-2.21	-3.36	33.49	-8.1337	-0.0018	-0.5545
650	SLV 12	-2.17	-3.54	33.48	-8.1308	-0.0017	-0.5456
650	SLV 13	-6.3	1	33.62	-8.0167	-0.0139	-1.5779
650	SLV 14	-6.25	0.71	33.6	-8.0122	-0.0137	-1.5639
650	SLV 15	-6.39	-1.08	34.07	-8.1704	-0.0165	-1.6002
650	SLV 16	-6.34	-1.37	34.05	-8.1659	-0.0164	-1.5863
650	CRTFP Ux+	0	0	0	0	0	0
650	CRTFP Ux-	0	0	0	0	0	0
652	SLU 1	-0.87	0.05	189.51	23.9158	-0.8794	-0.1322
652	SLU 2	-0.87	0.34	189.55	23.9324	-0.8714	-0.1295
652	SLU 3	-0.89	0.12	193.87	24.4619	-0.8982	-0.1343
652	SLU 4	-0.89	0.29	193.89	24.4719	-0.8934	-0.1328
652	SLU 5	-0.88	0.34	192.28	24.2713	-0.8874	-0.1324
652	SLU 6	-0.9	0.12	196.6	24.8008	-0.9142	-0.1372
652	SLU 7	-0.9	0.29	196.63	24.8107	-0.9094	-0.1357
652	SLU 8	-0.89	0.05	194.97	24.5935	-0.9113	-0.1379
652	SLU 9	-0.89	0.22	195	24.6035	-0.9065	-0.1364
652	SLU 10	-0.87	0.4	216.22	27.3043	-0.988	-0.1535
652	SLU 11	-0.89	0.19	220.54	27.8338	-1.0147	-0.1583
652	SLU 12	-0.89	0.36	220.57	27.8437	-1.01	-0.1567
652	SLU 13	-0.88	0.41	218.95	27.6431	-1.0039	-0.1564
652	SLU 14	-0.9	0.19	223.28	28.1726	-1.0307	-0.1612
652	SLU 15	-0.9	0.36	223.3	28.1826	-1.0259	-0.1596
652	SLU 16	-0.89	0.12	221.65	27.9654	-1.0278	-0.1619
652	SLU 17	-0.89	0.29	221.67	27.9754	-1.023	-0.1603
652	SLU 18	-0.87	0.15	227.61	28.7328	-1.0459	-0.1664
652	SLU 19	-0.87	0.32	227.64	28.7427	-1.0411	-0.1648
652	SLU 20	-0.88	0.15	230.34	29.0716	-1.0618	-0.1692
652	SLU 21	-0.88	0.32	230.37	29.0816	-1.057	-0.1677
652	SLU 22	-0.94	0.32	214.19	27.0824	-0.9249	-0.1437
652	SLU 23	-0.95	0.61	214.23	27.099	-0.9169	-0.1411
652	SLU 24	-0.96	0.39	218.55	27.6284	-0.9437	-0.1459
652	SLU 25	-0.96	0.57	218.58	27.6384	-0.9389	-0.1443
652	SLU 26	-0.96	0.61	216.96	27.4378	-0.9329	-0.144
652	SLU 27	-0.97	0.39	221.29	27.9673	-0.9597	-0.1488
652	SLU 28	-0.97	0.57	221.31	27.9772	-0.9549	-0.1472
652	SLU 29	-0.96	0.32	219.66	27.7601	-0.9568	-0.1495
652	SLU 30	-0.97	0.5	219.68	27.77	-0.952	-0.1479
652	SLU 31	-0.95	0.68	240.9	30.4708	-1.0335	-0.165
652	SLU 32	-0.96	0.46	245.23	31.0003	-1.0603	-0.1698
652	SLU 33	-0.96	0.64	245.25	31.0103	-1.0555	-0.1683
652	SLU 34	-0.96	0.68	243.64	30.8097	-1.0494	-0.1679
652	SLU 35	-0.97	0.46	247.96	31.3392	-1.0762	-0.1727
652	SLU 36	-0.97	0.64	247.98	31.3491	-1.0714	-0.1712
652	SLU 37	-0.96	0.39	246.33	31.1319	-1.0733	-0.1734
652	SLU 38	-0.97	0.57	246.35	31.1419	-1.0685	-0.1719
652	SLU 39	-0.94	0.42	252.29	31.8993	-1.0914	-0.1779
652	SLU 40	-0.94	0.59	252.32	31.9093	-1.0866	-0.1764
652	SLU 41	-0.95	0.42	255.03	32.2382	-1.1073	-0.1808
652	SLU 42	-0.96	0.59	255.05	32.2481	-1.1025	-0.1793
652	SLU 43	-1.11	-0.03	237.9	30.0049	-1.1276	-0.1678
652	SLU 44	-1.11	0.26	237.94	30.0215	-1.1196	-0.1652
652	SLU 45	-1.13	0.04	242.26	30.551	-1.1464	-0.17
652	SLU 46	-1.13	0.21	242.28	30.5609	-1.1417	-0.1684
652	SLU 47	-1.12	0.26	240.67	30.3604	-1.1356	-0.1681
652	SLU 48	-1.14	0.04	244.99	30.8898	-1.1624	-0.1729
652	SLU 49	-1.14	0.21	245.02	30.8998	-1.1576	-0.1713

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLU 50	-1.13	-0.03	243.36	30.6826	-1.1595	-0.1736
652	SLU 51	-1.13	0.14	243.39	30.6926	-1.1547	-0.172
652	SLU 52	-1.11	0.32	264.61	33.3934	-1.2362	-0.1892
652	SLU 53	-1.13	0.11	268.93	33.9229	-1.263	-0.194
652	SLU 54	-1.13	0.28	268.96	33.9328	-1.2582	-0.1924
652	SLU 55	-1.12	0.33	267.34	33.7322	-1.2521	-0.192
652	SLU 56	-1.14	0.11	271.67	34.2617	-1.2789	-0.1968
652	SLU 57	-1.14	0.28	271.69	34.2717	-1.2741	-0.1953
652	SLU 58	-1.13	0.04	270.04	34.0545	-1.276	-0.1976
652	SLU 59	-1.13	0.21	270.06	34.0644	-1.2712	-0.196
652	SLU 60	-1.11	0.07	276	34.8219	-1.2941	-0.202
652	SLU 61	-1.11	0.24	276.03	34.8318	-1.2893	-0.2005
652	SLU 62	-1.12	0.07	278.73	35.1607	-1.31	-0.2049
652	SLU 63	-1.12	0.24	278.76	35.1707	-1.3052	-0.2034
652	SLU 64	-1.18	0.24	262.58	33.1715	-1.1731	-0.1794
652	SLU 65	-1.18	0.53	262.62	33.188	-1.1651	-0.1768
652	SLU 66	-1.2	0.31	266.94	33.7175	-1.1919	-0.1816
652	SLU 67	-1.2	0.49	266.97	33.7275	-1.1872	-0.18
652	SLU 68	-1.19	0.53	265.35	33.5269	-1.1811	-0.1797
652	SLU 69	-1.21	0.31	269.68	34.0564	-1.2079	-0.1845
652	SLU 70	-1.21	0.49	269.7	34.0663	-1.2031	-0.1829
652	SLU 71	-1.2	0.24	268.05	33.8492	-1.205	-0.1852
652	SLU 72	-1.2	0.42	268.07	33.8591	-1.2002	-0.1836
652	SLU 73	-1.18	0.6	289.29	36.5599	-1.2817	-0.2007
652	SLU 74	-1.2	0.38	293.62	37.0894	-1.3085	-0.2055
652	SLU 75	-1.2	0.56	293.64	37.0993	-1.3037	-0.204
652	SLU 76	-1.19	0.6	292.03	36.8988	-1.2976	-0.2036
652	SLU 77	-1.21	0.38	296.35	37.4282	-1.3244	-0.2084
652	SLU 78	-1.21	0.56	296.37	37.4382	-1.3196	-0.2068
652	SLU 79	-1.2	0.31	294.72	37.221	-1.3215	-0.2091
652	SLU 80	-1.2	0.49	294.74	37.231	-1.3167	-0.2076
652	SLU 81	-1.18	0.34	300.68	37.9884	-1.3396	-0.2136
652	SLU 82	-1.18	0.51	300.71	37.9984	-1.3348	-0.212
652	SLU 83	-1.19	0.34	303.42	38.3273	-1.3555	-0.2165
652	SLU 84	-1.19	0.51	303.44	38.3372	-1.3507	-0.2149
652	SLE RA 1	-0.89	0.13	196.56	24.8206	-0.8924	-0.1355
652	SLE RA 2	-0.89	0.32	196.59	24.8316	-0.8871	-0.1337
652	SLE RA 3	-0.9	0.17	199.47	25.1846	-0.9049	-0.1369
652	SLE RA 4	-0.9	0.29	199.48	25.1912	-0.9018	-0.1359
652	SLE RA 5	-0.9	0.32	198.41	25.0575	-0.8977	-0.1356
652	SLE RA 6	-0.91	0.17	201.29	25.4105	-0.9156	-0.1388
652	SLE RA 7	-0.91	0.29	201.31	25.4171	-0.9124	-0.1378
652	SLE RA 8	-0.91	0.13	200.2	25.2724	-0.9136	-0.1393
652	SLE RA 9	-0.91	0.24	200.22	25.279	-0.9105	-0.1383
652	SLE RA 10	-0.89	0.36	214.37	27.0795	-0.9648	-0.1497
652	SLE RA 11	-0.9	0.22	217.25	27.4325	-0.9826	-0.1529
652	SLE RA 12	-0.9	0.33	217.27	27.4392	-0.9794	-0.1518
652	SLE RA 13	-0.9	0.36	216.19	27.3054	-0.9754	-0.1516
652	SLE RA 14	-0.91	0.22	219.07	27.6584	-0.9933	-0.1548
652	SLE RA 15	-0.91	0.33	219.09	27.6651	-0.9901	-0.1538
652	SLE RA 16	-0.91	0.17	217.99	27.5203	-0.9913	-0.1553
652	SLE RA 17	-0.91	0.29	218	27.5269	-0.9881	-0.1542
652	SLE RA 18	-0.89	0.19	221.96	28.0319	-1.0034	-0.1583
652	SLE RA 19	-0.89	0.31	221.98	28.0385	-1.0002	-0.1572
652	SLE RA 20	-0.9	0.19	223.78	28.2578	-1.014	-0.1602
652	SLE RA 21	-0.9	0.31	223.8	28.2644	-1.0108	-0.1591
652	SLE FR 1	-0.89	0.13	196.56	24.8206	-0.8924	-0.1355
652	SLE FR 2	-0.89	0.16	196.57	24.8228	-0.8913	-0.1351
652	SLE FR 3	-0.89	0.13	197.29	24.9109	-0.8966	-0.1362
652	SLE FR 4	-0.89	0.18	204.19	25.7862	-0.9246	-0.1419
652	SLE FR 5	-0.89	0.15	204.91	25.8743	-0.9299	-0.1431
652	SLE FR 6	-0.89	0.16	209.26	26.4262	-0.9479	-0.1469
652	SLE QP 1	-0.89	0.13	196.56	24.8206	-0.8924	-0.1355
652	SLE QP 2	-0.89	0.15	204.18	25.784	-0.9257	-0.1423
652	SLD 1	16.23	4.29	199.67	26.0832	-0.3017	-2.4039
652	SLD 2	16.28	3.58	199.56	26.0595	-0.2955	-2.3678
652	SLD 3	16.02	-1.8	200.52	25.9321	-0.4566	-2.4773
652	SLD 4	16.07	-2.51	200.41	25.9083	-0.4504	-2.4412
652	SLD 5	4.55	10.75	201.55	26.1072	-0.5047	-0.7159
652	SLD 6	4.59	10.28	201.48	26.0916	-0.5007	-0.6922
652	SLD 7	3.85	-9.54	204.4	25.6034	-1.0209	-0.9605
652	SLD 8	3.89	-10.01	204.33	25.5878	-1.0169	-0.9369
652	SLD 9	-5.67	10.3	204.04	25.9801	-0.8345	0.6523
652	SLD 10	-5.64	9.83	203.96	25.9645	-0.8304	0.6759
652	SLD 11	-6.37	-9.99	206.88	25.4763	-1.3507	0.4076
652	SLD 12	-6.34	-10.45	206.81	25.4607	-1.3467	0.4313
652	SLD 13	-17.85	2.8	207.95	25.6596	-1.401	2.1566
652	SLD 14	-17.8	2.09	207.84	25.6358	-1.3948	2.1927
652	SLD 15	-18.06	-3.29	208.81	25.5084	-1.5558	2.0832
652	SLD 16	-18.01	-4	208.7	25.4847	-1.5497	2.1193
652	SLV 1	39.15	9.65	193.64	26.5107	0.5301	-5.4335
652	SLV 2	39.27	8	193.38	26.4553	0.5444	-5.3495
652	SLV 3	38.66	-4.21	195.6	26.1668	0.1784	-5.6009
652	SLV 4	38.78	-5.86	195.34	26.1114	0.1927	-5.5169
652	SLV 5	11.85	24.3	198.09	26.5331	0.042	-1.4902
652	SLV 6	11.92	23.24	197.93	26.4974	0.0512	-1.4361
652	SLV 7	10.21	-21.9	204.62	25.3867	-1.1303	-2.0483
652	SLV 8	10.28	-22.96	204.45	25.351	-1.1211	-1.9941
652	SLV 9	-12.07	23.26	203.91	26.2169	-0.7303	1.7095
652	SLV 10	-11.99	22.19	203.74	26.1812	-0.7211	1.7637

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLV 11	-13.7	-22.95	210.43	25.0705	-1.9026	1.1515
652	SLV 12	-13.63	-24.01	210.27	25.0348	-1.8934	1.2056
652	SLV 13	-40.56	6.16	213.02	25.4565	-2.0441	5.2323
652	SLV 14	-40.45	4.5	212.76	25.4011	-2.0298	5.3163
652	SLV 15	-41.05	-7.7	214.98	25.1126	-2.3958	5.0649
652	SLV 16	-40.94	-9.36	214.72	25.0572	-2.3815	5.1489
652	CRTFP Ux+	0	0	0	0	0	0
652	CRTFP Ux-	0	0	0	0	0	0
652	CRTFP Uy+	0	0	0	0	0	0
652	CRTFP Uy-	0	0	0	0	0	0
655	SLU 1	-0.88	-1.31	171.3	-40.9625	2.6352	-0.2888
655	SLU 2	-0.88	-1.05	171.28	-40.9565	2.6396	-0.2935
655	SLU 3	-0.9	-1.28	175.23	-41.8986	2.6961	-0.2947
655	SLU 4	-0.9	-1.12	175.22	-41.895	2.6988	-0.2975
655	SLU 5	-0.89	-1.07	173.78	-41.5598	2.6767	-0.2964
655	SLU 6	-0.9	-1.3	177.73	-42.5018	2.7332	-0.2976
655	SLU 7	-0.91	-1.14	177.72	-42.4982	2.7359	-0.3004
655	SLU 8	-0.9	-1.36	176.3	-42.1691	2.7093	-0.2947
655	SLU 9	-0.9	-1.2	176.29	-42.1655	2.712	-0.2975
655	SLU 10	-0.9	-1.11	195.32	-46.6778	3.0138	-0.3084
655	SLU 11	-0.92	-1.33	199.27	-47.6198	3.0703	-0.3096
655	SLU 12	-0.92	-1.17	199.26	-47.6162	3.073	-0.3124
655	SLU 13	-0.91	-1.13	197.82	-47.281	3.0508	-0.3113
655	SLU 14	-0.92	-1.35	201.77	-48.2231	3.1073	-0.3125
655	SLU 15	-0.93	-1.2	201.76	-48.2195	3.11	-0.3153
655	SLU 16	-0.92	-1.41	200.34	-47.8903	3.0834	-0.3096
655	SLU 17	-0.92	-1.26	200.33	-47.8867	3.0861	-0.3124
655	SLU 18	-0.91	-1.39	205.65	-49.1358	3.1696	-0.3101
655	SLU 19	-0.91	-1.24	205.64	-49.1322	3.1723	-0.3129
655	SLU 20	-0.92	-1.42	208.15	-49.739	3.2067	-0.313
655	SLU 21	-0.92	-1.26	208.14	-49.7354	3.2094	-0.3158
655	SLU 22	-0.95	-1.18	193.07	-46.0787	3.0025	-0.3167
655	SLU 23	-0.95	-0.91	193.05	-46.0727	3.007	-0.3214
655	SLU 24	-0.97	-1.14	197	-47.0148	3.0635	-0.3225
655	SLU 25	-0.97	-0.98	196.99	-47.0112	3.0662	-0.3253
655	SLU 26	-0.96	-0.94	195.55	-46.676	3.0441	-0.3243
655	SLU 27	-0.98	-1.16	199.5	-47.618	3.1006	-0.3254
655	SLU 28	-0.98	-1	199.49	-47.6144	3.1033	-0.3282
655	SLU 29	-0.97	-1.22	198.07	-47.2853	3.0766	-0.3225
655	SLU 30	-0.97	-1.06	198.06	-47.2817	3.0793	-0.3253
655	SLU 31	-0.97	-0.97	217.1	-51.794	3.3812	-0.3362
655	SLU 32	-0.99	-1.2	221.05	-52.736	3.4376	-0.3374
655	SLU 33	-0.99	-1.04	221.04	-52.7324	3.4403	-0.3402
655	SLU 34	-0.98	-0.99	219.6	-52.3972	3.4182	-0.3392
655	SLU 35	-1	-1.22	223.55	-53.3393	3.4747	-0.3403
655	SLU 36	-1	-1.06	223.54	-53.3357	3.4774	-0.3431
655	SLU 37	-0.99	-1.28	222.12	-53.0065	3.4508	-0.3374
655	SLU 38	-0.99	-1.12	222.1	-53.0029	3.4535	-0.3402
655	SLU 39	-0.98	-1.26	227.42	-54.252	3.537	-0.338
655	SLU 40	-0.98	-1.1	227.41	-54.2483	3.5397	-0.3408
655	SLU 41	-0.99	-1.28	229.92	-54.8552	3.5741	-0.3409
655	SLU 42	-0.99	-1.12	229.91	-54.8516	3.5768	-0.3437
655	SLU 43	-1.12	-1.76	215.22	-51.4972	3.2997	-0.3659
655	SLU 44	-1.12	-1.49	215.2	-51.4912	3.3042	-0.3706
655	SLU 45	-1.13	-1.72	219.15	-52.4332	3.3607	-0.3718
655	SLU 46	-1.14	-1.56	219.14	-52.4296	3.3634	-0.3746
655	SLU 47	-1.13	-1.51	217.7	-52.0944	3.3413	-0.3735
655	SLU 48	-1.14	-1.74	221.65	-53.0365	3.3978	-0.3747
655	SLU 49	-1.14	-1.58	221.64	-53.0329	3.4005	-0.3775
655	SLU 50	-1.14	-1.8	220.22	-52.7037	3.3739	-0.3718
655	SLU 51	-1.14	-1.64	220.21	-52.7001	3.3766	-0.3746
655	SLU 52	-1.14	-1.55	239.25	-57.2124	3.6784	-0.3855
655	SLU 53	-1.15	-1.77	243.2	-58.1545	3.7348	-0.3867
655	SLU 54	-1.16	-1.62	243.19	-58.1509	3.7375	-0.3895
655	SLU 55	-1.15	-1.57	241.75	-57.8157	3.7154	-0.3884
655	SLU 56	-1.16	-1.8	245.7	-58.7577	3.7719	-0.3896
655	SLU 57	-1.16	-1.64	245.69	-58.7541	3.7746	-0.3924
655	SLU 58	-1.16	-1.85	244.27	-58.425	3.748	-0.3867
655	SLU 59	-1.16	-1.7	244.25	-58.4214	3.7507	-0.3895
655	SLU 60	-1.15	-1.83	249.57	-59.6704	3.8342	-0.3872
655	SLU 61	-1.15	-1.68	249.56	-59.6668	3.8369	-0.39
655	SLU 62	-1.16	-1.86	252.07	-60.2737	3.8713	-0.3901
655	SLU 63	-1.16	-1.7	252.06	-60.2701	3.874	-0.3929
655	SLU 64	-1.19	-1.62	236.99	-56.6134	3.6671	-0.3938
655	SLU 65	-1.19	-1.36	236.97	-56.6074	3.6716	-0.3985
655	SLU 66	-1.21	-1.58	240.92	-57.5494	3.7281	-0.3996
655	SLU 67	-1.21	-1.42	240.91	-57.5458	3.7308	-0.4024
655	SLU 68	-1.2	-1.38	239.48	-57.2106	3.7087	-0.4014
655	SLU 69	-1.22	-1.6	243.42	-58.1527	3.7651	-0.4025
655	SLU 70	-1.22	-1.44	243.41	-58.1491	3.7678	-0.4053
655	SLU 71	-1.21	-1.66	241.99	-57.8199	3.7412	-0.3996
655	SLU 72	-1.21	-1.5	241.98	-57.8163	3.7439	-0.4024
655	SLU 73	-1.21	-1.41	261.02	-62.3286	4.0457	-0.4134
655	SLU 74	-1.23	-1.64	264.97	-63.2707	4.1022	-0.4145
655	SLU 75	-1.23	-1.48	264.96	-63.2671	4.1049	-0.4173
655	SLU 76	-1.22	-1.43	263.52	-62.9319	4.0828	-0.4163
655	SLU 77	-1.24	-1.66	267.47	-63.8739	4.1393	-0.4174
655	SLU 78	-1.24	-1.5	267.46	-63.8703	4.142	-0.4202
655	SLU 79	-1.23	-1.72	266.04	-63.5412	4.1154	-0.4145
655	SLU 80	-1.23	-1.56	266.03	-63.5375	4.1181	-0.4173

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
655	SLU 81	-1.22	-1.7	271.34	-64.7866	4.2016	-0.4151
655	SLU 82	-1.22	-1.54	271.33	-64.783	4.2043	-0.4179
655	SLU 83	-1.23	-1.72	273.84	-65.3899	4.2386	-0.418
655	SLU 84	-1.23	-1.56	273.83	-65.3862	4.2413	-0.4208
655	SLE RA 1	-0.9	-1.27	177.52	-42.4243	2.7401	-0.2968
655	SLE RA 2	-0.9	-1.1	177.5	-42.4203	2.7431	-0.2999
655	SLE RA 3	-0.91	-1.25	180.14	-43.0483	2.7808	-0.3007
655	SLE RA 4	-0.91	-1.14	180.13	-43.0459	2.7826	-0.3026
655	SLE RA 5	-0.91	-1.11	179.17	-42.8225	2.7678	-0.3018
655	SLE RA 6	-0.92	-1.26	181.8	-43.4505	2.8055	-0.3026
655	SLE RA 7	-0.92	-1.16	181.8	-43.4481	2.8073	-0.3045
655	SLE RA 8	-0.91	-1.3	180.85	-43.2287	2.7895	-0.3007
655	SLE RA 9	-0.91	-1.2	180.84	-43.2263	2.7913	-0.3025
655	SLE RA 10	-0.91	-1.14	193.54	-46.2345	2.9925	-0.3098
655	SLE RA 11	-0.92	-1.29	196.17	-46.8625	3.0302	-0.3106
655	SLE RA 12	-0.92	-1.18	196.16	-46.8601	3.032	-0.3125
655	SLE RA 13	-0.92	-1.15	195.2	-46.6366	3.0172	-0.3118
655	SLE RA 14	-0.93	-1.3	197.83	-47.2647	3.0549	-0.3126
655	SLE RA 15	-0.93	-1.2	197.83	-47.2623	3.0567	-0.3144
655	SLE RA 16	-0.93	-1.34	196.88	-47.0428	3.0389	-0.3106
655	SLE RA 17	-0.93	-1.24	196.87	-47.0404	3.0407	-0.3125
655	SLE RA 18	-0.92	-1.33	200.42	-47.8731	3.0964	-0.311
655	SLE RA 19	-0.92	-1.22	200.41	-47.8707	3.0982	-0.3128
655	SLE RA 20	-0.93	-1.34	202.08	-48.2753	3.1211	-0.3129
655	SLE RA 21	-0.93	-1.24	202.08	-48.2729	3.1229	-0.3148
655	SLE FR 1	-0.9	-1.27	177.52	-42.4243	2.7401	-0.2968
655	SLE FR 2	-0.9	-1.24	177.51	-42.4235	2.7407	-0.2974
655	SLE FR 3	-0.9	-1.28	178.18	-42.5852	2.75	-0.2976
655	SLE FR 4	-0.91	-1.26	184.38	-44.0582	2.8476	-0.3017
655	SLE FR 5	-0.91	-1.3	185.05	-44.2198	2.8569	-0.3018
655	SLE FR 6	-0.91	-1.3	188.97	-45.1487	2.9183	-0.3039
655	SLE QP 1	-0.9	-1.27	177.52	-42.4243	2.7401	-0.2968
655	SLE QP 2	-0.91	-1.29	184.39	-44.059	2.847	-0.3011
655	SLD 1	14.25	2.26	177.74	-42.1738	2.8193	3.1293
655	SLD 2	14.41	1.83	177.61	-42.1409	2.8157	3.2165
655	SLD 3	14.05	-3.41	179.49	-42.6494	2.7528	3.2069
655	SLD 4	14.21	-3.84	179.37	-42.6166	2.7492	3.2941
655	SLD 5	3.91	8.44	179.75	-42.7779	2.9403	0.5947
655	SLD 6	4.02	8.16	179.67	-42.7563	2.9379	0.6519
655	SLD 7	3.25	-10.44	185.6	-44.3633	2.7184	0.8536
655	SLD 8	3.36	-10.73	185.52	-44.3418	2.7161	0.9108
655	SLD 9	-5.17	8.14	183.25	-43.7761	2.9779	-1.5129
655	SLD 10	-5.06	7.86	183.17	-43.7546	2.9756	-1.4557
655	SLD 11	-5.83	-10.74	189.1	-45.3616	2.7561	-1.254
655	SLD 12	-5.73	-11.03	189.02	-45.34	2.7538	-1.1968
655	SLD 13	-16.03	1.26	189.4	-45.5013	2.9448	-3.8962
655	SLD 14	-15.86	0.83	189.28	-45.4685	2.9413	-3.809
655	SLD 15	-16.22	-4.41	191.16	-45.977	2.8783	-3.8186
655	SLD 16	-16.06	-4.84	191.04	-45.9441	2.8747	-3.7314
655	SLV 1	34.54	6.83	168.88	-39.6594	2.7799	7.7235
655	SLV 2	34.92	5.83	168.59	-39.5828	2.7716	7.9266
655	SLV 3	34.08	-6.07	172.88	-40.7399	2.6287	7.9019
655	SLV 4	34.45	-7.07	172.59	-40.6634	2.6204	8.105
655	SLV 5	10.37	20.89	173.73	-41.1135	3.0576	1.8008
655	SLV 6	10.61	20.24	173.54	-41.0641	3.0523	1.9317
655	SLV 7	8.82	-22.12	187.04	-44.7152	2.5536	2.3954
655	SLV 8	9.06	-22.77	186.85	-44.6659	2.5483	2.5263
655	SLV 9	-10.88	20.19	181.92	-43.452	3.1457	-3.1284
655	SLV 10	-10.63	19.54	181.73	-43.4027	3.1404	-2.9975
655	SLV 11	-12.42	-22.82	195.23	-47.0538	2.6417	-2.5338
655	SLV 12	-12.18	-23.47	195.04	-47.0044	2.6364	-2.4029
655	SLV 13	-36.27	4.49	196.19	-47.4546	3.0736	-8.7071
655	SLV 14	-35.89	3.49	195.9	-47.378	3.0653	-8.504
655	SLV 15	-36.73	-8.41	200.18	-48.5351	2.9224	-8.5287
655	SLV 16	-36.35	-9.41	199.89	-48.4585	2.9141	-8.3256
655	CRTFP Ux+	0	0	0	0	0	0
655	CRTFP Ux-	0	0	0	0	0	0
655	CRTFP Uy+	0	0	0	0	0	0
655	CRTFP Uy-	0	0	0	0	0	0
656	SLU 1	-0.03	-0.17	17	3.5896	-0.5289	0.0014
656	SLU 2	-0.03	-0.14	17	3.5887	-0.5287	0.0022
656	SLU 3	-0.03	-0.16	17.39	3.6706	-0.5411	0.0015
656	SLU 4	-0.03	-0.15	17.39	3.6701	-0.541	0.0021
656	SLU 5	-0.03	-0.14	17.24	3.6399	-0.5364	0.0022
656	SLU 6	-0.03	-0.17	17.64	3.7218	-0.5488	0.0015
656	SLU 7	-0.03	-0.15	17.64	3.7212	-0.5487	0.002
656	SLU 8	-0.03	-0.17	17.49	3.6919	-0.5443	0.0013
656	SLU 9	-0.03	-0.16	17.49	3.6914	-0.5442	0.0018
656	SLU 10	-0.02	-0.15	19.39	4.0866	-0.6033	0.001
656	SLU 11	-0.02	-0.17	19.79	4.1686	-0.6157	0.0003
656	SLU 12	-0.03	-0.16	19.79	4.168	-0.6156	0.0009
656	SLU 13	-0.03	-0.15	19.64	4.1378	-0.611	0.001
656	SLU 14	-0.03	-0.18	20.04	4.2197	-0.6234	0.0003
656	SLU 15	-0.03	-0.16	20.03	4.2192	-0.6233	0.0008
656	SLU 16	-0.02	-0.18	19.89	4.1899	-0.6189	0
656	SLU 17	-0.03	-0.17	19.89	4.1893	-0.6188	0.0006
656	SLU 18	-0.02	-0.18	20.42	4.301	-0.6354	-0.0004
656	SLU 19	-0.02	-0.16	20.42	4.3004	-0.6354	0.0002
656	SLU 20	-0.02	-0.18	20.67	4.3521	-0.6431	-0.0004
656	SLU 21	-0.02	-0.17	20.67	4.3516	-0.6431	0.0001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLU 22	-0.03	-0.16	19.18	4.0431	-0.5965	0.0021
656	SLU 23	-0.03	-0.13	19.17	4.0422	-0.5964	0.003
656	SLU 24	-0.03	-0.15	19.57	4.1241	-0.6087	0.0023
656	SLU 25	-0.03	-0.14	19.57	4.1235	-0.6086	0.0028
656	SLU 26	-0.03	-0.13	19.42	4.0933	-0.6041	0.0029
656	SLU 27	-0.03	-0.16	19.82	4.1752	-0.6164	0.0022
656	SLU 28	-0.03	-0.14	19.81	4.1747	-0.6163	0.0027
656	SLU 29	-0.03	-0.16	19.67	4.1454	-0.6119	0.002
656	SLU 30	-0.03	-0.15	19.67	4.1449	-0.6118	0.0025
656	SLU 31	-0.03	-0.14	21.57	4.5401	-0.6709	0.0018
656	SLU 32	-0.03	-0.16	21.97	4.622	-0.6833	0.0011
656	SLU 33	-0.03	-0.15	21.96	4.6215	-0.6832	0.0016
656	SLU 34	-0.03	-0.14	21.82	4.5913	-0.6786	0.0017
656	SLU 35	-0.03	-0.17	22.21	4.6732	-0.691	0.001
656	SLU 36	-0.03	-0.15	22.21	4.6726	-0.6909	0.0015
656	SLU 37	-0.03	-0.17	22.07	4.6433	-0.6865	0.0008
656	SLU 38	-0.03	-0.16	22.07	4.6428	-0.6864	0.0013
656	SLU 39	-0.02	-0.17	22.6	4.7544	-0.7031	0.0004
656	SLU 40	-0.03	-0.15	22.6	4.7539	-0.703	0.0009
656	SLU 41	-0.03	-0.17	22.85	4.8056	-0.7108	0.0003
656	SLU 42	-0.03	-0.16	22.85	4.805	-0.7107	0.0008
656	SLU 43	-0.04	-0.22	21.35	4.511	-0.6644	0.0015
656	SLU 44	-0.04	-0.19	21.35	4.5101	-0.6642	0.0024
656	SLU 45	-0.04	-0.22	21.74	4.592	-0.6766	0.0017
656	SLU 46	-0.04	-0.2	21.74	4.5915	-0.6765	0.0022
656	SLU 47	-0.04	-0.2	21.6	4.5613	-0.6719	0.0024
656	SLU 48	-0.04	-0.22	21.99	4.6432	-0.6843	0.0016
656	SLU 49	-0.04	-0.2	21.99	4.6427	-0.6842	0.0022
656	SLU 50	-0.04	-0.23	21.85	4.6134	-0.6798	0.0014
656	SLU 51	-0.04	-0.21	21.85	4.6128	-0.6797	0.0019
656	SLU 52	-0.03	-0.2	23.75	5.0081	-0.7388	0.0012
656	SLU 53	-0.03	-0.23	24.14	5.09	-0.7511	0.0005
656	SLU 54	-0.03	-0.21	24.14	5.0894	-0.7511	0.001
656	SLU 55	-0.03	-0.21	23.99	5.0592	-0.7465	0.0011
656	SLU 56	-0.03	-0.23	24.39	5.1411	-0.7589	0.0004
656	SLU 57	-0.03	-0.21	24.39	5.1406	-0.7588	0.001
656	SLU 58	-0.03	-0.24	24.24	5.1113	-0.7544	0.0002
656	SLU 59	-0.03	-0.22	24.24	5.1107	-0.7543	0.0007
656	SLU 60	-0.03	-0.23	24.78	5.2224	-0.7709	-0.0002
656	SLU 61	-0.03	-0.22	24.78	5.2218	-0.7708	0.0003
656	SLU 62	-0.03	-0.24	25.02	5.2735	-0.7786	-0.0003
656	SLU 63	-0.03	-0.22	25.02	5.273	-0.7785	0.0003
656	SLU 64	-0.04	-0.21	23.53	4.9645	-0.732	0.0022
656	SLU 65	-0.04	-0.18	23.53	4.9636	-0.7318	0.0031
656	SLU 66	-0.04	-0.21	23.92	5.0455	-0.7442	0.0024
656	SLU 67	-0.04	-0.19	23.92	5.045	-0.7441	0.003
656	SLU 68	-0.04	-0.19	23.77	5.0147	-0.7395	0.0031
656	SLU 69	-0.04	-0.21	24.17	5.0967	-0.7519	0.0024
656	SLU 70	-0.04	-0.19	24.17	5.0961	-0.7518	0.0029
656	SLU 71	-0.04	-0.22	24.03	5.0668	-0.7474	0.0021
656	SLU 72	-0.04	-0.2	24.02	5.0663	-0.7473	0.0027
656	SLU 73	-0.03	-0.19	25.92	5.4615	-0.8064	0.0019
656	SLU 74	-0.03	-0.22	26.32	5.5434	-0.8188	0.0012
656	SLU 75	-0.03	-0.2	26.32	5.5429	-0.8187	0.0017
656	SLU 76	-0.03	-0.2	26.17	5.5127	-0.8141	0.0019
656	SLU 77	-0.03	-0.22	26.57	5.5946	-0.8265	0.0012
656	SLU 78	-0.03	-0.2	26.56	5.5941	-0.8264	0.0017
656	SLU 79	-0.03	-0.23	26.42	5.5648	-0.822	0.0009
656	SLU 80	-0.03	-0.21	26.42	5.5642	-0.8219	0.0015
656	SLU 81	-0.03	-0.22	26.95	5.6758	-0.8385	0.0005
656	SLU 82	-0.03	-0.21	26.95	5.6753	-0.8385	0.001
656	SLU 83	-0.03	-0.23	27.2	5.727	-0.8462	0.0005
656	SLU 84	-0.03	-0.21	27.2	5.7264	-0.8462	0.001
656	SLE RA 1	-0.03	-0.16	17.62	3.7192	-0.5482	0.0016
656	SLE RA 2	-0.03	-0.15	17.62	3.7186	-0.5481	0.0022
656	SLE RA 3	-0.03	-0.16	17.88	3.7732	-0.5563	0.0017
656	SLE RA 4	-0.03	-0.15	17.88	3.7728	-0.5563	0.002
656	SLE RA 5	-0.03	-0.15	17.78	3.7527	-0.5532	0.0021
656	SLE RA 6	-0.03	-0.16	18.05	3.8073	-0.5615	0.0017
656	SLE RA 7	-0.03	-0.15	18.05	3.8069	-0.5614	0.002
656	SLE RA 8	-0.03	-0.17	17.95	3.7874	-0.5585	0.0015
656	SLE RA 9	-0.03	-0.16	17.95	3.787	-0.5584	0.0019
656	SLE RA 10	-0.03	-0.15	19.22	4.0505	-0.5978	0.0014
656	SLE RA 11	-0.03	-0.17	19.48	4.1051	-0.6061	0.0009
656	SLE RA 12	-0.03	-0.16	19.48	4.1048	-0.606	0.0012
656	SLE RA 13	-0.03	-0.15	19.38	4.0846	-0.603	0.0013
656	SLE RA 14	-0.03	-0.17	19.65	4.1392	-0.6112	0.0008
656	SLE RA 15	-0.03	-0.16	19.64	4.1389	-0.6111	0.0012
656	SLE RA 16	-0.03	-0.17	19.55	4.1194	-0.6082	0.0007
656	SLE RA 17	-0.03	-0.16	19.55	4.119	-0.6081	0.001
656	SLE RA 18	-0.03	-0.17	19.9	4.1934	-0.6192	0.0004
656	SLE RA 19	-0.03	-0.16	19.9	4.193	-0.6192	0.0008
656	SLE RA 20	-0.03	-0.18	20.07	4.2275	-0.6244	0.0004
656	SLE RA 21	-0.03	-0.16	20.07	4.2271	-0.6243	0.0007
656	SLE FR 1	-0.03	-0.16	17.62	3.7192	-0.5482	0.0016
656	SLE FR 2	-0.03	-0.16	17.62	3.7191	-0.5482	0.0017
656	SLE FR 3	-0.03	-0.17	17.69	3.7328	-0.5503	0.0016
656	SLE FR 4	-0.03	-0.16	18.31	3.8613	-0.5695	0.0013
656	SLE FR 5	-0.03	-0.17	18.37	3.8751	-0.5716	0.0012
656	SLE FR 6	-0.03	-0.17	18.76	3.9563	-0.5837	0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLE QP 1	-0.03	-0.16	17.62	3.7192	-0.5482	0.0016
656	SLE QP 2	-0.03	-0.17	18.31	3.8615	-0.5695	0.0012
656	SLD 1	1.48	0.18	17.7	3.8163	-0.5502	-0.3683
656	SLD 2	1.48	0.14	17.68	3.8135	-0.5499	-0.3697
656	SLD 3	1.5	-0.39	17.9	3.8597	-0.5571	-0.3858
656	SLD 4	1.5	-0.42	17.89	3.8569	-0.5568	-0.3873
656	SLD 5	0.4	0.8	17.82	3.7826	-0.5533	-0.0828
656	SLD 6	0.4	0.78	17.81	3.7808	-0.5531	-0.0837
656	SLD 7	0.46	-1.09	18.5	3.9272	-0.5763	-0.1413
656	SLD 8	0.46	-1.11	18.49	3.9254	-0.5761	-0.1422
656	SLD 9	-0.51	0.78	18.12	3.7975	-0.5629	0.1447
656	SLD 10	-0.51	0.76	18.12	3.7957	-0.5627	0.1437
656	SLD 11	-0.45	-1.12	18.8	3.9421	-0.586	0.0861
656	SLD 12	-0.45	-1.14	18.8	3.9403	-0.5857	0.0852
656	SLD 13	-1.55	0.09	18.72	3.866	-0.5822	0.3897
656	SLD 14	-1.55	0.06	18.71	3.8632	-0.5819	0.3883
656	SLD 15	-1.54	-0.48	18.93	3.9094	-0.5892	0.3722
656	SLD 16	-1.54	-0.51	18.92	3.9066	-0.5888	0.3707
656	SLV 1	3.5	0.62	16.88	3.7562	-0.5245	-0.8635
656	SLV 2	3.5	0.54	16.86	3.7499	-0.5238	-0.8669
656	SLV 3	3.54	-0.67	17.35	3.8551	-0.5403	-0.9035
656	SLV 4	3.54	-0.75	17.32	3.8487	-0.5395	-0.9069
656	SLV 5	0.97	2.05	17.18	3.6811	-0.5323	-0.1969
656	SLV 6	0.97	1.99	17.16	3.677	-0.5318	-0.1991
656	SLV 7	1.11	-2.27	18.73	4.0105	-0.5847	-0.3303
656	SLV 8	1.11	-2.32	18.71	4.0064	-0.5842	-0.3325
656	SLV 9	-1.16	1.98	17.9	3.7165	-0.5548	0.3349
656	SLV 10	-1.16	1.93	17.89	3.7124	-0.5543	0.3328
656	SLV 11	-1.02	-2.33	19.45	4.0459	-0.6072	0.2015
656	SLV 12	-1.02	-2.38	19.43	4.0418	-0.6067	0.1994
656	SLV 13	-3.6	0.42	19.29	3.8742	-0.5995	0.9094
656	SLV 14	-3.6	0.34	19.27	3.8678	-0.5988	0.906
656	SLV 15	-3.56	-0.88	19.75	3.973	-0.6152	0.8693
656	SLV 16	-3.55	-0.96	19.73	3.9667	-0.6145	0.8659
656	CRTFP Ux+	0	0	0	0	0	0
656	CRTFP Ux-	0	0	0	0	0	0
656	CRTFP Uy+	0	0	0	0	0	0
656	CRTFP Uy-	0	0	0	0	0	0
658	SLU 1	-0.03	-0.53	44.51	9.1378	-6.6908	-0.0768
658	SLU 2	-0.03	-0.46	44.49	9.1327	-6.6879	-0.0663
658	SLU 3	-0.03	-0.52	45.53	9.3431	-6.845	-0.0762
658	SLU 4	-0.03	-0.48	45.52	9.3401	-6.8433	-0.0699
658	SLU 5	-0.03	-0.46	45.14	9.2631	-6.7854	-0.0677
658	SLU 6	-0.03	-0.53	46.18	9.4736	-6.9425	-0.0776
658	SLU 7	-0.03	-0.49	46.17	9.4705	-6.9408	-0.0713
658	SLU 8	-0.03	-0.54	45.81	9.3987	-6.8858	-0.0796
658	SLU 9	-0.03	-0.5	45.8	9.3956	-6.8841	-0.0733
658	SLU 10	-0.02	-0.49	50.77	10.3943	-7.6317	-0.0745
658	SLU 11	-0.01	-0.55	51.81	10.6048	-7.7888	-0.0844
658	SLU 12	-0.01	-0.51	51.8	10.6017	-7.7871	-0.0781
658	SLU 13	-0.02	-0.5	51.42	10.5248	-7.7292	-0.0759
658	SLU 14	-0.01	-0.56	52.46	10.7352	-7.8863	-0.0858
658	SLU 15	-0.01	-0.52	52.45	10.7322	-7.8846	-0.0795
658	SLU 16	-0.01	-0.58	52.08	10.6603	-7.8296	-0.0879
658	SLU 17	-0.01	-0.53	52.07	10.6573	-7.8279	-0.0815
658	SLU 18	-0.01	-0.57	53.48	10.9401	-8.0391	-0.0886
658	SLU 19	-0.01	-0.53	53.47	10.9371	-8.0374	-0.0822
658	SLU 20	-0.01	-0.58	54.13	11.0706	-8.1366	-0.09
658	SLU 21	-0.01	-0.54	54.12	11.0675	-8.1349	-0.0836
658	SLU 22	-0.03	-0.51	50.18	10.2748	-7.5417	-0.0751
658	SLU 23	-0.03	-0.44	50.16	10.2698	-7.5389	-0.0645
658	SLU 24	-0.03	-0.5	51.21	10.4802	-7.696	-0.0745
658	SLU 25	-0.03	-0.46	51.2	10.4772	-7.6942	-0.0681
658	SLU 26	-0.03	-0.45	50.81	10.4002	-7.6364	-0.0659
658	SLU 27	-0.03	-0.51	51.86	10.6106	-7.7935	-0.0759
658	SLU 28	-0.03	-0.47	51.85	10.6076	-7.7917	-0.0695
658	SLU 29	-0.03	-0.53	51.48	10.5357	-7.7368	-0.0779
658	SLU 30	-0.03	-0.49	51.47	10.5327	-7.735	-0.0716
658	SLU 31	-0.02	-0.47	56.44	11.5314	-8.4827	-0.0728
658	SLU 32	-0.01	-0.54	57.49	11.7419	-8.6398	-0.0827
658	SLU 33	-0.01	-0.5	57.48	11.7388	-8.638	-0.0764
658	SLU 34	-0.01	-0.48	57.09	11.6619	-8.5802	-0.0742
658	SLU 35	-0.01	-0.55	58.13	11.8723	-8.7373	-0.0841
658	SLU 36	-0.01	-0.5	58.12	11.8693	-8.7355	-0.0778
658	SLU 37	-0.01	-0.56	57.76	11.7974	-8.6806	-0.0862
658	SLU 38	-0.01	-0.52	57.75	11.7943	-8.6788	-0.0798
658	SLU 39	-0.01	-0.56	59.15	12.0772	-8.89	-0.0869
658	SLU 40	-0.01	-0.52	59.14	12.0742	-8.8883	-0.0805
658	SLU 41	-0.01	-0.57	59.8	12.2077	-8.9875	-0.0883
658	SLU 42	-0.01	-0.52	59.79	12.2046	-8.9858	-0.0819
658	SLU 43	-0.03	-0.69	55.92	11.4892	-8.4063	-0.1005
658	SLU 44	-0.03	-0.62	55.9	11.4842	-8.4034	-0.0899
658	SLU 45	-0.03	-0.68	56.94	11.6946	-8.5605	-0.0998
658	SLU 46	-0.03	-0.64	56.93	11.6915	-8.5588	-0.0935
658	SLU 47	-0.03	-0.63	56.55	11.6146	-8.5009	-0.0913
658	SLU 48	-0.03	-0.69	57.59	11.825	-8.658	-0.1012
658	SLU 49	-0.03	-0.65	57.58	11.822	-8.6563	-0.0949
658	SLU 50	-0.03	-0.71	57.21	11.7501	-8.6013	-0.1033
658	SLU 51	-0.03	-0.66	57.2	11.7471	-8.5996	-0.0969
658	SLU 52	-0.02	-0.65	62.18	12.7458	-9.3472	-0.0981

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
658	SLU 53	-0.02	-0.72	63.22	12.9563	-9.5043	-0.1081
658	SLU 54	-0.02	-0.67	63.21	12.9532	-9.5026	-0.1017
658	SLU 55	-0.02	-0.66	62.83	12.8763	-9.4447	-0.0995
658	SLU 56	-0.02	-0.72	63.87	13.0867	-9.6018	-0.1095
658	SLU 57	-0.02	-0.68	63.86	13.0837	-9.6001	-0.1031
658	SLU 58	-0.02	-0.74	63.49	13.0118	-9.5451	-0.1115
658	SLU 59	-0.02	-0.7	63.48	13.0087	-9.5434	-0.1052
658	SLU 60	-0.02	-0.74	64.89	13.2916	-9.7546	-0.1122
658	SLU 61	-0.02	-0.69	64.88	13.2886	-9.7529	-0.1059
658	SLU 62	-0.02	-0.74	65.53	13.4221	-9.8521	-0.1136
658	SLU 63	-0.02	-0.7	65.52	13.419	-9.8504	-0.1073
658	SLU 64	-0.03	-0.67	61.59	12.6263	-9.2572	-0.0988
658	SLU 65	-0.03	-0.6	61.57	12.6212	-9.2544	-0.0882
658	SLU 66	-0.03	-0.67	62.62	12.8317	-9.4114	-0.0981
658	SLU 67	-0.03	-0.63	62.61	12.8286	-9.4097	-0.0918
658	SLU 68	-0.03	-0.61	62.22	12.7517	-9.3519	-0.0896
658	SLU 69	-0.03	-0.68	63.26	12.9621	-9.509	-0.0995
658	SLU 70	-0.03	-0.63	63.25	12.9591	-9.5072	-0.0932
658	SLU 71	-0.03	-0.69	62.89	12.8872	-9.4522	-0.1016
658	SLU 72	-0.03	-0.65	62.88	12.8842	-9.4505	-0.0952
658	SLU 73	-0.02	-0.64	67.85	13.8829	-10.1982	-0.0964
658	SLU 74	-0.02	-0.7	68.89	14.0933	-10.3553	-0.1064
658	SLU 75	-0.02	-0.66	68.88	14.0903	-10.3535	-0.1
658	SLU 76	-0.02	-0.65	68.5	14.0133	-10.2957	-0.0978
658	SLU 77	-0.02	-0.71	69.54	14.2238	-10.4528	-0.1078
658	SLU 78	-0.02	-0.67	69.53	14.2207	-10.451	-0.1014
658	SLU 79	-0.02	-0.72	69.16	14.1489	-10.3961	-0.1098
658	SLU 80	-0.02	-0.68	69.15	14.1458	-10.3943	-0.1034
658	SLU 81	-0.02	-0.72	70.56	14.4287	-10.6055	-0.1105
658	SLU 82	-0.02	-0.68	70.55	14.4256	-10.6038	-0.1042
658	SLU 83	-0.02	-0.73	71.21	14.5591	-10.703	-0.1119
658	SLU 84	-0.02	-0.69	71.2	14.5561	-10.7013	-0.1056
658	SLE RA 1	-0.03	-0.52	46.13	9.4626	-6.9339	-0.0764
658	SLE RA 2	-0.03	-0.47	46.12	9.4593	-6.932	-0.0693
658	SLE RA 3	-0.03	-0.52	46.81	9.5995	-7.0367	-0.0759
658	SLE RA 4	-0.03	-0.49	46.81	9.5975	-7.0356	-0.0717
658	SLE RA 5	-0.03	-0.48	46.55	9.5462	-6.997	-0.0702
658	SLE RA 6	-0.03	-0.52	47.25	9.6865	-7.1017	-0.0769
658	SLE RA 7	-0.03	-0.5	47.24	9.6845	-7.1006	-0.0726
658	SLE RA 8	-0.03	-0.53	46.99	9.6366	-7.0639	-0.0782
658	SLE RA 9	-0.03	-0.5	46.99	9.6345	-7.0628	-0.074
658	SLE RA 10	-0.02	-0.5	50.3	10.3004	-7.5612	-0.0748
658	SLE RA 11	-0.02	-0.54	51	10.4407	-7.6659	-0.0814
658	SLE RA 12	-0.02	-0.51	50.99	10.4386	-7.6648	-0.0772
658	SLE RA 13	-0.02	-0.5	50.74	10.3873	-7.6262	-0.0757
658	SLE RA 14	-0.02	-0.54	51.43	10.5276	-7.731	-0.0824
658	SLE RA 15	-0.02	-0.52	51.42	10.5256	-7.7298	-0.0781
658	SLE RA 16	-0.02	-0.55	51.18	10.4777	-7.6931	-0.0837
658	SLE RA 17	-0.02	-0.53	51.17	10.4756	-7.692	-0.0795
658	SLE RA 18	-0.02	-0.55	52.11	10.6642	-7.8328	-0.0842
658	SLE RA 19	-0.02	-0.52	52.1	10.6622	-7.8316	-0.08
658	SLE RA 20	-0.02	-0.56	52.54	10.7512	-7.8978	-0.0851
658	SLE RA 21	-0.02	-0.53	52.53	10.7492	-7.8967	-0.0809
658	SLE FR 1	-0.03	-0.52	46.13	9.4626	-6.9339	-0.0764
658	SLE FR 2	-0.03	-0.51	46.13	9.462	-6.9336	-0.0749
658	SLE FR 3	-0.03	-0.52	46.3	9.4974	-6.9599	-0.0767
658	SLE FR 4	-0.02	-0.52	47.92	9.8224	-7.2032	-0.0773
658	SLE FR 5	-0.02	-0.53	48.1	9.8579	-7.2296	-0.0791
658	SLE FR 6	-0.02	-0.54	49.12	10.0634	-7.3834	-0.0803
658	SLE QP 1	-0.03	-0.52	46.13	9.4626	-6.9339	-0.0764
658	SLE QP 2	-0.02	-0.53	47.92	9.8231	-7.2036	-0.0787
658	SLD 1	3.89	0.33	46.35	9.8658	-6.9733	-0.9483
658	SLD 2	3.9	0.27	46.32	9.8598	-6.9696	-0.9583
658	SLD 3	3.94	-1.15	47.01	10.0267	-7.0794	-1.169
658	SLD 4	3.94	-1.21	46.98	10.0207	-7.0757	-1.1789
658	SLD 5	1.08	1.99	46.46	9.593	-6.9743	-0.0032
658	SLD 6	1.08	1.94	46.44	9.5891	-6.9718	-0.0097
658	SLD 7	1.24	-2.95	48.65	10.1292	-7.3279	-0.7387
658	SLD 8	1.24	-3	48.63	10.1253	-7.3254	-0.7452
658	SLD 9	-1.28	1.93	47.22	9.5209	-7.0817	0.5878
658	SLD 10	-1.28	1.89	47.2	9.517	-7.0793	0.5813
658	SLD 11	-1.13	-3	49.4	10.0572	-7.4354	-0.1477
658	SLD 12	-1.12	-3.05	49.39	10.0533	-7.4329	-0.1542
658	SLD 13	-3.99	0.15	48.87	9.6255	-7.3315	1.0215
658	SLD 14	-3.98	0.09	48.84	9.6196	-7.3278	1.0116
658	SLD 15	-3.94	-1.33	49.52	9.7864	-7.4376	0.8009
658	SLD 16	-3.94	-1.4	49.5	9.7805	-7.4339	0.7909
658	SLV 1	9.13	1.45	44.26	9.9292	-6.6682	-2.1195
658	SLV 2	9.14	1.29	44.2	9.9153	-6.6596	-2.1426
658	SLV 3	9.24	-1.93	45.75	10.295	-6.9095	-2.6219
658	SLV 4	9.25	-2.09	45.69	10.2811	-6.9008	-2.6451
658	SLV 5	2.55	5.21	44.57	9.3024	-6.6786	0.0751
658	SLV 6	2.56	5.11	44.53	9.2935	-6.673	0.0601
658	SLV 7	2.92	-6.04	49.55	10.522	-7.4827	-1.5997
658	SLV 8	2.93	-6.14	49.51	10.513	-7.4771	-1.6146
658	SLV 9	-2.97	5.08	46.34	9.1332	-6.93	1.4572
658	SLV 10	-2.97	4.98	46.3	9.1243	-6.9244	1.4423
658	SLV 11	-2.61	-6.17	51.31	10.3528	-7.7342	-0.2175
658	SLV 12	-2.6	-6.27	51.28	10.3438	-7.7286	-0.2325
658	SLV 13	-9.3	1.02	50.15	9.3651	-7.5064	2.4877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
658	SLV 14	-9.29	0.87	50.09	9.3512	-7.4977	2.4645
658	SLV 15	-9.19	-2.35	51.65	9.731	-7.7476	1.9852
658	SLV 16	-9.18	-2.51	51.59	9.7171	-7.7389	1.9621
658	CRTFP Ux+	0	0	0	0	0	0
658	CRTFP Ux-	0	0	0	0	0	0
658	CRTFP Uy+	0	0	0	0	0	0
658	CRTFP Uy-	0	0	0	0	0	0
659	SLU 1	0.07	-0.68	56.35	11.2525	8.3205	0.0895
659	SLU 2	0.07	-0.59	56.32	11.2422	8.3165	0.0767
659	SLU 3	0.07	-0.68	57.65	11.5052	8.5122	0.0882
659	SLU 4	0.07	-0.62	57.63	11.4991	8.5098	0.0805
659	SLU 5	0.07	-0.6	57.14	11.4035	8.4377	0.0779
659	SLU 6	0.07	-0.69	58.47	11.6665	8.6334	0.0894
659	SLU 7	0.07	-0.63	58.45	11.6603	8.631	0.0817
659	SLU 8	0.07	-0.7	57.99	11.575	8.5629	0.092
659	SLU 9	0.07	-0.65	57.97	11.5689	8.5605	0.0843
659	SLU 10	0.09	-0.63	64.26	12.7913	9.4901	0.0784
659	SLU 11	0.09	-0.71	65.59	13.0543	9.6858	0.0898
659	SLU 12	0.09	-0.66	65.57	13.0481	9.6834	0.0821
659	SLU 13	0.09	-0.64	65.08	12.9526	9.6113	0.0796
659	SLU 14	0.09	-0.72	66.41	13.2156	9.807	0.0911
659	SLU 15	0.09	-0.67	66.39	13.2094	9.8046	0.0834
659	SLU 16	0.09	-0.74	65.93	13.1241	9.7365	0.0937
659	SLU 17	0.09	-0.69	65.91	13.118	9.7341	0.086
659	SLU 18	0.1	-0.74	67.7	13.4655	9.997	0.092
659	SLU 19	0.09	-0.68	67.68	13.4593	9.9946	0.0843
659	SLU 20	0.1	-0.75	68.52	13.6268	10.1182	0.0932
659	SLU 21	0.1	-0.69	68.5	13.6206	10.1158	0.0855
659	SLU 22	0.08	-0.67	63.49	12.6462	9.3768	0.0852
659	SLU 23	0.08	-0.58	63.46	12.6359	9.3729	0.0724
659	SLU 24	0.08	-0.66	64.79	12.8989	9.5686	0.0838
659	SLU 25	0.08	-0.61	64.77	12.8928	9.5662	0.0761
659	SLU 26	0.08	-0.59	64.28	12.7972	9.4941	0.0736
659	SLU 27	0.08	-0.67	65.6	13.0602	9.6898	0.085
659	SLU 28	0.08	-0.62	65.59	13.054	9.6874	0.0773
659	SLU 29	0.08	-0.69	65.13	12.9688	9.6193	0.0876
659	SLU 30	0.08	-0.63	65.11	12.9626	9.6169	0.0799
659	SLU 31	0.1	-0.62	71.4	14.185	10.5464	0.0741
659	SLU 32	0.1	-0.7	72.73	14.448	10.7421	0.0855
659	SLU 33	0.1	-0.65	72.71	14.4419	10.7397	0.0778
659	SLU 34	0.1	-0.63	72.22	14.3463	10.6676	0.0753
659	SLU 35	0.1	-0.71	73.55	14.6093	10.8634	0.0867
659	SLU 36	0.1	-0.66	73.53	14.6031	10.861	0.079
659	SLU 37	0.1	-0.73	73.07	14.5179	10.7928	0.0893
659	SLU 38	0.1	-0.67	73.05	14.5117	10.7905	0.0816
659	SLU 39	0.11	-0.72	74.83	14.8592	11.0534	0.0876
659	SLU 40	0.11	-0.67	74.82	14.853	11.051	0.0799
659	SLU 41	0.11	-0.73	75.65	15.0205	11.1746	0.0888
659	SLU 42	0.11	-0.68	75.63	15.0143	11.1722	0.0811
659	SLU 43	0.08	-0.89	70.81	14.1504	10.4544	0.1179
659	SLU 44	0.08	-0.8	70.78	14.1401	10.4505	0.1051
659	SLU 45	0.08	-0.88	72.11	14.4031	10.6462	0.1165
659	SLU 46	0.08	-0.83	72.09	14.3969	10.6438	0.1088
659	SLU 47	0.08	-0.81	71.6	14.3014	10.5717	0.1063
659	SLU 48	0.09	-0.9	72.93	14.5644	10.7674	0.1177
659	SLU 49	0.09	-0.84	72.91	14.5582	10.765	0.11
659	SLU 50	0.09	-0.91	72.45	14.4729	10.6969	0.1203
659	SLU 51	0.09	-0.86	72.43	14.4668	10.6945	0.1126
659	SLU 52	0.1	-0.84	78.72	15.6892	11.624	0.1067
659	SLU 53	0.11	-0.92	80.05	15.9522	11.8197	0.1182
659	SLU 54	0.1	-0.87	80.03	15.946	11.8174	0.1105
659	SLU 55	0.1	-0.85	79.54	15.8505	11.7453	0.108
659	SLU 56	0.11	-0.93	80.87	16.1135	11.941	0.1194
659	SLU 57	0.11	-0.88	80.85	16.1073	11.9386	0.1117
659	SLU 58	0.11	-0.95	80.39	16.022	11.8705	0.122
659	SLU 59	0.11	-0.9	80.37	16.0159	11.8681	0.1143
659	SLU 60	0.11	-0.94	82.16	16.3634	12.131	0.1203
659	SLU 61	0.11	-0.89	82.14	16.3572	12.1286	0.1126
659	SLU 62	0.11	-0.96	82.98	16.5247	12.2522	0.1215
659	SLU 63	0.11	-0.9	82.96	16.5185	12.2498	0.1138
659	SLU 64	0.09	-0.87	77.95	15.5441	11.5108	0.1136
659	SLU 65	0.09	-0.79	77.92	15.5338	11.5068	0.1007
659	SLU 66	0.1	-0.87	79.24	15.7968	11.7025	0.1122
659	SLU 67	0.1	-0.82	79.23	15.7907	11.7001	0.1045
659	SLU 68	0.09	-0.8	78.74	15.6951	11.628	0.1019
659	SLU 69	0.1	-0.88	80.06	15.9581	11.8237	0.1134
659	SLU 70	0.1	-0.83	80.05	15.9519	11.8213	0.1057
659	SLU 71	0.1	-0.9	79.59	15.8667	11.7532	0.116
659	SLU 72	0.1	-0.84	79.57	15.8605	11.7508	0.1083
659	SLU 73	0.11	-0.82	85.86	17.0829	12.6804	0.1024
659	SLU 74	0.12	-0.91	87.19	17.3459	12.8761	0.1139
659	SLU 75	0.12	-0.85	87.17	17.3398	12.8737	0.1062
659	SLU 76	0.11	-0.84	86.68	17.2442	12.8016	0.1036
659	SLU 77	0.12	-0.92	88	17.5072	12.9973	0.1151
659	SLU 78	0.12	-0.87	87.99	17.501	12.9949	0.1074
659	SLU 79	0.12	-0.93	87.53	17.4158	12.9268	0.1177
659	SLU 80	0.12	-0.88	87.51	17.4096	12.9244	0.11
659	SLU 81	0.12	-0.93	89.29	17.7571	13.1873	0.116
659	SLU 82	0.12	-0.88	89.27	17.7509	13.185	0.1083
659	SLU 83	0.12	-0.94	90.11	17.9184	13.3086	0.1172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
659	SLU 84	0.12	-0.89	90.09	17.9122	13.3062	0.1095
659	SLE RA 1	0.07	-0.68	58.39	11.6507	8.6223	0.0883
659	SLE RA 2	0.07	-0.62	58.37	11.6438	8.6196	0.0797
659	SLE RA 3	0.07	-0.67	59.26	11.8192	8.7501	0.0874
659	SLE RA 4	0.07	-0.64	59.24	11.8151	8.7485	0.0822
659	SLE RA 5	0.07	-0.62	58.92	11.7513	8.7004	0.0806
659	SLE RA 6	0.07	-0.68	59.8	11.9267	8.8309	0.0882
659	SLE RA 7	0.07	-0.64	59.79	11.9226	8.8293	0.0831
659	SLE RA 8	0.07	-0.69	59.48	11.8657	8.7839	0.0899
659	SLE RA 9	0.07	-0.65	59.47	11.8616	8.7823	0.0848
659	SLE RA 10	0.08	-0.64	63.67	12.6766	9.402	0.0809
659	SLE RA 11	0.08	-0.7	64.55	12.8519	9.5325	0.0885
659	SLE RA 12	0.08	-0.66	64.54	12.8478	9.5309	0.0834
659	SLE RA 13	0.08	-0.65	64.21	12.7841	9.4828	0.0817
659	SLE RA 14	0.09	-0.71	65.1	12.9594	9.6133	0.0893
659	SLE RA 15	0.09	-0.67	65.08	12.9553	9.6117	0.0842
659	SLE RA 16	0.09	-0.72	64.78	12.8985	9.5663	0.0911
659	SLE RA 17	0.08	-0.68	64.77	12.8943	9.5647	0.0859
659	SLE RA 18	0.09	-0.71	65.95	13.126	9.74	0.0899
659	SLE RA 19	0.09	-0.68	65.94	13.1219	9.7384	0.0848
659	SLE RA 20	0.09	-0.72	66.5	13.2335	9.8208	0.0907
659	SLE RA 21	0.09	-0.68	66.49	13.2294	9.8192	0.0856
659	SLE FR 1	0.07	-0.68	58.39	11.6507	8.6223	0.0883
659	SLE FR 2	0.07	-0.66	58.39	11.6493	8.6218	0.0866
659	SLE FR 3	0.07	-0.68	58.61	11.6937	8.6546	0.0886
659	SLE FR 4	0.07	-0.68	60.66	12.0919	8.9571	0.0871
659	SLE FR 5	0.08	-0.69	60.88	12.1363	8.9899	0.0891
659	SLE FR 6	0.08	-0.69	62.17	12.3883	9.1811	0.0891
659	SLE QP 1	0.07	-0.68	58.39	11.6507	8.6223	0.0883
659	SLE QP 2	0.07	-0.69	60.66	12.0933	8.9576	0.0888
659	SLD 1	4.99	0.19	58.99	12.0089	8.6857	-1.2893
659	SLD 2	5	0.15	58.96	12.0035	8.6812	-1.282
659	SLD 3	5.05	-1.67	59.98	12.2927	8.8247	-1.0103
659	SLD 4	5.06	-1.72	59.96	12.2873	8.8202	-1.0029
659	SLD 5	1.46	2.41	58.66	11.6386	8.666	-0.7492
659	SLD 6	1.46	2.38	58.64	11.635	8.663	-0.7443
659	SLD 7	1.66	-3.8	61.97	12.5844	9.1294	0.181
659	SLD 8	1.66	-3.83	61.95	12.5809	9.1264	0.1858
659	SLD 9	-1.51	2.46	59.37	11.6057	8.7888	-0.0082
659	SLD 10	-1.51	2.43	59.35	11.6021	8.7858	-0.0034
659	SLD 11	-1.31	-3.76	62.68	12.5515	9.2522	0.9219
659	SLD 12	-1.31	-3.79	62.66	12.548	9.2492	0.9267
659	SLD 13	-4.91	0.34	61.36	11.8993	9.095	1.1805
659	SLD 14	-4.9	0.3	61.34	11.8939	9.0905	1.1879
659	SLD 15	-4.85	-1.52	62.36	12.183	9.234	1.4595
659	SLD 16	-4.84	-1.56	62.33	12.1776	9.2295	1.4669
659	SLV 1	11.57	1.31	56.79	11.9063	8.3259	-3.1256
659	SLV 2	11.59	1.21	56.72	11.8937	8.3155	-3.1084
659	SLV 3	11.71	-2.94	59.05	12.5495	8.6421	-2.4901
659	SLV 4	11.72	-3.04	58.98	12.5369	8.6316	-2.4729
659	SLV 5	3.31	6.37	56.08	11.0639	8.2903	-1.8423
659	SLV 6	3.32	6.3	56.04	11.0557	8.2836	-1.8313
659	SLV 7	3.77	-7.79	63.62	13.2078	9.3443	0.276
659	SLV 8	3.78	-7.85	63.57	13.1997	9.3376	0.2871
659	SLV 9	-3.63	6.48	57.75	10.9869	8.5776	-0.1095
659	SLV 10	-3.62	6.41	57.71	10.9787	8.5709	-0.0985
659	SLV 11	-3.17	-7.68	65.28	13.1308	9.6316	2.0089
659	SLV 12	-3.16	-7.74	65.24	13.1227	9.6249	2.0199
659	SLV 13	-11.57	1.67	62.34	11.6497	9.2836	2.6505
659	SLV 14	-11.56	1.57	62.27	11.6371	9.2732	2.6676
659	SLV 15	-11.44	-2.58	64.6	12.2928	9.5997	3.286
659	SLV 16	-11.42	-2.68	64.53	12.2802	9.5893	3.3032
659	CRTFP Ux+	0	0	0	0	0	0
659	CRTFP Ux-	0	0	0	0	0	0
659	CRTFP Uy+	0	0	0	0	0	0
659	CRTFP Uy-	0	0	0	0	0	0
661	SLU 1	0.13	-0.44	46.19	9.5231	-7.1582	-0.0924
661	SLU 2	0.13	-0.37	46.17	9.5136	-7.1537	-0.0807
661	SLU 3	0.13	-0.43	47.25	9.736	-7.3213	-0.0922
661	SLU 4	0.13	-0.39	47.23	9.7302	-7.3186	-0.0852
661	SLU 5	0.13	-0.37	46.83	9.6492	-7.2567	-0.0823
661	SLU 6	0.13	-0.44	47.92	9.8716	-7.4242	-0.0937
661	SLU 7	0.13	-0.39	47.9	9.8658	-7.4215	-0.0867
661	SLU 8	0.13	-0.45	47.53	9.7944	-7.3641	-0.0955
661	SLU 9	0.13	-0.41	47.51	9.7886	-7.3614	-0.0885
661	SLU 10	0.15	-0.38	52.65	10.8241	-8.1572	-0.0864
661	SLU 11	0.15	-0.44	53.74	11.0465	-8.3248	-0.0978
661	SLU 12	0.15	-0.4	53.72	11.0407	-8.3221	-0.0908
661	SLU 13	0.15	-0.38	53.32	10.9597	-8.2602	-0.0879
661	SLU 14	0.16	-0.45	54.4	11.1821	-8.4277	-0.0993
661	SLU 15	0.16	-0.41	54.39	11.1763	-8.425	-0.0923
661	SLU 16	0.15	-0.46	54.01	11.1049	-8.3676	-0.1011
661	SLU 17	0.15	-0.42	54	11.0991	-8.3649	-0.0941
661	SLU 18	0.16	-0.45	55.46	11.3953	-8.5918	-0.1004
661	SLU 19	0.16	-0.41	55.44	11.3895	-8.5891	-0.0934
661	SLU 20	0.16	-0.46	56.13	11.5309	-8.6947	-0.102
661	SLU 21	0.16	-0.42	56.11	11.5251	-8.692	-0.095
661	SLU 22	0.14	-0.41	52.01	10.699	-8.0578	-0.0914
661	SLU 23	0.14	-0.34	51.98	10.6894	-8.0533	-0.0798
661	SLU 24	0.15	-0.41	53.07	10.9118	-8.2209	-0.0912

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
661	SLU 25	0.15	-0.36	53.05	10.9061	-8.2182	-0.0842
661	SLU 26	0.15	-0.35	52.65	10.825	-8.1563	-0.0813
661	SLU 27	0.15	-0.41	53.73	11.0474	-8.3238	-0.0927
661	SLU 28	0.15	-0.37	53.71	11.0417	-8.3211	-0.0857
661	SLU 29	0.15	-0.43	53.34	10.9702	-8.2637	-0.0945
661	SLU 30	0.15	-0.38	53.33	10.9645	-8.261	-0.0875
661	SLU 31	0.16	-0.35	58.47	11.9999	-9.0568	-0.0854
661	SLU 32	0.17	-0.42	59.55	12.2223	-9.2244	-0.0968
661	SLU 33	0.17	-0.37	59.53	12.2166	-9.2217	-0.0898
661	SLU 34	0.17	-0.36	59.13	12.1355	-9.1598	-0.0869
661	SLU 35	0.17	-0.42	60.22	12.3579	-9.3274	-0.0984
661	SLU 36	0.17	-0.38	60.2	12.3522	-9.3247	-0.0914
661	SLU 37	0.17	-0.44	59.83	12.2807	-9.2672	-0.1001
661	SLU 38	0.17	-0.39	59.81	12.275	-9.2645	-0.0931
661	SLU 39	0.17	-0.43	61.28	12.5711	-9.4914	-0.0995
661	SLU 40	0.17	-0.38	61.26	12.5654	-9.4887	-0.0925
661	SLU 41	0.18	-0.43	61.94	12.7067	-9.5944	-0.101
661	SLU 42	0.18	-0.39	61.93	12.701	-9.5917	-0.094
661	SLU 43	0.16	-0.58	58.06	11.9769	-8.9972	-0.1205
661	SLU 44	0.16	-0.51	58.03	11.9674	-8.9927	-0.1088
661	SLU 45	0.16	-0.57	59.11	12.1898	-9.1603	-0.1202
661	SLU 46	0.16	-0.53	59.1	12.184	-9.1576	-0.1132
661	SLU 47	0.16	-0.51	58.7	12.103	-9.0957	-0.1103
661	SLU 48	0.17	-0.58	59.78	12.3254	-9.2632	-0.1218
661	SLU 49	0.17	-0.54	59.76	12.3196	-9.2605	-0.1148
661	SLU 50	0.17	-0.59	59.39	12.2482	-9.2031	-0.1235
661	SLU 51	0.17	-0.55	59.37	12.2424	-9.2004	-0.1165
661	SLU 52	0.18	-0.52	64.52	13.2778	-9.9962	-0.1144
661	SLU 53	0.19	-0.58	65.6	13.5003	-10.1638	-0.1259
661	SLU 54	0.19	-0.54	65.58	13.4945	-10.1611	-0.1189
661	SLU 55	0.18	-0.52	65.18	13.4135	-10.0992	-0.116
661	SLU 56	0.19	-0.59	66.27	13.6359	-10.2667	-0.1274
661	SLU 57	0.19	-0.55	66.25	13.6301	-10.264	-0.1204
661	SLU 58	0.19	-0.6	65.88	13.5587	-10.2066	-0.1291
661	SLU 59	0.19	-0.56	65.86	13.5529	-10.2039	-0.1222
661	SLU 60	0.19	-0.6	67.32	13.8491	-10.4308	-0.1285
661	SLU 61	0.19	-0.55	67.31	13.8433	-10.4281	-0.1215
661	SLU 62	0.19	-0.6	67.99	13.9847	-10.5337	-0.13
661	SLU 63	0.19	-0.56	67.97	13.9789	-10.531	-0.123
661	SLU 64	0.18	-0.55	63.87	13.1527	-9.8968	-0.1195
661	SLU 65	0.18	-0.48	63.85	13.1432	-9.8923	-0.1078
661	SLU 66	0.18	-0.55	64.93	13.3656	-10.0599	-0.1193
661	SLU 67	0.18	-0.5	64.91	13.3599	-10.0572	-0.1123
661	SLU 68	0.18	-0.49	64.51	13.2788	-9.9953	-0.1094
661	SLU 69	0.18	-0.55	65.6	13.5012	-10.1629	-0.1208
661	SLU 70	0.18	-0.51	65.58	13.4955	-10.1602	-0.1138
661	SLU 71	0.18	-0.57	65.21	13.424	-10.1028	-0.1225
661	SLU 72	0.18	-0.52	65.19	13.4183	-10.1001	-0.1155
661	SLU 73	0.2	-0.49	70.33	14.4537	-10.8958	-0.1134
661	SLU 74	0.2	-0.56	71.42	14.6761	-11.0634	-0.1249
661	SLU 75	0.2	-0.51	71.4	14.6703	-11.0607	-0.1179
661	SLU 76	0.2	-0.5	71	14.5893	-10.9988	-0.115
661	SLU 77	0.2	-0.56	72.08	14.8117	-11.1664	-0.1264
661	SLU 78	0.2	-0.52	72.07	14.806	-11.1637	-0.1194
661	SLU 79	0.2	-0.58	71.69	14.7345	-11.1063	-0.1282
661	SLU 80	0.2	-0.53	71.68	14.7288	-11.1036	-0.1212
661	SLU 81	0.21	-0.57	73.14	15.0249	-11.3304	-0.1275
661	SLU 82	0.21	-0.52	73.12	15.0191	-11.3277	-0.1205
661	SLU 83	0.21	-0.58	73.81	15.1605	-11.4334	-0.129
661	SLU 84	0.21	-0.53	73.79	15.1548	-11.4307	-0.1221
661	SLE RA 1	0.13	-0.43	47.86	9.8591	-7.4152	-0.0921
661	SLE RA 2	0.13	-0.38	47.84	9.8527	-7.4122	-0.0844
661	SLE RA 3	0.14	-0.43	48.56	10.001	-7.5239	-0.092
661	SLE RA 4	0.13	-0.4	48.55	9.9971	-7.5221	-0.0873
661	SLE RA 5	0.13	-0.39	48.28	9.9431	-7.4809	-0.0854
661	SLE RA 6	0.14	-0.43	49	10.0914	-7.5926	-0.093
661	SLE RA 7	0.14	-0.4	48.99	10.0876	-7.5908	-0.0883
661	SLE RA 8	0.14	-0.44	48.74	10.0399	-7.5525	-0.0942
661	SLE RA 9	0.14	-0.41	48.73	10.0361	-7.5507	-0.0895
661	SLE RA 10	0.15	-0.39	52.16	10.7264	-8.0812	-0.0881
661	SLE RA 11	0.15	-0.43	52.88	10.8746	-8.1929	-0.0957
661	SLE RA 12	0.15	-0.4	52.87	10.8708	-8.1911	-0.0911
661	SLE RA 13	0.15	-0.39	52.61	10.8168	-8.1499	-0.0891
661	SLE RA 14	0.15	-0.44	53.33	10.965	-8.2616	-0.0967
661	SLE RA 15	0.15	-0.41	53.32	10.9612	-8.2598	-0.0921
661	SLE RA 16	0.15	-0.45	53.07	10.9136	-8.2215	-0.0979
661	SLE RA 17	0.15	-0.42	53.06	10.9097	-8.2197	-0.0932
661	SLE RA 18	0.15	-0.44	54.03	11.1072	-8.3709	-0.0975
661	SLE RA 19	0.15	-0.41	54.02	11.1033	-8.3691	-0.0928
661	SLE RA 20	0.15	-0.45	54.48	11.1976	-8.4396	-0.0985
661	SLE RA 21	0.15	-0.42	54.47	11.1938	-8.4378	-0.0938
661	SLE FR 1	0.13	-0.43	47.86	9.8591	-7.4152	-0.0921
661	SLE FR 2	0.13	-0.42	47.85	9.8578	-7.4146	-0.0906
661	SLE FR 3	0.13	-0.43	48.03	9.8952	-7.4427	-0.0925
661	SLE FR 4	0.14	-0.43	49.71	10.2322	-7.7013	-0.0922
661	SLE FR 5	0.14	-0.44	49.89	10.2697	-7.7294	-0.0941
661	SLE FR 6	0.14	-0.44	50.94	10.4831	-7.8931	-0.0948
661	SLE QP 1	0.13	-0.43	47.86	9.8591	-7.4152	-0.0921
661	SLE QP 2	0.14	-0.43	49.71	10.2335	-7.7019	-0.0937
661	SLD 1	4.19	0.26	48.73	10.31	-7.5715	-0.9917

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
661	SLD 2	4.2	0.26	48.71	10.3066	-7.5689	-0.9917
661	SLD 3	4.14	-1.27	49.61	10.5648	-7.7097	-1.2269
661	SLD 4	4.15	-1.27	49.59	10.5614	-7.7071	-1.2269
661	SLD 5	1.43	2.09	48.08	9.8706	-7.4536	-0.0064
661	SLD 6	1.43	2.09	48.07	9.8684	-7.4519	-0.0064
661	SLD 7	1.27	-3	51.02	10.72	-7.9144	-0.7904
661	SLD 8	1.27	-3	51.01	10.7177	-7.9127	-0.7904
661	SLD 9	-0.99	2.13	48.41	9.7493	-7.4912	0.6029
661	SLD 10	-0.99	2.13	48.4	9.7471	-7.4895	0.603
661	SLD 11	-1.15	-2.96	51.35	10.5986	-7.9519	-0.1811
661	SLD 12	-1.15	-2.96	51.34	10.5964	-7.9502	-0.1811
661	SLD 13	-3.87	0.4	49.83	9.9056	-7.6967	1.0394
661	SLD 14	-3.87	0.4	49.81	9.9022	-7.6941	1.0395
661	SLD 15	-3.92	-1.13	50.71	10.1604	-7.835	0.8042
661	SLD 16	-3.92	-1.13	50.69	10.157	-7.8324	0.8043
661	SLV 1	9.62	1.15	47.44	10.4217	-7.4015	-2.2012
661	SLV 2	9.63	1.15	47.4	10.4138	-7.3954	-2.201
661	SLV 3	9.51	-2.33	49.45	10.9995	-7.7158	-2.7367
661	SLV 4	9.52	-2.33	49.4	10.9915	-7.7097	-2.7365
661	SLV 5	3.15	5.32	45.99	9.4151	-7.1362	0.0863
661	SLV 6	3.16	5.32	45.97	9.41	-7.1323	0.0864
661	SLV 7	2.78	-6.29	52.68	11.3409	-8.1838	-1.6989
661	SLV 8	2.78	-6.29	52.65	11.3358	-8.1799	-1.6988
661	SLV 9	-2.51	5.42	46.77	9.1312	-7.224	1.5113
661	SLV 10	-2.5	5.42	46.74	9.1261	-7.2201	1.5114
661	SLV 11	-2.88	-6.19	53.45	11.057	-8.2716	-0.2738
661	SLV 12	-2.87	-6.19	53.42	11.0519	-8.2677	-0.2737
661	SLV 13	-9.24	1.46	50.01	9.4755	-7.6942	2.5491
661	SLV 14	-9.23	1.46	49.97	9.4675	-7.6881	2.5492
661	SLV 15	-9.36	-2.02	52.02	10.0533	-8.0085	2.0135
661	SLV 16	-9.34	-2.02	51.98	10.0453	-8.0024	2.0137
661	CRTFP Ux+	0	0	0	0	0	0
661	CRTFP Ux-	0	0	0	0	0	0
661	CRTFP Uy+	0	0	0	0	0	0
661	CRTFP Uy-	0	0	0	0	0	0
663	SLU 1	0.45	-0.46	84.96	10.5516	11.5873	0.0357
663	SLU 2	0.45	-0.33	84.91	10.5423	11.5801	0.0169
663	SLU 3	0.46	-0.44	86.87	10.792	11.8504	0.0318
663	SLU 4	0.46	-0.36	86.84	10.7864	11.846	0.0206
663	SLU 5	0.45	-0.33	86.11	10.6942	11.7462	0.0171
663	SLU 6	0.47	-0.45	88.07	10.9439	12.0165	0.0321
663	SLU 7	0.47	-0.36	88.04	10.9383	12.0121	0.0208
663	SLU 8	0.46	-0.47	87.36	10.8554	11.9196	0.0362
663	SLU 9	0.46	-0.39	87.34	10.8498	11.9152	0.0249
663	SLU 10	0.5	-0.29	96.74	12.0249	13.1985	0.0089
663	SLU 11	0.51	-0.41	98.69	12.2747	13.4688	0.0238
663	SLU 12	0.51	-0.33	98.66	12.2691	13.4644	0.0126
663	SLU 13	0.51	-0.3	97.94	12.1768	13.3646	0.0091
663	SLU 14	0.52	-0.41	99.89	12.4266	13.6349	0.0241
663	SLU 15	0.52	-0.33	99.87	12.421	13.6306	0.0128
663	SLU 16	0.52	-0.44	99.19	12.3381	13.538	0.0282
663	SLU 17	0.52	-0.36	99.16	12.3324	13.5336	0.0169
663	SLU 18	0.53	-0.42	101.85	12.6697	13.8994	0.0242
663	SLU 19	0.52	-0.33	101.82	12.6641	13.895	0.013
663	SLU 20	0.53	-0.42	103.05	12.8216	14.0655	0.0245
663	SLU 21	0.53	-0.34	103.02	12.816	14.0611	0.0132
663	SLU 22	0.5	-0.37	95.56	11.8914	13.0353	0.0193
663	SLU 23	0.5	-0.23	95.51	11.882	13.028	0.0005
663	SLU 24	0.51	-0.35	97.47	12.1318	13.2983	0.0154
663	SLU 25	0.51	-0.27	97.44	12.1262	13.294	0.0042
663	SLU 26	0.51	-0.24	96.72	12.0339	13.1941	0.0007
663	SLU 27	0.52	-0.35	98.67	12.2837	13.4644	0.0157
663	SLU 28	0.52	-0.27	98.64	12.2781	13.4601	0.0044
663	SLU 29	0.52	-0.38	97.97	12.1952	13.3675	0.0198
663	SLU 30	0.52	-0.3	97.94	12.1896	13.3631	0.0085
663	SLU 31	0.55	-0.2	107.34	13.3647	14.6464	-0.0075
663	SLU 32	0.57	-0.32	109.29	13.6145	14.9167	0.0074
663	SLU 33	0.57	-0.23	109.27	13.6089	14.9124	-0.0038
663	SLU 34	0.56	-0.21	108.54	13.5166	14.8125	-0.0073
663	SLU 35	0.58	-0.32	110.5	13.7664	15.0829	0.0077
663	SLU 36	0.58	-0.24	110.47	13.7607	15.0785	-0.0036
663	SLU 37	0.57	-0.35	109.79	13.6778	14.9859	0.0118
663	SLU 38	0.57	-0.26	109.76	13.6722	14.9816	0.0005
663	SLU 39	0.58	-0.32	112.45	14.0095	15.3473	0.0078
663	SLU 40	0.58	-0.24	112.42	14.0039	15.3429	-0.0034
663	SLU 41	0.59	-0.33	113.65	14.1614	15.5134	0.0081
663	SLU 42	0.59	-0.25	113.63	14.1558	15.509	-0.0032
663	SLU 43	0.56	-0.64	106.81	13.2578	14.5671	0.052
663	SLU 44	0.56	-0.5	106.76	13.2484	14.5598	0.0332
663	SLU 45	0.58	-0.61	108.72	13.4982	14.8302	0.0481
663	SLU 46	0.57	-0.53	108.69	13.4926	14.8258	0.0369
663	SLU 47	0.57	-0.5	107.97	13.4003	14.7259	0.0335
663	SLU 48	0.58	-0.62	109.92	13.6501	14.9963	0.0484
663	SLU 49	0.58	-0.54	109.89	13.6445	14.9919	0.0371
663	SLU 50	0.58	-0.64	109.22	13.5615	14.8993	0.0525
663	SLU 51	0.58	-0.56	109.19	13.5559	14.895	0.0412
663	SLU 52	0.62	-0.47	118.59	14.7311	16.1782	0.0252
663	SLU 53	0.63	-0.58	120.54	14.9808	16.4486	0.0402
663	SLU 54	0.63	-0.5	120.51	14.9752	16.4442	0.0289
663	SLU 55	0.63	-0.47	119.79	14.883	16.3444	0.0255

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	SLU 56	0.64	-0.58	121.75	15.1327	16.6147	0.0404
663	SLU 57	0.64	-0.5	121.72	15.1271	16.6103	0.0291
663	SLU 58	0.63	-0.61	121.04	15.0442	16.5178	0.0445
663	SLU 59	0.63	-0.53	121.01	15.0386	16.5134	0.0332
663	SLU 60	0.64	-0.59	123.7	15.3759	16.8791	0.0406
663	SLU 61	0.64	-0.51	123.67	15.3702	16.8748	0.0293
663	SLU 62	0.65	-0.59	124.9	15.5277	17.0452	0.0408
663	SLU 63	0.65	-0.51	124.88	15.5221	17.0409	0.0295
663	SLU 64	0.62	-0.54	117.41	14.5975	16.0151	0.0356
663	SLU 65	0.62	-0.41	117.37	14.5882	16.0078	0.0168
663	SLU 66	0.63	-0.52	119.32	14.838	16.2781	0.0317
663	SLU 67	0.63	-0.44	119.29	14.8323	16.2737	0.0205
663	SLU 68	0.62	-0.41	118.57	14.7401	16.1739	0.0171
663	SLU 69	0.64	-0.52	120.52	14.9898	16.4442	0.032
663	SLU 70	0.64	-0.44	120.5	14.9842	16.4398	0.0207
663	SLU 71	0.63	-0.55	119.82	14.9013	16.3473	0.0361
663	SLU 72	0.63	-0.47	119.79	14.8957	16.3429	0.0248
663	SLU 73	0.67	-0.37	129.19	16.0708	17.6262	0.0088
663	SLU 74	0.68	-0.49	131.14	16.3206	17.8965	0.0238
663	SLU 75	0.68	-0.4	131.12	16.315	17.8921	0.0125
663	SLU 76	0.68	-0.38	130.39	16.2227	17.7923	0.0091
663	SLU 77	0.69	-0.49	132.35	16.4725	18.0626	0.024
663	SLU 78	0.69	-0.41	132.32	16.4669	18.0583	0.0128
663	SLU 79	0.69	-0.52	131.64	16.384	17.9657	0.0281
663	SLU 80	0.69	-0.44	131.61	16.3784	17.9613	0.0168
663	SLU 81	0.69	-0.49	134.3	16.7156	18.3271	0.0242
663	SLU 82	0.69	-0.41	134.28	16.71	18.3227	0.0129
663	SLU 83	0.7	-0.5	135.51	16.8675	18.4932	0.0244
663	SLU 84	0.7	-0.42	135.48	16.8619	18.4888	0.0131
663	SLE RA 1	0.46	-0.44	87.99	10.9344	12.001	0.031
663	SLE RA 2	0.46	-0.35	87.96	10.9282	11.9962	0.0184
663	SLE RA 3	0.47	-0.42	89.26	11.0947	12.1764	0.0284
663	SLE RA 4	0.47	-0.37	89.24	11.091	12.1735	0.0209
663	SLE RA 5	0.47	-0.35	88.76	11.0294	12.1069	0.0186
663	SLE RA 6	0.48	-0.43	90.06	11.196	12.2871	0.0286
663	SLE RA 7	0.48	-0.37	90.04	11.1922	12.2842	0.0211
663	SLE RA 8	0.47	-0.44	89.59	11.1369	12.2225	0.0313
663	SLE RA 9	0.47	-0.39	89.57	11.1332	12.2196	0.0238
663	SLE RA 10	0.5	-0.32	95.84	11.9166	13.0751	0.0131
663	SLE RA 11	0.51	-0.4	97.14	12.0831	13.2554	0.0231
663	SLE RA 12	0.51	-0.35	97.12	12.0794	13.2524	0.0156
663	SLE RA 13	0.5	-0.33	96.64	12.0179	13.1859	0.0133
663	SLE RA 14	0.51	-0.4	97.94	12.1844	13.3661	0.0233
663	SLE RA 15	0.51	-0.35	97.93	12.1807	13.3632	0.0158
663	SLE RA 16	0.51	-0.42	97.47	12.1254	13.3015	0.026
663	SLE RA 17	0.51	-0.37	97.45	12.1216	13.2986	0.0185
663	SLE RA 18	0.51	-0.41	99.25	12.3465	13.5424	0.0234
663	SLE RA 19	0.51	-0.35	99.23	12.3427	13.5395	0.0158
663	SLE RA 20	0.52	-0.41	100.05	12.4477	13.6531	0.0235
663	SLE RA 21	0.52	-0.35	100.03	12.444	13.6502	0.016
663	SLE FR 1	0.46	-0.44	87.99	10.9344	12.001	0.031
663	SLE FR 2	0.46	-0.42	87.98	10.9332	12.0001	0.0285
663	SLE FR 3	0.46	-0.44	88.31	10.9749	12.0453	0.031
663	SLE FR 4	0.48	-0.41	91.36	11.3568	12.4625	0.0262
663	SLE FR 5	0.48	-0.43	91.69	11.3985	12.5077	0.0288
663	SLE FR 6	0.49	-0.42	93.62	11.6404	12.7717	0.0272
663	SLE QP 1	0.46	-0.44	87.99	10.9344	12.001	0.031
663	SLE QP 2	0.48	-0.43	91.36	11.358	12.4634	0.0287
663	SLD 1	7.76	0.74	90.3	11.1902	12.2913	-1.1276
663	SLD 2	7.79	0.82	90.29	11.1835	12.2877	-1.1327
663	SLD 3	7.85	-2.06	91.79	11.4429	12.5153	-0.7359
663	SLD 4	7.88	-1.98	91.78	11.4363	12.5117	-0.741
663	SLD 5	2.53	4.15	88.79	10.9255	12.0727	-0.9114
663	SLD 6	2.54	4.2	88.78	10.9211	12.0704	-0.9148
663	SLD 7	2.82	-5.18	93.76	11.7681	12.8194	0.3943
663	SLD 8	2.83	-5.12	93.75	11.7637	12.817	0.391
663	SLD 9	-1.88	4.27	88.98	10.9524	12.1099	-0.3336
663	SLD 10	-1.86	4.32	88.97	10.948	12.1075	-0.337
663	SLD 11	-1.59	-5.06	93.95	11.795	12.8565	0.9721
663	SLD 12	-1.57	-5	93.94	11.7906	12.8542	0.9688
663	SLD 13	-6.92	1.12	90.95	11.2798	12.4152	0.7984
663	SLD 14	-6.89	1.21	90.93	11.2731	12.4116	0.7933
663	SLD 15	-6.83	-1.67	92.44	11.5326	12.6392	1.1901
663	SLD 16	-6.81	-1.59	92.42	11.5259	12.6356	1.185
663	SLV 1	17.51	2.21	88.94	10.9745	12.0685	-2.6636
663	SLV 2	17.58	2.4	88.91	10.9589	12.0603	-2.6754
663	SLV 3	17.71	-4.16	92.33	11.5488	12.5778	-1.7716
663	SLV 4	17.78	-3.97	92.3	11.5332	12.5695	-1.7834
663	SLV 5	5.27	9.99	85.5	10.3745	11.574	-2.1298
663	SLV 6	5.31	10.11	85.48	10.3645	11.5687	-2.1374
663	SLV 7	5.94	-11.24	96.8	12.2891	13.2716	0.8435
663	SLV 8	5.99	-11.12	96.78	12.279	13.2663	0.8359
663	SLV 9	-5.03	10.26	85.95	10.437	11.6606	-0.7785
663	SLV 10	-4.99	10.39	85.93	10.427	11.6553	-0.7861
663	SLV 11	-4.36	-10.97	97.25	12.3516	13.3582	2.1948
663	SLV 12	-4.31	-10.84	97.23	12.3415	13.3529	2.1872
663	SLV 13	-16.83	3.12	90.43	11.1828	12.3574	1.8408
663	SLV 14	-16.76	3.31	90.4	11.1672	12.3491	1.829
663	SLV 15	-16.62	-3.25	93.82	11.7572	12.8666	2.7328
663	SLV 16	-16.56	-3.06	93.79	11.7416	12.8584	2.7209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	CRTFP Ux+	0	0	0	0	0	0
663	CRTFP Ux-	0	0	0	0	0	0
663	CRTFP Uy+	0	0	0	0	0	0
663	CRTFP Uy-	0	0	0	0	0	0
665	SLU 1	0.18	0.04	29.12	6.9005	0.8513	-0.0383
665	SLU 2	0.18	0.08	29.11	6.8976	0.8508	-0.0396
665	SLU 3	0.19	0.05	29.77	7.0528	0.8705	-0.0397
665	SLU 4	0.19	0.08	29.76	7.0511	0.8701	-0.0405
665	SLU 5	0.18	0.09	29.52	6.9919	0.8629	-0.0403
665	SLU 6	0.19	0.05	30.18	7.1471	0.8825	-0.0404
665	SLU 7	0.19	0.08	30.17	7.1454	0.8822	-0.0412
665	SLU 8	0.19	0.04	29.94	7.0891	0.8755	-0.0397
665	SLU 9	0.19	0.07	29.93	7.0874	0.8752	-0.0405
665	SLU 10	0.2	0.12	33.15	7.8571	0.9694	-0.0447
665	SLU 11	0.21	0.08	33.81	8.0122	0.9891	-0.0448
665	SLU 12	0.21	0.11	33.8	8.0105	0.9888	-0.0456
665	SLU 13	0.2	0.12	33.55	7.9514	0.9815	-0.0454
665	SLU 14	0.21	0.09	34.21	8.1065	1.0012	-0.0455
665	SLU 15	0.21	0.11	34.2	8.1048	1.0009	-0.0463
665	SLU 16	0.21	0.08	33.97	8.0485	0.9941	-0.0448
665	SLU 17	0.21	0.1	33.96	8.0468	0.9938	-0.0456
665	SLU 18	0.21	0.09	34.89	8.2711	1.0208	-0.0455
665	SLU 19	0.21	0.11	34.88	8.2694	1.0205	-0.0463
665	SLU 20	0.21	0.09	35.29	8.3654	1.0329	-0.0462
665	SLU 21	0.21	0.12	35.29	8.3637	1.0326	-0.047
665	SLU 22	0.2	0.09	32.76	7.7713	0.9578	-0.0443
665	SLU 23	0.2	0.14	32.75	7.7684	0.9573	-0.0456
665	SLU 24	0.21	0.11	33.41	7.9236	0.9769	-0.0458
665	SLU 25	0.21	0.13	33.4	7.9219	0.9766	-0.0465
665	SLU 26	0.21	0.14	33.15	7.8627	0.9694	-0.0464
665	SLU 27	0.21	0.11	33.81	8.0179	0.989	-0.0465
665	SLU 28	0.21	0.14	33.81	8.0162	0.9887	-0.0473
665	SLU 29	0.21	0.1	33.57	7.9599	0.982	-0.0458
665	SLU 30	0.21	0.12	33.57	7.9582	0.9817	-0.0466
665	SLU 31	0.22	0.17	36.78	8.7278	1.0759	-0.0507
665	SLU 32	0.23	0.14	37.44	8.883	1.0956	-0.0508
665	SLU 33	0.23	0.17	37.44	8.8813	1.0953	-0.0516
665	SLU 34	0.23	0.17	37.19	8.8221	1.088	-0.0514
665	SLU 35	0.23	0.14	37.85	8.9773	1.1077	-0.0516
665	SLU 36	0.23	0.17	37.84	8.9756	1.1074	-0.0523
665	SLU 37	0.23	0.13	37.61	8.9193	1.1006	-0.0508
665	SLU 38	0.23	0.16	37.6	8.9176	1.1003	-0.0516
665	SLU 39	0.23	0.14	38.53	9.1419	1.1273	-0.0515
665	SLU 40	0.23	0.17	38.52	9.1402	1.127	-0.0523
665	SLU 41	0.23	0.14	38.93	9.2362	1.1394	-0.0523
665	SLU 42	0.23	0.17	38.93	9.2345	1.1391	-0.0531
665	SLU 43	0.23	0.03	36.61	8.6721	1.0702	-0.0477
665	SLU 44	0.23	0.08	36.6	8.6692	1.0697	-0.049
665	SLU 45	0.23	0.04	37.26	8.8244	1.0893	-0.0491
665	SLU 46	0.23	0.07	37.25	8.8227	1.089	-0.0499
665	SLU 47	0.23	0.08	37.01	8.7635	1.0818	-0.0497
665	SLU 48	0.24	0.05	37.67	8.9187	1.1014	-0.0499
665	SLU 49	0.24	0.07	37.66	8.917	1.1011	-0.0506
665	SLU 50	0.23	0.04	37.42	8.8607	1.0944	-0.0491
665	SLU 51	0.23	0.06	37.42	8.859	1.094	-0.0499
665	SLU 52	0.25	0.11	40.64	9.6287	1.1883	-0.0541
665	SLU 53	0.25	0.08	41.3	9.7838	1.208	-0.0542
665	SLU 54	0.25	0.1	41.29	9.7821	1.2077	-0.055
665	SLU 55	0.25	0.11	41.04	9.723	1.2004	-0.0548
665	SLU 56	0.26	0.08	41.7	9.8781	1.2201	-0.0549
665	SLU 57	0.26	0.11	41.69	9.8764	1.2198	-0.0557
665	SLU 58	0.25	0.07	41.46	9.8201	1.213	-0.0542
665	SLU 59	0.25	0.1	41.45	9.8184	1.2127	-0.055
665	SLU 60	0.26	0.08	42.38	10.0427	1.2397	-0.0549
665	SLU 61	0.26	0.11	42.37	10.041	1.2394	-0.0557
665	SLU 62	0.26	0.08	42.78	10.137	1.2518	-0.0556
665	SLU 63	0.26	0.11	42.78	10.1353	1.2515	-0.0564
665	SLU 64	0.25	0.09	40.25	9.5429	1.1767	-0.0537
665	SLU 65	0.25	0.13	40.24	9.54	1.1761	-0.055
665	SLU 66	0.25	0.1	40.9	9.6952	1.1958	-0.0552
665	SLU 67	0.25	0.13	40.89	9.6935	1.1955	-0.056
665	SLU 68	0.25	0.13	40.64	9.6343	1.1882	-0.0558
665	SLU 69	0.26	0.1	41.3	9.7895	1.2079	-0.0559
665	SLU 70	0.26	0.13	41.3	9.7878	1.2076	-0.0567
665	SLU 71	0.26	0.09	41.06	9.7315	1.2008	-0.0552
665	SLU 72	0.26	0.12	41.06	9.7298	1.2005	-0.056
665	SLU 73	0.27	0.17	44.27	10.4994	1.2948	-0.0601
665	SLU 74	0.27	0.13	44.93	10.6546	1.3145	-0.0602
665	SLU 75	0.27	0.16	44.93	10.6529	1.3142	-0.061
665	SLU 76	0.27	0.17	44.68	10.5937	1.3069	-0.0608
665	SLU 77	0.28	0.13	45.34	10.7489	1.3266	-0.061
665	SLU 78	0.28	0.16	45.33	10.7472	1.3262	-0.0618
665	SLU 79	0.28	0.12	45.1	10.6909	1.3195	-0.0602
665	SLU 80	0.28	0.15	45.09	10.6892	1.3192	-0.061
665	SLU 81	0.28	0.13	46.02	10.9135	1.3462	-0.061
665	SLU 82	0.28	0.16	46.01	10.9118	1.3458	-0.0617
665	SLU 83	0.28	0.14	46.42	11.0078	1.3582	-0.0617
665	SLU 84	0.28	0.16	46.41	11.0061	1.3579	-0.0625
665	SLE RA 1	0.19	0.05	30.16	7.1493	0.8817	-0.04
665	SLE RA 2	0.19	0.08	30.15	7.1474	0.8814	-0.0409

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
665	SLE RA 3	0.19	0.06	30.59	7.2508	0.8945	-0.041
665	SLE RA 4	0.19	0.08	30.59	7.2497	0.8943	-0.0415
665	SLE RA 5	0.19	0.09	30.42	7.2103	0.8894	-0.0414
665	SLE RA 6	0.19	0.06	30.86	7.3137	0.9026	-0.0414
665	SLE RA 7	0.19	0.08	30.86	7.3126	0.9023	-0.042
665	SLE RA 8	0.19	0.06	30.7	7.275	0.8978	-0.041
665	SLE RA 9	0.19	0.08	30.7	7.2739	0.8976	-0.0415
665	SLE RA 10	0.2	0.11	32.84	7.787	0.9605	-0.0442
665	SLE RA 11	0.2	0.08	33.28	7.8904	0.9736	-0.0443
665	SLE RA 12	0.2	0.1	33.28	7.8893	0.9734	-0.0449
665	SLE RA 13	0.2	0.11	33.12	7.8499	0.9685	-0.0447
665	SLE RA 14	0.21	0.09	33.56	7.9533	0.9816	-0.0448
665	SLE RA 15	0.21	0.1	33.55	7.9522	0.9814	-0.0454
665	SLE RA 16	0.2	0.08	33.39	7.9146	0.9769	-0.0443
665	SLE RA 17	0.2	0.1	33.39	7.9135	0.9767	-0.0449
665	SLE RA 18	0.21	0.09	34.01	8.063	0.9947	-0.0448
665	SLE RA 19	0.21	0.1	34	8.0619	0.9945	-0.0453
665	SLE RA 20	0.21	0.09	34.28	8.1259	1.0028	-0.0453
665	SLE RA 21	0.21	0.11	34.27	8.1247	1.0026	-0.0458
665	SLE FR 1	0.19	0.05	30.16	7.1493	0.8817	-0.04
665	SLE FR 2	0.19	0.06	30.16	7.1489	0.8817	-0.0402
665	SLE FR 3	0.19	0.05	30.27	7.1744	0.8849	-0.0402
665	SLE FR 4	0.19	0.07	31.31	7.423	0.9155	-0.0416
665	SLE FR 5	0.19	0.06	31.42	7.4485	0.9188	-0.0416
665	SLE FR 6	0.2	0.07	32.08	7.6061	0.9382	-0.0424
665	SLE QP 1	0.19	0.05	30.16	7.1493	0.8817	-0.04
665	SLE QP 2	0.19	0.06	31.32	7.4234	0.9156	-0.0414
665	SLD 1	2.77	0.42	30.96	7.3405	0.9117	-0.6945
665	SLD 2	2.77	0.47	30.96	7.3401	0.9115	-0.6965
665	SLD 3	2.74	-0.53	31.42	7.4396	0.9277	-0.6632
665	SLD 4	2.74	-0.48	31.42	7.4392	0.9275	-0.6652
665	SLD 5	1.01	1.6	30.52	7.2483	0.8901	-0.2844
665	SLD 6	1.01	1.64	30.52	7.248	0.89	-0.2857
665	SLD 7	0.91	-1.57	32.04	7.5786	0.9436	-0.1802
665	SLD 8	0.91	-1.53	32.04	7.5784	0.9435	-0.1816
665	SLD 9	-0.52	1.65	30.59	7.2684	0.8878	0.0987
665	SLD 10	-0.52	1.69	30.59	7.2682	0.8876	0.0974
665	SLD 11	-0.63	-1.51	32.11	7.5987	0.9412	0.2028
665	SLD 12	-0.63	-1.47	32.11	7.5985	0.9411	0.2015
665	SLD 13	-2.35	0.6	31.21	7.4076	0.9037	0.5824
665	SLD 14	-2.35	0.66	31.21	7.4072	0.9035	0.5804
665	SLD 15	-2.38	-0.35	31.67	7.5067	0.9197	0.6136
665	SLD 16	-2.38	-0.29	31.67	7.5063	0.9196	0.6116
665	SLV 1	6.21	0.86	30.51	7.232	0.9069	-1.5678
665	SLV 2	6.22	0.99	30.51	7.2311	0.9065	-1.5725
665	SLV 3	6.14	-1.3	31.55	7.4574	0.9433	-1.4965
665	SLV 4	6.15	-1.17	31.54	7.4565	0.9429	-1.5012
665	SLV 5	2.11	3.56	29.5	7.0243	0.8578	-0.6066
665	SLV 6	2.11	3.64	29.5	7.0237	0.8575	-0.6096
665	SLV 7	1.87	-3.65	32.96	7.7756	0.9793	-0.3691
665	SLV 8	1.87	-3.56	32.96	7.775	0.979	-0.3721
665	SLV 9	-1.48	3.69	29.67	7.0717	0.8522	0.2892
665	SLV 10	-1.48	3.77	29.67	7.0711	0.852	0.2862
665	SLV 11	-1.73	-3.52	33.13	7.8231	0.9737	0.5268
665	SLV 12	-1.72	-3.43	33.13	7.8225	0.9734	0.5237
665	SLV 13	-5.76	1.3	31.09	7.3903	0.8883	1.4184
665	SLV 14	-5.75	1.43	31.08	7.3893	0.8879	1.4137
665	SLV 15	-5.84	-0.87	32.13	7.6157	0.9247	1.4896
665	SLV 16	-5.83	-0.73	32.12	7.6147	0.9243	1.4849
665	CRTFP Ux+	0	0	0	0	0	0
665	CRTFP Ux-	0	0	0	0	0	0
665	CRTFP Uy+	0	0	0	0	0	0
665	CRTFP Uy-	0	0	0	0	0	0
666	SLU 1	0.21	0.27	26.75	6.28	-1.7464	-0.0275
666	SLU 2	0.21	0.31	26.74	6.2791	-1.746	-0.0247
666	SLU 3	0.21	0.29	27.34	6.4166	-1.7845	-0.0277
666	SLU 4	0.21	0.31	27.33	6.4161	-1.7843	-0.026
666	SLU 5	0.21	0.32	27.11	6.3637	-1.7698	-0.0251
666	SLU 6	0.22	0.29	27.7	6.5012	-1.8083	-0.0281
666	SLU 7	0.22	0.32	27.7	6.5007	-1.808	-0.0264
666	SLU 8	0.21	0.28	27.48	6.4491	-1.7939	-0.0284
666	SLU 9	0.21	0.31	27.48	6.4486	-1.7937	-0.0267
666	SLU 10	0.23	0.37	30.43	7.1458	-1.9864	-0.0258
666	SLU 11	0.23	0.34	31.03	7.2833	-2.0248	-0.0288
666	SLU 12	0.23	0.37	31.02	7.2828	-2.0246	-0.0271
666	SLU 13	0.23	0.37	30.8	7.2304	-2.0101	-0.0262
666	SLU 14	0.24	0.35	31.39	7.3679	-2.0486	-0.0292
666	SLU 15	0.24	0.37	31.39	7.3674	-2.0484	-0.0275
666	SLU 16	0.24	0.34	31.17	7.3158	-2.0342	-0.0295
666	SLU 17	0.24	0.36	31.17	7.3153	-2.034	-0.0278
666	SLU 18	0.24	0.35	32.02	7.5182	-2.0897	-0.0291
666	SLU 19	0.24	0.37	32.01	7.5176	-2.0895	-0.0274
666	SLU 20	0.24	0.36	32.39	7.6027	-2.1135	-0.0295
666	SLU 21	0.24	0.38	32.38	7.6022	-2.1133	-0.0278
666	SLU 22	0.23	0.35	30.09	7.0703	-1.9645	-0.0279
666	SLU 23	0.23	0.39	30.08	7.0694	-1.9641	-0.0251
666	SLU 24	0.24	0.36	30.68	7.2069	-2.0026	-0.0281
666	SLU 25	0.24	0.39	30.67	7.2064	-2.0024	-0.0264
666	SLU 26	0.24	0.39	30.45	7.154	-1.9879	-0.0255
666	SLU 27	0.24	0.37	31.04	7.2915	-2.0264	-0.0285

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
666	SLU 28	0.24	0.4	31.04	7.291	-2.0261	-0.0268
666	SLU 29	0.24	0.36	30.82	7.2394	-2.012	-0.0288
666	SLU 30	0.24	0.38	30.82	7.2389	-2.0118	-0.0271
666	SLU 31	0.25	0.44	33.77	7.9361	-2.2045	-0.0262
666	SLU 32	0.26	0.42	34.37	8.0736	-2.2429	-0.0291
666	SLU 33	0.26	0.44	34.36	8.0731	-2.2427	-0.0275
666	SLU 34	0.26	0.45	34.14	8.0207	-2.2282	-0.0266
666	SLU 35	0.26	0.42	34.73	8.1582	-2.2667	-0.0296
666	SLU 36	0.26	0.45	34.73	8.1577	-2.2665	-0.0279
666	SLU 37	0.26	0.41	34.51	8.1061	-2.2523	-0.0299
666	SLU 38	0.26	0.44	34.51	8.1056	-2.2521	-0.0282
666	SLU 39	0.26	0.42	35.36	8.3085	-2.3078	-0.0295
666	SLU 40	0.26	0.45	35.35	8.3079	-2.3076	-0.0278
666	SLU 41	0.27	0.43	35.73	8.393	-2.3316	-0.0299
666	SLU 42	0.27	0.46	35.72	8.3925	-2.3314	-0.0282
666	SLU 43	0.26	0.33	33.63	7.893	-2.1955	-0.0356
666	SLU 44	0.26	0.37	33.62	7.8922	-2.1952	-0.0328
666	SLU 45	0.27	0.34	34.22	8.0297	-2.2336	-0.0358
666	SLU 46	0.27	0.37	34.21	8.0291	-2.2334	-0.0341
666	SLU 47	0.27	0.37	33.99	7.9767	-2.2189	-0.0333
666	SLU 48	0.27	0.35	34.58	8.1142	-2.2574	-0.0362
666	SLU 49	0.27	0.37	34.58	8.1137	-2.2572	-0.0345
666	SLU 50	0.27	0.34	34.36	8.0622	-2.243	-0.0365
666	SLU 51	0.27	0.36	34.36	8.0616	-2.2428	-0.0348
666	SLU 52	0.28	0.42	37.31	8.7589	-2.4355	-0.0339
666	SLU 53	0.29	0.4	37.91	8.8964	-2.474	-0.0369
666	SLU 54	0.29	0.42	37.9	8.8958	-2.4738	-0.0352
666	SLU 55	0.29	0.43	37.68	8.8434	-2.4593	-0.0344
666	SLU 56	0.29	0.4	38.27	8.9809	-2.4977	-0.0373
666	SLU 57	0.29	0.43	38.27	8.9804	-2.4975	-0.0356
666	SLU 58	0.29	0.39	38.05	8.9289	-2.4834	-0.0376
666	SLU 59	0.29	0.42	38.05	8.9283	-2.4832	-0.0359
666	SLU 60	0.29	0.4	38.9	9.1312	-2.5389	-0.0372
666	SLU 61	0.29	0.43	38.89	9.1307	-2.5386	-0.0355
666	SLU 62	0.3	0.41	39.27	9.2158	-2.5626	-0.0376
666	SLU 63	0.3	0.44	39.26	9.2152	-2.5624	-0.036
666	SLU 64	0.29	0.4	36.97	8.6834	-2.4136	-0.036
666	SLU 65	0.29	0.44	36.96	8.6825	-2.4133	-0.0332
666	SLU 66	0.29	0.42	37.56	8.82	-2.4517	-0.0362
666	SLU 67	0.29	0.44	37.55	8.8195	-2.4515	-0.0345
666	SLU 68	0.29	0.45	37.33	8.767	-2.437	-0.0337
666	SLU 69	0.3	0.43	37.92	8.9045	-2.4755	-0.0366
666	SLU 70	0.3	0.45	37.92	8.904	-2.4753	-0.0349
666	SLU 71	0.29	0.41	37.7	8.8525	-2.4611	-0.0369
666	SLU 72	0.29	0.44	37.7	8.852	-2.4609	-0.0352
666	SLU 73	0.31	0.5	40.65	9.5492	-2.6536	-0.0343
666	SLU 74	0.31	0.47	41.25	9.6867	-2.6921	-0.0373
666	SLU 75	0.31	0.5	41.24	9.6862	-2.6919	-0.0356
666	SLU 76	0.31	0.5	41.02	9.6337	-2.6773	-0.0347
666	SLU 77	0.32	0.48	41.61	9.7712	-2.7158	-0.0377
666	SLU 78	0.32	0.51	41.61	9.7707	-2.7156	-0.036
666	SLU 79	0.31	0.47	41.39	9.7192	-2.7015	-0.038
666	SLU 80	0.31	0.49	41.39	9.7187	-2.7012	-0.0363
666	SLU 81	0.32	0.48	42.24	9.9215	-2.757	-0.0376
666	SLU 82	0.32	0.51	42.23	9.921	-2.7567	-0.0359
666	SLU 83	0.32	0.49	42.61	10.0061	-2.7807	-0.038
666	SLU 84	0.32	0.51	42.6	10.0055	-2.7805	-0.0363
666	SLE RA 1	0.21	0.29	27.7	6.5058	-1.8087	-0.0276
666	SLE RA 2	0.21	0.32	27.7	6.5052	-1.8085	-0.0258
666	SLE RA 3	0.22	0.3	28.1	6.5969	-1.8341	-0.0277
666	SLE RA 4	0.22	0.32	28.09	6.5965	-1.834	-0.0266
666	SLE RA 5	0.22	0.32	27.94	6.5616	-1.8243	-0.026
666	SLE RA 6	0.22	0.31	28.34	6.6533	-1.8499	-0.028
666	SLE RA 7	0.22	0.32	28.34	6.6529	-1.8498	-0.0269
666	SLE RA 8	0.22	0.3	28.19	6.6186	-1.8404	-0.0282
666	SLE RA 9	0.22	0.32	28.19	6.6182	-1.8402	-0.0271
666	SLE RA 10	0.23	0.36	30.16	7.083	-1.9687	-0.0265
666	SLE RA 11	0.23	0.34	30.55	7.1747	-1.9943	-0.0285
666	SLE RA 12	0.23	0.36	30.55	7.1743	-1.9942	-0.0273
666	SLE RA 13	0.23	0.36	30.4	7.1394	-1.9845	-0.0268
666	SLE RA 14	0.24	0.34	30.8	7.2311	-2.0102	-0.0287
666	SLE RA 15	0.23	0.36	30.8	7.2307	-2.01	-0.0276
666	SLE RA 16	0.23	0.34	30.65	7.1964	-2.0006	-0.0289
666	SLE RA 17	0.23	0.35	30.65	7.196	-2.0004	-0.0278
666	SLE RA 18	0.23	0.34	31.22	7.3312	-2.0376	-0.0287
666	SLE RA 19	0.23	0.36	31.21	7.3309	-2.0374	-0.0275
666	SLE RA 20	0.24	0.35	31.46	7.3876	-2.0534	-0.029
666	SLE RA 21	0.24	0.37	31.46	7.3873	-2.0533	-0.0278
666	SLE FR 1	0.21	0.29	27.7	6.5058	-1.8087	-0.0276
666	SLE FR 2	0.21	0.3	27.7	6.5057	-1.8086	-0.0272
666	SLE FR 3	0.22	0.29	27.8	6.5284	-1.815	-0.0277
666	SLE FR 4	0.22	0.31	28.76	6.7533	-1.8773	-0.0276
666	SLE FR 5	0.22	0.31	28.86	6.776	-1.8837	-0.0281
666	SLE FR 6	0.22	0.32	29.46	6.9185	-1.9231	-0.0281
666	SLE QP 1	0.21	0.29	27.7	6.5058	-1.8087	-0.0276
666	SLE QP 2	0.22	0.31	28.76	6.7534	-1.8774	-0.0279
666	SLD 1	2.63	0.6	28.36	6.6629	-1.8478	-0.6069
666	SLD 2	2.63	0.67	28.36	6.6648	-1.8479	-0.6028
666	SLD 3	2.6	-0.26	28.7	6.7202	-1.8673	-0.6614
666	SLD 4	2.6	-0.19	28.7	6.7222	-1.8674	-0.6573

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
666	SLD 5	0.99	1.69	28.13	6.6389	-1.8389	-0.1198
666	SLD 6	0.99	1.74	28.13	6.6402	-1.839	-0.1171
666	SLD 7	0.89	-1.18	29.25	6.8301	-1.9039	-0.3013
666	SLD 8	0.89	-1.14	29.25	6.8314	-1.9039	-0.2986
666	SLD 9	-0.45	1.75	28.26	6.6754	-1.8508	0.2427
666	SLD 10	-0.45	1.8	28.26	6.6767	-1.8509	0.2454
666	SLD 11	-0.55	-1.12	29.39	6.8667	-1.9157	0.0612
666	SLD 12	-0.55	-1.08	29.39	6.868	-1.9158	0.0639
666	SLD 13	-2.16	0.81	28.81	6.7847	-1.8873	0.6014
666	SLD 14	-2.16	0.88	28.81	6.7866	-1.8875	0.6055
666	SLD 15	-2.19	-0.06	29.15	6.842	-1.9068	0.5469
666	SLD 16	-2.19	0.01	29.15	6.844	-1.9069	0.551
666	SLV 1	5.85	0.97	27.85	6.5426	-1.8088	-1.3837
666	SLV 2	5.86	1.13	27.85	6.5472	-1.809	-1.3741
666	SLV 3	5.78	-0.99	28.61	6.6734	-1.8531	-1.5077
666	SLV 4	5.79	-0.83	28.62	6.678	-1.8534	-1.4982
666	SLV 5	2.01	3.46	27.32	6.491	-1.7894	-0.2482
666	SLV 6	2.02	3.56	27.32	6.4939	-1.7896	-0.242
666	SLV 7	1.78	-3.09	29.88	6.9271	-1.9373	-0.6616
666	SLV 8	1.79	-2.99	29.88	6.93	-1.9375	-0.6555
666	SLV 9	-1.35	3.6	27.64	6.5768	-1.8172	0.5996
666	SLV 10	-1.34	3.7	27.64	6.5798	-1.8174	0.6058
666	SLV 11	-1.58	-2.94	30.2	7.0129	-1.9651	0.1862
666	SLV 12	-1.57	-2.84	30.2	7.0159	-1.9653	0.1923
666	SLV 13	-5.35	1.45	28.9	6.8288	-1.9013	1.4423
666	SLV 14	-5.34	1.61	28.9	6.8335	-1.9016	1.4518
666	SLV 15	-5.42	-0.51	29.67	6.9597	-1.9457	1.3183
666	SLV 16	-5.41	-0.35	29.67	6.9643	-1.946	1.3278
666	CRTFP Ux+	0	0	0	0	0	0
666	CRTFP Ux-	0	0	0	0	0	0
666	CRTFP Uy+	0	0	0	0	0	0
666	CRTFP Uy-	0	0	0	0	0	0
668	SLU 1	1.11	1.86	104.1	36.9591	36.6038	-1.0473
668	SLU 2	1.11	2.02	104.11	36.9659	36.6028	-1.106
668	SLU 3	1.14	1.94	106.35	37.7569	37.3989	-1.0889
668	SLU 4	1.14	2.04	106.35	37.761	37.3983	-1.1241
668	SLU 5	1.13	2.05	105.5	37.4631	37.0993	-1.1249
668	SLU 6	1.16	1.97	107.74	38.254	37.8955	-1.1078
668	SLU 7	1.16	2.07	107.75	38.2581	37.8949	-1.1431
668	SLU 8	1.15	1.92	106.89	37.9534	37.5968	-1.0852
668	SLU 9	1.15	2.02	106.89	37.9575	37.5963	-1.1204
668	SLU 10	1.23	2.3	118.39	42.0321	41.6272	-1.2499
668	SLU 11	1.26	2.22	120.63	42.823	42.4234	-1.2328
668	SLU 12	1.26	2.32	120.63	42.8271	42.4228	-1.268
668	SLU 13	1.25	2.33	119.78	42.5292	42.1238	-1.2689
668	SLU 14	1.28	2.25	122.03	43.3201	42.9199	-1.2518
668	SLU 15	1.28	2.35	122.03	43.3242	42.9193	-1.287
668	SLU 16	1.27	2.2	121.17	43.0196	42.6213	-1.2291
668	SLU 17	1.27	2.3	121.18	43.0237	42.6207	-1.2643
668	SLU 18	1.28	2.25	124.5	44.1964	43.7815	-1.2529
668	SLU 19	1.28	2.35	124.51	44.2005	43.7809	-1.2881
668	SLU 20	1.3	2.28	125.9	44.6936	44.2781	-1.2718
668	SLU 21	1.3	2.38	125.9	44.6977	44.2775	-1.3071
668	SLU 22	1.24	2.22	117.17	41.6076	41.1828	-1.2282
668	SLU 23	1.24	2.39	117.18	41.6144	41.1818	-1.2869
668	SLU 24	1.28	2.31	119.42	42.4053	41.978	-1.2698
668	SLU 25	1.27	2.41	119.42	42.4094	41.9774	-1.3051
668	SLU 26	1.26	2.42	118.57	42.1116	41.6784	-1.3059
668	SLU 27	1.3	2.34	120.82	42.9025	42.4745	-1.2888
668	SLU 28	1.29	2.44	120.82	42.9066	42.4739	-1.324
668	SLU 29	1.28	2.29	119.96	42.6019	42.1759	-1.2661
668	SLU 30	1.28	2.39	119.97	42.606	42.1753	-1.3013
668	SLU 31	1.36	2.67	131.46	46.6805	46.2063	-1.4309
668	SLU 32	1.39	2.59	133.7	47.4714	47.0024	-1.4138
668	SLU 33	1.39	2.69	133.71	47.4756	47.0018	-1.449
668	SLU 34	1.38	2.7	132.86	47.1777	46.7028	-1.4498
668	SLU 35	1.41	2.62	135.1	47.9686	47.4989	-1.4327
668	SLU 36	1.41	2.72	135.1	47.9727	47.4983	-1.4679
668	SLU 37	1.4	2.57	134.24	47.668	47.2003	-1.4101
668	SLU 38	1.4	2.67	134.25	47.6721	47.1997	-1.4453
668	SLU 39	1.41	2.62	137.58	48.8449	48.3606	-1.4338
668	SLU 40	1.41	2.72	137.58	48.849	48.36	-1.4691
668	SLU 41	1.43	2.65	138.97	49.3421	48.8571	-1.4528
668	SLU 42	1.43	2.75	138.97	49.3462	48.8565	-1.488
668	SLU 43	1.4	2.29	130.85	46.4531	46.0149	-1.2994
668	SLU 44	1.4	2.45	130.85	46.4599	46.014	-1.3581
668	SLU 45	1.43	2.37	133.1	47.2508	46.8101	-1.341
668	SLU 46	1.43	2.47	133.1	47.2549	46.8095	-1.3762
668	SLU 47	1.42	2.48	132.25	46.9571	46.5105	-1.3771
668	SLU 48	1.45	2.4	134.49	47.748	47.3066	-1.36
668	SLU 49	1.45	2.5	134.5	47.7521	47.3061	-1.3952
668	SLU 50	1.44	2.35	133.64	47.4474	47.008	-1.3373
668	SLU 51	1.44	2.45	133.64	47.4515	47.0074	-1.3725
668	SLU 52	1.52	2.73	145.14	51.526	51.0384	-1.502
668	SLU 53	1.55	2.65	147.38	52.317	51.8345	-1.4849
668	SLU 54	1.55	2.75	147.38	52.3211	51.8339	-1.5202
668	SLU 55	1.54	2.76	146.53	52.0232	51.5349	-1.521
668	SLU 56	1.57	2.68	148.77	52.8141	52.3311	-1.5039
668	SLU 57	1.57	2.78	148.78	52.8182	52.3305	-1.5391
668	SLU 58	1.56	2.63	147.92	52.5135	52.0325	-1.4812

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
668	SLU 59	1.56	2.73	147.92	52.5176	52.0319	-1.5165
668	SLU 60	1.57	2.68	151.25	53.6904	53.1927	-1.505
668	SLU 61	1.57	2.78	151.25	53.6945	53.1921	-1.5402
668	SLU 62	1.59	2.71	152.65	54.1876	53.6892	-1.524
668	SLU 63	1.59	2.81	152.65	54.1917	53.6887	-1.5592
668	SLU 64	1.53	2.65	143.92	51.1015	50.594	-1.4803
668	SLU 65	1.53	2.82	143.93	51.1084	50.593	-1.5391
668	SLU 66	1.56	2.74	146.17	51.8993	51.3891	-1.522
668	SLU 67	1.56	2.84	146.17	51.9034	51.3885	-1.5572
668	SLU 68	1.55	2.85	145.32	51.6055	51.0895	-1.558
668	SLU 69	1.58	2.77	147.56	52.3965	51.8857	-1.5409
668	SLU 70	1.58	2.87	147.57	52.4006	51.8851	-1.5761
668	SLU 71	1.57	2.72	146.71	52.0959	51.5871	-1.5183
668	SLU 72	1.57	2.82	146.71	52.1	51.5865	-1.5535
668	SLU 73	1.65	3.1	158.21	56.1745	55.6174	-1.683
668	SLU 74	1.68	3.02	160.45	56.9654	56.4136	-1.6659
668	SLU 75	1.68	3.12	160.45	56.9695	56.413	-1.7011
668	SLU 76	1.67	3.13	159.6	56.6717	56.114	-1.702
668	SLU 77	1.7	3.05	161.85	57.4626	56.9101	-1.6848
668	SLU 78	1.7	3.15	161.85	57.4667	56.9095	-1.7201
668	SLU 79	1.69	3	160.99	57.162	56.6115	-1.6622
668	SLU 80	1.69	3.1	161	57.1661	56.6109	-1.6974
668	SLU 81	1.7	3.05	164.32	58.3389	57.7717	-1.686
668	SLU 82	1.7	3.15	164.33	58.343	57.7711	-1.7212
668	SLU 83	1.72	3.08	165.72	58.836	58.2683	-1.7049
668	SLU 84	1.72	3.18	165.72	58.8401	58.2677	-1.7402
668	SLE RA 1	1.15	1.96	107.83	38.2872	37.9121	-1.099
668	SLE RA 2	1.15	2.07	107.84	38.2918	37.9114	-1.1381
668	SLE RA 3	1.17	2.02	109.33	38.8191	38.4422	-1.1267
668	SLE RA 4	1.17	2.08	109.34	38.8218	38.4418	-1.1502
668	SLE RA 5	1.16	2.09	108.77	38.6232	38.2424	-1.1507
668	SLE RA 6	1.18	2.04	110.26	39.1505	38.7732	-1.1393
668	SLE RA 7	1.18	2.11	110.27	39.1532	38.7728	-1.1628
668	SLE RA 8	1.18	2	109.69	38.9501	38.5741	-1.1242
668	SLE RA 9	1.18	2.07	109.7	38.9529	38.5737	-1.1477
668	SLE RA 10	1.23	2.26	117.36	41.6692	41.261	-1.2341
668	SLE RA 11	1.25	2.2	118.86	42.1965	41.7918	-1.2227
668	SLE RA 12	1.25	2.27	118.86	42.1992	41.7914	-1.2461
668	SLE RA 13	1.24	2.28	118.29	42.0007	41.5921	-1.2467
668	SLE RA 14	1.26	2.22	119.79	42.5279	42.1228	-1.2353
668	SLE RA 15	1.26	2.29	119.79	42.5307	42.1224	-1.2588
668	SLE RA 16	1.25	2.19	119.22	42.3275	41.9237	-1.2202
668	SLE RA 17	1.25	2.26	119.22	42.3303	41.9233	-1.2437
668	SLE RA 18	1.26	2.23	121.44	43.1121	42.6972	-1.236
668	SLE RA 19	1.26	2.29	121.44	43.1149	42.6968	-1.2595
668	SLE RA 20	1.27	2.25	122.37	43.4436	43.0283	-1.2487
668	SLE RA 21	1.27	2.31	122.37	43.4463	43.0279	-1.2722
668	SLE FR 1	1.15	1.96	107.83	38.2872	37.9121	-1.099
668	SLE FR 2	1.15	1.98	107.84	38.2882	37.9119	-1.1068
668	SLE FR 3	1.16	1.97	108.21	38.4198	38.0445	-1.104
668	SLE FR 4	1.18	2.06	111.92	39.7356	39.3475	-1.1479
668	SLE FR 5	1.19	2.05	112.29	39.8673	39.48	-1.1451
668	SLE FR 6	1.21	2.09	114.64	40.6997	40.3046	-1.1675
668	SLE QP 1	1.15	1.96	107.83	38.2872	37.9121	-1.099
668	SLE QP 2	1.18	2.04	111.91	39.7347	39.3476	-1.1401
668	SLD 1	10.93	3.05	108.67	38.4843	38.5656	-5.0936
668	SLD 2	10.92	3.44	108.71	38.5074	38.5792	-5.2067
668	SLD 3	10.81	-0.32	109.32	38.636	38.8419	-3.8779
668	SLD 4	10.8	0.07	109.36	38.6591	38.8555	-3.991
668	SLD 5	4.29	7.39	109.95	39.1254	38.6916	-4.1498
668	SLD 6	4.29	7.65	109.97	39.1405	38.7006	-4.224
668	SLD 7	3.89	-3.85	112.12	39.6311	39.6124	-0.0975
668	SLD 8	3.88	-3.6	112.14	39.6462	39.6213	-0.1717
668	SLD 9	-1.52	7.68	111.69	39.8232	39.0739	-2.1085
668	SLD 10	-1.52	7.93	111.71	39.8384	39.0828	-2.1827
668	SLD 11	-1.92	-3.56	113.86	40.3289	39.9947	1.9438
668	SLD 12	-1.93	-3.31	113.88	40.344	40.0036	1.8697
668	SLD 13	-8.44	4.01	114.47	40.8103	39.8397	1.7108
668	SLD 14	-8.45	4.4	114.51	40.8334	39.8534	1.5977
668	SLD 15	-8.56	0.64	115.12	40.962	40.116	2.9265
668	SLD 16	-8.57	1.03	115.16	40.9851	40.1296	2.8134
668	SLV 1	23.99	4.3	104.35	36.8108	37.525	-10.3486
668	SLV 2	23.96	5.2	104.43	36.8646	37.5567	-10.6121
668	SLV 3	23.7	-3.38	105.84	37.1624	38.156	-7.5801
668	SLV 4	23.68	-2.48	105.92	37.2162	38.1877	-7.8436
668	SLV 5	8.45	14.21	107.36	38.315	37.8384	-8.0562
668	SLV 6	8.44	14.79	107.42	38.3496	37.8588	-8.226
668	SLV 7	7.52	-11.39	112.34	39.4871	39.9416	1.1723
668	SLV 8	7.5	-10.81	112.4	39.5217	39.9621	1.0025
668	SLV 9	-5.14	14.89	111.43	39.9477	38.7332	-3.2826
668	SLV 10	-5.15	15.47	111.49	39.9823	38.7536	-3.4524
668	SLV 11	-6.07	-10.71	116.41	41.1198	40.8364	5.9459
668	SLV 12	-6.09	-10.13	116.47	41.1544	40.8568	5.7761
668	SLV 13	-21.32	6.56	117.91	42.2532	40.5075	5.5634
668	SLV 14	-21.34	7.46	117.99	42.307	40.5392	5.2999
668	SLV 15	-21.6	-1.12	119.4	42.6049	41.1385	8.3319
668	SLV 16	-21.62	-0.22	119.48	42.6586	41.1702	8.0684
668	CRTFP Ux+	0	0	0	0	0	0
668	CRTFP Ux-	0	0	0	0	0	0
668	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
668	CRTFP Uy-	0	0	0	0	0	0
669	SLU 1	0.41	0.66	40.76	1.6081	-2.3354	-0.0059
669	SLU 2	0.41	0.72	40.75	1.6128	-2.3351	-0.0024
669	SLU 3	0.43	0.69	41.63	1.6427	-2.3855	-0.0056
669	SLU 4	0.42	0.72	41.63	1.6455	-2.3854	-0.0035
669	SLU 5	0.42	0.73	41.29	1.6366	-2.3656	-0.0027
669	SLU 6	0.43	0.7	42.17	1.6666	-2.416	-0.0059
669	SLU 7	0.43	0.73	42.17	1.6694	-2.4158	-0.0038
669	SLU 8	0.43	0.68	41.83	1.6559	-2.3963	-0.0065
669	SLU 9	0.43	0.72	41.82	1.6587	-2.3961	-0.0044
669	SLU 10	0.45	0.81	46.35	1.8322	-2.656	-0.0021
669	SLU 11	0.46	0.78	47.23	1.8622	-2.7065	-0.0053
669	SLU 12	0.46	0.82	47.23	1.8649	-2.7063	-0.0032
669	SLU 13	0.46	0.82	46.89	1.8561	-2.6865	-0.0024
669	SLU 14	0.47	0.79	47.76	1.886	-2.7369	-0.0056
669	SLU 15	0.47	0.83	47.76	1.8888	-2.7367	-0.0035
669	SLU 16	0.46	0.77	47.42	1.8753	-2.7172	-0.0062
669	SLU 17	0.46	0.81	47.42	1.8781	-2.717	-0.0041
669	SLU 18	0.47	0.79	48.75	1.9216	-2.7938	-0.0055
669	SLU 19	0.47	0.83	48.75	1.9244	-2.7937	-0.0034
669	SLU 20	0.47	0.8	49.29	1.9455	-2.8243	-0.0058
669	SLU 21	0.47	0.84	49.28	1.9483	-2.8241	-0.0037
669	SLU 22	0.46	0.78	45.89	1.8204	-2.6294	-0.0042
669	SLU 23	0.46	0.85	45.89	1.8251	-2.6292	-0.0007
669	SLU 24	0.47	0.81	46.76	1.855	-2.6796	-0.0039
669	SLU 25	0.47	0.85	46.76	1.8578	-2.6794	-0.0018
669	SLU 26	0.47	0.86	46.42	1.849	-2.6596	-0.001
669	SLU 27	0.48	0.82	47.3	1.8789	-2.71	-0.0042
669	SLU 28	0.48	0.86	47.3	1.8817	-2.7099	-0.0021
669	SLU 29	0.47	0.8	46.96	1.8682	-2.6903	-0.0048
669	SLU 30	0.47	0.84	46.96	1.871	-2.6902	-0.0027
669	SLU 31	0.5	0.94	51.48	2.0445	-2.9501	-0.0004
669	SLU 32	0.51	0.91	52.36	2.0745	-3.0005	-0.0036
669	SLU 33	0.51	0.94	52.36	2.0773	-3.0003	-0.0015
669	SLU 34	0.5	0.95	52.02	2.0684	-2.9805	-0.0007
669	SLU 35	0.51	0.92	52.89	2.0984	-3.031	-0.0039
669	SLU 36	0.51	0.95	52.89	2.1011	-3.0308	-0.0018
669	SLU 37	0.51	0.9	52.55	2.0876	-3.0113	-0.0045
669	SLU 38	0.51	0.93	52.55	2.0904	-3.0111	-0.0024
669	SLU 39	0.51	0.92	53.88	2.1339	-3.0879	-0.0038
669	SLU 40	0.51	0.95	53.88	2.1367	-3.0877	-0.0017
669	SLU 41	0.52	0.93	54.42	2.1578	-3.1183	-0.0041
669	SLU 42	0.52	0.96	54.42	2.1606	-3.1182	-0.002
669	SLU 43	0.52	0.81	51.22	2.0178	-2.9352	-0.0083
669	SLU 44	0.52	0.87	51.22	2.0224	-2.9349	-0.0048
669	SLU 45	0.53	0.84	52.1	2.0524	-2.9853	-0.008
669	SLU 46	0.53	0.88	52.1	2.0551	-2.9852	-0.0058
669	SLU 47	0.53	0.88	51.76	2.0463	-2.9653	-0.0051
669	SLU 48	0.54	0.85	52.63	2.0762	-3.0158	-0.0083
669	SLU 49	0.54	0.89	52.63	2.079	-3.0156	-0.0061
669	SLU 50	0.54	0.83	52.29	2.0655	-2.9961	-0.0089
669	SLU 51	0.54	0.87	52.29	2.0683	-2.9959	-0.0068
669	SLU 52	0.56	0.97	56.82	2.2418	-3.2558	-0.0045
669	SLU 53	0.57	0.93	57.7	2.2718	-3.3062	-0.0076
669	SLU 54	0.57	0.97	57.69	2.2746	-3.3061	-0.0055
669	SLU 55	0.57	0.98	57.35	2.2657	-3.2863	-0.0047
669	SLU 56	0.58	0.94	58.23	2.2957	-3.3367	-0.0079
669	SLU 57	0.58	0.98	58.23	2.2985	-3.3365	-0.0058
669	SLU 58	0.57	0.92	57.89	2.285	-3.317	-0.0086
669	SLU 59	0.57	0.96	57.89	2.2877	-3.3168	-0.0065
669	SLU 60	0.58	0.94	59.22	2.3312	-3.3936	-0.0078
669	SLU 61	0.58	0.98	59.22	2.334	-3.3935	-0.0057
669	SLU 62	0.58	0.95	59.75	2.3551	-3.4241	-0.0081
669	SLU 63	0.58	0.99	59.75	2.3579	-3.4239	-0.006
669	SLU 64	0.57	0.94	56.35	2.2301	-3.2292	-0.0066
669	SLU 65	0.57	1	56.35	2.2347	-3.2289	-0.0031
669	SLU 66	0.58	0.97	57.23	2.2647	-3.2794	-0.0063
669	SLU 67	0.58	1.01	57.23	2.2675	-3.2792	-0.0041
669	SLU 68	0.57	1.01	56.89	2.2586	-3.2594	-0.0034
669	SLU 69	0.59	0.98	57.76	2.2886	-3.3098	-0.0066
669	SLU 70	0.59	1.02	57.76	2.2913	-3.3097	-0.0044
669	SLU 71	0.58	0.96	57.42	2.2778	-3.2901	-0.0072
669	SLU 72	0.58	1	57.42	2.2806	-3.29	-0.0051
669	SLU 73	0.6	1.09	61.95	2.4542	-3.5499	-0.0028
669	SLU 74	0.62	1.06	62.83	2.4841	-3.6003	-0.0059
669	SLU 75	0.62	1.1	62.83	2.4869	-3.6001	-0.0038
669	SLU 76	0.61	1.1	62.48	2.478	-3.5803	-0.003
669	SLU 77	0.62	1.07	63.36	2.508	-3.6308	-0.0062
669	SLU 78	0.62	1.11	63.36	2.5108	-3.6306	-0.0041
669	SLU 79	0.62	1.05	63.02	2.4973	-3.611	-0.0069
669	SLU 80	0.62	1.09	63.02	2.5001	-3.6109	-0.0048
669	SLU 81	0.62	1.07	64.35	2.5436	-3.6877	-0.0061
669	SLU 82	0.62	1.11	64.35	2.5464	-3.6875	-0.004
669	SLU 83	0.63	1.08	64.88	2.5674	-3.7181	-0.0064
669	SLU 84	0.63	1.12	64.88	2.5702	-3.718	-0.0043
669	SLE RA 1	0.43	0.69	42.22	1.6688	-2.4194	-0.0054
669	SLE RA 2	0.43	0.74	42.22	1.6719	-2.4192	-0.0031
669	SLE RA 3	0.43	0.71	42.81	1.6919	-2.4528	-0.0052
669	SLE RA 4	0.43	0.74	42.81	1.6937	-2.4527	-0.0038
669	SLE RA 5	0.43	0.74	42.58	1.6878	-2.4395	-0.0033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
669	SLE RA 6	0.44	0.72	43.16	1.7078	-2.4731	-0.0054
669	SLE RA 7	0.44	0.75	43.16	1.7096	-2.473	-0.004
669	SLE RA 8	0.44	0.71	42.93	1.7006	-2.46	-0.0058
669	SLE RA 9	0.44	0.73	42.93	1.7025	-2.4599	-0.0044
669	SLE RA 10	0.45	0.8	45.95	1.8182	-2.6332	-0.0029
669	SLE RA 11	0.46	0.78	46.54	1.8381	-2.6668	-0.005
669	SLE RA 12	0.46	0.8	46.54	1.84	-2.6667	-0.0036
669	SLE RA 13	0.46	0.8	46.31	1.8341	-2.6535	-0.0031
669	SLE RA 14	0.46	0.78	46.89	1.8541	-2.6871	-0.0052
669	SLE RA 15	0.46	0.81	46.89	1.8559	-2.687	-0.0038
669	SLE RA 16	0.46	0.77	46.67	1.8469	-2.6739	-0.0056
669	SLE RA 17	0.46	0.79	46.67	1.8488	-2.6738	-0.0042
669	SLE RA 18	0.46	0.78	47.55	1.8778	-2.725	-0.0051
669	SLE RA 19	0.46	0.81	47.55	1.8796	-2.7249	-0.0037
669	SLE RA 20	0.47	0.79	47.91	1.8937	-2.7453	-0.0053
669	SLE RA 21	0.47	0.81	47.91	1.8955	-2.7452	-0.0039
669	SLE FR 1	0.43	0.69	42.22	1.6688	-2.4194	-0.0054
669	SLE FR 2	0.43	0.7	42.22	1.6694	-2.4194	-0.005
669	SLE FR 3	0.43	0.7	42.36	1.6752	-2.4275	-0.0055
669	SLE FR 4	0.44	0.73	43.82	1.7321	-2.511	-0.0049
669	SLE FR 5	0.44	0.72	43.96	1.7379	-2.5192	-0.0054
669	SLE FR 6	0.44	0.74	44.89	1.7733	-2.5722	-0.0053
669	SLE QP 1	0.43	0.69	42.22	1.6688	-2.4194	-0.0054
669	SLE QP 2	0.44	0.72	43.82	1.7315	-2.5111	-0.0054
669	SLD 1	4.05	1.07	42.2	1.5241	-2.4152	-0.2188
669	SLD 2	4.07	1.25	42.19	1.5356	-2.4139	-0.2063
669	SLD 3	4.09	-0.17	42.58	1.4343	-2.4414	-0.286
669	SLD 4	4.11	0.01	42.57	1.4458	-2.4402	-0.2736
669	SLD 5	1.45	2.68	42.77	1.8034	-2.4427	0.0304
669	SLD 6	1.46	2.79	42.76	1.811	-2.4419	0.0385
669	SLD 7	1.6	-1.46	44.02	1.5041	-2.5302	-0.1937
669	SLD 8	1.61	-1.34	44.01	1.5116	-2.5294	-0.1856
669	SLD 9	-0.73	2.78	43.63	1.9513	-2.4928	0.1748
669	SLD 10	-0.72	2.9	43.62	1.9589	-2.4919	0.183
669	SLD 11	-0.59	-1.35	44.88	1.652	-2.5803	-0.0492
669	SLD 12	-0.58	-1.23	44.87	1.6596	-2.5794	-0.0411
669	SLD 13	-3.23	1.43	45.07	2.0172	-2.582	0.2628
669	SLD 14	-3.22	1.61	45.06	2.0287	-2.5807	0.2753
669	SLD 15	-3.19	0.19	45.45	1.9274	-2.6083	0.1956
669	SLD 16	-3.18	0.37	45.44	1.9389	-2.607	0.2081
669	SLV 1	8.89	1.51	40.05	1.2428	-2.2874	-0.5065
669	SLV 2	8.92	1.92	40.02	1.2697	-2.2844	-0.4775
669	SLV 3	8.99	-1.32	40.91	1.0395	-2.3475	-0.6596
669	SLV 4	9.02	-0.9	40.89	1.0664	-2.3445	-0.6307
669	SLV 5	2.81	5.17	41.39	1.8885	-2.3533	0.0715
669	SLV 6	2.84	5.44	41.37	1.9058	-2.3514	0.0902
669	SLV 7	3.15	-4.25	44.26	1.211	-2.5537	-0.4389
669	SLV 8	3.17	-3.98	44.24	1.2283	-2.5518	-0.4202
669	SLV 9	-2.3	5.42	43.4	2.2347	-2.4704	0.4095
669	SLV 10	-2.28	5.69	43.38	2.252	-2.4685	0.4281
669	SLV 11	-1.96	-4	46.27	1.5571	-2.6708	-0.1009
669	SLV 12	-1.94	-3.73	46.26	1.5745	-2.6689	-0.0822
669	SLV 13	-8.15	2.34	46.76	2.3966	-2.6776	0.6199
669	SLV 14	-8.11	2.76	46.73	2.4235	-2.6747	0.6489
669	SLV 15	-8.05	-0.48	47.62	2.1933	-2.7378	0.4668
669	SLV 16	-8.01	-0.06	47.59	2.2202	-2.7348	0.4958
669	CRTFP Ux+	0	0	0	0	0	0
669	CRTFP Ux-	0	0	0	0	0	0
669	CRTFP Uy+	0	0	0	0	0	0
669	CRTFP Uy-	0	0	0	0	0	0
670	SLU 1	0.51	0.68	49.6	-1.3261	-0.6165	-0.0205
670	SLU 2	0.51	0.76	49.6	-1.3203	-0.6165	-0.0194
670	SLU 3	0.52	0.71	50.67	-1.3545	-0.6298	-0.0211
670	SLU 4	0.52	0.76	50.67	-1.351	-0.6298	-0.0204
670	SLU 5	0.51	0.76	50.25	-1.3343	-0.6246	-0.02
670	SLU 6	0.53	0.72	51.32	-1.3685	-0.6379	-0.0216
670	SLU 7	0.53	0.77	51.32	-1.365	-0.6379	-0.021
670	SLU 8	0.52	0.7	50.9	-1.3542	-0.6327	-0.0215
670	SLU 9	0.52	0.74	50.9	-1.3507	-0.6327	-0.0209
670	SLU 10	0.55	0.85	56.42	-1.5035	-0.7015	-0.0219
670	SLU 11	0.56	0.81	57.49	-1.5378	-0.7148	-0.0235
670	SLU 12	0.56	0.85	57.49	-1.5343	-0.7148	-0.0229
670	SLU 13	0.56	0.86	57.07	-1.5176	-0.7096	-0.0224
670	SLU 14	0.57	0.82	58.14	-1.5518	-0.723	-0.024
670	SLU 15	0.57	0.86	58.14	-1.5483	-0.723	-0.0234
670	SLU 16	0.57	0.79	57.72	-1.5374	-0.7178	-0.024
670	SLU 17	0.57	0.84	57.72	-1.5339	-0.7178	-0.0234
670	SLU 18	0.57	0.82	59.34	-1.5879	-0.7379	-0.024
670	SLU 19	0.57	0.86	59.34	-1.5844	-0.7379	-0.0234
670	SLU 20	0.58	0.83	59.99	-1.6019	-0.7461	-0.0245
670	SLU 21	0.58	0.87	59.99	-1.5984	-0.7461	-0.0239
670	SLU 22	0.56	0.82	55.87	-1.4803	-0.6951	-0.0227
670	SLU 23	0.56	0.89	55.86	-1.4745	-0.695	-0.0217
670	SLU 24	0.57	0.85	56.93	-1.5087	-0.7084	-0.0233
670	SLU 25	0.57	0.89	56.93	-1.5052	-0.7084	-0.0227
670	SLU 26	0.57	0.9	56.51	-1.4885	-0.7032	-0.0222
670	SLU 27	0.58	0.86	57.58	-1.5228	-0.7165	-0.0238
670	SLU 28	0.58	0.9	57.58	-1.5193	-0.7165	-0.0232
670	SLU 29	0.58	0.84	57.16	-1.5084	-0.7113	-0.0238
670	SLU 30	0.58	0.88	57.16	-1.5049	-0.7113	-0.0231

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
670	SLU 31	0.6	0.99	62.68	-1.6578	-0.7801	-0.0241
670	SLU 32	0.62	0.94	63.75	-1.692	-0.7934	-0.0257
670	SLU 33	0.62	0.99	63.75	-1.6885	-0.7934	-0.0251
670	SLU 34	0.61	1	63.33	-1.6718	-0.7882	-0.0247
670	SLU 35	0.62	0.95	64.4	-1.706	-0.8016	-0.0263
670	SLU 36	0.62	1	64.4	-1.7025	-0.8015	-0.0256
670	SLU 37	0.62	0.93	63.99	-1.6917	-0.7964	-0.0262
670	SLU 38	0.62	0.98	63.98	-1.6882	-0.7963	-0.0256
670	SLU 39	0.62	0.95	65.61	-1.7421	-0.8165	-0.0262
670	SLU 40	0.62	1	65.61	-1.7386	-0.8165	-0.0256
670	SLU 41	0.63	0.96	66.26	-1.7562	-0.8247	-0.0268
670	SLU 42	0.63	1.01	66.26	-1.7527	-0.8246	-0.0261
670	SLU 43	0.64	0.84	62.33	-1.671	-0.7745	-0.0259
670	SLU 44	0.64	0.91	62.33	-1.6652	-0.7744	-0.0248
670	SLU 45	0.65	0.87	63.4	-1.6994	-0.7878	-0.0264
670	SLU 46	0.65	0.91	63.4	-1.696	-0.7878	-0.0258
670	SLU 47	0.65	0.92	62.98	-1.6793	-0.7826	-0.0253
670	SLU 48	0.66	0.88	64.05	-1.7135	-0.7959	-0.027
670	SLU 49	0.66	0.92	64.05	-1.71	-0.7959	-0.0263
670	SLU 50	0.66	0.86	63.63	-1.6991	-0.7907	-0.0269
670	SLU 51	0.66	0.9	63.63	-1.6956	-0.7907	-0.0263
670	SLU 52	0.68	1.01	69.15	-1.8485	-0.8595	-0.0273
670	SLU 53	0.7	0.96	70.22	-1.8827	-0.8728	-0.0289
670	SLU 54	0.7	1.01	70.22	-1.8792	-0.8728	-0.0283
670	SLU 55	0.69	1.02	69.8	-1.8625	-0.8676	-0.0278
670	SLU 56	0.7	0.97	70.87	-1.8967	-0.881	-0.0294
670	SLU 57	0.7	1.02	70.87	-1.8933	-0.881	-0.0288
670	SLU 58	0.7	0.95	70.45	-1.8824	-0.8758	-0.0294
670	SLU 59	0.7	1	70.45	-1.8789	-0.8758	-0.0288
670	SLU 60	0.7	0.97	72.08	-1.9328	-0.8959	-0.0294
670	SLU 61	0.7	1.02	72.07	-1.9294	-0.8959	-0.0288
670	SLU 62	0.71	0.98	72.73	-1.9469	-0.9041	-0.0299
670	SLU 63	0.71	1.03	72.72	-1.9434	-0.9041	-0.0293
670	SLU 64	0.69	0.97	68.6	-1.8253	-0.8531	-0.0281
670	SLU 65	0.69	1.05	68.6	-1.8194	-0.853	-0.027
670	SLU 66	0.71	1.01	69.66	-1.8537	-0.8664	-0.0287
670	SLU 67	0.71	1.05	69.66	-1.8502	-0.8664	-0.028
670	SLU 68	0.7	1.06	69.24	-1.8335	-0.8612	-0.0276
670	SLU 69	0.72	1.01	70.31	-1.8677	-0.8745	-0.0292
670	SLU 70	0.71	1.06	70.31	-1.8642	-0.8745	-0.0286
670	SLU 71	0.71	0.99	69.9	-1.8533	-0.8693	-0.0291
670	SLU 72	0.71	1.04	69.9	-1.8498	-0.8693	-0.0285
670	SLU 73	0.74	1.14	75.42	-2.0027	-0.9381	-0.0295
670	SLU 74	0.75	1.1	76.48	-2.0369	-0.9514	-0.0311
670	SLU 75	0.75	1.15	76.48	-2.0335	-0.9514	-0.0305
670	SLU 76	0.74	1.15	76.07	-2.0168	-0.9462	-0.03
670	SLU 77	0.76	1.11	77.13	-2.051	-0.9596	-0.0317
670	SLU 78	0.76	1.15	77.13	-2.0475	-0.9595	-0.031
670	SLU 79	0.75	1.09	76.72	-2.0366	-0.9544	-0.0316
670	SLU 80	0.75	1.13	76.72	-2.0331	-0.9543	-0.031
670	SLU 81	0.75	1.11	78.34	-2.0871	-0.9745	-0.0316
670	SLU 82	0.75	1.15	78.34	-2.0836	-0.9745	-0.031
670	SLU 83	0.76	1.12	78.99	-2.1011	-0.9827	-0.0321
670	SLU 84	0.76	1.16	78.99	-2.0976	-0.9826	-0.0315
670	SLE RA 1	0.52	0.72	51.39	-1.3701	-0.6389	-0.0211
670	SLE RA 2	0.52	0.77	51.39	-1.3663	-0.6389	-0.0204
670	SLE RA 3	0.53	0.74	52.1	-1.3891	-0.6478	-0.0215
670	SLE RA 4	0.53	0.77	52.1	-1.3868	-0.6478	-0.0211
670	SLE RA 5	0.53	0.78	51.82	-1.3756	-0.6443	-0.0208
670	SLE RA 6	0.54	0.75	52.53	-1.3984	-0.6532	-0.0219
670	SLE RA 7	0.54	0.78	52.53	-1.3961	-0.6532	-0.0214
670	SLE RA 8	0.53	0.73	52.26	-1.3889	-0.6498	-0.0218
670	SLE RA 9	0.53	0.76	52.26	-1.3865	-0.6498	-0.0214
670	SLE RA 10	0.55	0.83	55.94	-1.4885	-0.6956	-0.0221
670	SLE RA 11	0.56	0.8	56.65	-1.5113	-0.7045	-0.0231
670	SLE RA 12	0.56	0.83	56.65	-1.5089	-0.7045	-0.0227
670	SLE RA 13	0.56	0.84	56.37	-1.4978	-0.701	-0.0224
670	SLE RA 14	0.56	0.81	57.08	-1.5206	-0.7099	-0.0235
670	SLE RA 15	0.56	0.84	57.08	-1.5183	-0.7099	-0.0231
670	SLE RA 16	0.56	0.8	56.8	-1.511	-0.7065	-0.0235
670	SLE RA 17	0.56	0.82	56.8	-1.5087	-0.7064	-0.023
670	SLE RA 18	0.56	0.81	57.89	-1.5447	-0.7199	-0.0235
670	SLE RA 19	0.56	0.84	57.88	-1.5424	-0.7199	-0.023
670	SLE RA 20	0.57	0.82	58.32	-1.554	-0.7253	-0.0238
670	SLE RA 21	0.57	0.85	58.32	-1.5517	-0.7253	-0.0234
670	SLE FR 1	0.52	0.72	51.39	-1.3701	-0.6389	-0.0211
670	SLE FR 2	0.52	0.73	51.39	-1.3694	-0.6389	-0.021
670	SLE FR 3	0.52	0.72	51.56	-1.3739	-0.6411	-0.0213
670	SLE FR 4	0.53	0.76	53.34	-1.4217	-0.6632	-0.0217
670	SLE FR 5	0.54	0.75	53.51	-1.4262	-0.6654	-0.022
670	SLE FR 6	0.54	0.76	54.64	-1.4574	-0.6794	-0.0223
670	SLE QP 1	0.52	0.72	51.39	-1.3701	-0.6389	-0.0211
670	SLE QP 2	0.53	0.75	53.34	-1.4225	-0.6632	-0.0218
670	SLD 1	4.89	1.17	50.9	-1.5611	-0.6158	-0.0064
670	SLD 2	4.91	1.4	50.88	-1.5462	-0.6154	0.0006
670	SLD 3	4.94	-0.31	51.4	-1.6983	-0.6223	-0.0233
670	SLD 4	4.96	-0.08	51.38	-1.6833	-0.6219	-0.0163
670	SLD 5	1.76	3.08	51.85	-1.2588	-0.6391	0.0071
670	SLD 6	1.77	3.23	51.83	-1.249	-0.6389	0.0117
670	SLD 7	1.93	-1.86	53.53	-1.7159	-0.661	-0.0491

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
670	SLD 8	1.94	-1.71	53.51	-1.7061	-0.6607	-0.0445
670	SLD 9	-0.88	3.2	53.17	-1.1389	-0.6657	0.0008
670	SLD 10	-0.86	3.36	53.15	-1.1291	-0.6655	0.0054
670	SLD 11	-0.7	-1.74	54.84	-1.5961	-0.6876	-0.0554
670	SLD 12	-0.69	-1.59	54.83	-1.5862	-0.6873	-0.0508
670	SLD 13	-3.89	1.57	55.3	-1.1617	-0.7045	-0.0274
670	SLD 14	-3.87	1.81	55.27	-1.1467	-0.7041	-0.0203
670	SLD 15	-3.84	0.09	55.8	-1.2988	-0.711	-0.0442
670	SLD 16	-3.82	0.32	55.78	-1.2839	-0.7107	-0.0372
670	SLV 1	10.71	1.69	47.65	-1.752	-0.5523	0.0137
670	SLV 2	10.76	2.23	47.6	-1.7171	-0.5514	0.0301
670	SLV 3	10.83	-1.69	48.8	-2.0629	-0.5674	-0.0247
670	SLV 4	10.88	-1.15	48.75	-2.028	-0.5665	-0.0084
670	SLV 5	3.39	6.06	49.89	-1.0559	-0.6072	0.0443
670	SLV 6	3.43	6.41	49.86	-1.0334	-0.6066	0.0548
670	SLV 7	3.8	-5.2	53.74	-2.0921	-0.6575	-0.0838
670	SLV 8	3.83	-4.85	53.71	-2.0696	-0.6569	-0.0733
670	SLV 9	-2.76	6.34	52.97	-0.7754	-0.6695	0.0296
670	SLV 10	-2.73	6.7	52.94	-0.7529	-0.6689	0.0402
670	SLV 11	-2.36	-4.92	56.82	-1.8116	-0.7198	-0.0985
670	SLV 12	-2.33	-4.57	56.79	-1.7891	-0.7192	-0.088
670	SLV 13	-9.82	2.64	57.93	-0.817	-0.7599	-0.0353
670	SLV 14	-9.76	3.18	57.88	-0.7821	-0.759	-0.0189
670	SLV 15	-9.69	-0.74	59.08	-1.1279	-0.775	-0.0737
670	SLV 16	-9.64	-0.2	59.03	-1.093	-0.7741	-0.0574
670	CRTFP Ux+	0	0	0	0	0	0
670	CRTFP Ux-	0	0	0	0	0	0
670	CRTFP Uy+	0	0	0	0	0	0
670	CRTFP Uy-	0	0	0	0	0	0
671	SLU 1	0.58	0.55	53.33	-1.4207	-0.0004	-0.0397
671	SLU 2	0.58	0.63	53.32	-1.4144	-0.0004	-0.0395
671	SLU 3	0.59	0.58	54.48	-1.4511	-0.0006	-0.041
671	SLU 4	0.59	0.63	54.48	-1.4474	-0.0005	-0.0408
671	SLU 5	0.58	0.64	54.03	-1.4296	-0.0005	-0.0403
671	SLU 6	0.6	0.59	55.18	-1.4663	-0.0007	-0.0418
671	SLU 7	0.6	0.64	55.18	-1.4626	-0.0007	-0.0416
671	SLU 8	0.59	0.57	54.73	-1.4509	-0.0007	-0.0413
671	SLU 9	0.59	0.61	54.73	-1.4472	-0.0007	-0.0412
671	SLU 10	0.62	0.72	60.66	-1.6105	-0.0006	-0.044
671	SLU 11	0.64	0.66	61.82	-1.6472	-0.0007	-0.0454
671	SLU 12	0.64	0.71	61.82	-1.6435	-0.0007	-0.0453
671	SLU 13	0.63	0.72	61.37	-1.6256	-0.0007	-0.0448
671	SLU 14	0.65	0.67	62.52	-1.6623	-0.0009	-0.0462
671	SLU 15	0.65	0.72	62.52	-1.6586	-0.0009	-0.0461
671	SLU 16	0.64	0.65	62.07	-1.647	-0.0009	-0.0458
671	SLU 17	0.64	0.7	62.07	-1.6433	-0.0009	-0.0456
671	SLU 18	0.64	0.67	63.81	-1.7007	-0.0007	-0.0461
671	SLU 19	0.64	0.72	63.81	-1.697	-0.0007	-0.0459
671	SLU 20	0.65	0.68	64.52	-1.7159	-0.0008	-0.0469
671	SLU 21	0.65	0.72	64.51	-1.7121	-0.0008	-0.0467
671	SLU 22	0.64	0.68	60.09	-1.586	-0.0012	-0.0447
671	SLU 23	0.64	0.76	60.09	-1.5798	-0.0012	-0.0445
671	SLU 24	0.65	0.7	61.24	-1.6165	-0.0013	-0.0459
671	SLU 25	0.65	0.75	61.24	-1.6127	-0.0013	-0.0458
671	SLU 26	0.64	0.76	60.79	-1.5949	-0.0013	-0.0453
671	SLU 27	0.66	0.71	61.94	-1.6316	-0.0015	-0.0467
671	SLU 28	0.66	0.76	61.94	-1.6279	-0.0015	-0.0466
671	SLU 29	0.65	0.69	61.49	-1.6163	-0.0015	-0.0463
671	SLU 30	0.65	0.74	61.49	-1.6125	-0.0015	-0.0462
671	SLU 31	0.68	0.84	67.43	-1.7758	-0.0014	-0.0489
671	SLU 32	0.7	0.79	68.58	-1.8125	-0.0015	-0.0504
671	SLU 33	0.7	0.83	68.58	-1.8088	-0.0015	-0.0502
671	SLU 34	0.69	0.85	68.13	-1.791	-0.0015	-0.0497
671	SLU 35	0.71	0.79	69.28	-1.8277	-0.0017	-0.0512
671	SLU 36	0.71	0.84	69.28	-1.8239	-0.0017	-0.051
671	SLU 37	0.7	0.77	68.83	-1.8123	-0.0017	-0.0507
671	SLU 38	0.7	0.82	68.83	-1.8086	-0.0017	-0.0506
671	SLU 39	0.7	0.79	70.58	-1.8661	-0.0015	-0.051
671	SLU 40	0.7	0.84	70.57	-1.8623	-0.0015	-0.0509
671	SLU 41	0.71	0.8	71.28	-1.8812	-0.0016	-0.0518
671	SLU 42	0.71	0.85	71.28	-1.8775	-0.0016	-0.0517
671	SLU 43	0.73	0.68	67.01	-1.7902	-0.0002	-0.05
671	SLU 44	0.73	0.76	67	-1.784	-0.0002	-0.0497
671	SLU 45	0.74	0.7	68.16	-1.8207	-0.0004	-0.0512
671	SLU 46	0.74	0.75	68.16	-1.8169	-0.0004	-0.0511
671	SLU 47	0.74	0.76	67.71	-1.7991	-0.0004	-0.0505
671	SLU 48	0.75	0.71	68.86	-1.8358	-0.0006	-0.052
671	SLU 49	0.75	0.76	68.86	-1.8321	-0.0005	-0.0519
671	SLU 50	0.75	0.69	68.41	-1.8205	-0.0005	-0.0516
671	SLU 51	0.75	0.74	68.41	-1.8167	-0.0005	-0.0514
671	SLU 52	0.77	0.84	74.34	-1.98	-0.0004	-0.0542
671	SLU 53	0.79	0.79	75.5	-2.0167	-0.0006	-0.0556
671	SLU 54	0.79	0.83	75.5	-2.013	-0.0006	-0.0555
671	SLU 55	0.78	0.85	75.05	-1.9951	-0.0006	-0.055
671	SLU 56	0.8	0.79	76.2	-2.0318	-0.0007	-0.0564
671	SLU 57	0.8	0.84	76.2	-2.0281	-0.0007	-0.0563
671	SLU 58	0.79	0.77	75.75	-2.0165	-0.0007	-0.056
671	SLU 59	0.79	0.82	75.75	-2.0128	-0.0007	-0.0559
671	SLU 60	0.8	0.79	77.49	-2.0702	-0.0005	-0.0563
671	SLU 61	0.79	0.84	77.49	-2.0665	-0.0005	-0.0562

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
671	SLU 62	0.8	0.8	78.2	-2.0854	-0.0007	-0.0571
671	SLU 63	0.8	0.85	78.19	-2.0817	-0.0007	-0.057
671	SLU 64	0.79	0.8	73.77	-1.9555	-0.001	-0.0549
671	SLU 65	0.79	0.88	73.77	-1.9493	-0.001	-0.0547
671	SLU 66	0.8	0.83	74.92	-1.986	-0.0012	-0.0561
671	SLU 67	0.8	0.88	74.92	-1.9823	-0.0012	-0.056
671	SLU 68	0.8	0.89	74.47	-1.9644	-0.0012	-0.0555
671	SLU 69	0.81	0.83	75.62	-2.0011	-0.0013	-0.0569
671	SLU 70	0.81	0.88	75.62	-1.9974	-0.0013	-0.0568
671	SLU 71	0.81	0.81	75.17	-1.9858	-0.0013	-0.0565
671	SLU 72	0.81	0.86	75.17	-1.9821	-0.0013	-0.0564
671	SLU 73	0.83	0.96	81.11	-2.1453	-0.0012	-0.0591
671	SLU 74	0.85	0.91	82.26	-2.182	-0.0014	-0.0606
671	SLU 75	0.85	0.96	82.26	-2.1783	-0.0014	-0.0605
671	SLU 76	0.84	0.97	81.81	-2.1605	-0.0014	-0.0599
671	SLU 77	0.86	0.92	82.96	-2.1972	-0.0015	-0.0614
671	SLU 78	0.86	0.96	82.96	-2.1935	-0.0015	-0.0613
671	SLU 79	0.85	0.89	82.51	-2.1818	-0.0015	-0.0609
671	SLU 80	0.85	0.94	82.51	-2.1781	-0.0015	-0.0608
671	SLU 81	0.86	0.92	84.26	-2.2356	-0.0013	-0.0612
671	SLU 82	0.86	0.97	84.25	-2.2318	-0.0013	-0.0611
671	SLU 83	0.86	0.92	84.96	-2.2507	-0.0015	-0.062
671	SLU 84	0.86	0.97	84.96	-2.247	-0.0015	-0.0619
671	SLE RA 1	0.59	0.59	55.26	-1.4679	-0.0006	-0.0411
671	SLE RA 2	0.59	0.64	55.26	-1.4637	-0.0006	-0.041
671	SLE RA 3	0.6	0.61	56.03	-1.4882	-0.0007	-0.042
671	SLE RA 4	0.6	0.64	56.03	-1.4857	-0.0007	-0.0419
671	SLE RA 5	0.6	0.65	55.73	-1.4738	-0.0007	-0.0415
671	SLE RA 6	0.61	0.61	56.49	-1.4983	-0.0008	-0.0425
671	SLE RA 7	0.61	0.64	56.49	-1.4958	-0.0008	-0.0424
671	SLE RA 8	0.61	0.6	56.2	-1.4881	-0.0008	-0.0422
671	SLE RA 9	0.61	0.63	56.19	-1.4856	-0.0008	-0.0421
671	SLE RA 10	0.62	0.7	60.15	-1.5944	-0.0007	-0.044
671	SLE RA 11	0.63	0.66	60.92	-1.6189	-0.0009	-0.0449
671	SLE RA 12	0.63	0.69	60.92	-1.6164	-0.0008	-0.0448
671	SLE RA 13	0.63	0.7	60.62	-1.6045	-0.0008	-0.0445
671	SLE RA 14	0.64	0.67	61.39	-1.629	-0.001	-0.0455
671	SLE RA 15	0.64	0.7	61.39	-1.6265	-0.0009	-0.0454
671	SLE RA 16	0.64	0.65	61.09	-1.6188	-0.001	-0.0452
671	SLE RA 17	0.64	0.68	61.09	-1.6163	-0.0009	-0.0451
671	SLE RA 18	0.64	0.67	62.25	-1.6546	-0.0008	-0.0454
671	SLE RA 19	0.64	0.7	62.25	-1.6521	-0.0008	-0.0453
671	SLE RA 20	0.64	0.67	62.72	-1.6647	-0.0009	-0.0459
671	SLE RA 21	0.64	0.7	62.72	-1.6622	-0.0009	-0.0458
671	SLE FR 1	0.59	0.59	55.26	-1.4679	-0.0006	-0.0411
671	SLE FR 2	0.59	0.6	55.26	-1.4671	-0.0006	-0.0411
671	SLE FR 3	0.6	0.59	55.45	-1.4719	-0.0007	-0.0414
671	SLE FR 4	0.61	0.62	57.36	-1.5231	-0.0007	-0.0424
671	SLE FR 5	0.61	0.61	57.54	-1.5279	-0.0007	-0.0426
671	SLE FR 6	0.62	0.63	58.75	-1.5612	-0.0007	-0.0433
671	SLE QP 1	0.59	0.59	55.26	-1.4679	-0.0006	-0.0411
671	SLE QP 2	0.61	0.61	57.36	-1.5239	-0.0007	-0.0424
671	SLD 1	5.28	1.06	54.01	-1.6702	0.0217	-0.0319
671	SLD 2	5.3	1.33	53.99	-1.6541	0.0219	-0.0276
671	SLD 3	5.33	-0.53	54.57	-1.8174	0.021	-0.0309
671	SLD 4	5.36	-0.26	54.54	-1.8012	0.0212	-0.0265
671	SLD 5	1.92	3.11	55.51	-1.3475	0.0071	-0.0416
671	SLD 6	1.93	3.28	55.49	-1.3369	0.0073	-0.0388
671	SLD 7	2.11	-2.19	57.37	-1.838	0.0046	-0.0381
671	SLD 8	2.12	-2.01	57.35	-1.8274	0.0048	-0.0353
671	SLD 9	-0.91	3.23	57.36	-1.2204	-0.0061	-0.0495
671	SLD 10	-0.89	3.41	57.34	-1.2098	-0.006	-0.0467
671	SLD 11	-0.72	-2.06	59.22	-1.7109	-0.0086	-0.046
671	SLD 12	-0.71	-1.88	59.2	-1.7003	-0.0085	-0.0432
671	SLD 13	-4.14	1.48	60.17	-1.2466	-0.0225	-0.0583
671	SLD 14	-4.12	1.75	60.14	-1.2304	-0.0223	-0.054
671	SLD 15	-4.09	-0.11	60.73	-1.3937	-0.0233	-0.0573
671	SLD 16	-4.07	0.17	60.7	-1.3776	-0.0231	-0.0529
671	SLV 1	11.53	1.61	49.55	-1.8718	0.0517	-0.0177
671	SLV 2	11.59	2.24	49.48	-1.8341	0.0522	-0.0076
671	SLV 3	11.66	-2.01	50.83	-2.2054	0.05	-0.0153
671	SLV 4	11.72	-1.38	50.76	-2.1677	0.0505	-0.0052
671	SLV 5	3.68	6.29	53.08	-1.1288	0.0176	-0.0404
671	SLV 6	3.71	6.69	53.04	-1.1045	0.0179	-0.0339
671	SLV 7	4.11	-5.77	57.36	-2.2408	0.0118	-0.0324
671	SLV 8	4.15	-5.36	57.31	-2.2165	0.0121	-0.0258
671	SLV 9	-2.93	6.58	57.4	-0.8313	-0.0135	-0.059
671	SLV 10	-2.9	6.99	57.36	-0.807	-0.0132	-0.0525
671	SLV 11	-2.5	-5.47	61.68	-1.9433	-0.0192	-0.0509
671	SLV 12	-2.46	-5.06	61.63	-1.919	-0.0189	-0.0444
671	SLV 13	-10.5	2.6	63.95	-0.8801	-0.0519	-0.0796
671	SLV 14	-10.45	3.23	63.88	-0.8424	-0.0514	-0.0695
671	SLV 15	-10.37	-1.02	65.23	-1.2137	-0.0536	-0.0772
671	SLV 16	-10.32	-0.38	65.16	-1.176	-0.0531	-0.0671
671	CRTFP Ux+	0	0	0	0	0	0
671	CRTFP Ux-	0	0	0	0	0	0
671	CRTFP Uy+	0	0	0	0	0	0
671	CRTFP Uy-	0	0	0	0	0	0
672	SLU 1	0.61	0.34	53.29	-1.4219	0.0029	-0.0438
672	SLU 2	0.61	0.42	53.28	-1.4157	0.0029	-0.0435

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
672	SLU 3	0.63	0.36	54.44	-1.4525	0.0028	-0.0451
672	SLU 4	0.63	0.41	54.44	-1.4488	0.0028	-0.045
672	SLU 5	0.62	0.42	53.99	-1.431	0.0028	-0.0444
672	SLU 6	0.64	0.36	55.15	-1.4678	0.0026	-0.046
672	SLU 7	0.64	0.41	55.15	-1.464	0.0027	-0.0458
672	SLU 8	0.63	0.34	54.7	-1.4525	0.0026	-0.0455
672	SLU 9	0.63	0.39	54.7	-1.4488	0.0026	-0.0453
672	SLU 10	0.66	0.48	60.62	-1.6117	0.0035	-0.0481
672	SLU 11	0.67	0.42	61.78	-1.6484	0.0034	-0.0497
672	SLU 12	0.67	0.47	61.78	-1.6447	0.0034	-0.0495
672	SLU 13	0.67	0.48	61.33	-1.6269	0.0034	-0.0489
672	SLU 14	0.68	0.42	62.49	-1.6637	0.0032	-0.0505
672	SLU 15	0.68	0.47	62.48	-1.66	0.0033	-0.0504
672	SLU 16	0.68	0.4	62.04	-1.6484	0.0032	-0.0501
672	SLU 17	0.68	0.45	62.03	-1.6447	0.0032	-0.0499
672	SLU 18	0.68	0.42	63.77	-1.7018	0.0037	-0.0503
672	SLU 19	0.68	0.47	63.76	-1.6981	0.0038	-0.0502
672	SLU 20	0.69	0.42	64.47	-1.7171	0.0036	-0.0512
672	SLU 21	0.69	0.47	64.47	-1.7134	0.0036	-0.051
672	SLU 22	0.67	0.44	60.07	-1.5875	0.0027	-0.049
672	SLU 23	0.67	0.52	60.06	-1.5813	0.0027	-0.0487
672	SLU 24	0.69	0.46	61.22	-1.6181	0.0026	-0.0503
672	SLU 25	0.69	0.51	61.22	-1.6144	0.0026	-0.0502
672	SLU 26	0.68	0.52	60.77	-1.5966	0.0026	-0.0496
672	SLU 27	0.7	0.46	61.93	-1.6334	0.0025	-0.0512
672	SLU 28	0.7	0.51	61.93	-1.6296	0.0025	-0.051
672	SLU 29	0.69	0.44	61.48	-1.6181	0.0024	-0.0507
672	SLU 30	0.69	0.49	61.48	-1.6143	0.0024	-0.0505
672	SLU 31	0.72	0.58	67.4	-1.7772	0.0033	-0.0533
672	SLU 32	0.74	0.52	68.56	-1.814	0.0032	-0.0549
672	SLU 33	0.74	0.57	68.55	-1.8103	0.0032	-0.0547
672	SLU 34	0.73	0.58	68.1	-1.7925	0.0032	-0.0541
672	SLU 35	0.75	0.52	69.26	-1.8293	0.003	-0.0557
672	SLU 36	0.75	0.57	69.26	-1.8256	0.0031	-0.0556
672	SLU 37	0.74	0.5	68.82	-1.814	0.003	-0.0553
672	SLU 38	0.74	0.55	68.81	-1.8103	0.003	-0.0551
672	SLU 39	0.74	0.52	70.54	-1.8674	0.0036	-0.0555
672	SLU 40	0.74	0.57	70.54	-1.8637	0.0036	-0.0554
672	SLU 41	0.75	0.52	71.25	-1.8827	0.0034	-0.0564
672	SLU 42	0.75	0.57	71.25	-1.879	0.0034	-0.0562
672	SLU 43	0.77	0.41	66.95	-1.7917	0.0038	-0.0552
672	SLU 44	0.77	0.49	66.95	-1.7855	0.0039	-0.0549
672	SLU 45	0.79	0.43	68.11	-1.8223	0.0037	-0.0565
672	SLU 46	0.79	0.48	68.1	-1.8186	0.0037	-0.0563
672	SLU 47	0.78	0.49	67.65	-1.8008	0.0037	-0.0557
672	SLU 48	0.8	0.43	68.81	-1.8376	0.0036	-0.0573
672	SLU 49	0.8	0.48	68.81	-1.8338	0.0036	-0.0572
672	SLU 50	0.79	0.41	68.36	-1.8223	0.0035	-0.0569
672	SLU 51	0.79	0.46	68.36	-1.8186	0.0036	-0.0567
672	SLU 52	0.82	0.55	74.28	-1.9815	0.0045	-0.0595
672	SLU 53	0.84	0.49	75.44	-2.0182	0.0043	-0.0611
672	SLU 54	0.84	0.54	75.44	-2.0145	0.0043	-0.0609
672	SLU 55	0.83	0.55	74.99	-1.9967	0.0043	-0.0603
672	SLU 56	0.85	0.49	76.15	-2.0335	0.0042	-0.0619
672	SLU 57	0.85	0.54	76.14	-2.0298	0.0042	-0.0617
672	SLU 58	0.84	0.47	75.7	-2.0182	0.0041	-0.0614
672	SLU 59	0.84	0.52	75.7	-2.0145	0.0042	-0.0612
672	SLU 60	0.84	0.49	77.43	-2.0716	0.0047	-0.0617
672	SLU 61	0.84	0.54	77.42	-2.0679	0.0047	-0.0615
672	SLU 62	0.85	0.49	78.13	-2.0869	0.0045	-0.0625
672	SLU 63	0.85	0.54	78.13	-2.0832	0.0046	-0.0624
672	SLU 64	0.83	0.5	73.73	-1.9573	0.0036	-0.0604
672	SLU 65	0.83	0.59	73.72	-1.9511	0.0037	-0.0601
672	SLU 66	0.85	0.53	74.88	-1.9879	0.0035	-0.0617
672	SLU 67	0.85	0.58	74.88	-1.9842	0.0036	-0.0615
672	SLU 68	0.84	0.59	74.43	-1.9664	0.0035	-0.061
672	SLU 69	0.86	0.53	75.59	-2.0032	0.0034	-0.0625
672	SLU 70	0.86	0.58	75.59	-1.9994	0.0034	-0.0624
672	SLU 71	0.85	0.51	75.14	-1.9879	0.0034	-0.0621
672	SLU 72	0.85	0.56	75.14	-1.9842	0.0034	-0.0619
672	SLU 73	0.88	0.65	81.06	-2.1471	0.0043	-0.0647
672	SLU 74	0.9	0.58	82.22	-2.1838	0.0041	-0.0663
672	SLU 75	0.9	0.63	82.22	-2.1801	0.0041	-0.0661
672	SLU 76	0.89	0.65	81.77	-2.1623	0.0041	-0.0655
672	SLU 77	0.91	0.59	82.93	-2.1991	0.004	-0.0671
672	SLU 78	0.91	0.64	82.92	-2.1954	0.004	-0.0669
672	SLU 79	0.9	0.57	82.48	-2.1838	0.0039	-0.0666
672	SLU 80	0.9	0.62	82.48	-2.1801	0.004	-0.0665
672	SLU 81	0.9	0.59	84.21	-2.2372	0.0045	-0.0669
672	SLU 82	0.9	0.64	84.2	-2.2335	0.0045	-0.0667
672	SLU 83	0.91	0.59	84.91	-2.2525	0.0043	-0.0677
672	SLU 84	0.91	0.64	84.91	-2.2488	0.0044	-0.0676
672	SLE RA 1	0.63	0.37	55.22	-1.4692	0.0028	-0.0453
672	SLE RA 2	0.63	0.42	55.22	-1.4651	0.0029	-0.0451
672	SLE RA 3	0.64	0.38	56	-1.4896	0.0028	-0.0462
672	SLE RA 4	0.64	0.41	55.99	-1.4871	0.0028	-0.0461
672	SLE RA 5	0.63	0.42	55.69	-1.4753	0.0028	-0.0457
672	SLE RA 6	0.65	0.38	56.47	-1.4998	0.0027	-0.0467
672	SLE RA 7	0.65	0.42	56.47	-1.4973	0.0027	-0.0466
672	SLE RA 8	0.64	0.37	56.17	-1.4896	0.0026	-0.0464

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
672	SLE RA 9	0.64	0.4	56.17	-1.4871	0.0027	-0.0463
672	SLE RA 10	0.66	0.46	60.11	-1.5957	0.0033	-0.0482
672	SLE RA 11	0.67	0.42	60.88	-1.6202	0.0032	-0.0492
672	SLE RA 12	0.67	0.45	60.88	-1.6178	0.0032	-0.0491
672	SLE RA 13	0.67	0.46	60.58	-1.6059	0.0032	-0.0487
672	SLE RA 14	0.68	0.42	61.36	-1.6304	0.0031	-0.0498
672	SLE RA 15	0.68	0.45	61.35	-1.6279	0.0031	-0.0497
672	SLE RA 16	0.67	0.41	61.06	-1.6202	0.003	-0.0495
672	SLE RA 17	0.67	0.44	61.06	-1.6178	0.0031	-0.0494
672	SLE RA 18	0.67	0.42	62.21	-1.6559	0.0034	-0.0496
672	SLE RA 19	0.67	0.46	62.21	-1.6534	0.0034	-0.0495
672	SLE RA 20	0.68	0.42	62.68	-1.666	0.0033	-0.0502
672	SLE RA 21	0.68	0.46	62.68	-1.6635	0.0033	-0.0501
672	SLE FR 1	0.63	0.37	55.22	-1.4692	0.0028	-0.0453
672	SLE FR 2	0.63	0.38	55.22	-1.4684	0.0028	-0.0453
672	SLE FR 3	0.63	0.37	55.41	-1.4733	0.0028	-0.0455
672	SLE FR 4	0.64	0.39	57.32	-1.5244	0.003	-0.0466
672	SLE FR 5	0.64	0.38	57.51	-1.5293	0.003	-0.0468
672	SLE FR 6	0.65	0.39	58.72	-1.5626	0.0031	-0.0475
672	SLE QP 1	0.63	0.37	55.22	-1.4692	0.0028	-0.0453
672	SLE QP 2	0.64	0.38	57.32	-1.5252	0.003	-0.0466
672	SLD 1	5.31	1.26	53.26	-1.6694	0.0229	-0.0346
672	SLD 2	5.33	1.55	53.22	-1.653	0.0231	-0.0302
672	SLD 3	5.36	-0.33	53.84	-1.8169	0.0218	-0.0355
672	SLD 4	5.39	-0.04	53.8	-1.8006	0.022	-0.0311
672	SLD 5	1.95	3	55.23	-1.3476	0.0106	-0.0424
672	SLD 6	1.97	3.19	55.2	-1.3369	0.0107	-0.0395
672	SLD 7	2.14	-2.29	57.16	-1.8394	0.0069	-0.0455
672	SLD 8	2.15	-2.1	57.14	-1.8287	0.0071	-0.0426
672	SLD 9	-0.87	2.87	57.5	-1.2218	-0.0011	-0.0506
672	SLD 10	-0.86	3.06	57.48	-1.2111	-0.0009	-0.0477
672	SLD 11	-0.68	-2.43	59.44	-1.7136	-0.0047	-0.0537
672	SLD 12	-0.67	-2.23	59.42	-1.7028	-0.0046	-0.0508
672	SLD 13	-4.1	0.8	60.84	-1.2499	-0.016	-0.0621
672	SLD 14	-4.08	1.1	60.8	-1.2336	-0.0158	-0.0577
672	SLD 15	-4.05	-0.78	61.42	-1.3974	-0.0171	-0.063
672	SLD 16	-4.02	-0.49	61.38	-1.3811	-0.0169	-0.0586
672	SLV 1	11.55	2.38	47.82	-1.868	0.0495	-0.0185
672	SLV 2	11.61	3.06	47.74	-1.8299	0.05	-0.0082
672	SLV 3	11.68	-1.24	49.16	-2.2024	0.047	-0.0206
672	SLV 4	11.74	-0.55	49.08	-2.1643	0.0475	-0.0104
672	SLV 5	3.71	6.35	52.46	-1.1274	0.0206	-0.0367
672	SLV 6	3.74	6.79	52.41	-1.1029	0.021	-0.03
672	SLV 7	4.14	-5.71	56.91	-2.2421	0.0123	-0.0439
672	SLV 8	4.18	-5.27	56.86	-2.2176	0.0127	-0.0373
672	SLV 9	-2.9	6.03	57.78	-0.8329	-0.0067	-0.056
672	SLV 10	-2.86	6.47	57.73	-0.8084	-0.0063	-0.0494
672	SLV 11	-2.46	-6.02	62.23	-1.9475	-0.015	-0.0632
672	SLV 12	-2.42	-5.58	62.18	-1.923	-0.0146	-0.0566
672	SLV 13	-10.46	1.32	65.57	-0.8861	-0.0415	-0.0828
672	SLV 14	-10.4	2	65.48	-0.8481	-0.041	-0.0726
672	SLV 15	-10.33	-2.3	66.9	-1.2205	-0.044	-0.085
672	SLV 16	-10.27	-1.61	66.82	-1.1825	-0.0435	-0.0748
672	CRTFP Ux+	0	0	0	0	0	0
672	CRTFP Ux-	0	0	0	0	0	0
672	CRTFP Uy+	0	0	0	0	0	0
672	CRTFP Uy-	0	0	0	0	0	0
673	SLU 1	0.65	0.11	53.13	-1.4249	0.0065	-0.0436
673	SLU 2	0.65	0.2	53.12	-1.4187	0.0065	-0.0433
673	SLU 3	0.66	0.13	54.28	-1.4556	0.0065	-0.0449
673	SLU 4	0.66	0.18	54.28	-1.4518	0.0065	-0.0447
673	SLU 5	0.66	0.2	53.83	-1.4341	0.0064	-0.0441
673	SLU 6	0.67	0.13	55	-1.471	0.0064	-0.0457
673	SLU 7	0.67	0.18	54.99	-1.4673	0.0064	-0.0455
673	SLU 8	0.67	0.11	54.55	-1.4557	0.0063	-0.0453
673	SLU 9	0.67	0.16	54.55	-1.452	0.0063	-0.0451
673	SLU 10	0.7	0.24	60.42	-1.6147	0.008	-0.0476
673	SLU 11	0.71	0.17	61.58	-1.6516	0.0079	-0.0493
673	SLU 12	0.71	0.22	61.58	-1.6479	0.008	-0.0491
673	SLU 13	0.71	0.23	61.13	-1.6302	0.0079	-0.0484
673	SLU 14	0.73	0.16	62.29	-1.6671	0.0078	-0.0501
673	SLU 15	0.72	0.21	62.29	-1.6633	0.0079	-0.0499
673	SLU 16	0.72	0.15	61.85	-1.6518	0.0078	-0.0496
673	SLU 17	0.72	0.2	61.84	-1.6481	0.0078	-0.0494
673	SLU 18	0.72	0.17	63.55	-1.705	0.0086	-0.0498
673	SLU 19	0.72	0.22	63.55	-1.7012	0.0086	-0.0496
673	SLU 20	0.73	0.16	64.26	-1.7204	0.0085	-0.0506
673	SLU 21	0.73	0.21	64.26	-1.7167	0.0085	-0.0504
673	SLU 22	0.71	0.19	59.9	-1.591	0.0069	-0.0487
673	SLU 23	0.71	0.27	59.9	-1.5847	0.0069	-0.0484
673	SLU 24	0.73	0.2	61.06	-1.6216	0.0068	-0.05
673	SLU 25	0.73	0.25	61.06	-1.6179	0.0069	-0.0498
673	SLU 26	0.72	0.27	60.61	-1.6002	0.0068	-0.0492
673	SLU 27	0.74	0.2	61.77	-1.6371	0.0067	-0.0508
673	SLU 28	0.74	0.25	61.77	-1.6333	0.0068	-0.0506
673	SLU 29	0.73	0.18	61.32	-1.6218	0.0067	-0.0503
673	SLU 30	0.73	0.23	61.32	-1.6181	0.0067	-0.0501
673	SLU 31	0.76	0.31	67.19	-1.7808	0.0084	-0.0527
673	SLU 32	0.78	0.24	68.36	-1.8177	0.0083	-0.0543
673	SLU 33	0.78	0.29	68.36	-1.814	0.0083	-0.0541

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
673	SLU 34	0.77	0.3	67.91	-1.7962	0.0083	-0.0535
673	SLU 35	0.79	0.24	69.07	-1.8331	0.0082	-0.0551
673	SLU 36	0.79	0.29	69.07	-1.8294	0.0082	-0.0549
673	SLU 37	0.79	0.22	68.62	-1.8179	0.0081	-0.0546
673	SLU 38	0.78	0.27	68.62	-1.8141	0.0082	-0.0544
673	SLU 39	0.79	0.24	70.33	-1.871	0.009	-0.0549
673	SLU 40	0.79	0.29	70.33	-1.8673	0.009	-0.0547
673	SLU 41	0.8	0.24	71.04	-1.8865	0.0089	-0.0557
673	SLU 42	0.8	0.29	71.04	-1.8827	0.0089	-0.0555
673	SLU 43	0.82	0.12	66.74	-1.7954	0.0083	-0.055
673	SLU 44	0.82	0.21	66.74	-1.7892	0.0084	-0.0547
673	SLU 45	0.84	0.14	67.9	-1.8261	0.0083	-0.0563
673	SLU 46	0.83	0.19	67.9	-1.8224	0.0083	-0.0561
673	SLU 47	0.83	0.21	67.45	-1.8046	0.0083	-0.0555
673	SLU 48	0.85	0.14	68.61	-1.8415	0.0082	-0.0571
673	SLU 49	0.85	0.19	68.61	-1.8378	0.0082	-0.0569
673	SLU 50	0.84	0.12	68.16	-1.8263	0.0081	-0.0566
673	SLU 51	0.84	0.17	68.16	-1.8225	0.0081	-0.0564
673	SLU 52	0.87	0.25	74.03	-1.9853	0.0098	-0.059
673	SLU 53	0.89	0.18	75.2	-2.0222	0.0097	-0.0606
673	SLU 54	0.89	0.23	75.19	-2.0184	0.0098	-0.0604
673	SLU 55	0.88	0.24	74.75	-2.0007	0.0097	-0.0598
673	SLU 56	0.9	0.17	75.91	-2.0376	0.0096	-0.0614
673	SLU 57	0.9	0.22	75.91	-2.0339	0.0097	-0.0612
673	SLU 58	0.89	0.16	75.46	-2.0223	0.0096	-0.0609
673	SLU 59	0.89	0.21	75.46	-2.0186	0.0096	-0.0607
673	SLU 60	0.89	0.18	77.17	-2.0755	0.0104	-0.0612
673	SLU 61	0.89	0.23	77.16	-2.0718	0.0104	-0.061
673	SLU 62	0.9	0.17	77.88	-2.0909	0.0103	-0.062
673	SLU 63	0.9	0.22	77.88	-2.0872	0.0103	-0.0618
673	SLU 64	0.88	0.2	73.52	-1.9615	0.0087	-0.06
673	SLU 65	0.88	0.28	73.51	-1.9553	0.0087	-0.0597
673	SLU 66	0.9	0.21	74.67	-1.9922	0.0087	-0.0613
673	SLU 67	0.9	0.26	74.67	-1.9884	0.0087	-0.0611
673	SLU 68	0.89	0.28	74.22	-1.9707	0.0086	-0.0605
673	SLU 69	0.91	0.21	75.39	-2.0076	0.0086	-0.0621
673	SLU 70	0.91	0.26	75.38	-2.0039	0.0086	-0.0619
673	SLU 71	0.91	0.19	74.94	-1.9923	0.0085	-0.0617
673	SLU 72	0.91	0.24	74.94	-1.9886	0.0085	-0.0615
673	SLU 73	0.93	0.32	80.81	-2.1513	0.0102	-0.064
673	SLU 74	0.95	0.25	81.97	-2.1882	0.0101	-0.0657
673	SLU 75	0.95	0.3	81.97	-2.1845	0.0102	-0.0655
673	SLU 76	0.95	0.31	81.52	-2.1667	0.0101	-0.0649
673	SLU 77	0.96	0.25	82.69	-2.2037	0.01	-0.0665
673	SLU 78	0.96	0.3	82.68	-2.1999	0.0101	-0.0663
673	SLU 79	0.96	0.23	82.24	-2.1884	0.01	-0.066
673	SLU 80	0.96	0.28	82.24	-2.1847	0.01	-0.0658
673	SLU 81	0.96	0.25	83.94	-2.2416	0.0108	-0.0662
673	SLU 82	0.96	0.3	83.94	-2.2378	0.0108	-0.066
673	SLU 83	0.97	0.25	84.66	-2.257	0.0107	-0.067
673	SLU 84	0.97	0.3	84.65	-2.2533	0.0107	-0.0668
673	SLE RA 1	0.67	0.14	55.06	-1.4723	0.0066	-0.0451
673	SLE RA 2	0.67	0.19	55.06	-1.4682	0.0066	-0.0449
673	SLE RA 3	0.68	0.15	55.83	-1.4928	0.0066	-0.0459
673	SLE RA 4	0.68	0.18	55.83	-1.4903	0.0066	-0.0458
673	SLE RA 5	0.67	0.19	55.53	-1.4785	0.0066	-0.0454
673	SLE RA 6	0.68	0.14	56.31	-1.5031	0.0065	-0.0465
673	SLE RA 7	0.68	0.18	56.31	-1.5006	0.0065	-0.0463
673	SLE RA 8	0.68	0.13	56.01	-1.4929	0.0065	-0.0462
673	SLE RA 9	0.68	0.17	56.01	-1.4904	0.0065	-0.046
673	SLE RA 10	0.7	0.22	59.92	-1.5989	0.0076	-0.0477
673	SLE RA 11	0.71	0.17	60.7	-1.6235	0.0076	-0.0488
673	SLE RA 12	0.71	0.2	60.7	-1.621	0.0076	-0.0487
673	SLE RA 13	0.71	0.21	60.4	-1.6092	0.0075	-0.0483
673	SLE RA 14	0.72	0.17	61.17	-1.6338	0.0075	-0.0494
673	SLE RA 15	0.72	0.2	61.17	-1.6313	0.0075	-0.0492
673	SLE RA 16	0.71	0.16	60.88	-1.6236	0.0074	-0.049
673	SLE RA 17	0.71	0.19	60.87	-1.6211	0.0075	-0.0489
673	SLE RA 18	0.71	0.17	62.01	-1.6591	0.008	-0.0492
673	SLE RA 19	0.71	0.2	62.01	-1.6566	0.008	-0.0491
673	SLE RA 20	0.72	0.17	62.49	-1.6693	0.0079	-0.0497
673	SLE RA 21	0.72	0.2	62.49	-1.6669	0.008	-0.0496
673	SLE FR 1	0.67	0.14	55.06	-1.4723	0.0066	-0.0451
673	SLE FR 2	0.67	0.15	55.06	-1.4715	0.0066	-0.045
673	SLE FR 3	0.67	0.13	55.25	-1.4765	0.0066	-0.0453
673	SLE FR 4	0.68	0.16	57.15	-1.5275	0.007	-0.0463
673	SLE FR 5	0.68	0.15	57.34	-1.5325	0.007	-0.0465
673	SLE FR 6	0.69	0.15	58.54	-1.5657	0.0073	-0.0471
673	SLE QP 1	0.67	0.14	55.06	-1.4723	0.0066	-0.0451
673	SLE QP 2	0.68	0.15	57.15	-1.5284	0.007	-0.0463
673	SLD 1	5.34	1.04	52.52	-1.6704	0.0207	-0.0347
673	SLD 2	5.36	1.36	52.47	-1.6539	0.0209	-0.03
673	SLD 3	5.39	-0.55	53.12	-1.8185	0.0193	-0.0362
673	SLD 4	5.42	-0.23	53.08	-1.8019	0.0195	-0.0316
673	SLD 5	1.99	2.77	54.85	-1.3494	0.0132	-0.0412
673	SLD 6	2	2.98	54.83	-1.3386	0.0134	-0.0382
673	SLD 7	2.17	-2.53	56.86	-1.8428	0.0085	-0.0465
673	SLD 8	2.19	-2.33	56.83	-1.832	0.0087	-0.0435
673	SLD 9	-0.83	2.62	57.46	-1.2247	0.0054	-0.0492
673	SLD 10	-0.81	2.83	57.44	-1.2139	0.0055	-0.0461

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
673	SLD 11	-0.64	-2.69	59.47	-1.7181	0.0007	-0.0544
673	SLD 12	-0.63	-2.48	59.44	-1.7073	0.0008	-0.0514
673	SLD 13	-4.06	0.53	61.22	-1.2548	-0.0055	-0.061
673	SLD 14	-4.03	0.84	61.17	-1.2383	-0.0052	-0.0564
673	SLD 15	-4	-1.07	61.82	-1.4028	-0.0069	-0.0626
673	SLD 16	-3.98	-0.75	61.78	-1.3863	-0.0066	-0.058
673	SLV 1	11.57	2.2	46.33	-1.8663	0.039	-0.019
673	SLV 2	11.63	2.93	46.23	-1.8278	0.0395	-0.0082
673	SLV 3	11.7	-1.43	47.71	-2.2018	0.0358	-0.0226
673	SLV 4	11.76	-0.69	47.61	-2.1633	0.0363	-0.0118
673	SLV 5	3.74	6.14	51.83	-1.1275	0.0214	-0.0345
673	SLV 6	3.78	6.61	51.76	-1.1028	0.0218	-0.0275
673	SLV 7	4.18	-5.96	56.42	-2.2458	0.0106	-0.0465
673	SLV 8	4.21	-5.48	56.36	-2.2211	0.011	-0.0396
673	SLV 9	-2.85	5.77	57.94	-0.8357	0.003	-0.053
673	SLV 10	-2.82	6.25	57.87	-0.8109	0.0034	-0.0461
673	SLV 11	-2.42	-6.32	62.53	-1.954	-0.0077	-0.0651
673	SLV 12	-2.38	-5.85	62.46	-1.9292	-0.0074	-0.0582
673	SLV 13	-10.4	0.99	66.69	-0.8934	-0.0223	-0.0808
673	SLV 14	-10.34	1.72	66.58	-0.855	-0.0217	-0.0701
673	SLV 15	-10.27	-2.64	68.07	-1.2289	-0.0255	-0.0844
673	SLV 16	-10.21	-1.91	67.96	-1.1904	-0.025	-0.0737
673	CRTFP Ux+	0	0	0	0	0	0
673	CRTFP Ux-	0	0	0	0	0	0
673	CRTFP Uy+	0	0	0	0	0	0
673	CRTFP Uy-	0	0	0	0	0	0
674	SLU 1	1.2	-0.28	89.75	-1.8185	-11.2349	-0.1229
674	SLU 2	1.2	-0.13	89.73	-1.8089	-11.2332	-0.1037
674	SLU 3	1.23	-0.27	91.72	-1.8582	-11.4824	-0.124
674	SLU 4	1.23	-0.18	91.71	-1.8525	-11.4814	-0.1125
674	SLU 5	1.22	-0.14	90.95	-1.8285	-11.3865	-0.1068
674	SLU 6	1.25	-0.28	92.93	-1.8778	-11.6357	-0.1271
674	SLU 7	1.25	-0.19	92.92	-1.8721	-11.6346	-0.1156
674	SLU 8	1.24	-0.3	92.18	-1.8576	-11.5415	-0.1291
674	SLU 9	1.24	-0.22	92.17	-1.8519	-11.5405	-0.1176
674	SLU 10	1.29	-0.12	102	-2.0604	-12.765	-0.1099
674	SLU 11	1.33	-0.25	103.99	-2.1097	-13.0141	-0.1302
674	SLU 12	1.33	-0.16	103.98	-2.104	-13.0131	-0.1186
674	SLU 13	1.31	-0.13	103.22	-2.08	-12.9183	-0.113
674	SLU 14	1.35	-0.26	105.2	-2.1293	-13.1674	-0.1332
674	SLU 15	1.35	-0.18	105.2	-2.1236	-13.1664	-0.1217
674	SLU 16	1.34	-0.29	104.45	-2.1091	-13.0733	-0.1352
674	SLU 17	1.34	-0.2	104.44	-2.1034	-13.0723	-0.1237
674	SLU 18	1.34	-0.26	107.28	-2.1778	-13.4232	-0.1317
674	SLU 19	1.34	-0.17	107.27	-2.172	-13.4221	-0.1202
674	SLU 20	1.36	-0.27	108.49	-2.1974	-13.5765	-0.1348
674	SLU 21	1.36	-0.18	108.48	-2.1916	-13.5754	-0.1233
674	SLU 22	1.32	-0.21	101.23	-2.0307	-12.6748	-0.1242
674	SLU 23	1.32	-0.06	101.21	-2.0211	-12.6731	-0.105
674	SLU 24	1.36	-0.2	103.2	-2.0704	-12.9223	-0.1253
674	SLU 25	1.36	-0.11	103.19	-2.0647	-12.9212	-0.1138
674	SLU 26	1.34	-0.08	102.43	-2.0407	-12.8264	-0.1081
674	SLU 27	1.38	-0.21	104.41	-2.09	-13.0756	-0.1284
674	SLU 28	1.38	-0.12	104.41	-2.0843	-13.0745	-0.1169
674	SLU 29	1.37	-0.24	103.66	-2.0698	-12.9814	-0.1304
674	SLU 30	1.36	-0.15	103.65	-2.0641	-12.9804	-0.1189
674	SLU 31	1.42	-0.05	113.48	-2.2726	-14.2049	-0.1112
674	SLU 32	1.45	-0.18	115.47	-2.3219	-14.454	-0.1315
674	SLU 33	1.45	-0.1	115.46	-2.3162	-14.453	-0.12
674	SLU 34	1.44	-0.06	114.7	-2.2922	-14.3582	-0.1143
674	SLU 35	1.47	-0.2	116.68	-2.3415	-14.6073	-0.1346
674	SLU 36	1.47	-0.11	116.68	-2.3358	-14.6063	-0.1231
674	SLU 37	1.46	-0.22	115.93	-2.3213	-14.5132	-0.1366
674	SLU 38	1.46	-0.13	115.92	-2.3156	-14.5122	-0.125
674	SLU 39	1.46	-0.19	118.76	-2.39	-14.8631	-0.133
674	SLU 40	1.46	-0.1	118.75	-2.3842	-14.862	-0.1215
674	SLU 41	1.48	-0.2	119.97	-2.4096	-15.0163	-0.1361
674	SLU 42	1.48	-0.11	119.97	-2.4038	-15.0153	-0.1246
674	SLU 43	1.52	-0.39	112.73	-2.2913	-14.1117	-0.1593
674	SLU 44	1.52	-0.24	112.72	-2.2817	-14.11	-0.1401
674	SLU 45	1.55	-0.37	114.7	-2.331	-14.3592	-0.1604
674	SLU 46	1.55	-0.29	114.7	-2.3253	-14.3582	-0.1489
674	SLU 47	1.54	-0.25	113.94	-2.3013	-14.2633	-0.1432
674	SLU 48	1.57	-0.39	115.92	-2.3506	-14.5125	-0.1635
674	SLU 49	1.57	-0.3	115.91	-2.3449	-14.5114	-0.152
674	SLU 50	1.56	-0.41	115.17	-2.3304	-14.4183	-0.1655
674	SLU 51	1.56	-0.32	115.16	-2.3247	-14.4173	-0.154
674	SLU 52	1.61	-0.22	124.99	-2.5332	-15.6418	-0.1463
674	SLU 53	1.65	-0.36	126.97	-2.5825	-15.8909	-0.1666
674	SLU 54	1.65	-0.27	126.97	-2.5768	-15.8899	-0.1551
674	SLU 55	1.63	-0.24	126.21	-2.5528	-15.7951	-0.1494
674	SLU 56	1.67	-0.37	128.19	-2.6021	-16.0442	-0.1697
674	SLU 57	1.67	-0.28	128.18	-2.5964	-16.0432	-0.1581
674	SLU 58	1.66	-0.39	127.44	-2.5819	-15.9501	-0.1716
674	SLU 59	1.65	-0.31	127.43	-2.5762	-15.9491	-0.1601
674	SLU 60	1.66	-0.36	130.26	-2.6506	-16.3	-0.1681
674	SLU 61	1.65	-0.27	130.25	-2.6448	-16.2989	-0.1566
674	SLU 62	1.68	-0.37	131.48	-2.6702	-16.4533	-0.1712
674	SLU 63	1.67	-0.29	131.47	-2.6644	-16.4522	-0.1597
674	SLU 64	1.64	-0.32	124.21	-2.5035	-15.5516	-0.1607

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
674	SLU 65	1.64	-0.17	124.2	-2.4939	-15.5499	-0.1415
674	SLU 66	1.68	-0.31	126.18	-2.5432	-15.7991	-0.1617
674	SLU 67	1.67	-0.22	126.18	-2.5375	-15.798	-0.1502
674	SLU 68	1.66	-0.18	125.42	-2.5135	-15.7032	-0.1445
674	SLU 69	1.7	-0.32	127.4	-2.5628	-15.9524	-0.1648
674	SLU 70	1.69	-0.23	127.39	-2.5571	-15.9513	-0.1533
674	SLU 71	1.68	-0.34	126.65	-2.5426	-15.8582	-0.1668
674	SLU 72	1.68	-0.25	126.64	-2.5369	-15.8572	-0.1553
674	SLU 73	1.74	-0.16	136.47	-2.7454	-17.0817	-0.1476
674	SLU 74	1.77	-0.29	138.45	-2.7947	-17.3308	-0.1679
674	SLU 75	1.77	-0.2	138.45	-2.789	-17.3298	-0.1564
674	SLU 76	1.76	-0.17	137.69	-2.765	-17.235	-0.1507
674	SLU 77	1.79	-0.3	139.67	-2.8143	-17.4841	-0.171
674	SLU 78	1.79	-0.21	139.66	-2.8086	-17.4831	-0.1595
674	SLU 79	1.78	-0.33	138.92	-2.7941	-17.39	-0.173
674	SLU 80	1.78	-0.24	138.91	-2.7884	-17.389	-0.1615
674	SLU 81	1.78	-0.29	141.74	-2.8628	-17.7399	-0.1695
674	SLU 82	1.78	-0.21	141.74	-2.857	-17.7388	-0.1579
674	SLU 83	1.8	-0.31	142.96	-2.8824	-17.8931	-0.1725
674	SLU 84	1.8	-0.22	142.95	-2.8766	-17.8921	-0.161
674	SLE RA 1	1.24	-0.26	93.03	-1.8791	-11.6463	-0.1233
674	SLE RA 2	1.24	-0.16	93.02	-1.8728	-11.6452	-0.1105
674	SLE RA 3	1.26	-0.25	94.34	-1.9056	-11.8113	-0.124
674	SLE RA 4	1.26	-0.19	94.33	-1.9018	-11.8106	-0.1163
674	SLE RA 5	1.25	-0.17	93.83	-1.8858	-11.7474	-0.1125
674	SLE RA 6	1.27	-0.26	95.15	-1.9187	-11.9135	-0.1261
674	SLE RA 7	1.27	-0.2	95.15	-1.9148	-11.9128	-0.1184
674	SLE RA 8	1.26	-0.28	94.65	-1.9052	-11.8507	-0.1274
674	SLE RA 9	1.26	-0.22	94.64	-1.9014	-11.85	-0.1197
674	SLE RA 10	1.3	-0.15	101.2	-2.0404	-12.6664	-0.1146
674	SLE RA 11	1.32	-0.24	102.52	-2.0733	-12.8325	-0.1281
674	SLE RA 12	1.32	-0.18	102.51	-2.0695	-12.8318	-0.1204
674	SLE RA 13	1.31	-0.16	102.01	-2.0535	-12.7686	-0.1167
674	SLE RA 14	1.33	-0.25	103.33	-2.0863	-12.9347	-0.1302
674	SLE RA 15	1.33	-0.19	103.33	-2.0825	-12.934	-0.1225
674	SLE RA 16	1.33	-0.26	102.83	-2.0729	-12.8719	-0.1315
674	SLE RA 17	1.33	-0.21	102.82	-2.0691	-12.8712	-0.1238
674	SLE RA 18	1.33	-0.24	104.71	-2.1187	-13.1051	-0.1292
674	SLE RA 19	1.33	-0.19	104.71	-2.1148	-13.1045	-0.1215
674	SLE RA 20	1.34	-0.25	105.52	-2.1317	-13.2073	-0.1312
674	SLE RA 21	1.34	-0.19	105.52	-2.1279	-13.2067	-0.1235
674	SLE FR 1	1.24	-0.26	93.03	-1.8791	-11.6463	-0.1233
674	SLE FR 2	1.24	-0.24	93.02	-1.8779	-11.6461	-0.1207
674	SLE FR 3	1.24	-0.26	93.35	-1.8844	-11.6872	-0.1241
674	SLE FR 4	1.26	-0.24	96.53	-1.9497	-12.0837	-0.1225
674	SLE FR 5	1.27	-0.26	96.86	-1.9562	-12.1248	-0.1259
674	SLE FR 6	1.28	-0.25	98.87	-1.9989	-12.3757	-0.1262
674	SLE QP 1	1.24	-0.26	93.03	-1.8791	-11.6463	-0.1233
674	SLE QP 2	1.26	-0.25	96.53	-1.951	-12.084	-0.125
674	SLD 1	9.16	1.36	88.08	-2.2674	-11.0035	0.0761
674	SLD 2	9.2	1.95	87.99	-2.2424	-10.9918	0.1615
674	SLD 3	9.26	-1.38	89.11	-2.491	-11.1303	-0.2725
674	SLD 4	9.3	-0.78	89.02	-2.466	-11.1186	-0.1871
674	SLD 5	3.48	4.27	92.45	-1.7113	-11.5696	0.4488
674	SLD 6	3.51	4.66	92.39	-1.6949	-11.5619	0.5048
674	SLD 7	3.8	-4.84	95.88	-2.4565	-11.9923	-0.7132
674	SLD 8	3.83	-4.45	95.82	-2.4401	-11.9846	-0.6572
674	SLD 9	-1.3	3.94	97.24	-1.4619	-12.1833	0.4071
674	SLD 10	-1.27	4.33	97.18	-1.4455	-12.1757	0.4631
674	SLD 11	-0.98	-5.17	100.68	-2.2071	-12.606	-0.7549
674	SLD 12	-0.95	-4.78	100.62	-2.1907	-12.5984	-0.6989
674	SLD 13	-6.77	0.27	104.05	-1.436	-13.0494	-0.063
674	SLD 14	-6.73	0.87	103.96	-1.411	-13.0377	0.0224
674	SLD 15	-6.67	-2.46	105.08	-1.6596	-13.1762	-0.4116
674	SLD 16	-6.63	-1.87	104.99	-1.6346	-13.1645	-0.3262
674	SLV 1	19.73	3.44	76.77	-2.6994	-9.559	0.3352
674	SLV 2	19.83	4.81	76.56	-2.6412	-9.5317	0.534
674	SLV 3	19.95	-2.79	79.13	-3.2059	-9.8484	-0.4588
674	SLV 4	20.05	-1.41	78.92	-3.1477	-9.8212	-0.26
674	SLV 5	6.45	10.06	87.07	-1.4174	-10.8921	1.183
674	SLV 6	6.51	10.95	86.93	-1.3799	-10.8746	1.3111
674	SLV 7	7.19	-10.7	94.92	-3.1056	-11.8571	-1.4636
674	SLV 8	7.25	-9.81	94.78	-3.0681	-11.8395	-1.3355
674	SLV 9	-4.72	9.3	98.28	-0.8339	-12.3284	1.0854
674	SLV 10	-4.66	10.19	98.14	-0.7963	-12.3109	1.2135
674	SLV 11	-3.98	-11.46	106.13	-2.5221	-13.2934	-1.5612
674	SLV 12	-3.92	-10.57	106	-2.4846	-13.2758	-1.4331
674	SLV 13	-17.52	0.9	114.15	-0.7543	-14.3467	0.0099
674	SLV 14	-17.42	2.28	113.94	-0.6961	-14.3195	0.2087
674	SLV 15	-17.3	-5.32	116.5	-1.2608	-14.6362	-0.7841
674	SLV 16	-17.2	-3.94	116.29	-1.2026	-14.609	-0.5853
674	CRTFP Ux+	0	0	0	0	0	0
674	CRTFP Ux-	0	0	0	0	0	0
674	CRTFP Uy+	0	0	0	0	0	0
674	CRTFP Uy-	0	0	0	0	0	0
675	SLU 1	1.15	-0.45	68.73	14.4644	-2.6483	-0.3106
675	SLU 2	1.15	-0.33	68.73	14.471	-2.6487	-0.3056
675	SLU 3	1.19	-0.45	70.25	14.7811	-2.7083	-0.3184
675	SLU 4	1.18	-0.38	70.25	14.7851	-2.7085	-0.3154
675	SLU 5	1.17	-0.34	69.68	14.6701	-2.6858	-0.3109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
675	SLU 6	1.21	-0.46	71.2	14.9802	-2.7454	-0.3237
675	SLU 7	1.2	-0.39	71.2	14.9842	-2.7456	-0.3207
675	SLU 8	1.19	-0.47	70.62	14.8625	-2.7226	-0.3212
675	SLU 9	1.19	-0.4	70.63	14.8665	-2.7228	-0.3182
675	SLU 10	1.24	-0.34	78.05	16.4065	-3.0026	-0.3288
675	SLU 11	1.28	-0.45	79.57	16.7167	-3.0621	-0.3416
675	SLU 12	1.27	-0.38	79.57	16.7206	-3.0624	-0.3386
675	SLU 13	1.26	-0.35	79	16.6056	-3.0397	-0.3341
675	SLU 14	1.3	-0.47	80.52	16.9157	-3.0993	-0.3469
675	SLU 15	1.29	-0.4	80.52	16.9197	-3.0995	-0.3439
675	SLU 16	1.28	-0.48	79.94	16.798	-3.0764	-0.3444
675	SLU 17	1.28	-0.41	79.95	16.802	-3.0767	-0.3414
675	SLU 18	1.28	-0.46	82.04	17.2294	-3.1538	-0.3436
675	SLU 19	1.28	-0.39	82.04	17.2334	-3.1541	-0.3407
675	SLU 20	1.3	-0.47	82.99	17.4285	-3.1909	-0.349
675	SLU 21	1.3	-0.4	82.99	17.4324	-3.1912	-0.346
675	SLU 22	1.27	-0.42	77.6	16.3012	-2.9957	-0.3399
675	SLU 23	1.27	-0.3	77.6	16.3078	-2.9962	-0.3349
675	SLU 24	1.3	-0.42	79.13	16.6179	-3.0557	-0.3477
675	SLU 25	1.3	-0.35	79.13	16.6219	-3.056	-0.3448
675	SLU 26	1.29	-0.32	78.55	16.5068	-3.0333	-0.3402
675	SLU 27	1.32	-0.43	80.08	16.817	-3.0928	-0.3531
675	SLU 28	1.32	-0.36	80.08	16.8209	-3.0931	-0.3501
675	SLU 29	1.31	-0.45	79.5	16.6993	-3.07	-0.3505
675	SLU 30	1.31	-0.38	79.5	16.7032	-3.0703	-0.3475
675	SLU 31	1.36	-0.31	86.92	18.2433	-3.35	-0.3581
675	SLU 32	1.39	-0.43	88.45	18.5534	-3.4096	-0.3709
675	SLU 33	1.39	-0.36	88.45	18.5574	-3.4098	-0.3679
675	SLU 34	1.38	-0.33	87.87	18.4423	-3.3872	-0.3634
675	SLU 35	1.41	-0.44	89.4	18.7525	-3.4467	-0.3762
675	SLU 36	1.41	-0.37	89.4	18.7564	-3.447	-0.3732
675	SLU 37	1.4	-0.46	88.82	18.6348	-3.4239	-0.3737
675	SLU 38	1.4	-0.39	88.82	18.6388	-3.4241	-0.3707
675	SLU 39	1.4	-0.43	90.92	19.0662	-3.5013	-0.373
675	SLU 40	1.4	-0.36	90.92	19.0702	-3.5015	-0.37
675	SLU 41	1.42	-0.45	91.87	19.2652	-3.5384	-0.3783
675	SLU 42	1.42	-0.38	91.87	19.2692	-3.5387	-0.3753
675	SLU 43	1.46	-0.59	86.3	18.174	-3.3236	-0.3937
675	SLU 44	1.46	-0.47	86.3	18.1806	-3.3241	-0.3887
675	SLU 45	1.49	-0.59	87.82	18.4907	-3.3836	-0.4015
675	SLU 46	1.49	-0.52	87.83	18.4947	-3.3839	-0.3985
675	SLU 47	1.48	-0.49	87.25	18.3796	-3.3612	-0.394
675	SLU 48	1.51	-0.6	88.77	18.6898	-3.4207	-0.4068
675	SLU 49	1.51	-0.53	88.78	18.6937	-3.421	-0.4039
675	SLU 50	1.5	-0.62	88.2	18.5721	-3.3979	-0.4043
675	SLU 51	1.5	-0.55	88.2	18.576	-3.3982	-0.4013
675	SLU 52	1.55	-0.48	95.62	20.1161	-3.6779	-0.4119
675	SLU 53	1.58	-0.6	97.14	20.4262	-3.7375	-0.4247
675	SLU 54	1.58	-0.53	97.15	20.4302	-3.7377	-0.4217
675	SLU 55	1.57	-0.49	96.57	20.3151	-3.7151	-0.4172
675	SLU 56	1.6	-0.61	98.09	20.6253	-3.7746	-0.43
675	SLU 57	1.6	-0.54	98.1	20.6292	-3.7749	-0.427
675	SLU 58	1.59	-0.63	97.52	20.5076	-3.7518	-0.4275
675	SLU 59	1.59	-0.55	97.52	20.5115	-3.752	-0.4245
675	SLU 60	1.59	-0.6	99.61	20.939	-3.8292	-0.4268
675	SLU 61	1.59	-0.53	99.62	20.943	-3.8294	-0.4238
675	SLU 62	1.61	-0.62	100.56	21.138	-3.8663	-0.4321
675	SLU 63	1.61	-0.55	100.57	21.142	-3.8666	-0.4291
675	SLU 64	1.58	-0.57	95.18	20.0108	-3.6711	-0.423
675	SLU 65	1.58	-0.45	95.18	20.0174	-3.6715	-0.418
675	SLU 66	1.61	-0.56	96.7	20.3275	-3.7311	-0.4308
675	SLU 67	1.61	-0.49	96.7	20.3315	-3.7313	-0.4279
675	SLU 68	1.6	-0.46	96.13	20.2164	-3.7087	-0.4233
675	SLU 69	1.63	-0.58	97.65	20.5265	-3.7682	-0.4362
675	SLU 70	1.63	-0.51	97.65	20.5305	-3.7685	-0.4332
675	SLU 71	1.62	-0.59	97.08	20.4089	-3.7454	-0.4336
675	SLU 72	1.62	-0.52	97.08	20.4128	-3.7456	-0.4307
675	SLU 73	1.67	-0.46	104.5	21.9529	-4.0254	-0.4412
675	SLU 74	1.7	-0.57	106.02	22.263	-4.0849	-0.454
675	SLU 75	1.7	-0.5	106.02	22.267	-4.0852	-0.451
675	SLU 76	1.69	-0.47	105.45	22.1519	-4.0625	-0.4465
675	SLU 77	1.72	-0.58	106.97	22.462	-4.1221	-0.4593
675	SLU 78	1.72	-0.51	106.97	22.466	-4.1223	-0.4563
675	SLU 79	1.71	-0.6	106.4	22.3444	-4.0992	-0.4568
675	SLU 80	1.71	-0.53	106.4	22.3483	-4.0995	-0.4538
675	SLU 81	1.71	-0.58	108.49	22.7758	-4.1766	-0.4561
675	SLU 82	1.71	-0.51	108.49	22.7797	-4.1769	-0.4531
675	SLU 83	1.73	-0.59	109.44	22.9748	-4.2138	-0.4614
675	SLU 84	1.73	-0.52	109.44	22.9788	-4.214	-0.4584
675	SLE RA 1	1.19	-0.44	71.26	14.9892	-2.7476	-0.3189
675	SLE RA 2	1.19	-0.36	71.26	14.9936	-2.7478	-0.3156
675	SLE RA 3	1.21	-0.44	72.28	15.2004	-2.7875	-0.3242
675	SLE RA 4	1.21	-0.39	72.28	15.203	-2.7877	-0.3222
675	SLE RA 5	1.2	-0.37	71.9	15.1263	-2.7726	-0.3192
675	SLE RA 6	1.22	-0.45	72.91	15.3331	-2.8123	-0.3277
675	SLE RA 7	1.22	-0.4	72.91	15.3357	-2.8125	-0.3257
675	SLE RA 8	1.21	-0.46	72.53	15.2546	-2.7971	-0.326
675	SLE RA 9	1.21	-0.41	72.53	15.2572	-2.7972	-0.324
675	SLE RA 10	1.25	-0.37	77.48	16.2839	-2.9838	-0.3311
675	SLE RA 11	1.27	-0.44	78.49	16.4907	-3.0234	-0.3396

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
675	SLE RA 12	1.27	-0.4	78.49	16.4933	-3.0236	-0.3376
675	SLE RA 13	1.26	-0.38	78.11	16.4166	-3.0085	-0.3346
675	SLE RA 14	1.28	-0.45	79.12	16.6234	-3.0482	-0.3432
675	SLE RA 15	1.28	-0.41	79.13	16.626	-3.0484	-0.3412
675	SLE RA 16	1.27	-0.46	78.74	16.5449	-3.033	-0.3415
675	SLE RA 17	1.27	-0.42	78.74	16.5476	-3.0332	-0.3395
675	SLE RA 18	1.27	-0.45	80.14	16.8325	-3.0846	-0.341
675	SLE RA 19	1.27	-0.4	80.14	16.8352	-3.0847	-0.339
675	SLE RA 20	1.29	-0.46	80.77	16.9652	-3.1093	-0.3445
675	SLE RA 21	1.29	-0.41	80.77	16.9679	-3.1095	-0.3426
675	SLE FR 1	1.19	-0.44	71.26	14.9892	-2.7476	-0.3189
675	SLE FR 2	1.19	-0.43	71.26	14.9901	-2.7476	-0.3183
675	SLE FR 3	1.19	-0.44	71.51	15.0423	-2.7575	-0.3204
675	SLE FR 4	1.21	-0.43	73.92	15.5431	-2.8487	-0.3249
675	SLE FR 5	1.22	-0.45	74.18	15.5953	-2.8586	-0.327
675	SLE FR 6	1.23	-0.44	75.7	15.9109	-2.9161	-0.33
675	SLE QP 1	1.19	-0.44	71.26	14.9892	-2.7476	-0.3189
675	SLE QP 2	1.21	-0.44	73.92	15.5422	-2.8487	-0.3256
675	SLD 1	7.44	0.9	67.29	13.453	-2.6533	-1.8497
675	SLD 2	7.45	1.45	67.25	13.4669	-2.6533	-1.8226
675	SLD 3	7.52	-1.27	67.76	13.3757	-2.6627	-1.9318
675	SLD 4	7.52	-0.72	67.72	13.3896	-2.6627	-1.9046
675	SLD 5	2.97	3.16	71.23	15.0302	-2.7758	-0.6632
675	SLD 6	2.97	3.52	71.2	15.0393	-2.7758	-0.6453
675	SLD 7	3.22	-4.09	72.79	14.7725	-2.8071	-0.9368
675	SLD 8	3.22	-3.73	72.77	14.7817	-2.8071	-0.9189
675	SLD 9	-0.79	2.84	75.08	16.3028	-2.8902	0.2678
675	SLD 10	-0.79	3.2	75.05	16.3119	-2.8902	0.2856
675	SLD 11	-0.54	-4.41	76.65	16.0451	-2.9215	-0.0058
675	SLD 12	-0.54	-4.05	76.62	16.0542	-2.9215	0.0121
675	SLD 13	-5.09	-0.16	80.13	17.6948	-3.0347	1.2535
675	SLD 14	-5.09	0.39	80.09	17.7087	-3.0346	1.2807
675	SLD 15	-5.02	-2.34	80.6	17.6175	-3.0441	1.1714
675	SLD 16	-5.01	-1.79	80.56	17.6314	-3.044	1.1986
675	SLV 1	15.78	2.64	58.4	10.6511	-2.3916	-3.8923
675	SLV 2	15.79	3.93	58.32	10.6834	-2.3914	-3.8289
675	SLV 3	15.95	-2.31	59.48	10.4741	-2.4132	-4.0794
675	SLV 4	15.96	-1.03	59.4	10.5064	-2.413	-4.016
675	SLV 5	5.32	7.78	67.65	14.3378	-2.6789	-1.1227
675	SLV 6	5.32	8.61	67.6	14.3586	-2.6788	-1.0819
675	SLV 7	5.9	-8.74	71.24	13.7477	-2.7507	-1.7464
675	SLV 8	5.91	-7.92	71.18	13.7685	-2.7506	-1.7056
675	SLV 9	-3.48	7.03	76.66	17.3159	-2.9467	1.0544
675	SLV 10	-3.47	7.86	76.61	17.3367	-2.9466	1.0953
675	SLV 11	-2.89	-9.49	80.25	16.7258	-3.0186	0.4308
675	SLV 12	-2.89	-8.67	80.2	16.7466	-3.0185	0.4716
675	SLV 13	-13.53	0.14	88.45	20.578	-3.2843	3.3649
675	SLV 14	-13.52	1.43	88.37	20.6104	-3.2842	3.4283
675	SLV 15	-13.36	-4.81	89.53	20.401	-3.3059	3.1778
675	SLV 16	-13.35	-3.53	89.44	20.4333	-3.3057	3.2412
675	CRTFP Ux+	0	0	0	0	0	0
675	CRTFP Ux-	0	0	0	0	0	0
675	CRTFP Uy+	0	0	0	0	0	0
675	CRTFP Uy-	0	0	0	0	0	0
679	SLU 1	1.46	-0.98	108.04	-22.3566	30.5107	0.568
679	SLU 2	1.46	-0.81	108.01	-22.3514	30.499	0.5181
679	SLU 3	1.5	-0.99	110.44	-22.8522	31.1829	0.577
679	SLU 4	1.5	-0.88	110.42	-22.8491	31.1759	0.5471
679	SLU 5	1.49	-0.83	109.5	-22.6595	30.9128	0.5302
679	SLU 6	1.52	-1.01	111.92	-23.1603	31.5968	0.5891
679	SLU 7	1.52	-0.91	111.9	-23.1572	31.5898	0.5592
679	SLU 8	1.51	-1.03	111.01	-22.9727	31.3384	0.5923
679	SLU 9	1.51	-0.93	110.99	-22.9696	31.3314	0.5623
679	SLU 10	1.57	-0.84	122.68	-25.371	34.6566	0.551
679	SLU 11	1.61	-1.03	125.1	-25.8718	35.3405	0.6099
679	SLU 12	1.61	-0.92	125.08	-25.8687	35.3335	0.5799
679	SLU 13	1.6	-0.87	124.16	-25.679	35.0705	0.5631
679	SLU 14	1.64	-1.05	126.58	-26.1799	35.7544	0.622
679	SLU 15	1.64	-0.94	126.57	-26.1768	35.7474	0.5921
679	SLU 16	1.62	-1.07	125.67	-25.9923	35.4961	0.6251
679	SLU 17	1.62	-0.96	125.65	-25.9892	35.489	0.5952
679	SLU 18	1.62	-1.04	128.99	-26.6703	36.4501	0.615
679	SLU 19	1.62	-0.93	128.97	-26.6672	36.4431	0.585
679	SLU 20	1.64	-1.06	130.47	-26.9784	36.864	0.6271
679	SLU 21	1.64	-0.95	130.46	-26.9752	36.857	0.5972
679	SLU 22	1.61	-0.97	121.96	-25.2214	34.4065	0.5938
679	SLU 23	1.61	-0.8	121.93	-25.2162	34.3948	0.5439
679	SLU 24	1.64	-0.98	124.35	-25.717	35.0787	0.6028
679	SLU 25	1.64	-0.87	124.33	-25.7139	35.0717	0.5729
679	SLU 26	1.63	-0.82	123.41	-25.5242	34.8087	0.556
679	SLU 27	1.67	-1	125.83	-26.0251	35.4926	0.6149
679	SLU 28	1.67	-0.9	125.82	-26.0219	35.4856	0.585
679	SLU 29	1.66	-1.02	124.92	-25.8375	35.2343	0.6181
679	SLU 30	1.65	-0.92	124.9	-25.8344	35.2272	0.5881
679	SLU 31	1.72	-0.83	136.59	-28.2358	38.5524	0.5768
679	SLU 32	1.76	-1.02	139.02	-28.7366	39.2364	0.6357
679	SLU 33	1.76	-0.91	139	-28.7335	39.2293	0.6057
679	SLU 34	1.74	-0.86	138.08	-28.5438	38.9663	0.5889
679	SLU 35	1.78	-1.04	140.5	-29.0446	39.6502	0.6478
679	SLU 36	1.78	-0.93	140.48	-29.0415	39.6432	0.6179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
679	SLU 37	1.77	-1.06	139.59	-28.8571	39.3919	0.6509
679	SLU 38	1.77	-0.95	139.57	-28.8539	39.3848	0.621
679	SLU 39	1.76	-1.03	142.91	-29.5351	40.346	0.6408
679	SLU 40	1.76	-0.92	142.89	-29.532	40.3389	0.6108
679	SLU 41	1.79	-1.05	144.39	-29.8431	40.7598	0.6529
679	SLU 42	1.79	-0.94	144.37	-29.84	40.7528	0.623
679	SLU 43	1.85	-1.28	135.68	-28.0814	38.3282	0.7296
679	SLU 44	1.85	-1.1	135.66	-28.0762	38.3165	0.6797
679	SLU 45	1.89	-1.29	138.08	-28.577	39.0004	0.7386
679	SLU 46	1.89	-1.18	138.06	-28.5739	38.9934	0.7086
679	SLU 47	1.87	-1.13	137.14	-28.3842	38.7303	0.6918
679	SLU 48	1.91	-1.31	139.56	-28.8851	39.4143	0.7507
679	SLU 49	1.91	-1.21	139.54	-28.882	39.4073	0.7207
679	SLU 50	1.9	-1.33	138.65	-28.6975	39.1559	0.7538
679	SLU 51	1.9	-1.23	138.63	-28.6944	39.1489	0.7239
679	SLU 52	1.96	-1.14	150.32	-31.0958	42.4741	0.7125
679	SLU 53	2	-1.32	152.74	-31.5966	43.158	0.7715
679	SLU 54	2	-1.22	152.72	-31.5935	43.151	0.7415
679	SLU 55	1.99	-1.16	151.8	-31.4038	42.888	0.7247
679	SLU 56	2.02	-1.35	154.22	-31.9047	43.5719	0.7836
679	SLU 57	2.02	-1.24	154.21	-31.9015	43.5649	0.7536
679	SLU 58	2.01	-1.37	153.31	-31.7171	43.3136	0.7867
679	SLU 59	2.01	-1.26	153.29	-31.714	43.3065	0.7567
679	SLU 60	2.01	-1.33	156.63	-32.3951	44.2676	0.7766
679	SLU 61	2.01	-1.23	156.62	-32.392	44.2606	0.7466
679	SLU 62	2.03	-1.36	158.11	-32.7031	44.6815	0.7887
679	SLU 63	2.03	-1.25	158.1	-32.7	44.6745	0.7587
679	SLU 64	1.99	-1.27	149.6	-30.9462	42.224	0.7554
679	SLU 65	1.99	-1.09	149.57	-30.941	42.2123	0.7055
679	SLU 66	2.03	-1.28	151.99	-31.4418	42.8962	0.7644
679	SLU 67	2.03	-1.17	151.98	-31.4387	42.8892	0.7344
679	SLU 68	2.02	-1.12	151.05	-31.249	42.6262	0.7176
679	SLU 69	2.06	-1.3	153.47	-31.7498	43.3101	0.7765
679	SLU 70	2.06	-1.2	153.46	-31.7467	43.3031	0.7465
679	SLU 71	2.04	-1.32	152.56	-31.5623	43.0518	0.7796
679	SLU 72	2.04	-1.22	152.55	-31.5591	43.0447	0.7497
679	SLU 73	2.11	-1.13	164.24	-33.9605	46.3699	0.7383
679	SLU 74	2.14	-1.31	166.66	-34.4614	47.0539	0.7973
679	SLU 75	2.14	-1.21	166.64	-34.4582	47.0468	0.7673
679	SLU 76	2.13	-1.16	165.72	-34.2686	46.7838	0.7505
679	SLU 77	2.17	-1.34	168.14	-34.7694	47.4677	0.8094
679	SLU 78	2.17	-1.23	168.12	-34.7663	47.4607	0.7794
679	SLU 79	2.15	-1.36	167.23	-34.5818	47.2094	0.8125
679	SLU 80	2.15	-1.25	167.21	-34.5787	47.2023	0.7825
679	SLU 81	2.15	-1.32	170.55	-35.2599	48.1635	0.8024
679	SLU 82	2.15	-1.22	170.53	-35.2567	48.1564	0.7724
679	SLU 83	2.18	-1.35	172.03	-35.5679	48.5773	0.8145
679	SLU 84	2.18	-1.24	172.01	-35.5648	48.5703	0.7845
679	SLE RA 1	1.5	-0.98	112.02	-23.1751	31.6238	0.5754
679	SLE RA 2	1.5	-0.86	112	-23.1717	31.616	0.5421
679	SLE RA 3	1.53	-0.98	113.61	-23.5055	32.0719	0.5814
679	SLE RA 4	1.53	-0.91	113.6	-23.5035	32.0672	0.5614
679	SLE RA 5	1.52	-0.88	112.99	-23.377	31.8919	0.5502
679	SLE RA 6	1.54	-1	114.6	-23.7109	32.3479	0.5895
679	SLE RA 7	1.54	-0.93	114.59	-23.7088	32.3432	0.5695
679	SLE RA 8	1.54	-1.01	113.99	-23.5859	32.1756	0.5916
679	SLE RA 9	1.54	-0.94	113.98	-23.5838	32.1709	0.5716
679	SLE RA 10	1.58	-0.89	121.78	-25.1847	34.3877	0.564
679	SLE RA 11	1.6	-1.01	123.39	-25.5186	34.8437	0.6033
679	SLE RA 12	1.6	-0.94	123.38	-25.5165	34.839	0.5833
679	SLE RA 13	1.59	-0.9	122.76	-25.3901	34.6636	0.5721
679	SLE RA 14	1.62	-1.03	124.38	-25.724	35.1196	0.6114
679	SLE RA 15	1.62	-0.95	124.37	-25.7219	35.1149	0.5914
679	SLE RA 16	1.61	-1.04	123.77	-25.5989	34.9474	0.6135
679	SLE RA 17	1.61	-0.97	123.76	-25.5968	34.9427	0.5935
679	SLE RA 18	1.61	-1.02	125.98	-26.0509	35.5834	0.6067
679	SLE RA 19	1.61	-0.94	125.97	-26.0488	35.5787	0.5867
679	SLE RA 20	1.62	-1.03	126.97	-26.2563	35.8593	0.6148
679	SLE RA 21	1.62	-0.96	126.96	-26.2542	35.8546	0.5948
679	SLE FR 1	1.5	-0.98	112.02	-23.1751	31.6238	0.5754
679	SLE FR 2	1.5	-0.96	112.01	-23.1744	31.6222	0.5687
679	SLE FR 3	1.51	-0.99	112.41	-23.2573	31.7341	0.5786
679	SLE FR 4	1.53	-0.97	116.2	-24.0372	32.8101	0.5781
679	SLE FR 5	1.54	-1	116.6	-24.12	32.922	0.588
679	SLE FR 6	1.56	-1	119	-24.613	33.6036	0.5911
679	SLE QP 1	1.5	-0.98	112.02	-23.1751	31.6238	0.5754
679	SLE QP 2	1.53	-0.99	116.21	-24.0379	32.8117	0.5848
679	SLD 1	10.77	1.1	106.49	-22.1067	30.1208	1.9984
679	SLD 2	10.85	1.96	106.36	-22.0941	30.0655	1.8084
679	SLD 3	10.66	-2.17	107.9	-22.3606	30.6207	2.9062
679	SLD 4	10.74	-1.3	107.77	-22.3481	30.5654	2.7162
679	SLD 5	4.46	4.43	111.18	-23.0756	31.256	-0.3342
679	SLD 6	4.52	5	111.1	-23.0674	31.2198	-0.4587
679	SLD 7	4.09	-6.45	115.87	-23.922	32.9224	2.6919
679	SLD 8	4.14	-5.88	115.79	-23.9138	32.8862	2.5673
679	SLD 9	-1.07	3.9	116.63	-24.1619	32.7372	-1.3977
679	SLD 10	-1.02	4.47	116.54	-24.1537	32.7009	-1.5223
679	SLD 11	-1.45	-6.98	121.32	-25.0083	34.4036	1.6283
679	SLD 12	-1.39	-6.42	121.23	-25.0001	34.3673	1.5038
679	SLD 13	-7.67	-0.68	124.64	-25.7277	35.0579	-1.5466

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
679	SLD 14	-7.59	0.18	124.51	-25.7151	35.0027	-1.7366
679	SLD 15	-7.78	-3.94	126.05	-25.9816	35.5579	-0.6388
679	SLD 16	-7.7	-3.08	125.92	-25.9691	35.5026	-0.8288
679	SLV 1	23.14	3.8	93.52	-19.5265	26.5297	3.9173
679	SLV 2	23.33	5.81	93.22	-19.4973	26.401	3.4748
679	SLV 3	22.87	-3.64	96.72	-20.1044	27.6672	5.9848
679	SLV 4	23.06	-1.63	96.42	-20.0752	27.5385	5.5423
679	SLV 5	8.38	11.38	104.6	-21.813	29.2241	-1.475
679	SLV 6	8.5	12.67	104.4	-21.7942	29.1411	-1.7602
679	SLV 7	7.5	-13.41	115.27	-23.7393	33.0157	5.4168
679	SLV 8	7.63	-12.12	115.07	-23.7205	32.9327	5.1316
679	SLV 9	-4.56	10.13	117.34	-24.3552	32.6906	-3.962
679	SLV 10	-4.44	11.43	117.15	-24.3364	32.6077	-4.2472
679	SLV 11	-5.43	-14.66	128.01	-26.2815	36.4822	2.9298
679	SLV 12	-5.31	-13.36	127.82	-26.2627	36.3992	2.6446
679	SLV 13	-19.99	-0.36	135.99	-28.0005	38.0849	-4.3727
679	SLV 14	-19.81	1.65	135.69	-27.9713	37.9561	-4.8152
679	SLV 15	-20.26	-7.79	139.19	-28.5784	39.2223	-2.3052
679	SLV 16	-20.07	-5.78	138.89	-28.5492	39.0936	-2.7477
679	CRTFP Ux+	0	0	0	0	0	0
679	CRTFP Ux-	0	0	0	0	0	0
679	CRTFP Uy+	0	0	0	0	0	0
679	CRTFP Uy-	0	0	0	0	0	0
680	SLU 1	2.28	-0.74	137.53	-2.0032	28.0347	0.2047
680	SLU 2	2.27	-0.52	137.55	-1.9966	28.0351	0.1579
680	SLU 3	2.34	-0.74	140.6	-2.0466	28.6598	0.2045
680	SLU 4	2.34	-0.6	140.61	-2.0426	28.66	0.1764
680	SLU 5	2.31	-0.54	139.45	-2.0245	28.4237	0.1631
680	SLU 6	2.38	-0.76	142.5	-2.0744	29.0484	0.2098
680	SLU 7	2.37	-0.62	142.51	-2.0705	29.0486	0.1817
680	SLU 8	2.35	-0.78	141.34	-2.0589	28.812	0.2153
680	SLU 9	2.35	-0.65	141.35	-2.055	28.8122	0.1872
680	SLU 10	2.45	-0.51	156.15	-2.2709	31.8244	0.162
680	SLU 11	2.51	-0.73	159.2	-2.3209	32.4491	0.2087
680	SLU 12	2.51	-0.6	159.21	-2.3169	32.4493	0.1806
680	SLU 13	2.49	-0.53	158.05	-2.2988	32.213	0.1673
680	SLU 14	2.55	-0.75	161.1	-2.3487	32.8377	0.214
680	SLU 15	2.55	-0.62	161.11	-2.3448	32.8379	0.1859
680	SLU 16	2.53	-0.78	159.94	-2.3332	32.6013	0.2195
680	SLU 17	2.53	-0.64	159.95	-2.3293	32.6015	0.1914
680	SLU 18	2.53	-0.74	164.11	-2.395	33.448	0.2107
680	SLU 19	2.53	-0.6	164.12	-2.3911	33.4482	0.1826
680	SLU 20	2.57	-0.76	166.01	-2.4229	33.8367	0.216
680	SLU 21	2.57	-0.62	166.02	-2.419	33.8369	0.1879
680	SLU 22	2.5	-0.69	155.44	-2.2617	31.67	0.1971
680	SLU 23	2.5	-0.47	155.45	-2.2552	31.6704	0.1503
680	SLU 24	2.57	-0.68	158.5	-2.3051	32.2951	0.197
680	SLU 25	2.56	-0.55	158.51	-2.3011	32.2953	0.1688
680	SLU 26	2.54	-0.49	157.36	-2.283	32.059	0.1556
680	SLU 27	2.6	-0.71	160.41	-2.3329	32.6837	0.2022
680	SLU 28	2.6	-0.57	160.42	-2.329	32.6839	0.1741
680	SLU 29	2.58	-0.73	159.25	-2.3175	32.4473	0.2077
680	SLU 30	2.58	-0.6	159.25	-2.3135	32.4475	0.1796
680	SLU 31	2.68	-0.46	174.05	-2.5294	35.4597	0.1545
680	SLU 32	2.74	-0.68	177.1	-2.5794	36.0844	0.2012
680	SLU 33	2.74	-0.54	177.11	-2.5754	36.0846	0.173
680	SLU 34	2.72	-0.48	175.96	-2.5573	35.8483	0.1597
680	SLU 35	2.78	-0.7	179.01	-2.6072	36.473	0.2064
680	SLU 36	2.78	-0.57	179.02	-2.6033	36.4732	0.1783
680	SLU 37	2.76	-0.73	177.85	-2.5917	36.2366	0.2119
680	SLU 38	2.76	-0.59	177.86	-2.5878	36.2368	0.1838
680	SLU 39	2.76	-0.68	182.01	-2.6535	37.0833	0.2031
680	SLU 40	2.76	-0.55	182.02	-2.6496	37.0835	0.175
680	SLU 41	2.8	-0.7	183.91	-2.6814	37.472	0.2084
680	SLU 42	2.79	-0.57	183.92	-2.6775	37.4721	0.1803
680	SLU 43	2.88	-0.99	172.66	-2.5155	35.1988	0.2687
680	SLU 44	2.88	-0.76	172.67	-2.509	35.1991	0.2219
680	SLU 45	2.94	-0.98	175.72	-2.5589	35.8238	0.2686
680	SLU 46	2.94	-0.85	175.73	-2.555	35.824	0.2404
680	SLU 47	2.92	-0.78	174.58	-2.5368	35.5877	0.2271
680	SLU 48	2.98	-1	177.63	-2.5868	36.2124	0.2738
680	SLU 49	2.98	-0.87	177.64	-2.5828	36.2126	0.2457
680	SLU 50	2.96	-1.03	176.47	-2.5713	35.976	0.2793
680	SLU 51	2.96	-0.89	176.48	-2.5673	35.9762	0.2512
680	SLU 52	3.06	-0.76	191.27	-2.7833	38.9884	0.2261
680	SLU 53	3.12	-0.98	194.32	-2.8332	39.6131	0.2727
680	SLU 54	3.12	-0.84	194.33	-2.8292	39.6133	0.2446
680	SLU 55	3.1	-0.78	193.18	-2.8111	39.377	0.2313
680	SLU 56	3.16	-1	196.23	-2.861	40.0018	0.278
680	SLU 57	3.16	-0.86	196.24	-2.8571	40.0019	0.2499
680	SLU 58	3.14	-1.02	195.07	-2.8456	39.7653	0.2835
680	SLU 59	3.13	-0.89	195.08	-2.8416	39.7655	0.2554
680	SLU 60	3.14	-0.98	199.23	-2.9074	40.6121	0.2747
680	SLU 61	3.13	-0.84	199.24	-2.9034	40.6123	0.2466
680	SLU 62	3.17	-1	201.13	-2.9352	41.0007	0.28
680	SLU 63	3.17	-0.86	201.14	-2.9313	41.0009	0.2519
680	SLU 64	3.11	-0.93	190.56	-2.774	38.8341	0.2611
680	SLU 65	3.11	-0.71	190.57	-2.7675	38.8344	0.2143
680	SLU 66	3.17	-0.93	193.62	-2.8174	39.4591	0.261
680	SLU 67	3.17	-0.79	193.63	-2.8135	39.4593	0.2329

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
680	SLU 68	3.15	-0.73	192.48	-2.7954	39.223	0.2196
680	SLU 69	3.21	-0.95	195.53	-2.8453	39.8477	0.2663
680	SLU 70	3.21	-0.81	195.54	-2.8413	39.8479	0.2381
680	SLU 71	3.19	-0.97	194.37	-2.8298	39.6113	0.2717
680	SLU 72	3.19	-0.84	194.38	-2.8258	39.6115	0.2436
680	SLU 73	3.28	-0.7	209.17	-3.0418	42.6237	0.2185
680	SLU 74	3.35	-0.92	212.22	-3.0917	43.2484	0.2652
680	SLU 75	3.35	-0.79	212.23	-3.0878	43.2486	0.2371
680	SLU 76	3.32	-0.72	211.08	-3.0696	43.0123	0.2238
680	SLU 77	3.39	-0.94	214.13	-3.1196	43.6371	0.2705
680	SLU 78	3.38	-0.81	214.14	-3.1156	43.6372	0.2423
680	SLU 79	3.36	-0.97	212.97	-3.1041	43.4006	0.2759
680	SLU 80	3.36	-0.83	212.98	-3.1001	43.4008	0.2478
680	SLU 81	3.36	-0.92	217.13	-3.1659	44.2474	0.2671
680	SLU 82	3.36	-0.79	217.14	-3.1619	44.2476	0.239
680	SLU 83	3.4	-0.94	219.04	-3.1937	44.636	0.2724
680	SLU 84	3.4	-0.81	219.04	-3.1898	44.6362	0.2443
680	SLE RA 1	2.34	-0.73	142.65	-2.077	29.0734	0.2025
680	SLE RA 2	2.34	-0.58	142.66	-2.0727	29.0736	0.1713
680	SLE RA 3	2.38	-0.73	144.69	-2.106	29.4901	0.2024
680	SLE RA 4	2.38	-0.63	144.7	-2.1033	29.4902	0.1837
680	SLE RA 5	2.37	-0.59	143.93	-2.0913	29.3327	0.1748
680	SLE RA 6	2.41	-0.74	145.96	-2.1245	29.7492	0.206
680	SLE RA 7	2.41	-0.65	145.97	-2.1219	29.7493	0.1872
680	SLE RA 8	2.39	-0.76	145.19	-2.1142	29.5916	0.2096
680	SLE RA 9	2.39	-0.67	145.19	-2.1116	29.5917	0.1908
680	SLE RA 10	2.46	-0.58	155.06	-2.2555	31.5998	0.1741
680	SLE RA 11	2.5	-0.72	157.09	-2.2888	32.0163	0.2052
680	SLE RA 12	2.5	-0.63	157.1	-2.2862	32.0164	0.1865
680	SLE RA 13	2.48	-0.59	156.33	-2.2741	31.8589	0.1776
680	SLE RA 14	2.53	-0.74	158.36	-2.3074	32.2754	0.2088
680	SLE RA 15	2.53	-0.65	158.37	-2.3048	32.2755	0.19
680	SLE RA 16	2.51	-0.75	157.59	-2.2971	32.1178	0.2124
680	SLE RA 17	2.51	-0.66	157.6	-2.2945	32.1179	0.1936
680	SLE RA 18	2.51	-0.72	160.36	-2.3383	32.6823	0.2065
680	SLE RA 19	2.51	-0.63	160.37	-2.3357	32.6824	0.1878
680	SLE RA 20	2.54	-0.74	161.63	-2.3569	32.9414	0.2101
680	SLE RA 21	2.54	-0.65	161.64	-2.3542	32.9415	0.1913
680	SLE FR 1	2.34	-0.73	142.65	-2.077	29.0734	0.2025
680	SLE FR 2	2.34	-0.7	142.65	-2.0762	29.0734	0.1963
680	SLE FR 3	2.35	-0.73	143.16	-2.0845	29.177	0.204
680	SLE FR 4	2.39	-0.7	147.97	-2.1545	30.1561	0.1975
680	SLE FR 5	2.4	-0.73	148.47	-2.1628	30.2597	0.2052
680	SLE FR 6	2.43	-0.73	151.51	-2.2077	30.8778	0.2045
680	SLE QP 1	2.34	-0.73	142.65	-2.077	29.0734	0.2025
680	SLE QP 2	2.39	-0.73	147.96	-2.1554	30.1561	0.2037
680	SLD 1	14.01	1.84	135.16	-2.1437	27.68	-0.3083
680	SLD 2	14.07	3.12	135.15	-2.1401	27.6691	-0.5445
680	SLD 3	14.15	-2.3	135.94	-2.2969	27.8659	0.5599
680	SLD 4	14.21	-1.01	135.93	-2.2933	27.8551	0.3237
680	SLD 5	5.65	6.08	142.94	-1.9202	29.1331	-1.2247
680	SLD 6	5.69	6.93	142.93	-1.9178	29.126	-1.3795
680	SLD 7	6.13	-7.7	145.54	-2.4309	29.753	1.6694
680	SLD 8	6.16	-6.85	145.53	-2.4285	29.7459	1.5145
680	SLD 9	-1.38	5.4	150.39	-1.8823	30.5662	-1.107
680	SLD 10	-1.34	6.24	150.38	-1.88	30.5591	-1.2619
680	SLD 11	-0.9	-8.38	153	-2.393	31.1861	1.787
680	SLD 12	-0.87	-7.54	152.98	-2.3907	31.179	1.6322
680	SLD 13	-9.43	-0.44	160	-2.0176	32.457	0.0838
680	SLD 14	-9.37	0.84	159.98	-2.0139	32.4462	-0.1524
680	SLD 15	-9.28	-4.58	160.78	-2.1708	32.643	0.952
680	SLD 16	-9.22	-3.29	160.76	-2.1672	32.6322	0.7158
680	SLV 1	29.56	5.15	118.03	-2.1369	24.3663	-0.9686
680	SLV 2	29.7	8.15	117.99	-2.1285	24.3411	-1.5188
680	SLV 3	29.89	-4.27	119.82	-2.4852	24.7908	1.0089
680	SLV 4	30.03	-1.27	119.77	-2.4768	24.7656	0.4587
680	SLV 5	10.02	14.8	136.28	-1.6231	27.7797	-3.0525
680	SLV 6	10.11	16.73	136.26	-1.6177	27.7634	-3.407
680	SLV 7	11.12	-16.59	142.23	-2.784	29.1947	3.5393
680	SLV 8	11.21	-14.66	142.21	-2.7786	29.1784	3.1848
680	SLV 9	-6.43	13.2	153.72	-1.5323	31.1337	-2.7773
680	SLV 10	-6.34	15.14	153.69	-1.5268	31.1175	-3.1318
680	SLV 11	-5.32	-18.19	159.67	-2.6931	32.5487	3.8145
680	SLV 12	-5.23	-16.26	159.64	-2.6877	32.5325	3.46
680	SLV 13	-25.24	-0.18	176.15	-1.8341	35.5465	-0.0513
680	SLV 14	-25.11	2.82	176.11	-1.8256	35.5213	-0.6014
680	SLV 15	-24.91	-9.6	177.94	-2.1823	35.971	1.9263
680	SLV 16	-24.77	-6.6	177.9	-2.1739	35.9458	1.3761
680	CRTFP Ux+	0	0	0	0	0	0
680	CRTFP Ux-	0	0	0	0	0	0
680	CRTFP Uy+	0	0	0	0	0	0
680	CRTFP Uy-	0	0	0	0	0	0
683	SLU 1	0.84	-0.2	49.72	-2.6001	-1.3199	0.0435
683	SLU 2	0.84	-0.12	49.73	-2.5974	-1.3205	0.0457
683	SLU 3	0.86	-0.2	50.83	-2.6572	-1.3493	0.0448
683	SLU 4	0.86	-0.15	50.83	-2.6555	-1.3497	0.0461
683	SLU 5	0.85	-0.13	50.42	-2.6334	-1.3388	0.0464
683	SLU 6	0.87	-0.2	51.51	-2.6931	-1.3676	0.0455
683	SLU 7	0.87	-0.16	51.52	-2.6915	-1.368	0.0468
683	SLU 8	0.87	-0.21	51.09	-2.672	-1.3564	0.0449

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
683	SLU 9	0.86	-0.16	51.1	-2.6704	-1.3568	0.0462
683	SLU 10	0.9	-0.11	56.46	-2.9497	-1.4991	0.0501
683	SLU 11	0.92	-0.19	57.55	-3.0095	-1.5279	0.0492
683	SLU 12	0.92	-0.14	57.56	-3.0079	-1.5283	0.0505
683	SLU 13	0.91	-0.12	57.15	-2.9857	-1.5174	0.0508
683	SLU 14	0.94	-0.19	58.24	-3.0455	-1.5462	0.0499
683	SLU 15	0.94	-0.15	58.25	-3.0438	-1.5466	0.0512
683	SLU 16	0.93	-0.2	57.82	-3.0244	-1.535	0.0492
683	SLU 17	0.93	-0.16	57.83	-3.0227	-1.5354	0.0506
683	SLU 18	0.93	-0.19	59.33	-3.1034	-1.575	0.0497
683	SLU 19	0.93	-0.14	59.34	-3.1018	-1.5754	0.0511
683	SLU 20	0.94	-0.19	60.02	-3.1394	-1.5933	0.0504
683	SLU 21	0.94	-0.15	60.03	-3.1378	-1.5937	0.0518
683	SLU 22	0.92	-0.18	56.22	-2.9355	-1.4929	0.0488
683	SLU 23	0.92	-0.1	56.23	-2.9328	-1.4935	0.051
683	SLU 24	0.94	-0.17	57.33	-2.9926	-1.5224	0.0501
683	SLU 25	0.94	-0.13	57.33	-2.9909	-1.5228	0.0514
683	SLU 26	0.93	-0.1	56.92	-2.9688	-1.5118	0.0517
683	SLU 27	0.96	-0.18	58.01	-3.0285	-1.5407	0.0508
683	SLU 28	0.96	-0.13	58.02	-3.0269	-1.541	0.0521
683	SLU 29	0.95	-0.19	57.59	-3.0075	-1.5294	0.0502
683	SLU 30	0.95	-0.14	57.6	-3.0058	-1.5298	0.0515
683	SLU 31	0.98	-0.09	62.96	-3.2851	-1.6721	0.0554
683	SLU 32	1.01	-0.17	64.05	-3.3449	-1.701	0.0545
683	SLU 33	1.01	-0.12	64.06	-3.3433	-1.7014	0.0558
683	SLU 34	1	-0.09	63.65	-3.3211	-1.6904	0.0561
683	SLU 35	1.02	-0.17	64.74	-3.3809	-1.7193	0.0551
683	SLU 36	1.02	-0.12	64.75	-3.3792	-1.7196	0.0565
683	SLU 37	1.01	-0.18	64.32	-3.3598	-1.708	0.0545
683	SLU 38	1.01	-0.13	64.33	-3.3582	-1.7084	0.0559
683	SLU 39	1.01	-0.16	65.83	-3.4389	-1.7481	0.055
683	SLU 40	1.01	-0.12	65.84	-3.4372	-1.7484	0.0564
683	SLU 41	1.03	-0.17	66.52	-3.4748	-1.7663	0.0557
683	SLU 42	1.03	-0.12	66.52	-3.4732	-1.7667	0.057
683	SLU 43	1.06	-0.27	62.41	-3.2651	-1.6565	0.0547
683	SLU 44	1.06	-0.19	62.42	-3.2624	-1.6571	0.057
683	SLU 45	1.08	-0.27	63.51	-3.3222	-1.686	0.056
683	SLU 46	1.08	-0.22	63.52	-3.3206	-1.6864	0.0574
683	SLU 47	1.07	-0.19	63.11	-3.2984	-1.6754	0.0577
683	SLU 48	1.1	-0.27	64.2	-3.3582	-1.7042	0.0567
683	SLU 49	1.1	-0.22	64.21	-3.3565	-1.7046	0.0581
683	SLU 50	1.09	-0.28	63.78	-3.3371	-1.693	0.0561
683	SLU 51	1.09	-0.23	63.79	-3.3354	-1.6934	0.0575
683	SLU 52	1.12	-0.18	69.15	-3.6147	-1.8357	0.0613
683	SLU 53	1.15	-0.26	70.24	-3.6745	-1.8646	0.0604
683	SLU 54	1.15	-0.21	70.25	-3.6729	-1.865	0.0617
683	SLU 55	1.14	-0.19	69.83	-3.6507	-1.854	0.062
683	SLU 56	1.16	-0.26	70.93	-3.7105	-1.8828	0.0611
683	SLU 57	1.16	-0.21	70.94	-3.7089	-1.8832	0.0624
683	SLU 58	1.15	-0.27	70.51	-3.6894	-1.8716	0.0605
683	SLU 59	1.15	-0.22	70.52	-3.6878	-1.872	0.0618
683	SLU 60	1.15	-0.26	72.02	-3.7685	-1.9117	0.061
683	SLU 61	1.15	-0.21	72.02	-3.7668	-1.912	0.0623
683	SLU 62	1.17	-0.26	72.7	-3.8044	-1.9299	0.0617
683	SLU 63	1.17	-0.21	72.71	-3.8028	-1.9303	0.063
683	SLU 64	1.14	-0.25	68.9	-3.6005	-1.8295	0.06
683	SLU 65	1.14	-0.17	68.92	-3.5978	-1.8302	0.0623
683	SLU 66	1.16	-0.24	70.01	-3.6576	-1.859	0.0613
683	SLU 67	1.16	-0.19	70.02	-3.656	-1.8594	0.0627
683	SLU 68	1.16	-0.17	69.61	-3.6338	-1.8484	0.0629
683	SLU 69	1.18	-0.25	70.7	-3.6936	-1.8773	0.062
683	SLU 70	1.18	-0.2	70.71	-3.6919	-1.8777	0.0634
683	SLU 71	1.17	-0.26	70.28	-3.6725	-1.8661	0.0614
683	SLU 72	1.17	-0.21	70.29	-3.6709	-1.8665	0.0627
683	SLU 73	1.21	-0.16	75.65	-3.9502	-2.0088	0.0666
683	SLU 74	1.23	-0.23	76.74	-4.0099	-2.0376	0.0657
683	SLU 75	1.23	-0.19	76.75	-4.0083	-2.038	0.067
683	SLU 76	1.22	-0.16	76.33	-3.9861	-2.027	0.0673
683	SLU 77	1.24	-0.24	77.43	-4.0459	-2.0559	0.0664
683	SLU 78	1.24	-0.19	77.44	-4.0443	-2.0563	0.0677
683	SLU 79	1.24	-0.25	77.01	-4.0248	-2.0447	0.0658
683	SLU 80	1.24	-0.2	77.02	-4.0232	-2.0451	0.0671
683	SLU 81	1.24	-0.23	78.52	-4.1039	-2.0847	0.0663
683	SLU 82	1.23	-0.18	78.52	-4.1023	-2.0851	0.0676
683	SLU 83	1.25	-0.24	79.2	-4.1399	-2.103	0.0669
683	SLU 84	1.25	-0.19	79.21	-4.1382	-2.1033	0.0683
683	SLE RA 1	0.86	-0.19	51.58	-2.6959	-1.3693	0.045
683	SLE RA 2	0.86	-0.14	51.58	-2.6941	-1.3697	0.0465
683	SLE RA 3	0.88	-0.19	52.31	-2.734	-1.389	0.0459
683	SLE RA 4	0.87	-0.16	52.32	-2.7329	-1.3892	0.0468
683	SLE RA 5	0.87	-0.14	52.04	-2.7181	-1.3819	0.047
683	SLE RA 6	0.88	-0.2	52.77	-2.7579	-1.4011	0.0463
683	SLE RA 7	0.88	-0.16	52.78	-2.7569	-1.4014	0.0472
683	SLE RA 8	0.88	-0.2	52.49	-2.7439	-1.3937	0.0459
683	SLE RA 9	0.88	-0.17	52.5	-2.7428	-1.3939	0.0468
683	SLE RA 10	0.9	-0.13	56.07	-2.929	-1.4888	0.0494
683	SLE RA 11	0.92	-0.19	56.8	-2.9689	-1.508	0.0488
683	SLE RA 12	0.92	-0.15	56.8	-2.9678	-1.5083	0.0497
683	SLE RA 13	0.91	-0.14	56.53	-2.953	-1.501	0.0499
683	SLE RA 14	0.93	-0.19	57.26	-2.9928	-1.5202	0.0492

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
683	SLE RA 15	0.93	-0.16	57.26	-2.9918	-1.5205	0.0501
683	SLE RA 16	0.92	-0.2	56.98	-2.9788	-1.5127	0.0488
683	SLE RA 17	0.92	-0.16	56.98	-2.9777	-1.513	0.0497
683	SLE RA 18	0.92	-0.19	57.98	-3.0315	-1.5394	0.0492
683	SLE RA 19	0.92	-0.15	57.99	-3.0304	-1.5397	0.0501
683	SLE RA 20	0.93	-0.19	58.44	-3.0555	-1.5516	0.0496
683	SLE RA 21	0.93	-0.16	58.45	-3.0544	-1.5518	0.0505
683	SLE FR 1	0.86	-0.19	51.58	-2.6959	-1.3693	0.045
683	SLE FR 2	0.86	-0.18	51.58	-2.6956	-1.3694	0.0453
683	SLE FR 3	0.86	-0.2	51.76	-2.7055	-1.3742	0.0452
683	SLE FR 4	0.88	-0.18	53.5	-2.7962	-1.4204	0.0466
683	SLE FR 5	0.88	-0.19	53.68	-2.8062	-1.4252	0.0464
683	SLE FR 6	0.89	-0.19	54.78	-2.8637	-1.4544	0.0471
683	SLE QP 1	0.86	-0.19	51.58	-2.6959	-1.3693	0.045
683	SLE QP 2	0.88	-0.19	53.5	-2.7966	-1.4203	0.0463
683	SLD 1	4.91	0.69	48.45	-2.5446	-1.2791	0.2535
683	SLD 2	4.93	1.2	48.46	-2.5436	-1.2795	0.2735
683	SLD 3	4.96	-0.75	48.67	-2.6222	-1.2747	0.2137
683	SLD 4	4.98	-0.25	48.68	-2.6212	-1.2752	0.2337
683	SLD 5	2.01	2.18	51.65	-2.6035	-1.3845	0.1651
683	SLD 6	2.02	2.51	51.66	-2.6029	-1.3848	0.1783
683	SLD 7	2.17	-2.64	52.38	-2.8621	-1.37	0.0327
683	SLD 8	2.19	-2.31	52.38	-2.8615	-1.3703	0.0458
683	SLD 9	-0.43	1.93	54.61	-2.7317	-1.4704	0.0467
683	SLD 10	-0.42	2.26	54.62	-2.7311	-1.4707	0.0599
683	SLD 11	-0.27	-2.89	55.34	-2.9903	-1.4559	-0.0857
683	SLD 12	-0.25	-2.56	55.34	-2.9897	-1.4562	-0.0726
683	SLD 13	-3.23	-0.13	58.31	-2.972	-1.5655	-0.1412
683	SLD 14	-3.2	0.37	58.32	-2.971	-1.5659	-0.1212
683	SLD 15	-3.18	-1.58	58.53	-3.0496	-1.5612	-0.181
683	SLD 16	-3.15	-1.08	58.54	-3.0486	-1.5616	-0.1609
683	SLV 1	10.3	1.84	41.7	-2.2097	-1.0898	0.5297
683	SLV 2	10.36	3.01	41.72	-2.2073	-1.0908	0.5763
683	SLV 3	10.42	-1.46	42.2	-2.3863	-1.0796	0.4392
683	SLV 4	10.48	-0.29	42.22	-2.3839	-1.0807	0.4858
683	SLV 5	3.52	5.21	49.19	-2.3531	-1.3364	0.3206
683	SLV 6	3.56	5.97	49.21	-2.3516	-1.337	0.3507
683	SLV 7	3.91	-5.77	50.87	-2.9418	-1.3026	0.0187
683	SLV 8	3.94	-5.01	50.88	-2.9403	-1.3032	0.0488
683	SLV 9	-2.19	4.63	56.11	-2.653	-1.5374	0.0437
683	SLV 10	-2.15	5.39	56.13	-2.6514	-1.5381	0.0738
683	SLV 11	-1.8	-6.35	57.79	-3.2416	-1.5036	-0.2581
683	SLV 12	-1.76	-5.59	57.8	-3.2401	-1.5043	-0.2281
683	SLV 13	-8.72	-0.1	64.77	-3.2093	-1.76	-0.3933
683	SLV 14	-8.66	1.07	64.79	-3.2069	-1.761	-0.3466
683	SLV 15	-8.6	-3.39	65.27	-3.3859	-1.7499	-0.4838
683	SLV 16	-8.55	-2.22	65.29	-3.3835	-1.7509	-0.4372
683	CRTFP Ux+	0	0	0	0	0	0
683	CRTFP Ux-	0	0	0	0	0	0
683	CRTFP Uy+	0	0	0	0	0	0
683	CRTFP Uy-	0	0	0	0	0	0
684	SLU 1	1.05	-0.19	61.07	-0.1946	-0.0401	0.012
684	SLU 2	1.04	-0.09	61.09	-0.1908	-0.0402	0.0124
684	SLU 3	1.07	-0.18	62.43	-0.1978	-0.0411	0.0123
684	SLU 4	1.07	-0.12	62.44	-0.1956	-0.0411	0.0125
684	SLU 5	1.06	-0.1	61.93	-0.1935	-0.0408	0.0126
684	SLU 6	1.09	-0.19	63.27	-0.2005	-0.0416	0.0125
684	SLU 7	1.09	-0.13	63.29	-0.1983	-0.0417	0.0127
684	SLU 8	1.08	-0.2	62.76	-0.1999	-0.0413	0.0124
684	SLU 9	1.08	-0.14	62.77	-0.1977	-0.0413	0.0127
684	SLU 10	1.12	-0.07	69.35	-0.2177	-0.0454	0.014
684	SLU 11	1.15	-0.17	70.69	-0.2247	-0.0463	0.0138
684	SLU 12	1.15	-0.11	70.7	-0.2225	-0.0463	0.014
684	SLU 13	1.14	-0.08	70.19	-0.2204	-0.046	0.0142
684	SLU 14	1.17	-0.17	71.53	-0.2274	-0.0468	0.014
684	SLU 15	1.17	-0.11	71.55	-0.2252	-0.0469	0.0142
684	SLU 16	1.16	-0.18	71.02	-0.2268	-0.0465	0.0139
684	SLU 17	1.16	-0.12	71.03	-0.2246	-0.0466	0.0142
684	SLU 18	1.16	-0.16	72.87	-0.2329	-0.0476	0.0142
684	SLU 19	1.16	-0.1	72.88	-0.2307	-0.0476	0.0145
684	SLU 20	1.18	-0.17	73.71	-0.2356	-0.0481	0.0144
684	SLU 21	1.18	-0.11	73.73	-0.2334	-0.0482	0.0146
684	SLU 22	1.15	-0.16	69.06	-0.215	-0.0455	0.0131
684	SLU 23	1.15	-0.06	69.08	-0.2112	-0.0456	0.0135
684	SLU 24	1.18	-0.15	70.42	-0.2183	-0.0464	0.0133
684	SLU 25	1.18	-0.09	70.43	-0.216	-0.0465	0.0135
684	SLU 26	1.16	-0.06	69.92	-0.2139	-0.0462	0.0137
684	SLU 27	1.19	-0.16	71.27	-0.221	-0.047	0.0135
684	SLU 28	1.19	-0.1	71.28	-0.2187	-0.0471	0.0137
684	SLU 29	1.18	-0.17	70.75	-0.2204	-0.0466	0.0135
684	SLU 30	1.18	-0.11	70.76	-0.2181	-0.0467	0.0137
684	SLU 31	1.23	-0.04	77.34	-0.2381	-0.0508	0.015
684	SLU 32	1.26	-0.13	78.68	-0.2451	-0.0516	0.0148
684	SLU 33	1.26	-0.08	78.69	-0.2429	-0.0517	0.0151
684	SLU 34	1.24	-0.05	78.19	-0.2408	-0.0514	0.0152
684	SLU 35	1.27	-0.14	79.53	-0.2478	-0.0522	0.015
684	SLU 36	1.27	-0.08	79.54	-0.2456	-0.0523	0.0153
684	SLU 37	1.26	-0.15	79.01	-0.2472	-0.0518	0.015
684	SLU 38	1.26	-0.09	79.02	-0.245	-0.0519	0.0152
684	SLU 39	1.26	-0.13	80.86	-0.2534	-0.0529	0.0153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
684	SLU 40	1.26	-0.07	80.87	-0.2511	-0.053	0.0155
684	SLU 41	1.28	-0.14	81.7	-0.256	-0.0535	0.0155
684	SLU 42	1.28	-0.08	81.72	-0.2538	-0.0536	0.0157
684	SLU 43	1.32	-0.25	76.65	-0.2459	-0.0503	0.0153
684	SLU 44	1.32	-0.16	76.67	-0.2422	-0.0504	0.0157
684	SLU 45	1.35	-0.25	78.01	-0.2492	-0.0513	0.0155
684	SLU 46	1.35	-0.19	78.02	-0.247	-0.0513	0.0157
684	SLU 47	1.34	-0.16	77.51	-0.2449	-0.051	0.0159
684	SLU 48	1.37	-0.26	78.85	-0.2519	-0.0519	0.0157
684	SLU 49	1.37	-0.2	78.87	-0.2496	-0.0519	0.0159
684	SLU 50	1.36	-0.27	78.34	-0.2513	-0.0515	0.0157
684	SLU 51	1.36	-0.21	78.35	-0.2491	-0.0516	0.0159
684	SLU 52	1.4	-0.14	84.93	-0.269	-0.0557	0.0172
684	SLU 53	1.43	-0.23	86.27	-0.2761	-0.0565	0.017
684	SLU 54	1.43	-0.17	86.28	-0.2738	-0.0565	0.0173
684	SLU 55	1.42	-0.15	85.77	-0.2717	-0.0562	0.0174
684	SLU 56	1.45	-0.24	87.11	-0.2788	-0.0571	0.0172
684	SLU 57	1.45	-0.18	87.13	-0.2765	-0.0571	0.0175
684	SLU 58	1.44	-0.25	86.6	-0.2782	-0.0567	0.0172
684	SLU 59	1.44	-0.19	86.61	-0.2759	-0.0568	0.0174
684	SLU 60	1.44	-0.23	88.45	-0.2843	-0.0578	0.0175
684	SLU 61	1.44	-0.17	88.46	-0.282	-0.0578	0.0177
684	SLU 62	1.46	-0.24	89.29	-0.287	-0.0584	0.0177
684	SLU 63	1.46	-0.18	89.3	-0.2847	-0.0584	0.0179
684	SLU 64	1.43	-0.22	84.64	-0.2663	-0.0557	0.0163
684	SLU 65	1.43	-0.13	84.66	-0.2626	-0.0558	0.0167
684	SLU 66	1.45	-0.22	86	-0.2696	-0.0566	0.0166
684	SLU 67	1.45	-0.16	86.01	-0.2674	-0.0567	0.0168
684	SLU 68	1.44	-0.13	85.5	-0.2653	-0.0564	0.0169
684	SLU 69	1.47	-0.22	86.85	-0.2723	-0.0572	0.0168
684	SLU 70	1.47	-0.17	86.86	-0.2701	-0.0573	0.017
684	SLU 71	1.46	-0.23	86.33	-0.2717	-0.0568	0.0167
684	SLU 72	1.46	-0.18	86.34	-0.2695	-0.0569	0.017
684	SLU 73	1.51	-0.11	92.92	-0.2894	-0.061	0.0183
684	SLU 74	1.53	-0.2	94.26	-0.2965	-0.0618	0.0181
684	SLU 75	1.53	-0.14	94.27	-0.2942	-0.0619	0.0183
684	SLU 76	1.52	-0.11	93.77	-0.2921	-0.0616	0.0185
684	SLU 77	1.55	-0.21	95.11	-0.2992	-0.0624	0.0183
684	SLU 78	1.55	-0.15	95.12	-0.2969	-0.0625	0.0185
684	SLU 79	1.54	-0.22	94.59	-0.2986	-0.062	0.0183
684	SLU 80	1.54	-0.16	94.6	-0.2963	-0.0621	0.0185
684	SLU 81	1.54	-0.2	96.44	-0.3047	-0.0631	0.0185
684	SLU 82	1.54	-0.14	96.45	-0.3025	-0.0632	0.0188
684	SLU 83	1.56	-0.2	97.28	-0.3074	-0.0637	0.0187
684	SLU 84	1.56	-0.15	97.3	-0.3052	-0.0638	0.0189
684	SLE RA 1	1.07	-0.18	63.35	-0.2004	-0.0417	0.0123
684	SLE RA 2	1.07	-0.11	63.36	-0.1979	-0.0417	0.0126
684	SLE RA 3	1.09	-0.18	64.26	-0.2026	-0.0423	0.0125
684	SLE RA 4	1.09	-0.14	64.27	-0.2011	-0.0423	0.0126
684	SLE RA 5	1.09	-0.12	63.93	-0.1997	-0.0421	0.0127
684	SLE RA 6	1.11	-0.18	64.82	-0.2044	-0.0427	0.0126
684	SLE RA 7	1.1	-0.14	64.83	-0.2029	-0.0427	0.0128
684	SLE RA 8	1.1	-0.19	64.48	-0.204	-0.0424	0.0126
684	SLE RA 9	1.1	-0.15	64.49	-0.2025	-0.0425	0.0128
684	SLE RA 10	1.13	-0.1	68.87	-0.2158	-0.0452	0.0136
684	SLE RA 11	1.15	-0.16	69.76	-0.2205	-0.0458	0.0135
684	SLE RA 12	1.15	-0.12	69.77	-0.219	-0.0458	0.0137
684	SLE RA 13	1.14	-0.11	69.43	-0.2176	-0.0456	0.0137
684	SLE RA 14	1.16	-0.17	70.33	-0.2223	-0.0461	0.0136
684	SLE RA 15	1.16	-0.13	70.34	-0.2208	-0.0462	0.0138
684	SLE RA 16	1.15	-0.17	69.98	-0.2219	-0.0459	0.0136
684	SLE RA 17	1.15	-0.14	69.99	-0.2204	-0.0459	0.0138
684	SLE RA 18	1.15	-0.16	71.22	-0.226	-0.0466	0.0138
684	SLE RA 19	1.15	-0.12	71.23	-0.2245	-0.0467	0.0139
684	SLE RA 20	1.16	-0.17	71.78	-0.2278	-0.047	0.0139
684	SLE RA 21	1.16	-0.13	71.79	-0.2263	-0.047	0.0141
684	SLE FR 1	1.07	-0.18	63.35	-0.2004	-0.0417	0.0123
684	SLE FR 2	1.07	-0.17	63.35	-0.1999	-0.0417	0.0124
684	SLE FR 3	1.08	-0.18	63.58	-0.2011	-0.0418	0.0124
684	SLE FR 4	1.1	-0.16	65.71	-0.2076	-0.0432	0.0128
684	SLE FR 5	1.1	-0.18	65.94	-0.2088	-0.0433	0.0128
684	SLE FR 6	1.11	-0.17	67.28	-0.2132	-0.0441	0.0131
684	SLE QP 1	1.07	-0.18	63.35	-0.2004	-0.0417	0.0123
684	SLE QP 2	1.1	-0.17	65.71	-0.2081	-0.0432	0.0128
684	SLD 1	5.96	0.9	58.91	-0.203	-0.0152	-0.0007
684	SLD 2	5.98	1.54	58.92	-0.2026	-0.0152	0.007
684	SLD 3	6.02	-0.86	59.15	-0.2801	-0.0139	-0.0044
684	SLD 4	6.04	-0.22	59.17	-0.2798	-0.0139	0.0033
684	SLD 5	2.46	2.7	63.3	-0.0896	-0.0367	0.013
684	SLD 6	2.48	3.12	63.3	-0.0894	-0.0367	0.0181
684	SLD 7	2.66	-3.15	64.11	-0.3467	-0.0324	0.0006
684	SLD 8	2.68	-2.73	64.12	-0.3465	-0.0325	0.0056
684	SLD 9	-0.48	2.39	67.3	-0.0697	-0.0539	0.0199
684	SLD 10	-0.47	2.81	67.31	-0.0694	-0.0539	0.0249
684	SLD 11	-0.28	-3.46	68.11	-0.3267	-0.0496	0.0075
684	SLD 12	-0.27	-3.04	68.12	-0.3265	-0.0496	0.0125
684	SLD 13	-3.85	-0.13	72.25	-0.1364	-0.0724	0.0223
684	SLD 14	-3.83	0.51	72.27	-0.136	-0.0724	0.0299
684	SLD 15	-3.79	-1.88	72.5	-0.2135	-0.0711	0.0186
684	SLD 16	-3.77	-1.24	72.51	-0.2131	-0.0711	0.0262

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
684	SLV 1	12.47	2.28	49.8	-0.2019	0.0224	-0.0187
684	SLV 2	12.53	3.77	49.83	-0.2012	0.0223	-0.0009
684	SLV 3	12.61	-1.72	50.37	-0.3773	0.0253	-0.0272
684	SLV 4	12.67	-0.23	50.4	-0.3765	0.0252	-0.0094
684	SLV 5	4.29	6.37	60.07	0.0595	-0.028	0.0132
684	SLV 6	4.32	7.33	60.09	0.06	-0.028	0.0246
684	SLV 7	4.76	-6.96	61.97	-0.5248	-0.0181	-0.0152
684	SLV 8	4.79	-6	61.99	-0.5243	-0.0182	-0.0037
684	SLV 9	-2.6	5.65	69.43	0.1082	-0.0681	0.0293
684	SLV 10	-2.56	6.61	69.45	0.1087	-0.0682	0.0407
684	SLV 11	-2.13	-7.68	71.33	-0.4762	-0.0583	0.0009
684	SLV 12	-2.09	-6.71	71.35	-0.4756	-0.0584	0.0124
684	SLV 13	-10.47	-0.12	81.02	-0.0397	-0.1115	0.035
684	SLV 14	-10.42	1.37	81.05	-0.0389	-0.1116	0.0528
684	SLV 15	-10.33	-4.12	81.59	-0.215	-0.1086	0.0265
684	SLV 16	-10.28	-2.63	81.62	-0.2142	-0.1087	0.0443
684	CRTFP Ux+	0	0	0	0	0	0
684	CRTFP Ux-	0	0	0	0	0	0
684	CRTFP Uy+	0	0	0	0	0	0
684	CRTFP Uy-	0	0	0	0	0	0
685	SLU 1	1.09	-0.12	62.31	-0.1794	-0.0368	0.0134
685	SLU 2	1.09	-0.02	62.33	-0.1759	-0.0369	0.014
685	SLU 3	1.12	-0.12	63.7	-0.1824	-0.0377	0.0137
685	SLU 4	1.12	-0.06	63.71	-0.1803	-0.0377	0.014
685	SLU 5	1.1	-0.03	63.19	-0.1784	-0.0374	0.0142
685	SLU 6	1.14	-0.12	64.56	-0.1849	-0.0383	0.0139
685	SLU 7	1.13	-0.06	64.58	-0.1828	-0.0383	0.0142
685	SLU 8	1.12	-0.13	64.03	-0.1844	-0.0379	0.0138
685	SLU 9	1.12	-0.07	64.05	-0.1823	-0.038	0.0142
685	SLU 10	1.17	0	70.75	-0.2006	-0.0413	0.0158
685	SLU 11	1.2	-0.09	72.11	-0.2071	-0.0421	0.0155
685	SLU 12	1.2	-0.03	72.13	-0.205	-0.0422	0.0158
685	SLU 13	1.19	0	71.61	-0.2032	-0.0419	0.016
685	SLU 14	1.22	-0.09	72.98	-0.2096	-0.0427	0.0156
685	SLU 15	1.22	-0.04	72.99	-0.2075	-0.0427	0.016
685	SLU 16	1.21	-0.11	72.45	-0.2091	-0.0424	0.0156
685	SLU 17	1.21	-0.05	72.46	-0.2071	-0.0424	0.0159
685	SLU 18	1.21	-0.08	74.33	-0.2147	-0.0432	0.016
685	SLU 19	1.2	-0.02	74.34	-0.2126	-0.0432	0.0163
685	SLU 20	1.22	-0.09	75.19	-0.2172	-0.0437	0.0162
685	SLU 21	1.22	-0.03	75.21	-0.2152	-0.0437	0.0165
685	SLU 22	1.19	-0.08	70.46	-0.198	-0.0414	0.0147
685	SLU 23	1.19	0.02	70.48	-0.1945	-0.0415	0.0153
685	SLU 24	1.22	-0.08	71.85	-0.201	-0.0423	0.0149
685	SLU 25	1.22	-0.02	71.86	-0.1989	-0.0423	0.0153
685	SLU 26	1.21	0.01	71.35	-0.197	-0.042	0.0155
685	SLU 27	1.24	-0.08	72.71	-0.2035	-0.0428	0.0151
685	SLU 28	1.24	-0.02	72.73	-0.2014	-0.0429	0.0155
685	SLU 29	1.23	-0.09	72.19	-0.203	-0.0425	0.0151
685	SLU 30	1.23	-0.03	72.2	-0.2009	-0.0425	0.0154
685	SLU 31	1.27	0.04	78.9	-0.2193	-0.0459	0.0171
685	SLU 32	1.31	-0.05	80.27	-0.2257	-0.0467	0.0167
685	SLU 33	1.3	0.01	80.28	-0.2236	-0.0468	0.0171
685	SLU 34	1.29	0.04	79.76	-0.2218	-0.0464	0.0173
685	SLU 35	1.32	-0.06	81.13	-0.2282	-0.0473	0.0169
685	SLU 36	1.32	0	81.14	-0.2262	-0.0473	0.0173
685	SLU 37	1.31	-0.07	80.6	-0.2278	-0.0469	0.0169
685	SLU 38	1.31	-0.01	80.62	-0.2257	-0.047	0.0172
685	SLU 39	1.31	-0.05	82.48	-0.2333	-0.0477	0.0172
685	SLU 40	1.31	0.01	82.5	-0.2312	-0.0478	0.0176
685	SLU 41	1.33	-0.05	83.34	-0.2358	-0.0483	0.0174
685	SLU 42	1.33	0.01	83.36	-0.2338	-0.0483	0.0178
685	SLU 43	1.38	-0.17	78.2	-0.2268	-0.0463	0.017
685	SLU 44	1.38	-0.07	78.23	-0.2233	-0.0464	0.0176
685	SLU 45	1.41	-0.17	79.59	-0.2298	-0.0472	0.0173
685	SLU 46	1.41	-0.11	79.61	-0.2277	-0.0472	0.0176
685	SLU 47	1.39	-0.08	79.09	-0.2258	-0.0469	0.0178
685	SLU 48	1.43	-0.17	80.46	-0.2323	-0.0477	0.0175
685	SLU 49	1.42	-0.11	80.47	-0.2302	-0.0478	0.0178
685	SLU 50	1.41	-0.18	79.93	-0.2318	-0.0474	0.0174
685	SLU 51	1.41	-0.12	79.94	-0.2297	-0.0474	0.0177
685	SLU 52	1.46	-0.05	86.64	-0.2481	-0.0508	0.0194
685	SLU 53	1.49	-0.14	88.01	-0.2546	-0.0516	0.019
685	SLU 54	1.49	-0.08	88.03	-0.2525	-0.0516	0.0194
685	SLU 55	1.48	-0.05	87.51	-0.2506	-0.0513	0.0196
685	SLU 56	1.51	-0.14	88.87	-0.2571	-0.0522	0.0192
685	SLU 57	1.51	-0.08	88.89	-0.255	-0.0522	0.0196
685	SLU 58	1.5	-0.16	88.35	-0.2566	-0.0518	0.0192
685	SLU 59	1.5	-0.1	88.36	-0.2545	-0.0519	0.0195
685	SLU 60	1.5	-0.13	90.23	-0.2622	-0.0526	0.0196
685	SLU 61	1.49	-0.07	90.24	-0.2601	-0.0527	0.0199
685	SLU 62	1.51	-0.14	91.09	-0.2647	-0.0532	0.0198
685	SLU 63	1.51	-0.08	91.1	-0.2626	-0.0532	0.0201
685	SLU 64	1.48	-0.13	86.36	-0.2454	-0.0509	0.0183
685	SLU 65	1.48	-0.03	86.38	-0.2419	-0.0509	0.0189
685	SLU 66	1.51	-0.13	87.75	-0.2484	-0.0518	0.0185
685	SLU 67	1.51	-0.07	87.76	-0.2463	-0.0518	0.0189
685	SLU 68	1.5	-0.04	87.24	-0.2445	-0.0515	0.0191
685	SLU 69	1.53	-0.13	88.61	-0.2509	-0.0523	0.0187
685	SLU 70	1.53	-0.07	88.62	-0.2488	-0.0523	0.0191

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
685	SLU 71	1.52	-0.14	88.08	-0.2504	-0.052	0.0187
685	SLU 72	1.52	-0.08	88.1	-0.2484	-0.052	0.019
685	SLU 73	1.56	-0.01	94.8	-0.2667	-0.0554	0.0207
685	SLU 74	1.6	-0.1	96.16	-0.2732	-0.0562	0.0203
685	SLU 75	1.59	-0.04	96.18	-0.2711	-0.0562	0.0207
685	SLU 76	1.58	-0.01	95.66	-0.2692	-0.0559	0.0208
685	SLU 77	1.61	-0.11	97.03	-0.2757	-0.0567	0.0205
685	SLU 78	1.61	-0.05	97.04	-0.2736	-0.0568	0.0209
685	SLU 79	1.6	-0.12	96.5	-0.2752	-0.0564	0.0205
685	SLU 80	1.6	-0.06	96.51	-0.2731	-0.0564	0.0208
685	SLU 81	1.6	-0.1	98.38	-0.2808	-0.0572	0.0208
685	SLU 82	1.6	-0.04	98.39	-0.2787	-0.0572	0.0212
685	SLU 83	1.62	-0.1	99.24	-0.2833	-0.0578	0.021
685	SLU 84	1.62	-0.04	99.26	-0.2812	-0.0578	0.0214
685	SLE RA 1	1.12	-0.11	64.64	-0.1847	-0.0381	0.0138
685	SLE RA 2	1.12	-0.04	64.65	-0.1824	-0.0382	0.0142
685	SLE RA 3	1.14	-0.11	65.56	-0.1867	-0.0387	0.0139
685	SLE RA 4	1.14	-0.07	65.57	-0.1853	-0.0387	0.0142
685	SLE RA 5	1.13	-0.05	65.23	-0.1841	-0.0385	0.0143
685	SLE RA 6	1.15	-0.11	66.14	-0.1884	-0.0391	0.0141
685	SLE RA 7	1.15	-0.07	66.15	-0.187	-0.0391	0.0143
685	SLE RA 8	1.14	-0.12	65.79	-0.188	-0.0389	0.014
685	SLE RA 9	1.14	-0.08	65.8	-0.1867	-0.0389	0.0143
685	SLE RA 10	1.17	-0.03	70.26	-0.1989	-0.0411	0.0154
685	SLE RA 11	1.19	-0.09	71.17	-0.2032	-0.0417	0.0151
685	SLE RA 12	1.19	-0.05	71.18	-0.2018	-0.0417	0.0154
685	SLE RA 13	1.18	-0.03	70.84	-0.2005	-0.0415	0.0155
685	SLE RA 14	1.2	-0.09	71.75	-0.2049	-0.042	0.0153
685	SLE RA 15	1.2	-0.05	71.76	-0.2035	-0.0421	0.0155
685	SLE RA 16	1.2	-0.1	71.4	-0.2045	-0.0418	0.0152
685	SLE RA 17	1.2	-0.06	71.41	-0.2031	-0.0418	0.0155
685	SLE RA 18	1.2	-0.09	72.65	-0.2083	-0.0424	0.0155
685	SLE RA 19	1.2	-0.05	72.66	-0.2069	-0.0424	0.0157
685	SLE RA 20	1.21	-0.09	73.23	-0.2099	-0.0427	0.0156
685	SLE RA 21	1.21	-0.05	73.24	-0.2085	-0.0427	0.0158
685	SLE FR 1	1.12	-0.11	64.64	-0.1847	-0.0381	0.0138
685	SLE FR 2	1.12	-0.1	64.64	-0.1842	-0.0381	0.0139
685	SLE FR 3	1.12	-0.11	64.87	-0.1854	-0.0383	0.0138
685	SLE FR 4	1.14	-0.09	67.04	-0.1913	-0.0394	0.0144
685	SLE FR 5	1.15	-0.1	67.27	-0.1924	-0.0395	0.0143
685	SLE FR 6	1.16	-0.1	68.64	-0.1965	-0.0402	0.0146
685	SLE QP 1	1.12	-0.11	64.64	-0.1847	-0.0381	0.0138
685	SLE QP 2	1.14	-0.1	67.04	-0.1918	-0.0394	0.0143
685	SLD 1	6	0.98	59.2	-0.1877	-0.0048	0.0007
685	SLD 2	6.02	1.66	59.22	-0.1887	-0.0047	0.009
685	SLD 3	6.06	-0.8	59.46	-0.2584	-0.0041	-0.0054
685	SLD 4	6.08	-0.12	59.48	-0.2594	-0.004	0.0029
685	SLD 5	2.5	2.8	64.29	-0.0831	-0.0301	0.018
685	SLD 6	2.52	3.24	64.3	-0.0838	-0.0301	0.0234
685	SLD 7	2.71	-3.13	65.16	-0.3189	-0.0277	-0.0023
685	SLD 8	2.72	-2.68	65.17	-0.3195	-0.0277	0.0031
685	SLD 9	-0.44	2.48	68.91	-0.064	-0.0511	0.0255
685	SLD 10	-0.42	2.92	68.92	-0.0647	-0.0511	0.0309
685	SLD 11	-0.24	-3.45	69.78	-0.2998	-0.0487	0.0051
685	SLD 12	-0.22	-3.01	69.79	-0.3004	-0.0487	0.0106
685	SLD 13	-3.8	-0.09	74.6	-0.1241	-0.0748	0.0257
685	SLD 14	-3.78	0.59	74.62	-0.1251	-0.0747	0.034
685	SLD 15	-3.74	-1.87	74.86	-0.1948	-0.0741	0.0196
685	SLD 16	-3.72	-1.19	74.88	-0.1958	-0.074	0.0279
685	SLV 1	12.51	2.38	48.7	-0.1875	0.0416	-0.0176
685	SLV 2	12.56	3.97	48.74	-0.1899	0.0418	0.0017
685	SLV 3	12.65	-1.67	49.31	-0.3483	0.0433	-0.0315
685	SLV 4	12.7	-0.09	49.34	-0.3507	0.0435	-0.0122
685	SLV 5	4.33	6.51	60.61	0.0538	-0.0176	0.0224
685	SLV 6	4.36	7.54	60.63	0.0523	-0.0175	0.0349
685	SLV 7	4.8	-6.99	62.64	-0.4822	-0.0121	-0.0238
685	SLV 8	4.83	-5.97	62.66	-0.4837	-0.012	-0.0114
685	SLV 9	-2.55	5.76	71.42	0.1002	-0.0668	0.04
685	SLV 10	-2.52	6.79	71.44	0.0987	-0.0667	0.0524
685	SLV 11	-2.08	-7.74	73.45	-0.4358	-0.0613	-0.0063
685	SLV 12	-2.04	-6.72	73.47	-0.4373	-0.0612	0.0061
685	SLV 13	-10.42	-0.12	84.74	-0.0328	-0.1222	0.0407
685	SLV 14	-10.36	1.47	84.77	-0.0352	-0.1221	0.0601
685	SLV 15	-10.28	-4.17	85.35	-0.1936	-0.1206	0.0269
685	SLV 16	-10.22	-2.59	85.38	-0.196	-0.1204	0.0462
685	CRTFP Ux+	0	0	0	0	0	0
685	CRTFP Ux-	0	0	0	0	0	0
685	CRTFP Uy+	0	0	0	0	0	0
685	CRTFP Uy-	0	0	0	0	0	0
686	SLU 1	1.13	-0.05	63.43	-0.1647	-0.033	0.0145
686	SLU 2	1.12	0.05	63.45	-0.1615	-0.033	0.0153
686	SLU 3	1.16	-0.04	64.85	-0.1674	-0.0338	0.0148
686	SLU 4	1.15	0.02	64.86	-0.1655	-0.0338	0.0153
686	SLU 5	1.14	0.05	64.33	-0.1638	-0.0335	0.0155
686	SLU 6	1.17	-0.05	65.73	-0.1698	-0.0343	0.015
686	SLU 7	1.17	0.02	65.74	-0.1678	-0.0343	0.0154
686	SLU 8	1.16	-0.06	65.19	-0.1694	-0.034	0.0149
686	SLU 9	1.16	0	65.2	-0.1675	-0.034	0.0154
686	SLU 10	1.21	0.09	72	-0.1842	-0.0366	0.0173
686	SLU 11	1.24	-0.01	73.39	-0.1901	-0.0374	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
686	SLU 12	1.24	0.06	73.41	-0.1882	-0.0374	0.0173
686	SLU 13	1.23	0.09	72.88	-0.1865	-0.0371	0.0175
686	SLU 14	1.26	-0.01	74.27	-0.1925	-0.0379	0.017
686	SLU 15	1.26	0.05	74.29	-0.1905	-0.0379	0.0175
686	SLU 16	1.25	-0.02	73.73	-0.1921	-0.0376	0.0169
686	SLU 17	1.25	0.04	73.75	-0.1901	-0.0376	0.0174
686	SLU 18	1.25	0	75.63	-0.1971	-0.0381	0.0174
686	SLU 19	1.25	0.06	75.65	-0.1952	-0.0381	0.0179
686	SLU 20	1.27	0	76.52	-0.1995	-0.0386	0.0176
686	SLU 21	1.26	0.06	76.53	-0.1975	-0.0386	0.0181
686	SLU 22	1.23	0	71.71	-0.1816	-0.0367	0.016
686	SLU 23	1.23	0.1	71.74	-0.1784	-0.0368	0.0168
686	SLU 24	1.26	0	73.13	-0.1843	-0.0376	0.0163
686	SLU 25	1.26	0.06	73.15	-0.1824	-0.0376	0.0167
686	SLU 26	1.25	0.09	72.62	-0.1807	-0.0373	0.017
686	SLU 27	1.28	0	74.01	-0.1866	-0.0381	0.0165
686	SLU 28	1.28	0.06	74.03	-0.1847	-0.0381	0.0169
686	SLU 29	1.27	-0.01	73.48	-0.1862	-0.0378	0.0164
686	SLU 30	1.27	0.05	73.49	-0.1843	-0.0378	0.0168
686	SLU 31	1.32	0.14	80.28	-0.2011	-0.0404	0.0188
686	SLU 32	1.35	0.04	81.68	-0.207	-0.0412	0.0183
686	SLU 33	1.35	0.1	81.69	-0.2051	-0.0412	0.0188
686	SLU 34	1.34	0.13	81.16	-0.2034	-0.0409	0.019
686	SLU 35	1.37	0.03	82.56	-0.2093	-0.0417	0.0185
686	SLU 36	1.37	0.1	82.57	-0.2074	-0.0417	0.0189
686	SLU 37	1.36	0.02	82.02	-0.2089	-0.0414	0.0184
686	SLU 38	1.36	0.09	82.04	-0.207	-0.0414	0.0189
686	SLU 39	1.36	0.05	83.92	-0.214	-0.0419	0.0189
686	SLU 40	1.35	0.11	83.94	-0.2121	-0.0419	0.0194
686	SLU 41	1.37	0.04	84.8	-0.2163	-0.0424	0.0191
686	SLU 42	1.37	0.11	84.82	-0.2144	-0.0424	0.0195
686	SLU 43	1.43	-0.08	79.61	-0.2083	-0.0415	0.0184
686	SLU 44	1.42	0.02	79.64	-0.2051	-0.0416	0.0192
686	SLU 45	1.46	-0.07	81.03	-0.2111	-0.0424	0.0187
686	SLU 46	1.46	-0.01	81.05	-0.2091	-0.0424	0.0191
686	SLU 47	1.44	0.02	80.52	-0.2075	-0.0421	0.0193
686	SLU 48	1.48	-0.08	81.91	-0.2134	-0.0429	0.0188
686	SLU 49	1.47	-0.01	81.93	-0.2115	-0.0429	0.0193
686	SLU 50	1.46	-0.09	81.38	-0.213	-0.0426	0.0188
686	SLU 51	1.46	-0.03	81.39	-0.2111	-0.0426	0.0192
686	SLU 52	1.51	0.06	88.18	-0.2278	-0.0452	0.0212
686	SLU 53	1.54	-0.04	89.58	-0.2337	-0.0459	0.0207
686	SLU 54	1.54	0.03	89.59	-0.2318	-0.046	0.0211
686	SLU 55	1.53	0.06	89.07	-0.2302	-0.0457	0.0214
686	SLU 56	1.56	-0.04	90.46	-0.2361	-0.0465	0.0209
686	SLU 57	1.56	0.02	90.47	-0.2342	-0.0465	0.0213
686	SLU 58	1.55	-0.05	89.92	-0.2357	-0.0462	0.0208
686	SLU 59	1.55	0.01	89.94	-0.2338	-0.0462	0.0212
686	SLU 60	1.55	-0.03	91.82	-0.2407	-0.0467	0.0213
686	SLU 61	1.55	0.03	91.84	-0.2388	-0.0467	0.0217
686	SLU 62	1.57	-0.03	92.7	-0.2431	-0.0472	0.0215
686	SLU 63	1.56	0.03	92.72	-0.2412	-0.0472	0.0219
686	SLU 64	1.53	-0.03	87.9	-0.2252	-0.0453	0.0199
686	SLU 65	1.53	0.07	87.93	-0.222	-0.0454	0.0206
686	SLU 66	1.56	-0.03	89.32	-0.2279	-0.0461	0.0201
686	SLU 67	1.56	0.03	89.33	-0.226	-0.0462	0.0206
686	SLU 68	1.55	0.06	88.81	-0.2243	-0.0459	0.0208
686	SLU 69	1.58	-0.03	90.2	-0.2303	-0.0467	0.0203
686	SLU 70	1.58	0.03	90.22	-0.2283	-0.0467	0.0208
686	SLU 71	1.57	-0.04	89.66	-0.2299	-0.0464	0.0202
686	SLU 72	1.57	0.02	89.68	-0.2279	-0.0464	0.0207
686	SLU 73	1.62	0.1	96.47	-0.2447	-0.0489	0.0226
686	SLU 74	1.65	0.01	97.86	-0.2506	-0.0497	0.0221
686	SLU 75	1.65	0.07	97.88	-0.2487	-0.0498	0.0226
686	SLU 76	1.64	0.1	97.35	-0.247	-0.0495	0.0228
686	SLU 77	1.67	0	98.75	-0.2529	-0.0503	0.0223
686	SLU 78	1.67	0.07	98.76	-0.251	-0.0503	0.0228
686	SLU 79	1.66	-0.01	98.21	-0.2526	-0.05	0.0223
686	SLU 80	1.66	0.06	98.22	-0.2506	-0.05	0.0227
686	SLU 81	1.66	0.02	100.11	-0.2576	-0.0505	0.0227
686	SLU 82	1.65	0.08	100.12	-0.2557	-0.0505	0.0232
686	SLU 83	1.67	0.01	100.99	-0.2599	-0.051	0.0229
686	SLU 84	1.67	0.07	101	-0.258	-0.051	0.0234
686	SLE RA 1	1.16	-0.04	65.8	-0.1695	-0.034	0.015
686	SLE RA 2	1.16	0.03	65.81	-0.1674	-0.034	0.0155
686	SLE RA 3	1.18	-0.03	66.74	-0.1713	-0.0346	0.0151
686	SLE RA 4	1.18	0.01	66.75	-0.1701	-0.0346	0.0154
686	SLE RA 5	1.17	0.03	66.4	-0.1689	-0.0344	0.0156
686	SLE RA 6	1.19	-0.03	67.33	-0.1729	-0.0349	0.0153
686	SLE RA 7	1.19	0.01	67.34	-0.1716	-0.0349	0.0156
686	SLE RA 8	1.18	-0.04	66.97	-0.1726	-0.0347	0.0152
686	SLE RA 9	1.18	0	66.98	-0.1714	-0.0347	0.0155
686	SLE RA 10	1.21	0.06	71.51	-0.1825	-0.0364	0.0168
686	SLE RA 11	1.23	-0.01	72.44	-0.1865	-0.037	0.0165
686	SLE RA 12	1.23	0.03	72.45	-0.1852	-0.037	0.0168
686	SLE RA 13	1.22	0.05	72.1	-0.1841	-0.0368	0.0169
686	SLE RA 14	1.25	-0.01	73.02	-0.188	-0.0373	0.0166
686	SLE RA 15	1.25	0.03	73.03	-0.1867	-0.0373	0.0169
686	SLE RA 16	1.24	-0.02	72.67	-0.1878	-0.0371	0.0165
686	SLE RA 17	1.24	0.02	72.68	-0.1865	-0.0371	0.0169

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
686	SLE RA 18	1.24	0	73.93	-0.1911	-0.0375	0.0169
686	SLE RA 19	1.24	0.04	73.94	-0.1898	-0.0375	0.0172
686	SLE RA 20	1.25	0	74.52	-0.1927	-0.0378	0.017
686	SLE RA 21	1.25	0.04	74.53	-0.1914	-0.0378	0.0173
686	SLE FR 1	1.16	-0.04	65.8	-0.1695	-0.034	0.015
686	SLE FR 2	1.16	-0.02	65.8	-0.1691	-0.034	0.0151
686	SLE FR 3	1.16	-0.04	66.03	-0.1701	-0.0342	0.015
686	SLE FR 4	1.18	-0.01	68.24	-0.1756	-0.0351	0.0156
686	SLE FR 5	1.19	-0.03	68.47	-0.1766	-0.0352	0.0156
686	SLE FR 6	1.2	-0.02	69.86	-0.1803	-0.0357	0.0159
686	SLE QP 1	1.16	-0.04	65.8	-0.1695	-0.034	0.015
686	SLE QP 2	1.18	-0.03	68.24	-0.176	-0.0351	0.0155
686	SLD 1	6.03	-0.05	59.22	-0.1729	0.0035	0.0024
686	SLD 2	6.06	0.68	59.23	-0.1753	0.0036	0.0117
686	SLD 3	6.1	-1.86	59.49	-0.2374	0.003	-0.0064
686	SLD 4	6.12	-1.14	59.5	-0.2397	0.0031	0.0028
686	SLD 5	2.54	2.59	65.11	-0.077	-0.0228	0.0234
686	SLD 6	2.56	3.07	65.12	-0.0785	-0.0227	0.0295
686	SLD 7	2.74	-3.46	66.03	-0.2917	-0.0244	-0.0062
686	SLD 8	2.76	-2.98	66.03	-0.2933	-0.0244	-0.0001
686	SLD 9	-0.4	2.93	70.44	-0.0588	-0.0458	0.0312
686	SLD 10	-0.38	3.41	70.45	-0.0603	-0.0457	0.0372
686	SLD 11	-0.19	-3.12	71.35	-0.2735	-0.0475	0.0016
686	SLD 12	-0.18	-2.65	71.36	-0.2751	-0.0474	0.0076
686	SLD 13	-3.76	1.08	76.97	-0.1123	-0.0732	0.0283
686	SLD 14	-3.73	1.81	76.98	-0.1146	-0.0731	0.0375
686	SLD 15	-3.7	-0.73	77.25	-0.1767	-0.0737	0.0194
686	SLD 16	-3.67	-0.01	77.26	-0.1791	-0.0736	0.0286
686	SLV 1	12.53	-0.12	47.13	-0.1736	0.0551	-0.0154
686	SLV 2	12.59	1.57	47.15	-0.1792	0.0554	0.0061
686	SLV 3	12.67	-4.26	47.77	-0.3202	0.0539	-0.0356
686	SLV 4	12.73	-2.57	47.79	-0.3257	0.0542	-0.0141
686	SLV 5	4.36	5.93	60.93	0.0479	-0.0063	0.0332
686	SLV 6	4.39	7.02	60.94	0.0443	-0.0061	0.047
686	SLV 7	4.84	-7.86	63.06	-0.4405	-0.0102	-0.0341
686	SLV 8	4.87	-6.77	63.08	-0.4441	-0.01	-0.0203
686	SLV 9	-2.51	6.72	73.4	0.0921	-0.0601	0.0513
686	SLV 10	-2.47	7.81	73.41	0.0885	-0.0599	0.0652
686	SLV 11	-2.03	-7.07	75.53	-0.3963	-0.0641	-0.0159
686	SLV 12	-2	-5.98	75.54	-0.3999	-0.0639	-0.0021
686	SLV 13	-10.37	2.52	88.68	-0.0263	-0.1244	0.0451
686	SLV 14	-10.31	4.21	88.7	-0.0319	-0.124	0.0666
686	SLV 15	-10.22	-1.62	89.32	-0.1728	-0.1255	0.025
686	SLV 16	-10.17	0.07	89.34	-0.1784	-0.1252	0.0464
686	CRTFP Ux+	0	0	0	0	0	0
686	CRTFP Ux-	0	0	0	0	0	0
686	CRTFP Uy+	0	0	0	0	0	0
686	CRTFP Uy-	0	0	0	0	0	0
687	SLU 1	1.16	0.03	64.43	-0.1506	-0.0296	0.0153
687	SLU 2	1.16	0.14	64.46	-0.1476	-0.0296	0.0163
687	SLU 3	1.19	0.04	65.88	-0.153	-0.0304	0.0156
687	SLU 4	1.19	0.1	65.89	-0.1513	-0.0304	0.0162
687	SLU 5	1.18	0.13	65.35	-0.1498	-0.0301	0.0165
687	SLU 6	1.21	0.03	66.77	-0.1552	-0.0309	0.0158
687	SLU 7	1.21	0.1	66.79	-0.1534	-0.0309	0.0164
687	SLU 8	1.2	0.02	66.23	-0.1549	-0.0306	0.0157
687	SLU 9	1.2	0.09	66.24	-0.1531	-0.0306	0.0163
687	SLU 10	1.24	0.18	73.11	-0.1683	-0.0325	0.0185
687	SLU 11	1.28	0.08	74.52	-0.1737	-0.0333	0.0178
687	SLU 12	1.28	0.15	74.54	-0.172	-0.0333	0.0184
687	SLU 13	1.26	0.18	74	-0.1705	-0.033	0.0187
687	SLU 14	1.3	0.08	75.42	-0.1759	-0.0337	0.018
687	SLU 15	1.3	0.14	75.44	-0.1742	-0.0338	0.0186
687	SLU 16	1.29	0.07	74.87	-0.1756	-0.0335	0.0179
687	SLU 17	1.29	0.13	74.89	-0.1739	-0.0335	0.0185
687	SLU 18	1.28	0.09	76.79	-0.1802	-0.0337	0.0185
687	SLU 19	1.28	0.16	76.8	-0.1784	-0.0337	0.0191
687	SLU 20	1.3	0.09	77.68	-0.1823	-0.0342	0.0187
687	SLU 21	1.3	0.16	77.7	-0.1806	-0.0342	0.0193
687	SLU 22	1.27	0.08	72.83	-0.1658	-0.0328	0.017
687	SLU 23	1.27	0.19	72.85	-0.1628	-0.0328	0.0179
687	SLU 24	1.3	0.09	74.27	-0.1682	-0.0335	0.0173
687	SLU 25	1.3	0.15	74.29	-0.1665	-0.0335	0.0179
687	SLU 26	1.29	0.19	73.75	-0.165	-0.0333	0.0181
687	SLU 27	1.32	0.09	75.17	-0.1704	-0.034	0.0175
687	SLU 28	1.32	0.15	75.19	-0.1686	-0.034	0.018
687	SLU 29	1.31	0.07	74.62	-0.1701	-0.0337	0.0174
687	SLU 30	1.31	0.14	74.64	-0.1683	-0.0337	0.0179
687	SLU 31	1.36	0.24	81.5	-0.1835	-0.0356	0.0202
687	SLU 32	1.39	0.14	82.92	-0.1889	-0.0364	0.0195
687	SLU 33	1.39	0.2	82.94	-0.1872	-0.0364	0.0201
687	SLU 34	1.38	0.23	82.4	-0.1857	-0.0361	0.0203
687	SLU 35	1.41	0.13	83.82	-0.1911	-0.0369	0.0197
687	SLU 36	1.41	0.2	83.83	-0.1893	-0.0369	0.0202
687	SLU 37	1.4	0.12	83.27	-0.1908	-0.0366	0.0196
687	SLU 38	1.4	0.19	83.29	-0.189	-0.0366	0.0201
687	SLU 39	1.39	0.15	85.18	-0.1953	-0.0368	0.0202
687	SLU 40	1.39	0.21	85.2	-0.1936	-0.0368	0.0207
687	SLU 41	1.41	0.15	86.08	-0.1975	-0.0373	0.0203
687	SLU 42	1.41	0.21	86.1	-0.1958	-0.0373	0.0209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
687	SLU 43	1.47	0.02	80.88	-0.1905	-0.0374	0.0194
687	SLU 44	1.47	0.13	80.91	-0.1876	-0.0375	0.0203
687	SLU 45	1.5	0.03	82.33	-0.193	-0.0382	0.0197
687	SLU 46	1.5	0.09	82.34	-0.1912	-0.0382	0.0202
687	SLU 47	1.49	0.12	81.8	-0.1898	-0.0379	0.0205
687	SLU 48	1.52	0.02	83.22	-0.1952	-0.0387	0.0199
687	SLU 49	1.52	0.09	83.24	-0.1934	-0.0387	0.0204
687	SLU 50	1.51	0.01	82.68	-0.1949	-0.0384	0.0197
687	SLU 51	1.51	0.08	82.69	-0.1931	-0.0384	0.0203
687	SLU 52	1.55	0.17	89.56	-0.2083	-0.0403	0.0225
687	SLU 53	1.59	0.07	90.97	-0.2137	-0.0411	0.0219
687	SLU 54	1.59	0.14	90.99	-0.2119	-0.0411	0.0225
687	SLU 55	1.57	0.17	90.45	-0.2105	-0.0408	0.0227
687	SLU 56	1.61	0.07	91.87	-0.2159	-0.0416	0.0221
687	SLU 57	1.61	0.13	91.89	-0.2141	-0.0416	0.0226
687	SLU 58	1.6	0.06	91.32	-0.2156	-0.0413	0.022
687	SLU 59	1.59	0.12	91.34	-0.2138	-0.0413	0.0225
687	SLU 60	1.59	0.09	93.24	-0.2201	-0.0415	0.0225
687	SLU 61	1.59	0.15	93.25	-0.2184	-0.0415	0.0231
687	SLU 62	1.61	0.08	94.13	-0.2223	-0.042	0.0227
687	SLU 63	1.61	0.15	94.15	-0.2205	-0.042	0.0233
687	SLU 64	1.58	0.07	89.28	-0.2057	-0.0406	0.021
687	SLU 65	1.58	0.18	89.31	-0.2028	-0.0406	0.022
687	SLU 66	1.61	0.08	90.72	-0.2082	-0.0413	0.0213
687	SLU 67	1.61	0.14	90.74	-0.2064	-0.0413	0.0219
687	SLU 68	1.6	0.18	90.2	-0.205	-0.0411	0.0222
687	SLU 69	1.63	0.08	91.62	-0.2104	-0.0418	0.0215
687	SLU 70	1.63	0.14	91.64	-0.2086	-0.0418	0.0221
687	SLU 71	1.62	0.06	91.07	-0.2101	-0.0416	0.0214
687	SLU 72	1.62	0.13	91.09	-0.2083	-0.0416	0.022
687	SLU 73	1.67	0.23	97.95	-0.2235	-0.0434	0.0242
687	SLU 74	1.7	0.13	99.37	-0.2289	-0.0442	0.0235
687	SLU 75	1.7	0.19	99.39	-0.2271	-0.0442	0.0241
687	SLU 76	1.69	0.22	98.85	-0.2257	-0.0439	0.0244
687	SLU 77	1.72	0.12	100.27	-0.2311	-0.0447	0.0237
687	SLU 78	1.72	0.19	100.28	-0.2293	-0.0447	0.0243
687	SLU 79	1.71	0.11	99.72	-0.2308	-0.0444	0.0236
687	SLU 80	1.71	0.18	99.74	-0.229	-0.0444	0.0242
687	SLU 81	1.7	0.14	101.63	-0.2353	-0.0446	0.0242
687	SLU 82	1.7	0.2	101.65	-0.2335	-0.0447	0.0248
687	SLU 83	1.72	0.14	102.53	-0.2375	-0.0451	0.0244
687	SLU 84	1.72	0.2	102.55	-0.2357	-0.0451	0.0249
687	SLE RA 1	1.19	0.04	66.83	-0.1549	-0.0305	0.0158
687	SLE RA 2	1.19	0.11	66.85	-0.153	-0.0305	0.0164
687	SLE RA 3	1.21	0.05	67.79	-0.1565	-0.031	0.016
687	SLE RA 4	1.21	0.09	67.8	-0.1554	-0.031	0.0164
687	SLE RA 5	1.2	0.11	67.45	-0.1544	-0.0309	0.0166
687	SLE RA 6	1.23	0.05	68.39	-0.158	-0.0314	0.0161
687	SLE RA 7	1.23	0.09	68.4	-0.1568	-0.0314	0.0165
687	SLE RA 8	1.22	0.04	68.03	-0.1578	-0.0312	0.0161
687	SLE RA 9	1.22	0.08	68.04	-0.1566	-0.0312	0.0164
687	SLE RA 10	1.25	0.15	72.61	-0.1668	-0.0324	0.0179
687	SLE RA 11	1.27	0.08	73.56	-0.1704	-0.0329	0.0175
687	SLE RA 12	1.27	0.12	73.57	-0.1692	-0.0329	0.0179
687	SLE RA 13	1.26	0.14	73.21	-0.1682	-0.0328	0.018
687	SLE RA 14	1.28	0.08	74.16	-0.1718	-0.0333	0.0176
687	SLE RA 15	1.28	0.12	74.17	-0.1706	-0.0333	0.018
687	SLE RA 16	1.28	0.07	73.79	-0.1716	-0.0331	0.0175
687	SLE RA 17	1.28	0.11	73.8	-0.1704	-0.0331	0.0179
687	SLE RA 18	1.27	0.09	75.07	-0.1746	-0.0332	0.0179
687	SLE RA 19	1.27	0.13	75.08	-0.1735	-0.0332	0.0183
687	SLE RA 20	1.29	0.09	75.67	-0.1761	-0.0336	0.018
687	SLE RA 21	1.29	0.13	75.68	-0.1749	-0.0336	0.0184
687	SLE FR 1	1.19	0.04	66.83	-0.1549	-0.0305	0.0158
687	SLE FR 2	1.19	0.06	66.83	-0.1545	-0.0305	0.0159
687	SLE FR 3	1.2	0.04	67.07	-0.1555	-0.0307	0.0159
687	SLE FR 4	1.22	0.07	69.31	-0.1604	-0.0313	0.0166
687	SLE FR 5	1.22	0.06	69.54	-0.1614	-0.0315	0.0165
687	SLE FR 6	1.23	0.07	70.95	-0.1648	-0.0319	0.0169
687	SLE QP 1	1.19	0.04	66.83	-0.1549	-0.0305	0.0158
687	SLE QP 2	1.22	0.06	69.3	-0.1608	-0.0313	0.0164
687	SLD 1	6.06	0	59.03	-0.1587	0.0087	0.0044
687	SLD 2	6.09	0.78	59.03	-0.1625	0.0088	0.0147
687	SLD 3	6.12	-1.87	59.31	-0.2169	0.0081	-0.0075
687	SLD 4	6.15	-1.09	59.31	-0.2206	0.0083	0.0028
687	SLD 5	2.57	2.74	65.79	-0.0713	-0.0185	0.029
687	SLD 6	2.59	3.24	65.8	-0.0738	-0.0184	0.0357
687	SLD 7	2.78	-3.49	66.73	-0.2652	-0.0204	-0.0105
687	SLD 8	2.79	-2.98	66.73	-0.2676	-0.0203	-0.0038
687	SLD 9	-0.36	3.1	71.87	-0.054	-0.0424	0.0367
687	SLD 10	-0.35	3.61	71.88	-0.0565	-0.0423	0.0434
687	SLD 11	-0.15	-3.13	72.81	-0.2479	-0.0443	-0.0028
687	SLD 12	-0.14	-2.62	72.81	-0.2503	-0.0442	0.0039
687	SLD 13	-3.71	1.21	79.29	-0.101	-0.0709	0.0301
687	SLD 14	-3.69	1.98	79.3	-0.1048	-0.0708	0.0404
687	SLD 15	-3.65	-0.66	79.57	-0.1592	-0.0715	0.0182
687	SLD 16	-3.63	0.11	79.58	-0.1629	-0.0713	0.0285
687	SLV 1	12.55	-0.13	45.26	-0.1603	0.0623	-0.0122
687	SLV 2	12.6	1.68	45.27	-0.169	0.0627	0.0118
687	SLV 3	12.69	-4.38	45.91	-0.2926	0.0609	-0.0391

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
687	SLV 4	12.75	-2.58	45.92	-0.3013	0.0613	-0.0151
687	SLV 5	4.39	6.14	61.1	0.0415	-0.0013	0.0445
687	SLV 6	4.42	7.31	61.1	0.0359	-0.001	0.06
687	SLV 7	4.87	-8.04	63.27	-0.3995	-0.0058	-0.0451
687	SLV 8	4.9	-6.88	63.28	-0.4051	-0.0055	-0.0297
687	SLV 9	-2.47	6.99	75.32	0.0835	-0.0571	0.0626
687	SLV 10	-2.44	8.15	75.33	0.0779	-0.0569	0.078
687	SLV 11	-1.99	-7.2	77.5	-0.3576	-0.0617	-0.0271
687	SLV 12	-1.96	-6.03	77.51	-0.3632	-0.0614	-0.0116
687	SLV 13	-10.31	2.69	92.68	-0.0204	-0.124	0.048
687	SLV 14	-10.26	4.5	92.69	-0.0291	-0.1236	0.072
687	SLV 15	-10.17	-1.56	93.34	-0.1527	-0.1253	0.0211
687	SLV 16	-10.12	0.24	93.35	-0.1614	-0.125	0.0451
687	CRTFP Ux+	0	0	0	0	0	0
687	CRTFP Ux-	0	0	0	0	0	0
687	CRTFP Uy+	0	0	0	0	0	0
687	CRTFP Uy-	0	0	0	0	0	0
688	SLU 1	1.19	0.11	65.34	-0.137	-0.0271	0.0158
688	SLU 2	1.19	0.22	65.37	-0.1343	-0.0271	0.0169
688	SLU 3	1.22	0.12	66.81	-0.1392	-0.0279	0.0161
688	SLU 4	1.22	0.19	66.83	-0.1376	-0.0279	0.0168
688	SLU 5	1.21	0.22	66.28	-0.1363	-0.0276	0.0171
688	SLU 6	1.24	0.12	67.72	-0.1412	-0.0283	0.0163
688	SLU 7	1.24	0.18	67.74	-0.1396	-0.0283	0.017
688	SLU 8	1.23	0.1	67.17	-0.141	-0.0281	0.0162
688	SLU 9	1.23	0.17	67.18	-0.1394	-0.0281	0.0168
688	SLU 10	1.28	0.28	74.1	-0.1531	-0.0294	0.0193
688	SLU 11	1.31	0.18	75.54	-0.158	-0.0301	0.0185
688	SLU 12	1.31	0.25	75.56	-0.1564	-0.0301	0.0191
688	SLU 13	1.3	0.28	75.01	-0.1552	-0.0299	0.0194
688	SLU 14	1.33	0.18	76.45	-0.16	-0.0306	0.0186
688	SLU 15	1.33	0.24	76.47	-0.1584	-0.0306	0.0193
688	SLU 16	1.32	0.16	75.9	-0.1598	-0.0304	0.0185
688	SLU 17	1.32	0.23	75.91	-0.1582	-0.0303	0.0192
688	SLU 18	1.32	0.19	77.81	-0.1639	-0.0304	0.0192
688	SLU 19	1.32	0.26	77.83	-0.1623	-0.0304	0.0198
688	SLU 20	1.34	0.19	78.73	-0.1659	-0.0308	0.0193
688	SLU 21	1.34	0.26	78.74	-0.1643	-0.0308	0.02
688	SLU 22	1.31	0.17	73.83	-0.1506	-0.0297	0.0176
688	SLU 23	1.3	0.28	73.86	-0.1479	-0.0297	0.0187
688	SLU 24	1.34	0.18	75.3	-0.1528	-0.0305	0.0179
688	SLU 25	1.34	0.25	75.32	-0.1512	-0.0305	0.0186
688	SLU 26	1.32	0.28	74.77	-0.1499	-0.0302	0.0189
688	SLU 27	1.36	0.18	76.21	-0.1548	-0.031	0.0181
688	SLU 28	1.36	0.25	76.23	-0.1532	-0.031	0.0188
688	SLU 29	1.35	0.17	75.66	-0.1546	-0.0307	0.018
688	SLU 30	1.35	0.23	75.67	-0.153	-0.0307	0.0186
688	SLU 31	1.39	0.34	82.59	-0.1667	-0.032	0.0211
688	SLU 32	1.43	0.24	84.03	-0.1716	-0.0327	0.0203
688	SLU 33	1.42	0.31	84.05	-0.17	-0.0327	0.0209
688	SLU 34	1.41	0.34	83.5	-0.1687	-0.0325	0.0212
688	SLU 35	1.45	0.24	84.94	-0.1736	-0.0332	0.0204
688	SLU 36	1.44	0.31	84.96	-0.172	-0.0332	0.0211
688	SLU 37	1.43	0.23	84.39	-0.1734	-0.033	0.0203
688	SLU 38	1.43	0.29	84.4	-0.1718	-0.033	0.021
688	SLU 39	1.43	0.25	86.3	-0.1775	-0.033	0.021
688	SLU 40	1.43	0.32	86.32	-0.1759	-0.033	0.0216
688	SLU 41	1.45	0.25	87.22	-0.1795	-0.0334	0.0211
688	SLU 42	1.45	0.32	87.23	-0.1779	-0.0334	0.0218
688	SLU 43	1.51	0.12	82.03	-0.1734	-0.0344	0.0199
688	SLU 44	1.51	0.23	82.06	-0.1708	-0.0344	0.0211
688	SLU 45	1.54	0.13	83.5	-0.1757	-0.0351	0.0202
688	SLU 46	1.54	0.2	83.52	-0.1741	-0.0351	0.0209
688	SLU 47	1.53	0.23	82.97	-0.1728	-0.0349	0.0212
688	SLU 48	1.56	0.13	84.42	-0.1777	-0.0356	0.0204
688	SLU 49	1.56	0.2	84.43	-0.1761	-0.0356	0.0211
688	SLU 50	1.55	0.12	83.86	-0.1775	-0.0353	0.0203
688	SLU 51	1.55	0.18	83.87	-0.1759	-0.0353	0.021
688	SLU 52	1.6	0.29	90.79	-0.1896	-0.0366	0.0234
688	SLU 53	1.63	0.19	92.23	-0.1945	-0.0374	0.0226
688	SLU 54	1.63	0.26	92.25	-0.1929	-0.0374	0.0233
688	SLU 55	1.62	0.29	91.7	-0.1916	-0.0371	0.0236
688	SLU 56	1.65	0.19	93.15	-0.1965	-0.0379	0.0228
688	SLU 57	1.65	0.25	93.16	-0.1949	-0.0379	0.0234
688	SLU 58	1.64	0.17	92.59	-0.1963	-0.0376	0.0226
688	SLU 59	1.64	0.24	92.61	-0.1947	-0.0376	0.0233
688	SLU 60	1.64	0.2	94.51	-0.2003	-0.0376	0.0233
688	SLU 61	1.63	0.27	94.52	-0.1987	-0.0376	0.024
688	SLU 62	1.66	0.2	95.42	-0.2023	-0.0381	0.0235
688	SLU 63	1.65	0.27	95.43	-0.2007	-0.0381	0.0241
688	SLU 64	1.62	0.18	90.52	-0.187	-0.037	0.0217
688	SLU 65	1.62	0.3	90.55	-0.1844	-0.037	0.0229
688	SLU 66	1.66	0.19	91.99	-0.1892	-0.0377	0.022
688	SLU 67	1.65	0.26	92.01	-0.1876	-0.0377	0.0227
688	SLU 68	1.64	0.29	91.46	-0.1864	-0.0375	0.023
688	SLU 69	1.68	0.19	92.9	-0.1912	-0.0382	0.0222
688	SLU 70	1.68	0.26	92.92	-0.1896	-0.0382	0.0229
688	SLU 71	1.67	0.18	92.35	-0.191	-0.0379	0.0221
688	SLU 72	1.66	0.25	92.36	-0.1894	-0.0379	0.0228
688	SLU 73	1.71	0.35	99.28	-0.2032	-0.0392	0.0252

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
688	SLU 74	1.74	0.25	100.72	-0.2081	-0.04	0.0244
688	SLU 75	1.74	0.32	100.74	-0.2065	-0.04	0.0251
688	SLU 76	1.73	0.35	100.19	-0.2052	-0.0397	0.0254
688	SLU 77	1.76	0.25	101.63	-0.2101	-0.0405	0.0246
688	SLU 78	1.76	0.32	101.65	-0.2085	-0.0405	0.0252
688	SLU 79	1.75	0.24	101.08	-0.2099	-0.0402	0.0244
688	SLU 80	1.75	0.3	101.09	-0.2083	-0.0402	0.0251
688	SLU 81	1.75	0.27	103	-0.2139	-0.0402	0.0251
688	SLU 82	1.75	0.33	103.01	-0.2123	-0.0402	0.0258
688	SLU 83	1.77	0.26	103.91	-0.2159	-0.0407	0.0253
688	SLU 84	1.77	0.33	103.92	-0.2143	-0.0407	0.0259
688	SLE RA 1	1.22	0.13	67.77	-0.1409	-0.0279	0.0163
688	SLE RA 2	1.22	0.2	67.78	-0.1391	-0.0279	0.0171
688	SLE RA 3	1.25	0.13	68.75	-0.1424	-0.0284	0.0165
688	SLE RA 4	1.24	0.18	68.76	-0.1413	-0.0284	0.017
688	SLE RA 5	1.24	0.2	68.39	-0.1404	-0.0282	0.0172
688	SLE RA 6	1.26	0.13	69.36	-0.1437	-0.0287	0.0166
688	SLE RA 7	1.26	0.18	69.37	-0.1426	-0.0287	0.0171
688	SLE RA 8	1.25	0.12	68.98	-0.1436	-0.0285	0.0166
688	SLE RA 9	1.25	0.17	68.99	-0.1425	-0.0285	0.017
688	SLE RA 10	1.28	0.24	73.61	-0.1516	-0.0294	0.0186
688	SLE RA 11	1.3	0.17	74.57	-0.1549	-0.0299	0.0181
688	SLE RA 12	1.3	0.22	74.58	-0.1538	-0.0299	0.0185
688	SLE RA 13	1.29	0.24	74.21	-0.153	-0.0297	0.0188
688	SLE RA 14	1.32	0.17	75.18	-0.1562	-0.0302	0.0182
688	SLE RA 15	1.32	0.22	75.19	-0.1552	-0.0302	0.0187
688	SLE RA 16	1.31	0.16	74.8	-0.1561	-0.03	0.0181
688	SLE RA 17	1.31	0.21	74.81	-0.155	-0.03	0.0186
688	SLE RA 18	1.31	0.18	76.08	-0.1588	-0.03	0.0186
688	SLE RA 19	1.31	0.23	76.09	-0.1577	-0.03	0.019
688	SLE RA 20	1.32	0.18	76.69	-0.1601	-0.0304	0.0187
688	SLE RA 21	1.32	0.23	76.7	-0.1591	-0.0304	0.0191
688	SLE FR 1	1.22	0.13	67.77	-0.1409	-0.0279	0.0163
688	SLE FR 2	1.22	0.14	67.77	-0.1405	-0.0279	0.0165
688	SLE FR 3	1.23	0.13	68.01	-0.1414	-0.028	0.0164
688	SLE FR 4	1.25	0.16	70.27	-0.1459	-0.0285	0.0171
688	SLE FR 5	1.25	0.14	70.51	-0.1468	-0.0287	0.017
688	SLE FR 6	1.27	0.15	71.93	-0.1498	-0.029	0.0174
688	SLE QP 1	1.22	0.13	67.77	-0.1409	-0.0279	0.0163
688	SLE QP 2	1.25	0.14	70.26	-0.1463	-0.0285	0.017
688	SLD 1	6.09	0.05	58.71	-0.1451	0.0121	0.0064
688	SLD 2	6.11	0.88	58.71	-0.1502	0.0123	0.0178
688	SLD 3	6.15	-1.89	58.98	-0.197	0.0113	-0.0084
688	SLD 4	6.17	-1.06	58.98	-0.2021	0.0115	0.003
688	SLD 5	2.6	2.9	66.38	-0.0663	-0.0151	0.0342
688	SLD 6	2.62	3.45	66.38	-0.0697	-0.015	0.0417
688	SLD 7	2.81	-3.55	67.3	-0.2393	-0.0179	-0.0151
688	SLD 8	2.82	-3.01	67.3	-0.2426	-0.0178	-0.0076
688	SLD 9	-0.33	3.29	73.23	-0.0499	-0.0393	0.0416
688	SLD 10	-0.31	3.84	73.23	-0.0532	-0.0392	0.0491
688	SLD 11	-0.12	-3.16	74.15	-0.2228	-0.0421	-0.0077
688	SLD 12	-0.1	-2.62	74.15	-0.2262	-0.042	-0.0002
688	SLD 13	-3.67	1.34	81.54	-0.0904	-0.0685	0.031
688	SLD 14	-3.65	2.17	81.54	-0.0955	-0.0684	0.0424
688	SLD 15	-3.61	-0.59	81.82	-0.1423	-0.0694	0.0162
688	SLD 16	-3.59	0.24	81.82	-0.1474	-0.0692	0.0276
688	SLV 1	12.56	-0.14	43.22	-0.1474	0.0667	-0.0083
688	SLV 2	12.61	1.8	43.22	-0.1593	0.067	0.0183
688	SLV 3	12.71	-4.55	43.86	-0.2655	0.0647	-0.0419
688	SLV 4	12.76	-2.61	43.86	-0.2774	0.0651	-0.0153
688	SLV 5	4.41	6.41	61.17	0.0346	0.0029	0.0557
688	SLV 6	4.45	7.66	61.17	0.0269	0.0032	0.0728
688	SLV 7	4.9	-8.28	63.32	-0.3591	-0.0036	-0.0561
688	SLV 8	4.93	-7.04	63.32	-0.3668	-0.0034	-0.039
688	SLV 9	-2.43	7.32	77.21	0.0743	-0.0537	0.073
688	SLV 10	-2.4	8.57	77.2	0.0666	-0.0534	0.0901
688	SLV 11	-1.95	-7.37	79.35	-0.3194	-0.0602	-0.0388
688	SLV 12	-1.91	-6.13	79.35	-0.3271	-0.06	-0.0217
688	SLV 13	-10.26	2.9	96.66	-0.0151	-0.1221	0.0493
688	SLV 14	-10.21	4.83	96.66	-0.027	-0.1217	0.0759
688	SLV 15	-10.12	-1.51	97.31	-0.1332	-0.1241	0.0157
688	SLV 16	-10.06	0.42	97.3	-0.1451	-0.1237	0.0423
688	CRTFP Ux+	0	0	0	0	0	0
688	CRTFP Ux-	0	0	0	0	0	0
688	CRTFP Uy+	0	0	0	0	0	0
688	CRTFP Uy-	0	0	0	0	0	0
689	SLU 1	1.22	0.19	66.19	-0.124	-0.0255	0.0159
689	SLU 2	1.22	0.31	66.21	-0.1216	-0.0255	0.0171
689	SLU 3	1.25	0.2	67.68	-0.126	-0.0262	0.0162
689	SLU 4	1.25	0.27	67.69	-0.1245	-0.0262	0.017
689	SLU 5	1.24	0.31	67.14	-0.1234	-0.0259	0.0173
689	SLU 6	1.27	0.2	68.61	-0.1278	-0.0267	0.0164
689	SLU 7	1.27	0.27	68.62	-0.1264	-0.0267	0.0171
689	SLU 8	1.26	0.19	68.04	-0.1277	-0.0264	0.0162
689	SLU 9	1.26	0.26	68.06	-0.1263	-0.0264	0.017
689	SLU 10	1.31	0.38	75.01	-0.1386	-0.0273	0.0196
689	SLU 11	1.34	0.27	76.47	-0.143	-0.028	0.0186
689	SLU 12	1.34	0.35	76.49	-0.1415	-0.028	0.0194
689	SLU 13	1.33	0.38	75.93	-0.1404	-0.0278	0.0197
689	SLU 14	1.36	0.27	77.4	-0.1448	-0.0285	0.0188

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
689	SLU 15	1.36	0.34	77.42	-0.1434	-0.0285	0.0195
689	SLU 16	1.35	0.26	76.84	-0.1447	-0.0282	0.0186
689	SLU 17	1.35	0.33	76.85	-0.1433	-0.0282	0.0194
689	SLU 18	1.35	0.29	78.75	-0.1483	-0.0281	0.0194
689	SLU 19	1.35	0.36	78.77	-0.1468	-0.0281	0.0201
689	SLU 20	1.37	0.29	79.68	-0.1501	-0.0285	0.0195
689	SLU 21	1.37	0.36	79.69	-0.1487	-0.0285	0.0203
689	SLU 22	1.34	0.26	74.75	-0.136	-0.0277	0.0178
689	SLU 23	1.33	0.38	74.78	-0.1336	-0.0277	0.019
689	SLU 24	1.37	0.27	76.24	-0.138	-0.0284	0.0181
689	SLU 25	1.37	0.35	76.26	-0.1366	-0.0284	0.0189
689	SLU 26	1.35	0.38	75.71	-0.1355	-0.0282	0.0192
689	SLU 27	1.39	0.27	77.17	-0.1399	-0.0289	0.0183
689	SLU 28	1.39	0.34	77.19	-0.1385	-0.0289	0.019
689	SLU 29	1.38	0.26	76.61	-0.1398	-0.0287	0.0181
689	SLU 30	1.38	0.33	76.62	-0.1383	-0.0286	0.0189
689	SLU 31	1.42	0.45	83.57	-0.1506	-0.0295	0.0215
689	SLU 32	1.46	0.35	85.04	-0.155	-0.0302	0.0205
689	SLU 33	1.46	0.42	85.06	-0.1536	-0.0302	0.0213
689	SLU 34	1.44	0.45	84.5	-0.1525	-0.03	0.0216
689	SLU 35	1.48	0.34	85.97	-0.1569	-0.0307	0.0207
689	SLU 36	1.48	0.42	85.98	-0.1554	-0.0307	0.0214
689	SLU 37	1.47	0.33	85.4	-0.1568	-0.0305	0.0205
689	SLU 38	1.47	0.4	85.42	-0.1553	-0.0305	0.0213
689	SLU 39	1.46	0.36	87.32	-0.1603	-0.0303	0.0213
689	SLU 40	1.46	0.44	87.33	-0.1589	-0.0303	0.022
689	SLU 41	1.48	0.36	88.25	-0.1622	-0.0308	0.0214
689	SLU 42	1.48	0.43	88.26	-0.1607	-0.0308	0.0222
689	SLU 43	1.55	0.22	83.11	-0.157	-0.0324	0.02
689	SLU 44	1.54	0.34	83.13	-0.1546	-0.0324	0.0213
689	SLU 45	1.58	0.23	84.6	-0.159	-0.0331	0.0203
689	SLU 46	1.58	0.31	84.61	-0.1576	-0.0331	0.0211
689	SLU 47	1.57	0.34	84.06	-0.1565	-0.0328	0.0214
689	SLU 48	1.6	0.23	85.52	-0.1609	-0.0336	0.0205
689	SLU 49	1.6	0.31	85.54	-0.1595	-0.0336	0.0212
689	SLU 50	1.59	0.22	84.96	-0.1608	-0.0333	0.0203
689	SLU 51	1.59	0.29	84.98	-0.1593	-0.0333	0.0211
689	SLU 52	1.63	0.41	91.93	-0.1716	-0.0342	0.0237
689	SLU 53	1.67	0.31	93.39	-0.176	-0.0349	0.0228
689	SLU 54	1.67	0.38	93.41	-0.1746	-0.0349	0.0235
689	SLU 55	1.65	0.41	92.85	-0.1735	-0.0346	0.0238
689	SLU 56	1.69	0.3	94.32	-0.1779	-0.0354	0.0229
689	SLU 57	1.69	0.38	94.34	-0.1764	-0.0354	0.0237
689	SLU 58	1.68	0.29	93.76	-0.1778	-0.0351	0.0228
689	SLU 59	1.68	0.36	93.77	-0.1763	-0.0351	0.0235
689	SLU 60	1.67	0.32	95.67	-0.1813	-0.035	0.0235
689	SLU 61	1.67	0.4	95.69	-0.1799	-0.035	0.0242
689	SLU 62	1.7	0.32	96.6	-0.1832	-0.0354	0.0236
689	SLU 63	1.69	0.4	96.61	-0.1817	-0.0354	0.0244
689	SLU 64	1.66	0.3	91.67	-0.1691	-0.0346	0.0219
689	SLU 65	1.66	0.41	91.7	-0.1667	-0.0346	0.0232
689	SLU 66	1.7	0.31	93.16	-0.1711	-0.0353	0.0222
689	SLU 67	1.69	0.38	93.18	-0.1696	-0.0353	0.023
689	SLU 68	1.68	0.41	92.62	-0.1686	-0.035	0.0233
689	SLU 69	1.72	0.31	94.09	-0.173	-0.0358	0.0224
689	SLU 70	1.72	0.38	94.11	-0.1715	-0.0358	0.0231
689	SLU 71	1.7	0.29	93.53	-0.1728	-0.0355	0.0222
689	SLU 72	1.7	0.36	93.54	-0.1714	-0.0355	0.023
689	SLU 73	1.75	0.49	100.49	-0.1837	-0.0364	0.0256
689	SLU 74	1.78	0.38	101.96	-0.1881	-0.0371	0.0247
689	SLU 75	1.78	0.45	101.97	-0.1866	-0.0371	0.0254
689	SLU 76	1.77	0.48	101.42	-0.1856	-0.0369	0.0257
689	SLU 77	1.81	0.38	102.89	-0.1899	-0.0376	0.0248
689	SLU 78	1.8	0.45	102.9	-0.1885	-0.0376	0.0256
689	SLU 79	1.79	0.36	102.32	-0.1898	-0.0373	0.0247
689	SLU 80	1.79	0.44	102.34	-0.1884	-0.0373	0.0254
689	SLU 81	1.79	0.4	104.24	-0.1934	-0.0372	0.0254
689	SLU 82	1.79	0.47	104.25	-0.1919	-0.0372	0.0261
689	SLU 83	1.81	0.4	105.16	-0.1952	-0.0377	0.0255
689	SLU 84	1.81	0.47	105.18	-0.1938	-0.0376	0.0263
689	SLE RA 1	1.25	0.21	68.63	-0.1274	-0.0261	0.0164
689	SLE RA 2	1.25	0.29	68.65	-0.1258	-0.0261	0.0173
689	SLE RA 3	1.28	0.22	69.63	-0.1288	-0.0266	0.0167
689	SLE RA 4	1.27	0.27	69.64	-0.1278	-0.0266	0.0171
689	SLE RA 5	1.27	0.29	69.27	-0.1271	-0.0264	0.0174
689	SLE RA 6	1.29	0.22	70.25	-0.13	-0.0269	0.0168
689	SLE RA 7	1.29	0.27	70.26	-0.129	-0.0269	0.0173
689	SLE RA 8	1.28	0.21	69.87	-0.1299	-0.0267	0.0167
689	SLE RA 9	1.28	0.26	69.88	-0.129	-0.0267	0.0172
689	SLE RA 10	1.31	0.34	74.51	-0.1372	-0.0273	0.0189
689	SLE RA 11	1.33	0.27	75.49	-0.1401	-0.0278	0.0183
689	SLE RA 12	1.33	0.31	75.5	-0.1391	-0.0278	0.0188
689	SLE RA 13	1.33	0.34	75.13	-0.1384	-0.0276	0.019
689	SLE RA 14	1.35	0.27	76.11	-0.1413	-0.0281	0.0184
689	SLE RA 15	1.35	0.31	76.12	-0.1404	-0.0281	0.0189
689	SLE RA 16	1.34	0.26	75.73	-0.1412	-0.028	0.0183
689	SLE RA 17	1.34	0.3	75.74	-0.1403	-0.028	0.0188
689	SLE RA 18	1.34	0.28	77.01	-0.1436	-0.0278	0.0187
689	SLE RA 19	1.34	0.33	77.02	-0.1427	-0.0278	0.0192
689	SLE RA 20	1.35	0.28	77.63	-0.1449	-0.0282	0.0189

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
689	SLE RA 21	1.35	0.33	77.64	-0.1439	-0.0282	0.0193
689	SLE FR 1	1.25	0.21	68.63	-0.1274	-0.0261	0.0164
689	SLE FR 2	1.25	0.23	68.64	-0.1271	-0.0261	0.0166
689	SLE FR 3	1.26	0.21	68.88	-0.1279	-0.0262	0.0165
689	SLE FR 4	1.28	0.25	71.15	-0.132	-0.0266	0.0173
689	SLE FR 5	1.28	0.23	71.39	-0.1328	-0.0268	0.0172
689	SLE FR 6	1.3	0.25	72.82	-0.1355	-0.027	0.0176
689	SLE QP 1	1.25	0.21	68.63	-0.1274	-0.0261	0.0164
689	SLE QP 2	1.28	0.23	71.15	-0.1323	-0.0266	0.0171
689	SLD 1	6.11	0.1	58.3	-0.132	0.0133	0.0082
689	SLD 2	6.13	0.99	58.3	-0.1385	0.0134	0.0208
689	SLD 3	6.17	-1.92	58.57	-0.1776	0.0144	-0.0092
689	SLD 4	6.19	-1.03	58.56	-0.1841	0.0146	0.0033
689	SLD 5	2.63	3.09	66.89	-0.0619	-0.0165	0.0387
689	SLD 6	2.64	3.68	66.89	-0.0662	-0.0164	0.0469
689	SLD 7	2.84	-3.63	67.77	-0.2139	-0.0126	-0.0195
689	SLD 8	2.85	-3.05	67.77	-0.2181	-0.0125	-0.0112
689	SLD 9	-0.29	3.51	74.52	-0.0465	-0.0408	0.0455
689	SLD 10	-0.28	4.1	74.52	-0.0507	-0.0407	0.0537
689	SLD 11	-0.08	-3.22	75.4	-0.1984	-0.0369	-0.0127
689	SLD 12	-0.07	-2.63	75.4	-0.2026	-0.0368	-0.0044
689	SLD 13	-3.63	1.49	83.73	-0.0805	-0.0679	0.0309
689	SLD 14	-3.61	2.38	83.73	-0.087	-0.0677	0.0435
689	SLD 15	-3.57	-0.53	84	-0.1261	-0.0667	0.0135
689	SLD 16	-3.55	0.37	83.99	-0.1325	-0.0665	0.026
689	SLV 1	12.57	-0.14	41.09	-0.135	0.0668	-0.0042
689	SLV 2	12.62	1.94	41.08	-0.1501	0.0671	0.025
689	SLV 3	12.71	-4.74	41.71	-0.2389	0.0695	-0.0438
689	SLV 4	12.77	-2.66	41.69	-0.254	0.0699	-0.0146
689	SLV 5	4.43	6.73	61.2	0.027	-0.0028	0.0658
689	SLV 6	4.46	8.07	61.19	0.0173	-0.0026	0.0846
689	SLV 7	4.93	-8.59	63.25	-0.3192	0.0063	-0.0663
689	SLV 8	4.96	-7.25	63.24	-0.3289	0.0065	-0.0474
689	SLV 9	-2.4	7.71	79.05	0.0643	-0.0598	0.0817
689	SLV 10	-2.37	9.05	79.04	0.0546	-0.0596	0.1005
689	SLV 11	-1.91	-7.61	81.1	-0.2818	-0.0507	-0.0503
689	SLV 12	-1.87	-6.27	81.1	-0.2915	-0.0504	-0.0315
689	SLV 13	-10.21	3.12	100.6	-0.0106	-0.1231	0.0489
689	SLV 14	-10.16	5.2	100.59	-0.0257	-0.1228	0.0781
689	SLV 15	-10.06	-1.47	101.22	-0.1145	-0.1204	0.0093
689	SLV 16	-10.01	0.6	101.2	-0.1295	-0.12	0.0385
689	CRTFP Ux+	0	0	0	0	0	0
689	CRTFP Ux-	0	0	0	0	0	0
689	CRTFP Uy+	0	0	0	0	0	0
689	CRTFP Uy-	0	0	0	0	0	0
690	SLU 1	1.25	0.27	66.99	-0.1115	-0.0249	0.0155
690	SLU 2	1.24	0.4	67.02	-0.1094	-0.0248	0.0168
690	SLU 3	1.28	0.29	68.51	-0.1133	-0.0256	0.0158
690	SLU 4	1.28	0.36	68.52	-0.112	-0.0256	0.0166
690	SLU 5	1.27	0.4	67.96	-0.1111	-0.0253	0.017
690	SLU 6	1.3	0.29	69.45	-0.115	-0.0261	0.016
690	SLU 7	1.3	0.36	69.47	-0.1137	-0.0261	0.0168
690	SLU 8	1.29	0.27	68.88	-0.115	-0.0258	0.0158
690	SLU 9	1.29	0.35	68.89	-0.1137	-0.0258	0.0166
690	SLU 10	1.33	0.48	75.87	-0.1246	-0.0264	0.0193
690	SLU 11	1.37	0.37	77.36	-0.1285	-0.0271	0.0183
690	SLU 12	1.37	0.44	77.37	-0.1272	-0.0271	0.0191
690	SLU 13	1.36	0.48	76.81	-0.1263	-0.0269	0.0194
690	SLU 14	1.39	0.37	78.3	-0.1302	-0.0276	0.0184
690	SLU 15	1.39	0.44	78.32	-0.129	-0.0276	0.0192
690	SLU 16	1.38	0.36	77.73	-0.1302	-0.0274	0.0182
690	SLU 17	1.38	0.43	77.74	-0.1289	-0.0273	0.019
690	SLU 18	1.38	0.39	79.63	-0.1333	-0.0271	0.019
690	SLU 19	1.37	0.47	79.65	-0.132	-0.027	0.0198
690	SLU 20	1.4	0.39	80.58	-0.135	-0.0275	0.0191
690	SLU 21	1.4	0.47	80.59	-0.1337	-0.0275	0.0199
690	SLU 22	1.36	0.35	75.63	-0.1221	-0.0269	0.0175
690	SLU 23	1.36	0.48	75.65	-0.12	-0.0268	0.0188
690	SLU 24	1.4	0.37	77.14	-0.1239	-0.0276	0.0178
690	SLU 25	1.4	0.44	77.16	-0.1226	-0.0276	0.0186
690	SLU 26	1.38	0.48	76.59	-0.1217	-0.0273	0.0189
690	SLU 27	1.42	0.37	78.09	-0.1256	-0.0281	0.0179
690	SLU 28	1.42	0.44	78.1	-0.1243	-0.0281	0.0187
690	SLU 29	1.41	0.35	77.51	-0.1256	-0.0278	0.0178
690	SLU 30	1.41	0.43	77.53	-0.1243	-0.0278	0.0186
690	SLU 31	1.45	0.56	84.5	-0.1352	-0.0284	0.0212
690	SLU 32	1.49	0.45	85.99	-0.1391	-0.0291	0.0202
690	SLU 33	1.49	0.53	86.01	-0.1378	-0.0291	0.021
690	SLU 34	1.47	0.56	85.44	-0.1369	-0.0289	0.0214
690	SLU 35	1.51	0.45	86.93	-0.1409	-0.0296	0.0204
690	SLU 36	1.51	0.53	86.95	-0.1396	-0.0296	0.0211
690	SLU 37	1.5	0.44	86.36	-0.1408	-0.0294	0.0202
690	SLU 38	1.5	0.51	86.38	-0.1395	-0.0294	0.021
690	SLU 39	1.49	0.47	88.27	-0.1439	-0.0291	0.0209
690	SLU 40	1.49	0.55	88.28	-0.1426	-0.029	0.0217
690	SLU 41	1.51	0.47	89.21	-0.1456	-0.0295	0.0211
690	SLU 42	1.51	0.55	89.23	-0.1443	-0.0295	0.0219
690	SLU 43	1.58	0.33	84.13	-0.1413	-0.0316	0.0195
690	SLU 44	1.58	0.45	84.16	-0.1392	-0.0316	0.0208
690	SLU 45	1.61	0.34	85.65	-0.1431	-0.0324	0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
690	SLU 46	1.61	0.41	85.66	-0.1418	-0.0323	0.0206
690	SLU 47	1.6	0.45	85.1	-0.1409	-0.0321	0.021
690	SLU 48	1.64	0.34	86.59	-0.1448	-0.0328	0.02
690	SLU 49	1.63	0.41	86.6	-0.1435	-0.0328	0.0208
690	SLU 50	1.62	0.32	86.02	-0.1448	-0.0326	0.0198
690	SLU 51	1.62	0.4	86.03	-0.1435	-0.0326	0.0206
690	SLU 52	1.67	0.54	93	-0.1544	-0.0331	0.0232
690	SLU 53	1.7	0.42	94.5	-0.1583	-0.0339	0.0222
690	SLU 54	1.7	0.5	94.51	-0.1571	-0.0339	0.023
690	SLU 55	1.69	0.54	93.95	-0.1562	-0.0336	0.0234
690	SLU 56	1.73	0.42	95.44	-0.1601	-0.0344	0.0224
690	SLU 57	1.72	0.5	95.45	-0.1588	-0.0344	0.0232
690	SLU 58	1.71	0.41	94.87	-0.16	-0.0341	0.0222
690	SLU 59	1.71	0.48	94.88	-0.1587	-0.0341	0.023
690	SLU 60	1.71	0.45	96.77	-0.1631	-0.0338	0.023
690	SLU 61	1.71	0.52	96.79	-0.1618	-0.0338	0.0238
690	SLU 62	1.73	0.45	97.72	-0.1648	-0.0343	0.0231
690	SLU 63	1.73	0.52	97.73	-0.1635	-0.0343	0.0239
690	SLU 64	1.7	0.41	92.76	-0.1519	-0.0336	0.0215
690	SLU 65	1.7	0.53	92.79	-0.1498	-0.0336	0.0228
690	SLU 66	1.73	0.42	94.28	-0.1537	-0.0344	0.0218
690	SLU 67	1.73	0.5	94.29	-0.1524	-0.0344	0.0226
690	SLU 68	1.72	0.53	93.73	-0.1515	-0.0341	0.0229
690	SLU 69	1.75	0.42	95.22	-0.1554	-0.0348	0.0219
690	SLU 70	1.75	0.5	95.24	-0.1541	-0.0348	0.0227
690	SLU 71	1.74	0.41	94.65	-0.1554	-0.0346	0.0218
690	SLU 72	1.74	0.48	94.67	-0.1541	-0.0346	0.0226
690	SLU 73	1.79	0.62	101.64	-0.165	-0.0352	0.0252
690	SLU 74	1.82	0.5	103.13	-0.1689	-0.0359	0.0242
690	SLU 75	1.82	0.58	103.14	-0.1677	-0.0359	0.025
690	SLU 76	1.81	0.62	102.58	-0.1668	-0.0356	0.0253
690	SLU 77	1.84	0.5	104.07	-0.1707	-0.0364	0.0243
690	SLU 78	1.84	0.58	104.09	-0.1694	-0.0364	0.0251
690	SLU 79	1.83	0.49	103.5	-0.1706	-0.0361	0.0242
690	SLU 80	1.83	0.57	103.51	-0.1693	-0.0361	0.025
690	SLU 81	1.83	0.53	105.41	-0.1737	-0.0358	0.0249
690	SLU 82	1.83	0.6	105.42	-0.1724	-0.0358	0.0257
690	SLU 83	1.85	0.53	106.35	-0.1754	-0.0363	0.0251
690	SLU 84	1.85	0.6	106.36	-0.1741	-0.0363	0.0258
690	SLE RA 1	1.28	0.3	69.46	-0.1145	-0.0254	0.0161
690	SLE RA 2	1.28	0.38	69.48	-0.1131	-0.0254	0.017
690	SLE RA 3	1.3	0.3	70.47	-0.1157	-0.0259	0.0163
690	SLE RA 4	1.3	0.35	70.48	-0.1149	-0.0259	0.0168
690	SLE RA 5	1.29	0.38	70.1	-0.1143	-0.0257	0.0171
690	SLE RA 6	1.32	0.3	71.1	-0.1169	-0.0262	0.0164
690	SLE RA 7	1.32	0.35	71.11	-0.116	-0.0262	0.0169
690	SLE RA 8	1.31	0.3	70.72	-0.1168	-0.0261	0.0163
690	SLE RA 9	1.31	0.35	70.73	-0.116	-0.0261	0.0168
690	SLE RA 10	1.34	0.44	75.38	-0.1233	-0.0264	0.0186
690	SLE RA 11	1.36	0.36	76.37	-0.1259	-0.0269	0.0179
690	SLE RA 12	1.36	0.41	76.38	-0.125	-0.0269	0.0184
690	SLE RA 13	1.35	0.44	76	-0.1244	-0.0268	0.0187
690	SLE RA 14	1.38	0.36	77	-0.127	-0.0273	0.018
690	SLE RA 15	1.38	0.41	77.01	-0.1262	-0.0273	0.0185
690	SLE RA 16	1.37	0.35	76.62	-0.127	-0.0271	0.0179
690	SLE RA 17	1.37	0.4	76.63	-0.1261	-0.0271	0.0184
690	SLE RA 18	1.37	0.38	77.89	-0.1291	-0.0269	0.0184
690	SLE RA 19	1.37	0.43	77.9	-0.1282	-0.0269	0.0189
690	SLE RA 20	1.38	0.38	78.52	-0.1302	-0.0272	0.0185
690	SLE RA 21	1.38	0.43	78.53	-0.1294	-0.0272	0.019
690	SLE FR 1	1.28	0.3	69.46	-0.1145	-0.0254	0.0161
690	SLE FR 2	1.28	0.31	69.46	-0.1143	-0.0254	0.0163
690	SLE FR 3	1.29	0.3	69.71	-0.115	-0.0256	0.0161
690	SLE FR 4	1.31	0.34	71.99	-0.1186	-0.0259	0.0169
690	SLE FR 5	1.31	0.32	72.24	-0.1194	-0.026	0.0168
690	SLE FR 6	1.32	0.34	73.67	-0.1218	-0.0262	0.0172
690	SLE QP 1	1.28	0.3	69.46	-0.1145	-0.0254	0.0161
690	SLE QP 2	1.31	0.32	71.99	-0.1189	-0.0259	0.0168
690	SLD 1	6.12	0.15	57.85	-0.1195	0.0142	0.0096
690	SLD 2	6.14	1.11	57.84	-0.1273	0.0144	0.0232
690	SLD 3	6.19	-1.97	58.1	-0.1587	0.0158	-0.01
690	SLD 4	6.21	-1.01	58.08	-0.1665	0.0159	0.0035
690	SLD 5	2.65	3.3	67.37	-0.0582	-0.0161	0.042
690	SLD 6	2.66	3.93	67.37	-0.0633	-0.016	0.0509
690	SLD 7	2.86	-3.74	68.2	-0.1889	-0.0111	-0.0235
690	SLD 8	2.88	-3.11	68.19	-0.1941	-0.011	-0.0146
690	SLD 9	-0.27	3.75	75.79	-0.0437	-0.0407	0.0481
690	SLD 10	-0.25	4.38	75.78	-0.0488	-0.0406	0.057
690	SLD 11	-0.05	-3.29	76.61	-0.1745	-0.0357	-0.0173
690	SLD 12	-0.04	-2.66	76.6	-0.1796	-0.0356	-0.0085
690	SLD 13	-3.6	1.64	85.89	-0.0712	-0.0676	0.03
690	SLD 14	-3.57	2.6	85.88	-0.0791	-0.0675	0.0436
690	SLD 15	-3.53	-0.47	86.14	-0.1105	-0.0661	0.0104
690	SLD 16	-3.51	0.49	86.13	-0.1183	-0.066	0.0239
690	SLV 1	12.57	-0.14	38.9	-0.1231	0.068	-0.0006
690	SLV 2	12.62	2.09	38.87	-0.1414	0.0684	0.031
690	SLV 3	12.72	-4.95	39.47	-0.2126	0.0715	-0.0452
690	SLV 4	12.77	-2.72	39.45	-0.2309	0.0719	-0.0136
690	SLV 5	4.45	7.09	61.19	0.0187	-0.0031	0.0737
690	SLV 6	4.48	8.53	61.18	0.0069	-0.0029	0.094

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
690	SLV 7	4.95	-8.94	63.11	-0.2796	0.0086	-0.0748
690	SLV 8	4.98	-7.5	63.1	-0.2914	0.0088	-0.0545
690	SLV 9	-2.37	8.14	80.88	0.0536	-0.0606	0.088
690	SLV 10	-2.34	9.58	80.86	0.0418	-0.0604	0.1084
690	SLV 11	-1.87	-7.89	82.8	-0.2447	-0.0489	-0.0605
690	SLV 12	-1.84	-6.45	82.78	-0.2565	-0.0487	-0.0402
690	SLV 13	-10.16	3.36	104.53	-0.0069	-0.1236	0.0471
690	SLV 14	-10.1	5.59	104.5	-0.0252	-0.1233	0.0787
690	SLV 15	-10.01	-1.45	105.1	-0.0964	-0.1201	0.0026
690	SLV 16	-9.95	0.78	105.08	-0.1146	-0.1198	0.0341
690	CRTFP Ux+	0	0	0	0	0	0
690	CRTFP Ux-	0	0	0	0	0	0
690	CRTFP Uy+	0	0	0	0	0	0
690	CRTFP Uy-	0	0	0	0	0	0
691	SLU 1	1.27	0.35	67.81	-0.0995	-0.0261	0.0146
691	SLU 2	1.27	0.48	67.83	-0.0976	-0.026	0.016
691	SLU 3	1.3	0.37	69.35	-0.1011	-0.0268	0.0149
691	SLU 4	1.3	0.45	69.36	-0.0999	-0.0268	0.0158
691	SLU 5	1.29	0.48	68.79	-0.0992	-0.0266	0.0161
691	SLU 6	1.33	0.37	70.3	-0.1027	-0.0274	0.0151
691	SLU 7	1.33	0.45	70.32	-0.1015	-0.0274	0.0159
691	SLU 8	1.31	0.35	69.72	-0.1027	-0.0271	0.0149
691	SLU 9	1.31	0.43	69.74	-0.1016	-0.0271	0.0157
691	SLU 10	1.36	0.58	76.73	-0.1112	-0.0276	0.0183
691	SLU 11	1.4	0.46	78.24	-0.1146	-0.0284	0.0173
691	SLU 12	1.39	0.54	78.26	-0.1135	-0.0284	0.0181
691	SLU 13	1.38	0.58	77.69	-0.1128	-0.0281	0.0184
691	SLU 14	1.42	0.46	79.2	-0.1162	-0.0289	0.0174
691	SLU 15	1.42	0.54	79.22	-0.1151	-0.0289	0.0182
691	SLU 16	1.41	0.45	78.62	-0.1163	-0.0286	0.0172
691	SLU 17	1.4	0.53	78.64	-0.1151	-0.0286	0.018
691	SLU 18	1.4	0.49	80.52	-0.1189	-0.0283	0.0179
691	SLU 19	1.4	0.57	80.53	-0.1178	-0.0283	0.0187
691	SLU 20	1.42	0.49	81.48	-0.1205	-0.0288	0.0181
691	SLU 21	1.42	0.57	81.49	-0.1194	-0.0288	0.0189
691	SLU 22	1.39	0.44	76.5	-0.1087	-0.0281	0.0165
691	SLU 23	1.39	0.58	76.53	-0.1068	-0.0281	0.0179
691	SLU 24	1.42	0.46	78.04	-0.1103	-0.0289	0.0169
691	SLU 25	1.42	0.54	78.06	-0.1092	-0.0289	0.0177
691	SLU 26	1.41	0.58	77.49	-0.1084	-0.0286	0.018
691	SLU 27	1.45	0.46	79	-0.1119	-0.0294	0.017
691	SLU 28	1.44	0.54	79.02	-0.1108	-0.0294	0.0178
691	SLU 29	1.43	0.44	78.42	-0.1119	-0.0291	0.0168
691	SLU 30	1.43	0.52	78.44	-0.1108	-0.0291	0.0176
691	SLU 31	1.48	0.67	85.43	-0.1204	-0.0296	0.0202
691	SLU 32	1.52	0.55	86.94	-0.1239	-0.0304	0.0192
691	SLU 33	1.51	0.63	86.96	-0.1227	-0.0304	0.02
691	SLU 34	1.5	0.67	86.39	-0.122	-0.0302	0.0203
691	SLU 35	1.54	0.55	87.9	-0.1255	-0.031	0.0193
691	SLU 36	1.54	0.63	87.92	-0.1243	-0.0309	0.0201
691	SLU 37	1.53	0.54	87.32	-0.1255	-0.0307	0.0191
691	SLU 38	1.52	0.62	87.33	-0.1244	-0.0307	0.0199
691	SLU 39	1.52	0.58	89.22	-0.1281	-0.0303	0.0198
691	SLU 40	1.52	0.66	89.23	-0.127	-0.0303	0.0206
691	SLU 41	1.54	0.58	90.17	-0.1297	-0.0308	0.02
691	SLU 42	1.54	0.66	90.19	-0.1286	-0.0308	0.0208
691	SLU 43	1.61	0.42	85.17	-0.1262	-0.0332	0.0184
691	SLU 44	1.61	0.56	85.19	-0.1243	-0.0332	0.0197
691	SLU 45	1.64	0.44	86.71	-0.1278	-0.034	0.0187
691	SLU 46	1.64	0.52	86.72	-0.1266	-0.034	0.0195
691	SLU 47	1.63	0.56	86.15	-0.1259	-0.0337	0.0198
691	SLU 48	1.67	0.44	87.66	-0.1294	-0.0345	0.0188
691	SLU 49	1.67	0.52	87.68	-0.1282	-0.0345	0.0196
691	SLU 50	1.65	0.42	87.08	-0.1294	-0.0342	0.0186
691	SLU 51	1.65	0.5	87.1	-0.1283	-0.0342	0.0194
691	SLU 52	1.7	0.65	94.09	-0.1379	-0.0347	0.022
691	SLU 53	1.74	0.54	95.6	-0.1413	-0.0355	0.021
691	SLU 54	1.73	0.62	95.62	-0.1402	-0.0355	0.0218
691	SLU 55	1.72	0.65	95.05	-0.1395	-0.0352	0.0222
691	SLU 56	1.76	0.54	96.56	-0.1429	-0.036	0.0211
691	SLU 57	1.76	0.62	96.58	-0.1418	-0.036	0.0219
691	SLU 58	1.75	0.52	95.98	-0.143	-0.0358	0.0209
691	SLU 59	1.74	0.6	96	-0.1418	-0.0357	0.0217
691	SLU 60	1.74	0.56	97.88	-0.1456	-0.0354	0.0217
691	SLU 61	1.74	0.64	97.89	-0.1445	-0.0354	0.0225
691	SLU 62	1.76	0.56	98.84	-0.1472	-0.0359	0.0218
691	SLU 63	1.76	0.64	98.85	-0.1461	-0.0359	0.0226
691	SLU 64	1.73	0.52	93.86	-0.1354	-0.0352	0.0203
691	SLU 65	1.73	0.65	93.89	-0.1335	-0.0352	0.0216
691	SLU 66	1.76	0.53	95.4	-0.137	-0.036	0.0206
691	SLU 67	1.76	0.61	95.42	-0.1359	-0.036	0.0214
691	SLU 68	1.75	0.65	94.85	-0.1351	-0.0357	0.0218
691	SLU 69	1.79	0.53	96.36	-0.1386	-0.0365	0.0207
691	SLU 70	1.78	0.61	96.38	-0.1375	-0.0365	0.0215
691	SLU 71	1.77	0.52	95.78	-0.1386	-0.0363	0.0205
691	SLU 72	1.77	0.6	95.8	-0.1375	-0.0363	0.0214
691	SLU 73	1.82	0.75	102.79	-0.1471	-0.0368	0.0239
691	SLU 74	1.86	0.63	104.3	-0.1506	-0.0376	0.0229
691	SLU 75	1.85	0.71	104.32	-0.1494	-0.0375	0.0237
691	SLU 76	1.84	0.75	103.74	-0.1487	-0.0373	0.0241

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
691	SLU 77	1.88	0.63	105.26	-0.1522	-0.0381	0.023
691	SLU 78	1.88	0.71	105.27	-0.151	-0.0381	0.0238
691	SLU 79	1.87	0.61	104.68	-0.1522	-0.0378	0.0228
691	SLU 80	1.86	0.69	104.69	-0.1511	-0.0378	0.0237
691	SLU 81	1.86	0.65	106.58	-0.1548	-0.0374	0.0236
691	SLU 82	1.86	0.73	106.59	-0.1537	-0.0374	0.0244
691	SLU 83	1.88	0.65	107.53	-0.1564	-0.038	0.0237
691	SLU 84	1.88	0.73	107.55	-0.1553	-0.0379	0.0245
691	SLE RA 1	1.3	0.38	70.29	-0.1021	-0.0267	0.0152
691	SLE RA 2	1.3	0.47	70.31	-0.1009	-0.0266	0.0161
691	SLE RA 3	1.33	0.39	71.32	-0.1032	-0.0272	0.0154
691	SLE RA 4	1.33	0.44	71.33	-0.1024	-0.0272	0.0159
691	SLE RA 5	1.32	0.47	70.95	-0.102	-0.027	0.0162
691	SLE RA 6	1.34	0.39	71.96	-0.1043	-0.0275	0.0155
691	SLE RA 7	1.34	0.44	71.97	-0.1035	-0.0275	0.016
691	SLE RA 8	1.33	0.38	71.57	-0.1043	-0.0273	0.0154
691	SLE RA 9	1.33	0.43	71.58	-0.1035	-0.0273	0.0159
691	SLE RA 10	1.36	0.53	76.24	-0.1099	-0.0277	0.0176
691	SLE RA 11	1.39	0.45	77.25	-0.1122	-0.0282	0.0169
691	SLE RA 12	1.39	0.5	77.26	-0.1115	-0.0282	0.0175
691	SLE RA 13	1.38	0.53	76.88	-0.111	-0.028	0.0177
691	SLE RA 14	1.4	0.45	77.89	-0.1133	-0.0285	0.017
691	SLE RA 15	1.4	0.5	77.9	-0.1125	-0.0285	0.0176
691	SLE RA 16	1.39	0.44	77.5	-0.1133	-0.0284	0.0169
691	SLE RA 17	1.39	0.49	77.51	-0.1126	-0.0284	0.0174
691	SLE RA 18	1.39	0.47	78.77	-0.1151	-0.0281	0.0174
691	SLE RA 19	1.39	0.52	78.78	-0.1143	-0.0281	0.0179
691	SLE RA 20	1.41	0.47	79.4	-0.1161	-0.0285	0.0175
691	SLE RA 21	1.41	0.52	79.41	-0.1154	-0.0285	0.018
691	SLE FR 1	1.3	0.38	70.29	-0.1021	-0.0267	0.0152
691	SLE FR 2	1.3	0.39	70.29	-0.1019	-0.0267	0.0154
691	SLE FR 3	1.31	0.38	70.55	-0.1026	-0.0268	0.0152
691	SLE FR 4	1.33	0.42	72.84	-0.1058	-0.0271	0.016
691	SLE FR 5	1.34	0.4	73.09	-0.1064	-0.0272	0.0159
691	SLE FR 6	1.35	0.42	74.53	-0.1086	-0.0274	0.0163
691	SLE QP 1	1.3	0.38	70.29	-0.1021	-0.0267	0.0152
691	SLE QP 2	1.33	0.4	72.83	-0.106	-0.0271	0.0158
691	SLD 1	6.13	0.2	57.38	-0.1074	0.0138	0.0099
691	SLD 2	6.15	1.23	57.36	-0.1166	0.014	0.0242
691	SLD 3	6.2	-2.02	57.61	-0.1402	0.0156	-0.0112
691	SLD 4	6.22	-0.99	57.59	-0.1495	0.0157	0.0031
691	SLD 5	2.67	3.52	67.85	-0.0549	-0.0176	0.0435
691	SLD 6	2.68	4.2	67.84	-0.061	-0.0175	0.0529
691	SLD 7	2.88	-3.87	68.62	-0.1645	-0.0116	-0.0268
691	SLD 8	2.9	-3.19	68.61	-0.1706	-0.0115	-0.0174
691	SLD 9	-0.24	4	77.06	-0.0415	-0.0427	0.0491
691	SLD 10	-0.22	4.68	77.05	-0.0475	-0.0426	0.0585
691	SLD 11	-0.02	-3.39	77.83	-0.1511	-0.0367	-0.0212
691	SLD 12	-0.01	-2.71	77.82	-0.1571	-0.0366	-0.0118
691	SLD 13	-3.56	1.79	88.07	-0.0626	-0.0699	0.0285
691	SLD 14	-3.54	2.83	88.06	-0.0718	-0.0698	0.0429
691	SLD 15	-3.49	-0.42	88.31	-0.0955	-0.0681	0.0074
691	SLD 16	-3.47	0.61	88.29	-0.1047	-0.068	0.0218
691	SLV 1	12.56	-0.14	36.66	-0.1116	0.0686	0.0013
691	SLV 2	12.61	2.27	36.63	-0.1331	0.069	0.0346
691	SLV 3	12.71	-5.19	37.2	-0.1867	0.0728	-0.0466
691	SLV 4	12.76	-2.78	37.17	-0.2082	0.0732	-0.0132
691	SLV 5	4.46	7.48	61.17	0.0099	-0.0048	0.0783
691	SLV 6	4.49	9.03	61.15	-0.0039	-0.0046	0.0998
691	SLV 7	4.97	-9.34	62.97	-0.2404	0.0092	-0.0812
691	SLV 8	5	-7.8	62.95	-0.2543	0.0094	-0.0597
691	SLV 9	-2.34	8.6	82.72	0.0422	-0.0636	0.0914
691	SLV 10	-2.31	10.15	82.7	0.0284	-0.0634	0.1129
691	SLV 11	-1.83	-8.23	84.52	-0.2081	-0.0496	-0.0681
691	SLV 12	-1.8	-6.68	84.5	-0.2219	-0.0494	-0.0467
691	SLV 13	-10.1	3.59	108.5	-0.0039	-0.1273	0.0449
691	SLV 14	-10.05	6	108.46	-0.0253	-0.127	0.0783
691	SLV 15	-9.95	-1.46	109.04	-0.079	-0.1232	-0.003
691	SLV 16	-9.9	0.95	109	-0.1004	-0.1228	0.0304
691	CRTFP Ux+	0	0	0	0	0	0
691	CRTFP Ux-	0	0	0	0	0	0
691	CRTFP Uy+	0	0	0	0	0	0
691	CRTFP Uy-	0	0	0	0	0	0
692	SLU 1	1.29	0.42	68.71	-0.0879	-0.031	0.0131
692	SLU 2	1.29	0.56	68.74	-0.0863	-0.031	0.0144
692	SLU 3	1.33	0.44	70.28	-0.0893	-0.032	0.0134
692	SLU 4	1.32	0.52	70.29	-0.0883	-0.0319	0.0142
692	SLU 5	1.31	0.56	69.71	-0.0878	-0.0316	0.0146
692	SLU 6	1.35	0.44	71.26	-0.0908	-0.0326	0.0136
692	SLU 7	1.35	0.52	71.27	-0.0898	-0.0325	0.0143
692	SLU 8	1.34	0.43	70.67	-0.0909	-0.0322	0.0134
692	SLU 9	1.33	0.51	70.68	-0.0899	-0.0322	0.0141
692	SLU 10	1.38	0.67	77.69	-0.0983	-0.0331	0.0165
692	SLU 11	1.42	0.55	79.23	-0.1013	-0.0341	0.0155
692	SLU 12	1.42	0.63	79.25	-0.1003	-0.034	0.0163
692	SLU 13	1.4	0.67	78.67	-0.0997	-0.0337	0.0166
692	SLU 14	1.44	0.55	80.21	-0.1027	-0.0347	0.0156
692	SLU 15	1.44	0.63	80.23	-0.1018	-0.0346	0.0164
692	SLU 16	1.43	0.53	79.62	-0.1028	-0.0343	0.0155
692	SLU 17	1.43	0.62	79.64	-0.1019	-0.0343	0.0162

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
692	SLU 18	1.42	0.58	81.51	-0.105	-0.034	0.0161
692	SLU 19	1.42	0.66	81.52	-0.104	-0.034	0.0169
692	SLU 20	1.45	0.58	82.48	-0.1065	-0.0346	0.0162
692	SLU 21	1.44	0.66	82.5	-0.1055	-0.0346	0.017
692	SLU 22	1.41	0.52	77.49	-0.0958	-0.0337	0.0149
692	SLU 23	1.41	0.66	77.51	-0.0942	-0.0336	0.0162
692	SLU 24	1.45	0.54	79.05	-0.0972	-0.0346	0.0152
692	SLU 25	1.44	0.63	79.07	-0.0962	-0.0346	0.016
692	SLU 26	1.43	0.67	78.49	-0.0957	-0.0342	0.0163
692	SLU 27	1.47	0.54	80.03	-0.0987	-0.0352	0.0153
692	SLU 28	1.47	0.63	80.04	-0.0977	-0.0352	0.0161
692	SLU 29	1.46	0.53	79.44	-0.0988	-0.0349	0.0152
692	SLU 30	1.45	0.61	79.45	-0.0978	-0.0349	0.0159
692	SLU 31	1.5	0.77	86.46	-0.1061	-0.0357	0.0183
692	SLU 32	1.54	0.65	88.01	-0.1091	-0.0367	0.0173
692	SLU 33	1.54	0.73	88.02	-0.1082	-0.0367	0.0181
692	SLU 34	1.52	0.77	87.44	-0.1076	-0.0363	0.0184
692	SLU 35	1.56	0.65	88.98	-0.1106	-0.0373	0.0174
692	SLU 36	1.56	0.73	89	-0.1096	-0.0373	0.0182
692	SLU 37	1.55	0.63	88.39	-0.1107	-0.037	0.0172
692	SLU 38	1.55	0.72	88.41	-0.1097	-0.037	0.018
692	SLU 39	1.54	0.68	90.28	-0.1129	-0.0367	0.0179
692	SLU 40	1.54	0.76	90.29	-0.1119	-0.0367	0.0187
692	SLU 41	1.57	0.68	91.25	-0.1144	-0.0373	0.018
692	SLU 42	1.57	0.76	91.27	-0.1134	-0.0373	0.0188
692	SLU 43	1.64	0.52	86.32	-0.1116	-0.0394	0.0165
692	SLU 44	1.63	0.66	86.34	-0.11	-0.0394	0.0178
692	SLU 45	1.67	0.53	87.89	-0.113	-0.0404	0.0168
692	SLU 46	1.67	0.62	87.9	-0.112	-0.0403	0.0176
692	SLU 47	1.66	0.66	87.32	-0.1115	-0.04	0.0179
692	SLU 48	1.69	0.53	88.86	-0.1145	-0.041	0.0169
692	SLU 49	1.69	0.62	88.88	-0.1135	-0.041	0.0177
692	SLU 50	1.68	0.52	88.27	-0.1146	-0.0407	0.0167
692	SLU 51	1.68	0.6	88.29	-0.1136	-0.0406	0.0175
692	SLU 52	1.73	0.76	95.3	-0.1219	-0.0415	0.0199
692	SLU 53	1.76	0.64	96.84	-0.1249	-0.0425	0.0189
692	SLU 54	1.76	0.72	96.86	-0.124	-0.0424	0.0196
692	SLU 55	1.75	0.76	96.27	-0.1234	-0.0421	0.02
692	SLU 56	1.79	0.64	97.82	-0.1264	-0.0431	0.019
692	SLU 57	1.78	0.72	97.83	-0.1254	-0.0431	0.0198
692	SLU 58	1.77	0.62	97.23	-0.1265	-0.0428	0.0188
692	SLU 59	1.77	0.71	97.24	-0.1255	-0.0427	0.0196
692	SLU 60	1.77	0.67	99.11	-0.1287	-0.0424	0.0195
692	SLU 61	1.77	0.75	99.13	-0.1277	-0.0424	0.0202
692	SLU 62	1.79	0.67	100.09	-0.1302	-0.043	0.0196
692	SLU 63	1.79	0.75	100.1	-0.1292	-0.043	0.0204
692	SLU 64	1.76	0.62	95.09	-0.1195	-0.0421	0.0183
692	SLU 65	1.75	0.76	95.12	-0.1179	-0.042	0.0196
692	SLU 66	1.79	0.63	96.66	-0.1209	-0.043	0.0186
692	SLU 67	1.79	0.72	96.67	-0.1199	-0.043	0.0193
692	SLU 68	1.78	0.76	96.09	-0.1193	-0.0427	0.0197
692	SLU 69	1.81	0.63	97.64	-0.1223	-0.0436	0.0187
692	SLU 70	1.81	0.72	97.65	-0.1214	-0.0436	0.0195
692	SLU 71	1.8	0.62	97.05	-0.1224	-0.0433	0.0185
692	SLU 72	1.8	0.7	97.06	-0.1215	-0.0433	0.0193
692	SLU 73	1.85	0.86	104.07	-0.1298	-0.0441	0.0217
692	SLU 74	1.89	0.74	105.61	-0.1328	-0.0451	0.0207
692	SLU 75	1.88	0.83	105.63	-0.1318	-0.0451	0.0214
692	SLU 76	1.87	0.87	105.05	-0.1313	-0.0448	0.0218
692	SLU 77	1.91	0.74	106.59	-0.1343	-0.0457	0.0208
692	SLU 78	1.91	0.83	106.6	-0.1333	-0.0457	0.0215
692	SLU 79	1.9	0.73	106	-0.1344	-0.0454	0.0206
692	SLU 80	1.89	0.81	106.01	-0.1334	-0.0454	0.0214
692	SLU 81	1.89	0.77	107.88	-0.1366	-0.0451	0.0213
692	SLU 82	1.89	0.85	107.9	-0.1356	-0.0451	0.022
692	SLU 83	1.91	0.77	108.86	-0.138	-0.0457	0.0214
692	SLU 84	1.91	0.86	108.87	-0.1371	-0.0457	0.0221
692	SLE RA 1	1.32	0.45	71.22	-0.0902	-0.0318	0.0137
692	SLE RA 2	1.32	0.55	71.24	-0.0891	-0.0318	0.0145
692	SLE RA 3	1.35	0.46	72.26	-0.0911	-0.0324	0.0139
692	SLE RA 4	1.35	0.52	72.27	-0.0904	-0.0324	0.0144
692	SLE RA 5	1.34	0.55	71.89	-0.0901	-0.0322	0.0146
692	SLE RA 6	1.36	0.46	72.92	-0.0921	-0.0328	0.0139
692	SLE RA 7	1.36	0.52	72.92	-0.0914	-0.0328	0.0144
692	SLE RA 8	1.36	0.45	72.52	-0.0922	-0.0326	0.0138
692	SLE RA 9	1.35	0.51	72.53	-0.0915	-0.0326	0.0143
692	SLE RA 10	1.38	0.62	77.2	-0.0971	-0.0332	0.0159
692	SLE RA 11	1.41	0.54	78.23	-0.0991	-0.0338	0.0152
692	SLE RA 12	1.41	0.59	78.24	-0.0984	-0.0338	0.0158
692	SLE RA 13	1.4	0.62	77.86	-0.098	-0.0336	0.016
692	SLE RA 14	1.43	0.54	78.88	-0.1	-0.0342	0.0153
692	SLE RA 15	1.42	0.59	78.89	-0.0994	-0.0342	0.0158
692	SLE RA 16	1.42	0.53	78.49	-0.1001	-0.034	0.0152
692	SLE RA 17	1.42	0.58	78.5	-0.0995	-0.034	0.0157
692	SLE RA 18	1.41	0.55	79.75	-0.1016	-0.0338	0.0156
692	SLE RA 19	1.41	0.61	79.76	-0.1009	-0.0338	0.0162
692	SLE RA 20	1.43	0.56	80.4	-0.1025	-0.0342	0.0157
692	SLE RA 21	1.43	0.61	80.41	-0.1019	-0.0342	0.0162
692	SLE FR 1	1.32	0.45	71.22	-0.0902	-0.0318	0.0137
692	SLE FR 2	1.32	0.47	71.22	-0.09	-0.0318	0.0138

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
692	SLE FR 3	1.33	0.45	71.48	-0.0906	-0.032	0.0137
692	SLE FR 4	1.35	0.5	73.78	-0.0934	-0.0324	0.0144
692	SLE FR 5	1.36	0.48	74.04	-0.094	-0.0326	0.0143
692	SLE FR 6	1.37	0.5	75.48	-0.0959	-0.0328	0.0147
692	SLE QP 1	1.32	0.45	71.22	-0.0902	-0.0318	0.0137
692	SLE QP 2	1.35	0.48	73.78	-0.0936	-0.0324	0.0143
692	SLD 1	6.14	0.25	56.95	-0.1222	0.0105	0.0272
692	SLD 2	6.16	1.36	56.93	-0.1328	0.0106	0.0419
692	SLD 3	6.21	-2.08	57.18	-0.0956	0.0125	0.0056
692	SLD 4	6.23	-0.97	57.16	-0.1062	0.0126	0.0204
692	SLD 5	2.69	3.75	68.39	-0.1406	-0.0226	0.0482
692	SLD 6	2.7	4.47	68.38	-0.1475	-0.0225	0.0579
692	SLD 7	2.9	-4.01	69.14	-0.052	-0.0159	-0.0237
692	SLD 8	2.92	-3.29	69.13	-0.059	-0.0158	-0.014
692	SLD 9	-0.21	4.25	78.43	-0.1282	-0.049	0.0425
692	SLD 10	-0.2	4.98	78.41	-0.1352	-0.0489	0.0522
692	SLD 11	0	-3.51	79.18	-0.0396	-0.0423	-0.0294
692	SLD 12	0.02	-2.78	79.16	-0.0466	-0.0422	-0.0197
692	SLD 13	-3.52	1.94	90.4	-0.081	-0.0774	0.0081
692	SLD 14	-3.5	3.04	90.38	-0.0916	-0.0773	0.0229
692	SLD 15	-3.46	-0.39	90.62	-0.0544	-0.0754	-0.0134
692	SLD 16	-3.44	0.72	90.6	-0.065	-0.0752	0.0013
692	SLV 1	12.55	-0.13	34.41	-0.1612	0.0679	0.0438
692	SLV 2	12.6	2.45	34.36	-0.1859	0.0682	0.0782
692	SLV 3	12.7	-5.43	34.93	-0.1003	0.0726	-0.0051
692	SLV 4	12.75	-2.85	34.89	-0.125	0.0729	0.0292
692	SLV 5	4.47	7.89	61.18	-0.2019	-0.0095	0.0915
692	SLV 6	4.5	9.55	61.15	-0.2178	-0.0093	0.1136
692	SLV 7	4.98	-9.77	62.93	0.0009	0.0062	-0.0717
692	SLV 8	5.01	-8.11	62.9	-0.015	0.0064	-0.0496
692	SLV 9	-2.31	9.08	84.66	-0.1722	-0.0712	0.0781
692	SLV 10	-2.28	10.74	84.63	-0.1881	-0.071	0.1002
692	SLV 11	-1.8	-8.59	86.41	0.0306	-0.0555	-0.0851
692	SLV 12	-1.77	-6.93	86.38	0.0147	-0.0553	-0.063
692	SLV 13	-10.05	3.82	112.67	-0.0622	-0.1377	-0.0007
692	SLV 14	-10	6.4	112.62	-0.0868	-0.1374	0.0336
692	SLV 15	-9.9	-1.48	113.2	-0.0013	-0.133	-0.0497
692	SLV 16	-9.85	1.1	113.15	-0.026	-0.1327	-0.0153
692	CRTFP Ux+	0	0	0	0	0	0
692	CRTFP Ux-	0	0	0	0	0	0
692	CRTFP Uy+	0	0	0	0	0	0
692	CRTFP Uy-	0	0	0	0	0	0
693	SLU 1	1.31	0.49	69.89	-0.0767	-0.0434	0.011
693	SLU 2	1.3	0.63	69.91	-0.0753	-0.0434	0.0122
693	SLU 3	1.34	0.5	71.49	-0.0779	-0.0447	0.0113
693	SLU 4	1.34	0.59	71.5	-0.077	-0.0446	0.0119
693	SLU 5	1.33	0.63	70.91	-0.0767	-0.0442	0.0122
693	SLU 6	1.37	0.51	72.49	-0.0792	-0.0455	0.0113
693	SLU 7	1.36	0.59	72.5	-0.0784	-0.0455	0.012
693	SLU 8	1.35	0.49	71.89	-0.0794	-0.045	0.0112
693	SLU 9	1.35	0.58	71.9	-0.0786	-0.045	0.0119
693	SLU 10	1.4	0.75	78.96	-0.0857	-0.0471	0.0139
693	SLU 11	1.44	0.62	80.54	-0.0882	-0.0484	0.013
693	SLU 12	1.43	0.71	80.55	-0.0874	-0.0484	0.0137
693	SLU 13	1.42	0.75	79.96	-0.087	-0.0479	0.014
693	SLU 14	1.46	0.62	81.53	-0.0896	-0.0492	0.0131
693	SLU 15	1.46	0.71	81.55	-0.0888	-0.0492	0.0138
693	SLU 16	1.45	0.61	80.93	-0.0898	-0.0488	0.0129
693	SLU 17	1.45	0.69	80.95	-0.0889	-0.0487	0.0136
693	SLU 18	1.44	0.65	82.81	-0.0915	-0.0488	0.0135
693	SLU 19	1.44	0.74	82.82	-0.0907	-0.0487	0.0142
693	SLU 20	1.46	0.66	83.81	-0.0928	-0.0496	0.0136
693	SLU 21	1.46	0.74	83.82	-0.092	-0.0495	0.0143
693	SLU 22	1.43	0.6	78.77	-0.0833	-0.0477	0.0126
693	SLU 23	1.43	0.74	78.79	-0.0819	-0.0477	0.0137
693	SLU 24	1.46	0.61	80.37	-0.0844	-0.0489	0.0128
693	SLU 25	1.46	0.7	80.38	-0.0836	-0.0489	0.0135
693	SLU 26	1.45	0.74	79.79	-0.0832	-0.0485	0.0138
693	SLU 27	1.49	0.62	81.37	-0.0858	-0.0497	0.0129
693	SLU 28	1.49	0.7	81.38	-0.085	-0.0497	0.0136
693	SLU 29	1.48	0.6	80.77	-0.086	-0.0493	0.0127
693	SLU 30	1.47	0.69	80.78	-0.0852	-0.0493	0.0134
693	SLU 31	1.52	0.86	87.84	-0.0923	-0.0514	0.0155
693	SLU 32	1.56	0.73	89.42	-0.0948	-0.0527	0.0146
693	SLU 33	1.56	0.82	89.43	-0.094	-0.0526	0.0153
693	SLU 34	1.54	0.86	88.84	-0.0936	-0.0522	0.0155
693	SLU 35	1.58	0.73	90.41	-0.0962	-0.0535	0.0146
693	SLU 36	1.58	0.82	90.43	-0.0954	-0.0534	0.0153
693	SLU 37	1.57	0.72	89.81	-0.0963	-0.053	0.0145
693	SLU 38	1.57	0.81	89.83	-0.0955	-0.053	0.0152
693	SLU 39	1.56	0.77	91.69	-0.0981	-0.053	0.0151
693	SLU 40	1.56	0.85	91.7	-0.0972	-0.053	0.0158
693	SLU 41	1.59	0.77	92.69	-0.0994	-0.0538	0.0151
693	SLU 42	1.59	0.85	92.7	-0.0986	-0.0538	0.0158
693	SLU 43	1.66	0.59	87.81	-0.0974	-0.055	0.0138
693	SLU 44	1.65	0.74	87.83	-0.096	-0.055	0.0149
693	SLU 45	1.69	0.61	89.41	-0.0986	-0.0562	0.014
693	SLU 46	1.69	0.7	89.43	-0.0978	-0.0562	0.0147
693	SLU 47	1.68	0.74	88.83	-0.0974	-0.0558	0.015
693	SLU 48	1.72	0.61	90.41	-0.1	-0.057	0.0141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
693	SLU 49	1.71	0.7	90.42	-0.0991	-0.057	0.0148
693	SLU 50	1.7	0.6	89.81	-0.1001	-0.0566	0.0139
693	SLU 51	1.7	0.69	89.82	-0.0993	-0.0566	0.0146
693	SLU 52	1.75	0.86	96.88	-0.1064	-0.0587	0.0167
693	SLU 53	1.79	0.73	98.46	-0.109	-0.06	0.0158
693	SLU 54	1.78	0.82	98.47	-0.1081	-0.0599	0.0165
693	SLU 55	1.77	0.86	97.88	-0.1078	-0.0595	0.0168
693	SLU 56	1.81	0.73	99.46	-0.1103	-0.0608	0.0159
693	SLU 57	1.81	0.82	99.47	-0.1095	-0.0608	0.0165
693	SLU 58	1.8	0.72	98.85	-0.1105	-0.0603	0.0157
693	SLU 59	1.8	0.8	98.87	-0.1097	-0.0603	0.0164
693	SLU 60	1.79	0.76	100.73	-0.1122	-0.0603	0.0163
693	SLU 61	1.79	0.85	100.75	-0.1114	-0.0603	0.017
693	SLU 62	1.81	0.76	101.73	-0.1136	-0.0611	0.0163
693	SLU 63	1.81	0.85	101.75	-0.1128	-0.0611	0.017
693	SLU 64	1.78	0.71	96.69	-0.104	-0.0593	0.0153
693	SLU 65	1.78	0.85	96.71	-0.1026	-0.0592	0.0165
693	SLU 66	1.81	0.72	98.29	-0.1052	-0.0605	0.0156
693	SLU 67	1.81	0.81	98.31	-0.1044	-0.0605	0.0163
693	SLU 68	1.8	0.85	97.71	-0.104	-0.06	0.0166
693	SLU 69	1.84	0.72	99.29	-0.1065	-0.0613	0.0157
693	SLU 70	1.84	0.81	99.3	-0.1057	-0.0613	0.0164
693	SLU 71	1.83	0.71	98.69	-0.1067	-0.0609	0.0155
693	SLU 72	1.82	0.8	98.7	-0.1059	-0.0608	0.0162
693	SLU 73	1.87	0.97	105.76	-0.113	-0.063	0.0182
693	SLU 74	1.91	0.84	107.34	-0.1156	-0.0642	0.0173
693	SLU 75	1.91	0.93	107.35	-0.1147	-0.0642	0.018
693	SLU 76	1.89	0.97	106.76	-0.1144	-0.0638	0.0183
693	SLU 77	1.93	0.84	108.34	-0.1169	-0.065	0.0174
693	SLU 78	1.93	0.93	108.35	-0.1161	-0.065	0.0181
693	SLU 79	1.92	0.83	107.73	-0.1171	-0.0646	0.0172
693	SLU 80	1.92	0.91	107.75	-0.1163	-0.0646	0.0179
693	SLU 81	1.91	0.87	109.61	-0.1188	-0.0646	0.0178
693	SLU 82	1.91	0.96	109.63	-0.118	-0.0646	0.0185
693	SLU 83	1.94	0.87	110.61	-0.1202	-0.0654	0.0179
693	SLU 84	1.94	0.96	110.63	-0.1194	-0.0654	0.0186
693	SLE RA 1	1.34	0.52	72.43	-0.0786	-0.0446	0.0114
693	SLE RA 2	1.34	0.62	72.44	-0.0776	-0.0446	0.0122
693	SLE RA 3	1.37	0.53	73.49	-0.0793	-0.0455	0.0116
693	SLE RA 4	1.36	0.59	73.5	-0.0788	-0.0455	0.0121
693	SLE RA 5	1.35	0.62	73.11	-0.0785	-0.0452	0.0123
693	SLE RA 6	1.38	0.53	74.16	-0.0803	-0.046	0.0117
693	SLE RA 7	1.38	0.59	74.17	-0.0797	-0.046	0.0121
693	SLE RA 8	1.37	0.52	73.76	-0.0804	-0.0457	0.0116
693	SLE RA 9	1.37	0.58	73.77	-0.0798	-0.0457	0.012
693	SLE RA 10	1.4	0.69	78.47	-0.0845	-0.0471	0.0134
693	SLE RA 11	1.43	0.61	79.52	-0.0863	-0.048	0.0128
693	SLE RA 12	1.43	0.67	79.53	-0.0857	-0.0479	0.0132
693	SLE RA 13	1.42	0.7	79.14	-0.0855	-0.0476	0.0134
693	SLE RA 14	1.44	0.61	80.19	-0.0872	-0.0485	0.0128
693	SLE RA 15	1.44	0.67	80.2	-0.0866	-0.0485	0.0133
693	SLE RA 16	1.44	0.6	79.79	-0.0873	-0.0482	0.0127
693	SLE RA 17	1.43	0.66	79.8	-0.0867	-0.0482	0.0132
693	SLE RA 18	1.43	0.63	81.04	-0.0884	-0.0482	0.0131
693	SLE RA 19	1.43	0.69	81.05	-0.0879	-0.0482	0.0136
693	SLE RA 20	1.45	0.63	81.71	-0.0893	-0.0487	0.0132
693	SLE RA 21	1.45	0.69	81.72	-0.0888	-0.0487	0.0136
693	SLE FR 1	1.34	0.52	72.43	-0.0786	-0.0446	0.0114
693	SLE FR 2	1.34	0.54	72.43	-0.0784	-0.0446	0.0116
693	SLE FR 3	1.35	0.52	72.69	-0.0789	-0.0449	0.0115
693	SLE FR 4	1.37	0.57	75.01	-0.0813	-0.0457	0.0121
693	SLE FR 5	1.37	0.55	75.28	-0.0819	-0.0459	0.012
693	SLE FR 6	1.39	0.57	76.73	-0.0835	-0.0464	0.0123
693	SLE QP 1	1.34	0.52	72.43	-0.0786	-0.0446	0.0114
693	SLE QP 2	1.37	0.55	75.01	-0.0815	-0.0457	0.0119
693	SLD 1	6.14	0.29	56.95	-0.1046	0.0012	0.0265
693	SLD 2	6.16	1.48	56.92	-0.1166	0.0014	0.0413
693	SLD 3	6.21	-2.14	56.71	-0.0841	0.0034	0.0057
693	SLD 4	6.23	-0.96	56.69	-0.0961	0.0036	0.0204
693	SLD 5	2.7	3.96	69.96	-0.1173	-0.0349	0.0453
693	SLD 6	2.71	4.74	69.94	-0.1252	-0.0349	0.0549
693	SLD 7	2.92	-4.17	69.17	-0.0491	-0.0277	-0.0241
693	SLD 8	2.93	-3.39	69.15	-0.057	-0.0276	-0.0145
693	SLD 9	-0.19	4.49	80.87	-0.106	-0.0638	0.0384
693	SLD 10	-0.18	5.27	80.86	-0.1139	-0.0637	0.048
693	SLD 11	0.03	-3.64	80.08	-0.0378	-0.0566	-0.0311
693	SLD 12	0.04	-2.86	80.07	-0.0457	-0.0565	-0.0214
693	SLD 13	-3.49	2.06	93.33	-0.0669	-0.095	0.0035
693	SLD 14	-3.47	3.25	93.31	-0.0789	-0.0948	0.0182
693	SLD 15	-3.43	-0.38	93.1	-0.0465	-0.0928	-0.0174
693	SLD 16	-3.41	0.81	93.07	-0.0585	-0.0927	-0.0027
693	SLV 1	12.53	-0.12	32.74	-0.1362	0.0642	0.0454
693	SLV 2	12.58	2.64	32.68	-0.1641	0.0645	0.0797
693	SLV 3	12.69	-5.67	32.19	-0.0891	0.0693	-0.0018
693	SLV 4	12.74	-2.91	32.13	-0.1171	0.0696	0.0324
693	SLV 5	4.48	8.29	63.18	-0.1645	-0.0205	0.0878
693	SLV 6	4.51	10.07	63.14	-0.1825	-0.0203	0.1098
693	SLV 7	4.99	-10.21	61.34	-0.0076	-0.0036	-0.0698
693	SLV 8	5.02	-8.43	61.3	-0.0256	-0.0034	-0.0477
693	SLV 9	-2.28	9.53	88.72	-0.1374	-0.0881	0.0716

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
693	SLV 10	-2.25	11.31	88.69	-0.1554	-0.0878	0.0937
693	SLV 11	-1.77	-8.97	86.88	0.0195	-0.0711	-0.086
693	SLV 12	-1.74	-7.19	86.84	0.0014	-0.0709	-0.0639
693	SLV 13	-10	4.02	117.89	-0.0459	-0.161	-0.0086
693	SLV 14	-9.95	6.78	117.83	-0.0739	-0.1607	0.0257
693	SLV 15	-9.85	-1.53	117.34	0.0011	-0.1559	-0.0558
693	SLV 16	-9.8	1.23	117.28	-0.0268	-0.1556	-0.0216
693	CRTFP Ux+	0	0	0	0	0	0
693	CRTFP Ux-	0	0	0	0	0	0
693	CRTFP Uy+	0	0	0	0	0	0
693	CRTFP Uy-	0	0	0	0	0	0
694	SLU 1	1.12	0.46	60.96	-0.0571	1.6604	-0.0059
694	SLU 2	1.12	0.58	60.98	-0.0562	1.6609	-0.0087
694	SLU 3	1.15	0.47	62.36	-0.058	1.6984	-0.0062
694	SLU 4	1.15	0.55	62.38	-0.0574	1.6987	-0.0079
694	SLU 5	1.14	0.59	61.86	-0.0572	1.6846	-0.0087
694	SLU 6	1.17	0.47	63.24	-0.0591	1.7221	-0.0062
694	SLU 7	1.17	0.55	63.25	-0.0585	1.7225	-0.0079
694	SLU 8	1.16	0.46	62.71	-0.0593	1.7078	-0.0059
694	SLU 9	1.16	0.54	62.73	-0.0587	1.7082	-0.0076
694	SLU 10	1.2	0.69	68.82	-0.0639	1.8756	-0.0107
694	SLU 11	1.23	0.58	70.21	-0.0657	1.9131	-0.0081
694	SLU 12	1.23	0.66	70.22	-0.0651	1.9134	-0.0098
694	SLU 13	1.22	0.69	69.7	-0.0649	1.8993	-0.0106
694	SLU 14	1.25	0.58	71.09	-0.0668	1.9368	-0.0081
694	SLU 15	1.25	0.66	71.1	-0.0662	1.9371	-0.0098
694	SLU 16	1.24	0.57	70.56	-0.067	1.9225	-0.0078
694	SLU 17	1.24	0.64	70.57	-0.0664	1.9228	-0.0095
694	SLU 18	1.24	0.61	72.17	-0.0681	1.967	-0.0086
694	SLU 19	1.24	0.69	72.18	-0.0675	1.9673	-0.0103
694	SLU 20	1.26	0.61	73.04	-0.0692	1.9908	-0.0086
694	SLU 21	1.26	0.69	73.05	-0.0686	1.9911	-0.0103
694	SLU 22	1.23	0.56	68.68	-0.0618	1.8712	-0.0077
694	SLU 23	1.23	0.68	68.7	-0.0608	1.8717	-0.0105
694	SLU 24	1.26	0.57	70.08	-0.0627	1.9092	-0.008
694	SLU 25	1.26	0.65	70.09	-0.0621	1.9095	-0.0097
694	SLU 26	1.25	0.69	69.57	-0.0619	1.8954	-0.0105
694	SLU 27	1.28	0.57	70.96	-0.0638	1.9329	-0.008
694	SLU 28	1.28	0.65	70.97	-0.0632	1.9333	-0.0097
694	SLU 29	1.27	0.56	70.43	-0.064	1.9186	-0.0077
694	SLU 30	1.27	0.64	70.44	-0.0634	1.919	-0.0094
694	SLU 31	1.31	0.79	76.54	-0.0685	2.0863	-0.0124
694	SLU 32	1.34	0.68	77.92	-0.0704	2.1239	-0.0099
694	SLU 33	1.34	0.76	77.94	-0.0698	2.1242	-0.0116
694	SLU 34	1.33	0.79	77.42	-0.0696	2.1101	-0.0124
694	SLU 35	1.36	0.68	78.8	-0.0715	2.1476	-0.0099
694	SLU 36	1.36	0.76	78.81	-0.0709	2.1479	-0.0116
694	SLU 37	1.35	0.67	78.27	-0.0717	2.1333	-0.0096
694	SLU 38	1.35	0.74	78.28	-0.0711	2.1336	-0.0113
694	SLU 39	1.34	0.71	79.88	-0.0728	2.1778	-0.0104
694	SLU 40	1.34	0.79	79.89	-0.0722	2.1781	-0.0121
694	SLU 41	1.36	0.71	80.76	-0.0739	2.2016	-0.0104
694	SLU 42	1.36	0.79	80.77	-0.0733	2.2019	-0.0121
694	SLU 43	1.42	0.56	76.6	-0.0727	2.0862	-0.0071
694	SLU 44	1.42	0.69	76.62	-0.0717	2.0867	-0.0099
694	SLU 45	1.45	0.57	78.01	-0.0736	2.1243	-0.0073
694	SLU 46	1.45	0.65	78.02	-0.073	2.1246	-0.0091
694	SLU 47	1.44	0.69	77.5	-0.0728	2.1105	-0.0099
694	SLU 48	1.47	0.58	78.88	-0.0747	2.148	-0.0073
694	SLU 49	1.47	0.65	78.9	-0.0741	2.1483	-0.009
694	SLU 50	1.46	0.56	78.36	-0.0749	2.1337	-0.007
694	SLU 51	1.46	0.64	78.37	-0.0743	2.134	-0.0088
694	SLU 52	1.5	0.79	84.47	-0.0794	2.3014	-0.0118
694	SLU 53	1.54	0.68	85.85	-0.0813	2.3389	-0.0093
694	SLU 54	1.53	0.76	85.86	-0.0807	2.3392	-0.011
694	SLU 55	1.52	0.8	85.34	-0.0805	2.3251	-0.0118
694	SLU 56	1.56	0.68	86.73	-0.0823	2.3627	-0.0092
694	SLU 57	1.55	0.76	86.74	-0.0818	2.363	-0.011
694	SLU 58	1.54	0.67	86.2	-0.0825	2.3484	-0.009
694	SLU 59	1.54	0.75	86.21	-0.082	2.3487	-0.0107
694	SLU 60	1.54	0.71	87.81	-0.0837	2.3929	-0.0098
694	SLU 61	1.54	0.79	87.82	-0.0831	2.3932	-0.0115
694	SLU 62	1.56	0.71	88.69	-0.0848	2.4166	-0.0098
694	SLU 63	1.56	0.79	88.7	-0.0842	2.4169	-0.0115
694	SLU 64	1.53	0.66	84.32	-0.0774	2.297	-0.0088
694	SLU 65	1.53	0.79	84.34	-0.0764	2.2975	-0.0117
694	SLU 66	1.56	0.67	85.72	-0.0782	2.335	-0.0091
694	SLU 67	1.56	0.75	85.73	-0.0776	2.3354	-0.0108
694	SLU 68	1.55	0.79	85.21	-0.0775	2.3213	-0.0117
694	SLU 69	1.58	0.68	86.6	-0.0793	2.3588	-0.0091
694	SLU 70	1.58	0.75	86.61	-0.0787	2.3591	-0.0108
694	SLU 71	1.57	0.66	86.07	-0.0795	2.3445	-0.0088
694	SLU 72	1.57	0.74	86.08	-0.0789	2.3448	-0.0105
694	SLU 73	1.61	0.89	92.18	-0.0841	2.5122	-0.0136
694	SLU 74	1.64	0.78	93.57	-0.0859	2.5497	-0.011
694	SLU 75	1.64	0.86	93.58	-0.0853	2.55	-0.0127
694	SLU 76	1.63	0.9	93.06	-0.0851	2.5359	-0.0136
694	SLU 77	1.66	0.78	94.44	-0.087	2.5734	-0.011
694	SLU 78	1.66	0.86	94.45	-0.0864	2.5738	-0.0127
694	SLU 79	1.65	0.77	93.92	-0.0872	2.5591	-0.0107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
694	SLU 80	1.65	0.85	93.93	-0.0866	2.5595	-0.0124
694	SLU 81	1.65	0.81	95.53	-0.0883	2.6037	-0.0116
694	SLU 82	1.64	0.89	95.54	-0.0878	2.604	-0.0133
694	SLU 83	1.66	0.81	96.4	-0.0894	2.6274	-0.0116
694	SLU 84	1.66	0.89	96.41	-0.0888	2.6277	-0.0133
694	SLE RA 1	1.15	0.48	63.17	-0.0585	1.7206	-0.0064
694	SLE RA 2	1.15	0.57	63.18	-0.0578	1.7209	-0.0083
694	SLE RA 3	1.17	0.49	64.1	-0.0591	1.746	-0.0066
694	SLE RA 4	1.17	0.55	64.11	-0.0587	1.7462	-0.0077
694	SLE RA 5	1.16	0.57	63.76	-0.0585	1.7368	-0.0083
694	SLE RA 6	1.19	0.5	64.69	-0.0598	1.7618	-0.0066
694	SLE RA 7	1.19	0.55	64.69	-0.0594	1.762	-0.0077
694	SLE RA 8	1.18	0.49	64.33	-0.0599	1.7522	-0.0064
694	SLE RA 9	1.18	0.54	64.34	-0.0595	1.7525	-0.0075
694	SLE RA 10	1.21	0.64	68.41	-0.063	1.8641	-0.0096
694	SLE RA 11	1.23	0.57	69.33	-0.0642	1.8891	-0.0079
694	SLE RA 12	1.23	0.62	69.34	-0.0638	1.8893	-0.009
694	SLE RA 13	1.22	0.64	68.99	-0.0637	1.8799	-0.0096
694	SLE RA 14	1.24	0.57	69.92	-0.0649	1.9049	-0.0079
694	SLE RA 15	1.24	0.62	69.92	-0.0645	1.9051	-0.009
694	SLE RA 16	1.23	0.56	69.56	-0.065	1.8954	-0.0077
694	SLE RA 17	1.23	0.61	69.57	-0.0647	1.8956	-0.0088
694	SLE RA 18	1.23	0.59	70.64	-0.0658	1.925	-0.0082
694	SLE RA 19	1.23	0.64	70.64	-0.0654	1.9252	-0.0094
694	SLE RA 20	1.24	0.59	71.22	-0.0665	1.9409	-0.0082
694	SLE RA 21	1.24	0.64	71.23	-0.0661	1.9411	-0.0094
694	SLE FR 1	1.15	0.48	63.17	-0.0585	1.7206	-0.0064
694	SLE FR 2	1.15	0.5	63.17	-0.0584	1.7207	-0.0068
694	SLE FR 3	1.16	0.48	63.4	-0.0588	1.7269	-0.0064
694	SLE FR 4	1.18	0.53	65.41	-0.0605	1.782	-0.0073
694	SLE FR 5	1.18	0.51	65.64	-0.061	1.7883	-0.0069
694	SLE FR 6	1.19	0.53	66.9	-0.0621	1.8228	-0.0073
694	SLE QP 1	1.15	0.48	63.17	-0.0585	1.7206	-0.0064
694	SLE QP 2	1.18	0.51	65.41	-0.0607	1.7819	-0.0069
694	SLD 1	5.24	0.28	48.72	-0.0764	1.3499	-0.0007
694	SLD 2	5.25	1.35	48.69	-0.0877	1.3493	-0.019
694	SLD 3	5.29	-1.89	48.49	-0.0632	1.3442	0.0445
694	SLD 4	5.31	-0.82	48.47	-0.0745	1.3436	0.0262
694	SLD 5	2.31	3.53	60.75	-0.0834	1.661	-0.0703
694	SLD 6	2.32	4.23	60.73	-0.0908	1.6606	-0.0823
694	SLD 7	2.49	-3.67	59.99	-0.0394	1.6421	0.0802
694	SLD 8	2.5	-2.97	59.98	-0.0468	1.6417	0.0682
694	SLD 9	-0.15	4	70.84	-0.0745	1.9221	-0.0821
694	SLD 10	-0.14	4.7	70.82	-0.082	1.9217	-0.0941
694	SLD 11	0.03	-3.2	70.08	-0.0305	1.9032	0.0684
694	SLD 12	0.05	-2.5	70.07	-0.038	1.9028	0.0564
694	SLD 13	-2.96	1.84	82.35	-0.0468	2.2202	-0.0401
694	SLD 14	-2.94	2.91	82.32	-0.0582	2.2196	-0.0584
694	SLD 15	-2.9	-0.32	82.12	-0.0336	2.2146	0.0051
694	SLD 16	-2.88	0.75	82.1	-0.045	2.214	-0.0132
694	SLV 1	10.67	-0.11	26.35	-0.098	0.7708	0.0091
694	SLV 2	10.71	2.39	26.29	-0.1245	0.7694	-0.0336
694	SLV 3	10.8	-5.02	25.82	-0.0675	0.7576	0.1119
694	SLV 4	10.84	-2.53	25.76	-0.094	0.7562	0.0693
694	SLV 5	3.82	7.36	54.5	-0.1136	1.4989	-0.1508
694	SLV 6	3.85	8.96	54.47	-0.1307	1.498	-0.1783
694	SLV 7	4.26	-9.04	52.74	-0.0119	1.4548	0.192
694	SLV 8	4.28	-7.43	52.7	-0.0289	1.4539	0.1646
694	SLV 9	-1.93	8.46	78.11	-0.0924	2.11	-0.1785
694	SLV 10	-1.9	10.06	78.08	-0.1095	2.1091	-0.2059
694	SLV 11	-1.49	-7.94	76.35	0.0093	2.0658	0.1644
694	SLV 12	-1.47	-6.33	76.31	-0.0077	2.0649	0.1369
694	SLV 13	-8.49	3.56	105.05	-0.0274	2.8077	-0.0832
694	SLV 14	-8.45	6.05	105	-0.0539	2.8063	-0.1258
694	SLV 15	-8.36	-1.36	104.52	0.0032	2.7944	0.0197
694	SLV 16	-8.32	1.13	104.47	-0.0233	2.7931	-0.023
694	CRTFP Ux+	0	0	0	0	0	0
694	CRTFP Ux-	0	0	0	0	0	0
694	CRTFP Uy+	0	0	0	0	0	0
694	CRTFP Uy-	0	0	0	0	0	0
696	SLU 1	1.9	0.8	104.25	0.1446	24.5556	-0.1952
696	SLU 2	1.89	1.02	104.28	0.1454	24.5632	-0.2494
696	SLU 3	1.95	0.83	106.66	0.1483	25.1179	-0.2021
696	SLU 4	1.95	0.96	106.68	0.1488	25.1225	-0.2347
696	SLU 5	1.93	1.02	105.79	0.1473	24.9142	-0.2501
696	SLU 6	1.98	0.83	108.16	0.1501	25.4689	-0.2028
696	SLU 7	1.98	0.96	108.18	0.1506	25.4735	-0.2354
696	SLU 8	1.97	0.8	107.26	0.1482	25.2576	-0.1966
696	SLU 9	1.96	0.94	107.28	0.1488	25.2622	-0.2291
696	SLU 10	2.03	1.2	117.67	0.1637	27.7278	-0.2946
696	SLU 11	2.09	1.01	120.04	0.1666	28.2824	-0.2473
696	SLU 12	2.09	1.14	120.06	0.1671	28.287	-0.2799
696	SLU 13	2.07	1.21	119.17	0.1656	28.0788	-0.2953
696	SLU 14	2.12	1.01	121.54	0.1684	28.6334	-0.248
696	SLU 15	2.12	1.15	121.56	0.1689	28.638	-0.2806
696	SLU 16	2.1	0.99	120.64	0.1665	28.4221	-0.2418
696	SLU 17	2.1	1.12	120.66	0.1671	28.4267	-0.2743
696	SLU 18	2.1	1.06	123.37	0.1707	29.0763	-0.2597
696	SLU 19	2.09	1.19	123.39	0.1712	29.0809	-0.2923
696	SLU 20	2.13	1.06	124.87	0.1726	29.4273	-0.2604

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
696	SLU 21	2.13	1.2	124.89	0.1731	29.4319	-0.293
696	SLU 22	2.08	0.97	117.43	0.1651	27.6646	-0.2375
696	SLU 23	2.07	1.19	117.46	0.166	27.6723	-0.2917
696	SLU 24	2.13	1	119.83	0.1688	28.227	-0.2444
696	SLU 25	2.13	1.13	119.85	0.1693	28.2316	-0.277
696	SLU 26	2.11	1.19	118.96	0.1678	28.0233	-0.2924
696	SLU 27	2.16	1	121.34	0.1706	28.578	-0.2451
696	SLU 28	2.16	1.13	121.35	0.1711	28.5826	-0.2777
696	SLU 29	2.14	0.98	120.43	0.1688	28.3666	-0.2389
696	SLU 30	2.14	1.11	120.45	0.1693	28.3712	-0.2714
696	SLU 31	2.21	1.38	130.84	0.1843	30.8368	-0.3369
696	SLU 32	2.27	1.18	133.22	0.1871	31.3915	-0.2896
696	SLU 33	2.26	1.32	133.23	0.1876	31.3961	-0.3222
696	SLU 34	2.24	1.38	132.34	0.1861	31.1878	-0.3376
696	SLU 35	2.3	1.19	134.72	0.1889	31.7425	-0.2903
696	SLU 36	2.3	1.32	134.74	0.1894	31.7471	-0.3229
696	SLU 37	2.28	1.16	133.82	0.1871	31.5311	-0.2841
696	SLU 38	2.28	1.29	133.83	0.1876	31.5357	-0.3166
696	SLU 39	2.27	1.23	136.54	0.1913	32.1854	-0.302
696	SLU 40	2.27	1.37	136.56	0.1918	32.19	-0.3346
696	SLU 41	2.31	1.24	138.05	0.1931	32.5364	-0.3027
696	SLU 42	2.3	1.37	138.07	0.1936	32.541	-0.3353
696	SLU 43	2.41	0.98	131.01	0.1809	30.8563	-0.2392
696	SLU 44	2.4	1.2	131.04	0.1818	30.8639	-0.2935
696	SLU 45	2.46	1.01	133.42	0.1846	31.4186	-0.2462
696	SLU 46	2.46	1.14	133.44	0.1851	31.4232	-0.2787
696	SLU 47	2.44	1.2	132.55	0.1836	31.2149	-0.2941
696	SLU 48	2.49	1.01	134.92	0.1864	31.7696	-0.2469
696	SLU 49	2.49	1.14	134.94	0.1869	31.7742	-0.2794
696	SLU 50	2.48	0.98	134.02	0.1846	31.5583	-0.2406
696	SLU 51	2.47	1.11	134.04	0.1851	31.5629	-0.2731
696	SLU 52	2.54	1.38	144.43	0.2001	34.0285	-0.3386
696	SLU 53	2.6	1.19	146.8	0.2029	34.5831	-0.2914
696	SLU 54	2.59	1.32	146.82	0.2034	34.5877	-0.3239
696	SLU 55	2.57	1.39	145.93	0.2019	34.3795	-0.3393
696	SLU 56	2.63	1.19	148.3	0.2047	34.9341	-0.2921
696	SLU 57	2.63	1.33	148.32	0.2052	34.9387	-0.3246
696	SLU 58	2.61	1.17	147.4	0.2029	34.7228	-0.2858
696	SLU 59	2.61	1.3	147.42	0.2034	34.7274	-0.3183
696	SLU 60	2.6	1.24	150.13	0.2071	35.377	-0.3038
696	SLU 61	2.6	1.37	150.15	0.2076	35.3816	-0.3363
696	SLU 62	2.64	1.24	151.63	0.2089	35.728	-0.3045
696	SLU 63	2.64	1.38	151.65	0.2094	35.7326	-0.337
696	SLU 64	2.59	1.15	144.19	0.2014	33.9653	-0.2815
696	SLU 65	2.58	1.37	144.22	0.2023	33.973	-0.3358
696	SLU 66	2.64	1.18	146.59	0.2051	34.5277	-0.2885
696	SLU 67	2.64	1.31	146.61	0.2056	34.5323	-0.321
696	SLU 68	2.62	1.37	145.72	0.2041	34.324	-0.3364
696	SLU 69	2.67	1.18	148.1	0.207	34.8787	-0.2892
696	SLU 70	2.67	1.31	148.11	0.2075	34.8833	-0.3217
696	SLU 71	2.65	1.16	147.19	0.2051	34.6673	-0.2829
696	SLU 72	2.65	1.29	147.21	0.2056	34.6719	-0.3154
696	SLU 73	2.72	1.56	157.6	0.2206	37.1375	-0.3809
696	SLU 74	2.78	1.36	159.97	0.2234	37.6922	-0.3337
696	SLU 75	2.77	1.5	159.99	0.2239	37.6968	-0.3662
696	SLU 76	2.75	1.56	159.1	0.2224	37.4885	-0.3816
696	SLU 77	2.81	1.37	161.48	0.2253	38.0432	-0.3344
696	SLU 78	2.81	1.5	161.5	0.2258	38.0478	-0.3669
696	SLU 79	2.79	1.34	160.57	0.2234	37.8318	-0.3281
696	SLU 80	2.79	1.47	160.59	0.2239	37.8365	-0.3606
696	SLU 81	2.78	1.41	163.3	0.2276	38.4861	-0.3461
696	SLU 82	2.78	1.55	163.32	0.2281	38.4907	-0.3786
696	SLU 83	2.82	1.42	164.81	0.2294	38.8371	-0.3468
696	SLU 84	2.81	1.55	164.82	0.2299	38.8417	-0.3793
696	SLE RA 1	1.95	0.85	108.02	0.1504	25.4439	-0.2073
696	SLE RA 2	1.95	0.99	108.04	0.151	25.449	-0.2434
696	SLE RA 3	1.99	0.87	109.62	0.1529	25.8188	-0.2119
696	SLE RA 4	1.98	0.95	109.63	0.1532	25.8218	-0.2336
696	SLE RA 5	1.97	1	109.04	0.1522	25.683	-0.2439
696	SLE RA 6	2.01	0.87	110.62	0.1541	26.0528	-0.2124
696	SLE RA 7	2.01	0.96	110.64	0.1545	26.0558	-0.2341
696	SLE RA 8	2	0.85	110.02	0.1529	25.9119	-0.2082
696	SLE RA 9	1.99	0.94	110.03	0.1532	25.9149	-0.2299
696	SLE RA 10	2.04	1.12	116.96	0.1632	27.5587	-0.2735
696	SLE RA 11	2.08	0.99	118.54	0.1651	27.9284	-0.242
696	SLE RA 12	2.07	1.08	118.55	0.1654	27.9315	-0.2637
696	SLE RA 13	2.06	1.12	117.96	0.1644	27.7927	-0.274
696	SLE RA 14	2.1	0.99	119.54	0.1663	28.1624	-0.2425
696	SLE RA 15	2.1	1.08	119.56	0.1667	28.1655	-0.2642
696	SLE RA 16	2.09	0.97	118.94	0.1651	28.0215	-0.2383
696	SLE RA 17	2.08	1.06	118.95	0.1654	28.0246	-0.26
696	SLE RA 18	2.08	1.02	120.76	0.1679	28.4577	-0.2503
696	SLE RA 19	2.08	1.11	120.77	0.1682	28.4608	-0.272
696	SLE RA 20	2.1	1.02	121.76	0.1691	28.6917	-0.2508
696	SLE RA 21	2.1	1.11	121.78	0.1694	28.6948	-0.2725
696	SLE FR 1	1.95	0.85	108.02	0.1504	25.4439	-0.2073
696	SLE FR 2	1.95	0.88	108.02	0.1506	25.4449	-0.2145
696	SLE FR 3	1.96	0.85	108.42	0.1509	25.5375	-0.2074
696	SLE FR 4	1.99	0.93	111.85	0.1558	26.349	-0.2274
696	SLE FR 5	2	0.9	112.24	0.1562	26.4416	-0.2204

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
696	SLE FR 6	2.02	0.93	114.39	0.1592	26.9508	-0.2288
696	SLE QP 1	1.95	0.85	108.02	0.1504	25.4439	-0.2073
696	SLE QP 2	1.99	0.9	111.84	0.1557	26.348	-0.2202
696	SLD 1	8.84	0.48	82.59	0.093	19.8577	-0.1239
696	SLD 2	8.87	2.34	82.55	0.0822	19.8484	-0.5696
696	SLD 3	8.93	-3.23	82.18	0.1034	19.7719	0.7807
696	SLD 4	8.96	-1.38	82.14	0.0927	19.7627	0.3351
696	SLD 5	3.9	6.08	103.69	0.123	24.5326	-1.4841
696	SLD 6	3.92	7.29	103.66	0.1159	24.5265	-1.7762
696	SLD 7	4.21	-6.3	102.33	0.1577	24.2468	1.5313
696	SLD 8	4.23	-5.09	102.3	0.1507	24.2407	1.2392
696	SLD 9	-0.25	6.89	121.38	0.1607	28.4553	-1.6795
696	SLD 10	-0.23	8.1	121.35	0.1536	28.4492	-1.9717
696	SLD 11	0.06	-5.49	120.02	0.1954	28.1695	1.3359
696	SLD 12	0.08	-4.28	119.99	0.1884	28.1634	1.0437
696	SLD 13	-4.98	3.18	141.55	0.2187	32.9333	-0.7754
696	SLD 14	-4.95	5.03	141.5	0.2079	32.9241	-1.2211
696	SLD 15	-4.89	-0.54	141.14	0.2291	32.8476	0.1292
696	SLD 16	-4.86	1.32	141.09	0.2183	32.8383	-0.3165
696	SLV 1	18	-0.18	43.38	0.0088	11.1588	0.0318
696	SLV 2	18.07	4.13	43.28	-0.0163	11.1372	-1.0062
696	SLV 3	18.22	-8.63	42.43	0.033	10.9585	2.09
696	SLV 4	18.29	-4.32	42.32	0.008	10.9369	1.0519
696	SLV 5	6.45	12.65	92.77	0.0791	22.0987	-3.0873
696	SLV 6	6.49	15.43	92.7	0.063	22.0848	-3.7562
696	SLV 7	7.18	-15.52	89.59	0.16	21.4311	3.7731
696	SLV 8	7.23	-12.74	89.52	0.1438	21.4172	3.1042
696	SLV 9	-3.25	14.54	134.16	0.1675	31.2789	-3.5445
696	SLV 10	-3.2	17.32	134.1	0.1514	31.265	-4.2134
696	SLV 11	-2.51	-13.63	130.98	0.2483	30.6112	3.3159
696	SLV 12	-2.47	-10.85	130.91	0.2322	30.5973	2.6469
696	SLV 13	-14.31	6.12	181.36	0.3034	41.7592	-1.4923
696	SLV 14	-14.24	10.43	181.26	0.2783	41.7376	-2.5303
696	SLV 15	-14.09	-2.33	180.4	0.3276	41.5589	0.5658
696	SLV 16	-14.02	1.98	180.3	0.3026	41.5373	-0.4722
696	CRTFP Ux+	0	0	0	0	0.0001	0
696	CRTFP Ux-	0	0	0	0	-0.0001	0
696	CRTFP Uy+	0	0	0	0	0	0
696	CRTFP Uy-	0	0	0	0	0	0
698	SLU 1	0.62	-0.17	37.47	-0.7236	0.9908	0.0195
698	SLU 2	0.62	-0.11	37.48	-0.7236	0.9894	0.0175
698	SLU 3	0.63	-0.17	38.31	-0.7397	1.013	0.0198
698	SLU 4	0.63	-0.13	38.31	-0.7397	1.0122	0.0186
698	SLU 5	0.63	-0.12	38	-0.7337	1.0034	0.0179
698	SLU 6	0.64	-0.17	38.83	-0.7497	1.0269	0.0202
698	SLU 7	0.64	-0.14	38.83	-0.7498	1.0261	0.019
698	SLU 8	0.64	-0.18	38.51	-0.7436	1.0186	0.0204
698	SLU 9	0.64	-0.14	38.51	-0.7437	1.0178	0.0191
698	SLU 10	0.66	-0.11	42.55	-0.8215	1.1226	0.0185
698	SLU 11	0.68	-0.16	43.37	-0.8376	1.1462	0.0208
698	SLU 12	0.68	-0.13	43.38	-0.8376	1.1454	0.0196
698	SLU 13	0.67	-0.11	43.07	-0.8315	1.1365	0.0189
698	SLU 14	0.69	-0.17	43.89	-0.8476	1.1601	0.0213
698	SLU 15	0.69	-0.13	43.9	-0.8476	1.1593	0.02
698	SLU 16	0.69	-0.18	43.58	-0.8415	1.1518	0.0214
698	SLU 17	0.68	-0.14	43.58	-0.8415	1.151	0.0202
698	SLU 18	0.68	-0.16	44.71	-0.8634	1.181	0.021
698	SLU 19	0.68	-0.13	44.72	-0.8634	1.1802	0.0198
698	SLU 20	0.7	-0.17	45.23	-0.8734	1.1949	0.0214
698	SLU 21	0.69	-0.13	45.23	-0.8734	1.1941	0.0202
698	SLU 22	0.68	-0.15	42.36	-0.8177	1.115	0.0202
698	SLU 23	0.68	-0.09	42.37	-0.8178	1.1137	0.0182
698	SLU 24	0.7	-0.15	43.2	-0.8339	1.1372	0.0205
698	SLU 25	0.69	-0.12	43.2	-0.8339	1.1364	0.0193
698	SLU 26	0.69	-0.1	42.89	-0.8278	1.1276	0.0186
698	SLU 27	0.71	-0.16	43.71	-0.8439	1.1511	0.0209
698	SLU 28	0.7	-0.12	43.72	-0.8439	1.1503	0.0197
698	SLU 29	0.7	-0.16	43.4	-0.8378	1.1428	0.0211
698	SLU 30	0.7	-0.13	43.4	-0.8378	1.142	0.0198
698	SLU 31	0.73	-0.09	47.44	-0.9156	1.2468	0.0192
698	SLU 32	0.74	-0.15	48.26	-0.9317	1.2704	0.0216
698	SLU 33	0.74	-0.11	48.27	-0.9317	1.2696	0.0203
698	SLU 34	0.74	-0.09	47.95	-0.9257	1.2607	0.0196
698	SLU 35	0.75	-0.15	48.78	-0.9417	1.2843	0.022
698	SLU 36	0.75	-0.12	48.79	-0.9418	1.2835	0.0207
698	SLU 37	0.75	-0.16	48.46	-0.9356	1.276	0.0221
698	SLU 38	0.75	-0.12	48.47	-0.9357	1.2752	0.0209
698	SLU 39	0.75	-0.15	49.6	-0.9575	1.3052	0.0217
698	SLU 40	0.75	-0.11	49.6	-0.9576	1.3044	0.0205
698	SLU 41	0.76	-0.15	50.12	-0.9676	1.3191	0.0222
698	SLU 42	0.76	-0.12	50.12	-0.9676	1.3183	0.0209
698	SLU 43	0.78	-0.23	47.04	-0.9084	1.2455	0.0251
698	SLU 44	0.78	-0.17	47.05	-0.9084	1.2441	0.0231
698	SLU 45	0.8	-0.23	47.87	-0.9245	1.2677	0.0254
698	SLU 46	0.8	-0.19	47.88	-0.9245	1.2669	0.0242
698	SLU 47	0.79	-0.17	47.56	-0.9184	1.258	0.0235
698	SLU 48	0.81	-0.23	48.39	-0.9345	1.2816	0.0258
698	SLU 49	0.81	-0.19	48.4	-0.9346	1.2808	0.0246
698	SLU 50	0.8	-0.24	48.07	-0.9284	1.2733	0.026
698	SLU 51	0.8	-0.2	48.08	-0.9285	1.2725	0.0247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
698	SLU 52	0.83	-0.16	52.11	-1.0063	1.3773	0.0241
698	SLU 53	0.84	-0.22	52.94	-1.0224	1.4008	0.0264
698	SLU 54	0.84	-0.19	52.95	-1.0224	1.4	0.0252
698	SLU 55	0.84	-0.17	52.63	-1.0163	1.3912	0.0245
698	SLU 56	0.86	-0.23	53.46	-1.0324	1.4147	0.0269
698	SLU 57	0.85	-0.19	53.46	-1.0324	1.4139	0.0256
698	SLU 58	0.85	-0.23	53.14	-1.0263	1.4064	0.027
698	SLU 59	0.85	-0.2	53.15	-1.0263	1.4056	0.0258
698	SLU 60	0.85	-0.22	54.27	-1.0482	1.4357	0.0266
698	SLU 61	0.85	-0.19	54.28	-1.0482	1.4349	0.0254
698	SLU 62	0.86	-0.23	54.79	-1.0582	1.4496	0.027
698	SLU 63	0.86	-0.19	54.8	-1.0582	1.4488	0.0258
698	SLU 64	0.84	-0.21	51.92	-1.0025	1.3697	0.0259
698	SLU 65	0.84	-0.15	51.93	-1.0026	1.3683	0.0238
698	SLU 66	0.86	-0.21	52.76	-1.0186	1.3919	0.0261
698	SLU 67	0.86	-0.17	52.77	-1.0187	1.3911	0.0249
698	SLU 68	0.85	-0.16	52.45	-1.0126	1.3822	0.0242
698	SLU 69	0.87	-0.21	53.28	-1.0287	1.4058	0.0265
698	SLU 70	0.87	-0.18	53.29	-1.0287	1.405	0.0253
698	SLU 71	0.86	-0.22	52.96	-1.0226	1.3975	0.0267
698	SLU 72	0.86	-0.18	52.97	-1.0226	1.3967	0.0255
698	SLU 73	0.89	-0.15	57	-1.1004	1.5015	0.0248
698	SLU 74	0.91	-0.2	57.83	-1.1165	1.525	0.0272
698	SLU 75	0.91	-0.17	57.83	-1.1165	1.5242	0.0259
698	SLU 76	0.9	-0.15	57.52	-1.1105	1.5154	0.0253
698	SLU 77	0.92	-0.21	58.35	-1.1265	1.539	0.0276
698	SLU 78	0.92	-0.17	58.35	-1.1266	1.5381	0.0264
698	SLU 79	0.91	-0.22	58.03	-1.1204	1.5307	0.0277
698	SLU 80	0.91	-0.18	58.04	-1.1205	1.5298	0.0265
698	SLU 81	0.91	-0.21	59.16	-1.1423	1.5599	0.0273
698	SLU 82	0.91	-0.17	59.17	-1.1424	1.5591	0.0261
698	SLU 83	0.92	-0.21	59.68	-1.1524	1.5738	0.0278
698	SLU 84	0.92	-0.17	59.69	-1.1524	1.573	0.0265
698	SLE RA 1	0.63	-0.17	38.87	-0.7505	1.0263	0.0197
698	SLE RA 2	0.63	-0.13	38.87	-0.7505	1.0254	0.0183
698	SLE RA 3	0.65	-0.17	39.43	-0.7612	1.0411	0.0199
698	SLE RA 4	0.65	-0.14	39.43	-0.7612	1.0406	0.0191
698	SLE RA 5	0.64	-0.13	39.22	-0.7572	1.0347	0.0186
698	SLE RA 6	0.65	-0.17	39.77	-0.7679	1.0504	0.0202
698	SLE RA 7	0.65	-0.14	39.77	-0.7679	1.0498	0.0194
698	SLE RA 8	0.65	-0.17	39.56	-0.7638	1.0448	0.0203
698	SLE RA 9	0.65	-0.15	39.56	-0.7639	1.0443	0.0195
698	SLE RA 10	0.67	-0.12	42.25	-0.8158	1.1142	0.019
698	SLE RA 11	0.68	-0.16	42.8	-0.8265	1.1299	0.0206
698	SLE RA 12	0.68	-0.14	42.81	-0.8265	1.1293	0.0198
698	SLE RA 13	0.67	-0.13	42.6	-0.8224	1.1234	0.0193
698	SLE RA 14	0.68	-0.17	43.15	-0.8332	1.1391	0.0209
698	SLE RA 15	0.68	-0.14	43.15	-0.8332	1.1386	0.0201
698	SLE RA 16	0.68	-0.17	42.94	-0.8291	1.1336	0.021
698	SLE RA 17	0.68	-0.15	42.94	-0.8291	1.1331	0.0202
698	SLE RA 18	0.68	-0.16	43.69	-0.8437	1.1531	0.0207
698	SLE RA 19	0.68	-0.14	43.7	-0.8437	1.1526	0.0199
698	SLE RA 20	0.69	-0.17	44.04	-0.8504	1.1624	0.021
698	SLE RA 21	0.69	-0.14	44.04	-0.8504	1.1618	0.0202
698	SLE FR 1	0.63	-0.17	38.87	-0.7505	1.0263	0.0197
698	SLE FR 2	0.63	-0.16	38.87	-0.7505	1.0261	0.0195
698	SLE FR 3	0.64	-0.17	39.01	-0.7532	1.03	0.0198
698	SLE FR 4	0.65	-0.16	40.32	-0.7785	1.0642	0.0197
698	SLE FR 5	0.65	-0.17	40.45	-0.7811	1.068	0.0201
698	SLE FR 6	0.66	-0.16	41.28	-0.7971	1.0897	0.0202
698	SLE QP 1	0.63	-0.17	38.87	-0.7505	1.0263	0.0197
698	SLE QP 2	0.65	-0.17	40.32	-0.7784	1.0643	0.02
698	SLD 1	3.81	0.52	36.75	-0.712	1.0244	0.0604
698	SLD 2	3.81	0.88	36.75	-0.7119	1.0222	0.0527
698	SLD 3	3.85	-0.6	36.87	-0.7168	1.0514	0.0987
698	SLD 4	3.85	-0.24	36.88	-0.7167	1.0491	0.091
698	SLD 5	1.54	1.68	39.06	-0.7513	1.0119	-0.0246
698	SLD 6	1.54	1.91	39.06	-0.7513	1.0104	-0.0296
698	SLD 7	1.67	-2.06	39.47	-0.7672	1.1017	0.1031
698	SLD 8	1.67	-1.82	39.47	-0.7671	1.1002	0.098
698	SLD 9	-0.37	1.49	41.16	-0.7898	1.0284	-0.058
698	SLD 10	-0.37	1.73	41.16	-0.7897	1.027	-0.063
698	SLD 11	-0.24	-2.24	41.57	-0.8056	1.1182	0.0697
698	SLD 12	-0.24	-2.01	41.57	-0.8055	1.1168	0.0646
698	SLD 13	-2.55	-0.09	43.75	-0.8402	1.0795	-0.0509
698	SLD 14	-2.55	0.27	43.76	-0.8401	1.0773	-0.0586
698	SLD 15	-2.51	-1.21	43.88	-0.845	1.1065	-0.0126
698	SLD 16	-2.51	-0.85	43.88	-0.8449	1.1042	-0.0203
698	SLV 1	8.04	1.41	31.97	-0.6232	0.9717	0.1155
698	SLV 2	8.05	2.25	31.98	-0.6229	0.9665	0.0976
698	SLV 3	8.13	-1.14	32.26	-0.634	1.0332	0.2027
698	SLV 4	8.14	-0.31	32.26	-0.6337	1.028	0.1848
698	SLV 5	2.73	4.04	37.38	-0.7155	0.9442	-0.0805
698	SLV 6	2.73	4.57	37.38	-0.7153	0.9408	-0.0921
698	SLV 7	3.03	-4.47	38.33	-0.7516	1.1492	0.2102
698	SLV 8	3.03	-3.94	38.33	-0.7514	1.1458	0.1986
698	SLV 9	-1.73	3.61	42.3	-0.8055	0.9829	-0.1586
698	SLV 10	-1.73	4.14	42.3	-0.8053	0.9795	-0.1701
698	SLV 11	-1.44	-4.91	43.25	-0.8416	1.1879	0.1321
698	SLV 12	-1.43	-4.37	43.25	-0.8414	1.1845	0.1205

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
698	SLV 13	-6.84	-0.02	48.37	-0.9232	1.1007	-0.1447
698	SLV 14	-6.83	0.81	48.37	-0.9229	1.0954	-0.1627
698	SLV 15	-6.75	-2.58	48.65	-0.934	1.1622	-0.0575
698	SLV 16	-6.74	-1.74	48.66	-0.9337	1.157	-0.0755
698	CRTFP Ux+	0	0	0	0	0	0
698	CRTFP Ux-	0	0	0	0	0	0
700	SLU 1	-1.86	-0.53	112	-5.6927	-21.0423	-0.1712
700	SLU 2	-1.86	-0.27	112.03	-5.6928	-21.0484	-0.1216
700	SLU 3	-1.91	-0.53	114.59	-5.8231	-21.525	-0.1743
700	SLU 4	-1.91	-0.38	114.61	-5.8232	-21.5286	-0.1445
700	SLU 5	-1.89	-0.28	113.66	-5.7755	-21.3518	-0.1251
700	SLU 6	-1.94	-0.55	116.22	-5.9058	-21.8284	-0.1778
700	SLU 7	-1.94	-0.39	116.24	-5.9059	-21.8321	-0.148
700	SLU 8	-1.93	-0.55	115.26	-5.858	-21.6492	-0.1782
700	SLU 9	-1.92	-0.4	115.28	-5.8581	-21.6528	-0.1484
700	SLU 10	-1.97	-0.28	126.4	-6.4274	-23.7618	-0.1247
700	SLU 11	-2.02	-0.54	128.96	-6.5577	-24.2384	-0.1774
700	SLU 12	-2.02	-0.38	128.97	-6.5577	-24.2421	-0.1476
700	SLU 13	-2	-0.29	128.03	-6.51	-24.0653	-0.1282
700	SLU 14	-2.05	-0.55	130.58	-6.6403	-24.5419	-0.1809
700	SLU 15	-2.05	-0.4	130.6	-6.6404	-24.5455	-0.1511
700	SLU 16	-2.04	-0.56	129.63	-6.5926	-24.3626	-0.1814
700	SLU 17	-2.03	-0.4	129.64	-6.5926	-24.3663	-0.1516
700	SLU 18	-2.02	-0.53	132.53	-6.742	-24.9187	-0.1757
700	SLU 19	-2.02	-0.38	132.54	-6.7421	-24.9223	-0.1459
700	SLU 20	-2.05	-0.55	134.15	-6.8247	-25.2221	-0.1792
700	SLU 21	-2.05	-0.39	134.17	-6.8248	-25.2258	-0.1494
700	SLU 22	-2.03	-0.52	126.24	-6.4144	-23.7244	-0.1755
700	SLU 23	-2.03	-0.27	126.27	-6.4145	-23.7304	-0.1258
700	SLU 24	-2.08	-0.53	128.83	-6.5448	-24.207	-0.1785
700	SLU 25	-2.08	-0.38	128.85	-6.5449	-24.2107	-0.1487
700	SLU 26	-2.06	-0.28	127.9	-6.4972	-24.0339	-0.1293
700	SLU 27	-2.11	-0.54	130.46	-6.6275	-24.5105	-0.182
700	SLU 28	-2.11	-0.39	130.48	-6.6276	-24.5141	-0.1522
700	SLU 29	-2.1	-0.55	129.5	-6.5797	-24.3312	-0.1825
700	SLU 30	-2.09	-0.39	129.52	-6.5798	-24.3349	-0.1527
700	SLU 31	-2.14	-0.27	140.64	-7.1491	-26.4439	-0.129
700	SLU 32	-2.19	-0.53	143.2	-7.2794	-26.9205	-0.1816
700	SLU 33	-2.19	-0.38	143.21	-7.2794	-26.9241	-0.1518
700	SLU 34	-2.17	-0.28	142.27	-7.2317	-26.7473	-0.1325
700	SLU 35	-2.22	-0.54	144.82	-7.362	-27.2239	-0.1851
700	SLU 36	-2.22	-0.39	144.84	-7.3621	-27.2276	-0.1553
700	SLU 37	-2.21	-0.55	143.87	-7.3143	-27.0447	-0.1856
700	SLU 38	-2.2	-0.4	143.88	-7.3143	-27.0483	-0.1558
700	SLU 39	-2.19	-0.53	146.77	-7.4638	-27.6007	-0.18
700	SLU 40	-2.19	-0.37	146.78	-7.4638	-27.6044	-0.1502
700	SLU 41	-2.22	-0.54	148.39	-7.5464	-27.9041	-0.1835
700	SLU 42	-2.22	-0.39	148.41	-7.5465	-27.9078	-0.1537
700	SLU 43	-2.36	-0.69	140.72	-7.1531	-26.4355	-0.2212
700	SLU 44	-2.36	-0.43	140.75	-7.1532	-26.4415	-0.1715
700	SLU 45	-2.41	-0.7	143.31	-7.2835	-26.9181	-0.2242
700	SLU 46	-2.41	-0.54	143.33	-7.2836	-26.9218	-0.1944
700	SLU 47	-2.39	-0.44	142.38	-7.2359	-26.745	-0.175
700	SLU 48	-2.44	-0.71	144.94	-7.3662	-27.2216	-0.2277
700	SLU 49	-2.44	-0.55	144.96	-7.3662	-27.2252	-0.1979
700	SLU 50	-2.43	-0.71	143.98	-7.3184	-27.0423	-0.2282
700	SLU 51	-2.42	-0.56	144	-7.3185	-27.046	-0.1984
700	SLU 52	-2.47	-0.44	155.12	-7.8877	-29.155	-0.1746
700	SLU 53	-2.52	-0.7	157.68	-8.018	-29.6316	-0.2273
700	SLU 54	-2.52	-0.54	157.69	-8.0181	-29.6352	-0.1975
700	SLU 55	-2.5	-0.45	156.75	-7.9704	-29.4584	-0.1781
700	SLU 56	-2.55	-0.71	159.3	-8.1007	-29.935	-0.2308
700	SLU 57	-2.55	-0.56	159.32	-8.1008	-29.9387	-0.201
700	SLU 58	-2.54	-0.72	158.35	-8.0529	-29.7558	-0.2313
700	SLU 59	-2.53	-0.56	158.36	-8.053	-29.7594	-0.2015
700	SLU 60	-2.52	-0.69	161.25	-8.2024	-30.3118	-0.2257
700	SLU 61	-2.52	-0.54	161.26	-8.2025	-30.3155	-0.1959
700	SLU 62	-2.55	-0.71	162.87	-8.2851	-30.6153	-0.2291
700	SLU 63	-2.55	-0.55	162.89	-8.2851	-30.6189	-0.1993
700	SLU 64	-2.53	-0.68	154.96	-7.8748	-29.1175	-0.2254
700	SLU 65	-2.53	-0.43	154.99	-7.8749	-29.1236	-0.1757
700	SLU 66	-2.58	-0.69	157.55	-8.0052	-29.6002	-0.2284
700	SLU 67	-2.58	-0.54	157.57	-8.0053	-29.6038	-0.1986
700	SLU 68	-2.56	-0.44	156.62	-7.9576	-29.427	-0.1792
700	SLU 69	-2.61	-0.7	159.18	-8.0879	-29.9036	-0.2319
700	SLU 70	-2.61	-0.55	159.19	-8.0879	-29.9073	-0.2021
700	SLU 71	-2.6	-0.71	158.22	-8.0401	-29.7244	-0.2324
700	SLU 72	-2.59	-0.55	158.24	-8.0402	-29.728	-0.2026
700	SLU 73	-2.64	-0.43	169.36	-8.6094	-31.837	-0.1789
700	SLU 74	-2.69	-0.69	171.91	-8.7397	-32.3136	-0.2316
700	SLU 75	-2.69	-0.54	171.93	-8.7398	-32.3173	-0.2018
700	SLU 76	-2.67	-0.44	170.99	-8.6921	-32.1405	-0.1824
700	SLU 77	-2.72	-0.71	173.54	-8.8224	-32.6171	-0.2351
700	SLU 78	-2.72	-0.55	173.56	-8.8225	-32.6207	-0.2053
700	SLU 79	-2.71	-0.71	172.58	-8.7746	-32.4378	-0.2355
700	SLU 80	-2.7	-0.56	172.6	-8.7747	-32.4415	-0.2057
700	SLU 81	-2.69	-0.69	175.48	-8.9241	-32.9939	-0.2299
700	SLU 82	-2.69	-0.53	175.5	-8.9242	-32.9975	-0.2001
700	SLU 83	-2.72	-0.7	177.11	-9.0068	-33.2973	-0.2334
700	SLU 84	-2.72	-0.55	177.13	-9.0068	-33.3009	-0.2036

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
700	SLE RA 1	-1.91	-0.53	116.07	-5.8989	-21.8086	-0.1725
700	SLE RA 2	-1.91	-0.36	116.09	-5.899	-21.8127	-0.1394
700	SLE RA 3	-1.94	-0.53	117.8	-5.9859	-22.1304	-0.1745
700	SLE RA 4	-1.94	-0.43	117.81	-5.9859	-22.1328	-0.1546
700	SLE RA 5	-1.93	-0.36	117.18	-5.9541	-22.015	-0.1417
700	SLE RA 6	-1.96	-0.54	118.88	-6.041	-22.3327	-0.1768
700	SLE RA 7	-1.96	-0.44	118.89	-6.041	-22.3351	-0.1569
700	SLE RA 8	-1.95	-0.54	118.24	-6.0091	-22.2132	-0.1771
700	SLE RA 9	-1.95	-0.44	118.25	-6.0092	-22.2156	-0.1573
700	SLE RA 10	-1.98	-0.36	125.67	-6.3887	-23.6216	-0.1414
700	SLE RA 11	-2.02	-0.53	127.37	-6.4756	-23.9394	-0.1766
700	SLE RA 12	-2.01	-0.43	127.39	-6.4756	-23.9418	-0.1567
700	SLE RA 13	-2	-0.37	126.75	-6.4438	-23.8239	-0.1438
700	SLE RA 14	-2.04	-0.54	128.46	-6.5307	-24.1417	-0.1789
700	SLE RA 15	-2.03	-0.44	128.47	-6.5307	-24.1441	-0.159
700	SLE RA 16	-2.03	-0.54	127.82	-6.4988	-24.0222	-0.1792
700	SLE RA 17	-2.02	-0.44	127.83	-6.4989	-24.0246	-0.1593
700	SLE RA 18	-2.02	-0.53	129.75	-6.5985	-24.3929	-0.1754
700	SLE RA 19	-2.01	-0.43	129.77	-6.5985	-24.3953	-0.1556
700	SLE RA 20	-2.04	-0.54	130.84	-6.6536	-24.5951	-0.1778
700	SLE RA 21	-2.03	-0.44	130.85	-6.6536	-24.5976	-0.1579
700	SLE FR 1	-1.91	-0.53	116.07	-5.8989	-21.8086	-0.1725
700	SLE FR 2	-1.91	-0.49	116.08	-5.8989	-21.8094	-0.1658
700	SLE FR 3	-1.92	-0.53	116.51	-5.921	-21.8895	-0.1734
700	SLE FR 4	-1.94	-0.49	120.18	-6.1088	-22.5847	-0.1667
700	SLE FR 5	-1.95	-0.53	120.61	-6.1308	-22.6648	-0.1743
700	SLE FR 6	-1.96	-0.53	122.91	-6.2487	-23.1007	-0.174
700	SLE QP 1	-1.91	-0.53	116.07	-5.8989	-21.8086	-0.1725
700	SLE QP 2	-1.94	-0.53	120.18	-6.1088	-22.5839	-0.1734
700	SLD 1	6.37	1.04	153.66	-7.8227	-28.6259	0.9001
700	SLD 2	6.34	-1.01	153.9	-7.8271	-28.676	0.5127
700	SLD 3	6.21	-3.18	154.28	-7.8723	-28.7584	0.0809
700	SLD 4	6.18	-5.22	154.51	-7.8767	-28.8085	-0.3065
700	SLD 5	0.81	6.7	129.25	-6.5469	-24.1867	1.4601
700	SLD 6	0.79	5.36	129.4	-6.5498	-24.2196	1.2061
700	SLD 7	0.25	-7.36	131.3	-6.7123	-24.6282	-1.2707
700	SLD 8	0.24	-8.7	131.45	-6.7152	-24.6611	-1.5247
700	SLD 9	-4.12	7.64	108.9	-5.5024	-20.5067	1.178
700	SLD 10	-4.14	6.3	109.06	-5.5053	-20.5396	0.924
700	SLD 11	-4.68	-6.42	110.95	-5.6677	-20.9482	-1.5528
700	SLD 12	-4.7	-7.76	111.11	-5.6706	-20.9811	-1.8068
700	SLD 13	-10.06	4.17	85.84	-4.3408	-16.3593	-0.0402
700	SLD 14	-10.09	2.12	86.08	-4.3453	-16.4094	-0.4276
700	SLD 15	-10.23	-0.05	86.45	-4.3904	-16.4918	-0.8594
700	SLD 16	-10.26	-2.1	86.69	-4.3949	-16.5419	-1.2468
700	SLV 1	17.5	3	198.55	-10.1203	-36.7258	2.3107
700	SLV 2	17.43	-1.77	199.1	-10.1306	-36.8424	1.4083
700	SLV 3	17.12	-6.6	199.97	-10.2341	-37.0313	0.4458
700	SLV 4	17.05	-11.37	200.52	-10.2445	-37.1479	-0.4565
700	SLV 5	4.48	15.91	141.44	-7.1377	-26.343	3.5556
700	SLV 6	4.44	12.84	141.79	-7.1444	-26.4182	2.9741
700	SLV 7	3.21	-16.09	146.17	-7.5173	-27.3613	-2.6605
700	SLV 8	3.16	-19.16	146.53	-7.524	-27.4365	-3.242
700	SLV 9	-7.05	18.11	93.82	-4.6936	-17.7313	2.8953
700	SLV 10	-7.09	15.04	94.18	-4.7003	-17.8065	2.3138
700	SLV 11	-8.33	-13.89	98.56	-5.0732	-18.7496	-3.3208
700	SLV 12	-8.37	-16.97	98.92	-5.0798	-18.8248	-3.9023
700	SLV 13	-20.94	10.32	39.83	-1.9731	-8.0199	0.1098
700	SLV 14	-21.01	5.55	40.39	-1.9834	-8.1365	-0.7926
700	SLV 15	-21.32	0.72	41.25	-2.087	-8.3254	-1.755
700	SLV 16	-21.39	-4.05	41.81	-2.0973	-8.442	-2.6574
700	CRTFP Ux+	0	0	0	0	0.0001	0
700	CRTFP Ux-	0	0	0	0	-0.0001	0
700	CRTFP Uy+	0	0	0	0	0	0
700	CRTFP Uy-	0	0	0	0	0	0
715	SLU 1	-2.72	-1.86	205.61	-15.2928	-12.568	-0.3771
715	SLU 2	-2.72	-1.53	205.67	-15.2891	-12.5649	-0.3564
715	SLU 3	-2.79	-1.86	210.32	-15.6369	-12.8587	-0.3825
715	SLU 4	-2.79	-1.66	210.35	-15.6346	-12.8568	-0.3701
715	SLU 5	-2.76	-1.57	208.6	-15.506	-12.746	-0.3624
715	SLU 6	-2.83	-1.89	213.25	-15.8538	-13.0398	-0.3885
715	SLU 7	-2.83	-1.7	213.29	-15.8516	-13.0379	-0.3761
715	SLU 8	-2.81	-1.92	211.48	-15.7267	-12.9302	-0.3891
715	SLU 9	-2.81	-1.73	211.51	-15.7245	-12.9283	-0.3766
715	SLU 10	-2.86	-1.65	233.66	-17.3725	-14.2837	-0.3784
715	SLU 11	-2.93	-1.97	238.31	-17.7203	-14.5775	-0.4046
715	SLU 12	-2.93	-1.78	238.34	-17.718	-14.5756	-0.3921
715	SLU 13	-2.91	-1.68	236.59	-17.5895	-14.4648	-0.3844
715	SLU 14	-2.97	-2.01	241.24	-17.9373	-14.7586	-0.4106
715	SLU 15	-2.97	-1.81	241.28	-17.935	-14.7567	-0.3981
715	SLU 16	-2.95	-2.04	239.47	-17.8102	-14.6491	-0.4111
715	SLU 17	-2.95	-1.84	239.5	-17.8079	-14.6472	-0.3987
715	SLU 18	-2.93	-2.02	245.6	-18.2691	-15.0235	-0.4086
715	SLU 19	-2.93	-1.83	245.63	-18.2669	-15.0216	-0.3962
715	SLU 20	-2.97	-2.05	248.53	-18.4861	-15.2046	-0.4146
715	SLU 21	-2.97	-1.86	248.56	-18.4839	-15.2027	-0.4022
715	SLU 22	-2.98	-1.87	232.6	-17.2692	-14.2084	-0.3998
715	SLU 23	-2.98	-1.55	232.65	-17.2655	-14.2052	-0.3791
715	SLU 24	-3.04	-1.87	237.31	-17.6133	-14.499	-0.4052
715	SLU 25	-3.04	-1.68	237.34	-17.611	-14.4971	-0.3928

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
715	SLU 26	-3.02	-1.58	235.59	-17.4824	-14.3863	-0.385
715	SLU 27	-3.09	-1.9	240.24	-17.8302	-14.6801	-0.4112
715	SLU 28	-3.09	-1.71	240.27	-17.828	-14.6782	-0.3988
715	SLU 29	-3.06	-1.93	238.46	-17.7031	-14.5706	-0.4118
715	SLU 30	-3.06	-1.74	238.5	-17.7009	-14.5687	-0.3993
715	SLU 31	-3.12	-1.66	260.64	-19.3489	-15.924	-0.4011
715	SLU 32	-3.19	-1.99	265.3	-19.6967	-16.2178	-0.4273
715	SLU 33	-3.19	-1.79	265.33	-19.6945	-16.2159	-0.4148
715	SLU 34	-3.17	-1.7	263.58	-19.5659	-16.1051	-0.4071
715	SLU 35	-3.23	-2.02	268.23	-19.9137	-16.3989	-0.4333
715	SLU 36	-3.23	-1.83	268.26	-19.9114	-16.397	-0.4208
715	SLU 37	-3.21	-2.05	266.46	-19.7866	-16.2894	-0.4338
715	SLU 38	-3.21	-1.86	266.49	-19.7843	-16.2875	-0.4214
715	SLU 39	-3.18	-2.04	272.58	-20.2456	-16.6638	-0.4313
715	SLU 40	-3.18	-1.84	272.62	-20.2433	-16.662	-0.4188
715	SLU 41	-3.23	-2.07	275.52	-20.4625	-16.8449	-0.4373
715	SLU 42	-3.23	-1.87	275.55	-20.4603	-16.843	-0.4248
715	SLU 43	-3.45	-2.41	258.04	-19.203	-15.776	-0.4825
715	SLU 44	-3.45	-2.09	258.1	-19.1993	-15.7729	-0.4617
715	SLU 45	-3.51	-2.41	262.75	-19.5471	-16.0667	-0.4879
715	SLU 46	-3.51	-2.22	262.78	-19.5448	-16.0648	-0.4754
715	SLU 47	-3.49	-2.12	261.03	-19.4162	-15.954	-0.4677
715	SLU 48	-3.56	-2.44	265.68	-19.764	-16.2478	-0.4939
715	SLU 49	-3.56	-2.25	265.72	-19.7618	-16.2459	-0.4814
715	SLU 50	-3.53	-2.47	263.91	-19.6369	-16.1382	-0.4944
715	SLU 51	-3.53	-2.28	263.94	-19.6347	-16.1363	-0.482
715	SLU 52	-3.59	-2.2	286.09	-21.2827	-17.4917	-0.4838
715	SLU 53	-3.66	-2.53	290.74	-21.6305	-17.7855	-0.5099
715	SLU 54	-3.66	-2.33	290.77	-21.6283	-17.7836	-0.4975
715	SLU 55	-3.63	-2.24	289.02	-21.4997	-17.6728	-0.4898
715	SLU 56	-3.7	-2.56	293.67	-21.8475	-17.9666	-0.5159
715	SLU 57	-3.7	-2.37	293.71	-21.8452	-17.9647	-0.5035
715	SLU 58	-3.68	-2.59	291.9	-21.7204	-17.8571	-0.5165
715	SLU 59	-3.68	-2.4	291.93	-21.7181	-17.8552	-0.5041
715	SLU 60	-3.65	-2.58	298.03	-22.1794	-18.2315	-0.514
715	SLU 61	-3.65	-2.38	298.06	-22.1771	-18.2296	-0.5015
715	SLU 62	-3.7	-2.61	300.96	-22.3963	-18.4126	-0.5199
715	SLU 63	-3.7	-2.41	300.99	-22.3941	-18.4107	-0.5075
715	SLU 64	-3.71	-2.42	285.03	-21.1794	-17.4164	-0.5051
715	SLU 65	-3.71	-2.1	285.08	-21.1757	-17.4132	-0.4844
715	SLU 66	-3.77	-2.42	289.74	-21.5235	-17.707	-0.5106
715	SLU 67	-3.77	-2.23	289.77	-21.5212	-17.7051	-0.4981
715	SLU 68	-3.75	-2.13	288.02	-21.3927	-17.5943	-0.4904
715	SLU 69	-3.81	-2.45	292.67	-21.7405	-17.8881	-0.5166
715	SLU 70	-3.81	-2.26	292.7	-21.7382	-17.8862	-0.5041
715	SLU 71	-3.79	-2.48	290.89	-21.6134	-17.7786	-0.5171
715	SLU 72	-3.79	-2.29	290.93	-21.6111	-17.7767	-0.5047
715	SLU 73	-3.85	-2.22	313.07	-23.2591	-19.1321	-0.5065
715	SLU 74	-3.91	-2.54	317.73	-23.6069	-19.4259	-0.5326
715	SLU 75	-3.91	-2.35	317.76	-23.6047	-19.424	-0.5202
715	SLU 76	-3.89	-2.25	316.01	-23.4761	-19.3132	-0.5124
715	SLU 77	-3.96	-2.57	320.66	-23.8239	-19.6069	-0.5386
715	SLU 78	-3.96	-2.38	320.69	-23.8216	-19.6051	-0.5262
715	SLU 79	-3.94	-2.6	318.89	-23.6968	-19.4974	-0.5392
715	SLU 80	-3.94	-2.41	318.92	-23.6946	-19.4955	-0.5267
715	SLU 81	-3.91	-2.59	325.02	-24.1558	-19.8719	-0.5366
715	SLU 82	-3.91	-2.4	325.05	-24.1535	-19.87	-0.5242
715	SLU 83	-3.95	-2.62	327.95	-24.3727	-20.053	-0.5426
715	SLU 84	-3.95	-2.43	327.98	-24.3705	-20.0511	-0.5302
715	SLE RA 1	-2.79	-1.86	213.32	-15.8575	-13.0367	-0.3836
715	SLE RA 2	-2.79	-1.65	213.36	-15.855	-13.0346	-0.3698
715	SLE RA 3	-2.84	-1.86	216.46	-16.0869	-13.2305	-0.3872
715	SLE RA 4	-2.84	-1.73	216.48	-16.0854	-13.2292	-0.3789
715	SLE RA 5	-2.82	-1.67	215.31	-15.9997	-13.1553	-0.3738
715	SLE RA 6	-2.87	-1.88	218.42	-16.2315	-13.3512	-0.3912
715	SLE RA 7	-2.87	-1.75	218.44	-16.23	-13.3499	-0.3829
715	SLE RA 8	-2.85	-1.9	217.23	-16.1468	-13.2782	-0.3916
715	SLE RA 9	-2.85	-1.77	217.25	-16.1453	-13.2769	-0.3833
715	SLE RA 10	-2.89	-1.72	232.02	-17.244	-14.1805	-0.3845
715	SLE RA 11	-2.93	-1.94	235.12	-17.4758	-14.3764	-0.4019
715	SLE RA 12	-2.93	-1.81	235.14	-17.4743	-14.3751	-0.3936
715	SLE RA 13	-2.92	-1.74	233.97	-17.3886	-14.3012	-0.3885
715	SLE RA 14	-2.96	-1.96	237.08	-17.6205	-14.4971	-0.4059
715	SLE RA 15	-2.96	-1.83	237.1	-17.619	-14.4958	-0.3976
715	SLE RA 16	-2.95	-1.98	235.89	-17.5357	-14.4241	-0.4063
715	SLE RA 17	-2.95	-1.85	235.91	-17.5342	-14.4228	-0.398
715	SLE RA 18	-2.93	-1.97	239.98	-17.8417	-14.6737	-0.4046
715	SLE RA 19	-2.93	-1.84	240	-17.8402	-14.6724	-0.3963
715	SLE RA 20	-2.96	-1.99	241.93	-17.9864	-14.7944	-0.4086
715	SLE RA 21	-2.96	-1.86	241.96	-17.9849	-14.7932	-0.4003
715	SLE FR 1	-2.79	-1.86	213.32	-15.8575	-13.0367	-0.3836
715	SLE FR 2	-2.79	-1.82	213.33	-15.857	-13.0363	-0.3808
715	SLE FR 3	-2.81	-1.87	214.1	-15.9154	-13.085	-0.3852
715	SLE FR 4	-2.83	-1.85	221.33	-16.4523	-13.5274	-0.3871
715	SLE FR 5	-2.85	-1.9	222.1	-16.5106	-13.5761	-0.3915
715	SLE FR 6	-2.86	-1.92	226.65	-16.8496	-13.8552	-0.3941
715	SLE QP 1	-2.79	-1.86	213.32	-15.8575	-13.0367	-0.3836
715	SLE QP 2	-2.83	-1.89	221.32	-16.4528	-13.5278	-0.3899
715	SLD 1	15.25	0.41	244.73	-17.934	-14.5832	1.0793
715	SLD 2	15.25	-1.52	244.79	-17.9309	-14.6	1.0131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
715	SLD 3	15.01	-5.64	245.45	-18.1416	-14.7143	0.6863
715	SLD 4	15.01	-7.57	245.51	-18.1385	-14.7311	0.6201
715	SLD 5	2.96	8.32	227.23	-16.5829	-13.6426	0.6586
715	SLD 6	2.96	7.06	227.27	-16.5809	-13.6536	0.6152
715	SLD 7	2.15	-11.86	229.64	-17.2748	-14.0796	-0.6512
715	SLD 8	2.15	-13.12	229.68	-17.2728	-14.0906	-0.6946
715	SLD 9	-7.82	9.33	212.95	-15.6328	-12.9649	-0.0851
715	SLD 10	-7.82	8.07	212.99	-15.6308	-12.976	-0.1285
715	SLD 11	-8.63	-10.84	215.36	-16.3247	-13.402	-1.395
715	SLD 12	-8.63	-12.11	215.4	-16.3227	-13.413	-1.4384
715	SLD 13	-20.68	3.79	197.13	-14.767	-12.3245	-1.3999
715	SLD 14	-20.68	1.86	197.19	-14.764	-12.3413	-1.4661
715	SLD 15	-20.92	-2.27	197.85	-14.9746	-12.4556	-1.7928
715	SLD 16	-20.92	-4.2	197.91	-14.9715	-12.4724	-1.859
715	SLV 1	39.46	3.29	276.09	-19.9224	-16.0007	3.0336
715	SLV 2	39.46	-1.19	276.23	-19.9153	-16.04	2.8794
715	SLV 3	38.89	-10.5	277.76	-20.3963	-16.299	2.1385
715	SLV 4	38.9	-14.99	277.9	-20.3892	-16.3383	1.9843
715	SLV 5	10.71	21.35	235.19	-16.7762	-13.8106	2.0213
715	SLV 6	10.71	18.46	235.28	-16.7716	-13.8359	1.9219
715	SLV 7	8.82	-24.62	240.76	-18.3557	-14.8047	-0.9624
715	SLV 8	8.83	-27.51	240.85	-18.3512	-14.8301	-1.0617
715	SLV 9	-14.5	23.72	201.78	-14.5544	-12.2255	0.282
715	SLV 10	-14.49	20.83	201.87	-14.5498	-12.2509	0.1826
715	SLV 11	-16.38	-22.25	207.35	-16.1339	-13.2197	-2.7017
715	SLV 12	-16.38	-25.14	207.44	-16.1293	-13.245	-2.8011
715	SLV 13	-44.57	11.2	164.73	-12.5164	-10.7173	-2.7641
715	SLV 14	-44.56	6.71	164.87	-12.5093	-10.7566	-2.9183
715	SLV 15	-45.13	-2.59	166.4	-12.9902	-11.0156	-3.6592
715	SLV 16	-45.13	-7.08	166.54	-12.9831	-11.0548	-3.8134
715	CRTFP Ux+	0	0	0	0	0	0
715	CRTFP Ux-	0	0	0	0	0	0
715	CRTFP Uy+	0	0	0	0	0	0
715	CRTFP Uy-	0	0	0	0	0	0
761	SLU 1	0.68	0.31	38.33	1.046	11.7006	-0.1261
761	SLU 2	0.68	0.39	38.35	1.0464	11.7059	-0.155
761	SLU 3	0.7	0.32	39.22	1.0701	11.9659	-0.1304
761	SLU 4	0.7	0.37	39.22	1.0703	11.9691	-0.1477
761	SLU 5	0.69	0.39	38.9	1.0614	11.8713	-0.1557
761	SLU 6	0.72	0.32	39.77	1.0851	12.1313	-0.1312
761	SLU 7	0.71	0.37	39.77	1.0853	12.1345	-0.1485
761	SLU 8	0.71	0.31	39.43	1.076	12.0314	-0.1276
761	SLU 9	0.71	0.36	39.44	1.0762	12.0346	-0.1449
761	SLU 10	0.73	0.46	43.26	1.1803	13.2091	-0.1809
761	SLU 11	0.75	0.39	44.14	1.204	13.4691	-0.1563
761	SLU 12	0.75	0.44	44.14	1.2042	13.4723	-0.1736
761	SLU 13	0.74	0.46	43.82	1.1952	13.3745	-0.1816
761	SLU 14	0.76	0.39	44.69	1.219	13.6345	-0.1571
761	SLU 15	0.76	0.44	44.69	1.2192	13.6377	-0.1744
761	SLU 16	0.76	0.38	44.35	1.2099	13.5346	-0.1535
761	SLU 17	0.75	0.43	44.36	1.2101	13.5378	-0.1708
761	SLU 18	0.75	0.41	45.36	1.2373	13.848	-0.1631
761	SLU 19	0.75	0.46	45.37	1.2375	13.8512	-0.1804
761	SLU 20	0.77	0.41	45.91	1.2523	14.0134	-0.1639
761	SLU 21	0.76	0.46	45.92	1.2525	14.0166	-0.1812
761	SLU 22	0.75	0.38	43.18	1.178	13.1766	-0.1508
761	SLU 23	0.74	0.46	43.19	1.1784	13.182	-0.1797
761	SLU 24	0.77	0.39	44.06	1.2021	13.4419	-0.1551
761	SLU 25	0.76	0.44	44.07	1.2023	13.4451	-0.1724
761	SLU 26	0.76	0.46	43.74	1.1934	13.3474	-0.1804
761	SLU 27	0.78	0.39	44.61	1.2171	13.6073	-0.1559
761	SLU 28	0.78	0.44	44.62	1.2173	13.6105	-0.1732
761	SLU 29	0.77	0.38	44.28	1.208	13.5075	-0.1523
761	SLU 30	0.77	0.43	44.29	1.2082	13.5106	-0.1696
761	SLU 31	0.79	0.53	48.11	1.3123	14.6852	-0.2056
761	SLU 32	0.81	0.46	48.98	1.336	14.9451	-0.181
761	SLU 33	0.81	0.51	48.99	1.3362	14.9483	-0.1983
761	SLU 34	0.8	0.53	48.66	1.3273	14.8506	-0.2063
761	SLU 35	0.83	0.46	49.53	1.351	15.1105	-0.1818
761	SLU 36	0.82	0.51	49.54	1.3512	15.1137	-0.1991
761	SLU 37	0.82	0.45	49.2	1.3419	15.0107	-0.1782
761	SLU 38	0.82	0.5	49.21	1.3421	15.0138	-0.1955
761	SLU 39	0.82	0.48	50.21	1.3693	15.3241	-0.1878
761	SLU 40	0.81	0.53	50.21	1.3695	15.3273	-0.2051
761	SLU 41	0.83	0.48	50.76	1.3843	15.4895	-0.1886
761	SLU 42	0.83	0.53	50.76	1.3845	15.4927	-0.2059
761	SLU 43	0.87	0.38	48.17	1.3146	14.7047	-0.1555
761	SLU 44	0.86	0.46	48.18	1.3149	14.71	-0.1843
761	SLU 45	0.89	0.39	49.05	1.3386	14.97	-0.1598
761	SLU 46	0.88	0.44	49.06	1.3388	14.9732	-0.1771
761	SLU 47	0.88	0.46	48.73	1.3299	14.8754	-0.1851
761	SLU 48	0.9	0.39	49.6	1.3536	15.1354	-0.1605
761	SLU 49	0.9	0.44	49.61	1.3538	15.1386	-0.1778
761	SLU 50	0.89	0.38	49.27	1.3446	15.0355	-0.157
761	SLU 51	0.89	0.43	49.28	1.3448	15.0387	-0.1743
761	SLU 52	0.91	0.53	53.1	1.4488	16.2132	-0.2102
761	SLU 53	0.93	0.46	53.97	1.4725	16.4732	-0.1857
761	SLU 54	0.93	0.51	53.98	1.4727	16.4764	-0.203
761	SLU 55	0.92	0.53	53.65	1.4638	16.3786	-0.211
761	SLU 56	0.95	0.46	54.52	1.4875	16.6386	-0.1864

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	SLU 57	0.94	0.51	54.53	1.4877	16.6418	-0.2037
761	SLU 58	0.94	0.45	54.19	1.4784	16.5387	-0.1829
761	SLU 59	0.94	0.5	54.2	1.4786	16.5419	-0.2002
761	SLU 60	0.94	0.48	55.2	1.5059	16.8521	-0.1925
761	SLU 61	0.93	0.53	55.21	1.5061	16.8553	-0.2098
761	SLU 62	0.95	0.48	55.75	1.5208	17.0175	-0.1932
761	SLU 63	0.95	0.53	55.76	1.521	17.0207	-0.2105
761	SLU 64	0.93	0.45	53.02	1.4466	16.1807	-0.1802
761	SLU 65	0.93	0.53	53.03	1.4469	16.1861	-0.209
761	SLU 66	0.95	0.46	53.9	1.4706	16.446	-0.1845
761	SLU 67	0.95	0.51	53.91	1.4708	16.4492	-0.2018
761	SLU 68	0.94	0.53	53.58	1.4619	16.3515	-0.2098
761	SLU 69	0.96	0.46	54.45	1.4856	16.6114	-0.1852
761	SLU 70	0.96	0.51	54.46	1.4858	16.6146	-0.2025
761	SLU 71	0.96	0.45	54.12	1.4766	16.5116	-0.1817
761	SLU 72	0.95	0.5	54.13	1.4768	16.5147	-0.199
761	SLU 73	0.98	0.6	57.95	1.5808	17.6893	-0.2349
761	SLU 74	1	0.53	58.82	1.6045	17.9492	-0.2104
761	SLU 75	1	0.58	58.83	1.6047	17.9524	-0.2277
761	SLU 76	0.99	0.6	58.5	1.5958	17.8547	-0.2357
761	SLU 77	1.01	0.53	59.37	1.6195	18.1146	-0.2111
761	SLU 78	1.01	0.58	59.38	1.6197	18.1178	-0.2284
761	SLU 79	1	0.52	59.04	1.6105	18.0148	-0.2076
761	SLU 80	1	0.57	59.04	1.6107	18.0179	-0.2249
761	SLU 81	1	0.55	60.04	1.6379	18.3282	-0.2172
761	SLU 82	1	0.6	60.05	1.6381	18.3314	-0.2345
761	SLU 83	1.01	0.55	60.6	1.6528	18.4936	-0.2179
761	SLU 84	1.01	0.6	60.6	1.6531	18.4968	-0.2353
761	SLE RA 1	0.7	0.33	39.72	1.0837	12.1223	-0.1332
761	SLE RA 2	0.7	0.38	39.73	1.084	12.1259	-0.1524
761	SLE RA 3	0.71	0.34	40.31	1.0998	12.2992	-0.136
761	SLE RA 4	0.71	0.37	40.31	1.0999	12.3013	-0.1476
761	SLE RA 5	0.71	0.38	40.09	1.094	12.2361	-0.1529
761	SLE RA 6	0.72	0.34	40.67	1.1098	12.4094	-0.1365
761	SLE RA 7	0.72	0.37	40.68	1.1099	12.4116	-0.1481
761	SLE RA 8	0.72	0.33	40.45	1.1037	12.3429	-0.1342
761	SLE RA 9	0.72	0.36	40.46	1.1039	12.345	-0.1457
761	SLE RA 10	0.73	0.43	43.01	1.1732	13.128	-0.1697
761	SLE RA 11	0.75	0.38	43.59	1.189	13.3013	-0.1533
761	SLE RA 12	0.75	0.42	43.59	1.1892	13.3034	-0.1649
761	SLE RA 13	0.74	0.43	43.37	1.1832	13.2383	-0.1702
761	SLE RA 14	0.75	0.38	43.95	1.199	13.4116	-0.1538
761	SLE RA 15	0.75	0.42	43.96	1.1992	13.4137	-0.1653
761	SLE RA 16	0.75	0.38	43.73	1.193	13.345	-0.1514
761	SLE RA 17	0.75	0.41	43.74	1.1931	13.3471	-0.163
761	SLE RA 18	0.75	0.4	44.4	1.2113	13.5539	-0.1579
761	SLE RA 19	0.75	0.43	44.41	1.2114	13.5561	-0.1694
761	SLE RA 20	0.76	0.4	44.77	1.2213	13.6642	-0.1583
761	SLE RA 21	0.75	0.43	44.77	1.2214	13.6663	-0.1699
761	SLE FR 1	0.7	0.33	39.72	1.0837	12.1223	-0.1332
761	SLE FR 2	0.7	0.34	39.72	1.0838	12.123	-0.137
761	SLE FR 3	0.71	0.33	39.86	1.0877	12.1664	-0.1334
761	SLE FR 4	0.72	0.36	41.12	1.122	12.5525	-0.1444
761	SLE FR 5	0.72	0.35	41.27	1.126	12.5959	-0.1408
761	SLE FR 6	0.73	0.36	42.06	1.1475	12.8381	-0.1455
761	SLE QP 1	0.7	0.33	39.72	1.0837	12.1223	-0.1332
761	SLE QP 2	0.72	0.35	41.12	1.122	12.5518	-0.1406
761	SLD 1	3.24	0.19	30.37	0.8285	9.524	-0.4372
761	SLD 2	3.21	0.88	30.33	0.8269	9.5245	-0.6768
761	SLD 3	3.3	-1.2	30.52	0.8329	9.4802	0.0468
761	SLD 4	3.27	-0.51	30.48	0.8313	9.4806	-0.1928
761	SLD 5	1.39	2.29	37.67	1.0276	11.7099	-0.9211
761	SLD 6	1.37	2.74	37.65	1.0265	11.7102	-1.0782
761	SLD 7	1.59	-2.35	38.18	1.0422	11.5637	0.6924
761	SLD 8	1.57	-1.89	38.15	1.0411	11.564	0.5353
761	SLD 9	-0.13	2.59	44.09	1.2029	13.5396	-0.8164
761	SLD 10	-0.15	3.04	44.07	1.2018	13.5399	-0.9735
761	SLD 11	0.07	-2.04	44.6	1.2175	13.3934	0.797
761	SLD 12	0.05	-1.59	44.57	1.2164	13.3937	0.6399
761	SLD 13	-1.83	1.2	51.76	1.4127	15.623	-0.0884
761	SLD 14	-1.86	1.89	51.72	1.4111	15.6234	-0.328
761	SLD 15	-1.77	-0.19	51.92	1.4171	15.5791	0.3957
761	SLD 16	-1.8	0.5	51.88	1.4154	15.5796	0.1561
761	SLV 1	6.61	-0.06	15.95	0.4352	5.4655	-0.8202
761	SLV 2	6.54	1.55	15.86	0.4314	5.4665	-1.3782
761	SLV 3	6.75	-3.22	16.31	0.4454	5.3635	0.2811
761	SLV 4	6.68	-1.61	16.22	0.4416	5.3646	-0.277
761	SLV 5	2.29	4.75	33.05	0.9012	10.5803	-1.9186
761	SLV 6	2.24	5.78	32.99	0.8987	10.581	-2.2782
761	SLV 7	2.75	-5.8	34.23	0.9352	10.2405	1.7522
761	SLV 8	2.7	-4.76	34.18	0.9327	10.2412	1.3926
761	SLV 9	-1.27	5.46	48.07	1.3113	14.8624	-1.6738
761	SLV 10	-1.31	6.49	48.01	1.3088	14.8631	-2.0334
761	SLV 11	-0.81	-5.09	49.26	1.3453	14.5226	1.997
761	SLV 12	-0.86	-4.05	49.2	1.3428	14.5233	1.6374
761	SLV 13	-5.25	2.31	66.03	1.8024	19.739	-0.0042
761	SLV 14	-5.32	3.91	65.94	1.7985	19.7401	-0.5622
761	SLV 15	-5.11	-0.85	66.38	1.8126	19.6371	1.097
761	SLV 16	-5.18	0.75	66.29	1.8088	19.6381	0.539
761	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	CRTFP Ux-	0	0	0	0	0	0
761	CRTFP Uy+	0	0	0	0	0	0
761	CRTFP Uy-	0	0	0	0	0	0
764	SLU 1	1.26	-0.31	76.58	11.1495	-0.4956	-0.1861
764	SLU 2	1.26	-0.18	76.62	11.1549	-0.4986	-0.1855
764	SLU 3	1.3	-0.3	78.3	11.3997	-0.506	-0.191
764	SLU 4	1.3	-0.23	78.32	11.4029	-0.5078	-0.1906
764	SLU 5	1.28	-0.19	77.68	11.3097	-0.5049	-0.1885
764	SLU 6	1.32	-0.31	79.36	11.5544	-0.5122	-0.194
764	SLU 7	1.32	-0.24	79.38	11.5577	-0.5141	-0.1936
764	SLU 8	1.31	-0.33	78.71	11.459	-0.5081	-0.192
764	SLU 9	1.3	-0.25	78.73	11.4623	-0.5099	-0.1917
764	SLU 10	1.36	-0.17	86.96	12.6609	-0.5659	-0.1992
764	SLU 11	1.39	-0.29	88.65	12.9056	-0.5732	-0.2047
764	SLU 12	1.39	-0.21	88.67	12.9089	-0.575	-0.2043
764	SLU 13	1.38	-0.18	88.03	12.8157	-0.5721	-0.2022
764	SLU 14	1.41	-0.3	89.71	13.0604	-0.5795	-0.2077
764	SLU 15	1.41	-0.22	89.73	13.0637	-0.5813	-0.2073
764	SLU 16	1.4	-0.31	89.06	12.965	-0.5754	-0.2058
764	SLU 17	1.4	-0.24	89.08	12.9683	-0.5772	-0.2054
764	SLU 18	1.4	-0.29	91.37	13.3009	-0.5916	-0.2057
764	SLU 19	1.4	-0.21	91.39	13.3041	-0.5935	-0.2053
764	SLU 20	1.42	-0.3	92.43	13.4556	-0.5979	-0.2087
764	SLU 21	1.42	-0.22	92.45	13.4589	-0.5997	-0.2083
764	SLU 22	1.39	-0.27	86.59	12.6072	-0.5674	-0.2045
764	SLU 23	1.39	-0.14	86.62	12.6126	-0.5705	-0.2039
764	SLU 24	1.42	-0.26	88.31	12.8574	-0.5778	-0.2094
764	SLU 25	1.42	-0.19	88.33	12.8607	-0.5796	-0.209
764	SLU 26	1.41	-0.15	87.69	12.7674	-0.5767	-0.2068
764	SLU 27	1.44	-0.27	89.37	13.0122	-0.5841	-0.2123
764	SLU 28	1.44	-0.2	89.39	13.0154	-0.5859	-0.212
764	SLU 29	1.43	-0.29	88.72	12.9168	-0.58	-0.2104
764	SLU 30	1.43	-0.21	88.74	12.92	-0.5818	-0.2101
764	SLU 31	1.48	-0.13	96.97	14.1186	-0.6377	-0.2176
764	SLU 32	1.52	-0.25	98.65	14.3634	-0.6451	-0.2231
764	SLU 33	1.52	-0.17	98.67	14.3666	-0.6469	-0.2227
764	SLU 34	1.5	-0.14	98.03	14.2734	-0.644	-0.2206
764	SLU 35	1.54	-0.26	99.72	14.5182	-0.6513	-0.2261
764	SLU 36	1.54	-0.18	99.74	14.5214	-0.6531	-0.2257
764	SLU 37	1.53	-0.27	99.06	14.4227	-0.6472	-0.2242
764	SLU 38	1.53	-0.2	99.08	14.426	-0.649	-0.2238
764	SLU 39	1.53	-0.25	101.37	14.7586	-0.6635	-0.2241
764	SLU 40	1.52	-0.17	101.39	14.7619	-0.6653	-0.2237
764	SLU 41	1.55	-0.26	102.44	14.9134	-0.6698	-0.2271
764	SLU 42	1.55	-0.18	102.46	14.9166	-0.6716	-0.2267
764	SLU 43	1.6	-0.41	96.13	13.9945	-0.6196	-0.2356
764	SLU 44	1.6	-0.29	96.16	14	-0.6227	-0.235
764	SLU 45	1.63	-0.41	97.84	14.2447	-0.63	-0.2405
764	SLU 46	1.63	-0.33	97.86	14.248	-0.6318	-0.2401
764	SLU 47	1.62	-0.3	97.22	14.1547	-0.6289	-0.238
764	SLU 48	1.65	-0.42	98.91	14.3995	-0.6363	-0.2435
764	SLU 49	1.65	-0.34	98.93	14.4027	-0.6381	-0.2431
764	SLU 50	1.64	-0.43	98.25	14.3041	-0.6322	-0.2415
764	SLU 51	1.64	-0.36	98.27	14.3073	-0.634	-0.2412
764	SLU 52	1.69	-0.27	106.51	15.5059	-0.6899	-0.2487
764	SLU 53	1.73	-0.39	108.19	15.7507	-0.6973	-0.2542
764	SLU 54	1.73	-0.32	108.21	15.7539	-0.6991	-0.2539
764	SLU 55	1.71	-0.28	107.57	15.6607	-0.6962	-0.2517
764	SLU 56	1.75	-0.4	109.25	15.9055	-0.7035	-0.2572
764	SLU 57	1.75	-0.33	109.27	15.9087	-0.7053	-0.2568
764	SLU 58	1.74	-0.42	108.6	15.81	-0.6994	-0.2553
764	SLU 59	1.74	-0.34	108.62	15.8133	-0.7012	-0.2549
764	SLU 60	1.74	-0.39	110.91	16.1459	-0.7157	-0.2552
764	SLU 61	1.73	-0.32	110.93	16.1492	-0.7175	-0.2548
764	SLU 62	1.76	-0.4	111.97	16.3007	-0.722	-0.2582
764	SLU 63	1.76	-0.33	111.99	16.3039	-0.7238	-0.2578
764	SLU 64	1.73	-0.37	106.13	15.4523	-0.6915	-0.254
764	SLU 65	1.72	-0.25	106.17	15.4577	-0.6945	-0.2534
764	SLU 66	1.76	-0.37	107.85	15.7025	-0.7019	-0.2589
764	SLU 67	1.76	-0.29	107.87	15.7057	-0.7037	-0.2585
764	SLU 68	1.74	-0.26	107.23	15.6125	-0.7008	-0.2564
764	SLU 69	1.78	-0.38	108.91	15.8572	-0.7081	-0.2619
764	SLU 70	1.78	-0.3	108.93	15.8605	-0.7099	-0.2615
764	SLU 71	1.77	-0.39	108.26	15.7618	-0.704	-0.2599
764	SLU 72	1.77	-0.32	108.28	15.7651	-0.7058	-0.2596
764	SLU 73	1.82	-0.24	116.52	16.9637	-0.7617	-0.2671
764	SLU 74	1.85	-0.36	118.2	17.2084	-0.7691	-0.2726
764	SLU 75	1.85	-0.28	118.22	17.2117	-0.7709	-0.2722
764	SLU 76	1.84	-0.24	117.58	17.1184	-0.768	-0.2701
764	SLU 77	1.88	-0.36	119.26	17.3632	-0.7754	-0.2756
764	SLU 78	1.87	-0.29	119.28	17.3665	-0.7772	-0.2752
764	SLU 79	1.86	-0.38	118.61	17.2678	-0.7712	-0.2737
764	SLU 80	1.86	-0.3	118.63	17.271	-0.7731	-0.2733
764	SLU 81	1.86	-0.35	120.92	17.6037	-0.7875	-0.2736
764	SLU 82	1.86	-0.28	120.94	17.6069	-0.7894	-0.2732
764	SLU 83	1.88	-0.36	121.98	17.7584	-0.7938	-0.2766
764	SLU 84	1.88	-0.29	122	17.7617	-0.7956	-0.2762
764	SLE RA 1	1.3	-0.3	79.44	11.566	-0.5161	-0.1913
764	SLE RA 2	1.3	-0.21	79.46	11.5696	-0.5181	-0.1909
764	SLE RA 3	1.32	-0.29	80.59	11.7328	-0.523	-0.1946

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
764	SLE RA 4	1.32	-0.24	80.6	11.7349	-0.5243	-0.1944
764	SLE RA 5	1.31	-0.22	80.17	11.6728	-0.5223	-0.1929
764	SLE RA 6	1.34	-0.3	81.29	11.836	-0.5272	-0.1966
764	SLE RA 7	1.34	-0.25	81.31	11.8381	-0.5284	-0.1963
764	SLE RA 8	1.33	-0.31	80.86	11.7723	-0.5245	-0.1953
764	SLE RA 9	1.33	-0.26	80.87	11.7745	-0.5257	-0.1951
764	SLE RA 10	1.36	-0.2	86.36	12.5736	-0.563	-0.2001
764	SLE RA 11	1.39	-0.28	87.49	12.7368	-0.5679	-0.2037
764	SLE RA 12	1.38	-0.23	87.5	12.7389	-0.5691	-0.2035
764	SLE RA 13	1.38	-0.21	87.07	12.6768	-0.5671	-0.2021
764	SLE RA 14	1.4	-0.29	88.19	12.8399	-0.572	-0.2057
764	SLE RA 15	1.4	-0.24	88.21	12.8421	-0.5733	-0.2055
764	SLE RA 16	1.39	-0.3	87.76	12.7763	-0.5693	-0.2044
764	SLE RA 17	1.39	-0.25	87.77	12.7785	-0.5705	-0.2042
764	SLE RA 18	1.39	-0.28	89.3	13.0002	-0.5802	-0.2044
764	SLE RA 19	1.39	-0.23	89.31	13.0024	-0.5814	-0.2042
764	SLE RA 20	1.4	-0.29	90.01	13.1034	-0.5843	-0.2064
764	SLE RA 21	1.4	-0.24	90.02	13.1056	-0.5855	-0.2061
764	SLE FR 1	1.3	-0.3	79.44	11.566	-0.5161	-0.1913
764	SLE FR 2	1.3	-0.28	79.45	11.5667	-0.5165	-0.1912
764	SLE FR 3	1.31	-0.3	79.73	11.6073	-0.5178	-0.1921
764	SLE FR 4	1.33	-0.28	82.4	11.997	-0.5357	-0.1952
764	SLE FR 5	1.33	-0.29	82.68	12.0375	-0.537	-0.196
764	SLE FR 6	1.35	-0.29	84.37	12.2831	-0.5481	-0.1979
764	SLE QP 1	1.3	-0.3	79.44	11.566	-0.5161	-0.1913
764	SLE QP 2	1.33	-0.29	82.4	11.9963	-0.5353	-0.1952
764	SLD 1	7.86	1.11	75.04	10.9153	-0.3798	-1.1585
764	SLD 2	7.8	1.85	75.05	10.9183	-0.3832	-1.1367
764	SLD 3	7.93	-1.19	74.86	10.8787	-0.334	-1.1704
764	SLD 4	7.88	-0.45	74.88	10.8817	-0.3373	-1.1487
764	SLD 5	3.18	3.49	80.45	11.7269	-0.5576	-0.47
764	SLD 6	3.14	3.97	80.46	11.7289	-0.5598	-0.4557
764	SLD 7	3.44	-4.18	79.87	11.605	-0.4048	-0.5098
764	SLD 8	3.4	-3.7	79.88	11.607	-0.407	-0.4955
764	SLD 9	-0.75	3.11	84.92	12.3856	-0.6636	0.105
764	SLD 10	-0.78	3.6	84.93	12.3875	-0.6658	0.1193
764	SLD 11	-0.49	-4.56	84.33	12.2636	-0.5109	0.0652
764	SLD 12	-0.52	-4.07	84.35	12.2656	-0.5131	0.0795
764	SLD 13	-5.23	-0.14	89.92	13.1108	-0.7333	0.7582
764	SLD 14	-5.28	0.6	89.94	13.1138	-0.7367	0.7799
764	SLD 15	-5.15	-2.44	89.75	13.0742	-0.6875	0.7462
764	SLD 16	-5.2	-1.7	89.76	13.0772	-0.6908	0.768
764	SLV 1	16.6	2.93	65.16	9.4648	-0.1709	-2.4478
764	SLV 2	16.47	4.65	65.2	9.4718	-0.1787	-2.3971
764	SLV 3	16.78	-2.31	64.76	9.3813	-0.0657	-2.4756
764	SLV 4	16.65	-0.59	64.8	9.3883	-0.0735	-2.425
764	SLV 5	5.65	8.33	77.83	11.3623	-0.5842	-0.8375
764	SLV 6	5.57	9.43	77.86	11.3668	-0.5892	-0.8048
764	SLV 7	6.26	-9.14	76.49	11.0839	-0.2335	-0.9303
764	SLV 8	6.18	-8.03	76.51	11.0884	-0.2386	-0.8977
764	SLV 9	-3.53	7.45	88.28	12.9041	-0.8321	0.5072
764	SLV 10	-3.61	8.56	88.31	12.9087	-0.8371	0.5398
764	SLV 11	-2.91	-10.02	86.94	12.6257	-0.4814	0.4144
764	SLV 12	-3	-8.91	86.97	12.6302	-0.4865	0.447
764	SLV 13	-14	0.01	100	14.6042	-0.9971	2.0345
764	SLV 14	-14.12	1.72	100.04	14.6113	-1.005	2.0852
764	SLV 15	-13.81	-5.23	99.6	14.5207	-0.8919	2.0067
764	SLV 16	-13.94	-3.52	99.64	14.5277	-0.8998	2.0573
764	CRTFP Ux+	0	0	0	0	0	0
764	CRTFP Ux-	0	0	0	0	0	0
764	CRTFP Uy+	0	0	0	0	0	0
764	CRTFP Uy-	0	0	0	0	0	0
767	SLU 1	0.74	0.37	43.06	-0.0605	12.1051	-0.1266
767	SLU 2	0.73	0.46	43.07	-0.0605	12.1117	-0.1601
767	SLU 3	0.76	0.38	44.05	-0.062	12.3765	-0.1311
767	SLU 4	0.75	0.44	44.06	-0.062	12.3805	-0.1512
767	SLU 5	0.74	0.47	43.69	-0.0615	12.2808	-0.1606
767	SLU 6	0.77	0.38	44.66	-0.0629	12.5457	-0.1316
767	SLU 7	0.77	0.44	44.67	-0.0629	12.5496	-0.1517
767	SLU 8	0.76	0.37	44.29	-0.0624	12.4434	-0.1276
767	SLU 9	0.76	0.43	44.3	-0.0624	12.4473	-0.1477
767	SLU 10	0.78	0.55	48.58	-0.0692	13.654	-0.189
767	SLU 11	0.81	0.46	49.55	-0.0706	13.9189	-0.1599
767	SLU 12	0.8	0.52	49.56	-0.0706	13.9229	-0.18
767	SLU 13	0.79	0.55	49.19	-0.0701	13.8232	-0.1895
767	SLU 14	0.82	0.47	50.17	-0.0716	14.0881	-0.1604
767	SLU 15	0.82	0.52	50.18	-0.0716	14.092	-0.1805
767	SLU 16	0.81	0.45	49.8	-0.071	13.9858	-0.1565
767	SLU 17	0.81	0.51	49.8	-0.0711	13.9897	-0.1766
767	SLU 18	0.81	0.49	50.92	-0.0728	14.3085	-0.1678
767	SLU 19	0.81	0.54	50.93	-0.0729	14.3124	-0.1879
767	SLU 20	0.82	0.49	51.54	-0.0738	14.4776	-0.1683
767	SLU 21	0.82	0.55	51.55	-0.0738	14.4816	-0.1884
767	SLU 22	0.8	0.45	48.49	-0.0688	13.6196	-0.1536
767	SLU 23	0.8	0.54	48.5	-0.0689	13.6262	-0.1871
767	SLU 24	0.82	0.46	49.48	-0.0703	13.891	-0.158
767	SLU 25	0.82	0.52	49.48	-0.0703	13.895	-0.1781
767	SLU 26	0.81	0.54	49.12	-0.0698	13.7953	-0.1876
767	SLU 27	0.84	0.46	50.09	-0.0712	14.0602	-0.1585
767	SLU 28	0.83	0.52	50.1	-0.0713	14.0641	-0.1786

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
767	SLU 29	0.83	0.45	49.72	-0.0707	13.9579	-0.1545
767	SLU 30	0.83	0.51	49.73	-0.0708	13.9618	-0.1746
767	SLU 31	0.85	0.62	54	-0.0775	15.1685	-0.2159
767	SLU 32	0.87	0.54	54.98	-0.0789	15.4334	-0.1868
767	SLU 33	0.87	0.6	54.99	-0.079	15.4373	-0.2069
767	SLU 34	0.86	0.63	54.62	-0.0785	15.3377	-0.2164
767	SLU 35	0.89	0.54	55.6	-0.0799	15.6025	-0.1873
767	SLU 36	0.88	0.6	55.61	-0.0799	15.6065	-0.2074
767	SLU 37	0.88	0.53	55.22	-0.0794	15.5002	-0.1834
767	SLU 38	0.88	0.59	55.23	-0.0794	15.5042	-0.2035
767	SLU 39	0.88	0.56	56.35	-0.0812	15.823	-0.1948
767	SLU 40	0.87	0.62	56.36	-0.0812	15.8269	-0.2149
767	SLU 41	0.89	0.57	56.97	-0.0821	15.9921	-0.1953
767	SLU 42	0.89	0.62	56.98	-0.0822	15.9961	-0.2154
767	SLU 43	0.94	0.45	54.12	-0.0758	15.2174	-0.1554
767	SLU 44	0.93	0.55	54.13	-0.0758	15.2239	-0.1889
767	SLU 45	0.96	0.46	55.1	-0.0772	15.4888	-0.1598
767	SLU 46	0.95	0.52	55.11	-0.0773	15.4928	-0.1799
767	SLU 47	0.94	0.55	54.74	-0.0768	15.3931	-0.1894
767	SLU 48	0.97	0.47	55.72	-0.0782	15.6579	-0.1603
767	SLU 49	0.97	0.52	55.73	-0.0782	15.6619	-0.1804
767	SLU 50	0.96	0.45	55.35	-0.0777	15.5556	-0.1564
767	SLU 51	0.96	0.51	55.36	-0.0777	15.5596	-0.1765
767	SLU 52	0.98	0.63	59.63	-0.0845	16.7663	-0.2178
767	SLU 53	1.01	0.55	60.61	-0.0859	17.0312	-0.1887
767	SLU 54	1	0.6	60.62	-0.0859	17.0351	-0.2088
767	SLU 55	0.99	0.63	60.25	-0.0854	16.9355	-0.2182
767	SLU 56	1.02	0.55	61.23	-0.0868	17.2003	-0.1892
767	SLU 57	1.02	0.61	61.23	-0.0869	17.2043	-0.2093
767	SLU 58	1.01	0.54	60.85	-0.0863	17.098	-0.1852
767	SLU 59	1.01	0.6	60.86	-0.0864	17.102	-0.2053
767	SLU 60	1.01	0.57	61.98	-0.0881	17.4208	-0.1966
767	SLU 61	1	0.63	61.99	-0.0882	17.4247	-0.2167
767	SLU 62	1.02	0.57	62.6	-0.0891	17.5899	-0.1971
767	SLU 63	1.02	0.63	62.6	-0.0891	17.5939	-0.2172
767	SLU 64	1	0.53	59.54	-0.0841	16.7319	-0.1823
767	SLU 65	1	0.63	59.56	-0.0842	16.7384	-0.2158
767	SLU 66	1.02	0.54	60.53	-0.0856	17.0033	-0.1867
767	SLU 67	1.02	0.6	60.54	-0.0856	17.0072	-0.2068
767	SLU 68	1.01	0.63	60.17	-0.0851	16.9076	-0.2163
767	SLU 69	1.04	0.54	61.15	-0.0865	17.1724	-0.1872
767	SLU 70	1.03	0.6	61.16	-0.0866	17.1764	-0.2073
767	SLU 71	1.03	0.53	60.78	-0.086	17.0701	-0.1833
767	SLU 72	1.03	0.59	60.78	-0.086	17.0741	-0.2034
767	SLU 73	1.05	0.71	65.06	-0.0928	18.2808	-0.2447
767	SLU 74	1.07	0.62	66.04	-0.0942	18.5457	-0.2156
767	SLU 75	1.07	0.68	66.05	-0.0943	18.5496	-0.2357
767	SLU 76	1.06	0.71	65.68	-0.0938	18.45	-0.2452
767	SLU 77	1.09	0.63	66.65	-0.0952	18.7148	-0.2161
767	SLU 78	1.08	0.68	66.66	-0.0952	18.7188	-0.2362
767	SLU 79	1.08	0.62	66.28	-0.0947	18.6125	-0.2122
767	SLU 80	1.08	0.67	66.29	-0.0947	18.6165	-0.2323
767	SLU 81	1.07	0.65	67.41	-0.0965	18.9353	-0.2235
767	SLU 82	1.07	0.71	67.42	-0.0965	18.9392	-0.2436
767	SLU 83	1.09	0.65	68.02	-0.0974	19.1044	-0.224
767	SLU 84	1.08	0.71	68.03	-0.0975	19.1083	-0.2441
767	SLE RA 1	0.76	0.39	44.61	-0.0629	12.5378	-0.1343
767	SLE RA 2	0.75	0.45	44.62	-0.0629	12.5422	-0.1567
767	SLE RA 3	0.77	0.4	45.27	-0.0638	12.7188	-0.1373
767	SLE RA 4	0.77	0.44	45.27	-0.0639	12.7214	-0.1507
767	SLE RA 5	0.76	0.46	45.03	-0.0635	12.6549	-0.157
767	SLE RA 6	0.78	0.4	45.68	-0.0645	12.8315	-0.1376
767	SLE RA 7	0.78	0.44	45.69	-0.0645	12.8342	-0.151
767	SLE RA 8	0.77	0.39	45.43	-0.0641	12.7633	-0.135
767	SLE RA 9	0.77	0.43	45.44	-0.0642	12.766	-0.1484
767	SLE RA 10	0.79	0.51	48.29	-0.0687	13.5704	-0.1759
767	SLE RA 11	0.8	0.45	48.94	-0.0696	13.747	-0.1565
767	SLE RA 12	0.8	0.49	48.94	-0.0696	13.7496	-0.1699
767	SLE RA 13	0.79	0.51	48.7	-0.0693	13.6832	-0.1762
767	SLE RA 14	0.81	0.45	49.35	-0.0702	13.8598	-0.1568
767	SLE RA 15	0.81	0.49	49.36	-0.0703	13.8624	-0.1702
767	SLE RA 16	0.81	0.45	49.1	-0.0699	13.7916	-0.1542
767	SLE RA 17	0.81	0.49	49.11	-0.0699	13.7942	-0.1676
767	SLE RA 18	0.8	0.47	49.85	-0.0711	14.0067	-0.1618
767	SLE RA 19	0.8	0.51	49.86	-0.0711	14.0094	-0.1752
767	SLE RA 20	0.81	0.47	50.26	-0.0717	14.1195	-0.1621
767	SLE RA 21	0.81	0.51	50.27	-0.0718	14.1221	-0.1755
767	SLE FR 1	0.76	0.39	44.61	-0.0629	12.5378	-0.1343
767	SLE FR 2	0.76	0.4	44.61	-0.0629	12.5387	-0.1388
767	SLE FR 3	0.76	0.39	44.77	-0.0631	12.5829	-0.1345
767	SLE FR 4	0.77	0.43	46.18	-0.0653	12.9794	-0.147
767	SLE FR 5	0.77	0.41	46.35	-0.0656	13.0236	-0.1427
767	SLE FR 6	0.78	0.43	47.23	-0.067	13.2723	-0.1481
767	SLE QP 1	0.76	0.39	44.61	-0.0629	12.5378	-0.1343
767	SLE QP 2	0.77	0.41	46.18	-0.0653	12.9785	-0.1426
767	SLD 1	3.58	0.23	34.12	-0.0477	9.8621	-0.0787
767	SLD 2	3.51	1.03	34.05	-0.0488	9.8654	-0.3579
767	SLD 3	3.69	-1.38	34.3	-0.0465	9.8059	0.4849
767	SLD 4	3.62	-0.58	34.23	-0.0476	9.8092	0.2058
767	SLD 5	1.46	2.67	42.3	-0.0618	12.1282	-0.9287

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
767	SLD 6	1.41	3.19	42.25	-0.0625	12.1303	-1.1117
767	SLD 7	1.83	-2.72	42.91	-0.0576	11.9409	0.9502
767	SLD 8	1.78	-2.19	42.86	-0.0583	11.9431	0.7672
767	SLD 9	-0.24	3.02	49.51	-0.0724	14.0139	-1.0524
767	SLD 10	-0.29	3.55	49.46	-0.0731	14.016	-1.2354
767	SLD 11	0.13	-2.36	50.11	-0.0682	13.8266	0.8266
767	SLD 12	0.09	-1.84	50.06	-0.0689	13.8288	0.6436
767	SLD 13	-2.08	1.41	58.14	-0.0831	16.1477	-0.4909
767	SLD 14	-2.15	2.21	58.06	-0.0842	16.151	-0.7701
767	SLD 15	-1.97	-0.21	58.32	-0.0819	16.0916	0.0727
767	SLD 16	-2.04	0.6	58.25	-0.0829	16.0949	-0.2064
767	SLV 1	7.35	-0.06	17.95	-0.0241	5.684	0.0234
767	SLV 2	7.17	1.81	17.78	-0.0266	5.6917	-0.6267
767	SLV 3	7.6	-3.73	18.38	-0.0213	5.5546	1.3059
767	SLV 4	7.43	-1.87	18.21	-0.0238	5.5623	0.6557
767	SLV 5	2.39	5.52	37.1	-0.0568	10.9851	-1.9258
767	SLV 6	2.28	6.73	36.99	-0.0585	10.9901	-2.3448
767	SLV 7	3.24	-6.73	38.51	-0.0474	10.5537	2.3489
767	SLV 8	3.13	-5.52	38.4	-0.049	10.5587	1.93
767	SLV 9	-1.58	6.35	53.96	-0.0817	15.3983	-2.2151
767	SLV 10	-1.69	7.55	53.85	-0.0833	15.4033	-2.6341
767	SLV 11	-0.73	-5.9	55.38	-0.0722	14.9669	2.0596
767	SLV 12	-0.84	-4.7	55.27	-0.0738	14.9719	1.6407
767	SLV 13	-5.89	2.7	74.16	-0.1069	20.3947	-0.9409
767	SLV 14	-6.06	4.56	73.99	-0.1094	20.4024	-1.591
767	SLV 15	-5.63	-0.98	74.58	-0.104	20.2653	0.3415
767	SLV 16	-5.8	0.89	74.41	-0.1066	20.273	-0.3086
767	CRTFP Ux+	0	0	0	0	0	0
767	CRTFP Ux-	0	0	0	0	0	0
767	CRTFP Uy+	0	0	0	0	0	0
767	CRTFP Uy-	0	0	0	0	0	0
769	SLU 1	0.77	0.27	122.96	-6.9687	-5.1204	-0.179
769	SLU 2	0.77	0.48	123.06	-6.969	-5.1227	-0.1684
769	SLU 3	0.79	0.33	125.74	-7.1329	-5.2316	-0.1807
769	SLU 4	0.79	0.45	125.8	-7.1331	-5.2329	-0.1744
769	SLU 5	0.78	0.48	124.79	-7.0713	-5.1943	-0.1715
769	SLU 6	0.81	0.33	127.47	-7.2351	-5.3032	-0.1838
769	SLU 7	0.8	0.46	127.53	-7.2353	-5.3045	-0.1774
769	SLU 8	0.8	0.28	126.43	-7.1732	-5.2637	-0.1851
769	SLU 9	0.8	0.41	126.49	-7.1735	-5.265	-0.1788
769	SLU 10	0.92	0.55	140.28	-7.9625	-5.8235	-0.1822
769	SLU 11	0.94	0.4	142.96	-8.1263	-5.9324	-0.1945
769	SLU 12	0.94	0.52	143.02	-8.1265	-5.9338	-0.1882
769	SLU 13	0.93	0.55	142.01	-8.0647	-5.8952	-0.1853
769	SLU 14	0.96	0.4	144.69	-8.2286	-6.0041	-0.1976
769	SLU 15	0.96	0.52	144.75	-8.2288	-6.0054	-0.1912
769	SLU 16	0.95	0.35	143.65	-8.1667	-5.9645	-0.1989
769	SLU 17	0.95	0.47	143.71	-8.1669	-5.9659	-0.1926
769	SLU 18	0.98	0.37	147.57	-8.3879	-6.1217	-0.1987
769	SLU 19	0.98	0.49	147.62	-8.3881	-6.123	-0.1924
769	SLU 20	1	0.37	149.3	-8.4901	-6.1933	-0.2018
769	SLU 21	1	0.5	149.36	-8.4904	-6.1946	-0.1954
769	SLU 22	0.88	0.49	139.11	-7.887	-5.7482	-0.1894
769	SLU 23	0.87	0.69	139.2	-7.8873	-5.7504	-0.1789
769	SLU 24	0.9	0.54	141.88	-8.0511	-5.8593	-0.1911
769	SLU 25	0.89	0.67	141.94	-8.0513	-5.8606	-0.1848
769	SLU 26	0.89	0.7	140.94	-7.9896	-5.822	-0.1819
769	SLU 27	0.91	0.55	143.62	-8.1534	-5.9309	-0.1942
769	SLU 28	0.91	0.67	143.67	-8.1536	-5.9323	-0.1879
769	SLU 29	0.91	0.5	142.57	-8.0915	-5.8914	-0.1955
769	SLU 30	0.91	0.62	142.63	-8.0917	-5.8928	-0.1892
769	SLU 31	1.02	0.76	156.43	-8.8807	-6.4513	-0.1927
769	SLU 32	1.05	0.61	159.11	-9.0446	-6.5602	-0.2049
769	SLU 33	1.05	0.73	159.16	-9.0448	-6.5615	-0.1986
769	SLU 34	1.04	0.77	158.16	-8.983	-6.5229	-0.1957
769	SLU 35	1.06	0.62	160.84	-9.1469	-6.6318	-0.208
769	SLU 36	1.06	0.74	160.9	-9.1471	-6.6331	-0.2017
769	SLU 37	1.06	0.56	159.8	-9.085	-6.5923	-0.2093
769	SLU 38	1.06	0.69	159.85	-9.0852	-6.5936	-0.203
769	SLU 39	1.09	0.58	163.71	-9.3062	-6.7494	-0.2091
769	SLU 40	1.09	0.71	163.77	-9.3064	-6.7507	-0.2028
769	SLU 41	1.11	0.59	165.44	-9.4084	-6.821	-0.2122
769	SLU 42	1.11	0.71	165.5	-9.4086	-6.8224	-0.2058
769	SLU 43	0.96	0.28	154.32	-8.7444	-6.4413	-0.2291
769	SLU 44	0.96	0.49	154.41	-8.7448	-6.4436	-0.2186
769	SLU 45	0.98	0.34	157.09	-8.9086	-6.5525	-0.2309
769	SLU 46	0.98	0.46	157.15	-8.9088	-6.5538	-0.2245
769	SLU 47	0.98	0.49	156.14	-8.8471	-6.5152	-0.2216
769	SLU 48	1	0.34	158.82	-9.0109	-6.6241	-0.2339
769	SLU 49	1	0.47	158.88	-9.0111	-6.6255	-0.2276
769	SLU 50	1	0.29	157.78	-8.949	-6.5846	-0.2352
769	SLU 51	1	0.41	157.84	-8.9492	-6.5859	-0.2289
769	SLU 52	1.11	0.56	171.63	-9.7382	-7.1445	-0.2324
769	SLU 53	1.13	0.41	174.31	-9.902	-7.2533	-0.2447
769	SLU 54	1.13	0.53	174.37	-9.9022	-7.2547	-0.2383
769	SLU 55	1.13	0.56	173.37	-9.8405	-7.2161	-0.2354
769	SLU 56	1.15	0.41	176.05	-10.0043	-7.325	-0.2477
769	SLU 57	1.15	0.53	176.1	-10.0045	-7.3263	-0.2414
769	SLU 58	1.15	0.36	175	-9.9424	-7.2855	-0.249
769	SLU 59	1.15	0.48	175.06	-9.9426	-7.2868	-0.2427

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
769	SLU 60	1.18	0.38	178.92	-10.1636	-7.4426	-0.2488
769	SLU 61	1.18	0.5	178.98	-10.1638	-7.4439	-0.2425
769	SLU 62	1.2	0.38	180.65	-10.2659	-7.5142	-0.2519
769	SLU 63	1.19	0.51	180.71	-10.2661	-7.5155	-0.2456
769	SLU 64	1.07	0.5	170.46	-9.6627	-7.0691	-0.2395
769	SLU 65	1.07	0.7	170.56	-9.6631	-7.0713	-0.229
769	SLU 66	1.09	0.55	173.24	-9.8269	-7.1802	-0.2413
769	SLU 67	1.09	0.68	173.29	-9.8271	-7.1815	-0.2349
769	SLU 68	1.08	0.71	172.29	-9.7654	-7.1429	-0.232
769	SLU 69	1.11	0.56	174.97	-9.9292	-7.2518	-0.2443
769	SLU 70	1.11	0.68	175.03	-9.9294	-7.2532	-0.238
769	SLU 71	1.1	0.51	173.93	-9.8673	-7.2123	-0.2456
769	SLU 72	1.1	0.63	173.98	-9.8675	-7.2137	-0.2393
769	SLU 73	1.22	0.77	187.78	-10.6565	-7.7722	-0.2428
769	SLU 74	1.24	0.62	190.46	-10.8203	-7.8811	-0.2551
769	SLU 75	1.24	0.74	190.52	-10.8205	-7.8824	-0.2487
769	SLU 76	1.24	0.77	189.51	-10.7588	-7.8438	-0.2458
769	SLU 77	1.26	0.62	192.19	-10.9226	-7.9527	-0.2581
769	SLU 78	1.26	0.75	192.25	-10.9228	-7.954	-0.2518
769	SLU 79	1.26	0.57	191.15	-10.8607	-7.9132	-0.2594
769	SLU 80	1.25	0.7	191.21	-10.8609	-7.9145	-0.2531
769	SLU 81	1.29	0.59	195.06	-11.0819	-8.0703	-0.2593
769	SLU 82	1.28	0.72	195.12	-11.0821	-8.0716	-0.2529
769	SLU 83	1.3	0.6	196.8	-11.1842	-8.1419	-0.2623
769	SLU 84	1.3	0.72	196.85	-11.1844	-8.1433	-0.256
769	SLE RA 1	0.8	0.33	127.58	-7.231	-5.2998	-0.182
769	SLE RA 2	0.8	0.47	127.64	-7.2313	-5.3013	-0.1749
769	SLE RA 3	0.81	0.37	129.43	-7.3405	-5.3739	-0.1831
769	SLE RA 4	0.81	0.45	129.46	-7.3406	-5.3748	-0.1789
769	SLE RA 5	0.81	0.47	128.79	-7.2995	-5.349	-0.177
769	SLE RA 6	0.82	0.38	130.58	-7.4087	-5.4216	-0.1852
769	SLE RA 7	0.82	0.46	130.62	-7.4088	-5.4225	-0.1809
769	SLE RA 8	0.82	0.34	129.89	-7.3674	-5.3953	-0.186
769	SLE RA 9	0.82	0.42	129.92	-7.3676	-5.3962	-0.1818
769	SLE RA 10	0.9	0.52	139.12	-7.8936	-5.7685	-0.1841
769	SLE RA 11	0.91	0.42	140.91	-8.0028	-5.8411	-0.1923
769	SLE RA 12	0.91	0.5	140.95	-8.0029	-5.842	-0.1881
769	SLE RA 13	0.91	0.52	140.28	-7.9618	-5.8163	-0.1862
769	SLE RA 14	0.93	0.42	142.06	-8.071	-5.8889	-0.1944
769	SLE RA 15	0.92	0.5	142.1	-8.0711	-5.8898	-0.1901
769	SLE RA 16	0.92	0.39	141.37	-8.0297	-5.8625	-0.1952
769	SLE RA 17	0.92	0.47	141.41	-8.0298	-5.8634	-0.191
769	SLE RA 18	0.94	0.4	143.98	-8.1772	-5.9673	-0.1951
769	SLE RA 19	0.94	0.48	144.02	-8.1773	-5.9682	-0.1909
769	SLE RA 20	0.95	0.4	145.13	-8.2454	-6.015	-0.1971
769	SLE RA 21	0.95	0.48	145.17	-8.2455	-6.0159	-0.1929
769	SLE FR 1	0.8	0.33	127.58	-7.231	-5.2998	-0.182
769	SLE FR 2	0.8	0.36	127.59	-7.2311	-5.3001	-0.1806
769	SLE FR 3	0.8	0.34	128.04	-7.2583	-5.3189	-0.1828
769	SLE FR 4	0.84	0.38	132.51	-7.5149	-5.5003	-0.1845
769	SLE FR 5	0.85	0.36	132.96	-7.5422	-5.5191	-0.1867
769	SLE FR 6	0.87	0.37	135.78	-7.7041	-5.6335	-0.1885
769	SLE QP 1	0.8	0.33	127.58	-7.231	-5.2998	-0.182
769	SLE QP 2	0.84	0.35	132.5	-7.5149	-5.5	-0.1859
769	SLD 1	12.99	3.35	135.04	-7.1686	-5.4027	0.4938
769	SLD 2	12.79	2.83	134.86	-7.17	-5.3847	0.496
769	SLD 3	13.14	-0.99	133.96	-7.2356	-5.365	0.265
769	SLD 4	12.95	-1.5	133.78	-7.2369	-5.347	0.2672
769	SLD 5	4.29	7.92	134.93	-7.3092	-5.5313	0.3646
769	SLD 6	4.16	7.59	134.81	-7.3101	-5.5195	0.3661
769	SLD 7	4.8	-6.54	131.33	-7.5324	-5.4055	-0.3981
769	SLD 8	4.67	-6.87	131.21	-7.5333	-5.3937	-0.3966
769	SLD 9	-2.98	7.58	133.78	-7.4965	-5.6064	0.0248
769	SLD 10	-3.11	7.24	133.67	-7.4973	-5.5946	0.0262
769	SLD 11	-2.48	-6.88	130.18	-7.7197	-5.4806	-0.7379
769	SLD 12	-2.61	-7.22	130.06	-7.7206	-5.4688	-0.7364
769	SLD 13	-11.26	2.21	131.21	-7.7928	-5.6531	-0.6391
769	SLD 14	-11.46	1.69	131.03	-7.7942	-5.6351	-0.6368
769	SLD 15	-11.11	-2.13	130.13	-7.8598	-5.6153	-0.8679
769	SLD 16	-11.31	-2.64	129.95	-7.8611	-5.5973	-0.8656
769	SLV 1	29.26	7.23	138.59	-6.7049	-5.2629	1.3965
769	SLV 2	28.8	6.03	138.18	-6.708	-5.2209	1.4017
769	SLV 3	29.61	-2.65	136.13	-6.8575	-5.1757	0.8755
769	SLV 4	29.15	-3.85	135.72	-6.8607	-5.1337	0.8807
769	SLV 5	8.91	17.61	138.12	-7.0398	-5.5684	1.0782
769	SLV 6	8.61	16.83	137.86	-7.0418	-5.5414	1.0815
769	SLV 7	10.09	-15.32	129.93	-7.5487	-5.2776	-0.6587
769	SLV 8	9.79	-16.1	129.67	-7.5507	-5.2506	-0.6553
769	SLV 9	-8.11	16.81	135.32	-7.4791	-5.7495	0.2835
769	SLV 10	-8.4	16.03	135.06	-7.4811	-5.7224	0.2868
769	SLV 11	-6.93	-16.12	127.14	-7.988	-5.4587	-1.4534
769	SLV 12	-7.23	-16.9	126.87	-7.99	-5.4316	-1.45
769	SLV 13	-27.46	4.56	129.27	-8.1691	-5.8664	-1.2525
769	SLV 14	-27.93	3.36	128.86	-8.1722	-5.8244	-1.2473
769	SLV 15	-27.11	-5.32	126.81	-8.3218	-5.7791	-1.7736
769	SLV 16	-27.57	-6.52	126.4	-8.3249	-5.7372	-1.7684
769	CRTFP Ux+	0	0	0	0	0	0
769	CRTFP Ux-	0	0	0	0	0	0
769	CRTFP Uy+	0	0	0	0	0	0
769	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
772	SLU 1	1.17	1.82	83.86	-11.2205	-2.4376	0.1686
772	SLU 2	1.17	1.97	83.92	-11.2256	-2.441	0.1721
772	SLU 3	1.21	1.91	85.66	-11.4621	-2.4907	0.1741
772	SLU 4	1.21	1.99	85.7	-11.4651	-2.4927	0.1762
772	SLU 5	1.2	2	85.06	-11.3772	-2.4734	0.1751
772	SLU 6	1.23	1.94	86.8	-11.6137	-2.5231	0.1772
772	SLU 7	1.23	2.03	86.84	-11.6167	-2.5251	0.1792
772	SLU 8	1.22	1.89	86.14	-11.5237	-2.5023	0.1747
772	SLU 9	1.22	1.98	86.17	-11.5267	-2.5044	0.1768
772	SLU 10	1.33	2.24	95.34	-12.7605	-2.7841	0.1913
772	SLU 11	1.36	2.17	97.09	-12.997	-2.8338	0.1933
772	SLU 12	1.37	2.26	97.12	-13	-2.8359	0.1954
772	SLU 13	1.35	2.27	96.48	-12.9121	-2.8165	0.1943
772	SLU 14	1.39	2.2	98.23	-13.1486	-2.8662	0.1964
772	SLU 15	1.39	2.29	98.26	-13.1516	-2.8682	0.1984
772	SLU 16	1.38	2.15	97.57	-13.0586	-2.8455	0.1939
772	SLU 17	1.38	2.24	97.6	-13.0616	-2.8475	0.196
772	SLU 18	1.4	2.2	100.18	-13.4133	-2.9278	0.196
772	SLU 19	1.4	2.29	100.22	-13.4163	-2.9298	0.1981
772	SLU 20	1.42	2.23	101.32	-13.5648	-2.9602	0.1991
772	SLU 21	1.42	2.32	101.36	-13.5679	-2.9622	0.2012
772	SLU 22	1.34	2.17	94.48	-12.638	-2.7676	0.1918
772	SLU 23	1.34	2.32	94.54	-12.643	-2.771	0.1953
772	SLU 24	1.37	2.25	96.28	-12.8795	-2.8207	0.1973
772	SLU 25	1.37	2.34	96.32	-12.8825	-2.8227	0.1994
772	SLU 26	1.36	2.35	95.68	-12.7946	-2.8033	0.1983
772	SLU 27	1.4	2.28	97.42	-13.0311	-2.853	0.2004
772	SLU 28	1.4	2.37	97.46	-13.0341	-2.8551	0.2025
772	SLU 29	1.38	2.23	96.76	-12.9411	-2.8323	0.1979
772	SLU 30	1.38	2.32	96.79	-12.9441	-2.8343	0.2
772	SLU 31	1.5	2.58	105.96	-14.1779	-3.1141	0.2145
772	SLU 32	1.53	2.52	107.71	-14.4144	-3.1638	0.2165
772	SLU 33	1.53	2.6	107.74	-14.4174	-3.1658	0.2186
772	SLU 34	1.52	2.61	107.1	-14.3295	-3.1465	0.2176
772	SLU 35	1.55	2.55	108.85	-14.566	-3.1962	0.2196
772	SLU 36	1.55	2.64	108.88	-14.569	-3.1982	0.2217
772	SLU 37	1.54	2.5	108.19	-14.476	-3.1754	0.2171
772	SLU 38	1.54	2.59	108.22	-14.479	-3.1774	0.2192
772	SLU 39	1.56	2.55	110.81	-14.8307	-3.2578	0.2193
772	SLU 40	1.56	2.64	110.84	-14.8337	-3.2598	0.2213
772	SLU 41	1.59	2.58	111.94	-14.9822	-3.2901	0.2223
772	SLU 42	1.59	2.67	111.98	-14.9853	-3.2922	0.2244
772	SLU 43	1.47	2.25	105.38	-14.1007	-3.0558	0.2112
772	SLU 44	1.47	2.4	105.43	-14.1058	-3.0592	0.2147
772	SLU 45	1.5	2.33	107.18	-14.3423	-3.1089	0.2167
772	SLU 46	1.5	2.42	107.21	-14.3453	-3.1109	0.2188
772	SLU 47	1.49	2.43	106.57	-14.2574	-3.0915	0.2177
772	SLU 48	1.53	2.37	108.32	-14.4939	-3.1412	0.2198
772	SLU 49	1.53	2.45	108.35	-14.4969	-3.1433	0.2218
772	SLU 50	1.51	2.32	107.66	-14.4039	-3.1205	0.2173
772	SLU 51	1.52	2.41	107.69	-14.4069	-3.1225	0.2194
772	SLU 52	1.63	2.66	116.86	-15.6407	-3.4023	0.2339
772	SLU 53	1.66	2.6	118.61	-15.8772	-3.452	0.2359
772	SLU 54	1.66	2.69	118.64	-15.8802	-3.454	0.238
772	SLU 55	1.65	2.7	118	-15.7923	-3.4346	0.2369
772	SLU 56	1.68	2.63	119.75	-16.0288	-3.4844	0.239
772	SLU 57	1.68	2.72	119.78	-16.0318	-3.4864	0.2411
772	SLU 58	1.67	2.58	119.08	-15.9388	-3.4636	0.2365
772	SLU 59	1.67	2.67	119.12	-15.9418	-3.4656	0.2386
772	SLU 60	1.69	2.63	121.7	-16.2935	-3.546	0.2387
772	SLU 61	1.69	2.72	121.73	-16.2965	-3.548	0.2407
772	SLU 62	1.72	2.66	122.84	-16.445	-3.5783	0.2417
772	SLU 63	1.72	2.75	122.87	-16.4481	-3.5803	0.2438
772	SLU 64	1.63	2.6	116	-15.5181	-3.3857	0.2344
772	SLU 65	1.63	2.75	116.05	-15.5232	-3.3891	0.2379
772	SLU 66	1.67	2.68	117.8	-15.7597	-3.4388	0.2399
772	SLU 67	1.67	2.77	117.83	-15.7627	-3.4409	0.242
772	SLU 68	1.66	2.78	117.19	-15.6748	-3.4215	0.241
772	SLU 69	1.69	2.71	118.94	-15.9113	-3.4712	0.243
772	SLU 70	1.69	2.8	118.97	-15.9143	-3.4732	0.2451
772	SLU 71	1.68	2.66	118.28	-15.8213	-3.4504	0.2405
772	SLU 72	1.68	2.75	118.31	-15.8243	-3.4525	0.2426
772	SLU 73	1.79	3.01	127.48	-17.0581	-3.7323	0.2571
772	SLU 74	1.82	2.94	129.23	-17.2946	-3.782	0.2592
772	SLU 75	1.83	3.03	129.26	-17.2976	-3.784	0.2612
772	SLU 76	1.81	3.04	128.62	-17.2097	-3.7646	0.2602
772	SLU 77	1.85	2.98	130.37	-17.4462	-3.8143	0.2622
772	SLU 78	1.85	3.06	130.4	-17.4492	-3.8163	0.2643
772	SLU 79	1.84	2.93	129.7	-17.3562	-3.7936	0.2598
772	SLU 80	1.84	3.02	129.74	-17.3592	-3.7956	0.2618
772	SLU 81	1.86	2.98	132.32	-17.7109	-3.8759	0.2619
772	SLU 82	1.86	3.07	132.36	-17.7139	-3.878	0.264
772	SLU 83	1.88	3.01	133.46	-17.8624	-3.9083	0.2649
772	SLU 84	1.88	3.1	133.5	-17.8655	-3.9103	0.267
772	SLE RA 1	1.22	1.92	86.9	-11.6255	-2.5319	0.1752
772	SLE RA 2	1.22	2.02	86.93	-11.6289	-2.5341	0.1775
772	SLE RA 3	1.24	1.98	88.1	-11.7865	-2.5673	0.1789
772	SLE RA 4	1.24	2.04	88.12	-11.7886	-2.5686	0.1803
772	SLE RA 5	1.24	2.04	87.69	-11.73	-2.5557	0.1796
772	SLE RA 6	1.26	2	88.86	-11.8876	-2.5888	0.1809

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
772	SLE RA 7	1.26	2.06	88.88	-11.8896	-2.5902	0.1823
772	SLE RA 8	1.25	1.97	88.41	-11.8276	-2.575	0.1793
772	SLE RA 9	1.25	2.03	88.44	-11.8296	-2.5764	0.1807
772	SLE RA 10	1.33	2.2	94.55	-12.6522	-2.7629	0.1903
772	SLE RA 11	1.35	2.15	95.71	-12.8098	-2.796	0.1917
772	SLE RA 12	1.35	2.21	95.74	-12.8118	-2.7974	0.1931
772	SLE RA 13	1.34	2.22	95.31	-12.7532	-2.7845	0.1924
772	SLE RA 14	1.36	2.17	96.47	-12.9109	-2.8176	0.1937
772	SLE RA 15	1.36	2.23	96.5	-12.9129	-2.819	0.1951
772	SLE RA 16	1.36	2.14	96.03	-12.8509	-2.8038	0.1921
772	SLE RA 17	1.36	2.2	96.05	-12.8529	-2.8051	0.1935
772	SLE RA 18	1.37	2.17	97.78	-13.0873	-2.8587	0.1935
772	SLE RA 19	1.37	2.23	97.8	-13.0894	-2.86	0.1949
772	SLE RA 20	1.39	2.2	98.54	-13.1884	-2.8802	0.1956
772	SLE RA 21	1.39	2.26	98.56	-13.1904	-2.8816	0.1969
772	SLE FR 1	1.22	1.92	86.9	-11.6255	-2.5319	0.1752
772	SLE FR 2	1.22	1.94	86.9	-11.6262	-2.5323	0.1757
772	SLE FR 3	1.23	1.93	87.2	-11.6659	-2.5405	0.176
772	SLE FR 4	1.26	2.02	90.17	-12.0647	-2.6304	0.1812
772	SLE FR 5	1.27	2.01	90.46	-12.1045	-2.6385	0.1815
772	SLE FR 6	1.29	2.05	92.34	-12.3564	-2.6953	0.1844
772	SLE QP 1	1.22	1.92	86.9	-11.6255	-2.5319	0.1752
772	SLE QP 2	1.26	2	90.16	-12.0641	-2.6299	0.1807
772	SLD 1	10.08	2.87	85.91	-11.5755	-2.1096	1.3046
772	SLD 2	9.95	3.23	86.04	-11.5885	-2.1146	1.3159
772	SLD 3	9.95	-0.13	85.26	-11.5303	-2.0533	1.2261
772	SLD 4	9.82	0.23	85.39	-11.5434	-2.0583	1.2375
772	SLD 5	4.13	6.75	89.85	-11.9836	-2.5583	0.6349
772	SLD 6	4.04	6.99	89.94	-11.9922	-2.5616	0.6423
772	SLD 7	3.7	-3.26	87.68	-11.8332	-2.3707	0.3733
772	SLD 8	3.61	-3.02	87.77	-11.8417	-2.374	0.3808
772	SLD 9	-1.08	7.02	92.55	-12.2864	-2.8858	-0.0193
772	SLD 10	-1.17	7.25	92.64	-12.295	-2.8892	-0.0119
772	SLD 11	-1.51	-2.99	90.38	-12.1359	-2.6983	-0.2808
772	SLD 12	-1.6	-2.75	90.47	-12.1445	-2.7016	-0.2734
772	SLD 13	-7.29	3.77	94.93	-12.5848	-3.2015	-0.876
772	SLD 14	-7.43	4.13	95.06	-12.5978	-3.2066	-0.8647
772	SLD 15	-7.42	0.77	94.28	-12.5396	-3.1452	-0.9545
772	SLD 16	-7.55	1.13	94.41	-12.5526	-3.1503	-0.9431
772	SLV 1	21.89	3.95	80.18	-10.9198	-1.4105	2.8067
772	SLV 2	21.58	4.78	80.5	-10.9501	-1.4223	2.8331
772	SLV 3	21.59	-2.89	78.71	-10.8165	-1.2827	2.6279
772	SLV 4	21.28	-2.06	79.02	-10.8469	-1.2944	2.6543
772	SLV 5	7.96	12.81	89.35	-11.8721	-2.4559	1.2352
772	SLV 6	7.76	13.34	89.55	-11.8916	-2.4635	1.2522
772	SLV 7	6.96	-9.98	84.44	-11.528	-2.0299	0.6391
772	SLV 8	6.76	-9.45	84.64	-11.5476	-2.0375	0.6561
772	SLV 9	-4.23	13.44	95.68	-12.5805	-3.2224	-0.2947
772	SLV 10	-4.43	13.98	95.88	-12.6001	-3.23	-0.2777
772	SLV 11	-5.23	-9.35	90.77	-12.2365	-2.7963	-0.8908
772	SLV 12	-5.43	-8.81	90.97	-12.256	-2.8039	-0.8738
772	SLV 13	-18.75	6.06	101.3	-13.2812	-3.9654	-2.2929
772	SLV 14	-19.06	6.89	101.61	-13.3116	-3.9772	-2.2665
772	SLV 15	-19.05	-0.78	99.82	-13.178	-3.8376	-2.4717
772	SLV 16	-19.36	0.05	100.14	-13.2084	-3.8493	-2.4453
772	CRTFP Ux+	0	0	0	0	0	0
772	CRTFP Ux-	0	0	0	0	0	0
772	CRTFP Uy+	0	0	0	0	0	0
772	CRTFP Uy-	0	0	0	0	0	0
775	SLU 1	0.68	0.37	41.07	-0.0697	10.372	-0.1286
775	SLU 2	0.67	0.47	41.08	-0.0698	10.3782	-0.162
775	SLU 3	0.69	0.39	42.01	-0.0714	10.6005	-0.133
775	SLU 4	0.69	0.44	42.02	-0.0715	10.6043	-0.1531
775	SLU 5	0.68	0.47	41.66	-0.0709	10.5205	-0.1626
775	SLU 6	0.71	0.39	42.59	-0.0725	10.7428	-0.1336
775	SLU 7	0.7	0.44	42.6	-0.0726	10.7466	-0.1536
775	SLU 8	0.7	0.38	42.24	-0.0719	10.6566	-0.1296
775	SLU 9	0.7	0.43	42.24	-0.072	10.6603	-0.1497
775	SLU 10	0.71	0.55	46.3	-0.0798	11.6801	-0.1912
775	SLU 11	0.74	0.47	47.23	-0.0814	11.9024	-0.1622
775	SLU 12	0.74	0.53	47.24	-0.0815	11.9061	-0.1822
775	SLU 13	0.73	0.55	46.88	-0.0809	11.8224	-0.1917
775	SLU 14	0.75	0.47	47.81	-0.0825	12.0447	-0.1627
775	SLU 15	0.75	0.53	47.82	-0.0826	12.0485	-0.1827
775	SLU 16	0.75	0.46	47.46	-0.0819	11.9585	-0.1588
775	SLU 17	0.74	0.52	47.46	-0.082	11.9622	-0.1788
775	SLU 18	0.74	0.49	48.53	-0.084	12.2318	-0.1702
775	SLU 19	0.74	0.55	48.53	-0.0841	12.2356	-0.1903
775	SLU 20	0.75	0.49	49.11	-0.0851	12.3741	-0.1707
775	SLU 21	0.75	0.55	49.12	-0.0852	12.3779	-0.1908
775	SLU 22	0.74	0.45	46.22	-0.0794	11.6504	-0.1557
775	SLU 23	0.73	0.55	46.23	-0.0795	11.6566	-0.1892
775	SLU 24	0.76	0.46	47.16	-0.0811	11.8789	-0.1602
775	SLU 25	0.75	0.52	47.17	-0.0812	11.8827	-0.1802
775	SLU 26	0.74	0.55	46.82	-0.0806	11.7989	-0.1897
775	SLU 27	0.77	0.47	47.75	-0.0822	12.0212	-0.1607
775	SLU 28	0.76	0.52	47.75	-0.0823	12.025	-0.1808
775	SLU 29	0.76	0.45	47.39	-0.0816	11.935	-0.1568
775	SLU 30	0.76	0.51	47.4	-0.0817	11.9387	-0.1768
775	SLU 31	0.78	0.63	51.45	-0.0895	12.9585	-0.2183

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
775	SLU 32	0.8	0.55	52.38	-0.0911	13.1808	-0.1893
775	SLU 33	0.8	0.6	52.39	-0.0912	13.1845	-0.2094
775	SLU 34	0.79	0.63	52.04	-0.0906	13.1008	-0.2188
775	SLU 35	0.81	0.55	52.97	-0.0922	13.3231	-0.1898
775	SLU 36	0.81	0.61	52.97	-0.0923	13.3269	-0.2099
775	SLU 37	0.81	0.54	52.61	-0.0916	13.2369	-0.1859
775	SLU 38	0.8	0.59	52.62	-0.0916	13.2406	-0.2059
775	SLU 39	0.8	0.57	53.68	-0.0937	13.5102	-0.1973
775	SLU 40	0.8	0.63	53.68	-0.0937	13.514	-0.2174
775	SLU 41	0.82	0.57	54.26	-0.0948	13.6525	-0.1978
775	SLU 42	0.81	0.63	54.27	-0.0948	13.6563	-0.2179
775	SLU 43	0.86	0.46	51.62	-0.0873	13.0452	-0.1579
775	SLU 44	0.85	0.55	51.63	-0.0874	13.0515	-0.1913
775	SLU 45	0.88	0.47	52.56	-0.0891	13.2738	-0.1623
775	SLU 46	0.87	0.53	52.57	-0.0891	13.2775	-0.1824
775	SLU 47	0.86	0.56	52.22	-0.0885	13.1938	-0.1918
775	SLU 48	0.89	0.47	53.15	-0.0902	13.4161	-0.1628
775	SLU 49	0.88	0.53	53.15	-0.0902	13.4198	-0.1829
775	SLU 50	0.88	0.46	52.79	-0.0895	13.3299	-0.1589
775	SLU 51	0.88	0.52	52.8	-0.0896	13.3336	-0.179
775	SLU 52	0.9	0.64	56.85	-0.0974	14.3534	-0.2204
775	SLU 53	0.92	0.55	57.78	-0.0991	14.5757	-0.1914
775	SLU 54	0.92	0.61	57.79	-0.0991	14.5794	-0.2115
775	SLU 55	0.91	0.64	57.44	-0.0985	14.4957	-0.221
775	SLU 56	0.93	0.56	58.37	-0.1001	14.718	-0.192
775	SLU 57	0.93	0.61	58.37	-0.1002	14.7217	-0.212
775	SLU 58	0.93	0.54	58.01	-0.0995	14.6318	-0.188
775	SLU 59	0.92	0.6	58.02	-0.0996	14.6355	-0.2081
775	SLU 60	0.92	0.58	59.08	-0.1016	14.9051	-0.1995
775	SLU 61	0.92	0.63	59.09	-0.1017	14.9088	-0.2195
775	SLU 62	0.94	0.58	59.66	-0.1027	15.0474	-0.2
775	SLU 63	0.93	0.64	59.67	-0.1028	15.0512	-0.2201
775	SLU 64	0.92	0.54	56.77	-0.097	14.3236	-0.185
775	SLU 65	0.91	0.63	56.78	-0.0971	14.3299	-0.2184
775	SLU 66	0.94	0.55	57.72	-0.0987	14.5522	-0.1895
775	SLU 67	0.93	0.61	57.72	-0.0988	14.5559	-0.2095
775	SLU 68	0.92	0.63	57.37	-0.0982	14.4722	-0.219
775	SLU 69	0.95	0.55	58.3	-0.0998	14.6945	-0.19
775	SLU 70	0.95	0.61	58.31	-0.0999	14.6982	-0.21
775	SLU 71	0.94	0.54	57.94	-0.0992	14.6083	-0.186
775	SLU 72	0.94	0.6	57.95	-0.0993	14.612	-0.2061
775	SLU 73	0.96	0.71	62.01	-0.1071	15.6318	-0.2476
775	SLU 74	0.98	0.63	62.94	-0.1087	15.8541	-0.2186
775	SLU 75	0.98	0.69	62.94	-0.1088	15.8578	-0.2386
775	SLU 76	0.97	0.72	62.59	-0.1082	15.7741	-0.2481
775	SLU 77	1	0.63	63.52	-0.1098	15.9964	-0.2191
775	SLU 78	0.99	0.69	63.53	-0.1099	16.0001	-0.2392
775	SLU 79	0.99	0.62	63.16	-0.1092	15.9102	-0.2152
775	SLU 80	0.99	0.68	63.17	-0.1093	15.9139	-0.2352
775	SLU 81	0.99	0.66	64.23	-0.1113	16.1835	-0.2266
775	SLU 82	0.98	0.71	64.24	-0.1114	16.1872	-0.2467
775	SLU 83	1	0.66	64.82	-0.1124	16.3258	-0.2271
775	SLU 84	0.99	0.71	64.82	-0.1124	16.3295	-0.2472
775	SLE RA 1	0.69	0.4	42.54	-0.0725	10.7372	-0.1363
775	SLE RA 2	0.69	0.46	42.55	-0.0726	10.7414	-0.1586
775	SLE RA 3	0.71	0.4	43.17	-0.0736	10.8896	-0.1393
775	SLE RA 4	0.7	0.44	43.17	-0.0737	10.8921	-0.1527
775	SLE RA 5	0.7	0.46	42.94	-0.0733	10.8363	-0.159
775	SLE RA 6	0.71	0.4	43.56	-0.0744	10.9844	-0.1397
775	SLE RA 7	0.71	0.44	43.56	-0.0744	10.9869	-0.153
775	SLE RA 8	0.71	0.4	43.32	-0.074	10.927	-0.137
775	SLE RA 9	0.71	0.44	43.32	-0.074	10.9295	-0.1504
775	SLE RA 10	0.72	0.51	46.03	-0.0792	11.6093	-0.1781
775	SLE RA 11	0.74	0.46	46.65	-0.0803	11.7575	-0.1587
775	SLE RA 12	0.73	0.5	46.65	-0.0803	11.76	-0.1721
775	SLE RA 13	0.73	0.52	46.42	-0.08	11.7042	-0.1784
775	SLE RA 14	0.74	0.46	47.04	-0.081	11.8524	-0.1591
775	SLE RA 15	0.74	0.5	47.04	-0.0811	11.8549	-0.1724
775	SLE RA 16	0.74	0.45	46.8	-0.0806	11.7949	-0.1565
775	SLE RA 17	0.74	0.49	46.8	-0.0807	11.7974	-0.1698
775	SLE RA 18	0.74	0.47	47.51	-0.082	11.9771	-0.1641
775	SLE RA 19	0.73	0.51	47.52	-0.0821	11.9796	-0.1775
775	SLE RA 20	0.75	0.48	47.9	-0.0827	12.072	-0.1644
775	SLE RA 21	0.74	0.51	47.91	-0.0828	12.0745	-0.1778
775	SLE FR 1	0.69	0.4	42.54	-0.0725	10.7372	-0.1363
775	SLE FR 2	0.69	0.41	42.54	-0.0725	10.7381	-0.1408
775	SLE FR 3	0.7	0.4	42.7	-0.0728	10.7752	-0.1365
775	SLE FR 4	0.71	0.43	44.03	-0.0754	11.11	-0.1491
775	SLE FR 5	0.71	0.42	44.19	-0.0756	11.1471	-0.1448
775	SLE FR 6	0.72	0.43	45.03	-0.0773	11.3572	-0.1502
775	SLE QP 1	0.69	0.4	42.54	-0.0725	10.7372	-0.1363
775	SLE QP 2	0.71	0.42	44.03	-0.0754	11.1092	-0.1447
775	SLD 1	3.36	0.24	32.57	-0.0547	8.4817	-0.08
775	SLD 2	3.25	1.04	32.46	-0.0559	8.4846	-0.3596
775	SLD 3	3.52	-1.38	32.76	-0.0529	8.426	0.4845
775	SLD 4	3.41	-0.58	32.66	-0.0541	8.4289	0.2049
775	SLD 5	1.28	2.67	40.31	-0.0716	10.405	-0.9317
775	SLD 6	1.21	3.2	40.24	-0.0724	10.4069	-1.115
775	SLD 7	1.81	-2.72	40.97	-0.0657	10.2192	0.9499
775	SLD 8	1.74	-2.19	40.9	-0.0665	10.2211	0.7666

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
775	SLD 9	-0.33	3.03	47.17	-0.0842	11.9973	-1.0559
775	SLD 10	-0.4	3.55	47.1	-0.085	11.9992	-1.2392
775	SLD 11	0.21	-2.36	47.82	-0.0783	11.8115	0.8256
775	SLD 12	0.13	-1.84	47.75	-0.0791	11.8134	0.6423
775	SLD 13	-1.99	1.42	55.41	-0.0966	13.7895	-0.4942
775	SLD 14	-2.11	2.22	55.3	-0.0978	13.7924	-0.7738
775	SLD 15	-1.83	-0.2	55.6	-0.0948	13.7338	0.0703
775	SLD 16	-1.95	0.6	55.5	-0.096	13.7367	-0.2094
775	SLV 1	6.92	-0.06	17.2	-0.0269	4.9585	0.0234
775	SLV 2	6.66	1.81	16.95	-0.0298	4.9652	-0.6278
775	SLV 3	7.28	-3.74	17.66	-0.0229	4.8306	1.3075
775	SLV 4	7.02	-1.87	17.41	-0.0258	4.8373	0.6563
775	SLV 5	2.07	5.53	35.34	-0.0664	9.4568	-1.9298
775	SLV 6	1.9	6.74	35.17	-0.0683	9.4611	-2.3494
775	SLV 7	3.27	-6.73	36.85	-0.053	9.0305	2.3508
775	SLV 8	3.1	-5.53	36.69	-0.0549	9.0348	1.9312
775	SLV 9	-1.69	6.36	51.37	-0.0958	13.1836	-2.2205
775	SLV 10	-1.86	7.57	51.21	-0.0977	13.1879	-2.6402
775	SLV 11	-0.48	-5.9	52.89	-0.0824	12.7573	2.0601
775	SLV 12	-0.65	-4.7	52.73	-0.0843	12.7616	1.6405
775	SLV 13	-5.6	2.71	70.66	-0.1249	17.3811	-0.9457
775	SLV 14	-5.87	4.58	70.4	-0.1278	17.3878	-1.5969
775	SLV 15	-5.24	-0.97	71.11	-0.1209	17.2532	0.3385
775	SLV 16	-5.5	0.9	70.86	-0.1238	17.2599	-0.3127
775	CRTFP Ux+	0	0	0	0	0	0
775	CRTFP Ux-	0	0	0	0	0	0
775	CRTFP Uy+	0	0	0	0	0	0
775	CRTFP Uy-	0	0	0	0	0	0
776	SLU 1	-1.24	-0.25	64.69	-11.7047	-9.9956	-0.2797
776	SLU 2	-1.23	-0.09	64.71	-11.7086	-9.9962	-0.2392
776	SLU 3	-1.27	-0.25	66.18	-11.9752	-10.212	-0.2858
776	SLU 4	-1.27	-0.16	66.2	-11.9776	-10.2124	-0.2616
776	SLU 5	-1.25	-0.1	65.65	-11.8787	-10.1311	-0.2444
776	SLU 6	-1.29	-0.26	67.12	-12.1453	-10.3469	-0.291
776	SLU 7	-1.29	-0.16	67.14	-12.1476	-10.3473	-0.2667
776	SLU 8	-1.28	-0.26	66.57	-12.0449	-10.2654	-0.2901
776	SLU 9	-1.28	-0.17	66.58	-12.0472	-10.2658	-0.2658
776	SLU 10	-1.32	-0.09	72.92	-13.2017	-11.2792	-0.2519
776	SLU 11	-1.36	-0.24	74.4	-13.4683	-11.495	-0.2984
776	SLU 12	-1.36	-0.15	74.41	-13.4707	-11.4954	-0.2742
776	SLU 13	-1.34	-0.09	73.86	-13.3718	-11.4141	-0.2571
776	SLU 14	-1.38	-0.25	75.34	-13.6384	-11.6299	-0.3036
776	SLU 15	-1.38	-0.16	75.35	-13.6407	-11.6303	-0.2794
776	SLU 16	-1.37	-0.25	74.78	-13.538	-11.5484	-0.3027
776	SLU 17	-1.37	-0.16	74.79	-13.5403	-11.5488	-0.2784
776	SLU 18	-1.37	-0.24	76.42	-13.8377	-11.8284	-0.2977
776	SLU 19	-1.36	-0.14	76.43	-13.84	-11.8288	-0.2734
776	SLU 20	-1.39	-0.24	77.36	-14.0078	-11.9633	-0.3029
776	SLU 21	-1.38	-0.15	77.37	-14.0101	-11.9637	-0.2786
776	SLU 22	-1.36	-0.23	72.86	-13.1886	-11.2553	-0.2972
776	SLU 23	-1.35	-0.08	72.88	-13.1924	-11.2559	-0.2568
776	SLU 24	-1.39	-0.24	74.36	-13.4591	-11.4717	-0.3033
776	SLU 25	-1.39	-0.14	74.37	-13.4614	-11.4721	-0.2791
776	SLU 26	-1.37	-0.09	73.82	-13.3625	-11.3908	-0.262
776	SLU 27	-1.42	-0.24	75.3	-13.6291	-11.6066	-0.3085
776	SLU 28	-1.41	-0.15	75.31	-13.6315	-11.607	-0.2843
776	SLU 29	-1.41	-0.25	74.74	-13.5287	-11.5251	-0.3076
776	SLU 30	-1.4	-0.15	74.75	-13.531	-11.5255	-0.2833
776	SLU 31	-1.44	-0.07	81.1	-14.6855	-12.5389	-0.2694
776	SLU 32	-1.48	-0.23	82.57	-14.9522	-12.7547	-0.316
776	SLU 33	-1.48	-0.14	82.58	-14.9545	-12.7551	-0.2917
776	SLU 34	-1.46	-0.08	82.04	-14.8556	-12.6738	-0.2746
776	SLU 35	-1.5	-0.24	83.51	-15.1223	-12.8896	-0.3212
776	SLU 36	-1.5	-0.14	83.52	-15.1246	-12.89	-0.2969
776	SLU 37	-1.49	-0.24	82.95	-15.0218	-12.8081	-0.3202
776	SLU 38	-1.49	-0.15	82.97	-15.0241	-12.8085	-0.296
776	SLU 39	-1.49	-0.22	84.59	-15.3216	-13.0881	-0.3152
776	SLU 40	-1.48	-0.13	84.61	-15.3239	-13.0885	-0.291
776	SLU 41	-1.51	-0.23	85.53	-15.4916	-13.223	-0.3204
776	SLU 42	-1.5	-0.14	85.55	-15.494	-13.2234	-0.2962
776	SLU 43	-1.58	-0.33	81.29	-14.7074	-12.5623	-0.3576
776	SLU 44	-1.57	-0.17	81.32	-14.7113	-12.563	-0.3171
776	SLU 45	-1.61	-0.33	82.79	-14.9779	-12.7788	-0.3637
776	SLU 46	-1.6	-0.24	82.8	-14.9802	-12.7792	-0.3394
776	SLU 47	-1.59	-0.18	82.26	-14.8813	-12.6979	-0.3223
776	SLU 48	-1.63	-0.33	83.73	-15.148	-12.9137	-0.3689
776	SLU 49	-1.62	-0.24	83.74	-15.1503	-12.9141	-0.3446
776	SLU 50	-1.62	-0.34	83.17	-15.0475	-12.8322	-0.368
776	SLU 51	-1.61	-0.25	83.19	-15.0499	-12.8326	-0.3437
776	SLU 52	-1.65	-0.16	89.53	-16.2044	-13.846	-0.3298
776	SLU 53	-1.69	-0.32	91	-16.471	-14.0618	-0.3763
776	SLU 54	-1.69	-0.23	91.01	-16.4733	-14.0621	-0.3521
776	SLU 55	-1.67	-0.17	90.47	-16.3744	-13.9809	-0.3349
776	SLU 56	-1.71	-0.33	91.94	-16.6411	-14.1967	-0.3815
776	SLU 57	-1.71	-0.23	91.95	-16.6434	-14.1971	-0.3572
776	SLU 58	-1.7	-0.33	91.39	-16.5406	-14.1152	-0.3806
776	SLU 59	-1.7	-0.24	91.4	-16.543	-14.1155	-0.3563
776	SLU 60	-1.7	-0.32	93.03	-16.8404	-14.3952	-0.3756
776	SLU 61	-1.69	-0.22	93.04	-16.8427	-14.3956	-0.3513
776	SLU 62	-1.72	-0.32	93.97	-17.0105	-14.5301	-0.3808

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
776	SLU 63	-1.71	-0.23	93.98	-17.0128	-14.5305	-0.3565
776	SLU 64	-1.7	-0.31	89.47	-16.1912	-13.8221	-0.3751
776	SLU 65	-1.69	-0.16	89.49	-16.1951	-13.8227	-0.3347
776	SLU 66	-1.73	-0.32	90.96	-16.4618	-14.0385	-0.3812
776	SLU 67	-1.72	-0.22	90.97	-16.4641	-14.0389	-0.357
776	SLU 68	-1.71	-0.16	90.43	-16.3652	-13.9576	-0.3399
776	SLU 69	-1.75	-0.32	91.9	-16.6318	-14.1734	-0.3864
776	SLU 70	-1.74	-0.23	91.91	-16.6341	-14.1738	-0.3622
776	SLU 71	-1.74	-0.33	91.35	-16.5314	-14.0919	-0.3855
776	SLU 72	-1.73	-0.23	91.36	-16.5337	-14.0923	-0.3612
776	SLU 73	-1.77	-0.15	97.7	-17.6882	-15.1057	-0.3473
776	SLU 74	-1.81	-0.31	99.17	-17.9549	-15.3215	-0.3939
776	SLU 75	-1.81	-0.22	99.19	-17.9572	-15.3219	-0.3696
776	SLU 76	-1.79	-0.16	98.64	-17.8583	-15.2406	-0.3525
776	SLU 77	-1.83	-0.32	100.11	-18.1249	-15.4564	-0.399
776	SLU 78	-1.83	-0.22	100.13	-18.1272	-15.4568	-0.3748
776	SLU 79	-1.82	-0.32	99.56	-18.0245	-15.3749	-0.3981
776	SLU 80	-1.82	-0.23	99.57	-18.0268	-15.3752	-0.3739
776	SLU 81	-1.82	-0.3	101.2	-18.3242	-15.6549	-0.3931
776	SLU 82	-1.81	-0.21	101.21	-18.3266	-15.6553	-0.3689
776	SLU 83	-1.84	-0.31	102.14	-18.4943	-15.7898	-0.3983
776	SLU 84	-1.83	-0.22	102.15	-18.4966	-15.7902	-0.3741
776	SLE RA 1	-1.28	-0.24	67.02	-12.1287	-10.3555	-0.2847
776	SLE RA 2	-1.27	-0.14	67.04	-12.1313	-10.3559	-0.2577
776	SLE RA 3	-1.3	-0.25	68.02	-12.309	-10.4998	-0.2888
776	SLE RA 4	-1.29	-0.18	68.03	-12.3106	-10.5	-0.2726
776	SLE RA 5	-1.29	-0.14	67.67	-12.2446	-10.4459	-0.2612
776	SLE RA 6	-1.31	-0.25	68.65	-12.4224	-10.5897	-0.2922
776	SLE RA 7	-1.31	-0.19	68.66	-12.4239	-10.59	-0.2761
776	SLE RA 8	-1.31	-0.25	68.28	-12.3554	-10.5354	-0.2916
776	SLE RA 9	-1.3	-0.19	68.29	-12.357	-10.5356	-0.2754
776	SLE RA 10	-1.33	-0.14	72.51	-13.1267	-11.2112	-0.2661
776	SLE RA 11	-1.36	-0.24	73.5	-13.3044	-11.3551	-0.2972
776	SLE RA 12	-1.35	-0.18	73.5	-13.306	-11.3554	-0.281
776	SLE RA 13	-1.34	-0.14	73.14	-13.24	-11.3012	-0.2696
776	SLE RA 14	-1.37	-0.25	74.12	-13.4178	-11.445	-0.3007
776	SLE RA 15	-1.37	-0.18	74.13	-13.4194	-11.4453	-0.2845
776	SLE RA 16	-1.36	-0.25	73.75	-13.3508	-11.3907	-0.3
776	SLE RA 17	-1.36	-0.19	73.76	-13.3524	-11.391	-0.2839
776	SLE RA 18	-1.36	-0.24	74.85	-13.5507	-11.5774	-0.2967
776	SLE RA 19	-1.36	-0.18	74.85	-13.5522	-11.5776	-0.2805
776	SLE RA 20	-1.37	-0.24	75.47	-13.6641	-11.6673	-0.3002
776	SLE RA 21	-1.37	-0.18	75.48	-13.6656	-11.6676	-0.284
776	SLE FR 1	-1.28	-0.24	67.02	-12.1287	-10.3555	-0.2847
776	SLE FR 2	-1.28	-0.22	67.03	-12.1292	-10.3556	-0.2793
776	SLE FR 3	-1.28	-0.25	67.28	-12.174	-10.3915	-0.2861
776	SLE FR 4	-1.3	-0.22	69.37	-12.5558	-10.7221	-0.2829
776	SLE FR 5	-1.31	-0.24	69.62	-12.6006	-10.758	-0.2897
776	SLE FR 6	-1.32	-0.24	70.94	-12.8397	-10.9664	-0.2907
776	SLE QP 1	-1.28	-0.24	67.02	-12.1287	-10.3555	-0.2847
776	SLE QP 2	-1.3	-0.24	69.37	-12.5553	-10.7221	-0.2883
776	SLD 1	3.74	2.62	88.5	-16.0283	-13.506	1.093
776	SLD 2	3.6	1.37	88.65	-16.055	-13.5992	0.7614
776	SLD 3	3.57	0.04	88.78	-16.0823	-13.7381	0.4202
776	SLD 4	3.43	-1.21	88.94	-16.109	-13.8313	0.0887
776	SLD 5	0.49	4.75	74.65	-13.5106	-11.1886	1.2053
776	SLD 6	0.4	3.93	74.75	-13.5281	-11.2497	0.9879
776	SLD 7	-0.07	-3.85	75.6	-13.6905	-11.9624	-1.0371
776	SLD 8	-0.16	-4.66	75.7	-13.708	-12.0235	-1.2544
776	SLD 9	-2.44	4.18	63.04	-11.4026	-9.4206	0.6778
776	SLD 10	-2.53	3.36	63.15	-11.4201	-9.4817	0.4605
776	SLD 11	-3	-4.41	63.99	-11.5825	-10.1945	-1.5645
776	SLD 12	-3.09	-5.23	64.09	-11.6	-10.2555	-1.7819
776	SLD 13	-6.03	0.72	49.81	-9.0016	-7.6128	-0.6653
776	SLD 14	-6.17	-0.52	49.96	-9.0283	-7.706	-0.9968
776	SLD 15	-6.2	-1.85	50.09	-9.0555	-7.8449	-1.338
776	SLD 16	-6.34	-3.1	50.24	-9.0823	-7.9381	-1.6696
776	SLV 1	10.48	6.36	114.13	-20.6834	-17.2449	2.9199
776	SLV 2	10.15	3.46	114.5	-20.7457	-17.462	2.1476
776	SLV 3	10.1	0.49	114.79	-20.809	-17.7747	1.3888
776	SLV 4	9.77	-2.41	115.16	-20.8712	-17.9917	0.6165
776	SLV 5	2.87	11.14	81.74	-14.7926	-11.8381	3.1293
776	SLV 6	2.66	9.27	81.97	-14.8327	-11.978	2.6316
776	SLV 7	1.59	-8.42	83.94	-15.211	-13.6039	-1.9743
776	SLV 8	1.38	-10.3	84.17	-15.2511	-13.7437	-2.472
776	SLV 9	-3.99	9.81	54.57	-9.8594	-7.7004	1.8954
776	SLV 10	-4.2	7.94	54.81	-9.8995	-7.8402	1.3977
776	SLV 11	-5.26	-9.75	56.77	-10.2778	-9.4661	-3.2082
776	SLV 12	-5.47	-11.63	57	-10.3179	-9.606	-3.7059
776	SLV 13	-12.37	1.93	23.59	-4.2394	-3.4524	-1.1931
776	SLV 14	-12.7	-0.98	23.95	-4.3016	-3.6695	-1.9654
776	SLV 15	-12.76	-3.94	24.25	-4.3649	-3.9822	-2.7242
776	SLV 16	-13.08	-6.85	24.61	-4.4271	-4.1992	-3.4965
776	CRTFP Ux+	0	0	0	0	0	0
776	CRTFP Ux-	0	0	0	0	0	0
776	CRTFP Uy+	0	0	0	0	0	0
776	CRTFP Uy-	0	0	0	0	0	0
779	SLU 1	-1.37	-0.89	108.2	-15.2679	2.1409	-0.1727
779	SLU 2	-1.37	-0.72	108.25	-15.2748	2.1465	-0.1766
779	SLU 3	-1.4	-0.89	110.7	-15.6193	2.1867	-0.1775

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
779	SLU 4	-1.4	-0.78	110.73	-15.6235	2.19	-0.1798
779	SLU 5	-1.39	-0.73	109.8	-15.4931	2.1754	-0.1793
779	SLU 6	-1.42	-0.9	112.25	-15.8376	2.2155	-0.1802
779	SLU 7	-1.42	-0.8	112.28	-15.8417	2.2189	-0.1825
779	SLU 8	-1.41	-0.92	111.3	-15.7044	2.1987	-0.1782
779	SLU 9	-1.41	-0.82	111.33	-15.7085	2.2021	-0.1805
779	SLU 10	-1.44	-0.77	122.94	-17.3495	2.4212	-0.1849
779	SLU 11	-1.48	-0.94	125.39	-17.694	2.4613	-0.1858
779	SLU 12	-1.48	-0.84	125.42	-17.6982	2.4647	-0.1881
779	SLU 13	-1.46	-0.79	124.49	-17.5678	2.4501	-0.1876
779	SLU 14	-1.5	-0.96	126.95	-17.9122	2.4902	-0.1885
779	SLU 15	-1.5	-0.85	126.97	-17.9164	2.4936	-0.1908
779	SLU 16	-1.49	-0.97	126	-17.779	2.4733	-0.1865
779	SLU 17	-1.49	-0.87	126.02	-17.7832	2.4767	-0.1888
779	SLU 18	-1.47	-0.97	129.19	-18.2317	2.5333	-0.1846
779	SLU 19	-1.47	-0.86	129.22	-18.2359	2.5366	-0.1869
779	SLU 20	-1.5	-0.98	130.74	-18.4499	2.5621	-0.1873
779	SLU 21	-1.5	-0.88	130.77	-18.4541	2.5655	-0.1896
779	SLU 22	-1.5	-0.89	122.48	-17.279	2.4144	-0.1912
779	SLU 23	-1.5	-0.72	122.53	-17.286	2.42	-0.1951
779	SLU 24	-1.54	-0.89	124.98	-17.6305	2.4601	-0.196
779	SLU 25	-1.54	-0.78	125.01	-17.6347	2.4635	-0.1983
779	SLU 26	-1.52	-0.73	124.08	-17.5042	2.4489	-0.1978
779	SLU 27	-1.56	-0.9	126.53	-17.8487	2.489	-0.1987
779	SLU 28	-1.56	-0.8	126.56	-17.8529	2.4924	-0.201
779	SLU 29	-1.54	-0.92	125.58	-17.7155	2.4722	-0.1967
779	SLU 30	-1.55	-0.82	125.61	-17.7197	2.4755	-0.199
779	SLU 31	-1.58	-0.77	137.22	-19.3607	2.6947	-0.2034
779	SLU 32	-1.61	-0.94	139.67	-19.7052	2.7348	-0.2043
779	SLU 33	-1.61	-0.84	139.7	-19.7094	2.7382	-0.2066
779	SLU 34	-1.6	-0.79	138.77	-19.5789	2.7236	-0.2061
779	SLU 35	-1.63	-0.96	141.22	-19.9234	2.7637	-0.207
779	SLU 36	-1.63	-0.85	141.25	-19.9276	2.7671	-0.2093
779	SLU 37	-1.62	-0.97	140.27	-19.7902	2.7468	-0.205
779	SLU 38	-1.62	-0.87	140.3	-19.7944	2.7502	-0.2073
779	SLU 39	-1.61	-0.97	143.47	-20.2429	2.8067	-0.2031
779	SLU 40	-1.61	-0.86	143.5	-20.247	2.8101	-0.2054
779	SLU 41	-1.63	-0.98	145.02	-20.4611	2.8356	-0.2058
779	SLU 42	-1.63	-0.88	145.05	-20.4653	2.839	-0.2081
779	SLU 43	-1.73	-1.15	135.76	-19.1587	2.6894	-0.2182
779	SLU 44	-1.73	-0.98	135.81	-19.1656	2.695	-0.222
779	SLU 45	-1.77	-1.15	138.27	-19.5101	2.7352	-0.223
779	SLU 46	-1.77	-1.05	138.29	-19.5143	2.7385	-0.2253
779	SLU 47	-1.75	-1	137.36	-19.3839	2.7239	-0.2248
779	SLU 48	-1.79	-1.17	139.82	-19.7284	2.7641	-0.2257
779	SLU 49	-1.79	-1.07	139.84	-19.7326	2.7674	-0.228
779	SLU 50	-1.77	-1.18	138.87	-19.5952	2.7472	-0.2237
779	SLU 51	-1.78	-1.08	138.89	-19.5993	2.7506	-0.226
779	SLU 52	-1.81	-1.04	150.51	-21.2403	2.9697	-0.2303
779	SLU 53	-1.84	-1.21	152.96	-21.5848	3.0098	-0.2313
779	SLU 54	-1.84	-1.11	152.99	-21.589	3.0132	-0.2336
779	SLU 55	-1.83	-1.05	152.06	-21.4586	2.9986	-0.2331
779	SLU 56	-1.86	-1.22	154.51	-21.8031	3.0387	-0.234
779	SLU 57	-1.86	-1.12	154.54	-21.8072	3.0421	-0.2363
779	SLU 58	-1.85	-1.24	153.56	-21.6698	3.0218	-0.232
779	SLU 59	-1.85	-1.14	153.59	-21.674	3.0252	-0.2343
779	SLU 60	-1.84	-1.23	156.76	-22.1225	3.0818	-0.2301
779	SLU 61	-1.84	-1.13	156.79	-22.1267	3.0851	-0.2324
779	SLU 62	-1.86	-1.25	158.31	-22.3407	3.1106	-0.2328
779	SLU 63	-1.86	-1.15	158.34	-22.3449	3.114	-0.2351
779	SLU 64	-1.86	-1.15	150.04	-21.1698	2.9629	-0.2367
779	SLU 65	-1.87	-0.98	150.09	-21.1768	2.9685	-0.2405
779	SLU 66	-1.9	-1.15	152.54	-21.5213	3.0087	-0.2415
779	SLU 67	-1.9	-1.05	152.57	-21.5255	3.012	-0.2438
779	SLU 68	-1.89	-1	151.64	-21.3951	2.9974	-0.2433
779	SLU 69	-1.92	-1.17	154.09	-21.7395	3.0375	-0.2442
779	SLU 70	-1.92	-1.07	154.12	-21.7437	3.0409	-0.2465
779	SLU 71	-1.91	-1.18	153.14	-21.6063	3.0207	-0.2422
779	SLU 72	-1.91	-1.08	153.17	-21.6105	3.0241	-0.2444
779	SLU 73	-1.94	-1.04	164.78	-23.2515	3.2432	-0.2488
779	SLU 74	-1.97	-1.21	167.24	-23.596	3.2833	-0.2498
779	SLU 75	-1.97	-1.11	167.27	-23.6002	3.2867	-0.2521
779	SLU 76	-1.96	-1.05	166.34	-23.4697	3.2721	-0.2516
779	SLU 77	-2	-1.22	168.79	-23.8142	3.3122	-0.2525
779	SLU 78	-2	-1.12	168.82	-23.8184	3.3156	-0.2548
779	SLU 79	-1.98	-1.24	167.84	-23.681	3.2953	-0.2505
779	SLU 80	-1.98	-1.14	167.87	-23.6852	3.2987	-0.2528
779	SLU 81	-1.97	-1.23	171.03	-24.1337	3.3553	-0.2486
779	SLU 82	-1.97	-1.13	171.06	-24.1378	3.3586	-0.2509
779	SLU 83	-1.99	-1.25	172.58	-24.3519	3.3841	-0.2513
779	SLU 84	-1.99	-1.15	172.61	-24.3561	3.3875	-0.2536
779	SLE RA 1	-1.4	-0.89	112.28	-15.8425	2.219	-0.178
779	SLE RA 2	-1.41	-0.77	112.31	-15.8471	2.2228	-0.1806
779	SLE RA 3	-1.43	-0.89	113.95	-16.0768	2.2495	-0.1812
779	SLE RA 4	-1.43	-0.82	113.97	-16.0796	2.2518	-0.1827
779	SLE RA 5	-1.42	-0.78	113.34	-15.9926	2.2421	-0.1824
779	SLE RA 6	-1.44	-0.9	114.98	-16.2223	2.2688	-0.183
779	SLE RA 7	-1.44	-0.83	115	-16.2251	2.2711	-0.1845
779	SLE RA 8	-1.43	-0.91	114.35	-16.1335	2.2576	-0.1817
779	SLE RA 9	-1.44	-0.84	114.37	-16.1363	2.2598	-0.1832

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
779	SLE RA 10	-1.46	-0.81	122.11	-17.2302	2.4059	-0.1861
779	SLE RA 11	-1.48	-0.92	123.74	-17.4599	2.4326	-0.1867
779	SLE RA 12	-1.48	-0.86	123.76	-17.4627	2.4349	-0.1883
779	SLE RA 13	-1.47	-0.82	123.14	-17.3757	2.4252	-0.1879
779	SLE RA 14	-1.49	-0.93	124.78	-17.6054	2.4519	-0.1885
779	SLE RA 15	-1.49	-0.87	124.8	-17.6082	2.4542	-0.1901
779	SLE RA 16	-1.48	-0.94	124.14	-17.5166	2.4407	-0.1872
779	SLE RA 17	-1.48	-0.88	124.16	-17.5194	2.4429	-0.1887
779	SLE RA 18	-1.48	-0.94	126.27	-17.8184	2.4806	-0.1859
779	SLE RA 19	-1.48	-0.87	126.29	-17.8211	2.4829	-0.1875
779	SLE RA 20	-1.49	-0.95	127.31	-17.9639	2.4999	-0.1877
779	SLE RA 21	-1.49	-0.88	127.33	-17.9666	2.5021	-0.1893
779	SLE FR 1	-1.4	-0.89	112.28	-15.8425	2.219	-0.178
779	SLE FR 2	-1.41	-0.86	112.29	-15.8434	2.2198	-0.1785
779	SLE FR 3	-1.41	-0.89	112.69	-15.9007	2.2267	-0.1787
779	SLE FR 4	-1.43	-0.88	116.48	-16.4362	2.2983	-0.1809
779	SLE FR 5	-1.43	-0.91	116.89	-16.4934	2.3052	-0.1811
779	SLE FR 6	-1.44	-0.91	119.28	-16.8304	2.3498	-0.182
779	SLE QP 1	-1.4	-0.89	112.28	-15.8425	2.219	-0.178
779	SLE QP 2	-1.43	-0.9	116.48	-16.4352	2.2975	-0.1804
779	SLD 1	8.26	0.34	129.33	-18.2531	2.8382	1.1188
779	SLD 2	8.06	-0.7	129.4	-18.2575	2.8241	1.1404
779	SLD 3	8.12	-2.88	129.61	-18.2909	2.7443	1.1852
779	SLD 4	7.92	-3.92	129.67	-18.2953	2.7302	1.2068
779	SLD 5	1.73	4.54	119.9	-16.9224	2.6047	0.1048
779	SLD 6	1.59	3.86	119.95	-16.9253	2.5955	0.119
779	SLD 7	1.26	-6.2	120.82	-17.0486	2.2916	0.3262
779	SLD 8	1.13	-6.88	120.86	-17.0515	2.2823	0.3403
779	SLD 9	-3.98	5.08	112.09	-15.819	2.3127	-0.7011
779	SLD 10	-4.12	4.39	112.13	-15.8219	2.3035	-0.687
779	SLD 11	-4.45	-5.67	113	-15.9452	1.9995	-0.4797
779	SLD 12	-4.58	-6.35	113.05	-15.9481	1.9903	-0.4656
779	SLD 13	-10.77	2.12	103.28	-14.5752	1.8648	-1.5676
779	SLD 14	-10.97	1.08	103.35	-14.5796	1.8508	-1.546
779	SLD 15	-10.91	-1.11	103.55	-14.613	1.7709	-1.5012
779	SLD 16	-11.11	-2.15	103.62	-14.6174	1.7568	-1.4796
779	SLV 1	21.22	1.9	146.57	-20.6899	3.5601	2.8601
779	SLV 2	20.76	-0.52	146.73	-20.7002	3.5274	2.9103
779	SLV 3	20.9	-5.44	147.2	-20.7775	3.3452	3.0115
779	SLV 4	20.44	-7.87	147.36	-20.7878	3.3124	3.0618
779	SLV 5	5.94	11.49	124.52	-17.5771	3.0079	0.4934
779	SLV 6	5.64	9.93	124.62	-17.5837	2.9868	0.5258
779	SLV 7	4.86	-12.98	126.63	-17.8689	2.2915	0.9982
779	SLV 8	4.56	-14.55	126.73	-17.8756	2.2704	1.0306
779	SLV 9	-7.42	12.74	106.22	-14.9949	2.3247	-1.3914
779	SLV 10	-7.72	11.18	106.33	-15.0015	2.3035	-1.359
779	SLV 11	-8.49	-11.74	108.33	-15.2868	1.6082	-0.8866
779	SLV 12	-8.79	-13.3	108.44	-15.2934	1.5871	-0.8542
779	SLV 13	-23.29	6.06	85.59	-12.0827	1.2826	-3.4226
779	SLV 14	-23.75	3.63	85.75	-12.093	1.2498	-3.3723
779	SLV 15	-23.61	-1.28	86.23	-12.1702	1.0677	-3.2711
779	SLV 16	-24.08	-3.71	86.39	-12.1805	1.0349	-3.2208
779	CRTFP Ux+	0	0	0	0	0	0
779	CRTFP Ux-	0	0	0	0	0	0
779	CRTFP Uy+	0	0	0	0	0	0
779	CRTFP Uy-	0	0	0	0	0	0
782	SLU 1	1.56	-0.29	91.46	-8.882	-0.0339	0.1405
782	SLU 2	1.55	-0.14	91.51	-8.8868	-0.0372	0.1401
782	SLU 3	1.6	-0.29	93.52	-9.0816	-0.0318	0.1443
782	SLU 4	1.59	-0.2	93.55	-9.0845	-0.0337	0.1441
782	SLU 5	1.58	-0.15	92.78	-9.0102	-0.0358	0.1425
782	SLU 6	1.62	-0.29	94.79	-9.2049	-0.0304	0.1467
782	SLU 7	1.62	-0.21	94.82	-9.2078	-0.0324	0.1465
782	SLU 8	1.61	-0.31	94	-9.1287	-0.0312	0.1452
782	SLU 9	1.6	-0.22	94.03	-9.1316	-0.0332	0.145
782	SLU 10	1.67	-0.12	103.85	-10.0861	-0.035	0.1507
782	SLU 11	1.71	-0.26	105.86	-10.2808	-0.0296	0.1548
782	SLU 12	1.71	-0.17	105.89	-10.2837	-0.0315	0.1546
782	SLU 13	1.69	-0.13	105.12	-10.2095	-0.0336	0.1531
782	SLU 14	1.74	-0.27	107.13	-10.4042	-0.0282	0.1572
782	SLU 15	1.73	-0.18	107.16	-10.4071	-0.0302	0.157
782	SLU 16	1.72	-0.29	106.34	-10.328	-0.029	0.1558
782	SLU 17	1.72	-0.2	106.37	-10.3309	-0.031	0.1556
782	SLU 18	1.72	-0.26	109.08	-10.5953	-0.0308	0.1555
782	SLU 19	1.72	-0.17	109.12	-10.5982	-0.0327	0.1553
782	SLU 20	1.75	-0.27	110.36	-10.7186	-0.0294	0.1579
782	SLU 21	1.74	-0.18	110.39	-10.7215	-0.0314	0.1577
782	SLU 22	1.71	-0.24	103.44	-10.0438	-0.0355	0.1547
782	SLU 23	1.7	-0.09	103.49	-10.0486	-0.0387	0.1544
782	SLU 24	1.75	-0.23	105.5	-10.2433	-0.0334	0.1585
782	SLU 25	1.75	-0.14	105.53	-10.2462	-0.0353	0.1583
782	SLU 26	1.73	-0.1	104.76	-10.172	-0.0374	0.1567
782	SLU 27	1.77	-0.24	106.77	-10.3667	-0.032	0.1609
782	SLU 28	1.77	-0.15	106.8	-10.3696	-0.034	0.1607
782	SLU 29	1.76	-0.26	105.98	-10.2905	-0.0328	0.1594
782	SLU 30	1.76	-0.17	106.01	-10.2934	-0.0347	0.1592
782	SLU 31	1.82	-0.07	115.83	-11.2479	-0.0365	0.1649
782	SLU 32	1.87	-0.21	117.84	-11.4426	-0.0312	0.169
782	SLU 33	1.86	-0.12	117.87	-11.4455	-0.0331	0.1689
782	SLU 34	1.84	-0.08	117.1	-11.3713	-0.0352	0.1673

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
782	SLU 35	1.89	-0.22	119.11	-11.566	-0.0298	0.1714
782	SLU 36	1.89	-0.13	119.14	-11.5689	-0.0318	0.1712
782	SLU 37	1.87	-0.24	118.32	-11.4898	-0.0306	0.17
782	SLU 38	1.87	-0.15	118.35	-11.4927	-0.0325	0.1698
782	SLU 39	1.87	-0.21	121.06	-11.757	-0.0323	0.1697
782	SLU 40	1.87	-0.12	121.09	-11.7599	-0.0343	0.1695
782	SLU 41	1.9	-0.22	122.33	-11.8804	-0.031	0.1721
782	SLU 42	1.9	-0.13	122.37	-11.8833	-0.0329	0.1719
782	SLU 43	1.97	-0.4	114.79	-11.1483	-0.0435	0.1777
782	SLU 44	1.97	-0.25	114.84	-11.1531	-0.0468	0.1774
782	SLU 45	2.01	-0.39	116.85	-11.3478	-0.0414	0.1815
782	SLU 46	2.01	-0.3	116.88	-11.3507	-0.0434	0.1813
782	SLU 47	1.99	-0.26	116.11	-11.2765	-0.0454	0.1798
782	SLU 48	2.04	-0.4	118.12	-11.4712	-0.0401	0.1839
782	SLU 49	2.03	-0.31	118.15	-11.4741	-0.042	0.1837
782	SLU 50	2.02	-0.42	117.33	-11.395	-0.0408	0.1825
782	SLU 51	2.02	-0.33	117.37	-11.3979	-0.0428	0.1823
782	SLU 52	2.08	-0.23	127.18	-12.3524	-0.0446	0.1879
782	SLU 53	2.13	-0.37	129.19	-12.5471	-0.0392	0.1921
782	SLU 54	2.12	-0.28	129.22	-12.55	-0.0412	0.1919
782	SLU 55	2.11	-0.24	128.45	-12.4758	-0.0432	0.1903
782	SLU 56	2.15	-0.38	130.46	-12.6705	-0.0379	0.1945
782	SLU 57	2.15	-0.29	130.49	-12.6734	-0.0398	0.1943
782	SLU 58	2.14	-0.4	129.67	-12.5943	-0.0386	0.193
782	SLU 59	2.13	-0.31	129.7	-12.5972	-0.0406	0.1928
782	SLU 60	2.14	-0.37	132.41	-12.8615	-0.0404	0.1928
782	SLU 61	2.13	-0.28	132.45	-12.8644	-0.0424	0.1926
782	SLU 62	2.16	-0.38	133.69	-12.9849	-0.0391	0.1952
782	SLU 63	2.16	-0.29	133.72	-12.9878	-0.041	0.195
782	SLU 64	2.12	-0.35	126.77	-12.31	-0.0451	0.1919
782	SLU 65	2.12	-0.2	126.82	-12.3149	-0.0484	0.1916
782	SLU 66	2.16	-0.34	128.83	-12.5096	-0.043	0.1958
782	SLU 67	2.16	-0.25	128.86	-12.5125	-0.0449	0.1956
782	SLU 68	2.14	-0.21	128.09	-12.4383	-0.047	0.194
782	SLU 69	2.19	-0.35	130.1	-12.633	-0.0416	0.1981
782	SLU 70	2.19	-0.26	130.13	-12.6359	-0.0436	0.1979
782	SLU 71	2.17	-0.37	129.31	-12.5568	-0.0424	0.1967
782	SLU 72	2.17	-0.28	129.34	-12.5597	-0.0444	0.1965
782	SLU 73	2.23	-0.17	139.16	-13.5142	-0.0462	0.2022
782	SLU 74	2.28	-0.32	141.17	-13.7089	-0.0408	0.2063
782	SLU 75	2.28	-0.23	141.2	-13.7118	-0.0427	0.2061
782	SLU 76	2.26	-0.18	140.43	-13.6375	-0.0448	0.2045
782	SLU 77	2.3	-0.33	142.44	-13.8323	-0.0394	0.2087
782	SLU 78	2.3	-0.24	142.47	-13.8352	-0.0414	0.2085
782	SLU 79	2.29	-0.34	141.65	-13.7561	-0.0402	0.2072
782	SLU 80	2.29	-0.25	141.68	-13.759	-0.0422	0.207
782	SLU 81	2.29	-0.31	144.39	-14.0233	-0.042	0.207
782	SLU 82	2.29	-0.23	144.43	-14.0262	-0.0439	0.2068
782	SLU 83	2.31	-0.32	145.67	-14.1467	-0.0406	0.2094
782	SLU 84	2.31	-0.23	145.7	-14.1496	-0.0426	0.2092
782	SLE RA 1	1.6	-0.28	94.88	-9.2139	-0.0344	0.1445
782	SLE RA 2	1.6	-0.18	94.92	-9.2172	-0.0365	0.1443
782	SLE RA 3	1.63	-0.27	96.25	-9.347	-0.0329	0.1471
782	SLE RA 4	1.63	-0.21	96.28	-9.3489	-0.0342	0.1469
782	SLE RA 5	1.61	-0.19	95.76	-9.2994	-0.0356	0.1459
782	SLE RA 6	1.64	-0.28	97.1	-9.4292	-0.032	0.1487
782	SLE RA 7	1.64	-0.22	97.12	-9.4312	-0.0333	0.1485
782	SLE RA 8	1.63	-0.29	96.58	-9.3784	-0.0326	0.1477
782	SLE RA 9	1.63	-0.23	96.6	-9.3804	-0.0339	0.1476
782	SLE RA 10	1.67	-0.16	103.14	-10.0167	-0.0351	0.1513
782	SLE RA 11	1.7	-0.26	104.48	-10.1465	-0.0315	0.1541
782	SLE RA 12	1.7	-0.2	104.5	-10.1484	-0.0328	0.154
782	SLE RA 13	1.69	-0.17	103.99	-10.0989	-0.0342	0.1529
782	SLE RA 14	1.72	-0.26	105.33	-10.2287	-0.0306	0.1557
782	SLE RA 15	1.72	-0.2	105.35	-10.2307	-0.0319	0.1556
782	SLE RA 16	1.71	-0.28	104.8	-10.178	-0.0311	0.1547
782	SLE RA 17	1.71	-0.22	104.82	-10.1799	-0.0324	0.1546
782	SLE RA 18	1.71	-0.26	106.63	-10.3561	-0.0323	0.1546
782	SLE RA 19	1.71	-0.2	106.65	-10.358	-0.0336	0.1544
782	SLE RA 20	1.73	-0.26	107.48	-10.4384	-0.0314	0.1561
782	SLE RA 21	1.72	-0.2	107.5	-10.4403	-0.0327	0.156
782	SLE FR 1	1.6	-0.28	94.88	-9.2139	-0.0344	0.1445
782	SLE FR 2	1.6	-0.26	94.89	-9.2146	-0.0348	0.1445
782	SLE FR 3	1.61	-0.28	95.22	-9.2468	-0.034	0.1451
782	SLE FR 4	1.63	-0.25	98.41	-9.5572	-0.0342	0.1475
782	SLE FR 5	1.64	-0.27	98.74	-9.5895	-0.0334	0.1482
782	SLE FR 6	1.66	-0.27	100.76	-9.785	-0.0333	0.1495
782	SLE QP 1	1.6	-0.28	94.88	-9.2139	-0.0344	0.1445
782	SLE QP 2	1.63	-0.27	98.41	-9.5566	-0.0337	0.1475
782	SLD 1	9.49	1.4	89.34	-8.6906	0.0757	0.8922
782	SLD 2	9.31	2.27	89.35	-8.6939	0.076	0.8952
782	SLD 3	9.59	-1.35	88.81	-8.6508	0.1377	0.9012
782	SLD 4	9.4	-0.47	88.82	-8.654	0.138	0.9043
782	SLD 5	3.88	4.24	96.49	-9.3566	-0.0951	0.3566
782	SLD 6	3.75	4.81	96.5	-9.3588	-0.0948	0.3586
782	SLD 7	4.2	-4.91	94.71	-9.2238	0.1117	0.3868
782	SLD 8	4.08	-4.34	94.72	-9.226	0.1119	0.3888
782	SLD 9	-0.81	3.8	102.09	-9.8872	-0.1794	-0.0938
782	SLD 10	-0.94	4.37	102.1	-9.8893	-0.1792	-0.0918
782	SLD 11	-0.49	-5.35	100.31	-9.7544	0.0274	-0.0636

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
782	SLD 12	-0.61	-4.78	100.32	-9.7565	0.0276	-0.0616
782	SLD 13	-6.14	-0.07	107.99	-10.4592	-0.2055	-0.6092
782	SLD 14	-6.33	0.81	108	-10.4624	-0.2052	-0.6062
782	SLD 15	-6.04	-2.82	107.46	-10.4193	-0.1435	-0.6002
782	SLD 16	-6.23	-1.94	107.47	-10.4226	-0.1431	-0.5971
782	SLV 1	20.01	3.55	77.16	-7.528	0.2227	1.889
782	SLV 2	19.58	5.6	77.19	-7.5355	0.2234	1.8961
782	SLV 3	20.24	-2.7	75.95	-7.4373	0.3662	1.9102
782	SLV 4	19.81	-0.66	75.98	-7.4448	0.367	1.9173
782	SLV 5	6.88	10.01	93.87	-9.0842	-0.1747	0.6366
782	SLV 6	6.6	11.32	93.89	-9.0891	-0.1742	0.6412
782	SLV 7	7.64	-10.84	89.82	-8.7819	0.3039	0.7072
782	SLV 8	7.36	-9.52	89.84	-8.7868	0.3044	0.7118
782	SLV 9	-4.09	8.98	106.97	-10.3263	-0.3718	-0.4167
782	SLV 10	-4.37	10.29	106.99	-10.3312	-0.3714	-0.4121
782	SLV 11	-3.33	-11.87	102.92	-10.0241	0.1068	-0.3461
782	SLV 12	-3.61	-10.55	102.94	-10.0289	0.1073	-0.3416
782	SLV 13	-16.54	0.11	120.83	-11.6683	-0.4344	-1.6222
782	SLV 14	-16.98	2.16	120.86	-11.6759	-0.4337	-1.6151
782	SLV 15	-16.31	-6.14	119.62	-11.5776	-0.2909	-1.601
782	SLV 16	-16.75	-4.09	119.65	-11.5852	-0.2901	-1.5939
782	CRTFP Ux+	0	0	0	0	0	0
782	CRTFP Ux-	0	0	0	0	0	0
782	CRTFP Uy+	0	0	0	0	0	0
782	CRTFP Uy-	0	0	0	0	0	0
785	SLU 1	0.34	0.22	27.18	-0.0163	6.1683	-0.06
785	SLU 2	0.34	0.27	27.21	-0.0163	6.1716	-0.0715
785	SLU 3	0.35	0.24	27.79	-0.0168	6.3065	-0.0642
785	SLU 4	0.35	0.27	27.81	-0.0168	6.3085	-0.0711
785	SLU 5	0.35	0.27	27.59	-0.0166	6.257	-0.0725
785	SLU 6	0.36	0.24	28.17	-0.0171	6.3918	-0.0653
785	SLU 7	0.36	0.27	28.19	-0.0171	6.3938	-0.0722
785	SLU 8	0.36	0.23	27.94	-0.017	6.339	-0.0621
785	SLU 9	0.36	0.26	27.96	-0.017	6.341	-0.069
785	SLU 10	0.4	0.3	31.01	-0.019	7.024	-0.0796
785	SLU 11	0.41	0.27	31.6	-0.0194	7.1589	-0.0723
785	SLU 12	0.41	0.3	31.61	-0.0194	7.1609	-0.0792
785	SLU 13	0.4	0.3	31.39	-0.0193	7.1093	-0.0806
785	SLU 14	0.41	0.27	31.97	-0.0198	7.2442	-0.0734
785	SLU 15	0.41	0.3	31.99	-0.0197	7.2462	-0.0803
785	SLU 16	0.41	0.26	31.74	-0.0196	7.1914	-0.0702
785	SLU 17	0.41	0.29	31.76	-0.0196	7.1933	-0.0771
785	SLU 18	0.42	0.27	32.62	-0.0201	7.386	-0.0716
785	SLU 19	0.42	0.29	32.63	-0.0201	7.388	-0.0784
785	SLU 20	0.43	0.27	32.99	-0.0204	7.4713	-0.0726
785	SLU 21	0.43	0.3	33.01	-0.0204	7.4733	-0.0795
785	SLU 22	0.39	0.29	30.79	-0.0182	6.9774	-0.0768
785	SLU 23	0.39	0.33	30.81	-0.0182	6.9807	-0.0883
785	SLU 24	0.4	0.3	31.4	-0.0187	7.1156	-0.081
785	SLU 25	0.4	0.33	31.41	-0.0186	7.1176	-0.0879
785	SLU 26	0.4	0.34	31.19	-0.0185	7.0661	-0.0893
785	SLU 27	0.41	0.31	31.78	-0.019	7.201	-0.0821
785	SLU 28	0.4	0.33	31.79	-0.019	7.2029	-0.0889
785	SLU 29	0.4	0.29	31.55	-0.0188	7.1481	-0.0789
785	SLU 30	0.4	0.32	31.56	-0.0188	7.1501	-0.0858
785	SLU 31	0.44	0.36	34.62	-0.0208	7.8331	-0.0963
785	SLU 32	0.45	0.33	35.2	-0.0213	7.968	-0.0891
785	SLU 33	0.45	0.36	35.22	-0.0213	7.97	-0.096
785	SLU 34	0.45	0.37	35	-0.0211	7.9184	-0.0974
785	SLU 35	0.46	0.34	35.58	-0.0216	8.0533	-0.0901
785	SLU 36	0.46	0.37	35.59	-0.0216	8.0553	-0.097
785	SLU 37	0.46	0.32	35.35	-0.0214	8.0005	-0.087
785	SLU 38	0.46	0.35	35.36	-0.0214	8.0024	-0.0939
785	SLU 39	0.47	0.33	36.22	-0.0219	8.1951	-0.0883
785	SLU 40	0.47	0.36	36.24	-0.0219	8.1971	-0.0952
785	SLU 41	0.47	0.33	36.6	-0.0222	8.2804	-0.0894
785	SLU 42	0.47	0.36	36.61	-0.0222	8.2824	-0.0963
785	SLU 43	0.43	0.27	34.1	-0.0206	7.7414	-0.0722
785	SLU 44	0.43	0.31	34.13	-0.0206	7.7447	-0.0837
785	SLU 45	0.44	0.28	34.71	-0.0211	7.8796	-0.0765
785	SLU 46	0.44	0.31	34.73	-0.0211	7.8816	-0.0833
785	SLU 47	0.44	0.32	34.51	-0.0209	7.83	-0.0848
785	SLU 48	0.45	0.29	35.09	-0.0214	7.9649	-0.0775
785	SLU 49	0.45	0.31	35.11	-0.0214	7.9669	-0.0844
785	SLU 50	0.44	0.27	34.86	-0.0212	7.9121	-0.0744
785	SLU 51	0.44	0.3	34.88	-0.0212	7.9141	-0.0813
785	SLU 52	0.48	0.34	37.93	-0.0232	8.5971	-0.0918
785	SLU 53	0.49	0.31	38.51	-0.0237	8.732	-0.0846
785	SLU 54	0.49	0.34	38.53	-0.0237	8.734	-0.0914
785	SLU 55	0.49	0.35	38.31	-0.0235	8.6824	-0.0929
785	SLU 56	0.5	0.32	38.89	-0.024	8.8173	-0.0856
785	SLU 57	0.5	0.34	38.91	-0.024	8.8193	-0.0925
785	SLU 58	0.5	0.3	38.66	-0.0239	8.7644	-0.0825
785	SLU 59	0.5	0.33	38.68	-0.0239	8.7664	-0.0893
785	SLU 60	0.51	0.31	39.53	-0.0244	8.9591	-0.0838
785	SLU 61	0.51	0.34	39.55	-0.0244	8.9611	-0.0907
785	SLU 62	0.51	0.31	39.91	-0.0247	9.0444	-0.0849
785	SLU 63	0.51	0.34	39.93	-0.0247	9.0464	-0.0917
785	SLU 64	0.48	0.33	37.71	-0.0225	8.5505	-0.089
785	SLU 65	0.48	0.38	37.73	-0.0224	8.5538	-0.1005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
785	SLU 66	0.49	0.35	38.32	-0.0229	8.6887	-0.0932
785	SLU 67	0.48	0.38	38.33	-0.0229	8.6907	-0.1001
785	SLU 68	0.48	0.38	38.11	-0.0228	8.6392	-0.1016
785	SLU 69	0.49	0.35	38.7	-0.0232	8.774	-0.0943
785	SLU 70	0.49	0.38	38.71	-0.0232	8.776	-0.1012
785	SLU 71	0.49	0.34	38.46	-0.0231	8.7212	-0.0911
785	SLU 72	0.49	0.37	38.48	-0.0231	8.7232	-0.098
785	SLU 73	0.53	0.41	41.54	-0.0251	9.4062	-0.1086
785	SLU 74	0.54	0.38	42.12	-0.0256	9.5411	-0.1013
785	SLU 75	0.54	0.41	42.13	-0.0256	9.5431	-0.1082
785	SLU 76	0.54	0.41	41.91	-0.0254	9.4915	-0.1097
785	SLU 77	0.55	0.38	42.5	-0.0259	9.6264	-0.1024
785	SLU 78	0.55	0.41	42.51	-0.0259	9.6284	-0.1093
785	SLU 79	0.54	0.37	42.27	-0.0257	9.5735	-0.0992
785	SLU 80	0.54	0.4	42.28	-0.0257	9.5755	-0.1061
785	SLU 81	0.55	0.37	43.14	-0.0262	9.7682	-0.1006
785	SLU 82	0.55	0.4	43.15	-0.0262	9.7702	-0.1075
785	SLU 83	0.56	0.38	43.52	-0.0265	9.8535	-0.1016
785	SLU 84	0.56	0.41	43.53	-0.0265	9.8555	-0.1085
785	SLE RA 1	0.36	0.24	28.21	-0.0169	6.3995	-0.0648
785	SLE RA 2	0.36	0.27	28.23	-0.0169	6.4017	-0.0724
785	SLE RA 3	0.36	0.25	28.62	-0.0172	6.4916	-0.0676
785	SLE RA 4	0.36	0.27	28.63	-0.0172	6.4929	-0.0722
785	SLE RA 5	0.36	0.27	28.48	-0.0171	6.4586	-0.0731
785	SLE RA 6	0.37	0.25	28.87	-0.0174	6.5485	-0.0683
785	SLE RA 7	0.37	0.27	28.88	-0.0174	6.5498	-0.0729
785	SLE RA 8	0.37	0.25	28.72	-0.0173	6.5133	-0.0662
785	SLE RA 9	0.37	0.26	28.73	-0.0173	6.5146	-0.0708
785	SLE RA 10	0.39	0.29	30.77	-0.0186	6.9699	-0.0778
785	SLE RA 11	0.4	0.27	31.15	-0.0189	7.0599	-0.073
785	SLE RA 12	0.4	0.29	31.17	-0.0189	7.0612	-0.0776
785	SLE RA 13	0.4	0.29	31.02	-0.0188	7.0268	-0.0785
785	SLE RA 14	0.4	0.27	31.41	-0.0191	7.1168	-0.0737
785	SLE RA 15	0.4	0.29	31.42	-0.0191	7.1181	-0.0783
785	SLE RA 16	0.4	0.27	31.25	-0.019	7.0815	-0.0716
785	SLE RA 17	0.4	0.28	31.26	-0.019	7.0828	-0.0762
785	SLE RA 18	0.41	0.27	31.83	-0.0194	7.2113	-0.0725
785	SLE RA 19	0.41	0.29	31.84	-0.0194	7.2126	-0.0771
785	SLE RA 20	0.41	0.27	32.09	-0.0196	7.2682	-0.0732
785	SLE RA 21	0.41	0.29	32.1	-0.0196	7.2695	-0.0778
785	SLE FR 1	0.36	0.24	28.21	-0.0169	6.3995	-0.0648
785	SLE FR 2	0.36	0.25	28.22	-0.0169	6.3999	-0.0663
785	SLE FR 3	0.36	0.24	28.31	-0.017	6.4222	-0.0651
785	SLE FR 4	0.37	0.26	29.3	-0.0176	6.6435	-0.0686
785	SLE FR 5	0.37	0.25	29.4	-0.0177	6.6658	-0.0674
785	SLE FR 6	0.38	0.26	30.02	-0.0181	6.8054	-0.0686
785	SLE QP 1	0.36	0.24	28.21	-0.0169	6.3995	-0.0648
785	SLE QP 2	0.37	0.25	29.3	-0.0176	6.643	-0.0671
785	SLD 1	3.13	0.95	30.48	-0.0062	6.8805	-0.2433
785	SLD 2	3.06	0.81	30.44	-0.0062	6.8788	-0.2086
785	SLD 3	3.17	-0.02	30.1	-0.0074	6.8553	-0.0011
785	SLD 4	3.09	-0.16	30.06	-0.0075	6.8537	0.0336
785	SLD 5	1.16	1.95	30.23	-0.0123	6.7527	-0.4935
785	SLD 6	1.11	1.86	30.2	-0.0123	6.7517	-0.4707
785	SLD 7	1.28	-1.28	28.98	-0.0165	6.6688	0.3139
785	SLD 8	1.23	-1.37	28.95	-0.0165	6.6677	0.3366
785	SLD 9	-0.49	1.86	29.65	-0.0188	6.6183	-0.4708
785	SLD 10	-0.53	1.78	29.62	-0.0188	6.6173	-0.4481
785	SLD 11	-0.37	-1.37	28.39	-0.023	6.5344	0.3365
785	SLD 12	-0.41	-1.45	28.37	-0.023	6.5333	0.3593
785	SLD 13	-2.35	0.65	28.54	-0.0278	6.4324	-0.1678
785	SLD 14	-2.42	0.52	28.5	-0.0278	6.4308	-0.1331
785	SLD 15	-2.31	-0.31	28.16	-0.029	6.4072	0.0744
785	SLD 16	-2.39	-0.45	28.12	-0.0291	6.4056	0.1091
785	SLV 1	6.82	1.85	32.09	0.0093	7.2022	-0.4717
785	SLV 2	6.65	1.54	31.99	0.0092	7.1984	-0.391
785	SLV 3	6.9	-0.35	31.23	0.0064	7.1447	0.0799
785	SLV 4	6.73	-0.67	31.13	0.0064	7.1409	0.1606
785	SLV 5	2.21	4.13	31.45	-0.0052	6.8987	-1.039
785	SLV 6	2.1	3.93	31.39	-0.0052	6.8962	-0.987
785	SLV 7	2.49	-3.22	28.6	-0.0148	6.7069	0.7997
785	SLV 8	2.38	-3.43	28.53	-0.0148	6.7045	0.8517
785	SLV 9	-1.63	3.92	30.06	-0.0204	6.5815	-0.9859
785	SLV 10	-1.74	3.72	30	-0.0205	6.5791	-0.9339
785	SLV 11	-1.35	-3.43	27.21	-0.03	6.3898	0.8528
785	SLV 12	-1.47	-3.63	27.15	-0.0301	6.3874	0.9048
785	SLV 13	-5.99	1.16	27.47	-0.0416	6.1451	-0.2948
785	SLV 14	-6.16	0.85	27.37	-0.0416	6.1414	-0.2141
785	SLV 15	-5.9	-1.04	26.61	-0.0445	6.0876	0.2568
785	SLV 16	-6.08	-1.36	26.51	-0.0445	6.0839	0.3375
785	CRTFP Ux+	0	0	0	0	0	0
785	CRTFP Ux-	0	0	0	0	0	0
785	CRTFP Uy+	0	0	0	0	0	0
785	CRTFP Uy-	0	0	0	0	0	0
787	SLU 1	0.83	1.21	49.05	-0.0437	-0.3441	-0.0135
787	SLU 2	0.83	1.31	49.09	-0.0436	-0.3455	-0.0135
787	SLU 3	0.86	1.27	50.1	-0.0446	-0.3528	-0.0139
787	SLU 4	0.86	1.32	50.13	-0.0446	-0.3537	-0.0138
787	SLU 5	0.85	1.33	49.77	-0.044	-0.3506	-0.0138
787	SLU 6	0.87	1.29	50.77	-0.0451	-0.358	-0.0141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
787	SLU 7	0.87	1.34	50.8	-0.045	-0.3588	-0.0141
787	SLU 8	0.87	1.26	50.39	-0.0446	-0.3543	-0.0141
787	SLU 9	0.87	1.31	50.42	-0.0446	-0.3552	-0.0141
787	SLU 10	0.96	1.48	55.72	-0.0508	-0.4017	-0.0166
787	SLU 11	0.98	1.44	56.73	-0.0519	-0.4091	-0.017
787	SLU 12	0.98	1.49	56.76	-0.0518	-0.4099	-0.017
787	SLU 13	0.97	1.5	56.4	-0.0513	-0.4069	-0.0169
787	SLU 14	1	1.46	57.4	-0.0523	-0.4142	-0.0172
787	SLU 15	1	1.52	57.43	-0.0523	-0.4151	-0.0172
787	SLU 16	0.99	1.43	57.02	-0.0519	-0.4106	-0.0172
787	SLU 17	0.99	1.48	57.05	-0.0518	-0.4114	-0.0172
787	SLU 18	1.01	1.46	58.52	-0.054	-0.4244	-0.018
787	SLU 19	1.01	1.52	58.55	-0.054	-0.4253	-0.018
787	SLU 20	1.03	1.48	59.19	-0.0545	-0.4296	-0.0183
787	SLU 21	1.03	1.54	59.22	-0.0545	-0.4304	-0.0182
787	SLU 22	0.96	1.44	55.29	-0.0484	-0.4034	-0.0161
787	SLU 23	0.96	1.53	55.34	-0.0483	-0.4048	-0.0161
787	SLU 24	0.98	1.49	56.34	-0.0493	-0.4121	-0.0164
787	SLU 25	0.98	1.55	56.37	-0.0493	-0.413	-0.0164
787	SLU 26	0.97	1.55	56.01	-0.0488	-0.4099	-0.0164
787	SLU 27	1	1.51	57.02	-0.0498	-0.4173	-0.0167
787	SLU 28	1	1.57	57.04	-0.0498	-0.4181	-0.0167
787	SLU 29	0.99	1.48	56.64	-0.0493	-0.4137	-0.0167
787	SLU 30	0.99	1.54	56.67	-0.0493	-0.4145	-0.0167
787	SLU 31	1.08	1.7	61.97	-0.0556	-0.461	-0.0192
787	SLU 32	1.1	1.66	62.97	-0.0566	-0.4684	-0.0195
787	SLU 33	1.11	1.72	63	-0.0566	-0.4692	-0.0195
787	SLU 34	1.1	1.72	62.64	-0.056	-0.4662	-0.0195
787	SLU 35	1.12	1.69	63.65	-0.0571	-0.4735	-0.0198
787	SLU 36	1.12	1.74	63.68	-0.057	-0.4744	-0.0198
787	SLU 37	1.11	1.65	63.27	-0.0566	-0.4699	-0.0198
787	SLU 38	1.12	1.71	63.3	-0.0566	-0.4708	-0.0198
787	SLU 39	1.13	1.69	64.77	-0.0588	-0.4838	-0.0206
787	SLU 40	1.13	1.74	64.79	-0.0587	-0.4846	-0.0205
787	SLU 41	1.15	1.71	65.44	-0.0593	-0.4889	-0.0208
787	SLU 42	1.15	1.76	65.47	-0.0592	-0.4897	-0.0208
787	SLU 43	1.04	1.5	61.62	-0.0552	-0.427	-0.0167
787	SLU 44	1.04	1.59	61.67	-0.0551	-0.4284	-0.0167
787	SLU 45	1.06	1.55	62.67	-0.0561	-0.4357	-0.017
787	SLU 46	1.06	1.61	62.7	-0.056	-0.4366	-0.017
787	SLU 47	1.06	1.61	62.34	-0.0555	-0.4335	-0.017
787	SLU 48	1.08	1.58	63.34	-0.0566	-0.4408	-0.0173
787	SLU 49	1.08	1.63	63.37	-0.0565	-0.4417	-0.0173
787	SLU 50	1.07	1.54	62.97	-0.0561	-0.4372	-0.0173
787	SLU 51	1.07	1.6	62.99	-0.056	-0.4381	-0.0173
787	SLU 52	1.16	1.77	68.3	-0.0623	-0.4846	-0.0198
787	SLU 53	1.19	1.73	69.3	-0.0634	-0.492	-0.0201
787	SLU 54	1.19	1.78	69.33	-0.0633	-0.4928	-0.0201
787	SLU 55	1.18	1.79	68.97	-0.0628	-0.4898	-0.0201
787	SLU 56	1.21	1.75	69.97	-0.0638	-0.4971	-0.0204
787	SLU 57	1.21	1.8	70	-0.0638	-0.4979	-0.0204
787	SLU 58	1.2	1.72	69.6	-0.0634	-0.4935	-0.0204
787	SLU 59	1.2	1.77	69.62	-0.0633	-0.4943	-0.0204
787	SLU 60	1.22	1.75	71.09	-0.0655	-0.5073	-0.0212
787	SLU 61	1.22	1.8	71.12	-0.0655	-0.5082	-0.0211
787	SLU 62	1.23	1.77	71.77	-0.066	-0.5125	-0.0214
787	SLU 63	1.23	1.82	71.79	-0.0659	-0.5133	-0.0214
787	SLU 64	1.16	1.73	67.87	-0.0599	-0.4863	-0.0193
787	SLU 65	1.17	1.82	67.91	-0.0598	-0.4877	-0.0193
787	SLU 66	1.19	1.78	68.92	-0.0608	-0.495	-0.0196
787	SLU 67	1.19	1.83	68.94	-0.0608	-0.4959	-0.0196
787	SLU 68	1.18	1.84	68.58	-0.0603	-0.4928	-0.0196
787	SLU 69	1.21	1.8	69.59	-0.0613	-0.5002	-0.0199
787	SLU 70	1.21	1.85	69.62	-0.0612	-0.501	-0.0199
787	SLU 71	1.2	1.77	69.21	-0.0608	-0.4965	-0.0198
787	SLU 72	1.2	1.82	69.24	-0.0608	-0.4974	-0.0198
787	SLU 73	1.29	1.99	74.54	-0.0671	-0.5439	-0.0224
787	SLU 74	1.31	1.95	75.55	-0.0681	-0.5513	-0.0227
787	SLU 75	1.31	2.01	75.58	-0.068	-0.5521	-0.0227
787	SLU 76	1.31	2.01	75.22	-0.0675	-0.5491	-0.0227
787	SLU 77	1.33	1.97	76.22	-0.0686	-0.5564	-0.023
787	SLU 78	1.33	2.03	76.25	-0.0685	-0.5573	-0.023
787	SLU 79	1.32	1.94	75.84	-0.0681	-0.5528	-0.023
787	SLU 80	1.32	2	75.87	-0.068	-0.5536	-0.0229
787	SLU 81	1.34	1.97	77.34	-0.0703	-0.5666	-0.0237
787	SLU 82	1.34	2.03	77.37	-0.0702	-0.5675	-0.0237
787	SLU 83	1.36	1.99	78.01	-0.0707	-0.5718	-0.024
787	SLU 84	1.36	2.05	78.04	-0.0707	-0.5726	-0.024
787	SLE RA 1	0.87	1.28	50.83	-0.045	-0.361	-0.0143
787	SLE RA 2	0.87	1.34	50.86	-0.045	-0.362	-0.0143
787	SLE RA 3	0.88	1.31	51.53	-0.0457	-0.3669	-0.0145
787	SLE RA 4	0.88	1.35	51.55	-0.0456	-0.3674	-0.0145
787	SLE RA 5	0.88	1.35	51.31	-0.0453	-0.3654	-0.0144
787	SLE RA 6	0.9	1.33	51.98	-0.046	-0.3703	-0.0147
787	SLE RA 7	0.9	1.36	52	-0.0459	-0.3708	-0.0147
787	SLE RA 8	0.89	1.31	51.73	-0.0457	-0.3679	-0.0146
787	SLE RA 9	0.89	1.34	51.75	-0.0456	-0.3684	-0.0146
787	SLE RA 10	0.95	1.45	55.28	-0.0498	-0.3995	-0.0163
787	SLE RA 11	0.97	1.43	55.95	-0.0505	-0.4044	-0.0166
787	SLE RA 12	0.97	1.46	55.97	-0.0505	-0.4049	-0.0166

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
787	SLE RA 13	0.96	1.47	55.73	-0.0501	-0.4029	-0.0165
787	SLE RA 14	0.98	1.44	56.4	-0.0508	-0.4078	-0.0167
787	SLE RA 15	0.98	1.48	56.42	-0.0508	-0.4083	-0.0167
787	SLE RA 16	0.97	1.42	56.15	-0.0505	-0.4054	-0.0167
787	SLE RA 17	0.97	1.46	56.17	-0.0505	-0.4059	-0.0167
787	SLE RA 18	0.99	1.44	57.15	-0.0519	-0.4146	-0.0172
787	SLE RA 19	0.99	1.48	57.17	-0.0519	-0.4152	-0.0172
787	SLE RA 20	1	1.46	57.6	-0.0523	-0.418	-0.0174
787	SLE RA 21	1	1.49	57.61	-0.0522	-0.4186	-0.0174
787	SLE FR 1	0.87	1.28	50.83	-0.045	-0.361	-0.0143
787	SLE FR 2	0.87	1.29	50.84	-0.045	-0.3612	-0.0143
787	SLE FR 3	0.87	1.28	51.01	-0.0452	-0.3624	-0.0143
787	SLE FR 4	0.9	1.34	52.73	-0.0471	-0.3773	-0.0152
787	SLE FR 5	0.91	1.33	52.91	-0.0472	-0.3785	-0.0152
787	SLE FR 6	0.93	1.36	53.99	-0.0485	-0.3878	-0.0158
787	SLE QP 1	0.87	1.28	50.83	-0.045	-0.361	-0.0143
787	SLE QP 2	0.9	1.33	52.73	-0.0471	-0.3771	-0.0152
787	SLD 1	6.48	1.87	49.49	-0.0619	-0.0725	-0.0383
787	SLD 2	6.33	2.08	49.6	-0.0618	-0.0748	-0.0277
787	SLD 3	6.4	0.01	48.81	-0.0651	-0.0453	-0.0395
787	SLD 4	6.25	0.23	48.91	-0.065	-0.0476	-0.0289
787	SLD 5	2.73	4.26	52.78	-0.0467	-0.3265	-0.0221
787	SLD 6	2.63	4.41	52.85	-0.0467	-0.328	-0.0152
787	SLD 7	2.45	-1.92	50.49	-0.0574	-0.236	-0.0262
787	SLD 8	2.35	-1.78	50.56	-0.0573	-0.2375	-0.0193
787	SLD 9	-0.54	4.43	54.89	-0.0369	-0.5167	-0.011
787	SLD 10	-0.65	4.58	54.96	-0.0369	-0.5182	-0.0041
787	SLD 11	-0.82	-1.75	52.6	-0.0475	-0.4262	-0.0152
787	SLD 12	-0.92	-1.61	52.68	-0.0475	-0.4277	-0.0082
787	SLD 13	-4.44	2.43	56.54	-0.0292	-0.7066	-0.0014
787	SLD 14	-4.59	2.65	56.64	-0.0291	-0.7089	0.0092
787	SLD 15	-4.52	0.57	55.85	-0.0324	-0.6794	-0.0026
787	SLD 16	-4.68	0.79	55.96	-0.0323	-0.6817	0.008
787	SLV 1	13.95	2.53	45.14	-0.0819	0.3367	-0.0692
787	SLV 2	13.6	3.04	45.38	-0.0815	0.3314	-0.0446
787	SLV 3	13.76	-1.7	43.58	-0.0891	0.3983	-0.0721
787	SLV 4	13.4	-1.19	43.83	-0.0888	0.393	-0.0475
787	SLV 5	5.17	8.01	52.76	-0.0466	-0.2556	-0.0313
787	SLV 6	4.94	8.34	52.92	-0.0464	-0.259	-0.0154
787	SLV 7	4.53	-6.08	47.59	-0.0708	-0.0501	-0.0409
787	SLV 8	4.3	-5.75	47.75	-0.0705	-0.0535	-0.025
787	SLV 9	-2.49	8.4	57.71	-0.0237	-0.7007	-0.0053
787	SLV 10	-2.72	8.73	57.87	-0.0234	-0.7041	0.0105
787	SLV 11	-3.14	-5.68	52.53	-0.0478	-0.4952	-0.015
787	SLV 12	-3.37	-5.35	52.69	-0.0476	-0.4986	0.0009
787	SLV 13	-11.59	3.85	61.62	-0.0054	-1.1472	0.0171
787	SLV 14	-11.95	4.35	61.87	-0.0051	-1.1525	0.0418
787	SLV 15	-11.79	-0.38	60.07	-0.0127	-1.0856	0.0142
787	SLV 16	-12.15	0.13	60.32	-0.0123	-1.0909	0.0389
787	CRTFP Ux+	0	0	0	0	0	0
787	CRTFP Ux-	0	0	0	0	0	0
789	SLU 1	-0.66	-0.11	32.47	-0.037	-3.2694	-0.0275
789	SLU 2	-0.66	-0.03	32.48	-0.037	-3.2692	-0.0071
789	SLU 3	-0.68	-0.11	33.22	-0.0379	-3.3338	-0.0278
789	SLU 4	-0.67	-0.06	33.23	-0.0379	-3.3337	-0.0155
789	SLU 5	-0.67	-0.03	32.95	-0.0376	-3.309	-0.0078
789	SLU 6	-0.69	-0.11	33.69	-0.0384	-3.3736	-0.0285
789	SLU 7	-0.68	-0.06	33.7	-0.0384	-3.3735	-0.0163
789	SLU 8	-0.68	-0.12	33.41	-0.0381	-3.349	-0.029
789	SLU 9	-0.68	-0.07	33.42	-0.0381	-3.3489	-0.0168
789	SLU 10	-0.71	-0.02	36.56	-0.0427	-3.6732	-0.0053
789	SLU 11	-0.73	-0.1	37.3	-0.0435	-3.7378	-0.026
789	SLU 12	-0.73	-0.05	37.3	-0.0435	-3.7377	-0.0138
789	SLU 13	-0.72	-0.02	37.03	-0.0432	-3.713	-0.0061
789	SLU 14	-0.74	-0.11	37.77	-0.0441	-3.7776	-0.0268
789	SLU 15	-0.74	-0.06	37.77	-0.0441	-3.7775	-0.0145
789	SLU 16	-0.73	-0.11	37.49	-0.0437	-3.753	-0.0272
789	SLU 17	-0.73	-0.06	37.49	-0.0438	-3.7529	-0.015
789	SLU 18	-0.73	-0.1	38.29	-0.045	-3.8466	-0.025
789	SLU 19	-0.73	-0.05	38.3	-0.0451	-3.8464	-0.0127
789	SLU 20	-0.75	-0.1	38.76	-0.0456	-3.8864	-0.0257
789	SLU 21	-0.74	-0.05	38.77	-0.0456	-3.8862	-0.0135
789	SLU 22	-0.73	-0.1	36.54	-0.0423	-3.6632	-0.0251
789	SLU 23	-0.72	-0.02	36.55	-0.0424	-3.663	-0.0047
789	SLU 24	-0.74	-0.1	37.29	-0.0432	-3.7276	-0.0254
789	SLU 25	-0.74	-0.05	37.3	-0.0432	-3.7274	-0.0131
789	SLU 26	-0.73	-0.02	37.02	-0.0429	-3.7028	-0.0055
789	SLU 27	-0.75	-0.1	37.76	-0.0437	-3.7674	-0.0261
789	SLU 28	-0.75	-0.05	37.77	-0.0438	-3.7672	-0.0139
789	SLU 29	-0.75	-0.11	37.48	-0.0434	-3.7428	-0.0266
789	SLU 30	-0.75	-0.06	37.49	-0.0435	-3.7426	-0.0144
789	SLU 31	-0.77	-0.01	40.63	-0.048	-4.0669	-0.0029
789	SLU 32	-0.79	-0.09	41.37	-0.0488	-4.1315	-0.0236
789	SLU 33	-0.79	-0.05	41.37	-0.0489	-4.1314	-0.0114
789	SLU 34	-0.79	-0.01	41.1	-0.0486	-4.1067	-0.0037
789	SLU 35	-0.81	-0.1	41.84	-0.0494	-4.1713	-0.0244
789	SLU 36	-0.8	-0.05	41.84	-0.0494	-4.1712	-0.0121
789	SLU 37	-0.8	-0.1	41.56	-0.0491	-4.1468	-0.0249
789	SLU 38	-0.8	-0.05	41.56	-0.0491	-4.1466	-0.0126
789	SLU 39	-0.8	-0.09	42.36	-0.0504	-4.2403	-0.0226

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
789	SLU 40	-0.8	-0.04	42.37	-0.0504	-4.2402	-0.0104
789	SLU 41	-0.81	-0.09	42.83	-0.0509	-4.2801	-0.0233
789	SLU 42	-0.81	-0.04	42.84	-0.051	-4.28	-0.0111
789	SLU 43	-0.84	-0.15	40.82	-0.0462	-4.1153	-0.0366
789	SLU 44	-0.83	-0.06	40.83	-0.0463	-4.115	-0.0161
789	SLU 45	-0.85	-0.15	41.57	-0.0471	-4.1796	-0.0368
789	SLU 46	-0.85	-0.1	41.57	-0.0471	-4.1795	-0.0246
789	SLU 47	-0.84	-0.07	41.3	-0.0469	-4.1548	-0.0169
789	SLU 48	-0.86	-0.15	42.04	-0.0477	-4.2194	-0.0376
789	SLU 49	-0.86	-0.1	42.04	-0.0477	-4.2193	-0.0253
789	SLU 50	-0.86	-0.15	41.76	-0.0474	-4.1949	-0.0381
789	SLU 51	-0.85	-0.1	41.76	-0.0474	-4.1947	-0.0258
789	SLU 52	-0.88	-0.06	44.9	-0.0519	-4.519	-0.0144
789	SLU 53	-0.9	-0.14	45.64	-0.0528	-4.5836	-0.0351
789	SLU 54	-0.9	-0.09	45.65	-0.0528	-4.5835	-0.0228
789	SLU 55	-0.89	-0.06	45.37	-0.0525	-4.5588	-0.0151
789	SLU 56	-0.91	-0.14	46.11	-0.0533	-4.6234	-0.0358
789	SLU 57	-0.91	-0.09	46.12	-0.0534	-4.6233	-0.0236
789	SLU 58	-0.91	-0.14	45.83	-0.053	-4.5989	-0.0363
789	SLU 59	-0.91	-0.1	45.84	-0.053	-4.5987	-0.0241
789	SLU 60	-0.91	-0.14	46.64	-0.0543	-4.6924	-0.034
789	SLU 61	-0.91	-0.09	46.65	-0.0543	-4.6923	-0.0218
789	SLU 62	-0.92	-0.14	47.11	-0.0549	-4.7322	-0.0348
789	SLU 63	-0.92	-0.09	47.12	-0.0549	-4.7321	-0.0226
789	SLU 64	-0.9	-0.14	44.89	-0.0516	-4.509	-0.0342
789	SLU 65	-0.9	-0.05	44.9	-0.0516	-4.5088	-0.0138
789	SLU 66	-0.92	-0.14	45.64	-0.0524	-4.5734	-0.0344
789	SLU 67	-0.92	-0.09	45.64	-0.0525	-4.5733	-0.0222
789	SLU 68	-0.91	-0.06	45.37	-0.0522	-4.5486	-0.0145
789	SLU 69	-0.93	-0.14	46.11	-0.053	-4.6132	-0.0352
789	SLU 70	-0.93	-0.09	46.11	-0.053	-4.613	-0.0229
789	SLU 71	-0.92	-0.14	45.83	-0.0527	-4.5886	-0.0357
789	SLU 72	-0.92	-0.09	45.83	-0.0527	-4.5885	-0.0234
789	SLU 73	-0.95	-0.05	48.97	-0.0573	-4.9128	-0.012
789	SLU 74	-0.97	-0.13	49.71	-0.0581	-4.9774	-0.0327
789	SLU 75	-0.97	-0.08	49.72	-0.0581	-4.9772	-0.0204
789	SLU 76	-0.96	-0.05	49.44	-0.0578	-4.9526	-0.0128
789	SLU 77	-0.98	-0.13	50.18	-0.0587	-5.0172	-0.0334
789	SLU 78	-0.98	-0.08	50.19	-0.0587	-5.017	-0.0212
789	SLU 79	-0.98	-0.14	49.9	-0.0583	-4.9926	-0.0339
789	SLU 80	-0.97	-0.09	49.91	-0.0584	-4.9925	-0.0217
789	SLU 81	-0.98	-0.13	50.71	-0.0596	-5.0862	-0.0317
789	SLU 82	-0.97	-0.08	50.72	-0.0597	-5.086	-0.0194
789	SLU 83	-0.99	-0.13	51.18	-0.0602	-5.1259	-0.0324
789	SLU 84	-0.98	-0.08	51.19	-0.0602	-5.1258	-0.0202
789	SLE RA 1	-0.68	-0.11	33.63	-0.0385	-3.3819	-0.0268
789	SLE RA 2	-0.68	-0.05	33.64	-0.0385	-3.3818	-0.0132
789	SLE RA 3	-0.69	-0.11	34.13	-0.0391	-3.4249	-0.027
789	SLE RA 4	-0.69	-0.07	34.14	-0.0391	-3.4248	-0.0188
789	SLE RA 5	-0.68	-0.05	33.95	-0.0389	-3.4083	-0.0137
789	SLE RA 6	-0.7	-0.11	34.45	-0.0395	-3.4514	-0.0275
789	SLE RA 7	-0.7	-0.08	34.45	-0.0395	-3.4513	-0.0193
789	SLE RA 8	-0.69	-0.11	34.26	-0.0392	-3.435	-0.0278
789	SLE RA 9	-0.69	-0.08	34.27	-0.0393	-3.4349	-0.0197
789	SLE RA 10	-0.71	-0.05	36.36	-0.0423	-3.6511	-0.012
789	SLE RA 11	-0.72	-0.1	36.85	-0.0428	-3.6942	-0.0258
789	SLE RA 12	-0.72	-0.07	36.85	-0.0429	-3.6941	-0.0177
789	SLE RA 13	-0.72	-0.05	36.67	-0.0427	-3.6776	-0.0125
789	SLE RA 14	-0.73	-0.1	37.16	-0.0432	-3.7207	-0.0263
789	SLE RA 15	-0.73	-0.07	37.17	-0.0432	-3.7206	-0.0182
789	SLE RA 16	-0.73	-0.11	36.98	-0.043	-3.7043	-0.0266
789	SLE RA 17	-0.73	-0.07	36.98	-0.043	-3.7042	-0.0185
789	SLE RA 18	-0.73	-0.1	37.52	-0.0439	-3.7667	-0.0251
789	SLE RA 19	-0.73	-0.07	37.52	-0.0439	-3.7666	-0.017
789	SLE RA 20	-0.74	-0.1	37.83	-0.0442	-3.7932	-0.0256
789	SLE RA 21	-0.73	-0.07	37.83	-0.0443	-3.7931	-0.0175
789	SLE FR 1	-0.68	-0.11	33.63	-0.0385	-3.3819	-0.0268
789	SLE FR 2	-0.68	-0.1	33.64	-0.0385	-3.3819	-0.0241
789	SLE FR 3	-0.68	-0.11	33.76	-0.0386	-3.3926	-0.027
789	SLE FR 4	-0.69	-0.09	34.8	-0.0401	-3.4973	-0.0236
789	SLE FR 5	-0.7	-0.11	34.92	-0.0403	-3.508	-0.0265
789	SLE FR 6	-0.7	-0.1	35.57	-0.0412	-3.5743	-0.026
789	SLE QP 1	-0.68	-0.11	33.63	-0.0385	-3.3819	-0.0268
789	SLE QP 2	-0.69	-0.1	34.8	-0.0401	-3.4974	-0.0263
789	SLD 1	1.96	1.41	44.31	-0.0537	-4.35	0.3521
789	SLD 2	1.85	0.75	44.41	-0.0531	-4.3927	0.1873
789	SLD 3	1.88	0.04	44.45	-0.0529	-4.4608	0.0097
789	SLD 4	1.77	-0.62	44.54	-0.0523	-4.5035	-0.1552
789	SLD 5	0.24	2.54	37.43	-0.0455	-3.5776	0.636
789	SLD 6	0.17	2.11	37.49	-0.0451	-3.6056	0.5279
789	SLD 7	-0.02	-2.02	37.89	-0.0428	-3.9468	-0.5056
789	SLD 8	-0.09	-2.45	37.95	-0.0424	-3.9748	-0.6137
789	SLD 9	-1.3	2.24	31.65	-0.0378	-3.02	0.5611
789	SLD 10	-1.37	1.81	31.71	-0.0374	-3.048	0.453
789	SLD 11	-1.55	-2.32	32.11	-0.0351	-3.3892	-0.5805
789	SLD 12	-1.63	-2.75	32.17	-0.0347	-3.4171	-0.6886
789	SLD 13	-3.16	0.41	25.05	-0.0279	-2.4913	0.1026
789	SLD 14	-3.27	-0.25	25.15	-0.0274	-2.534	-0.0623
789	SLD 15	-3.24	-0.96	25.19	-0.0271	-2.602	-0.2399
789	SLD 16	-3.35	-1.62	25.29	-0.0265	-2.6447	-0.4048

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
789	SLV 1	5.51	3.4	57.06	-0.0719	-5.4967	0.8475
789	SLV 2	5.26	1.85	57.28	-0.0705	-5.5961	0.4636
789	SLV 3	5.34	0.28	57.38	-0.07	-5.7495	0.068
789	SLV 4	5.08	-1.26	57.6	-0.0686	-5.8489	-0.3159
789	SLV 5	1.48	5.93	40.95	-0.0527	-3.6966	1.4843
789	SLV 6	1.31	4.94	41.1	-0.0519	-3.7607	1.2369
789	SLV 7	0.89	-4.45	42.02	-0.0464	-4.5393	-1.1142
789	SLV 8	0.73	-5.44	42.17	-0.0456	-4.6033	-1.3616
789	SLV 9	-2.12	5.23	27.43	-0.0347	-2.3914	1.309
789	SLV 10	-2.28	4.24	27.57	-0.0338	-2.4555	1.0616
789	SLV 11	-2.7	-5.15	28.5	-0.0284	-3.234	-1.2895
789	SLV 12	-2.87	-6.14	28.65	-0.0275	-3.2981	-1.5369
789	SLV 13	-6.47	1.05	11.99	-0.0116	-1.1459	0.2633
789	SLV 14	-6.73	-0.49	12.22	-0.0103	-1.2453	-0.1206
789	SLV 15	-6.64	-2.06	12.31	-0.0097	-1.3987	-0.5162
789	SLV 16	-6.9	-3.6	12.54	-0.0084	-1.4981	-0.9001
789	CRTFP Ux+	0	0	0	0	0	0
789	CRTFP Ux-	0	0	0	0	0	0
789	CRTFP Uy+	0	0	0	0	0	0
789	CRTFP Uy-	0	0	0	0	0	0
792	SLU 1	0.63	0.37	38.96	-0.0689	8.6433	-0.1298
792	SLU 2	0.62	0.47	38.97	-0.069	8.6487	-0.1632
792	SLU 3	0.65	0.39	39.85	-0.0706	8.8291	-0.1343
792	SLU 4	0.64	0.44	39.86	-0.0707	8.8323	-0.1543
792	SLU 5	0.63	0.47	39.52	-0.0701	8.7643	-0.1637
792	SLU 6	0.66	0.39	40.4	-0.0717	8.9446	-0.1348
792	SLU 7	0.65	0.45	40.41	-0.0717	8.9479	-0.1548
792	SLU 8	0.65	0.38	40.07	-0.0711	8.8744	-0.1309
792	SLU 9	0.65	0.43	40.07	-0.0711	8.8777	-0.1509
792	SLU 10	0.66	0.55	43.89	-0.0789	9.7091	-0.1925
792	SLU 11	0.69	0.47	44.77	-0.0805	9.8894	-0.1636
792	SLU 12	0.68	0.53	44.77	-0.0805	9.8926	-0.1836
792	SLU 13	0.68	0.56	44.44	-0.08	9.8246	-0.193
792	SLU 14	0.7	0.47	45.32	-0.0816	10.0049	-0.1641
792	SLU 15	0.7	0.53	45.33	-0.0816	10.0082	-0.1842
792	SLU 16	0.7	0.46	44.98	-0.0809	9.9347	-0.1602
792	SLU 17	0.69	0.52	44.99	-0.081	9.938	-0.1802
792	SLU 18	0.69	0.49	45.99	-0.083	10.1581	-0.1717
792	SLU 19	0.69	0.55	45.99	-0.0831	10.1613	-0.1917
792	SLU 20	0.7	0.5	46.54	-0.0841	10.2736	-0.1722
792	SLU 21	0.7	0.55	46.54	-0.0842	10.2769	-0.1923
792	SLU 22	0.69	0.45	43.82	-0.0785	9.6847	-0.1571
792	SLU 23	0.68	0.55	43.83	-0.0786	9.6901	-0.1905
792	SLU 24	0.7	0.47	44.71	-0.0802	9.8704	-0.1615
792	SLU 25	0.7	0.52	44.72	-0.0802	9.8737	-0.1816
792	SLU 26	0.69	0.55	44.38	-0.0797	9.8056	-0.191
792	SLU 27	0.72	0.47	45.26	-0.0812	9.986	-0.1621
792	SLU 28	0.71	0.52	45.27	-0.0813	9.9892	-0.1821
792	SLU 29	0.71	0.46	44.93	-0.0806	9.9158	-0.1582
792	SLU 30	0.7	0.51	44.93	-0.0807	9.919	-0.1782
792	SLU 31	0.72	0.63	48.75	-0.0885	10.7504	-0.2198
792	SLU 32	0.75	0.55	49.63	-0.09	10.9307	-0.1909
792	SLU 33	0.74	0.61	49.63	-0.0901	10.934	-0.2109
792	SLU 34	0.73	0.63	49.3	-0.0896	10.866	-0.2203
792	SLU 35	0.76	0.55	50.18	-0.0911	11.0463	-0.1914
792	SLU 36	0.75	0.61	50.19	-0.0912	11.0495	-0.2114
792	SLU 37	0.75	0.54	49.84	-0.0905	10.9761	-0.1875
792	SLU 38	0.75	0.6	49.85	-0.0906	10.9793	-0.2075
792	SLU 39	0.75	0.57	50.85	-0.0926	11.1994	-0.199
792	SLU 40	0.74	0.63	50.85	-0.0927	11.2027	-0.219
792	SLU 41	0.76	0.57	51.4	-0.0937	11.315	-0.1995
792	SLU 42	0.76	0.63	51.4	-0.0937	11.3182	-0.2195
792	SLU 43	0.8	0.46	48.98	-0.0863	10.8793	-0.1594
792	SLU 44	0.79	0.56	48.99	-0.0864	10.8847	-0.1928
792	SLU 45	0.81	0.47	49.87	-0.088	11.065	-0.1639
792	SLU 46	0.81	0.53	49.88	-0.088	11.0683	-0.1839
792	SLU 47	0.8	0.56	49.54	-0.0875	11.0002	-0.1933
792	SLU 48	0.83	0.47	50.43	-0.0891	11.1806	-0.1644
792	SLU 49	0.82	0.53	50.43	-0.0891	11.1838	-0.1844
792	SLU 50	0.82	0.46	50.09	-0.0884	11.1104	-0.1605
792	SLU 51	0.82	0.52	50.09	-0.0885	11.1136	-0.1805
792	SLU 52	0.83	0.64	53.91	-0.0963	11.945	-0.2221
792	SLU 53	0.86	0.56	54.79	-0.0979	12.1253	-0.1932
792	SLU 54	0.85	0.61	54.8	-0.0979	12.1286	-0.2132
792	SLU 55	0.84	0.64	54.46	-0.0974	12.0606	-0.2226
792	SLU 56	0.87	0.56	55.34	-0.0989	12.2409	-0.1937
792	SLU 57	0.86	0.62	55.35	-0.099	12.2441	-0.2138
792	SLU 58	0.86	0.55	55.01	-0.0983	12.1707	-0.1898
792	SLU 59	0.86	0.6	55.01	-0.0984	12.1739	-0.2098
792	SLU 60	0.86	0.58	56.01	-0.1004	12.394	-0.2013
792	SLU 61	0.85	0.64	56.01	-0.1005	12.3973	-0.2213
792	SLU 62	0.87	0.58	56.56	-0.1015	12.5096	-0.2018
792	SLU 63	0.87	0.64	56.57	-0.1016	12.5128	-0.2219
792	SLU 64	0.86	0.54	53.84	-0.0958	11.9206	-0.1867
792	SLU 65	0.85	0.63	53.85	-0.096	11.926	-0.2201
792	SLU 66	0.87	0.55	54.73	-0.0975	12.1064	-0.1911
792	SLU 67	0.87	0.61	54.74	-0.0976	12.1096	-0.2112
792	SLU 68	0.86	0.64	54.4	-0.0971	12.0416	-0.2206
792	SLU 69	0.88	0.55	55.29	-0.0986	12.2219	-0.1917
792	SLU 70	0.88	0.61	55.29	-0.0987	12.2252	-0.2117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
792	SLU 71	0.88	0.54	54.95	-0.098	12.1517	-0.1877
792	SLU 72	0.87	0.6	54.95	-0.0981	12.155	-0.2078
792	SLU 73	0.89	0.72	58.77	-0.1059	12.9864	-0.2494
792	SLU 74	0.92	0.63	59.65	-0.1074	13.1667	-0.2205
792	SLU 75	0.91	0.69	59.66	-0.1075	13.1699	-0.2405
792	SLU 76	0.9	0.72	59.32	-0.1069	13.1019	-0.2499
792	SLU 77	0.93	0.64	60.2	-0.1085	13.2822	-0.221
792	SLU 78	0.92	0.69	60.21	-0.1086	13.2855	-0.241
792	SLU 79	0.92	0.63	59.87	-0.1079	13.212	-0.2171
792	SLU 80	0.92	0.68	59.87	-0.108	13.2153	-0.2371
792	SLU 81	0.92	0.66	60.87	-0.11	13.4354	-0.2286
792	SLU 82	0.91	0.72	60.87	-0.11	13.4386	-0.2486
792	SLU 83	0.93	0.66	61.42	-0.111	13.5509	-0.2291
792	SLU 84	0.92	0.72	61.43	-0.1111	13.5542	-0.2491
792	SLE RA 1	0.65	0.4	40.35	-0.0716	8.9408	-0.1376
792	SLE RA 2	0.64	0.46	40.35	-0.0717	8.9444	-0.1599
792	SLE RA 3	0.66	0.41	40.94	-0.0728	9.0647	-0.1406
792	SLE RA 4	0.65	0.44	40.95	-0.0728	9.0668	-0.1539
792	SLE RA 5	0.65	0.46	40.72	-0.0724	9.0215	-0.1602
792	SLE RA 6	0.66	0.41	41.31	-0.0735	9.1417	-0.1409
792	SLE RA 7	0.66	0.44	41.31	-0.0735	9.1439	-0.1543
792	SLE RA 8	0.66	0.4	41.09	-0.0731	9.0949	-0.1383
792	SLE RA 9	0.66	0.44	41.09	-0.0731	9.0971	-0.1517
792	SLE RA 10	0.67	0.52	43.63	-0.0783	9.6513	-0.1794
792	SLE RA 11	0.69	0.46	44.22	-0.0793	9.7716	-0.1601
792	SLE RA 12	0.68	0.5	44.22	-0.0794	9.7737	-0.1735
792	SLE RA 13	0.68	0.52	44	-0.079	9.7284	-0.1798
792	SLE RA 14	0.69	0.46	44.59	-0.0801	9.8486	-0.1605
792	SLE RA 15	0.69	0.5	44.59	-0.0801	9.8508	-0.1738
792	SLE RA 16	0.69	0.45	44.37	-0.0797	9.8018	-0.1579
792	SLE RA 17	0.69	0.49	44.37	-0.0797	9.804	-0.1712
792	SLE RA 18	0.69	0.48	45.03	-0.081	9.9507	-0.1655
792	SLE RA 19	0.68	0.51	45.04	-0.0811	9.9528	-0.1789
792	SLE RA 20	0.69	0.48	45.4	-0.0818	10.0277	-0.1659
792	SLE RA 21	0.69	0.52	45.41	-0.0818	10.0299	-0.1792
792	SLE FR 1	0.65	0.4	40.35	-0.0716	8.9408	-0.1376
792	SLE FR 2	0.64	0.41	40.35	-0.0716	8.9416	-0.1421
792	SLE FR 3	0.65	0.4	40.5	-0.0719	8.9716	-0.1378
792	SLE FR 4	0.66	0.43	41.76	-0.0745	9.2445	-0.1504
792	SLE FR 5	0.66	0.42	41.9	-0.0747	9.2746	-0.1461
792	SLE FR 6	0.67	0.44	42.69	-0.0763	9.4458	-0.1516
792	SLE QP 1	0.65	0.4	40.35	-0.0716	8.9408	-0.1376
792	SLE QP 2	0.66	0.42	41.76	-0.0744	9.2438	-0.146
792	SLD 1	3.13	0.24	30.93	-0.0539	7.1156	-0.0806
792	SLD 2	2.98	1.04	30.78	-0.0552	7.1155	-0.3606
792	SLD 3	3.34	-1.38	31.16	-0.0517	7.0661	0.4844
792	SLD 4	3.19	-0.58	31.01	-0.053	7.066	0.2044
792	SLD 5	1.11	2.68	38.19	-0.0713	8.6804	-0.9336
792	SLD 6	1.02	3.2	38.09	-0.0722	8.6803	-1.1171
792	SLD 7	1.8	-2.72	38.95	-0.0641	8.5155	0.9498
792	SLD 8	1.7	-2.19	38.85	-0.065	8.5154	0.7663
792	SLD 9	-0.39	3.03	44.66	-0.0839	9.9722	-1.0583
792	SLD 10	-0.49	3.56	44.57	-0.0848	9.9721	-1.2418
792	SLD 11	0.3	-2.36	45.42	-0.0767	9.8073	0.8251
792	SLD 12	0.2	-1.84	45.32	-0.0776	9.8072	0.6416
792	SLD 13	-1.87	1.42	52.5	-0.0959	11.4215	-0.4964
792	SLD 14	-2.02	2.22	52.35	-0.0972	11.4214	-0.7764
792	SLD 15	-1.67	-0.2	52.73	-0.0937	11.3721	0.0686
792	SLD 16	-1.82	0.61	52.58	-0.095	11.372	-0.2114
792	SLV 1	6.45	-0.06	16.42	-0.0262	4.2616	0.0237
792	SLV 2	6.1	1.81	16.08	-0.0293	4.2614	-0.6284
792	SLV 3	6.92	-3.74	16.95	-0.0213	4.1482	1.3091
792	SLV 4	6.57	-1.87	16.61	-0.0244	4.148	0.6571
792	SLV 5	1.75	5.54	33.42	-0.0669	7.9212	-1.9324
792	SLV 6	1.52	6.75	33.2	-0.0689	7.9211	-2.3526
792	SLV 7	3.31	-6.74	35.16	-0.0505	7.5431	2.3524
792	SLV 8	3.08	-5.53	34.94	-0.0525	7.543	1.9323
792	SLV 9	-1.77	6.37	48.57	-0.0964	10.9446	-2.2242
792	SLV 10	-1.99	7.58	48.35	-0.0984	10.9445	-2.6444
792	SLV 11	-0.2	-5.9	50.31	-0.08	10.5665	2.0606
792	SLV 12	-0.43	-4.7	50.09	-0.082	10.5664	1.6404
792	SLV 13	-5.26	2.71	66.91	-0.1245	14.3396	-0.9491
792	SLV 14	-5.61	4.59	66.56	-0.1276	14.3394	-1.6011
792	SLV 15	-4.79	-0.97	67.43	-0.1196	14.2262	0.3364
792	SLV 16	-5.14	0.9	67.09	-0.1227	14.2259	-0.3156
792	CRTFP Ux+	0	0	0	0	0	0
792	CRTFP Ux-	0	0	0	0	0	0
792	CRTFP Uy+	0	0	0	0	0	0
792	CRTFP Uy-	0	0	0	0	0	0
794	SLU 1	1.1	-0.16	62.28	0.0198	0.1143	-0.0097
794	SLU 2	1.1	-0.06	62.32	0.0196	0.1121	-0.0097
794	SLU 3	1.13	-0.15	63.69	0.0204	0.1194	-0.0098
794	SLU 4	1.13	-0.09	63.71	0.0203	0.118	-0.0098
794	SLU 5	1.12	-0.06	63.18	0.0199	0.1152	-0.0097
794	SLU 6	1.15	-0.16	64.56	0.0207	0.1225	-0.0099
794	SLU 7	1.15	-0.1	64.58	0.0206	0.1212	-0.0099
794	SLU 8	1.14	-0.17	64.02	0.0204	0.1206	-0.0098
794	SLU 9	1.14	-0.11	64.04	0.0203	0.1192	-0.0098
794	SLU 10	1.18	-0.04	70.71	0.022	0.1341	-0.0105
794	SLU 11	1.21	-0.13	72.08	0.0228	0.1414	-0.0106

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
794	SLU 12	1.21	-0.07	72.11	0.0227	0.14	-0.0106
794	SLU 13	1.2	-0.05	71.58	0.0223	0.1372	-0.0105
794	SLU 14	1.23	-0.14	72.95	0.0231	0.1445	-0.0107
794	SLU 15	1.23	-0.08	72.97	0.023	0.1432	-0.0107
794	SLU 16	1.22	-0.15	72.41	0.0228	0.1426	-0.0106
794	SLU 17	1.22	-0.09	72.43	0.0227	0.1412	-0.0106
794	SLU 18	1.22	-0.13	74.27	0.0232	0.1457	-0.0108
794	SLU 19	1.22	-0.07	74.29	0.0231	0.1444	-0.0108
794	SLU 20	1.24	-0.14	75.14	0.0235	0.1488	-0.0109
794	SLU 21	1.24	-0.08	75.16	0.0234	0.1475	-0.0109
794	SLU 22	1.21	-0.12	70.45	0.0228	0.134	-0.0103
794	SLU 23	1.21	-0.02	70.49	0.0226	0.1318	-0.0103
794	SLU 24	1.24	-0.11	71.87	0.0234	0.1391	-0.0104
794	SLU 25	1.24	-0.05	71.89	0.0233	0.1378	-0.0104
794	SLU 26	1.22	-0.03	71.36	0.023	0.135	-0.0104
794	SLU 27	1.26	-0.12	72.73	0.0238	0.1423	-0.0105
794	SLU 28	1.25	-0.06	72.76	0.0237	0.141	-0.0105
794	SLU 29	1.24	-0.13	72.19	0.0234	0.1403	-0.0105
794	SLU 30	1.24	-0.07	72.21	0.0233	0.139	-0.0104
794	SLU 31	1.29	0	78.88	0.025	0.1538	-0.0111
794	SLU 32	1.32	-0.1	80.26	0.0258	0.1611	-0.0112
794	SLU 33	1.32	-0.03	80.28	0.0257	0.1598	-0.0112
794	SLU 34	1.31	-0.01	79.75	0.0253	0.157	-0.0112
794	SLU 35	1.34	-0.1	81.13	0.0261	0.1643	-0.0113
794	SLU 36	1.34	-0.04	81.15	0.026	0.1629	-0.0113
794	SLU 37	1.33	-0.11	80.58	0.0258	0.1623	-0.0113
794	SLU 38	1.32	-0.05	80.6	0.0257	0.161	-0.0112
794	SLU 39	1.33	-0.09	82.44	0.0262	0.1655	-0.0114
794	SLU 40	1.33	-0.03	82.46	0.0261	0.1641	-0.0114
794	SLU 41	1.34	-0.1	83.31	0.0265	0.1686	-0.0115
794	SLU 42	1.34	-0.04	83.33	0.0264	0.1673	-0.0115
794	SLU 43	1.4	-0.22	78.16	0.0247	0.1418	-0.0124
794	SLU 44	1.4	-0.12	78.2	0.0245	0.1396	-0.0124
794	SLU 45	1.43	-0.21	79.57	0.0253	0.1469	-0.0125
794	SLU 46	1.43	-0.15	79.6	0.0252	0.1456	-0.0125
794	SLU 47	1.41	-0.13	79.07	0.0248	0.1427	-0.0124
794	SLU 48	1.44	-0.22	80.44	0.0256	0.15	-0.0126
794	SLU 49	1.44	-0.16	80.46	0.0255	0.1487	-0.0126
794	SLU 50	1.43	-0.23	79.9	0.0253	0.1481	-0.0125
794	SLU 51	1.43	-0.17	79.92	0.0252	0.1467	-0.0125
794	SLU 52	1.48	-0.1	86.59	0.0269	0.1616	-0.0132
794	SLU 53	1.51	-0.2	87.97	0.0277	0.1689	-0.0133
794	SLU 54	1.51	-0.14	87.99	0.0276	0.1676	-0.0133
794	SLU 55	1.5	-0.11	87.46	0.0272	0.1647	-0.0132
794	SLU 56	1.53	-0.2	88.83	0.028	0.172	-0.0134
794	SLU 57	1.52	-0.14	88.86	0.0279	0.1707	-0.0134
794	SLU 58	1.52	-0.21	88.29	0.0277	0.1701	-0.0133
794	SLU 59	1.51	-0.15	88.31	0.0276	0.1687	-0.0133
794	SLU 60	1.52	-0.19	90.15	0.0281	0.1732	-0.0135
794	SLU 61	1.51	-0.13	90.17	0.028	0.1719	-0.0135
794	SLU 62	1.53	-0.2	91.02	0.0284	0.1764	-0.0136
794	SLU 63	1.53	-0.14	91.04	0.0283	0.175	-0.0136
794	SLU 64	1.51	-0.18	86.34	0.0277	0.1615	-0.013
794	SLU 65	1.5	-0.08	86.37	0.0275	0.1593	-0.013
794	SLU 66	1.53	-0.17	87.75	0.0283	0.1666	-0.0131
794	SLU 67	1.53	-0.11	87.77	0.0282	0.1653	-0.0131
794	SLU 68	1.52	-0.09	87.24	0.0279	0.1625	-0.0131
794	SLU 69	1.55	-0.18	88.62	0.0287	0.1698	-0.0132
794	SLU 70	1.55	-0.12	88.64	0.0286	0.1685	-0.0132
794	SLU 71	1.54	-0.19	88.07	0.0283	0.1678	-0.0131
794	SLU 72	1.54	-0.13	88.09	0.0282	0.1665	-0.0131
794	SLU 73	1.58	-0.06	94.76	0.0299	0.1813	-0.0138
794	SLU 74	1.62	-0.16	96.14	0.0307	0.1886	-0.0139
794	SLU 75	1.61	-0.1	96.16	0.0306	0.1873	-0.0139
794	SLU 76	1.6	-0.07	95.63	0.0302	0.1845	-0.0139
794	SLU 77	1.63	-0.16	97.01	0.031	0.1918	-0.014
794	SLU 78	1.63	-0.1	97.03	0.0309	0.1905	-0.014
794	SLU 79	1.62	-0.17	96.46	0.0307	0.1898	-0.0139
794	SLU 80	1.62	-0.11	96.49	0.0306	0.1885	-0.0139
794	SLU 81	1.62	-0.16	98.32	0.0311	0.193	-0.0141
794	SLU 82	1.62	-0.09	98.34	0.031	0.1916	-0.0141
794	SLU 83	1.64	-0.16	99.19	0.0314	0.1961	-0.0142
794	SLU 84	1.64	-0.1	99.21	0.0313	0.1948	-0.0142
794	SLE RA 1	1.13	-0.15	64.62	0.0206	0.1199	-0.0099
794	SLE RA 2	1.13	-0.08	64.64	0.0205	0.1184	-0.0099
794	SLE RA 3	1.15	-0.14	65.56	0.0211	0.1233	-0.0099
794	SLE RA 4	1.15	-0.1	65.57	0.021	0.1224	-0.0099
794	SLE RA 5	1.14	-0.08	65.22	0.0208	0.1205	-0.0099
794	SLE RA 6	1.16	-0.15	66.14	0.0213	0.1254	-0.01
794	SLE RA 7	1.16	-0.11	66.15	0.0212	0.1245	-0.01
794	SLE RA 8	1.16	-0.16	65.77	0.0211	0.1241	-0.01
794	SLE RA 9	1.16	-0.12	65.79	0.021	0.1232	-0.01
794	SLE RA 10	1.19	-0.07	70.23	0.0221	0.1331	-0.0104
794	SLE RA 11	1.21	-0.13	71.15	0.0226	0.138	-0.0105
794	SLE RA 12	1.21	-0.09	71.17	0.0226	0.1371	-0.0105
794	SLE RA 13	1.2	-0.07	70.81	0.0223	0.1352	-0.0104
794	SLE RA 14	1.22	-0.14	71.73	0.0229	0.1401	-0.0105
794	SLE RA 15	1.22	-0.1	71.74	0.0228	0.1392	-0.0105
794	SLE RA 16	1.21	-0.14	71.37	0.0227	0.1388	-0.0105
794	SLE RA 17	1.21	-0.1	71.38	0.0226	0.1379	-0.0105

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
794	SLE RA 18	1.21	-0.13	72.61	0.0229	0.1409	-0.0106
794	SLE RA 19	1.21	-0.09	72.62	0.0228	0.14	-0.0106
794	SLE RA 20	1.22	-0.13	73.19	0.0231	0.143	-0.0107
794	SLE RA 21	1.22	-0.09	73.2	0.0231	0.1421	-0.0107
794	SLE FR 1	1.13	-0.15	64.62	0.0206	0.1199	-0.0099
794	SLE FR 2	1.13	-0.13	64.62	0.0206	0.1196	-0.0099
794	SLE FR 3	1.14	-0.15	64.85	0.0207	0.1208	-0.0099
794	SLE FR 4	1.16	-0.13	67.02	0.0213	0.1259	-0.0101
794	SLE FR 5	1.16	-0.14	67.24	0.0214	0.127	-0.0101
794	SLE FR 6	1.17	-0.14	68.61	0.0218	0.1304	-0.0102
794	SLE QP 1	1.13	-0.15	64.62	0.0206	0.1199	-0.0099
794	SLE QP 2	1.16	-0.14	67.01	0.0213	0.1262	-0.0101
794	SLD 1	6.55	0.98	60.67	0.014	0.1864	-0.0309
794	SLD 2	6.35	1.57	60.64	0.0122	0.1877	-0.0178
794	SLD 3	6.63	-0.88	60.26	0.0166	0.2327	-0.0328
794	SLD 4	6.42	-0.28	60.22	0.0148	0.234	-0.0197
794	SLD 5	2.71	2.9	65.74	0.0155	0.0738	-0.0158
794	SLD 6	2.57	3.29	65.72	0.0143	0.0747	-0.0073
794	SLD 7	2.94	-3.28	64.37	0.0242	0.2281	-0.0221
794	SLD 8	2.81	-2.89	64.34	0.023	0.229	-0.0135
794	SLD 9	-0.49	2.6	69.68	0.0196	0.0234	-0.0067
794	SLD 10	-0.63	2.99	69.66	0.0184	0.0243	0.0019
794	SLD 11	-0.25	-3.57	68.31	0.0284	0.1777	-0.0129
794	SLD 12	-0.39	-3.18	68.28	0.0271	0.1786	-0.0044
794	SLD 13	-4.1	0	73.8	0.0279	0.0184	-0.0005
794	SLD 14	-4.31	0.59	73.77	0.026	0.0197	0.0126
794	SLD 15	-4.03	-1.85	73.39	0.0305	0.0647	-0.0023
794	SLD 16	-4.24	-1.26	73.35	0.0286	0.066	0.0107
794	SLV 1	13.78	2.42	52.15	0.0042	0.2674	-0.0587
794	SLV 2	13.29	3.8	52.07	-0.0002	0.2704	-0.0283
794	SLV 3	13.94	-1.8	51.21	0.0102	0.3748	-0.063
794	SLV 4	13.46	-0.42	51.13	0.0058	0.3778	-0.0326
794	SLV 5	4.78	6.79	64	0.0079	0.0052	-0.0234
794	SLV 6	4.46	7.68	63.94	0.0051	0.0071	-0.0038
794	SLV 7	5.33	-7.28	60.86	0.0277	0.3631	-0.0378
794	SLV 8	5.02	-6.39	60.8	0.0249	0.3651	-0.0182
794	SLV 9	-2.7	6.1	73.22	0.0177	-0.1127	-0.002
794	SLV 10	-3.01	6.99	73.17	0.0149	-0.1107	0.0176
794	SLV 11	-2.15	-7.96	70.08	0.0375	0.2453	-0.0164
794	SLV 12	-2.46	-7.08	70.03	0.0347	0.2472	0.0032
794	SLV 13	-11.14	0.13	82.9	0.0368	-0.1254	0.0125
794	SLV 14	-11.63	1.51	82.82	0.0325	-0.1224	0.0428
794	SLV 15	-10.98	-4.09	81.96	0.0428	-0.018	0.0081
794	SLV 16	-11.46	-2.71	81.87	0.0384	-0.015	0.0385
794	CRTFP Ux+	0	0	0	0	0	0
794	CRTFP Ux-	0	0	0	0	0	0
794	CRTFP Uy+	0	0	0	0	0	0
794	CRTFP Uy-	0	0	0	0	0	0
797	SLU 1	-0.86	-0.51	65.79	0.0061	-0.2712	0.0069
797	SLU 2	-0.86	-0.41	65.81	0.0058	-0.2682	0.007
797	SLU 3	-0.88	-0.51	67.32	0.0065	-0.2799	0.0071
797	SLU 4	-0.88	-0.45	67.33	0.0063	-0.2781	0.0071
797	SLU 5	-0.87	-0.42	66.76	0.006	-0.2732	0.0071
797	SLU 6	-0.89	-0.52	68.26	0.0066	-0.285	0.0072
797	SLU 7	-0.89	-0.46	68.28	0.0064	-0.2832	0.0073
797	SLU 8	-0.88	-0.53	67.68	0.0064	-0.2813	0.0072
797	SLU 9	-0.89	-0.47	67.69	0.0062	-0.2795	0.0072
797	SLU 10	-0.91	-0.44	74.73	0.0063	-0.3174	0.0083
797	SLU 11	-0.93	-0.54	76.24	0.0069	-0.3291	0.0084
797	SLU 12	-0.93	-0.48	76.25	0.0068	-0.3273	0.0084
797	SLU 13	-0.92	-0.45	75.68	0.0064	-0.3224	0.0084
797	SLU 14	-0.94	-0.55	77.18	0.0071	-0.3342	0.0085
797	SLU 15	-0.94	-0.49	77.2	0.0069	-0.3324	0.0085
797	SLU 16	-0.94	-0.56	76.6	0.0069	-0.3305	0.0085
797	SLU 17	-0.94	-0.5	76.62	0.0067	-0.3287	0.0085
797	SLU 18	-0.93	-0.56	78.53	0.0068	-0.3415	0.0087
797	SLU 19	-0.93	-0.49	78.55	0.0066	-0.3397	0.0088
797	SLU 20	-0.94	-0.57	79.48	0.0069	-0.3465	0.0089
797	SLU 21	-0.95	-0.5	79.49	0.0068	-0.3447	0.0089
797	SLU 22	-0.94	-0.51	74.49	0.0075	-0.3147	0.0077
797	SLU 23	-0.94	-0.41	74.52	0.0073	-0.3117	0.0078
797	SLU 24	-0.96	-0.51	76.02	0.0079	-0.3234	0.0079
797	SLU 25	-0.96	-0.45	76.04	0.0077	-0.3216	0.0079
797	SLU 26	-0.96	-0.41	75.46	0.0074	-0.3168	0.0079
797	SLU 27	-0.98	-0.52	76.97	0.0081	-0.3285	0.008
797	SLU 28	-0.98	-0.45	76.98	0.0079	-0.3267	0.0081
797	SLU 29	-0.97	-0.53	76.39	0.0078	-0.3248	0.008
797	SLU 30	-0.97	-0.46	76.4	0.0077	-0.323	0.008
797	SLU 31	-0.99	-0.44	83.44	0.0077	-0.3609	0.009
797	SLU 32	-1.01	-0.54	84.95	0.0084	-0.3726	0.0091
797	SLU 33	-1.02	-0.48	84.96	0.0082	-0.3708	0.0092
797	SLU 34	-1.01	-0.45	84.39	0.0079	-0.366	0.0092
797	SLU 35	-1.03	-0.55	85.89	0.0085	-0.3777	0.0093
797	SLU 36	-1.03	-0.49	85.91	0.0084	-0.3759	0.0093
797	SLU 37	-1.02	-0.56	85.31	0.0083	-0.3741	0.0092
797	SLU 38	-1.02	-0.5	85.32	0.0082	-0.3723	0.0093
797	SLU 39	-1.01	-0.55	87.24	0.0082	-0.385	0.0095
797	SLU 40	-1.02	-0.49	87.25	0.008	-0.3832	0.0096
797	SLU 41	-1.03	-0.56	88.18	0.0084	-0.3901	0.0096
797	SLU 42	-1.03	-0.5	88.2	0.0082	-0.3883	0.0097

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
797	SLU 43	-1.08	-0.66	82.54	0.0074	-0.3376	0.0088
797	SLU 44	-1.09	-0.56	82.56	0.0071	-0.3346	0.0088
797	SLU 45	-1.11	-0.66	84.07	0.0078	-0.3463	0.0089
797	SLU 46	-1.11	-0.6	84.08	0.0076	-0.3445	0.009
797	SLU 47	-1.1	-0.57	83.51	0.0073	-0.3397	0.0089
797	SLU 48	-1.12	-0.67	85.01	0.0079	-0.3514	0.0091
797	SLU 49	-1.12	-0.61	85.03	0.0078	-0.3496	0.0091
797	SLU 50	-1.11	-0.68	84.43	0.0077	-0.3478	0.009
797	SLU 51	-1.11	-0.62	84.44	0.0076	-0.346	0.0091
797	SLU 52	-1.14	-0.59	91.48	0.0076	-0.3838	0.0101
797	SLU 53	-1.16	-0.7	92.99	0.0083	-0.3956	0.0102
797	SLU 54	-1.16	-0.63	93	0.0081	-0.3937	0.0102
797	SLU 55	-1.15	-0.6	92.43	0.0078	-0.3889	0.0102
797	SLU 56	-1.17	-0.7	93.94	0.0084	-0.4006	0.0103
797	SLU 57	-1.17	-0.64	93.95	0.0082	-0.3988	0.0103
797	SLU 58	-1.16	-0.71	93.35	0.0082	-0.397	0.0103
797	SLU 59	-1.17	-0.65	93.37	0.008	-0.3952	0.0103
797	SLU 60	-1.16	-0.71	95.28	0.0081	-0.4079	0.0105
797	SLU 61	-1.16	-0.65	95.3	0.0079	-0.4061	0.0106
797	SLU 62	-1.17	-0.72	96.23	0.0082	-0.413	0.0107
797	SLU 63	-1.17	-0.66	96.24	0.0081	-0.4112	0.0107
797	SLU 64	-1.17	-0.66	91.24	0.0089	-0.3811	0.0095
797	SLU 65	-1.17	-0.56	91.27	0.0086	-0.3781	0.0096
797	SLU 66	-1.19	-0.66	92.77	0.0092	-0.3899	0.0097
797	SLU 67	-1.19	-0.6	92.79	0.0091	-0.3881	0.0097
797	SLU 68	-1.18	-0.57	92.21	0.0087	-0.3832	0.0097
797	SLU 69	-1.21	-0.67	93.72	0.0094	-0.3949	0.0098
797	SLU 70	-1.21	-0.61	93.74	0.0092	-0.3931	0.0099
797	SLU 71	-1.2	-0.68	93.14	0.0092	-0.3913	0.0098
797	SLU 72	-1.2	-0.62	93.15	0.009	-0.3895	0.0098
797	SLU 73	-1.22	-0.59	100.19	0.0091	-0.4273	0.0109
797	SLU 74	-1.24	-0.69	101.7	0.0097	-0.4391	0.011
797	SLU 75	-1.24	-0.63	101.71	0.0095	-0.4373	0.011
797	SLU 76	-1.24	-0.6	101.14	0.0092	-0.4324	0.011
797	SLU 77	-1.26	-0.7	102.64	0.0099	-0.4442	0.0111
797	SLU 78	-1.26	-0.64	102.66	0.0097	-0.4423	0.0111
797	SLU 79	-1.25	-0.71	102.06	0.0096	-0.4405	0.0111
797	SLU 80	-1.25	-0.65	102.07	0.0095	-0.4387	0.0111
797	SLU 81	-1.24	-0.71	103.99	0.0095	-0.4514	0.0113
797	SLU 82	-1.24	-0.65	104	0.0094	-0.4496	0.0114
797	SLU 83	-1.26	-0.72	104.94	0.0097	-0.4565	0.0115
797	SLU 84	-1.26	-0.66	104.95	0.0095	-0.4547	0.0115
797	SLE RA 1	-0.88	-0.51	68.27	0.0065	-0.2836	0.0072
797	SLE RA 2	-0.88	-0.44	68.29	0.0063	-0.2816	0.0072
797	SLE RA 3	-0.9	-0.51	69.29	0.0067	-0.2894	0.0073
797	SLE RA 4	-0.9	-0.47	69.3	0.0066	-0.2882	0.0073
797	SLE RA 5	-0.89	-0.45	68.92	0.0064	-0.285	0.0073
797	SLE RA 6	-0.9	-0.52	69.92	0.0068	-0.2928	0.0074
797	SLE RA 7	-0.91	-0.47	69.93	0.0067	-0.2916	0.0074
797	SLE RA 8	-0.9	-0.52	69.54	0.0067	-0.2904	0.0073
797	SLE RA 9	-0.9	-0.48	69.55	0.0066	-0.2892	0.0074
797	SLE RA 10	-0.92	-0.46	74.24	0.0066	-0.3144	0.008
797	SLE RA 11	-0.93	-0.53	75.24	0.0071	-0.3222	0.0081
797	SLE RA 12	-0.93	-0.49	75.25	0.0069	-0.321	0.0081
797	SLE RA 13	-0.93	-0.47	74.87	0.0067	-0.3178	0.0081
797	SLE RA 14	-0.94	-0.54	75.87	0.0072	-0.3256	0.0082
797	SLE RA 15	-0.94	-0.5	75.88	0.0071	-0.3244	0.0082
797	SLE RA 16	-0.93	-0.54	75.48	0.007	-0.3232	0.0082
797	SLE RA 17	-0.93	-0.5	75.49	0.0069	-0.322	0.0082
797	SLE RA 18	-0.93	-0.54	76.77	0.0069	-0.3305	0.0084
797	SLE RA 19	-0.93	-0.5	76.78	0.0068	-0.3293	0.0084
797	SLE RA 20	-0.94	-0.55	77.4	0.0071	-0.3339	0.0084
797	SLE RA 21	-0.94	-0.51	77.41	0.0069	-0.3326	0.0085
797	SLE FR 1	-0.88	-0.51	68.27	0.0065	-0.2836	0.0072
797	SLE FR 2	-0.88	-0.5	68.28	0.0065	-0.2832	0.0072
797	SLE FR 3	-0.88	-0.51	68.53	0.0065	-0.285	0.0072
797	SLE FR 4	-0.9	-0.51	70.83	0.0066	-0.2973	0.0075
797	SLE FR 5	-0.9	-0.52	71.08	0.0067	-0.299	0.0076
797	SLE FR 6	-0.91	-0.53	72.52	0.0067	-0.307	0.0078
797	SLE QP 1	-0.88	-0.51	68.27	0.0065	-0.2836	0.0072
797	SLE QP 2	-0.9	-0.52	70.82	0.0066	-0.2977	0.0075
797	SLD 1	5.08	0.24	78.67	0.0066	-0.1421	-0.0143
797	SLD 2	4.86	-0.39	78.78	0.009	-0.1525	-0.0003
797	SLD 3	4.98	-1.71	78.83	0.0116	-0.2036	-0.0117
797	SLD 4	4.76	-2.34	78.93	0.014	-0.214	0.0023
797	SLD 5	1.08	2.79	72.92	-0.0014	-0.1559	-0.0054
797	SLD 6	0.94	2.37	72.99	0.0002	-0.1628	0.0038
797	SLD 7	0.76	-3.73	73.44	0.0153	-0.3608	0.0032
797	SLD 8	0.62	-4.14	73.51	0.0169	-0.3676	0.0123
797	SLD 9	-2.41	3.1	68.14	-0.0036	-0.2277	0.0027
797	SLD 10	-2.55	2.69	68.21	-0.002	-0.2345	0.0119
797	SLD 11	-2.73	-3.41	68.65	0.0131	-0.4325	0.0113
797	SLD 12	-2.87	-3.82	68.72	0.0146	-0.4394	0.0204
797	SLD 13	-6.56	1.3	62.72	-0.0008	-0.3813	0.0128
797	SLD 14	-6.77	0.68	62.82	0.0016	-0.3917	0.0267
797	SLD 15	-6.65	-0.65	62.87	0.0042	-0.4428	0.0153
797	SLD 16	-6.87	-1.28	62.97	0.0066	-0.4532	0.0293
797	SLV 1	13.07	1.2	89.2	0.0071	0.0645	-0.0433
797	SLV 2	12.56	-0.27	89.44	0.0127	0.0402	-0.0108
797	SLV 3	12.85	-3.26	89.56	0.0185	-0.0761	-0.0374

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
797	SLV 4	12.34	-4.72	89.8	0.024	-0.1004	-0.0049
797	SLV 5	3.71	7	75.75	-0.0114	0.0283	-0.0222
797	SLV 6	3.39	6.06	75.9	-0.0078	0.0127	-0.0012
797	SLV 7	2.98	-7.85	76.95	0.0264	-0.4402	-0.0027
797	SLV 8	2.66	-8.79	77.1	0.03	-0.4558	0.0183
797	SLV 9	-4.45	7.75	64.54	-0.0167	-0.1395	-0.0032
797	SLV 10	-4.77	6.81	64.7	-0.0132	-0.1551	0.0177
797	SLV 11	-5.18	-7.1	65.74	0.0211	-0.608	0.0163
797	SLV 12	-5.5	-8.04	65.9	0.0246	-0.6236	0.0372
797	SLV 13	-14.13	3.68	51.84	-0.0108	-0.4949	0.0199
797	SLV 14	-14.64	2.22	52.09	-0.0052	-0.5192	0.0525
797	SLV 15	-14.35	-0.77	52.2	0.0006	-0.6355	0.0258
797	SLV 16	-14.86	-2.23	52.45	0.0061	-0.6598	0.0583
797	CRTFP Ux+	0	0	0	0	0	0
797	CRTFP Ux-	0	0	0	0	0	0
797	CRTFP Uy+	0	0	0	0	0	0
797	CRTFP Uy-	0	0	0	0	0	0
800	SLU 1	0.4	0.23	24.54	-0.4534	5.6129	-0.0521
800	SLU 2	0.4	0.27	24.56	-0.454	5.6168	-0.0625
800	SLU 3	0.41	0.25	25.09	-0.4636	5.7383	-0.0558
800	SLU 4	0.41	0.27	25.1	-0.4639	5.7406	-0.0621
800	SLU 5	0.41	0.28	24.91	-0.4603	5.6942	-0.0634
800	SLU 6	0.42	0.25	25.43	-0.4699	5.8157	-0.0567
800	SLU 7	0.42	0.28	25.45	-0.4702	5.8181	-0.063
800	SLU 8	0.41	0.24	25.22	-0.4661	5.7678	-0.0539
800	SLU 9	0.41	0.27	25.24	-0.4664	5.7701	-0.0601
800	SLU 10	0.46	0.3	27.99	-0.5174	6.3927	-0.0689
800	SLU 11	0.47	0.28	28.52	-0.5271	6.5141	-0.0622
800	SLU 12	0.47	0.3	28.53	-0.5274	6.5165	-0.0685
800	SLU 13	0.47	0.31	28.33	-0.5238	6.4701	-0.0698
800	SLU 14	0.48	0.28	28.86	-0.5334	6.5916	-0.0631
800	SLU 15	0.48	0.31	28.87	-0.5337	6.5939	-0.0694
800	SLU 16	0.47	0.27	28.65	-0.5296	6.5437	-0.0603
800	SLU 17	0.47	0.29	28.66	-0.5299	6.546	-0.0665
800	SLU 18	0.48	0.27	29.43	-0.5441	6.7213	-0.0612
800	SLU 19	0.48	0.3	29.45	-0.5444	6.7236	-0.0674
800	SLU 20	0.49	0.28	29.78	-0.5504	6.7987	-0.0621
800	SLU 21	0.49	0.3	29.79	-0.5508	6.8011	-0.0683
800	SLU 22	0.45	0.29	27.8	-0.5135	6.353	-0.0665
800	SLU 23	0.45	0.33	27.83	-0.514	6.3569	-0.0769
800	SLU 24	0.46	0.31	28.35	-0.5236	6.4784	-0.0702
800	SLU 25	0.46	0.33	28.37	-0.5239	6.4807	-0.0765
800	SLU 26	0.46	0.34	28.17	-0.5203	6.4343	-0.0778
800	SLU 27	0.47	0.31	28.69	-0.5299	6.5558	-0.0712
800	SLU 28	0.47	0.34	28.71	-0.5302	6.5582	-0.0774
800	SLU 29	0.47	0.3	28.49	-0.5261	6.5079	-0.0683
800	SLU 30	0.47	0.33	28.5	-0.5264	6.5102	-0.0746
800	SLU 31	0.51	0.36	31.25	-0.5775	7.1327	-0.0833
800	SLU 32	0.52	0.34	31.78	-0.5871	7.2542	-0.0766
800	SLU 33	0.52	0.36	31.79	-0.5874	7.2566	-0.0829
800	SLU 34	0.52	0.37	31.59	-0.5838	7.2102	-0.0842
800	SLU 35	0.53	0.34	32.12	-0.5934	7.3317	-0.0775
800	SLU 36	0.53	0.37	32.13	-0.5937	7.334	-0.0838
800	SLU 37	0.53	0.33	31.91	-0.5896	7.2838	-0.0747
800	SLU 38	0.53	0.36	31.92	-0.5899	7.2861	-0.0809
800	SLU 39	0.54	0.33	32.7	-0.6041	7.4614	-0.0756
800	SLU 40	0.54	0.36	32.71	-0.6044	7.4637	-0.0818
800	SLU 41	0.55	0.34	33.04	-0.6104	7.5388	-0.0765
800	SLU 42	0.55	0.36	33.05	-0.6108	7.5412	-0.0828
800	SLU 43	0.5	0.28	30.79	-0.5689	7.043	-0.0627
800	SLU 44	0.5	0.32	30.81	-0.5694	7.0469	-0.0731
800	SLU 45	0.51	0.3	31.33	-0.579	7.1684	-0.0665
800	SLU 46	0.51	0.32	31.35	-0.5794	7.1707	-0.0727
800	SLU 47	0.51	0.33	31.15	-0.5757	7.1244	-0.0741
800	SLU 48	0.52	0.3	31.68	-0.5854	7.2459	-0.0674
800	SLU 49	0.52	0.33	31.69	-0.5857	7.2482	-0.0737
800	SLU 50	0.52	0.29	31.47	-0.5815	7.1979	-0.0645
800	SLU 51	0.52	0.31	31.48	-0.5818	7.2003	-0.0708
800	SLU 52	0.56	0.35	34.23	-0.6329	7.8228	-0.0795
800	SLU 53	0.57	0.33	34.76	-0.6425	7.9443	-0.0729
800	SLU 54	0.57	0.35	34.77	-0.6428	7.9466	-0.0791
800	SLU 55	0.57	0.36	34.57	-0.6392	7.9002	-0.0804
800	SLU 56	0.58	0.33	35.1	-0.6488	8.0217	-0.0738
800	SLU 57	0.58	0.35	35.11	-0.6492	8.024	-0.08
800	SLU 58	0.58	0.32	34.89	-0.645	7.9738	-0.0709
800	SLU 59	0.58	0.34	34.91	-0.6453	7.9761	-0.0772
800	SLU 60	0.59	0.32	35.68	-0.6596	8.1514	-0.0718
800	SLU 61	0.59	0.35	35.69	-0.6599	8.1537	-0.0781
800	SLU 62	0.59	0.33	36.02	-0.6659	8.2289	-0.0728
800	SLU 63	0.59	0.35	36.03	-0.6662	8.2312	-0.079
800	SLU 64	0.55	0.34	34.05	-0.6289	7.7831	-0.0771
800	SLU 65	0.55	0.38	34.07	-0.6294	7.787	-0.0876
800	SLU 66	0.57	0.36	34.6	-0.6391	7.9085	-0.0809
800	SLU 67	0.56	0.38	34.61	-0.6394	7.9108	-0.0872
800	SLU 68	0.56	0.39	34.41	-0.6357	7.8645	-0.0885
800	SLU 69	0.57	0.36	34.94	-0.6454	7.9859	-0.0818
800	SLU 70	0.57	0.39	34.95	-0.6457	7.9883	-0.0881
800	SLU 71	0.57	0.35	34.73	-0.6415	7.938	-0.079
800	SLU 72	0.57	0.37	34.74	-0.6418	7.9404	-0.0852
800	SLU 73	0.61	0.41	37.5	-0.6929	8.5629	-0.094

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
800	SLU 74	0.63	0.39	38.02	-0.7025	8.6844	-0.0873
800	SLU 75	0.62	0.41	38.04	-0.7028	8.6867	-0.0935
800	SLU 76	0.62	0.42	37.84	-0.6992	8.6403	-0.0949
800	SLU 77	0.63	0.39	38.36	-0.7088	8.7618	-0.0882
800	SLU 78	0.63	0.42	38.38	-0.7092	8.7641	-0.0945
800	SLU 79	0.63	0.38	38.15	-0.705	8.7139	-0.0854
800	SLU 80	0.63	0.4	38.17	-0.7053	8.7162	-0.0916
800	SLU 81	0.64	0.38	38.94	-0.7196	8.8915	-0.0863
800	SLU 82	0.64	0.41	38.95	-0.7199	8.8938	-0.0925
800	SLU 83	0.65	0.39	39.28	-0.7259	8.9689	-0.0872
800	SLU 84	0.65	0.41	39.3	-0.7262	8.9713	-0.0934
800	SLE RA 1	0.41	0.25	25.47	-0.4706	5.8244	-0.0562
800	SLE RA 2	0.41	0.28	25.49	-0.4709	5.827	-0.0631
800	SLE RA 3	0.42	0.26	25.84	-0.4773	5.9079	-0.0587
800	SLE RA 4	0.42	0.28	25.85	-0.4776	5.9095	-0.0629
800	SLE RA 5	0.42	0.28	25.72	-0.4751	5.8786	-0.0637
800	SLE RA 6	0.43	0.26	26.07	-0.4816	5.9596	-0.0593
800	SLE RA 7	0.43	0.28	26.08	-0.4818	5.9611	-0.0635
800	SLE RA 8	0.43	0.25	25.93	-0.479	5.9276	-0.0574
800	SLE RA 9	0.43	0.27	25.94	-0.4792	5.9292	-0.0616
800	SLE RA 10	0.45	0.3	27.77	-0.5133	6.3442	-0.0674
800	SLE RA 11	0.46	0.28	28.12	-0.5197	6.4252	-0.0629
800	SLE RA 12	0.46	0.3	28.13	-0.5199	6.4267	-0.0671
800	SLE RA 13	0.46	0.3	28	-0.5175	6.3958	-0.068
800	SLE RA 14	0.47	0.28	28.35	-0.5239	6.4768	-0.0635
800	SLE RA 15	0.47	0.3	28.36	-0.5241	6.4784	-0.0677
800	SLE RA 16	0.47	0.27	28.21	-0.5213	6.4449	-0.0616
800	SLE RA 17	0.46	0.29	28.22	-0.5215	6.4464	-0.0658
800	SLE RA 18	0.47	0.28	28.74	-0.531	6.5633	-0.0623
800	SLE RA 19	0.47	0.29	28.74	-0.5313	6.5648	-0.0664
800	SLE RA 20	0.48	0.28	28.96	-0.5353	6.6149	-0.0629
800	SLE RA 21	0.48	0.3	28.97	-0.5355	6.6165	-0.067
800	SLE FR 1	0.41	0.25	25.47	-0.4706	5.8244	-0.0562
800	SLE FR 2	0.41	0.25	25.48	-0.4707	5.8249	-0.0576
800	SLE FR 3	0.42	0.25	25.56	-0.4723	5.845	-0.0564
800	SLE FR 4	0.43	0.26	26.46	-0.4888	6.0466	-0.0594
800	SLE FR 5	0.43	0.26	26.54	-0.4904	6.0667	-0.0582
800	SLE FR 6	0.44	0.26	27.1	-0.5008	6.1938	-0.0592
800	SLE QP 1	0.41	0.25	25.47	-0.4706	5.8244	-0.0562
800	SLE QP 2	0.43	0.26	26.45	-0.4887	6.046	-0.058
800	SLD 1	2.98	0.9	27.74	-0.5088	6.3347	-0.1495
800	SLD 2	2.89	0.78	27.7	-0.508	6.3312	-0.1197
800	SLD 3	3.02	0.02	27.4	-0.5014	6.2889	0.0706
800	SLD 4	2.92	-0.1	27.37	-0.5005	6.2854	0.1004
800	SLD 5	1.17	1.8	27.35	-0.5062	6.2028	-0.4245
800	SLD 6	1.1	1.72	27.33	-0.5057	6.2005	-0.405
800	SLD 7	1.27	-1.12	26.23	-0.4814	6.05	0.3091
800	SLD 8	1.21	-1.21	26.21	-0.4808	6.0477	0.3286
800	SLD 9	-0.35	1.72	26.69	-0.4966	6.0444	-0.4446
800	SLD 10	-0.41	1.64	26.67	-0.4961	6.0421	-0.425
800	SLD 11	-0.24	-1.21	25.57	-0.4718	5.8916	0.289
800	SLD 12	-0.3	-1.29	25.55	-0.4712	5.8893	0.3085
800	SLD 13	-2.06	0.62	25.54	-0.4769	5.8067	-0.2164
800	SLD 14	-2.15	0.5	25.5	-0.4761	5.8032	-0.1866
800	SLD 15	-2.03	-0.26	25.2	-0.4695	5.7609	0.0037
800	SLD 16	-2.12	-0.38	25.17	-0.4686	5.7574	0.0335
800	SLV 1	6.4	1.73	29.49	-0.5361	6.7261	-0.2646
800	SLV 2	6.18	1.44	29.4	-0.5342	6.7179	-0.1952
800	SLV 3	6.48	-0.27	28.72	-0.5192	6.6219	0.2366
800	SLV 4	6.26	-0.56	28.64	-0.5173	6.6138	0.306
800	SLV 5	2.15	3.78	28.54	-0.529	6.4095	-0.8921
800	SLV 6	2.01	3.6	28.48	-0.5277	6.4042	-0.8474
800	SLV 7	2.4	-2.89	25.99	-0.4725	6.0622	0.7786
800	SLV 8	2.25	-3.07	25.93	-0.4713	6.0569	0.8233
800	SLV 9	-1.39	3.59	26.97	-0.5062	6.0351	-0.9393
800	SLV 10	-1.53	3.4	26.92	-0.5049	6.0299	-0.8946
800	SLV 11	-1.14	-3.08	24.42	-0.4497	5.6879	0.7314
800	SLV 12	-1.28	-3.27	24.37	-0.4485	5.6826	0.7761
800	SLV 13	-5.39	1.07	24.27	-0.4602	5.4783	-0.422
800	SLV 14	-5.61	0.79	24.18	-0.4582	5.4702	-0.3526
800	SLV 15	-5.32	-0.93	23.5	-0.4432	5.3741	0.0792
800	SLV 16	-5.54	-1.21	23.42	-0.4413	5.366	0.1486
800	CRTFP Ux+	0	0	0	0	0	0
800	CRTFP Ux-	0	0	0	0	0	0
800	CRTFP Uy+	0	0	0	0	0	0
800	CRTFP Uy-	0	0	0	0	0	0
802	SLU 1	0.82	1.16	43.86	-0.8239	-0.3481	0.0071
802	SLU 2	0.82	1.24	43.9	-0.8248	-0.3492	0.0072
802	SLU 3	0.84	1.21	44.8	-0.8415	-0.3571	0.0074
802	SLU 4	0.84	1.26	44.82	-0.842	-0.3578	0.0075
802	SLU 5	0.84	1.26	44.5	-0.8361	-0.3547	0.0074
802	SLU 6	0.86	1.23	45.4	-0.8528	-0.3626	0.0076
802	SLU 7	0.86	1.28	45.43	-0.8533	-0.3633	0.0077
802	SLU 8	0.85	1.2	45.07	-0.8465	-0.359	0.0075
802	SLU 9	0.85	1.25	45.09	-0.847	-0.3597	0.0075
802	SLU 10	0.95	1.41	49.79	-0.9365	-0.4064	0.0079
802	SLU 11	0.97	1.37	50.69	-0.9532	-0.4143	0.0081
802	SLU 12	0.97	1.42	50.72	-0.9537	-0.415	0.0081
802	SLU 13	0.96	1.43	50.4	-0.9477	-0.4118	0.008
802	SLU 14	0.99	1.39	51.3	-0.9644	-0.4198	0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
802	SLU 15	0.99	1.44	51.32	-0.965	-0.4205	0.0083
802	SLU 16	0.98	1.36	50.96	-0.9581	-0.4162	0.0081
802	SLU 17	0.98	1.41	50.99	-0.9586	-0.4169	0.0082
802	SLU 18	1	1.39	52.28	-0.9834	-0.4297	0.008
802	SLU 19	1	1.44	52.3	-0.984	-0.4304	0.0081
802	SLU 20	1.02	1.41	52.88	-0.9947	-0.4352	0.0082
802	SLU 21	1.02	1.46	52.91	-0.9952	-0.4359	0.0083
802	SLU 22	0.94	1.37	49.46	-0.9287	-0.4069	0.0081
802	SLU 23	0.94	1.45	49.5	-0.9296	-0.4081	0.0082
802	SLU 24	0.97	1.42	50.4	-0.9462	-0.416	0.0084
802	SLU 25	0.97	1.47	50.43	-0.9468	-0.4167	0.0085
802	SLU 26	0.96	1.47	50.11	-0.9408	-0.4136	0.0084
802	SLU 27	0.98	1.44	51.01	-0.9575	-0.4215	0.0086
802	SLU 28	0.98	1.49	51.03	-0.958	-0.4222	0.0086
802	SLU 29	0.98	1.41	50.67	-0.9512	-0.4179	0.0085
802	SLU 30	0.98	1.46	50.7	-0.9517	-0.4186	0.0085
802	SLU 31	1.07	1.62	55.4	-1.0412	-0.4653	0.0088
802	SLU 32	1.09	1.58	56.3	-1.0579	-0.4732	0.009
802	SLU 33	1.09	1.63	56.32	-1.0584	-0.4739	0.0091
802	SLU 34	1.09	1.64	56	-1.0525	-0.4707	0.009
802	SLU 35	1.11	1.6	56.9	-1.0692	-0.4787	0.0092
802	SLU 36	1.11	1.65	56.93	-1.0697	-0.4793	0.0093
802	SLU 37	1.1	1.58	56.57	-1.0629	-0.475	0.0091
802	SLU 38	1.1	1.62	56.59	-1.0634	-0.4757	0.0091
802	SLU 39	1.12	1.6	57.88	-1.0882	-0.4886	0.009
802	SLU 40	1.12	1.65	57.91	-1.0887	-0.4893	0.0091
802	SLU 41	1.14	1.62	58.49	-1.0994	-0.4941	0.0092
802	SLU 42	1.14	1.67	58.51	-1.1	-0.4948	0.0092
802	SLU 43	1.02	1.44	55.09	-1.0352	-0.4323	0.0089
802	SLU 44	1.02	1.52	55.13	-1.0361	-0.4334	0.009
802	SLU 45	1.05	1.49	56.03	-1.0528	-0.4414	0.0092
802	SLU 46	1.05	1.54	56.06	-1.0533	-0.4421	0.0093
802	SLU 47	1.04	1.54	55.74	-1.0473	-0.4389	0.0092
802	SLU 48	1.06	1.51	56.64	-1.064	-0.4468	0.0094
802	SLU 49	1.06	1.56	56.66	-1.0646	-0.4475	0.0095
802	SLU 50	1.06	1.48	56.3	-1.0577	-0.4432	0.0093
802	SLU 51	1.06	1.53	56.33	-1.0582	-0.4439	0.0093
802	SLU 52	1.15	1.68	61.03	-1.1477	-0.4906	0.0097
802	SLU 53	1.17	1.65	61.93	-1.1644	-0.4985	0.0099
802	SLU 54	1.17	1.7	61.95	-1.165	-0.4992	0.0099
802	SLU 55	1.17	1.7	61.63	-1.159	-0.4961	0.0098
802	SLU 56	1.19	1.67	62.53	-1.1757	-0.504	0.0101
802	SLU 57	1.19	1.72	62.56	-1.1762	-0.5047	0.0101
802	SLU 58	1.18	1.64	62.2	-1.1694	-0.5004	0.0099
802	SLU 59	1.18	1.69	62.22	-1.1699	-0.5011	0.01
802	SLU 60	1.2	1.67	63.51	-1.1947	-0.514	0.0098
802	SLU 61	1.2	1.72	63.54	-1.1952	-0.5146	0.0099
802	SLU 62	1.22	1.69	64.12	-1.206	-0.5194	0.01
802	SLU 63	1.22	1.74	64.14	-1.2065	-0.5201	0.0101
802	SLU 64	1.15	1.65	60.7	-1.1399	-0.4912	0.0099
802	SLU 65	1.15	1.73	60.74	-1.1408	-0.4923	0.01
802	SLU 66	1.17	1.7	61.64	-1.1575	-0.5003	0.0102
802	SLU 67	1.17	1.75	61.66	-1.158	-0.5009	0.0103
802	SLU 68	1.16	1.75	61.34	-1.1521	-0.4978	0.0102
802	SLU 69	1.19	1.72	62.24	-1.1688	-0.5057	0.0104
802	SLU 70	1.19	1.77	62.27	-1.1693	-0.5064	0.0105
802	SLU 71	1.18	1.69	61.91	-1.1625	-0.5021	0.0103
802	SLU 72	1.18	1.74	61.93	-1.163	-0.5028	0.0103
802	SLU 73	1.27	1.89	66.63	-1.2525	-0.5495	0.0106
802	SLU 74	1.3	1.86	67.53	-1.2692	-0.5574	0.0109
802	SLU 75	1.3	1.91	67.56	-1.2697	-0.5581	0.0109
802	SLU 76	1.29	1.91	67.24	-1.2637	-0.555	0.0108
802	SLU 77	1.31	1.88	68.14	-1.2804	-0.5629	0.011
802	SLU 78	1.31	1.93	68.16	-1.281	-0.5636	0.0111
802	SLU 79	1.31	1.85	67.8	-1.2741	-0.5593	0.0109
802	SLU 80	1.31	1.9	67.83	-1.2747	-0.56	0.011
802	SLU 81	1.33	1.88	69.12	-1.2994	-0.5728	0.0108
802	SLU 82	1.33	1.93	69.14	-1.3	-0.5735	0.0109
802	SLU 83	1.34	1.9	69.72	-1.3107	-0.5783	0.011
802	SLU 84	1.34	1.95	69.75	-1.3112	-0.579	0.011
802	SLE RA 1	0.86	1.22	45.46	-0.8538	-0.3649	0.0074
802	SLE RA 2	0.86	1.28	45.48	-0.8544	-0.3657	0.0075
802	SLE RA 3	0.87	1.25	46.09	-0.8656	-0.3709	0.0076
802	SLE RA 4	0.87	1.29	46.1	-0.8659	-0.3714	0.0077
802	SLE RA 5	0.87	1.29	45.89	-0.862	-0.3693	0.0076
802	SLE RA 6	0.88	1.27	46.49	-0.8731	-0.3746	0.0077
802	SLE RA 7	0.88	1.3	46.5	-0.8734	-0.375	0.0078
802	SLE RA 8	0.88	1.25	46.26	-0.8689	-0.3722	0.0076
802	SLE RA 9	0.88	1.28	46.28	-0.8692	-0.3726	0.0077
802	SLE RA 10	0.94	1.38	49.41	-0.9289	-0.4038	0.0079
802	SLE RA 11	0.95	1.36	50.02	-0.94	-0.409	0.008
802	SLE RA 12	0.95	1.4	50.03	-0.9404	-0.4095	0.0081
802	SLE RA 13	0.95	1.4	49.82	-0.9364	-0.4074	0.008
802	SLE RA 14	0.97	1.38	50.42	-0.9475	-0.4127	0.0082
802	SLE RA 15	0.97	1.41	50.44	-0.9479	-0.4131	0.0082
802	SLE RA 16	0.96	1.36	50.19	-0.9433	-0.4103	0.0081
802	SLE RA 17	0.96	1.39	50.21	-0.9437	-0.4107	0.0081
802	SLE RA 18	0.98	1.38	51.07	-0.9602	-0.4193	0.008
802	SLE RA 19	0.98	1.41	51.09	-0.9605	-0.4198	0.0081
802	SLE RA 20	0.99	1.39	51.48	-0.9677	-0.423	0.0081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
802	SLE RA 21	0.99	1.42	51.49	-0.9681	-0.4234	0.0082
802	SLE FR 1	0.86	1.22	45.46	-0.8538	-0.3649	0.0074
802	SLE FR 2	0.86	1.23	45.46	-0.854	-0.365	0.0074
802	SLE FR 3	0.86	1.23	45.62	-0.8568	-0.3663	0.0075
802	SLE FR 4	0.89	1.28	47.15	-0.8859	-0.3814	0.0076
802	SLE FR 5	0.9	1.27	47.3	-0.8888	-0.3827	0.0076
802	SLE FR 6	0.92	1.3	48.26	-0.907	-0.3921	0.0077
802	SLE QP 1	0.86	1.22	45.46	-0.8538	-0.3649	0.0074
802	SLE QP 2	0.89	1.27	47.14	-0.8857	-0.3812	0.0076
802	SLD 1	6.08	1.75	43.86	-0.8335	-0.0981	0.0807
802	SLD 2	5.89	1.95	43.95	-0.8355	-0.1003	0.0869
802	SLD 3	6.01	0.07	43.23	-0.8197	-0.0761	0.0778
802	SLD 4	5.82	0.27	43.33	-0.8218	-0.0783	0.084
802	SLD 5	2.59	3.93	47.08	-0.8905	-0.3293	0.0328
802	SLD 6	2.47	4.06	47.15	-0.8919	-0.3307	0.0369
802	SLD 7	2.35	-1.68	45.01	-0.8447	-0.2559	0.0231
802	SLD 8	2.22	-1.55	45.07	-0.8461	-0.2574	0.0272
802	SLD 9	-0.44	4.09	49.22	-0.9254	-0.5051	-0.012
802	SLD 10	-0.57	4.22	49.28	-0.9267	-0.5065	-0.0079
802	SLD 11	-0.69	-1.53	47.14	-0.8796	-0.4317	-0.0217
802	SLD 12	-0.81	-1.4	47.2	-0.881	-0.4332	-0.0177
802	SLD 13	-4.03	2.27	50.96	-0.9497	-0.6841	-0.0688
802	SLD 14	-4.22	2.47	51.05	-0.9518	-0.6863	-0.0626
802	SLD 15	-4.11	0.58	50.33	-0.936	-0.6621	-0.0717
802	SLD 16	-4.3	0.78	50.43	-0.938	-0.6643	-0.0655
802	SLV 1	13.03	2.35	39.43	-0.7629	0.2821	0.1785
802	SLV 2	12.58	2.81	39.65	-0.7676	0.277	0.193
802	SLV 3	12.85	-1.49	38.02	-0.7318	0.332	0.1719
802	SLV 4	12.41	-1.02	38.24	-0.7365	0.3269	0.1863
802	SLV 5	4.87	7.33	46.93	-0.8952	-0.2571	0.0665
802	SLV 6	4.58	7.63	47.07	-0.8983	-0.2604	0.0758
802	SLV 7	4.3	-5.46	42.23	-0.7916	-0.0907	0.0443
802	SLV 8	4.01	-5.16	42.37	-0.7946	-0.094	0.0536
802	SLV 9	-2.23	7.69	51.92	-0.9769	-0.6685	-0.0384
802	SLV 10	-2.52	7.99	52.06	-0.9799	-0.6718	-0.0291
802	SLV 11	-2.8	-5.09	47.21	-0.8732	-0.5021	-0.0606
802	SLV 12	-3.08	-4.8	47.35	-0.8763	-0.5054	-0.0513
802	SLV 13	-10.63	3.56	56.05	-1.035	-1.0893	-0.1712
802	SLV 14	-11.07	4.02	56.27	-1.0397	-1.0944	-0.1567
802	SLV 15	-10.8	-0.28	54.64	-1.0039	-1.0394	-0.1778
802	SLV 16	-11.24	0.19	54.85	-1.0086	-1.0445	-0.1633
802	CRTFP Ux+	0	0	0	0	0	0
802	CRTFP Ux-	0	0	0	0	0	0
804	SLU 1	-0.65	-0.1	31.48	-0.0273	-2.7159	-0.0246
804	SLU 2	-0.65	-0.02	31.48	-0.0274	-2.7162	-0.0043
804	SLU 3	-0.67	-0.1	32.2	-0.028	-2.7671	-0.0248
804	SLU 4	-0.67	-0.05	32.21	-0.028	-2.7672	-0.0126
804	SLU 5	-0.66	-0.02	31.94	-0.0278	-2.7479	-0.005
804	SLU 6	-0.68	-0.1	32.66	-0.0284	-2.7987	-0.0255
804	SLU 7	-0.68	-0.05	32.66	-0.0284	-2.7989	-0.0133
804	SLU 8	-0.67	-0.1	32.39	-0.0282	-2.7792	-0.026
804	SLU 9	-0.67	-0.05	32.39	-0.0282	-2.7794	-0.0138
804	SLU 10	-0.71	-0.01	35.41	-0.0316	-3.0337	-0.0021
804	SLU 11	-0.72	-0.09	36.13	-0.0322	-3.0845	-0.0227
804	SLU 12	-0.72	-0.04	36.13	-0.0322	-3.0847	-0.0105
804	SLU 13	-0.72	-0.01	35.86	-0.032	-3.0653	-0.0028
804	SLU 14	-0.73	-0.09	36.58	-0.0326	-3.1161	-0.0234
804	SLU 15	-0.73	-0.04	36.59	-0.0326	-3.1163	-0.0112
804	SLU 16	-0.73	-0.09	36.31	-0.0324	-3.0967	-0.0239
804	SLU 17	-0.73	-0.05	36.32	-0.0324	-3.0968	-0.0117
804	SLU 18	-0.73	-0.09	37.08	-0.0333	-3.1694	-0.0215
804	SLU 19	-0.73	-0.04	37.09	-0.0334	-3.1696	-0.0093
804	SLU 20	-0.74	-0.09	37.54	-0.0337	-3.2011	-0.0222
804	SLU 21	-0.74	-0.04	37.54	-0.0338	-3.2012	-0.01
804	SLU 22	-0.72	-0.09	35.4	-0.0312	-3.0262	-0.0218
804	SLU 23	-0.72	-0.01	35.41	-0.0313	-3.0265	-0.0015
804	SLU 24	-0.74	-0.09	36.13	-0.0319	-3.0774	-0.022
804	SLU 25	-0.73	-0.04	36.13	-0.0319	-3.0775	-0.0098
804	SLU 26	-0.73	-0.01	35.87	-0.0317	-3.0582	-0.0022
804	SLU 27	-0.75	-0.09	36.58	-0.0323	-3.109	-0.0228
804	SLU 28	-0.74	-0.04	36.59	-0.0324	-3.1092	-0.0106
804	SLU 29	-0.74	-0.09	36.31	-0.0321	-3.0895	-0.0233
804	SLU 30	-0.74	-0.04	36.32	-0.0321	-3.0897	-0.0111
804	SLU 31	-0.77	0	39.33	-0.0355	-3.344	0.0006
804	SLU 32	-0.79	-0.08	40.05	-0.0361	-3.3948	-0.0199
804	SLU 33	-0.79	-0.03	40.06	-0.0361	-3.395	-0.0077
804	SLU 34	-0.78	0	39.79	-0.036	-3.3756	-0.0001
804	SLU 35	-0.8	-0.08	40.51	-0.0365	-3.4264	-0.0206
804	SLU 36	-0.8	-0.03	40.51	-0.0366	-3.4266	-0.0084
804	SLU 37	-0.8	-0.08	40.24	-0.0363	-3.407	-0.0211
804	SLU 38	-0.79	-0.03	40.24	-0.0363	-3.4071	-0.0089
804	SLU 39	-0.8	-0.07	41.01	-0.0372	-3.4797	-0.0188
804	SLU 40	-0.8	-0.03	41.01	-0.0373	-3.4799	-0.0066
804	SLU 41	-0.81	-0.08	41.46	-0.0377	-3.5114	-0.0195
804	SLU 42	-0.81	-0.03	41.47	-0.0377	-3.5115	-0.0073
804	SLU 43	-0.82	-0.13	39.57	-0.0342	-3.4243	-0.0329
804	SLU 44	-0.82	-0.05	39.58	-0.0342	-3.4246	-0.0126
804	SLU 45	-0.84	-0.13	40.3	-0.0348	-3.4755	-0.0331
804	SLU 46	-0.84	-0.08	40.3	-0.0349	-3.4756	-0.0209
804	SLU 47	-0.83	-0.05	40.04	-0.0347	-3.4563	-0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
804	SLU 48	-0.85	-0.13	40.75	-0.0352	-3.5071	-0.0338
804	SLU 49	-0.85	-0.08	40.76	-0.0353	-3.5073	-0.0216
804	SLU 50	-0.85	-0.14	40.48	-0.035	-3.4876	-0.0343
804	SLU 51	-0.84	-0.09	40.49	-0.035	-3.4878	-0.0221
804	SLU 52	-0.88	-0.04	43.5	-0.0385	-3.7421	-0.0104
804	SLU 53	-0.9	-0.12	44.22	-0.039	-3.7929	-0.031
804	SLU 54	-0.89	-0.07	44.23	-0.0391	-3.7931	-0.0188
804	SLU 55	-0.89	-0.04	43.96	-0.0389	-3.7737	-0.0111
804	SLU 56	-0.91	-0.13	44.68	-0.0394	-3.8245	-0.0317
804	SLU 57	-0.9	-0.08	44.68	-0.0395	-3.8247	-0.0195
804	SLU 58	-0.9	-0.13	44.41	-0.0392	-3.8051	-0.0322
804	SLU 59	-0.9	-0.08	44.41	-0.0393	-3.8052	-0.02
804	SLU 60	-0.9	-0.12	45.18	-0.0402	-3.8778	-0.0298
804	SLU 61	-0.9	-0.07	45.18	-0.0402	-3.878	-0.0176
804	SLU 62	-0.91	-0.12	45.63	-0.0406	-3.9095	-0.0306
804	SLU 63	-0.91	-0.07	45.64	-0.0406	-3.9096	-0.0184
804	SLU 64	-0.89	-0.12	43.5	-0.0381	-3.7346	-0.0302
804	SLU 65	-0.89	-0.04	43.51	-0.0382	-3.7349	-0.0098
804	SLU 66	-0.91	-0.12	44.23	-0.0387	-3.7858	-0.0304
804	SLU 67	-0.91	-0.07	44.23	-0.0388	-3.7859	-0.0182
804	SLU 68	-0.9	-0.04	43.96	-0.0386	-3.7665	-0.0105
804	SLU 69	-0.92	-0.12	44.68	-0.0392	-3.8174	-0.0311
804	SLU 70	-0.92	-0.07	44.69	-0.0392	-3.8176	-0.0189
804	SLU 71	-0.91	-0.12	44.41	-0.0389	-3.7979	-0.0316
804	SLU 72	-0.91	-0.08	44.42	-0.039	-3.7981	-0.0194
804	SLU 73	-0.95	-0.03	47.43	-0.0424	-4.0523	-0.0077
804	SLU 74	-0.96	-0.11	48.15	-0.0429	-4.1032	-0.0282
804	SLU 75	-0.96	-0.06	48.15	-0.043	-4.1034	-0.016
804	SLU 76	-0.96	-0.03	47.89	-0.0428	-4.084	-0.0084
804	SLU 77	-0.97	-0.11	48.6	-0.0434	-4.1348	-0.0289
804	SLU 78	-0.97	-0.07	48.61	-0.0434	-4.135	-0.0167
804	SLU 79	-0.97	-0.12	48.33	-0.0431	-4.1153	-0.0294
804	SLU 80	-0.97	-0.07	48.34	-0.0432	-4.1155	-0.0172
804	SLU 81	-0.97	-0.11	49.11	-0.0441	-4.1881	-0.0271
804	SLU 82	-0.97	-0.06	49.11	-0.0441	-4.1883	-0.0149
804	SLU 83	-0.98	-0.11	49.56	-0.0445	-4.2198	-0.0278
804	SLU 84	-0.98	-0.06	49.57	-0.0446	-4.2199	-0.0156
804	SLE RA 1	-0.67	-0.09	32.6	-0.0284	-2.8046	-0.0238
804	SLE RA 2	-0.67	-0.04	32.6	-0.0285	-2.8048	-0.0102
804	SLE RA 3	-0.68	-0.09	33.08	-0.0289	-2.8387	-0.0239
804	SLE RA 4	-0.68	-0.06	33.09	-0.0289	-2.8388	-0.0158
804	SLE RA 5	-0.68	-0.04	32.91	-0.0288	-2.8259	-0.0107
804	SLE RA 6	-0.69	-0.1	33.39	-0.0291	-2.8598	-0.0244
804	SLE RA 7	-0.69	-0.06	33.39	-0.0292	-2.8599	-0.0163
804	SLE RA 8	-0.69	-0.1	33.21	-0.029	-2.8468	-0.0248
804	SLE RA 9	-0.68	-0.07	33.21	-0.029	-2.8469	-0.0166
804	SLE RA 10	-0.71	-0.03	35.22	-0.0313	-3.0164	-0.0088
804	SLE RA 11	-0.72	-0.09	35.7	-0.0317	-3.0503	-0.0225
804	SLE RA 12	-0.72	-0.06	35.7	-0.0317	-3.0504	-0.0144
804	SLE RA 13	-0.71	-0.04	35.52	-0.0316	-3.0375	-0.0093
804	SLE RA 14	-0.73	-0.09	36	-0.032	-3.0714	-0.023
804	SLE RA 15	-0.72	-0.06	36	-0.032	-3.0715	-0.0149
804	SLE RA 16	-0.72	-0.09	35.82	-0.0318	-3.0584	-0.0233
804	SLE RA 17	-0.72	-0.06	35.82	-0.0318	-3.0585	-0.0152
804	SLE RA 18	-0.72	-0.09	36.34	-0.0324	-3.1069	-0.0218
804	SLE RA 19	-0.72	-0.05	36.34	-0.0325	-3.107	-0.0136
804	SLE RA 20	-0.73	-0.09	36.64	-0.0327	-3.128	-0.0222
804	SLE RA 21	-0.73	-0.06	36.64	-0.0328	-3.1281	-0.0141
804	SLE FR 1	-0.67	-0.09	32.6	-0.0284	-2.8046	-0.0238
804	SLE FR 2	-0.67	-0.08	32.6	-0.0284	-2.8046	-0.0211
804	SLE FR 3	-0.67	-0.09	32.72	-0.0285	-2.813	-0.024
804	SLE FR 4	-0.69	-0.08	33.72	-0.0296	-2.8953	-0.0205
804	SLE FR 5	-0.69	-0.09	33.84	-0.0297	-2.9037	-0.0234
804	SLE FR 6	-0.7	-0.09	34.47	-0.0304	-2.9558	-0.0228
804	SLE QP 1	-0.67	-0.09	32.6	-0.0284	-2.8046	-0.0238
804	SLE QP 2	-0.69	-0.09	33.72	-0.0296	-2.8953	-0.0232
804	SLD 1	2	1.42	42.88	-0.04	-3.5768	0.3555
804	SLD 2	1.86	0.76	43	-0.039	-3.6027	0.1905
804	SLD 3	1.94	0.06	43.03	-0.0385	-3.6419	0.0126
804	SLD 4	1.8	-0.61	43.15	-0.0375	-3.6679	-0.1524
804	SLD 5	0.24	2.56	36.23	-0.0352	-2.9963	0.6397
804	SLD 6	0.15	2.12	36.3	-0.0346	-3.0133	0.5316
804	SLD 7	0.03	-2.01	36.71	-0.0302	-3.2135	-0.5031
804	SLD 8	-0.06	-2.44	36.79	-0.0296	-3.2305	-0.6113
804	SLD 9	-1.31	2.26	30.65	-0.0297	-2.5601	0.5649
804	SLD 10	-1.4	1.82	30.73	-0.0291	-2.5771	0.4567
804	SLD 11	-1.52	-2.31	31.14	-0.0247	-2.7773	-0.578
804	SLD 12	-1.61	-2.74	31.21	-0.0241	-2.7943	-0.6861
804	SLD 13	-3.17	0.43	24.29	-0.0217	-2.1227	0.106
804	SLD 14	-3.31	-0.24	24.41	-0.0208	-2.1487	-0.059
804	SLD 15	-3.24	-0.94	24.44	-0.0202	-2.1879	-0.2369
804	SLD 16	-3.37	-1.61	24.56	-0.0193	-2.2138	-0.4018
804	SLV 1	5.59	3.41	55.16	-0.0538	-4.4924	0.8511
804	SLV 2	5.27	1.86	55.44	-0.0516	-4.5529	0.4669
804	SLV 3	5.45	0.29	55.5	-0.0504	-4.6415	0.0707
804	SLV 4	5.13	-1.25	55.78	-0.0482	-4.7019	-0.3135
804	SLV 5	1.47	5.95	39.59	-0.0424	-3.138	1.4889
804	SLV 6	1.27	4.96	39.77	-0.041	-3.177	1.2413
804	SLV 7	0.99	-4.44	40.72	-0.0311	-3.6348	-1.1125
804	SLV 8	0.78	-5.43	40.9	-0.0297	-3.6737	-1.3601

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
804	SLV 9	-2.16	5.25	26.54	-0.0296	-2.1169	1.3137
804	SLV 10	-2.36	4.25	26.72	-0.0282	-2.1558	1.0661
804	SLV 11	-2.64	-5.14	27.67	-0.0183	-2.6136	-1.2877
804	SLV 12	-2.85	-6.14	27.85	-0.0169	-2.6526	-1.5353
804	SLV 13	-6.5	1.07	11.66	-0.0111	-1.0887	0.2671
804	SLV 14	-6.82	-0.48	11.94	-0.0089	-1.1491	-0.1171
804	SLV 15	-6.65	-2.05	12	-0.0077	-1.2377	-0.5133
804	SLV 16	-6.97	-3.59	12.28	-0.0055	-1.2982	-0.8975
804	CRTFP Ux+	0	0	0	0	0	0
804	CRTFP Ux-	0	0	0	0	0	0
804	CRTFP Uy+	0	0	0	0	0	0
804	CRTFP Uy-	0	0	0	0	0	0
807	SLU 1	0.6	0.37	36.97	-0.0627	7.0516	-0.1306
807	SLU 2	0.59	0.47	36.97	-0.0628	7.0559	-0.1639
807	SLU 3	0.62	0.39	37.81	-0.0642	7.198	-0.1351
807	SLU 4	0.61	0.44	37.81	-0.0643	7.2006	-0.1551
807	SLU 5	0.6	0.47	37.49	-0.0638	7.1469	-0.1645
807	SLU 6	0.63	0.39	38.33	-0.0652	7.2889	-0.1356
807	SLU 7	0.62	0.45	38.33	-0.0653	7.2915	-0.1556
807	SLU 8	0.62	0.38	38.01	-0.0647	7.2335	-0.1317
807	SLU 9	0.62	0.43	38.01	-0.0647	7.2361	-0.1517
807	SLU 10	0.64	0.55	41.61	-0.0718	7.8927	-0.1934
807	SLU 11	0.66	0.47	42.44	-0.0732	8.0348	-0.1645
807	SLU 12	0.66	0.53	42.44	-0.0733	8.0373	-0.1845
807	SLU 13	0.65	0.56	42.13	-0.0728	7.9836	-0.1939
807	SLU 14	0.67	0.47	42.96	-0.0742	8.1257	-0.1651
807	SLU 15	0.67	0.53	42.96	-0.0743	8.1283	-0.1851
807	SLU 16	0.67	0.46	42.64	-0.0737	8.0702	-0.1612
807	SLU 17	0.66	0.52	42.65	-0.0737	8.0728	-0.1811
807	SLU 18	0.67	0.49	43.59	-0.0755	8.247	-0.1727
807	SLU 19	0.66	0.55	43.59	-0.0756	8.2496	-0.1927
807	SLU 20	0.68	0.5	44.11	-0.0765	8.3379	-0.1732
807	SLU 21	0.67	0.55	44.11	-0.0766	8.3405	-0.1932
807	SLU 22	0.66	0.45	41.55	-0.0714	7.8738	-0.158
807	SLU 23	0.65	0.55	41.56	-0.0715	7.8781	-0.1913
807	SLU 24	0.68	0.47	42.39	-0.0729	8.0201	-0.1624
807	SLU 25	0.67	0.52	42.4	-0.073	8.0227	-0.1824
807	SLU 26	0.66	0.55	42.08	-0.0725	7.969	-0.1918
807	SLU 27	0.69	0.47	42.91	-0.0739	8.111	-0.163
807	SLU 28	0.68	0.52	42.92	-0.074	8.1136	-0.183
807	SLU 29	0.68	0.46	42.59	-0.0734	8.0556	-0.1591
807	SLU 30	0.68	0.51	42.6	-0.0735	8.0582	-0.179
807	SLU 31	0.7	0.63	46.19	-0.0805	8.7148	-0.2208
807	SLU 32	0.72	0.55	47.03	-0.0819	8.8569	-0.1919
807	SLU 33	0.72	0.61	47.03	-0.082	8.8595	-0.2119
807	SLU 34	0.71	0.63	46.71	-0.0815	8.8058	-0.2213
807	SLU 35	0.73	0.55	47.55	-0.0829	8.9478	-0.1924
807	SLU 36	0.73	0.61	47.55	-0.083	8.9504	-0.2124
807	SLU 37	0.73	0.54	47.23	-0.0824	8.8924	-0.1885
807	SLU 38	0.72	0.6	47.23	-0.0825	8.895	-0.2085
807	SLU 39	0.72	0.57	48.17	-0.0842	9.0691	-0.2001
807	SLU 40	0.72	0.63	48.17	-0.0843	9.0717	-0.2201
807	SLU 41	0.74	0.57	48.69	-0.0852	9.1601	-0.2006
807	SLU 42	0.73	0.63	48.69	-0.0853	9.1627	-0.2206
807	SLU 43	0.76	0.46	46.49	-0.0785	8.8852	-0.1604
807	SLU 44	0.75	0.56	46.49	-0.0786	8.8896	-0.1937
807	SLU 45	0.78	0.47	47.33	-0.08	9.0316	-0.1649
807	SLU 46	0.77	0.53	47.33	-0.0801	9.0342	-0.1849
807	SLU 47	0.76	0.56	47.01	-0.0796	8.9805	-0.1943
807	SLU 48	0.79	0.47	47.85	-0.081	9.1225	-0.1654
807	SLU 49	0.78	0.53	47.85	-0.0811	9.1251	-0.1854
807	SLU 50	0.79	0.46	47.53	-0.0805	9.0671	-0.1615
807	SLU 51	0.78	0.52	47.53	-0.0806	9.0697	-0.1815
807	SLU 52	0.8	0.64	51.12	-0.0876	9.7263	-0.2232
807	SLU 53	0.82	0.56	51.96	-0.089	9.8684	-0.1943
807	SLU 54	0.82	0.61	51.96	-0.0891	9.871	-0.2143
807	SLU 55	0.81	0.64	51.65	-0.0886	9.8172	-0.2237
807	SLU 56	0.84	0.56	52.48	-0.09	9.9593	-0.1949
807	SLU 57	0.83	0.62	52.48	-0.0901	9.9619	-0.2149
807	SLU 58	0.83	0.55	52.16	-0.0895	9.9039	-0.191
807	SLU 59	0.82	0.6	52.16	-0.0896	9.9064	-0.2109
807	SLU 60	0.83	0.58	53.11	-0.0913	10.0806	-0.2025
807	SLU 61	0.82	0.64	53.11	-0.0914	10.0832	-0.2225
807	SLU 62	0.84	0.58	53.63	-0.0923	10.1716	-0.203
807	SLU 63	0.83	0.64	53.63	-0.0924	10.1741	-0.223
807	SLU 64	0.82	0.54	51.07	-0.0872	9.7074	-0.1878
807	SLU 65	0.81	0.63	51.08	-0.0874	9.7117	-0.2211
807	SLU 66	0.84	0.55	51.91	-0.0888	9.8537	-0.1922
807	SLU 67	0.83	0.61	51.91	-0.0888	9.8563	-0.2122
807	SLU 68	0.82	0.64	51.6	-0.0883	9.8026	-0.2216
807	SLU 69	0.85	0.55	52.43	-0.0897	9.9447	-0.1928
807	SLU 70	0.84	0.61	52.44	-0.0898	9.9472	-0.2128
807	SLU 71	0.84	0.54	52.11	-0.0892	9.8892	-0.1889
807	SLU 72	0.84	0.6	52.12	-0.0893	9.8918	-0.2088
807	SLU 73	0.86	0.72	55.71	-0.0963	10.5485	-0.2506
807	SLU 74	0.88	0.64	56.55	-0.0977	10.6905	-0.2217
807	SLU 75	0.88	0.69	56.55	-0.0978	10.6931	-0.2417
807	SLU 76	0.87	0.72	56.23	-0.0973	10.6394	-0.2511
807	SLU 77	0.89	0.64	57.07	-0.0987	10.7814	-0.2222
807	SLU 78	0.89	0.69	57.07	-0.0988	10.784	-0.2422

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
807	SLU 79	0.89	0.63	56.75	-0.0982	10.726	-0.2183
807	SLU 80	0.88	0.68	56.75	-0.0983	10.7286	-0.2383
807	SLU 81	0.89	0.66	57.69	-0.1001	10.9028	-0.2299
807	SLU 82	0.88	0.72	57.69	-0.1001	10.9053	-0.2499
807	SLU 83	0.9	0.66	58.21	-0.101	10.9937	-0.2304
807	SLU 84	0.89	0.72	58.21	-0.1011	10.9963	-0.2504
807	SLE RA 1	0.62	0.4	38.28	-0.0652	7.2865	-0.1384
807	SLE RA 2	0.61	0.46	38.28	-0.0653	7.2894	-0.1606
807	SLE RA 3	0.63	0.41	38.84	-0.0662	7.3841	-0.1414
807	SLE RA 4	0.63	0.44	38.84	-0.0663	7.3858	-0.1547
807	SLE RA 5	0.62	0.46	38.63	-0.0659	7.35	-0.161
807	SLE RA 6	0.64	0.41	39.19	-0.0669	7.4447	-0.1418
807	SLE RA 7	0.63	0.44	39.19	-0.0669	7.4464	-0.1551
807	SLE RA 8	0.63	0.4	38.97	-0.0665	7.4078	-0.1391
807	SLE RA 9	0.63	0.44	38.97	-0.0665	7.4095	-0.1525
807	SLE RA 10	0.64	0.52	41.37	-0.0713	7.8472	-0.1803
807	SLE RA 11	0.66	0.46	41.93	-0.0722	7.9419	-0.1611
807	SLE RA 12	0.66	0.5	41.93	-0.0723	7.9437	-0.1744
807	SLE RA 13	0.65	0.52	41.72	-0.0719	7.9079	-0.1806
807	SLE RA 14	0.67	0.46	42.27	-0.0729	8.0026	-0.1614
807	SLE RA 15	0.66	0.5	42.28	-0.0729	8.0043	-0.1747
807	SLE RA 16	0.66	0.45	42.06	-0.0725	7.9656	-0.1588
807	SLE RA 17	0.66	0.49	42.06	-0.0725	7.9673	-0.1721
807	SLE RA 18	0.66	0.48	42.69	-0.0737	8.0834	-0.1665
807	SLE RA 19	0.66	0.51	42.69	-0.0738	8.0852	-0.1798
807	SLE RA 20	0.67	0.48	43.04	-0.0744	8.1441	-0.1669
807	SLE RA 21	0.67	0.52	43.04	-0.0745	8.1458	-0.1802
807	SLE FR 1	0.62	0.4	38.28	-0.0652	7.2865	-0.1384
807	SLE FR 2	0.62	0.41	38.28	-0.0652	7.2871	-0.1429
807	SLE FR 3	0.62	0.4	38.42	-0.0654	7.3108	-0.1386
807	SLE FR 4	0.63	0.43	39.6	-0.0678	7.5262	-0.1513
807	SLE FR 5	0.63	0.42	39.74	-0.068	7.5498	-0.147
807	SLE FR 6	0.64	0.44	40.49	-0.0695	7.685	-0.1525
807	SLE QP 1	0.62	0.4	38.28	-0.0652	7.2865	-0.1384
807	SLE QP 2	0.63	0.42	39.6	-0.0677	7.5256	-0.1469
807	SLD 1	2.92	0.23	29.38	-0.049	5.865	-0.081
807	SLD 2	2.73	1.04	29.19	-0.0504	5.8598	-0.3612
807	SLD 3	3.17	-1.39	29.66	-0.0465	5.8251	0.4844
807	SLD 4	2.98	-0.58	29.47	-0.0479	5.82	0.2042
807	SLD 5	0.97	2.68	36.15	-0.0656	7.0888	-0.9348
807	SLD 6	0.85	3.21	36.03	-0.0665	7.0854	-1.1185
807	SLD 7	1.81	-2.72	37.07	-0.0574	6.9559	0.9498
807	SLD 8	1.69	-2.19	36.95	-0.0583	6.9525	0.7661
807	SLD 9	-0.42	3.04	42.26	-0.0772	8.0987	-1.0599
807	SLD 10	-0.55	3.56	42.14	-0.0781	8.0953	-1.2435
807	SLD 11	0.42	-2.36	43.18	-0.0689	7.9658	0.8247
807	SLD 12	0.29	-1.84	43.05	-0.0699	7.9624	0.6411
807	SLD 13	-1.72	1.42	49.74	-0.0875	9.2312	-0.4979
807	SLD 14	-1.91	2.23	49.55	-0.089	9.2261	-0.7781
807	SLD 15	-1.47	-0.2	50.01	-0.0851	9.1914	0.0675
807	SLD 16	-1.66	0.61	49.82	-0.0865	9.1862	-0.2127
807	SLV 1	5.99	-0.06	15.69	-0.0237	3.638	0.024
807	SLV 2	5.55	1.81	15.25	-0.0271	3.626	-0.6286
807	SLV 3	6.57	-3.75	16.32	-0.0181	3.5464	1.3103
807	SLV 4	6.13	-1.88	15.88	-0.0215	3.5343	0.6577
807	SLV 5	1.45	5.54	31.55	-0.0624	6.5003	-1.9341
807	SLV 6	1.16	6.75	31.27	-0.0646	6.4926	-2.3546
807	SLV 7	3.36	-6.74	33.65	-0.0438	6.1949	2.3535
807	SLV 8	3.07	-5.53	33.36	-0.046	6.1872	1.933
807	SLV 9	-1.81	6.38	45.84	-0.0895	8.864	-2.2267
807	SLV 10	-2.09	7.58	45.56	-0.0917	8.8563	-2.6472
807	SLV 11	0.1	-5.91	47.94	-0.0709	8.5586	2.0609
807	SLV 12	-0.18	-4.7	47.66	-0.0731	8.5509	1.6404
807	SLV 13	-4.86	2.72	63.33	-0.114	11.5169	-0.9514
807	SLV 14	-5.3	4.59	62.89	-0.1174	11.5048	-1.604
807	SLV 15	-4.29	-0.97	63.96	-0.1084	11.4253	0.3349
807	SLV 16	-4.73	0.91	63.52	-0.1118	11.4132	-0.3177
807	CRTFP Ux+	0	0	0	0	0	0
807	CRTFP Ux-	0	0	0	0	0	0
807	CRTFP Uy+	0	0	0	0	0	0
807	CRTFP Uy-	0	0	0	0	0	0
809	SLU 1	1.16	-0.13	62.88	0.0198	0.1867	-0.0115
809	SLU 2	1.16	-0.03	62.91	0.0194	0.1845	-0.0115
809	SLU 3	1.19	-0.13	64.31	0.0203	0.1937	-0.0116
809	SLU 4	1.19	-0.07	64.33	0.0201	0.1924	-0.0116
809	SLU 5	1.18	-0.04	63.79	0.0197	0.1888	-0.0116
809	SLU 6	1.21	-0.13	65.19	0.0206	0.198	-0.0117
809	SLU 7	1.21	-0.07	65.21	0.0204	0.1967	-0.0117
809	SLU 8	1.2	-0.14	64.64	0.0204	0.1953	-0.0117
809	SLU 9	1.2	-0.08	64.66	0.0202	0.194	-0.0117
809	SLU 10	1.25	-0.01	71.37	0.0217	0.2172	-0.0125
809	SLU 11	1.28	-0.11	72.78	0.0227	0.2264	-0.0126
809	SLU 12	1.28	-0.05	72.79	0.0224	0.2251	-0.0126
809	SLU 13	1.26	-0.02	72.25	0.022	0.2215	-0.0126
809	SLU 14	1.3	-0.11	73.65	0.023	0.2307	-0.0127
809	SLU 15	1.29	-0.05	73.67	0.0227	0.2294	-0.0127
809	SLU 16	1.29	-0.12	73.1	0.0227	0.228	-0.0127
809	SLU 17	1.28	-0.06	73.12	0.0225	0.2267	-0.0127
809	SLU 18	1.29	-0.11	74.97	0.023	0.2334	-0.0129
809	SLU 19	1.29	-0.04	74.99	0.0228	0.2321	-0.013

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
809	SLU 20	1.3	-0.11	75.85	0.0234	0.2377	-0.013
809	SLU 21	1.3	-0.05	75.87	0.0231	0.2364	-0.0131
809	SLU 22	1.27	-0.09	71.14	0.0226	0.2174	-0.0122
809	SLU 23	1.27	0.01	71.17	0.0223	0.2152	-0.0122
809	SLU 24	1.3	-0.09	72.58	0.0232	0.2244	-0.0124
809	SLU 25	1.3	-0.03	72.59	0.023	0.2231	-0.0124
809	SLU 26	1.29	0	72.05	0.0226	0.2195	-0.0123
809	SLU 27	1.32	-0.09	73.45	0.0235	0.2287	-0.0125
809	SLU 28	1.32	-0.03	73.47	0.0233	0.2274	-0.0125
809	SLU 29	1.31	-0.1	72.9	0.0233	0.226	-0.0124
809	SLU 30	1.31	-0.04	72.92	0.023	0.2247	-0.0124
809	SLU 31	1.36	0.03	79.64	0.0246	0.2479	-0.0133
809	SLU 32	1.39	-0.07	81.04	0.0255	0.2571	-0.0134
809	SLU 33	1.39	-0.01	81.06	0.0253	0.2558	-0.0134
809	SLU 34	1.37	0.02	80.51	0.0249	0.2522	-0.0134
809	SLU 35	1.41	-0.07	81.92	0.0258	0.2614	-0.0135
809	SLU 36	1.4	-0.01	81.93	0.0256	0.2601	-0.0135
809	SLU 37	1.39	-0.08	81.36	0.0256	0.2587	-0.0135
809	SLU 38	1.39	-0.02	81.38	0.0254	0.2574	-0.0135
809	SLU 39	1.4	-0.06	83.24	0.0259	0.2641	-0.0137
809	SLU 40	1.4	0	83.25	0.0257	0.2628	-0.0137
809	SLU 41	1.41	-0.07	84.11	0.0262	0.2684	-0.0138
809	SLU 42	1.41	-0.01	84.13	0.026	0.2671	-0.0138
809	SLU 43	1.47	-0.19	78.91	0.0247	0.2322	-0.0146
809	SLU 44	1.47	-0.09	78.94	0.0243	0.23	-0.0146
809	SLU 45	1.5	-0.18	80.34	0.0253	0.2392	-0.0148
809	SLU 46	1.5	-0.12	80.36	0.0251	0.2379	-0.0148
809	SLU 47	1.49	-0.09	79.82	0.0246	0.2343	-0.0147
809	SLU 48	1.52	-0.19	81.22	0.0256	0.2435	-0.0149
809	SLU 49	1.52	-0.13	81.24	0.0254	0.2422	-0.0149
809	SLU 50	1.51	-0.2	80.67	0.0253	0.2408	-0.0148
809	SLU 51	1.51	-0.14	80.69	0.0251	0.2395	-0.0148
809	SLU 52	1.56	-0.07	87.4	0.0266	0.2627	-0.0157
809	SLU 53	1.59	-0.16	88.81	0.0276	0.2719	-0.0158
809	SLU 54	1.59	-0.1	88.82	0.0274	0.2706	-0.0158
809	SLU 55	1.58	-0.07	88.28	0.0269	0.267	-0.0158
809	SLU 56	1.61	-0.17	89.68	0.0279	0.2762	-0.0159
809	SLU 57	1.61	-0.11	89.7	0.0277	0.2749	-0.0159
809	SLU 58	1.6	-0.18	89.13	0.0276	0.2735	-0.0159
809	SLU 59	1.59	-0.12	89.15	0.0274	0.2722	-0.0159
809	SLU 60	1.6	-0.16	91	0.028	0.2789	-0.0161
809	SLU 61	1.6	-0.1	91.02	0.0278	0.2776	-0.0161
809	SLU 62	1.62	-0.16	91.88	0.0283	0.2832	-0.0162
809	SLU 63	1.61	-0.1	91.9	0.0281	0.2819	-0.0162
809	SLU 64	1.58	-0.15	87.18	0.0276	0.2629	-0.0154
809	SLU 65	1.58	-0.05	87.2	0.0272	0.2607	-0.0154
809	SLU 66	1.61	-0.14	88.61	0.0282	0.2699	-0.0155
809	SLU 67	1.61	-0.08	88.62	0.028	0.2686	-0.0156
809	SLU 68	1.6	-0.05	88.08	0.0275	0.265	-0.0155
809	SLU 69	1.63	-0.15	89.49	0.0285	0.2742	-0.0156
809	SLU 70	1.63	-0.08	89.5	0.0283	0.2729	-0.0157
809	SLU 71	1.62	-0.16	88.93	0.0282	0.2715	-0.0156
809	SLU 72	1.62	-0.1	88.95	0.028	0.2702	-0.0156
809	SLU 73	1.67	-0.03	95.67	0.0295	0.2934	-0.0165
809	SLU 74	1.7	-0.12	97.07	0.0305	0.3026	-0.0166
809	SLU 75	1.7	-0.06	97.09	0.0303	0.3013	-0.0166
809	SLU 76	1.69	-0.03	96.55	0.0298	0.2977	-0.0166
809	SLU 77	1.72	-0.12	97.95	0.0308	0.3069	-0.0167
809	SLU 78	1.72	-0.06	97.97	0.0306	0.3056	-0.0167
809	SLU 79	1.71	-0.14	97.4	0.0305	0.3042	-0.0166
809	SLU 80	1.7	-0.08	97.41	0.0303	0.3029	-0.0167
809	SLU 81	1.71	-0.12	99.27	0.0309	0.3096	-0.0169
809	SLU 82	1.71	-0.06	99.28	0.0307	0.3083	-0.0169
809	SLU 83	1.73	-0.12	100.14	0.0312	0.3139	-0.017
809	SLU 84	1.72	-0.06	100.16	0.031	0.3126	-0.017
809	SLE RA 1	1.19	-0.12	65.24	0.0206	0.1955	-0.0117
809	SLE RA 2	1.19	-0.06	65.26	0.0203	0.194	-0.0117
809	SLE RA 3	1.21	-0.12	66.2	0.021	0.2001	-0.0118
809	SLE RA 4	1.21	-0.08	66.21	0.0208	0.1993	-0.0118
809	SLE RA 5	1.2	-0.06	65.85	0.0205	0.1969	-0.0118
809	SLE RA 6	1.22	-0.12	66.78	0.0212	0.203	-0.0118
809	SLE RA 7	1.22	-0.08	66.79	0.021	0.2021	-0.0118
809	SLE RA 8	1.22	-0.13	66.41	0.021	0.2012	-0.0118
809	SLE RA 9	1.22	-0.09	66.42	0.0208	0.2003	-0.0118
809	SLE RA 10	1.25	-0.04	70.9	0.0219	0.2158	-0.0124
809	SLE RA 11	1.27	-0.1	71.84	0.0225	0.2219	-0.0125
809	SLE RA 12	1.27	-0.06	71.85	0.0224	0.2211	-0.0125
809	SLE RA 13	1.26	-0.05	71.49	0.0221	0.2187	-0.0124
809	SLE RA 14	1.28	-0.11	72.42	0.0227	0.2248	-0.0125
809	SLE RA 15	1.28	-0.07	72.44	0.0226	0.2239	-0.0125
809	SLE RA 16	1.28	-0.12	72.06	0.0225	0.223	-0.0125
809	SLE RA 17	1.27	-0.08	72.07	0.0224	0.2221	-0.0125
809	SLE RA 18	1.28	-0.1	73.3	0.0228	0.2266	-0.0127
809	SLE RA 19	1.28	-0.06	73.31	0.0226	0.2258	-0.0127
809	SLE RA 20	1.29	-0.11	73.89	0.023	0.2295	-0.0127
809	SLE RA 21	1.29	-0.07	73.9	0.0228	0.2286	-0.0127
809	SLE FR 1	1.19	-0.12	65.24	0.0206	0.1955	-0.0117
809	SLE FR 2	1.19	-0.11	65.25	0.0205	0.1952	-0.0117
809	SLE FR 3	1.2	-0.12	65.48	0.0207	0.1966	-0.0117
809	SLE FR 4	1.22	-0.1	67.66	0.0212	0.2045	-0.012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
809	SLE FR 5	1.22	-0.12	67.89	0.0213	0.206	-0.012
809	SLE FR 6	1.24	-0.11	69.27	0.0217	0.211	-0.0122
809	SLE QP 1	1.19	-0.12	65.24	0.0206	0.1955	-0.0117
809	SLE QP 2	1.22	-0.12	67.66	0.0212	0.2048	-0.012
809	SLD 1	6.74	1	60.81	0.0139	0.2567	-0.0395
809	SLD 2	6.46	1.59	60.71	0.0112	0.2585	-0.0257
809	SLD 3	6.81	-0.85	61.12	0.0204	0.3045	-0.0413
809	SLD 4	6.53	-0.26	61.02	0.0177	0.3063	-0.0275
809	SLD 5	2.81	2.92	65.15	0.0097	0.1475	-0.0201
809	SLD 6	2.62	3.31	65.08	0.0079	0.1487	-0.0111
809	SLD 7	3.06	-3.25	66.19	0.0313	0.3069	-0.0258
809	SLD 8	2.88	-2.87	66.12	0.0295	0.3081	-0.0168
809	SLD 9	-0.44	2.63	69.2	0.013	0.1015	-0.0072
809	SLD 10	-0.63	3.02	69.13	0.0112	0.1027	0.0018
809	SLD 11	-0.19	-3.54	70.24	0.0346	0.2609	-0.0129
809	SLD 12	-0.37	-3.16	70.17	0.0328	0.2621	-0.0038
809	SLD 13	-4.09	0.03	74.3	0.0248	0.1033	0.0035
809	SLD 14	-4.38	0.62	74.2	0.0221	0.1052	0.0173
809	SLD 15	-4.02	-1.82	74.61	0.0313	0.1511	0.0018
809	SLD 16	-4.3	-1.23	74.51	0.0285	0.153	0.0156
809	SLV 1	14.12	2.44	51.63	0.0044	0.3265	-0.0764
809	SLV 2	13.47	3.82	51.38	-0.0021	0.3309	-0.0443
809	SLV 3	14.3	-1.78	52.34	0.019	0.4376	-0.0804
809	SLV 4	13.65	-0.4	52.1	0.0126	0.4419	-0.0482
809	SLV 5	4.93	6.82	61.81	-0.0049	0.0722	-0.0309
809	SLV 6	4.51	7.7	61.65	-0.0091	0.075	-0.0101
809	SLV 7	5.53	-7.25	64.19	0.0439	0.4423	-0.044
809	SLV 8	5.11	-6.37	64.03	0.0398	0.4451	-0.0233
809	SLV 9	-2.67	6.13	71.29	0.0027	-0.0354	-0.0007
809	SLV 10	-3.09	7.02	71.13	-0.0014	-0.0327	0.0201
809	SLV 11	-2.07	-7.94	73.67	0.0516	0.3346	-0.0138
809	SLV 12	-2.49	-7.05	73.51	0.0474	0.3374	0.0069
809	SLV 13	-11.21	0.17	83.23	0.0299	-0.0323	0.0243
809	SLV 14	-11.86	1.55	82.98	0.0235	-0.0279	0.0564
809	SLV 15	-11.03	-4.05	83.94	0.0446	0.0788	0.0203
809	SLV 16	-11.68	-2.68	83.69	0.0381	0.0831	0.0525
809	CRTFP Ux+	0	0	0	0	0	0
809	CRTFP Ux-	0	0	0	0	0	0
809	CRTFP Uy+	0	0	0	0	0	0
809	CRTFP Uy-	0	0	0	0	0	0
812	SLU 1	-0.91	-0.5	65.9	0.0017	-0.3144	0.0109
812	SLU 2	-0.91	-0.39	65.92	0.0012	-0.3114	0.0109
812	SLU 3	-0.93	-0.49	67.44	0.0019	-0.3242	0.0111
812	SLU 4	-0.93	-0.43	67.45	0.0016	-0.3224	0.0111
812	SLU 5	-0.93	-0.4	66.87	0.0013	-0.3171	0.0111
812	SLU 6	-0.95	-0.5	68.39	0.002	-0.33	0.0113
812	SLU 7	-0.95	-0.44	68.4	0.0017	-0.3282	0.0113
812	SLU 8	-0.94	-0.51	67.8	0.0018	-0.3259	0.0112
812	SLU 9	-0.94	-0.45	67.81	0.0015	-0.3241	0.0113
812	SLU 10	-0.97	-0.42	74.84	0.001	-0.367	0.0127
812	SLU 11	-0.99	-0.53	76.37	0.0016	-0.3798	0.0129
812	SLU 12	-0.99	-0.46	76.38	0.0014	-0.378	0.0129
812	SLU 13	-0.99	-0.43	75.79	0.001	-0.3727	0.0129
812	SLU 14	-1.01	-0.53	77.32	0.0017	-0.3856	0.0131
812	SLU 15	-1.01	-0.47	77.33	0.0014	-0.3838	0.0131
812	SLU 16	-1	-0.54	76.73	0.0015	-0.3815	0.013
812	SLU 17	-1	-0.48	76.74	0.0013	-0.3797	0.013
812	SLU 18	-0.99	-0.54	78.65	0.0013	-0.3938	0.0134
812	SLU 19	-1	-0.48	78.66	0.001	-0.392	0.0134
812	SLU 20	-1.01	-0.55	79.6	0.0014	-0.3996	0.0136
812	SLU 21	-1.01	-0.49	79.61	0.0011	-0.3978	0.0136
812	SLU 22	-1	-0.49	74.64	0.0023	-0.3644	0.012
812	SLU 23	-1	-0.39	74.65	0.0019	-0.3614	0.0121
812	SLU 24	-1.02	-0.49	76.18	0.0026	-0.3743	0.0123
812	SLU 25	-1.02	-0.43	76.19	0.0023	-0.3725	0.0123
812	SLU 26	-1.02	-0.4	75.6	0.0019	-0.3672	0.0123
812	SLU 27	-1.04	-0.5	77.13	0.0026	-0.38	0.0125
812	SLU 28	-1.04	-0.44	77.14	0.0023	-0.3782	0.0125
812	SLU 29	-1.03	-0.51	76.54	0.0025	-0.3759	0.0124
812	SLU 30	-1.03	-0.45	76.55	0.0022	-0.3741	0.0125
812	SLU 31	-1.06	-0.42	83.58	0.0016	-0.417	0.0139
812	SLU 32	-1.08	-0.52	85.11	0.0023	-0.4299	0.0141
812	SLU 33	-1.08	-0.46	85.11	0.002	-0.4281	0.0141
812	SLU 34	-1.08	-0.43	84.53	0.0017	-0.4228	0.0141
812	SLU 35	-1.1	-0.53	86.05	0.0023	-0.4356	0.0143
812	SLU 36	-1.1	-0.47	86.06	0.0021	-0.4338	0.0143
812	SLU 37	-1.09	-0.54	85.47	0.0022	-0.4315	0.0142
812	SLU 38	-1.09	-0.48	85.47	0.0019	-0.4297	0.0142
812	SLU 39	-1.08	-0.54	87.39	0.002	-0.4439	0.0146
812	SLU 40	-1.09	-0.48	87.4	0.0017	-0.4421	0.0146
812	SLU 41	-1.1	-0.55	88.34	0.002	-0.4496	0.0148
812	SLU 42	-1.1	-0.49	88.35	0.0017	-0.4478	0.0148
812	SLU 43	-1.15	-0.65	82.68	0.002	-0.3915	0.0137
812	SLU 44	-1.15	-0.54	82.69	0.0015	-0.3885	0.0137
812	SLU 45	-1.17	-0.64	84.22	0.0022	-0.4014	0.0139
812	SLU 46	-1.17	-0.58	84.22	0.0019	-0.3996	0.014
812	SLU 47	-1.17	-0.55	83.64	0.0016	-0.3943	0.0139
812	SLU 48	-1.19	-0.65	85.17	0.0022	-0.4071	0.0141
812	SLU 49	-1.19	-0.59	85.17	0.002	-0.4053	0.0142
812	SLU 50	-1.18	-0.66	84.58	0.0021	-0.403	0.0141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
812	SLU 51	-1.18	-0.6	84.58	0.0018	-0.4012	0.0141
812	SLU 52	-1.21	-0.57	91.62	0.0013	-0.4441	0.0155
812	SLU 53	-1.23	-0.68	93.14	0.0019	-0.457	0.0157
812	SLU 54	-1.23	-0.61	93.15	0.0016	-0.4552	0.0157
812	SLU 55	-1.23	-0.58	92.57	0.0013	-0.4499	0.0157
812	SLU 56	-1.25	-0.68	94.09	0.002	-0.4627	0.0159
812	SLU 57	-1.25	-0.62	94.1	0.0017	-0.4609	0.0159
812	SLU 58	-1.24	-0.69	93.5	0.0018	-0.4586	0.0159
812	SLU 59	-1.24	-0.63	93.51	0.0016	-0.4568	0.0159
812	SLU 60	-1.24	-0.69	95.43	0.0016	-0.471	0.0162
812	SLU 61	-1.24	-0.63	95.44	0.0013	-0.4692	0.0163
812	SLU 62	-1.25	-0.7	96.38	0.0017	-0.4767	0.0164
812	SLU 63	-1.25	-0.64	96.39	0.0014	-0.4749	0.0165
812	SLU 64	-1.24	-0.64	91.42	0.0026	-0.4416	0.0149
812	SLU 65	-1.24	-0.54	91.43	0.0022	-0.4386	0.0149
812	SLU 66	-1.26	-0.64	92.95	0.0028	-0.4514	0.0151
812	SLU 67	-1.26	-0.58	92.96	0.0026	-0.4496	0.0152
812	SLU 68	-1.26	-0.55	92.38	0.0022	-0.4443	0.0151
812	SLU 69	-1.28	-0.65	93.9	0.0029	-0.4571	0.0153
812	SLU 70	-1.28	-0.59	93.91	0.0026	-0.4553	0.0154
812	SLU 71	-1.27	-0.66	93.31	0.0027	-0.4531	0.0153
812	SLU 72	-1.27	-0.6	93.32	0.0025	-0.4513	0.0153
812	SLU 73	-1.3	-0.57	100.36	0.0019	-0.4942	0.0167
812	SLU 74	-1.32	-0.67	101.88	0.0026	-0.507	0.0169
812	SLU 75	-1.32	-0.61	101.89	0.0023	-0.5052	0.0169
812	SLU 76	-1.32	-0.58	101.3	0.002	-0.4999	0.0169
812	SLU 77	-1.34	-0.68	102.83	0.0026	-0.5128	0.0171
812	SLU 78	-1.34	-0.62	102.84	0.0024	-0.511	0.0171
812	SLU 79	-1.33	-0.69	102.24	0.0025	-0.5087	0.0171
812	SLU 80	-1.33	-0.63	102.25	0.0022	-0.5069	0.0171
812	SLU 81	-1.33	-0.69	104.17	0.0023	-0.521	0.0174
812	SLU 82	-1.33	-0.63	104.18	0.002	-0.5192	0.0175
812	SLU 83	-1.34	-0.7	105.12	0.0023	-0.5268	0.0176
812	SLU 84	-1.34	-0.64	105.12	0.002	-0.525	0.0177
812	SLE RA 1	-0.93	-0.5	68.4	0.0019	-0.3287	0.0112
812	SLE RA 2	-0.94	-0.43	68.41	0.0016	-0.3267	0.0112
812	SLE RA 3	-0.95	-0.49	69.42	0.002	-0.3352	0.0114
812	SLE RA 4	-0.95	-0.45	69.43	0.0018	-0.334	0.0114
812	SLE RA 5	-0.95	-0.43	69.04	0.0016	-0.3305	0.0114
812	SLE RA 6	-0.96	-0.5	70.06	0.0021	-0.3391	0.0115
812	SLE RA 7	-0.96	-0.46	70.06	0.0019	-0.3379	0.0115
812	SLE RA 8	-0.95	-0.51	69.66	0.002	-0.3363	0.0115
812	SLE RA 9	-0.96	-0.47	69.67	0.0018	-0.3351	0.0115
812	SLE RA 10	-0.98	-0.45	74.36	0.0014	-0.3637	0.0124
812	SLE RA 11	-0.99	-0.52	75.38	0.0018	-0.3723	0.0125
812	SLE RA 12	-0.99	-0.47	75.38	0.0017	-0.3711	0.0126
812	SLE RA 13	-0.99	-0.45	74.99	0.0014	-0.3676	0.0125
812	SLE RA 14	-1	-0.52	76.01	0.0019	-0.3761	0.0127
812	SLE RA 15	-1	-0.48	76.01	0.0017	-0.3749	0.0127
812	SLE RA 16	-0.99	-0.53	75.62	0.0018	-0.3734	0.0126
812	SLE RA 17	-1	-0.49	75.62	0.0016	-0.3722	0.0127
812	SLE RA 18	-0.99	-0.53	76.9	0.0016	-0.3816	0.0129
812	SLE RA 19	-0.99	-0.48	76.91	0.0015	-0.3804	0.0129
812	SLE RA 20	-1	-0.53	77.53	0.0017	-0.3855	0.013
812	SLE RA 21	-1	-0.49	77.54	0.0015	-0.3843	0.013
812	SLE FR 1	-0.93	-0.5	68.4	0.0019	-0.3287	0.0112
812	SLE FR 2	-0.93	-0.48	68.4	0.0018	-0.3283	0.0112
812	SLE FR 3	-0.94	-0.5	68.65	0.0019	-0.3302	0.0112
812	SLE FR 4	-0.95	-0.49	70.95	0.0017	-0.3442	0.0117
812	SLE FR 5	-0.96	-0.51	71.2	0.0018	-0.3461	0.0118
812	SLE FR 6	-0.96	-0.51	72.65	0.0018	-0.3552	0.012
812	SLE QP 1	-0.93	-0.5	68.4	0.0019	-0.3287	0.0112
812	SLE QP 2	-0.95	-0.5	70.95	0.0018	-0.3446	0.0117
812	SLD 1	5.15	0.26	78.8	-0.0012	-0.1943	-0.018
812	SLD 2	4.85	-0.37	78.98	0.002	-0.2049	-0.0029
812	SLD 3	5.04	-1.7	79	0.0077	-0.2562	-0.015
812	SLD 4	4.75	-2.32	79.19	0.0109	-0.2668	0
812	SLD 5	1.09	2.8	72.96	-0.0132	-0.2037	-0.0043
812	SLD 6	0.9	2.39	73.08	-0.0111	-0.2107	0.0055
812	SLD 7	0.74	-3.71	73.65	0.0166	-0.41	0.0055
812	SLD 8	0.54	-4.13	73.77	0.0186	-0.417	0.0153
812	SLD 9	-2.45	3.12	68.13	-0.015	-0.2721	0.0081
812	SLD 10	-2.64	2.71	68.25	-0.0129	-0.2791	0.0179
812	SLD 11	-2.8	-3.4	68.82	0.0147	-0.4784	0.0179
812	SLD 12	-3	-3.81	68.94	0.0168	-0.4854	0.0277
812	SLD 13	-6.65	1.31	62.71	-0.0073	-0.4223	0.0234
812	SLD 14	-6.95	0.69	62.89	-0.0041	-0.433	0.0384
812	SLD 15	-6.75	-0.64	62.92	0.0017	-0.4842	0.0263
812	SLD 16	-7.05	-1.27	63.1	0.0048	-0.4948	0.0414
812	SLV 1	13.32	1.22	89.33	-0.0048	0.0052	-0.0575
812	SLV 2	12.62	-0.24	89.76	0.0026	-0.0196	-0.0224
812	SLV 3	13.07	-3.23	89.81	0.0154	-0.1363	-0.0508
812	SLV 4	12.38	-4.69	90.24	0.0228	-0.1611	-0.0157
812	SLV 5	3.82	7.02	75.67	-0.0321	-0.0207	-0.0253
812	SLV 6	3.37	6.08	75.94	-0.0274	-0.0367	-0.0027
812	SLV 7	3	-7.83	77.26	0.0353	-0.4924	-0.0029
812	SLV 8	2.56	-8.77	77.53	0.0401	-0.5084	0.0197
812	SLV 9	-4.46	7.76	64.37	-0.0364	-0.1807	0.0037
812	SLV 10	-4.91	6.82	64.64	-0.0317	-0.1967	0.0263
812	SLV 11	-5.27	-7.09	65.96	0.031	-0.6524	0.0261

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
812	SLV 12	-5.72	-8.03	66.23	0.0358	-0.6684	0.0487
812	SLV 13	-14.28	3.69	51.66	-0.0192	-0.528	0.0391
812	SLV 14	-14.97	2.23	52.09	-0.0118	-0.5528	0.0742
812	SLV 15	-14.52	-0.77	52.14	0.001	-0.6695	0.0458
812	SLV 16	-15.22	-2.23	52.57	0.0084	-0.6943	0.0809
812	CRTFP Ux+	0	0	0	0	0	0
812	CRTFP Ux-	0	0	0	0	0	0
812	CRTFP Uy+	0	0	0	0	0	0
812	CRTFP Uy-	0	0	0	0	0	0
827	SLU 1	2.15	1.8	129.12	2.6132	-21.2725	0.4012
827	SLU 2	2.15	2.03	129.21	2.6074	-21.2872	0.4413
827	SLU 3	2.21	1.9	131.98	2.6758	-21.7307	0.4207
827	SLU 4	2.21	2.04	132.03	2.6723	-21.7396	0.4447
827	SLU 5	2.19	2.06	130.99	2.6452	-21.5737	0.4483
827	SLU 6	2.25	1.93	133.75	2.7136	-22.0172	0.4278
827	SLU 7	2.25	2.07	133.81	2.7101	-22.026	0.4518
827	SLU 8	2.24	1.87	132.67	2.6889	-21.8454	0.4154
827	SLU 9	2.24	2	132.73	2.6854	-21.8543	0.4394
827	SLU 10	2.48	2.25	146.93	2.9583	-24.1348	0.4913
827	SLU 11	2.54	2.12	149.7	3.0267	-24.5783	0.4708
827	SLU 12	2.53	2.26	149.76	3.0232	-24.5871	0.4948
827	SLU 13	2.52	2.28	148.71	2.9962	-24.4213	0.4983
827	SLU 14	2.58	2.16	151.48	3.0646	-24.8647	0.4778
827	SLU 15	2.58	2.29	151.53	3.0611	-24.8736	0.5018
827	SLU 16	2.56	2.09	150.39	3.0398	-24.6929	0.4654
827	SLU 17	2.56	2.22	150.45	3.0363	-24.7018	0.4894
827	SLU 18	2.62	2.12	154.44	3.1146	-25.3404	0.4727
827	SLU 19	2.62	2.25	154.49	3.1111	-25.3493	0.4967
827	SLU 20	2.66	2.15	156.21	3.1524	-25.6269	0.4798
827	SLU 21	2.66	2.29	156.27	3.1489	-25.6357	0.5038
827	SLU 22	2.46	2.19	146.09	2.9714	-24	0.4793
827	SLU 23	2.46	2.42	146.19	2.9656	-24.0148	0.5193
827	SLU 24	2.52	2.29	148.95	3.034	-24.4583	0.4988
827	SLU 25	2.52	2.43	149.01	3.0305	-24.4672	0.5228
827	SLU 26	2.5	2.45	147.96	3.0034	-24.3013	0.5264
827	SLU 27	2.56	2.32	150.73	3.0718	-24.7447	0.5059
827	SLU 28	2.56	2.46	150.78	3.0683	-24.7536	0.5299
827	SLU 29	2.55	2.26	149.65	3.0471	-24.573	0.4934
827	SLU 30	2.55	2.39	149.7	3.0436	-24.5818	0.5175
827	SLU 31	2.78	2.64	163.91	3.3166	-26.8624	0.5694
827	SLU 32	2.84	2.51	166.68	3.385	-27.3058	0.5489
827	SLU 33	2.84	2.65	166.73	3.3815	-27.3147	0.5729
827	SLU 34	2.83	2.67	165.69	3.3544	-27.1488	0.5764
827	SLU 35	2.89	2.54	168.45	3.4228	-27.5923	0.5559
827	SLU 36	2.89	2.68	168.51	3.4193	-27.6012	0.5799
827	SLU 37	2.87	2.48	167.37	3.398	-27.4205	0.5435
827	SLU 38	2.87	2.61	167.43	3.3946	-27.4294	0.5675
827	SLU 39	2.93	2.51	171.42	3.4728	-28.068	0.5508
827	SLU 40	2.92	2.64	171.47	3.4693	-28.0768	0.5748
827	SLU 41	2.97	2.54	173.19	3.5106	-28.3544	0.5579
827	SLU 42	2.97	2.68	173.25	3.5071	-28.3633	0.5819
827	SLU 43	2.69	2.21	162.03	3.2744	-26.719	0.4948
827	SLU 44	2.69	2.44	162.12	3.2685	-26.7338	0.5349
827	SLU 45	2.75	2.31	164.89	3.3369	-27.1773	0.5143
827	SLU 46	2.75	2.44	164.95	3.3334	-27.1861	0.5383
827	SLU 47	2.73	2.47	163.9	3.3064	-27.0203	0.5419
827	SLU 48	2.79	2.34	166.67	3.3748	-27.4637	0.5214
827	SLU 49	2.79	2.48	166.72	3.3713	-27.4726	0.5454
827	SLU 50	2.78	2.27	165.59	3.35	-27.292	0.509
827	SLU 51	2.78	2.41	165.64	3.3465	-27.3008	0.533
827	SLU 52	3.02	2.66	179.85	3.6195	-29.5814	0.5849
827	SLU 53	3.08	2.53	182.62	3.6879	-30.0248	0.5644
827	SLU 54	3.07	2.67	182.67	3.6844	-30.0337	0.5884
827	SLU 55	3.06	2.69	181.63	3.6573	-29.8678	0.5919
827	SLU 56	3.12	2.56	184.39	3.7257	-30.3113	0.5714
827	SLU 57	3.12	2.7	184.45	3.7222	-30.3202	0.5954
827	SLU 58	3.1	2.5	183.31	3.701	-30.1395	0.559
827	SLU 59	3.1	2.63	183.37	3.6975	-30.1484	0.583
827	SLU 60	3.16	2.53	187.35	3.7757	-30.787	0.5663
827	SLU 61	3.16	2.66	187.41	3.7722	-30.7958	0.5903
827	SLU 62	3.2	2.56	189.13	3.8136	-31.0734	0.5734
827	SLU 63	3.2	2.69	189.19	3.8101	-31.0823	0.5974
827	SLU 64	3	2.6	179.01	3.6326	-29.4466	0.5729
827	SLU 65	3	2.82	179.1	3.6268	-29.4614	0.6129
827	SLU 66	3.06	2.7	181.87	3.6952	-29.9049	0.5924
827	SLU 67	3.06	2.83	181.92	3.6917	-29.9137	0.6164
827	SLU 68	3.04	2.86	180.88	3.6646	-29.7479	0.62
827	SLU 69	3.1	2.73	183.64	3.733	-30.1913	0.5995
827	SLU 70	3.1	2.87	183.7	3.7295	-30.2002	0.6235
827	SLU 71	3.09	2.66	182.56	3.7083	-30.0195	0.587
827	SLU 72	3.09	2.8	182.62	3.7048	-30.0284	0.611
827	SLU 73	3.32	3.05	196.83	3.9777	-32.3089	0.663
827	SLU 74	3.38	2.92	199.59	4.0461	-32.7524	0.6424
827	SLU 75	3.38	3.05	199.65	4.0426	-32.7613	0.6665
827	SLU 76	3.37	3.08	198.6	4.0155	-32.5954	0.67
827	SLU 77	3.43	2.95	201.37	4.0839	-33.0389	0.6495
827	SLU 78	3.43	3.09	201.42	4.0804	-33.0477	0.6735
827	SLU 79	3.41	2.88	200.29	4.0592	-32.8671	0.6371
827	SLU 80	3.41	3.02	200.34	4.0557	-32.876	0.6611
827	SLU 81	3.47	2.92	204.33	4.1339	-33.5145	0.6444

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
827	SLU 82	3.46	3.05	204.39	4.1304	-33.5234	0.6684
827	SLU 83	3.51	2.95	206.11	4.1718	-33.801	0.6515
827	SLU 84	3.51	3.08	206.16	4.1683	-33.8099	0.6755
827	SLE RA 1	2.24	1.91	133.97	2.7156	-22.0518	0.4236
827	SLE RA 2	2.24	2.06	134.03	2.7117	-22.0616	0.4502
827	SLE RA 3	2.28	1.98	135.87	2.7573	-22.3573	0.4365
827	SLE RA 4	2.28	2.07	135.91	2.755	-22.3632	0.4525
827	SLE RA 5	2.27	2.09	135.21	2.7369	-22.2526	0.4549
827	SLE RA 6	2.31	2	137.06	2.7825	-22.5482	0.4412
827	SLE RA 7	2.31	2.09	137.09	2.7802	-22.5542	0.4572
827	SLE RA 8	2.3	1.96	136.34	2.766	-22.4337	0.433
827	SLE RA 9	2.3	2.05	136.37	2.7637	-22.4396	0.449
827	SLE RA 10	2.46	2.21	145.85	2.9457	-23.96	0.4836
827	SLE RA 11	2.5	2.13	147.69	2.9912	-24.2556	0.4699
827	SLE RA 12	2.5	2.22	147.73	2.9889	-24.2615	0.4859
827	SLE RA 13	2.49	2.23	147.03	2.9709	-24.151	0.4883
827	SLE RA 14	2.52	2.15	148.87	3.0165	-24.4466	0.4746
827	SLE RA 15	2.52	2.24	148.91	3.0141	-24.4525	0.4906
827	SLE RA 16	2.52	2.1	148.15	3	-24.3321	0.4663
827	SLE RA 17	2.51	2.19	148.19	2.9976	-24.338	0.4823
827	SLE RA 18	2.55	2.12	150.85	3.0498	-24.7637	0.4712
827	SLE RA 19	2.55	2.22	150.89	3.0475	-24.7696	0.4872
827	SLE RA 20	2.58	2.15	152.03	3.075	-24.9547	0.4759
827	SLE RA 21	2.58	2.24	152.07	3.0727	-24.9606	0.4919
827	SLE FR 1	2.24	1.91	133.97	2.7156	-22.0518	0.4236
827	SLE FR 2	2.24	1.94	133.98	2.7148	-22.0537	0.4289
827	SLE FR 3	2.25	1.92	134.44	2.7257	-22.1282	0.4254
827	SLE FR 4	2.33	2.01	139.04	2.8151	-22.8673	0.4432
827	SLE FR 5	2.35	1.99	139.51	2.8259	-22.9418	0.4397
827	SLE FR 6	2.4	2.02	142.41	2.8827	-23.4078	0.4474
827	SLE QP 1	2.24	1.91	133.97	2.7156	-22.0518	0.4236
827	SLE QP 2	2.33	1.98	139.03	2.8158	-22.8654	0.4379
827	SLD 1	16.87	5.16	147.52	2.9134	-24.7134	0.6022
827	SLD 2	16.18	4.64	147.34	2.9213	-24.6751	0.5627
827	SLD 3	17.05	0.42	146.21	3.0208	-24.4995	-0.2299
827	SLD 4	16.36	-0.1	146.04	3.0287	-24.4612	-0.2694
827	SLD 5	6.55	10.21	143.59	2.6809	-23.751	1.7562
827	SLD 6	6.09	9.87	143.48	2.6861	-23.7259	1.7303
827	SLD 7	7.14	-5.59	139.24	3.0387	-23.038	-1.0174
827	SLD 8	6.69	-5.93	139.12	3.0439	-23.0129	-1.0433
827	SLD 9	-2.02	9.88	138.94	2.5878	-22.7178	1.919
827	SLD 10	-2.47	9.54	138.83	2.593	-22.6927	1.8931
827	SLD 11	-1.43	-5.92	134.59	2.9456	-22.0048	-0.8546
827	SLD 12	-1.88	-6.26	134.48	2.9508	-21.9797	-0.8805
827	SLD 13	-11.69	4.06	132.03	2.603	-21.2695	1.1451
827	SLD 14	-12.38	3.53	131.86	2.6109	-21.2312	1.1056
827	SLD 15	-11.51	-0.68	130.72	2.7103	-21.0556	0.313
827	SLD 16	-12.2	-1.21	130.55	2.7183	-21.0173	0.2735
827	SLV 1	36.33	9.29	159	3.0501	-27.2027	0.7944
827	SLV 2	34.72	8.07	158.6	3.0686	-27.1135	0.7023
827	SLV 3	36.74	-1.51	156.03	3.2935	-26.7169	-1.1008
827	SLV 4	35.13	-2.73	155.63	3.312	-26.6277	-1.1929
827	SLV 5	12.18	20.75	149.59	2.5138	-24.9188	3.4351
827	SLV 6	11.14	19.97	149.34	2.5257	-24.8614	3.3758
827	SLV 7	13.57	-15.23	139.7	3.3251	-23.2993	-2.8823
827	SLV 8	12.53	-16.02	139.44	3.337	-23.2418	-2.9416
827	SLV 9	-7.86	19.97	138.62	2.2947	-22.4889	3.8173
827	SLV 10	-8.9	19.19	138.37	2.3065	-22.4315	3.758
827	SLV 11	-6.47	-16.01	128.73	3.106	-20.8694	-2.5001
827	SLV 12	-7.51	-16.8	128.47	3.1179	-20.8119	-2.5594
827	SLV 13	-30.46	6.68	122.43	2.3197	-19.1031	2.0686
827	SLV 14	-32.08	5.46	122.03	2.3382	-19.0139	1.9765
827	SLV 15	-30.05	-4.11	119.47	2.5631	-18.6172	0.1734
827	SLV 16	-31.66	-5.33	119.07	2.5816	-18.528	0.0813
827	CRTFP Ux+	0	0	0	0	0	0
827	CRTFP Ux-	0	0	0	0	0	0
827	CRTFP Uy+	0	0	0	0	0	0
827	CRTFP Uy-	0	0	0	0	0	0
828	SLU 1	0.7	-0.01	38.1	-12.5623	0.0664	0.2163
828	SLU 2	0.7	0.06	38.15	-12.577	0.0666	0.2159
828	SLU 3	0.72	0.01	38.93	-12.8372	0.0681	0.2218
828	SLU 4	0.72	0.05	38.96	-12.846	0.0682	0.2216
828	SLU 5	0.71	0.06	38.67	-12.7489	0.0676	0.2202
828	SLU 6	0.73	0.01	39.45	-13.0091	0.069	0.2261
828	SLU 7	0.73	0.05	39.48	-13.0179	0.0691	0.2259
828	SLU 8	0.73	-0.01	39.14	-12.906	0.0682	0.2249
828	SLU 9	0.73	0.03	39.17	-12.9148	0.0684	0.2246
828	SLU 10	0.8	0.07	43.39	-14.3104	0.077	0.2473
828	SLU 11	0.82	0.02	44.17	-14.5705	0.0784	0.2532
828	SLU 12	0.82	0.06	44.2	-14.5794	0.0785	0.253
828	SLU 13	0.81	0.07	43.91	-14.4822	0.0779	0.2516
828	SLU 14	0.83	0.02	44.69	-14.7424	0.0793	0.2575
828	SLU 15	0.83	0.06	44.72	-14.7512	0.0794	0.2573
828	SLU 16	0.83	0	44.38	-14.6393	0.0785	0.2563
828	SLU 17	0.83	0.04	44.41	-14.6482	0.0787	0.2561
828	SLU 18	0.84	0.01	45.59	-15.0385	0.0811	0.2612
828	SLU 19	0.84	0.05	45.62	-15.0473	0.0813	0.261
828	SLU 20	0.86	0.01	46.11	-15.2103	0.082	0.2655
828	SLU 21	0.86	0.05	46.14	-15.2192	0.0822	0.2652
828	SLU 22	0.79	0.05	43.07	-14.203	0.0783	0.2445

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
828	SLU 23	0.79	0.13	43.12	-14.2177	0.0786	0.2441
828	SLU 24	0.81	0.07	43.9	-14.4779	0.08	0.25
828	SLU 25	0.81	0.11	43.93	-14.4867	0.0802	0.2498
828	SLU 26	0.81	0.13	43.64	-14.3895	0.0795	0.2484
828	SLU 27	0.82	0.07	44.42	-14.6497	0.0809	0.2543
828	SLU 28	0.82	0.11	44.45	-14.6585	0.0811	0.2541
828	SLU 29	0.82	0.05	44.11	-14.5466	0.0801	0.2531
828	SLU 30	0.82	0.1	44.14	-14.5555	0.0803	0.2528
828	SLU 31	0.89	0.14	48.36	-15.951	0.0889	0.2755
828	SLU 32	0.91	0.08	49.15	-16.2112	0.0903	0.2814
828	SLU 33	0.91	0.13	49.17	-16.22	0.0905	0.2812
828	SLU 34	0.91	0.14	48.88	-16.1228	0.0898	0.2798
828	SLU 35	0.93	0.08	49.67	-16.383	0.0912	0.2857
828	SLU 36	0.92	0.13	49.69	-16.3918	0.0914	0.2855
828	SLU 37	0.92	0.06	49.35	-16.28	0.0904	0.2845
828	SLU 38	0.92	0.11	49.38	-16.2888	0.0906	0.2843
828	SLU 39	0.94	0.07	50.56	-16.6791	0.093	0.2894
828	SLU 40	0.94	0.11	50.59	-16.688	0.0932	0.2892
828	SLU 41	0.95	0.07	51.08	-16.851	0.094	0.2937
828	SLU 42	0.95	0.11	51.11	-16.8598	0.0941	0.2934
828	SLU 43	0.88	-0.04	47.83	-15.7685	0.0822	0.2715
828	SLU 44	0.88	0.04	47.87	-15.7832	0.0825	0.2711
828	SLU 45	0.9	-0.02	48.66	-16.0434	0.0839	0.277
828	SLU 46	0.9	0.03	48.68	-16.0522	0.084	0.2768
828	SLU 47	0.89	0.04	48.39	-15.9551	0.0834	0.2754
828	SLU 48	0.91	-0.02	49.17	-16.2152	0.0848	0.2813
828	SLU 49	0.91	0.02	49.2	-16.2241	0.0849	0.2811
828	SLU 50	0.91	-0.04	48.86	-16.1122	0.084	0.2801
828	SLU 51	0.91	0.01	48.89	-16.121	0.0842	0.2799
828	SLU 52	0.98	0.05	53.12	-17.5166	0.0928	0.3026
828	SLU 53	1	-0.01	53.9	-17.7767	0.0942	0.3084
828	SLU 54	1	0.04	53.93	-17.7856	0.0943	0.3082
828	SLU 55	0.99	0.05	53.63	-17.6884	0.0937	0.3068
828	SLU 56	1.01	-0.01	54.42	-17.9486	0.0951	0.3127
828	SLU 57	1.01	0.04	54.45	-17.9574	0.0953	0.3125
828	SLU 58	1.01	-0.02	54.11	-17.8455	0.0943	0.3115
828	SLU 59	1.01	0.02	54.13	-17.8543	0.0945	0.3113
828	SLU 60	1.02	-0.02	55.32	-18.2447	0.0969	0.3164
828	SLU 61	1.02	0.03	55.34	-18.2535	0.0971	0.3162
828	SLU 62	1.04	-0.02	55.84	-18.4165	0.0978	0.3207
828	SLU 63	1.04	0.03	55.86	-18.4254	0.098	0.3205
828	SLU 64	0.97	0.03	52.8	-17.4091	0.0941	0.2997
828	SLU 65	0.97	0.1	52.85	-17.4239	0.0944	0.2993
828	SLU 66	0.99	0.04	53.63	-17.684	0.0958	0.3052
828	SLU 67	0.99	0.09	53.66	-17.6929	0.096	0.305
828	SLU 68	0.98	0.1	53.36	-17.5957	0.0953	0.3036
828	SLU 69	1	0.04	54.15	-17.8559	0.0967	0.3095
828	SLU 70	1	0.09	54.17	-17.8647	0.0969	0.3093
828	SLU 71	1	0.03	53.84	-17.7528	0.0959	0.3083
828	SLU 72	1	0.07	53.86	-17.7617	0.0961	0.3081
828	SLU 73	1.07	0.11	58.09	-19.1572	0.1047	0.3307
828	SLU 74	1.09	0.06	58.87	-19.4174	0.1061	0.3366
828	SLU 75	1.09	0.1	58.9	-19.4262	0.1063	0.3364
828	SLU 76	1.08	0.11	58.61	-19.329	0.1056	0.335
828	SLU 77	1.1	0.06	59.39	-19.5892	0.107	0.3409
828	SLU 78	1.1	0.1	59.42	-19.598	0.1072	0.3407
828	SLU 79	1.1	0.04	59.08	-19.4861	0.1063	0.3397
828	SLU 80	1.1	0.08	59.11	-19.495	0.1064	0.3395
828	SLU 81	1.12	0.05	60.29	-19.8853	0.1089	0.3446
828	SLU 82	1.11	0.09	60.32	-19.8942	0.109	0.3444
828	SLU 83	1.13	0.05	60.81	-20.0572	0.1098	0.3489
828	SLU 84	1.13	0.09	60.84	-20.066	0.1099	0.3487
828	SLE RA 1	0.73	0.01	39.52	-13.0311	0.0698	0.2243
828	SLE RA 2	0.73	0.06	39.55	-13.0409	0.07	0.2241
828	SLE RA 3	0.74	0.02	40.07	-13.2143	0.0709	0.228
828	SLE RA 4	0.74	0.05	40.09	-13.2202	0.071	0.2279
828	SLE RA 5	0.74	0.06	39.9	-13.1554	0.0706	0.2269
828	SLE RA 6	0.75	0.02	40.42	-13.3289	0.0715	0.2309
828	SLE RA 7	0.75	0.05	40.44	-13.3348	0.0716	0.2307
828	SLE RA 8	0.75	0.01	40.21	-13.2602	0.071	0.2301
828	SLE RA 9	0.74	0.04	40.23	-13.2661	0.0711	0.2299
828	SLE RA 10	0.79	0.06	43.05	-14.1964	0.0768	0.245
828	SLE RA 11	0.81	0.03	43.57	-14.3699	0.0778	0.249
828	SLE RA 12	0.81	0.06	43.59	-14.3758	0.0779	0.2488
828	SLE RA 13	0.8	0.06	43.39	-14.311	0.0774	0.2479
828	SLE RA 14	0.82	0.03	43.92	-14.4844	0.0784	0.2518
828	SLE RA 15	0.81	0.06	43.93	-14.4903	0.0785	0.2517
828	SLE RA 16	0.81	0.02	43.71	-14.4157	0.0779	0.251
828	SLE RA 17	0.81	0.04	43.73	-14.4216	0.078	0.2509
828	SLE RA 18	0.82	0.02	44.52	-14.6819	0.0796	0.2543
828	SLE RA 19	0.82	0.05	44.53	-14.6877	0.0797	0.2541
828	SLE RA 20	0.83	0.02	44.86	-14.7964	0.0802	0.2571
828	SLE RA 21	0.83	0.05	44.88	-14.8023	0.0803	0.257
828	SLE FR 1	0.73	0.01	39.52	-13.0311	0.0698	0.2243
828	SLE FR 2	0.73	0.02	39.53	-13.033	0.0698	0.2243
828	SLE FR 3	0.73	0.01	39.66	-13.0769	0.07	0.2255
828	SLE FR 4	0.76	0.02	41.03	-13.5283	0.0728	0.2333
828	SLE FR 5	0.76	0.01	41.16	-13.5721	0.073	0.2345
828	SLE FR 6	0.78	0.01	42.02	-13.8565	0.0747	0.2393
828	SLE QP 1	0.73	0.01	39.52	-13.0311	0.0698	0.2243

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
828	SLE QP 2	0.76	0.01	41.02	-13.5263	0.0727	0.2333
828	SLD 1	5.2	1.07	43.81	-14.3515	0.0936	1.6683
828	SLD 2	5.03	0.9	43.72	-14.3215	0.094	1.6171
828	SLD 3	5.25	-0.49	43.05	-14.1176	0.0886	1.6868
828	SLD 4	5.08	-0.65	42.96	-14.0876	0.089	1.6356
828	SLD 5	2.03	2.71	43.03	-14.1339	0.0865	0.6448
828	SLD 6	1.92	2.6	42.97	-14.1143	0.0868	0.6113
828	SLD 7	2.22	-2.47	40.49	-13.3543	0.0698	0.7065
828	SLD 8	2.11	-2.58	40.43	-13.3346	0.0701	0.673
828	SLD 9	-0.6	2.6	41.61	-13.718	0.0754	-0.2063
828	SLD 10	-0.71	2.49	41.55	-13.6983	0.0756	-0.2399
828	SLD 11	-0.41	-2.58	39.07	-12.9384	0.0587	-0.1447
828	SLD 12	-0.52	-2.69	39.01	-12.9187	0.0589	-0.1782
828	SLD 13	-3.57	0.68	39.08	-12.965	0.0565	-1.169
828	SLD 14	-3.74	0.51	38.99	-12.935	0.0569	-1.2201
828	SLD 15	-3.52	-0.88	38.32	-12.7311	0.0515	-1.1505
828	SLD 16	-3.69	-1.04	38.23	-12.7011	0.0519	-1.2016
828	SLV 1	11.14	2.43	47.6	-15.4725	0.1214	3.5893
828	SLV 2	10.75	2.04	47.38	-15.4026	0.1223	3.4702
828	SLV 3	11.27	-1.11	45.87	-14.9414	0.11	3.6323
828	SLV 4	10.88	-1.5	45.65	-14.8715	0.1109	3.5132
828	SLV 5	3.74	6.17	45.65	-14.9276	0.1044	1.1954
828	SLV 6	3.49	5.92	45.51	-14.8825	0.105	1.1186
828	SLV 7	4.18	-5.63	39.89	-13.1575	0.0665	1.3387
828	SLV 8	3.92	-5.88	39.75	-13.1124	0.0671	1.262
828	SLV 9	-2.41	5.9	42.29	-13.9402	0.0784	-0.7954
828	SLV 10	-2.67	5.65	42.14	-13.8951	0.079	-0.8721
828	SLV 11	-1.97	-5.9	36.53	-12.1701	0.0404	-0.652
828	SLV 12	-2.23	-6.15	36.39	-12.125	0.041	-0.7287
828	SLV 13	-9.37	1.52	36.39	-12.1811	0.0345	-3.0466
828	SLV 14	-9.76	1.13	36.17	-12.1112	0.0354	-3.1656
828	SLV 15	-9.24	-2.02	34.66	-11.6501	0.0231	-3.0036
828	SLV 16	-9.63	-2.41	34.44	-11.5802	0.024	-3.1226
828	CRTFP Ux+	0	0	0	0	0	0
828	CRTFP Ux-	0	0	0	0	0	0
828	CRTFP Uy+	0	0	0	0	0	0
828	CRTFP Uy-	0	0	0	0	0	0
830	SLU 1	1.72	1.8	84.96	0.511	16.8856	-0.2966
830	SLU 2	1.72	1.96	85.02	0.5037	16.8975	-0.3288
830	SLU 3	1.77	1.88	86.76	0.5277	17.2482	-0.3116
830	SLU 4	1.76	1.98	86.8	0.5233	17.2554	-0.3309
830	SLU 5	1.75	1.99	86.15	0.5134	17.1243	-0.334
830	SLU 6	1.8	1.91	87.89	0.5375	17.475	-0.3169
830	SLU 7	1.8	2.01	87.93	0.5331	17.4822	-0.3362
830	SLU 8	1.79	1.86	87.22	0.5305	17.3392	-0.3071
830	SLU 9	1.79	1.96	87.26	0.5261	17.3463	-0.3264
830	SLU 10	1.98	2.19	96.21	0.5602	19.1513	-0.3658
830	SLU 11	2.03	2.11	97.95	0.5842	19.502	-0.3486
830	SLU 12	2.03	2.21	97.99	0.5798	19.5092	-0.3679
830	SLU 13	2.01	2.23	97.34	0.5699	19.3781	-0.371
830	SLU 14	2.06	2.14	99.08	0.5939	19.7288	-0.3539
830	SLU 15	2.06	2.24	99.12	0.5895	19.736	-0.3732
830	SLU 16	2.05	2.09	98.41	0.5869	19.593	-0.3441
830	SLU 17	2.05	2.19	98.45	0.5825	19.6001	-0.3634
830	SLU 18	2.09	2.13	100.95	0.5917	20.1053	-0.3494
830	SLU 19	2.09	2.23	100.98	0.5873	20.1124	-0.3687
830	SLU 20	2.13	2.16	102.08	0.6014	20.3321	-0.3547
830	SLU 21	2.13	2.26	102.11	0.597	20.3392	-0.374
830	SLU 22	1.97	2.14	95.68	0.5928	19.0443	-0.3568
830	SLU 23	1.97	2.31	95.74	0.5855	19.0562	-0.3889
830	SLU 24	2.01	2.23	97.48	0.6095	19.407	-0.3718
830	SLU 25	2.01	2.32	97.52	0.6051	19.4141	-0.3911
830	SLU 26	2	2.34	96.87	0.5952	19.283	-0.3942
830	SLU 27	2.05	2.26	98.61	0.6192	19.6338	-0.3771
830	SLU 28	2.05	2.36	98.65	0.6148	19.6409	-0.3964
830	SLU 29	2.04	2.21	97.94	0.6123	19.498	-0.3673
830	SLU 30	2.04	2.3	97.98	0.6079	19.5051	-0.3866
830	SLU 31	2.23	2.54	106.93	0.6419	21.31	-0.4259
830	SLU 32	2.27	2.46	108.67	0.666	21.6608	-0.4088
830	SLU 33	2.27	2.55	108.71	0.6616	21.6679	-0.4281
830	SLU 34	2.26	2.57	108.06	0.6517	21.5368	-0.4312
830	SLU 35	2.31	2.49	109.8	0.6757	21.8876	-0.4141
830	SLU 36	2.31	2.59	109.83	0.6713	21.8947	-0.4334
830	SLU 37	2.3	2.44	109.13	0.6687	21.7517	-0.4043
830	SLU 38	2.3	2.53	109.16	0.6643	21.7589	-0.4236
830	SLU 39	2.34	2.47	111.67	0.6735	22.2641	-0.4096
830	SLU 40	2.34	2.57	111.7	0.6691	22.2712	-0.4289
830	SLU 41	2.37	2.5	112.8	0.6832	22.4909	-0.4149
830	SLU 42	2.37	2.6	112.83	0.6788	22.498	-0.4342
830	SLU 43	2.15	2.22	106.78	0.6363	21.2111	-0.3649
830	SLU 44	2.15	2.39	106.84	0.629	21.223	-0.3971
830	SLU 45	2.2	2.3	108.58	0.653	21.5738	-0.38
830	SLU 46	2.19	2.4	108.61	0.6486	21.5809	-0.3993
830	SLU 47	2.18	2.42	107.97	0.6387	21.4498	-0.4024
830	SLU 48	2.23	2.34	109.71	0.6627	21.8006	-0.3852
830	SLU 49	2.23	2.43	109.74	0.6583	21.8077	-0.4046
830	SLU 50	2.22	2.28	109.04	0.6558	21.6647	-0.3755
830	SLU 51	2.22	2.38	109.07	0.6513	21.6719	-0.3948
830	SLU 52	2.41	2.62	118.03	0.6854	23.4768	-0.4341
830	SLU 53	2.46	2.53	119.77	0.7095	23.8276	-0.417

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
830	SLU 54	2.46	2.63	119.8	0.7051	23.8347	-0.4363
830	SLU 55	2.44	2.65	119.16	0.6951	23.7036	-0.4394
830	SLU 56	2.49	2.57	120.9	0.7192	24.0544	-0.4222
830	SLU 57	2.49	2.66	120.93	0.7148	24.0615	-0.4416
830	SLU 58	2.48	2.51	120.23	0.7122	23.9185	-0.4125
830	SLU 59	2.48	2.61	120.26	0.7078	23.9257	-0.4318
830	SLU 60	2.52	2.55	122.76	0.717	24.4308	-0.4178
830	SLU 61	2.52	2.65	122.8	0.7126	24.438	-0.4371
830	SLU 62	2.56	2.58	123.89	0.7267	24.6576	-0.423
830	SLU 63	2.56	2.68	123.93	0.7223	24.6648	-0.4424
830	SLU 64	2.4	2.56	117.5	0.7181	23.3699	-0.4251
830	SLU 65	2.4	2.73	117.56	0.7107	23.3818	-0.4573
830	SLU 66	2.44	2.65	119.3	0.7348	23.7325	-0.4402
830	SLU 67	2.44	2.75	119.33	0.7304	23.7397	-0.4595
830	SLU 68	2.43	2.76	118.69	0.7205	23.6086	-0.4626
830	SLU 69	2.48	2.68	120.43	0.7445	23.9593	-0.4454
830	SLU 70	2.48	2.78	120.46	0.7401	23.9665	-0.4647
830	SLU 71	2.47	2.63	119.76	0.7375	23.8235	-0.4356
830	SLU 72	2.47	2.73	119.79	0.7331	23.8306	-0.455
830	SLU 73	2.66	2.96	128.75	0.7672	25.6356	-0.4943
830	SLU 74	2.71	2.88	130.49	0.7913	25.9863	-0.4772
830	SLU 75	2.7	2.98	130.52	0.7868	25.9934	-0.4965
830	SLU 76	2.69	2.99	129.87	0.7769	25.8624	-0.4996
830	SLU 77	2.74	2.91	131.61	0.801	26.2131	-0.4824
830	SLU 78	2.74	3.01	131.65	0.7966	26.2202	-0.5017
830	SLU 79	2.73	2.86	130.94	0.794	26.0773	-0.4726
830	SLU 80	2.73	2.96	130.98	0.7896	26.0844	-0.492
830	SLU 81	2.77	2.89	133.48	0.7987	26.5896	-0.478
830	SLU 82	2.77	2.99	133.52	0.7943	26.5967	-0.4973
830	SLU 83	2.81	2.92	134.61	0.8085	26.8164	-0.4832
830	SLU 84	2.8	3.02	134.65	0.8041	26.8235	-0.5025
830	SLE RA 1	1.79	1.9	88.03	0.5344	17.5024	-0.3138
830	SLE RA 2	1.79	2.01	88.07	0.5295	17.5103	-0.3352
830	SLE RA 3	1.82	1.95	89.23	0.5455	17.7441	-0.3238
830	SLE RA 4	1.82	2.02	89.25	0.5426	17.7489	-0.3367
830	SLE RA 5	1.81	2.03	88.82	0.536	17.6615	-0.3387
830	SLE RA 6	1.84	1.97	89.98	0.552	17.8953	-0.3273
830	SLE RA 7	1.84	2.04	90	0.5491	17.9001	-0.3402
830	SLE RA 8	1.84	1.94	89.53	0.5474	17.8048	-0.3208
830	SLE RA 9	1.84	2	89.56	0.5444	17.8095	-0.3337
830	SLE RA 10	1.96	2.16	95.53	0.5671	19.0128	-0.3599
830	SLE RA 11	1.99	2.11	96.69	0.5832	19.2467	-0.3485
830	SLE RA 12	1.99	2.17	96.71	0.5802	19.2514	-0.3614
830	SLE RA 13	1.99	2.18	96.28	0.5736	19.164	-0.3634
830	SLE RA 14	2.02	2.13	97.44	0.5897	19.3979	-0.352
830	SLE RA 15	2.02	2.19	97.46	0.5867	19.4026	-0.3649
830	SLE RA 16	2.01	2.09	96.99	0.585	19.3073	-0.3455
830	SLE RA 17	2.01	2.16	97.02	0.5821	19.3121	-0.3583
830	SLE RA 18	2.04	2.12	98.68	0.5882	19.6489	-0.349
830	SLE RA 19	2.04	2.18	98.71	0.5852	19.6536	-0.3619
830	SLE RA 20	2.06	2.14	99.44	0.5947	19.8001	-0.3525
830	SLE RA 21	2.06	2.2	99.46	0.5917	19.8048	-0.3654
830	SLE FR 1	1.79	1.9	88.03	0.5344	17.5024	-0.3138
830	SLE FR 2	1.79	1.92	88.04	0.5334	17.504	-0.3181
830	SLE FR 3	1.8	1.91	88.33	0.537	17.5629	-0.3152
830	SLE FR 4	1.86	1.98	91.23	0.5496	18.1479	-0.3286
830	SLE FR 5	1.87	1.97	91.52	0.5531	18.2068	-0.3258
830	SLE FR 6	1.91	2.01	93.36	0.5613	18.5756	-0.3314
830	SLE QP 1	1.79	1.9	88.03	0.5344	17.5024	-0.3138
830	SLE QP 2	1.86	1.96	91.22	0.5505	18.1463	-0.3243
830	SLD 1	13.04	3.49	99.67	0.4393	19.6666	-0.7581
830	SLD 2	12.52	3.27	99.52	0.4367	19.6374	-0.6967
830	SLD 3	13.18	0.06	98.8	0.5733	19.4944	-0.0844
830	SLD 4	12.66	-0.15	98.65	0.5707	19.4652	-0.0229
830	SLD 5	5.1	7.65	95.1	0.3143	18.8688	-1.4873
830	SLD 6	4.76	7.51	95	0.3126	18.8496	-1.447
830	SLD 7	5.56	-3.76	92.21	0.7611	18.2948	0.7586
830	SLD 8	5.22	-3.9	92.11	0.7594	18.2756	0.7989
830	SLD 9	-1.49	7.83	90.34	0.3417	18.017	-1.4476
830	SLD 10	-1.83	7.68	90.24	0.3399	17.9979	-1.4073
830	SLD 11	-1.03	-3.58	87.45	0.7885	17.443	0.7983
830	SLD 12	-1.37	-3.72	87.35	0.7867	17.4239	0.8386
830	SLD 13	-8.93	4.08	83.8	0.5304	16.8274	-0.6258
830	SLD 14	-9.45	3.86	83.64	0.5277	16.7983	-0.5643
830	SLD 15	-8.79	0.66	82.93	0.6644	16.6552	0.048
830	SLD 16	-9.31	0.44	82.78	0.6618	16.626	0.1094
830	SLV 1	28.01	5.4	111.03	0.2943	21.7132	-1.3208
830	SLV 2	26.78	4.9	110.67	0.2882	21.6453	-1.1778
830	SLV 3	28.33	-2.39	109.06	0.5989	21.3221	0.2138
830	SLV 4	27.11	-2.9	108.7	0.5928	21.2542	0.3568
830	SLV 5	9.43	14.9	100.21	0.0128	19.8213	-2.9754
830	SLV 6	8.64	14.58	99.98	0.0088	19.7775	-2.8832
830	SLV 7	10.5	-11.08	93.65	1.028	18.5176	2.1399
830	SLV 8	9.71	-11.41	93.43	1.0241	18.4738	2.2321
830	SLV 9	-5.98	15.33	89.02	0.077	17.8189	-2.8808
830	SLV 10	-6.77	15	88.79	0.073	17.7751	-2.7886
830	SLV 11	-4.91	-10.65	82.47	1.0922	16.5151	2.2345
830	SLV 12	-5.7	-10.98	82.24	1.0883	16.4713	2.3267
830	SLV 13	-23.38	6.82	73.74	0.5083	15.0385	-1.0055
830	SLV 14	-24.6	6.32	73.39	0.5022	14.9705	-0.8625

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
830	SLV 15	-23.06	-0.97	71.78	0.8129	14.6474	0.5291
830	SLV 16	-24.28	-1.48	71.42	0.8067	14.5794	0.6721
830	CRTFP Ux+	0	0	0	0	0	0
830	CRTFP Ux-	0	0	0	0	0	0
830	CRTFP Uy+	0	0	0	0	0	0
830	CRTFP Uy-	0	0	0	0	0	0
831	SLU 1	0.91	1.03	40.36	0.2608	0.0506	0.0122
831	SLU 2	0.91	1.12	40.39	0.2567	0.0506	0.012
831	SLU 3	0.93	1.08	41.19	0.2697	0.052	0.0124
831	SLU 4	0.93	1.13	41.2	0.2672	0.0521	0.0123
831	SLU 5	0.93	1.14	40.91	0.2619	0.0514	0.0122
831	SLU 6	0.95	1.1	41.71	0.2749	0.0529	0.0126
831	SLU 7	0.95	1.15	41.73	0.2725	0.0529	0.0125
831	SLU 8	0.94	1.07	41.41	0.2713	0.0522	0.0126
831	SLU 9	0.94	1.12	41.42	0.2688	0.0523	0.0124
831	SLU 10	1.05	1.25	45.55	0.2839	0.0597	0.0139
831	SLU 11	1.07	1.21	46.35	0.2969	0.0611	0.0143
831	SLU 12	1.07	1.26	46.37	0.2944	0.0612	0.0142
831	SLU 13	1.06	1.27	46.07	0.2891	0.0605	0.0141
831	SLU 14	1.09	1.23	46.87	0.3021	0.062	0.0145
831	SLU 15	1.09	1.28	46.89	0.2996	0.062	0.0144
831	SLU 16	1.08	1.21	46.57	0.2984	0.0613	0.0145
831	SLU 17	1.08	1.26	46.59	0.2959	0.0614	0.0144
831	SLU 18	1.11	1.23	47.73	0.2996	0.0635	0.0149
831	SLU 19	1.11	1.28	47.75	0.2971	0.0636	0.0148
831	SLU 20	1.12	1.25	48.26	0.3049	0.0644	0.0151
831	SLU 21	1.12	1.29	48.27	0.3024	0.0644	0.015
831	SLU 22	1.04	1.22	45.31	0.3033	0.0592	0.0136
831	SLU 23	1.04	1.31	45.33	0.2991	0.0593	0.0134
831	SLU 24	1.07	1.27	46.13	0.3122	0.0607	0.0138
831	SLU 25	1.07	1.32	46.15	0.3097	0.0608	0.0137
831	SLU 26	1.06	1.32	45.86	0.3043	0.0601	0.0136
831	SLU 27	1.08	1.29	46.66	0.3174	0.0616	0.014
831	SLU 28	1.08	1.34	46.67	0.3149	0.0616	0.0139
831	SLU 29	1.08	1.26	46.35	0.3137	0.0609	0.014
831	SLU 30	1.08	1.31	46.37	0.3112	0.061	0.0139
831	SLU 31	1.18	1.44	50.49	0.3263	0.0684	0.0153
831	SLU 32	1.2	1.4	51.3	0.3393	0.0698	0.0158
831	SLU 33	1.2	1.45	51.31	0.3368	0.0699	0.0156
831	SLU 34	1.2	1.46	51.02	0.3315	0.0692	0.0155
831	SLU 35	1.22	1.42	51.82	0.3445	0.0707	0.016
831	SLU 36	1.22	1.47	51.84	0.342	0.0707	0.0158
831	SLU 37	1.22	1.39	51.52	0.3409	0.07	0.0159
831	SLU 38	1.22	1.44	51.53	0.3384	0.0701	0.0158
831	SLU 39	1.24	1.42	52.68	0.3421	0.0722	0.0163
831	SLU 40	1.24	1.47	52.7	0.3396	0.0723	0.0162
831	SLU 41	1.26	1.43	53.2	0.3473	0.0731	0.0165
831	SLU 42	1.26	1.48	53.22	0.3448	0.0731	0.0164
831	SLU 43	1.14	1.28	50.77	0.3245	0.0627	0.0153
831	SLU 44	1.14	1.36	50.8	0.3204	0.0628	0.0151
831	SLU 45	1.16	1.33	51.6	0.3334	0.0642	0.0156
831	SLU 46	1.16	1.37	51.61	0.3309	0.0642	0.0154
831	SLU 47	1.15	1.38	51.32	0.3256	0.0636	0.0153
831	SLU 48	1.18	1.34	52.12	0.3387	0.0651	0.0158
831	SLU 49	1.18	1.39	52.14	0.3362	0.0651	0.0156
831	SLU 50	1.17	1.32	51.82	0.335	0.0644	0.0157
831	SLU 51	1.17	1.37	51.83	0.3325	0.0645	0.0156
831	SLU 52	1.27	1.5	55.96	0.3476	0.0719	0.017
831	SLU 53	1.3	1.46	56.76	0.3606	0.0733	0.0175
831	SLU 54	1.3	1.51	56.78	0.3581	0.0733	0.0174
831	SLU 55	1.29	1.52	56.48	0.3528	0.0727	0.0172
831	SLU 56	1.32	1.48	57.28	0.3658	0.0742	0.0177
831	SLU 57	1.32	1.53	57.3	0.3633	0.0742	0.0176
831	SLU 58	1.31	1.45	56.98	0.3621	0.0735	0.0176
831	SLU 59	1.31	1.5	57	0.3597	0.0735	0.0175
831	SLU 60	1.33	1.47	58.14	0.3633	0.0757	0.0181
831	SLU 61	1.33	1.52	58.16	0.3609	0.0758	0.0179
831	SLU 62	1.35	1.49	58.67	0.3686	0.0766	0.0183
831	SLU 63	1.35	1.54	58.68	0.3661	0.0766	0.0181
831	SLU 64	1.27	1.47	55.72	0.367	0.0714	0.0168
831	SLU 65	1.27	1.55	55.74	0.3628	0.0715	0.0166
831	SLU 66	1.29	1.51	56.55	0.3759	0.0729	0.017
831	SLU 67	1.29	1.56	56.56	0.3734	0.0729	0.0169
831	SLU 68	1.29	1.57	56.27	0.368	0.0723	0.0168
831	SLU 69	1.31	1.53	57.07	0.3811	0.0738	0.0172
831	SLU 70	1.31	1.58	57.09	0.3786	0.0738	0.0171
831	SLU 71	1.3	1.51	56.76	0.3774	0.0731	0.0172
831	SLU 72	1.3	1.55	56.78	0.3749	0.0731	0.017
831	SLU 73	1.41	1.69	60.91	0.39	0.0806	0.0185
831	SLU 74	1.43	1.65	61.71	0.403	0.082	0.0189
831	SLU 75	1.43	1.7	61.72	0.4005	0.082	0.0188
831	SLU 76	1.42	1.7	61.43	0.3952	0.0814	0.0187
831	SLU 77	1.45	1.67	62.23	0.4082	0.0829	0.0191
831	SLU 78	1.45	1.72	62.25	0.4058	0.0829	0.019
831	SLU 79	1.44	1.64	61.93	0.4046	0.0822	0.0191
831	SLU 80	1.44	1.69	61.94	0.4021	0.0822	0.019
831	SLU 81	1.47	1.66	63.09	0.4058	0.0844	0.0195
831	SLU 82	1.47	1.71	63.11	0.4033	0.0845	0.0194
831	SLU 83	1.48	1.68	63.62	0.411	0.0853	0.0197
831	SLU 84	1.48	1.73	63.63	0.4085	0.0853	0.0196

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
831	SLE RA 1	0.95	1.09	41.77	0.273	0.053	0.0126
831	SLE RA 2	0.95	1.14	41.79	0.2702	0.0531	0.0124
831	SLE RA 3	0.96	1.12	42.32	0.2789	0.054	0.0127
831	SLE RA 4	0.96	1.15	42.33	0.2772	0.054	0.0127
831	SLE RA 5	0.96	1.16	42.14	0.2737	0.0536	0.0126
831	SLE RA 6	0.98	1.13	42.67	0.2824	0.0546	0.0129
831	SLE RA 7	0.97	1.16	42.68	0.2807	0.0546	0.0128
831	SLE RA 8	0.97	1.11	42.47	0.2799	0.0542	0.0128
831	SLE RA 9	0.97	1.15	42.48	0.2783	0.0542	0.0128
831	SLE RA 10	1.04	1.23	45.23	0.2883	0.0591	0.0137
831	SLE RA 11	1.06	1.21	45.77	0.297	0.0601	0.014
831	SLE RA 12	1.06	1.24	45.78	0.2953	0.0601	0.0139
831	SLE RA 13	1.05	1.25	45.58	0.2918	0.0597	0.0139
831	SLE RA 14	1.07	1.22	46.11	0.3005	0.0607	0.0141
831	SLE RA 15	1.07	1.25	46.13	0.2988	0.0607	0.0141
831	SLE RA 16	1.06	1.2	45.91	0.298	0.0602	0.0141
831	SLE RA 17	1.06	1.24	45.92	0.2964	0.0602	0.014
831	SLE RA 18	1.08	1.22	46.69	0.2988	0.0617	0.0144
831	SLE RA 19	1.08	1.25	46.7	0.2972	0.0617	0.0143
831	SLE RA 20	1.09	1.23	47.04	0.3023	0.0623	0.0145
831	SLE RA 21	1.09	1.26	47.05	0.3006	0.0623	0.0144
831	SLE FR 1	0.95	1.09	41.77	0.273	0.053	0.0126
831	SLE FR 2	0.95	1.1	41.78	0.2724	0.053	0.0126
831	SLE FR 3	0.95	1.09	41.91	0.2743	0.0533	0.0126
831	SLE FR 4	0.99	1.14	43.25	0.2802	0.0556	0.0131
831	SLE FR 5	0.99	1.13	43.39	0.2821	0.0559	0.0132
831	SLE FR 6	1.01	1.15	44.23	0.2859	0.0574	0.0135
831	SLE QP 1	0.95	1.09	41.77	0.273	0.053	0.0126
831	SLE QP 2	0.99	1.13	43.25	0.2807	0.0556	0.0131
831	SLD 1	6.76	1.88	47.81	0.2066	0.062	0.0033
831	SLD 2	6.49	1.81	47.73	0.2031	0.0617	0.0085
831	SLD 3	6.83	0.17	47.4	0.283	0.0614	0.0086
831	SLD 4	6.56	0.11	47.32	0.2795	0.061	0.0139
831	SLD 5	2.66	3.95	45.25	0.1432	0.0586	0.0011
831	SLD 6	2.48	3.91	45.2	0.1408	0.0584	0.0046
831	SLD 7	2.9	-1.74	43.88	0.398	0.0564	0.019
831	SLD 8	2.72	-1.78	43.83	0.3957	0.0562	0.0224
831	SLD 9	-0.75	4.03	42.66	0.1658	0.0551	0.0038
831	SLD 10	-0.92	3.99	42.61	0.1635	0.0549	0.0073
831	SLD 11	-0.51	-1.66	41.29	0.4206	0.0528	0.0217
831	SLD 12	-0.68	-1.7	41.24	0.4183	0.0526	0.0251
831	SLD 13	-4.59	2.15	39.17	0.2819	0.0502	0.0124
831	SLD 14	-4.86	2.08	39.1	0.2784	0.0499	0.0176
831	SLD 15	-4.51	0.44	38.76	0.3584	0.0496	0.0177
831	SLD 16	-4.79	0.38	38.69	0.3549	0.0492	0.023
831	SLV 1	14.48	2.82	53.93	0.1095	0.0708	-0.0098
831	SLV 2	13.85	2.67	53.76	0.1013	0.0701	0.0025
831	SLV 3	14.65	-1.07	53	0.2833	0.0693	0.0024
831	SLV 4	14.02	-1.22	52.83	0.2751	0.0685	0.0147
831	SLV 5	4.89	7.56	47.89	-0.0328	0.0627	-0.0143
831	SLV 6	4.48	7.46	47.78	-0.0381	0.0622	-0.0064
831	SLV 7	5.45	-5.4	44.79	0.5465	0.0575	0.0263
831	SLV 8	5.04	-5.5	44.68	0.5412	0.057	0.0342
831	SLV 9	-3.07	7.75	41.81	0.0202	0.0542	-0.0079
831	SLV 10	-3.47	7.66	41.7	0.0149	0.0538	0
831	SLV 11	-2.51	-5.21	38.71	0.5995	0.0491	0.0327
831	SLV 12	-2.92	-5.3	38.6	0.5943	0.0486	0.0406
831	SLV 13	-12.05	3.47	33.67	0.2863	0.0427	0.0116
831	SLV 14	-12.68	3.32	33.5	0.2781	0.042	0.0238
831	SLV 15	-11.88	-0.41	32.74	0.4601	0.0412	0.0238
831	SLV 16	-12.51	-0.57	32.57	0.4519	0.0405	0.036
831	CRTFP Ux+	0	0	0	0	0	0
831	CRTFP Ux-	0	0	0	0	0	0
831	CRTFP Uy+	0	0	0	0	0	0
831	CRTFP Uy-	0	0	0	0	0	0
832	SLU 1	0.93	1.09	39.33	0.2534	0.0185	0.0103
832	SLU 2	0.93	1.18	39.36	0.2492	0.0186	0.0102
832	SLU 3	0.95	1.14	40.13	0.2621	0.0191	0.0105
832	SLU 4	0.95	1.19	40.14	0.2596	0.0191	0.0104
832	SLU 5	0.94	1.19	39.86	0.2544	0.0189	0.0103
832	SLU 6	0.97	1.16	40.64	0.2673	0.0194	0.0106
832	SLU 7	0.97	1.21	40.65	0.2648	0.0194	0.0106
832	SLU 8	0.96	1.13	40.34	0.2637	0.0191	0.0106
832	SLU 9	0.96	1.18	40.36	0.2612	0.0191	0.0105
832	SLU 10	1.07	1.32	44.33	0.2752	0.0221	0.0118
832	SLU 11	1.09	1.28	45.1	0.2881	0.0227	0.0121
832	SLU 12	1.09	1.33	45.12	0.2856	0.0227	0.0121
832	SLU 13	1.09	1.34	44.84	0.2803	0.0224	0.012
832	SLU 14	1.11	1.3	45.61	0.2932	0.023	0.0123
832	SLU 15	1.11	1.35	45.62	0.2907	0.023	0.0122
832	SLU 16	1.1	1.28	45.32	0.2896	0.0227	0.0123
832	SLU 17	1.1	1.33	45.33	0.2871	0.0227	0.0122
832	SLU 18	1.13	1.3	46.43	0.2904	0.0237	0.0126
832	SLU 19	1.13	1.35	46.45	0.2879	0.0237	0.0126
832	SLU 20	1.15	1.32	46.94	0.2956	0.024	0.0128
832	SLU 21	1.15	1.37	46.96	0.2931	0.024	0.0128
832	SLU 22	1.06	1.29	44.1	0.2948	0.022	0.0116
832	SLU 23	1.06	1.37	44.12	0.2907	0.022	0.0115
832	SLU 24	1.09	1.34	44.89	0.3035	0.0226	0.0118
832	SLU 25	1.09	1.38	44.91	0.3011	0.0226	0.0117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
832	SLU 26	1.08	1.39	44.63	0.2958	0.0223	0.0116
832	SLU 27	1.11	1.35	45.4	0.3087	0.0229	0.0119
832	SLU 28	1.11	1.4	45.42	0.3062	0.0229	0.0119
832	SLU 29	1.1	1.33	45.11	0.3051	0.0226	0.0119
832	SLU 30	1.1	1.38	45.13	0.3026	0.0226	0.0118
832	SLU 31	1.2	1.52	49.1	0.3166	0.0256	0.0131
832	SLU 32	1.23	1.48	49.87	0.3295	0.0261	0.0134
832	SLU 33	1.23	1.53	49.88	0.327	0.0262	0.0134
832	SLU 34	1.22	1.53	49.6	0.3217	0.0259	0.0133
832	SLU 35	1.25	1.5	50.38	0.3346	0.0264	0.0136
832	SLU 36	1.25	1.55	50.39	0.3321	0.0264	0.0135
832	SLU 37	1.24	1.47	50.08	0.331	0.0262	0.0136
832	SLU 38	1.24	1.52	50.1	0.3285	0.0262	0.0135
832	SLU 39	1.26	1.5	51.2	0.3318	0.0271	0.0139
832	SLU 40	1.26	1.54	51.22	0.3293	0.0271	0.0139
832	SLU 41	1.28	1.51	51.71	0.337	0.0274	0.0141
832	SLU 42	1.28	1.56	51.72	0.3345	0.0274	0.014
832	SLU 43	1.16	1.35	49.49	0.3152	0.0229	0.0129
832	SLU 44	1.16	1.44	49.52	0.3111	0.023	0.0128
832	SLU 45	1.18	1.4	50.29	0.3239	0.0235	0.0131
832	SLU 46	1.18	1.45	50.31	0.3215	0.0235	0.013
832	SLU 47	1.18	1.46	50.03	0.3162	0.0232	0.013
832	SLU 48	1.2	1.42	50.8	0.3291	0.0238	0.0133
832	SLU 49	1.2	1.47	50.82	0.3266	0.0238	0.0132
832	SLU 50	1.19	1.39	50.51	0.3255	0.0235	0.0132
832	SLU 51	1.19	1.44	50.53	0.323	0.0235	0.0132
832	SLU 52	1.3	1.58	54.49	0.337	0.0265	0.0145
832	SLU 53	1.32	1.55	55.27	0.3499	0.0271	0.0148
832	SLU 54	1.32	1.59	55.28	0.3474	0.0271	0.0147
832	SLU 55	1.32	1.6	55	0.3421	0.0268	0.0146
832	SLU 56	1.34	1.56	55.77	0.355	0.0274	0.0149
832	SLU 57	1.34	1.61	55.79	0.3525	0.0274	0.0149
832	SLU 58	1.34	1.54	55.48	0.3514	0.0271	0.0149
832	SLU 59	1.34	1.59	55.5	0.3489	0.0271	0.0148
832	SLU 60	1.36	1.56	56.6	0.3522	0.028	0.0153
832	SLU 61	1.36	1.61	56.62	0.3498	0.0281	0.0152
832	SLU 62	1.38	1.58	57.11	0.3574	0.0283	0.0154
832	SLU 63	1.38	1.63	57.12	0.3549	0.0284	0.0154
832	SLU 64	1.29	1.55	54.26	0.3566	0.0264	0.0142
832	SLU 65	1.29	1.63	54.29	0.3525	0.0264	0.0141
832	SLU 66	1.32	1.6	55.06	0.3653	0.0269	0.0144
832	SLU 67	1.32	1.65	55.08	0.3629	0.027	0.0143
832	SLU 68	1.31	1.65	54.8	0.3576	0.0267	0.0143
832	SLU 69	1.34	1.62	55.57	0.3705	0.0272	0.0146
832	SLU 70	1.34	1.66	55.58	0.368	0.0273	0.0145
832	SLU 71	1.33	1.59	55.28	0.3669	0.027	0.0145
832	SLU 72	1.33	1.64	55.29	0.3644	0.027	0.0145
832	SLU 73	1.43	1.78	59.26	0.3784	0.03	0.0158
832	SLU 74	1.46	1.74	60.03	0.3913	0.0305	0.0161
832	SLU 75	1.46	1.79	60.05	0.3888	0.0305	0.016
832	SLU 76	1.45	1.8	59.77	0.3835	0.0303	0.0159
832	SLU 77	1.48	1.76	60.54	0.3964	0.0308	0.0162
832	SLU 78	1.48	1.81	60.56	0.3939	0.0308	0.0162
832	SLU 79	1.47	1.73	60.25	0.3928	0.0305	0.0162
832	SLU 80	1.47	1.78	60.27	0.3903	0.0305	0.0161
832	SLU 81	1.5	1.76	61.37	0.3936	0.0315	0.0166
832	SLU 82	1.5	1.81	61.38	0.3912	0.0315	0.0165
832	SLU 83	1.51	1.78	61.87	0.3988	0.0318	0.0167
832	SLU 84	1.51	1.82	61.89	0.3963	0.0318	0.0167
832	SLE RA 1	0.97	1.15	40.69	0.2652	0.0195	0.0106
832	SLE RA 2	0.96	1.2	40.71	0.2625	0.0195	0.0106
832	SLE RA 3	0.98	1.18	41.22	0.271	0.0199	0.0108
832	SLE RA 4	0.98	1.21	41.23	0.2694	0.0199	0.0107
832	SLE RA 5	0.98	1.22	41.05	0.2659	0.0197	0.0107
832	SLE RA 6	0.99	1.19	41.56	0.2745	0.0201	0.0109
832	SLE RA 7	0.99	1.23	41.57	0.2728	0.0201	0.0108
832	SLE RA 8	0.99	1.17	41.37	0.2721	0.0199	0.0109
832	SLE RA 9	0.99	1.21	41.38	0.2704	0.0199	0.0108
832	SLE RA 10	1.06	1.3	44.03	0.2797	0.0219	0.0117
832	SLE RA 11	1.08	1.28	44.54	0.2883	0.0223	0.0119
832	SLE RA 12	1.08	1.31	44.55	0.2867	0.0223	0.0118
832	SLE RA 13	1.07	1.31	44.36	0.2832	0.0221	0.0118
832	SLE RA 14	1.09	1.29	44.88	0.2918	0.0225	0.012
832	SLE RA 15	1.09	1.32	44.89	0.2901	0.0225	0.012
832	SLE RA 16	1.08	1.27	44.68	0.2894	0.0223	0.012
832	SLE RA 17	1.08	1.3	44.69	0.2877	0.0223	0.0119
832	SLE RA 18	1.1	1.29	45.43	0.2899	0.0229	0.0122
832	SLE RA 19	1.1	1.32	45.44	0.2882	0.0229	0.0122
832	SLE RA 20	1.11	1.3	45.77	0.2933	0.0231	0.0123
832	SLE RA 21	1.11	1.33	45.78	0.2917	0.0231	0.0123
832	SLE FR 1	0.97	1.15	40.69	0.2652	0.0195	0.0106
832	SLE FR 2	0.96	1.16	40.7	0.2647	0.0195	0.0106
832	SLE FR 3	0.97	1.15	40.83	0.2666	0.0196	0.0107
832	SLE FR 4	1.01	1.2	42.12	0.2721	0.0206	0.0111
832	SLE FR 5	1.01	1.2	42.25	0.274	0.0206	0.0112
832	SLE FR 6	1.03	1.22	43.06	0.2776	0.0212	0.0114
832	SLE QP 1	0.97	1.15	40.69	0.2652	0.0195	0.0106
832	SLE QP 2	1.01	1.19	42.11	0.2726	0.0206	0.0111
832	SLD 1	6.78	1.93	46.29	0.1958	0.0395	0.0122
832	SLD 2	6.51	1.89	46.23	0.1918	0.039	0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
832	SLD 3	6.85	0.25	45.9	0.2722	0.039	0.0155
832	SLD 4	6.58	0.21	45.84	0.2681	0.0385	0.02
832	SLD 5	2.68	3.97	43.98	0.1345	0.027	0.0057
832	SLD 6	2.5	3.95	43.94	0.1319	0.0267	0.0086
832	SLD 7	2.92	-1.64	42.66	0.389	0.0255	0.0166
832	SLD 8	2.74	-1.66	42.62	0.3864	0.0252	0.0195
832	SLD 9	-0.73	4.04	41.61	0.1589	0.0159	0.0027
832	SLD 10	-0.91	4.02	41.57	0.1562	0.0156	0.0056
832	SLD 11	-0.49	-1.57	40.29	0.4134	0.0144	0.0136
832	SLD 12	-0.67	-1.59	40.25	0.4107	0.0141	0.0165
832	SLD 13	-4.57	2.17	38.39	0.2771	0.0026	0.0023
832	SLD 14	-4.84	2.13	38.33	0.2731	0.0021	0.0067
832	SLD 15	-4.5	0.49	37.99	0.3535	0.0021	0.0055
832	SLD 16	-4.77	0.45	37.93	0.3494	0.0016	0.01
832	SLV 1	14.51	2.87	51.91	0.0951	0.0649	0.0139
832	SLV 2	13.88	2.77	51.77	0.0858	0.0638	0.0243
832	SLV 3	14.68	-0.97	51.01	0.2687	0.0639	0.0213
832	SLV 4	14.05	-1.06	50.87	0.2593	0.0627	0.0317
832	SLV 5	4.91	7.52	46.44	-0.0423	0.0357	-0.0012
832	SLV 6	4.51	7.47	46.35	-0.0483	0.035	0.0055
832	SLV 7	5.47	-5.26	43.44	0.5363	0.0321	0.0237
832	SLV 8	5.06	-5.32	43.35	0.5303	0.0314	0.0304
832	SLV 9	-3.05	7.7	40.87	0.015	0.0097	-0.0082
832	SLV 10	-3.46	7.64	40.78	0.0089	0.009	-0.0015
832	SLV 11	-2.49	-5.08	37.88	0.5936	0.0061	0.0167
832	SLV 12	-2.9	-5.14	37.79	0.5875	0.0054	0.0234
832	SLV 13	-12.04	3.44	33.36	0.2859	-0.0216	-0.0095
832	SLV 14	-12.67	3.35	33.22	0.2765	-0.0228	0.0009
832	SLV 15	-11.87	-0.39	32.46	0.4595	-0.0227	-0.0021
832	SLV 16	-12.5	-0.49	32.32	0.4501	-0.0238	0.0084
832	CRTFP Ux+	0	0	0	0	0	0
832	CRTFP Ux-	0	0	0	0	0	0
832	CRTFP Uy+	0	0	0	0	0	0
832	CRTFP Uy-	0	0	0	0	0	0
833	SLU 1	0.94	1.14	39.17	0.2463	-0.0071	0.0088
833	SLU 2	0.94	1.23	39.2	0.2422	-0.0071	0.0088
833	SLU 3	0.97	1.19	39.96	0.2549	-0.0072	0.0091
833	SLU 4	0.97	1.24	39.98	0.2525	-0.0072	0.0091
833	SLU 5	0.96	1.25	39.7	0.2473	-0.0072	0.009
833	SLU 6	0.99	1.21	40.47	0.26	-0.0074	0.0092
833	SLU 7	0.99	1.26	40.48	0.2575	-0.0074	0.0092
833	SLU 8	0.98	1.18	40.18	0.2565	-0.0074	0.0091
833	SLU 9	0.98	1.23	40.2	0.254	-0.0074	0.0091
833	SLU 10	1.09	1.38	44.13	0.2669	-0.008	0.0103
833	SLU 11	1.11	1.34	44.9	0.2797	-0.0081	0.0105
833	SLU 12	1.11	1.39	44.91	0.2772	-0.0081	0.0105
833	SLU 13	1.11	1.4	44.64	0.272	-0.0081	0.0105
833	SLU 14	1.13	1.36	45.4	0.2848	-0.0083	0.0107
833	SLU 15	1.13	1.41	45.42	0.2823	-0.0083	0.0107
833	SLU 16	1.13	1.34	45.12	0.2812	-0.0083	0.0106
833	SLU 17	1.13	1.39	45.13	0.2787	-0.0083	0.0106
833	SLU 18	1.15	1.36	46.22	0.2817	-0.0084	0.011
833	SLU 19	1.15	1.41	46.24	0.2792	-0.0084	0.011
833	SLU 20	1.17	1.38	46.73	0.2867	-0.0085	0.0111
833	SLU 21	1.17	1.43	46.74	0.2843	-0.0085	0.0111
833	SLU 22	1.08	1.35	43.9	0.2868	-0.0079	0.0101
833	SLU 23	1.08	1.43	43.93	0.2827	-0.0079	0.0101
833	SLU 24	1.11	1.39	44.69	0.2954	-0.0081	0.0103
833	SLU 25	1.11	1.44	44.71	0.2929	-0.0081	0.0103
833	SLU 26	1.1	1.45	44.43	0.2877	-0.0081	0.0102
833	SLU 27	1.13	1.41	45.2	0.3005	-0.0082	0.0104
833	SLU 28	1.13	1.46	45.21	0.298	-0.0082	0.0104
833	SLU 29	1.12	1.39	44.91	0.2969	-0.0082	0.0103
833	SLU 30	1.12	1.44	44.93	0.2945	-0.0082	0.0104
833	SLU 31	1.23	1.58	48.86	0.3074	-0.0088	0.0116
833	SLU 32	1.25	1.55	49.63	0.3201	-0.009	0.0118
833	SLU 33	1.25	1.6	49.64	0.3177	-0.009	0.0118
833	SLU 34	1.25	1.6	49.37	0.3125	-0.009	0.0117
833	SLU 35	1.27	1.57	50.13	0.3252	-0.0091	0.0119
833	SLU 36	1.27	1.62	50.15	0.3227	-0.0091	0.0119
833	SLU 37	1.27	1.54	49.85	0.3217	-0.0091	0.0118
833	SLU 38	1.26	1.59	49.86	0.3192	-0.0091	0.0118
833	SLU 39	1.29	1.56	50.95	0.3221	-0.0092	0.0122
833	SLU 40	1.29	1.61	50.97	0.3196	-0.0092	0.0122
833	SLU 41	1.31	1.58	51.46	0.3272	-0.0093	0.0123
833	SLU 42	1.31	1.63	51.47	0.3247	-0.0093	0.0123
833	SLU 43	1.18	1.42	49.3	0.3064	-0.0089	0.0111
833	SLU 44	1.18	1.5	49.33	0.3022	-0.0089	0.0111
833	SLU 45	1.2	1.46	50.09	0.315	-0.0091	0.0113
833	SLU 46	1.2	1.51	50.11	0.3125	-0.0091	0.0113
833	SLU 47	1.2	1.52	49.83	0.3073	-0.0091	0.0112
833	SLU 48	1.22	1.48	50.6	0.3201	-0.0092	0.0114
833	SLU 49	1.22	1.53	50.61	0.3176	-0.0092	0.0114
833	SLU 50	1.22	1.46	50.31	0.3165	-0.0092	0.0114
833	SLU 51	1.22	1.51	50.33	0.314	-0.0092	0.0114
833	SLU 52	1.32	1.65	54.26	0.327	-0.0098	0.0126
833	SLU 53	1.35	1.62	55.03	0.3397	-0.01	0.0128
833	SLU 54	1.35	1.67	55.04	0.3372	-0.01	0.0128
833	SLU 55	1.34	1.67	54.77	0.332	-0.01	0.0127
833	SLU 56	1.37	1.64	55.53	0.3448	-0.0101	0.0129

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
833	SLU 57	1.37	1.69	55.55	0.3423	-0.0101	0.0129
833	SLU 58	1.36	1.61	55.25	0.3413	-0.0101	0.0128
833	SLU 59	1.36	1.66	55.26	0.3388	-0.0101	0.0128
833	SLU 60	1.39	1.64	56.35	0.3417	-0.0102	0.0132
833	SLU 61	1.39	1.68	56.37	0.3392	-0.0102	0.0132
833	SLU 62	1.4	1.66	56.86	0.3468	-0.0104	0.0133
833	SLU 63	1.4	1.7	56.87	0.3443	-0.0104	0.0133
833	SLU 64	1.32	1.62	54.03	0.3468	-0.0097	0.0123
833	SLU 65	1.32	1.7	54.06	0.3427	-0.0097	0.0123
833	SLU 66	1.34	1.67	54.82	0.3554	-0.0099	0.0125
833	SLU 67	1.34	1.72	54.84	0.353	-0.0099	0.0125
833	SLU 68	1.34	1.72	54.56	0.3478	-0.0099	0.0124
833	SLU 69	1.36	1.69	55.33	0.3605	-0.0101	0.0126
833	SLU 70	1.36	1.74	55.34	0.358	-0.0101	0.0127
833	SLU 71	1.36	1.66	55.04	0.357	-0.0101	0.0126
833	SLU 72	1.36	1.71	55.06	0.3545	-0.0101	0.0126
833	SLU 73	1.46	1.85	58.99	0.3674	-0.0106	0.0138
833	SLU 74	1.49	1.82	59.76	0.3802	-0.0108	0.014
833	SLU 75	1.49	1.87	59.77	0.3777	-0.0108	0.014
833	SLU 76	1.48	1.87	59.5	0.3725	-0.0108	0.0139
833	SLU 77	1.51	1.84	60.26	0.3852	-0.011	0.0141
833	SLU 78	1.51	1.89	60.28	0.3828	-0.011	0.0141
833	SLU 79	1.5	1.81	59.98	0.3817	-0.011	0.0141
833	SLU 80	1.5	1.86	59.99	0.3792	-0.011	0.0141
833	SLU 81	1.53	1.84	61.08	0.3822	-0.011	0.0144
833	SLU 82	1.52	1.89	61.1	0.3797	-0.011	0.0144
833	SLU 83	1.54	1.86	61.59	0.3872	-0.0112	0.0146
833	SLU 84	1.54	1.91	61.6	0.3848	-0.0112	0.0146
833	SLE RA 1	0.98	1.2	40.52	0.2579	-0.0073	0.0092
833	SLE RA 2	0.98	1.26	40.54	0.2551	-0.0073	0.0092
833	SLE RA 3	1	1.23	41.05	0.2636	-0.0074	0.0093
833	SLE RA 4	1	1.27	41.06	0.262	-0.0074	0.0093
833	SLE RA 5	1	1.27	40.88	0.2585	-0.0074	0.0093
833	SLE RA 6	1.01	1.25	41.39	0.267	-0.0075	0.0094
833	SLE RA 7	1.01	1.28	41.4	0.2654	-0.0075	0.0094
833	SLE RA 8	1.01	1.23	41.2	0.2647	-0.0075	0.0094
833	SLE RA 9	1.01	1.26	41.21	0.263	-0.0075	0.0094
833	SLE RA 10	1.08	1.36	43.83	0.2716	-0.0079	0.0102
833	SLE RA 11	1.1	1.34	44.34	0.2801	-0.008	0.0103
833	SLE RA 12	1.1	1.37	44.35	0.2785	-0.008	0.0103
833	SLE RA 13	1.09	1.37	44.17	0.275	-0.008	0.0103
833	SLE RA 14	1.11	1.35	44.68	0.2835	-0.0081	0.0104
833	SLE RA 15	1.11	1.38	44.69	0.2819	-0.0081	0.0104
833	SLE RA 16	1.1	1.33	44.49	0.2812	-0.0081	0.0104
833	SLE RA 17	1.1	1.36	44.5	0.2795	-0.0081	0.0104
833	SLE RA 18	1.12	1.35	45.22	0.2815	-0.0082	0.0106
833	SLE RA 19	1.12	1.38	45.23	0.2798	-0.0082	0.0106
833	SLE RA 20	1.13	1.36	45.56	0.2848	-0.0083	0.0107
833	SLE RA 21	1.13	1.39	45.57	0.2832	-0.0083	0.0107
833	SLE FR 1	0.98	1.2	40.52	0.2579	-0.0073	0.0092
833	SLE FR 2	0.98	1.21	40.53	0.2573	-0.0073	0.0092
833	SLE FR 3	0.99	1.21	40.66	0.2593	-0.0074	0.0092
833	SLE FR 4	1.02	1.26	41.94	0.2644	-0.0076	0.0096
833	SLE FR 5	1.03	1.25	42.07	0.2663	-0.0076	0.0097
833	SLE FR 6	1.05	1.27	42.87	0.2697	-0.0077	0.0099
833	SLE QP 1	0.98	1.2	40.52	0.2579	-0.0073	0.0092
833	SLE QP 2	1.02	1.25	41.93	0.265	-0.0076	0.0096
833	SLD 1	6.8	1.99	45.4	0.1854	0.0209	0.0128
833	SLD 2	6.53	1.97	45.36	0.1808	0.0203	0.0168
833	SLD 3	6.88	0.32	45.01	0.2617	0.0204	0.0138
833	SLD 4	6.6	0.3	44.97	0.2571	0.0198	0.0179
833	SLD 5	2.7	4.01	43.57	0.1262	0.0017	0.0082
833	SLD 6	2.52	4	43.54	0.1232	0.0013	0.0109
833	SLD 7	2.94	-1.57	42.27	0.3805	0.0003	0.0118
833	SLD 8	2.76	-1.58	42.25	0.3775	-0.0001	0.0144
833	SLD 9	-0.71	4.07	41.62	0.1524	-0.0151	0.0048
833	SLD 10	-0.89	4.06	41.59	0.1495	-0.0155	0.0075
833	SLD 11	-0.47	-1.51	40.32	0.4067	-0.0165	0.0083
833	SLD 12	-0.65	-1.52	40.29	0.4037	-0.0168	0.011
833	SLD 13	-4.56	2.19	38.89	0.2728	-0.035	0.0013
833	SLD 14	-4.83	2.17	38.85	0.2683	-0.0356	0.0054
833	SLD 15	-4.48	0.52	38.51	0.3491	-0.0354	0.0024
833	SLD 16	-4.75	0.5	38.46	0.3445	-0.036	0.0065
833	SLV 1	14.54	2.92	50.06	0.081	0.059	0.0171
833	SLV 2	13.91	2.88	49.96	0.0704	0.0576	0.0266
833	SLV 3	14.71	-0.88	49.18	0.2544	0.058	0.0195
833	SLV 4	14.08	-0.93	49.08	0.2439	0.0566	0.029
833	SLV 5	4.93	7.53	45.73	-0.0514	0.0141	0.0065
833	SLV 6	4.52	7.51	45.66	-0.0582	0.0132	0.0126
833	SLV 7	5.49	-5.16	42.79	0.5266	0.0109	0.0147
833	SLV 8	5.09	-5.19	42.72	0.5198	0.01	0.0208
833	SLV 9	-3.04	7.68	41.14	0.0101	-0.0251	-0.0015
833	SLV 10	-3.44	7.65	41.08	0.0033	-0.026	0.0046
833	SLV 11	-2.48	-5.02	38.2	0.5882	-0.0284	0.0066
833	SLV 12	-2.88	-5.04	38.14	0.5813	-0.0293	0.0127
833	SLV 13	-12.03	3.42	34.79	0.2861	-0.0718	-0.0098
833	SLV 14	-12.66	3.38	34.68	0.2755	-0.0732	-0.0003
833	SLV 15	-11.86	-0.39	33.9	0.4595	-0.0727	-0.0073
833	SLV 16	-12.49	-0.43	33.8	0.4489	-0.0742	0.0022
833	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
833	CRTFP Ux-	0	0	0	0	0	0
833	CRTFP Uy+	0	0	0	0	0	0
833	CRTFP Uy-	0	0	0	0	0	0
834	SLU 1	0.96	1.19	39.69	0.2397	-0.0265	0.0078
834	SLU 2	0.96	1.27	39.71	0.2356	-0.0265	0.0079
834	SLU 3	0.98	1.24	40.49	0.2482	-0.0272	0.008
834	SLU 4	0.98	1.29	40.51	0.2457	-0.0272	0.008
834	SLU 5	0.98	1.29	40.23	0.2406	-0.027	0.008
834	SLU 6	1	1.26	41.01	0.2532	-0.0277	0.0081
834	SLU 7	1	1.31	41.02	0.2507	-0.0277	0.0082
834	SLU 8	1	1.23	40.72	0.2497	-0.0275	0.008
834	SLU 9	1	1.28	40.73	0.2473	-0.0275	0.0081
834	SLU 10	1.11	1.43	44.73	0.2591	-0.0308	0.0092
834	SLU 11	1.13	1.4	45.51	0.2718	-0.0315	0.0093
834	SLU 12	1.13	1.45	45.52	0.2693	-0.0315	0.0094
834	SLU 13	1.12	1.45	45.24	0.2642	-0.0313	0.0093
834	SLU 14	1.15	1.42	46.02	0.2768	-0.032	0.0094
834	SLU 15	1.15	1.47	46.04	0.2743	-0.032	0.0095
834	SLU 16	1.14	1.39	45.73	0.2733	-0.0318	0.0093
834	SLU 17	1.14	1.44	45.75	0.2708	-0.0318	0.0094
834	SLU 18	1.17	1.42	46.85	0.2734	-0.0326	0.0097
834	SLU 19	1.17	1.47	46.87	0.2709	-0.0326	0.0097
834	SLU 20	1.19	1.44	47.37	0.2784	-0.0331	0.0098
834	SLU 21	1.19	1.49	47.38	0.2759	-0.0331	0.0099
834	SLU 22	1.1	1.4	44.49	0.2793	-0.0305	0.0089
834	SLU 23	1.1	1.48	44.52	0.2751	-0.0305	0.0091
834	SLU 24	1.13	1.45	45.3	0.2878	-0.0312	0.0092
834	SLU 25	1.13	1.49	45.31	0.2853	-0.0312	0.0092
834	SLU 26	1.12	1.5	45.03	0.2801	-0.031	0.0092
834	SLU 27	1.15	1.47	45.81	0.2928	-0.0317	0.0093
834	SLU 28	1.15	1.52	45.83	0.2903	-0.0317	0.0093
834	SLU 29	1.14	1.44	45.52	0.2893	-0.0315	0.0092
834	SLU 30	1.14	1.49	45.54	0.2868	-0.0315	0.0093
834	SLU 31	1.25	1.64	49.53	0.2987	-0.0348	0.0104
834	SLU 32	1.27	1.61	50.31	0.3113	-0.0355	0.0105
834	SLU 33	1.27	1.66	50.33	0.3088	-0.0356	0.0106
834	SLU 34	1.27	1.66	50.05	0.3037	-0.0353	0.0105
834	SLU 35	1.29	1.63	50.83	0.3163	-0.036	0.0106
834	SLU 36	1.29	1.68	50.84	0.3139	-0.0361	0.0107
834	SLU 37	1.29	1.6	50.54	0.3129	-0.0358	0.0105
834	SLU 38	1.29	1.65	50.55	0.3104	-0.0358	0.0106
834	SLU 39	1.31	1.63	51.66	0.3129	-0.0367	0.0108
834	SLU 40	1.31	1.68	51.67	0.3105	-0.0367	0.0109
834	SLU 41	1.33	1.65	52.17	0.318	-0.0372	0.011
834	SLU 42	1.33	1.7	52.19	0.3155	-0.0372	0.011
834	SLU 43	1.2	1.47	49.95	0.2981	-0.033	0.0097
834	SLU 44	1.2	1.55	49.97	0.2939	-0.033	0.0098
834	SLU 45	1.22	1.52	50.75	0.3065	-0.0337	0.0099
834	SLU 46	1.22	1.57	50.77	0.3041	-0.0337	0.01
834	SLU 47	1.22	1.57	50.49	0.2989	-0.0335	0.0099
834	SLU 48	1.24	1.54	51.27	0.3115	-0.0342	0.01
834	SLU 49	1.24	1.59	51.28	0.3091	-0.0342	0.0101
834	SLU 50	1.24	1.51	50.98	0.3081	-0.034	0.0099
834	SLU 51	1.23	1.56	50.99	0.3056	-0.034	0.01
834	SLU 52	1.34	1.71	54.99	0.3175	-0.0373	0.0111
834	SLU 53	1.37	1.68	55.77	0.3301	-0.038	0.0112
834	SLU 54	1.37	1.73	55.78	0.3276	-0.038	0.0113
834	SLU 55	1.36	1.74	55.5	0.3225	-0.0378	0.0113
834	SLU 56	1.39	1.7	56.28	0.3351	-0.0385	0.0113
834	SLU 57	1.39	1.75	56.3	0.3326	-0.0385	0.0114
834	SLU 58	1.38	1.67	55.99	0.3317	-0.0383	0.0113
834	SLU 59	1.38	1.72	56.01	0.3292	-0.0383	0.0113
834	SLU 60	1.41	1.7	57.11	0.3317	-0.0391	0.0116
834	SLU 61	1.41	1.75	57.13	0.3293	-0.0391	0.0117
834	SLU 62	1.43	1.72	57.63	0.3367	-0.0396	0.0117
834	SLU 63	1.43	1.77	57.64	0.3343	-0.0396	0.0118
834	SLU 64	1.34	1.68	54.75	0.3376	-0.0371	0.0109
834	SLU 65	1.34	1.76	54.78	0.3335	-0.0371	0.011
834	SLU 66	1.37	1.73	55.56	0.3461	-0.0378	0.0111
834	SLU 67	1.37	1.78	55.57	0.3436	-0.0378	0.0111
834	SLU 68	1.36	1.78	55.29	0.3385	-0.0376	0.0111
834	SLU 69	1.38	1.75	56.07	0.3511	-0.0383	0.0112
834	SLU 70	1.38	1.8	56.09	0.3486	-0.0383	0.0113
834	SLU 71	1.38	1.72	55.78	0.3476	-0.0381	0.0111
834	SLU 72	1.38	1.77	55.8	0.3452	-0.0381	0.0112
834	SLU 73	1.49	1.92	59.79	0.3571	-0.0414	0.0123
834	SLU 74	1.51	1.89	60.57	0.3697	-0.0421	0.0124
834	SLU 75	1.51	1.94	60.59	0.3672	-0.0421	0.0125
834	SLU 76	1.51	1.94	60.31	0.3621	-0.0419	0.0124
834	SLU 77	1.53	1.91	61.09	0.3747	-0.0426	0.0125
834	SLU 78	1.53	1.96	61.1	0.3722	-0.0426	0.0126
834	SLU 79	1.53	1.88	60.8	0.3712	-0.0424	0.0124
834	SLU 80	1.53	1.93	60.81	0.3687	-0.0424	0.0125
834	SLU 81	1.55	1.91	61.92	0.3713	-0.0432	0.0128
834	SLU 82	1.55	1.96	61.93	0.3688	-0.0432	0.0128
834	SLU 83	1.57	1.93	62.43	0.3763	-0.0437	0.0129
834	SLU 84	1.57	1.98	62.45	0.3738	-0.0437	0.013
834	SLE RA 1	1	1.25	41.06	0.251	-0.0276	0.0081
834	SLE RA 2	1	1.3	41.08	0.2483	-0.0276	0.0082
834	SLE RA 3	1.02	1.28	41.6	0.2567	-0.0281	0.0082

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
834	SLE RA 4	1.02	1.31	41.61	0.255	-0.0281	0.0083
834	SLE RA 5	1.01	1.32	41.42	0.2516	-0.028	0.0083
834	SLE RA 6	1.03	1.29	41.94	0.26	-0.0284	0.0083
834	SLE RA 7	1.03	1.33	41.95	0.2584	-0.0284	0.0084
834	SLE RA 8	1.02	1.28	41.75	0.2577	-0.0283	0.0083
834	SLE RA 9	1.02	1.31	41.76	0.256	-0.0283	0.0083
834	SLE RA 10	1.1	1.41	44.42	0.264	-0.0305	0.0091
834	SLE RA 11	1.12	1.39	44.94	0.2724	-0.031	0.0091
834	SLE RA 12	1.11	1.42	44.95	0.2707	-0.031	0.0092
834	SLE RA 13	1.11	1.42	44.76	0.2673	-0.0308	0.0091
834	SLE RA 14	1.13	1.4	45.28	0.2757	-0.0313	0.0092
834	SLE RA 15	1.13	1.43	45.29	0.2741	-0.0313	0.0093
834	SLE RA 16	1.12	1.38	45.09	0.2734	-0.0312	0.0092
834	SLE RA 17	1.12	1.41	45.1	0.2718	-0.0312	0.0092
834	SLE RA 18	1.14	1.4	45.84	0.2735	-0.0317	0.0094
834	SLE RA 19	1.14	1.43	45.85	0.2718	-0.0317	0.0094
834	SLE RA 20	1.15	1.41	46.18	0.2768	-0.032	0.0094
834	SLE RA 21	1.15	1.45	46.19	0.2752	-0.0321	0.0095
834	SLE FR 1	1	1.25	41.06	0.251	-0.0276	0.0081
834	SLE FR 2	1	1.26	41.06	0.2505	-0.0276	0.0081
834	SLE FR 3	1	1.25	41.2	0.2523	-0.0277	0.0081
834	SLE FR 4	1.04	1.3	42.5	0.2572	-0.0288	0.0085
834	SLE FR 5	1.05	1.3	42.63	0.2591	-0.029	0.0085
834	SLE FR 6	1.07	1.32	43.45	0.2622	-0.0297	0.0087
834	SLE QP 1	1	1.25	41.06	0.251	-0.0276	0.0081
834	SLE QP 2	1.04	1.29	42.49	0.2577	-0.0288	0.0085
834	SLD 1	6.82	2.22	45.03	0.1753	0.0056	0.013
834	SLD 2	6.55	2.22	45	0.1702	0.005	0.017
834	SLD 3	6.89	0.54	44.64	0.2516	0.0052	0.0113
834	SLD 4	6.62	0.55	44.62	0.2465	0.0045	0.0153
834	SLD 5	2.71	4.11	43.85	0.1183	-0.0177	0.0117
834	SLD 6	2.54	4.11	43.83	0.1149	-0.0181	0.0143
834	SLD 7	2.96	-1.47	42.55	0.3724	-0.0192	0.006
834	SLD 8	2.78	-1.47	42.54	0.3691	-0.0197	0.0087
834	SLD 9	-0.7	4.06	42.45	0.1464	-0.038	0.0083
834	SLD 10	-0.87	4.06	42.43	0.143	-0.0385	0.0109
834	SLD 11	-0.45	-1.52	41.16	0.4005	-0.0396	0.0026
834	SLD 12	-0.63	-1.52	41.14	0.3972	-0.04	0.0053
834	SLD 13	-4.54	2.04	40.37	0.269	-0.0622	0.0016
834	SLD 14	-4.81	2.04	40.35	0.2639	-0.0629	0.0057
834	SLD 15	-4.47	0.37	39.98	0.3452	-0.0626	-0.0001
834	SLD 16	-4.74	0.37	39.96	0.3402	-0.0633	0.004
834	SLV 1	14.56	3.41	48.44	0.0671	0.0519	0.019
834	SLV 2	13.93	3.42	48.38	0.0553	0.0503	0.0284
834	SLV 3	14.73	-0.4	47.56	0.2404	0.0508	0.0152
834	SLV 4	14.1	-0.39	47.5	0.2286	0.0492	0.0246
834	SLV 5	4.95	7.71	45.62	-0.0603	-0.0027	0.0158
834	SLV 6	4.54	7.72	45.58	-0.0679	-0.0037	0.0219
834	SLV 7	5.51	-5	42.69	0.5174	-0.0064	0.003
834	SLV 8	5.11	-4.99	42.65	0.5099	-0.0074	0.0091
834	SLV 9	-3.02	7.58	42.33	0.0056	-0.0503	0.0079
834	SLV 10	-3.43	7.59	42.3	-0.002	-0.0513	0.0139
834	SLV 11	-2.46	-5.13	39.4	0.5834	-0.054	-0.005
834	SLV 12	-2.86	-5.12	39.37	0.5758	-0.055	0.0011
834	SLV 13	-12.01	2.98	37.48	0.2868	-0.1069	-0.0076
834	SLV 14	-12.65	2.99	37.43	0.2751	-0.1084	0.0018
834	SLV 15	-11.84	-0.84	36.61	0.4602	-0.108	-0.0115
834	SLV 16	-12.48	-0.83	36.55	0.4484	-0.1096	-0.002
834	CRTFP Ux+	0	0	0	0	0	0
834	CRTFP Ux-	0	0	0	0	0	0
834	CRTFP Uy+	0	0	0	0	0	0
834	CRTFP Uy-	0	0	0	0	0	0
835	SLU 1	0.97	1.23	40.71	0.2335	-0.0406	0.0068
835	SLU 2	0.97	1.31	40.73	0.2293	-0.0407	0.007
835	SLU 3	1	1.28	41.54	0.2418	-0.0418	0.0071
835	SLU 4	1	1.33	41.56	0.2394	-0.0418	0.0072
835	SLU 5	0.99	1.33	41.27	0.2343	-0.0414	0.0072
835	SLU 6	1.01	1.3	42.07	0.2468	-0.0425	0.0072
835	SLU 7	1.01	1.35	42.09	0.2443	-0.0425	0.0073
835	SLU 8	1.01	1.27	41.78	0.2434	-0.0422	0.0071
835	SLU 9	1.01	1.32	41.79	0.2409	-0.0422	0.0072
835	SLU 10	1.12	1.48	45.92	0.2518	-0.0475	0.0082
835	SLU 11	1.15	1.44	46.72	0.2643	-0.0486	0.0082
835	SLU 12	1.15	1.49	46.74	0.2618	-0.0486	0.0084
835	SLU 13	1.14	1.5	46.45	0.2567	-0.0482	0.0083
835	SLU 14	1.17	1.47	47.26	0.2693	-0.0493	0.0084
835	SLU 15	1.16	1.51	47.27	0.2668	-0.0494	0.0085
835	SLU 16	1.16	1.44	46.96	0.2658	-0.049	0.0082
835	SLU 17	1.16	1.49	46.98	0.2634	-0.049	0.0084
835	SLU 18	1.18	1.47	48.11	0.2656	-0.0504	0.0085
835	SLU 19	1.18	1.52	48.13	0.2631	-0.0504	0.0087
835	SLU 20	1.2	1.49	48.65	0.2705	-0.0511	0.0086
835	SLU 21	1.2	1.54	48.66	0.268	-0.0511	0.0088
835	SLU 22	1.11	1.44	45.67	0.2722	-0.0471	0.008
835	SLU 23	1.11	1.52	45.7	0.2681	-0.0471	0.0082
835	SLU 24	1.14	1.49	46.5	0.2806	-0.0482	0.0082
835	SLU 25	1.14	1.54	46.52	0.2781	-0.0483	0.0083
835	SLU 26	1.13	1.55	46.23	0.273	-0.0479	0.0083
835	SLU 27	1.16	1.51	47.04	0.2855	-0.049	0.0083
835	SLU 28	1.16	1.56	47.06	0.2831	-0.049	0.0085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
835	SLU 29	1.15	1.48	46.74	0.2821	-0.0486	0.0082
835	SLU 30	1.15	1.53	46.76	0.2796	-0.0486	0.0083
835	SLU 31	1.26	1.69	50.88	0.2905	-0.0539	0.0094
835	SLU 32	1.29	1.66	51.69	0.303	-0.055	0.0094
835	SLU 33	1.29	1.71	51.7	0.3006	-0.0551	0.0095
835	SLU 34	1.28	1.71	51.42	0.2955	-0.0547	0.0095
835	SLU 35	1.31	1.68	52.22	0.308	-0.0558	0.0095
835	SLU 36	1.31	1.73	52.24	0.3055	-0.0558	0.0096
835	SLU 37	1.3	1.65	51.92	0.3046	-0.0554	0.0094
835	SLU 38	1.3	1.7	51.94	0.3021	-0.0554	0.0095
835	SLU 39	1.33	1.68	53.08	0.3043	-0.0568	0.0097
835	SLU 40	1.33	1.73	53.09	0.3018	-0.0569	0.0098
835	SLU 41	1.35	1.7	53.61	0.3093	-0.0576	0.0098
835	SLU 42	1.35	1.75	53.63	0.3068	-0.0576	0.0099
835	SLU 43	1.21	1.52	51.22	0.2902	-0.0506	0.0085
835	SLU 44	1.21	1.6	51.24	0.2861	-0.0506	0.0087
835	SLU 45	1.24	1.57	52.05	0.2986	-0.0518	0.0087
835	SLU 46	1.24	1.62	52.07	0.2961	-0.0518	0.0088
835	SLU 47	1.23	1.63	51.78	0.291	-0.0514	0.0088
835	SLU 48	1.26	1.59	52.58	0.3036	-0.0525	0.0088
835	SLU 49	1.26	1.64	52.6	0.3011	-0.0525	0.009
835	SLU 50	1.25	1.56	52.28	0.3001	-0.0521	0.0087
835	SLU 51	1.25	1.61	52.3	0.2977	-0.0521	0.0088
835	SLU 52	1.36	1.77	56.43	0.3085	-0.0575	0.0099
835	SLU 53	1.39	1.74	57.23	0.3211	-0.0586	0.0099
835	SLU 54	1.39	1.79	57.25	0.3186	-0.0586	0.01
835	SLU 55	1.38	1.79	56.96	0.3135	-0.0582	0.01
835	SLU 56	1.41	1.76	57.77	0.326	-0.0593	0.01
835	SLU 57	1.41	1.81	57.78	0.3235	-0.0593	0.0101
835	SLU 58	1.4	1.73	57.47	0.3226	-0.0589	0.0099
835	SLU 59	1.4	1.78	57.49	0.3201	-0.059	0.01
835	SLU 60	1.42	1.76	58.62	0.3223	-0.0604	0.0102
835	SLU 61	1.42	1.81	58.64	0.3198	-0.0604	0.0103
835	SLU 62	1.44	1.78	59.16	0.3273	-0.0611	0.0103
835	SLU 63	1.44	1.83	59.17	0.3248	-0.0611	0.0104
835	SLU 64	1.36	1.74	56.18	0.329	-0.0571	0.0096
835	SLU 65	1.35	1.82	56.21	0.3248	-0.0571	0.0099
835	SLU 66	1.38	1.79	57.01	0.3373	-0.0582	0.0099
835	SLU 67	1.38	1.84	57.03	0.3349	-0.0582	0.01
835	SLU 68	1.37	1.84	56.74	0.3298	-0.0579	0.01
835	SLU 69	1.4	1.81	57.55	0.3423	-0.059	0.01
835	SLU 70	1.4	1.86	57.56	0.3398	-0.059	0.0101
835	SLU 71	1.39	1.78	57.25	0.3389	-0.0586	0.0099
835	SLU 72	1.39	1.83	57.27	0.3364	-0.0586	0.01
835	SLU 73	1.5	1.99	61.39	0.3473	-0.0639	0.011
835	SLU 74	1.53	1.95	62.2	0.3598	-0.065	0.011
835	SLU 75	1.53	2	62.21	0.3573	-0.065	0.0112
835	SLU 76	1.52	2.01	61.93	0.3522	-0.0647	0.0112
835	SLU 77	1.55	1.97	62.73	0.3648	-0.0658	0.0112
835	SLU 78	1.55	2.02	62.75	0.3623	-0.0658	0.0113
835	SLU 79	1.54	1.95	62.43	0.3613	-0.0654	0.0111
835	SLU 80	1.54	2	62.45	0.3589	-0.0654	0.0112
835	SLU 81	1.57	1.98	63.59	0.3611	-0.0668	0.0113
835	SLU 82	1.57	2.02	63.6	0.3586	-0.0668	0.0115
835	SLU 83	1.59	2	64.12	0.366	-0.0676	0.0114
835	SLU 84	1.59	2.05	64.14	0.3635	-0.0676	0.0116
835	SLE RA 1	1.01	1.29	42.12	0.2445	-0.0425	0.0072
835	SLE RA 2	1.01	1.34	42.14	0.2418	-0.0425	0.0073
835	SLE RA 3	1.03	1.32	42.68	0.2501	-0.0432	0.0073
835	SLE RA 4	1.03	1.35	42.69	0.2485	-0.0433	0.0074
835	SLE RA 5	1.02	1.36	42.5	0.2451	-0.043	0.0074
835	SLE RA 6	1.04	1.34	43.04	0.2534	-0.0437	0.0074
835	SLE RA 7	1.04	1.37	43.05	0.2518	-0.0438	0.0075
835	SLE RA 8	1.04	1.32	42.84	0.2511	-0.0435	0.0073
835	SLE RA 9	1.04	1.35	42.85	0.2495	-0.0435	0.0074
835	SLE RA 10	1.11	1.46	45.6	0.2567	-0.047	0.0081
835	SLE RA 11	1.13	1.43	46.14	0.2651	-0.0478	0.0081
835	SLE RA 12	1.13	1.47	46.15	0.2634	-0.0478	0.0082
835	SLE RA 13	1.12	1.47	45.96	0.2601	-0.0476	0.0082
835	SLE RA 14	1.14	1.45	46.49	0.2684	-0.0483	0.0082
835	SLE RA 15	1.14	1.48	46.5	0.2667	-0.0483	0.0083
835	SLE RA 16	1.14	1.43	46.29	0.2661	-0.048	0.0081
835	SLE RA 17	1.14	1.46	46.3	0.2645	-0.048	0.0082
835	SLE RA 18	1.15	1.45	47.06	0.2659	-0.049	0.0083
835	SLE RA 19	1.15	1.48	47.07	0.2643	-0.049	0.0084
835	SLE RA 20	1.17	1.46	47.42	0.2692	-0.0495	0.0084
835	SLE RA 21	1.17	1.49	47.43	0.2676	-0.0495	0.0085
835	SLE FR 1	1.01	1.29	42.12	0.2445	-0.0425	0.0072
835	SLE FR 2	1.01	1.3	42.13	0.244	-0.0425	0.0072
835	SLE FR 3	1.02	1.29	42.27	0.2459	-0.0427	0.0072
835	SLE FR 4	1.05	1.35	43.61	0.2504	-0.0444	0.0075
835	SLE FR 5	1.06	1.34	43.75	0.2523	-0.0446	0.0075
835	SLE FR 6	1.08	1.37	44.59	0.2552	-0.0457	0.0077
835	SLE QP 1	1.01	1.29	42.12	0.2445	-0.0425	0.0072
835	SLE QP 2	1.05	1.34	43.61	0.251	-0.0444	0.0075
835	SLD 1	6.83	2.26	45.09	0.1655	-0.0072	0.0121
835	SLD 2	6.56	2.28	45.09	0.16	-0.0079	0.0165
835	SLD 3	6.91	0.57	44.7	0.2418	-0.0067	0.0083
835	SLD 4	6.64	0.59	44.7	0.2362	-0.0074	0.0127
835	SLD 5	2.72	4.17	44.65	0.1106	-0.034	0.0138

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
835	SLD 6	2.55	4.19	44.64	0.107	-0.0345	0.0167
835	SLD 7	2.97	-1.46	43.34	0.3649	-0.0321	0.0012
835	SLD 8	2.79	-1.44	43.34	0.3612	-0.0326	0.0041
835	SLD 9	-0.68	4.12	43.87	0.1407	-0.0563	0.0109
835	SLD 10	-0.86	4.13	43.87	0.137	-0.0567	0.0138
835	SLD 11	-0.44	-1.51	42.57	0.3949	-0.0544	-0.0017
835	SLD 12	-0.62	-1.5	42.56	0.3913	-0.0549	0.0012
835	SLD 13	-4.53	2.08	42.51	0.2657	-0.0815	0.0023
835	SLD 14	-4.8	2.1	42.51	0.2601	-0.0822	0.0067
835	SLD 15	-4.46	0.39	42.12	0.342	-0.0809	-0.0015
835	SLD 16	-4.73	0.42	42.12	0.3364	-0.0816	0.0029
835	SLV 1	14.57	3.45	47.11	0.0534	0.0426	0.0181
835	SLV 2	13.94	3.5	47.1	0.0404	0.041	0.0284
835	SLV 3	14.74	-0.4	46.22	0.2267	0.0439	0.0095
835	SLV 4	14.11	-0.34	46.21	0.2137	0.0423	0.0198
835	SLV 5	4.96	7.79	46	-0.069	-0.02	0.022
835	SLV 6	4.55	7.83	46	-0.0774	-0.021	0.0286
835	SLV 7	5.53	-5.03	43.05	0.5088	-0.0157	-0.0067
835	SLV 8	5.12	-4.99	43.04	0.5004	-0.0168	-0.0001
835	SLV 9	-3.01	7.66	44.17	0.0015	-0.0721	0.0151
835	SLV 10	-3.42	7.7	44.17	-0.0069	-0.0732	0.0217
835	SLV 11	-2.44	-5.16	41.21	0.5793	-0.0678	-0.0136
835	SLV 12	-2.85	-5.12	41.21	0.5709	-0.0689	-0.007
835	SLV 13	-12	3.01	41	0.2882	-0.1311	-0.0048
835	SLV 14	-12.64	3.07	40.99	0.2752	-0.1328	0.0055
835	SLV 15	-11.83	-0.83	40.11	0.4616	-0.1299	-0.0134
835	SLV 16	-12.46	-0.77	40.1	0.4486	-0.1315	-0.0031
835	CRTFP Ux+	0	0	0	0	0	0
835	CRTFP Ux-	0	0	0	0	0	0
835	CRTFP Uy+	0	0	0	0	0	0
835	CRTFP Uy-	0	0	0	0	0	0
836	SLU 1	0.97	1.26	42.08	0.2276	-0.0504	0.0059
836	SLU 2	0.97	1.35	42.11	0.2235	-0.0505	0.0062
836	SLU 3	1	1.31	42.96	0.2359	-0.0519	0.0061
836	SLU 4	1	1.36	42.97	0.2334	-0.0519	0.0063
836	SLU 5	0.99	1.37	42.67	0.2284	-0.0514	0.0063
836	SLU 6	1.02	1.33	43.52	0.2408	-0.0528	0.0062
836	SLU 7	1.02	1.38	43.53	0.2383	-0.0528	0.0064
836	SLU 8	1.01	1.3	43.21	0.2375	-0.0523	0.0061
836	SLU 9	1.01	1.36	43.22	0.235	-0.0523	0.0063
836	SLU 10	1.13	1.52	47.53	0.2448	-0.059	0.0072
836	SLU 11	1.15	1.49	48.37	0.2573	-0.0604	0.0072
836	SLU 12	1.15	1.54	48.39	0.2548	-0.0604	0.0073
836	SLU 13	1.15	1.54	48.09	0.2498	-0.0599	0.0073
836	SLU 14	1.17	1.51	48.93	0.2622	-0.0613	0.0073
836	SLU 15	1.17	1.56	48.95	0.2597	-0.0613	0.0074
836	SLU 16	1.16	1.48	48.62	0.2588	-0.0608	0.0071
836	SLU 17	1.16	1.53	48.64	0.2563	-0.0609	0.0073
836	SLU 18	1.19	1.51	49.82	0.2582	-0.0626	0.0074
836	SLU 19	1.19	1.56	49.84	0.2557	-0.0626	0.0075
836	SLU 20	1.21	1.53	50.38	0.2631	-0.0636	0.0075
836	SLU 21	1.21	1.58	50.4	0.2606	-0.0636	0.0076
836	SLU 22	1.12	1.48	47.27	0.2656	-0.0586	0.007
836	SLU 23	1.12	1.57	47.3	0.2614	-0.0586	0.0073
836	SLU 24	1.15	1.53	48.14	0.2739	-0.06	0.0072
836	SLU 25	1.15	1.58	48.16	0.2714	-0.06	0.0074
836	SLU 26	1.14	1.59	47.86	0.2664	-0.0595	0.0074
836	SLU 27	1.17	1.56	48.7	0.2788	-0.0609	0.0073
836	SLU 28	1.17	1.61	48.72	0.2763	-0.0609	0.0075
836	SLU 29	1.16	1.53	48.39	0.2754	-0.0604	0.0072
836	SLU 30	1.16	1.58	48.41	0.2729	-0.0604	0.0074
836	SLU 31	1.27	1.74	52.72	0.2828	-0.0671	0.0083
836	SLU 32	1.3	1.71	53.56	0.2953	-0.0685	0.0082
836	SLU 33	1.3	1.76	53.58	0.2928	-0.0685	0.0084
836	SLU 34	1.29	1.76	53.28	0.2877	-0.0681	0.0084
836	SLU 35	1.32	1.73	54.12	0.3002	-0.0694	0.0084
836	SLU 36	1.32	1.78	54.14	0.2977	-0.0695	0.0085
836	SLU 37	1.31	1.7	53.81	0.2968	-0.069	0.0082
836	SLU 38	1.31	1.75	53.82	0.2943	-0.069	0.0084
836	SLU 39	1.34	1.73	55.01	0.2962	-0.0707	0.0085
836	SLU 40	1.34	1.78	55.03	0.2937	-0.0708	0.0086
836	SLU 41	1.36	1.75	55.57	0.3011	-0.0717	0.0086
836	SLU 42	1.36	1.8	55.59	0.2986	-0.0717	0.0087
836	SLU 43	1.22	1.56	52.93	0.2829	-0.0628	0.0073
836	SLU 44	1.22	1.65	52.96	0.2787	-0.0628	0.0076
836	SLU 45	1.24	1.61	53.8	0.2912	-0.0642	0.0075
836	SLU 46	1.24	1.67	53.82	0.2887	-0.0642	0.0077
836	SLU 47	1.24	1.67	53.52	0.2836	-0.0638	0.0077
836	SLU 48	1.26	1.64	54.36	0.2961	-0.0651	0.0076
836	SLU 49	1.26	1.69	54.38	0.2936	-0.0652	0.0078
836	SLU 50	1.26	1.61	54.05	0.2927	-0.0646	0.0075
836	SLU 51	1.26	1.66	54.07	0.2902	-0.0647	0.0077
836	SLU 52	1.37	1.82	58.38	0.3001	-0.0714	0.0086
836	SLU 53	1.4	1.79	59.22	0.3125	-0.0727	0.0085
836	SLU 54	1.39	1.84	59.24	0.3101	-0.0728	0.0087
836	SLU 55	1.39	1.84	58.94	0.305	-0.0723	0.0087
836	SLU 56	1.41	1.81	59.78	0.3175	-0.0737	0.0087
836	SLU 57	1.41	1.86	59.8	0.315	-0.0737	0.0088
836	SLU 58	1.41	1.78	59.47	0.3141	-0.0732	0.0085
836	SLU 59	1.41	1.83	59.49	0.3116	-0.0732	0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
836	SLU 60	1.43	1.81	60.67	0.3134	-0.075	0.0088
836	SLU 61	1.43	1.86	60.69	0.3109	-0.075	0.0089
836	SLU 62	1.45	1.83	61.23	0.3184	-0.0759	0.0089
836	SLU 63	1.45	1.88	61.25	0.3159	-0.0759	0.009
836	SLU 64	1.36	1.79	58.12	0.3209	-0.0709	0.0084
836	SLU 65	1.36	1.87	58.15	0.3167	-0.0709	0.0087
836	SLU 66	1.39	1.84	58.99	0.3291	-0.0723	0.0086
836	SLU 67	1.39	1.89	59.01	0.3266	-0.0723	0.0088
836	SLU 68	1.38	1.89	58.71	0.3216	-0.0719	0.0088
836	SLU 69	1.41	1.86	59.55	0.3341	-0.0733	0.0087
836	SLU 70	1.41	1.91	59.57	0.3316	-0.0733	0.0089
836	SLU 71	1.4	1.83	59.24	0.3307	-0.0728	0.0086
836	SLU 72	1.4	1.88	59.26	0.3282	-0.0728	0.0088
836	SLU 73	1.51	2.04	63.56	0.3381	-0.0795	0.0097
836	SLU 74	1.54	2.01	64.41	0.3505	-0.0809	0.0096
836	SLU 75	1.54	2.06	64.42	0.348	-0.0809	0.0098
836	SLU 76	1.53	2.06	64.12	0.343	-0.0804	0.0098
836	SLU 77	1.56	2.03	64.97	0.3554	-0.0818	0.0097
836	SLU 78	1.56	2.08	64.98	0.3529	-0.0818	0.0099
836	SLU 79	1.55	2	64.66	0.3521	-0.0813	0.0096
836	SLU 80	1.55	2.05	64.67	0.3496	-0.0813	0.0098
836	SLU 81	1.58	2.03	65.86	0.3514	-0.0831	0.0098
836	SLU 82	1.58	2.08	65.87	0.3489	-0.0831	0.01
836	SLU 83	1.6	2.05	66.42	0.3563	-0.084	0.01
836	SLU 84	1.6	2.1	66.43	0.3538	-0.084	0.0101
836	SLE RA 1	1.02	1.32	43.57	0.2385	-0.0528	0.0062
836	SLE RA 2	1.02	1.38	43.59	0.2357	-0.0528	0.0064
836	SLE RA 3	1.03	1.36	44.15	0.244	-0.0537	0.0064
836	SLE RA 4	1.03	1.39	44.16	0.2423	-0.0537	0.0065
836	SLE RA 5	1.03	1.4	43.96	0.239	-0.0534	0.0065
836	SLE RA 6	1.05	1.37	44.52	0.2473	-0.0543	0.0064
836	SLE RA 7	1.05	1.41	44.53	0.2456	-0.0543	0.0066
836	SLE RA 8	1.04	1.35	44.31	0.245	-0.054	0.0063
836	SLE RA 9	1.04	1.39	44.32	0.2434	-0.054	0.0065
836	SLE RA 10	1.12	1.5	47.2	0.25	-0.0585	0.0071
836	SLE RA 11	1.14	1.47	47.76	0.2582	-0.0594	0.007
836	SLE RA 12	1.13	1.51	47.77	0.2566	-0.0594	0.0072
836	SLE RA 13	1.13	1.51	47.57	0.2532	-0.0591	0.0072
836	SLE RA 14	1.15	1.49	48.13	0.2615	-0.06	0.0071
836	SLE RA 15	1.15	1.52	48.14	0.2599	-0.06	0.0072
836	SLE RA 16	1.14	1.47	47.92	0.2593	-0.0597	0.007
836	SLE RA 17	1.14	1.5	47.94	0.2576	-0.0597	0.0071
836	SLE RA 18	1.16	1.49	48.73	0.2588	-0.0609	0.0072
836	SLE RA 19	1.16	1.52	48.74	0.2572	-0.0609	0.0073
836	SLE RA 20	1.17	1.5	49.1	0.2621	-0.0615	0.0073
836	SLE RA 21	1.17	1.54	49.11	0.2605	-0.0615	0.0074
836	SLE FR 1	1.02	1.32	43.57	0.2385	-0.0528	0.0062
836	SLE FR 2	1.02	1.34	43.57	0.2379	-0.0528	0.0062
836	SLE FR 3	1.02	1.33	43.72	0.2398	-0.053	0.0062
836	SLE FR 4	1.06	1.39	45.12	0.244	-0.0552	0.0065
836	SLE FR 5	1.06	1.38	45.26	0.2459	-0.0554	0.0065
836	SLE FR 6	1.09	1.41	46.15	0.2487	-0.0568	0.0067
836	SLE QP 1	1.02	1.32	43.57	0.2385	-0.0528	0.0062
836	SLE QP 2	1.06	1.37	45.11	0.2446	-0.0552	0.0065
836	SLD 1	6.91	2.3	45.74	0.1561	-0.0168	0.0022
836	SLD 2	6.64	2.35	45.76	0.1499	-0.0176	0.0073
836	SLD 3	6.84	0.59	45.34	0.2324	-0.0162	-0.0033
836	SLD 4	6.57	0.64	45.36	0.2263	-0.0169	0.0018
836	SLD 5	2.98	4.24	45.91	0.1033	-0.0446	0.0126
836	SLD 6	2.8	4.28	45.92	0.0992	-0.045	0.016
836	SLD 7	2.73	-1.47	44.57	0.3579	-0.0424	-0.0057
836	SLD 8	2.55	-1.44	44.58	0.3539	-0.0429	-0.0023
836	SLD 9	-0.43	4.19	45.65	0.1353	-0.0675	0.0153
836	SLD 10	-0.61	4.22	45.66	0.1313	-0.068	0.0187
836	SLD 11	-0.68	-1.53	44.31	0.3899	-0.0654	-0.003
836	SLD 12	-0.86	-1.49	44.32	0.3859	-0.0658	0.0004
836	SLD 13	-4.45	2.11	44.87	0.2628	-0.0935	0.0112
836	SLD 14	-4.72	2.16	44.89	0.2567	-0.0942	0.0163
836	SLD 15	-4.52	0.4	44.47	0.3392	-0.0928	0.0057
836	SLD 16	-4.79	0.45	44.48	0.3331	-0.0935	0.0108
836	SLV 1	14.75	3.5	46.66	0.0397	0.0346	-0.0038
836	SLV 2	14.12	3.61	46.7	0.0255	0.0329	0.0082
836	SLV 3	14.58	-0.41	45.75	0.2133	0.0361	-0.0163
836	SLV 4	13.95	-0.29	45.79	0.199	0.0344	-0.0043
836	SLV 5	5.54	7.91	46.95	-0.0776	-0.0303	0.0203
836	SLV 6	5.13	7.99	46.98	-0.0868	-0.0313	0.028
836	SLV 7	4.96	-5.1	43.92	0.5008	-0.0253	-0.0213
836	SLV 8	4.56	-5.03	43.95	0.4916	-0.0263	-0.0136
836	SLV 9	-2.44	7.77	46.28	-0.0025	-0.0841	0.0266
836	SLV 10	-2.84	7.85	46.31	-0.0116	-0.0851	0.0343
836	SLV 11	-3.01	-5.24	43.25	0.5759	-0.0791	-0.015
836	SLV 12	-3.42	-5.16	43.28	0.5667	-0.0801	-0.0073
836	SLV 13	-11.83	3.04	44.44	0.2901	-0.1448	0.0173
836	SLV 14	-12.46	3.15	44.48	0.2759	-0.1465	0.0293
836	SLV 15	-12	-0.87	43.53	0.4637	-0.1433	0.0049
836	SLV 16	-12.63	-0.75	43.57	0.4494	-0.145	0.0168
836	CRTFP Ux+	0	0	0	0	0	0
836	CRTFP Ux-	0	0	0	0	0	0
836	CRTFP Uy+	0	0	0	0	0	0
836	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
837	SLU 1	0.97	1.29	43.69	0.2222	-0.0558	0.0048
837	SLU 2	0.97	1.38	43.72	0.218	-0.0559	0.0051
837	SLU 3	1	1.34	44.61	0.2304	-0.0574	0.005
837	SLU 4	1	1.39	44.63	0.2278	-0.0574	0.0052
837	SLU 5	0.99	1.4	44.31	0.2229	-0.0569	0.0052
837	SLU 6	1.02	1.36	45.2	0.2352	-0.0584	0.0051
837	SLU 7	1.02	1.42	45.22	0.2327	-0.0585	0.0053
837	SLU 8	1.01	1.34	44.87	0.2319	-0.0579	0.005
837	SLU 9	1.01	1.39	44.89	0.2294	-0.0579	0.0052
837	SLU 10	1.12	1.55	49.41	0.2383	-0.0653	0.0059
837	SLU 11	1.15	1.52	50.3	0.2507	-0.0669	0.0058
837	SLU 12	1.15	1.57	50.32	0.2482	-0.0669	0.006
837	SLU 13	1.14	1.58	50	0.2432	-0.0664	0.006
837	SLU 14	1.17	1.54	50.89	0.2556	-0.0679	0.0059
837	SLU 15	1.17	1.59	50.91	0.2531	-0.0679	0.0061
837	SLU 16	1.16	1.51	50.56	0.2523	-0.0673	0.0058
837	SLU 17	1.16	1.56	50.58	0.2498	-0.0674	0.006
837	SLU 18	1.19	1.54	51.82	0.2512	-0.0694	0.0059
837	SLU 19	1.19	1.6	51.84	0.2487	-0.0694	0.0061
837	SLU 20	1.21	1.57	52.41	0.2561	-0.0704	0.006
837	SLU 21	1.21	1.62	52.43	0.2536	-0.0704	0.0062
837	SLU 22	1.12	1.52	49.14	0.2594	-0.0649	0.0058
837	SLU 23	1.12	1.6	49.17	0.2553	-0.0649	0.0061
837	SLU 24	1.15	1.57	50.06	0.2676	-0.0664	0.006
837	SLU 25	1.15	1.62	50.07	0.2651	-0.0665	0.0062
837	SLU 26	1.14	1.63	49.76	0.2601	-0.0659	0.0062
837	SLU 27	1.17	1.59	50.65	0.2725	-0.0675	0.0061
837	SLU 28	1.17	1.64	50.66	0.27	-0.0675	0.0063
837	SLU 29	1.16	1.56	50.32	0.2692	-0.0669	0.0059
837	SLU 30	1.16	1.61	50.34	0.2667	-0.0669	0.0061
837	SLU 31	1.27	1.78	54.86	0.2756	-0.0744	0.0069
837	SLU 32	1.3	1.75	55.75	0.288	-0.0759	0.0068
837	SLU 33	1.3	1.8	55.76	0.2855	-0.0759	0.007
837	SLU 34	1.29	1.8	55.45	0.2805	-0.0754	0.007
837	SLU 35	1.32	1.77	56.33	0.2929	-0.0769	0.0069
837	SLU 36	1.32	1.82	56.35	0.2904	-0.077	0.0071
837	SLU 37	1.31	1.74	56.01	0.2896	-0.0764	0.0068
837	SLU 38	1.31	1.79	56.02	0.287	-0.0764	0.007
837	SLU 39	1.34	1.77	57.27	0.2885	-0.0784	0.0069
837	SLU 40	1.34	1.82	57.28	0.286	-0.0784	0.0071
837	SLU 41	1.36	1.79	57.86	0.2934	-0.0794	0.007
837	SLU 42	1.35	1.85	57.87	0.2909	-0.0794	0.0072
837	SLU 43	1.22	1.6	54.93	0.276	-0.0695	0.0059
837	SLU 44	1.22	1.69	54.96	0.2718	-0.0695	0.0062
837	SLU 45	1.24	1.65	55.85	0.2842	-0.0711	0.0061
837	SLU 46	1.24	1.7	55.87	0.2817	-0.0711	0.0063
837	SLU 47	1.23	1.71	55.55	0.2767	-0.0706	0.0063
837	SLU 48	1.26	1.67	56.44	0.2891	-0.0721	0.0062
837	SLU 49	1.26	1.73	56.46	0.2866	-0.0721	0.0064
837	SLU 50	1.25	1.64	56.11	0.2858	-0.0715	0.0061
837	SLU 51	1.25	1.7	56.13	0.2833	-0.0716	0.0063
837	SLU 52	1.37	1.86	60.65	0.2922	-0.079	0.007
837	SLU 53	1.39	1.83	61.54	0.3046	-0.0805	0.0069
837	SLU 54	1.39	1.88	61.56	0.3021	-0.0805	0.0071
837	SLU 55	1.39	1.89	61.24	0.2971	-0.08	0.0071
837	SLU 56	1.41	1.85	62.13	0.3094	-0.0815	0.007
837	SLU 57	1.41	1.9	62.15	0.3069	-0.0816	0.0072
837	SLU 58	1.41	1.82	61.8	0.3061	-0.081	0.0069
837	SLU 59	1.41	1.87	61.82	0.3036	-0.081	0.0071
837	SLU 60	1.43	1.85	63.06	0.3051	-0.083	0.007
837	SLU 61	1.43	1.91	63.08	0.3026	-0.083	0.0072
837	SLU 62	1.45	1.88	63.65	0.31	-0.084	0.0071
837	SLU 63	1.45	1.93	63.67	0.3075	-0.0841	0.0073
837	SLU 64	1.36	1.83	60.38	0.3133	-0.0785	0.0068
837	SLU 65	1.36	1.91	60.41	0.3091	-0.0786	0.0072
837	SLU 66	1.39	1.88	61.3	0.3215	-0.0801	0.0071
837	SLU 67	1.39	1.93	61.31	0.319	-0.0801	0.0073
837	SLU 68	1.38	1.94	61	0.314	-0.0796	0.0073
837	SLU 69	1.41	1.9	61.89	0.3264	-0.0811	0.0072
837	SLU 70	1.41	1.95	61.9	0.3239	-0.0811	0.0074
837	SLU 71	1.4	1.87	61.56	0.3231	-0.0806	0.007
837	SLU 72	1.4	1.92	61.58	0.3206	-0.0806	0.0072
837	SLU 73	1.51	2.09	66.1	0.3295	-0.088	0.008
837	SLU 74	1.54	2.06	66.99	0.3419	-0.0896	0.0079
837	SLU 75	1.54	2.11	67	0.3393	-0.0896	0.0081
837	SLU 76	1.53	2.11	66.69	0.3344	-0.0891	0.0081
837	SLU 77	1.56	2.08	67.58	0.3467	-0.0906	0.008
837	SLU 78	1.56	2.13	67.59	0.3442	-0.0906	0.0082
837	SLU 79	1.55	2.05	67.25	0.3434	-0.09	0.0079
837	SLU 80	1.55	2.1	67.27	0.3409	-0.0901	0.0081
837	SLU 81	1.58	2.08	68.51	0.3424	-0.092	0.008
837	SLU 82	1.58	2.13	68.52	0.3399	-0.0921	0.0082
837	SLU 83	1.6	2.1	69.1	0.3473	-0.0931	0.0081
837	SLU 84	1.6	2.16	69.11	0.3447	-0.0931	0.0083
837	SLE RA 1	1.02	1.36	45.25	0.2328	-0.0584	0.0051
837	SLE RA 2	1.02	1.41	45.27	0.23	-0.0584	0.0053
837	SLE RA 3	1.03	1.39	45.86	0.2383	-0.0595	0.0052
837	SLE RA 4	1.03	1.42	45.87	0.2366	-0.0595	0.0053
837	SLE RA 5	1.03	1.43	45.66	0.2333	-0.0591	0.0053
837	SLE RA 6	1.05	1.41	46.25	0.2415	-0.0601	0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
837	SLE RA 7	1.05	1.44	46.27	0.2399	-0.0602	0.0054
837	SLE RA 8	1.04	1.39	46.04	0.2393	-0.0598	0.0052
837	SLE RA 9	1.04	1.42	46.05	0.2376	-0.0598	0.0053
837	SLE RA 10	1.12	1.53	49.06	0.2436	-0.0648	0.0058
837	SLE RA 11	1.13	1.51	49.65	0.2518	-0.0658	0.0058
837	SLE RA 12	1.13	1.54	49.66	0.2502	-0.0658	0.0059
837	SLE RA 13	1.13	1.55	49.45	0.2468	-0.0654	0.0059
837	SLE RA 14	1.15	1.52	50.05	0.2551	-0.0665	0.0058
837	SLE RA 15	1.15	1.56	50.06	0.2534	-0.0665	0.0059
837	SLE RA 16	1.14	1.5	49.83	0.2529	-0.0661	0.0057
837	SLE RA 17	1.14	1.54	49.84	0.2512	-0.0661	0.0059
837	SLE RA 18	1.16	1.53	50.67	0.2522	-0.0674	0.0058
837	SLE RA 19	1.16	1.56	50.68	0.2505	-0.0674	0.006
837	SLE RA 20	1.17	1.54	51.06	0.2554	-0.0681	0.0059
837	SLE RA 21	1.17	1.57	51.07	0.2538	-0.0681	0.006
837	SLE FR 1	1.02	1.36	45.25	0.2328	-0.0584	0.0051
837	SLE FR 2	1.02	1.37	45.25	0.2323	-0.0584	0.0051
837	SLE FR 3	1.02	1.36	45.41	0.2341	-0.0587	0.0051
837	SLE FR 4	1.06	1.42	46.88	0.2381	-0.0611	0.0053
837	SLE FR 5	1.06	1.41	47.03	0.2399	-0.0614	0.0053
837	SLE FR 6	1.09	1.44	47.96	0.2425	-0.0629	0.0054
837	SLE QP 1	1.02	1.36	45.25	0.2328	-0.0584	0.0051
837	SLE QP 2	1.06	1.41	46.87	0.2386	-0.0611	0.0053
837	SLD 1	6.91	2.35	45.91	0.1469	-0.0233	-0.0015
837	SLD 2	6.64	2.42	45.95	0.1402	-0.024	0.0048
837	SLD 3	6.84	0.6	45.49	0.2234	-0.0225	-0.008
837	SLD 4	6.57	0.68	45.53	0.2168	-0.0232	-0.0017
837	SLD 5	2.98	4.32	47.21	0.0961	-0.0509	0.012
837	SLD 6	2.8	4.38	47.24	0.0918	-0.0513	0.0161
837	SLD 7	2.73	-1.5	45.82	0.3514	-0.0482	-0.0097
837	SLD 8	2.55	-1.45	45.85	0.347	-0.0486	-0.0056
837	SLD 9	-0.43	4.26	47.9	0.1302	-0.0736	0.0161
837	SLD 10	-0.61	4.31	47.93	0.1258	-0.0741	0.0202
837	SLD 11	-0.68	-1.56	46.51	0.3855	-0.0709	-0.0055
837	SLD 12	-0.86	-1.51	46.54	0.3811	-0.0714	-0.0014
837	SLD 13	-4.45	2.13	48.22	0.2605	-0.0991	0.0123
837	SLD 14	-4.72	2.21	48.26	0.2538	-0.0998	0.0185
837	SLD 15	-4.52	0.39	47.8	0.3371	-0.0983	0.0058
837	SLD 16	-4.8	0.47	47.84	0.3304	-0.099	0.012
837	SLV 1	14.75	3.56	44.57	0.0262	0.0275	-0.0107
837	SLV 2	14.12	3.74	44.66	0.0107	0.0259	0.0039
837	SLV 3	14.57	-0.42	43.63	0.2001	0.0293	-0.0255
837	SLV 4	13.94	-0.24	43.72	0.1846	0.0277	-0.0109
837	SLV 5	5.54	8.05	47.6	-0.0862	-0.0371	0.0204
837	SLV 6	5.13	8.17	47.66	-0.0962	-0.0381	0.0298
837	SLV 7	4.96	-5.21	44.45	0.4935	-0.0309	-0.0289
837	SLV 8	4.55	-5.09	44.51	0.4835	-0.0319	-0.0195
837	SLV 9	-2.44	7.9	49.24	-0.0062	-0.0903	0.0301
837	SLV 10	-2.84	8.02	49.3	-0.0162	-0.0913	0.0394
837	SLV 11	-3.01	-5.36	46.09	0.5734	-0.0841	-0.0192
837	SLV 12	-3.42	-5.24	46.15	0.5634	-0.0852	-0.0098
837	SLV 13	-11.83	3.05	50.03	0.2926	-0.15	0.0215
837	SLV 14	-12.46	3.24	50.12	0.2771	-0.1516	0.036
837	SLV 15	-12	-0.93	49.09	0.4665	-0.1481	0.0067
837	SLV 16	-12.63	-0.74	49.18	0.451	-0.1497	0.0213
837	CRTFP Ux+	0	0	0	0	0	0
837	CRTFP Ux-	0	0	0	0	0	0
837	CRTFP Uy+	0	0	0	0	0	0
837	CRTFP Uy-	0	0	0	0	0	0
838	SLU 1	0.96	1.31	45.38	0.2171	-0.0557	0.0033
838	SLU 2	0.96	1.4	45.42	0.2129	-0.0558	0.0036
838	SLU 3	0.99	1.37	46.35	0.2252	-0.0573	0.0035
838	SLU 4	0.99	1.42	46.37	0.2227	-0.0573	0.0037
838	SLU 5	0.98	1.42	46.04	0.2177	-0.0568	0.0037
838	SLU 6	1.01	1.39	46.97	0.2301	-0.0583	0.0036
838	SLU 7	1.01	1.44	46.99	0.2275	-0.0583	0.0038
838	SLU 8	1	1.36	46.63	0.2268	-0.0577	0.0034
838	SLU 9	1	1.41	46.64	0.2243	-0.0578	0.0036
838	SLU 10	1.11	1.58	51.39	0.2322	-0.0652	0.0042
838	SLU 11	1.14	1.55	52.32	0.2446	-0.0667	0.004
838	SLU 12	1.14	1.6	52.34	0.242	-0.0667	0.0042
838	SLU 13	1.13	1.61	52.01	0.2371	-0.0662	0.0042
838	SLU 14	1.16	1.57	52.94	0.2494	-0.0677	0.0041
838	SLU 15	1.16	1.62	52.96	0.2469	-0.0677	0.0043
838	SLU 16	1.15	1.54	52.6	0.2461	-0.0671	0.004
838	SLU 17	1.15	1.59	52.62	0.2436	-0.0672	0.0042
838	SLU 18	1.18	1.57	53.92	0.2447	-0.0692	0.0041
838	SLU 19	1.18	1.63	53.94	0.2422	-0.0692	0.0043
838	SLU 20	1.2	1.6	54.54	0.2496	-0.0702	0.0041
838	SLU 21	1.2	1.65	54.56	0.247	-0.0702	0.0043
838	SLU 22	1.11	1.55	51.1	0.2537	-0.0648	0.0041
838	SLU 23	1.11	1.63	51.14	0.2495	-0.0648	0.0044
838	SLU 24	1.14	1.6	52.07	0.2619	-0.0663	0.0043
838	SLU 25	1.14	1.65	52.09	0.2593	-0.0664	0.0045
838	SLU 26	1.13	1.66	51.76	0.2544	-0.0658	0.0045
838	SLU 27	1.16	1.62	52.69	0.2667	-0.0673	0.0043
838	SLU 28	1.16	1.67	52.71	0.2642	-0.0674	0.0045
838	SLU 29	1.15	1.59	52.35	0.2634	-0.0668	0.0042
838	SLU 30	1.15	1.64	52.36	0.2609	-0.0668	0.0044
838	SLU 31	1.26	1.81	57.11	0.2689	-0.0743	0.0049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
838	SLU 32	1.29	1.78	58.04	0.2812	-0.0758	0.0048
838	SLU 33	1.29	1.83	58.06	0.2787	-0.0758	0.005
838	SLU 34	1.28	1.84	57.73	0.2737	-0.0753	0.005
838	SLU 35	1.31	1.8	58.67	0.2861	-0.0768	0.0049
838	SLU 36	1.31	1.86	58.68	0.2835	-0.0768	0.0051
838	SLU 37	1.3	1.77	58.32	0.2828	-0.0762	0.0048
838	SLU 38	1.3	1.83	58.34	0.2803	-0.0762	0.005
838	SLU 39	1.32	1.81	59.64	0.2814	-0.0782	0.0048
838	SLU 40	1.32	1.86	59.66	0.2788	-0.0783	0.005
838	SLU 41	1.34	1.83	60.26	0.2862	-0.0792	0.0049
838	SLU 42	1.34	1.88	60.28	0.2837	-0.0793	0.0051
838	SLU 43	1.2	1.63	57.04	0.2696	-0.0693	0.004
838	SLU 44	1.2	1.71	57.07	0.2654	-0.0694	0.0043
838	SLU 45	1.23	1.68	58	0.2778	-0.0709	0.0042
838	SLU 46	1.23	1.73	58.02	0.2752	-0.0709	0.0044
838	SLU 47	1.22	1.74	57.69	0.2703	-0.0704	0.0044
838	SLU 48	1.25	1.7	58.62	0.2826	-0.0719	0.0043
838	SLU 49	1.25	1.76	58.64	0.2801	-0.0719	0.0045
838	SLU 50	1.24	1.67	58.28	0.2794	-0.0713	0.0041
838	SLU 51	1.24	1.73	58.3	0.2768	-0.0714	0.0043
838	SLU 52	1.35	1.9	63.04	0.2848	-0.0788	0.0049
838	SLU 53	1.38	1.86	63.98	0.2971	-0.0803	0.0048
838	SLU 54	1.38	1.92	64	0.2946	-0.0803	0.005
838	SLU 55	1.37	1.92	63.67	0.2896	-0.0798	0.0049
838	SLU 56	1.4	1.89	64.6	0.302	-0.0813	0.0048
838	SLU 57	1.4	1.94	64.62	0.2994	-0.0813	0.005
838	SLU 58	1.39	1.85	64.26	0.2987	-0.0807	0.0047
838	SLU 59	1.39	1.91	64.27	0.2962	-0.0808	0.0049
838	SLU 60	1.42	1.89	65.57	0.2973	-0.0828	0.0048
838	SLU 61	1.42	1.94	65.59	0.2947	-0.0828	0.005
838	SLU 62	1.44	1.91	66.2	0.3021	-0.0838	0.0049
838	SLU 63	1.44	1.96	66.21	0.2996	-0.0838	0.0051
838	SLU 64	1.35	1.86	62.76	0.3063	-0.0784	0.0048
838	SLU 65	1.35	1.95	62.79	0.3021	-0.0784	0.0051
838	SLU 66	1.38	1.91	63.72	0.3144	-0.0799	0.005
838	SLU 67	1.38	1.97	63.74	0.3119	-0.08	0.0052
838	SLU 68	1.37	1.97	63.41	0.3069	-0.0794	0.0052
838	SLU 69	1.4	1.94	64.34	0.3193	-0.0809	0.0051
838	SLU 70	1.4	1.99	64.36	0.3168	-0.081	0.0053
838	SLU 71	1.39	1.9	64	0.316	-0.0804	0.0049
838	SLU 72	1.39	1.96	64.02	0.3135	-0.0804	0.0051
838	SLU 73	1.5	2.13	68.76	0.3214	-0.0879	0.0057
838	SLU 74	1.53	2.09	69.7	0.3338	-0.0894	0.0055
838	SLU 75	1.53	2.15	69.72	0.3312	-0.0894	0.0057
838	SLU 76	1.52	2.15	69.39	0.3263	-0.0889	0.0057
838	SLU 77	1.55	2.12	70.32	0.3386	-0.0904	0.0056
838	SLU 78	1.55	2.17	70.34	0.3361	-0.0904	0.0058
838	SLU 79	1.54	2.09	69.98	0.3353	-0.0898	0.0055
838	SLU 80	1.54	2.14	69.99	0.3328	-0.0898	0.0057
838	SLU 81	1.56	2.12	71.3	0.3339	-0.0918	0.0056
838	SLU 82	1.56	2.17	71.31	0.3314	-0.0919	0.0058
838	SLU 83	1.58	2.14	71.92	0.3388	-0.0928	0.0056
838	SLU 84	1.58	2.19	71.93	0.3363	-0.0929	0.0058
838	SLE RA 1	1.01	1.38	47.02	0.2276	-0.0583	0.0035
838	SLE RA 2	1.01	1.44	47.04	0.2248	-0.0583	0.0037
838	SLE RA 3	1.02	1.41	47.66	0.233	-0.0593	0.0036
838	SLE RA 4	1.02	1.45	47.67	0.2313	-0.0594	0.0038
838	SLE RA 5	1.02	1.45	47.45	0.228	-0.059	0.0038
838	SLE RA 6	1.04	1.43	48.08	0.2362	-0.06	0.0037
838	SLE RA 7	1.04	1.47	48.09	0.2345	-0.06	0.0038
838	SLE RA 8	1.03	1.41	47.85	0.234	-0.0596	0.0036
838	SLE RA 9	1.03	1.44	47.86	0.2323	-0.0597	0.0037
838	SLE RA 10	1.11	1.56	51.02	0.2376	-0.0646	0.0041
838	SLE RA 11	1.12	1.54	51.65	0.2459	-0.0656	0.004
838	SLE RA 12	1.12	1.57	51.66	0.2442	-0.0656	0.0041
838	SLE RA 13	1.12	1.57	51.44	0.2409	-0.0653	0.0041
838	SLE RA 14	1.14	1.55	52.06	0.2491	-0.0663	0.0041
838	SLE RA 15	1.14	1.59	52.07	0.2474	-0.0663	0.0042
838	SLE RA 16	1.13	1.53	51.83	0.2469	-0.0659	0.004
838	SLE RA 17	1.13	1.57	51.84	0.2452	-0.0659	0.0041
838	SLE RA 18	1.15	1.55	52.71	0.246	-0.0673	0.004
838	SLE RA 19	1.15	1.59	52.72	0.2443	-0.0673	0.0042
838	SLE RA 20	1.16	1.57	53.12	0.2492	-0.0679	0.0041
838	SLE RA 21	1.16	1.6	53.14	0.2475	-0.068	0.0042
838	SLE FR 1	1.01	1.38	47.02	0.2276	-0.0583	0.0035
838	SLE FR 2	1.01	1.39	47.02	0.227	-0.0583	0.0035
838	SLE FR 3	1.01	1.39	47.18	0.2289	-0.0586	0.0035
838	SLE FR 4	1.05	1.44	48.73	0.2325	-0.061	0.0037
838	SLE FR 5	1.05	1.44	48.89	0.2344	-0.0613	0.0037
838	SLE FR 6	1.08	1.47	49.86	0.2368	-0.0628	0.0038
838	SLE QP 1	1.01	1.38	47.02	0.2276	-0.0583	0.0035
838	SLE QP 2	1.05	1.43	48.73	0.2331	-0.061	0.0037
838	SLD 1	6.9	2.14	46.69	0.1379	-0.0253	-0.0089
838	SLD 2	6.63	2.25	46.75	0.1307	-0.0259	-0.0011
838	SLD 3	6.83	0.35	46.25	0.2148	-0.0242	-0.0154
838	SLD 4	6.56	0.47	46.31	0.2076	-0.0248	-0.0077
838	SLD 5	2.97	4.33	48.77	0.0892	-0.0518	0.0085
838	SLD 6	2.79	4.4	48.81	0.0845	-0.0522	0.0136
838	SLD 7	2.72	-1.62	47.3	0.3455	-0.0482	-0.0134
838	SLD 8	2.54	-1.54	47.34	0.3408	-0.0486	-0.0084

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
838	SLD 9	-0.44	4.4	50.11	0.1254	-0.0734	0.0157
838	SLD 10	-0.62	4.48	50.15	0.1207	-0.0738	0.0207
838	SLD 11	-0.69	-1.54	48.64	0.3817	-0.0698	-0.0063
838	SLD 12	-0.87	-1.47	48.68	0.377	-0.0702	-0.0012
838	SLD 13	-4.46	2.39	51.15	0.2586	-0.0972	0.015
838	SLD 14	-4.73	2.51	51.21	0.2514	-0.0978	0.0227
838	SLD 15	-4.53	0.61	50.71	0.3355	-0.0961	0.0084
838	SLD 16	-4.8	0.73	50.76	0.3282	-0.0967	0.0162
838	SLV 1	14.74	3.02	43.93	0.0128	0.0226	-0.0258
838	SLV 2	14.1	3.29	44.07	-0.004	0.0212	-0.0078
838	SLV 3	14.56	-1.04	42.93	0.1873	0.025	-0.0407
838	SLV 4	13.93	-0.77	43.07	0.1705	0.0236	-0.0227
838	SLV 5	5.53	8.02	48.78	-0.0948	-0.0394	0.0144
838	SLV 6	5.12	8.2	48.87	-0.1056	-0.0403	0.026
838	SLV 7	4.95	-5.52	45.45	0.4869	-0.0312	-0.0355
838	SLV 8	4.54	-5.34	45.54	0.4761	-0.0321	-0.0239
838	SLV 9	-2.44	8.21	51.91	-0.0099	-0.0898	0.0312
838	SLV 10	-2.85	8.38	52	-0.0208	-0.0907	0.0428
838	SLV 11	-3.02	-5.34	48.58	0.5718	-0.0817	-0.0187
838	SLV 12	-3.43	-5.16	48.67	0.561	-0.0826	-0.0071
838	SLV 13	-11.83	3.63	54.38	0.2957	-0.1456	0.0301
838	SLV 14	-12.46	3.9	54.52	0.2789	-0.147	0.0481
838	SLV 15	-12.01	-0.43	53.38	0.4702	-0.1432	0.0151
838	SLV 16	-12.64	-0.16	53.52	0.4534	-0.1446	0.0331
838	CRTFP Ux+	0	0	0	0	0	0
838	CRTFP Ux-	0	0	0	0	0	0
838	CRTFP Uy+	0	0	0	0	0	0
838	CRTFP Uy-	0	0	0	0	0	0
839	SLU 1	0.86	1.2	42.59	0.194	0.7561	-0.0212
839	SLU 2	0.86	1.29	42.62	0.1901	0.7566	-0.0225
839	SLU 3	0.89	1.25	43.5	0.2013	0.7722	-0.022
839	SLU 4	0.89	1.3	43.52	0.199	0.7725	-0.0228
839	SLU 5	0.88	1.31	43.21	0.1945	0.7669	-0.0228
839	SLU 6	0.9	1.27	44.09	0.2057	0.7825	-0.0223
839	SLU 7	0.9	1.32	44.11	0.2034	0.7828	-0.0231
839	SLU 8	0.9	1.25	43.77	0.2028	0.7768	-0.0219
839	SLU 9	0.9	1.29	43.78	0.2004	0.7771	-0.0227
839	SLU 10	1	1.45	48.28	0.2069	0.8558	-0.0254
839	SLU 11	1.02	1.42	49.16	0.2181	0.8713	-0.0249
839	SLU 12	1.02	1.47	49.18	0.2158	0.8716	-0.0257
839	SLU 13	1.01	1.47	48.86	0.2113	0.8661	-0.0258
839	SLU 14	1.04	1.44	49.75	0.2225	0.8816	-0.0253
839	SLU 15	1.04	1.49	49.77	0.2202	0.8819	-0.026
839	SLU 16	1.03	1.41	49.42	0.2196	0.8759	-0.0248
839	SLU 17	1.03	1.46	49.44	0.2173	0.8762	-0.0256
839	SLU 18	1.05	1.44	50.67	0.218	0.8978	-0.0254
839	SLU 19	1.05	1.49	50.69	0.2156	0.8981	-0.0262
839	SLU 20	1.07	1.46	51.26	0.2224	0.9082	-0.0258
839	SLU 21	1.07	1.51	51.28	0.2201	0.9084	-0.0265
839	SLU 22	0.99	1.42	48.01	0.2269	0.851	-0.0248
839	SLU 23	0.99	1.5	48.04	0.223	0.8515	-0.0261
839	SLU 24	1.02	1.47	48.92	0.2343	0.867	-0.0256
839	SLU 25	1.02	1.52	48.94	0.2319	0.8673	-0.0263
839	SLU 26	1.01	1.52	48.63	0.2274	0.8618	-0.0264
839	SLU 27	1.03	1.49	49.51	0.2387	0.8773	-0.0259
839	SLU 28	1.03	1.54	49.53	0.2363	0.8776	-0.0267
839	SLU 29	1.03	1.46	49.18	0.2357	0.8716	-0.0255
839	SLU 30	1.03	1.51	49.2	0.2334	0.8719	-0.0262
839	SLU 31	1.13	1.67	53.7	0.2398	0.9507	-0.029
839	SLU 32	1.15	1.63	54.58	0.2511	0.9662	-0.0285
839	SLU 33	1.15	1.68	54.6	0.2487	0.9665	-0.0292
839	SLU 34	1.14	1.69	54.28	0.2442	0.961	-0.0293
839	SLU 35	1.17	1.66	55.17	0.2555	0.9765	-0.0288
839	SLU 36	1.17	1.7	55.19	0.2532	0.9768	-0.0296
839	SLU 37	1.16	1.63	54.84	0.2525	0.9708	-0.0284
839	SLU 38	1.16	1.68	54.86	0.2502	0.9711	-0.0292
839	SLU 39	1.18	1.66	56.09	0.2509	0.9927	-0.029
839	SLU 40	1.18	1.71	56.11	0.2486	0.993	-0.0297
839	SLU 41	1.2	1.68	56.68	0.2553	1.003	-0.0293
839	SLU 42	1.2	1.73	56.7	0.253	1.0033	-0.0301
839	SLU 43	1.08	1.49	53.51	0.2408	0.9505	-0.0264
839	SLU 44	1.08	1.57	53.54	0.237	0.951	-0.0277
839	SLU 45	1.1	1.54	54.42	0.2482	0.9665	-0.0272
839	SLU 46	1.1	1.59	54.44	0.2459	0.9668	-0.0279
839	SLU 47	1.09	1.59	54.13	0.2414	0.9613	-0.028
839	SLU 48	1.12	1.56	55.01	0.2526	0.9768	-0.0275
839	SLU 49	1.12	1.61	55.03	0.2503	0.9771	-0.0283
839	SLU 50	1.11	1.53	54.68	0.2497	0.9711	-0.0271
839	SLU 51	1.11	1.58	54.7	0.2473	0.9714	-0.0278
839	SLU 52	1.21	1.74	59.2	0.2538	1.0501	-0.0306
839	SLU 53	1.23	1.71	60.08	0.265	1.0657	-0.0301
839	SLU 54	1.23	1.76	60.1	0.2627	1.066	-0.0308
839	SLU 55	1.23	1.76	59.78	0.2582	1.0604	-0.0309
839	SLU 56	1.25	1.73	60.67	0.2694	1.076	-0.0304
839	SLU 57	1.25	1.78	60.69	0.2671	1.0763	-0.0312
839	SLU 58	1.25	1.7	60.34	0.2665	1.0703	-0.03
839	SLU 59	1.24	1.75	60.36	0.2642	1.0706	-0.0308
839	SLU 60	1.27	1.73	61.59	0.2649	1.0922	-0.0306
839	SLU 61	1.27	1.78	61.61	0.2625	1.0925	-0.0313
839	SLU 62	1.29	1.75	62.18	0.2693	1.1025	-0.0309

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
839	SLU 63	1.29	1.8	62.2	0.2669	1.1028	-0.0317
839	SLU 64	1.21	1.71	58.93	0.2738	1.0453	-0.0299
839	SLU 65	1.21	1.79	58.96	0.2699	1.0458	-0.0312
839	SLU 66	1.23	1.76	59.84	0.2812	1.0613	-0.0307
839	SLU 67	1.23	1.8	59.86	0.2788	1.0616	-0.0315
839	SLU 68	1.22	1.81	59.54	0.2743	1.0561	-0.0316
839	SLU 69	1.25	1.78	60.43	0.2856	1.0717	-0.0311
839	SLU 70	1.25	1.83	60.45	0.2832	1.0719	-0.0318
839	SLU 71	1.24	1.75	60.1	0.2826	1.0659	-0.0306
839	SLU 72	1.24	1.8	60.12	0.2803	1.0662	-0.0314
839	SLU 73	1.34	1.95	64.61	0.2867	1.145	-0.0341
839	SLU 74	1.36	1.92	65.5	0.298	1.1605	-0.0336
839	SLU 75	1.36	1.97	65.52	0.2956	1.1608	-0.0344
839	SLU 76	1.36	1.98	65.2	0.2911	1.1553	-0.0345
839	SLU 77	1.38	1.94	66.09	0.3024	1.1708	-0.034
839	SLU 78	1.38	1.99	66.1	0.3	1.1711	-0.0347
839	SLU 79	1.37	1.92	65.76	0.2994	1.1651	-0.0336
839	SLU 80	1.37	1.96	65.78	0.2971	1.1654	-0.0343
839	SLU 81	1.4	1.94	67.01	0.2978	1.187	-0.0341
839	SLU 82	1.4	1.99	67.03	0.2955	1.1873	-0.0349
839	SLU 83	1.42	1.97	67.6	0.3022	1.1973	-0.0345
839	SLU 84	1.42	2.01	67.62	0.2999	1.1976	-0.0352
839	SLE RA 1	0.9	1.27	44.14	0.2034	0.7833	-0.0223
839	SLE RA 2	0.9	1.32	44.16	0.2008	0.7836	-0.0231
839	SLE RA 3	0.92	1.3	44.75	0.2083	0.7939	-0.0228
839	SLE RA 4	0.92	1.33	44.76	0.2067	0.7941	-0.0233
839	SLE RA 5	0.91	1.33	44.55	0.2037	0.7905	-0.0233
839	SLE RA 6	0.93	1.31	45.14	0.2112	0.8008	-0.023
839	SLE RA 7	0.93	1.34	45.15	0.2097	0.801	-0.0235
839	SLE RA 8	0.92	1.29	44.92	0.2092	0.797	-0.0227
839	SLE RA 9	0.92	1.33	44.93	0.2077	0.7972	-0.0232
839	SLE RA 10	0.99	1.43	47.93	0.212	0.8497	-0.025
839	SLE RA 11	1	1.41	48.52	0.2195	0.8601	-0.0247
839	SLE RA 12	1	1.44	48.53	0.2179	0.8602	-0.0252
839	SLE RA 13	1	1.44	48.32	0.2149	0.8566	-0.0253
839	SLE RA 14	1.02	1.42	48.91	0.2224	0.8669	-0.0249
839	SLE RA 15	1.02	1.46	48.92	0.2209	0.8671	-0.0254
839	SLE RA 16	1.01	1.4	48.69	0.2205	0.8631	-0.0247
839	SLE RA 17	1.01	1.44	48.71	0.2189	0.8633	-0.0252
839	SLE RA 18	1.03	1.42	49.53	0.2194	0.8777	-0.025
839	SLE RA 19	1.03	1.46	49.54	0.2178	0.8779	-0.0255
839	SLE RA 20	1.04	1.44	49.92	0.2223	0.8846	-0.0253
839	SLE RA 21	1.04	1.47	49.93	0.2208	0.8848	-0.0258
839	SLE FR 1	0.9	1.27	44.14	0.2034	0.7833	-0.0223
839	SLE FR 2	0.9	1.28	44.14	0.2028	0.7833	-0.0224
839	SLE FR 3	0.9	1.27	44.29	0.2045	0.786	-0.0223
839	SLE FR 4	0.94	1.32	45.76	0.2077	0.8117	-0.0233
839	SLE FR 5	0.94	1.32	45.91	0.2093	0.8143	-0.0232
839	SLE FR 6	0.96	1.34	46.83	0.2114	0.8305	-0.0236
839	SLE QP 1	0.9	1.27	44.14	0.2034	0.7833	-0.0223
839	SLE QP 2	0.94	1.31	45.75	0.2082	0.8116	-0.0231
839	SLD 1	6.25	1.9	43.03	0.1184	0.7843	-0.053
839	SLD 2	6	2.05	43.1	0.1113	0.7853	-0.0474
839	SLD 3	6.18	0.25	42.6	0.1889	0.7774	-0.0271
839	SLD 4	5.94	0.4	42.66	0.1818	0.7783	-0.0214
839	SLD 5	2.68	3.97	45.58	0.0756	0.8139	-0.0724
839	SLD 6	2.52	4.06	45.62	0.071	0.8145	-0.0687
839	SLD 7	2.45	-1.53	44.14	0.3105	0.7906	0.014
839	SLD 8	2.29	-1.44	44.19	0.3059	0.7912	0.0177
839	SLD 9	-0.41	4.06	47.32	0.1104	0.832	-0.0639
839	SLD 10	-0.58	4.16	47.37	0.1058	0.8326	-0.0602
839	SLD 11	-0.64	-1.44	45.89	0.3454	0.8087	0.0225
839	SLD 12	-0.8	-1.34	45.93	0.3407	0.8093	0.0262
839	SLD 13	-4.06	2.23	48.84	0.2345	0.8449	-0.0247
839	SLD 14	-4.31	2.37	48.91	0.2275	0.8458	-0.0191
839	SLD 15	-4.13	0.58	48.41	0.305	0.8379	0.0012
839	SLD 16	-4.38	0.72	48.48	0.298	0.8388	0.0068
839	SLV 1	13.36	2.64	39.36	0.0003	0.7474	-0.0922
839	SLV 2	12.79	2.98	39.52	-0.0162	0.7496	-0.0791
839	SLV 3	13.2	-1.12	38.38	0.1602	0.7316	-0.0331
839	SLV 4	12.63	-0.78	38.54	0.1437	0.7337	-0.02
839	SLV 5	5.01	7.35	45.29	-0.0939	0.816	-0.1357
839	SLV 6	4.64	7.57	45.39	-0.1045	0.8174	-0.1272
839	SLV 7	4.47	-5.17	42.03	0.4391	0.7632	0.0612
839	SLV 8	4.1	-4.95	42.14	0.4285	0.7646	0.0697
839	SLV 9	-2.23	7.58	49.37	-0.0122	0.8586	-0.1158
839	SLV 10	-2.6	7.8	49.47	-0.0228	0.86	-0.1074
839	SLV 11	-2.76	-4.94	46.12	0.5209	0.8058	0.081
839	SLV 12	-3.13	-4.72	46.22	0.5102	0.8072	0.0895
839	SLV 13	-10.75	3.41	52.97	0.2726	0.8895	-0.0261
839	SLV 14	-11.33	3.74	53.13	0.2562	0.8916	-0.013
839	SLV 15	-10.91	-0.35	51.99	0.4325	0.8736	0.0329
839	SLV 16	-11.49	-0.01	52.15	0.4161	0.8758	0.046
839	CRTFP Ux+	0	0	0	0	0	0
839	CRTFP Ux-	0	0	0	0	0	0
839	CRTFP Uy+	0	0	0	0	0	0
839	CRTFP Uy-	0	0	0	0	0	0
841	SLU 1	1.67	2.38	86.09	0.26	2.9142	-0.0982
841	SLU 2	1.67	2.54	86.15	0.2569	2.9153	-0.1043
841	SLU 3	1.71	2.47	87.95	0.2683	2.9748	-0.102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
841	SLU 4	1.71	2.57	87.98	0.2664	2.9754	-0.1057
841	SLU 5	1.7	2.58	87.35	0.2619	2.9546	-0.106
841	SLU 6	1.75	2.52	89.14	0.2733	3.0141	-0.1036
841	SLU 7	1.75	2.61	89.18	0.2714	3.0147	-0.1073
841	SLU 8	1.73	2.46	88.48	0.2701	2.9929	-0.1015
841	SLU 9	1.73	2.56	88.52	0.2682	2.9935	-0.1052
841	SLU 10	1.92	2.87	97.66	0.284	3.2891	-0.1181
841	SLU 11	1.97	2.8	99.46	0.2954	3.3486	-0.1157
841	SLU 12	1.97	2.9	99.49	0.2935	3.3492	-0.1194
841	SLU 13	1.96	2.91	98.85	0.289	3.3284	-0.1197
841	SLU 14	2	2.85	100.65	0.3004	3.3879	-0.1174
841	SLU 15	2	2.94	100.69	0.2985	3.3885	-0.1211
841	SLU 16	1.99	2.79	99.99	0.2972	3.3667	-0.1153
841	SLU 17	1.99	2.89	100.02	0.2953	3.3673	-0.1189
841	SLU 18	2.04	2.85	102.53	0.2987	3.4482	-0.1178
841	SLU 19	2.04	2.94	102.57	0.2969	3.4489	-0.1215
841	SLU 20	2.07	2.89	103.72	0.3038	3.4876	-0.1195
841	SLU 21	2.07	2.99	103.76	0.3019	3.4882	-0.1232
841	SLU 22	1.92	2.8	97.12	0.3	3.2678	-0.1152
841	SLU 23	1.92	2.96	97.19	0.2969	3.2688	-0.1213
841	SLU 24	1.96	2.9	98.98	0.3083	3.3283	-0.119
841	SLU 25	1.96	3	99.02	0.3064	3.3289	-0.1226
841	SLU 26	1.95	3	98.38	0.3019	3.3081	-0.123
841	SLU 27	2	2.94	100.18	0.3133	3.3676	-0.1206
841	SLU 28	2	3.04	100.22	0.3114	3.3682	-0.1243
841	SLU 29	1.98	2.88	99.51	0.3101	3.3464	-0.1185
841	SLU 30	1.98	2.98	99.55	0.3082	3.347	-0.1222
841	SLU 31	2.18	3.29	108.69	0.324	3.6426	-0.1351
841	SLU 32	2.22	3.23	110.49	0.3354	3.7021	-0.1327
841	SLU 33	2.22	3.33	110.53	0.3335	3.7027	-0.1364
841	SLU 34	2.21	3.33	109.89	0.329	3.6819	-0.1367
841	SLU 35	2.26	3.27	111.69	0.3404	3.7414	-0.1344
841	SLU 36	2.26	3.37	111.72	0.3385	3.742	-0.138
841	SLU 37	2.24	3.21	111.02	0.3372	3.7202	-0.1322
841	SLU 38	2.24	3.31	111.06	0.3353	3.7208	-0.1359
841	SLU 39	2.29	3.27	113.56	0.3387	3.8018	-0.1348
841	SLU 40	2.29	3.37	113.6	0.3369	3.8024	-0.1385
841	SLU 41	2.32	3.31	114.76	0.3438	3.8411	-0.1365
841	SLU 42	2.32	3.41	114.8	0.3419	3.8417	-0.1402
841	SLU 43	2.08	2.94	108.13	0.3243	3.6673	-0.1218
841	SLU 44	2.08	3.11	108.19	0.3212	3.6684	-0.128
841	SLU 45	2.13	3.04	109.99	0.3325	3.7278	-0.1256
841	SLU 46	2.13	3.14	110.03	0.3307	3.7285	-0.1293
841	SLU 47	2.11	3.15	109.39	0.3262	3.7077	-0.1296
841	SLU 48	2.16	3.08	111.19	0.3376	3.7672	-0.1273
841	SLU 49	2.16	3.18	111.22	0.3357	3.7678	-0.1309
841	SLU 50	2.15	3.03	110.52	0.3344	3.746	-0.1251
841	SLU 51	2.15	3.12	110.56	0.3325	3.7466	-0.1288
841	SLU 52	2.34	3.44	119.7	0.3483	4.0422	-0.1417
841	SLU 53	2.39	3.37	121.5	0.3597	4.1016	-0.1394
841	SLU 54	2.39	3.47	121.54	0.3578	4.1023	-0.143
841	SLU 55	2.37	3.48	120.9	0.3533	4.0815	-0.1434
841	SLU 56	2.42	3.41	122.69	0.3647	4.141	-0.141
841	SLU 57	2.42	3.51	122.73	0.3628	4.1416	-0.1447
841	SLU 58	2.41	3.36	122.03	0.3615	4.1198	-0.1389
841	SLU 59	2.41	3.45	122.07	0.3596	4.1204	-0.1426
841	SLU 60	2.45	3.41	124.57	0.363	4.2013	-0.1415
841	SLU 61	2.45	3.51	124.61	0.3611	4.2019	-0.1452
841	SLU 62	2.48	3.46	125.77	0.3681	4.2406	-0.1431
841	SLU 63	2.48	3.55	125.8	0.3662	4.2413	-0.1468
841	SLU 64	2.33	3.37	119.17	0.3643	4.0208	-0.1388
841	SLU 65	2.33	3.53	119.23	0.3612	4.0219	-0.145
841	SLU 66	2.38	3.47	121.03	0.3725	4.0813	-0.1426
841	SLU 67	2.38	3.56	121.06	0.3707	4.082	-0.1463
841	SLU 68	2.36	3.57	120.42	0.3662	4.0612	-0.1466
841	SLU 69	2.41	3.51	122.22	0.3776	4.1207	-0.1442
841	SLU 70	2.41	3.61	122.26	0.3757	4.1213	-0.1479
841	SLU 71	2.4	3.45	121.56	0.3744	4.0995	-0.1421
841	SLU 72	2.4	3.55	121.59	0.3725	4.1001	-0.1458
841	SLU 73	2.59	3.86	130.74	0.3883	4.3957	-0.1587
841	SLU 74	2.64	3.8	132.53	0.3997	4.4551	-0.1563
841	SLU 75	2.64	3.89	132.57	0.3978	4.4558	-0.16
841	SLU 76	2.62	3.9	131.93	0.3933	4.435	-0.1604
841	SLU 77	2.67	3.84	133.73	0.4047	4.4945	-0.158
841	SLU 78	2.67	3.94	133.77	0.4028	4.4951	-0.1617
841	SLU 79	2.66	3.78	133.06	0.4015	4.4733	-0.1559
841	SLU 80	2.66	3.88	133.1	0.3996	4.4739	-0.1596
841	SLU 81	2.7	3.84	135.61	0.403	4.5548	-0.1585
841	SLU 82	2.7	3.94	135.64	0.4011	4.5554	-0.1622
841	SLU 83	2.73	3.88	136.8	0.4081	4.5941	-0.1601
841	SLU 84	2.73	3.98	136.84	0.4062	4.5948	-0.1638
841	SLE RA 1	1.74	2.5	89.24	0.2714	3.0153	-0.1031
841	SLE RA 2	1.74	2.61	89.28	0.2693	3.0159	-0.1071
841	SLE RA 3	1.77	2.56	90.48	0.2769	3.0556	-0.1056
841	SLE RA 4	1.77	2.63	90.51	0.2757	3.056	-0.108
841	SLE RA 5	1.76	2.63	90.08	0.2727	3.0422	-0.1082
841	SLE RA 6	1.79	2.59	91.28	0.2803	3.0818	-0.1067
841	SLE RA 7	1.79	2.66	91.3	0.279	3.0822	-0.1091
841	SLE RA 8	1.78	2.55	90.83	0.2782	3.0677	-0.1053
841	SLE RA 9	1.78	2.62	90.86	0.2769	3.0681	-0.1077

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
841	SLE RA 10	1.91	2.83	96.95	0.2874	3.2651	-0.1163
841	SLE RA 11	1.94	2.78	98.15	0.295	3.3048	-0.1147
841	SLE RA 12	1.94	2.85	98.18	0.2938	3.3052	-0.1172
841	SLE RA 13	1.93	2.85	97.75	0.2908	3.2914	-0.1174
841	SLE RA 14	1.96	2.81	98.95	0.2984	3.331	-0.1158
841	SLE RA 15	1.96	2.88	98.97	0.2971	3.3314	-0.1183
841	SLE RA 16	1.95	2.77	98.51	0.2962	3.3169	-0.1144
841	SLE RA 17	1.95	2.84	98.53	0.295	3.3173	-0.1169
841	SLE RA 18	1.98	2.81	100.2	0.2972	3.3712	-0.1162
841	SLE RA 19	1.98	2.88	100.23	0.296	3.3717	-0.1186
841	SLE RA 20	2.01	2.84	101	0.3006	3.3975	-0.1173
841	SLE RA 21	2.01	2.9	101.02	0.2994	3.3979	-0.1197
841	SLE FR 1	1.74	2.5	89.24	0.2714	3.0153	-0.1031
841	SLE FR 2	1.74	2.52	89.25	0.271	3.0154	-0.1039
841	SLE FR 3	1.75	2.51	89.56	0.2728	3.0257	-0.1035
841	SLE FR 4	1.81	2.61	92.54	0.2788	3.1222	-0.1078
841	SLE FR 5	1.82	2.6	92.85	0.2805	3.1325	-0.1074
841	SLE FR 6	1.86	2.65	94.72	0.2843	3.1932	-0.1096
841	SLE QP 1	1.74	2.5	89.24	0.2714	3.0153	-0.1031
841	SLE QP 2	1.81	2.59	92.53	0.2792	3.122	-0.107
841	SLD 1	12.28	3.56	85.67	0.1956	3.2398	-0.2172
841	SLD 2	11.79	3.94	85.82	0.1897	3.2427	-0.2104
841	SLD 3	12.14	0.27	84.74	0.2526	3.2523	-0.0925
841	SLD 4	11.66	0.65	84.89	0.2467	3.2552	-0.0857
841	SLD 5	5.24	7.81	91.85	0.1687	3.1379	-0.3303
841	SLD 6	4.92	8.06	91.95	0.1648	3.1398	-0.3259
841	SLD 7	4.79	-3.17	88.76	0.3587	3.1796	0.0852
841	SLD 8	4.47	-2.92	88.86	0.3549	3.1815	0.0896
841	SLD 9	-0.85	8.1	96.2	0.2035	3.0626	-0.3036
841	SLD 10	-1.17	8.35	96.3	0.1996	3.0645	-0.2992
841	SLD 11	-1.3	-2.88	93.11	0.3935	3.1043	0.1119
841	SLD 12	-1.62	-2.63	93.2	0.3897	3.1062	0.1163
841	SLD 13	-8.03	4.53	100.16	0.3116	2.9889	-0.1282
841	SLD 14	-8.52	4.91	100.31	0.3057	2.9918	-0.1214
841	SLD 15	-8.17	1.24	99.24	0.3686	3.0014	-0.0036
841	SLD 16	-8.65	1.62	99.39	0.3627	3.0043	0.0032
841	SLV 1	26.29	4.76	76.45	0.0854	3.4001	-0.3608
841	SLV 2	25.15	5.64	76.8	0.0718	3.4068	-0.345
841	SLV 3	25.97	-2.75	74.35	0.2148	3.4288	-0.0769
841	SLV 4	24.84	-1.86	74.7	0.2011	3.4355	-0.0612
841	SLV 5	9.83	14.47	90.83	0.0272	3.1609	-0.6164
841	SLV 6	9.1	15.04	91.06	0.0184	3.1652	-0.6063
841	SLV 7	8.78	-10.54	83.83	0.4584	3.2564	0.3299
841	SLV 8	8.05	-9.97	84.05	0.4496	3.2607	0.3401
841	SLV 9	-4.42	15.15	101.01	0.1088	2.9834	-0.554
841	SLV 10	-5.15	15.72	101.23	0.1	2.9877	-0.5439
841	SLV 11	-5.47	-9.86	94	0.5399	3.0789	0.3923
841	SLV 12	-6.21	-9.29	94.23	0.5311	3.0832	0.4025
841	SLV 13	-21.21	7.04	110.36	0.3572	2.8086	-0.1528
841	SLV 14	-22.35	7.93	110.71	0.3436	2.8153	-0.137
841	SLV 15	-21.53	-0.46	108.26	0.4866	2.8373	0.1311
841	SLV 16	-22.67	0.43	108.61	0.4729	2.844	0.1469
841	CRTFP Ux+	0	0	0	0	0	0
841	CRTFP Ux-	0	0	0	0	0	0
841	CRTFP Uy+	0	0	0	0	0	0
841	CRTFP Uy-	0	0	0	0	0	0
843	SLU 1	-0.64	-0.09	30.84	-0.014	-2.3793	-0.0222
843	SLU 2	-0.64	-0.01	30.84	-0.0141	-2.3798	-0.0019
843	SLU 3	-0.66	-0.09	31.55	-0.0143	-2.4225	-0.0223
843	SLU 4	-0.66	-0.04	31.55	-0.0143	-2.4227	-0.0102
843	SLU 5	-0.65	-0.01	31.29	-0.0143	-2.4065	-0.0026
843	SLU 6	-0.67	-0.09	31.99	-0.0145	-2.4492	-0.023
843	SLU 7	-0.67	-0.04	32	-0.0146	-2.4494	-0.0109
843	SLU 8	-0.66	-0.09	31.73	-0.0144	-2.4328	-0.0235
843	SLU 9	-0.66	-0.04	31.73	-0.0145	-2.433	-0.0114
843	SLU 10	-0.7	0	34.67	-0.0163	-2.6421	0.0005
843	SLU 11	-0.71	-0.08	35.37	-0.0165	-2.6848	-0.0199
843	SLU 12	-0.71	-0.03	35.37	-0.0166	-2.685	-0.0077
843	SLU 13	-0.71	0	35.11	-0.0165	-2.6688	-0.0001
843	SLU 14	-0.72	-0.08	35.82	-0.0168	-2.7115	-0.0206
843	SLU 15	-0.72	-0.03	35.82	-0.0168	-2.7118	-0.0084
843	SLU 16	-0.72	-0.08	35.55	-0.0167	-2.6951	-0.0211
843	SLU 17	-0.72	-0.03	35.55	-0.0167	-2.6953	-0.0089
843	SLU 18	-0.72	-0.07	36.3	-0.0172	-2.7541	-0.0186
843	SLU 19	-0.72	-0.02	36.3	-0.0172	-2.7543	-0.0065
843	SLU 20	-0.73	-0.08	36.74	-0.0174	-2.7808	-0.0193
843	SLU 21	-0.73	-0.03	36.75	-0.0175	-2.781	-0.0072
843	SLU 22	-0.71	-0.07	34.67	-0.016	-2.6372	-0.0191
843	SLU 23	-0.71	0.01	34.68	-0.0161	-2.6376	0.0012
843	SLU 24	-0.72	-0.08	35.38	-0.0163	-2.6803	-0.0193
843	SLU 25	-0.72	-0.03	35.38	-0.0164	-2.6806	-0.0071
843	SLU 26	-0.72	0	35.12	-0.0163	-2.6643	0.0005
843	SLU 27	-0.73	-0.08	35.83	-0.0165	-2.707	-0.0199
843	SLU 28	-0.73	-0.03	35.83	-0.0166	-2.7073	-0.0078
843	SLU 29	-0.73	-0.08	35.56	-0.0164	-2.6906	-0.0205
843	SLU 30	-0.73	-0.03	35.57	-0.0165	-2.6909	-0.0083
843	SLU 31	-0.77	0.02	38.5	-0.0183	-2.8999	0.0036
843	SLU 32	-0.78	-0.07	39.21	-0.0186	-2.9426	-0.0168
843	SLU 33	-0.78	-0.02	39.21	-0.0186	-2.9429	-0.0047
843	SLU 34	-0.78	0.01	38.95	-0.0186	-2.9266	0.0029

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
843	SLU 35	-0.79	-0.07	39.65	-0.0188	-2.9694	-0.0175
843	SLU 36	-0.79	-0.02	39.65	-0.0188	-2.9696	-0.0053
843	SLU 37	-0.79	-0.07	39.39	-0.0187	-2.9529	-0.018
843	SLU 38	-0.79	-0.02	39.39	-0.0187	-2.9532	-0.0059
843	SLU 39	-0.79	-0.06	40.13	-0.0192	-3.0119	-0.0156
843	SLU 40	-0.79	-0.01	40.14	-0.0193	-3.0122	-0.0034
843	SLU 41	-0.8	-0.06	40.58	-0.0194	-3.0387	-0.0163
843	SLU 42	-0.8	-0.02	40.58	-0.0195	-3.0389	-0.0041
843	SLU 43	-0.81	-0.12	38.77	-0.0175	-3.0047	-0.0299
843	SLU 44	-0.81	-0.04	38.78	-0.0176	-3.0052	-0.0096
843	SLU 45	-0.83	-0.12	39.48	-0.0178	-3.0479	-0.03
843	SLU 46	-0.83	-0.07	39.49	-0.0178	-3.0481	-0.0179
843	SLU 47	-0.82	-0.04	39.22	-0.0178	-3.0319	-0.0103
843	SLU 48	-0.84	-0.12	39.93	-0.018	-3.0746	-0.0307
843	SLU 49	-0.84	-0.07	39.93	-0.0181	-3.0748	-0.0186
843	SLU 50	-0.83	-0.12	39.66	-0.0179	-3.0582	-0.0312
843	SLU 51	-0.83	-0.07	39.67	-0.018	-3.0584	-0.0191
843	SLU 52	-0.87	-0.03	42.6	-0.0198	-3.2675	-0.0071
843	SLU 53	-0.88	-0.11	43.31	-0.02	-3.3102	-0.0276
843	SLU 54	-0.88	-0.06	43.31	-0.0201	-3.3104	-0.0154
843	SLU 55	-0.88	-0.03	43.05	-0.02	-3.2942	-0.0078
843	SLU 56	-0.89	-0.11	43.75	-0.0203	-3.3369	-0.0283
843	SLU 57	-0.89	-0.06	43.76	-0.0203	-3.3371	-0.0161
843	SLU 58	-0.89	-0.11	43.49	-0.0202	-3.3205	-0.0288
843	SLU 59	-0.89	-0.06	43.49	-0.0202	-3.3207	-0.0166
843	SLU 60	-0.89	-0.1	44.24	-0.0207	-3.3795	-0.0263
843	SLU 61	-0.89	-0.06	44.24	-0.0207	-3.3797	-0.0142
843	SLU 62	-0.9	-0.11	44.68	-0.0209	-3.4062	-0.027
843	SLU 63	-0.9	-0.06	44.68	-0.021	-3.4064	-0.0149
843	SLU 64	-0.88	-0.11	42.61	-0.0195	-3.2626	-0.0268
843	SLU 65	-0.88	-0.02	42.61	-0.0196	-3.263	-0.0065
843	SLU 66	-0.89	-0.11	43.32	-0.0198	-3.3057	-0.027
843	SLU 67	-0.89	-0.06	43.32	-0.0199	-3.306	-0.0148
843	SLU 68	-0.89	-0.03	43.06	-0.0198	-3.2897	-0.0072
843	SLU 69	-0.9	-0.11	43.76	-0.02	-3.3324	-0.0276
843	SLU 70	-0.9	-0.06	43.77	-0.0201	-3.3327	-0.0155
843	SLU 71	-0.9	-0.11	43.5	-0.0199	-3.316	-0.0282
843	SLU 72	-0.9	-0.06	43.5	-0.02	-3.3163	-0.016
843	SLU 73	-0.94	-0.01	46.44	-0.0218	-3.5253	-0.0041
843	SLU 74	-0.95	-0.1	47.14	-0.0221	-3.568	-0.0245
843	SLU 75	-0.95	-0.05	47.14	-0.0221	-3.5683	-0.0124
843	SLU 76	-0.95	-0.02	46.88	-0.0221	-3.552	-0.0048
843	SLU 77	-0.96	-0.1	47.59	-0.0223	-3.5948	-0.0252
843	SLU 78	-0.96	-0.05	47.59	-0.0223	-3.595	-0.013
843	SLU 79	-0.96	-0.1	47.32	-0.0222	-3.5783	-0.0257
843	SLU 80	-0.96	-0.05	47.33	-0.0222	-3.5786	-0.0136
843	SLU 81	-0.96	-0.09	48.07	-0.0227	-3.6373	-0.0233
843	SLU 82	-0.96	-0.04	48.07	-0.0228	-3.6376	-0.0111
843	SLU 83	-0.97	-0.09	48.52	-0.0229	-3.664	-0.024
843	SLU 84	-0.97	-0.05	48.52	-0.023	-3.6643	-0.0118
843	SLE RA 1	-0.66	-0.08	31.93	-0.0145	-2.453	-0.0213
843	SLE RA 2	-0.66	-0.03	31.94	-0.0146	-2.4533	-0.0078
843	SLE RA 3	-0.67	-0.08	32.41	-0.0147	-2.4818	-0.0214
843	SLE RA 4	-0.67	-0.05	32.41	-0.0148	-2.4819	-0.0133
843	SLE RA 5	-0.67	-0.03	32.23	-0.0147	-2.4711	-0.0082
843	SLE RA 6	-0.68	-0.09	32.7	-0.0149	-2.4996	-0.0219
843	SLE RA 7	-0.68	-0.05	32.71	-0.0149	-2.4997	-0.0138
843	SLE RA 8	-0.67	-0.09	32.53	-0.0148	-2.4886	-0.0222
843	SLE RA 9	-0.67	-0.05	32.53	-0.0149	-2.4888	-0.0141
843	SLE RA 10	-0.7	-0.02	34.48	-0.0161	-2.6282	-0.0061
843	SLE RA 11	-0.71	-0.08	34.96	-0.0163	-2.6566	-0.0198
843	SLE RA 12	-0.71	-0.05	34.96	-0.0163	-2.6568	-0.0117
843	SLE RA 13	-0.71	-0.03	34.78	-0.0163	-2.646	-0.0066
843	SLE RA 14	-0.72	-0.08	35.25	-0.0164	-2.6745	-0.0202
843	SLE RA 15	-0.72	-0.05	35.25	-0.0164	-2.6746	-0.0121
843	SLE RA 16	-0.71	-0.08	35.08	-0.0163	-2.6635	-0.0206
843	SLE RA 17	-0.71	-0.05	35.08	-0.0164	-2.6637	-0.0125
843	SLE RA 18	-0.72	-0.07	35.57	-0.0167	-2.7028	-0.0189
843	SLE RA 19	-0.72	-0.04	35.58	-0.0167	-2.703	-0.0108
843	SLE RA 20	-0.72	-0.08	35.87	-0.0168	-2.7207	-0.0194
843	SLE RA 21	-0.72	-0.04	35.87	-0.0169	-2.7208	-0.0113
843	SLE FR 1	-0.66	-0.08	31.93	-0.0145	-2.453	-0.0213
843	SLE FR 2	-0.66	-0.07	31.93	-0.0145	-2.4531	-0.0186
843	SLE FR 3	-0.66	-0.08	32.05	-0.0146	-2.4601	-0.0215
843	SLE FR 4	-0.68	-0.07	33.03	-0.0152	-2.528	-0.0179
843	SLE FR 5	-0.68	-0.08	33.14	-0.0152	-2.5351	-0.0208
843	SLE FR 6	-0.69	-0.08	33.75	-0.0156	-2.5779	-0.0201
843	SLE QP 1	-0.66	-0.08	31.93	-0.0145	-2.453	-0.0213
843	SLE QP 2	-0.68	-0.08	33.02	-0.0152	-2.528	-0.0206
843	SLD 1	2.08	1.44	41.95	-0.021	-3.1018	0.358
843	SLD 2	1.91	0.77	42.1	-0.0198	-3.1194	0.193
843	SLD 3	2.03	0.07	42.13	-0.0188	-3.141	0.0151
843	SLD 4	1.86	-0.6	42.28	-0.0176	-3.1586	-0.1499
843	SLD 5	0.26	2.57	35.41	-0.0205	-2.6376	0.6425
843	SLD 6	0.15	2.14	35.51	-0.0197	-2.6491	0.5343
843	SLD 7	0.08	-2	36	-0.0131	-2.7682	-0.5007
843	SLD 8	-0.03	-2.43	36.1	-0.0123	-2.7797	-0.6088
843	SLD 9	-1.33	2.27	29.95	-0.018	-2.2762	0.5677
843	SLD 10	-1.44	1.84	30.05	-0.0172	-2.2878	0.4595
843	SLD 11	-1.51	-2.3	30.54	-0.0106	-2.4068	-0.5755

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
843	SLD 12	-1.62	-2.73	30.64	-0.0098	-2.4184	-0.6836
843	SLD 13	-3.21	0.44	23.77	-0.0128	-1.8973	0.1087
843	SLD 14	-3.38	-0.23	23.92	-0.0115	-1.915	-0.0563
843	SLD 15	-3.27	-0.93	23.94	-0.0106	-1.9365	-0.2342
843	SLD 16	-3.44	-1.6	24.1	-0.0093	-1.9541	-0.3992
843	SLV 1	5.77	3.42	53.92	-0.0288	-3.8723	0.8536
843	SLV 2	5.38	1.87	54.28	-0.0259	-3.9134	0.4693
843	SLV 3	5.65	0.3	54.33	-0.0238	-3.9621	0.073
843	SLV 4	5.26	-1.25	54.68	-0.0209	-4.0031	-0.3113
843	SLV 5	1.51	5.97	38.62	-0.0274	-2.7881	1.4918
843	SLV 6	1.26	4.97	38.85	-0.0255	-2.8146	1.2441
843	SLV 7	1.1	-4.43	39.97	-0.0106	-3.0872	-1.1102
843	SLV 8	0.85	-5.43	40.2	-0.0088	-3.1137	-1.3579
843	SLV 9	-2.2	5.27	25.85	-0.0216	-1.9423	1.3167
843	SLV 10	-2.45	4.27	26.08	-0.0197	-1.9687	1.0691
843	SLV 11	-2.62	-5.13	27.2	-0.0048	-2.2414	-1.2853
843	SLV 12	-2.87	-6.13	27.43	-0.003	-2.2678	-1.5329
843	SLV 13	-6.61	1.08	11.37	-0.0095	-1.0528	0.2701
843	SLV 14	-7	-0.46	11.72	-0.0066	-1.0939	-0.1142
843	SLV 15	-6.74	-2.04	11.77	-0.0044	-1.1426	-0.5105
843	SLV 16	-7.13	-3.58	12.13	-0.0015	-1.1836	-0.8948
843	CRTFP Ux+	0	0	0	0	0	0
843	CRTFP Ux-	0	0	0	0	0	0
843	CRTFP Uy+	0	0	0	0	0	0
843	CRTFP Uy-	0	0	0	0	0	0
846	SLU 1	0.6	0.37	35.2	-0.0544	5.6621	-0.1311
846	SLU 2	0.59	0.47	35.2	-0.0546	5.6652	-0.1643
846	SLU 3	0.62	0.39	36	-0.0558	5.7741	-0.1355
846	SLU 4	0.61	0.44	36	-0.0559	5.7759	-0.1555
846	SLU 5	0.6	0.47	35.69	-0.0554	5.7346	-0.1649
846	SLU 6	0.63	0.39	36.49	-0.0566	5.8435	-0.1361
846	SLU 7	0.62	0.44	36.49	-0.0567	5.8454	-0.156
846	SLU 8	0.62	0.38	36.19	-0.0561	5.801	-0.1321
846	SLU 9	0.62	0.43	36.19	-0.0562	5.8028	-0.1521
846	SLU 10	0.64	0.55	39.58	-0.0624	6.3059	-0.1939
846	SLU 11	0.66	0.47	40.38	-0.0636	6.4148	-0.1651
846	SLU 12	0.66	0.53	40.38	-0.0637	6.4167	-0.1851
846	SLU 13	0.65	0.55	40.07	-0.0632	6.3753	-0.1945
846	SLU 14	0.68	0.47	40.87	-0.0644	6.4843	-0.1657
846	SLU 15	0.67	0.53	40.87	-0.0645	6.4861	-0.1856
846	SLU 16	0.67	0.46	40.57	-0.0639	6.4417	-0.1617
846	SLU 17	0.66	0.52	40.57	-0.064	6.4435	-0.1817
846	SLU 18	0.67	0.49	41.46	-0.0656	6.5774	-0.1734
846	SLU 19	0.66	0.55	41.46	-0.0656	6.5793	-0.1933
846	SLU 20	0.68	0.5	41.95	-0.0664	6.6469	-0.1739
846	SLU 21	0.67	0.55	41.95	-0.0665	6.6487	-0.1938
846	SLU 22	0.66	0.45	39.54	-0.062	6.2922	-0.1585
846	SLU 23	0.65	0.55	39.54	-0.0621	6.2953	-0.1918
846	SLU 24	0.68	0.46	40.34	-0.0633	6.4042	-0.163
846	SLU 25	0.67	0.52	40.34	-0.0634	6.406	-0.1829
846	SLU 26	0.66	0.55	40.03	-0.063	6.3647	-0.1923
846	SLU 27	0.69	0.47	40.83	-0.0642	6.4736	-0.1635
846	SLU 28	0.68	0.52	40.83	-0.0643	6.4754	-0.1835
846	SLU 29	0.68	0.45	40.53	-0.0637	6.431	-0.1596
846	SLU 30	0.68	0.51	40.52	-0.0638	6.4329	-0.1795
846	SLU 31	0.7	0.63	43.92	-0.0699	6.936	-0.2214
846	SLU 32	0.73	0.55	44.72	-0.0711	7.0449	-0.1926
846	SLU 33	0.72	0.61	44.71	-0.0712	7.0468	-0.2125
846	SLU 34	0.71	0.63	44.41	-0.0708	7.0054	-0.2219
846	SLU 35	0.74	0.55	45.21	-0.072	7.1143	-0.1931
846	SLU 36	0.73	0.61	45.21	-0.0721	7.1162	-0.213
846	SLU 37	0.73	0.54	44.9	-0.0715	7.0718	-0.1892
846	SLU 38	0.73	0.6	44.9	-0.0716	7.0736	-0.2091
846	SLU 39	0.73	0.57	45.8	-0.0731	7.2075	-0.2008
846	SLU 40	0.72	0.63	45.79	-0.0732	7.2094	-0.2207
846	SLU 41	0.74	0.57	46.29	-0.074	7.2769	-0.2013
846	SLU 42	0.74	0.63	46.29	-0.0741	7.2788	-0.2213
846	SLU 43	0.76	0.46	44.28	-0.0681	7.1447	-0.161
846	SLU 44	0.75	0.55	44.27	-0.0683	7.1478	-0.1943
846	SLU 45	0.78	0.47	45.07	-0.0695	7.2567	-0.1654
846	SLU 46	0.77	0.53	45.07	-0.0696	7.2585	-0.1854
846	SLU 47	0.76	0.56	44.77	-0.0692	7.2172	-0.1948
846	SLU 48	0.79	0.47	45.56	-0.0704	7.3261	-0.166
846	SLU 49	0.78	0.53	45.56	-0.0705	7.328	-0.1859
846	SLU 50	0.78	0.46	45.26	-0.0699	7.2836	-0.1621
846	SLU 51	0.78	0.52	45.26	-0.07	7.2854	-0.182
846	SLU 52	0.8	0.64	48.65	-0.0761	7.7885	-0.2238
846	SLU 53	0.82	0.56	49.45	-0.0773	7.8974	-0.195
846	SLU 54	0.82	0.61	49.45	-0.0774	7.8993	-0.215
846	SLU 55	0.81	0.64	49.15	-0.077	7.8579	-0.2244
846	SLU 56	0.84	0.56	49.94	-0.0782	7.9669	-0.1956
846	SLU 57	0.83	0.61	49.94	-0.0783	7.9687	-0.2155
846	SLU 58	0.83	0.55	49.64	-0.0777	7.9243	-0.1917
846	SLU 59	0.82	0.6	49.64	-0.0778	7.9261	-0.2116
846	SLU 60	0.83	0.58	50.53	-0.0793	8.0601	-0.2033
846	SLU 61	0.82	0.64	50.53	-0.0794	8.0619	-0.2232
846	SLU 62	0.84	0.58	51.02	-0.0802	8.1295	-0.2038
846	SLU 63	0.83	0.64	51.02	-0.0803	8.1313	-0.2238
846	SLU 64	0.82	0.54	48.61	-0.0757	7.7748	-0.1884
846	SLU 65	0.81	0.63	48.61	-0.0759	7.7779	-0.2217

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
846	SLU 66	0.84	0.55	49.41	-0.077	7.8868	-0.1929
846	SLU 67	0.83	0.61	49.41	-0.0771	7.8886	-0.2128
846	SLU 68	0.82	0.63	49.1	-0.0767	7.8473	-0.2222
846	SLU 69	0.85	0.55	49.9	-0.0779	7.9562	-0.1934
846	SLU 70	0.84	0.61	49.9	-0.078	7.958	-0.2134
846	SLU 71	0.84	0.54	49.6	-0.0774	7.9136	-0.1895
846	SLU 72	0.84	0.6	49.6	-0.0775	7.9155	-0.2095
846	SLU 73	0.86	0.72	52.99	-0.0837	8.4186	-0.2513
846	SLU 74	0.88	0.63	53.79	-0.0848	8.5275	-0.2225
846	SLU 75	0.88	0.69	53.79	-0.0849	8.5294	-0.2424
846	SLU 76	0.87	0.72	53.48	-0.0845	8.488	-0.2518
846	SLU 77	0.9	0.64	54.28	-0.0857	8.5969	-0.223
846	SLU 78	0.89	0.69	54.28	-0.0858	8.5988	-0.243
846	SLU 79	0.89	0.62	53.98	-0.0852	8.5544	-0.2191
846	SLU 80	0.88	0.68	53.98	-0.0853	8.5562	-0.239
846	SLU 81	0.89	0.66	54.87	-0.0868	8.6901	-0.2307
846	SLU 82	0.88	0.71	54.87	-0.0869	8.692	-0.2507
846	SLU 83	0.9	0.66	55.36	-0.0877	8.7596	-0.2312
846	SLU 84	0.89	0.72	55.36	-0.0878	8.7614	-0.2512
846	SLE RA 1	0.62	0.4	36.44	-0.0566	5.8421	-0.1389
846	SLE RA 2	0.61	0.46	36.44	-0.0567	5.8442	-0.1611
846	SLE RA 3	0.63	0.4	36.97	-0.0575	5.9168	-0.1419
846	SLE RA 4	0.62	0.44	36.97	-0.0575	5.918	-0.1552
846	SLE RA 5	0.62	0.46	36.77	-0.0573	5.8905	-0.1614
846	SLE RA 6	0.64	0.41	37.3	-0.058	5.9631	-0.1422
846	SLE RA 7	0.63	0.44	37.3	-0.0581	5.9643	-0.1555
846	SLE RA 8	0.63	0.4	37.1	-0.0577	5.9347	-0.1396
846	SLE RA 9	0.63	0.44	37.1	-0.0578	5.9359	-0.1529
846	SLE RA 10	0.64	0.52	39.36	-0.0619	6.2713	-0.1808
846	SLE RA 11	0.66	0.46	39.89	-0.0627	6.344	-0.1616
846	SLE RA 12	0.66	0.5	39.89	-0.0627	6.3452	-0.1749
846	SLE RA 13	0.65	0.52	39.69	-0.0625	6.3176	-0.1812
846	SLE RA 14	0.67	0.46	40.22	-0.0632	6.3902	-0.162
846	SLE RA 15	0.66	0.5	40.22	-0.0633	6.3915	-0.1753
846	SLE RA 16	0.66	0.45	40.02	-0.0629	6.3619	-0.1594
846	SLE RA 17	0.66	0.49	40.02	-0.063	6.3631	-0.1727
846	SLE RA 18	0.66	0.48	40.61	-0.064	6.4524	-0.1671
846	SLE RA 19	0.66	0.51	40.61	-0.0641	6.4536	-0.1804
846	SLE RA 20	0.67	0.48	40.94	-0.0646	6.4986	-0.1675
846	SLE RA 21	0.67	0.51	40.94	-0.0646	6.4999	-0.1808
846	SLE FR 1	0.62	0.4	36.44	-0.0566	5.8421	-0.1389
846	SLE FR 2	0.62	0.41	36.44	-0.0566	5.8425	-0.1434
846	SLE FR 3	0.62	0.4	36.57	-0.0568	5.8607	-0.1391
846	SLE FR 4	0.63	0.43	37.69	-0.0588	6.0256	-0.1518
846	SLE FR 5	0.63	0.42	37.82	-0.059	6.0437	-0.1475
846	SLE FR 6	0.64	0.44	38.53	-0.0603	6.1473	-0.153
846	SLE QP 1	0.62	0.4	36.44	-0.0566	5.8421	-0.1389
846	SLE QP 2	0.63	0.42	37.69	-0.0588	6.0252	-0.1474
846	SLD 1	2.73	0.23	28.01	-0.0425	4.7485	-0.0811
846	SLD 2	2.51	1.04	27.77	-0.0441	4.7365	-0.3614
846	SLD 3	3.03	-1.39	28.34	-0.0398	4.7791	0.4845
846	SLD 4	2.8	-0.58	28.11	-0.0413	4.7671	0.2041
846	SLD 5	0.85	2.68	34.32	-0.0577	5.598	-0.9354
846	SLD 6	0.7	3.2	34.16	-0.0587	5.5901	-1.1192
846	SLD 7	1.84	-2.72	35.44	-0.0487	5.6998	0.9498
846	SLD 8	1.69	-2.2	35.29	-0.0497	5.692	0.766
846	SLD 9	-0.43	3.04	40.1	-0.0679	6.3584	-1.0607
846	SLD 10	-0.58	3.56	39.94	-0.0689	6.3506	-1.2445
846	SLD 11	0.56	-2.37	41.22	-0.0588	6.4603	0.8244
846	SLD 12	0.41	-1.84	41.07	-0.0599	6.4524	0.6407
846	SLD 13	-1.54	1.42	47.27	-0.0762	7.2833	-0.4989
846	SLD 14	-1.77	2.23	47.04	-0.0778	7.2713	-0.7792
846	SLD 15	-1.24	-0.2	47.61	-0.0735	7.3139	0.0667
846	SLD 16	-1.47	0.61	47.38	-0.0751	7.3019	-0.2137
846	SLV 1	5.56	-0.07	15.03	-0.0206	3.0373	0.0244
846	SLV 2	5.03	1.81	14.49	-0.0242	3.0094	-0.6285
846	SLV 3	6.23	-3.75	15.8	-0.0145	3.1081	1.3111
846	SLV 4	5.7	-1.88	15.26	-0.0181	3.0802	0.6582
846	SLV 5	1.18	5.54	29.82	-0.056	5.0262	-1.9349
846	SLV 6	0.84	6.75	29.47	-0.0583	5.0082	-2.3556
846	SLV 7	3.43	-6.75	32.39	-0.0356	5.2623	2.3541
846	SLV 8	3.09	-5.54	32.04	-0.0379	5.2443	1.9333
846	SLV 9	-1.82	6.38	43.35	-0.0797	6.8061	-2.2281
846	SLV 10	-2.16	7.58	43	-0.082	6.7881	-2.6488
846	SLV 11	0.43	-5.91	45.91	-0.0593	7.0422	2.0609
846	SLV 12	0.09	-4.7	45.56	-0.0616	7.0242	1.6401
846	SLV 13	-4.44	2.72	60.13	-0.0995	8.9702	-0.9529
846	SLV 14	-4.97	4.59	59.58	-0.1031	8.9423	-1.6059
846	SLV 15	-3.77	-0.97	60.9	-0.0934	9.041	0.3337
846	SLV 16	-4.29	0.91	60.35	-0.097	9.0131	-0.3192
846	CRTFP Ux+	0	0	0	0	0	0
846	CRTFP Ux-	0	0	0	0	0	0
846	CRTFP Uy+	0	0	0	0	0	0
846	CRTFP Uy-	0	0	0	0	0	0
848	SLU 1	1.23	-0.11	63.46	0.019	0.2595	-0.0122
848	SLU 2	1.23	-0.01	63.48	0.0185	0.2573	-0.0122
848	SLU 3	1.26	-0.1	64.91	0.0196	0.2684	-0.0123
848	SLU 4	1.26	-0.04	64.92	0.0193	0.2671	-0.0123
848	SLU 5	1.24	-0.02	64.37	0.0188	0.2628	-0.0123
848	SLU 6	1.28	-0.11	65.8	0.0198	0.2738	-0.0124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
848	SLU 7	1.27	-0.05	65.81	0.0195	0.2726	-0.0125
848	SLU 8	1.26	-0.12	65.24	0.0196	0.2704	-0.0124
848	SLU 9	1.26	-0.06	65.25	0.0193	0.2691	-0.0124
848	SLU 10	1.32	0.01	72.01	0.0206	0.3009	-0.0134
848	SLU 11	1.35	-0.08	73.44	0.0216	0.3119	-0.0135
848	SLU 12	1.35	-0.02	73.45	0.0213	0.3106	-0.0135
848	SLU 13	1.34	0	72.9	0.0209	0.3063	-0.0135
848	SLU 14	1.37	-0.09	74.33	0.0219	0.3173	-0.0136
848	SLU 15	1.37	-0.03	74.34	0.0216	0.3161	-0.0137
848	SLU 16	1.36	-0.1	73.77	0.0216	0.3139	-0.0136
848	SLU 17	1.36	-0.04	73.78	0.0214	0.3126	-0.0136
848	SLU 18	1.36	-0.08	75.65	0.022	0.3216	-0.0139
848	SLU 19	1.36	-0.02	75.66	0.0217	0.3204	-0.0139
848	SLU 20	1.38	-0.09	76.54	0.0223	0.3271	-0.014
848	SLU 21	1.38	-0.03	76.55	0.022	0.3258	-0.014
848	SLU 22	1.34	-0.07	71.81	0.0216	0.3012	-0.0131
848	SLU 23	1.34	0.03	71.83	0.0212	0.299	-0.0131
848	SLU 24	1.37	-0.06	73.26	0.0222	0.3101	-0.0132
848	SLU 25	1.37	0	73.27	0.0219	0.3088	-0.0132
848	SLU 26	1.36	0.03	72.71	0.0215	0.3045	-0.0132
848	SLU 27	1.39	-0.07	74.15	0.0225	0.3155	-0.0133
848	SLU 28	1.39	-0.01	74.16	0.0222	0.3142	-0.0133
848	SLU 29	1.38	-0.08	73.59	0.0222	0.3121	-0.0133
848	SLU 30	1.38	-0.02	73.59	0.0219	0.3108	-0.0133
848	SLU 31	1.43	0.05	80.36	0.0233	0.3426	-0.0143
848	SLU 32	1.47	-0.04	81.79	0.0243	0.3536	-0.0144
848	SLU 33	1.46	0.02	81.8	0.024	0.3523	-0.0144
848	SLU 34	1.45	0.05	81.24	0.0235	0.348	-0.0144
848	SLU 35	1.48	-0.05	82.68	0.0246	0.359	-0.0145
848	SLU 36	1.48	0.01	82.68	0.0243	0.3578	-0.0145
848	SLU 37	1.47	-0.06	82.11	0.0243	0.3556	-0.0145
848	SLU 38	1.47	0	82.12	0.024	0.3543	-0.0145
848	SLU 39	1.48	-0.04	84	0.0246	0.3633	-0.0148
848	SLU 40	1.47	0.02	84.01	0.0243	0.3621	-0.0148
848	SLU 41	1.49	-0.04	84.88	0.0249	0.3688	-0.0149
848	SLU 42	1.49	0.02	84.89	0.0246	0.3675	-0.0149
848	SLU 43	1.56	-0.16	79.64	0.0238	0.323	-0.0155
848	SLU 44	1.55	-0.06	79.66	0.0233	0.3209	-0.0156
848	SLU 45	1.59	-0.15	81.09	0.0243	0.3319	-0.0157
848	SLU 46	1.59	-0.09	81.1	0.0241	0.3306	-0.0157
848	SLU 47	1.57	-0.07	80.54	0.0236	0.3263	-0.0157
848	SLU 48	1.61	-0.16	81.98	0.0246	0.3374	-0.0158
848	SLU 49	1.6	-0.1	81.99	0.0243	0.3361	-0.0158
848	SLU 50	1.59	-0.17	81.42	0.0244	0.3339	-0.0158
848	SLU 51	1.59	-0.11	81.43	0.0241	0.3327	-0.0158
848	SLU 52	1.65	-0.04	88.19	0.0254	0.3644	-0.0168
848	SLU 53	1.68	-0.13	89.62	0.0264	0.3754	-0.0169
848	SLU 54	1.68	-0.07	89.63	0.0261	0.3742	-0.0169
848	SLU 55	1.67	-0.04	89.07	0.0257	0.3699	-0.0169
848	SLU 56	1.7	-0.14	90.51	0.0267	0.3809	-0.017
848	SLU 57	1.7	-0.08	90.52	0.0264	0.3796	-0.017
848	SLU 58	1.69	-0.15	89.95	0.0264	0.3774	-0.017
848	SLU 59	1.69	-0.09	89.95	0.0262	0.3762	-0.017
848	SLU 60	1.69	-0.13	91.83	0.0268	0.3852	-0.0173
848	SLU 61	1.69	-0.07	91.84	0.0265	0.3839	-0.0173
848	SLU 62	1.71	-0.14	92.71	0.0271	0.3906	-0.0174
848	SLU 63	1.71	-0.07	92.72	0.0268	0.3894	-0.0174
848	SLU 64	1.67	-0.12	87.99	0.0264	0.3647	-0.0164
848	SLU 65	1.67	-0.02	88	0.026	0.3626	-0.0165
848	SLU 66	1.7	-0.11	89.44	0.027	0.3736	-0.0166
848	SLU 67	1.7	-0.05	89.45	0.0267	0.3723	-0.0166
848	SLU 68	1.69	-0.02	88.89	0.0262	0.368	-0.0166
848	SLU 69	1.72	-0.12	90.32	0.0273	0.3791	-0.0167
848	SLU 70	1.72	-0.06	90.33	0.027	0.3778	-0.0167
848	SLU 71	1.71	-0.13	89.76	0.027	0.3756	-0.0166
848	SLU 72	1.71	-0.07	89.77	0.0267	0.3744	-0.0167
848	SLU 73	1.76	0	96.53	0.0281	0.4061	-0.0177
848	SLU 74	1.79	-0.09	97.97	0.0291	0.4171	-0.0178
848	SLU 75	1.79	-0.03	97.98	0.0288	0.4159	-0.0178
848	SLU 76	1.78	0	97.42	0.0283	0.4116	-0.0178
848	SLU 77	1.81	-0.09	98.85	0.0294	0.4226	-0.0179
848	SLU 78	1.81	-0.03	98.86	0.0291	0.4213	-0.0179
848	SLU 79	1.8	-0.11	98.29	0.0291	0.4191	-0.0178
848	SLU 80	1.8	-0.05	98.3	0.0288	0.4179	-0.0179
848	SLU 81	1.81	-0.09	100.17	0.0294	0.4269	-0.0181
848	SLU 82	1.8	-0.03	100.18	0.0291	0.4256	-0.0182
848	SLU 83	1.82	-0.09	101.06	0.0297	0.4323	-0.0182
848	SLU 84	1.82	-0.03	101.07	0.0294	0.4311	-0.0183
848	SLE RA 1	1.26	-0.1	65.85	0.0198	0.2714	-0.0124
848	SLE RA 2	1.26	-0.03	65.86	0.0194	0.27	-0.0125
848	SLE RA 3	1.28	-0.1	66.81	0.0201	0.2773	-0.0125
848	SLE RA 4	1.28	-0.06	66.82	0.0199	0.2765	-0.0125
848	SLE RA 5	1.27	-0.04	66.45	0.0196	0.2736	-0.0125
848	SLE RA 6	1.29	-0.1	67.41	0.0203	0.281	-0.0126
848	SLE RA 7	1.29	-0.06	67.41	0.0201	0.2801	-0.0126
848	SLE RA 8	1.29	-0.11	67.03	0.0201	0.2787	-0.0126
848	SLE RA 9	1.28	-0.07	67.04	0.0199	0.2778	-0.0126
848	SLE RA 10	1.32	-0.02	71.55	0.0208	0.299	-0.0133
848	SLE RA 11	1.34	-0.08	72.5	0.0215	0.3063	-0.0133
848	SLE RA 12	1.34	-0.04	72.51	0.0213	0.3055	-0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
848	SLE RA 13	1.33	-0.02	72.14	0.021	0.3026	-0.0133
848	SLE RA 14	1.35	-0.08	73.09	0.0217	0.31	-0.0134
848	SLE RA 15	1.35	-0.04	73.1	0.0215	0.3091	-0.0134
848	SLE RA 16	1.35	-0.09	72.72	0.0215	0.3077	-0.0134
848	SLE RA 17	1.35	-0.05	72.72	0.0213	0.3068	-0.0134
848	SLE RA 18	1.35	-0.08	73.97	0.0217	0.3128	-0.0136
848	SLE RA 19	1.35	-0.04	73.98	0.0216	0.312	-0.0136
848	SLE RA 20	1.36	-0.08	74.56	0.0219	0.3165	-0.0137
848	SLE RA 21	1.36	-0.04	74.57	0.0217	0.3156	-0.0137
848	SLE FR 1	1.26	-0.1	65.85	0.0198	0.2714	-0.0124
848	SLE FR 2	1.26	-0.09	65.85	0.0197	0.2711	-0.0124
848	SLE FR 3	1.27	-0.1	66.09	0.0198	0.2728	-0.0125
848	SLE FR 4	1.29	-0.08	68.29	0.0203	0.2835	-0.0128
848	SLE FR 5	1.29	-0.1	68.52	0.0204	0.2853	-0.0128
848	SLE FR 6	1.31	-0.09	69.91	0.0208	0.2921	-0.013
848	SLE QP 1	1.26	-0.1	65.85	0.0198	0.2714	-0.0124
848	SLE QP 2	1.29	-0.09	68.29	0.0204	0.2838	-0.0128
848	SLD 1	6.97	1.02	61.39	0.0127	0.3278	-0.0479
848	SLD 2	6.61	1.61	61.19	0.0093	0.3303	-0.0336
848	SLD 3	7.05	-0.83	61.59	0.0219	0.3773	-0.0494
848	SLD 4	6.69	-0.24	61.39	0.0186	0.3797	-0.0351
848	SLD 5	2.93	2.95	65.94	0.0047	0.2216	-0.0236
848	SLD 6	2.7	3.33	65.81	0.0025	0.2232	-0.0142
848	SLD 7	3.21	-3.23	66.62	0.0354	0.3865	-0.0286
848	SLD 8	2.97	-2.84	66.49	0.0332	0.3881	-0.0192
848	SLD 9	-0.4	2.66	70.08	0.0075	0.1796	-0.0064
848	SLD 10	-0.63	3.04	69.95	0.0053	0.1812	0.003
848	SLD 11	-0.12	-3.52	70.76	0.0382	0.3445	-0.0113
848	SLD 12	-0.35	-3.13	70.63	0.036	0.3461	-0.002
848	SLD 13	-4.12	0.05	75.18	0.0222	0.1879	0.0096
848	SLD 14	-4.48	0.64	74.98	0.0188	0.1903	0.0239
848	SLD 15	-4.04	-1.8	75.38	0.0314	0.2374	0.0081
848	SLD 16	-4.39	-1.21	75.18	0.028	0.2398	0.0224
848	SLV 1	14.57	2.46	52.13	0.0027	0.3874	-0.095
848	SLV 2	13.74	3.83	51.67	-0.005	0.393	-0.0616
848	SLV 3	14.76	-1.76	52.61	0.0236	0.5023	-0.0985
848	SLV 4	13.93	-0.39	52.14	0.0158	0.508	-0.0651
848	SLV 5	5.13	6.84	62.8	-0.0152	0.1395	-0.0379
848	SLV 6	4.59	7.72	62.5	-0.0202	0.1432	-0.0164
848	SLV 7	5.77	-7.23	64.38	0.0543	0.5228	-0.0495
848	SLV 8	5.23	-6.35	64.09	0.0493	0.5264	-0.028
848	SLV 9	-2.65	6.16	72.49	-0.0086	0.0412	0.0025
848	SLV 10	-3.19	7.04	72.19	-0.0136	0.0449	0.0239
848	SLV 11	-2.01	-7.91	74.07	0.0609	0.4245	-0.0091
848	SLV 12	-2.55	-7.03	73.78	0.0559	0.4281	0.0123
848	SLV 13	-11.36	0.2	84.43	0.0249	0.0597	0.0396
848	SLV 14	-12.19	1.57	83.97	0.0171	0.0653	0.0729
848	SLV 15	-11.17	-4.02	84.91	0.0458	0.1746	0.0361
848	SLV 16	-12	-2.65	84.44	0.038	0.1803	0.0694
848	CRTFP Ux+	0	0	0	0	0	0
848	CRTFP Ux-	0	0	0	0	0	0
848	CRTFP Uy+	0	0	0	0	0	0
848	CRTFP Uy-	0	0	0	0	0	0
851	SLU 1	-0.98	-0.49	65.89	-0.0022	-0.3583	0.0133
851	SLU 2	-0.98	-0.38	65.89	-0.0027	-0.3553	0.0133
851	SLU 3	-1	-0.48	67.43	-0.0021	-0.3693	0.0136
851	SLU 4	-1	-0.42	67.43	-0.0024	-0.3675	0.0136
851	SLU 5	-1	-0.39	66.84	-0.0027	-0.3617	0.0136
851	SLU 6	-1.02	-0.49	68.38	-0.0021	-0.3757	0.0138
851	SLU 7	-1.02	-0.43	68.38	-0.0025	-0.3739	0.0138
851	SLU 8	-1.01	-0.5	67.79	-0.0022	-0.3712	0.0137
851	SLU 9	-1.01	-0.44	67.79	-0.0026	-0.3694	0.0138
851	SLU 10	-1.05	-0.41	74.79	-0.0038	-0.4175	0.0155
851	SLU 11	-1.07	-0.52	76.34	-0.0032	-0.4314	0.0158
851	SLU 12	-1.08	-0.45	76.34	-0.0035	-0.4296	0.0158
851	SLU 13	-1.07	-0.42	75.74	-0.0038	-0.4239	0.0158
851	SLU 14	-1.09	-0.52	77.29	-0.0032	-0.4379	0.016
851	SLU 15	-1.09	-0.46	77.29	-0.0036	-0.4361	0.016
851	SLU 16	-1.08	-0.53	76.69	-0.0033	-0.4333	0.0159
851	SLU 17	-1.08	-0.47	76.69	-0.0037	-0.4315	0.016
851	SLU 18	-1.08	-0.53	78.61	-0.0037	-0.4471	0.0164
851	SLU 19	-1.08	-0.47	78.61	-0.004	-0.4453	0.0165
851	SLU 20	-1.1	-0.54	79.56	-0.0038	-0.4536	0.0167
851	SLU 21	-1.1	-0.48	79.56	-0.0041	-0.4518	0.0167
851	SLU 22	-1.08	-0.48	74.63	-0.0024	-0.415	0.0148
851	SLU 23	-1.08	-0.38	74.63	-0.0029	-0.412	0.0149
851	SLU 24	-1.1	-0.48	76.17	-0.0023	-0.426	0.0151
851	SLU 25	-1.1	-0.42	76.17	-0.0026	-0.4242	0.0151
851	SLU 26	-1.09	-0.39	75.58	-0.0029	-0.4184	0.0151
851	SLU 27	-1.12	-0.49	77.12	-0.0023	-0.4324	0.0153
851	SLU 28	-1.12	-0.43	77.12	-0.0027	-0.4306	0.0154
851	SLU 29	-1.11	-0.5	76.53	-0.0024	-0.4278	0.0153
851	SLU 30	-1.11	-0.44	76.53	-0.0028	-0.426	0.0153
851	SLU 31	-1.15	-0.41	83.54	-0.004	-0.4742	0.0171
851	SLU 32	-1.17	-0.51	85.08	-0.0034	-0.4881	0.0173
851	SLU 33	-1.17	-0.45	85.08	-0.0037	-0.4863	0.0173
851	SLU 34	-1.17	-0.42	84.49	-0.004	-0.4806	0.0173
851	SLU 35	-1.19	-0.52	86.03	-0.0034	-0.4946	0.0175
851	SLU 36	-1.19	-0.46	86.03	-0.0038	-0.4928	0.0176
851	SLU 37	-1.18	-0.53	85.44	-0.0035	-0.49	0.0175

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
851	SLU 38	-1.18	-0.47	85.44	-0.0039	-0.4882	0.0175
851	SLU 39	-1.18	-0.53	87.36	-0.0039	-0.5038	0.018
851	SLU 40	-1.18	-0.47	87.36	-0.0042	-0.502	0.018
851	SLU 41	-1.19	-0.54	88.3	-0.004	-0.5102	0.0182
851	SLU 42	-1.2	-0.48	88.3	-0.0043	-0.5084	0.0182
851	SLU 43	-1.24	-0.63	82.66	-0.0027	-0.4464	0.0168
851	SLU 44	-1.24	-0.53	82.66	-0.0033	-0.4434	0.0168
851	SLU 45	-1.26	-0.63	84.2	-0.0027	-0.4573	0.017
851	SLU 46	-1.26	-0.57	84.2	-0.003	-0.4555	0.0171
851	SLU 47	-1.26	-0.54	83.61	-0.0033	-0.4498	0.017
851	SLU 48	-1.28	-0.64	85.15	-0.0027	-0.4638	0.0173
851	SLU 49	-1.28	-0.58	85.15	-0.0031	-0.462	0.0173
851	SLU 50	-1.27	-0.65	84.56	-0.0028	-0.4592	0.0172
851	SLU 51	-1.27	-0.59	84.56	-0.0031	-0.4574	0.0172
851	SLU 52	-1.31	-0.56	91.56	-0.0044	-0.5056	0.019
851	SLU 53	-1.33	-0.66	93.11	-0.0038	-0.5195	0.0192
851	SLU 54	-1.34	-0.6	93.11	-0.0041	-0.5177	0.0193
851	SLU 55	-1.33	-0.57	92.51	-0.0044	-0.512	0.0192
851	SLU 56	-1.35	-0.67	94.06	-0.0038	-0.5259	0.0195
851	SLU 57	-1.35	-0.61	94.06	-0.0041	-0.5241	0.0195
851	SLU 58	-1.34	-0.68	93.46	-0.0039	-0.5214	0.0194
851	SLU 59	-1.34	-0.62	93.46	-0.0042	-0.5196	0.0194
851	SLU 60	-1.34	-0.68	95.38	-0.0043	-0.5352	0.0199
851	SLU 61	-1.34	-0.62	95.38	-0.0046	-0.5334	0.0199
851	SLU 62	-1.36	-0.69	96.33	-0.0043	-0.5416	0.0201
851	SLU 63	-1.36	-0.62	96.33	-0.0047	-0.5398	0.0201
851	SLU 64	-1.34	-0.63	91.4	-0.0029	-0.5031	0.0183
851	SLU 65	-1.34	-0.53	91.4	-0.0035	-0.5001	0.0183
851	SLU 66	-1.36	-0.63	92.94	-0.0029	-0.514	0.0186
851	SLU 67	-1.36	-0.57	92.94	-0.0032	-0.5122	0.0186
851	SLU 68	-1.35	-0.54	92.35	-0.0035	-0.5065	0.0186
851	SLU 69	-1.38	-0.64	93.89	-0.0029	-0.5204	0.0188
851	SLU 70	-1.38	-0.57	93.89	-0.0033	-0.5186	0.0188
851	SLU 71	-1.37	-0.65	93.3	-0.003	-0.5159	0.0187
851	SLU 72	-1.37	-0.58	93.3	-0.0033	-0.5141	0.0188
851	SLU 73	-1.41	-0.56	100.31	-0.0046	-0.5622	0.0205
851	SLU 74	-1.43	-0.66	101.85	-0.004	-0.5762	0.0208
851	SLU 75	-1.43	-0.6	101.85	-0.0043	-0.5744	0.0208
851	SLU 76	-1.43	-0.57	101.26	-0.0046	-0.5687	0.0208
851	SLU 77	-1.45	-0.67	102.8	-0.004	-0.5826	0.021
851	SLU 78	-1.45	-0.61	102.8	-0.0043	-0.5808	0.021
851	SLU 79	-1.44	-0.68	102.21	-0.0041	-0.5781	0.0209
851	SLU 80	-1.44	-0.62	102.21	-0.0044	-0.5763	0.021
851	SLU 81	-1.44	-0.68	104.12	-0.0045	-0.5919	0.0214
851	SLU 82	-1.44	-0.61	104.12	-0.0048	-0.5901	0.0215
851	SLU 83	-1.45	-0.68	105.07	-0.0045	-0.5983	0.0217
851	SLU 84	-1.46	-0.62	105.07	-0.0049	-0.5965	0.0217
851	SLE RA 1	-1.01	-0.49	68.39	-0.0022	-0.3745	0.0137
851	SLE RA 2	-1.01	-0.42	68.39	-0.0026	-0.3725	0.0138
851	SLE RA 3	-1.02	-0.48	69.42	-0.0022	-0.3818	0.0139
851	SLE RA 4	-1.02	-0.44	69.42	-0.0024	-0.3806	0.0139
851	SLE RA 5	-1.02	-0.42	69.02	-0.0026	-0.3768	0.0139
851	SLE RA 6	-1.03	-0.49	70.05	-0.0022	-0.3861	0.0141
851	SLE RA 7	-1.03	-0.45	70.05	-0.0024	-0.3849	0.0141
851	SLE RA 8	-1.03	-0.5	69.65	-0.0023	-0.3831	0.014
851	SLE RA 9	-1.03	-0.45	69.65	-0.0025	-0.3819	0.0141
851	SLE RA 10	-1.06	-0.44	74.32	-0.0033	-0.414	0.0152
851	SLE RA 11	-1.07	-0.5	75.35	-0.0029	-0.4233	0.0154
851	SLE RA 12	-1.07	-0.46	75.35	-0.0031	-0.4221	0.0154
851	SLE RA 13	-1.07	-0.44	74.96	-0.0033	-0.4182	0.0154
851	SLE RA 14	-1.08	-0.51	75.99	-0.0029	-0.4275	0.0155
851	SLE RA 15	-1.08	-0.47	75.99	-0.0032	-0.4263	0.0156
851	SLE RA 16	-1.08	-0.52	75.59	-0.003	-0.4245	0.0155
851	SLE RA 17	-1.08	-0.48	75.59	-0.0032	-0.4233	0.0155
851	SLE RA 18	-1.07	-0.52	76.87	-0.0033	-0.4337	0.0158
851	SLE RA 19	-1.08	-0.47	76.87	-0.0035	-0.4325	0.0158
851	SLE RA 20	-1.09	-0.52	77.5	-0.0033	-0.438	0.016
851	SLE RA 21	-1.09	-0.48	77.5	-0.0035	-0.4368	0.016
851	SLE FR 1	-1.01	-0.49	68.39	-0.0022	-0.3745	0.0137
851	SLE FR 2	-1.01	-0.47	68.39	-0.0023	-0.3741	0.0137
851	SLE FR 3	-1.01	-0.49	68.64	-0.0022	-0.3762	0.0138
851	SLE FR 4	-1.03	-0.48	70.93	-0.0026	-0.3919	0.0144
851	SLE FR 5	-1.03	-0.5	71.18	-0.0025	-0.394	0.0144
851	SLE FR 6	-1.04	-0.5	72.63	-0.0027	-0.4041	0.0148
851	SLE QP 1	-1.01	-0.49	68.39	-0.0022	-0.3745	0.0137
851	SLE QP 2	-1.03	-0.49	70.93	-0.0025	-0.3923	0.0144
851	SLD 1	5.26	0.27	78.68	-0.0064	-0.2475	-0.0239
851	SLD 2	4.87	-0.35	78.96	-0.003	-0.2584	-0.0081
851	SLD 3	5.14	-1.68	79.13	0.0042	-0.3099	-0.0209
851	SLD 4	4.75	-2.31	79.41	0.0076	-0.3208	-0.0051
851	SLD 5	1.11	2.81	72.53	-0.0204	-0.2522	-0.0045
851	SLD 6	0.85	2.4	72.71	-0.0182	-0.2593	0.0058
851	SLD 7	0.71	-3.7	74.02	0.015	-0.4604	0.0056
851	SLD 8	0.46	-4.11	74.2	0.0172	-0.4675	0.016
851	SLD 9	-2.51	3.12	67.66	-0.0223	-0.3171	0.0128
851	SLD 10	-2.76	2.71	67.84	-0.0201	-0.3242	0.0231
851	SLD 11	-2.91	-3.39	69.15	0.0131	-0.5252	0.0229
851	SLD 12	-3.16	-3.8	69.34	0.0154	-0.5324	0.0333
851	SLD 13	-6.81	1.32	62.46	-0.0127	-0.4637	0.0338
851	SLD 14	-7.19	0.69	62.74	-0.0093	-0.4746	0.0496

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
851	SLD 15	-6.93	-0.63	62.91	-0.0021	-0.5262	0.0368
851	SLD 16	-7.31	-1.26	63.19	0.0013	-0.5371	0.0526
851	SLV 1	13.66	1.23	89.09	-0.0112	-0.0553	-0.075
851	SLV 2	12.77	-0.22	89.74	-0.0032	-0.0807	-0.0382
851	SLV 3	13.39	-3.21	90.11	0.0129	-0.1982	-0.0681
851	SLV 4	12.49	-4.67	90.76	0.0208	-0.2235	-0.0313
851	SLV 5	3.95	7.02	74.72	-0.043	-0.0702	-0.0293
851	SLV 6	3.37	6.08	75.14	-0.0379	-0.0866	-0.0056
851	SLV 7	3.03	-7.81	78.12	0.0373	-0.5463	-0.0062
851	SLV 8	2.46	-8.75	78.54	0.0424	-0.5626	0.0175
851	SLV 9	-4.51	7.76	63.33	-0.0474	-0.2219	0.0112
851	SLV 10	-5.09	6.82	63.75	-0.0423	-0.2383	0.0349
851	SLV 11	-5.43	-7.07	66.72	0.0328	-0.698	0.0343
851	SLV 12	-6.01	-8.01	67.14	0.0379	-0.7143	0.058
851	SLV 13	-14.55	3.68	51.11	-0.0259	-0.561	0.06
851	SLV 14	-15.44	2.23	51.76	-0.018	-0.5864	0.0968
851	SLV 15	-14.82	-0.76	52.12	-0.0018	-0.7038	0.0669
851	SLV 16	-15.72	-2.22	52.78	0.0061	-0.7292	0.1037
851	CRTFP Ux+	0	0	0	0	0	0
851	CRTFP Ux-	0	0	0	0	0	0
851	CRTFP Uy+	0	0	0	0	0	0
851	CRTFP Uy-	0	0	0	0	0	0
866	SLU 1	0.64	0.65	50.35	0.9766	1.0976	0.0172
866	SLU 2	0.64	0.73	50.37	0.9766	1.0987	0.0171
866	SLU 3	0.65	0.68	51.48	0.9988	1.1278	0.0176
866	SLU 4	0.65	0.73	51.49	0.9988	1.1285	0.0176
866	SLU 5	0.65	0.74	51.07	0.9903	1.1167	0.0174
866	SLU 6	0.67	0.69	52.18	1.0125	1.1458	0.0179
866	SLU 7	0.67	0.75	52.19	1.0125	1.1465	0.0178
866	SLU 8	0.66	0.67	51.75	1.0039	1.1336	0.0178
866	SLU 9	0.66	0.72	51.76	1.004	1.1343	0.0177
866	SLU 10	0.73	0.81	57.32	1.1109	1.2834	0.0196
866	SLU 11	0.75	0.76	58.43	1.1331	1.3126	0.0201
866	SLU 12	0.75	0.81	58.44	1.1331	1.3132	0.02
866	SLU 13	0.75	0.82	58.02	1.1246	1.3014	0.0199
866	SLU 14	0.76	0.77	59.13	1.1467	1.3306	0.0204
866	SLU 15	0.76	0.82	59.14	1.1468	1.3312	0.0203
866	SLU 16	0.76	0.75	58.69	1.1382	1.3184	0.0203
866	SLU 17	0.76	0.8	58.71	1.1382	1.319	0.0202
866	SLU 18	0.78	0.76	60.27	1.1684	1.3615	0.0208
866	SLU 19	0.78	0.81	60.28	1.1684	1.3622	0.0207
866	SLU 20	0.79	0.77	60.97	1.1821	1.3795	0.0211
866	SLU 21	0.79	0.82	60.98	1.1821	1.3802	0.021
866	SLU 22	0.73	0.79	57.04	1.1068	1.2747	0.0193
866	SLU 23	0.73	0.87	57.06	1.1069	1.2757	0.0192
866	SLU 24	0.75	0.82	58.17	1.129	1.3048	0.0197
866	SLU 25	0.75	0.87	58.18	1.1291	1.3055	0.0197
866	SLU 26	0.74	0.88	57.76	1.1205	1.2937	0.0195
866	SLU 27	0.76	0.84	58.87	1.1427	1.3228	0.02
866	SLU 28	0.76	0.89	58.88	1.1427	1.3235	0.0199
866	SLU 29	0.76	0.81	58.44	1.1342	1.3106	0.0199
866	SLU 30	0.76	0.86	58.45	1.1342	1.3113	0.0198
866	SLU 31	0.83	0.95	64	1.2411	1.4605	0.0217
866	SLU 32	0.85	0.9	65.11	1.2633	1.4896	0.0222
866	SLU 33	0.85	0.95	65.13	1.2633	1.4902	0.0222
866	SLU 34	0.84	0.96	64.7	1.2548	1.4785	0.022
866	SLU 35	0.86	0.91	65.81	1.277	1.5076	0.0225
866	SLU 36	0.86	0.96	65.83	1.277	1.5082	0.0224
866	SLU 37	0.85	0.89	65.38	1.2685	1.4954	0.0224
866	SLU 38	0.85	0.94	65.4	1.2685	1.496	0.0223
866	SLU 39	0.87	0.9	66.96	1.2987	1.5386	0.0229
866	SLU 40	0.87	0.95	66.97	1.2987	1.5392	0.0228
866	SLU 41	0.88	0.91	67.66	1.3123	1.5566	0.0232
866	SLU 42	0.88	0.96	67.67	1.3124	1.5572	0.0231
866	SLU 43	0.8	0.79	63.16	1.2249	1.3662	0.0217
866	SLU 44	0.8	0.88	63.18	1.2249	1.3673	0.0215
866	SLU 45	0.81	0.83	64.29	1.2471	1.3964	0.0221
866	SLU 46	0.81	0.88	64.31	1.2471	1.3971	0.022
866	SLU 47	0.81	0.89	63.88	1.2386	1.3853	0.0218
866	SLU 48	0.83	0.84	64.99	1.2608	1.4144	0.0223
866	SLU 49	0.83	0.89	65.01	1.2608	1.4151	0.0223
866	SLU 50	0.82	0.82	64.56	1.2522	1.4022	0.0222
866	SLU 51	0.82	0.87	64.57	1.2523	1.4029	0.0221
866	SLU 52	0.89	0.95	70.13	1.3592	1.552	0.024
866	SLU 53	0.91	0.91	71.24	1.3814	1.5812	0.0246
866	SLU 54	0.91	0.96	71.25	1.3814	1.5818	0.0245
866	SLU 55	0.91	0.97	70.83	1.3729	1.57	0.0243
866	SLU 56	0.92	0.92	71.94	1.395	1.5992	0.0248
866	SLU 57	0.92	0.97	71.95	1.3951	1.5998	0.0248
866	SLU 58	0.92	0.89	71.51	1.3865	1.587	0.0247
866	SLU 59	0.92	0.94	71.52	1.3865	1.5876	0.0246
866	SLU 60	0.93	0.9	73.08	1.4167	1.6301	0.0252
866	SLU 61	0.93	0.95	73.1	1.4167	1.6308	0.0252
866	SLU 62	0.95	0.92	73.78	1.4304	1.6481	0.0255
866	SLU 63	0.95	0.97	73.8	1.4304	1.6488	0.0254
866	SLU 64	0.89	0.93	69.85	1.3551	1.5433	0.0238
866	SLU 65	0.89	1.02	69.87	1.3552	1.5443	0.0237
866	SLU 66	0.91	0.97	70.98	1.3774	1.5734	0.0242
866	SLU 67	0.91	1.02	70.99	1.3774	1.5741	0.0241
866	SLU 68	0.9	1.03	70.57	1.3689	1.5623	0.0239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
866	SLU 69	0.92	0.98	71.68	1.391	1.5914	0.0245
866	SLU 70	0.92	1.03	71.69	1.3911	1.5921	0.0244
866	SLU 71	0.92	0.96	71.25	1.3825	1.5792	0.0243
866	SLU 72	0.92	1.01	71.26	1.3825	1.5799	0.0243
866	SLU 73	0.99	1.09	76.82	1.4895	1.7291	0.0261
866	SLU 74	1	1.05	77.93	1.5116	1.7582	0.0267
866	SLU 75	1	1.1	77.94	1.5116	1.7588	0.0266
866	SLU 76	1	1.11	77.52	1.5031	1.7471	0.0264
866	SLU 77	1.02	1.06	78.63	1.5253	1.7762	0.0269
866	SLU 78	1.02	1.11	78.64	1.5253	1.7768	0.0269
866	SLU 79	1.01	1.03	78.19	1.5168	1.764	0.0268
866	SLU 80	1.01	1.08	78.21	1.5168	1.7646	0.0267
866	SLU 81	1.03	1.04	79.77	1.547	1.8072	0.0273
866	SLU 82	1.03	1.09	79.78	1.547	1.8078	0.0273
866	SLU 83	1.04	1.06	80.47	1.5607	1.8252	0.0276
866	SLU 84	1.04	1.11	80.48	1.5607	1.8258	0.0275
866	SLE RA 1	0.66	0.69	52.26	1.0138	1.1482	0.0178
866	SLE RA 2	0.66	0.74	52.28	1.0138	1.1489	0.0177
866	SLE RA 3	0.68	0.71	53.01	1.0286	1.1683	0.0181
866	SLE RA 4	0.68	0.74	53.02	1.0286	1.1688	0.018
866	SLE RA 5	0.67	0.75	52.74	1.0229	1.1609	0.0179
866	SLE RA 6	0.68	0.72	53.48	1.0377	1.1803	0.0183
866	SLE RA 7	0.68	0.75	53.49	1.0377	1.1808	0.0182
866	SLE RA 8	0.68	0.7	53.19	1.032	1.1722	0.0182
866	SLE RA 9	0.68	0.74	53.2	1.032	1.1726	0.0181
866	SLE RA 10	0.73	0.79	56.91	1.1033	1.2721	0.0194
866	SLE RA 11	0.74	0.76	57.64	1.1181	1.2915	0.0198
866	SLE RA 12	0.74	0.8	57.65	1.1181	1.2919	0.0197
866	SLE RA 13	0.74	0.8	57.37	1.1124	1.2841	0.0196
866	SLE RA 14	0.75	0.77	58.11	1.1272	1.3035	0.0199
866	SLE RA 15	0.75	0.8	58.12	1.1272	1.3039	0.0199
866	SLE RA 16	0.75	0.75	57.82	1.1216	1.2954	0.0199
866	SLE RA 17	0.75	0.79	57.83	1.1216	1.2958	0.0198
866	SLE RA 18	0.76	0.76	58.87	1.1417	1.3242	0.0202
866	SLE RA 19	0.76	0.79	58.88	1.1417	1.3246	0.0202
866	SLE RA 20	0.76	0.77	59.34	1.1508	1.3361	0.0204
866	SLE RA 21	0.76	0.8	59.35	1.1508	1.3366	0.0203
866	SLE FR 1	0.66	0.69	52.26	1.0138	1.1482	0.0178
866	SLE FR 2	0.66	0.7	52.26	1.0138	1.1484	0.0178
866	SLE FR 3	0.67	0.69	52.45	1.0174	1.153	0.0179
866	SLE FR 4	0.69	0.72	54.25	1.0522	1.2011	0.0185
866	SLE FR 5	0.69	0.71	54.43	1.0558	1.2058	0.0186
866	SLE FR 6	0.71	0.72	55.57	1.0777	1.2362	0.019
866	SLE QP 1	0.66	0.69	52.26	1.0138	1.1482	0.0178
866	SLE QP 2	0.69	0.71	54.24	1.0522	1.201	0.0185
866	SLD 1	6.31	1.94	56.84	1.1017	1.0623	-0.1261
866	SLD 2	5.99	1.72	56.8	1.1018	1.066	-0.1079
866	SLD 3	6.23	0.17	57.11	1.1042	1.0478	-0.1207
866	SLD 4	5.91	-0.05	57.08	1.1043	1.0516	-0.1025
866	SLD 5	2.55	3.8	54.61	1.0631	1.1806	-0.0362
866	SLD 6	2.34	3.66	54.59	1.0632	1.1831	-0.0243
866	SLD 7	2.29	-2.09	55.53	1.0716	1.1324	-0.0183
866	SLD 8	2.08	-2.24	55.51	1.0717	1.1349	-0.0064
866	SLD 9	-0.7	3.66	52.98	1.0326	1.2671	0.0435
866	SLD 10	-0.91	3.51	52.96	1.0327	1.2695	0.0554
866	SLD 11	-0.96	-2.24	53.9	1.0411	1.2189	0.0614
866	SLD 12	-1.17	-2.38	53.88	1.0412	1.2214	0.0733
866	SLD 13	-4.53	1.46	51.41	1	1.3504	0.1396
866	SLD 14	-4.85	1.25	51.38	1.0001	1.3542	0.1577
866	SLD 15	-4.6	-0.3	51.69	1.0025	1.336	0.145
866	SLD 16	-4.92	-0.52	51.65	1.0026	1.3397	0.1631
866	SLV 1	13.83	3.53	60.38	1.1692	0.8758	-0.3194
866	SLV 2	13.08	3.03	60.3	1.1695	0.8846	-0.2772
866	SLV 3	13.64	-0.5	61.01	1.175	0.8428	-0.3072
866	SLV 4	12.9	-1	60.93	1.1752	0.8516	-0.2649
866	SLV 5	5.03	7.75	55.15	1.0785	1.152	-0.1088
866	SLV 6	4.55	7.42	55.09	1.0787	1.1576	-0.0816
866	SLV 7	4.43	-5.67	57.24	1.0977	1.042	-0.0678
866	SLV 8	3.95	-5.99	57.19	1.0979	1.0476	-0.0406
866	SLV 9	-2.57	7.41	51.3	1.0064	1.3544	0.0777
866	SLV 10	-3.05	7.09	51.25	1.0066	1.36	0.1049
866	SLV 11	-3.17	-6	53.39	1.0257	1.2443	0.1186
866	SLV 12	-3.65	-6.33	53.34	1.0259	1.25	0.1459
866	SLV 13	-11.52	2.42	47.56	0.9291	1.5504	0.302
866	SLV 14	-12.26	1.91	47.48	0.9294	1.5592	0.3442
866	SLV 15	-11.7	-1.61	48.19	0.9348	1.5174	0.3143
866	SLV 16	-12.44	-2.11	48.11	0.9351	1.5261	0.3565
866	CRTFP Ux+	0	0	0	0	0	0
866	CRTFP Ux-	0	0	0	0	0	0
866	CRTFP Uy+	0	0	0	0	0	0
866	CRTFP Uy-	0	0	0	0	0	0
869	SLU 1	0.85	1.29	45.68	0.8809	-0.3629	-0.0098
869	SLU 2	0.85	1.37	45.7	0.8809	-0.3639	-0.0097
869	SLU 3	0.87	1.34	46.68	0.9005	-0.3725	-0.0099
869	SLU 4	0.87	1.39	46.69	0.9005	-0.3731	-0.0098
869	SLU 5	0.87	1.39	46.34	0.8934	-0.3698	-0.0098
869	SLU 6	0.89	1.36	47.32	0.9131	-0.3783	-0.01
869	SLU 7	0.89	1.41	47.33	0.9131	-0.3789	-0.01
869	SLU 8	0.88	1.33	46.96	0.906	-0.3746	-0.01
869	SLU 9	0.88	1.38	46.97	0.906	-0.3752	-0.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
869	SLU 10	0.98	1.55	51.79	0.9977	-0.4235	-0.0108
869	SLU 11	1	1.52	52.77	1.0174	-0.432	-0.0111
869	SLU 12	1	1.57	52.78	1.0174	-0.4326	-0.011
869	SLU 13	1	1.57	52.43	1.0103	-0.4293	-0.0109
869	SLU 14	1.02	1.54	53.41	1.0299	-0.4379	-0.0112
869	SLU 15	1.02	1.59	53.42	1.0299	-0.4385	-0.0111
869	SLU 16	1.01	1.51	53.05	1.0228	-0.4341	-0.0112
869	SLU 17	1.01	1.56	53.06	1.0228	-0.4348	-0.0111
869	SLU 18	1.04	1.54	54.38	1.0478	-0.448	-0.0114
869	SLU 19	1.04	1.59	54.39	1.0478	-0.4486	-0.0114
869	SLU 20	1.05	1.56	55.02	1.0603	-0.4538	-0.0116
869	SLU 21	1.05	1.61	55.03	1.0603	-0.4544	-0.0115
869	SLU 22	0.98	1.51	51.57	0.9951	-0.4234	-0.0108
869	SLU 23	0.98	1.6	51.59	0.9951	-0.4245	-0.0106
869	SLU 24	1	1.57	52.56	1.0147	-0.433	-0.0109
869	SLU 25	1	1.62	52.58	1.0147	-0.4336	-0.0108
869	SLU 26	0.99	1.62	52.23	1.0076	-0.4303	-0.0108
869	SLU 27	1.02	1.59	53.2	1.0272	-0.4389	-0.011
869	SLU 28	1.01	1.64	53.22	1.0272	-0.4395	-0.0109
869	SLU 29	1.01	1.56	52.85	1.0201	-0.4351	-0.011
869	SLU 30	1.01	1.61	52.86	1.0201	-0.4357	-0.011
869	SLU 31	1.11	1.77	57.67	1.1119	-0.484	-0.0118
869	SLU 32	1.13	1.74	58.65	1.1315	-0.4926	-0.012
869	SLU 33	1.13	1.79	58.66	1.1315	-0.4932	-0.012
869	SLU 34	1.12	1.8	58.31	1.1244	-0.4899	-0.0119
869	SLU 35	1.15	1.76	59.29	1.144	-0.4984	-0.0122
869	SLU 36	1.15	1.82	59.3	1.144	-0.499	-0.0121
869	SLU 37	1.14	1.73	58.93	1.1369	-0.4947	-0.0122
869	SLU 38	1.14	1.79	58.94	1.1369	-0.4953	-0.0121
869	SLU 39	1.16	1.77	60.26	1.1619	-0.5085	-0.0124
869	SLU 40	1.16	1.82	60.27	1.1619	-0.5091	-0.0123
869	SLU 41	1.18	1.79	60.9	1.1745	-0.5144	-0.0125
869	SLU 42	1.18	1.84	60.91	1.1745	-0.515	-0.0125
869	SLU 43	1.06	1.59	57.37	1.1061	-0.451	-0.0124
869	SLU 44	1.06	1.68	57.39	1.1061	-0.452	-0.0123
869	SLU 45	1.08	1.65	58.37	1.1257	-0.4606	-0.0125
869	SLU 46	1.08	1.7	58.38	1.1257	-0.4612	-0.0124
869	SLU 47	1.08	1.7	58.03	1.1186	-0.4579	-0.0124
869	SLU 48	1.1	1.67	59.01	1.1382	-0.4664	-0.0126
869	SLU 49	1.1	1.72	59.02	1.1382	-0.467	-0.0126
869	SLU 50	1.1	1.64	58.65	1.1311	-0.4627	-0.0127
869	SLU 51	1.09	1.69	58.66	1.1311	-0.4633	-0.0126
869	SLU 52	1.19	1.85	63.48	1.2229	-0.5116	-0.0134
869	SLU 53	1.22	1.82	64.45	1.2425	-0.5201	-0.0137
869	SLU 54	1.22	1.87	64.47	1.2425	-0.5207	-0.0136
869	SLU 55	1.21	1.88	64.12	1.2354	-0.5174	-0.0136
869	SLU 56	1.23	1.85	65.09	1.255	-0.526	-0.0138
869	SLU 57	1.23	1.9	65.11	1.255	-0.5266	-0.0137
869	SLU 58	1.23	1.82	64.74	1.2479	-0.5223	-0.0138
869	SLU 59	1.23	1.87	64.75	1.2479	-0.5229	-0.0137
869	SLU 60	1.25	1.85	66.06	1.273	-0.5361	-0.014
869	SLU 61	1.25	1.9	66.08	1.273	-0.5367	-0.014
869	SLU 62	1.27	1.87	66.7	1.2855	-0.5419	-0.0142
869	SLU 63	1.27	1.92	66.72	1.2855	-0.5425	-0.0141
869	SLU 64	1.19	1.82	63.25	1.2202	-0.5115	-0.0134
869	SLU 65	1.19	1.9	63.27	1.2202	-0.5126	-0.0133
869	SLU 66	1.21	1.87	64.25	1.2398	-0.5211	-0.0135
869	SLU 67	1.21	1.92	64.26	1.2398	-0.5217	-0.0134
869	SLU 68	1.2	1.93	63.91	1.2327	-0.5184	-0.0134
869	SLU 69	1.23	1.9	64.89	1.2523	-0.527	-0.0136
869	SLU 70	1.23	1.95	64.9	1.2523	-0.5276	-0.0135
869	SLU 71	1.22	1.87	64.53	1.2452	-0.5232	-0.0136
869	SLU 72	1.22	1.92	64.54	1.2452	-0.5239	-0.0136
869	SLU 73	1.32	2.08	69.36	1.337	-0.5721	-0.0144
869	SLU 74	1.34	2.05	70.34	1.3566	-0.5807	-0.0146
869	SLU 75	1.34	2.1	70.35	1.3566	-0.5813	-0.0146
869	SLU 76	1.33	2.1	70	1.3495	-0.578	-0.0145
869	SLU 77	1.36	2.07	70.98	1.3692	-0.5865	-0.0148
869	SLU 78	1.36	2.12	70.99	1.3692	-0.5871	-0.0147
869	SLU 79	1.35	2.04	70.62	1.3621	-0.5828	-0.0148
869	SLU 80	1.35	2.09	70.63	1.3621	-0.5834	-0.0147
869	SLU 81	1.38	2.07	71.95	1.3871	-0.5966	-0.015
869	SLU 82	1.37	2.12	71.96	1.3871	-0.5972	-0.0149
869	SLU 83	1.39	2.1	72.59	1.3996	-0.6025	-0.0151
869	SLU 84	1.39	2.15	72.6	1.3996	-0.6031	-0.0151
869	SLE RA 1	0.89	1.35	47.36	0.9135	-0.3802	-0.0101
869	SLE RA 2	0.89	1.41	47.38	0.9135	-0.3809	-0.01
869	SLE RA 3	0.9	1.39	48.03	0.9266	-0.3866	-0.0101
869	SLE RA 4	0.9	1.42	48.04	0.9266	-0.387	-0.0101
869	SLE RA 5	0.9	1.42	47.8	0.9219	-0.3848	-0.0101
869	SLE RA 6	0.91	1.4	48.45	0.935	-0.3905	-0.0102
869	SLE RA 7	0.91	1.43	48.46	0.935	-0.3909	-0.0102
869	SLE RA 8	0.91	1.38	48.22	0.9302	-0.388	-0.0102
869	SLE RA 9	0.91	1.41	48.22	0.9302	-0.3884	-0.0102
869	SLE RA 10	0.97	1.52	51.43	0.9914	-0.4206	-0.0108
869	SLE RA 11	0.99	1.5	52.09	1.0045	-0.4263	-0.0109
869	SLE RA 12	0.99	1.54	52.09	1.0045	-0.4267	-0.0109
869	SLE RA 13	0.98	1.54	51.86	0.9998	-0.4245	-0.0108
869	SLE RA 14	1	1.52	52.51	1.0128	-0.4302	-0.011
869	SLE RA 15	1	1.55	52.52	1.0128	-0.4306	-0.0109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
869	SLE RA 16	1	1.5	52.27	1.0081	-0.4277	-0.011
869	SLE RA 17	1	1.53	52.28	1.0081	-0.4281	-0.011
869	SLE RA 18	1.01	1.52	53.16	1.0248	-0.4369	-0.0112
869	SLE RA 19	1.01	1.55	53.17	1.0248	-0.4373	-0.0111
869	SLE RA 20	1.02	1.53	53.59	1.0331	-0.4408	-0.0112
869	SLE RA 21	1.02	1.57	53.59	1.0331	-0.4412	-0.0112
869	SLE FR 1	0.89	1.35	47.36	0.9135	-0.3802	-0.0101
869	SLE FR 2	0.89	1.36	47.37	0.9135	-0.3803	-0.0101
869	SLE FR 3	0.89	1.36	47.53	0.9169	-0.3817	-0.0101
869	SLE FR 4	0.92	1.41	49.1	0.9469	-0.3973	-0.0104
869	SLE FR 5	0.93	1.41	49.27	0.9502	-0.3988	-0.0104
869	SLE FR 6	0.95	1.43	50.26	0.9692	-0.4085	-0.0106
869	SLE QP 1	0.89	1.35	47.36	0.9135	-0.3802	-0.0101
869	SLE QP 2	0.92	1.4	49.1	0.9469	-0.3972	-0.0104
869	SLD 1	6.49	1.9	44.97	0.8694	-0.1127	-0.1506
869	SLD 2	6.17	2.1	45.03	0.8697	-0.1146	-0.1328
869	SLD 3	6.56	0.18	45.24	0.8721	-0.0932	-0.1533
869	SLD 4	6.24	0.38	45.29	0.8723	-0.0951	-0.1355
869	SLD 5	2.54	4.12	47.45	0.9195	-0.3411	-0.0516
869	SLD 6	2.33	4.25	47.49	0.9197	-0.3423	-0.0399
869	SLD 7	2.78	-1.6	48.33	0.9285	-0.2761	-0.0604
869	SLD 8	2.57	-1.47	48.37	0.9287	-0.2773	-0.0488
869	SLD 9	-0.72	4.27	49.84	0.9652	-0.5171	0.028
869	SLD 10	-0.93	4.41	49.87	0.9653	-0.5183	0.0397
869	SLD 11	-0.49	-1.45	50.71	0.9741	-0.4521	0.0191
869	SLD 12	-0.7	-1.31	50.75	0.9743	-0.4533	0.0308
869	SLD 13	-4.39	2.42	52.91	1.0215	-0.6993	0.1147
869	SLD 14	-4.71	2.62	52.97	1.0217	-0.7012	0.1325
869	SLD 15	-4.32	0.7	53.18	1.0242	-0.6798	0.112
869	SLD 16	-4.64	0.91	53.23	1.0244	-0.6817	0.1298
869	SLV 1	13.93	2.5	39.45	0.7657	0.2693	-0.3384
869	SLV 2	13.19	2.97	39.58	0.7662	0.2649	-0.2969
869	SLV 3	14.09	-1.41	40.05	0.7719	0.3135	-0.3445
869	SLV 4	13.35	-0.93	40.17	0.7724	0.3092	-0.303
869	SLV 5	4.71	7.58	45.28	0.8831	-0.2636	-0.1066
869	SLV 6	4.23	7.88	45.36	0.8834	-0.2664	-0.0799
869	SLV 7	5.25	-5.45	47.27	0.9037	-0.1161	-0.1271
869	SLV 8	4.77	-5.14	47.35	0.904	-0.1189	-0.1003
869	SLV 9	-2.93	7.95	50.85	0.9898	-0.6755	0.0795
869	SLV 10	-3.4	8.25	50.93	0.9901	-0.6783	0.1063
869	SLV 11	-2.38	-5.08	52.84	1.0104	-0.528	0.0591
869	SLV 12	-2.86	-4.77	52.92	1.0107	-0.5308	0.0858
869	SLV 13	-11.51	3.73	58.03	1.1214	-1.1036	0.2822
869	SLV 14	-12.25	4.21	58.16	1.1219	-1.1079	0.3237
869	SLV 15	-11.34	-0.17	58.63	1.1276	-1.0593	0.2761
869	SLV 16	-12.08	0.3	58.75	1.1281	-1.0637	0.3176
869	CRTFP Ux+	0	0	0	0	0	0
869	CRTFP Ux-	0	0	0	0	0	0
869	CRTFP Uy+	0	0	0	0	0	0
869	CRTFP Uy-	0	0	0	0	0	0
871	SLU 1	-0.63	-0.08	30.66	0.0027	-2.3257	-0.0203
871	SLU 2	-0.63	0	30.66	0.0026	-2.3259	-0.0001
871	SLU 3	-0.64	-0.08	31.36	0.0028	-2.3677	-0.0204
871	SLU 4	-0.64	-0.03	31.37	0.0027	-2.3678	-0.0083
871	SLU 5	-0.64	0	31.1	0.0026	-2.3519	-0.0008
871	SLU 6	-0.65	-0.08	31.81	0.0029	-2.3938	-0.0211
871	SLU 7	-0.65	-0.03	31.81	0.0028	-2.3939	-0.009
871	SLU 8	-0.65	-0.08	31.54	0.0028	-2.3778	-0.0216
871	SLU 9	-0.65	-0.04	31.54	0.0027	-2.3779	-0.0095
871	SLU 10	-0.69	0.01	34.45	0.0027	-2.5735	0.0026
871	SLU 11	-0.7	-0.07	35.15	0.0029	-2.6154	-0.0177
871	SLU 12	-0.7	-0.02	35.16	0.0029	-2.6155	-0.0056
871	SLU 13	-0.7	0.01	34.89	0.0028	-2.5996	0.0019
871	SLU 14	-0.71	-0.07	35.6	0.003	-2.6414	-0.0184
871	SLU 15	-0.71	-0.02	35.6	0.0029	-2.6416	-0.0063
871	SLU 16	-0.71	-0.07	35.33	0.0029	-2.6254	-0.0189
871	SLU 17	-0.71	-0.03	35.33	0.0029	-2.6256	-0.0068
871	SLU 18	-0.71	-0.06	36.07	0.0029	-2.6795	-0.0164
871	SLU 19	-0.71	-0.02	36.07	0.0029	-2.6796	-0.0043
871	SLU 20	-0.72	-0.07	36.52	0.003	-2.7055	-0.0171
871	SLU 21	-0.72	-0.02	36.52	0.0029	-2.7056	-0.005
871	SLU 22	-0.7	-0.07	34.47	0.0031	-2.5712	-0.017
871	SLU 23	-0.7	0.01	34.47	0.003	-2.5714	0.0032
871	SLU 24	-0.71	-0.07	35.17	0.0032	-2.6132	-0.0171
871	SLU 25	-0.71	-0.02	35.17	0.0031	-2.6134	-0.005
871	SLU 26	-0.71	0.01	34.91	0.003	-2.5975	0.0025
871	SLU 27	-0.72	-0.07	35.62	0.0032	-2.6393	-0.0178
871	SLU 28	-0.72	-0.02	35.62	0.0031	-2.6394	-0.0057
871	SLU 29	-0.72	-0.07	35.35	0.0032	-2.6233	-0.0183
871	SLU 30	-0.72	-0.02	35.35	0.0031	-2.6234	-0.0062
871	SLU 31	-0.76	0.03	38.26	0.0031	-2.819	0.0059
871	SLU 32	-0.77	-0.06	38.96	0.0033	-2.8609	-0.0144
871	SLU 33	-0.77	-0.01	38.96	0.0032	-2.861	-0.0023
871	SLU 34	-0.77	0.02	38.7	0.0031	-2.8451	0.0052
871	SLU 35	-0.78	-0.06	39.41	0.0033	-2.887	-0.0151
871	SLU 36	-0.78	-0.01	39.41	0.0033	-2.8871	-0.003
871	SLU 37	-0.78	-0.06	39.14	0.0033	-2.871	-0.0156
871	SLU 38	-0.78	-0.01	39.14	0.0032	-2.8711	-0.0035
871	SLU 39	-0.78	-0.05	39.88	0.0033	-2.925	-0.0131
871	SLU 40	-0.78	0	39.88	0.0032	-2.9251	-0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
871	SLU 41	-0.79	-0.05	40.32	0.0033	-2.951	-0.0138
871	SLU 42	-0.79	0	40.32	0.0032	-2.9512	-0.0017
871	SLU 43	-0.79	-0.11	38.55	0.0034	-2.9392	-0.0275
871	SLU 44	-0.79	-0.03	38.55	0.0033	-2.9394	-0.0073
871	SLU 45	-0.81	-0.11	39.26	0.0035	-2.9812	-0.0276
871	SLU 46	-0.81	-0.06	39.26	0.0034	-2.9814	-0.0155
871	SLU 47	-0.8	-0.03	38.99	0.0033	-2.9655	-0.008
871	SLU 48	-0.82	-0.11	39.7	0.0036	-3.0073	-0.0283
871	SLU 49	-0.82	-0.06	39.7	0.0035	-3.0074	-0.0162
871	SLU 50	-0.81	-0.11	39.44	0.0035	-2.9913	-0.0288
871	SLU 51	-0.81	-0.06	39.44	0.0034	-2.9914	-0.0167
871	SLU 52	-0.85	-0.02	42.34	0.0034	-3.187	-0.0046
871	SLU 53	-0.87	-0.1	43.05	0.0036	-3.2289	-0.0249
871	SLU 54	-0.87	-0.05	43.05	0.0036	-3.229	-0.0128
871	SLU 55	-0.86	-0.02	42.78	0.0035	-3.2131	-0.0053
871	SLU 56	-0.88	-0.1	43.49	0.0037	-3.255	-0.0256
871	SLU 57	-0.88	-0.05	43.49	0.0036	-3.2551	-0.0135
871	SLU 58	-0.87	-0.1	43.23	0.0036	-3.239	-0.0261
871	SLU 59	-0.87	-0.05	43.23	0.0036	-3.2391	-0.014
871	SLU 60	-0.88	-0.09	43.96	0.0036	-3.293	-0.0236
871	SLU 61	-0.88	-0.04	43.97	0.0036	-3.2931	-0.0115
871	SLU 62	-0.89	-0.09	44.41	0.0037	-3.319	-0.0243
871	SLU 63	-0.89	-0.05	44.41	0.0036	-3.3192	-0.0122
871	SLU 64	-0.86	-0.09	42.36	0.0038	-3.1847	-0.0242
871	SLU 65	-0.86	-0.01	42.36	0.0037	-3.1849	-0.004
871	SLU 66	-0.88	-0.09	43.06	0.0039	-3.2268	-0.0243
871	SLU 67	-0.88	-0.05	43.07	0.0038	-3.2269	-0.0122
871	SLU 68	-0.87	-0.02	42.8	0.0037	-3.211	-0.0047
871	SLU 69	-0.89	-0.1	43.51	0.0039	-3.2528	-0.025
871	SLU 70	-0.89	-0.05	43.51	0.0038	-3.253	-0.0129
871	SLU 71	-0.88	-0.1	43.24	0.0039	-3.2368	-0.0255
871	SLU 72	-0.88	-0.05	43.24	0.0038	-3.237	-0.0134
871	SLU 73	-0.92	0	46.15	0.0038	-3.4326	-0.0013
871	SLU 74	-0.94	-0.08	46.85	0.004	-3.4744	-0.0216
871	SLU 75	-0.94	-0.04	46.86	0.0039	-3.4745	-0.0095
871	SLU 76	-0.93	-0.01	46.59	0.0038	-3.4586	-0.002
871	SLU 77	-0.95	-0.09	47.3	0.004	-3.5005	-0.0223
871	SLU 78	-0.95	-0.04	47.3	0.004	-3.5006	-0.0102
871	SLU 79	-0.94	-0.09	47.03	0.004	-3.4845	-0.0228
871	SLU 80	-0.94	-0.04	47.03	0.0039	-3.4846	-0.0107
871	SLU 81	-0.95	-0.08	47.77	0.004	-3.5385	-0.0203
871	SLU 82	-0.95	-0.03	47.77	0.0039	-3.5386	-0.0082
871	SLU 83	-0.96	-0.08	48.22	0.004	-3.5646	-0.021
871	SLU 84	-0.96	-0.03	48.22	0.0039	-3.5647	-0.0089
871	SLE RA 1	-0.65	-0.08	31.75	0.0028	-2.3958	-0.0193
871	SLE RA 2	-0.65	-0.02	31.75	0.0028	-2.396	-0.0059
871	SLE RA 3	-0.66	-0.08	32.22	0.0029	-2.4239	-0.0194
871	SLE RA 4	-0.66	-0.04	32.22	0.0028	-2.4239	-0.0114
871	SLE RA 5	-0.65	-0.02	32.04	0.0028	-2.4133	-0.0063
871	SLE RA 6	-0.66	-0.08	32.51	0.0029	-2.4412	-0.0199
871	SLE RA 7	-0.66	-0.05	32.51	0.0029	-2.4413	-0.0118
871	SLE RA 8	-0.66	-0.08	32.34	0.0029	-2.4306	-0.0202
871	SLE RA 9	-0.66	-0.05	32.34	0.0028	-2.4307	-0.0121
871	SLE RA 10	-0.69	-0.01	34.27	0.0028	-2.5611	-0.0041
871	SLE RA 11	-0.7	-0.07	34.74	0.003	-2.589	-0.0176
871	SLE RA 12	-0.7	-0.04	34.74	0.0029	-2.589	-0.0095
871	SLE RA 13	-0.69	-0.02	34.57	0.0029	-2.5784	-0.0045
871	SLE RA 14	-0.7	-0.07	35.04	0.003	-2.6063	-0.0181
871	SLE RA 15	-0.7	-0.04	35.04	0.003	-2.6064	-0.01
871	SLE RA 16	-0.7	-0.07	34.86	0.003	-2.5957	-0.0184
871	SLE RA 17	-0.7	-0.04	34.86	0.0029	-2.5958	-0.0103
871	SLE RA 18	-0.7	-0.07	35.36	0.003	-2.6317	-0.0168
871	SLE RA 19	-0.7	-0.03	35.36	0.0029	-2.6318	-0.0087
871	SLE RA 20	-0.71	-0.07	35.65	0.003	-2.6491	-0.0172
871	SLE RA 21	-0.71	-0.03	35.65	0.0029	-2.6491	-0.0091
871	SLE FR 1	-0.65	-0.08	31.75	0.0028	-2.3958	-0.0193
871	SLE FR 2	-0.65	-0.06	31.75	0.0028	-2.3958	-0.0166
871	SLE FR 3	-0.65	-0.08	31.86	0.0029	-2.4028	-0.0195
871	SLE FR 4	-0.66	-0.06	32.83	0.0029	-2.4666	-0.0159
871	SLE FR 5	-0.67	-0.07	32.95	0.0029	-2.4735	-0.0187
871	SLE FR 6	-0.68	-0.07	33.55	0.0029	-2.5137	-0.018
871	SLE QP 1	-0.65	-0.08	31.75	0.0028	-2.3958	-0.0193
871	SLE QP 2	-0.66	-0.07	32.83	0.0029	-2.4666	-0.0186
871	SLD 1	2.2	1.44	41.67	0.0026	-3.0176	0.3598
871	SLD 2	2	0.78	41.86	0.0041	-3.0348	0.1948
871	SLD 3	2.15	0.07	41.91	0.0055	-3.0484	0.0171
871	SLD 4	1.95	-0.59	42.1	0.007	-3.0656	-0.1479
871	SLD 5	0.31	2.58	35.09	-0.0019	-2.5822	0.644
871	SLD 6	0.18	2.14	35.21	-0.0009	-2.5935	0.5359
871	SLD 7	0.14	-1.99	35.88	0.0078	-2.6847	-0.4983
871	SLD 8	0.01	-2.42	36	0.0088	-2.696	-0.6065
871	SLD 9	-1.34	2.28	29.65	-0.003	-2.2372	0.5693
871	SLD 10	-1.47	1.84	29.78	-0.002	-2.2484	0.4612
871	SLD 11	-1.51	-2.29	30.44	0.0066	-2.3397	-0.573
871	SLD 12	-1.64	-2.72	30.57	0.0076	-2.3509	-0.6811
871	SLD 13	-3.28	0.45	23.56	-0.0013	-1.8676	0.1108
871	SLD 14	-3.48	-0.22	23.75	0.0003	-1.8848	-0.0542
871	SLD 15	-3.33	-0.92	23.79	0.0016	-1.8983	-0.2319
871	SLD 16	-3.53	-1.59	23.99	0.0032	-1.9155	-0.3969
871	SLV 1	6.04	3.43	53.52	0.0023	-3.7575	0.855

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
871	SLV 2	5.58	1.88	53.98	0.0059	-3.7974	0.4708
871	SLV 3	5.93	0.31	54.06	0.0089	-3.8277	0.0749
871	SLV 4	5.46	-1.24	54.52	0.0124	-3.8677	-0.3093
871	SLV 5	1.6	5.98	38.14	-0.0079	-2.7404	1.4928
871	SLV 6	1.3	4.98	38.43	-0.0055	-2.7662	1.2452
871	SLV 7	1.22	-4.42	39.94	0.014	-2.9746	-1.1075
871	SLV 8	0.92	-5.42	40.23	0.0163	-3.0003	-1.3551
871	SLV 9	-2.25	5.27	25.43	-0.0106	-1.9328	1.3179
871	SLV 10	-2.55	4.28	25.72	-0.0082	-1.9586	1.0703
871	SLV 11	-2.63	-5.12	27.23	0.0113	-2.167	-1.2823
871	SLV 12	-2.93	-6.12	27.52	0.0136	-2.1927	-1.5299
871	SLV 13	-6.79	1.09	11.14	-0.0067	-1.0655	0.2722
871	SLV 14	-7.26	-0.45	11.59	-0.0031	-1.1055	-0.112
871	SLV 15	-6.91	-2.03	11.68	-0.0001	-1.1357	-0.5079
871	SLV 16	-7.37	-3.57	12.13	0.0035	-1.1757	-0.8921
871	CRTFP Ux+	0	0	0	0	0	0
871	CRTFP Ux-	0	0	0	0	0	0
871	CRTFP Uy+	0	0	0	0	0	0
871	CRTFP Uy-	0	0	0	0	0	0
874	SLU 1	0.62	0.37	33.68	-0.0465	4.4824	-0.1314
874	SLU 2	0.61	0.47	33.68	-0.0467	4.4842	-0.1646
874	SLU 3	0.64	0.38	34.44	-0.0477	4.5653	-0.1358
874	SLU 4	0.63	0.44	34.44	-0.0478	4.5663	-0.1557
874	SLU 5	0.62	0.47	34.14	-0.0474	4.5354	-0.1651
874	SLU 6	0.65	0.39	34.91	-0.0484	4.6164	-0.1363
874	SLU 7	0.65	0.44	34.91	-0.0485	4.6175	-0.1562
874	SLU 8	0.65	0.37	34.62	-0.048	4.5848	-0.1324
874	SLU 9	0.64	0.43	34.61	-0.0481	4.5858	-0.1523
874	SLU 10	0.67	0.55	37.84	-0.0533	4.9577	-0.1943
874	SLU 11	0.69	0.47	38.6	-0.0543	5.0388	-0.1655
874	SLU 12	0.69	0.53	38.6	-0.0544	5.0399	-0.1854
874	SLU 13	0.68	0.55	38.3	-0.0541	5.0089	-0.1948
874	SLU 14	0.71	0.47	39.07	-0.0551	5.09	-0.166
874	SLU 15	0.7	0.53	39.07	-0.0552	5.091	-0.1859
874	SLU 16	0.7	0.46	38.78	-0.0547	5.0583	-0.1621
874	SLU 17	0.69	0.52	38.78	-0.0548	5.0593	-0.182
874	SLU 18	0.7	0.49	39.63	-0.056	5.1589	-0.1738
874	SLU 19	0.69	0.55	39.62	-0.0561	5.16	-0.1937
874	SLU 20	0.71	0.49	40.09	-0.0568	5.2101	-0.1743
874	SLU 21	0.71	0.55	40.09	-0.0569	5.2111	-0.1942
874	SLU 22	0.69	0.45	37.81	-0.0529	4.9489	-0.1588
874	SLU 23	0.68	0.54	37.8	-0.0531	4.9507	-0.1921
874	SLU 24	0.71	0.46	38.57	-0.0541	5.0318	-0.1633
874	SLU 25	0.7	0.52	38.56	-0.0542	5.0328	-0.1832
874	SLU 26	0.69	0.55	38.27	-0.0539	5.0019	-0.1926
874	SLU 27	0.72	0.46	39.04	-0.0548	5.0829	-0.1638
874	SLU 28	0.71	0.52	39.03	-0.0549	5.084	-0.1837
874	SLU 29	0.71	0.45	38.75	-0.0544	5.0513	-0.1599
874	SLU 30	0.71	0.51	38.74	-0.0545	5.0523	-0.1798
874	SLU 31	0.73	0.63	41.96	-0.0598	5.4242	-0.2217
874	SLU 32	0.76	0.55	42.73	-0.0607	5.5053	-0.193
874	SLU 33	0.76	0.6	42.73	-0.0608	5.5064	-0.2129
874	SLU 34	0.75	0.63	42.43	-0.0605	5.4754	-0.2223
874	SLU 35	0.77	0.55	43.2	-0.0615	5.5565	-0.1935
874	SLU 36	0.77	0.6	43.19	-0.0616	5.5575	-0.2134
874	SLU 37	0.77	0.54	42.91	-0.0611	5.5248	-0.1896
874	SLU 38	0.76	0.59	42.9	-0.0612	5.5258	-0.2095
874	SLU 39	0.77	0.57	43.75	-0.0624	5.6254	-0.2013
874	SLU 40	0.76	0.63	43.75	-0.0625	5.6265	-0.2212
874	SLU 41	0.78	0.57	44.22	-0.0632	5.6766	-0.2018
874	SLU 42	0.77	0.63	44.22	-0.0633	5.6776	-0.2217
874	SLU 43	0.79	0.46	42.37	-0.0583	5.6672	-0.1613
874	SLU 44	0.78	0.55	42.36	-0.0584	5.669	-0.1945
874	SLU 45	0.81	0.47	43.13	-0.0594	5.7501	-0.1658
874	SLU 46	0.8	0.53	43.13	-0.0595	5.7511	-0.1857
874	SLU 47	0.79	0.55	42.83	-0.0592	5.7201	-0.1951
874	SLU 48	0.82	0.47	43.6	-0.0602	5.8012	-0.1663
874	SLU 49	0.81	0.53	43.59	-0.0603	5.8023	-0.1862
874	SLU 50	0.81	0.46	43.31	-0.0598	5.7695	-0.1624
874	SLU 51	0.8	0.52	43.3	-0.0599	5.7706	-0.1823
874	SLU 52	0.83	0.64	46.53	-0.0651	6.1425	-0.2242
874	SLU 53	0.86	0.55	47.29	-0.0661	6.2236	-0.1955
874	SLU 54	0.85	0.61	47.29	-0.0662	6.2246	-0.2154
874	SLU 55	0.84	0.64	46.99	-0.0658	6.1937	-0.2248
874	SLU 56	0.87	0.56	47.76	-0.0668	6.2748	-0.196
874	SLU 57	0.86	0.61	47.76	-0.0669	6.2758	-0.2159
874	SLU 58	0.86	0.54	47.47	-0.0664	6.2431	-0.1921
874	SLU 59	0.86	0.6	47.47	-0.0665	6.2441	-0.212
874	SLU 60	0.87	0.58	48.32	-0.0678	6.3437	-0.2038
874	SLU 61	0.86	0.63	48.31	-0.0679	6.3448	-0.2237
874	SLU 62	0.88	0.58	48.78	-0.0685	6.3949	-0.2043
874	SLU 63	0.87	0.64	48.78	-0.0686	6.3959	-0.2242
874	SLU 64	0.85	0.53	46.5	-0.0647	6.1337	-0.1888
874	SLU 65	0.84	0.63	46.49	-0.0649	6.1355	-0.222
874	SLU 66	0.87	0.55	47.26	-0.0659	6.2166	-0.1933
874	SLU 67	0.87	0.6	47.25	-0.0659	6.2176	-0.2132
874	SLU 68	0.86	0.63	46.96	-0.0656	6.1866	-0.2226
874	SLU 69	0.88	0.55	47.73	-0.0666	6.2677	-0.1938
874	SLU 70	0.88	0.61	47.72	-0.0667	6.2688	-0.2137
874	SLU 71	0.88	0.54	47.44	-0.0662	6.236	-0.1899

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
874	SLU 72	0.87	0.59	47.43	-0.0663	6.2371	-0.2098
874	SLU 73	0.9	0.71	50.65	-0.0715	6.609	-0.2517
874	SLU 74	0.93	0.63	51.42	-0.0725	6.6901	-0.223
874	SLU 75	0.92	0.69	51.41	-0.0726	6.6911	-0.2429
874	SLU 76	0.91	0.72	51.12	-0.0723	6.6602	-0.2523
874	SLU 77	0.94	0.63	51.89	-0.0732	6.7412	-0.2235
874	SLU 78	0.93	0.69	51.88	-0.0733	6.7423	-0.2434
874	SLU 79	0.93	0.62	51.6	-0.0728	6.7096	-0.2196
874	SLU 80	0.93	0.68	51.59	-0.0729	6.7106	-0.2395
874	SLU 81	0.93	0.65	52.44	-0.0742	6.8102	-0.2312
874	SLU 82	0.93	0.71	52.44	-0.0743	6.8113	-0.2512
874	SLU 83	0.94	0.66	52.91	-0.0749	6.8614	-0.2318
874	SLU 84	0.94	0.71	52.91	-0.075	6.8624	-0.2517
874	SLE RA 1	0.64	0.39	34.86	-0.0484	4.6157	-0.1392
874	SLE RA 2	0.64	0.46	34.86	-0.0485	4.6169	-0.1613
874	SLE RA 3	0.65	0.4	35.37	-0.0491	4.6709	-0.1422
874	SLE RA 4	0.65	0.44	35.36	-0.0492	4.6716	-0.1555
874	SLE RA 5	0.64	0.46	35.17	-0.049	4.651	-0.1617
874	SLE RA 6	0.66	0.4	35.68	-0.0496	4.7051	-0.1425
874	SLE RA 7	0.66	0.44	35.68	-0.0497	4.7058	-0.1558
874	SLE RA 8	0.66	0.4	35.49	-0.0494	4.6839	-0.1399
874	SLE RA 9	0.65	0.43	35.48	-0.0494	4.6846	-0.1532
874	SLE RA 10	0.67	0.51	37.63	-0.0529	4.9326	-0.1811
874	SLE RA 11	0.69	0.46	38.14	-0.0536	4.9866	-0.162
874	SLE RA 12	0.69	0.5	38.14	-0.0536	4.9873	-0.1752
874	SLE RA 13	0.68	0.51	37.94	-0.0534	4.9667	-0.1815
874	SLE RA 14	0.7	0.46	38.45	-0.0541	5.0207	-0.1623
874	SLE RA 15	0.69	0.5	38.45	-0.0541	5.0214	-0.1756
874	SLE RA 16	0.69	0.45	38.26	-0.0538	4.9996	-0.1597
874	SLE RA 17	0.69	0.49	38.26	-0.0538	5.0003	-0.173
874	SLE RA 18	0.69	0.47	38.82	-0.0547	5.0667	-0.1675
874	SLE RA 19	0.69	0.51	38.82	-0.0547	5.0674	-0.1808
874	SLE RA 20	0.7	0.48	39.14	-0.0552	5.1008	-0.1678
874	SLE RA 21	0.7	0.51	39.13	-0.0552	5.1015	-0.1811
874	SLE FR 1	0.64	0.39	34.86	-0.0484	4.6157	-0.1392
874	SLE FR 2	0.64	0.41	34.86	-0.0484	4.616	-0.1436
874	SLE FR 3	0.65	0.39	34.99	-0.0486	4.6294	-0.1393
874	SLE FR 4	0.66	0.43	36.05	-0.0503	4.7513	-0.1521
874	SLE FR 5	0.66	0.42	36.17	-0.0505	4.7647	-0.1478
874	SLE FR 6	0.67	0.43	36.84	-0.0515	4.8412	-0.1533
874	SLE QP 1	0.64	0.39	34.86	-0.0484	4.6157	-0.1392
874	SLE QP 2	0.66	0.42	36.05	-0.0503	4.751	-0.1477
874	SLD 1	2.58	0.23	26.82	-0.0364	3.8359	-0.0811
874	SLD 2	2.32	1.03	26.54	-0.038	3.8156	-0.3615
874	SLD 3	2.92	-1.39	27.23	-0.0335	3.8639	0.4845
874	SLD 4	2.66	-0.59	26.95	-0.0351	3.8436	0.2041
874	SLD 5	0.76	2.68	32.71	-0.0502	4.4377	-0.9357
874	SLD 6	0.59	3.2	32.52	-0.0513	4.4244	-1.1195
874	SLD 7	1.9	-2.72	34.08	-0.0406	4.5308	0.9496
874	SLD 8	1.73	-2.2	33.89	-0.0416	4.5175	0.7658
874	SLD 9	-0.41	3.03	38.21	-0.0589	4.9845	-1.0612
874	SLD 10	-0.58	3.56	38.02	-0.06	4.9712	-1.245
874	SLD 11	0.73	-2.37	39.58	-0.0492	5.0776	0.8241
874	SLD 12	0.55	-1.84	39.39	-0.0503	5.0643	0.6403
874	SLD 13	-1.34	1.42	45.15	-0.0654	5.6585	-0.4995
874	SLD 14	-1.6	2.23	44.87	-0.067	5.6382	-0.7799
874	SLD 15	-1	-0.2	45.56	-0.0625	5.6864	0.0661
874	SLD 16	-1.26	0.61	45.28	-0.0641	5.6661	-0.2143
874	SLV 1	5.16	-0.07	14.46	-0.0178	2.6092	0.0248
874	SLV 2	4.54	1.8	13.81	-0.0216	2.5619	-0.6282
874	SLV 3	5.94	-3.76	15.4	-0.0112	2.6744	1.3116
874	SLV 4	5.32	-1.88	14.74	-0.015	2.6271	0.6585
874	SLV 5	0.94	5.54	28.27	-0.0498	4.0178	-1.935
874	SLV 6	0.54	6.75	27.85	-0.0523	3.9873	-2.3559
874	SLV 7	3.52	-6.75	31.39	-0.0279	4.235	2.3541
874	SLV 8	3.13	-5.54	30.96	-0.0304	4.2045	1.9333
874	SLV 9	-1.81	6.38	41.14	-0.0701	5.2975	-2.2287
874	SLV 10	-2.21	7.58	40.71	-0.0726	5.267	-2.6495
874	SLV 11	0.77	-5.91	44.25	-0.0482	5.5147	2.0605
874	SLV 12	0.38	-4.7	43.83	-0.0507	5.4843	1.6397
874	SLV 13	-4	2.72	57.36	-0.0855	6.8749	-0.9539
874	SLV 14	-4.62	4.59	56.7	-0.0893	6.8277	-1.607
874	SLV 15	-3.23	-0.97	58.29	-0.0789	6.9401	0.3329
874	SLV 16	-3.84	0.91	57.64	-0.0827	6.8928	-0.3202
874	CRTFP Ux+	0	0	0	0	0	0
874	CRTFP Ux-	0	0	0	0	0	0
874	CRTFP Uy+	0	0	0	0	0	0
874	CRTFP Uy-	0	0	0	0	0	0
876	SLU 1	1.29	-0.09	64.05	0.0204	0.3328	-0.0117
876	SLU 2	1.29	0.01	64.05	0.0199	0.3307	-0.0117
876	SLU 3	1.32	-0.09	65.52	0.021	0.3436	-0.0118
876	SLU 4	1.32	-0.03	65.52	0.0207	0.3423	-0.0118
876	SLU 5	1.31	0	64.95	0.0202	0.3373	-0.0118
876	SLU 6	1.34	-0.09	66.41	0.0213	0.3502	-0.0119
876	SLU 7	1.34	-0.03	66.41	0.021	0.3489	-0.0119
876	SLU 8	1.33	-0.1	65.84	0.021	0.346	-0.0119
876	SLU 9	1.33	-0.04	65.84	0.0207	0.3447	-0.0119
876	SLU 10	1.39	0.03	72.64	0.022	0.385	-0.013
876	SLU 11	1.43	-0.06	74.11	0.0231	0.398	-0.0131
876	SLU 12	1.42	0	74.11	0.0228	0.3967	-0.0131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
876	SLU 13	1.41	0.02	73.54	0.0223	0.3917	-0.0131
876	SLU 14	1.44	-0.07	75	0.0234	0.4046	-0.0132
876	SLU 15	1.44	-0.01	75	0.0231	0.4033	-0.0132
876	SLU 16	1.43	-0.08	74.44	0.0232	0.4004	-0.0131
876	SLU 17	1.43	-0.02	74.44	0.0228	0.3991	-0.0132
876	SLU 18	1.44	-0.06	76.33	0.0235	0.4104	-0.0135
876	SLU 19	1.44	0	76.33	0.0231	0.4092	-0.0135
876	SLU 20	1.46	-0.07	77.22	0.0238	0.4171	-0.0136
876	SLU 21	1.45	-0.01	77.22	0.0234	0.4158	-0.0136
876	SLU 22	1.41	-0.05	72.48	0.0231	0.3855	-0.0126
876	SLU 23	1.41	0.05	72.48	0.0226	0.3834	-0.0126
876	SLU 24	1.44	-0.04	73.94	0.0237	0.3964	-0.0127
876	SLU 25	1.44	0.02	73.94	0.0233	0.3951	-0.0127
876	SLU 26	1.43	0.04	73.37	0.0229	0.3901	-0.0127
876	SLU 27	1.46	-0.05	74.84	0.024	0.403	-0.0128
876	SLU 28	1.46	0.01	74.84	0.0236	0.4017	-0.0128
876	SLU 29	1.45	-0.06	74.27	0.0237	0.3988	-0.0128
876	SLU 30	1.45	0	74.27	0.0234	0.3975	-0.0128
876	SLU 31	1.51	0.07	81.07	0.0247	0.4378	-0.0139
876	SLU 32	1.54	-0.02	82.53	0.0258	0.4507	-0.014
876	SLU 33	1.54	0.04	82.54	0.0255	0.4495	-0.014
876	SLU 34	1.53	0.07	81.97	0.025	0.4444	-0.014
876	SLU 35	1.56	-0.02	83.43	0.0261	0.4574	-0.0141
876	SLU 36	1.56	0.04	83.43	0.0258	0.4561	-0.0141
876	SLU 37	1.55	-0.04	82.86	0.0258	0.4532	-0.014
876	SLU 38	1.55	0.02	82.86	0.0255	0.4519	-0.0141
876	SLU 39	1.56	-0.02	84.75	0.0261	0.4632	-0.0144
876	SLU 40	1.56	0.04	84.75	0.0258	0.462	-0.0144
876	SLU 41	1.58	-0.02	85.65	0.0264	0.4698	-0.0145
876	SLU 42	1.57	0.04	85.65	0.0261	0.4686	-0.0145
876	SLU 43	1.64	-0.14	80.38	0.0257	0.4145	-0.0149
876	SLU 44	1.64	-0.04	80.38	0.0251	0.4124	-0.0149
876	SLU 45	1.67	-0.13	81.84	0.0262	0.4253	-0.015
876	SLU 46	1.67	-0.07	81.84	0.0259	0.4241	-0.015
876	SLU 47	1.66	-0.04	81.28	0.0254	0.419	-0.015
876	SLU 48	1.69	-0.13	82.74	0.0265	0.4319	-0.0151
876	SLU 49	1.69	-0.07	82.74	0.0262	0.4307	-0.0151
876	SLU 50	1.68	-0.15	82.17	0.0263	0.4277	-0.0151
876	SLU 51	1.68	-0.09	82.17	0.0259	0.4265	-0.0151
876	SLU 52	1.74	-0.02	88.97	0.0272	0.4668	-0.0162
876	SLU 53	1.77	-0.11	90.44	0.0283	0.4797	-0.0163
876	SLU 54	1.77	-0.05	90.44	0.028	0.4784	-0.0163
876	SLU 55	1.76	-0.02	89.87	0.0275	0.4734	-0.0163
876	SLU 56	1.79	-0.11	91.33	0.0286	0.4863	-0.0164
876	SLU 57	1.79	-0.05	91.33	0.0283	0.4851	-0.0164
876	SLU 58	1.78	-0.12	90.76	0.0284	0.4821	-0.0163
876	SLU 59	1.78	-0.06	90.76	0.0281	0.4809	-0.0164
876	SLU 60	1.79	-0.11	92.65	0.0287	0.4922	-0.0167
876	SLU 61	1.78	-0.05	92.65	0.0284	0.4909	-0.0167
876	SLU 62	1.8	-0.11	93.55	0.029	0.4988	-0.0168
876	SLU 63	1.8	-0.05	93.55	0.0287	0.4975	-0.0168
876	SLU 64	1.76	-0.09	88.81	0.0283	0.4673	-0.0158
876	SLU 65	1.76	0.01	88.81	0.0278	0.4652	-0.0158
876	SLU 66	1.79	-0.09	90.27	0.0289	0.4781	-0.0159
876	SLU 67	1.79	-0.03	90.27	0.0286	0.4768	-0.0159
876	SLU 68	1.78	0	89.7	0.0281	0.4718	-0.0159
876	SLU 69	1.81	-0.09	91.17	0.0292	0.4847	-0.016
876	SLU 70	1.81	-0.03	91.17	0.0289	0.4835	-0.016
876	SLU 71	1.8	-0.1	90.6	0.0289	0.4805	-0.016
876	SLU 72	1.8	-0.04	90.6	0.0286	0.4792	-0.016
876	SLU 73	1.86	0.03	97.4	0.0299	0.5195	-0.0171
876	SLU 74	1.89	-0.06	98.86	0.031	0.5325	-0.0172
876	SLU 75	1.89	0	98.86	0.0307	0.5312	-0.0172
876	SLU 76	1.88	0.02	98.29	0.0302	0.5262	-0.0172
876	SLU 77	1.91	-0.07	99.76	0.0313	0.5391	-0.0173
876	SLU 78	1.91	-0.01	99.76	0.031	0.5378	-0.0173
876	SLU 79	1.9	-0.08	99.19	0.031	0.5349	-0.0172
876	SLU 80	1.9	-0.02	99.19	0.0307	0.5336	-0.0173
876	SLU 81	1.9	-0.06	101.08	0.0314	0.5449	-0.0176
876	SLU 82	1.9	0	101.08	0.031	0.5437	-0.0176
876	SLU 83	1.92	-0.07	101.98	0.0317	0.5516	-0.0177
876	SLU 84	1.92	-0.01	101.98	0.0313	0.5503	-0.0177
876	SLE RA 1	1.33	-0.08	66.46	0.0212	0.3478	-0.0119
876	SLE RA 2	1.33	-0.02	66.46	0.0208	0.3464	-0.012
876	SLE RA 3	1.35	-0.08	67.44	0.0216	0.355	-0.012
876	SLE RA 4	1.35	-0.04	67.44	0.0214	0.3542	-0.012
876	SLE RA 5	1.34	-0.02	67.06	0.021	0.3509	-0.012
876	SLE RA 6	1.36	-0.08	68.03	0.0218	0.3595	-0.0121
876	SLE RA 7	1.36	-0.04	68.03	0.0216	0.3586	-0.0121
876	SLE RA 8	1.35	-0.09	67.65	0.0216	0.3567	-0.0121
876	SLE RA 9	1.35	-0.05	67.65	0.0214	0.3558	-0.0121
876	SLE RA 10	1.39	0	72.19	0.0223	0.3827	-0.0128
876	SLE RA 11	1.42	-0.06	73.16	0.023	0.3913	-0.0129
876	SLE RA 12	1.41	-0.02	73.16	0.0228	0.3905	-0.0129
876	SLE RA 13	1.41	0	72.79	0.0225	0.3871	-0.0129
876	SLE RA 14	1.43	-0.06	73.76	0.0232	0.3957	-0.0129
876	SLE RA 15	1.43	-0.02	73.76	0.023	0.3949	-0.013
876	SLE RA 16	1.42	-0.07	73.38	0.023	0.3929	-0.0129
876	SLE RA 17	1.42	-0.03	73.38	0.0228	0.3921	-0.0129
876	SLE RA 18	1.42	-0.06	74.64	0.0232	0.3996	-0.0131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
876	SLE RA 19	1.42	-0.02	74.64	0.023	0.3988	-0.0132
876	SLE RA 20	1.44	-0.06	75.24	0.0234	0.404	-0.0132
876	SLE RA 21	1.44	-0.02	75.24	0.0232	0.4032	-0.0132
876	SLE FR 1	1.33	-0.08	66.46	0.0212	0.3478	-0.0119
876	SLE FR 2	1.33	-0.07	66.46	0.0211	0.3476	-0.0119
876	SLE FR 3	1.33	-0.08	66.7	0.0213	0.3496	-0.012
876	SLE FR 4	1.36	-0.06	68.92	0.0217	0.3631	-0.0123
876	SLE FR 5	1.36	-0.08	69.15	0.0219	0.3651	-0.0123
876	SLE FR 6	1.38	-0.07	70.55	0.0222	0.3737	-0.0125
876	SLE QP 1	1.33	-0.08	66.46	0.0212	0.3478	-0.0119
876	SLE QP 2	1.36	-0.08	68.92	0.0218	0.3634	-0.0123
876	SLD 1	7.25	1.04	61.84	0.0129	0.4004	-0.055
876	SLD 2	6.81	1.63	61.54	0.0093	0.4034	-0.0404
876	SLD 3	7.33	-0.82	62.2	0.0235	0.4517	-0.0563
876	SLD 4	6.9	-0.23	61.9	0.02	0.4547	-0.0418
876	SLD 5	3.07	2.96	66.3	0.0035	0.2962	-0.0256
876	SLD 6	2.78	3.35	66.1	0.0012	0.2982	-0.0161
876	SLD 7	3.36	-3.21	67.5	0.0392	0.4671	-0.0302
876	SLD 8	3.08	-2.82	67.3	0.0368	0.469	-0.0206
876	SLD 9	-0.36	2.67	70.53	0.0068	0.2577	-0.004
876	SLD 10	-0.65	3.06	70.33	0.0044	0.2596	0.0056
876	SLD 11	-0.07	-3.5	71.73	0.0424	0.4286	-0.0085
876	SLD 12	-0.35	-3.11	71.53	0.0401	0.4305	0.001
876	SLD 13	-4.18	0.08	75.93	0.0237	0.272	0.0172
876	SLD 14	-4.62	0.66	75.63	0.0201	0.275	0.0317
876	SLD 15	-4.1	-1.78	76.29	0.0344	0.3233	0.0158
876	SLD 16	-4.53	-1.19	75.99	0.0308	0.3263	0.0304
876	SLV 1	15.13	2.47	52.36	0.0012	0.4508	-0.112
876	SLV 2	14.11	3.84	51.66	-0.0071	0.4578	-0.0782
876	SLV 3	15.33	-1.75	53.18	0.0254	0.5701	-0.1152
876	SLV 4	14.32	-0.37	52.47	0.0171	0.577	-0.0814
876	SLV 5	5.35	6.85	62.83	-0.0197	0.2076	-0.0432
876	SLV 6	4.7	7.73	62.38	-0.025	0.212	-0.0214
876	SLV 7	6.03	-7.21	65.55	0.0611	0.605	-0.0538
876	SLV 8	5.38	-6.33	65.1	0.0557	0.6095	-0.032
876	SLV 9	-2.67	6.18	72.73	-0.0121	0.1172	0.0074
876	SLV 10	-3.32	7.06	72.28	-0.0174	0.1217	0.0292
876	SLV 11	-1.99	-7.89	75.45	0.0687	0.5147	-0.0032
876	SLV 12	-2.64	-7	75	0.0633	0.5192	0.0186
876	SLV 13	-11.6	0.22	85.36	0.0265	0.1497	0.0568
876	SLV 14	-12.62	1.6	84.65	0.0182	0.1567	0.0906
876	SLV 15	-11.4	-4	86.17	0.0507	0.269	0.0536
876	SLV 16	-12.41	-2.62	85.47	0.0424	0.2759	0.0874
876	CRTFP Ux+	0	0	0	0	0	0
876	CRTFP Ux-	0	0	0	0	0	0
876	CRTFP Uy+	0	0	0	0	0	0
876	CRTFP Uy-	0	0	0	0	0	0
879	SLU 1	-1.06	-0.48	65.85	0.0009	-0.4031	0.0141
879	SLU 2	-1.06	-0.38	65.84	0.0004	-0.4001	0.0141
879	SLU 3	-1.08	-0.48	67.4	0.0009	-0.4152	0.0144
879	SLU 4	-1.09	-0.41	67.39	0.0006	-0.4134	0.0144
879	SLU 5	-1.08	-0.38	66.78	0.0003	-0.4072	0.0143
879	SLU 6	-1.1	-0.48	68.34	0.0009	-0.4223	0.0146
879	SLU 7	-1.1	-0.42	68.33	0.0006	-0.4205	0.0146
879	SLU 8	-1.09	-0.49	67.75	0.0008	-0.4173	0.0146
879	SLU 9	-1.09	-0.43	67.74	0.0005	-0.4155	0.0146
879	SLU 10	-1.14	-0.41	74.71	-0.0008	-0.469	0.0166
879	SLU 11	-1.17	-0.51	76.27	-0.0002	-0.4841	0.0169
879	SLU 12	-1.17	-0.45	76.26	-0.0005	-0.4823	0.0169
879	SLU 13	-1.16	-0.42	75.66	-0.0008	-0.4761	0.0169
879	SLU 14	-1.19	-0.52	77.22	-0.0002	-0.4912	0.0171
879	SLU 15	-1.19	-0.45	77.21	-0.0005	-0.4894	0.0171
879	SLU 16	-1.18	-0.53	76.62	-0.0003	-0.4862	0.0171
879	SLU 17	-1.18	-0.46	76.61	-0.0006	-0.4844	0.0171
879	SLU 18	-1.18	-0.52	78.53	-0.0008	-0.5015	0.0177
879	SLU 19	-1.18	-0.46	78.52	-0.0011	-0.4997	0.0177
879	SLU 20	-1.2	-0.53	79.47	-0.0008	-0.5086	0.0179
879	SLU 21	-1.2	-0.47	79.46	-0.0011	-0.5068	0.0179
879	SLU 22	-1.17	-0.48	74.59	0.0007	-0.4666	0.0159
879	SLU 23	-1.17	-0.37	74.57	0.0001	-0.4636	0.0159
879	SLU 24	-1.19	-0.47	76.13	0.0007	-0.4787	0.0162
879	SLU 25	-1.19	-0.41	76.12	0.0004	-0.4769	0.0162
879	SLU 26	-1.19	-0.38	75.52	0.0001	-0.4707	0.0161
879	SLU 27	-1.21	-0.48	77.08	0.0007	-0.4858	0.0164
879	SLU 28	-1.21	-0.42	77.07	0.0004	-0.484	0.0164
879	SLU 29	-1.2	-0.49	76.48	0.0006	-0.4808	0.0164
879	SLU 30	-1.2	-0.43	76.47	0.0003	-0.479	0.0164
879	SLU 31	-1.25	-0.41	83.44	-0.001	-0.5324	0.0184
879	SLU 32	-1.28	-0.51	85	-0.0004	-0.5475	0.0187
879	SLU 33	-1.28	-0.44	84.99	-0.0007	-0.5457	0.0187
879	SLU 34	-1.27	-0.41	84.39	-0.001	-0.5395	0.0187
879	SLU 35	-1.29	-0.51	85.95	-0.0004	-0.5546	0.0189
879	SLU 36	-1.3	-0.45	85.94	-0.0008	-0.5528	0.0189
879	SLU 37	-1.29	-0.52	85.36	-0.0005	-0.5497	0.0189
879	SLU 38	-1.29	-0.46	85.35	-0.0009	-0.5479	0.0189
879	SLU 39	-1.29	-0.52	87.26	-0.001	-0.5649	0.0195
879	SLU 40	-1.29	-0.46	87.25	-0.0013	-0.5631	0.0195
879	SLU 41	-1.3	-0.53	88.21	-0.001	-0.5721	0.0197
879	SLU 42	-1.31	-0.47	88.2	-0.0013	-0.5703	0.0197
879	SLU 43	-1.34	-0.62	82.61	0.0012	-0.5023	0.0177

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
879	SLU 44	-1.34	-0.52	82.6	0.0007	-0.4993	0.0177
879	SLU 45	-1.36	-0.62	84.16	0.0013	-0.5144	0.018
879	SLU 46	-1.37	-0.56	84.15	0.001	-0.5126	0.018
879	SLU 47	-1.36	-0.53	83.54	0.0007	-0.5064	0.018
879	SLU 48	-1.38	-0.63	85.1	0.0013	-0.5215	0.0182
879	SLU 49	-1.38	-0.57	85.09	0.001	-0.5197	0.0183
879	SLU 50	-1.37	-0.64	84.51	0.0012	-0.5165	0.0182
879	SLU 51	-1.37	-0.58	84.5	0.0009	-0.5147	0.0182
879	SLU 52	-1.43	-0.55	91.47	-0.0005	-0.5682	0.0202
879	SLU 53	-1.45	-0.65	93.03	0.0001	-0.5832	0.0205
879	SLU 54	-1.45	-0.59	93.02	-0.0002	-0.5814	0.0205
879	SLU 55	-1.44	-0.56	92.42	-0.0005	-0.5753	0.0205
879	SLU 56	-1.47	-0.66	93.98	0.0001	-0.5904	0.0207
879	SLU 57	-1.47	-0.6	93.97	-0.0002	-0.5886	0.0208
879	SLU 58	-1.46	-0.67	93.38	0	-0.5854	0.0207
879	SLU 59	-1.46	-0.61	93.37	-0.0003	-0.5836	0.0207
879	SLU 60	-1.46	-0.67	95.29	-0.0004	-0.6007	0.0213
879	SLU 61	-1.46	-0.61	95.28	-0.0007	-0.5989	0.0213
879	SLU 62	-1.48	-0.68	96.23	-0.0004	-0.6078	0.0215
879	SLU 63	-1.48	-0.61	96.22	-0.0008	-0.606	0.0215
879	SLU 64	-1.45	-0.62	91.35	0.001	-0.5658	0.0195
879	SLU 65	-1.45	-0.52	91.33	0.0005	-0.5628	0.0195
879	SLU 66	-1.47	-0.62	92.89	0.0011	-0.5778	0.0198
879	SLU 67	-1.47	-0.56	92.88	0.0008	-0.576	0.0198
879	SLU 68	-1.47	-0.53	92.28	0.0005	-0.5699	0.0198
879	SLU 69	-1.49	-0.63	93.84	0.001	-0.585	0.02
879	SLU 70	-1.49	-0.56	93.83	0.0007	-0.5832	0.0201
879	SLU 71	-1.48	-0.64	93.24	0.0009	-0.58	0.02
879	SLU 72	-1.48	-0.57	93.23	0.0006	-0.5782	0.02
879	SLU 73	-1.53	-0.55	100.2	-0.0007	-0.6316	0.022
879	SLU 74	-1.56	-0.65	101.76	-0.0001	-0.6467	0.0223
879	SLU 75	-1.56	-0.59	101.75	-0.0004	-0.6449	0.0223
879	SLU 76	-1.55	-0.56	101.15	-0.0007	-0.6387	0.0223
879	SLU 77	-1.57	-0.66	102.71	-0.0001	-0.6538	0.0225
879	SLU 78	-1.58	-0.6	102.7	-0.0004	-0.652	0.0226
879	SLU 79	-1.57	-0.67	102.12	-0.0002	-0.6488	0.0225
879	SLU 80	-1.57	-0.61	102.11	-0.0005	-0.647	0.0225
879	SLU 81	-1.57	-0.67	104.02	-0.0007	-0.6641	0.0231
879	SLU 82	-1.57	-0.6	104.01	-0.001	-0.6623	0.0231
879	SLU 83	-1.58	-0.67	104.97	-0.0007	-0.6712	0.0233
879	SLU 84	-1.59	-0.61	104.96	-0.001	-0.6694	0.0233
879	SLE RA 1	-1.09	-0.48	68.35	0.0008	-0.4212	0.0146
879	SLE RA 2	-1.09	-0.41	68.34	0.0005	-0.4192	0.0146
879	SLE RA 3	-1.11	-0.48	69.38	0.0009	-0.4293	0.0148
879	SLE RA 4	-1.11	-0.43	69.37	0.0007	-0.4281	0.0148
879	SLE RA 5	-1.1	-0.41	68.97	0.0005	-0.424	0.0148
879	SLE RA 6	-1.12	-0.48	70.01	0.0008	-0.4341	0.015
879	SLE RA 7	-1.12	-0.44	70	0.0006	-0.4329	0.015
879	SLE RA 8	-1.11	-0.49	69.61	0.0008	-0.4307	0.0149
879	SLE RA 9	-1.11	-0.45	69.61	0.0006	-0.4295	0.0149
879	SLE RA 10	-1.15	-0.43	74.25	-0.0003	-0.4652	0.0163
879	SLE RA 11	-1.16	-0.5	75.29	0.0001	-0.4752	0.0165
879	SLE RA 12	-1.16	-0.46	75.28	-0.0001	-0.474	0.0165
879	SLE RA 13	-1.16	-0.44	74.88	-0.0003	-0.4699	0.0164
879	SLE RA 14	-1.17	-0.5	75.92	0.0001	-0.48	0.0166
879	SLE RA 15	-1.18	-0.46	75.92	-0.0001	-0.4788	0.0166
879	SLE RA 16	-1.17	-0.51	75.53	0	-0.4766	0.0166
879	SLE RA 17	-1.17	-0.47	75.52	-0.0002	-0.4754	0.0166
879	SLE RA 18	-1.17	-0.51	76.8	-0.0003	-0.4868	0.017
879	SLE RA 19	-1.17	-0.47	76.79	-0.0005	-0.4856	0.017
879	SLE RA 20	-1.18	-0.51	77.43	-0.0003	-0.4916	0.0171
879	SLE RA 21	-1.18	-0.47	77.42	-0.0005	-0.4904	0.0172
879	SLE FR 1	-1.09	-0.48	68.35	0.0008	-0.4212	0.0146
879	SLE FR 2	-1.09	-0.46	68.35	0.0007	-0.4208	0.0146
879	SLE FR 3	-1.09	-0.48	68.6	0.0008	-0.4231	0.0147
879	SLE FR 4	-1.11	-0.47	70.88	0.0004	-0.4405	0.0153
879	SLE FR 5	-1.12	-0.49	71.13	0.0005	-0.4428	0.0154
879	SLE FR 6	-1.13	-0.49	72.57	0.0003	-0.454	0.0158
879	SLE QP 1	-1.09	-0.48	68.35	0.0008	-0.4212	0.0146
879	SLE QP 2	-1.11	-0.49	70.88	0.0005	-0.4409	0.0153
879	SLD 1	5.4	0.28	78.55	-0.0007	-0.3018	-0.0311
879	SLD 2	4.93	-0.34	78.92	0.0023	-0.3129	-0.015
879	SLD 3	5.27	-1.67	79.28	0.0093	-0.365	-0.0283
879	SLD 4	4.79	-2.29	79.65	0.0123	-0.3761	-0.0121
879	SLD 5	1.13	2.81	72.01	-0.0155	-0.3014	-0.0058
879	SLD 6	0.82	2.4	72.25	-0.0135	-0.3087	0.0047
879	SLD 7	0.68	-3.69	74.45	0.0177	-0.512	0.0037
879	SLD 8	0.37	-4.1	74.69	0.0197	-0.5193	0.0143
879	SLD 9	-2.6	3.12	67.07	-0.0187	-0.3626	0.0164
879	SLD 10	-2.91	2.71	67.32	-0.0167	-0.3699	0.0269
879	SLD 11	-3.04	-3.38	69.51	0.0145	-0.5731	0.0259
879	SLD 12	-3.35	-3.79	69.76	0.0165	-0.5805	0.0365
879	SLD 13	-7.02	1.32	62.11	-0.0113	-0.5057	0.0428
879	SLD 14	-7.49	0.7	62.48	-0.0083	-0.5169	0.0589
879	SLD 15	-7.15	-0.63	62.84	-0.0014	-0.5689	0.0457
879	SLD 16	-7.63	-1.25	63.22	0.0017	-0.5801	0.0618
879	SLV 1	14.12	1.25	88.86	-0.0019	-0.1173	-0.0932
879	SLV 2	13.01	-0.21	89.73	0.0052	-0.1433	-0.0556
879	SLV 3	13.81	-3.2	90.52	0.0207	-0.2617	-0.0866
879	SLV 4	12.71	-4.65	91.39	0.0277	-0.2877	-0.0491

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
879	SLV 5	4.11	7.02	73.61	-0.0357	-0.1203	-0.0336
879	SLV 6	3.4	6.08	74.17	-0.0311	-0.137	-0.0094
879	SLV 7	3.09	-7.79	79.14	0.0396	-0.6018	-0.0118
879	SLV 8	2.38	-8.72	79.7	0.0441	-0.6185	0.0124
879	SLV 9	-4.6	7.75	62.07	-0.0432	-0.2633	0.0183
879	SLV 10	-5.31	6.81	62.63	-0.0386	-0.2801	0.0425
879	SLV 11	-5.63	-7.06	67.59	0.0321	-0.7448	0.0401
879	SLV 12	-6.34	-7.99	68.15	0.0367	-0.7616	0.0643
879	SLV 13	-14.93	3.68	50.38	-0.0268	-0.5941	0.0798
879	SLV 14	-16.04	2.22	51.25	-0.0197	-0.6201	0.1173
879	SLV 15	-15.24	-0.76	52.04	-0.0042	-0.7386	0.0863
879	SLV 16	-16.35	-2.22	52.9	0.0029	-0.7646	0.1238
879	CRTFP Ux+	0	0	0	0	0	0
879	CRTFP Ux-	0	0	0	0	0	0
879	CRTFP Uy+	0	0	0	0	0	0
879	CRTFP Uy-	0	0	0	0	0	0
882	SLU 1	0.51	0.75	56.82	0.0531	1.1112	0.0373
882	SLU 2	0.51	0.84	56.83	0.0525	1.1123	0.0372
882	SLU 3	0.53	0.79	58.11	0.0546	1.1417	0.0383
882	SLU 4	0.53	0.84	58.11	0.0543	1.1423	0.0382
882	SLU 5	0.53	0.85	57.62	0.0534	1.1304	0.0379
882	SLU 6	0.54	0.8	58.9	0.0555	1.1599	0.0389
882	SLU 7	0.54	0.86	58.91	0.0552	1.1605	0.0389
882	SLU 8	0.54	0.78	58.41	0.0548	1.1475	0.0386
882	SLU 9	0.54	0.83	58.41	0.0545	1.1482	0.0386
882	SLU 10	0.59	0.93	64.64	0.0588	1.299	0.043
882	SLU 11	0.61	0.88	65.92	0.061	1.3284	0.044
882	SLU 12	0.61	0.93	65.93	0.0606	1.3291	0.044
882	SLU 13	0.6	0.94	65.44	0.0597	1.3172	0.0437
882	SLU 14	0.62	0.89	66.72	0.0619	1.3466	0.0447
882	SLU 15	0.62	0.95	66.72	0.0615	1.3472	0.0447
882	SLU 16	0.61	0.86	66.22	0.0612	1.3343	0.0444
882	SLU 17	0.61	0.92	66.23	0.0608	1.3349	0.0444
882	SLU 18	0.63	0.87	67.98	0.0621	1.3779	0.0456
882	SLU 19	0.63	0.93	67.99	0.0617	1.3786	0.0455
882	SLU 20	0.64	0.89	68.78	0.063	1.3961	0.0462
882	SLU 21	0.64	0.94	68.78	0.0626	1.3968	0.0462
882	SLU 22	0.59	0.91	64.38	0.0605	1.2901	0.0426
882	SLU 23	0.59	1	64.39	0.0599	1.2912	0.0426
882	SLU 24	0.6	0.95	65.67	0.0621	1.3207	0.0436
882	SLU 25	0.61	1	65.67	0.0617	1.3213	0.0436
882	SLU 26	0.6	1.01	65.18	0.0608	1.3094	0.0433
882	SLU 27	0.62	0.96	66.46	0.063	1.3388	0.0443
882	SLU 28	0.62	1.02	66.47	0.0626	1.3395	0.0443
882	SLU 29	0.61	0.93	65.97	0.0623	1.3265	0.044
882	SLU 30	0.61	0.99	65.98	0.0619	1.3272	0.044
882	SLU 31	0.67	1.09	72.21	0.0662	1.478	0.0484
882	SLU 32	0.68	1.03	73.48	0.0684	1.5074	0.0494
882	SLU 33	0.68	1.09	73.49	0.068	1.508	0.0494
882	SLU 34	0.68	1.1	73	0.0671	1.4962	0.0491
882	SLU 35	0.69	1.05	74.28	0.0693	1.5256	0.0501
882	SLU 36	0.69	1.1	74.28	0.0689	1.5262	0.05
882	SLU 37	0.69	1.02	73.79	0.0686	1.5132	0.0498
882	SLU 38	0.69	1.08	73.79	0.0682	1.5139	0.0497
882	SLU 39	0.7	1.03	75.55	0.0695	1.5569	0.0509
882	SLU 40	0.7	1.09	75.55	0.0692	1.5576	0.0509
882	SLU 41	0.71	1.05	76.34	0.0704	1.5751	0.0516
882	SLU 42	0.71	1.1	76.35	0.0701	1.5757	0.0516
882	SLU 43	0.64	0.92	71.27	0.0664	1.3831	0.0466
882	SLU 44	0.64	1.01	71.28	0.0658	1.3842	0.0466
882	SLU 45	0.66	0.96	72.56	0.068	1.4137	0.0476
882	SLU 46	0.66	1.02	72.56	0.0677	1.4143	0.0476
882	SLU 47	0.65	1.02	72.07	0.0667	1.4024	0.0473
882	SLU 48	0.67	0.97	73.35	0.0689	1.4318	0.0483
882	SLU 49	0.67	1.03	73.36	0.0686	1.4325	0.0483
882	SLU 50	0.66	0.95	72.86	0.0682	1.4195	0.048
882	SLU 51	0.66	1	72.87	0.0679	1.4202	0.0479
882	SLU 52	0.72	1.1	79.1	0.0722	1.571	0.0524
882	SLU 53	0.73	1.05	80.37	0.0743	1.6004	0.0534
882	SLU 54	0.73	1.1	80.38	0.074	1.601	0.0534
882	SLU 55	0.73	1.11	79.89	0.0731	1.5892	0.053
882	SLU 56	0.74	1.06	81.17	0.0752	1.6186	0.0541
882	SLU 57	0.75	1.12	81.17	0.0749	1.6192	0.054
882	SLU 58	0.74	1.03	80.68	0.0745	1.6062	0.0538
882	SLU 59	0.74	1.09	80.68	0.0742	1.6069	0.0537
882	SLU 60	0.75	1.04	82.44	0.0754	1.6499	0.0549
882	SLU 61	0.75	1.1	82.44	0.0751	1.6506	0.0549
882	SLU 62	0.76	1.06	83.23	0.0763	1.6681	0.0556
882	SLU 63	0.76	1.11	83.24	0.076	1.6687	0.0555
882	SLU 64	0.72	1.08	78.83	0.0739	1.5621	0.052
882	SLU 65	0.72	1.17	78.84	0.0733	1.5632	0.052
882	SLU 66	0.73	1.12	80.12	0.0755	1.5926	0.053
882	SLU 67	0.73	1.17	80.13	0.0751	1.5933	0.0529
882	SLU 68	0.73	1.18	79.64	0.0742	1.5814	0.0526
882	SLU 69	0.74	1.13	80.92	0.0763	1.6108	0.0536
882	SLU 70	0.74	1.19	80.92	0.076	1.6115	0.0536
882	SLU 71	0.74	1.1	80.42	0.0756	1.5985	0.0533
882	SLU 72	0.74	1.16	80.43	0.0753	1.5991	0.0533
882	SLU 73	0.8	1.26	86.66	0.0796	1.75	0.0577
882	SLU 74	0.81	1.21	87.94	0.0818	1.7794	0.0588

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
882	SLU 75	0.81	1.26	87.94	0.0814	1.78	0.0587
882	SLU 76	0.81	1.27	87.45	0.0805	1.7681	0.0584
882	SLU 77	0.82	1.22	88.73	0.0827	1.7976	0.0594
882	SLU 78	0.82	1.27	88.74	0.0823	1.7982	0.0594
882	SLU 79	0.82	1.19	88.24	0.082	1.7852	0.0591
882	SLU 80	0.82	1.25	88.24	0.0816	1.7859	0.0591
882	SLU 81	0.83	1.2	90	0.0829	1.8289	0.0603
882	SLU 82	0.83	1.26	90	0.0825	1.8295	0.0602
882	SLU 83	0.84	1.22	90.79	0.0838	1.8471	0.0609
882	SLU 84	0.84	1.27	90.8	0.0834	1.8477	0.0609
882	SLE RA 1	0.54	0.79	58.98	0.0552	1.1623	0.0388
882	SLE RA 2	0.54	0.86	58.99	0.0548	1.163	0.0388
882	SLE RA 3	0.55	0.82	59.84	0.0562	1.1826	0.0395
882	SLE RA 4	0.55	0.86	59.84	0.056	1.1831	0.0394
882	SLE RA 5	0.54	0.86	59.52	0.0554	1.1752	0.0392
882	SLE RA 6	0.55	0.83	60.37	0.0568	1.1948	0.0399
882	SLE RA 7	0.55	0.87	60.37	0.0566	1.1952	0.0399
882	SLE RA 8	0.55	0.81	60.04	0.0564	1.1865	0.0397
882	SLE RA 9	0.55	0.85	60.04	0.0561	1.187	0.0397
882	SLE RA 10	0.59	0.91	64.2	0.059	1.2875	0.0426
882	SLE RA 11	0.6	0.88	65.05	0.0604	1.3071	0.0433
882	SLE RA 12	0.6	0.92	65.05	0.0602	1.3076	0.0433
882	SLE RA 13	0.6	0.92	64.73	0.0596	1.2996	0.0431
882	SLE RA 14	0.6	0.89	65.58	0.061	1.3192	0.0438
882	SLE RA 15	0.6	0.93	65.58	0.0608	1.3197	0.0438
882	SLE RA 16	0.6	0.87	65.25	0.0606	1.311	0.0436
882	SLE RA 17	0.6	0.91	65.25	0.0603	1.3115	0.0435
882	SLE RA 18	0.61	0.88	66.42	0.0612	1.3401	0.0443
882	SLE RA 19	0.61	0.91	66.43	0.061	1.3406	0.0443
882	SLE RA 20	0.62	0.89	66.95	0.0618	1.3523	0.0448
882	SLE RA 21	0.62	0.92	66.96	0.0616	1.3527	0.0448
882	SLE FR 1	0.54	0.79	58.98	0.0552	1.1623	0.0388
882	SLE FR 2	0.54	0.81	58.98	0.0551	1.1624	0.0388
882	SLE FR 3	0.54	0.8	59.19	0.0554	1.1671	0.039
882	SLE FR 4	0.56	0.83	61.21	0.0569	1.2158	0.0405
882	SLE FR 5	0.56	0.82	61.42	0.0572	1.2205	0.0406
882	SLE FR 6	0.57	0.84	62.7	0.0582	1.2512	0.0416
882	SLE QP 1	0.54	0.79	58.98	0.0552	1.1623	0.0388
882	SLE QP 2	0.56	0.82	61.21	0.057	1.2157	0.0405
882	SLD 1	6.99	2.17	64.16	0.0539	1.0884	-0.0153
882	SLD 2	6.56	1.93	64.15	0.0551	1.0928	0.0001
882	SLD 3	6.89	0.23	64.24	0.0645	1.0734	-0.012
882	SLD 4	6.46	-0.01	64.23	0.0657	1.0779	0.0034
882	SLD 5	2.72	4.21	61.97	0.0398	1.1993	0.0159
882	SLD 6	2.44	4.06	61.97	0.0406	1.2022	0.026
882	SLD 7	2.38	-2.26	62.24	0.0751	1.1496	0.0271
882	SLD 8	2.1	-2.42	62.24	0.0759	1.1525	0.0372
882	SLD 9	-0.99	4.05	60.18	0.0381	1.2788	0.0438
882	SLD 10	-1.27	3.9	60.18	0.0389	1.2818	0.0539
882	SLD 11	-1.32	-2.42	60.46	0.0734	1.2291	0.0549
882	SLD 12	-1.6	-2.57	60.45	0.0742	1.232	0.065
882	SLD 13	-5.35	1.65	58.2	0.0482	1.3534	0.0775
882	SLD 14	-5.78	1.41	58.19	0.0495	1.3579	0.0929
882	SLD 15	-5.45	-0.3	58.28	0.0588	1.3385	0.0809
882	SLD 16	-5.88	-0.53	58.27	0.06	1.3429	0.0962
882	SLV 1	15.61	3.92	68.16	0.0507	0.9172	-0.0898
882	SLV 2	14.61	3.37	68.15	0.0535	0.9276	-0.054
882	SLV 3	15.37	-0.5	68.35	0.0746	0.8831	-0.0822
882	SLV 4	14.38	-1.05	68.34	0.0775	0.8935	-0.0464
882	SLV 5	5.6	8.55	63.01	0.0182	1.176	-0.0164
882	SLV 6	4.95	8.2	63	0.0201	1.1827	0.0067
882	SLV 7	4.82	-6.19	63.65	0.0982	1.0624	0.0091
882	SLV 8	4.18	-6.54	63.64	0.1	1.0691	0.0322
882	SLV 9	-3.06	8.18	58.79	0.014	1.3622	0.0488
882	SLV 10	-3.71	7.83	58.78	0.0158	1.3689	0.0718
882	SLV 11	-3.84	-6.56	59.42	0.0939	1.2486	0.0742
882	SLV 12	-4.48	-6.91	59.41	0.0957	1.2553	0.0973
882	SLV 13	-13.26	2.69	54.09	0.0365	1.5378	0.1273
882	SLV 14	-14.26	2.14	54.07	0.0393	1.5482	0.1631
882	SLV 15	-13.49	-1.73	54.28	0.0605	1.5037	0.135
882	SLV 16	-14.49	-2.29	54.26	0.0633	1.5141	0.1708
882	CRTFP Ux+	0	0	0	0	0	0
882	CRTFP Ux-	0	0	0	0	0	0
882	CRTFP Uy+	0	0	0	0	0	0
882	CRTFP Uy-	0	0	0	0	0	0
885	SLU 1	0.88	1.47	51.57	0.0559	-0.3734	0.0132
885	SLU 2	0.88	1.56	51.58	0.0553	-0.3745	0.0132
885	SLU 3	0.9	1.53	52.72	0.0577	-0.3833	0.0137
885	SLU 4	0.9	1.58	52.72	0.0573	-0.3839	0.0137
885	SLU 5	0.89	1.58	52.31	0.0563	-0.3805	0.0136
885	SLU 6	0.92	1.55	53.44	0.0587	-0.3893	0.0141
885	SLU 7	0.92	1.61	53.45	0.0584	-0.3899	0.0141
885	SLU 8	0.91	1.52	53.03	0.0579	-0.3855	0.0139
885	SLU 9	0.91	1.57	53.04	0.0576	-0.3861	0.0139
885	SLU 10	1.01	1.76	58.43	0.062	-0.4355	0.0161
885	SLU 11	1.03	1.73	59.57	0.0644	-0.4442	0.0166
885	SLU 12	1.03	1.78	59.57	0.064	-0.4449	0.0166
885	SLU 13	1.02	1.79	59.16	0.063	-0.4415	0.0164
885	SLU 14	1.05	1.75	60.3	0.0654	-0.4502	0.0169
885	SLU 15	1.05	1.81	60.3	0.0651	-0.4509	0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
885	SLU 16	1.04	1.72	59.88	0.0647	-0.4464	0.0167
885	SLU 17	1.04	1.77	59.89	0.0643	-0.4471	0.0168
885	SLU 18	1.06	1.75	61.36	0.0655	-0.4606	0.0173
885	SLU 19	1.06	1.81	61.36	0.0651	-0.4612	0.0173
885	SLU 20	1.08	1.78	62.09	0.0665	-0.4666	0.0176
885	SLU 21	1.08	1.83	62.09	0.0661	-0.4672	0.0177
885	SLU 22	1	1.72	58.24	0.0639	-0.4354	0.0159
885	SLU 23	1	1.81	58.25	0.0633	-0.4364	0.016
885	SLU 24	1.03	1.78	59.38	0.0657	-0.4452	0.0165
885	SLU 25	1.02	1.84	59.39	0.0653	-0.4458	0.0165
885	SLU 26	1.02	1.84	58.98	0.0644	-0.4424	0.0163
885	SLU 27	1.04	1.81	60.11	0.0667	-0.4512	0.0168
885	SLU 28	1.04	1.86	60.12	0.0664	-0.4518	0.0169
885	SLU 29	1.04	1.77	59.7	0.066	-0.4474	0.0166
885	SLU 30	1.04	1.83	59.7	0.0656	-0.448	0.0167
885	SLU 31	1.13	2.02	65.1	0.07	-0.4974	0.0189
885	SLU 32	1.16	1.98	66.23	0.0724	-0.5062	0.0193
885	SLU 33	1.16	2.04	66.24	0.0721	-0.5068	0.0194
885	SLU 34	1.15	2.04	65.83	0.0711	-0.5034	0.0192
885	SLU 35	1.17	2.01	66.96	0.0735	-0.5122	0.0197
885	SLU 36	1.17	2.06	66.97	0.0731	-0.5128	0.0197
885	SLU 37	1.17	1.97	66.55	0.0727	-0.5084	0.0195
885	SLU 38	1.17	2.03	66.56	0.0723	-0.509	0.0195
885	SLU 39	1.19	2.01	68.03	0.0735	-0.5225	0.02
885	SLU 40	1.19	2.06	68.03	0.0731	-0.5231	0.0201
885	SLU 41	1.21	2.03	68.76	0.0745	-0.5285	0.0204
885	SLU 42	1.21	2.09	68.76	0.0742	-0.5291	0.0204
885	SLU 43	1.1	1.82	64.76	0.0699	-0.4642	0.0162
885	SLU 44	1.1	1.91	64.77	0.0693	-0.4653	0.0163
885	SLU 45	1.12	1.88	65.9	0.0717	-0.4741	0.0167
885	SLU 46	1.12	1.93	65.91	0.0713	-0.4747	0.0168
885	SLU 47	1.11	1.94	65.5	0.0703	-0.4713	0.0166
885	SLU 48	1.14	1.9	66.63	0.0727	-0.4801	0.0171
885	SLU 49	1.13	1.96	66.64	0.0724	-0.4807	0.0171
885	SLU 50	1.13	1.87	66.22	0.072	-0.4763	0.0169
885	SLU 51	1.13	1.93	66.22	0.0716	-0.4769	0.0169
885	SLU 52	1.23	2.11	71.62	0.076	-0.5262	0.0191
885	SLU 53	1.25	2.08	72.75	0.0784	-0.535	0.0196
885	SLU 54	1.25	2.13	72.76	0.078	-0.5357	0.0196
885	SLU 55	1.24	2.14	72.35	0.077	-0.5323	0.0195
885	SLU 56	1.27	2.1	73.48	0.0794	-0.541	0.0199
885	SLU 57	1.27	2.16	73.49	0.0791	-0.5417	0.02
885	SLU 58	1.26	2.07	73.07	0.0787	-0.5372	0.0198
885	SLU 59	1.26	2.13	73.07	0.0783	-0.5378	0.0198
885	SLU 60	1.28	2.11	74.55	0.0795	-0.5514	0.0203
885	SLU 61	1.28	2.16	74.55	0.0791	-0.552	0.0203
885	SLU 62	1.3	2.13	75.28	0.0805	-0.5574	0.0206
885	SLU 63	1.3	2.19	75.28	0.0802	-0.558	0.0207
885	SLU 64	1.22	2.07	71.43	0.0779	-0.5262	0.019
885	SLU 65	1.22	2.17	71.43	0.0773	-0.5272	0.019
885	SLU 66	1.25	2.13	72.57	0.0797	-0.536	0.0195
885	SLU 67	1.24	2.19	72.57	0.0794	-0.5366	0.0195
885	SLU 68	1.24	2.19	72.16	0.0784	-0.5332	0.0194
885	SLU 69	1.26	2.16	73.3	0.0807	-0.542	0.0198
885	SLU 70	1.26	2.22	73.3	0.0804	-0.5426	0.0199
885	SLU 71	1.26	2.13	72.89	0.08	-0.5382	0.0197
885	SLU 72	1.26	2.18	72.89	0.0796	-0.5388	0.0197
885	SLU 73	1.35	2.37	78.28	0.084	-0.5882	0.0219
885	SLU 74	1.38	2.33	79.42	0.0864	-0.597	0.0223
885	SLU 75	1.38	2.39	79.42	0.0861	-0.5976	0.0224
885	SLU 76	1.37	2.39	79.01	0.0851	-0.5942	0.0222
885	SLU 77	1.39	2.36	80.15	0.0875	-0.603	0.0227
885	SLU 78	1.39	2.42	80.15	0.0871	-0.6036	0.0227
885	SLU 79	1.39	2.33	79.74	0.0867	-0.5992	0.0225
885	SLU 80	1.39	2.38	79.74	0.0864	-0.5998	0.0225
885	SLU 81	1.41	2.36	81.21	0.0875	-0.6133	0.023
885	SLU 82	1.41	2.42	81.22	0.0871	-0.6139	0.0231
885	SLU 83	1.43	2.39	81.94	0.0885	-0.6193	0.0234
885	SLU 84	1.43	2.44	81.95	0.0882	-0.6199	0.0234
885	SLE RA 1	0.91	1.54	53.48	0.0582	-0.3911	0.014
885	SLE RA 2	0.91	1.6	53.48	0.0578	-0.3918	0.014
885	SLE RA 3	0.93	1.58	54.24	0.0594	-0.3977	0.0143
885	SLE RA 4	0.93	1.62	54.24	0.0591	-0.3981	0.0143
885	SLE RA 5	0.92	1.62	53.97	0.0585	-0.3958	0.0142
885	SLE RA 6	0.94	1.6	54.73	0.0601	-0.4017	0.0146
885	SLE RA 7	0.94	1.63	54.73	0.0598	-0.4021	0.0146
885	SLE RA 8	0.94	1.57	54.45	0.0595	-0.3992	0.0144
885	SLE RA 9	0.93	1.61	54.45	0.0593	-0.3996	0.0145
885	SLE RA 10	1	1.74	58.05	0.0622	-0.4325	0.0159
885	SLE RA 11	1.02	1.71	58.81	0.0638	-0.4383	0.0162
885	SLE RA 12	1.02	1.75	58.81	0.0636	-0.4388	0.0163
885	SLE RA 13	1.01	1.75	58.54	0.0629	-0.4365	0.0161
885	SLE RA 14	1.03	1.73	59.29	0.0645	-0.4423	0.0165
885	SLE RA 15	1.03	1.77	59.3	0.0643	-0.4428	0.0165
885	SLE RA 16	1.02	1.71	59.02	0.064	-0.4398	0.0163
885	SLE RA 17	1.02	1.74	59.02	0.0638	-0.4402	0.0164
885	SLE RA 18	1.04	1.73	60	0.0646	-0.4492	0.0167
885	SLE RA 19	1.04	1.77	60.01	0.0643	-0.4496	0.0167
885	SLE RA 20	1.05	1.75	60.49	0.0653	-0.4532	0.0169
885	SLE RA 21	1.05	1.79	60.49	0.065	-0.4536	0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
885	SLE FR 1	0.91	1.54	53.48	0.0582	-0.3911	0.014
885	SLE FR 2	0.91	1.55	53.48	0.0581	-0.3913	0.014
885	SLE FR 3	0.92	1.55	53.67	0.0584	-0.3927	0.0141
885	SLE FR 4	0.95	1.61	55.44	0.06	-0.4087	0.0148
885	SLE FR 5	0.95	1.6	55.63	0.0604	-0.4102	0.0149
885	SLE FR 6	0.98	1.64	56.74	0.0614	-0.4202	0.0153
885	SLE QP 1	0.91	1.54	53.48	0.0582	-0.3911	0.014
885	SLE QP 2	0.95	1.6	55.44	0.0601	-0.4086	0.0148
885	SLD 1	7.31	2.14	50.98	0.0529	-0.1093	-0.0375
885	SLD 2	6.89	2.36	51.01	0.0516	-0.1106	-0.0224
885	SLD 3	7.39	0.26	51.05	0.0639	-0.0897	-0.0388
885	SLD 4	6.97	0.48	51.08	0.0627	-0.091	-0.0237
885	SLD 5	2.81	4.58	53.98	0.0415	-0.3483	-0.0015
885	SLD 6	2.53	4.73	54	0.0406	-0.3491	0.0084
885	SLD 7	3.08	-1.7	54.23	0.0781	-0.283	-0.0061
885	SLD 8	2.8	-1.56	54.24	0.0773	-0.2838	0.0038
885	SLD 9	-0.9	4.75	56.63	0.0428	-0.5333	0.0257
885	SLD 10	-1.18	4.9	56.65	0.042	-0.5341	0.0356
885	SLD 11	-0.63	-1.53	56.87	0.0795	-0.4681	0.0212
885	SLD 12	-0.91	-1.39	56.89	0.0787	-0.4689	0.0311
885	SLD 13	-5.07	2.71	59.79	0.0575	-0.7261	0.0533
885	SLD 14	-5.49	2.94	59.82	0.0563	-0.7274	0.0684
885	SLD 15	-4.99	0.83	59.86	0.0685	-0.7066	0.052
885	SLD 16	-5.41	1.05	59.89	0.0673	-0.7078	0.0671
885	SLV 1	15.83	2.81	45.01	0.0432	0.2924	-0.1074
885	SLV 2	14.84	3.33	45.07	0.0403	0.2895	-0.0722
885	SLV 3	16.01	-1.48	45.18	0.0682	0.3369	-0.1106
885	SLV 4	15.02	-0.96	45.24	0.0653	0.3339	-0.0754
885	SLV 5	5.3	8.38	52.04	0.0177	-0.2651	-0.0231
885	SLV 6	4.66	8.72	52.08	0.0158	-0.267	-0.0004
885	SLV 7	5.93	-5.93	52.6	0.1008	-0.1171	-0.0337
885	SLV 8	5.29	-5.59	52.65	0.099	-0.119	-0.011
885	SLV 9	-3.39	8.79	58.23	0.0212	-0.6982	0.0406
885	SLV 10	-4.03	9.12	58.27	0.0193	-0.7	0.0633
885	SLV 11	-2.76	-5.52	58.79	0.1043	-0.5501	0.03
885	SLV 12	-3.4	-5.19	58.83	0.1025	-0.552	0.0527
885	SLV 13	-13.12	4.16	65.63	0.0549	-1.1511	0.105
885	SLV 14	-14.11	4.68	65.69	0.052	-1.154	0.1402
885	SLV 15	-12.93	-0.14	65.8	0.0798	-1.1067	0.1018
885	SLV 16	-13.93	0.38	65.86	0.0769	-1.1096	0.137
885	CRTFP Ux+	0	0	0	0	0	0
885	CRTFP Ux-	0	0	0	0	0	0
887	SLU 1	-0.61	-0.07	31.05	0.023	-2.6271	-0.019
887	SLU 2	-0.62	0.01	31.04	0.0228	-2.6268	0.0011
887	SLU 3	-0.63	-0.07	31.76	0.0236	-2.6768	-0.0191
887	SLU 4	-0.63	-0.03	31.76	0.0235	-2.6766	-0.007
887	SLU 5	-0.63	0	31.49	0.0232	-2.6576	0.0005
887	SLU 6	-0.64	-0.08	32.21	0.0239	-2.7077	-0.0197
887	SLU 7	-0.64	-0.03	32.21	0.0238	-2.7075	-0.0077
887	SLU 8	-0.63	-0.08	31.94	0.0237	-2.6888	-0.0203
887	SLU 9	-0.63	-0.03	31.94	0.0236	-2.6886	-0.0082
887	SLU 10	-0.67	0.02	34.88	0.0258	-2.9096	0.004
887	SLU 11	-0.69	-0.06	35.6	0.0265	-2.9596	-0.0162
887	SLU 12	-0.69	-0.01	35.6	0.0264	-2.9594	-0.0042
887	SLU 13	-0.68	0.02	35.33	0.0262	-2.9404	0.0033
887	SLU 14	-0.7	-0.07	36.05	0.0269	-2.9904	-0.0169
887	SLU 15	-0.7	-0.02	36.04	0.0268	-2.9903	-0.0048
887	SLU 16	-0.69	-0.07	35.78	0.0266	-2.9716	-0.0174
887	SLU 17	-0.69	-0.02	35.78	0.0266	-2.9714	-0.0054
887	SLU 18	-0.7	-0.06	36.53	0.0272	-3.0311	-0.0149
887	SLU 19	-0.7	-0.01	36.52	0.0271	-3.0309	-0.0028
887	SLU 20	-0.71	-0.06	36.97	0.0276	-3.0619	-0.0155
887	SLU 21	-0.71	-0.01	36.97	0.0275	-3.0617	-0.0035
887	SLU 22	-0.68	-0.06	34.91	0.0262	-2.9099	-0.0155
887	SLU 23	-0.68	0.02	34.9	0.026	-2.9096	0.0046
887	SLU 24	-0.69	-0.06	35.62	0.0268	-2.9597	-0.0156
887	SLU 25	-0.7	-0.01	35.62	0.0267	-2.9595	-0.0036
887	SLU 26	-0.69	0.02	35.35	0.0264	-2.9405	0.0039
887	SLU 27	-0.7	-0.06	36.07	0.0271	-2.9905	-0.0163
887	SLU 28	-0.7	-0.01	36.07	0.027	-2.9903	-0.0042
887	SLU 29	-0.7	-0.06	35.8	0.0269	-2.9716	-0.0168
887	SLU 30	-0.7	-0.02	35.8	0.0268	-2.9715	-0.0047
887	SLU 31	-0.74	0.03	38.74	0.029	-3.1924	0.0074
887	SLU 32	-0.75	-0.05	39.46	0.0297	-3.2425	-0.0127
887	SLU 33	-0.75	0	39.46	0.0296	-3.2423	-0.0007
887	SLU 34	-0.75	0.03	39.19	0.0294	-3.2233	0.0068
887	SLU 35	-0.76	-0.05	39.91	0.0301	-3.2733	-0.0134
887	SLU 36	-0.76	0	39.91	0.03	-3.2731	-0.0013
887	SLU 37	-0.76	-0.05	39.64	0.0298	-3.2544	-0.0139
887	SLU 38	-0.76	-0.01	39.64	0.0298	-3.2542	-0.0019
887	SLU 39	-0.76	-0.04	40.39	0.0304	-3.3139	-0.0114
887	SLU 40	-0.77	0.01	40.39	0.0303	-3.3137	0.0006
887	SLU 41	-0.77	-0.05	40.84	0.0308	-3.3448	-0.012
887	SLU 42	-0.77	0	40.83	0.0307	-3.3446	0
887	SLU 43	-0.78	-0.1	39.03	0.0288	-3.3182	-0.0259
887	SLU 44	-0.78	-0.02	39.03	0.0286	-3.3179	-0.0058
887	SLU 45	-0.79	-0.1	39.75	0.0293	-3.368	-0.026
887	SLU 46	-0.79	-0.05	39.75	0.0293	-3.3678	-0.0139
887	SLU 47	-0.79	-0.02	39.48	0.029	-3.3488	-0.0064
887	SLU 48	-0.8	-0.1	40.2	0.0297	-3.3988	-0.0266

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
887	SLU 49	-0.8	-0.06	40.2	0.0296	-3.3986	-0.0146
887	SLU 50	-0.8	-0.11	39.93	0.0294	-3.3799	-0.0271
887	SLU 51	-0.8	-0.06	39.93	0.0294	-3.3798	-0.0151
887	SLU 52	-0.84	-0.01	42.87	0.0316	-3.6007	-0.0029
887	SLU 53	-0.85	-0.09	43.59	0.0323	-3.6508	-0.0231
887	SLU 54	-0.85	-0.04	43.59	0.0322	-3.6506	-0.0111
887	SLU 55	-0.85	-0.01	43.32	0.032	-3.6316	-0.0036
887	SLU 56	-0.86	-0.09	44.04	0.0327	-3.6816	-0.0237
887	SLU 57	-0.86	-0.04	44.03	0.0326	-3.6814	-0.0117
887	SLU 58	-0.85	-0.09	43.77	0.0324	-3.6627	-0.0243
887	SLU 59	-0.86	-0.05	43.77	0.0323	-3.6625	-0.0122
887	SLU 60	-0.86	-0.08	44.52	0.033	-3.7222	-0.0218
887	SLU 61	-0.86	-0.04	44.51	0.0329	-3.722	-0.0097
887	SLU 62	-0.87	-0.09	44.96	0.0334	-3.7531	-0.0224
887	SLU 63	-0.87	-0.04	44.96	0.0333	-3.7529	-0.0104
887	SLU 64	-0.84	-0.09	42.9	0.032	-3.6011	-0.0224
887	SLU 65	-0.84	-0.01	42.89	0.0318	-3.6008	-0.0023
887	SLU 66	-0.86	-0.09	43.61	0.0325	-3.6508	-0.0225
887	SLU 67	-0.86	-0.04	43.61	0.0325	-3.6506	-0.0105
887	SLU 68	-0.85	-0.01	43.34	0.0322	-3.6316	-0.003
887	SLU 69	-0.87	-0.09	44.06	0.0329	-3.6817	-0.0231
887	SLU 70	-0.87	-0.04	44.06	0.0328	-3.6815	-0.0111
887	SLU 71	-0.86	-0.09	43.79	0.0326	-3.6628	-0.0237
887	SLU 72	-0.86	-0.04	43.79	0.0326	-3.6626	-0.0116
887	SLU 73	-0.9	0.01	46.73	0.0348	-3.8836	0.0006
887	SLU 74	-0.92	-0.08	47.45	0.0355	-3.9336	-0.0196
887	SLU 75	-0.92	-0.03	47.45	0.0354	-3.9334	-0.0076
887	SLU 76	-0.91	0	47.18	0.0352	-3.9144	-0.0001
887	SLU 77	-0.92	-0.08	47.9	0.0359	-3.9644	-0.0203
887	SLU 78	-0.93	-0.03	47.9	0.0358	-3.9643	-0.0082
887	SLU 79	-0.92	-0.08	47.63	0.0356	-3.9456	-0.0208
887	SLU 80	-0.92	-0.03	47.63	0.0355	-3.9454	-0.0088
887	SLU 81	-0.93	-0.07	48.38	0.0362	-4.0051	-0.0183
887	SLU 82	-0.93	-0.02	48.38	0.0361	-4.0049	-0.0062
887	SLU 83	-0.94	-0.07	48.83	0.0366	-4.0359	-0.0189
887	SLU 84	-0.94	-0.02	48.82	0.0365	-4.0357	-0.0069
887	SLE RA 1	-0.63	-0.07	32.15	0.0239	-2.7079	-0.018
887	SLE RA 2	-0.63	-0.02	32.15	0.0238	-2.7077	-0.0046
887	SLE RA 3	-0.64	-0.07	32.63	0.0243	-2.7411	-0.0181
887	SLE RA 4	-0.64	-0.04	32.63	0.0242	-2.7409	-0.01
887	SLE RA 5	-0.64	-0.02	32.45	0.024	-2.7283	-0.005
887	SLE RA 6	-0.65	-0.07	32.93	0.0245	-2.7616	-0.0185
887	SLE RA 7	-0.65	-0.04	32.92	0.0244	-2.7615	-0.0105
887	SLE RA 8	-0.65	-0.07	32.75	0.0243	-2.749	-0.0188
887	SLE RA 9	-0.65	-0.04	32.75	0.0243	-2.7489	-0.0108
887	SLE RA 10	-0.67	-0.01	34.7	0.0258	-2.8962	-0.0027
887	SLE RA 11	-0.68	-0.06	35.18	0.0263	-2.9296	-0.0161
887	SLE RA 12	-0.68	-0.03	35.18	0.0262	-2.9295	-0.0081
887	SLE RA 13	-0.68	-0.01	35	0.026	-2.9168	-0.0031
887	SLE RA 14	-0.69	-0.06	35.48	0.0265	-2.9501	-0.0166
887	SLE RA 15	-0.69	-0.03	35.48	0.0264	-2.95	-0.0085
887	SLE RA 16	-0.69	-0.07	35.3	0.0263	-2.9376	-0.0169
887	SLE RA 17	-0.69	-0.03	35.3	0.0263	-2.9374	-0.0089
887	SLE RA 18	-0.69	-0.06	35.8	0.0267	-2.9772	-0.0153
887	SLE RA 19	-0.69	-0.03	35.8	0.0267	-2.9771	-0.0072
887	SLE RA 20	-0.7	-0.06	36.1	0.027	-2.9978	-0.0157
887	SLE RA 21	-0.7	-0.03	36.1	0.0269	-2.9977	-0.0077
887	SLE FR 1	-0.63	-0.07	32.15	0.0239	-2.7079	-0.018
887	SLE FR 2	-0.63	-0.06	32.15	0.0239	-2.7079	-0.0153
887	SLE FR 3	-0.64	-0.07	32.27	0.024	-2.7161	-0.0182
887	SLE FR 4	-0.65	-0.06	33.24	0.0247	-2.7887	-0.0145
887	SLE FR 5	-0.65	-0.07	33.36	0.0248	-2.7969	-0.0173
887	SLE FR 6	-0.66	-0.06	33.98	0.0253	-2.8426	-0.0166
887	SLE QP 1	-0.63	-0.07	32.15	0.0239	-2.7079	-0.018
887	SLE QP 2	-0.65	-0.07	33.24	0.0247	-2.7887	-0.0172
887	SLD 1	2.36	1.45	42.17	0.0308	-3.4216	0.3606
887	SLD 2	2.12	0.78	42.42	0.0327	-3.4455	0.1957
887	SLD 3	2.31	0.08	42.5	0.0344	-3.4597	0.0184
887	SLD 4	2.07	-0.59	42.74	0.0362	-3.4837	-0.1464
887	SLD 5	0.38	2.58	35.39	0.0209	-2.9164	0.6444
887	SLD 6	0.22	2.15	35.55	0.0221	-2.9321	0.5363
887	SLD 7	0.2	-1.98	36.47	0.0327	-3.0437	-0.4961
887	SLD 8	0.04	-2.42	36.63	0.0339	-3.0594	-0.6042
887	SLD 9	-1.34	2.28	29.86	0.0156	-2.518	0.5698
887	SLD 10	-1.5	1.85	30.02	0.0168	-2.5337	0.4618
887	SLD 11	-1.52	-2.28	30.94	0.0274	-2.6453	-0.5707
887	SLD 12	-1.68	-2.72	31.1	0.0286	-2.661	-0.6787
887	SLD 13	-3.37	0.45	23.75	0.0133	-2.0937	0.1121
887	SLD 14	-3.61	-0.21	23.99	0.0151	-2.1177	-0.0528
887	SLD 15	-3.42	-0.92	24.07	0.0168	-2.1319	-0.2301
887	SLD 16	-3.66	-1.58	24.32	0.0187	-2.1558	-0.3949
887	SLV 1	6.4	3.43	54.15	0.0391	-4.2713	0.8551
887	SLV 2	5.84	1.88	54.73	0.0434	-4.3271	0.4711
887	SLV 3	6.28	0.31	54.89	0.0471	-4.3581	0.0762
887	SLV 4	5.72	-1.23	55.46	0.0514	-4.4139	-0.3077
887	SLV 5	1.75	5.98	38.3	0.0161	-3.0922	1.4918
887	SLV 6	1.39	4.98	38.67	0.0189	-3.1282	1.2444
887	SLV 7	1.34	-4.41	40.75	0.0429	-3.3816	-1.1042
887	SLV 8	0.98	-5.41	41.12	0.0457	-3.4175	-1.3517
887	SLV 9	-2.28	5.28	25.37	0.0038	-2.1599	1.3173

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
887	SLV 10	-2.64	4.28	25.74	0.0066	-2.1958	1.0699
887	SLV 11	-2.69	-5.11	27.82	0.0306	-2.4492	-1.2787
887	SLV 12	-3.05	-6.11	28.19	0.0333	-2.4852	-1.5262
887	SLV 13	-7.02	1.1	11.03	-0.002	-1.1635	0.2734
887	SLV 14	-7.58	-0.45	11.6	0.0024	-1.2193	-0.1106
887	SLV 15	-7.14	-2.02	11.76	0.0061	-1.2503	-0.5054
887	SLV 16	-7.7	-3.56	12.34	0.0104	-1.3061	-0.8894
887	CRTFP Ux+	0	0	0	0	0	0
887	CRTFP Ux-	0	0	0	0	0	0
887	CRTFP Uy+	0	0	0	0	0	0
887	CRTFP Uy-	0	0	0	0	0	0
890	SLU 1	0.67	0.37	32.37	-0.0405	3.4864	-0.1315
890	SLU 2	0.66	0.47	32.36	-0.0406	3.4869	-0.1647
890	SLU 3	0.69	0.38	33.1	-0.0415	3.5447	-0.1359
890	SLU 4	0.68	0.44	33.09	-0.0416	3.545	-0.1558
890	SLU 5	0.67	0.47	32.81	-0.0413	3.5226	-0.1652
890	SLU 6	0.7	0.38	33.55	-0.0421	3.5804	-0.1364
890	SLU 7	0.69	0.44	33.54	-0.0422	3.5807	-0.1563
890	SLU 8	0.69	0.37	33.27	-0.0418	3.5579	-0.1325
890	SLU 9	0.69	0.43	33.26	-0.0419	3.5582	-0.1524
890	SLU 10	0.72	0.55	36.34	-0.0464	3.8185	-0.1944
890	SLU 11	0.75	0.47	37.08	-0.0472	3.8763	-0.1657
890	SLU 12	0.74	0.52	37.07	-0.0473	3.8766	-0.1856
890	SLU 13	0.73	0.55	36.79	-0.047	3.8543	-0.195
890	SLU 14	0.76	0.47	37.52	-0.0479	3.9121	-0.1662
890	SLU 15	0.76	0.53	37.52	-0.048	3.9123	-0.1861
890	SLU 16	0.76	0.46	37.24	-0.0475	3.8895	-0.1623
890	SLU 17	0.75	0.51	37.24	-0.0476	3.8898	-0.1822
890	SLU 18	0.76	0.49	38.05	-0.0487	3.9602	-0.174
890	SLU 19	0.75	0.55	38.05	-0.0488	3.9604	-0.1939
890	SLU 20	0.77	0.49	38.5	-0.0493	3.9959	-0.1746
890	SLU 21	0.77	0.55	38.49	-0.0494	3.9962	-0.1945
890	SLU 22	0.74	0.45	36.32	-0.046	3.8143	-0.159
890	SLU 23	0.73	0.54	36.31	-0.0462	3.8148	-0.1922
890	SLU 24	0.76	0.46	37.05	-0.047	3.8726	-0.1635
890	SLU 25	0.76	0.52	37.04	-0.0471	3.8729	-0.1833
890	SLU 26	0.75	0.54	36.76	-0.0468	3.8505	-0.1927
890	SLU 27	0.78	0.46	37.5	-0.0477	3.9084	-0.164
890	SLU 28	0.77	0.52	37.49	-0.0478	3.9086	-0.1839
890	SLU 29	0.77	0.45	37.22	-0.0473	3.8858	-0.1601
890	SLU 30	0.76	0.51	37.21	-0.0474	3.8861	-0.18
890	SLU 31	0.8	0.63	40.29	-0.0519	4.1464	-0.222
890	SLU 32	0.83	0.54	41.02	-0.0528	4.2042	-0.1932
890	SLU 33	0.82	0.6	41.02	-0.0529	4.2045	-0.2131
890	SLU 34	0.81	0.63	40.73	-0.0526	4.1822	-0.2225
890	SLU 35	0.84	0.55	41.47	-0.0534	4.24	-0.1938
890	SLU 36	0.83	0.6	41.46	-0.0535	4.2403	-0.2137
890	SLU 37	0.83	0.54	41.19	-0.0531	4.2175	-0.1899
890	SLU 38	0.83	0.59	41.18	-0.0532	4.2177	-0.2098
890	SLU 39	0.83	0.57	42	-0.0542	4.2881	-0.2016
890	SLU 40	0.83	0.63	41.99	-0.0543	4.2884	-0.2215
890	SLU 41	0.85	0.57	42.45	-0.0549	4.3238	-0.2021
890	SLU 42	0.84	0.63	42.44	-0.055	4.3241	-0.222
890	SLU 43	0.85	0.45	40.73	-0.0507	4.4199	-0.1615
890	SLU 44	0.84	0.55	40.72	-0.0509	4.4204	-0.1947
890	SLU 45	0.86	0.47	41.46	-0.0517	4.4782	-0.1659
890	SLU 46	0.86	0.52	41.45	-0.0518	4.4784	-0.1858
890	SLU 47	0.85	0.55	41.17	-0.0515	4.4561	-0.1952
890	SLU 48	0.88	0.47	41.91	-0.0524	4.5139	-0.1664
890	SLU 49	0.87	0.53	41.9	-0.0525	4.5142	-0.1863
890	SLU 50	0.87	0.46	41.63	-0.052	4.4914	-0.1625
890	SLU 51	0.86	0.51	41.62	-0.0521	4.4917	-0.1824
890	SLU 52	0.9	0.63	44.7	-0.0566	4.752	-0.2244
890	SLU 53	0.93	0.55	45.43	-0.0575	4.8098	-0.1957
890	SLU 54	0.92	0.61	45.43	-0.0576	4.8101	-0.2156
890	SLU 55	0.91	0.64	45.14	-0.0573	4.7877	-0.225
890	SLU 56	0.94	0.55	45.88	-0.0581	4.8456	-0.1962
890	SLU 57	0.93	0.61	45.88	-0.0582	4.8458	-0.2161
890	SLU 58	0.93	0.54	45.6	-0.0578	4.823	-0.1923
890	SLU 59	0.93	0.6	45.6	-0.0579	4.8233	-0.2122
890	SLU 60	0.93	0.58	46.41	-0.0589	4.8937	-0.204
890	SLU 61	0.93	0.63	46.41	-0.059	4.8939	-0.2239
890	SLU 62	0.95	0.58	46.86	-0.0596	4.9294	-0.2046
890	SLU 63	0.94	0.63	46.85	-0.0597	4.9297	-0.2245
890	SLU 64	0.92	0.53	44.68	-0.0562	4.7478	-0.189
890	SLU 65	0.91	0.63	44.67	-0.0564	4.7483	-0.2222
890	SLU 66	0.94	0.54	45.41	-0.0573	4.8061	-0.1935
890	SLU 67	0.93	0.6	45.4	-0.0574	4.8064	-0.2134
890	SLU 68	0.92	0.63	45.12	-0.0571	4.784	-0.2227
890	SLU 69	0.95	0.55	45.85	-0.0579	4.8418	-0.194
890	SLU 70	0.94	0.6	45.85	-0.058	4.8421	-0.2139
890	SLU 71	0.94	0.54	45.58	-0.0576	4.8193	-0.1901
890	SLU 72	0.94	0.59	45.57	-0.0577	4.8196	-0.21
890	SLU 73	0.97	0.71	48.64	-0.0622	5.0799	-0.252
890	SLU 74	1	0.63	49.38	-0.063	5.1377	-0.2232
890	SLU 75	0.99	0.69	49.38	-0.0631	5.138	-0.2431
890	SLU 76	0.98	0.71	49.09	-0.0628	5.1157	-0.2525
890	SLU 77	1.01	0.63	49.83	-0.0637	5.1735	-0.2238
890	SLU 78	1.01	0.69	49.82	-0.0638	5.1738	-0.2437
890	SLU 79	1.01	0.62	49.55	-0.0633	5.151	-0.2199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
890	SLU 80	1	0.68	49.54	-0.0634	5.1512	-0.2398
890	SLU 81	1.01	0.65	50.36	-0.0645	5.2216	-0.2316
890	SLU 82	1	0.71	50.35	-0.0646	5.2219	-0.2515
890	SLU 83	1.02	0.65	50.81	-0.0651	5.2573	-0.2321
890	SLU 84	1.02	0.71	50.8	-0.0652	5.2576	-0.252
890	SLE RA 1	0.69	0.39	33.5	-0.042	3.5801	-0.1394
890	SLE RA 2	0.68	0.46	33.5	-0.0422	3.5804	-0.1615
890	SLE RA 3	0.7	0.4	33.99	-0.0427	3.619	-0.1423
890	SLE RA 4	0.7	0.44	33.98	-0.0428	3.6191	-0.1556
890	SLE RA 5	0.69	0.46	33.79	-0.0426	3.6042	-0.1618
890	SLE RA 6	0.71	0.4	34.28	-0.0432	3.6428	-0.1427
890	SLE RA 7	0.71	0.44	34.28	-0.0432	3.643	-0.1559
890	SLE RA 8	0.71	0.39	34.1	-0.0429	3.6278	-0.1401
890	SLE RA 9	0.7	0.43	34.09	-0.043	3.628	-0.1533
890	SLE RA 10	0.73	0.51	36.15	-0.046	3.8015	-0.1813
890	SLE RA 11	0.75	0.46	36.64	-0.0466	3.84	-0.1622
890	SLE RA 12	0.74	0.49	36.63	-0.0466	3.8402	-0.1754
890	SLE RA 13	0.73	0.51	36.44	-0.0464	3.8253	-0.1817
890	SLE RA 14	0.75	0.46	36.93	-0.047	3.8639	-0.1625
890	SLE RA 15	0.75	0.5	36.93	-0.0471	3.8641	-0.1758
890	SLE RA 16	0.75	0.45	36.75	-0.0468	3.8489	-0.1599
890	SLE RA 17	0.75	0.49	36.74	-0.0468	3.849	-0.1732
890	SLE RA 18	0.75	0.47	37.29	-0.0475	3.8959	-0.1677
890	SLE RA 19	0.75	0.51	37.28	-0.0476	3.8961	-0.181
890	SLE RA 20	0.76	0.47	37.59	-0.048	3.9198	-0.1681
890	SLE RA 21	0.75	0.51	37.58	-0.048	3.92	-0.1813
890	SLE FR 1	0.69	0.39	33.5	-0.042	3.5801	-0.1394
890	SLE FR 2	0.69	0.41	33.5	-0.0421	3.5802	-0.1438
890	SLE FR 3	0.69	0.39	33.62	-0.0422	3.5896	-0.1395
890	SLE FR 4	0.71	0.43	34.64	-0.0437	3.6749	-0.1523
890	SLE FR 5	0.71	0.42	34.76	-0.0439	3.6844	-0.148
890	SLE FR 6	0.72	0.43	35.4	-0.0448	3.738	-0.1535
890	SLE QP 1	0.69	0.39	33.5	-0.042	3.5801	-0.1394
890	SLE QP 2	0.71	0.42	34.64	-0.0437	3.6749	-0.1479
890	SLD 1	2.46	0.23	25.8	-0.0318	3.0611	-0.081
890	SLD 2	2.16	1.03	25.47	-0.0335	3.0312	-0.3614
890	SLD 3	2.84	-1.39	26.29	-0.0287	3.0974	0.4845
890	SLD 4	2.54	-0.59	25.96	-0.0304	3.0675	0.2041
890	SLD 5	0.71	2.67	31.3	-0.0445	3.441	-0.9356
890	SLD 6	0.51	3.2	31.08	-0.0456	3.4214	-1.1194
890	SLD 7	1.99	-2.73	32.94	-0.0343	3.5619	0.9493
890	SLD 8	1.79	-2.2	32.72	-0.0354	3.5423	0.7655
890	SLD 9	-0.37	3.03	36.55	-0.052	3.8074	-1.0612
890	SLD 10	-0.57	3.56	36.34	-0.0531	3.7878	-1.2451
890	SLD 11	0.91	-2.37	38.2	-0.0418	3.9283	0.8237
890	SLD 12	0.71	-1.84	37.98	-0.0429	3.9087	0.6399
890	SLD 13	-1.12	1.42	43.32	-0.057	4.2823	-0.4998
890	SLD 14	-1.43	2.23	42.99	-0.0586	4.2523	-0.7802
890	SLD 15	-0.74	-0.2	43.81	-0.0539	4.3185	0.0657
890	SLD 16	-1.04	0.61	43.48	-0.0556	4.2886	-0.2147
890	SLV 1	4.81	-0.08	13.96	-0.0158	2.2389	0.0252
890	SLV 2	4.11	1.8	13.2	-0.0197	2.1692	-0.6278
890	SLV 3	5.69	-3.76	15.08	-0.0088	2.3228	1.3117
890	SLV 4	4.98	-1.89	14.32	-0.0127	2.2531	0.6587
890	SLV 5	0.74	5.53	26.87	-0.0452	3.1288	-1.9347
890	SLV 6	0.28	6.74	26.37	-0.0477	3.0839	-2.3556
890	SLV 7	3.65	-6.75	30.6	-0.022	3.4085	2.3537
890	SLV 8	3.2	-5.54	30.11	-0.0245	3.3636	1.9329
890	SLV 9	-1.78	6.37	39.17	-0.0628	3.9861	-2.2286
890	SLV 10	-2.23	7.58	38.67	-0.0654	3.9412	-2.6495
890	SLV 11	1.14	-5.91	42.9	-0.0397	4.2658	2.0598
890	SLV 12	0.68	-4.7	42.41	-0.0422	4.2209	1.639
890	SLV 13	-3.57	2.72	54.96	-0.0746	5.0966	-0.9544
890	SLV 14	-4.27	4.59	54.19	-0.0785	5.0269	-1.6075
890	SLV 15	-2.69	-0.96	56.08	-0.0677	5.1805	0.3321
890	SLV 16	-3.4	0.91	55.31	-0.0716	5.1108	-0.3209
890	CRTFP Ux+	0	0	0	0	0	0
890	CRTFP Ux-	0	0	0	0	0	0
890	CRTFP Uy+	0	0	0	0	0	0
890	CRTFP Uy-	0	0	0	0	0	0
892	SLU 1	1.36	-0.08	64.75	0.0266	0.4066	-0.0098
892	SLU 2	1.35	0.02	64.73	0.026	0.4046	-0.0098
892	SLU 3	1.39	-0.07	66.23	0.0273	0.4194	-0.0098
892	SLU 4	1.38	-0.01	66.22	0.0269	0.4182	-0.0099
892	SLU 5	1.37	0.02	65.64	0.0264	0.4124	-0.0099
892	SLU 6	1.41	-0.07	67.14	0.0277	0.4272	-0.0099
892	SLU 7	1.4	-0.01	67.13	0.0273	0.426	-0.01
892	SLU 8	1.39	-0.09	66.56	0.0274	0.4222	-0.0099
892	SLU 9	1.39	-0.03	66.55	0.027	0.421	-0.01
892	SLU 10	1.46	0.04	73.4	0.0288	0.4699	-0.0111
892	SLU 11	1.49	-0.05	74.9	0.03	0.4847	-0.0111
892	SLU 12	1.49	0.01	74.89	0.0297	0.4835	-0.0111
892	SLU 13	1.48	0.04	74.3	0.0292	0.4777	-0.0111
892	SLU 14	1.51	-0.05	75.8	0.0304	0.4926	-0.0111
892	SLU 15	1.51	0.01	75.79	0.0301	0.4913	-0.0112
892	SLU 16	1.5	-0.06	75.23	0.0301	0.4876	-0.0111
892	SLU 17	1.5	0	75.22	0.0298	0.4863	-0.0112
892	SLU 18	1.51	-0.05	77.13	0.0305	0.5	-0.0115
892	SLU 19	1.51	0.01	77.12	0.0302	0.4987	-0.0116
892	SLU 20	1.53	-0.05	78.03	0.0309	0.5078	-0.0116

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
892	SLU 21	1.53	0.01	78.02	0.0306	0.5065	-0.0116
892	SLU 22	1.48	-0.03	73.27	0.0299	0.4706	-0.0106
892	SLU 23	1.48	0.07	73.25	0.0293	0.4685	-0.0107
892	SLU 24	1.51	-0.03	74.75	0.0306	0.4834	-0.0107
892	SLU 25	1.51	0.03	74.74	0.0302	0.4821	-0.0107
892	SLU 26	1.5	0.06	74.15	0.0297	0.4763	-0.0107
892	SLU 27	1.53	-0.03	75.65	0.031	0.4912	-0.0107
892	SLU 28	1.53	0.03	75.64	0.0306	0.4899	-0.0108
892	SLU 29	1.52	-0.04	75.08	0.0307	0.4862	-0.0107
892	SLU 30	1.52	0.02	75.07	0.0303	0.485	-0.0108
892	SLU 31	1.58	0.09	81.91	0.0321	0.5339	-0.0119
892	SLU 32	1.62	0	83.41	0.0333	0.5487	-0.0119
892	SLU 33	1.62	0.06	83.4	0.033	0.5475	-0.0119
892	SLU 34	1.6	0.08	82.82	0.0325	0.5417	-0.012
892	SLU 35	1.64	-0.01	84.32	0.0337	0.5565	-0.012
892	SLU 36	1.63	0.05	84.31	0.0334	0.5553	-0.012
892	SLU 37	1.62	-0.02	83.74	0.0334	0.5515	-0.012
892	SLU 38	1.62	0.04	83.73	0.0331	0.5503	-0.012
892	SLU 39	1.63	0	85.64	0.0338	0.5639	-0.0123
892	SLU 40	1.63	0.06	85.63	0.0335	0.5627	-0.0124
892	SLU 41	1.65	0	86.55	0.0342	0.5717	-0.0124
892	SLU 42	1.65	0.06	86.54	0.0339	0.5705	-0.0125
892	SLU 43	1.72	-0.12	81.26	0.0334	0.5067	-0.0124
892	SLU 44	1.72	-0.02	81.24	0.0328	0.5046	-0.0125
892	SLU 45	1.75	-0.11	82.74	0.0341	0.5195	-0.0125
892	SLU 46	1.75	-0.05	82.73	0.0338	0.5182	-0.0125
892	SLU 47	1.74	-0.02	82.15	0.0332	0.5124	-0.0126
892	SLU 48	1.77	-0.11	83.65	0.0345	0.5273	-0.0125
892	SLU 49	1.77	-0.05	83.64	0.0342	0.526	-0.0126
892	SLU 50	1.76	-0.13	83.07	0.0342	0.5223	-0.0125
892	SLU 51	1.76	-0.07	83.06	0.0339	0.5211	-0.0126
892	SLU 52	1.82	0.01	89.9	0.0356	0.57	-0.0137
892	SLU 53	1.86	-0.09	91.4	0.0369	0.5848	-0.0137
892	SLU 54	1.86	-0.03	91.39	0.0365	0.5836	-0.0138
892	SLU 55	1.84	0	90.81	0.036	0.5778	-0.0138
892	SLU 56	1.88	-0.09	92.31	0.0373	0.5926	-0.0138
892	SLU 57	1.87	-0.03	92.3	0.0369	0.5914	-0.0138
892	SLU 58	1.86	-0.1	91.73	0.037	0.5877	-0.0138
892	SLU 59	1.86	-0.04	91.72	0.0366	0.5864	-0.0138
892	SLU 60	1.87	-0.08	93.63	0.0373	0.6001	-0.0142
892	SLU 61	1.87	-0.02	93.62	0.037	0.5988	-0.0142
892	SLU 62	1.89	-0.09	94.54	0.0377	0.6079	-0.0142
892	SLU 63	1.89	-0.03	94.53	0.0374	0.6066	-0.0143
892	SLU 64	1.84	-0.07	89.77	0.0367	0.5707	-0.0132
892	SLU 65	1.84	0.03	89.75	0.0361	0.5686	-0.0133
892	SLU 66	1.87	-0.07	91.25	0.0374	0.5834	-0.0133
892	SLU 67	1.87	-0.01	91.24	0.0371	0.5822	-0.0134
892	SLU 68	1.86	0.02	90.66	0.0365	0.5764	-0.0134
892	SLU 69	1.89	-0.07	92.16	0.0378	0.5912	-0.0134
892	SLU 70	1.89	-0.01	92.15	0.0375	0.59	-0.0134
892	SLU 71	1.88	-0.08	91.58	0.0375	0.5863	-0.0134
892	SLU 72	1.88	-0.02	91.57	0.0372	0.585	-0.0134
892	SLU 73	1.95	0.05	98.42	0.0389	0.6339	-0.0145
892	SLU 74	1.98	-0.04	99.92	0.0402	0.6488	-0.0145
892	SLU 75	1.98	0.02	99.91	0.0398	0.6475	-0.0146
892	SLU 76	1.97	0.05	99.32	0.0393	0.6417	-0.0146
892	SLU 77	2	-0.05	100.82	0.0406	0.6566	-0.0146
892	SLU 78	2	0.01	100.81	0.0402	0.6553	-0.0147
892	SLU 79	1.99	-0.06	100.25	0.0403	0.6516	-0.0146
892	SLU 80	1.99	0	100.24	0.0399	0.6504	-0.0147
892	SLU 81	2	-0.04	102.15	0.0407	0.664	-0.015
892	SLU 82	1.99	0.02	102.14	0.0403	0.6628	-0.015
892	SLU 83	2.02	-0.04	103.05	0.0411	0.6718	-0.0151
892	SLU 84	2.01	0.02	103.04	0.0407	0.6706	-0.0151
892	SLE RA 1	1.39	-0.07	67.18	0.0275	0.4249	-0.01
892	SLE RA 2	1.39	0	67.17	0.0271	0.4235	-0.0101
892	SLE RA 3	1.41	-0.06	68.17	0.028	0.4334	-0.01
892	SLE RA 4	1.41	-0.02	68.17	0.0278	0.4326	-0.0101
892	SLE RA 5	1.4	0	67.78	0.0274	0.4287	-0.0101
892	SLE RA 6	1.42	-0.06	68.78	0.0283	0.4386	-0.0101
892	SLE RA 7	1.42	-0.02	68.77	0.028	0.4378	-0.0101
892	SLE RA 8	1.42	-0.07	68.39	0.028	0.4353	-0.0101
892	SLE RA 9	1.42	-0.03	68.38	0.0278	0.4345	-0.0101
892	SLE RA 10	1.46	0.02	72.95	0.029	0.4671	-0.0109
892	SLE RA 11	1.48	-0.04	73.95	0.0298	0.477	-0.0109
892	SLE RA 12	1.48	-0.01	73.94	0.0296	0.4762	-0.0109
892	SLE RA 13	1.47	0.01	73.55	0.0292	0.4723	-0.0109
892	SLE RA 14	1.5	-0.05	74.55	0.0301	0.4822	-0.0109
892	SLE RA 15	1.49	-0.01	74.55	0.0299	0.4814	-0.0109
892	SLE RA 16	1.49	-0.06	74.17	0.0299	0.4789	-0.0109
892	SLE RA 17	1.49	-0.02	74.16	0.0297	0.478	-0.0109
892	SLE RA 18	1.49	-0.04	75.43	0.0301	0.4871	-0.0112
892	SLE RA 19	1.49	0	75.43	0.0299	0.4863	-0.0112
892	SLE RA 20	1.51	-0.05	76.04	0.0304	0.4923	-0.0112
892	SLE RA 21	1.5	-0.01	76.03	0.0302	0.4915	-0.0112
892	SLE FR 1	1.39	-0.07	67.18	0.0275	0.4249	-0.01
892	SLE FR 2	1.39	-0.05	67.18	0.0274	0.4246	-0.01
892	SLE FR 3	1.4	-0.07	67.42	0.0276	0.427	-0.01
892	SLE FR 4	1.42	-0.05	69.66	0.0282	0.4433	-0.0104
892	SLE FR 5	1.43	-0.06	69.9	0.0284	0.4457	-0.0104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
892	SLE FR 6	1.44	-0.06	71.31	0.0288	0.456	-0.0106
892	SLE QP 1	1.39	-0.07	67.18	0.0275	0.4249	-0.01
892	SLE QP 2	1.42	-0.06	69.66	0.0283	0.4436	-0.0103
892	SLD 1	7.56	1.05	62.3	0.0164	0.475	-0.0595
892	SLD 2	7.04	1.64	61.89	0.0129	0.4786	-0.045
892	SLD 3	7.65	-0.8	62.95	0.0276	0.5282	-0.061
892	SLD 4	7.14	-0.21	62.54	0.0241	0.5318	-0.0466
892	SLD 5	3.21	2.97	66.53	0.0084	0.3717	-0.0253
892	SLD 6	2.88	3.36	66.26	0.0061	0.374	-0.0159
892	SLD 7	3.52	-3.19	68.71	0.0457	0.549	-0.0304
892	SLD 8	3.18	-2.81	68.44	0.0434	0.5513	-0.0209
892	SLD 9	-0.34	2.69	70.87	0.0132	0.3358	0.0002
892	SLD 10	-0.68	3.07	70.6	0.0109	0.3381	0.0097
892	SLD 11	-0.03	-3.48	73.06	0.0505	0.5131	-0.0048
892	SLD 12	-0.37	-3.09	72.79	0.0482	0.5155	0.0047
892	SLD 13	-4.29	0.09	76.77	0.0325	0.3554	0.0259
892	SLD 14	-4.81	0.68	76.36	0.029	0.3589	0.0403
892	SLD 15	-4.2	-1.76	77.43	0.0437	0.4086	0.0243
892	SLD 16	-4.71	-1.17	77.02	0.0402	0.4121	0.0388
892	SLV 1	15.77	2.48	52.45	0.0009	0.518	-0.1252
892	SLV 2	14.57	3.85	51.49	-0.0073	0.5263	-0.0916
892	SLV 3	15.98	-1.73	53.93	0.0263	0.6419	-0.1287
892	SLV 4	14.79	-0.36	52.97	0.018	0.6501	-0.0951
892	SLV 5	5.61	6.86	62.41	-0.0169	0.2767	-0.0452
892	SLV 6	4.84	7.74	61.8	-0.0222	0.282	-0.0236
892	SLV 7	6.32	-7.19	67.35	0.0675	0.6894	-0.057
892	SLV 8	5.55	-6.31	66.73	0.0622	0.6948	-0.0353
892	SLV 9	-2.71	6.19	72.58	-0.0056	0.1924	0.0146
892	SLV 10	-3.48	7.07	71.96	-0.0109	0.1977	0.0363
892	SLV 11	-1.99	-7.86	77.52	0.0788	0.6051	0.0029
892	SLV 12	-2.76	-6.98	76.9	0.0735	0.6104	0.0246
892	SLV 13	-11.95	0.24	86.35	0.0386	0.237	0.0744
892	SLV 14	-13.14	1.61	85.39	0.0303	0.2453	0.108
892	SLV 15	-11.73	-3.97	87.83	0.0639	0.3608	0.0709
892	SLV 16	-12.93	-2.6	86.87	0.0557	0.3691	0.1045
892	CRTFP Ux+	0	0	0	0	0	0
892	CRTFP Ux-	0	0	0	0	0	0
892	CRTFP Uy+	0	0	0	0	0	0
892	CRTFP Uy-	0	0	0	0	0	0
895	SLU 1	-1.14	-0.47	66.08	0.0174	-0.4489	0.0131
895	SLU 2	-1.14	-0.37	66.05	0.017	-0.4458	0.0131
895	SLU 3	-1.17	-0.47	67.63	0.0178	-0.4621	0.0134
895	SLU 4	-1.17	-0.41	67.61	0.0176	-0.4603	0.0134
895	SLU 5	-1.16	-0.38	67	0.0172	-0.4537	0.0133
895	SLU 6	-1.18	-0.48	68.58	0.018	-0.4699	0.0136
895	SLU 7	-1.19	-0.42	68.56	0.0178	-0.4681	0.0136
895	SLU 8	-1.17	-0.49	67.98	0.0178	-0.4645	0.0135
895	SLU 9	-1.18	-0.43	67.96	0.0176	-0.4627	0.0135
895	SLU 10	-1.24	-0.4	74.91	0.0175	-0.5215	0.0158
895	SLU 11	-1.26	-0.5	76.49	0.0183	-0.5378	0.016
895	SLU 12	-1.27	-0.44	76.47	0.0181	-0.536	0.016
895	SLU 13	-1.26	-0.41	75.86	0.0177	-0.5294	0.016
895	SLU 14	-1.28	-0.51	77.44	0.0185	-0.5456	0.0162
895	SLU 15	-1.28	-0.45	77.42	0.0183	-0.5438	0.0162
895	SLU 16	-1.27	-0.52	76.84	0.0183	-0.5402	0.0161
895	SLU 17	-1.28	-0.46	76.82	0.0181	-0.5384	0.0161
895	SLU 18	-1.28	-0.52	78.74	0.0181	-0.557	0.0169
895	SLU 19	-1.28	-0.46	78.72	0.0179	-0.5552	0.0169
895	SLU 20	-1.3	-0.52	79.69	0.0183	-0.5648	0.0171
895	SLU 21	-1.3	-0.46	79.67	0.0181	-0.563	0.0171
895	SLU 22	-1.26	-0.47	74.83	0.0189	-0.5192	0.015
895	SLU 23	-1.26	-0.37	74.8	0.0185	-0.5162	0.015
895	SLU 24	-1.28	-0.47	76.38	0.0193	-0.5325	0.0153
895	SLU 25	-1.28	-0.41	76.36	0.0191	-0.5307	0.0153
895	SLU 26	-1.28	-0.37	75.75	0.0187	-0.524	0.0152
895	SLU 27	-1.3	-0.47	77.33	0.0195	-0.5403	0.0155
895	SLU 28	-1.3	-0.41	77.31	0.0193	-0.5385	0.0155
895	SLU 29	-1.29	-0.49	76.73	0.0193	-0.5349	0.0154
895	SLU 30	-1.29	-0.42	76.71	0.0191	-0.5331	0.0154
895	SLU 31	-1.36	-0.4	83.66	0.019	-0.5919	0.0177
895	SLU 32	-1.38	-0.5	85.24	0.0198	-0.6082	0.018
895	SLU 33	-1.38	-0.44	85.22	0.0196	-0.6064	0.018
895	SLU 34	-1.38	-0.41	84.61	0.0192	-0.5997	0.0179
895	SLU 35	-1.4	-0.51	86.19	0.02	-0.616	0.0182
895	SLU 36	-1.4	-0.45	86.17	0.0198	-0.6142	0.0182
895	SLU 37	-1.39	-0.52	85.59	0.0198	-0.6106	0.0181
895	SLU 38	-1.39	-0.46	85.57	0.0196	-0.6088	0.0181
895	SLU 39	-1.4	-0.51	87.48	0.0196	-0.6274	0.0189
895	SLU 40	-1.4	-0.45	87.47	0.0194	-0.6256	0.0189
895	SLU 41	-1.42	-0.52	88.43	0.0198	-0.6352	0.0191
895	SLU 42	-1.42	-0.46	88.42	0.0196	-0.6334	0.0191
895	SLU 43	-1.44	-0.61	82.9	0.0221	-0.5594	0.0163
895	SLU 44	-1.44	-0.51	82.88	0.0217	-0.5564	0.0163
895	SLU 45	-1.47	-0.61	84.45	0.0225	-0.5727	0.0166
895	SLU 46	-1.47	-0.55	84.44	0.0223	-0.5708	0.0166
895	SLU 47	-1.46	-0.52	83.83	0.0219	-0.5642	0.0165
895	SLU 48	-1.48	-0.62	85.41	0.0227	-0.5805	0.0168
895	SLU 49	-1.49	-0.56	85.39	0.0225	-0.5787	0.0168
895	SLU 50	-1.48	-0.63	84.81	0.0225	-0.575	0.0167
895	SLU 51	-1.48	-0.57	84.79	0.0223	-0.5732	0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
895	SLU 52	-1.54	-0.54	91.73	0.0222	-0.6321	0.019
895	SLU 53	-1.57	-0.64	93.31	0.023	-0.6484	0.0193
895	SLU 54	-1.57	-0.58	93.3	0.0228	-0.6465	0.0193
895	SLU 55	-1.56	-0.55	92.68	0.0224	-0.6399	0.0192
895	SLU 56	-1.58	-0.65	94.26	0.0232	-0.6562	0.0195
895	SLU 57	-1.59	-0.59	94.25	0.023	-0.6544	0.0195
895	SLU 58	-1.57	-0.66	93.66	0.023	-0.6507	0.0194
895	SLU 59	-1.58	-0.6	93.65	0.0228	-0.6489	0.0194
895	SLU 60	-1.58	-0.66	95.56	0.0228	-0.6675	0.0202
895	SLU 61	-1.58	-0.6	95.54	0.0226	-0.6657	0.0202
895	SLU 62	-1.6	-0.67	96.51	0.023	-0.6754	0.0203
895	SLU 63	-1.6	-0.6	96.49	0.0228	-0.6735	0.0203
895	SLU 64	-1.56	-0.61	91.65	0.0236	-0.6298	0.0183
895	SLU 65	-1.56	-0.51	91.62	0.0232	-0.6268	0.0183
895	SLU 66	-1.58	-0.61	93.2	0.024	-0.643	0.0186
895	SLU 67	-1.59	-0.55	93.19	0.0238	-0.6412	0.0186
895	SLU 68	-1.58	-0.52	92.58	0.0234	-0.6346	0.0185
895	SLU 69	-1.6	-0.62	94.15	0.0242	-0.6509	0.0188
895	SLU 70	-1.6	-0.56	94.14	0.024	-0.649	0.0188
895	SLU 71	-1.59	-0.63	93.55	0.024	-0.6454	0.0187
895	SLU 72	-1.59	-0.57	93.54	0.0238	-0.6436	0.0187
895	SLU 73	-1.66	-0.54	100.48	0.0237	-0.7025	0.021
895	SLU 74	-1.68	-0.64	102.06	0.0245	-0.7187	0.0212
895	SLU 75	-1.68	-0.58	102.04	0.0243	-0.7169	0.0212
895	SLU 76	-1.68	-0.55	101.43	0.0239	-0.7103	0.0212
895	SLU 77	-1.7	-0.65	103.01	0.0247	-0.7265	0.0214
895	SLU 78	-1.7	-0.59	103	0.0245	-0.7247	0.0214
895	SLU 79	-1.69	-0.66	102.41	0.0245	-0.7211	0.0213
895	SLU 80	-1.69	-0.6	102.4	0.0243	-0.7193	0.0214
895	SLU 81	-1.7	-0.66	104.31	0.0243	-0.7379	0.0221
895	SLU 82	-1.7	-0.6	104.29	0.024	-0.7361	0.0221
895	SLU 83	-1.72	-0.66	105.26	0.0245	-0.7457	0.0223
895	SLU 84	-1.72	-0.6	105.24	0.0243	-0.7439	0.0223
895	SLE RA 1	-1.17	-0.47	68.58	0.0178	-0.469	0.0136
895	SLE RA 2	-1.17	-0.4	68.56	0.0175	-0.467	0.0136
895	SLE RA 3	-1.19	-0.47	69.61	0.0181	-0.4778	0.0138
895	SLE RA 4	-1.19	-0.43	69.6	0.0179	-0.4766	0.0138
895	SLE RA 5	-1.18	-0.41	69.19	0.0177	-0.4722	0.0138
895	SLE RA 6	-1.2	-0.47	70.25	0.0182	-0.483	0.0139
895	SLE RA 7	-1.2	-0.43	70.24	0.0181	-0.4818	0.014
895	SLE RA 8	-1.2	-0.48	69.85	0.0181	-0.4794	0.0139
895	SLE RA 9	-1.2	-0.44	69.84	0.0179	-0.4782	0.0139
895	SLE RA 10	-1.24	-0.42	74.47	0.0179	-0.5174	0.0154
895	SLE RA 11	-1.26	-0.49	75.52	0.0184	-0.5283	0.0156
895	SLE RA 12	-1.26	-0.45	75.51	0.0183	-0.5271	0.0156
895	SLE RA 13	-1.25	-0.43	75.1	0.018	-0.5226	0.0155
895	SLE RA 14	-1.27	-0.5	76.15	0.0186	-0.5335	0.0157
895	SLE RA 15	-1.27	-0.45	76.14	0.0184	-0.5323	0.0157
895	SLE RA 16	-1.26	-0.5	75.75	0.0184	-0.5299	0.0157
895	SLE RA 17	-1.26	-0.46	75.74	0.0183	-0.5287	0.0157
895	SLE RA 18	-1.27	-0.5	77.02	0.0183	-0.5411	0.0162
895	SLE RA 19	-1.27	-0.46	77	0.0181	-0.5399	0.0162
895	SLE RA 20	-1.28	-0.51	77.65	0.0184	-0.5463	0.0163
895	SLE RA 21	-1.28	-0.47	77.64	0.0183	-0.5451	0.0163
895	SLE FR 1	-1.17	-0.47	68.58	0.0178	-0.469	0.0136
895	SLE FR 2	-1.17	-0.46	68.58	0.0178	-0.4686	0.0136
895	SLE FR 3	-1.18	-0.47	68.83	0.0179	-0.4711	0.0137
895	SLE FR 4	-1.2	-0.47	71.11	0.0179	-0.4902	0.0144
895	SLE FR 5	-1.2	-0.48	71.36	0.018	-0.4927	0.0144
895	SLE FR 6	-1.22	-0.49	72.8	0.018	-0.505	0.0149
895	SLE QP 1	-1.17	-0.47	68.58	0.0178	-0.469	0.0136
895	SLE QP 2	-1.2	-0.48	71.11	0.0179	-0.4906	0.0144
895	SLD 1	5.59	0.29	78.84	0.0239	-0.3573	-0.0387
895	SLD 2	5.03	-0.33	79.28	0.0261	-0.3688	-0.0227
895	SLD 3	5.45	-1.66	79.81	0.0313	-0.4214	-0.0363
895	SLD 4	4.88	-2.28	80.26	0.0335	-0.4328	-0.0203
895	SLD 5	1.16	2.81	71.88	0.0081	-0.3515	-0.008
895	SLD 6	0.79	2.41	72.17	0.0095	-0.359	0.0024
895	SLD 7	0.67	-3.67	75.11	0.0329	-0.5649	0
895	SLD 8	0.3	-4.08	75.41	0.0343	-0.5724	0.0105
895	SLD 9	-2.7	3.12	66.81	0.0016	-0.4088	0.0183
895	SLD 10	-3.07	2.71	67.11	0.003	-0.4163	0.0288
895	SLD 11	-3.19	-3.36	70.05	0.0264	-0.6222	0.0264
895	SLD 12	-3.56	-3.77	70.35	0.0278	-0.6297	0.0368
895	SLD 13	-7.28	1.32	61.97	0.0024	-0.5484	0.0491
895	SLD 14	-7.84	0.7	62.41	0.0046	-0.5598	0.0651
895	SLD 15	-7.43	-0.62	62.94	0.0098	-0.6124	0.0515
895	SLD 16	-7.99	-1.25	63.39	0.012	-0.6239	0.0675
895	SLV 1	14.68	1.26	89.24	0.0321	-0.1807	-0.1096
895	SLV 2	13.37	-0.2	90.28	0.0372	-0.2073	-0.0725
895	SLV 3	14.34	-3.18	91.44	0.049	-0.3271	-0.1041
895	SLV 4	13.03	-4.63	92.48	0.0541	-0.3538	-0.067
895	SLV 5	4.3	7.02	73.03	-0.0043	-0.171	-0.0376
895	SLV 6	3.46	6.08	73.71	-0.001	-0.1881	-0.0137
895	SLV 7	3.18	-7.76	80.37	0.052	-0.6591	-0.0191
895	SLV 8	2.33	-8.7	81.04	0.0553	-0.6762	0.0048
895	SLV 9	-4.73	7.74	61.18	-0.0194	-0.305	0.024
895	SLV 10	-5.57	6.81	61.86	-0.0161	-0.3221	0.0479
895	SLV 11	-5.86	-7.04	68.52	0.0369	-0.7931	0.0425
895	SLV 12	-6.7	-7.98	69.19	0.0402	-0.8102	0.0664

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
895	SLV 13	-15.43	3.67	49.74	-0.0182	-0.6274	0.0958
895	SLV 14	-16.74	2.22	50.78	-0.0131	-0.6541	0.1329
895	SLV 15	-15.76	-0.76	51.94	-0.0013	-0.7739	0.1013
895	SLV 16	-17.08	-2.21	52.98	0.0038	-0.8005	0.1384
895	CRTFP Ux+	0	0	0	0	0	0
895	CRTFP Ux-	0	0	0	0	0	0
895	CRTFP Uy+	0	0	0	0	0	0
895	CRTFP Uy-	0	0	0	0	0	0
897	SLU 1	-0.6	-0.07	32.11	0.0473	-3.364	-0.0183
897	SLU 2	-0.6	0.01	32.11	0.0471	-3.363	0.0017
897	SLU 3	-0.61	-0.07	32.86	0.0484	-3.4323	-0.0184
897	SLU 4	-0.61	-0.02	32.85	0.0483	-3.4316	-0.0064
897	SLU 5	-0.61	0.01	32.57	0.0478	-3.4053	0.001
897	SLU 6	-0.62	-0.07	33.32	0.0491	-3.4746	-0.019
897	SLU 7	-0.62	-0.03	33.32	0.0491	-3.474	-0.0071
897	SLU 8	-0.62	-0.08	33.04	0.0487	-3.4487	-0.0196
897	SLU 9	-0.62	-0.03	33.04	0.0486	-3.4481	-0.0076
897	SLU 10	-0.66	0.02	36.09	0.0535	-3.7411	0.0046
897	SLU 11	-0.67	-0.06	36.84	0.0548	-3.8103	-0.0155
897	SLU 12	-0.67	-0.01	36.83	0.0547	-3.8097	-0.0035
897	SLU 13	-0.67	0.02	36.55	0.0542	-3.7834	0.004
897	SLU 14	-0.68	-0.06	37.3	0.0555	-3.8527	-0.0161
897	SLU 15	-0.68	-0.01	37.3	0.0554	-3.852	-0.0041
897	SLU 16	-0.67	-0.06	37.02	0.055	-3.8268	-0.0166
897	SLU 17	-0.67	-0.02	37.02	0.055	-3.8262	-0.0047
897	SLU 18	-0.68	-0.05	37.8	0.0563	-3.9041	-0.0141
897	SLU 19	-0.68	-0.01	37.79	0.0563	-3.9035	-0.0021
897	SLU 20	-0.69	-0.06	38.26	0.0571	-3.9465	-0.0147
897	SLU 21	-0.69	-0.01	38.26	0.057	-3.9458	-0.0028
897	SLU 22	-0.66	-0.06	36.12	0.0538	-3.7444	-0.0147
897	SLU 23	-0.66	0.02	36.12	0.0537	-3.7434	0.0052
897	SLU 24	-0.67	-0.06	36.87	0.055	-3.8127	-0.0148
897	SLU 25	-0.68	-0.01	36.86	0.0549	-3.812	-0.0029
897	SLU 26	-0.67	0.02	36.58	0.0544	-3.7857	0.0046
897	SLU 27	-0.68	-0.06	37.33	0.0557	-3.855	-0.0155
897	SLU 28	-0.69	-0.01	37.33	0.0556	-3.8544	-0.0035
897	SLU 29	-0.68	-0.06	37.05	0.0553	-3.8291	-0.016
897	SLU 30	-0.68	-0.01	37.05	0.0552	-3.8285	-0.004
897	SLU 31	-0.72	0.04	40.1	0.0601	-4.1214	0.0082
897	SLU 32	-0.73	-0.04	40.85	0.0614	-4.1907	-0.0119
897	SLU 33	-0.73	0	40.84	0.0613	-4.1901	0.0001
897	SLU 34	-0.73	0.03	40.56	0.0608	-4.1638	0.0075
897	SLU 35	-0.74	-0.05	41.31	0.0621	-4.2331	-0.0125
897	SLU 36	-0.74	0	41.31	0.062	-4.2324	-0.0005
897	SLU 37	-0.74	-0.05	41.03	0.0616	-4.2072	-0.0131
897	SLU 38	-0.74	0	41.03	0.0615	-4.2065	-0.0011
897	SLU 39	-0.74	-0.04	41.81	0.0629	-4.2845	-0.0105
897	SLU 40	-0.74	0.01	41.8	0.0628	-4.2839	0.0015
897	SLU 41	-0.75	-0.04	42.27	0.0636	-4.3269	-0.0112
897	SLU 42	-0.75	0.01	42.27	0.0636	-4.3262	0.0008
897	SLU 43	-0.76	-0.1	40.37	0.0592	-4.2428	-0.025
897	SLU 44	-0.76	-0.02	40.37	0.059	-4.2418	-0.0051
897	SLU 45	-0.77	-0.1	41.12	0.0604	-4.3111	-0.0251
897	SLU 46	-0.77	-0.05	41.11	0.0603	-4.3104	-0.0131
897	SLU 47	-0.77	-0.02	40.83	0.0597	-4.2841	-0.0057
897	SLU 48	-0.78	-0.1	41.58	0.0611	-4.3534	-0.0258
897	SLU 49	-0.78	-0.05	41.58	0.061	-4.3528	-0.0138
897	SLU 50	-0.77	-0.1	41.3	0.0606	-4.3275	-0.0263
897	SLU 51	-0.78	-0.05	41.3	0.0605	-4.3269	-0.0143
897	SLU 52	-0.81	0	44.35	0.0654	-4.6198	-0.0021
897	SLU 53	-0.83	-0.09	45.1	0.0667	-4.6891	-0.0222
897	SLU 54	-0.83	-0.04	45.09	0.0666	-4.6885	-0.0102
897	SLU 55	-0.82	-0.01	44.81	0.0661	-4.6622	-0.0027
897	SLU 56	-0.84	-0.09	45.56	0.0674	-4.7315	-0.0228
897	SLU 57	-0.84	-0.04	45.56	0.0673	-4.7308	-0.0108
897	SLU 58	-0.83	-0.09	45.28	0.067	-4.7056	-0.0234
897	SLU 59	-0.83	-0.04	45.28	0.0669	-4.705	-0.0114
897	SLU 60	-0.84	-0.08	46.06	0.0683	-4.7829	-0.0208
897	SLU 61	-0.84	-0.03	46.05	0.0682	-4.7823	-0.0088
897	SLU 62	-0.85	-0.08	46.52	0.069	-4.8253	-0.0215
897	SLU 63	-0.85	-0.03	46.52	0.0689	-4.8246	-0.0095
897	SLU 64	-0.82	-0.08	44.38	0.0658	-4.6232	-0.0215
897	SLU 65	-0.82	0	44.38	0.0656	-4.6222	-0.0015
897	SLU 66	-0.83	-0.08	45.13	0.0669	-4.6914	-0.0216
897	SLU 67	-0.83	-0.03	45.12	0.0669	-4.6908	-0.0096
897	SLU 68	-0.83	0	44.84	0.0663	-4.6645	-0.0021
897	SLU 69	-0.84	-0.09	45.59	0.0677	-4.7338	-0.0222
897	SLU 70	-0.84	-0.04	45.59	0.0676	-4.7332	-0.0102
897	SLU 71	-0.84	-0.09	45.31	0.0672	-4.7079	-0.0227
897	SLU 72	-0.84	-0.04	45.31	0.0671	-4.7073	-0.0107
897	SLU 73	-0.88	0.01	48.36	0.072	-5.0002	0.0015
897	SLU 74	-0.89	-0.07	49.11	0.0733	-5.0695	-0.0186
897	SLU 75	-0.89	-0.02	49.1	0.0732	-5.0689	-0.0066
897	SLU 76	-0.89	0.01	48.82	0.0727	-5.0426	0.0008
897	SLU 77	-0.9	-0.07	49.57	0.074	-5.1119	-0.0192
897	SLU 78	-0.9	-0.03	49.57	0.0739	-5.1112	-0.0073
897	SLU 79	-0.89	-0.08	49.29	0.0735	-5.086	-0.0198
897	SLU 80	-0.9	-0.03	49.29	0.0735	-5.0853	-0.0078
897	SLU 81	-0.9	-0.06	50.07	0.0749	-5.1633	-0.0172
897	SLU 82	-0.9	-0.02	50.06	0.0748	-5.1627	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
897	SLU 83	-0.91	-0.07	50.53	0.0756	-5.2056	-0.0179
897	SLU 84	-0.91	-0.02	50.53	0.0755	-5.205	-0.0059
897	SLE RA 1	-0.62	-0.07	33.26	0.0491	-3.4727	-0.0173
897	SLE RA 2	-0.62	-0.01	33.26	0.049	-3.472	-0.004
897	SLE RA 3	-0.62	-0.07	33.76	0.0499	-3.5182	-0.0174
897	SLE RA 4	-0.63	-0.03	33.75	0.0499	-3.5178	-0.0094
897	SLE RA 5	-0.62	-0.01	33.56	0.0495	-3.5003	-0.0044
897	SLE RA 6	-0.63	-0.07	34.06	0.0504	-3.5464	-0.0178
897	SLE RA 7	-0.63	-0.04	34.06	0.0503	-3.546	-0.0098
897	SLE RA 8	-0.63	-0.07	33.88	0.0501	-3.5292	-0.0181
897	SLE RA 9	-0.63	-0.04	33.88	0.05	-3.5288	-0.0101
897	SLE RA 10	-0.65	-0.01	35.91	0.0533	-3.7241	-0.002
897	SLE RA 11	-0.66	-0.06	36.41	0.0542	-3.7702	-0.0154
897	SLE RA 12	-0.66	-0.03	36.41	0.0541	-3.7698	-0.0074
897	SLE RA 13	-0.66	-0.01	36.22	0.0538	-3.7523	-0.0024
897	SLE RA 14	-0.67	-0.06	36.72	0.0546	-3.7985	-0.0158
897	SLE RA 15	-0.67	-0.03	36.71	0.0546	-3.7981	-0.0078
897	SLE RA 16	-0.67	-0.06	36.53	0.0543	-3.7812	-0.0162
897	SLE RA 17	-0.67	-0.03	36.53	0.0543	-3.7808	-0.0082
897	SLE RA 18	-0.67	-0.05	37.05	0.0552	-3.8328	-0.0145
897	SLE RA 19	-0.67	-0.02	37.05	0.0551	-3.8324	-0.0065
897	SLE RA 20	-0.68	-0.06	37.36	0.0557	-3.861	-0.0149
897	SLE RA 21	-0.68	-0.02	37.36	0.0556	-3.8606	-0.0069
897	SLE FR 1	-0.62	-0.07	33.26	0.0491	-3.4727	-0.0173
897	SLE FR 2	-0.62	-0.06	33.26	0.0491	-3.4726	-0.0146
897	SLE FR 3	-0.62	-0.07	33.38	0.0493	-3.484	-0.0175
897	SLE FR 4	-0.63	-0.05	34.4	0.0509	-3.5806	-0.0138
897	SLE FR 5	-0.63	-0.06	34.52	0.0511	-3.592	-0.0166
897	SLE FR 6	-0.64	-0.06	35.15	0.0522	-3.6527	-0.0159
897	SLE QP 1	-0.62	-0.07	33.26	0.0491	-3.4727	-0.0173
897	SLE QP 2	-0.63	-0.06	34.4	0.051	-3.5807	-0.0164
897	SLD 1	2.55	1.45	43.62	0.0644	-4.4239	0.3605
897	SLD 2	2.27	0.79	43.93	0.0666	-4.4616	0.1958
897	SLD 3	2.49	0.08	44.06	0.0686	-4.4836	0.0192
897	SLD 4	2.2	-0.58	44.37	0.0708	-4.5213	-0.1455
897	SLD 5	0.47	2.58	36.45	0.0483	-3.7364	0.6435
897	SLD 6	0.28	2.15	36.65	0.0497	-3.7611	0.5356
897	SLD 7	0.26	-1.98	37.9	0.0622	-3.9355	-0.4941
897	SLD 8	0.07	-2.41	38.1	0.0636	-3.9602	-0.6021
897	SLD 9	-1.34	2.28	30.69	0.0383	-3.2013	0.5692
897	SLD 10	-1.52	1.85	30.89	0.0397	-3.226	0.4612
897	SLD 11	-1.55	-2.27	32.14	0.0522	-3.4003	-0.5685
897	SLD 12	-1.73	-2.71	32.34	0.0537	-3.4251	-0.6764
897	SLD 13	-3.47	0.46	24.43	0.0311	-2.6401	0.1126
897	SLD 14	-3.75	-0.21	24.74	0.0333	-2.6779	-0.0521
897	SLD 15	-3.53	-0.91	24.86	0.0353	-2.6999	-0.2287
897	SLD 16	-3.81	-1.58	25.17	0.0375	-2.7376	-0.3934
897	SLV 1	6.8	3.43	56	0.0826	-5.5563	0.8539
897	SLV 2	6.14	1.88	56.72	0.0877	-5.6442	0.4703
897	SLV 3	6.66	0.32	56.99	0.0921	-5.6918	0.077
897	SLV 4	6	-1.23	57.71	0.0972	-5.7797	-0.3066
897	SLV 5	1.93	5.97	39.26	0.0452	-3.9528	1.489
897	SLV 6	1.51	4.98	39.72	0.0485	-4.0094	1.2418
897	SLV 7	1.45	-4.4	42.55	0.0768	-4.4044	-1.1006
897	SLV 8	1.02	-5.4	43.01	0.0801	-4.4611	-1.3478
897	SLV 9	-2.29	5.27	25.78	0.0218	-2.7004	1.3149
897	SLV 10	-2.71	4.28	26.25	0.0251	-2.7571	1.0677
897	SLV 11	-2.77	-5.1	29.07	0.0534	-3.1521	-1.2747
897	SLV 12	-3.2	-6.1	29.54	0.0567	-3.2087	-1.5219
897	SLV 13	-7.26	1.1	11.09	0.0047	-1.3818	0.2737
897	SLV 14	-7.92	-0.44	11.81	0.0098	-1.4697	-0.1099
897	SLV 15	-7.41	-2.01	12.07	0.0142	-1.5173	-0.5032
897	SLV 16	-8.07	-3.56	12.79	0.0193	-1.6052	-0.8868
897	CRTFP Ux+	0	0	0	0	0	0
897	CRTFP Ux-	0	0	0	0	0	0
897	CRTFP Uy+	0	0	0	0	0	0
897	CRTFP Uy-	0	0	0	0	0	0
900	SLU 1	0.3	0.78	58.35	0.0512	1.0172	0.04
900	SLU 2	0.3	0.87	58.34	0.0506	1.0182	0.04
900	SLU 3	0.31	0.82	59.69	0.0528	1.045	0.0411
900	SLU 4	0.31	0.88	59.68	0.0524	1.0456	0.0411
900	SLU 5	0.31	0.89	59.16	0.0515	1.0348	0.0407
900	SLU 6	0.32	0.84	60.51	0.0537	1.0616	0.0418
900	SLU 7	0.32	0.89	60.5	0.0533	1.0622	0.0418
900	SLU 8	0.31	0.81	59.99	0.053	1.0504	0.0414
900	SLU 9	0.31	0.87	59.99	0.0526	1.051	0.0414
900	SLU 10	0.34	0.96	66.33	0.0561	1.1888	0.0464
900	SLU 11	0.35	0.91	67.67	0.0583	1.2157	0.0474
900	SLU 12	0.35	0.97	67.67	0.058	1.2163	0.0474
900	SLU 13	0.35	0.98	67.15	0.057	1.2054	0.0471
900	SLU 14	0.36	0.93	68.49	0.0592	1.2323	0.0481
900	SLU 15	0.36	0.98	68.49	0.0588	1.2329	0.0482
900	SLU 16	0.36	0.9	67.98	0.0585	1.221	0.0478
900	SLU 17	0.36	0.96	67.98	0.0581	1.2216	0.0478
900	SLU 18	0.36	0.91	69.76	0.0591	1.2609	0.0491
900	SLU 19	0.36	0.97	69.76	0.0587	1.2615	0.0491
900	SLU 20	0.37	0.93	70.59	0.06	1.2775	0.0498
900	SLU 21	0.37	0.98	70.58	0.0596	1.2781	0.0498
900	SLU 22	0.35	0.94	66.12	0.058	1.1808	0.046
900	SLU 23	0.35	1.03	66.11	0.0574	1.1818	0.046

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
900	SLU 24	0.35	0.98	67.46	0.0596	1.2086	0.0471
900	SLU 25	0.35	1.04	67.45	0.0592	1.2092	0.0471
900	SLU 26	0.35	1.05	66.93	0.0583	1.1984	0.0468
900	SLU 27	0.36	1	68.28	0.0604	1.2252	0.0478
900	SLU 28	0.36	1.05	68.27	0.0601	1.2258	0.0478
900	SLU 29	0.36	0.97	67.76	0.0598	1.214	0.0474
900	SLU 30	0.36	1.03	67.76	0.0594	1.2146	0.0475
900	SLU 31	0.39	1.13	74.1	0.0629	1.3524	0.0524
900	SLU 32	0.4	1.07	75.45	0.0651	1.3793	0.0534
900	SLU 33	0.4	1.13	75.44	0.0647	1.3799	0.0535
900	SLU 34	0.4	1.14	74.92	0.0638	1.369	0.0531
900	SLU 35	0.41	1.09	76.27	0.066	1.3958	0.0542
900	SLU 36	0.41	1.14	76.26	0.0656	1.3965	0.0542
900	SLU 37	0.4	1.06	75.75	0.0653	1.3846	0.0538
900	SLU 38	0.4	1.12	75.75	0.0649	1.3852	0.0538
900	SLU 39	0.41	1.07	77.54	0.0659	1.4245	0.0551
900	SLU 40	0.41	1.13	77.53	0.0655	1.4251	0.0551
900	SLU 41	0.42	1.09	78.36	0.0667	1.4411	0.0558
900	SLU 42	0.42	1.14	78.35	0.0664	1.4417	0.0558
900	SLU 43	0.37	0.96	73.19	0.0643	1.2662	0.0499
900	SLU 44	0.37	1.05	73.18	0.0637	1.2672	0.05
900	SLU 45	0.38	1	74.53	0.0659	1.2941	0.051
900	SLU 46	0.38	1.06	74.52	0.0655	1.2947	0.051
900	SLU 47	0.38	1.07	74	0.0645	1.2838	0.0507
900	SLU 48	0.39	1.02	75.35	0.0667	1.3107	0.0517
900	SLU 49	0.39	1.07	75.34	0.0664	1.3113	0.0517
900	SLU 50	0.39	0.99	74.83	0.066	1.2994	0.0514
900	SLU 51	0.39	1.04	74.83	0.0657	1.3	0.0514
900	SLU 52	0.42	1.14	81.17	0.0692	1.4379	0.0563
900	SLU 53	0.43	1.09	82.52	0.0714	1.4647	0.0574
900	SLU 54	0.43	1.15	82.51	0.071	1.4653	0.0574
900	SLU 55	0.43	1.16	81.99	0.0701	1.4545	0.057
900	SLU 56	0.43	1.11	83.34	0.0722	1.4813	0.0581
900	SLU 57	0.43	1.16	83.33	0.0719	1.4819	0.0581
900	SLU 58	0.43	1.08	82.82	0.0715	1.47	0.0577
900	SLU 59	0.43	1.14	82.82	0.0712	1.4706	0.0577
900	SLU 60	0.44	1.09	84.61	0.0722	1.51	0.059
900	SLU 61	0.44	1.15	84.6	0.0718	1.5106	0.059
900	SLU 62	0.44	1.1	85.43	0.073	1.5266	0.0597
900	SLU 63	0.45	1.16	85.42	0.0727	1.5272	0.0597
900	SLU 64	0.42	1.12	80.96	0.0711	1.4298	0.0559
900	SLU 65	0.42	1.21	80.96	0.0704	1.4308	0.056
900	SLU 66	0.43	1.16	82.3	0.0726	1.4577	0.057
900	SLU 67	0.43	1.22	82.29	0.0723	1.4583	0.057
900	SLU 68	0.43	1.23	81.78	0.0713	1.4474	0.0567
900	SLU 69	0.44	1.18	83.12	0.0735	1.4743	0.0577
900	SLU 70	0.44	1.23	83.11	0.0731	1.4749	0.0578
900	SLU 71	0.43	1.15	82.6	0.0728	1.463	0.0574
900	SLU 72	0.43	1.21	82.6	0.0724	1.4636	0.0574
900	SLU 73	0.46	1.3	88.95	0.0759	1.6015	0.0623
900	SLU 74	0.47	1.25	90.29	0.0781	1.6283	0.0634
900	SLU 75	0.47	1.31	90.28	0.0778	1.6289	0.0634
900	SLU 76	0.47	1.32	89.77	0.0768	1.618	0.063
900	SLU 77	0.48	1.27	91.11	0.079	1.6449	0.0641
900	SLU 78	0.48	1.32	91.1	0.0786	1.6455	0.0641
900	SLU 79	0.48	1.24	90.59	0.0783	1.6336	0.0637
900	SLU 80	0.48	1.3	90.59	0.0779	1.6342	0.0638
900	SLU 81	0.48	1.25	92.38	0.0789	1.6736	0.065
900	SLU 82	0.48	1.31	92.37	0.0786	1.6742	0.065
900	SLU 83	0.49	1.27	93.2	0.0798	1.6901	0.0657
900	SLU 84	0.49	1.32	93.19	0.0794	1.6908	0.0658
900	SLE RA 1	0.31	0.83	60.57	0.0532	1.0639	0.0417
900	SLE RA 2	0.31	0.89	60.57	0.0528	1.0646	0.0417
900	SLE RA 3	0.32	0.86	61.46	0.0542	1.0825	0.0424
900	SLE RA 4	0.32	0.89	61.46	0.054	1.0829	0.0424
900	SLE RA 5	0.32	0.9	61.11	0.0533	1.0756	0.0422
900	SLE RA 6	0.32	0.86	62.01	0.0548	1.0936	0.0429
900	SLE RA 7	0.32	0.9	62	0.0546	1.094	0.0429
900	SLE RA 8	0.32	0.85	61.67	0.0543	1.086	0.0427
900	SLE RA 9	0.32	0.88	61.66	0.0541	1.0864	0.0427
900	SLE RA 10	0.34	0.95	65.89	0.0564	1.1783	0.046
900	SLE RA 11	0.35	0.92	66.79	0.0579	1.1962	0.0467
900	SLE RA 12	0.35	0.95	66.78	0.0576	1.1966	0.0467
900	SLE RA 13	0.35	0.96	66.44	0.057	1.1894	0.0464
900	SLE RA 14	0.35	0.93	67.33	0.0585	1.2073	0.0471
900	SLE RA 15	0.35	0.96	67.33	0.0582	1.2077	0.0472
900	SLE RA 16	0.35	0.91	66.99	0.058	1.1998	0.0469
900	SLE RA 17	0.35	0.94	66.99	0.0578	1.2002	0.0469
900	SLE RA 18	0.36	0.91	68.18	0.0584	1.2264	0.0478
900	SLE RA 19	0.36	0.95	68.18	0.0582	1.2268	0.0478
900	SLE RA 20	0.36	0.92	68.73	0.059	1.2375	0.0482
900	SLE RA 21	0.36	0.96	68.72	0.0588	1.2379	0.0483
900	SLE FR 1	0.31	0.83	60.57	0.0532	1.0639	0.0417
900	SLE FR 2	0.31	0.84	60.57	0.0531	1.064	0.0417
900	SLE FR 3	0.31	0.83	60.79	0.0534	1.0683	0.0419
900	SLE FR 4	0.33	0.87	62.85	0.0547	1.1128	0.0435
900	SLE FR 5	0.33	0.86	63.07	0.055	1.1171	0.0437
900	SLE FR 6	0.33	0.87	64.38	0.0558	1.1451	0.0447
900	SLE QP 1	0.31	0.83	60.57	0.0532	1.0639	0.0417
900	SLE QP 2	0.33	0.85	62.85	0.0547	1.1126	0.0435

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
900	SLD 1	7.09	2.21	65.66	0.0524	1.0109	-0.0198
900	SLD 2	6.57	1.97	65.69	0.0537	1.0157	-0.0035
900	SLD 3	6.98	0.27	65.98	0.0637	0.9969	-0.0177
900	SLD 4	6.46	0.03	66.01	0.0651	1.0017	-0.0013
900	SLD 5	2.62	4.24	63.2	0.0365	1.1025	0.0183
900	SLD 6	2.28	4.09	63.22	0.0374	1.1057	0.0291
900	SLD 7	2.24	-2.22	64.28	0.0745	1.0558	0.0256
900	SLD 8	1.9	-2.38	64.3	0.0753	1.059	0.0363
900	SLD 9	-1.25	4.09	61.41	0.0342	1.1663	0.0508
900	SLD 10	-1.59	3.93	61.43	0.035	1.1695	0.0615
900	SLD 11	-1.63	-2.38	62.49	0.0721	1.1196	0.058
900	SLD 12	-1.97	-2.54	62.51	0.0729	1.1228	0.0687
900	SLD 13	-5.81	1.68	59.7	0.0444	1.2236	0.0883
900	SLD 14	-6.33	1.44	59.73	0.0457	1.2284	0.1047
900	SLD 15	-5.92	-0.26	60.02	0.0558	1.2096	0.0905
900	SLD 16	-6.44	-0.5	60.05	0.0571	1.2144	0.1069
900	SLV 1	16.14	3.96	69.49	0.0503	0.8739	-0.1046
900	SLV 2	14.94	3.41	69.56	0.0534	0.8851	-0.0664
900	SLV 3	15.88	-0.46	70.22	0.0761	0.8419	-0.0996
900	SLV 4	14.68	-1.01	70.29	0.0791	0.8531	-0.0614
900	SLV 5	5.67	8.58	63.72	0.0138	1.0876	-0.0151
900	SLV 6	4.9	8.23	63.77	0.0157	1.0949	0.0095
900	SLV 7	4.81	-6.15	66.16	0.0997	0.981	0.0016
900	SLV 8	4.03	-6.5	66.2	0.1017	0.9882	0.0262
900	SLV 9	-3.38	8.21	59.5	0.0078	1.2371	0.0609
900	SLV 10	-4.15	7.85	59.55	0.0098	1.2443	0.0854
900	SLV 11	-4.24	-6.52	61.94	0.0937	1.1304	0.0775
900	SLV 12	-5.02	-6.88	61.99	0.0957	1.1377	0.1021
900	SLV 13	-14.03	2.71	55.42	0.0303	1.3722	0.1485
900	SLV 14	-15.23	2.16	55.49	0.0334	1.3834	0.1866
900	SLV 15	-14.29	-1.7	56.15	0.0561	1.3402	0.1535
900	SLV 16	-15.49	-2.25	56.22	0.0592	1.3514	0.1916
900	CRTFP Ux+	0	0	0	0	0	0
900	CRTFP Ux-	0	0	0	0	0	0
900	CRTFP Uy+	0	0	0	0	0	0
900	CRTFP Uy-	0	0	0	0	0	0
903	SLU 1	0.79	1.51	53.37	0.0658	-0.349	0.0172
903	SLU 2	0.79	1.61	53.36	0.0651	-0.3499	0.0172
903	SLU 3	0.81	1.58	54.57	0.0678	-0.3581	0.0178
903	SLU 4	0.81	1.63	54.56	0.0675	-0.3587	0.0178
903	SLU 5	0.8	1.63	54.12	0.0663	-0.3555	0.0176
903	SLU 6	0.82	1.6	55.33	0.069	-0.3637	0.0182
903	SLU 7	0.82	1.66	55.32	0.0687	-0.3643	0.0183
903	SLU 8	0.82	1.57	54.89	0.0681	-0.3602	0.0181
903	SLU 9	0.82	1.62	54.89	0.0678	-0.3607	0.0181
903	SLU 10	0.9	1.81	60.43	0.073	-0.4065	0.021
903	SLU 11	0.92	1.78	61.64	0.0757	-0.4147	0.0216
903	SLU 12	0.92	1.84	61.63	0.0754	-0.4153	0.0216
903	SLU 13	0.91	1.84	61.19	0.0742	-0.4121	0.0214
903	SLU 14	0.94	1.81	62.4	0.0769	-0.4203	0.0221
903	SLU 15	0.93	1.86	62.39	0.0765	-0.4209	0.0221
903	SLU 16	0.93	1.77	61.96	0.076	-0.4168	0.0219
903	SLU 17	0.93	1.83	61.96	0.0757	-0.4173	0.0219
903	SLU 18	0.95	1.81	63.47	0.077	-0.4299	0.0226
903	SLU 19	0.95	1.86	63.46	0.0767	-0.4304	0.0226
903	SLU 20	0.96	1.84	64.23	0.0782	-0.4355	0.023
903	SLU 21	0.96	1.89	64.22	0.0779	-0.436	0.0231
903	SLU 22	0.9	1.78	60.29	0.0749	-0.4064	0.0207
903	SLU 23	0.9	1.87	60.28	0.0743	-0.4074	0.0207
903	SLU 24	0.92	1.84	61.49	0.077	-0.4156	0.0214
903	SLU 25	0.92	1.89	61.48	0.0766	-0.4161	0.0214
903	SLU 26	0.91	1.89	61.04	0.0755	-0.413	0.0212
903	SLU 27	0.93	1.86	62.25	0.0782	-0.4212	0.0218
903	SLU 28	0.93	1.92	62.25	0.0778	-0.4217	0.0218
903	SLU 29	0.93	1.83	61.82	0.0773	-0.4176	0.0216
903	SLU 30	0.93	1.88	61.81	0.0769	-0.4182	0.0216
903	SLU 31	1.01	2.07	67.35	0.0822	-0.464	0.0245
903	SLU 32	1.03	2.04	68.56	0.0849	-0.4722	0.0252
903	SLU 33	1.03	2.1	68.55	0.0845	-0.4728	0.0252
903	SLU 34	1.02	2.1	68.11	0.0834	-0.4696	0.025
903	SLU 35	1.04	2.07	69.32	0.0861	-0.4778	0.0256
903	SLU 36	1.04	2.13	69.31	0.0857	-0.4784	0.0256
903	SLU 37	1.04	2.04	68.88	0.0852	-0.4743	0.0254
903	SLU 38	1.04	2.09	68.88	0.0848	-0.4748	0.0254
903	SLU 39	1.06	2.07	70.39	0.0862	-0.4873	0.0262
903	SLU 40	1.06	2.13	70.38	0.0858	-0.4879	0.0262
903	SLU 41	1.07	2.1	71.15	0.0874	-0.4929	0.0266
903	SLU 42	1.07	2.15	71.14	0.087	-0.4935	0.0266
903	SLU 43	0.99	1.88	67.01	0.0824	-0.434	0.0211
903	SLU 44	0.99	1.97	67	0.0817	-0.4349	0.0211
903	SLU 45	1.01	1.94	68.21	0.0844	-0.4431	0.0217
903	SLU 46	1.01	2	68.2	0.0841	-0.4437	0.0218
903	SLU 47	1	2	67.76	0.0829	-0.4405	0.0216
903	SLU 48	1.02	1.97	68.97	0.0856	-0.4487	0.0222
903	SLU 49	1.02	2.02	68.96	0.0852	-0.4492	0.0222
903	SLU 50	1.02	1.93	68.53	0.0847	-0.4451	0.022
903	SLU 51	1.02	1.99	68.53	0.0844	-0.4457	0.022
903	SLU 52	1.1	2.18	74.06	0.0896	-0.4915	0.0249
903	SLU 53	1.12	2.15	75.27	0.0923	-0.4997	0.0255
903	SLU 54	1.12	2.2	75.27	0.092	-0.5003	0.0256

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
903	SLU 55	1.11	2.2	74.83	0.0908	-0.4971	0.0254
903	SLU 56	1.13	2.17	76.04	0.0935	-0.5053	0.026
903	SLU 57	1.13	2.23	76.03	0.0931	-0.5059	0.026
903	SLU 58	1.13	2.14	75.6	0.0926	-0.5018	0.0258
903	SLU 59	1.13	2.19	75.59	0.0922	-0.5023	0.0258
903	SLU 60	1.15	2.17	77.1	0.0936	-0.5148	0.0265
903	SLU 61	1.15	2.23	77.1	0.0933	-0.5154	0.0266
903	SLU 62	1.16	2.2	77.87	0.0948	-0.5204	0.027
903	SLU 63	1.16	2.26	77.86	0.0944	-0.521	0.027
903	SLU 64	1.1	2.14	73.93	0.0915	-0.4914	0.0247
903	SLU 65	1.1	2.23	73.92	0.0909	-0.4924	0.0247
903	SLU 66	1.12	2.2	75.13	0.0936	-0.5006	0.0253
903	SLU 67	1.11	2.26	75.12	0.0932	-0.5011	0.0253
903	SLU 68	1.11	2.26	74.68	0.0921	-0.498	0.0251
903	SLU 69	1.13	2.23	75.89	0.0948	-0.5062	0.0257
903	SLU 70	1.13	2.28	75.88	0.0944	-0.5067	0.0257
903	SLU 71	1.13	2.19	75.45	0.0939	-0.5026	0.0255
903	SLU 72	1.12	2.25	75.45	0.0935	-0.5032	0.0255
903	SLU 73	1.21	2.44	80.98	0.0988	-0.549	0.0285
903	SLU 74	1.23	2.41	82.2	0.1015	-0.5572	0.0291
903	SLU 75	1.23	2.46	82.19	0.1011	-0.5577	0.0291
903	SLU 76	1.22	2.47	81.75	0.1	-0.5546	0.0289
903	SLU 77	1.24	2.43	82.96	0.1027	-0.5628	0.0295
903	SLU 78	1.24	2.49	82.95	0.1023	-0.5633	0.0295
903	SLU 79	1.24	2.4	82.52	0.1018	-0.5592	0.0293
903	SLU 80	1.24	2.46	82.51	0.1014	-0.5598	0.0293
903	SLU 81	1.26	2.44	84.02	0.1028	-0.5723	0.0301
903	SLU 82	1.26	2.49	84.02	0.1024	-0.5729	0.0301
903	SLU 83	1.27	2.46	84.79	0.104	-0.5779	0.0305
903	SLU 84	1.27	2.52	84.78	0.1036	-0.5785	0.0305
903	SLE RA 1	0.82	1.59	55.35	0.0684	-0.3654	0.0182
903	SLE RA 2	0.82	1.65	55.34	0.068	-0.366	0.0182
903	SLE RA 3	0.83	1.63	56.15	0.0698	-0.3715	0.0186
903	SLE RA 4	0.83	1.67	56.14	0.0695	-0.3719	0.0186
903	SLE RA 5	0.83	1.67	55.85	0.0688	-0.3697	0.0185
903	SLE RA 6	0.84	1.65	56.65	0.0706	-0.3752	0.0189
903	SLE RA 7	0.84	1.68	56.65	0.0703	-0.3756	0.0189
903	SLE RA 8	0.84	1.62	56.36	0.07	-0.3729	0.0188
903	SLE RA 9	0.84	1.66	56.36	0.0697	-0.3732	0.0188
903	SLE RA 10	0.89	1.79	60.05	0.0732	-0.4038	0.0207
903	SLE RA 11	0.91	1.77	60.86	0.075	-0.4092	0.0211
903	SLE RA 12	0.91	1.8	60.85	0.0748	-0.4096	0.0212
903	SLE RA 13	0.9	1.81	60.56	0.074	-0.4075	0.021
903	SLE RA 14	0.92	1.79	61.37	0.0758	-0.413	0.0214
903	SLE RA 15	0.92	1.82	61.36	0.0756	-0.4133	0.0214
903	SLE RA 16	0.91	1.76	61.08	0.0752	-0.4106	0.0213
903	SLE RA 17	0.91	1.8	61.07	0.075	-0.411	0.0213
903	SLE RA 18	0.93	1.79	62.08	0.0759	-0.4193	0.0218
903	SLE RA 19	0.93	1.82	62.07	0.0757	-0.4197	0.0218
903	SLE RA 20	0.94	1.8	62.59	0.0767	-0.423	0.0221
903	SLE RA 21	0.94	1.84	62.58	0.0764	-0.4234	0.0221
903	SLE FR 1	0.82	1.59	55.35	0.0684	-0.3654	0.0182
903	SLE FR 2	0.82	1.6	55.35	0.0683	-0.3655	0.0182
903	SLE FR 3	0.82	1.6	55.55	0.0687	-0.3669	0.0183
903	SLE FR 4	0.85	1.66	57.36	0.0706	-0.3817	0.0193
903	SLE FR 5	0.86	1.66	57.57	0.071	-0.3831	0.0194
903	SLE FR 6	0.87	1.69	58.71	0.0721	-0.3924	0.02
903	SLE QP 1	0.82	1.59	55.35	0.0684	-0.3654	0.0182
903	SLE QP 2	0.85	1.65	57.37	0.0706	-0.3816	0.0193
903	SLD 1	7.52	2.19	52.79	0.0626	-0.0947	-0.0408
903	SLD 2	7.01	2.42	52.78	0.0612	-0.0951	-0.0247
903	SLD 3	7.61	0.31	53.15	0.0744	-0.077	-0.0422
903	SLD 4	7.1	0.53	53.13	0.073	-0.0774	-0.026
903	SLD 5	2.81	4.63	55.46	0.0505	-0.3223	0.0004
903	SLD 6	2.48	4.78	55.45	0.0497	-0.3226	0.011
903	SLD 7	3.1	-1.65	56.64	0.0899	-0.2632	-0.0041
903	SLD 8	2.77	-1.5	56.63	0.089	-0.2635	0.0065
903	SLD 9	-1.06	4.8	58.1	0.0522	-0.4996	0.032
903	SLD 10	-1.4	4.95	58.09	0.0514	-0.4999	0.0426
903	SLD 11	-0.77	-1.48	59.28	0.0916	-0.4405	0.0275
903	SLD 12	-1.11	-1.33	59.27	0.0907	-0.4408	0.0381
903	SLD 13	-5.39	2.76	61.6	0.0682	-0.6857	0.0646
903	SLD 14	-5.91	2.99	61.59	0.0669	-0.6862	0.0807
903	SLD 15	-5.31	0.88	61.95	0.0801	-0.668	0.0632
903	SLD 16	-5.82	1.1	61.94	0.0787	-0.6684	0.0794
903	SLV 1	16.46	2.86	46.68	0.0517	0.2904	-0.1212
903	SLV 2	15.26	3.38	46.65	0.0485	0.2894	-0.0836
903	SLV 3	16.66	-1.43	47.48	0.0785	0.3307	-0.1244
903	SLV 4	15.47	-0.91	47.46	0.0753	0.3296	-0.0867
903	SLV 5	5.43	8.43	52.95	0.0249	-0.2408	-0.0246
903	SLV 6	4.66	8.77	52.93	0.0228	-0.2415	-0.0003
903	SLV 7	6.1	-5.87	55.62	0.1142	-0.1067	-0.0351
903	SLV 8	5.34	-5.54	55.61	0.1121	-0.1074	-0.0108
903	SLV 9	-3.63	8.83	59.13	0.0292	-0.6558	0.0494
903	SLV 10	-4.4	9.17	59.11	0.0271	-0.6564	0.0737
903	SLV 11	-2.96	-5.47	61.8	0.1185	-0.5217	0.0389
903	SLV 12	-3.73	-5.14	61.79	0.1164	-0.5223	0.0631
903	SLV 13	-13.76	4.21	67.28	0.066	-1.0928	0.1253
903	SLV 14	-14.95	4.72	67.25	0.0628	-1.0938	0.1629
903	SLV 15	-13.56	-0.09	68.08	0.0928	-1.0526	0.1221

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
903	SLV 16	-14.75	0.43	68.05	0.0896	-1.0536	0.1598
903	CRTFP Ux+	0	0	0	0	0	0
903	CRTFP Ux-	0	0	0	0	0	0
906	SLU 1	0.73	0.37	31.21	-0.0374	2.6175	-0.1317
906	SLU 2	0.72	0.46	31.19	-0.0376	2.6167	-0.1648
906	SLU 3	0.76	0.38	31.9	-0.0383	2.6544	-0.1361
906	SLU 4	0.75	0.44	31.89	-0.0384	2.6539	-0.156
906	SLU 5	0.74	0.47	31.62	-0.0382	2.639	-0.1654
906	SLU 6	0.77	0.38	32.33	-0.0389	2.6767	-0.1367
906	SLU 7	0.76	0.44	32.32	-0.039	2.6762	-0.1565
906	SLU 8	0.76	0.37	32.06	-0.0386	2.6622	-0.1328
906	SLU 9	0.76	0.43	32.05	-0.0387	2.6617	-0.1526
906	SLU 10	0.8	0.55	35	-0.0428	2.8239	-0.1947
906	SLU 11	0.83	0.47	35.71	-0.0436	2.8616	-0.166
906	SLU 12	0.82	0.52	35.7	-0.0437	2.8611	-0.1859
906	SLU 13	0.81	0.55	35.43	-0.0435	2.8462	-0.1952
906	SLU 14	0.84	0.47	36.14	-0.0442	2.8839	-0.1665
906	SLU 15	0.83	0.52	36.13	-0.0443	2.8834	-0.1864
906	SLU 16	0.83	0.46	35.87	-0.0439	2.8693	-0.1626
906	SLU 17	0.83	0.51	35.86	-0.044	2.8688	-0.1825
906	SLU 18	0.84	0.49	36.65	-0.0449	2.9135	-0.1744
906	SLU 19	0.83	0.55	36.64	-0.045	2.913	-0.1943
906	SLU 20	0.85	0.49	37.08	-0.0455	2.9358	-0.1749
906	SLU 21	0.84	0.55	37.07	-0.0456	2.9353	-0.1948
906	SLU 22	0.82	0.45	34.99	-0.0425	2.8241	-0.1593
906	SLU 23	0.81	0.54	34.98	-0.0427	2.8233	-0.1924
906	SLU 24	0.84	0.46	35.69	-0.0434	2.861	-0.1637
906	SLU 25	0.83	0.52	35.68	-0.0435	2.8605	-0.1836
906	SLU 26	0.82	0.54	35.41	-0.0433	2.8456	-0.193
906	SLU 27	0.85	0.46	36.12	-0.044	2.8833	-0.1642
906	SLU 28	0.85	0.52	36.11	-0.0442	2.8828	-0.1841
906	SLU 29	0.85	0.45	35.85	-0.0437	2.8688	-0.1603
906	SLU 30	0.84	0.51	35.84	-0.0438	2.8683	-0.1802
906	SLU 31	0.88	0.63	38.79	-0.0479	3.0305	-0.2223
906	SLU 32	0.91	0.54	39.5	-0.0487	3.0682	-0.1936
906	SLU 33	0.91	0.6	39.49	-0.0488	3.0677	-0.2135
906	SLU 34	0.89	0.63	39.22	-0.0486	3.0528	-0.2228
906	SLU 35	0.92	0.55	39.93	-0.0493	3.0905	-0.1941
906	SLU 36	0.92	0.6	39.92	-0.0494	3.09	-0.214
906	SLU 37	0.92	0.53	39.66	-0.049	3.0759	-0.1902
906	SLU 38	0.91	0.59	39.65	-0.0491	3.0754	-0.2101
906	SLU 39	0.92	0.57	40.44	-0.05	3.1201	-0.202
906	SLU 40	0.92	0.62	40.43	-0.0501	3.1196	-0.2218
906	SLU 41	0.94	0.57	40.86	-0.0506	3.1424	-0.2025
906	SLU 42	0.93	0.63	40.85	-0.0507	3.1419	-0.2224
906	SLU 43	0.93	0.45	39.27	-0.0469	3.332	-0.1618
906	SLU 44	0.92	0.55	39.25	-0.047	3.3311	-0.1949
906	SLU 45	0.95	0.47	39.97	-0.0478	3.3688	-0.1662
906	SLU 46	0.94	0.52	39.96	-0.0479	3.3684	-0.1861
906	SLU 47	0.93	0.55	39.68	-0.0476	3.3534	-0.1954
906	SLU 48	0.96	0.47	40.4	-0.0484	3.3912	-0.1667
906	SLU 49	0.95	0.52	40.39	-0.0485	3.3907	-0.1866
906	SLU 50	0.95	0.46	40.13	-0.0481	3.3766	-0.1628
906	SLU 51	0.95	0.51	40.12	-0.0482	3.3761	-0.1827
906	SLU 52	0.99	0.63	43.06	-0.0523	3.5383	-0.2248
906	SLU 53	1.02	0.55	43.78	-0.0531	3.576	-0.196
906	SLU 54	1.01	0.61	43.77	-0.0532	3.5755	-0.2159
906	SLU 55	1	0.63	43.49	-0.0529	3.5606	-0.2253
906	SLU 56	1.03	0.55	44.2	-0.0537	3.5983	-0.1966
906	SLU 57	1.03	0.61	44.19	-0.0538	3.5978	-0.2164
906	SLU 58	1.02	0.54	43.94	-0.0534	3.5837	-0.1927
906	SLU 59	1.02	0.6	43.93	-0.0535	3.5832	-0.2126
906	SLU 60	1.03	0.57	44.71	-0.0544	3.6279	-0.2044
906	SLU 61	1.02	0.63	44.7	-0.0545	3.6274	-0.2243
906	SLU 62	1.04	0.58	45.14	-0.055	3.6502	-0.205
906	SLU 63	1.04	0.63	45.13	-0.0551	3.6497	-0.2248
906	SLU 64	1.01	0.53	43.06	-0.052	3.5386	-0.1894
906	SLU 65	1	0.63	43.04	-0.0521	3.5377	-0.2225
906	SLU 66	1.03	0.54	43.75	-0.0529	3.5755	-0.1938
906	SLU 67	1.03	0.6	43.74	-0.053	3.575	-0.2136
906	SLU 68	1.01	0.63	43.47	-0.0527	3.56	-0.223
906	SLU 69	1.04	0.55	44.18	-0.0535	3.5978	-0.1943
906	SLU 70	1.04	0.6	44.17	-0.0536	3.5973	-0.2142
906	SLU 71	1.04	0.53	43.91	-0.0532	3.5832	-0.1904
906	SLU 72	1.03	0.59	43.9	-0.0533	3.5827	-0.2103
906	SLU 73	1.07	0.71	46.85	-0.0574	3.7449	-0.2524
906	SLU 74	1.1	0.63	47.56	-0.0582	3.7826	-0.2236
906	SLU 75	1.1	0.69	47.55	-0.0583	3.7821	-0.2435
906	SLU 76	1.09	0.71	47.28	-0.058	3.7672	-0.2529
906	SLU 77	1.12	0.63	47.99	-0.0588	3.8049	-0.2242
906	SLU 78	1.11	0.69	47.98	-0.0589	3.8044	-0.244
906	SLU 79	1.11	0.62	47.72	-0.0585	3.7903	-0.2203
906	SLU 80	1.1	0.68	47.71	-0.0586	3.7898	-0.2401
906	SLU 81	1.11	0.65	48.5	-0.0595	3.8345	-0.232
906	SLU 82	1.11	0.71	48.49	-0.0596	3.834	-0.2519
906	SLU 83	1.13	0.65	48.93	-0.0601	3.8568	-0.2325
906	SLU 84	1.12	0.71	48.92	-0.0602	3.8563	-0.2524
906	SLE RA 1	0.76	0.39	32.29	-0.0388	2.6766	-0.1396
906	SLE RA 2	0.75	0.45	32.28	-0.039	2.676	-0.1617
906	SLE RA 3	0.77	0.4	32.75	-0.0395	2.7012	-0.1425

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
906	SLE RA 4	0.77	0.44	32.75	-0.0395	2.7008	-0.1558
906	SLE RA 5	0.76	0.46	32.56	-0.0394	2.6909	-0.162
906	SLE RA 6	0.78	0.4	33.04	-0.0399	2.716	-0.1429
906	SLE RA 7	0.78	0.44	33.03	-0.04	2.7157	-0.1561
906	SLE RA 8	0.78	0.39	32.86	-0.0397	2.7063	-0.1403
906	SLE RA 9	0.77	0.43	32.85	-0.0397	2.706	-0.1535
906	SLE RA 10	0.8	0.51	34.82	-0.0425	2.8141	-0.1816
906	SLE RA 11	0.82	0.46	35.29	-0.043	2.8393	-0.1625
906	SLE RA 12	0.82	0.49	35.29	-0.0431	2.8389	-0.1757
906	SLE RA 13	0.81	0.51	35.1	-0.0429	2.829	-0.1819
906	SLE RA 14	0.83	0.46	35.58	-0.0434	2.8541	-0.1628
906	SLE RA 15	0.83	0.5	35.57	-0.0435	2.8538	-0.176
906	SLE RA 16	0.82	0.45	35.4	-0.0432	2.8444	-0.1602
906	SLE RA 17	0.82	0.49	35.39	-0.0433	2.8441	-0.1735
906	SLE RA 18	0.83	0.47	35.92	-0.0439	2.8739	-0.168
906	SLE RA 19	0.82	0.51	35.91	-0.0439	2.8735	-0.1813
906	SLE RA 20	0.84	0.47	36.2	-0.0443	2.8887	-0.1684
906	SLE RA 21	0.83	0.51	36.2	-0.0444	2.8884	-0.1816
906	SLE FR 1	0.76	0.39	32.29	-0.0388	2.6766	-0.1396
906	SLE FR 2	0.76	0.4	32.29	-0.0389	2.6765	-0.144
906	SLE FR 3	0.76	0.39	32.4	-0.039	2.6825	-0.1397
906	SLE FR 4	0.78	0.43	33.38	-0.0404	2.7356	-0.1525
906	SLE FR 5	0.78	0.42	33.49	-0.0405	2.7417	-0.1483
906	SLE FR 6	0.79	0.43	34.1	-0.0414	2.7752	-0.1538
906	SLE QP 1	0.76	0.39	32.29	-0.0388	2.6766	-0.1396
906	SLE QP 2	0.78	0.42	33.38	-0.0404	2.7358	-0.1481
906	SLD 1	2.38	0.22	24.88	-0.0295	2.3723	-0.0811
906	SLD 2	2.03	1.03	24.5	-0.0313	2.3318	-0.3614
906	SLD 3	2.8	-1.39	25.46	-0.0263	2.4233	0.4842
906	SLD 4	2.46	-0.59	25.08	-0.0281	2.3828	0.2039
906	SLD 5	0.67	2.67	30.01	-0.0416	2.5566	-0.9355
906	SLD 6	0.45	3.2	29.76	-0.0428	2.5301	-1.1193
906	SLD 7	2.09	-2.73	31.95	-0.031	2.7265	0.9488
906	SLD 8	1.87	-2.2	31.7	-0.0321	2.7	0.765
906	SLD 9	-0.31	3.03	35.05	-0.0486	2.7715	-1.0613
906	SLD 10	-0.54	3.56	34.8	-0.0497	2.745	-1.245
906	SLD 11	1.11	-2.37	36.99	-0.0379	2.9414	0.8231
906	SLD 12	0.89	-1.84	36.74	-0.0391	2.9149	0.6393
906	SLD 13	-0.9	1.42	41.68	-0.0527	3.0887	-0.5001
906	SLD 14	-1.24	2.23	41.29	-0.0544	3.0483	-0.7805
906	SLD 15	-0.47	-0.2	42.26	-0.0495	3.1397	0.0652
906	SLD 16	-0.82	0.61	41.88	-0.0512	3.0992	-0.2152
906	SLV 1	4.52	-0.08	13.51	-0.0149	1.8867	0.0254
906	SLV 2	3.73	1.79	12.62	-0.0189	1.7924	-0.6275
906	SLV 3	5.5	-3.76	14.83	-0.0077	2.0037	1.3115
906	SLV 4	4.7	-1.89	13.94	-0.0117	1.9094	0.6586
906	SLV 5	0.57	5.53	25.57	-0.043	2.3198	-1.9342
906	SLV 6	0.05	6.74	25	-0.0456	2.259	-2.355
906	SLV 7	3.81	-6.75	29.97	-0.0189	2.7098	2.3528
906	SLV 8	3.29	-5.54	29.39	-0.0215	2.6491	1.932
906	SLV 9	-1.73	6.37	37.36	-0.0592	2.8224	-2.2283
906	SLV 10	-2.25	7.58	36.79	-0.0618	2.7617	-2.6491
906	SLV 11	1.51	-5.91	41.76	-0.0351	3.2125	2.0587
906	SLV 12	0.99	-4.7	41.19	-0.0377	3.1517	1.638
906	SLV 13	-3.14	2.72	52.82	-0.069	3.5621	-0.9549
906	SLV 14	-3.94	4.59	51.93	-0.073	3.4678	-1.6078
906	SLV 15	-2.17	-0.96	54.13	-0.0618	3.6791	0.3312
906	SLV 16	-2.96	0.91	53.25	-0.0658	3.5849	-0.3217
906	CRTFP Ux+	0	0	0	0	0	0
906	CRTFP Ux-	0	0	0	0	0	0
906	CRTFP Uy+	0	0	0	0	0	0
906	CRTFP Uy-	0	0	0	0	0	0
908	SLU 1	1.4	-0.07	65.73	0.0397	0.4812	-0.0062
908	SLU 2	1.4	0.03	65.7	0.0392	0.4792	-0.0063
908	SLU 3	1.43	-0.06	67.24	0.0407	0.496	-0.0062
908	SLU 4	1.43	0	67.22	0.0404	0.4948	-0.0063
908	SLU 5	1.42	0.03	66.62	0.0398	0.4882	-0.0063
908	SLU 6	1.45	-0.06	68.16	0.0414	0.505	-0.0062
908	SLU 7	1.45	0	68.14	0.041	0.5038	-0.0063
908	SLU 8	1.44	-0.07	67.58	0.0409	0.4992	-0.0063
908	SLU 9	1.44	-0.01	67.56	0.0406	0.498	-0.0063
908	SLU 10	1.51	0.06	74.47	0.0435	0.5556	-0.0074
908	SLU 11	1.55	-0.03	76.01	0.0451	0.5724	-0.0073
908	SLU 12	1.54	0.03	75.99	0.0447	0.5712	-0.0073
908	SLU 13	1.53	0.05	75.39	0.0441	0.5646	-0.0074
908	SLU 14	1.57	-0.04	76.93	0.0457	0.5814	-0.0073
908	SLU 15	1.56	0.02	76.91	0.0453	0.5802	-0.0074
908	SLU 16	1.55	-0.05	76.34	0.0452	0.5757	-0.0073
908	SLU 17	1.55	0.01	76.32	0.0449	0.5744	-0.0074
908	SLU 18	1.56	-0.03	78.26	0.0459	0.5904	-0.0077
908	SLU 19	1.56	0.03	78.24	0.0455	0.5892	-0.0078
908	SLU 20	1.58	-0.03	79.18	0.0465	0.5994	-0.0078
908	SLU 21	1.58	0.02	79.16	0.0461	0.5982	-0.0078
908	SLU 22	1.53	-0.02	74.37	0.0446	0.5565	-0.0069
908	SLU 23	1.53	0.08	74.34	0.044	0.5544	-0.007
908	SLU 24	1.56	-0.01	75.88	0.0456	0.5712	-0.0069
908	SLU 25	1.56	0.05	75.86	0.0453	0.57	-0.0069
908	SLU 26	1.55	0.08	75.26	0.0446	0.5634	-0.007
908	SLU 27	1.58	-0.02	76.8	0.0462	0.5802	-0.0069
908	SLU 28	1.58	0.04	76.78	0.0459	0.579	-0.007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
908	SLU 29	1.57	-0.03	76.21	0.0458	0.5745	-0.0069
908	SLU 30	1.57	0.03	76.19	0.0455	0.5732	-0.007
908	SLU 31	1.64	0.1	83.1	0.0483	0.6309	-0.008
908	SLU 32	1.67	0.01	84.65	0.0499	0.6476	-0.0079
908	SLU 33	1.67	0.07	84.63	0.0496	0.6464	-0.008
908	SLU 34	1.66	0.1	84.03	0.0489	0.6399	-0.0081
908	SLU 35	1.69	0.01	85.57	0.0505	0.6566	-0.0079
908	SLU 36	1.69	0.07	85.55	0.0502	0.6554	-0.008
908	SLU 37	1.68	0	84.98	0.0501	0.6509	-0.008
908	SLU 38	1.68	0.06	84.96	0.0498	0.6497	-0.008
908	SLU 39	1.69	0.01	86.9	0.0507	0.6656	-0.0084
908	SLU 40	1.69	0.07	86.88	0.0504	0.6644	-0.0084
908	SLU 41	1.71	0.01	87.82	0.0513	0.6746	-0.0084
908	SLU 42	1.71	0.07	87.8	0.051	0.6734	-0.0085
908	SLU 43	1.78	-0.1	82.49	0.0499	0.5998	-0.0079
908	SLU 44	1.78	0	82.46	0.0494	0.5978	-0.008
908	SLU 45	1.81	-0.09	84	0.051	0.6146	-0.0079
908	SLU 46	1.81	-0.03	83.98	0.0507	0.6133	-0.0079
908	SLU 47	1.8	-0.01	83.38	0.05	0.6068	-0.008
908	SLU 48	1.83	-0.1	84.92	0.0516	0.6236	-0.0079
908	SLU 49	1.83	-0.04	84.9	0.0513	0.6223	-0.0079
908	SLU 50	1.82	-0.11	84.34	0.0512	0.6178	-0.0079
908	SLU 51	1.82	-0.05	84.32	0.0508	0.6166	-0.008
908	SLU 52	1.89	0.02	91.23	0.0537	0.6742	-0.009
908	SLU 53	1.92	-0.07	92.77	0.0553	0.691	-0.0089
908	SLU 54	1.92	-0.01	92.75	0.055	0.6897	-0.009
908	SLU 55	1.91	0.02	92.15	0.0543	0.6832	-0.0091
908	SLU 56	1.94	-0.07	93.69	0.0559	0.7	-0.0089
908	SLU 57	1.94	-0.01	93.67	0.0556	0.6987	-0.009
908	SLU 58	1.93	-0.08	93.1	0.0555	0.6942	-0.009
908	SLU 59	1.93	-0.02	93.08	0.0551	0.693	-0.009
908	SLU 60	1.94	-0.07	95.02	0.0561	0.709	-0.0094
908	SLU 61	1.94	-0.01	95	0.0558	0.7078	-0.0094
908	SLU 62	1.96	-0.07	95.94	0.0567	0.718	-0.0094
908	SLU 63	1.96	-0.01	95.92	0.0564	0.7168	-0.0095
908	SLU 64	1.91	-0.06	91.13	0.0548	0.6751	-0.0085
908	SLU 65	1.9	0.04	91.1	0.0543	0.673	-0.0086
908	SLU 66	1.94	-0.05	92.64	0.0559	0.6898	-0.0085
908	SLU 67	1.94	0.01	92.62	0.0555	0.6886	-0.0086
908	SLU 68	1.92	0.04	92.02	0.0549	0.682	-0.0086
908	SLU 69	1.96	-0.05	93.56	0.0565	0.6988	-0.0085
908	SLU 70	1.96	0.01	93.54	0.0561	0.6976	-0.0086
908	SLU 71	1.95	-0.06	92.97	0.056	0.6931	-0.0086
908	SLU 72	1.94	0	92.95	0.0557	0.6918	-0.0086
908	SLU 73	2.02	0.07	99.86	0.0586	0.7494	-0.0097
908	SLU 74	2.05	-0.02	101.41	0.0602	0.7662	-0.0096
908	SLU 75	2.05	0.04	101.39	0.0598	0.765	-0.0096
908	SLU 76	2.04	0.06	100.79	0.0592	0.7584	-0.0097
908	SLU 77	2.07	-0.03	102.33	0.0608	0.7752	-0.0096
908	SLU 78	2.07	0.03	102.31	0.0605	0.774	-0.0097
908	SLU 79	2.06	-0.04	101.74	0.0604	0.7695	-0.0096
908	SLU 80	2.06	0.02	101.72	0.06	0.7682	-0.0097
908	SLU 81	2.07	-0.02	103.66	0.061	0.7842	-0.01
908	SLU 82	2.07	0.04	103.64	0.0606	0.783	-0.0101
908	SLU 83	2.09	-0.02	104.58	0.0616	0.7932	-0.01
908	SLU 84	2.09	0.03	104.56	0.0613	0.792	-0.0101
908	SLE RA 1	1.44	-0.05	68.2	0.0411	0.5027	-0.0064
908	SLE RA 2	1.44	0.01	68.18	0.0407	0.5014	-0.0065
908	SLE RA 3	1.46	-0.05	69.21	0.0418	0.5126	-0.0064
908	SLE RA 4	1.46	-0.01	69.19	0.0416	0.5117	-0.0065
908	SLE RA 5	1.45	0.01	68.79	0.0411	0.5074	-0.0065
908	SLE RA 6	1.47	-0.05	69.82	0.0422	0.5186	-0.0064
908	SLE RA 7	1.47	-0.01	69.81	0.042	0.5177	-0.0065
908	SLE RA 8	1.46	-0.06	69.43	0.0419	0.5147	-0.0064
908	SLE RA 9	1.46	-0.02	69.42	0.0417	0.5139	-0.0065
908	SLE RA 10	1.51	0.03	74.02	0.0436	0.5523	-0.0072
908	SLE RA 11	1.53	-0.03	75.05	0.0447	0.5635	-0.0071
908	SLE RA 12	1.53	0.01	75.04	0.0444	0.5627	-0.0072
908	SLE RA 13	1.53	0.03	74.64	0.044	0.5583	-0.0072
908	SLE RA 14	1.55	-0.03	75.67	0.0451	0.5695	-0.0071
908	SLE RA 15	1.55	0.01	75.65	0.0449	0.5687	-0.0072
908	SLE RA 16	1.54	-0.04	75.27	0.0448	0.5657	-0.0071
908	SLE RA 17	1.54	0	75.26	0.0446	0.5649	-0.0072
908	SLE RA 18	1.55	-0.03	76.55	0.0452	0.5755	-0.0074
908	SLE RA 19	1.55	0.01	76.54	0.045	0.5747	-0.0075
908	SLE RA 20	1.56	-0.03	77.17	0.0456	0.5815	-0.0074
908	SLE RA 21	1.56	0.01	77.15	0.0454	0.5807	-0.0075
908	SLE FR 1	1.44	-0.05	68.2	0.0411	0.5027	-0.0064
908	SLE FR 2	1.44	-0.04	68.2	0.041	0.5025	-0.0064
908	SLE FR 3	1.44	-0.05	68.45	0.0413	0.5051	-0.0064
908	SLE FR 4	1.47	-0.03	70.7	0.0423	0.5243	-0.0067
908	SLE FR 5	1.48	-0.05	70.95	0.0425	0.527	-0.0067
908	SLE FR 6	1.49	-0.04	72.38	0.0431	0.5391	-0.0069
908	SLE QP 1	1.44	-0.05	68.2	0.0411	0.5027	-0.0064
908	SLE QP 2	1.47	-0.05	70.71	0.0423	0.5246	-0.0067
908	SLD 1	7.89	1.06	62.93	0.0251	0.5522	-0.0624
908	SLD 2	7.3	1.65	62.41	0.0219	0.5564	-0.0485
908	SLD 3	7.98	-0.79	63.9	0.036	0.6075	-0.0603
908	SLD 4	7.39	-0.2	63.39	0.0328	0.6116	-0.0464
908	SLD 5	3.36	2.98	66.99	0.0212	0.4483	-0.029

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
908	SLD 6	2.97	3.37	66.65	0.0191	0.451	-0.0199
908	SLD 7	3.67	-3.17	70.23	0.0575	0.6325	-0.0221
908	SLD 8	3.29	-2.79	69.9	0.0554	0.6352	-0.013
908	SLD 9	-0.35	2.7	71.52	0.0292	0.4139	-0.0004
908	SLD 10	-0.73	3.08	71.18	0.0271	0.4166	0.0087
908	SLD 11	-0.03	-3.46	74.76	0.0656	0.5981	0.0065
908	SLD 12	-0.42	-3.08	74.43	0.0635	0.6008	0.0156
908	SLD 13	-4.45	0.11	78.03	0.0519	0.4375	0.033
908	SLD 14	-5.04	0.69	77.51	0.0487	0.4417	0.0469
908	SLD 15	-4.36	-1.74	79	0.0628	0.4928	0.0351
908	SLD 16	-4.95	-1.15	78.49	0.0596	0.4969	0.049
908	SLV 1	16.48	2.49	52.52	0.0023	0.5904	-0.1368
908	SLV 2	15.1	3.86	51.33	-0.0051	0.6	-0.1045
908	SLV 3	16.7	-1.72	54.73	0.027	0.7191	-0.1321
908	SLV 4	15.32	-0.35	53.53	0.0196	0.7287	-0.0998
908	SLV 5	5.87	6.86	62.12	-0.0059	0.3475	-0.0585
908	SLV 6	4.99	7.74	61.35	-0.0107	0.3537	-0.0377
908	SLV 7	6.61	-7.17	69.46	0.0765	0.7764	-0.0427
908	SLV 8	5.73	-6.29	68.69	0.0717	0.7826	-0.0219
908	SLV 9	-2.79	6.19	72.73	0.013	0.2665	0.0084
908	SLV 10	-3.67	7.07	71.96	0.0082	0.2727	0.0293
908	SLV 11	-2.05	-7.84	80.06	0.0953	0.6955	0.0243
908	SLV 12	-2.93	-6.95	79.29	0.0905	0.7017	0.0451
908	SLV 13	-12.38	0.26	87.88	0.0651	0.3205	0.0863
908	SLV 14	-13.76	1.63	86.69	0.0576	0.3301	0.1186
908	SLV 15	-12.16	-3.95	90.09	0.0898	0.4492	0.0911
908	SLV 16	-13.54	-2.58	88.89	0.0823	0.4588	0.1234
908	CRTFP Ux+	0	0	0	0	0	0
908	CRTFP Ux-	0	0	0	0	0	0
908	CRTFP Uy+	0	0	0	0	0	0
908	CRTFP Uy-	0	0	0	0	0	0
911	SLU 1	-1.91	-0.72	105.53	12.8843	-0.8098	0.2464
911	SLU 2	-1.91	-0.56	105.46	12.876	-0.8053	0.2467
911	SLU 3	-1.95	-0.71	108	13.1871	-0.8332	0.2524
911	SLU 4	-1.96	-0.62	107.97	13.1821	-0.8305	0.2526
911	SLU 5	-1.94	-0.57	106.98	13.0612	-0.8191	0.2507
911	SLU 6	-1.99	-0.73	109.52	13.3722	-0.847	0.2563
911	SLU 7	-1.99	-0.63	109.48	13.3673	-0.8443	0.2565
911	SLU 8	-1.97	-0.74	108.56	13.2547	-0.8375	0.2543
911	SLU 9	-1.97	-0.65	108.52	13.2497	-0.8348	0.2545
911	SLU 10	-2.1	-0.61	119.49	14.5798	-0.9391	0.2744
911	SLU 11	-2.14	-0.76	122.03	14.8909	-0.9669	0.28
911	SLU 12	-2.14	-0.67	121.99	14.8859	-0.9642	0.2802
911	SLU 13	-2.13	-0.62	121	14.765	-0.9529	0.2783
911	SLU 14	-2.17	-0.78	123.54	15.0761	-0.9808	0.2839
911	SLU 15	-2.17	-0.68	123.51	15.0711	-0.9781	0.2842
911	SLU 16	-2.16	-0.79	122.58	14.9585	-0.9712	0.2819
911	SLU 17	-2.16	-0.7	122.55	14.9535	-0.9685	0.2821
911	SLU 18	-2.17	-0.79	125.56	15.3184	-1.0009	0.2859
911	SLU 19	-2.18	-0.69	125.52	15.3134	-0.9982	0.2861
911	SLU 20	-2.2	-0.8	127.08	15.5035	-1.0147	0.2898
911	SLU 21	-2.21	-0.71	127.04	15.4986	-1.012	0.29
911	SLU 22	-2.12	-0.71	119.44	14.579	-0.936	0.2751
911	SLU 23	-2.12	-0.56	119.38	14.5707	-0.9315	0.2755
911	SLU 24	-2.16	-0.71	121.92	14.8818	-0.9593	0.2811
911	SLU 25	-2.16	-0.62	121.88	14.8768	-0.9566	0.2813
911	SLU 26	-2.15	-0.57	120.89	14.7559	-0.9453	0.2794
911	SLU 27	-2.19	-0.72	123.43	15.0669	-0.9731	0.285
911	SLU 28	-2.19	-0.63	123.4	15.062	-0.9704	0.2853
911	SLU 29	-2.18	-0.74	122.47	14.9494	-0.9636	0.283
911	SLU 30	-2.18	-0.64	122.44	14.9444	-0.9609	0.2832
911	SLU 31	-2.3	-0.61	133.4	16.2745	-1.0652	0.3031
911	SLU 32	-2.35	-0.76	135.94	16.5856	-1.0931	0.3087
911	SLU 33	-2.35	-0.67	135.9	16.5806	-1.0904	0.3089
911	SLU 34	-2.34	-0.62	134.92	16.4597	-1.0791	0.3071
911	SLU 35	-2.38	-0.77	137.46	16.7708	-1.1069	0.3127
911	SLU 36	-2.38	-0.68	137.42	16.7658	-1.1042	0.3129
911	SLU 37	-2.36	-0.79	136.5	16.6532	-1.0974	0.3107
911	SLU 38	-2.37	-0.69	136.46	16.6482	-1.0947	0.3109
911	SLU 39	-2.38	-0.79	139.47	17.0131	-1.1271	0.3146
911	SLU 40	-2.38	-0.69	139.44	17.0081	-1.1244	0.3148
911	SLU 41	-2.41	-0.8	140.99	17.1983	-1.1409	0.3186
911	SLU 42	-2.41	-0.7	140.95	17.1933	-1.1382	0.3188
911	SLU 43	-2.41	-0.93	132.41	16.1685	-1.0095	0.3104
911	SLU 44	-2.41	-0.78	132.35	16.1602	-1.005	0.3108
911	SLU 45	-2.46	-0.93	134.89	16.4713	-1.0328	0.3164
911	SLU 46	-2.46	-0.84	134.85	16.4663	-1.0301	0.3166
911	SLU 47	-2.44	-0.79	133.87	16.3454	-1.0188	0.3148
911	SLU 48	-2.49	-0.94	136.41	16.6565	-1.0467	0.3204
911	SLU 49	-2.49	-0.85	136.37	16.6515	-1.044	0.3206
911	SLU 50	-2.47	-0.96	135.45	16.5389	-1.0372	0.3183
911	SLU 51	-2.47	-0.86	135.41	16.5339	-1.0345	0.3186
911	SLU 52	-2.6	-0.82	146.37	17.8641	-1.1388	0.3384
911	SLU 53	-2.64	-0.98	148.92	18.1752	-1.1666	0.3441
911	SLU 54	-2.64	-0.88	148.88	18.1702	-1.1639	0.3443
911	SLU 55	-2.63	-0.84	147.89	18.0493	-1.1526	0.3424
911	SLU 56	-2.67	-0.99	150.43	18.3603	-1.1804	0.348
911	SLU 57	-2.67	-0.9	150.39	18.3554	-1.1777	0.3482
911	SLU 58	-2.66	-1.01	149.47	18.2428	-1.1709	0.346
911	SLU 59	-2.66	-0.91	149.43	18.2378	-1.1682	0.3462

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
911	SLU 60	-2.67	-1	152.45	18.6026	-1.2006	0.3499
911	SLU 61	-2.68	-0.91	152.41	18.5976	-1.1979	0.3502
911	SLU 62	-2.71	-1.02	153.96	18.7878	-1.2144	0.3539
911	SLU 63	-2.71	-0.92	153.93	18.7828	-1.2117	0.3541
911	SLU 64	-2.62	-0.93	146.33	17.8632	-1.1356	0.3392
911	SLU 65	-2.62	-0.77	146.26	17.8549	-1.1312	0.3395
911	SLU 66	-2.66	-0.93	148.8	18.166	-1.159	0.3452
911	SLU 67	-2.67	-0.83	148.77	18.161	-1.1563	0.3454
911	SLU 68	-2.65	-0.78	147.78	18.0401	-1.145	0.3435
911	SLU 69	-2.69	-0.94	150.32	18.3512	-1.1728	0.3491
911	SLU 70	-2.7	-0.84	150.28	18.3462	-1.1701	0.3493
911	SLU 71	-2.68	-0.96	149.36	18.2336	-1.1633	0.3471
911	SLU 72	-2.68	-0.86	149.32	18.2286	-1.1606	0.3473
911	SLU 73	-2.81	-0.82	160.29	19.5588	-1.2649	0.3672
911	SLU 74	-2.85	-0.98	162.83	19.8699	-1.2928	0.3728
911	SLU 75	-2.85	-0.88	162.79	19.8649	-1.2901	0.373
911	SLU 76	-2.84	-0.83	161.81	19.744	-1.2788	0.3711
911	SLU 77	-2.88	-0.99	164.35	20.055	-1.3066	0.3767
911	SLU 78	-2.88	-0.89	164.31	20.0501	-1.3039	0.377
911	SLU 79	-2.86	-1.01	163.38	19.9375	-1.2971	0.3747
911	SLU 80	-2.87	-0.91	163.35	19.9325	-1.2944	0.3749
911	SLU 81	-2.88	-1	166.36	20.2973	-1.3268	0.3787
911	SLU 82	-2.88	-0.91	166.32	20.2923	-1.3241	0.3789
911	SLU 83	-2.91	-1.01	167.88	20.4825	-1.3406	0.3826
911	SLU 84	-2.92	-0.92	167.84	20.4775	-1.3379	0.3828
911	SLE RA 1	-1.97	-0.72	109.5	13.3685	-0.8458	0.2546
911	SLE RA 2	-1.97	-0.61	109.46	13.363	-0.8429	0.2548
911	SLE RA 3	-2	-0.71	111.15	13.5703	-0.8614	0.2586
911	SLE RA 4	-2	-0.65	111.13	13.567	-0.8596	0.2587
911	SLE RA 5	-1.99	-0.62	110.47	13.4864	-0.8521	0.2575
911	SLE RA 6	-2.02	-0.72	112.16	13.6938	-0.8706	0.2612
911	SLE RA 7	-2.02	-0.66	112.14	13.6905	-0.8688	0.2613
911	SLE RA 8	-2.01	-0.73	111.52	13.6154	-0.8643	0.2599
911	SLE RA 9	-2.01	-0.67	111.5	13.6121	-0.8625	0.26
911	SLE RA 10	-2.09	-0.64	118.81	14.4989	-0.932	0.2733
911	SLE RA 11	-2.12	-0.75	120.5	14.7062	-0.9506	0.277
911	SLE RA 12	-2.12	-0.68	120.48	14.7029	-0.9488	0.2771
911	SLE RA 13	-2.11	-0.65	119.82	14.6223	-0.9413	0.2759
911	SLE RA 14	-2.14	-0.76	121.51	14.8297	-0.9598	0.2796
911	SLE RA 15	-2.14	-0.69	121.49	14.8264	-0.958	0.2798
911	SLE RA 16	-2.13	-0.77	120.87	14.7513	-0.9535	0.2783
911	SLE RA 17	-2.13	-0.7	120.85	14.748	-0.9517	0.2784
911	SLE RA 18	-2.14	-0.76	122.86	14.9912	-0.9733	0.2809
911	SLE RA 19	-2.15	-0.7	122.83	14.9879	-0.9715	0.2811
911	SLE RA 20	-2.16	-0.77	123.87	15.1147	-0.9825	0.2836
911	SLE RA 21	-2.17	-0.71	123.84	15.1113	-0.9807	0.2837
911	SLE FR 1	-1.97	-0.72	109.5	13.3685	-0.8458	0.2546
911	SLE FR 2	-1.97	-0.7	109.49	13.3674	-0.8452	0.2546
911	SLE FR 3	-1.98	-0.72	109.91	13.4179	-0.8495	0.2556
911	SLE FR 4	-2.02	-0.71	113.5	13.8542	-0.8835	0.2625
911	SLE FR 5	-2.03	-0.73	113.91	13.9047	-0.8878	0.2635
911	SLE FR 6	-2.06	-0.74	116.18	14.1799	-0.9095	0.2678
911	SLE QP 1	-1.97	-0.72	109.5	13.3685	-0.8458	0.2546
911	SLE QP 2	-2.02	-0.73	113.51	13.8553	-0.8841	0.2625
911	SLD 1	9.22	0.47	126.33	15.4668	-0.7072	-1.1978
911	SLD 2	8.16	-0.5	127.12	15.5651	-0.725	-1.0417
911	SLD 3	8.97	-2.56	128.12	15.6936	-0.8047	-1.1651
911	SLD 4	7.91	-3.53	128.91	15.7919	-0.8225	-1.0091
911	SLD 5	1.92	4.4	114.5	13.9772	-0.6799	-0.2528
911	SLD 6	1.23	3.76	115.01	14.0416	-0.6916	-0.1505
911	SLD 7	1.08	-5.7	120.47	14.7334	-1.005	-0.144
911	SLD 8	0.39	-6.34	120.98	14.7978	-1.0167	-0.0417
911	SLD 9	-4.43	4.87	106.03	12.9128	-0.7515	0.5667
911	SLD 10	-5.12	4.24	106.55	12.9772	-0.7631	0.669
911	SLD 11	-5.27	-5.22	112	13.669	-1.0765	0.6755
911	SLD 12	-5.96	-5.86	112.52	13.7334	-1.0882	0.7778
911	SLD 13	-11.95	2.07	98.11	11.9187	-0.9456	1.5341
911	SLD 14	-13.01	1.1	98.9	12.017	-0.9634	1.6901
911	SLD 15	-12.2	-0.96	99.9	12.1455	-1.0431	1.5667
911	SLD 16	-13.26	-1.93	100.69	12.2438	-1.0609	1.7228
911	SLV 1	24.25	1.98	143.59	17.636	-0.4732	-3.1514
911	SLV 2	21.79	-0.28	145.43	17.865	-0.5147	-2.788
911	SLV 3	23.67	-4.92	147.65	18.1498	-0.6962	-3.0764
911	SLV 4	21.22	-7.18	149.48	18.3787	-0.7377	-2.7129
911	SLV 5	7.16	10.94	116.07	14.1709	-0.4154	-0.9381
911	SLV 6	5.57	9.48	117.25	14.3184	-0.4422	-0.7039
911	SLV 7	5.24	-12.07	129.58	15.8834	-1.1588	-0.6879
911	SLV 8	3.65	-13.52	130.77	16.031	-1.1855	-0.4537
911	SLV 9	-7.7	12.06	96.25	11.6797	-0.5826	0.9787
911	SLV 10	-9.28	10.6	97.43	11.8272	-0.6093	1.2129
911	SLV 11	-9.61	-10.94	109.77	13.3922	-1.326	1.2289
911	SLV 12	-11.2	-12.4	110.95	13.5397	-1.3527	1.4631
911	SLV 13	-25.26	5.72	77.53	9.3319	-1.0305	3.2379
911	SLV 14	-27.71	3.46	79.37	9.5608	-1.0719	3.6014
911	SLV 15	-25.83	-1.18	81.59	9.8456	-1.2535	3.313
911	SLV 16	-28.29	-3.44	83.42	10.0746	-1.295	3.6764
911	CRTFP Ux+	0	0	0	0	0	0
911	CRTFP Ux-	0	0	0	0	0	0
911	CRTFP Uy+	0	0	0	0	0	0
911	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
913	SLU 1	-0.58	-0.07	34	0.0761	-4.6336	-0.0183
913	SLU 2	-0.58	0.01	33.99	0.076	-4.6316	0.0016
913	SLU 3	-0.59	-0.07	34.79	0.078	-4.7337	-0.0184
913	SLU 4	-0.59	-0.02	34.78	0.0779	-4.7325	-0.0065
913	SLU 5	-0.59	0.01	34.48	0.0771	-4.6937	0.0009
913	SLU 6	-0.6	-0.07	35.28	0.0792	-4.7958	-0.019
913	SLU 7	-0.6	-0.02	35.27	0.0791	-4.7946	-0.0071
913	SLU 8	-0.6	-0.07	34.98	0.0785	-4.7579	-0.0196
913	SLU 9	-0.6	-0.03	34.98	0.0784	-4.7567	-0.0076
913	SLU 10	-0.63	0.02	38.22	0.0863	-5.1778	0.0045
913	SLU 11	-0.64	-0.06	39.02	0.0884	-5.2798	-0.0154
913	SLU 12	-0.64	-0.01	39.01	0.0883	-5.2786	-0.0035
913	SLU 13	-0.64	0.02	38.71	0.0875	-5.2399	0.0039
913	SLU 14	-0.65	-0.06	39.51	0.0895	-5.342	-0.0161
913	SLU 15	-0.65	-0.01	39.51	0.0894	-5.3408	-0.0042
913	SLU 16	-0.65	-0.06	39.22	0.0888	-5.304	-0.0166
913	SLU 17	-0.65	-0.01	39.21	0.0887	-5.3028	-0.0047
913	SLU 18	-0.65	-0.05	40.05	0.0909	-5.4139	-0.0141
913	SLU 19	-0.65	0	40.04	0.0908	-5.4126	-0.0022
913	SLU 20	-0.66	-0.05	40.54	0.0921	-5.476	-0.0147
913	SLU 21	-0.66	-0.01	40.53	0.092	-5.4748	-0.0028
913	SLU 22	-0.63	-0.05	38.27	0.0867	-5.1847	-0.0147
913	SLU 23	-0.63	0.02	38.26	0.0866	-5.1827	0.0052
913	SLU 24	-0.65	-0.06	39.06	0.0886	-5.2847	-0.0148
913	SLU 25	-0.65	-0.01	39.05	0.0885	-5.2835	-0.0029
913	SLU 26	-0.64	0.02	38.75	0.0877	-5.2448	0.0045
913	SLU 27	-0.66	-0.06	39.55	0.0898	-5.3469	-0.0154
913	SLU 28	-0.66	-0.01	39.55	0.0897	-5.3456	-0.0035
913	SLU 29	-0.65	-0.06	39.26	0.089	-5.3089	-0.016
913	SLU 30	-0.65	-0.01	39.25	0.0889	-5.3077	-0.0041
913	SLU 31	-0.69	0.04	42.49	0.0969	-5.7288	0.0081
913	SLU 32	-0.7	-0.04	43.29	0.099	-5.8309	-0.0119
913	SLU 33	-0.7	0.01	43.29	0.0989	-5.8297	0
913	SLU 34	-0.7	0.03	42.99	0.0981	-5.7909	0.0075
913	SLU 35	-0.71	-0.05	43.79	0.1001	-5.893	-0.0125
913	SLU 36	-0.71	0	43.78	0.1	-5.8918	-0.0006
913	SLU 37	-0.71	-0.05	43.49	0.0994	-5.8551	-0.013
913	SLU 38	-0.71	0	43.48	0.0993	-5.8539	-0.0011
913	SLU 39	-0.71	-0.04	44.32	0.1015	-5.9649	-0.0105
913	SLU 40	-0.71	0.01	44.31	0.1014	-5.9637	0.0014
913	SLU 41	-0.72	-0.04	44.81	0.1027	-6.027	-0.0111
913	SLU 42	-0.72	0.01	44.8	0.1026	-6.0258	0.0008
913	SLU 43	-0.73	-0.1	42.73	0.0953	-5.8348	-0.025
913	SLU 44	-0.73	-0.02	42.72	0.0952	-5.8328	-0.0051
913	SLU 45	-0.74	-0.1	43.52	0.0972	-5.9348	-0.0251
913	SLU 46	-0.74	-0.05	43.51	0.0971	-5.9336	-0.0132
913	SLU 47	-0.74	-0.02	43.21	0.0963	-5.8949	-0.0058
913	SLU 48	-0.75	-0.1	44.01	0.0984	-5.997	-0.0257
913	SLU 49	-0.75	-0.05	44.01	0.0983	-5.9957	-0.0138
913	SLU 50	-0.75	-0.1	43.72	0.0977	-5.959	-0.0263
913	SLU 51	-0.75	-0.05	43.71	0.0976	-5.9578	-0.0144
913	SLU 52	-0.78	0	46.95	0.1055	-6.3789	-0.0022
913	SLU 53	-0.79	-0.08	47.76	0.1076	-6.481	-0.0222
913	SLU 54	-0.8	-0.04	47.75	0.1075	-6.4798	-0.0102
913	SLU 55	-0.79	-0.01	47.45	0.1067	-6.441	-0.0028
913	SLU 56	-0.8	-0.09	48.25	0.1087	-6.5431	-0.0228
913	SLU 57	-0.8	-0.04	48.24	0.1087	-6.5419	-0.0109
913	SLU 58	-0.8	-0.09	47.95	0.108	-6.5052	-0.0233
913	SLU 59	-0.8	-0.04	47.94	0.1079	-6.504	-0.0114
913	SLU 60	-0.8	-0.08	48.78	0.1101	-6.615	-0.0208
913	SLU 61	-0.8	-0.03	48.77	0.11	-6.6138	-0.0089
913	SLU 62	-0.81	-0.08	49.27	0.1113	-6.6771	-0.0214
913	SLU 63	-0.81	-0.03	49.27	0.1112	-6.6759	-0.0095
913	SLU 64	-0.79	-0.08	47.01	0.1059	-6.3858	-0.0214
913	SLU 65	-0.79	0	46.99	0.1058	-6.3838	-0.0016
913	SLU 66	-0.8	-0.08	47.79	0.1078	-6.4859	-0.0215
913	SLU 67	-0.8	-0.03	47.79	0.1077	-6.4847	-0.0096
913	SLU 68	-0.8	0	47.49	0.1069	-6.4459	-0.0022
913	SLU 69	-0.81	-0.08	48.29	0.109	-6.548	-0.0222
913	SLU 70	-0.81	-0.04	48.28	0.1089	-6.5468	-0.0102
913	SLU 71	-0.81	-0.09	47.99	0.1082	-6.5101	-0.0227
913	SLU 72	-0.81	-0.04	47.98	0.1082	-6.5089	-0.0108
913	SLU 73	-0.84	0.01	51.23	0.1161	-6.93	0.0014
913	SLU 74	-0.85	-0.07	52.03	0.1182	-7.0321	-0.0186
913	SLU 75	-0.85	-0.02	52.02	0.1181	-7.0308	-0.0067
913	SLU 76	-0.85	0.01	51.72	0.1173	-6.9921	0.0007
913	SLU 77	-0.86	-0.07	52.52	0.1193	-7.0942	-0.0192
913	SLU 78	-0.86	-0.02	52.51	0.1192	-7.093	-0.0073
913	SLU 79	-0.86	-0.07	52.22	0.1186	-7.0563	-0.0198
913	SLU 80	-0.86	-0.03	52.22	0.1185	-7.055	-0.0078
913	SLU 81	-0.86	-0.06	53.05	0.1207	-7.1661	-0.0172
913	SLU 82	-0.86	-0.02	53.05	0.1206	-7.1649	-0.0053
913	SLU 83	-0.87	-0.07	53.55	0.1219	-7.2282	-0.0179
913	SLU 84	-0.87	-0.02	53.54	0.1218	-7.227	-0.0059
913	SLE RA 1	-0.59	-0.07	35.22	0.0792	-4.7911	-0.0173
913	SLE RA 2	-0.59	-0.01	35.21	0.0791	-4.7897	-0.004
913	SLE RA 3	-0.6	-0.07	35.75	0.0804	-4.8578	-0.0173
913	SLE RA 4	-0.6	-0.03	35.74	0.0804	-4.857	-0.0094
913	SLE RA 5	-0.6	-0.01	35.54	0.0798	-4.8311	-0.0045
913	SLE RA 6	-0.61	-0.07	36.07	0.0812	-4.8992	-0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
913	SLE RA 7	-0.61	-0.04	36.07	0.0811	-4.8984	-0.0098
913	SLE RA 8	-0.61	-0.07	35.88	0.0807	-4.8739	-0.0181
913	SLE RA 9	-0.61	-0.04	35.87	0.0806	-4.8731	-0.0102
913	SLE RA 10	-0.63	0	38.03	0.0859	-5.1538	-0.0021
913	SLE RA 11	-0.64	-0.06	38.57	0.0873	-5.2219	-0.0154
913	SLE RA 12	-0.64	-0.03	38.56	0.0873	-5.2211	-0.0074
913	SLE RA 13	-0.63	-0.01	38.36	0.0867	-5.1952	-0.0025
913	SLE RA 14	-0.64	-0.06	38.9	0.0881	-5.2633	-0.0158
913	SLE RA 15	-0.64	-0.03	38.89	0.088	-5.2625	-0.0079
913	SLE RA 16	-0.64	-0.06	38.7	0.0876	-5.238	-0.0162
913	SLE RA 17	-0.64	-0.03	38.69	0.0875	-5.2372	-0.0082
913	SLE RA 18	-0.64	-0.05	39.25	0.089	-5.3112	-0.0145
913	SLE RA 19	-0.64	-0.02	39.25	0.0889	-5.3104	-0.0065
913	SLE RA 20	-0.65	-0.06	39.58	0.0898	-5.3526	-0.0149
913	SLE RA 21	-0.65	-0.02	39.57	0.0897	-5.3518	-0.0069
913	SLE FR 1	-0.59	-0.07	35.22	0.0792	-4.7911	-0.0173
913	SLE FR 2	-0.59	-0.05	35.22	0.0791	-4.7908	-0.0146
913	SLE FR 3	-0.6	-0.07	35.35	0.0795	-4.8076	-0.0174
913	SLE FR 4	-0.61	-0.05	36.43	0.0821	-4.9468	-0.0138
913	SLE FR 5	-0.61	-0.06	36.56	0.0824	-4.9637	-0.0166
913	SLE FR 6	-0.62	-0.06	37.23	0.0841	-5.0512	-0.0159
913	SLE QP 1	-0.59	-0.07	35.22	0.0792	-4.7911	-0.0173
913	SLE QP 2	-0.61	-0.06	36.43	0.0821	-4.9471	-0.0164
913	SLD 1	2.74	1.45	46.19	0.104	-6.1572	0.3595
913	SLD 2	2.41	0.79	46.57	0.1066	-6.216	0.1949
913	SLD 3	2.65	0.08	46.76	0.1088	-6.2508	0.0193
913	SLD 4	2.33	-0.58	47.14	0.1114	-6.3097	-0.1452
913	SLD 5	0.59	2.58	38.43	0.0809	-5.1577	0.6415
913	SLD 6	0.37	2.14	38.68	0.0826	-5.1963	0.5336
913	SLD 7	0.3	-1.97	40.32	0.097	-5.4697	-0.4923
913	SLD 8	0.08	-2.41	40.57	0.0987	-5.5083	-0.6002
913	SLD 9	-1.3	2.28	32.28	0.0655	-4.3859	0.5673
913	SLD 10	-1.51	1.85	32.53	0.0672	-4.4245	0.4595
913	SLD 11	-1.58	-2.27	34.18	0.0816	-4.698	-0.5664
913	SLD 12	-1.8	-2.7	34.43	0.0833	-4.7365	-0.6743
913	SLD 13	-3.54	0.46	25.72	0.0528	-3.5846	0.1124
913	SLD 14	-3.87	-0.21	26.1	0.0554	-3.6434	-0.0522
913	SLD 15	-3.63	-0.91	26.28	0.0577	-3.6782	-0.2278
913	SLD 16	-3.95	-1.57	26.67	0.0602	-3.7371	-0.3923
913	SLV 1	7.22	3.43	59.3	0.1335	-7.7827	0.8515
913	SLV 2	6.45	1.88	60.19	0.1395	-7.9198	0.4683
913	SLV 3	7.02	0.32	60.58	0.1444	-7.9949	0.0772
913	SLV 4	6.26	-1.23	61.47	0.1504	-8.1319	-0.306
913	SLV 5	2.17	5.96	41.18	0.0799	-5.4524	1.4843
913	SLV 6	1.68	4.97	41.75	0.0838	-5.5407	1.2373
913	SLV 7	1.51	-4.39	45.48	0.1164	-6.1597	-1.0966
913	SLV 8	1.02	-5.39	46.05	0.1202	-6.248	-1.3436
913	SLV 9	-2.24	5.27	26.81	0.044	-3.6462	1.3107
913	SLV 10	-2.73	4.27	27.38	0.0479	-3.7346	1.0638
913	SLV 11	-2.89	-5.09	31.1	0.0805	-4.3535	-1.2701
913	SLV 12	-3.39	-6.09	31.68	0.0843	-4.4419	-1.5171
913	SLV 13	-7.47	1.1	11.38	0.0138	-1.7623	0.2732
913	SLV 14	-8.24	-0.44	12.27	0.0198	-1.8994	-0.1101
913	SLV 15	-7.67	-2	12.67	0.0247	-1.9745	-0.5011
913	SLV 16	-8.43	-3.55	13.56	0.0308	-2.1115	-0.8844
913	CRTFP Ux+	0	0	0	0	0	0
913	CRTFP Ux-	0	0	0	0	0	0
913	CRTFP Uy+	0	0	0	0	0	0
913	CRTFP Uy-	0	0	0	0	0	0
916	SLU 1	0.08	0.81	59.88	0.0533	0.9249	0.0409
916	SLU 2	0.08	0.9	59.85	0.0527	0.9258	0.041
916	SLU 3	0.08	0.85	61.26	0.055	0.9502	0.042
916	SLU 4	0.08	0.91	61.24	0.0546	0.9508	0.0421
916	SLU 5	0.08	0.92	60.7	0.0536	0.9409	0.0417
916	SLU 6	0.08	0.87	62.1	0.0559	0.9652	0.0428
916	SLU 7	0.08	0.92	62.09	0.0555	0.9658	0.0428
916	SLU 8	0.08	0.84	61.57	0.0552	0.955	0.0424
916	SLU 9	0.08	0.89	61.55	0.0548	0.9555	0.0424
916	SLU 10	0.09	0.99	68	0.058	1.0806	0.0475
916	SLU 11	0.09	0.94	69.4	0.0603	1.105	0.0486
916	SLU 12	0.09	1	69.39	0.0599	1.1055	0.0486
916	SLU 13	0.09	1.01	68.84	0.0589	1.0957	0.0483
916	SLU 14	0.09	0.96	70.25	0.0612	1.12	0.0493
916	SLU 15	0.09	1.01	70.23	0.0608	1.1206	0.0494
916	SLU 16	0.09	0.93	69.72	0.0604	1.1098	0.0489
916	SLU 17	0.09	0.99	69.7	0.0601	1.1103	0.049
916	SLU 18	0.09	0.94	71.51	0.0609	1.146	0.0503
916	SLU 19	0.09	1	71.5	0.0605	1.1466	0.0503
916	SLU 20	0.09	0.96	72.36	0.0618	1.1611	0.051
916	SLU 21	0.09	1.01	72.35	0.0614	1.1616	0.0511
916	SLU 22	0.09	0.97	67.84	0.06	1.0734	0.0472
916	SLU 23	0.09	1.06	67.82	0.0594	1.0743	0.0473
916	SLU 24	0.09	1.01	69.23	0.0616	1.0987	0.0484
916	SLU 25	0.09	1.07	69.21	0.0613	1.0992	0.0484
916	SLU 26	0.09	1.08	68.66	0.0603	1.0894	0.048
916	SLU 27	0.09	1.03	70.07	0.0626	1.1137	0.0491
916	SLU 28	0.09	1.08	70.06	0.0622	1.1143	0.0491
916	SLU 29	0.09	1	69.54	0.0618	1.1035	0.0487
916	SLU 30	0.09	1.06	69.52	0.0614	1.104	0.0487
916	SLU 31	0.1	1.16	75.96	0.0646	1.2291	0.0539

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
916	SLU 32	0.1	1.11	77.37	0.0669	1.2535	0.0549
916	SLU 33	0.1	1.16	77.36	0.0665	1.254	0.055
916	SLU 34	0.1	1.17	76.81	0.0655	1.2442	0.0546
916	SLU 35	0.1	1.12	78.22	0.0678	1.2685	0.0556
916	SLU 36	0.1	1.18	78.2	0.0674	1.2691	0.0557
916	SLU 37	0.1	1.09	77.68	0.0671	1.2583	0.0553
916	SLU 38	0.1	1.15	77.67	0.0667	1.2588	0.0553
916	SLU 39	0.1	1.1	79.48	0.0675	1.2945	0.0566
916	SLU 40	0.1	1.16	79.47	0.0671	1.2951	0.0566
916	SLU 41	0.1	1.12	80.33	0.0684	1.3096	0.0573
916	SLU 42	0.1	1.17	80.31	0.068	1.3101	0.0574
916	SLU 43	0.1	1	75.11	0.0671	1.1514	0.051
916	SLU 44	0.1	1.09	75.08	0.0664	1.1524	0.0511
916	SLU 45	0.1	1.04	76.49	0.0687	1.1767	0.0522
916	SLU 46	0.1	1.09	76.47	0.0683	1.1773	0.0522
916	SLU 47	0.1	1.1	75.93	0.0673	1.1674	0.0518
916	SLU 48	0.1	1.05	77.34	0.0696	1.1918	0.0529
916	SLU 49	0.1	1.11	77.32	0.0692	1.1923	0.0529
916	SLU 50	0.1	1.03	76.8	0.0689	1.1815	0.0525
916	SLU 51	0.1	1.08	76.79	0.0685	1.1821	0.0525
916	SLU 52	0.1	1.18	83.23	0.0717	1.3072	0.0577
916	SLU 53	0.11	1.13	84.64	0.074	1.3315	0.0587
916	SLU 54	0.11	1.19	84.62	0.0736	1.3321	0.0588
916	SLU 55	0.11	1.2	84.08	0.0726	1.3222	0.0584
916	SLU 56	0.11	1.15	85.48	0.0749	1.3466	0.0594
916	SLU 57	0.11	1.2	85.47	0.0745	1.3471	0.0595
916	SLU 58	0.11	1.12	84.95	0.0742	1.3363	0.0591
916	SLU 59	0.11	1.17	84.93	0.0738	1.3369	0.0591
916	SLU 60	0.11	1.13	86.75	0.0746	1.3726	0.0604
916	SLU 61	0.11	1.18	86.73	0.0742	1.3732	0.0604
916	SLU 62	0.11	1.14	87.59	0.0755	1.3876	0.0611
916	SLU 63	0.11	1.2	87.58	0.0751	1.3882	0.0612
916	SLU 64	0.11	1.16	83.08	0.0737	1.2999	0.0573
916	SLU 65	0.11	1.25	83.05	0.0731	1.3009	0.0574
916	SLU 66	0.11	1.2	84.46	0.0754	1.3252	0.0585
916	SLU 67	0.11	1.26	84.44	0.075	1.3258	0.0585
916	SLU 68	0.11	1.27	83.9	0.074	1.3159	0.0581
916	SLU 69	0.11	1.22	85.3	0.0763	1.3403	0.0592
916	SLU 70	0.11	1.27	85.29	0.0759	1.3408	0.0592
916	SLU 71	0.11	1.19	84.77	0.0756	1.33	0.0588
916	SLU 72	0.11	1.24	84.75	0.0752	1.3306	0.0588
916	SLU 73	0.12	1.34	91.2	0.0783	1.4557	0.064
916	SLU 74	0.12	1.29	92.6	0.0806	1.48	0.065
916	SLU 75	0.12	1.35	92.59	0.0802	1.4806	0.0651
916	SLU 76	0.12	1.36	92.04	0.0793	1.4707	0.0647
916	SLU 77	0.12	1.31	93.45	0.0815	1.4951	0.0658
916	SLU 78	0.12	1.36	93.43	0.0812	1.4956	0.0658
916	SLU 79	0.12	1.28	92.91	0.0808	1.4848	0.0654
916	SLU 80	0.12	1.34	92.9	0.0804	1.4854	0.0654
916	SLU 81	0.12	1.29	94.71	0.0812	1.5211	0.0667
916	SLU 82	0.12	1.35	94.7	0.0809	1.5216	0.0668
916	SLU 83	0.12	1.31	95.56	0.0822	1.5361	0.0674
916	SLU 84	0.12	1.36	95.54	0.0818	1.5367	0.0675
916	SLE RA 1	0.08	0.86	62.15	0.0552	0.9673	0.0427
916	SLE RA 2	0.08	0.92	62.14	0.0548	0.9679	0.0428
916	SLE RA 3	0.08	0.88	63.07	0.0563	0.9842	0.0435
916	SLE RA 4	0.08	0.92	63.06	0.0561	0.9846	0.0435
916	SLE RA 5	0.08	0.93	62.7	0.0554	0.978	0.0433
916	SLE RA 6	0.08	0.89	63.64	0.057	0.9942	0.044
916	SLE RA 7	0.08	0.93	63.63	0.0567	0.9946	0.044
916	SLE RA 8	0.08	0.88	63.28	0.0565	0.9874	0.0437
916	SLE RA 9	0.08	0.91	63.27	0.0562	0.9878	0.0437
916	SLE RA 10	0.09	0.98	67.57	0.0583	1.0711	0.0471
916	SLE RA 11	0.09	0.95	68.51	0.0599	1.0874	0.0478
916	SLE RA 12	0.09	0.98	68.49	0.0596	1.0878	0.0479
916	SLE RA 13	0.09	0.99	68.13	0.0589	1.0812	0.0476
916	SLE RA 14	0.09	0.96	69.07	0.0605	1.0974	0.0483
916	SLE RA 15	0.09	0.99	69.06	0.0602	1.0978	0.0484
916	SLE RA 16	0.09	0.94	68.71	0.06	1.0906	0.0481
916	SLE RA 17	0.09	0.97	68.7	0.0597	1.091	0.0481
916	SLE RA 18	0.09	0.94	69.91	0.0603	1.1147	0.049
916	SLE RA 19	0.09	0.98	69.9	0.06	1.1151	0.049
916	SLE RA 20	0.09	0.95	70.48	0.0609	1.1248	0.0495
916	SLE RA 21	0.09	0.99	70.47	0.0606	1.1252	0.0495
916	SLE FR 1	0.08	0.86	62.15	0.0552	0.9673	0.0427
916	SLE FR 2	0.08	0.87	62.15	0.0552	0.9674	0.0427
916	SLE FR 3	0.08	0.86	62.38	0.0555	0.9713	0.0429
916	SLE FR 4	0.08	0.89	64.48	0.0567	1.0117	0.0446
916	SLE FR 5	0.08	0.89	64.71	0.057	1.0156	0.0448
916	SLE FR 6	0.08	0.9	66.03	0.0578	1.041	0.0458
916	SLE QP 1	0.08	0.86	62.15	0.0552	0.9673	0.0427
916	SLE QP 2	0.08	0.88	64.48	0.0567	1.0115	0.0446
916	SLD 1	7.21	2.24	67.14	0.0555	0.9345	-0.0228
916	SLD 2	6.6	2	67.21	0.0569	0.9397	-0.0061
916	SLD 3	7.09	0.3	67.8	0.0673	0.9213	-0.0212
916	SLD 4	6.48	0.06	67.87	0.0687	0.9265	-0.0045
916	SLD 5	2.51	4.27	64.27	0.0381	1.0074	0.019
916	SLD 6	2.11	4.11	64.31	0.0391	1.0108	0.0299
916	SLD 7	2.11	-2.19	66.46	0.0777	0.9636	0.0243
916	SLD 8	1.71	-2.34	66.51	0.0786	0.967	0.0353

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
916	SLD 9	-1.55	4.11	62.45	0.0349	1.0561	0.0539
916	SLD 10	-1.94	3.96	62.5	0.0358	1.0595	0.0649
916	SLD 11	-1.95	-2.35	64.65	0.0744	1.0122	0.0593
916	SLD 12	-2.35	-2.5	64.7	0.0754	1.0156	0.0702
916	SLD 13	-6.31	1.7	61.1	0.0448	1.0966	0.0937
916	SLD 14	-6.92	1.47	61.17	0.0462	1.1018	0.1104
916	SLD 15	-6.44	-0.24	61.76	0.0566	1.0834	0.0953
916	SLD 16	-7.04	-0.47	61.83	0.058	1.0886	0.112
916	SLV 1	16.74	3.99	70.76	0.055	0.8305	-0.113
916	SLV 2	15.33	3.44	70.92	0.0582	0.8426	-0.0741
916	SLV 3	16.46	-0.42	72.25	0.0819	0.8005	-0.1092
916	SLV 4	15.05	-0.97	72.41	0.0851	0.8126	-0.0703
916	SLV 5	5.75	8.6	64.07	0.0149	1.0007	-0.0151
916	SLV 6	4.84	8.25	64.18	0.017	1.0085	0.01
916	SLV 7	4.82	-6.11	69.05	0.1045	0.9006	-0.0026
916	SLV 8	3.9	-6.46	69.15	0.1066	0.9084	0.0225
916	SLV 9	-3.74	8.23	59.81	0.0069	1.1147	0.0667
916	SLV 10	-4.65	7.87	59.92	0.009	1.1225	0.0917
916	SLV 11	-4.67	-6.49	64.78	0.0965	1.0146	0.0792
916	SLV 12	-5.58	-6.84	64.89	0.0986	1.0224	0.1043
916	SLV 13	-14.88	2.74	56.55	0.0284	1.2105	0.1595
916	SLV 14	-16.3	2.19	56.71	0.0316	1.2226	0.1984
916	SLV 15	-15.16	-1.68	58.04	0.0553	1.1805	0.1633
916	SLV 16	-16.58	-2.23	58.21	0.0585	1.1926	0.2022
916	CRTFP Ux+	0	0	0	0	0	0
916	CRTFP Ux-	0	0	0	0	0	0
916	CRTFP Uy+	0	0	0	0	0	0
916	CRTFP Uy-	0	0	0	0	0	0
919	SLU 1	0.69	1.55	55.44	0.0756	-0.3252	0.0185
919	SLU 2	0.69	1.65	55.41	0.0749	-0.326	0.0185
919	SLU 3	0.7	1.62	56.71	0.0779	-0.3337	0.0192
919	SLU 4	0.7	1.67	56.69	0.0775	-0.3342	0.0192
919	SLU 5	0.7	1.67	56.21	0.0762	-0.3312	0.019
919	SLU 6	0.71	1.64	57.51	0.0792	-0.3389	0.0197
919	SLU 7	0.71	1.7	57.49	0.0788	-0.3394	0.0197
919	SLU 8	0.71	1.61	57.04	0.0782	-0.3356	0.0195
919	SLU 9	0.71	1.66	57.02	0.0778	-0.3361	0.0195
919	SLU 10	0.77	1.86	62.73	0.0839	-0.3784	0.0228
919	SLU 11	0.79	1.83	64.02	0.0869	-0.3861	0.0235
919	SLU 12	0.79	1.88	64.01	0.0865	-0.3866	0.0235
919	SLU 13	0.79	1.88	63.53	0.0852	-0.3836	0.0233
919	SLU 14	0.8	1.85	64.82	0.0882	-0.3913	0.0239
919	SLU 15	0.8	1.91	64.8	0.0878	-0.3918	0.0239
919	SLU 16	0.8	1.82	64.36	0.0872	-0.388	0.0237
919	SLU 17	0.8	1.87	64.34	0.0868	-0.3885	0.0237
919	SLU 18	0.81	1.85	65.89	0.0884	-0.4	0.0246
919	SLU 19	0.81	1.91	65.88	0.088	-0.4005	0.0246
919	SLU 20	0.83	1.88	66.69	0.0897	-0.4052	0.0251
919	SLU 21	0.83	1.94	66.68	0.0893	-0.4057	0.0251
919	SLU 22	0.77	1.82	62.65	0.0858	-0.3783	0.0224
919	SLU 23	0.77	1.91	62.62	0.0852	-0.3792	0.0224
919	SLU 24	0.79	1.88	63.91	0.0881	-0.3868	0.0231
919	SLU 25	0.79	1.94	63.9	0.0878	-0.3873	0.0231
919	SLU 26	0.78	1.94	63.42	0.0865	-0.3844	0.0229
919	SLU 27	0.8	1.91	64.71	0.0895	-0.392	0.0236
919	SLU 28	0.8	1.96	64.7	0.0891	-0.3925	0.0235
919	SLU 29	0.8	1.87	64.25	0.0885	-0.3887	0.0234
919	SLU 30	0.8	1.93	64.23	0.0881	-0.3892	0.0234
919	SLU 31	0.86	2.12	69.94	0.0942	-0.4315	0.0267
919	SLU 32	0.88	2.09	71.23	0.0971	-0.4392	0.0273
919	SLU 33	0.88	2.15	71.21	0.0967	-0.4397	0.0273
919	SLU 34	0.87	2.15	70.73	0.0955	-0.4367	0.0271
919	SLU 35	0.89	2.12	72.03	0.0985	-0.4444	0.0278
919	SLU 36	0.89	2.17	72.01	0.0981	-0.4449	0.0278
919	SLU 37	0.89	2.08	71.56	0.0974	-0.4411	0.0276
919	SLU 38	0.89	2.14	71.55	0.0971	-0.4416	0.0276
919	SLU 39	0.9	2.12	73.1	0.0987	-0.4531	0.0285
919	SLU 40	0.9	2.18	73.08	0.0983	-0.4536	0.0285
919	SLU 41	0.91	2.15	73.9	0.1	-0.4583	0.029
919	SLU 42	0.91	2.2	73.88	0.0996	-0.4588	0.029
919	SLU 43	0.86	1.93	69.61	0.0947	-0.4046	0.0228
919	SLU 44	0.86	2.02	69.58	0.0941	-0.4054	0.0228
919	SLU 45	0.88	1.99	70.87	0.0971	-0.413	0.0235
919	SLU 46	0.88	2.05	70.85	0.0967	-0.4135	0.0234
919	SLU 47	0.87	2.05	70.38	0.0954	-0.4106	0.0232
919	SLU 48	0.89	2.02	71.67	0.0984	-0.4182	0.0239
919	SLU 49	0.89	2.07	71.65	0.098	-0.4187	0.0239
919	SLU 50	0.89	1.98	71.21	0.0974	-0.415	0.0237
919	SLU 51	0.89	2.04	71.19	0.097	-0.4155	0.0237
919	SLU 52	0.95	2.23	76.89	0.1031	-0.4578	0.027
919	SLU 53	0.97	2.2	78.19	0.106	-0.4654	0.0277
919	SLU 54	0.97	2.26	78.17	0.1057	-0.4659	0.0277
919	SLU 55	0.96	2.26	77.69	0.1044	-0.463	0.0275
919	SLU 56	0.98	2.23	78.99	0.1074	-0.4706	0.0282
919	SLU 57	0.98	2.28	78.97	0.107	-0.4711	0.0282
919	SLU 58	0.98	2.19	78.52	0.1064	-0.4673	0.028
919	SLU 59	0.98	2.25	78.5	0.106	-0.4678	0.028
919	SLU 60	0.99	2.23	80.06	0.1076	-0.4794	0.0289
919	SLU 61	0.99	2.28	80.04	0.1072	-0.4799	0.0288
919	SLU 62	1	2.26	80.86	0.1089	-0.4846	0.0293

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
919	SLU 63	1	2.31	80.84	0.1085	-0.4851	0.0293
919	SLU 64	0.95	2.19	76.81	0.105	-0.4577	0.0267
919	SLU 65	0.95	2.29	76.78	0.1043	-0.4585	0.0266
919	SLU 66	0.97	2.26	78.08	0.1073	-0.4662	0.0273
919	SLU 67	0.96	2.31	78.06	0.1069	-0.4667	0.0273
919	SLU 68	0.96	2.31	77.58	0.1057	-0.4637	0.0271
919	SLU 69	0.98	2.28	78.88	0.1086	-0.4714	0.0278
919	SLU 70	0.98	2.34	78.86	0.1082	-0.4719	0.0278
919	SLU 71	0.97	2.25	78.41	0.1076	-0.4681	0.0276
919	SLU 72	0.97	2.3	78.39	0.1072	-0.4686	0.0276
919	SLU 73	1.04	2.5	84.1	0.1133	-0.5109	0.0309
919	SLU 74	1.06	2.47	85.39	0.1163	-0.5185	0.0316
919	SLU 75	1.05	2.52	85.37	0.1159	-0.519	0.0316
919	SLU 76	1.05	2.52	84.9	0.1146	-0.5161	0.0314
919	SLU 77	1.07	2.49	86.19	0.1176	-0.5237	0.032
919	SLU 78	1.07	2.55	86.17	0.1172	-0.5242	0.032
919	SLU 79	1.06	2.46	85.73	0.1166	-0.5204	0.0318
919	SLU 80	1.06	2.51	85.71	0.1162	-0.5209	0.0318
919	SLU 81	1.08	2.49	87.26	0.1178	-0.5325	0.0327
919	SLU 82	1.08	2.55	87.25	0.1174	-0.533	0.0327
919	SLU 83	1.09	2.52	88.06	0.1191	-0.5377	0.0332
919	SLU 84	1.09	2.58	88.04	0.1187	-0.5382	0.0332
919	SLE RA 1	0.71	1.63	57.5	0.0785	-0.3404	0.0197
919	SLE RA 2	0.71	1.69	57.48	0.0781	-0.3409	0.0196
919	SLE RA 3	0.72	1.67	58.35	0.0801	-0.346	0.0201
919	SLE RA 4	0.72	1.71	58.33	0.0798	-0.3464	0.0201
919	SLE RA 5	0.72	1.71	58.02	0.0789	-0.3444	0.02
919	SLE RA 6	0.73	1.69	58.88	0.0809	-0.3495	0.0204
919	SLE RA 7	0.73	1.73	58.87	0.0807	-0.3498	0.0204
919	SLE RA 8	0.73	1.67	58.57	0.0803	-0.3473	0.0203
919	SLE RA 9	0.73	1.7	58.56	0.08	-0.3476	0.0203
919	SLE RA 10	0.77	1.83	62.36	0.0841	-0.3759	0.0225
919	SLE RA 11	0.78	1.81	63.22	0.086	-0.3809	0.0229
919	SLE RA 12	0.78	1.85	63.21	0.0858	-0.3813	0.0229
919	SLE RA 13	0.78	1.85	62.89	0.0849	-0.3793	0.0228
919	SLE RA 14	0.79	1.83	63.76	0.0869	-0.3844	0.0232
919	SLE RA 15	0.79	1.87	63.74	0.0867	-0.3847	0.0232
919	SLE RA 16	0.79	1.81	63.45	0.0862	-0.3822	0.0231
919	SLE RA 17	0.79	1.84	63.43	0.086	-0.3826	0.0231
919	SLE RA 18	0.8	1.83	64.47	0.0871	-0.3903	0.0237
919	SLE RA 19	0.8	1.87	64.46	0.0868	-0.3906	0.0237
919	SLE RA 20	0.8	1.85	65	0.0879	-0.3937	0.024
919	SLE RA 21	0.8	1.88	64.99	0.0877	-0.3941	0.024
919	SLE FR 1	0.71	1.63	57.5	0.0785	-0.3404	0.0197
919	SLE FR 2	0.71	1.64	57.5	0.0784	-0.3405	0.0197
919	SLE FR 3	0.71	1.64	57.72	0.0789	-0.3418	0.0198
919	SLE FR 4	0.74	1.7	59.59	0.081	-0.3555	0.0209
919	SLE FR 5	0.74	1.7	59.81	0.0814	-0.3567	0.021
919	SLE FR 6	0.75	1.73	60.99	0.0828	-0.3653	0.0217
919	SLE QP 1	0.71	1.63	57.5	0.0785	-0.3404	0.0197
919	SLE QP 2	0.74	1.69	59.59	0.0811	-0.3553	0.0209
919	SLD 1	7.75	2.24	54.89	0.0724	-0.0804	-0.0448
919	SLD 2	7.15	2.46	54.83	0.071	-0.0801	-0.0282
919	SLD 3	7.85	0.35	55.59	0.0846	-0.0645	-0.043
919	SLD 4	7.25	0.58	55.54	0.0832	-0.0641	-0.0265
919	SLD 5	2.81	4.67	57.12	0.0602	-0.2971	-0.0045
919	SLD 6	2.41	4.81	57.09	0.0593	-0.2969	0.0064
919	SLD 7	3.12	-1.61	59.47	0.1009	-0.244	0.0015
919	SLD 8	2.72	-1.46	59.43	0.1	-0.2437	0.0123
919	SLD 9	-1.25	4.84	59.75	0.0622	-0.467	0.0294
919	SLD 10	-1.64	4.98	59.72	0.0612	-0.4667	0.0403
919	SLD 11	-0.94	-1.44	62.1	0.1029	-0.4138	0.0353
919	SLD 12	-1.33	-1.29	62.06	0.1019	-0.4136	0.0462
919	SLD 13	-5.77	2.8	63.65	0.079	-0.6466	0.0682
919	SLD 14	-6.37	3.02	63.6	0.0775	-0.6462	0.0847
919	SLD 15	-5.68	0.92	64.35	0.0912	-0.6306	0.07
919	SLD 16	-6.28	1.14	64.3	0.0898	-0.6302	0.0865
919	SLV 1	17.15	2.91	48.61	0.0606	0.2886	-0.1326
919	SLV 2	15.74	3.42	48.48	0.0572	0.2895	-0.0941
919	SLV 3	17.36	-1.38	50.2	0.0882	0.3248	-0.1285
919	SLV 4	15.96	-0.86	50.08	0.0849	0.3257	-0.09
919	SLV 5	5.57	8.47	53.9	0.0335	-0.2172	-0.038
919	SLV 6	4.67	8.8	53.82	0.0314	-0.2166	-0.0132
919	SLV 7	6.3	-5.82	59.22	0.1258	-0.0966	-0.0244
919	SLV 8	5.39	-5.49	59.14	0.1236	-0.096	0.0005
919	SLV 9	-3.92	8.87	60.05	0.0385	-0.6147	0.0413
919	SLV 10	-4.82	9.2	59.97	0.0364	-0.6141	0.0661
919	SLV 11	-3.19	-5.42	65.37	0.1308	-0.4941	0.0549
919	SLV 12	-4.1	-5.09	65.29	0.1286	-0.4935	0.0797
919	SLV 13	-14.49	4.24	69.11	0.0772	-1.0363	0.1317
919	SLV 14	-15.89	4.76	68.98	0.0739	-1.0354	0.1702
919	SLV 15	-14.27	-0.04	70.7	0.1049	-1.0002	0.1358
919	SLV 16	-15.67	0.47	70.58	0.1016	-0.9993	0.1743
919	CRTFP Ux+	0	0	0	0	0	0
919	CRTFP Ux-	0	0	0	0	0	0
922	SLU 1	0.81	0.37	30.08	-0.0377	1.8241	-0.1323
922	SLU 2	0.8	0.47	30.06	-0.0378	1.822	-0.1654
922	SLU 3	0.83	0.38	30.75	-0.0386	1.8415	-0.1367
922	SLU 4	0.83	0.44	30.74	-0.0387	1.8403	-0.1565
922	SLU 5	0.81	0.47	30.47	-0.0384	1.8321	-0.1659

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
922	SLU 6	0.85	0.38	31.16	-0.0392	1.8516	-0.1372
922	SLU 7	0.84	0.44	31.15	-0.0393	1.8503	-0.1571
922	SLU 8	0.84	0.37	30.9	-0.0389	1.8442	-0.1333
922	SLU 9	0.83	0.43	30.89	-0.039	1.8429	-0.1532
922	SLU 10	0.88	0.55	33.71	-0.0431	1.9149	-0.1953
922	SLU 11	0.91	0.47	34.4	-0.0439	1.9344	-0.1667
922	SLU 12	0.91	0.52	34.39	-0.044	1.9331	-0.1865
922	SLU 13	0.9	0.55	34.12	-0.0437	1.9249	-0.1959
922	SLU 14	0.93	0.47	34.81	-0.0445	1.9444	-0.1672
922	SLU 15	0.92	0.53	34.8	-0.0446	1.9432	-0.187
922	SLU 16	0.92	0.46	34.55	-0.0442	1.937	-0.1633
922	SLU 17	0.91	0.52	34.54	-0.0443	1.9358	-0.1832
922	SLU 18	0.92	0.49	35.3	-0.0452	1.9567	-0.1751
922	SLU 19	0.92	0.55	35.29	-0.0453	1.9555	-0.195
922	SLU 20	0.94	0.49	35.71	-0.0458	1.9668	-0.1756
922	SLU 21	0.93	0.55	35.69	-0.0459	1.9655	-0.1955
922	SLU 22	0.9	0.45	33.72	-0.0428	1.9195	-0.16
922	SLU 23	0.89	0.54	33.7	-0.0429	1.9174	-0.193
922	SLU 24	0.93	0.46	34.39	-0.0437	1.9369	-0.1644
922	SLU 25	0.92	0.52	34.37	-0.0438	1.9357	-0.1842
922	SLU 26	0.91	0.54	34.1	-0.0436	1.9275	-0.1936
922	SLU 27	0.94	0.46	34.79	-0.0443	1.947	-0.1649
922	SLU 28	0.94	0.52	34.78	-0.0444	1.9457	-0.1848
922	SLU 29	0.93	0.45	34.54	-0.044	1.9396	-0.161
922	SLU 30	0.93	0.51	34.52	-0.0441	1.9384	-0.1809
922	SLU 31	0.98	0.63	37.35	-0.0482	2.0103	-0.223
922	SLU 32	1.01	0.55	38.04	-0.049	2.0298	-0.1944
922	SLU 33	1	0.6	38.02	-0.0491	2.0285	-0.2142
922	SLU 34	0.99	0.63	37.76	-0.0488	2.0203	-0.2236
922	SLU 35	1.02	0.55	38.45	-0.0496	2.0398	-0.1949
922	SLU 36	1.02	0.6	38.43	-0.0497	2.0386	-0.2147
922	SLU 37	1.01	0.54	38.19	-0.0493	2.0325	-0.191
922	SLU 38	1.01	0.59	38.17	-0.0494	2.0312	-0.2108
922	SLU 39	1.02	0.57	38.93	-0.0503	2.0522	-0.2028
922	SLU 40	1.01	0.63	38.92	-0.0504	2.0509	-0.2227
922	SLU 41	1.03	0.57	39.34	-0.0509	2.0622	-0.2033
922	SLU 42	1.03	0.63	39.33	-0.051	2.061	-0.2232
922	SLU 43	1.02	0.46	37.86	-0.0472	2.3386	-0.1624
922	SLU 44	1.01	0.55	37.84	-0.0474	2.3365	-0.1955
922	SLU 45	1.04	0.47	38.53	-0.0482	2.356	-0.1669
922	SLU 46	1.04	0.52	38.52	-0.0483	2.3548	-0.1867
922	SLU 47	1.02	0.55	38.25	-0.048	2.3466	-0.1961
922	SLU 48	1.06	0.47	38.94	-0.0488	2.3661	-0.1674
922	SLU 49	1.05	0.53	38.93	-0.0489	2.3648	-0.1872
922	SLU 50	1.05	0.46	38.68	-0.0484	2.3587	-0.1635
922	SLU 51	1.04	0.51	38.67	-0.0485	2.3575	-0.1834
922	SLU 52	1.09	0.63	41.49	-0.0526	2.4294	-0.2255
922	SLU 53	1.12	0.55	42.18	-0.0534	2.4489	-0.1969
922	SLU 54	1.12	0.61	42.17	-0.0535	2.4476	-0.2167
922	SLU 55	1.11	0.64	41.9	-0.0533	2.4394	-0.2261
922	SLU 56	1.14	0.55	42.59	-0.0541	2.4589	-0.1974
922	SLU 57	1.13	0.61	42.58	-0.0542	2.4577	-0.2172
922	SLU 58	1.13	0.54	42.33	-0.0537	2.4516	-0.1935
922	SLU 59	1.12	0.6	42.32	-0.0538	2.4503	-0.2133
922	SLU 60	1.13	0.58	43.08	-0.0547	2.4713	-0.2053
922	SLU 61	1.13	0.63	43.06	-0.0548	2.47	-0.2251
922	SLU 62	1.15	0.58	43.49	-0.0554	2.4813	-0.2058
922	SLU 63	1.14	0.63	43.47	-0.0555	2.4801	-0.2257
922	SLU 64	1.11	0.53	41.5	-0.0523	2.434	-0.1901
922	SLU 65	1.1	0.63	41.47	-0.0525	2.432	-0.2232
922	SLU 66	1.14	0.55	42.16	-0.0533	2.4515	-0.1946
922	SLU 67	1.13	0.6	42.15	-0.0534	2.4502	-0.2144
922	SLU 68	1.12	0.63	41.88	-0.0531	2.442	-0.2238
922	SLU 69	1.15	0.55	42.57	-0.0539	2.4615	-0.1951
922	SLU 70	1.15	0.6	42.56	-0.054	2.4603	-0.2149
922	SLU 71	1.14	0.54	42.31	-0.0536	2.4541	-0.1912
922	SLU 72	1.14	0.59	42.3	-0.0537	2.4529	-0.211
922	SLU 73	1.19	0.71	45.12	-0.0578	2.5248	-0.2532
922	SLU 74	1.22	0.63	45.81	-0.0585	2.5443	-0.2245
922	SLU 75	1.21	0.69	45.8	-0.0586	2.543	-0.2444
922	SLU 76	1.2	0.71	45.53	-0.0584	2.5348	-0.2537
922	SLU 77	1.23	0.63	46.22	-0.0592	2.5543	-0.2251
922	SLU 78	1.23	0.69	46.21	-0.0593	2.5531	-0.2449
922	SLU 79	1.22	0.62	45.97	-0.0588	2.547	-0.2212
922	SLU 80	1.22	0.68	45.95	-0.0589	2.5457	-0.241
922	SLU 81	1.23	0.65	46.71	-0.0599	2.5667	-0.233
922	SLU 82	1.22	0.71	46.7	-0.06	2.5654	-0.2528
922	SLU 83	1.24	0.66	47.12	-0.0605	2.5767	-0.2335
922	SLU 84	1.24	0.71	47.11	-0.0606	2.5755	-0.2534
922	SLE RA 1	0.84	0.39	31.12	-0.0391	1.8514	-0.1402
922	SLE RA 2	0.83	0.46	31.11	-0.0392	1.85	-0.1622
922	SLE RA 3	0.85	0.4	31.57	-0.0398	1.863	-0.1431
922	SLE RA 4	0.85	0.44	31.56	-0.0398	1.8621	-0.1564
922	SLE RA 5	0.84	0.46	31.38	-0.0396	1.8567	-0.1626
922	SLE RA 6	0.86	0.4	31.84	-0.0402	1.8697	-0.1435
922	SLE RA 7	0.86	0.44	31.83	-0.0402	1.8688	-0.1567
922	SLE RA 8	0.86	0.4	31.67	-0.0399	1.8648	-0.1409
922	SLE RA 9	0.85	0.43	31.66	-0.04	1.8639	-0.1541
922	SLE RA 10	0.88	0.51	33.54	-0.0427	1.9119	-0.1822
922	SLE RA 11	0.91	0.46	34	-0.0433	1.9249	-0.1631

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
922	SLE RA 12	0.9	0.5	33.99	-0.0433	1.924	-0.1763
922	SLE RA 13	0.89	0.51	33.81	-0.0432	1.9186	-0.1826
922	SLE RA 14	0.91	0.46	34.27	-0.0437	1.9316	-0.1635
922	SLE RA 15	0.91	0.5	34.26	-0.0438	1.9307	-0.1767
922	SLE RA 16	0.91	0.45	34.1	-0.0435	1.9267	-0.1609
922	SLE RA 17	0.91	0.49	34.09	-0.0435	1.9258	-0.1741
922	SLE RA 18	0.91	0.47	34.6	-0.0441	1.9398	-0.1687
922	SLE RA 19	0.91	0.51	34.59	-0.0442	1.939	-0.182
922	SLE RA 20	0.92	0.47	34.87	-0.0446	1.9465	-0.1691
922	SLE RA 21	0.92	0.51	34.86	-0.0446	1.9457	-0.1823
922	SLE FR 1	0.84	0.39	31.12	-0.0391	1.8514	-0.1402
922	SLE FR 2	0.83	0.41	31.12	-0.0391	1.8511	-0.1446
922	SLE FR 3	0.84	0.39	31.23	-0.0393	1.8541	-0.1403
922	SLE FR 4	0.86	0.43	32.16	-0.0406	1.8776	-0.1532
922	SLE FR 5	0.86	0.42	32.27	-0.0408	1.8806	-0.1489
922	SLE FR 6	0.87	0.43	32.86	-0.0416	1.8956	-0.1545
922	SLE QP 1	0.84	0.39	31.12	-0.0391	1.8514	-0.1402
922	SLE QP 2	0.86	0.42	32.16	-0.0406	1.8779	-0.1487
922	SLD 1	2.32	0.22	23.99	-0.0298	1.6737	-0.0815
922	SLD 2	1.94	1.03	23.56	-0.0316	1.6219	-0.3618
922	SLD 3	2.79	-1.39	24.67	-0.0266	1.7416	0.4836
922	SLD 4	2.4	-0.59	24.23	-0.0283	1.6898	0.2033
922	SLD 5	0.66	2.67	28.77	-0.042	1.7229	-0.9357
922	SLD 6	0.41	3.2	28.48	-0.0432	1.689	-1.1195
922	SLD 7	2.21	-2.72	31.01	-0.0312	1.9492	0.9478
922	SLD 8	1.96	-2.2	30.73	-0.0323	1.9152	0.764
922	SLD 9	-0.25	3.03	33.6	-0.0489	1.8406	-1.0615
922	SLD 10	-0.5	3.56	33.31	-0.0501	1.8066	-1.2452
922	SLD 11	1.31	-2.36	35.84	-0.0381	2.0668	0.822
922	SLD 12	1.06	-1.84	35.56	-0.0392	2.0329	0.6383
922	SLD 13	-0.69	1.42	40.1	-0.0529	2.066	-0.5008
922	SLD 14	-1.07	2.23	39.66	-0.0547	2.0142	-0.781
922	SLD 15	-0.22	-0.19	40.77	-0.0497	2.1339	0.0643
922	SLD 16	-0.6	0.61	40.34	-0.0514	2.0821	-0.216
922	SLV 1	4.28	-0.08	13.06	-0.0153	1.4035	0.0253
922	SLV 2	3.39	1.79	12.05	-0.0193	1.2828	-0.6275
922	SLV 3	5.35	-3.76	14.59	-0.0079	1.5587	1.3108
922	SLV 4	4.46	-1.89	13.58	-0.012	1.4381	0.6581
922	SLV 5	0.42	5.53	24.29	-0.0435	1.5209	-1.9339
922	SLV 6	-0.15	6.74	23.64	-0.0461	1.4432	-2.3545
922	SLV 7	3.97	-6.74	29.38	-0.0189	2.0383	2.3513
922	SLV 8	3.4	-5.53	28.73	-0.0215	1.9606	1.9307
922	SLV 9	-1.68	6.37	35.6	-0.0597	1.7952	-2.2281
922	SLV 10	-2.26	7.58	34.95	-0.0623	1.7175	-2.6488
922	SLV 11	1.87	-5.9	40.69	-0.0351	2.3126	2.057
922	SLV 12	1.29	-4.69	40.04	-0.0377	2.2349	1.6364
922	SLV 13	-2.74	2.72	50.75	-0.0693	2.3177	-0.9556
922	SLV 14	-3.63	4.6	49.74	-0.0733	2.1971	-1.6083
922	SLV 15	-1.67	-0.96	52.28	-0.0619	2.473	0.33
922	SLV 16	-2.56	0.92	51.27	-0.066	2.3523	-0.3228
922	CRTFP Ux+	0	0	0	0	0	0
922	CRTFP Ux-	0	0	0	0	0	0
922	CRTFP Uy+	0	0	0	0	0	0
922	CRTFP Uy-	0	0	0	0	0	0
924	SLU 1	1.23	-0.05	57.84	-1.5759	0.4765	0.0332
924	SLU 2	1.23	0.04	57.79	-1.575	0.4747	0.033
924	SLU 3	1.25	-0.04	59.17	-1.612	0.4908	0.034
924	SLU 4	1.25	0.01	59.14	-1.6115	0.4898	0.0339
924	SLU 5	1.24	0.03	58.61	-1.5971	0.4835	0.0335
924	SLU 6	1.27	-0.04	59.98	-1.6341	0.4996	0.0345
924	SLU 7	1.27	0.01	59.95	-1.6336	0.4985	0.0344
924	SLU 8	1.26	-0.05	59.46	-1.62	0.494	0.0342
924	SLU 9	1.26	0	59.44	-1.6195	0.4929	0.0341
924	SLU 10	1.33	0.06	65.48	-1.7853	0.5498	0.0352
924	SLU 11	1.36	-0.02	66.86	-1.8223	0.5659	0.0362
924	SLU 12	1.35	0.03	66.83	-1.8218	0.5648	0.0361
924	SLU 13	1.34	0.06	66.29	-1.8073	0.5585	0.0357
924	SLU 14	1.37	-0.02	67.67	-1.8443	0.5746	0.0367
924	SLU 15	1.37	0.03	67.64	-1.8438	0.5736	0.0366
924	SLU 16	1.36	-0.03	67.15	-1.8302	0.569	0.0364
924	SLU 17	1.36	0.02	67.12	-1.8297	0.568	0.0363
924	SLU 18	1.37	-0.02	68.82	-1.8762	0.5837	0.0363
924	SLU 19	1.37	0.03	68.79	-1.8757	0.5827	0.0362
924	SLU 20	1.39	-0.02	69.63	-1.8983	0.5925	0.0368
924	SLU 21	1.39	0.03	69.61	-1.8978	0.5914	0.0367
924	SLU 22	1.34	-0.01	65.42	-1.7829	0.5507	0.036
924	SLU 23	1.34	0.08	65.38	-1.7821	0.5489	0.0359
924	SLU 24	1.37	0	66.76	-1.8191	0.565	0.0369
924	SLU 25	1.37	0.05	66.73	-1.8186	0.564	0.0368
924	SLU 26	1.36	0.07	66.19	-1.8042	0.5577	0.0364
924	SLU 27	1.38	0	67.57	-1.8412	0.5738	0.0374
924	SLU 28	1.38	0.05	67.54	-1.8406	0.5727	0.0373
924	SLU 29	1.37	-0.02	67.05	-1.8271	0.5682	0.037
924	SLU 30	1.37	0.04	67.02	-1.8265	0.5671	0.037
924	SLU 31	1.44	0.1	73.07	-1.9923	0.624	0.0381
924	SLU 32	1.47	0.02	74.44	-2.0293	0.6401	0.0391
924	SLU 33	1.47	0.07	74.42	-2.0288	0.639	0.039
924	SLU 34	1.46	0.1	73.88	-2.0144	0.6327	0.0386
924	SLU 35	1.49	0.02	75.26	-2.0514	0.6488	0.0396
924	SLU 36	1.48	0.07	75.23	-2.0509	0.6478	0.0395

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
924	SLU 37	1.48	0.01	74.74	-2.0373	0.6432	0.0393
924	SLU 38	1.47	0.06	74.71	-2.0368	0.6422	0.0392
924	SLU 39	1.49	0.02	76.41	-2.0833	0.6579	0.0392
924	SLU 40	1.48	0.07	76.38	-2.0828	0.6568	0.0391
924	SLU 41	1.5	0.02	77.22	-2.1053	0.6667	0.0397
924	SLU 42	1.5	0.07	77.19	-2.1048	0.6656	0.0396
924	SLU 43	1.56	-0.08	72.58	-1.9776	0.594	0.0421
924	SLU 44	1.55	0.01	72.54	-1.9768	0.5922	0.042
924	SLU 45	1.58	-0.07	73.92	-2.0138	0.6083	0.043
924	SLU 46	1.58	-0.02	73.89	-2.0133	0.6073	0.0429
924	SLU 47	1.57	0.01	73.36	-1.9989	0.601	0.0425
924	SLU 48	1.6	-0.07	74.73	-2.0359	0.6171	0.0435
924	SLU 49	1.6	-0.02	74.7	-2.0354	0.616	0.0434
924	SLU 50	1.59	-0.08	74.21	-2.0218	0.6115	0.0432
924	SLU 51	1.59	-0.03	74.18	-2.0213	0.6104	0.0431
924	SLU 52	1.66	0.03	80.23	-2.187	0.6673	0.0442
924	SLU 53	1.68	-0.05	81.6	-2.224	0.6834	0.0452
924	SLU 54	1.68	0	81.58	-2.2235	0.6823	0.0451
924	SLU 55	1.67	0.03	81.04	-2.2091	0.6761	0.0447
924	SLU 56	1.7	-0.05	82.42	-2.2461	0.6921	0.0457
924	SLU 57	1.7	0	82.39	-2.2456	0.6911	0.0456
924	SLU 58	1.69	-0.06	81.9	-2.232	0.6866	0.0454
924	SLU 59	1.69	-0.01	81.87	-2.2315	0.6855	0.0453
924	SLU 60	1.7	-0.05	83.57	-2.278	0.7012	0.0453
924	SLU 61	1.7	0.01	83.54	-2.2775	0.7002	0.0452
924	SLU 62	1.72	-0.05	84.38	-2.3	0.71	0.0458
924	SLU 63	1.72	0	84.36	-2.2995	0.7089	0.0457
924	SLU 64	1.67	-0.04	80.17	-2.1847	0.6682	0.045
924	SLU 65	1.67	0.05	80.13	-2.1839	0.6664	0.0449
924	SLU 66	1.7	-0.03	81.51	-2.2209	0.6825	0.0458
924	SLU 67	1.69	0.02	81.48	-2.2204	0.6815	0.0457
924	SLU 68	1.68	0.05	80.94	-2.2059	0.6752	0.0454
924	SLU 69	1.71	-0.03	82.32	-2.2429	0.6913	0.0463
924	SLU 70	1.71	0.02	82.29	-2.2424	0.6902	0.0463
924	SLU 71	1.7	-0.04	81.8	-2.2288	0.6857	0.046
924	SLU 72	1.7	0.01	81.77	-2.2283	0.6846	0.0459
924	SLU 73	1.77	0.07	87.82	-2.3941	0.7415	0.0471
924	SLU 74	1.8	-0.01	89.19	-2.4311	0.7576	0.048
924	SLU 75	1.8	0.04	89.17	-2.4306	0.7565	0.0479
924	SLU 76	1.79	0.07	88.63	-2.4162	0.7502	0.0476
924	SLU 77	1.81	-0.01	90.01	-2.4532	0.7663	0.0485
924	SLU 78	1.81	0.04	89.98	-2.4527	0.7653	0.0485
924	SLU 79	1.8	-0.02	89.49	-2.4391	0.7607	0.0482
924	SLU 80	1.8	0.03	89.46	-2.4386	0.7597	0.0481
924	SLU 81	1.81	-0.01	91.16	-2.485	0.7754	0.0481
924	SLU 82	1.81	0.04	91.13	-2.4845	0.7744	0.0481
924	SLU 83	1.83	-0.01	91.97	-2.5071	0.7842	0.0487
924	SLU 84	1.83	0.04	91.94	-2.5066	0.7831	0.0486
924	SLE RA 1	1.26	-0.04	60	-1.635	0.4977	0.034
924	SLE RA 2	1.26	0.02	59.98	-1.6345	0.4965	0.0339
924	SLE RA 3	1.28	-0.03	60.89	-1.6591	0.5072	0.0345
924	SLE RA 4	1.28	0	60.88	-1.6588	0.5065	0.0345
924	SLE RA 5	1.27	0.02	60.52	-1.6492	0.5023	0.0342
924	SLE RA 6	1.29	-0.03	61.43	-1.6738	0.5131	0.0349
924	SLE RA 7	1.29	0	61.42	-1.6735	0.5124	0.0348
924	SLE RA 8	1.28	-0.04	61.09	-1.6644	0.5094	0.0347
924	SLE RA 9	1.28	-0.01	61.07	-1.6641	0.5087	0.0346
924	SLE RA 10	1.33	0.03	65.1	-1.7746	0.5466	0.0354
924	SLE RA 11	1.34	-0.02	66.02	-1.7993	0.5573	0.036
924	SLE RA 12	1.34	0.02	66	-1.799	0.5566	0.036
924	SLE RA 13	1.34	0.03	65.64	-1.7893	0.5524	0.0357
924	SLE RA 14	1.36	-0.02	66.56	-1.814	0.5631	0.0364
924	SLE RA 15	1.36	0.01	66.54	-1.8137	0.5624	0.0363
924	SLE RA 16	1.35	-0.03	66.21	-1.8046	0.5594	0.0361
924	SLE RA 17	1.35	0.01	66.2	-1.8043	0.5587	0.0361
924	SLE RA 18	1.36	-0.02	67.33	-1.8353	0.5692	0.0361
924	SLE RA 19	1.36	0.02	67.31	-1.8349	0.5685	0.036
924	SLE RA 20	1.37	-0.02	67.87	-1.85	0.575	0.0364
924	SLE RA 21	1.37	0.02	67.85	-1.8496	0.5743	0.0364
924	SLE FR 1	1.26	-0.04	60	-1.635	0.4977	0.034
924	SLE FR 2	1.26	-0.03	60	-1.6349	0.4974	0.034
924	SLE FR 3	1.26	-0.04	60.22	-1.6409	0.5	0.0341
924	SLE FR 4	1.29	-0.02	62.19	-1.695	0.5189	0.0346
924	SLE FR 5	1.29	-0.03	62.42	-1.701	0.5215	0.0348
924	SLE FR 6	1.31	-0.03	63.66	-1.7351	0.5334	0.035
924	SLE QP 1	1.26	-0.04	60	-1.635	0.4977	0.034
924	SLE QP 2	1.29	-0.03	62.2	-1.6951	0.5191	0.0346
924	SLD 1	7.06	0.92	55	-1.51	0.4428	0.1489
924	SLD 2	6.49	1.43	54.48	-1.4973	0.4468	0.1437
924	SLD 3	7.14	-0.67	56.08	-1.5341	0.4924	0.152
924	SLD 4	6.58	-0.16	55.57	-1.5214	0.4964	0.1468
924	SLD 5	2.99	2.57	58.49	-1.6052	0.4203	0.0651
924	SLD 6	2.62	2.91	58.15	-1.5969	0.4229	0.0617
924	SLD 7	3.27	-2.72	62.1	-1.6857	0.5856	0.0755
924	SLD 8	2.9	-2.39	61.76	-1.6774	0.5883	0.0721
924	SLD 9	-0.32	2.33	62.64	-1.7128	0.45	-0.0029
924	SLD 10	-0.7	2.66	62.3	-1.7045	0.4526	-0.0062
924	SLD 11	-0.05	-2.97	66.25	-1.7933	0.6153	0.0075
924	SLD 12	-0.42	-2.64	65.91	-1.785	0.618	0.0042
924	SLD 13	-4	0.1	68.83	-1.8688	0.5419	-0.0776

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
924	SLD 14	-4.57	0.61	68.32	-1.8561	0.5459	-0.0827
924	SLD 15	-3.92	-1.49	69.92	-1.8929	0.5915	-0.0744
924	SLD 16	-4.48	-0.98	69.41	-1.8802	0.5955	-0.0796
924	SLV 1	14.79	2.15	45.37	-1.2625	0.3399	0.3018
924	SLV 2	13.47	3.32	44.18	-1.233	0.3493	0.2898
924	SLV 3	14.98	-1.47	47.82	-1.3171	0.4555	0.309
924	SLV 4	13.66	-0.3	46.63	-1.2876	0.4649	0.2969
924	SLV 5	5.27	5.91	53.64	-1.4876	0.2884	0.106
924	SLV 6	4.42	6.67	52.87	-1.4686	0.2945	0.0983
924	SLV 7	5.92	-6.16	61.81	-1.6696	0.6737	0.1298
924	SLV 8	5.07	-5.4	61.04	-1.6505	0.6798	0.122
924	SLV 9	-2.49	5.34	63.36	-1.7397	0.3585	-0.0528
924	SLV 10	-3.34	6.1	62.59	-1.7206	0.3645	-0.0606
924	SLV 11	-1.84	-6.73	71.53	-1.9216	0.7438	-0.029
924	SLV 12	-2.69	-5.97	70.76	-1.9026	0.7498	-0.0368
924	SLV 13	-11.08	0.23	77.77	-2.1026	0.5734	-0.2277
924	SLV 14	-12.4	1.41	76.58	-2.0731	0.5828	-0.2397
924	SLV 15	-10.89	-3.39	80.23	-2.1572	0.689	-0.2205
924	SLV 16	-12.21	-2.21	79.03	-2.1277	0.6984	-0.2326
924	CRTFP Ux+	0	0	0	0	0	0
924	CRTFP Ux-	0	0	0	0	0	0
924	CRTFP Uy+	0	0	0	0	0	0
924	CRTFP Uy-	0	0	0	0	0	0
940	SLU 1	-0.47	-0.06	31.46	-0.81	-5.5178	-0.029
940	SLU 2	-0.47	0.01	31.44	-0.8097	-5.515	-0.012
940	SLU 3	-0.48	-0.06	32.19	-0.8288	-5.6423	-0.0295
940	SLU 4	-0.48	-0.02	32.18	-0.8286	-5.6406	-0.0192
940	SLU 5	-0.48	0.01	31.9	-0.8215	-5.5923	-0.0128
940	SLU 6	-0.49	-0.06	32.65	-0.8406	-5.7196	-0.0302
940	SLU 7	-0.49	-0.02	32.64	-0.8404	-5.7179	-0.02
940	SLU 8	-0.49	-0.06	32.37	-0.8335	-5.6725	-0.0306
940	SLU 9	-0.49	-0.02	32.36	-0.8333	-5.6708	-0.0204
940	SLU 10	-0.51	0.02	35.39	-0.9105	-6.1894	-0.0106
940	SLU 11	-0.52	-0.05	36.14	-0.9296	-6.3167	-0.028
940	SLU 12	-0.52	-0.01	36.13	-0.9294	-6.315	-0.0178
940	SLU 13	-0.52	0.02	35.84	-0.9223	-6.2668	-0.0114
940	SLU 14	-0.53	-0.05	36.59	-0.9414	-6.3941	-0.0288
940	SLU 15	-0.53	-0.01	36.58	-0.9412	-6.3924	-0.0186
940	SLU 16	-0.53	-0.05	36.32	-0.9343	-6.3469	-0.0292
940	SLU 17	-0.53	-0.01	36.31	-0.9341	-6.3452	-0.019
940	SLU 18	-0.53	-0.05	37.09	-0.954	-6.4813	-0.027
940	SLU 19	-0.53	0	37.08	-0.9538	-6.4796	-0.0168
940	SLU 20	-0.53	-0.05	37.55	-0.9657	-6.5586	-0.0278
940	SLU 21	-0.53	-0.01	37.54	-0.9656	-6.5569	-0.0176
940	SLU 22	-0.52	-0.05	35.44	-0.9117	-6.1989	-0.0272
940	SLU 23	-0.51	0.02	35.43	-0.9115	-6.1961	-0.0102
940	SLU 24	-0.53	-0.05	36.18	-0.9306	-6.3234	-0.0276
940	SLU 25	-0.53	-0.01	36.17	-0.9304	-6.3217	-0.0174
940	SLU 26	-0.52	0.02	35.88	-0.9232	-6.2735	-0.011
940	SLU 27	-0.54	-0.05	36.63	-0.9423	-6.4007	-0.0284
940	SLU 28	-0.53	-0.01	36.62	-0.9421	-6.3991	-0.0182
940	SLU 29	-0.53	-0.05	36.36	-0.9352	-6.3536	-0.0288
940	SLU 30	-0.53	-0.01	36.35	-0.935	-6.3519	-0.0185
940	SLU 31	-0.55	0.03	39.37	-1.0123	-6.8706	-0.0087
940	SLU 32	-0.57	-0.04	40.12	-1.0314	-6.9978	-0.0262
940	SLU 33	-0.57	0	40.11	-1.0312	-6.9962	-0.016
940	SLU 34	-0.56	0.03	39.83	-1.024	-6.9479	-0.0095
940	SLU 35	-0.57	-0.04	40.58	-1.0431	-7.0752	-0.027
940	SLU 36	-0.57	0	40.57	-1.0429	-7.0735	-0.0168
940	SLU 37	-0.57	-0.04	40.3	-1.036	-7.028	-0.0273
940	SLU 38	-0.57	0	40.29	-1.0358	-7.0264	-0.0171
940	SLU 39	-0.57	-0.03	41.07	-1.0557	-7.1624	-0.0252
940	SLU 40	-0.57	0.01	41.07	-1.0556	-7.1607	-0.0149
940	SLU 41	-0.58	-0.03	41.53	-1.0675	-7.2398	-0.0259
940	SLU 42	-0.58	0.01	41.52	-1.0673	-7.2381	-0.0157
940	SLU 43	-0.6	-0.08	39.53	-1.0181	-6.9396	-0.0384
940	SLU 44	-0.6	-0.01	39.52	-1.0178	-6.9368	-0.0213
940	SLU 45	-0.61	-0.08	40.26	-1.0369	-7.064	-0.0388
940	SLU 46	-0.61	-0.04	40.26	-1.0368	-7.0624	-0.0286
940	SLU 47	-0.6	-0.02	39.97	-1.0296	-7.0141	-0.0221
940	SLU 48	-0.62	-0.09	40.72	-1.0487	-7.1414	-0.0396
940	SLU 49	-0.62	-0.04	40.71	-1.0485	-7.1397	-0.0294
940	SLU 50	-0.61	-0.09	40.44	-1.0416	-7.0942	-0.0399
940	SLU 51	-0.61	-0.05	40.44	-1.0414	-7.0926	-0.0297
940	SLU 52	-0.63	0	43.46	-1.1186	-7.6112	-0.0199
940	SLU 53	-0.65	-0.07	44.21	-1.1377	-7.7385	-0.0374
940	SLU 54	-0.65	-0.03	44.2	-1.1376	-7.7368	-0.0271
940	SLU 55	-0.64	-0.01	43.92	-1.1304	-7.6886	-0.0207
940	SLU 56	-0.66	-0.07	44.67	-1.1495	-7.8158	-0.0381
940	SLU 57	-0.65	-0.03	44.66	-1.1493	-7.8142	-0.0279
940	SLU 58	-0.65	-0.08	44.39	-1.1424	-7.7687	-0.0385
940	SLU 59	-0.65	-0.04	44.38	-1.1422	-7.767	-0.0283
940	SLU 60	-0.65	-0.07	45.16	-1.1621	-7.9031	-0.0363
940	SLU 61	-0.65	-0.03	45.15	-1.162	-7.9014	-0.0261
940	SLU 62	-0.66	-0.07	45.62	-1.1739	-7.9804	-0.0371
940	SLU 63	-0.66	-0.03	45.61	-1.1737	-7.9787	-0.0269
940	SLU 64	-0.64	-0.07	43.51	-1.1199	-7.6207	-0.0365
940	SLU 65	-0.64	0	43.5	-1.1196	-7.6179	-0.0195
940	SLU 66	-0.65	-0.07	44.25	-1.1387	-7.7452	-0.037
940	SLU 67	-0.65	-0.03	44.24	-1.1385	-7.7435	-0.0267

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
940	SLU 68	-0.65	0	43.96	-1.1313	-7.6953	-0.0203
940	SLU 69	-0.66	-0.07	44.7	-1.1504	-7.8225	-0.0377
940	SLU 70	-0.66	-0.03	44.7	-1.1502	-7.8209	-0.0275
940	SLU 71	-0.66	-0.07	44.43	-1.1433	-7.7754	-0.0381
940	SLU 72	-0.66	-0.03	44.42	-1.1432	-7.7737	-0.0279
940	SLU 73	-0.68	0.01	47.44	-1.2204	-8.2924	-0.0181
940	SLU 74	-0.69	-0.06	48.19	-1.2395	-8.4196	-0.0355
940	SLU 75	-0.69	-0.02	48.18	-1.2393	-8.418	-0.0253
940	SLU 76	-0.69	0.01	47.9	-1.2321	-8.3697	-0.0189
940	SLU 77	-0.7	-0.06	48.65	-1.2512	-8.497	-0.0363
940	SLU 78	-0.7	-0.02	48.64	-1.251	-8.4953	-0.0261
940	SLU 79	-0.7	-0.06	48.37	-1.2441	-8.4498	-0.0367
940	SLU 80	-0.7	-0.02	48.36	-1.244	-8.4482	-0.0265
940	SLU 81	-0.7	-0.05	49.15	-1.2639	-8.5842	-0.0345
940	SLU 82	-0.7	-0.01	49.14	-1.2637	-8.5825	-0.0243
940	SLU 83	-0.71	-0.06	49.6	-1.2756	-8.6615	-0.0353
940	SLU 84	-0.7	-0.02	49.59	-1.2754	-8.6599	-0.0251
940	SLE RA 1	-0.48	-0.06	32.6	-0.8391	-5.7124	-0.0285
940	SLE RA 2	-0.48	-0.01	32.59	-0.8389	-5.7105	-0.0172
940	SLE RA 3	-0.49	-0.06	33.09	-0.8516	-5.7954	-0.0288
940	SLE RA 4	-0.49	-0.03	33.08	-0.8515	-5.7943	-0.022
940	SLE RA 5	-0.49	-0.01	32.89	-0.8467	-5.7621	-0.0177
940	SLE RA 6	-0.5	-0.06	33.39	-0.8594	-5.8469	-0.0293
940	SLE RA 7	-0.5	-0.03	33.38	-0.8593	-5.8458	-0.0225
940	SLE RA 8	-0.49	-0.06	33.21	-0.8547	-5.8155	-0.0295
940	SLE RA 9	-0.49	-0.03	33.2	-0.8546	-5.8144	-0.0227
940	SLE RA 10	-0.51	0	35.21	-0.9061	-6.1602	-0.0162
940	SLE RA 11	-0.52	-0.05	35.71	-0.9188	-6.245	-0.0278
940	SLE RA 12	-0.52	-0.02	35.71	-0.9187	-6.2439	-0.021
940	SLE RA 13	-0.51	-0.01	35.52	-0.9139	-6.2117	-0.0167
940	SLE RA 14	-0.52	-0.05	36.02	-0.9266	-6.2966	-0.0284
940	SLE RA 15	-0.52	-0.02	36.01	-0.9265	-6.2955	-0.0215
940	SLE RA 16	-0.52	-0.05	35.83	-0.9219	-6.2651	-0.0286
940	SLE RA 17	-0.52	-0.03	35.83	-0.9218	-6.264	-0.0218
940	SLE RA 18	-0.52	-0.05	36.35	-0.9351	-6.3547	-0.0271
940	SLE RA 19	-0.52	-0.02	36.35	-0.935	-6.3536	-0.0203
940	SLE RA 20	-0.53	-0.05	36.66	-0.9429	-6.4063	-0.0277
940	SLE RA 21	-0.53	-0.02	36.65	-0.9428	-6.4052	-0.0209
940	SLE FR 1	-0.48	-0.06	32.6	-0.8391	-5.7124	-0.0285
940	SLE FR 2	-0.48	-0.05	32.59	-0.839	-5.712	-0.0262
940	SLE FR 3	-0.49	-0.06	32.72	-0.8422	-5.733	-0.0287
940	SLE FR 4	-0.49	-0.04	33.72	-0.8678	-5.9047	-0.0258
940	SLE FR 5	-0.5	-0.05	33.84	-0.871	-5.9257	-0.0283
940	SLE FR 6	-0.5	-0.05	34.47	-0.8871	-6.0335	-0.0278
940	SLE QP 1	-0.48	-0.06	32.6	-0.8391	-5.7124	-0.0285
940	SLE QP 2	-0.49	-0.05	33.72	-0.8679	-5.9051	-0.0281
940	SLD 1	2.5	1.24	42.75	-1.1005	-7.3898	0.3269
940	SLD 2	2.18	0.67	43.15	-1.1097	-7.4634	0.1763
940	SLD 3	2.39	0.07	43.36	-1.1142	-7.5069	0.0326
940	SLD 4	2.07	-0.5	43.76	-1.1234	-7.5805	-0.118
940	SLD 5	0.62	2.21	35.43	-0.9153	-6.1599	0.5516
940	SLD 6	0.41	1.84	35.69	-0.9213	-6.2082	0.4528
940	SLD 7	0.27	-1.69	37.47	-0.9609	-6.55	-0.4295
940	SLD 8	0.06	-2.06	37.73	-0.9669	-6.5983	-0.5282
940	SLD 9	-1.05	1.96	29.71	-0.7688	-5.2119	0.4721
940	SLD 10	-1.26	1.58	29.97	-0.7748	-5.2601	0.3733
940	SLD 11	-1.4	-1.95	31.75	-0.8145	-5.602	-0.509
940	SLD 12	-1.61	-2.32	32.01	-0.8205	-5.6502	-0.6078
940	SLD 13	-3.06	0.39	23.68	-0.6124	-4.2297	0.0619
940	SLD 14	-3.38	-0.18	24.08	-0.6215	-4.3033	-0.0888
940	SLD 15	-3.17	-0.78	24.3	-0.6261	-4.3467	-0.2325
940	SLD 16	-3.49	-1.35	24.69	-0.6352	-4.4203	-0.3831
940	SLV 1	6.5	2.94	54.88	-1.4129	-9.3844	0.7926
940	SLV 2	5.75	1.61	55.8	-1.4342	-9.5558	0.4418
940	SLV 3	6.26	0.28	56.26	-1.4439	-9.6495	0.1226
940	SLV 4	5.51	-1.05	57.19	-1.4653	-9.821	-0.2282
940	SLV 5	2.1	5.12	37.81	-0.9806	-6.5172	1.2947
940	SLV 6	1.62	4.26	38.4	-0.9944	-6.6277	1.0686
940	SLV 7	1.29	-3.77	42.43	-1.0841	-7.401	-0.9386
940	SLV 8	0.81	-4.63	43.02	-1.0978	-7.5115	-1.1647
940	SLV 9	-1.8	4.52	24.42	-0.6379	-4.2986	1.1085
940	SLV 10	-2.28	3.66	25.02	-0.6517	-4.4091	0.8824
940	SLV 11	-2.61	-4.37	29.04	-0.7414	-5.1825	-1.1248
940	SLV 12	-3.09	-5.22	29.64	-0.7551	-5.293	-1.3508
940	SLV 13	-6.5	0.95	10.26	-0.2705	-1.9892	0.172
940	SLV 14	-7.25	-0.38	11.18	-0.2919	-2.1606	-0.1788
940	SLV 15	-6.74	-1.72	11.65	-0.3015	-2.2543	-0.4979
940	SLV 16	-7.49	-3.05	12.57	-0.3229	-2.4258	-0.8488
940	CRTFP Ux+	0	0	0	0	0	0
940	CRTFP Ux-	0	0	0	0	0	0
940	CRTFP Uy+	0	0	0	0	0	0
940	CRTFP Uy-	0	0	0	0	0	0
943	SLU 1	-0.15	0.83	61.59	0.0648	0.8342	0.0401
943	SLU 2	-0.15	0.92	61.55	0.0642	0.8351	0.0402
943	SLU 3	-0.15	0.87	63.03	0.0668	0.8569	0.0412
943	SLU 4	-0.15	0.93	63	0.0664	0.8575	0.0412
943	SLU 5	-0.15	0.94	62.42	0.0653	0.8486	0.0409
943	SLU 6	-0.15	0.89	63.9	0.0679	0.8705	0.0419
943	SLU 7	-0.15	0.94	63.87	0.0675	0.871	0.042
943	SLU 8	-0.15	0.86	63.34	0.067	0.8612	0.0415

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLU 9	-0.15	0.92	63.32	0.0666	0.8618	0.0416
943	SLU 10	-0.18	1.02	69.86	0.0706	0.9743	0.0466
943	SLU 11	-0.18	0.97	71.34	0.0732	0.9962	0.0476
943	SLU 12	-0.18	1.02	71.31	0.0728	0.9967	0.0476
943	SLU 13	-0.18	1.03	70.74	0.0717	0.9878	0.0473
943	SLU 14	-0.18	0.98	72.22	0.0743	1.0097	0.0483
943	SLU 15	-0.18	1.04	72.19	0.0739	1.0102	0.0484
943	SLU 16	-0.18	0.95	71.66	0.0734	1.0005	0.0479
943	SLU 17	-0.18	1.01	71.63	0.073	1.001	0.048
943	SLU 18	-0.19	0.97	73.47	0.074	1.0331	0.0492
943	SLU 19	-0.19	1.02	73.44	0.0736	1.0336	0.0493
943	SLU 20	-0.19	0.98	74.35	0.0751	1.0466	0.0499
943	SLU 21	-0.19	1.04	74.32	0.0747	1.0472	0.05
943	SLU 22	-0.17	1	69.77	0.0727	0.9678	0.0463
943	SLU 23	-0.17	1.09	69.73	0.0721	0.9687	0.0464
943	SLU 24	-0.18	1.04	71.2	0.0747	0.9906	0.0474
943	SLU 25	-0.18	1.09	71.18	0.0743	0.9911	0.0475
943	SLU 26	-0.17	1.1	70.6	0.0732	0.9822	0.0471
943	SLU 27	-0.18	1.05	72.08	0.0758	1.0041	0.0481
943	SLU 28	-0.18	1.11	72.05	0.0754	1.0046	0.0482
943	SLU 29	-0.17	1.02	71.52	0.0749	0.9949	0.0477
943	SLU 30	-0.17	1.08	71.49	0.0746	0.9954	0.0478
943	SLU 31	-0.2	1.18	78.04	0.0785	1.108	0.0528
943	SLU 32	-0.2	1.13	79.52	0.0811	1.1298	0.0538
943	SLU 33	-0.2	1.19	79.49	0.0807	1.1304	0.0539
943	SLU 34	-0.2	1.2	78.92	0.0796	1.1215	0.0535
943	SLU 35	-0.2	1.15	80.39	0.0822	1.1434	0.0545
943	SLU 36	-0.2	1.2	80.37	0.0818	1.1439	0.0546
943	SLU 37	-0.2	1.12	79.84	0.0813	1.1341	0.0541
943	SLU 38	-0.2	1.17	79.81	0.081	1.1346	0.0542
943	SLU 39	-0.21	1.13	81.65	0.0819	1.1668	0.0554
943	SLU 40	-0.21	1.19	81.62	0.0815	1.1673	0.0555
943	SLU 41	-0.21	1.14	82.52	0.083	1.1803	0.0562
943	SLU 42	-0.21	1.2	82.5	0.0826	1.1808	0.0562
943	SLU 43	-0.18	1.02	77.27	0.0816	1.0386	0.05
943	SLU 44	-0.18	1.12	77.22	0.0809	1.0395	0.0501
943	SLU 45	-0.19	1.07	78.7	0.0835	1.0614	0.0511
943	SLU 46	-0.19	1.12	78.67	0.0831	1.0619	0.0511
943	SLU 47	-0.18	1.13	78.1	0.082	1.053	0.0508
943	SLU 48	-0.19	1.08	79.58	0.0846	1.0749	0.0518
943	SLU 49	-0.19	1.14	79.55	0.0842	1.0754	0.0519
943	SLU 50	-0.19	1.05	79.02	0.0838	1.0657	0.0514
943	SLU 51	-0.19	1.11	78.99	0.0834	1.0662	0.0515
943	SLU 52	-0.21	1.21	85.54	0.0873	1.1788	0.0564
943	SLU 53	-0.21	1.16	87.01	0.0899	1.2006	0.0575
943	SLU 54	-0.21	1.22	86.99	0.0895	1.2012	0.0575
943	SLU 55	-0.21	1.22	86.41	0.0884	1.1923	0.0572
943	SLU 56	-0.22	1.18	87.89	0.091	1.2141	0.0582
943	SLU 57	-0.22	1.23	87.86	0.0906	1.2147	0.0582
943	SLU 58	-0.21	1.15	87.33	0.0902	1.2049	0.0578
943	SLU 59	-0.21	1.2	87.31	0.0898	1.2054	0.0578
943	SLU 60	-0.22	1.16	89.14	0.0907	1.2376	0.0591
943	SLU 61	-0.22	1.21	89.12	0.0903	1.2381	0.0592
943	SLU 62	-0.22	1.17	90.02	0.0918	1.2511	0.0598
943	SLU 63	-0.22	1.23	89.99	0.0914	1.2516	0.0599
943	SLU 64	-0.21	1.19	85.45	0.0895	1.1723	0.0562
943	SLU 65	-0.21	1.28	85.4	0.0888	1.1732	0.0563
943	SLU 66	-0.21	1.23	86.88	0.0914	1.195	0.0573
943	SLU 67	-0.21	1.29	86.85	0.091	1.1956	0.0574
943	SLU 68	-0.21	1.29	86.28	0.0899	1.1867	0.057
943	SLU 69	-0.21	1.25	87.75	0.0925	1.2085	0.058
943	SLU 70	-0.21	1.3	87.73	0.0921	1.2091	0.0581
943	SLU 71	-0.21	1.22	87.2	0.0917	1.1993	0.0576
943	SLU 72	-0.21	1.27	87.17	0.0913	1.1998	0.0577
943	SLU 73	-0.24	1.37	93.71	0.0952	1.3124	0.0627
943	SLU 74	-0.24	1.33	95.19	0.0978	1.3343	0.0637
943	SLU 75	-0.24	1.38	95.17	0.0974	1.3348	0.0638
943	SLU 76	-0.24	1.39	94.59	0.0963	1.3259	0.0634
943	SLU 77	-0.24	1.34	96.07	0.0989	1.3478	0.0644
943	SLU 78	-0.24	1.4	96.04	0.0985	1.3483	0.0645
943	SLU 79	-0.24	1.31	95.51	0.0981	1.3386	0.064
943	SLU 80	-0.24	1.37	95.48	0.0977	1.3391	0.0641
943	SLU 81	-0.25	1.32	97.32	0.0986	1.3712	0.0653
943	SLU 82	-0.25	1.38	97.3	0.0982	1.3717	0.0654
943	SLU 83	-0.25	1.34	98.2	0.0997	1.3847	0.066
943	SLU 84	-0.25	1.39	98.17	0.0993	1.3852	0.0661
943	SLE RA 1	-0.15	0.88	63.93	0.0671	0.8724	0.0419
943	SLE RA 2	-0.15	0.94	63.9	0.0667	0.873	0.0419
943	SLE RA 3	-0.16	0.91	64.89	0.0684	0.8875	0.0426
943	SLE RA 4	-0.16	0.94	64.87	0.0681	0.8879	0.0426
943	SLE RA 5	-0.16	0.95	64.48	0.0674	0.882	0.0424
943	SLE RA 6	-0.16	0.92	65.47	0.0691	0.8966	0.0431
943	SLE RA 7	-0.16	0.95	65.45	0.0689	0.8969	0.0431
943	SLE RA 8	-0.16	0.9	65.1	0.0686	0.8904	0.0428
943	SLE RA 9	-0.16	0.93	65.08	0.0683	0.8908	0.0429
943	SLE RA 10	-0.17	1	69.44	0.0709	0.9658	0.0462
943	SLE RA 11	-0.18	0.97	70.43	0.0727	0.9804	0.0469
943	SLE RA 12	-0.18	1.01	70.41	0.0724	0.9807	0.0469
943	SLE RA 13	-0.17	1.01	70.03	0.0717	0.9748	0.0467
943	SLE RA 14	-0.18	0.98	71.01	0.0734	0.9894	0.0473

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLE RA 15	-0.18	1.02	70.99	0.0731	0.9897	0.0474
943	SLE RA 16	-0.17	0.96	70.64	0.0728	0.9832	0.0471
943	SLE RA 17	-0.17	1	70.62	0.0726	0.9836	0.0471
943	SLE RA 18	-0.18	0.97	71.85	0.0732	1.005	0.0479
943	SLE RA 19	-0.18	1	71.83	0.0729	1.0053	0.048
943	SLE RA 20	-0.18	0.98	72.43	0.0739	1.014	0.0484
943	SLE RA 21	-0.18	1.01	72.41	0.0737	1.0144	0.0485
943	SLE FR 1	-0.15	0.88	63.93	0.0671	0.8724	0.0419
943	SLE FR 2	-0.15	0.89	63.92	0.067	0.8725	0.0419
943	SLE FR 3	-0.15	0.88	64.16	0.0674	0.876	0.0421
943	SLE FR 4	-0.16	0.92	66.3	0.0688	0.9123	0.0437
943	SLE FR 5	-0.16	0.91	66.54	0.0692	0.9158	0.0439
943	SLE FR 6	-0.17	0.92	67.89	0.0701	0.9387	0.0449
943	SLE QP 1	-0.15	0.88	63.93	0.0671	0.8724	0.0419
943	SLE QP 2	-0.16	0.9	66.31	0.0689	0.9122	0.0437
943	SLD 1	7.34	2.26	68.85	0.0692	0.8583	-0.0231
943	SLD 2	6.64	2.02	68.97	0.0706	0.8639	-0.0068
943	SLD 3	7.21	0.32	69.86	0.0814	0.846	-0.0216
943	SLD 4	6.51	0.09	69.98	0.0828	0.8516	-0.0053
943	SLD 5	2.4	4.29	65.52	0.0502	0.9137	0.0185
943	SLD 6	1.95	4.13	65.59	0.0512	0.9174	0.0291
943	SLD 7	1.98	-2.16	68.89	0.0909	0.8726	0.0235
943	SLD 8	1.52	-2.32	68.96	0.0919	0.8763	0.0341
943	SLD 9	-1.85	4.13	63.65	0.046	0.948	0.0532
943	SLD 10	-2.31	3.97	63.73	0.0469	0.9517	0.0639
943	SLD 11	-2.27	-2.32	67.02	0.0867	0.907	0.0582
943	SLD 12	-2.73	-2.48	67.09	0.0876	0.9106	0.0689
943	SLD 13	-6.83	1.72	62.63	0.055	0.9728	0.0927
943	SLD 14	-7.53	1.49	62.75	0.0565	0.9783	0.109
943	SLD 15	-6.96	-0.21	63.65	0.0672	0.9604	0.0942
943	SLD 16	-7.66	-0.45	63.76	0.0687	0.966	0.1105
943	SLV 1	17.37	4.01	72.33	0.0707	0.7852	-0.1124
943	SLV 2	15.74	3.47	72.59	0.074	0.7982	-0.0746
943	SLV 3	17.08	-0.39	74.62	0.0984	0.7571	-0.1089
943	SLV 4	15.45	-0.94	74.88	0.1017	0.7701	-0.0711
943	SLV 5	5.82	8.62	64.6	0.0269	0.9145	-0.015
943	SLV 6	4.77	8.26	64.76	0.029	0.9228	0.0094
943	SLV 7	4.84	-6.07	72.23	0.1192	0.8208	-0.0033
943	SLV 8	3.79	-6.43	72.4	0.1213	0.8292	0.0211
943	SLV 9	-4.12	8.24	60.22	0.0165	0.9952	0.0663
943	SLV 10	-5.17	7.88	60.38	0.0187	1.0035	0.0907
943	SLV 11	-5.1	-6.45	67.85	0.1088	0.9015	0.078
943	SLV 12	-6.15	-6.81	68.02	0.111	0.9099	0.1024
943	SLV 13	-15.77	2.75	57.73	0.0362	1.0542	0.1585
943	SLV 14	-17.4	2.2	57.99	0.0395	1.0672	0.1963
943	SLV 15	-16.07	-1.66	60.02	0.0638	1.0261	0.162
943	SLV 16	-17.7	-2.2	60.28	0.0672	1.0391	0.1998
943	CRTFP Ux+	0	0	0	0	0	0
943	CRTFP Ux-	0	0	0	0	0	0
943	CRTFP Uy+	0	0	0	0	0	0
943	CRTFP Uy-	0	0	0	0	0	0
946	SLU 1	0.58	1.58	57.88	0.0914	-0.3021	0.0174
946	SLU 2	0.58	1.67	57.83	0.0908	-0.3029	0.0174
946	SLU 3	0.6	1.65	59.22	0.0941	-0.3099	0.018
946	SLU 4	0.6	1.7	59.19	0.0937	-0.3104	0.018
946	SLU 5	0.59	1.7	58.68	0.0923	-0.3077	0.0178
946	SLU 6	0.61	1.67	60.06	0.0957	-0.3148	0.0185
946	SLU 7	0.6	1.73	60.03	0.0953	-0.3152	0.0185
946	SLU 8	0.6	1.64	59.57	0.0945	-0.3117	0.0183
946	SLU 9	0.6	1.69	59.54	0.0941	-0.3122	0.0183
946	SLU 10	0.65	1.89	65.44	0.1017	-0.3511	0.0216
946	SLU 11	0.66	1.86	66.83	0.1051	-0.3582	0.0222
946	SLU 12	0.66	1.91	66.8	0.1047	-0.3586	0.0222
946	SLU 13	0.66	1.92	66.28	0.1032	-0.3559	0.022
946	SLU 14	0.67	1.89	67.67	0.1066	-0.363	0.0227
946	SLU 15	0.67	1.94	67.64	0.1062	-0.3634	0.0227
946	SLU 16	0.67	1.85	67.17	0.1054	-0.36	0.0225
946	SLU 17	0.67	1.91	67.14	0.105	-0.3604	0.0225
946	SLU 18	0.68	1.89	68.75	0.107	-0.371	0.0234
946	SLU 19	0.68	1.94	68.72	0.1066	-0.3714	0.0234
946	SLU 20	0.69	1.92	69.59	0.1086	-0.3758	0.0239
946	SLU 21	0.69	1.97	69.56	0.1082	-0.3763	0.0239
946	SLU 22	0.65	1.85	65.42	0.1036	-0.351	0.0212
946	SLU 23	0.65	1.94	65.37	0.103	-0.3517	0.0211
946	SLU 24	0.66	1.91	66.76	0.1063	-0.3588	0.0218
946	SLU 25	0.66	1.97	66.73	0.1059	-0.3593	0.0218
946	SLU 26	0.66	1.97	66.21	0.1045	-0.3565	0.0216
946	SLU 27	0.67	1.94	67.6	0.1079	-0.3636	0.0222
946	SLU 28	0.67	2	67.57	0.1075	-0.3641	0.0222
946	SLU 29	0.67	1.91	67.1	0.1067	-0.3606	0.0221
946	SLU 30	0.67	1.96	67.07	0.1063	-0.361	0.022
946	SLU 31	0.71	2.16	72.97	0.1139	-0.3999	0.0253
946	SLU 32	0.73	2.13	74.36	0.1173	-0.407	0.026
946	SLU 33	0.73	2.18	74.33	0.1169	-0.4075	0.026
946	SLU 34	0.72	2.19	73.82	0.1154	-0.4048	0.0258
946	SLU 35	0.74	2.16	75.2	0.1188	-0.4119	0.0264
946	SLU 36	0.74	2.21	75.17	0.1184	-0.4123	0.0264
946	SLU 37	0.73	2.12	74.71	0.1176	-0.4088	0.0263
946	SLU 38	0.73	2.18	74.68	0.1172	-0.4093	0.0263
946	SLU 39	0.74	2.16	76.28	0.1192	-0.4199	0.0272

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
946	SLU 40	0.74	2.21	76.25	0.1188	-0.4203	0.0272
946	SLU 41	0.75	2.18	77.12	0.1208	-0.4247	0.0276
946	SLU 42	0.75	2.24	77.09	0.1204	-0.4251	0.0276
946	SLU 43	0.74	1.96	72.67	0.1147	-0.376	0.0214
946	SLU 44	0.74	2.06	72.62	0.114	-0.3767	0.0213
946	SLU 45	0.75	2.03	74	0.1174	-0.3838	0.022
946	SLU 46	0.75	2.08	73.97	0.117	-0.3843	0.022
946	SLU 47	0.74	2.08	73.46	0.1155	-0.3815	0.0218
946	SLU 48	0.76	2.06	74.85	0.1189	-0.3886	0.0224
946	SLU 49	0.76	2.11	74.82	0.1185	-0.3891	0.0224
946	SLU 50	0.76	2.02	74.35	0.1177	-0.3856	0.0223
946	SLU 51	0.75	2.08	74.32	0.1174	-0.3861	0.0222
946	SLU 52	0.8	2.27	80.22	0.1249	-0.425	0.0255
946	SLU 53	0.81	2.24	81.61	0.1283	-0.4321	0.0262
946	SLU 54	0.81	2.3	81.58	0.1279	-0.4325	0.0262
946	SLU 55	0.81	2.3	81.06	0.1265	-0.4298	0.026
946	SLU 56	0.82	2.27	82.45	0.1299	-0.4369	0.0266
946	SLU 57	0.82	2.32	82.42	0.1295	-0.4373	0.0266
946	SLU 58	0.82	2.23	81.95	0.1287	-0.4338	0.0265
946	SLU 59	0.82	2.29	81.92	0.1283	-0.4343	0.0264
946	SLU 60	0.83	2.27	83.53	0.1303	-0.4449	0.0274
946	SLU 61	0.83	2.33	83.5	0.1299	-0.4453	0.0274
946	SLU 62	0.84	2.3	84.37	0.1318	-0.4497	0.0278
946	SLU 63	0.84	2.35	84.34	0.1314	-0.4501	0.0278
946	SLU 64	0.8	2.23	80.2	0.1269	-0.4249	0.0251
946	SLU 65	0.8	2.33	80.15	0.1262	-0.4256	0.0251
946	SLU 66	0.81	2.3	81.54	0.1296	-0.4327	0.0257
946	SLU 67	0.81	2.35	81.51	0.1292	-0.4331	0.0257
946	SLU 68	0.81	2.35	80.99	0.1277	-0.4304	0.0255
946	SLU 69	0.82	2.32	82.38	0.1311	-0.4375	0.0262
946	SLU 70	0.82	2.38	82.35	0.1307	-0.438	0.0262
946	SLU 71	0.82	2.29	81.88	0.1299	-0.4345	0.026
946	SLU 72	0.82	2.34	81.85	0.1296	-0.4349	0.026
946	SLU 73	0.87	2.54	87.76	0.1371	-0.4738	0.0293
946	SLU 74	0.88	2.51	89.14	0.1405	-0.4809	0.0299
946	SLU 75	0.88	2.57	89.11	0.1401	-0.4814	0.0299
946	SLU 76	0.88	2.57	88.6	0.1387	-0.4786	0.0297
946	SLU 77	0.89	2.54	89.98	0.1421	-0.4857	0.0304
946	SLU 78	0.89	2.59	89.96	0.1417	-0.4862	0.0304
946	SLU 79	0.89	2.5	89.49	0.1409	-0.4827	0.0302
946	SLU 80	0.89	2.56	89.46	0.1405	-0.4832	0.0302
946	SLU 81	0.9	2.54	91.06	0.1425	-0.4937	0.0311
946	SLU 82	0.9	2.59	91.04	0.1421	-0.4942	0.0311
946	SLU 83	0.91	2.57	91.91	0.144	-0.4986	0.0316
946	SLU 84	0.9	2.62	91.88	0.1436	-0.499	0.0315
946	SLE RA 1	0.6	1.66	60.04	0.0949	-0.3161	0.0185
946	SLE RA 2	0.6	1.72	60	0.0945	-0.3166	0.0185
946	SLE RA 3	0.61	1.7	60.93	0.0967	-0.3213	0.0189
946	SLE RA 4	0.61	1.74	60.91	0.0965	-0.3216	0.0189
946	SLE RA 5	0.61	1.74	60.56	0.0955	-0.3198	0.0188
946	SLE RA 6	0.62	1.72	61.49	0.0978	-0.3245	0.0192
946	SLE RA 7	0.62	1.76	61.47	0.0975	-0.3248	0.0192
946	SLE RA 8	0.62	1.7	61.16	0.097	-0.3225	0.0191
946	SLE RA 9	0.61	1.73	61.14	0.0967	-0.3228	0.0191
946	SLE RA 10	0.65	1.86	65.07	0.1017	-0.3487	0.0213
946	SLE RA 11	0.65	1.84	66	0.104	-0.3534	0.0217
946	SLE RA 12	0.65	1.88	65.98	0.1037	-0.3537	0.0217
946	SLE RA 13	0.65	1.88	65.63	0.1028	-0.3519	0.0216
946	SLE RA 14	0.66	1.86	66.56	0.105	-0.3567	0.022
946	SLE RA 15	0.66	1.9	66.54	0.1048	-0.357	0.022
946	SLE RA 16	0.66	1.84	66.23	0.1042	-0.3546	0.0219
946	SLE RA 17	0.66	1.88	66.21	0.104	-0.3549	0.0219
946	SLE RA 18	0.67	1.86	67.28	0.1053	-0.362	0.0225
946	SLE RA 19	0.66	1.9	67.26	0.105	-0.3623	0.0225
946	SLE RA 20	0.67	1.88	67.84	0.1063	-0.3652	0.0228
946	SLE RA 21	0.67	1.92	67.82	0.1061	-0.3655	0.0228
946	SLE FR 1	0.6	1.66	60.04	0.0949	-0.3161	0.0185
946	SLE FR 2	0.6	1.67	60.03	0.0948	-0.3162	0.0185
946	SLE FR 3	0.61	1.67	60.26	0.0953	-0.3174	0.0186
946	SLE FR 4	0.62	1.73	62.2	0.0979	-0.3299	0.0197
946	SLE FR 5	0.62	1.73	62.43	0.0984	-0.3311	0.0198
946	SLE FR 6	0.63	1.76	63.66	0.1001	-0.339	0.0205
946	SLE QP 1	0.6	1.66	60.04	0.0949	-0.3161	0.0185
946	SLE QP 2	0.62	1.72	62.21	0.098	-0.3298	0.0197
946	SLD 1	7.99	2.27	57.35	0.0889	-0.0665	-0.0452
946	SLD 2	7.3	2.49	57.25	0.0874	-0.0653	-0.029
946	SLD 3	8.09	0.39	58.41	0.1013	-0.0523	-0.0431
946	SLD 4	7.4	0.61	58.32	0.0999	-0.0511	-0.027
946	SLD 5	2.8	4.7	59.15	0.0766	-0.2726	-0.0057
946	SLD 6	2.35	4.84	59.09	0.0756	-0.2718	0.0049
946	SLD 7	3.14	-1.57	62.7	0.1182	-0.2252	0.001
946	SLD 8	2.68	-1.42	62.64	0.1172	-0.2245	0.0116
946	SLD 9	-1.44	4.86	61.78	0.0788	-0.4352	0.0278
946	SLD 10	-1.9	5.01	61.72	0.0778	-0.4345	0.0384
946	SLD 11	-1.11	-1.4	65.33	0.1204	-0.3879	0.0345
946	SLD 12	-1.56	-1.26	65.27	0.1194	-0.3871	0.0451
946	SLD 13	-6.16	2.83	66.1	0.0962	-0.6086	0.0664
946	SLD 14	-6.85	3.05	66	0.0947	-0.6074	0.0825
946	SLD 15	-6.06	0.95	67.16	0.1087	-0.5944	0.0684
946	SLD 16	-6.75	1.17	67.07	0.1072	-0.5932	0.0845

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
946	SLV 1	17.86	2.94	50.87	0.0763	0.2869	-0.1319
946	SLV 2	16.25	3.45	50.65	0.0729	0.2897	-0.0943
946	SLV 3	18.1	-1.34	53.29	0.1046	0.3191	-0.1272
946	SLV 4	16.48	-0.83	53.07	0.1012	0.322	-0.0897
946	SLV 5	5.72	8.49	55.18	0.0492	-0.1942	-0.0393
946	SLV 6	4.68	8.82	55.04	0.047	-0.1924	-0.0151
946	SLV 7	6.5	-5.78	63.24	0.1435	-0.0868	-0.0238
946	SLV 8	5.46	-5.45	63.09	0.1413	-0.0849	0.0004
946	SLV 9	-4.21	8.89	61.33	0.0548	-0.5748	0.039
946	SLV 10	-5.25	9.22	61.18	0.0525	-0.5729	0.0632
946	SLV 11	-3.43	-5.38	69.38	0.1491	-0.4673	0.0544
946	SLV 12	-4.47	-5.05	69.24	0.1469	-0.4655	0.0786
946	SLV 13	-15.24	4.27	71.35	0.0949	-0.9817	0.1291
946	SLV 14	-16.85	4.78	71.13	0.0915	-0.9788	0.1666
946	SLV 15	-15.01	-0.01	73.77	0.1232	-0.9494	0.1337
946	SLV 16	-16.62	0.5	73.54	0.1198	-0.9466	0.1713
946	CRTFP Ux+	0	0	0	0	0	0
946	CRTFP Ux-	0	0	0	0	0	0
946	CRTFP Uy+	0	0	0	0	0	0
946	CRTFP Uy-	0	0	0	0	0	0
949	SLU 1	1.57	-0.06	76.4	-3.6242	-0.0829	0.0865
949	SLU 2	1.56	0.05	76.34	-3.6222	-0.0844	0.0873
949	SLU 3	1.6	-0.05	78.17	-3.7068	-0.0805	0.0886
949	SLU 4	1.6	0.02	78.13	-3.7056	-0.0814	0.0891
949	SLU 5	1.59	0.05	77.41	-3.6726	-0.0829	0.0886
949	SLU 6	1.62	-0.05	79.25	-3.7572	-0.079	0.0899
949	SLU 7	1.62	0.02	79.21	-3.756	-0.0799	0.0904
949	SLU 8	1.61	-0.06	78.56	-3.7249	-0.0799	0.089
949	SLU 9	1.61	0	78.52	-3.7238	-0.0808	0.0895
949	SLU 10	1.7	0.08	86.45	-4.1053	-0.0815	0.0941
949	SLU 11	1.73	-0.02	88.29	-4.1899	-0.0777	0.0954
949	SLU 12	1.73	0.05	88.25	-4.1887	-0.0786	0.0959
949	SLU 13	1.72	0.08	87.53	-4.1556	-0.0801	0.0953
949	SLU 14	1.75	-0.02	89.37	-4.2403	-0.0762	0.0966
949	SLU 15	1.75	0.04	89.32	-4.2391	-0.0771	0.0971
949	SLU 16	1.74	-0.04	88.68	-4.208	-0.0771	0.0957
949	SLU 17	1.74	0.03	88.64	-4.2068	-0.078	0.0962
949	SLU 18	1.76	-0.02	90.86	-4.3142	-0.0788	0.0962
949	SLU 19	1.76	0.05	90.81	-4.3131	-0.0797	0.0967
949	SLU 20	1.78	-0.02	91.93	-4.3646	-0.0774	0.0974
949	SLU 21	1.78	0.05	91.89	-4.3634	-0.0783	0.0979
949	SLU 22	1.71	0	86.41	-4.0996	-0.0796	0.0946
949	SLU 23	1.71	0.1	86.34	-4.0976	-0.0811	0.0955
949	SLU 24	1.74	0.01	88.18	-4.1823	-0.0773	0.0967
949	SLU 25	1.74	0.07	88.14	-4.1811	-0.0781	0.0972
949	SLU 26	1.73	0.1	87.42	-4.148	-0.0796	0.0967
949	SLU 27	1.77	0	89.26	-4.2327	-0.0758	0.098
949	SLU 28	1.77	0.07	89.22	-4.2315	-0.0767	0.0985
949	SLU 29	1.75	-0.01	88.57	-4.2004	-0.0767	0.0971
949	SLU 30	1.75	0.05	88.53	-4.1992	-0.0775	0.0976
949	SLU 31	1.85	0.13	96.46	-4.5807	-0.0783	0.1022
949	SLU 32	1.88	0.03	98.3	-4.6653	-0.0744	0.1035
949	SLU 33	1.88	0.1	98.26	-4.6642	-0.0753	0.104
949	SLU 34	1.87	0.13	97.54	-4.6311	-0.0768	0.1034
949	SLU 35	1.9	0.03	99.37	-4.7157	-0.0729	0.1047
949	SLU 36	1.9	0.1	99.33	-4.7145	-0.0738	0.1052
949	SLU 37	1.89	0.02	98.69	-4.6834	-0.0738	0.1039
949	SLU 38	1.89	0.08	98.64	-4.6823	-0.0747	0.1043
949	SLU 39	1.9	0.04	100.87	-4.7897	-0.0756	0.1043
949	SLU 40	1.9	0.1	100.82	-4.7885	-0.0765	0.1048
949	SLU 41	1.92	0.03	101.94	-4.8401	-0.0741	0.1055
949	SLU 42	1.92	0.1	101.9	-4.8389	-0.075	0.106
949	SLU 43	1.99	-0.09	95.89	-4.5484	-0.1089	0.1097
949	SLU 44	1.98	0.02	95.83	-4.5464	-0.1104	0.1105
949	SLU 45	2.02	-0.08	97.66	-4.6311	-0.1065	0.1118
949	SLU 46	2.02	-0.01	97.62	-4.6299	-0.1074	0.1123
949	SLU 47	2.01	0.02	96.9	-4.5968	-0.1089	0.1117
949	SLU 48	2.04	-0.08	98.74	-4.6814	-0.105	0.113
949	SLU 49	2.04	-0.02	98.7	-4.6803	-0.1059	0.1135
949	SLU 50	2.03	-0.1	98.05	-4.6492	-0.1059	0.1122
949	SLU 51	2.03	-0.03	98.01	-4.648	-0.1068	0.1126
949	SLU 52	2.12	0.05	105.94	-5.0295	-0.1075	0.1173
949	SLU 53	2.15	-0.05	107.78	-5.1141	-0.1037	0.1186
949	SLU 54	2.15	0.01	107.74	-5.1129	-0.1046	0.1191
949	SLU 55	2.14	0.04	107.02	-5.0799	-0.106	0.1185
949	SLU 56	2.17	-0.06	108.86	-5.1645	-0.1022	0.1198
949	SLU 57	2.17	0.01	108.81	-5.1633	-0.1031	0.1203
949	SLU 58	2.16	-0.07	108.17	-5.1322	-0.1031	0.1189
949	SLU 59	2.16	0	108.12	-5.131	-0.104	0.1194
949	SLU 60	2.18	-0.05	110.35	-5.2385	-0.1048	0.1194
949	SLU 61	2.18	0.02	110.3	-5.2373	-0.1057	0.1198
949	SLU 62	2.2	-0.05	111.42	-5.2889	-0.1034	0.1206
949	SLU 63	2.2	0.01	111.38	-5.2877	-0.1042	0.1211
949	SLU 64	2.13	-0.04	105.9	-5.0239	-0.1056	0.1178
949	SLU 65	2.13	0.07	105.83	-5.0219	-0.1071	0.1186
949	SLU 66	2.16	-0.03	107.67	-5.1065	-0.1032	0.1199
949	SLU 67	2.16	0.04	107.63	-5.1053	-0.1041	0.1204
949	SLU 68	2.15	0.07	106.91	-5.0723	-0.1056	0.1199
949	SLU 69	2.19	-0.03	108.75	-5.1569	-0.1018	0.1211
949	SLU 70	2.19	0.03	108.71	-5.1557	-0.1026	0.1216

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
949	SLU 71	2.17	-0.05	108.06	-5.1246	-0.1026	0.1203
949	SLU 72	2.17	0.02	108.02	-5.1234	-0.1035	0.1208
949	SLU 73	2.26	0.1	115.95	-5.5049	-0.1043	0.1254
949	SLU 74	2.3	0	117.79	-5.5896	-0.1004	0.1267
949	SLU 75	2.3	0.06	117.75	-5.5884	-0.1013	0.1272
949	SLU 76	2.29	0.09	117.03	-5.5553	-0.1028	0.1266
949	SLU 77	2.32	0	118.86	-5.64	-0.0989	0.1279
949	SLU 78	2.32	0.06	118.82	-5.6388	-0.0998	0.1284
949	SLU 79	2.31	-0.02	118.17	-5.6077	-0.0998	0.127
949	SLU 80	2.31	0.05	118.13	-5.6065	-0.1007	0.1275
949	SLU 81	2.32	0	120.35	-5.7139	-0.1016	0.1275
949	SLU 82	2.32	0.07	120.31	-5.7127	-0.1025	0.128
949	SLU 83	2.34	0	121.43	-5.7643	-0.1001	0.1287
949	SLU 84	2.34	0.06	121.39	-5.7631	-0.101	0.1292
949	SLE RA 1	1.61	-0.04	79.26	-3.76	-0.082	0.0888
949	SLE RA 2	1.61	0.03	79.22	-3.7587	-0.0829	0.0894
949	SLE RA 3	1.63	-0.03	80.44	-3.8151	-0.0804	0.0902
949	SLE RA 4	1.63	0.01	80.41	-3.8143	-0.081	0.0906
949	SLE RA 5	1.62	0.03	79.94	-3.7923	-0.082	0.0902
949	SLE RA 6	1.64	-0.04	81.16	-3.8487	-0.0794	0.0911
949	SLE RA 7	1.64	0.01	81.13	-3.8479	-0.08	0.0914
949	SLE RA 8	1.64	-0.05	80.7	-3.8272	-0.08	0.0905
949	SLE RA 9	1.64	0	80.67	-3.8264	-0.0806	0.0908
949	SLE RA 10	1.7	0.05	85.96	-4.0807	-0.0811	0.0939
949	SLE RA 11	1.72	-0.02	87.19	-4.1372	-0.0785	0.0948
949	SLE RA 12	1.72	0.03	87.16	-4.1364	-0.0791	0.0951
949	SLE RA 13	1.71	0.05	86.68	-4.1143	-0.0801	0.0947
949	SLE RA 14	1.73	-0.02	87.9	-4.1707	-0.0775	0.0956
949	SLE RA 15	1.73	0.03	87.88	-4.17	-0.0781	0.0959
949	SLE RA 16	1.72	-0.03	87.45	-4.1492	-0.0781	0.095
949	SLE RA 17	1.72	0.02	87.42	-4.1484	-0.0787	0.0953
949	SLE RA 18	1.74	-0.01	88.9	-4.2201	-0.0793	0.0953
949	SLE RA 19	1.73	0.03	88.87	-4.2193	-0.0799	0.0956
949	SLE RA 20	1.75	-0.02	89.62	-4.2536	-0.0783	0.0961
949	SLE RA 21	1.75	0.03	89.59	-4.2529	-0.0789	0.0964
949	SLE FR 1	1.61	-0.04	79.26	-3.76	-0.082	0.0888
949	SLE FR 2	1.61	-0.03	79.25	-3.7597	-0.0822	0.0889
949	SLE FR 3	1.61	-0.04	79.55	-3.7734	-0.0816	0.0892
949	SLE FR 4	1.65	-0.02	82.15	-3.8978	-0.0813	0.0909
949	SLE FR 5	1.65	-0.03	82.44	-3.9115	-0.0808	0.0911
949	SLE FR 6	1.67	-0.03	84.08	-3.99	-0.0806	0.0921
949	SLE QP 1	1.61	-0.04	79.26	-3.76	-0.082	0.0888
949	SLE QP 2	1.65	-0.03	82.15	-3.898	-0.0811	0.0908
949	SLD 1	9.36	1.18	71.97	-3.4902	-0.0192	0.4353
949	SLD 2	8.57	1.83	71.25	-3.4596	-0.0063	0.4143
949	SLD 3	9.47	-0.85	73.65	-3.5482	0.035	0.4199
949	SLD 4	8.68	-0.2	72.92	-3.5175	0.0479	0.3988
949	SLD 5	3.94	3.3	76.69	-3.6932	-0.147	0.2214
949	SLD 6	3.41	3.73	76.21	-3.6731	-0.1386	0.2075
949	SLD 7	4.3	-3.48	82.27	-3.8865	0.0336	0.1698
949	SLD 8	3.78	-3.05	81.79	-3.8664	0.042	0.156
949	SLD 9	-0.49	2.99	82.52	-3.9297	-0.2043	0.0256
949	SLD 10	-1.01	3.41	82.04	-3.9096	-0.1959	0.0118
949	SLD 11	-0.12	-3.79	88.09	-4.123	-0.0237	-0.026
949	SLD 12	-0.64	-3.37	87.62	-4.1029	-0.0153	-0.0398
949	SLD 13	-5.39	0.14	91.39	-4.2785	-0.2102	-0.2172
949	SLD 14	-6.18	0.78	90.66	-4.2478	-0.1973	-0.2383
949	SLD 15	-5.28	-1.9	93.06	-4.3365	-0.156	-0.2327
949	SLD 16	-6.07	-1.25	92.34	-4.3058	-0.1431	-0.2538
949	SLV 1	19.69	2.75	58.38	-2.9452	0.0639	0.8961
949	SLV 2	17.84	4.26	56.69	-2.8737	0.0939	0.847
949	SLV 3	19.95	-1.88	62.16	-3.0763	0.1906	0.8607
949	SLV 4	18.09	-0.37	60.47	-3.0048	0.2206	0.8116
949	SLV 5	6.99	7.57	69.57	-3.4257	-0.235	0.3945
949	SLV 6	5.79	8.54	68.48	-3.3796	-0.2157	0.3628
949	SLV 7	7.85	-7.88	82.19	-3.8626	0.1874	0.2766
949	SLV 8	6.65	-6.9	81.1	-3.8166	0.2067	0.2449
949	SLV 9	-3.36	6.84	83.21	-3.9795	-0.369	-0.0634
949	SLV 10	-4.55	7.81	82.12	-3.9334	-0.3497	-0.095
949	SLV 11	-2.5	-8.61	95.83	-4.4164	0.0534	-0.1813
949	SLV 12	-3.7	-7.64	94.74	-4.3704	0.0727	-0.2129
949	SLV 13	-14.8	0.3	103.84	-4.7912	-0.3829	-0.6301
949	SLV 14	-16.66	1.81	102.14	-4.7198	-0.3529	-0.6792
949	SLV 15	-14.55	-4.33	107.62	-4.9223	-0.2562	-0.6655
949	SLV 16	-16.4	-2.82	105.93	-4.8509	-0.2262	-0.7146
949	CRTFP Ux+	0	0	0	0	0	0
949	CRTFP Ux-	0	0	0	0	0	0
949	CRTFP Uy+	0	0	0	0	0	0
949	CRTFP Uy-	0	0	0	0	0	0
963	SLU 1	0.43	0.19	14.6	-1.4805	0.6469	-0.0224
963	SLU 2	0.43	0.23	14.59	-1.4792	0.6454	-0.0394
963	SLU 3	0.44	0.19	14.93	-1.5133	0.6492	-0.0233
963	SLU 4	0.44	0.22	14.92	-1.5125	0.6482	-0.0335
963	SLU 5	0.43	0.24	14.79	-1.4993	0.6463	-0.0388
963	SLU 6	0.45	0.19	15.12	-1.5333	0.6501	-0.0228
963	SLU 7	0.45	0.22	15.12	-1.5325	0.6492	-0.033
963	SLU 8	0.45	0.19	15	-1.5206	0.6488	-0.0213
963	SLU 9	0.44	0.22	14.99	-1.5198	0.6479	-0.0315
963	SLU 10	0.47	0.28	16.35	-1.6582	0.6533	-0.0499
963	SLU 11	0.49	0.24	16.69	-1.6922	0.6571	-0.0339

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
963	SLU 12	0.48	0.26	16.68	-1.6915	0.6561	-0.0441
963	SLU 13	0.48	0.28	16.55	-1.6782	0.6542	-0.0494
963	SLU 14	0.49	0.24	16.89	-1.7123	0.658	-0.0334
963	SLU 15	0.49	0.27	16.88	-1.7115	0.6571	-0.0435
963	SLU 16	0.49	0.23	16.76	-1.6995	0.6567	-0.0319
963	SLU 17	0.49	0.26	16.75	-1.6988	0.6558	-0.042
963	SLU 18	0.49	0.25	17.12	-1.7361	0.6582	-0.0375
963	SLU 19	0.49	0.28	17.11	-1.7354	0.6573	-0.0476
963	SLU 20	0.5	0.25	17.32	-1.7562	0.6592	-0.0369
963	SLU 21	0.5	0.28	17.31	-1.7554	0.6582	-0.0471
963	SLU 22	0.48	0.23	16.36	-1.6588	0.6573	-0.031
963	SLU 23	0.48	0.27	16.35	-1.6575	0.6558	-0.048
963	SLU 24	0.49	0.23	16.68	-1.6916	0.6595	-0.032
963	SLU 25	0.49	0.26	16.68	-1.6908	0.6586	-0.0422
963	SLU 26	0.48	0.27	16.54	-1.6776	0.6567	-0.0475
963	SLU 27	0.5	0.23	16.88	-1.7116	0.6605	-0.0315
963	SLU 28	0.5	0.26	16.87	-1.7108	0.6595	-0.0416
963	SLU 29	0.5	0.23	16.75	-1.6989	0.6592	-0.03
963	SLU 30	0.49	0.26	16.75	-1.6981	0.6582	-0.0401
963	SLU 31	0.52	0.32	18.11	-1.8365	0.6637	-0.0585
963	SLU 32	0.54	0.28	18.45	-1.8705	0.6674	-0.0425
963	SLU 33	0.54	0.3	18.44	-1.8698	0.6665	-0.0527
963	SLU 34	0.53	0.32	18.31	-1.8565	0.6646	-0.058
963	SLU 35	0.55	0.28	18.64	-1.8906	0.6684	-0.042
963	SLU 36	0.54	0.3	18.64	-1.8898	0.6674	-0.0522
963	SLU 37	0.54	0.27	18.52	-1.8778	0.6671	-0.0405
963	SLU 38	0.54	0.3	18.51	-1.8771	0.6661	-0.0507
963	SLU 39	0.54	0.29	18.88	-1.9144	0.6686	-0.0461
963	SLU 40	0.54	0.32	18.87	-1.9137	0.6677	-0.0563
963	SLU 41	0.55	0.29	19.08	-1.9345	0.6695	-0.0456
963	SLU 42	0.55	0.32	19.07	-1.9337	0.6686	-0.0557
963	SLU 43	0.54	0.23	18.38	-1.8635	0.8375	-0.0261
963	SLU 44	0.54	0.28	18.37	-1.8622	0.8359	-0.0431
963	SLU 45	0.55	0.24	18.7	-1.8963	0.8397	-0.0271
963	SLU 46	0.55	0.26	18.7	-1.8955	0.8388	-0.0373
963	SLU 47	0.55	0.28	18.56	-1.8823	0.8369	-0.0426
963	SLU 48	0.56	0.24	18.9	-1.9163	0.8406	-0.0266
963	SLU 49	0.56	0.27	18.89	-1.9156	0.8397	-0.0367
963	SLU 50	0.56	0.23	18.78	-1.9036	0.8393	-0.0251
963	SLU 51	0.55	0.26	18.77	-1.9028	0.8384	-0.0353
963	SLU 52	0.58	0.32	20.13	-2.0412	0.8438	-0.0536
963	SLU 53	0.6	0.28	20.47	-2.0752	0.8476	-0.0376
963	SLU 54	0.6	0.31	20.46	-2.0745	0.8467	-0.0478
963	SLU 55	0.59	0.32	20.33	-2.0612	0.8448	-0.0531
963	SLU 56	0.61	0.28	20.66	-2.0953	0.8485	-0.0371
963	SLU 57	0.6	0.31	20.66	-2.0945	0.8476	-0.0473
963	SLU 58	0.6	0.27	20.54	-2.0826	0.8472	-0.0356
963	SLU 59	0.6	0.3	20.53	-2.0818	0.8463	-0.0458
963	SLU 60	0.6	0.29	20.9	-2.1192	0.8488	-0.0412
963	SLU 61	0.6	0.32	20.89	-2.1184	0.8478	-0.0514
963	SLU 62	0.61	0.29	21.1	-2.1392	0.8497	-0.0407
963	SLU 63	0.61	0.32	21.09	-2.1384	0.8488	-0.0508
963	SLU 64	0.59	0.27	20.14	-2.0418	0.8478	-0.0348
963	SLU 65	0.59	0.32	20.13	-2.0405	0.8463	-0.0518
963	SLU 66	0.61	0.28	20.46	-2.0746	0.8501	-0.0357
963	SLU 67	0.6	0.3	20.45	-2.0738	0.8491	-0.0459
963	SLU 68	0.6	0.32	20.32	-2.0606	0.8472	-0.0512
963	SLU 69	0.61	0.28	20.66	-2.0946	0.851	-0.0352
963	SLU 70	0.61	0.3	20.65	-2.0939	0.8501	-0.0454
963	SLU 71	0.61	0.27	20.53	-2.0819	0.8497	-0.0337
963	SLU 72	0.61	0.3	20.53	-2.0811	0.8488	-0.0439
963	SLU 73	0.63	0.36	21.89	-2.2195	0.8542	-0.0623
963	SLU 74	0.65	0.32	22.22	-2.2535	0.858	-0.0463
963	SLU 75	0.65	0.35	22.22	-2.2528	0.857	-0.0565
963	SLU 76	0.64	0.36	22.09	-2.2395	0.8551	-0.0618
963	SLU 77	0.66	0.32	22.42	-2.2736	0.8589	-0.0458
963	SLU 78	0.65	0.35	22.41	-2.2728	0.858	-0.0559
963	SLU 79	0.65	0.31	22.3	-2.2608	0.8576	-0.0443
963	SLU 80	0.65	0.34	22.29	-2.2601	0.8567	-0.0544
963	SLU 81	0.66	0.33	22.66	-2.2975	0.8591	-0.0499
963	SLU 82	0.65	0.36	22.65	-2.2967	0.8582	-0.06
963	SLU 83	0.66	0.33	22.86	-2.3175	0.86	-0.0493
963	SLU 84	0.66	0.36	22.85	-2.3167	0.8591	-0.0595
963	SLE RA 1	0.44	0.2	15.1	-1.5314	0.6499	-0.0249
963	SLE RA 2	0.44	0.23	15.1	-1.5306	0.6489	-0.0362
963	SLE RA 3	0.45	0.2	15.32	-1.5533	0.6514	-0.0255
963	SLE RA 4	0.45	0.22	15.31	-1.5528	0.6508	-0.0323
963	SLE RA 5	0.45	0.23	15.23	-1.5439	0.6495	-0.0358
963	SLE RA 6	0.46	0.2	15.45	-1.5666	0.652	-0.0251
963	SLE RA 7	0.46	0.22	15.45	-1.5661	0.6514	-0.0319
963	SLE RA 8	0.46	0.2	15.37	-1.5582	0.6511	-0.0242
963	SLE RA 9	0.45	0.22	15.36	-1.5576	0.6505	-0.0309
963	SLE RA 10	0.47	0.26	16.27	-1.6499	0.6541	-0.0432
963	SLE RA 11	0.48	0.23	16.5	-1.6726	0.6567	-0.0325
963	SLE RA 12	0.48	0.25	16.49	-1.6721	0.656	-0.0393
963	SLE RA 13	0.48	0.26	16.4	-1.6633	0.6548	-0.0428
963	SLE RA 14	0.49	0.23	16.63	-1.6859	0.6573	-0.0322
963	SLE RA 15	0.49	0.25	16.62	-1.6854	0.6567	-0.039
963	SLE RA 16	0.48	0.23	16.54	-1.6775	0.6564	-0.0312
963	SLE RA 17	0.48	0.25	16.54	-1.677	0.6558	-0.038

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
963	SLE RA 18	0.49	0.24	16.78	-1.7019	0.6574	-0.0349
963	SLE RA 19	0.49	0.26	16.78	-1.7014	0.6568	-0.0417
963	SLE RA 20	0.49	0.24	16.92	-1.7152	0.658	-0.0345
963	SLE RA 21	0.49	0.26	16.91	-1.7147	0.6574	-0.0413
963	SLE FR 1	0.44	0.2	15.1	-1.5314	0.6499	-0.0249
963	SLE FR 2	0.44	0.21	15.1	-1.5313	0.6497	-0.0271
963	SLE FR 3	0.45	0.2	15.16	-1.5368	0.6502	-0.0247
963	SLE FR 4	0.46	0.22	15.61	-1.5824	0.652	-0.0301
963	SLE FR 5	0.46	0.21	15.66	-1.5879	0.6524	-0.0277
963	SLE FR 6	0.47	0.22	15.94	-1.6167	0.6537	-0.0299
963	SLE QP 1	0.44	0.2	15.1	-1.5314	0.6499	-0.0249
963	SLE QP 2	0.46	0.21	15.61	-1.5826	0.6522	-0.0279
963	SLD 1	1.14	0.11	11.65	-1.181	0.7639	0.0542
963	SLD 2	0.94	0.52	11.41	-1.1573	0.7333	-0.1072
963	SLD 3	1.39	-0.69	12.02	-1.2182	0.805	0.3618
963	SLD 4	1.18	-0.29	11.78	-1.1945	0.7743	0.2004
963	SLD 5	0.32	1.34	13.9	-1.4098	0.6289	-0.441
963	SLD 6	0.19	1.6	13.74	-1.3943	0.6088	-0.5468
963	SLD 7	1.15	-1.36	15.14	-1.5339	0.7658	0.5842
963	SLD 8	1.02	-1.09	14.98	-1.5184	0.7457	0.4784
963	SLD 9	-0.1	1.52	16.23	-1.6467	0.5587	-0.5341
963	SLD 10	-0.24	1.78	16.08	-1.6312	0.5386	-0.6399
963	SLD 11	0.73	-1.18	17.47	-1.7708	0.6956	0.4911
963	SLD 12	0.59	-0.91	17.32	-1.7553	0.6755	0.3853
963	SLD 13	-0.27	0.71	19.43	-1.9706	0.53	-0.2561
963	SLD 14	-0.48	1.12	19.2	-1.9469	0.4993	-0.4175
963	SLD 15	-0.02	-0.09	19.81	-2.0079	0.5711	0.0515
963	SLD 16	-0.23	0.31	19.57	-1.9842	0.5404	-0.11
963	SLV 1	2.06	-0.04	6.35	-0.644	0.9137	0.1731
963	SLV 2	1.58	0.9	5.8	-0.5888	0.8423	-0.2028
963	SLV 3	2.63	-1.88	7.2	-0.7283	1.0075	0.873
963	SLV 4	2.15	-0.94	6.65	-0.6731	0.9361	0.497
963	SLV 5	0.16	2.76	11.65	-1.1825	0.6007	-0.9643
963	SLV 6	-0.15	3.37	11.29	-1.147	0.5547	-1.2066
963	SLV 7	2.05	-3.37	14.46	-1.4638	0.9133	1.3686
963	SLV 8	1.74	-2.76	14.1	-1.4282	0.8673	1.1263
963	SLV 9	-0.83	3.19	17.11	-1.7369	0.437	-1.1821
963	SLV 10	-1.14	3.79	16.76	-1.7014	0.391	-1.4243
963	SLV 11	1.06	-2.95	19.92	-2.0182	0.7496	1.1508
963	SLV 12	0.75	-2.34	19.57	-1.9826	0.7036	0.9085
963	SLV 13	-1.23	1.36	24.57	-2.492	0.3682	-0.5528
963	SLV 14	-1.71	2.3	24.02	-2.4368	0.2968	-0.9287
963	SLV 15	-0.67	-0.48	25.41	-2.5764	0.462	0.1471
963	SLV 16	-1.15	0.46	24.86	-2.5212	0.3906	-0.2289
963	CRTFP Ux+	0	0	0	0	0	0
963	CRTFP Ux-	0	0	0	0	0	0
963	CRTFP Uy+	0	0	0	0	0	0
963	CRTFP Uy-	0	0	0	0	0	0
967	SLU 1	0.38	-0.02	20.6	0.5835	5.2196	-0.0055
967	SLU 2	0.38	0.01	20.57	0.5828	5.2156	-0.0126
967	SLU 3	0.39	-0.02	21.08	0.5971	5.3423	-0.0063
967	SLU 4	0.39	0	21.06	0.5967	5.3399	-0.0106
967	SLU 5	0.39	0.01	20.87	0.5911	5.2907	-0.0124
967	SLU 6	0.39	-0.02	21.37	0.6055	5.4175	-0.0062
967	SLU 7	0.39	0	21.36	0.6051	5.4151	-0.0104
967	SLU 8	0.39	-0.02	21.18	0.6001	5.3699	-0.0052
967	SLU 9	0.39	0	21.17	0.5997	5.3675	-0.0095
967	SLU 10	0.42	0.02	23.3	0.6598	5.9003	-0.0154
967	SLU 11	0.42	-0.01	23.8	0.6741	6.027	-0.0091
967	SLU 12	0.42	0.01	23.79	0.6737	6.0246	-0.0134
967	SLU 13	0.42	0.02	23.59	0.6682	5.9754	-0.0152
967	SLU 14	0.43	-0.01	24.09	0.6825	6.1021	-0.009
967	SLU 15	0.43	0.01	24.08	0.6821	6.0997	-0.0132
967	SLU 16	0.43	-0.01	23.91	0.6771	6.0546	-0.008
967	SLU 17	0.43	0	23.89	0.6768	6.0522	-0.0122
967	SLU 18	0.43	-0.01	24.49	0.6935	6.1977	-0.0095
967	SLU 19	0.43	0.01	24.47	0.6931	6.1953	-0.0137
967	SLU 20	0.44	-0.01	24.78	0.7018	6.2729	-0.0094
967	SLU 21	0.44	0.01	24.77	0.7014	6.2704	-0.0136
967	SLU 22	0.42	-0.01	23.3	0.6599	5.8995	-0.0098
967	SLU 23	0.42	0.02	23.27	0.6593	5.8955	-0.0168
967	SLU 24	0.43	0	23.78	0.6736	6.0222	-0.0106
967	SLU 25	0.43	0.01	23.76	0.6732	6.0198	-0.0148
967	SLU 26	0.42	0.02	23.57	0.6676	5.9707	-0.0167
967	SLU 27	0.43	0	24.07	0.6819	6.0974	-0.0104
967	SLU 28	0.43	0.01	24.06	0.6815	6.095	-0.0147
967	SLU 29	0.43	-0.01	23.88	0.6766	6.0498	-0.0095
967	SLU 30	0.43	0.01	23.87	0.6762	6.0474	-0.0137
967	SLU 31	0.45	0.03	26	0.7363	6.5802	-0.0196
967	SLU 32	0.46	0.01	26.5	0.7506	6.7069	-0.0134
967	SLU 33	0.46	0.02	26.49	0.7502	6.7045	-0.0176
967	SLU 34	0.46	0.03	26.29	0.7446	6.6553	-0.0195
967	SLU 35	0.46	0	26.79	0.7589	6.782	-0.0132
967	SLU 36	0.46	0.02	26.78	0.7585	6.7796	-0.0175
967	SLU 37	0.46	0	26.61	0.7536	6.7345	-0.0123
967	SLU 38	0.46	0.02	26.59	0.7532	6.7321	-0.0165
967	SLU 39	0.47	0.01	27.19	0.77	6.8776	-0.0138
967	SLU 40	0.47	0.02	27.17	0.7696	6.8752	-0.018
967	SLU 41	0.47	0	27.48	0.7783	6.9528	-0.0136
967	SLU 42	0.47	0.02	27.47	0.7779	6.9504	-0.0179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
967	SLU 43	0.48	-0.03	25.85	0.7323	6.5524	-0.0057
967	SLU 44	0.48	0	25.83	0.7316	6.5484	-0.0128
967	SLU 45	0.49	-0.03	26.33	0.7459	6.6751	-0.0065
967	SLU 46	0.49	-0.01	26.32	0.7455	6.6727	-0.0107
967	SLU 47	0.49	0	26.12	0.74	6.6235	-0.0126
967	SLU 48	0.5	-0.03	26.62	0.7543	6.7502	-0.0064
967	SLU 49	0.5	-0.01	26.61	0.7539	6.7478	-0.0106
967	SLU 50	0.49	-0.03	26.43	0.749	6.7027	-0.0054
967	SLU 51	0.49	-0.01	26.42	0.7486	6.7003	-0.0096
967	SLU 52	0.52	0.01	28.55	0.8086	7.233	-0.0156
967	SLU 53	0.53	-0.02	29.05	0.823	7.3598	-0.0093
967	SLU 54	0.53	0	29.04	0.8226	7.3573	-0.0135
967	SLU 55	0.52	0.01	28.84	0.817	7.3082	-0.0154
967	SLU 56	0.53	-0.02	29.35	0.8313	7.4349	-0.0092
967	SLU 57	0.53	0	29.33	0.8309	7.4325	-0.0134
967	SLU 58	0.53	-0.02	29.16	0.826	7.3874	-0.0082
967	SLU 59	0.53	-0.01	29.14	0.8256	7.3849	-0.0124
967	SLU 60	0.53	-0.02	29.74	0.8423	7.5305	-0.0097
967	SLU 61	0.53	0	29.73	0.8419	7.5281	-0.0139
967	SLU 62	0.54	-0.02	30.03	0.8506	7.6056	-0.0095
967	SLU 63	0.54	0	30.02	0.8502	7.6032	-0.0138
967	SLU 64	0.52	-0.01	28.55	0.8088	7.2323	-0.0099
967	SLU 65	0.52	0.01	28.53	0.8081	7.2283	-0.017
967	SLU 66	0.53	-0.01	29.03	0.8224	7.355	-0.0108
967	SLU 67	0.53	0	29.02	0.822	7.3526	-0.015
967	SLU 68	0.53	0.01	28.82	0.8164	7.3034	-0.0169
967	SLU 69	0.53	-0.01	29.32	0.8307	7.4302	-0.0106
967	SLU 70	0.53	0	29.31	0.8304	7.4277	-0.0149
967	SLU 71	0.53	-0.02	29.14	0.8254	7.3826	-0.0097
967	SLU 72	0.53	0	29.12	0.825	7.3802	-0.0139
967	SLU 73	0.55	0.02	31.25	0.8851	7.9129	-0.0198
967	SLU 74	0.56	0	31.75	0.8994	8.0397	-0.0136
967	SLU 75	0.56	0.01	31.74	0.899	8.0373	-0.0178
967	SLU 76	0.56	0.02	31.54	0.8934	7.9881	-0.0197
967	SLU 77	0.57	-0.01	32.05	0.9078	8.1148	-0.0134
967	SLU 78	0.57	0.01	32.03	0.9074	8.1124	-0.0177
967	SLU 79	0.56	-0.01	31.86	0.9024	8.0673	-0.0125
967	SLU 80	0.56	0.01	31.85	0.902	8.0649	-0.0167
967	SLU 81	0.57	0	32.44	0.9188	8.2104	-0.0139
967	SLU 82	0.57	0.01	32.43	0.9184	8.208	-0.0182
967	SLU 83	0.57	-0.01	32.73	0.9271	8.2855	-0.0138
967	SLU 84	0.57	0.01	32.72	0.9267	8.2831	-0.018
967	SLE RA 1	0.39	-0.01	21.37	0.6053	5.4139	-0.0067
967	SLE RA 2	0.39	0	21.35	0.6049	5.4112	-0.0114
967	SLE RA 3	0.4	-0.01	21.69	0.6144	5.4957	-0.0073
967	SLE RA 4	0.4	0	21.68	0.6142	5.4941	-0.0101
967	SLE RA 5	0.4	0	21.55	0.6104	5.4613	-0.0113
967	SLE RA 6	0.4	-0.01	21.88	0.62	5.5458	-0.0072
967	SLE RA 7	0.4	0	21.87	0.6197	5.5442	-0.01
967	SLE RA 8	0.4	-0.02	21.76	0.6164	5.5141	-0.0065
967	SLE RA 9	0.4	0	21.75	0.6162	5.5125	-0.0093
967	SLE RA 10	0.41	0.01	23.17	0.6562	5.8676	-0.0133
967	SLE RA 11	0.42	-0.01	23.5	0.6658	5.9521	-0.0091
967	SLE RA 12	0.42	0	23.49	0.6655	5.9505	-0.012
967	SLE RA 13	0.42	0.01	23.36	0.6618	5.9177	-0.0132
967	SLE RA 14	0.42	-0.01	23.7	0.6713	6.0022	-0.009
967	SLE RA 15	0.42	0	23.69	0.6711	6.0006	-0.0119
967	SLE RA 16	0.42	-0.01	23.57	0.6678	5.9705	-0.0084
967	SLE RA 17	0.42	0	23.56	0.6675	5.9689	-0.0112
967	SLE RA 18	0.42	-0.01	23.96	0.6787	6.0659	-0.0094
967	SLE RA 19	0.42	0	23.95	0.6784	6.0643	-0.0122
967	SLE RA 20	0.43	-0.01	24.16	0.6842	6.116	-0.0093
967	SLE RA 21	0.43	0	24.15	0.684	6.1144	-0.0121
967	SLE FR 1	0.39	-0.01	21.37	0.6053	5.4139	-0.0067
967	SLE FR 2	0.39	-0.01	21.36	0.6052	5.4133	-0.0077
967	SLE FR 3	0.39	-0.01	21.45	0.6075	5.4339	-0.0067
967	SLE FR 4	0.4	-0.01	22.14	0.6272	5.609	-0.0085
967	SLE FR 5	0.4	-0.01	22.22	0.6295	5.6295	-0.0075
967	SLE FR 6	0.41	-0.01	22.66	0.642	5.7399	-0.008
967	SLE QP 1	0.39	-0.01	21.37	0.6053	5.4139	-0.0067
967	SLE QP 2	0.4	-0.01	22.15	0.6273	5.6095	-0.0075
967	SLD 1	2.47	0.32	19.22	0.5414	4.8251	-0.1338
967	SLD 2	2.25	0.47	19.03	0.5359	4.793	-0.1663
967	SLD 3	2.5	-0.21	19.73	0.5562	4.9156	-0.0022
967	SLD 4	2.28	-0.06	19.53	0.5507	4.8836	-0.0347
967	SLD 5	1.02	0.86	20.54	0.5801	5.2426	-0.2392
967	SLD 6	0.87	0.96	20.41	0.5765	5.2216	-0.2605
967	SLD 7	1.11	-0.9	22.22	0.6294	5.5443	0.1995
967	SLD 8	0.97	-0.8	22.09	0.6258	5.5233	0.1782
967	SLD 9	-0.17	0.77	22.2	0.6289	5.6957	-0.1932
967	SLD 10	-0.31	0.87	22.07	0.6253	5.6747	-0.2145
967	SLD 11	-0.07	-0.98	23.88	0.6781	5.9974	0.2455
967	SLD 12	-0.21	-0.88	23.75	0.6745	5.9764	0.2242
967	SLD 13	-1.47	0.03	24.76	0.7039	6.3354	0.0197
967	SLD 14	-1.69	0.19	24.56	0.6984	6.3034	-0.0129
967	SLD 15	-1.44	-0.5	25.26	0.7187	6.4259	0.1513
967	SLD 16	-1.66	-0.34	25.07	0.7132	6.3939	0.1188
967	SLV 1	5.23	0.74	15.32	0.4267	3.7762	-0.2991
967	SLV 2	4.72	1.1	14.86	0.4139	3.7016	-0.3748
967	SLV 3	5.3	-0.46	16.46	0.4602	3.9815	0.0008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
967	SLV 4	4.79	-0.1	16.01	0.4474	3.9069	-0.075
967	SLV 5	1.83	1.97	18.44	0.5185	4.7611	-0.5367
967	SLV 6	1.5	2.2	18.15	0.5103	4.713	-0.5855
967	SLV 7	2.07	-2.03	22.26	0.6302	5.4453	0.4628
967	SLV 8	1.73	-1.79	21.96	0.6219	5.3972	0.414
967	SLV 9	-0.93	1.77	22.33	0.6327	5.8218	-0.429
967	SLV 10	-1.26	2	22.03	0.6245	5.7737	-0.4778
967	SLV 11	-0.7	-2.23	26.14	0.7443	6.506	0.5705
967	SLV 12	-1.03	-1.99	25.85	0.7361	6.4579	0.5217
967	SLV 13	-3.99	0.07	28.28	0.8072	7.3121	0.0599
967	SLV 14	-4.5	0.43	27.83	0.7944	7.2375	-0.0158
967	SLV 15	-3.92	-1.13	29.43	0.8407	7.5174	0.3598
967	SLV 16	-4.43	-0.76	28.97	0.8279	7.4428	0.284
967	CRTFP Ux+	0	0	0	0	0	0
967	CRTFP Ux-	0	0	0	0	0	0
967	CRTFP Uy+	0	0	0	0	0	0
967	CRTFP Uy-	0	0	0	0	0	0
968	SLU 1	-0.75	-0.09	51.64	-17.203	-8.7949	-0.3025
968	SLU 2	-0.75	0.02	51.62	-17.1963	-8.7906	-0.2827
968	SLU 3	-0.77	-0.09	52.85	-17.6027	-8.9994	-0.3097
968	SLU 4	-0.77	-0.02	52.84	-17.5987	-8.9968	-0.2978
968	SLU 5	-0.76	0.02	52.37	-17.4456	-8.9178	-0.2882
968	SLU 6	-0.78	-0.09	53.61	-17.852	-9.1266	-0.3152
968	SLU 7	-0.78	-0.02	53.59	-17.848	-9.124	-0.3033
968	SLU 8	-0.78	-0.09	53.15	-17.7016	-9.0494	-0.3136
968	SLU 9	-0.78	-0.03	53.14	-17.6976	-9.0468	-0.3017
968	SLU 10	-0.81	0.04	58.1	-19.3361	-9.8912	-0.3042
968	SLU 11	-0.83	-0.07	59.34	-19.7425	-10.1	-0.3312
968	SLU 12	-0.83	0	59.32	-19.7385	-10.0974	-0.3193
968	SLU 13	-0.83	0.04	58.86	-19.5854	-10.0184	-0.3098
968	SLU 14	-0.85	-0.07	60.09	-19.9918	-10.2272	-0.3368
968	SLU 15	-0.85	0	60.07	-19.9878	-10.2247	-0.3249
968	SLU 16	-0.84	-0.07	59.63	-19.8414	-10.15	-0.3352
968	SLU 17	-0.84	-0.01	59.62	-19.8374	-10.1474	-0.3233
968	SLU 18	-0.84	-0.06	60.91	-20.2599	-10.3672	-0.3333
968	SLU 19	-0.84	0.01	60.89	-20.2559	-10.3646	-0.3214
968	SLU 20	-0.85	-0.06	61.66	-20.5092	-10.4945	-0.3388
968	SLU 21	-0.85	0	61.64	-20.5052	-10.4919	-0.3269
968	SLU 22	-0.82	-0.06	58.19	-19.3635	-9.9065	-0.3264
968	SLU 23	-0.82	0.05	58.17	-19.3568	-9.9022	-0.3066
968	SLU 24	-0.84	-0.06	59.4	-19.7632	-10.111	-0.3336
968	SLU 25	-0.84	0	59.39	-19.7592	-10.1084	-0.3217
968	SLU 26	-0.84	0.04	58.92	-19.6061	-10.0294	-0.3122
968	SLU 27	-0.86	-0.07	60.16	-20.0125	-10.2382	-0.3392
968	SLU 28	-0.85	0	60.14	-20.0085	-10.2357	-0.3273
968	SLU 29	-0.85	-0.07	59.7	-19.8621	-10.161	-0.3376
968	SLU 30	-0.85	0	59.68	-19.8581	-10.1584	-0.3257
968	SLU 31	-0.88	0.07	64.65	-21.4966	-11.0028	-0.3282
968	SLU 32	-0.9	-0.04	65.89	-21.903	-11.2117	-0.3552
968	SLU 33	-0.9	0.02	65.87	-21.899	-11.2091	-0.3433
968	SLU 34	-0.9	0.06	65.41	-21.7459	-11.1301	-0.3337
968	SLU 35	-0.92	-0.05	66.64	-22.1523	-11.3389	-0.3607
968	SLU 36	-0.92	0.02	66.62	-22.1483	-11.3363	-0.3488
968	SLU 37	-0.91	-0.05	66.18	-22.0019	-11.2616	-0.3591
968	SLU 38	-0.91	0.02	66.17	-21.9979	-11.2591	-0.3472
968	SLU 39	-0.91	-0.04	67.46	-22.4204	-11.4789	-0.3572
968	SLU 40	-0.91	0.03	67.44	-22.4163	-11.4763	-0.3453
968	SLU 41	-0.93	-0.04	68.21	-22.6697	-11.6061	-0.3628
968	SLU 42	-0.92	0.03	68.19	-22.6656	-11.6035	-0.3509
968	SLU 43	-0.95	-0.12	64.89	-21.6232	-11.0522	-0.385
968	SLU 44	-0.95	-0.01	64.87	-21.6165	-11.0479	-0.3652
968	SLU 45	-0.97	-0.12	66.1	-22.0229	-11.2567	-0.3922
968	SLU 46	-0.97	-0.06	66.09	-22.0188	-11.2541	-0.3803
968	SLU 47	-0.96	-0.01	65.62	-21.8658	-11.1751	-0.3708
968	SLU 48	-0.99	-0.12	66.85	-22.2722	-11.3839	-0.3978
968	SLU 49	-0.98	-0.06	66.84	-22.2681	-11.3813	-0.3859
968	SLU 50	-0.98	-0.13	66.4	-22.1218	-11.3067	-0.3961
968	SLU 51	-0.98	-0.06	66.38	-22.1178	-11.3041	-0.3842
968	SLU 52	-1.01	0.01	71.35	-23.7563	-12.1485	-0.3867
968	SLU 53	-1.03	-0.1	72.58	-24.1627	-12.3573	-0.4137
968	SLU 54	-1.03	-0.04	72.57	-24.1586	-12.3547	-0.4019
968	SLU 55	-1.03	0.01	72.1	-24.0056	-12.2758	-0.3923
968	SLU 56	-1.05	-0.1	73.34	-24.412	-12.4846	-0.4193
968	SLU 57	-1.05	-0.04	73.32	-24.4079	-12.482	-0.4074
968	SLU 58	-1.04	-0.11	72.88	-24.2616	-12.4073	-0.4177
968	SLU 59	-1.04	-0.04	72.87	-24.2576	-12.4047	-0.4058
968	SLU 60	-1.04	-0.09	74.15	-24.68	-12.6245	-0.4158
968	SLU 61	-1.04	-0.03	74.14	-24.676	-12.622	-0.4039
968	SLU 62	-1.06	-0.1	74.91	-24.9294	-12.7518	-0.4214
968	SLU 63	-1.05	-0.03	74.89	-24.9253	-12.7492	-0.4095
968	SLU 64	-1.02	-0.1	71.44	-23.7837	-12.1638	-0.409
968	SLU 65	-1.02	0.01	71.42	-23.777	-12.1595	-0.3892
968	SLU 66	-1.04	-0.1	72.65	-24.1833	-12.3683	-0.4162
968	SLU 67	-1.04	-0.03	72.64	-24.1793	-12.3657	-0.4043
968	SLU 68	-1.04	0.01	72.17	-24.0263	-12.2868	-0.3947
968	SLU 69	-1.06	-0.1	73.4	-24.4327	-12.4956	-0.4217
968	SLU 70	-1.06	-0.04	73.39	-24.4286	-12.493	-0.4098
968	SLU 71	-1.05	-0.1	72.95	-24.2823	-12.4183	-0.4201
968	SLU 72	-1.05	-0.04	72.93	-24.2783	-12.4157	-0.4082
968	SLU 73	-1.09	0.03	77.9	-25.9168	-13.2602	-0.4107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
968	SLU 74	-1.11	-0.08	79.13	-26.3231	-13.469	-0.4377
968	SLU 75	-1.1	-0.01	79.12	-26.3191	-13.4664	-0.4258
968	SLU 76	-1.1	0.03	78.65	-26.1661	-13.3874	-0.4163
968	SLU 77	-1.12	-0.08	79.89	-26.5724	-13.5962	-0.4433
968	SLU 78	-1.12	-0.02	79.87	-26.5684	-13.5936	-0.4314
968	SLU 79	-1.11	-0.08	79.43	-26.4221	-13.519	-0.4416
968	SLU 80	-1.11	-0.02	79.42	-26.4181	-13.5164	-0.4297
968	SLU 81	-1.11	-0.07	80.7	-26.8405	-13.7362	-0.4397
968	SLU 82	-1.11	0	80.69	-26.8365	-13.7336	-0.4279
968	SLU 83	-1.13	-0.07	81.46	-27.0898	-13.8634	-0.4453
968	SLU 84	-1.13	-0.01	81.44	-27.0858	-13.8608	-0.4334
968	SLE RA 1	-0.77	-0.08	53.52	-17.8203	-9.1125	-0.3093
968	SLE RA 2	-0.77	-0.01	53.5	-17.8158	-9.1096	-0.2961
968	SLE RA 3	-0.79	-0.08	54.32	-18.0868	-9.2488	-0.3141
968	SLE RA 4	-0.78	-0.04	54.31	-18.0841	-9.2471	-0.3062
968	SLE RA 5	-0.78	-0.01	54	-17.982	-9.1944	-0.2998
968	SLE RA 6	-0.79	-0.08	54.82	-18.253	-9.3336	-0.3178
968	SLE RA 7	-0.79	-0.04	54.81	-18.2503	-9.3319	-0.3099
968	SLE RA 8	-0.79	-0.08	54.52	-18.1527	-9.2821	-0.3167
968	SLE RA 9	-0.79	-0.04	54.51	-18.15	-9.2804	-0.3088
968	SLE RA 10	-0.81	0.01	57.82	-19.2424	-9.8434	-0.3105
968	SLE RA 11	-0.83	-0.07	58.64	-19.5133	-9.9826	-0.3285
968	SLE RA 12	-0.83	-0.02	58.63	-19.5106	-9.9808	-0.3206
968	SLE RA 13	-0.82	0	58.32	-19.4086	-9.9282	-0.3142
968	SLE RA 14	-0.84	-0.07	59.15	-19.6795	-10.0674	-0.3322
968	SLE RA 15	-0.83	-0.03	59.14	-19.6768	-10.0657	-0.3243
968	SLE RA 16	-0.83	-0.07	58.84	-19.5792	-10.0159	-0.3311
968	SLE RA 17	-0.83	-0.03	58.83	-19.5766	-10.0142	-0.3232
968	SLE RA 18	-0.83	-0.06	59.69	-19.8582	-10.1607	-0.3298
968	SLE RA 19	-0.83	-0.02	59.68	-19.8555	-10.159	-0.3219
968	SLE RA 20	-0.84	-0.06	60.19	-20.0244	-10.2455	-0.3336
968	SLE RA 21	-0.84	-0.02	60.18	-20.0217	-10.2438	-0.3256
968	SLE FR 1	-0.77	-0.08	53.52	-17.8203	-9.1125	-0.3093
968	SLE FR 2	-0.77	-0.07	53.51	-17.8194	-9.1119	-0.3067
968	SLE FR 3	-0.78	-0.08	53.72	-17.8868	-9.1464	-0.3108
968	SLE FR 4	-0.79	-0.06	55.37	-18.4308	-9.4264	-0.3128
968	SLE FR 5	-0.79	-0.08	55.57	-18.4982	-9.4609	-0.317
968	SLE FR 6	-0.8	-0.07	56.6	-18.8393	-9.6366	-0.3196
968	SLE QP 1	-0.77	-0.08	53.52	-17.8203	-9.1125	-0.3093
968	SLE QP 2	-0.79	-0.07	55.37	-18.4317	-9.427	-0.3155
968	SLD 1	4.06	2.02	70.29	-23.4345	-11.8937	1.7175
968	SLD 2	3.53	1.1	70.95	-23.6361	-12.0074	1.3651
968	SLD 3	3.89	0.13	71.32	-23.7387	-12.0719	1.3278
968	SLD 4	3.36	-0.79	71.98	-23.9403	-12.1857	0.9755
968	SLD 5	1.02	3.59	58.16	-19.4353	-9.8764	0.948
968	SLD 6	0.68	2.98	58.59	-19.5675	-9.951	0.717
968	SLD 7	0.44	-2.72	61.6	-20.4493	-10.4705	-0.3508
968	SLD 8	0.1	-3.32	62.04	-20.5814	-10.5451	-0.5818
968	SLD 9	-1.68	3.17	48.7	-16.2819	-8.3088	-0.0492
968	SLD 10	-2.02	2.57	49.14	-16.414	-8.3834	-0.2801
968	SLD 11	-2.26	-3.13	52.14	-17.2959	-8.9029	-1.348
968	SLD 12	-2.6	-3.74	52.58	-17.428	-8.9775	-1.579
968	SLD 13	-4.94	0.64	38.75	-12.9231	-6.6683	-1.6064
968	SLD 14	-5.47	-0.28	39.42	-13.1246	-6.782	-1.9588
968	SLD 15	-5.12	-1.25	39.79	-13.2273	-6.8465	-1.9961
968	SLD 16	-5.64	-2.17	40.45	-13.4288	-6.9602	-2.3484
968	SLV 1	10.54	4.77	90.32	-30.1514	-15.2067	4.4256
968	SLV 2	9.32	2.62	91.87	-30.6208	-15.4716	3.6049
968	SLV 3	10.15	0.47	92.66	-30.8406	-15.6104	3.5385
968	SLV 4	8.93	-1.69	94.21	-31.31	-15.8753	2.7179
968	SLV 5	3.42	8.28	62.04	-20.8215	-10.5029	2.5935
968	SLV 6	2.63	6.89	63.04	-21.1239	-10.6737	2.0647
968	SLV 7	2.1	-6.07	69.84	-23.1188	-11.8487	-0.3633
968	SLV 8	1.32	-7.46	70.84	-23.4213	-12.0194	-0.8921
968	SLV 9	-2.9	7.31	39.9	-13.442	-6.8345	0.2612
968	SLV 10	-3.68	5.92	40.9	-13.7445	-7.0052	-0.2677
968	SLV 11	-4.21	-7.04	47.7	-15.7394	-8.1803	-2.6956
968	SLV 12	-5	-8.43	48.7	-16.0419	-8.351	-3.2245
968	SLV 13	-10.51	1.54	16.53	-5.5533	-2.9786	-3.3489
968	SLV 14	-11.73	-0.62	18.08	-6.0227	-3.2435	-4.1695
968	SLV 15	-10.9	-2.76	18.87	-6.2426	-3.3823	-4.2359
968	SLV 16	-12.13	-4.92	20.42	-6.7119	-3.6472	-5.0565
968	CRTFP Ux+	0	0	0	0	0	0
968	CRTFP Ux-	0	0	0	0	0	0
968	CRTFP Uy+	0	0	0	0	0	0
968	CRTFP Uy-	0	0	0	0	0	0
970	SLU 1	-0.56	-0.09	32.43	-16.1984	-0.8289	-0.3267
970	SLU 2	-0.56	-0.01	32.42	-16.193	-0.8286	-0.3253
970	SLU 3	-0.58	-0.09	33.18	-16.5691	-0.8479	-0.3346
970	SLU 4	-0.58	-0.04	33.17	-16.5658	-0.8477	-0.3338
970	SLU 5	-0.57	-0.02	32.88	-16.4242	-0.8404	-0.3309
970	SLU 6	-0.59	-0.09	33.65	-16.8004	-0.8598	-0.3402
970	SLU 7	-0.59	-0.05	33.64	-16.7971	-0.8596	-0.3394
970	SLU 8	-0.58	-0.09	33.37	-16.6609	-0.8526	-0.3378
970	SLU 9	-0.58	-0.05	33.36	-16.6576	-0.8524	-0.337
970	SLU 10	-0.61	0	36.45	-18.1792	-0.9312	-0.3542
970	SLU 11	-0.63	-0.08	37.22	-18.5553	-0.9505	-0.3636
970	SLU 12	-0.63	-0.04	37.21	-18.5521	-0.9503	-0.3627
970	SLU 13	-0.62	-0.01	36.92	-18.4104	-0.943	-0.3598
970	SLU 14	-0.64	-0.08	37.68	-18.7866	-0.9624	-0.3691

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
970	SLU 15	-0.64	-0.04	37.68	-18.7833	-0.9622	-0.3683
970	SLU 16	-0.63	-0.09	37.4	-18.6471	-0.9552	-0.3668
970	SLU 17	-0.63	-0.04	37.39	-18.6438	-0.955	-0.3659
970	SLU 18	-0.63	-0.08	38.19	-19.0359	-0.9755	-0.368
970	SLU 19	-0.63	-0.03	38.19	-19.0326	-0.9753	-0.3672
970	SLU 20	-0.64	-0.08	38.66	-19.2671	-0.9873	-0.3736
970	SLU 21	-0.64	-0.03	38.65	-19.2638	-0.9871	-0.3728
970	SLU 22	-0.62	-0.08	36.5	-18.2029	-0.9324	-0.3587
970	SLU 23	-0.62	0	36.49	-18.1975	-0.9321	-0.3573
970	SLU 24	-0.63	-0.08	37.25	-18.5736	-0.9514	-0.3666
970	SLU 25	-0.63	-0.03	37.25	-18.5703	-0.9512	-0.3658
970	SLU 26	-0.63	0	36.96	-18.4287	-0.9439	-0.3629
970	SLU 27	-0.64	-0.08	37.72	-18.8049	-0.9633	-0.3722
970	SLU 28	-0.64	-0.03	37.71	-18.8016	-0.9631	-0.3714
970	SLU 29	-0.64	-0.08	37.44	-18.6654	-0.9561	-0.3698
970	SLU 30	-0.64	-0.04	37.43	-18.6621	-0.9559	-0.369
970	SLU 31	-0.67	0.01	40.53	-20.1837	-1.0347	-0.3862
970	SLU 32	-0.68	-0.07	41.29	-20.5598	-1.054	-0.3956
970	SLU 33	-0.68	-0.02	41.28	-20.5566	-1.0538	-0.3947
970	SLU 34	-0.68	0	40.99	-20.4149	-1.0465	-0.3918
970	SLU 35	-0.69	-0.07	41.76	-20.7911	-1.0659	-0.4011
970	SLU 36	-0.69	-0.03	41.75	-20.7878	-1.0657	-0.4003
970	SLU 37	-0.69	-0.07	41.48	-20.6516	-1.0587	-0.3988
970	SLU 38	-0.69	-0.03	41.47	-20.6483	-1.0585	-0.3979
970	SLU 39	-0.69	-0.07	42.27	-21.0404	-1.079	-0.4
970	SLU 40	-0.69	-0.02	42.26	-21.0371	-1.0788	-0.3992
970	SLU 41	-0.7	-0.07	42.74	-21.2716	-1.0908	-0.4056
970	SLU 42	-0.7	-0.02	42.73	-21.2683	-1.0906	-0.4048
970	SLU 43	-0.71	-0.12	40.76	-20.3707	-1.042	-0.4137
970	SLU 44	-0.71	-0.04	40.75	-20.3652	-1.0417	-0.4123
970	SLU 45	-0.73	-0.12	41.51	-20.7414	-1.0611	-0.4216
970	SLU 46	-0.73	-0.07	41.5	-20.7381	-1.0609	-0.4208
970	SLU 47	-0.72	-0.05	41.22	-20.5965	-1.0536	-0.4179
970	SLU 48	-0.73	-0.12	41.98	-20.9726	-1.0729	-0.4272
970	SLU 49	-0.74	-0.08	41.97	-20.9694	-1.0727	-0.4264
970	SLU 50	-0.73	-0.12	41.7	-20.8332	-1.0657	-0.4249
970	SLU 51	-0.73	-0.08	41.69	-20.8299	-1.0656	-0.424
970	SLU 52	-0.76	-0.04	44.78	-22.3514	-1.1443	-0.4413
970	SLU 53	-0.78	-0.11	45.55	-22.7276	-1.1637	-0.4506
970	SLU 54	-0.78	-0.07	45.54	-22.7243	-1.1635	-0.4498
970	SLU 55	-0.77	-0.04	45.25	-22.5827	-1.1562	-0.4468
970	SLU 56	-0.79	-0.11	46.02	-22.9588	-1.1755	-0.4562
970	SLU 57	-0.79	-0.07	46.01	-22.9556	-1.1753	-0.4553
970	SLU 58	-0.78	-0.12	45.73	-22.8194	-1.1684	-0.4538
970	SLU 59	-0.78	-0.07	45.73	-22.8161	-1.1682	-0.453
970	SLU 60	-0.78	-0.11	46.53	-23.2081	-1.1886	-0.4551
970	SLU 61	-0.78	-0.06	46.52	-23.2049	-1.1884	-0.4542
970	SLU 62	-0.79	-0.11	46.99	-23.4394	-1.2005	-0.4606
970	SLU 63	-0.79	-0.06	46.99	-23.4361	-1.2003	-0.4598
970	SLU 64	-0.77	-0.11	44.84	-22.3752	-1.1456	-0.4457
970	SLU 65	-0.77	-0.03	44.82	-22.3697	-1.1452	-0.4443
970	SLU 66	-0.78	-0.11	45.59	-22.7459	-1.1646	-0.4536
970	SLU 67	-0.78	-0.06	45.58	-22.7426	-1.1644	-0.4528
970	SLU 68	-0.78	-0.03	45.29	-22.601	-1.1571	-0.4499
970	SLU 69	-0.79	-0.11	46.05	-22.9771	-1.1765	-0.4592
970	SLU 70	-0.79	-0.07	46.05	-22.9739	-1.1763	-0.4584
970	SLU 71	-0.79	-0.11	45.77	-22.8377	-1.1693	-0.4569
970	SLU 72	-0.79	-0.07	45.76	-22.8344	-1.1691	-0.456
970	SLU 73	-0.82	-0.02	48.86	-24.3559	-1.2478	-0.4733
970	SLU 74	-0.83	-0.1	49.62	-24.7321	-1.2672	-0.4826
970	SLU 75	-0.83	-0.05	49.61	-24.7288	-1.267	-0.4818
970	SLU 76	-0.83	-0.03	49.33	-24.5872	-1.2597	-0.4788
970	SLU 77	-0.84	-0.1	50.09	-24.9633	-1.2791	-0.4882
970	SLU 78	-0.84	-0.06	50.08	-24.9601	-1.2789	-0.4873
970	SLU 79	-0.84	-0.1	49.81	-24.8239	-1.2719	-0.4858
970	SLU 80	-0.84	-0.06	49.8	-24.8206	-1.2717	-0.485
970	SLU 81	-0.84	-0.1	50.6	-25.2126	-1.2921	-0.4871
970	SLU 82	-0.84	-0.05	50.59	-25.2094	-1.292	-0.4862
970	SLU 83	-0.85	-0.1	51.07	-25.4439	-1.304	-0.4926
970	SLU 84	-0.85	-0.05	51.06	-25.4406	-1.3038	-0.4918
970	SLE RA 1	-0.58	-0.09	33.59	-16.7711	-0.8585	-0.3358
970	SLE RA 2	-0.58	-0.03	33.58	-16.7675	-0.8582	-0.3349
970	SLE RA 3	-0.59	-0.09	34.09	-17.0183	-0.8711	-0.3411
970	SLE RA 4	-0.59	-0.06	34.09	-17.0161	-0.871	-0.3406
970	SLE RA 5	-0.59	-0.04	33.9	-16.9217	-0.8661	-0.3386
970	SLE RA 6	-0.59	-0.09	34.41	-17.1724	-0.879	-0.3448
970	SLE RA 7	-0.59	-0.06	34.4	-17.1702	-0.8789	-0.3443
970	SLE RA 8	-0.59	-0.09	34.22	-17.0795	-0.8743	-0.3433
970	SLE RA 9	-0.59	-0.06	34.21	-17.0773	-0.8741	-0.3427
970	SLE RA 10	-0.61	-0.03	36.27	-18.0916	-0.9266	-0.3542
970	SLE RA 11	-0.62	-0.08	36.78	-18.3424	-0.9396	-0.3604
970	SLE RA 12	-0.62	-0.05	36.78	-18.3402	-0.9394	-0.3599
970	SLE RA 13	-0.62	-0.03	36.59	-18.2458	-0.9345	-0.3579
970	SLE RA 14	-0.63	-0.08	37.1	-18.4966	-0.9475	-0.3641
970	SLE RA 15	-0.63	-0.05	37.09	-18.4944	-0.9473	-0.3636
970	SLE RA 16	-0.62	-0.08	36.91	-18.4036	-0.9427	-0.3626
970	SLE RA 17	-0.62	-0.05	36.9	-18.4014	-0.9425	-0.362
970	SLE RA 18	-0.63	-0.08	37.44	-18.6628	-0.9562	-0.3634
970	SLE RA 19	-0.63	-0.05	37.43	-18.6606	-0.956	-0.3628
970	SLE RA 20	-0.63	-0.08	37.75	-18.8169	-0.9641	-0.3671

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
970	SLE RA 21	-0.63	-0.05	37.74	-18.8147	-0.9639	-0.3666
970	SLE FR 1	-0.58	-0.09	33.59	-16.7711	-0.8585	-0.3358
970	SLE FR 2	-0.58	-0.08	33.59	-16.7704	-0.8584	-0.3356
970	SLE FR 3	-0.58	-0.09	33.72	-16.8328	-0.8616	-0.3373
970	SLE FR 4	-0.59	-0.07	34.74	-17.3379	-0.8877	-0.3439
970	SLE FR 5	-0.6	-0.08	34.87	-17.4003	-0.8909	-0.3456
970	SLE FR 6	-0.6	-0.08	35.52	-17.7169	-0.9073	-0.3496
970	SLE QP 1	-0.58	-0.09	33.59	-16.7711	-0.8585	-0.3358
970	SLE QP 2	-0.59	-0.08	34.75	-17.3386	-0.8878	-0.3441
970	SLD 1	2.82	1.35	43.91	-21.948	-1.113	1.6424
970	SLD 2	2.47	0.72	44.29	-22.1264	-1.1224	1.4256
970	SLD 3	2.73	0.05	44.5	-22.2156	-1.1275	1.5605
970	SLD 4	2.38	-0.57	44.88	-22.3941	-1.1369	1.3437
970	SLD 5	0.63	2.43	36.54	-18.2838	-0.9317	0.4146
970	SLD 6	0.4	2.01	36.79	-18.4007	-0.9379	0.2725
970	SLD 7	0.33	-1.9	38.49	-19.1759	-0.98	0.1416
970	SLD 8	0.1	-2.31	38.75	-19.2929	-0.9862	-0.0005
970	SLD 9	-1.29	2.14	30.75	-15.3843	-0.7894	-0.6876
970	SLD 10	-1.52	1.73	31	-15.5013	-0.7955	-0.8298
970	SLD 11	-1.58	-2.18	32.71	-16.2765	-0.8377	-0.9607
970	SLD 12	-1.81	-2.59	32.96	-16.3935	-0.8438	-1.1028
970	SLD 13	-3.57	0.41	24.61	-12.2832	-0.6386	-2.0319
970	SLD 14	-3.92	-0.22	25	-12.4616	-0.648	-2.2487
970	SLD 15	-3.66	-0.89	25.2	-12.5508	-0.6531	-2.1138
970	SLD 16	-4	-1.52	25.59	-12.7292	-0.6625	-2.3306
970	SLV 1	7.38	3.23	56.21	-28.1362	-1.4155	4.2985
970	SLV 2	6.57	1.76	57.11	-28.5517	-1.4374	3.7936
970	SLV 3	7.18	0.28	57.54	-28.7425	-1.4483	4.1115
970	SLV 4	6.37	-1.19	58.44	-29.158	-1.4703	3.6066
970	SLV 5	2.25	5.64	39.01	-19.5868	-0.9925	1.4193
970	SLV 6	1.73	4.7	39.59	-19.8546	-1.0067	1.0939
970	SLV 7	1.57	-4.2	43.45	-21.6078	-1.1019	0.7959
970	SLV 8	1.05	-5.14	44.03	-21.8755	-1.1161	0.4705
970	SLV 9	-2.23	4.98	25.47	-12.8017	-0.6595	-1.1587
970	SLV 10	-2.76	4.03	26.04	-13.0695	-0.6736	-1.4841
970	SLV 11	-2.91	-4.86	29.9	-14.8227	-0.7689	-1.7821
970	SLV 12	-3.43	-5.81	30.48	-15.0905	-0.783	-2.1075
970	SLV 13	-7.55	1.02	11.06	-5.5193	-0.3053	-4.2948
970	SLV 14	-8.36	-0.44	11.95	-5.9348	-0.3272	-4.7997
970	SLV 15	-7.76	-1.93	12.39	-6.1256	-0.3381	-4.4818
970	SLV 16	-8.57	-3.39	13.28	-6.5411	-0.3601	-4.9867
970	CRTFP Ux+	0	0	0	0	0	0
970	CRTFP Ux-	0	0	0	0	0	0
970	CRTFP Uy+	0	0	0	0	0	0
970	CRTFP Uy-	0	0	0	0	0	0
971	SLU 1	-0.66	-0.14	34.59	-16.1826	0.1052	-0.3822
971	SLU 2	-0.66	-0.06	34.57	-16.1776	0.1051	-0.3831
971	SLU 3	-0.68	-0.14	35.38	-16.5464	0.1078	-0.3915
971	SLU 4	-0.68	-0.09	35.37	-16.5434	0.1078	-0.3921
971	SLU 5	-0.68	-0.06	35.07	-16.4043	0.1068	-0.3896
971	SLU 6	-0.69	-0.15	35.88	-16.7731	0.1095	-0.398
971	SLU 7	-0.69	-0.1	35.87	-16.7701	0.1095	-0.3985
971	SLU 8	-0.69	-0.15	35.58	-16.636	0.1085	-0.3951
971	SLU 9	-0.69	-0.1	35.57	-16.633	0.1085	-0.3957
971	SLU 10	-0.72	-0.06	38.86	-18.133	0.1189	-0.4177
971	SLU 11	-0.74	-0.15	39.66	-18.5018	0.1216	-0.4261
971	SLU 12	-0.74	-0.1	39.66	-18.4988	0.1215	-0.4267
971	SLU 13	-0.73	-0.06	39.35	-18.3597	0.1205	-0.4242
971	SLU 14	-0.75	-0.15	40.16	-18.7285	0.1233	-0.4326
971	SLU 15	-0.75	-0.1	40.15	-18.7255	0.1232	-0.4332
971	SLU 16	-0.74	-0.15	39.86	-18.5914	0.1223	-0.4298
971	SLU 17	-0.75	-0.1	39.85	-18.5884	0.1222	-0.4303
971	SLU 18	-0.75	-0.15	40.7	-18.976	0.1248	-0.4317
971	SLU 19	-0.75	-0.09	40.7	-18.973	0.1248	-0.4322
971	SLU 20	-0.76	-0.15	41.2	-19.2027	0.1265	-0.4381
971	SLU 21	-0.76	-0.1	41.19	-19.1997	0.1265	-0.4387
971	SLU 22	-0.73	-0.14	38.91	-18.1548	0.1192	-0.4205
971	SLU 23	-0.73	-0.06	38.89	-18.1498	0.1191	-0.4214
971	SLU 24	-0.74	-0.14	39.7	-18.5186	0.1218	-0.4298
971	SLU 25	-0.75	-0.09	39.69	-18.5156	0.1218	-0.4303
971	SLU 26	-0.74	-0.06	39.39	-18.3766	0.1208	-0.4278
971	SLU 27	-0.76	-0.14	40.2	-18.7453	0.1235	-0.4363
971	SLU 28	-0.76	-0.09	40.19	-18.7424	0.1235	-0.4368
971	SLU 29	-0.75	-0.15	39.9	-18.6083	0.1225	-0.4334
971	SLU 30	-0.75	-0.1	39.89	-18.6053	0.1225	-0.434
971	SLU 31	-0.79	-0.06	43.18	-20.1052	0.1328	-0.456
971	SLU 32	-0.8	-0.14	43.98	-20.474	0.1356	-0.4644
971	SLU 33	-0.81	-0.09	43.97	-20.471	0.1355	-0.4649
971	SLU 34	-0.8	-0.06	43.67	-20.3319	0.1345	-0.4625
971	SLU 35	-0.82	-0.14	44.48	-20.7007	0.1373	-0.4709
971	SLU 36	-0.82	-0.09	44.47	-20.6977	0.1372	-0.4714
971	SLU 37	-0.81	-0.15	44.18	-20.5636	0.1363	-0.468
971	SLU 38	-0.81	-0.1	44.17	-20.5606	0.1362	-0.4686
971	SLU 39	-0.81	-0.14	45.02	-20.9482	0.1388	-0.4699
971	SLU 40	-0.81	-0.09	45.02	-20.9452	0.1388	-0.4705
971	SLU 41	-0.83	-0.14	45.52	-21.1749	0.1405	-0.4764
971	SLU 42	-0.83	-0.09	45.51	-21.1719	0.1404	-0.4769
971	SLU 43	-0.84	-0.19	43.48	-20.3612	0.1319	-0.4837
971	SLU 44	-0.84	-0.11	43.47	-20.3562	0.1319	-0.4846
971	SLU 45	-0.85	-0.19	44.28	-20.725	0.1346	-0.4931

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
971	SLU 46	-0.86	-0.14	44.27	-20.722	0.1345	-0.4936
971	SLU 47	-0.85	-0.11	43.96	-20.5829	0.1335	-0.4911
971	SLU 48	-0.87	-0.19	44.77	-20.9517	0.1363	-0.4995
971	SLU 49	-0.87	-0.14	44.76	-20.9487	0.1362	-0.5001
971	SLU 50	-0.86	-0.2	44.47	-20.8146	0.1353	-0.4967
971	SLU 51	-0.86	-0.14	44.46	-20.8116	0.1352	-0.4972
971	SLU 52	-0.9	-0.11	47.75	-22.3116	0.1456	-0.5193
971	SLU 53	-0.91	-0.19	48.56	-22.6803	0.1483	-0.5277
971	SLU 54	-0.92	-0.14	48.55	-22.6774	0.1483	-0.5282
971	SLU 55	-0.91	-0.11	48.25	-22.5383	0.1473	-0.5257
971	SLU 56	-0.93	-0.19	49.05	-22.9071	0.15	-0.5342
971	SLU 57	-0.93	-0.14	49.05	-22.9041	0.15	-0.5347
971	SLU 58	-0.92	-0.2	48.75	-22.77	0.149	-0.5313
971	SLU 59	-0.92	-0.15	48.75	-22.767	0.149	-0.5319
971	SLU 60	-0.92	-0.19	49.6	-23.1545	0.1516	-0.5332
971	SLU 61	-0.92	-0.14	49.59	-23.1516	0.1515	-0.5337
971	SLU 62	-0.94	-0.19	50.09	-23.3813	0.1533	-0.5397
971	SLU 63	-0.94	-0.14	50.09	-23.3783	0.1532	-0.5402
971	SLU 64	-0.9	-0.18	47.8	-22.3334	0.1459	-0.522
971	SLU 65	-0.91	-0.1	47.79	-22.3284	0.1458	-0.5229
971	SLU 66	-0.92	-0.18	48.6	-22.6972	0.1486	-0.5313
971	SLU 67	-0.92	-0.13	48.59	-22.6942	0.1485	-0.5319
971	SLU 68	-0.92	-0.1	48.28	-22.5551	0.1475	-0.5294
971	SLU 69	-0.93	-0.19	49.09	-22.9239	0.1503	-0.5378
971	SLU 70	-0.93	-0.14	49.08	-22.9209	0.1502	-0.5383
971	SLU 71	-0.93	-0.19	48.79	-22.7868	0.1493	-0.5349
971	SLU 72	-0.93	-0.14	48.78	-22.7839	0.1492	-0.5355
971	SLU 73	-0.97	-0.1	52.07	-24.2838	0.1596	-0.5575
971	SLU 74	-0.98	-0.19	52.88	-24.6526	0.1623	-0.5659
971	SLU 75	-0.98	-0.14	52.87	-24.6496	0.1623	-0.5665
971	SLU 76	-0.98	-0.1	52.56	-24.5105	0.1613	-0.564
971	SLU 77	-0.99	-0.19	53.37	-24.8793	0.164	-0.5724
971	SLU 78	-0.99	-0.14	53.36	-24.8763	0.164	-0.573
971	SLU 79	-0.99	-0.19	53.07	-24.7422	0.163	-0.5696
971	SLU 80	-0.99	-0.14	53.06	-24.7392	0.163	-0.5701
971	SLU 81	-0.99	-0.19	53.92	-25.1268	0.1656	-0.5715
971	SLU 82	-0.99	-0.13	53.91	-25.1238	0.1655	-0.572
971	SLU 83	-1	-0.19	54.41	-25.3535	0.1672	-0.5779
971	SLU 84	-1	-0.14	54.41	-25.3505	0.1672	-0.5785
971	SLE RA 1	-0.68	-0.14	35.82	-16.7461	0.1092	-0.3931
971	SLE RA 2	-0.68	-0.09	35.81	-16.7428	0.1091	-0.3937
971	SLE RA 3	-0.69	-0.14	36.35	-16.9886	0.1109	-0.3993
971	SLE RA 4	-0.69	-0.11	36.35	-16.9866	0.1109	-0.3997
971	SLE RA 5	-0.69	-0.09	36.14	-16.8939	0.1102	-0.398
971	SLE RA 6	-0.7	-0.15	36.68	-17.1398	0.1121	-0.4037
971	SLE RA 7	-0.7	-0.11	36.68	-17.1378	0.112	-0.404
971	SLE RA 8	-0.7	-0.15	36.48	-17.0484	0.1114	-0.4018
971	SLE RA 9	-0.7	-0.11	36.48	-17.0464	0.1114	-0.4021
971	SLE RA 10	-0.72	-0.09	38.67	-18.0463	0.1183	-0.4168
971	SLE RA 11	-0.73	-0.14	39.21	-18.2922	0.1201	-0.4224
971	SLE RA 12	-0.73	-0.11	39.2	-18.2902	0.1201	-0.4228
971	SLE RA 13	-0.73	-0.09	39	-18.1975	0.1194	-0.4211
971	SLE RA 14	-0.74	-0.15	39.54	-18.4433	0.1212	-0.4267
971	SLE RA 15	-0.74	-0.11	39.53	-18.4414	0.1212	-0.4271
971	SLE RA 16	-0.74	-0.15	39.34	-18.3519	0.1206	-0.4248
971	SLE RA 17	-0.74	-0.11	39.33	-18.35	0.1205	-0.4252
971	SLE RA 18	-0.74	-0.14	39.9	-18.6083	0.1223	-0.4261
971	SLE RA 19	-0.74	-0.11	39.89	-18.6063	0.1222	-0.4265
971	SLE RA 20	-0.75	-0.15	40.23	-18.7595	0.1234	-0.4304
971	SLE RA 21	-0.75	-0.11	40.22	-18.7575	0.1234	-0.4308
971	SLE FR 1	-0.68	-0.14	35.82	-16.7461	0.1092	-0.3931
971	SLE FR 2	-0.68	-0.13	35.82	-16.7454	0.1092	-0.3932
971	SLE FR 3	-0.68	-0.14	35.95	-16.8065	0.1096	-0.3949
971	SLE FR 4	-0.7	-0.13	37.04	-17.3041	0.1131	-0.4031
971	SLE FR 5	-0.7	-0.14	37.18	-17.3652	0.1135	-0.4047
971	SLE FR 6	-0.71	-0.14	37.86	-17.6772	0.1157	-0.4096
971	SLE QP 1	-0.68	-0.14	35.82	-16.7461	0.1092	-0.3931
971	SLE QP 2	-0.7	-0.14	37.05	-17.3047	0.1131	-0.403
971	SLD 1	3.3	1.44	46.4	-21.7183	0.1566	1.8938
971	SLD 2	2.89	0.75	46.79	-21.8875	0.1585	1.661
971	SLD 3	3.19	0	47	-21.9792	0.1599	1.8369
971	SLD 4	2.79	-0.69	47.39	-22.1484	0.1618	1.6041
971	SLD 5	0.73	2.63	38.87	-18.2029	0.1207	0.4138
971	SLD 6	0.46	2.18	39.13	-18.3138	0.1219	0.2611
971	SLD 7	0.39	-2.16	40.88	-19.0728	0.1319	0.224
971	SLD 8	0.12	-2.61	41.13	-19.1838	0.1332	0.0714
971	SLD 9	-1.52	2.32	32.96	-15.4257	0.093	-0.8774
971	SLD 10	-1.78	1.87	33.21	-15.5366	0.0943	-1.0301
971	SLD 11	-1.86	-2.47	34.97	-16.2957	0.1043	-1.0672
971	SLD 12	-2.13	-2.92	35.22	-16.4066	0.1055	-1.2198
971	SLD 13	-4.18	0.4	26.7	-12.461	0.0644	-2.4101
971	SLD 14	-4.59	-0.29	27.09	-12.6302	0.0662	-2.643
971	SLD 15	-4.29	-1.03	27.3	-12.722	0.0677	-2.467
971	SLD 16	-4.69	-1.72	27.69	-12.8912	0.0696	-2.6999
971	SLV 1	8.64	3.51	58.96	-27.6434	0.2149	4.9664
971	SLV 2	7.69	1.9	59.87	-28.0375	0.2193	4.4241
971	SLV 3	8.41	0.24	60.33	-28.235	0.2227	4.8357
971	SLV 4	7.46	-1.37	61.24	-28.6291	0.2271	4.2934
971	SLV 5	2.63	6.19	41.39	-19.4412	0.1312	1.4994
971	SLV 6	2.01	5.16	41.98	-19.6951	0.134	1.15

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
971	SLV 7	1.84	-4.71	45.94	-21.4133	0.1569	1.0638
971	SLV 8	1.23	-5.75	46.53	-21.6672	0.1598	0.7143
971	SLV 9	-2.62	5.46	27.56	-12.9423	0.0664	-1.5203
971	SLV 10	-3.24	4.43	28.15	-13.1962	0.0693	-1.8698
971	SLV 11	-3.41	-5.44	32.11	-14.9144	0.0922	-1.956
971	SLV 12	-4.02	-6.48	32.7	-15.1683	0.095	-2.3055
971	SLV 13	-8.85	1.08	12.85	-5.9804	-0.0009	-5.0995
971	SLV 14	-9.8	-0.52	13.77	-6.3745	0.0035	-5.6418
971	SLV 15	-9.09	-2.19	14.22	-6.572	0.0069	-5.2302
971	SLV 16	-10.04	-3.79	15.13	-6.9661	0.0113	-5.7724
971	CRTFP Ux+	0	0	0	0	0	0
971	CRTFP Ux-	0	0	0	0	0	0
971	CRTFP Uy+	0	0	0	0	0	0
971	CRTFP Uy-	0	0	0	0	0	0
972	SLU 1	-0.67	-0.18	31.61	-13.778	0.0824	-0.3849
972	SLU 2	-0.67	-0.1	31.59	-13.7743	0.0824	-0.3858
972	SLU 3	-0.68	-0.18	32.32	-14.0811	0.0845	-0.3943
972	SLU 4	-0.69	-0.13	32.32	-14.0789	0.0845	-0.3948
972	SLU 5	-0.68	-0.1	32.04	-13.9629	0.0837	-0.3923
972	SLU 6	-0.7	-0.18	32.77	-14.2697	0.0858	-0.4008
972	SLU 7	-0.7	-0.13	32.76	-14.2675	0.0858	-0.4013
972	SLU 8	-0.69	-0.18	32.5	-14.1552	0.0851	-0.3979
972	SLU 9	-0.69	-0.13	32.49	-14.153	0.085	-0.3985
972	SLU 10	-0.73	-0.11	35.49	-15.4115	0.093	-0.4209
972	SLU 11	-0.74	-0.19	36.22	-15.7183	0.0951	-0.4294
972	SLU 12	-0.75	-0.14	36.21	-15.7161	0.0951	-0.4299
972	SLU 13	-0.74	-0.11	35.93	-15.6001	0.0943	-0.4274
972	SLU 14	-0.76	-0.19	36.66	-15.9069	0.0965	-0.4359
972	SLU 15	-0.76	-0.14	36.66	-15.9047	0.0964	-0.4364
972	SLU 16	-0.75	-0.19	36.39	-15.7924	0.0957	-0.433
972	SLU 17	-0.75	-0.14	36.39	-15.7902	0.0957	-0.4336
972	SLU 18	-0.75	-0.19	37.17	-16.1168	0.0976	-0.435
972	SLU 19	-0.76	-0.14	37.16	-16.1146	0.0976	-0.4356
972	SLU 20	-0.77	-0.19	37.61	-16.3054	0.0989	-0.4415
972	SLU 21	-0.77	-0.15	37.61	-16.3032	0.0989	-0.4421
972	SLU 22	-0.73	-0.18	35.53	-15.4277	0.0933	-0.4236
972	SLU 23	-0.74	-0.1	35.52	-15.424	0.0932	-0.4245
972	SLU 24	-0.75	-0.18	36.25	-15.7308	0.0954	-0.433
972	SLU 25	-0.75	-0.13	36.24	-15.7286	0.0953	-0.4335
972	SLU 26	-0.75	-0.1	35.97	-15.6126	0.0945	-0.431
972	SLU 27	-0.76	-0.18	36.7	-15.9194	0.0967	-0.4395
972	SLU 28	-0.76	-0.13	36.69	-15.9172	0.0966	-0.44
972	SLU 29	-0.76	-0.18	36.42	-15.8049	0.0959	-0.4366
972	SLU 30	-0.76	-0.14	36.42	-15.8027	0.0959	-0.4372
972	SLU 31	-0.8	-0.11	39.41	-17.0612	0.1039	-0.4596
972	SLU 32	-0.81	-0.19	40.14	-17.368	0.106	-0.4681
972	SLU 33	-0.81	-0.14	40.14	-17.3658	0.106	-0.4686
972	SLU 34	-0.81	-0.11	39.86	-17.2498	0.1052	-0.4661
972	SLU 35	-0.82	-0.19	40.59	-17.5566	0.1073	-0.4746
972	SLU 36	-0.82	-0.14	40.58	-17.5544	0.1073	-0.4751
972	SLU 37	-0.82	-0.19	40.32	-17.4421	0.1066	-0.4717
972	SLU 38	-0.82	-0.15	40.31	-17.4399	0.1065	-0.4723
972	SLU 39	-0.82	-0.19	41.09	-17.7665	0.1085	-0.4737
972	SLU 40	-0.82	-0.14	41.09	-17.7643	0.1084	-0.4743
972	SLU 41	-0.83	-0.19	41.54	-17.9551	0.1098	-0.4802
972	SLU 42	-0.83	-0.15	41.53	-17.9529	0.1098	-0.4808
972	SLU 43	-0.85	-0.23	39.74	-17.3458	0.1034	-0.4871
972	SLU 44	-0.85	-0.15	39.73	-17.3421	0.1034	-0.488
972	SLU 45	-0.86	-0.23	40.46	-17.6489	0.1055	-0.4965
972	SLU 46	-0.86	-0.18	40.45	-17.6467	0.1055	-0.497
972	SLU 47	-0.86	-0.15	40.18	-17.5307	0.1047	-0.4945
972	SLU 48	-0.87	-0.23	40.91	-17.8375	0.1068	-0.503
972	SLU 49	-0.87	-0.18	40.9	-17.8353	0.1068	-0.5035
972	SLU 50	-0.87	-0.23	40.64	-17.723	0.1061	-0.5001
972	SLU 51	-0.87	-0.19	40.63	-17.7208	0.106	-0.5007
972	SLU 52	-0.91	-0.16	43.62	-18.9793	0.114	-0.5231
972	SLU 53	-0.92	-0.24	44.35	-19.2861	0.1162	-0.5316
972	SLU 54	-0.92	-0.19	44.35	-19.2839	0.1161	-0.5321
972	SLU 55	-0.92	-0.16	44.07	-19.1679	0.1153	-0.5296
972	SLU 56	-0.93	-0.24	44.8	-19.4747	0.1175	-0.5381
972	SLU 57	-0.93	-0.19	44.79	-19.4725	0.1174	-0.5386
972	SLU 58	-0.93	-0.24	44.53	-19.3602	0.1167	-0.5352
972	SLU 59	-0.93	-0.2	44.52	-19.358	0.1167	-0.5358
972	SLU 60	-0.93	-0.24	45.3	-19.6846	0.1186	-0.5372
972	SLU 61	-0.93	-0.19	45.3	-19.6824	0.1186	-0.5378
972	SLU 62	-0.94	-0.24	45.75	-19.8732	0.1199	-0.5437
972	SLU 63	-0.94	-0.2	45.74	-19.871	0.1199	-0.5443
972	SLU 64	-0.91	-0.23	43.67	-18.9955	0.1143	-0.5258
972	SLU 65	-0.91	-0.15	43.65	-18.9918	0.1142	-0.5267
972	SLU 66	-0.93	-0.23	44.38	-19.2986	0.1164	-0.5352
972	SLU 67	-0.93	-0.18	44.38	-19.2964	0.1163	-0.5357
972	SLU 68	-0.93	-0.15	44.1	-19.1804	0.1155	-0.5332
972	SLU 69	-0.94	-0.23	44.83	-19.4872	0.1177	-0.5417
972	SLU 70	-0.94	-0.19	44.82	-19.485	0.1176	-0.5422
972	SLU 71	-0.94	-0.24	44.56	-19.3727	0.1169	-0.5388
972	SLU 72	-0.94	-0.19	44.55	-19.3705	0.1169	-0.5394
972	SLU 73	-0.97	-0.16	47.55	-20.629	0.1249	-0.5618
972	SLU 74	-0.99	-0.24	48.28	-20.9358	0.127	-0.5703
972	SLU 75	-0.99	-0.19	48.27	-20.9335	0.127	-0.5708
972	SLU 76	-0.99	-0.16	48	-20.8176	0.1262	-0.5683

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
972	SLU 77	-1	-0.24	48.72	-21.1244	0.1283	-0.5768
972	SLU 78	-1	-0.2	48.72	-21.1222	0.1283	-0.5773
972	SLU 79	-1	-0.25	48.45	-21.0099	0.1276	-0.5739
972	SLU 80	-1	-0.2	48.45	-21.0077	0.1275	-0.5745
972	SLU 81	-1	-0.24	49.23	-21.3343	0.1295	-0.5759
972	SLU 82	-1	-0.2	49.22	-21.3321	0.1294	-0.5765
972	SLU 83	-1.01	-0.25	49.67	-21.5229	0.1308	-0.5824
972	SLU 84	-1.01	-0.2	49.67	-21.5207	0.1308	-0.583
972	SLE RA 1	-0.69	-0.18	32.73	-14.2493	0.0855	-0.396
972	SLE RA 2	-0.69	-0.12	32.72	-14.2469	0.0855	-0.3966
972	SLE RA 3	-0.7	-0.18	33.21	-14.4514	0.0869	-0.4022
972	SLE RA 4	-0.7	-0.14	33.2	-14.4499	0.0869	-0.4026
972	SLE RA 5	-0.7	-0.13	33.02	-14.3726	0.0864	-0.4009
972	SLE RA 6	-0.71	-0.18	33.5	-14.5771	0.0878	-0.4065
972	SLE RA 7	-0.71	-0.15	33.5	-14.5757	0.0878	-0.4069
972	SLE RA 8	-0.7	-0.18	33.32	-14.5008	0.0873	-0.4046
972	SLE RA 9	-0.7	-0.15	33.32	-14.4993	0.0873	-0.405
972	SLE RA 10	-0.73	-0.13	35.32	-15.3383	0.0926	-0.42
972	SLE RA 11	-0.74	-0.18	35.8	-15.5429	0.094	-0.4256
972	SLE RA 12	-0.74	-0.15	35.8	-15.5414	0.094	-0.426
972	SLE RA 13	-0.74	-0.13	35.61	-15.4641	0.0935	-0.4243
972	SLE RA 14	-0.75	-0.19	36.1	-15.6686	0.0949	-0.4299
972	SLE RA 15	-0.75	-0.15	36.09	-15.6671	0.0949	-0.4303
972	SLE RA 16	-0.74	-0.19	35.92	-15.5923	0.0944	-0.428
972	SLE RA 17	-0.74	-0.16	35.91	-15.5908	0.0943	-0.4284
972	SLE RA 18	-0.74	-0.19	36.44	-15.8086	0.0957	-0.4294
972	SLE RA 19	-0.75	-0.15	36.43	-15.8071	0.0956	-0.4297
972	SLE RA 20	-0.75	-0.19	36.73	-15.9343	0.0965	-0.4337
972	SLE RA 21	-0.75	-0.16	36.73	-15.9328	0.0965	-0.4341
972	SLE FR 1	-0.69	-0.18	32.73	-14.2493	0.0855	-0.396
972	SLE FR 2	-0.69	-0.17	32.73	-14.2488	0.0855	-0.3961
972	SLE FR 3	-0.69	-0.18	32.85	-14.2996	0.0859	-0.3977
972	SLE FR 4	-0.7	-0.17	33.84	-14.7166	0.0886	-0.4061
972	SLE FR 5	-0.71	-0.18	33.96	-14.7674	0.0889	-0.4077
972	SLE FR 6	-0.72	-0.18	34.58	-15.0289	0.0906	-0.4127
972	SLE QP 1	-0.69	-0.18	32.73	-14.2493	0.0855	-0.396
972	SLE QP 2	-0.7	-0.18	33.84	-14.7171	0.0886	-0.406
972	SLD 1	3.3	1.3	41.91	-18.2358	0.1255	1.8941
972	SLD 2	2.89	0.66	42.24	-18.3686	0.1271	1.661
972	SLD 3	3.19	-0.05	42.43	-18.4571	0.1284	1.8375
972	SLD 4	2.79	-0.69	42.77	-18.59	0.13	1.6045
972	SLD 5	0.72	2.43	35.4	-15.4134	0.095	0.4113
972	SLD 6	0.46	2.01	35.62	-15.5005	0.0961	0.2585
972	SLD 7	0.38	-2.08	37.16	-16.1512	0.1046	0.2227
972	SLD 8	0.12	-2.5	37.38	-16.2383	0.1057	0.0699
972	SLD 9	-1.52	2.14	30.3	-13.1959	0.0715	-0.8819
972	SLD 10	-1.79	1.72	30.52	-13.283	0.0725	-1.0347
972	SLD 11	-1.86	-2.37	32.06	-13.9337	0.0811	-1.0705
972	SLD 12	-2.13	-2.79	32.28	-14.0208	0.0821	-1.2233
972	SLD 13	-4.2	0.33	24.91	-10.8442	0.0471	-2.4164
972	SLD 14	-4.6	-0.31	25.25	-10.9771	0.0487	-2.6495
972	SLD 15	-4.3	-1.02	25.44	-11.0656	0.05	-2.473
972	SLD 16	-4.71	-1.66	25.77	-11.1984	0.0516	-2.7061
972	SLV 1	8.65	3.25	52.73	-22.9592	0.1752	4.9711
972	SLV 2	7.7	1.75	53.52	-23.2687	0.1789	4.4282
972	SLV 3	8.41	0.17	53.93	-23.4625	0.1818	4.8411
972	SLV 4	7.46	-1.33	54.71	-23.772	0.1855	4.2983
972	SLV 5	2.62	5.78	37.56	-16.3731	0.1039	1.4977
972	SLV 6	2.01	4.81	38.06	-16.5725	0.1063	1.1479
972	SLV 7	1.84	-4.49	41.55	-18.0508	0.1259	1.0646
972	SLV 8	1.23	-5.45	42.05	-18.2502	0.1283	0.7148
972	SLV 9	-2.64	5.09	25.62	-11.184	0.0488	-1.5267
972	SLV 10	-3.25	4.13	26.13	-11.3834	0.0512	-1.8765
972	SLV 11	-3.42	-5.17	29.62	-12.8617	0.0708	-1.9598
972	SLV 12	-4.03	-6.13	30.12	-13.0611	0.0732	-2.3096
972	SLV 13	-8.87	0.97	12.96	-5.6622	-0.0084	-5.1103
972	SLV 14	-9.82	-0.52	13.75	-5.9717	-0.0046	-5.6531
972	SLV 15	-9.11	-2.11	14.16	-6.1655	-0.0018	-5.2402
972	SLV 16	-10.06	-3.6	14.94	-6.475	0.0019	-5.783
972	CRTFP Ux+	0	0	0	0	0	0
972	CRTFP Ux-	0	0	0	0	0	0
972	CRTFP Uy+	0	0	0	0	0	0
972	CRTFP Uy-	0	0	0	0	0	0
973	SLU 1	-0.67	-0.2	29.39	-12.0205	0.0574	-0.3874
973	SLU 2	-0.67	-0.12	29.38	-12.0179	0.0574	-0.3883
973	SLU 3	-0.69	-0.2	30.05	-12.2793	0.0589	-0.3968
973	SLU 4	-0.69	-0.15	30.04	-12.2777	0.0588	-0.3973
973	SLU 5	-0.69	-0.13	29.79	-12.1785	0.0583	-0.3948
973	SLU 6	-0.7	-0.2	30.46	-12.44	0.0598	-0.4033
973	SLU 7	-0.7	-0.16	30.45	-12.4384	0.0597	-0.4039
973	SLU 8	-0.7	-0.2	30.21	-12.3419	0.0592	-0.4004
973	SLU 9	-0.7	-0.16	30.2	-12.3403	0.0592	-0.401
973	SLU 10	-0.74	-0.14	32.99	-13.4254	0.0646	-0.4239
973	SLU 11	-0.75	-0.21	33.66	-13.6868	0.0661	-0.4324
973	SLU 12	-0.75	-0.17	33.65	-13.6852	0.066	-0.4329
973	SLU 13	-0.75	-0.14	33.4	-13.586	0.0655	-0.4304
973	SLU 14	-0.76	-0.22	34.07	-13.8475	0.067	-0.4389
973	SLU 15	-0.76	-0.17	34.06	-13.8459	0.067	-0.4395
973	SLU 16	-0.76	-0.22	33.82	-13.7494	0.0665	-0.436
973	SLU 17	-0.76	-0.18	33.81	-13.7478	0.0664	-0.4366

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
973	SLU 18	-0.76	-0.22	34.54	-14.0313	0.0677	-0.4382
973	SLU 19	-0.76	-0.18	34.54	-14.0297	0.0677	-0.4388
973	SLU 20	-0.77	-0.22	34.95	-14.1919	0.0686	-0.4448
973	SLU 21	-0.77	-0.18	34.95	-14.1903	0.0686	-0.4453
973	SLU 22	-0.74	-0.2	33.02	-13.4367	0.0648	-0.4265
973	SLU 23	-0.74	-0.13	33.01	-13.434	0.0648	-0.4274
973	SLU 24	-0.76	-0.2	33.68	-13.6954	0.0663	-0.436
973	SLU 25	-0.76	-0.16	33.68	-13.6938	0.0662	-0.4365
973	SLU 26	-0.75	-0.13	33.42	-13.5947	0.0657	-0.434
973	SLU 27	-0.77	-0.21	34.09	-13.8561	0.0672	-0.4425
973	SLU 28	-0.77	-0.16	34.09	-13.8545	0.0671	-0.443
973	SLU 29	-0.76	-0.21	33.84	-13.7581	0.0666	-0.4396
973	SLU 30	-0.76	-0.17	33.84	-13.7564	0.0666	-0.4401
973	SLU 31	-0.8	-0.15	36.62	-14.8415	0.072	-0.463
973	SLU 32	-0.82	-0.22	37.29	-15.103	0.0735	-0.4715
973	SLU 33	-0.82	-0.18	37.29	-15.1013	0.0734	-0.4721
973	SLU 34	-0.81	-0.15	37.03	-15.0022	0.0729	-0.4696
973	SLU 35	-0.83	-0.22	37.7	-15.2636	0.0744	-0.4781
973	SLU 36	-0.83	-0.18	37.7	-15.262	0.0744	-0.4786
973	SLU 37	-0.82	-0.23	37.45	-15.1656	0.0739	-0.4752
973	SLU 38	-0.83	-0.18	37.45	-15.164	0.0738	-0.4757
973	SLU 39	-0.83	-0.23	38.18	-15.4474	0.0751	-0.4774
973	SLU 40	-0.83	-0.18	38.17	-15.4458	0.0751	-0.4779
973	SLU 41	-0.84	-0.23	38.59	-15.6081	0.076	-0.4839
973	SLU 42	-0.84	-0.19	38.58	-15.6065	0.076	-0.4845
973	SLU 43	-0.85	-0.25	36.95	-15.1412	0.0721	-0.4902
973	SLU 44	-0.85	-0.18	36.95	-15.1385	0.072	-0.4911
973	SLU 45	-0.87	-0.25	37.62	-15.3999	0.0735	-0.4996
973	SLU 46	-0.87	-0.21	37.61	-15.3983	0.0735	-0.5001
973	SLU 47	-0.86	-0.18	37.36	-15.2992	0.073	-0.4976
973	SLU 48	-0.88	-0.26	38.03	-15.5606	0.0745	-0.5061
973	SLU 49	-0.88	-0.21	38.02	-15.559	0.0744	-0.5067
973	SLU 50	-0.87	-0.26	37.78	-15.4625	0.0739	-0.5032
973	SLU 51	-0.87	-0.21	37.77	-15.4609	0.0739	-0.5038
973	SLU 52	-0.91	-0.2	40.56	-16.546	0.0792	-0.5267
973	SLU 53	-0.93	-0.27	41.23	-16.8074	0.0807	-0.5352
973	SLU 54	-0.93	-0.23	41.22	-16.8058	0.0807	-0.5357
973	SLU 55	-0.93	-0.2	40.97	-16.7067	0.0802	-0.5332
973	SLU 56	-0.94	-0.27	41.64	-16.9681	0.0817	-0.5417
973	SLU 57	-0.94	-0.23	41.63	-16.9665	0.0816	-0.5423
973	SLU 58	-0.94	-0.28	41.39	-16.87	0.0811	-0.5388
973	SLU 59	-0.94	-0.23	41.38	-16.8684	0.0811	-0.5394
973	SLU 60	-0.94	-0.28	42.11	-17.1519	0.0824	-0.541
973	SLU 61	-0.94	-0.23	42.11	-17.1503	0.0824	-0.5416
973	SLU 62	-0.95	-0.28	42.52	-17.3126	0.0833	-0.5475
973	SLU 63	-0.95	-0.24	42.52	-17.311	0.0833	-0.5481
973	SLU 64	-0.92	-0.26	40.59	-16.5573	0.0795	-0.5293
973	SLU 65	-0.92	-0.19	40.58	-16.5546	0.0794	-0.5302
973	SLU 66	-0.94	-0.26	41.25	-16.8161	0.0809	-0.5387
973	SLU 67	-0.94	-0.22	41.25	-16.8145	0.0809	-0.5393
973	SLU 68	-0.93	-0.19	40.99	-16.7153	0.0804	-0.5368
973	SLU 69	-0.95	-0.26	41.66	-16.9767	0.0819	-0.5453
973	SLU 70	-0.95	-0.22	41.66	-16.9751	0.0818	-0.5458
973	SLU 71	-0.94	-0.27	41.41	-16.8787	0.0813	-0.5424
973	SLU 72	-0.94	-0.22	41.41	-16.8771	0.0813	-0.5429
973	SLU 73	-0.98	-0.2	44.19	-17.9621	0.0866	-0.5658
973	SLU 74	-1	-0.28	44.86	-18.2236	0.0881	-0.5743
973	SLU 75	-1	-0.23	44.86	-18.222	0.0881	-0.5749
973	SLU 76	-0.99	-0.21	44.6	-18.1228	0.0876	-0.5724
973	SLU 77	-1.01	-0.28	45.27	-18.3843	0.0891	-0.5809
973	SLU 78	-1.01	-0.24	45.27	-18.3826	0.089	-0.5814
973	SLU 79	-1	-0.28	45.02	-18.2862	0.0885	-0.578
973	SLU 80	-1	-0.24	45.02	-18.2846	0.0885	-0.5785
973	SLU 81	-1.01	-0.28	45.75	-18.568	0.0898	-0.5802
973	SLU 82	-1.01	-0.24	45.74	-18.5664	0.0898	-0.5807
973	SLU 83	-1.02	-0.29	46.16	-18.7287	0.0907	-0.5867
973	SLU 84	-1.02	-0.24	46.15	-18.7271	0.0907	-0.5872
973	SLE RA 1	-0.69	-0.2	30.42	-12.4252	0.0595	-0.3986
973	SLE RA 2	-0.69	-0.15	30.42	-12.4234	0.0595	-0.3992
973	SLE RA 3	-0.7	-0.2	30.87	-12.5977	0.0605	-0.4048
973	SLE RA 4	-0.7	-0.17	30.86	-12.5966	0.0605	-0.4052
973	SLE RA 5	-0.7	-0.15	30.69	-12.5305	0.0601	-0.4035
973	SLE RA 6	-0.71	-0.2	31.14	-12.7048	0.0611	-0.4092
973	SLE RA 7	-0.71	-0.17	31.14	-12.7037	0.0611	-0.4096
973	SLE RA 8	-0.71	-0.2	30.97	-12.6394	0.0607	-0.4073
973	SLE RA 9	-0.71	-0.17	30.97	-12.6383	0.0607	-0.4076
973	SLE RA 10	-0.73	-0.16	32.82	-13.3617	0.0643	-0.4229
973	SLE RA 11	-0.74	-0.21	33.27	-13.536	0.0653	-0.4286
973	SLE RA 12	-0.74	-0.18	33.27	-13.5349	0.0653	-0.4289
973	SLE RA 13	-0.74	-0.16	33.1	-13.4688	0.0649	-0.4273
973	SLE RA 14	-0.75	-0.21	33.55	-13.6431	0.0659	-0.4329
973	SLE RA 15	-0.75	-0.18	33.54	-13.642	0.0659	-0.4333
973	SLE RA 16	-0.75	-0.21	33.38	-13.5777	0.0656	-0.431
973	SLE RA 17	-0.75	-0.18	33.37	-13.5767	0.0655	-0.4314
973	SLE RA 18	-0.75	-0.21	33.86	-13.7656	0.0664	-0.4325
973	SLE RA 19	-0.75	-0.19	33.86	-13.7646	0.0664	-0.4328
973	SLE RA 20	-0.76	-0.22	34.14	-13.8728	0.067	-0.4368
973	SLE RA 21	-0.76	-0.19	34.13	-13.8717	0.067	-0.4372
973	SLE FR 1	-0.69	-0.2	30.42	-12.4252	0.0595	-0.3986
973	SLE FR 2	-0.69	-0.19	30.42	-12.4248	0.0595	-0.3987

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
973	SLE FR 3	-0.7	-0.2	30.53	-12.468	0.0598	-0.4003
973	SLE FR 4	-0.71	-0.19	31.45	-12.8269	0.0616	-0.4089
973	SLE FR 5	-0.71	-0.2	31.56	-12.8701	0.0618	-0.4105
973	SLE FR 6	-0.72	-0.21	32.14	-13.0954	0.063	-0.4155
973	SLE QP 1	-0.69	-0.2	30.42	-12.4252	0.0595	-0.3986
973	SLE QP 2	-0.71	-0.2	31.46	-12.8273	0.0616	-0.4087
973	SLD 1	3.3	1.19	38.44	-15.625	0.0916	1.8943
973	SLD 2	2.89	0.6	38.73	-15.7292	0.0929	1.6609
973	SLD 3	3.19	-0.08	38.92	-15.8249	0.0939	1.8379
973	SLD 4	2.79	-0.68	39.21	-15.9292	0.0952	1.6046
973	SLD 5	0.72	2.25	32.78	-13.3448	0.0669	0.4091
973	SLD 6	0.45	1.86	32.97	-13.4131	0.0678	0.2562
973	SLD 7	0.38	-1.99	34.36	-14.0113	0.0745	0.2212
973	SLD 8	0.11	-2.38	34.55	-14.0797	0.0754	0.0683
973	SLD 9	-1.53	1.98	28.36	-11.5749	0.0478	-0.8857
973	SLD 10	-1.8	1.59	28.55	-11.6433	0.0486	-1.0387
973	SLD 11	-1.87	-2.27	29.94	-12.2414	0.0554	-1.0737
973	SLD 12	-2.14	-2.66	30.13	-12.3098	0.0562	-1.2266
973	SLD 13	-4.21	0.27	23.7	-9.7254	0.0279	-2.422
973	SLD 14	-4.61	-0.33	23.99	-9.8297	0.0292	-2.6554
973	SLD 15	-4.31	-1	24.18	-9.9254	0.0302	-2.4784
973	SLD 16	-4.72	-1.6	24.47	-10.0296	0.0315	-2.7117
973	SLV 1	8.65	3.02	47.83	-19.3801	0.132	4.9751
973	SLV 2	7.7	1.63	48.5	-19.6229	0.135	4.4317
973	SLV 3	8.42	0.12	48.91	-19.8373	0.1372	4.8456
973	SLV 4	7.47	-1.27	49.58	-20.0802	0.1402	4.3022
973	SLV 5	2.62	5.4	34.61	-14.0578	0.0743	1.4963
973	SLV 6	2	4.51	35.05	-14.2143	0.0762	1.1461
973	SLV 7	1.84	-4.27	38.21	-15.582	0.0917	1.0648
973	SLV 8	1.23	-5.16	38.65	-15.7385	0.0936	0.7146
973	SLV 9	-2.65	4.76	24.26	-9.9161	0.0296	-1.5321
973	SLV 10	-3.26	3.86	24.7	-10.0726	0.0315	-1.8823
973	SLV 11	-3.42	-4.92	27.86	-11.4403	0.0469	-1.9636
973	SLV 12	-4.04	-5.81	28.3	-11.5968	0.0489	-2.3138
973	SLV 13	-8.89	0.86	13.33	-5.5744	-0.0171	-5.1197
973	SLV 14	-9.84	-0.53	14	-5.8173	-0.0141	-5.6631
973	SLV 15	-9.12	-2.04	14.41	-6.0317	-0.0119	-5.2492
973	SLV 16	-10.07	-3.43	15.08	-6.2745	-0.0088	-5.7925
973	CRTFP Ux+	0	0	0	0	0	0
973	CRTFP Ux-	0	0	0	0	0	0
973	CRTFP Uy+	0	0	0	0	0	0
973	CRTFP Uy-	0	0	0	0	0	0
974	SLU 1	-0.68	-0.21	27.97	-10.9345	0.0318	-0.3896
974	SLU 2	-0.68	-0.14	27.96	-10.9325	0.0318	-0.3905
974	SLU 3	-0.69	-0.21	28.6	-11.166	0.0326	-0.399
974	SLU 4	-0.69	-0.17	28.59	-11.1648	0.0326	-0.3996
974	SLU 5	-0.69	-0.14	28.35	-11.0758	0.0323	-0.397
974	SLU 6	-0.7	-0.21	28.99	-11.3093	0.0331	-0.4056
974	SLU 7	-0.71	-0.17	28.98	-11.3081	0.0331	-0.4061
974	SLU 8	-0.7	-0.22	28.75	-11.2212	0.0328	-0.4027
974	SLU 9	-0.7	-0.17	28.74	-11.22	0.0328	-0.4032
974	SLU 10	-0.74	-0.16	31.4	-12.2026	0.0354	-0.4266
974	SLU 11	-0.76	-0.23	32.04	-12.4361	0.0362	-0.4351
974	SLU 12	-0.76	-0.19	32.03	-12.4348	0.0362	-0.4357
974	SLU 13	-0.75	-0.17	31.79	-12.3459	0.0359	-0.4331
974	SLU 14	-0.77	-0.24	32.42	-12.5794	0.0368	-0.4417
974	SLU 15	-0.77	-0.19	32.42	-12.5782	0.0367	-0.4422
974	SLU 16	-0.76	-0.24	32.18	-12.4913	0.0365	-0.4388
974	SLU 17	-0.76	-0.2	32.18	-12.4901	0.0365	-0.4393
974	SLU 18	-0.77	-0.24	32.88	-12.7489	0.037	-0.4412
974	SLU 19	-0.77	-0.2	32.88	-12.7477	0.037	-0.4417
974	SLU 20	-0.78	-0.25	33.27	-12.8923	0.0375	-0.4477
974	SLU 21	-0.78	-0.2	33.26	-12.891	0.0375	-0.4482
974	SLU 22	-0.75	-0.22	31.43	-12.2099	0.0356	-0.4292
974	SLU 23	-0.75	-0.15	31.42	-12.2078	0.0356	-0.4301
974	SLU 24	-0.76	-0.22	32.05	-12.4413	0.0364	-0.4387
974	SLU 25	-0.76	-0.18	32.05	-12.4401	0.0364	-0.4392
974	SLU 26	-0.76	-0.15	31.81	-12.3512	0.0361	-0.4366
974	SLU 27	-0.77	-0.22	32.44	-12.5847	0.0369	-0.4452
974	SLU 28	-0.77	-0.18	32.44	-12.5834	0.0369	-0.4457
974	SLU 29	-0.77	-0.23	32.2	-12.4966	0.0367	-0.4423
974	SLU 30	-0.77	-0.19	32.2	-12.4953	0.0366	-0.4428
974	SLU 31	-0.81	-0.18	34.86	-13.4779	0.0393	-0.4662
974	SLU 32	-0.82	-0.24	35.49	-13.7114	0.0401	-0.4747
974	SLU 33	-0.83	-0.2	35.49	-13.7102	0.0401	-0.4753
974	SLU 34	-0.82	-0.18	35.24	-13.6212	0.0398	-0.4727
974	SLU 35	-0.84	-0.25	35.88	-13.8547	0.0406	-0.4813
974	SLU 36	-0.84	-0.21	35.87	-13.8535	0.0406	-0.4818
974	SLU 37	-0.83	-0.25	35.64	-13.7666	0.0403	-0.4784
974	SLU 38	-0.83	-0.21	35.64	-13.7654	0.0403	-0.4789
974	SLU 39	-0.83	-0.25	36.34	-14.0242	0.0409	-0.4808
974	SLU 40	-0.84	-0.21	36.33	-14.023	0.0409	-0.4813
974	SLU 41	-0.85	-0.26	36.73	-14.1676	0.0414	-0.4873
974	SLU 42	-0.85	-0.22	36.72	-14.1664	0.0414	-0.4878
974	SLU 43	-0.86	-0.27	35.18	-13.7776	0.04	-0.4929
974	SLU 44	-0.86	-0.2	35.17	-13.7756	0.04	-0.4938
974	SLU 45	-0.87	-0.27	35.8	-14.0091	0.0408	-0.5023
974	SLU 46	-0.87	-0.23	35.8	-14.0079	0.0408	-0.5029
974	SLU 47	-0.87	-0.2	35.56	-13.9189	0.0405	-0.5003
974	SLU 48	-0.88	-0.27	36.19	-14.1524	0.0413	-0.5089

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
974	SLU 49	-0.89	-0.23	36.19	-14.1512	0.0413	-0.5094
974	SLU 50	-0.88	-0.28	35.95	-14.0643	0.041	-0.506
974	SLU 51	-0.88	-0.23	35.95	-14.0631	0.041	-0.5065
974	SLU 52	-0.92	-0.22	38.61	-15.0457	0.0436	-0.5299
974	SLU 53	-0.94	-0.29	39.24	-15.2792	0.0445	-0.5384
974	SLU 54	-0.94	-0.25	39.24	-15.2779	0.0444	-0.539
974	SLU 55	-0.93	-0.23	38.99	-15.189	0.0442	-0.5364
974	SLU 56	-0.95	-0.3	39.63	-15.4225	0.045	-0.545
974	SLU 57	-0.95	-0.25	39.62	-15.4213	0.045	-0.5455
974	SLU 58	-0.94	-0.3	39.39	-15.3344	0.0447	-0.5421
974	SLU 59	-0.94	-0.26	39.39	-15.3332	0.0447	-0.5426
974	SLU 60	-0.95	-0.3	40.09	-15.592	0.0452	-0.5445
974	SLU 61	-0.95	-0.26	40.08	-15.5908	0.0452	-0.545
974	SLU 62	-0.96	-0.31	40.48	-15.7354	0.0458	-0.551
974	SLU 63	-0.96	-0.26	40.47	-15.7342	0.0457	-0.5515
974	SLU 64	-0.93	-0.28	38.63	-15.053	0.0439	-0.5325
974	SLU 65	-0.93	-0.21	38.62	-15.0509	0.0438	-0.5334
974	SLU 66	-0.94	-0.28	39.26	-15.2844	0.0446	-0.542
974	SLU 67	-0.94	-0.24	39.26	-15.2832	0.0446	-0.5425
974	SLU 68	-0.94	-0.21	39.01	-15.1943	0.0443	-0.5399
974	SLU 69	-0.95	-0.28	39.65	-15.4278	0.0452	-0.5485
974	SLU 70	-0.95	-0.24	39.64	-15.4265	0.0451	-0.549
974	SLU 71	-0.95	-0.29	39.41	-15.3397	0.0449	-0.5456
974	SLU 72	-0.95	-0.24	39.4	-15.3384	0.0449	-0.5461
974	SLU 73	-0.99	-0.23	42.06	-16.321	0.0475	-0.5695
974	SLU 74	-1	-0.3	42.7	-16.5545	0.0483	-0.578
974	SLU 75	-1	-0.26	42.69	-16.5533	0.0483	-0.5786
974	SLU 76	-1	-0.24	42.45	-16.4643	0.048	-0.576
974	SLU 77	-1.02	-0.31	43.09	-16.6978	0.0488	-0.5846
974	SLU 78	-1.02	-0.26	43.08	-16.6966	0.0488	-0.5851
974	SLU 79	-1.01	-0.31	42.85	-16.6097	0.0486	-0.5817
974	SLU 80	-1.01	-0.27	42.84	-16.6085	0.0485	-0.5822
974	SLU 81	-1.01	-0.31	43.54	-16.8673	0.0491	-0.5841
974	SLU 82	-1.02	-0.27	43.54	-16.8661	0.0491	-0.5846
974	SLU 83	-1.03	-0.32	43.93	-17.0107	0.0496	-0.5906
974	SLU 84	-1.03	-0.28	43.93	-17.0095	0.0496	-0.5911
974	SLE RA 1	-0.7	-0.21	28.96	-11.2989	0.0329	-0.4009
974	SLE RA 2	-0.7	-0.17	28.95	-11.2975	0.0329	-0.4015
974	SLE RA 3	-0.71	-0.21	29.38	-11.4532	0.0334	-0.4072
974	SLE RA 4	-0.71	-0.19	29.37	-11.4524	0.0334	-0.4076
974	SLE RA 5	-0.71	-0.17	29.21	-11.3931	0.0332	-0.4059
974	SLE RA 6	-0.72	-0.22	29.64	-11.5488	0.0338	-0.4116
974	SLE RA 7	-0.72	-0.19	29.63	-11.548	0.0337	-0.4119
974	SLE RA 8	-0.71	-0.22	29.48	-11.49	0.0336	-0.4096
974	SLE RA 9	-0.71	-0.19	29.47	-11.4892	0.0336	-0.41
974	SLE RA 10	-0.74	-0.18	31.24	-12.1443	0.0353	-0.4256
974	SLE RA 11	-0.75	-0.23	31.67	-12.2999	0.0359	-0.4313
974	SLE RA 12	-0.75	-0.2	31.66	-12.2991	0.0358	-0.4316
974	SLE RA 13	-0.75	-0.18	31.5	-12.2398	0.0357	-0.4299
974	SLE RA 14	-0.76	-0.23	31.93	-12.3955	0.0362	-0.4356
974	SLE RA 15	-0.76	-0.2	31.92	-12.3947	0.0362	-0.436
974	SLE RA 16	-0.75	-0.23	31.77	-12.3368	0.036	-0.4337
974	SLE RA 17	-0.75	-0.21	31.76	-12.3359	0.036	-0.4341
974	SLE RA 18	-0.76	-0.24	32.23	-12.5085	0.0364	-0.4353
974	SLE RA 19	-0.76	-0.21	32.23	-12.5077	0.0364	-0.4356
974	SLE RA 20	-0.76	-0.24	32.49	-12.6041	0.0367	-0.4396
974	SLE RA 21	-0.76	-0.21	32.49	-12.6033	0.0367	-0.44
974	SLE FR 1	-0.7	-0.21	28.96	-11.2989	0.0329	-0.4009
974	SLE FR 2	-0.7	-0.2	28.96	-11.2986	0.0329	-0.401
974	SLE FR 3	-0.7	-0.21	29.06	-11.3371	0.033	-0.4027
974	SLE FR 4	-0.71	-0.21	29.94	-11.6615	0.0339	-0.4113
974	SLE FR 5	-0.72	-0.22	30.04	-11.7	0.0341	-0.413
974	SLE FR 6	-0.73	-0.22	30.6	-11.9037	0.0346	-0.4181
974	SLE QP 1	-0.7	-0.21	28.96	-11.2989	0.0329	-0.4009
974	SLE QP 2	-0.71	-0.22	29.94	-11.6618	0.0339	-0.4112
974	SLD 1	3.3	1.1	36.07	-13.9155	0.0572	1.8941
974	SLD 2	2.89	0.55	36.33	-13.9994	0.0581	1.6606
974	SLD 3	3.19	-0.1	36.51	-14.1079	0.0588	1.8379
974	SLD 4	2.79	-0.66	36.77	-14.1918	0.0597	1.6044
974	SLD 5	0.71	2.1	31.07	-12.0312	0.0383	0.4072
974	SLD 6	0.45	1.74	31.23	-12.0862	0.0389	0.2542
974	SLD 7	0.38	-1.91	32.54	-12.6725	0.0436	0.2197
974	SLD 8	0.11	-2.28	32.7	-12.7275	0.0443	0.0666
974	SLD 9	-1.54	1.84	27.18	-10.5961	0.0236	-0.8891
974	SLD 10	-1.81	1.47	27.34	-10.6511	0.0242	-1.0421
974	SLD 11	-1.88	-2.18	28.65	-11.2374	0.0289	-1.0766
974	SLD 12	-2.14	-2.54	28.81	-11.2924	0.0296	-1.2297
974	SLD 13	-4.22	0.22	23.11	-9.1318	0.0081	-2.4268
974	SLD 14	-4.62	-0.34	23.37	-9.2157	0.0091	-2.6603
974	SLD 15	-4.32	-0.99	23.55	-9.3242	0.0097	-2.4831
974	SLD 16	-4.72	-1.54	23.81	-9.4081	0.0107	-2.7166
974	SLV 1	8.66	2.84	44.31	-16.9401	0.0884	4.9781
974	SLV 2	7.71	1.54	44.9	-17.1355	0.0906	4.4343
974	SLV 3	8.43	0.09	45.31	-17.3825	0.092	4.8489
974	SLV 4	7.48	-1.2	45.9	-17.5779	0.0943	4.3051
974	SLV 5	2.61	5.08	32.62	-12.5407	0.0443	1.4951
974	SLV 6	2	4.25	33	-12.6666	0.0458	1.1447
974	SLV 7	1.84	-4.06	35.97	-14.0153	0.0565	1.0646
974	SLV 8	1.23	-4.9	36.35	-14.1412	0.058	0.7141
974	SLV 9	-2.66	4.46	23.53	-9.1823	0.0099	-1.5366

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
974	SLV 10	-3.27	3.63	23.91	-9.3083	0.0113	-1.887
974	SLV 11	-3.43	-4.69	26.88	-10.657	0.0221	-1.9671
974	SLV 12	-4.04	-5.52	27.26	-10.7829	0.0236	-2.3176
974	SLV 13	-8.91	0.76	13.98	-5.7457	-0.0264	-5.1276
974	SLV 14	-9.86	-0.53	14.57	-5.9411	-0.0242	-5.6714
974	SLV 15	-9.14	-1.98	14.98	-6.188	-0.0227	-5.2567
974	SLV 16	-10.09	-3.28	15.58	-6.3835	-0.0205	-5.8006
974	CRTFP Ux+	0	0	0	0	0	0
974	CRTFP Ux-	0	0	0	0	0	0
974	CRTFP Uy+	0	0	0	0	0	0
974	CRTFP Uy-	0	0	0	0	0	0
975	SLU 1	-0.68	-0.22	27.36	-10.5126	0.0069	-0.3916
975	SLU 2	-0.68	-0.16	27.35	-10.5108	0.0069	-0.3924
975	SLU 3	-0.7	-0.22	27.97	-10.7337	0.007	-0.401
975	SLU 4	-0.7	-0.18	27.97	-10.7326	0.007	-0.4015
975	SLU 5	-0.69	-0.16	27.73	-10.6473	0.007	-0.399
975	SLU 6	-0.71	-0.22	28.35	-10.8702	0.0071	-0.4076
975	SLU 7	-0.71	-0.18	28.35	-10.8691	0.0071	-0.4081
975	SLU 8	-0.7	-0.23	28.12	-10.7856	0.0071	-0.4047
975	SLU 9	-0.7	-0.19	28.11	-10.7845	0.0071	-0.4052
975	SLU 10	-0.75	-0.18	30.73	-11.7351	0.0071	-0.429
975	SLU 11	-0.76	-0.25	31.35	-11.958	0.0072	-0.4376
975	SLU 12	-0.76	-0.21	31.34	-11.9569	0.0072	-0.4381
975	SLU 13	-0.76	-0.19	31.11	-11.8716	0.0072	-0.4356
975	SLU 14	-0.77	-0.25	31.73	-12.0945	0.0074	-0.4442
975	SLU 15	-0.77	-0.21	31.72	-12.0934	0.0074	-0.4447
975	SLU 16	-0.77	-0.25	31.49	-12.0099	0.0073	-0.4413
975	SLU 17	-0.77	-0.22	31.49	-12.0089	0.0073	-0.4418
975	SLU 18	-0.77	-0.26	32.18	-12.2616	0.0072	-0.4438
975	SLU 19	-0.77	-0.22	32.18	-12.2605	0.0072	-0.4444
975	SLU 20	-0.78	-0.26	32.56	-12.3981	0.0073	-0.4504
975	SLU 21	-0.78	-0.22	32.56	-12.397	0.0073	-0.4509
975	SLU 22	-0.75	-0.23	30.75	-11.7391	0.0073	-0.4316
975	SLU 23	-0.75	-0.17	30.74	-11.7373	0.0072	-0.4325
975	SLU 24	-0.77	-0.23	31.36	-11.9602	0.0074	-0.4411
975	SLU 25	-0.77	-0.19	31.36	-11.9591	0.0074	-0.4416
975	SLU 26	-0.76	-0.17	31.12	-11.8738	0.0074	-0.439
975	SLU 27	-0.78	-0.24	31.74	-12.0967	0.0075	-0.4477
975	SLU 28	-0.78	-0.2	31.74	-12.0956	0.0075	-0.4482
975	SLU 29	-0.77	-0.24	31.51	-12.0122	0.0075	-0.4447
975	SLU 30	-0.77	-0.2	31.5	-12.0111	0.0075	-0.4452
975	SLU 31	-0.81	-0.2	34.12	-12.9616	0.0075	-0.4691
975	SLU 32	-0.83	-0.26	34.74	-13.1845	0.0076	-0.4777
975	SLU 33	-0.83	-0.22	34.73	-13.1834	0.0076	-0.4782
975	SLU 34	-0.83	-0.2	34.5	-13.0981	0.0076	-0.4756
975	SLU 35	-0.84	-0.26	35.12	-13.321	0.0077	-0.4843
975	SLU 36	-0.84	-0.23	35.11	-13.3199	0.0077	-0.4848
975	SLU 37	-0.84	-0.27	34.88	-13.2365	0.0077	-0.4813
975	SLU 38	-0.84	-0.23	34.88	-13.2354	0.0077	-0.4819
975	SLU 39	-0.84	-0.27	35.57	-13.4881	0.0076	-0.4839
975	SLU 40	-0.84	-0.23	35.57	-13.487	0.0076	-0.4844
975	SLU 41	-0.85	-0.28	35.95	-13.6246	0.0077	-0.4905
975	SLU 42	-0.85	-0.24	35.95	-13.6236	0.0077	-0.491
975	SLU 43	-0.86	-0.28	34.41	-13.2458	0.0088	-0.4953
975	SLU 44	-0.86	-0.22	34.4	-13.2441	0.0088	-0.4961
975	SLU 45	-0.88	-0.28	35.02	-13.4669	0.009	-0.5047
975	SLU 46	-0.88	-0.24	35.01	-13.4658	0.0089	-0.5053
975	SLU 47	-0.87	-0.22	34.78	-13.3806	0.0089	-0.5027
975	SLU 48	-0.89	-0.28	35.4	-13.6034	0.0091	-0.5113
975	SLU 49	-0.89	-0.25	35.39	-13.6024	0.0091	-0.5118
975	SLU 50	-0.88	-0.29	35.16	-13.5189	0.009	-0.5084
975	SLU 51	-0.88	-0.25	35.16	-13.5178	0.009	-0.5089
975	SLU 52	-0.93	-0.24	37.78	-14.4684	0.009	-0.5327
975	SLU 53	-0.94	-0.31	38.4	-14.6912	0.0092	-0.5413
975	SLU 54	-0.94	-0.27	38.39	-14.6901	0.0092	-0.5419
975	SLU 55	-0.94	-0.25	38.15	-14.6049	0.0091	-0.5393
975	SLU 56	-0.95	-0.31	38.77	-14.8277	0.0093	-0.5479
975	SLU 57	-0.95	-0.27	38.77	-14.8267	0.0093	-0.5484
975	SLU 58	-0.95	-0.32	38.54	-14.7432	0.0093	-0.545
975	SLU 59	-0.95	-0.28	38.53	-14.7421	0.0092	-0.5455
975	SLU 60	-0.95	-0.32	39.23	-14.9949	0.0091	-0.5476
975	SLU 61	-0.95	-0.28	39.23	-14.9938	0.0091	-0.5481
975	SLU 62	-0.96	-0.33	39.61	-15.1314	0.0092	-0.5541
975	SLU 63	-0.96	-0.29	39.6	-15.1303	0.0092	-0.5546
975	SLU 64	-0.93	-0.3	37.8	-14.4724	0.0092	-0.5354
975	SLU 65	-0.93	-0.23	37.79	-14.4706	0.0092	-0.5362
975	SLU 66	-0.95	-0.29	38.41	-14.6934	0.0093	-0.5448
975	SLU 67	-0.95	-0.26	38.4	-14.6924	0.0093	-0.5453
975	SLU 68	-0.94	-0.23	38.17	-14.6071	0.0093	-0.5428
975	SLU 69	-0.96	-0.3	38.79	-14.83	0.0095	-0.5514
975	SLU 70	-0.96	-0.26	38.78	-14.8289	0.0094	-0.5519
975	SLU 71	-0.95	-0.3	38.55	-14.7454	0.0094	-0.5485
975	SLU 72	-0.95	-0.26	38.55	-14.7443	0.0094	-0.549
975	SLU 73	-1	-0.26	41.16	-15.6949	0.0094	-0.5728
975	SLU 74	-1.01	-0.32	41.78	-15.9177	0.0096	-0.5814
975	SLU 75	-1.01	-0.28	41.78	-15.9167	0.0095	-0.5819
975	SLU 76	-1.01	-0.26	41.54	-15.8314	0.0095	-0.5794
975	SLU 77	-1.02	-0.33	42.16	-16.0543	0.0097	-0.588
975	SLU 78	-1.02	-0.29	42.16	-16.0532	0.0097	-0.5885
975	SLU 79	-1.02	-0.33	41.93	-15.9697	0.0096	-0.5851

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
975	SLU 80	-1.02	-0.29	41.92	-15.9686	0.0096	-0.5856
975	SLU 81	-1.02	-0.34	42.62	-16.2214	0.0095	-0.5877
975	SLU 82	-1.02	-0.3	42.61	-16.2203	0.0095	-0.5882
975	SLU 83	-1.03	-0.34	43	-16.3579	0.0096	-0.5942
975	SLU 84	-1.03	-0.3	42.99	-16.3568	0.0096	-0.5947
975	SLE RA 1	-0.7	-0.22	28.33	-10.863	0.007	-0.403
975	SLE RA 2	-0.7	-0.18	28.32	-10.8618	0.007	-0.4036
975	SLE RA 3	-0.71	-0.22	28.74	-11.0104	0.0071	-0.4093
975	SLE RA 4	-0.71	-0.2	28.73	-11.0097	0.0071	-0.4097
975	SLE RA 5	-0.71	-0.18	28.58	-10.9528	0.0071	-0.4079
975	SLE RA 6	-0.72	-0.23	28.99	-11.1014	0.0072	-0.4137
975	SLE RA 7	-0.72	-0.2	28.99	-11.1007	0.0072	-0.414
975	SLE RA 8	-0.72	-0.23	28.83	-11.045	0.0071	-0.4117
975	SLE RA 9	-0.72	-0.2	28.83	-11.0443	0.0071	-0.4121
975	SLE RA 10	-0.74	-0.2	30.57	-11.678	0.0071	-0.428
975	SLE RA 11	-0.75	-0.24	30.99	-11.8266	0.0072	-0.4337
975	SLE RA 12	-0.75	-0.22	30.98	-11.8259	0.0072	-0.4341
975	SLE RA 13	-0.75	-0.2	30.83	-11.769	0.0072	-0.4323
975	SLE RA 14	-0.76	-0.24	31.24	-11.9176	0.0073	-0.4381
975	SLE RA 15	-0.76	-0.22	31.24	-11.9169	0.0073	-0.4384
975	SLE RA 16	-0.76	-0.25	31.08	-11.8613	0.0073	-0.4361
975	SLE RA 17	-0.76	-0.22	31.08	-11.8605	0.0073	-0.4365
975	SLE RA 18	-0.76	-0.25	31.54	-12.029	0.0072	-0.4379
975	SLE RA 19	-0.76	-0.22	31.54	-12.0283	0.0072	-0.4382
975	SLE RA 20	-0.77	-0.25	31.8	-12.12	0.0073	-0.4422
975	SLE RA 21	-0.77	-0.23	31.79	-12.1193	0.0073	-0.4426
975	SLE FR 1	-0.7	-0.22	28.33	-10.863	0.007	-0.403
975	SLE FR 2	-0.7	-0.22	28.33	-10.8628	0.007	-0.4031
975	SLE FR 3	-0.7	-0.22	28.43	-10.8994	0.007	-0.4048
975	SLE FR 4	-0.72	-0.22	29.29	-11.2126	0.007	-0.4136
975	SLE FR 5	-0.72	-0.23	29.39	-11.2492	0.0071	-0.4152
975	SLE FR 6	-0.73	-0.24	29.94	-11.446	0.0071	-0.4204
975	SLE QP 1	-0.7	-0.22	28.33	-10.863	0.007	-0.403
975	SLE QP 2	-0.72	-0.23	29.29	-11.2128	0.007	-0.4135
975	SLD 1	3.29	1.03	34.78	-13.0958	0.0239	1.8936
975	SLD 2	2.89	0.51	35.01	-13.1676	0.0245	1.66
975	SLD 3	3.19	-0.12	35.2	-13.2871	0.0248	1.8374
975	SLD 4	2.79	-0.64	35.43	-13.3589	0.0254	1.6038
975	SLD 5	0.71	1.98	30.26	-11.4749	0.0106	0.4054
975	SLD 6	0.44	1.64	30.41	-11.5219	0.011	0.2523
975	SLD 7	0.38	-1.84	31.66	-12.1124	0.0136	0.2181
975	SLD 8	0.11	-2.18	31.81	-12.1595	0.014	0.065
975	SLD 9	-1.55	1.72	26.77	-10.2662	0.0001	-0.8919
975	SLD 10	-1.81	1.38	26.92	-10.3132	0.0005	-1.045
975	SLD 11	-1.88	-2.1	28.18	-10.9037	0.003	-1.0792
975	SLD 12	-2.15	-2.44	28.33	-10.9508	0.0035	-1.2323
975	SLD 13	-4.22	0.17	23.16	-9.0668	-0.0113	-2.4308
975	SLD 14	-4.63	-0.35	23.38	-9.1386	-0.0107	-2.6644
975	SLD 15	-4.32	-0.98	23.58	-9.2581	-0.0104	-2.487
975	SLD 16	-4.73	-1.49	23.8	-9.3298	-0.0098	-2.7205
975	SLV 1	8.66	2.68	42.15	-15.6229	0.0465	4.9799
975	SLV 2	7.71	1.47	42.68	-15.79	0.048	4.4359
975	SLV 3	8.43	0.07	43.11	-16.0641	0.0485	4.8509
975	SLV 4	7.48	-1.14	43.65	-16.2313	0.05	4.3069
975	SLV 5	2.61	4.81	31.6	-11.8379	0.0155	1.4938
975	SLV 6	2	4.03	31.95	-11.9456	0.0165	1.1433
975	SLV 7	1.84	-3.89	34.8	-13.3086	0.0223	1.0639
975	SLV 8	1.23	-4.67	35.15	-13.4163	0.0233	0.7133
975	SLV 9	-2.67	4.21	23.44	-9.0093	-0.0092	-1.5403
975	SLV 10	-3.28	3.43	23.78	-9.117	-0.0083	-1.8909
975	SLV 11	-3.43	-4.5	26.64	-10.4801	-0.0024	-1.9702
975	SLV 12	-4.04	-5.27	26.98	-10.5878	-0.0014	-2.3208
975	SLV 13	-8.92	0.67	14.94	-6.1944	-0.0359	-5.1338
975	SLV 14	-9.87	-0.54	15.47	-6.3615	-0.0345	-5.6778
975	SLV 15	-9.15	-1.94	15.9	-6.6356	-0.0339	-5.2628
975	SLV 16	-10.1	-3.15	16.43	-6.8028	-0.0324	-5.8068
975	CRTFP Ux+	0	0	0	0	0	0
975	CRTFP Ux-	0	0	0	0	0	0
975	CRTFP Uy+	0	0	0	0	0	0
975	CRTFP Uy-	0	0	0	0	0	0
976	SLU 1	-0.68	-0.23	27.51	-10.7184	-0.0162	-0.3933
976	SLU 2	-0.68	-0.17	27.51	-10.7165	-0.0162	-0.3942
976	SLU 3	-0.7	-0.23	28.13	-10.9451	-0.0166	-0.4028
976	SLU 4	-0.7	-0.19	28.13	-10.944	-0.0166	-0.4033
976	SLU 5	-0.7	-0.17	27.89	-10.8561	-0.0164	-0.4007
976	SLU 6	-0.71	-0.23	28.51	-11.0848	-0.0169	-0.4094
976	SLU 7	-0.71	-0.19	28.51	-11.0836	-0.0169	-0.4099
976	SLU 8	-0.71	-0.24	28.27	-10.9977	-0.0167	-0.4064
976	SLU 9	-0.71	-0.2	28.27	-10.9965	-0.0167	-0.4069
976	SLU 10	-0.75	-0.2	30.93	-11.9821	-0.0191	-0.4313
976	SLU 11	-0.76	-0.26	31.55	-12.2108	-0.0196	-0.44
976	SLU 12	-0.77	-0.22	31.55	-12.2096	-0.0196	-0.4405
976	SLU 13	-0.76	-0.2	31.31	-12.1217	-0.0194	-0.4379
976	SLU 14	-0.78	-0.26	31.93	-12.3504	-0.0198	-0.4465
976	SLU 15	-0.78	-0.23	31.93	-12.3492	-0.0198	-0.447
976	SLU 16	-0.77	-0.27	31.7	-12.2633	-0.0197	-0.4436
976	SLU 17	-0.77	-0.23	31.69	-12.2621	-0.0196	-0.4441
976	SLU 18	-0.78	-0.28	32.4	-12.5265	-0.0204	-0.4464
976	SLU 19	-0.78	-0.24	32.4	-12.5253	-0.0204	-0.4469
976	SLU 20	-0.79	-0.28	32.78	-12.6661	-0.0207	-0.453

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
976	SLU 21	-0.79	-0.24	32.78	-12.665	-0.0207	-0.4535
976	SLU 22	-0.75	-0.24	30.94	-11.9836	-0.019	-0.4339
976	SLU 23	-0.76	-0.18	30.93	-11.9816	-0.019	-0.4347
976	SLU 24	-0.77	-0.24	31.56	-12.2103	-0.0194	-0.4434
976	SLU 25	-0.77	-0.21	31.55	-12.2091	-0.0194	-0.4439
976	SLU 26	-0.77	-0.19	31.31	-12.1212	-0.0192	-0.4413
976	SLU 27	-0.78	-0.25	31.94	-12.3499	-0.0197	-0.45
976	SLU 28	-0.78	-0.21	31.93	-12.3487	-0.0197	-0.4505
976	SLU 29	-0.78	-0.25	31.7	-12.2628	-0.0195	-0.447
976	SLU 30	-0.78	-0.21	31.7	-12.2616	-0.0195	-0.4475
976	SLU 31	-0.82	-0.21	34.36	-13.2472	-0.022	-0.4719
976	SLU 32	-0.84	-0.28	34.98	-13.4759	-0.0224	-0.4806
976	SLU 33	-0.84	-0.24	34.98	-13.4747	-0.0224	-0.4811
976	SLU 34	-0.83	-0.22	34.74	-13.3868	-0.0222	-0.4785
976	SLU 35	-0.85	-0.28	35.36	-13.6155	-0.0227	-0.4871
976	SLU 36	-0.85	-0.24	35.36	-13.6143	-0.0227	-0.4876
976	SLU 37	-0.84	-0.28	35.12	-13.5284	-0.0225	-0.4842
976	SLU 38	-0.84	-0.25	35.12	-13.5272	-0.0225	-0.4847
976	SLU 39	-0.85	-0.29	35.83	-13.7916	-0.0233	-0.487
976	SLU 40	-0.85	-0.25	35.82	-13.7905	-0.0233	-0.4875
976	SLU 41	-0.86	-0.29	36.21	-13.9313	-0.0235	-0.4936
976	SLU 42	-0.86	-0.26	36.2	-13.9301	-0.0235	-0.494
976	SLU 43	-0.86	-0.29	34.59	-13.5002	-0.02	-0.4974
976	SLU 44	-0.87	-0.23	34.58	-13.4982	-0.02	-0.4982
976	SLU 45	-0.88	-0.29	35.21	-13.7269	-0.0205	-0.5069
976	SLU 46	-0.88	-0.26	35.2	-13.7257	-0.0205	-0.5074
976	SLU 47	-0.88	-0.23	34.96	-13.6378	-0.0203	-0.5048
976	SLU 48	-0.89	-0.3	35.59	-13.8665	-0.0207	-0.5135
976	SLU 49	-0.89	-0.26	35.58	-13.8653	-0.0207	-0.514
976	SLU 50	-0.89	-0.3	35.35	-13.7794	-0.0205	-0.5105
976	SLU 51	-0.89	-0.26	35.35	-13.7782	-0.0205	-0.511
976	SLU 52	-0.93	-0.26	38.01	-14.7639	-0.023	-0.5354
976	SLU 53	-0.95	-0.32	38.63	-14.9926	-0.0235	-0.5441
976	SLU 54	-0.95	-0.29	38.63	-14.9914	-0.0235	-0.5446
976	SLU 55	-0.94	-0.27	38.39	-14.9035	-0.0233	-0.542
976	SLU 56	-0.96	-0.33	39.01	-15.1322	-0.0237	-0.5506
976	SLU 57	-0.96	-0.29	39.01	-15.131	-0.0237	-0.5511
976	SLU 58	-0.95	-0.33	38.77	-15.0451	-0.0235	-0.5477
976	SLU 59	-0.95	-0.29	38.77	-15.0439	-0.0235	-0.5482
976	SLU 60	-0.96	-0.34	39.48	-15.3083	-0.0243	-0.5505
976	SLU 61	-0.96	-0.3	39.47	-15.3071	-0.0243	-0.551
976	SLU 62	-0.97	-0.34	39.86	-15.4479	-0.0246	-0.5571
976	SLU 63	-0.97	-0.3	39.85	-15.4467	-0.0246	-0.5576
976	SLU 64	-0.93	-0.31	38.02	-14.7653	-0.0229	-0.538
976	SLU 65	-0.94	-0.25	38.01	-14.7633	-0.0229	-0.5388
976	SLU 66	-0.95	-0.31	38.64	-14.992	-0.0233	-0.5475
976	SLU 67	-0.95	-0.27	38.63	-14.9908	-0.0233	-0.548
976	SLU 68	-0.95	-0.25	38.39	-14.903	-0.0231	-0.5454
976	SLU 69	-0.96	-0.31	39.02	-15.1316	-0.0236	-0.5541
976	SLU 70	-0.96	-0.27	39.01	-15.1305	-0.0236	-0.5545
976	SLU 71	-0.96	-0.31	38.78	-15.0446	-0.0234	-0.5511
976	SLU 72	-0.96	-0.28	38.78	-15.0434	-0.0234	-0.5516
976	SLU 73	-1	-0.28	41.43	-16.029	-0.0258	-0.576
976	SLU 74	-1.02	-0.34	42.06	-16.2577	-0.0263	-0.5847
976	SLU 75	-1.02	-0.3	42.05	-16.2565	-0.0263	-0.5851
976	SLU 76	-1.01	-0.28	41.81	-16.1686	-0.0261	-0.5825
976	SLU 77	-1.03	-0.34	42.44	-16.3973	-0.0266	-0.5912
976	SLU 78	-1.03	-0.31	42.43	-16.3961	-0.0265	-0.5917
976	SLU 79	-1.02	-0.35	42.2	-16.3102	-0.0264	-0.5883
976	SLU 80	-1.02	-0.31	42.2	-16.309	-0.0264	-0.5888
976	SLU 81	-1.03	-0.35	42.91	-16.5734	-0.0271	-0.5911
976	SLU 82	-1.03	-0.32	42.9	-16.5722	-0.0271	-0.5916
976	SLU 83	-1.04	-0.36	43.29	-16.713	-0.0274	-0.5976
976	SLU 84	-1.04	-0.32	43.28	-16.7118	-0.0274	-0.5981
976	SLE RA 1	-0.7	-0.23	28.49	-11.0799	-0.017	-0.4049
976	SLE RA 2	-0.7	-0.19	28.49	-11.0786	-0.017	-0.4055
976	SLE RA 3	-0.71	-0.23	28.9	-11.231	-0.0173	-0.4113
976	SLE RA 4	-0.72	-0.21	28.9	-11.2302	-0.0173	-0.4116
976	SLE RA 5	-0.71	-0.19	28.74	-11.1717	-0.0171	-0.4099
976	SLE RA 6	-0.72	-0.24	29.16	-11.3241	-0.0174	-0.4156
976	SLE RA 7	-0.72	-0.21	29.15	-11.3233	-0.0174	-0.416
976	SLE RA 8	-0.72	-0.24	29	-11.266	-0.0173	-0.4137
976	SLE RA 9	-0.72	-0.21	29	-11.2653	-0.0173	-0.414
976	SLE RA 10	-0.75	-0.21	30.77	-11.9224	-0.019	-0.4303
976	SLE RA 11	-0.76	-0.25	31.19	-12.0748	-0.0193	-0.436
976	SLE RA 12	-0.76	-0.23	31.18	-12.074	-0.0193	-0.4364
976	SLE RA 13	-0.76	-0.22	31.02	-12.0154	-0.0191	-0.4346
976	SLE RA 14	-0.77	-0.26	31.44	-12.1679	-0.0194	-0.4404
976	SLE RA 15	-0.77	-0.23	31.44	-12.1671	-0.0194	-0.4407
976	SLE RA 16	-0.76	-0.26	31.28	-12.1098	-0.0193	-0.4384
976	SLE RA 17	-0.76	-0.23	31.28	-12.109	-0.0193	-0.4388
976	SLE RA 18	-0.77	-0.26	31.75	-12.2853	-0.0198	-0.4403
976	SLE RA 19	-0.77	-0.24	31.75	-12.2845	-0.0198	-0.4407
976	SLE RA 20	-0.77	-0.27	32	-12.3784	-0.02	-0.4447
976	SLE RA 21	-0.77	-0.24	32	-12.3776	-0.02	-0.445
976	SLE FR 1	-0.7	-0.23	28.49	-11.0799	-0.017	-0.4049
976	SLE FR 2	-0.7	-0.23	28.49	-11.0796	-0.017	-0.405
976	SLE FR 3	-0.71	-0.23	28.59	-11.1171	-0.017	-0.4067
976	SLE FR 4	-0.72	-0.23	29.47	-11.4413	-0.0178	-0.4157
976	SLE FR 5	-0.73	-0.24	29.57	-11.4787	-0.0179	-0.4173

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
976	SLE FR 6	-0.73	-0.25	30.12	-11.6826	-0.0184	-0.4226
976	SLE QP 1	-0.7	-0.23	28.49	-11.0799	-0.017	-0.4049
976	SLE QP 2	-0.72	-0.24	29.47	-11.4415	-0.0178	-0.4156
976	SLD 1	3.29	0.97	34.52	-13.1158	-0.0067	1.8925
976	SLD 2	2.88	0.48	34.73	-13.1831	-0.0064	1.6589
976	SLD 3	3.19	-0.13	34.93	-13.307	-0.0064	1.8364
976	SLD 4	2.79	-0.62	35.14	-13.3744	-0.0061	1.6028
976	SLD 5	0.71	1.87	30.32	-11.6417	-0.015	0.4035
976	SLD 6	0.44	1.55	30.46	-11.6859	-0.0148	0.2503
976	SLD 7	0.37	-1.79	31.69	-12.2793	-0.014	0.2165
976	SLD 8	0.11	-2.11	31.83	-12.3234	-0.0138	0.0634
976	SLD 9	-1.55	1.62	27.11	-10.5596	-0.0218	-0.8945
976	SLD 10	-1.82	1.3	27.25	-10.6038	-0.0216	-1.0476
976	SLD 11	-1.88	-2.04	28.48	-11.1971	-0.0209	-1.0815
976	SLD 12	-2.15	-2.36	28.62	-11.2413	-0.0207	-1.2346
976	SLD 13	-4.23	0.13	23.8	-9.5086	-0.0295	-2.4339
976	SLD 14	-4.64	-0.36	24.01	-9.576	-0.0292	-2.6675
976	SLD 15	-4.33	-0.97	24.21	-9.6999	-0.0293	-2.49
976	SLD 16	-4.74	-1.45	24.42	-9.7673	-0.0289	-2.7236
976	SLV 1	8.66	2.56	41.29	-15.363	0.0082	4.98
976	SLV 2	7.71	1.42	41.79	-15.5199	0.0089	4.4361
976	SLV 3	8.44	0.05	42.23	-15.8044	0.0088	4.8512
976	SLV 4	7.49	-1.08	42.72	-15.9613	0.0096	4.3073
976	SLV 5	2.6	4.59	31.51	-11.9215	-0.0112	1.4921
976	SLV 6	1.99	3.86	31.83	-12.0226	-0.0107	1.1415
976	SLV 7	1.84	-3.76	34.63	-13.3928	-0.009	1.0629
976	SLV 8	1.23	-4.49	34.95	-13.4939	-0.0085	0.7124
976	SLV 9	-2.67	4	23.99	-9.3891	-0.0272	-1.5435
976	SLV 10	-3.29	3.27	24.31	-9.4902	-0.0267	-1.894
976	SLV 11	-3.44	-4.34	27.11	-10.8604	-0.025	-1.9726
976	SLV 12	-4.05	-5.08	27.43	-10.9616	-0.0245	-2.3232
976	SLV 13	-8.93	0.6	16.22	-6.9217	-0.0452	-5.1384
976	SLV 14	-9.88	-0.54	16.71	-7.0786	-0.0445	-5.6824
976	SLV 15	-9.16	-1.91	17.15	-7.3631	-0.0446	-5.2672
976	SLV 16	-10.11	-3.04	17.65	-7.52	-0.0438	-5.8111
976	CRTFP Ux+	0	0	0	0	0	0
976	CRTFP Ux-	0	0	0	0	0	0
976	CRTFP Uy+	0	0	0	0	0	0
976	CRTFP Uy-	0	0	0	0	0	0
977	SLU 1	-0.69	-0.24	28.35	-11.4897	-0.0361	-0.3951
977	SLU 2	-0.69	-0.18	28.34	-11.4871	-0.036	-0.3959
977	SLU 3	-0.7	-0.24	28.99	-11.7366	-0.037	-0.4046
977	SLU 4	-0.7	-0.2	28.98	-11.735	-0.037	-0.4051
977	SLU 5	-0.7	-0.18	28.74	-11.6387	-0.0366	-0.4024
977	SLU 6	-0.71	-0.24	29.38	-11.8882	-0.0376	-0.4112
977	SLU 7	-0.72	-0.2	29.38	-11.8866	-0.0376	-0.4117
977	SLU 8	-0.71	-0.24	29.14	-11.7931	-0.0372	-0.4082
977	SLU 9	-0.71	-0.21	29.13	-11.7915	-0.0372	-0.4087
977	SLU 10	-0.75	-0.21	31.9	-12.8731	-0.0418	-0.4337
977	SLU 11	-0.77	-0.27	32.55	-13.1226	-0.0428	-0.4424
977	SLU 12	-0.77	-0.24	32.55	-13.121	-0.0428	-0.4429
977	SLU 13	-0.76	-0.22	32.3	-13.0248	-0.0424	-0.4402
977	SLU 14	-0.78	-0.27	32.94	-13.2743	-0.0434	-0.4489
977	SLU 15	-0.78	-0.24	32.94	-13.2727	-0.0434	-0.4494
977	SLU 16	-0.78	-0.28	32.7	-13.1791	-0.043	-0.446
977	SLU 17	-0.78	-0.24	32.69	-13.1775	-0.043	-0.4465
977	SLU 18	-0.78	-0.29	33.44	-13.4698	-0.0443	-0.4491
977	SLU 19	-0.78	-0.25	33.43	-13.4682	-0.0443	-0.4495
977	SLU 20	-0.79	-0.29	33.83	-13.6215	-0.0449	-0.4556
977	SLU 21	-0.79	-0.25	33.83	-13.6199	-0.0449	-0.4561
977	SLU 22	-0.76	-0.25	31.91	-12.8726	-0.0417	-0.4363
977	SLU 23	-0.76	-0.2	31.91	-12.8699	-0.0417	-0.437
977	SLU 24	-0.77	-0.25	32.55	-13.1194	-0.0426	-0.4458
977	SLU 25	-0.78	-0.22	32.55	-13.1178	-0.0426	-0.4462
977	SLU 26	-0.77	-0.2	32.3	-13.0216	-0.0422	-0.4436
977	SLU 27	-0.79	-0.26	32.95	-13.2711	-0.0432	-0.4523
977	SLU 28	-0.79	-0.22	32.94	-13.2695	-0.0432	-0.4528
977	SLU 29	-0.78	-0.26	32.7	-13.1759	-0.0428	-0.4494
977	SLU 30	-0.78	-0.22	32.7	-13.1743	-0.0428	-0.4498
977	SLU 31	-0.83	-0.23	35.47	-14.256	-0.0474	-0.4748
977	SLU 32	-0.84	-0.29	36.11	-14.5055	-0.0484	-0.4835
977	SLU 33	-0.84	-0.25	36.11	-14.5039	-0.0484	-0.484
977	SLU 34	-0.84	-0.23	35.86	-14.4076	-0.048	-0.4813
977	SLU 35	-0.85	-0.29	36.51	-14.6571	-0.049	-0.4901
977	SLU 36	-0.85	-0.26	36.5	-14.6555	-0.049	-0.4906
977	SLU 37	-0.85	-0.29	36.26	-14.562	-0.0486	-0.4871
977	SLU 38	-0.85	-0.26	36.26	-14.5604	-0.0486	-0.4876
977	SLU 39	-0.85	-0.3	37	-14.8527	-0.0499	-0.4902
977	SLU 40	-0.85	-0.27	37	-14.8511	-0.0499	-0.4907
977	SLU 41	-0.86	-0.31	37.39	-15.0043	-0.0505	-0.4968
977	SLU 42	-0.86	-0.27	37.39	-15.0027	-0.0505	-0.4972
977	SLU 43	-0.87	-0.3	35.63	-14.4625	-0.045	-0.4996
977	SLU 44	-0.87	-0.24	35.63	-14.4599	-0.0449	-0.5003
977	SLU 45	-0.88	-0.3	36.27	-14.7094	-0.0459	-0.5091
977	SLU 46	-0.89	-0.27	36.27	-14.7078	-0.0459	-0.5095
977	SLU 47	-0.88	-0.25	36.02	-14.6115	-0.0455	-0.5069
977	SLU 48	-0.9	-0.31	36.67	-14.861	-0.0465	-0.5156
977	SLU 49	-0.9	-0.27	36.66	-14.8594	-0.0465	-0.5161
977	SLU 50	-0.89	-0.31	36.42	-14.7659	-0.0461	-0.5127
977	SLU 51	-0.89	-0.27	36.42	-14.7643	-0.0461	-0.5131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
977	SLU 52	-0.94	-0.28	39.19	-15.8459	-0.0507	-0.5381
977	SLU 53	-0.95	-0.34	39.83	-16.0954	-0.0517	-0.5468
977	SLU 54	-0.95	-0.3	39.83	-16.0938	-0.0517	-0.5473
977	SLU 55	-0.95	-0.28	39.58	-15.9976	-0.0513	-0.5446
977	SLU 56	-0.96	-0.34	40.23	-16.2471	-0.0523	-0.5534
977	SLU 57	-0.96	-0.31	40.22	-16.2455	-0.0522	-0.5538
977	SLU 58	-0.96	-0.34	39.98	-16.1519	-0.0519	-0.5504
977	SLU 59	-0.96	-0.31	39.98	-16.1503	-0.0519	-0.5509
977	SLU 60	-0.96	-0.35	40.72	-16.4426	-0.0532	-0.5535
977	SLU 61	-0.96	-0.32	40.72	-16.441	-0.0532	-0.554
977	SLU 62	-0.97	-0.36	41.11	-16.5943	-0.0538	-0.56
977	SLU 63	-0.97	-0.32	41.11	-16.5927	-0.0538	-0.5605
977	SLU 64	-0.94	-0.32	39.2	-15.8454	-0.0506	-0.5407
977	SLU 65	-0.94	-0.26	39.19	-15.8427	-0.0505	-0.5415
977	SLU 66	-0.96	-0.32	39.84	-16.0922	-0.0515	-0.5502
977	SLU 67	-0.96	-0.28	39.83	-16.0906	-0.0515	-0.5507
977	SLU 68	-0.95	-0.26	39.58	-15.9944	-0.0511	-0.548
977	SLU 69	-0.97	-0.32	40.23	-16.2439	-0.0521	-0.5568
977	SLU 70	-0.97	-0.29	40.23	-16.2423	-0.0521	-0.5572
977	SLU 71	-0.96	-0.33	39.98	-16.1487	-0.0517	-0.5538
977	SLU 72	-0.96	-0.29	39.98	-16.1471	-0.0517	-0.5543
977	SLU 73	-1.01	-0.3	42.75	-17.2288	-0.0563	-0.5792
977	SLU 74	-1.02	-0.35	43.4	-17.4783	-0.0573	-0.588
977	SLU 75	-1.02	-0.32	43.39	-17.4767	-0.0573	-0.5884
977	SLU 76	-1.02	-0.3	43.14	-17.3804	-0.0569	-0.5858
977	SLU 77	-1.03	-0.36	43.79	-17.6299	-0.0579	-0.5945
977	SLU 78	-1.03	-0.32	43.79	-17.6283	-0.0579	-0.595
977	SLU 79	-1.03	-0.36	43.55	-17.5348	-0.0575	-0.5916
977	SLU 80	-1.03	-0.33	43.54	-17.5332	-0.0575	-0.592
977	SLU 81	-1.03	-0.37	44.28	-17.8255	-0.0588	-0.5946
977	SLU 82	-1.03	-0.33	44.28	-17.8239	-0.0588	-0.5951
977	SLU 83	-1.04	-0.37	44.68	-17.9771	-0.0594	-0.6012
977	SLU 84	-1.05	-0.34	44.67	-17.9755	-0.0594	-0.6017
977	SLE RA 1	-0.71	-0.24	29.37	-11.8848	-0.0377	-0.4069
977	SLE RA 2	-0.71	-0.2	29.36	-11.883	-0.0377	-0.4074
977	SLE RA 3	-0.72	-0.24	29.79	-12.0494	-0.0383	-0.4132
977	SLE RA 4	-0.72	-0.22	29.79	-12.0483	-0.0383	-0.4135
977	SLE RA 5	-0.72	-0.21	29.63	-11.9842	-0.038	-0.4118
977	SLE RA 6	-0.73	-0.24	30.06	-12.1505	-0.0387	-0.4176
977	SLE RA 7	-0.73	-0.22	30.05	-12.1494	-0.0387	-0.4179
977	SLE RA 8	-0.72	-0.25	29.89	-12.087	-0.0384	-0.4156
977	SLE RA 9	-0.72	-0.22	29.89	-12.086	-0.0384	-0.4159
977	SLE RA 10	-0.75	-0.23	31.74	-12.8071	-0.0415	-0.4326
977	SLE RA 11	-0.76	-0.27	32.17	-12.9734	-0.0422	-0.4384
977	SLE RA 12	-0.76	-0.24	32.17	-12.9723	-0.0421	-0.4387
977	SLE RA 13	-0.76	-0.23	32	-12.9082	-0.0419	-0.4369
977	SLE RA 14	-0.77	-0.27	32.43	-13.0745	-0.0425	-0.4428
977	SLE RA 15	-0.77	-0.24	32.43	-13.0735	-0.0425	-0.4431
977	SLE RA 16	-0.77	-0.27	32.27	-13.0111	-0.0423	-0.4408
977	SLE RA 17	-0.77	-0.25	32.26	-13.01	-0.0423	-0.4411
977	SLE RA 18	-0.77	-0.28	32.76	-13.2049	-0.0432	-0.4428
977	SLE RA 19	-0.77	-0.25	32.76	-13.2038	-0.0432	-0.4431
977	SLE RA 20	-0.78	-0.28	33.02	-13.306	-0.0436	-0.4472
977	SLE RA 21	-0.78	-0.25	33.02	-13.3049	-0.0435	-0.4475
977	SLE FR 1	-0.71	-0.24	29.37	-11.8848	-0.0377	-0.4069
977	SLE FR 2	-0.71	-0.23	29.37	-11.8845	-0.0377	-0.407
977	SLE FR 3	-0.71	-0.24	29.47	-11.9253	-0.0378	-0.4086
977	SLE FR 4	-0.73	-0.24	30.38	-12.2805	-0.0393	-0.4178
977	SLE FR 5	-0.73	-0.25	30.49	-12.3213	-0.0395	-0.4194
977	SLE FR 6	-0.74	-0.26	31.06	-12.5449	-0.0404	-0.4249
977	SLE QP 1	-0.71	-0.24	29.37	-11.8848	-0.0377	-0.4069
977	SLE QP 2	-0.73	-0.25	30.39	-12.2808	-0.0393	-0.4177
977	SLD 1	3.29	0.91	35.16	-13.8895	-0.0329	1.8904
977	SLD 2	2.88	0.45	35.37	-13.9596	-0.0328	1.6571
977	SLD 3	3.19	-0.15	35.57	-14.0814	-0.0335	1.8345
977	SLD 4	2.78	-0.61	35.78	-14.1514	-0.0335	1.6011
977	SLD 5	0.7	1.79	31.16	-12.46	-0.0364	0.4011
977	SLD 6	0.43	1.49	31.3	-12.506	-0.0363	0.2481
977	SLD 7	0.37	-1.75	32.52	-13.0995	-0.0386	0.2146
977	SLD 8	0.1	-2.05	32.66	-13.1454	-0.0386	0.0616
977	SLD 9	-1.56	1.55	28.11	-11.4162	-0.04	-0.897
977	SLD 10	-1.82	1.25	28.25	-11.4622	-0.04	-1.0499
977	SLD 11	-1.89	-2	29.47	-12.0557	-0.0423	-1.0835
977	SLD 12	-2.15	-2.3	29.61	-12.1017	-0.0423	-1.2364
977	SLD 13	-4.24	0.1	25	-10.4102	-0.0452	-2.4365
977	SLD 14	-4.64	-0.35	25.2	-10.4803	-0.0451	-2.6698
977	SLD 15	-4.33	-0.96	25.4	-10.6021	-0.0458	-2.4924
977	SLD 16	-4.74	-1.42	25.61	-10.6722	-0.0458	-2.7258
977	SLV 1	8.66	2.44	41.58	-16.0496	-0.0242	4.9781
977	SLV 2	7.71	1.37	42.06	-16.2128	-0.0241	4.4346
977	SLV 3	8.43	0.02	42.51	-16.4913	-0.0258	4.8497
977	SLV 4	7.49	-1.05	42.99	-16.6545	-0.0257	4.3062
977	SLV 5	2.6	4.42	32.25	-12.7135	-0.0324	1.4894
977	SLV 6	1.99	3.73	32.56	-12.8186	-0.0323	1.1391
977	SLV 7	1.84	-3.67	35.35	-14.1857	-0.0377	1.0614
977	SLV 8	1.23	-4.35	35.66	-14.2909	-0.0376	0.7112
977	SLV 9	-2.68	3.85	25.11	-10.2708	-0.041	-1.5465
977	SLV 10	-3.29	3.16	25.42	-10.3759	-0.041	-1.8968
977	SLV 11	-3.44	-4.23	28.21	-11.743	-0.0463	-1.9745
977	SLV 12	-4.05	-4.92	28.52	-11.8482	-0.0463	-2.3247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
977	SLV 13	-8.94	0.55	17.78	-7.9072	-0.053	-5.1415
977	SLV 14	-9.89	-0.52	18.27	-8.0704	-0.0529	-5.685
977	SLV 15	-9.16	-1.88	18.71	-8.3489	-0.0546	-5.2699
977	SLV 16	-10.11	-2.95	19.2	-8.5121	-0.0545	-5.8134
977	CRTFP Ux+	0	0	0	0	0	0
977	CRTFP Ux-	0	0	0	0	0	0
977	CRTFP Uy+	0	0	0	0	0	0
977	CRTFP Uy-	0	0	0	0	0	0
978	SLU 1	-0.69	-0.24	29.75	-12.7362	-0.0513	-0.397
978	SLU 2	-0.69	-0.19	29.74	-12.7324	-0.0513	-0.3978
978	SLU 3	-0.71	-0.24	30.42	-13.0154	-0.0527	-0.4066
978	SLU 4	-0.71	-0.21	30.42	-13.0131	-0.0527	-0.407
978	SLU 5	-0.7	-0.19	30.15	-12.9036	-0.0521	-0.4043
978	SLU 6	-0.72	-0.25	30.84	-13.1867	-0.0535	-0.4131
978	SLU 7	-0.72	-0.21	30.83	-13.1844	-0.0535	-0.4136
978	SLU 8	-0.71	-0.25	30.58	-13.0788	-0.053	-0.4101
978	SLU 9	-0.71	-0.22	30.57	-13.0765	-0.0529	-0.4106
978	SLU 10	-0.76	-0.22	33.52	-14.3058	-0.0592	-0.4362
978	SLU 11	-0.77	-0.28	34.2	-14.5888	-0.0606	-0.445
978	SLU 12	-0.77	-0.24	34.2	-14.5865	-0.0606	-0.4454
978	SLU 13	-0.77	-0.23	33.93	-14.4771	-0.06	-0.4427
978	SLU 14	-0.79	-0.28	34.62	-14.7601	-0.0614	-0.4516
978	SLU 15	-0.79	-0.25	34.61	-14.7578	-0.0614	-0.452
978	SLU 16	-0.78	-0.29	34.36	-14.6522	-0.0609	-0.4486
978	SLU 17	-0.78	-0.25	34.35	-14.6499	-0.0608	-0.449
978	SLU 18	-0.79	-0.29	35.15	-14.984	-0.0626	-0.4519
978	SLU 19	-0.79	-0.26	35.14	-14.9816	-0.0626	-0.4524
978	SLU 20	-0.8	-0.3	35.56	-15.1552	-0.0634	-0.4585
978	SLU 21	-0.8	-0.26	35.56	-15.1529	-0.0634	-0.4589
978	SLU 22	-0.76	-0.26	33.53	-14.3037	-0.0591	-0.4388
978	SLU 23	-0.76	-0.2	33.52	-14.2998	-0.059	-0.4395
978	SLU 24	-0.78	-0.26	34.2	-14.5829	-0.0604	-0.4483
978	SLU 25	-0.78	-0.23	34.2	-14.5806	-0.0604	-0.4488
978	SLU 26	-0.78	-0.21	33.93	-14.4711	-0.0598	-0.4461
978	SLU 27	-0.79	-0.26	34.62	-14.7541	-0.0613	-0.4549
978	SLU 28	-0.79	-0.23	34.61	-14.7518	-0.0612	-0.4553
978	SLU 29	-0.79	-0.27	34.36	-14.6462	-0.0607	-0.4519
978	SLU 30	-0.79	-0.23	34.35	-14.6439	-0.0607	-0.4523
978	SLU 31	-0.83	-0.24	37.3	-15.8733	-0.0669	-0.478
978	SLU 32	-0.85	-0.29	37.98	-16.1563	-0.0684	-0.4868
978	SLU 33	-0.85	-0.26	37.98	-16.154	-0.0683	-0.4872
978	SLU 34	-0.84	-0.24	37.71	-16.0445	-0.0678	-0.4845
978	SLU 35	-0.86	-0.3	38.4	-16.3276	-0.0692	-0.4933
978	SLU 36	-0.86	-0.26	38.39	-16.3253	-0.0691	-0.4938
978	SLU 37	-0.85	-0.3	38.14	-16.2197	-0.0686	-0.4903
978	SLU 38	-0.85	-0.27	38.13	-16.2174	-0.0686	-0.4908
978	SLU 39	-0.86	-0.31	38.93	-16.5514	-0.0704	-0.4937
978	SLU 40	-0.86	-0.28	38.92	-16.5491	-0.0704	-0.4941
978	SLU 41	-0.87	-0.31	39.34	-16.7227	-0.0712	-0.5003
978	SLU 42	-0.87	-0.28	39.34	-16.7204	-0.0712	-0.5007
978	SLU 43	-0.87	-0.31	37.38	-16.0197	-0.0641	-0.5018
978	SLU 44	-0.87	-0.26	37.37	-16.0158	-0.064	-0.5025
978	SLU 45	-0.89	-0.31	38.05	-16.2988	-0.0654	-0.5114
978	SLU 46	-0.89	-0.28	38.05	-16.2965	-0.0654	-0.5118
978	SLU 47	-0.88	-0.26	37.78	-16.1871	-0.0648	-0.5091
978	SLU 48	-0.9	-0.32	38.47	-16.4701	-0.0662	-0.5179
978	SLU 49	-0.9	-0.28	38.46	-16.4678	-0.0662	-0.5184
978	SLU 50	-0.9	-0.32	38.21	-16.3622	-0.0657	-0.5149
978	SLU 51	-0.9	-0.28	38.2	-16.3599	-0.0657	-0.5154
978	SLU 52	-0.94	-0.29	41.15	-17.5892	-0.0719	-0.541
978	SLU 53	-0.96	-0.35	41.83	-17.8723	-0.0733	-0.5498
978	SLU 54	-0.96	-0.31	41.83	-17.87	-0.0733	-0.5502
978	SLU 55	-0.95	-0.29	41.56	-17.7605	-0.0727	-0.5475
978	SLU 56	-0.97	-0.35	42.25	-18.0435	-0.0742	-0.5563
978	SLU 57	-0.97	-0.32	42.24	-18.0412	-0.0741	-0.5568
978	SLU 58	-0.96	-0.35	41.99	-17.9356	-0.0736	-0.5534
978	SLU 59	-0.96	-0.32	41.98	-17.9333	-0.0736	-0.5538
978	SLU 60	-0.97	-0.36	42.78	-18.2674	-0.0754	-0.5567
978	SLU 61	-0.97	-0.33	42.77	-18.2651	-0.0753	-0.5572
978	SLU 62	-0.98	-0.37	43.19	-18.4387	-0.0762	-0.5633
978	SLU 63	-0.98	-0.33	43.19	-18.4364	-0.0762	-0.5637
978	SLU 64	-0.95	-0.33	41.16	-17.5871	-0.0718	-0.5436
978	SLU 65	-0.95	-0.27	41.15	-17.5833	-0.0718	-0.5443
978	SLU 66	-0.96	-0.33	41.83	-17.8663	-0.0732	-0.5531
978	SLU 67	-0.96	-0.29	41.83	-17.864	-0.0731	-0.5536
978	SLU 68	-0.96	-0.27	41.56	-17.7545	-0.0726	-0.5509
978	SLU 69	-0.97	-0.33	42.25	-18.0376	-0.074	-0.5597
978	SLU 70	-0.97	-0.3	42.24	-18.0353	-0.074	-0.5601
978	SLU 71	-0.97	-0.33	41.99	-17.9297	-0.0734	-0.5567
978	SLU 72	-0.97	-0.3	41.98	-17.9274	-0.0734	-0.5571
978	SLU 73	-1.01	-0.31	44.93	-19.1567	-0.0797	-0.5828
978	SLU 74	-1.03	-0.36	45.61	-19.4397	-0.0811	-0.5916
978	SLU 75	-1.03	-0.33	45.61	-19.4374	-0.0811	-0.592
978	SLU 76	-1.02	-0.31	45.34	-19.328	-0.0805	-0.5893
978	SLU 77	-1.04	-0.37	46.03	-19.611	-0.0819	-0.5981
978	SLU 78	-1.04	-0.33	46.02	-19.6087	-0.0819	-0.5986
978	SLU 79	-1.03	-0.37	45.77	-19.5031	-0.0814	-0.5951
978	SLU 80	-1.04	-0.34	45.76	-19.5008	-0.0813	-0.5956
978	SLU 81	-1.04	-0.38	46.55	-19.8349	-0.0831	-0.5985
978	SLU 82	-1.04	-0.34	46.55	-19.8326	-0.0831	-0.5989

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
978	SLU 83	-1.05	-0.38	46.97	-20.0062	-0.0839	-0.605
978	SLU 84	-1.05	-0.35	46.96	-20.0038	-0.0839	-0.6055
978	SLE RA 1	-0.71	-0.25	30.83	-13.1841	-0.0535	-0.409
978	SLE RA 2	-0.71	-0.21	30.82	-13.1815	-0.0535	-0.4095
978	SLE RA 3	-0.72	-0.25	31.28	-13.3702	-0.0544	-0.4153
978	SLE RA 4	-0.72	-0.23	31.27	-13.3686	-0.0544	-0.4156
978	SLE RA 5	-0.72	-0.21	31.1	-13.2957	-0.054	-0.4138
978	SLE RA 6	-0.73	-0.25	31.56	-13.4844	-0.055	-0.4197
978	SLE RA 7	-0.73	-0.23	31.55	-13.4828	-0.055	-0.42
978	SLE RA 8	-0.73	-0.25	31.38	-13.4124	-0.0546	-0.4177
978	SLE RA 9	-0.73	-0.23	31.38	-13.4109	-0.0546	-0.418
978	SLE RA 10	-0.76	-0.23	33.34	-14.2304	-0.0588	-0.4351
978	SLE RA 11	-0.77	-0.27	33.8	-14.4191	-0.0597	-0.4409
978	SLE RA 12	-0.77	-0.25	33.79	-14.4176	-0.0597	-0.4412
978	SLE RA 13	-0.76	-0.24	33.62	-14.3446	-0.0593	-0.4394
978	SLE RA 14	-0.77	-0.27	34.08	-14.5333	-0.0603	-0.4453
978	SLE RA 15	-0.77	-0.25	34.07	-14.5318	-0.0602	-0.4456
978	SLE RA 16	-0.77	-0.28	33.9	-14.4614	-0.0599	-0.4433
978	SLE RA 17	-0.77	-0.25	33.9	-14.4598	-0.0599	-0.4436
978	SLE RA 18	-0.77	-0.28	34.43	-14.6826	-0.0611	-0.4456
978	SLE RA 19	-0.78	-0.26	34.42	-14.681	-0.0611	-0.4459
978	SLE RA 20	-0.78	-0.28	34.7	-14.7967	-0.0616	-0.4499
978	SLE RA 21	-0.78	-0.26	34.7	-14.7952	-0.0616	-0.4502
978	SLE FR 1	-0.71	-0.25	30.83	-13.1841	-0.0535	-0.409
978	SLE FR 2	-0.71	-0.24	30.83	-13.1835	-0.0535	-0.4091
978	SLE FR 3	-0.71	-0.25	30.94	-13.2297	-0.0538	-0.4107
978	SLE FR 4	-0.73	-0.25	31.91	-13.6331	-0.0558	-0.42
978	SLE FR 5	-0.73	-0.26	32.02	-13.6793	-0.056	-0.4217
978	SLE FR 6	-0.74	-0.27	32.63	-13.9333	-0.0573	-0.4273
978	SLE QP 1	-0.71	-0.25	30.83	-13.1841	-0.0535	-0.409
978	SLE QP 2	-0.73	-0.26	31.91	-13.6336	-0.0558	-0.4199
978	SLD 1	3.28	0.86	36.56	-15.2939	-0.0528	1.8873
978	SLD 2	2.88	0.43	36.77	-15.3729	-0.053	1.6543
978	SLD 3	3.19	-0.18	36.97	-15.4913	-0.0542	1.8316
978	SLD 4	2.78	-0.61	37.18	-15.5703	-0.0544	1.5987
978	SLD 5	0.69	1.73	32.63	-13.8182	-0.0528	0.3981
978	SLD 6	0.43	1.45	32.77	-13.87	-0.0529	0.2454
978	SLD 7	0.37	-1.74	34.02	-14.4763	-0.0574	0.2125
978	SLD 8	0.1	-2.02	34.16	-14.5281	-0.0575	0.0598
978	SLD 9	-1.56	1.5	29.66	-12.7391	-0.0541	-0.8997
978	SLD 10	-1.83	1.22	29.8	-12.7909	-0.0542	-1.0524
978	SLD 11	-1.89	-1.97	31.04	-13.3972	-0.0587	-1.0852
978	SLD 12	-2.15	-2.25	31.18	-13.449	-0.0588	-1.238
978	SLD 13	-4.24	0.09	26.64	-11.6969	-0.0572	-2.4386
978	SLD 14	-4.65	-0.34	26.85	-11.7759	-0.0574	-2.6715
978	SLD 15	-4.34	-0.95	27.05	-11.8943	-0.0586	-2.4942
978	SLD 16	-4.74	-1.38	27.26	-11.9734	-0.0588	-2.7272
978	SLV 1	8.65	2.33	42.8	-17.5245	-0.0488	4.9738
978	SLV 2	7.71	1.32	43.29	-17.7087	-0.0493	4.4312
978	SLV 3	8.43	-0.04	43.74	-17.9767	-0.052	4.8461
978	SLV 4	7.48	-1.05	44.23	-18.1609	-0.0525	4.3035
978	SLV 5	2.59	4.29	33.66	-14.0833	-0.0488	1.4854
978	SLV 6	1.98	3.64	33.97	-14.202	-0.0491	1.1357
978	SLV 7	1.84	-3.62	36.81	-15.5907	-0.0594	1.0595
978	SLV 8	1.23	-4.27	37.12	-15.7093	-0.0597	0.7099
978	SLV 9	-2.69	3.75	26.69	-11.5579	-0.0519	-1.5498
978	SLV 10	-3.3	3.1	27.01	-11.6766	-0.0522	-1.8994
978	SLV 11	-3.44	-4.15	29.85	-13.0652	-0.0625	-1.9756
978	SLV 12	-4.05	-4.8	30.16	-13.1839	-0.0628	-2.3253
978	SLV 13	-8.94	0.53	19.58	-9.1064	-0.0591	-5.1434
978	SLV 14	-9.89	-0.48	20.07	-9.2905	-0.0596	-5.6859
978	SLV 15	-9.17	-1.84	20.53	-9.5586	-0.0623	-5.2711
978	SLV 16	-10.12	-2.85	21.02	-9.7427	-0.0628	-5.8137
978	CRTFP Ux+	0	0	0	0	0	0
978	CRTFP Ux-	0	0	0	0	0	0
978	CRTFP Uy+	0	0	0	0	0	0
978	CRTFP Uy-	0	0	0	0	0	0
979	SLU 1	-0.69	-0.25	31.53	-14.3341	-0.06	-0.3991
979	SLU 2	-0.7	-0.19	31.52	-14.3285	-0.0599	-0.3998
979	SLU 3	-0.71	-0.24	32.25	-14.6547	-0.0615	-0.4087
979	SLU 4	-0.71	-0.21	32.25	-14.6514	-0.0615	-0.4091
979	SLU 5	-0.71	-0.19	31.96	-14.525	-0.0608	-0.4064
979	SLU 6	-0.72	-0.25	32.7	-14.8513	-0.0625	-0.4152
979	SLU 7	-0.72	-0.21	32.69	-14.8479	-0.0624	-0.4157
979	SLU 8	-0.72	-0.25	32.42	-14.7271	-0.0619	-0.4122
979	SLU 9	-0.72	-0.22	32.41	-14.7238	-0.0618	-0.4126
979	SLU 10	-0.76	-0.22	35.57	-16.1393	-0.069	-0.439
979	SLU 11	-0.78	-0.28	36.31	-16.4656	-0.0707	-0.4479
979	SLU 12	-0.78	-0.25	36.3	-16.4622	-0.0706	-0.4483
979	SLU 13	-0.78	-0.23	36.01	-16.3359	-0.07	-0.4455
979	SLU 14	-0.79	-0.28	36.75	-16.6621	-0.0716	-0.4544
979	SLU 15	-0.79	-0.25	36.74	-16.6588	-0.0716	-0.4549
979	SLU 16	-0.79	-0.29	36.47	-16.538	-0.071	-0.4514
979	SLU 17	-0.79	-0.25	36.46	-16.5346	-0.071	-0.4518
979	SLU 18	-0.79	-0.29	37.32	-16.921	-0.073	-0.4551
979	SLU 19	-0.79	-0.26	37.31	-16.9177	-0.073	-0.4555
979	SLU 20	-0.8	-0.3	37.76	-17.1175	-0.074	-0.4616
979	SLU 21	-0.8	-0.26	37.76	-17.1142	-0.0739	-0.462
979	SLU 22	-0.77	-0.26	35.58	-16.1361	-0.0689	-0.4416
979	SLU 23	-0.77	-0.2	35.56	-16.1305	-0.0688	-0.4423

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
979	SLU 24	-0.78	-0.26	36.3	-16.4567	-0.0705	-0.4512
979	SLU 25	-0.79	-0.22	36.29	-16.4534	-0.0705	-0.4516
979	SLU 26	-0.78	-0.21	36.01	-16.327	-0.0698	-0.4488
979	SLU 27	-0.8	-0.26	36.74	-16.6532	-0.0715	-0.4577
979	SLU 28	-0.8	-0.23	36.74	-16.6499	-0.0714	-0.4581
979	SLU 29	-0.79	-0.27	36.46	-16.5291	-0.0708	-0.4547
979	SLU 30	-0.79	-0.23	36.46	-16.5257	-0.0708	-0.4551
979	SLU 31	-0.84	-0.24	39.62	-17.9413	-0.078	-0.4815
979	SLU 32	-0.85	-0.29	40.35	-18.2676	-0.0796	-0.4903
979	SLU 33	-0.85	-0.26	40.34	-18.2642	-0.0796	-0.4908
979	SLU 34	-0.85	-0.24	40.06	-18.1378	-0.0789	-0.488
979	SLU 35	-0.86	-0.3	40.8	-18.4641	-0.0806	-0.4969
979	SLU 36	-0.87	-0.26	40.79	-18.4607	-0.0806	-0.4973
979	SLU 37	-0.86	-0.3	40.52	-18.3399	-0.08	-0.4939
979	SLU 38	-0.86	-0.27	40.51	-18.3366	-0.0799	-0.4943
979	SLU 39	-0.87	-0.31	41.36	-18.723	-0.082	-0.4975
979	SLU 40	-0.87	-0.27	41.36	-18.7196	-0.0819	-0.498
979	SLU 41	-0.88	-0.31	41.81	-18.9195	-0.0829	-0.5041
979	SLU 42	-0.88	-0.28	41.8	-18.9161	-0.0829	-0.5045
979	SLU 43	-0.88	-0.31	39.6	-18.0165	-0.0749	-0.5043
979	SLU 44	-0.88	-0.26	39.59	-18.0109	-0.0748	-0.505
979	SLU 45	-0.89	-0.31	40.33	-18.3371	-0.0765	-0.5138
979	SLU 46	-0.89	-0.28	40.32	-18.3338	-0.0764	-0.5143
979	SLU 47	-0.89	-0.26	40.03	-18.2074	-0.0757	-0.5115
979	SLU 48	-0.91	-0.32	40.77	-18.5337	-0.0774	-0.5204
979	SLU 49	-0.91	-0.28	40.76	-18.5303	-0.0774	-0.5208
979	SLU 50	-0.9	-0.32	40.49	-18.4095	-0.0768	-0.5174
979	SLU 51	-0.9	-0.29	40.48	-18.4062	-0.0767	-0.5178
979	SLU 52	-0.95	-0.29	43.64	-19.8218	-0.0839	-0.5441
979	SLU 53	-0.96	-0.35	44.38	-20.148	-0.0856	-0.553
979	SLU 54	-0.96	-0.31	44.37	-20.1446	-0.0855	-0.5535
979	SLU 55	-0.96	-0.3	44.09	-20.0183	-0.0849	-0.5507
979	SLU 56	-0.97	-0.35	44.82	-20.3445	-0.0865	-0.5596
979	SLU 57	-0.97	-0.32	44.82	-20.3412	-0.0865	-0.56
979	SLU 58	-0.97	-0.36	44.54	-20.2204	-0.0859	-0.5566
979	SLU 59	-0.97	-0.32	44.54	-20.217	-0.0859	-0.557
979	SLU 60	-0.97	-0.36	45.39	-20.6034	-0.0879	-0.5602
979	SLU 61	-0.98	-0.33	45.38	-20.6001	-0.0879	-0.5606
979	SLU 62	-0.99	-0.37	45.84	-20.7999	-0.0889	-0.5668
979	SLU 63	-0.99	-0.33	45.83	-20.7966	-0.0888	-0.5672
979	SLU 64	-0.95	-0.33	43.65	-19.8185	-0.0838	-0.5467
979	SLU 65	-0.95	-0.27	43.64	-19.8129	-0.0838	-0.5474
979	SLU 66	-0.97	-0.33	44.37	-20.1391	-0.0854	-0.5563
979	SLU 67	-0.97	-0.29	44.36	-20.1358	-0.0854	-0.5567
979	SLU 68	-0.96	-0.28	44.08	-20.0094	-0.0847	-0.554
979	SLU 69	-0.98	-0.33	44.82	-20.3356	-0.0864	-0.5629
979	SLU 70	-0.98	-0.3	44.81	-20.3323	-0.0863	-0.5633
979	SLU 71	-0.97	-0.34	44.54	-20.2115	-0.0857	-0.5599
979	SLU 72	-0.97	-0.3	44.53	-20.2081	-0.0857	-0.5603
979	SLU 73	-1.02	-0.31	47.69	-21.6237	-0.0929	-0.5866
979	SLU 74	-1.04	-0.36	48.42	-21.95	-0.0946	-0.5955
979	SLU 75	-1.04	-0.33	48.42	-21.9466	-0.0945	-0.5959
979	SLU 76	-1.03	-0.31	48.13	-21.8202	-0.0938	-0.5932
979	SLU 77	-1.05	-0.36	48.87	-22.1465	-0.0955	-0.6021
979	SLU 78	-1.05	-0.33	48.86	-22.1431	-0.0955	-0.6025
979	SLU 79	-1.04	-0.37	48.59	-22.0223	-0.0949	-0.599
979	SLU 80	-1.04	-0.34	48.58	-22.019	-0.0948	-0.5995
979	SLU 81	-1.05	-0.38	49.44	-22.4054	-0.0969	-0.6027
979	SLU 82	-1.05	-0.34	49.43	-22.402	-0.0968	-0.6031
979	SLU 83	-1.06	-0.38	49.88	-22.6019	-0.0978	-0.6093
979	SLU 84	-1.06	-0.35	49.87	-22.5985	-0.0978	-0.6097
979	SLE RA 1	-0.72	-0.25	32.69	-14.8489	-0.0625	-0.4112
979	SLE RA 2	-0.72	-0.21	32.68	-14.8452	-0.0625	-0.4117
979	SLE RA 3	-0.73	-0.25	33.17	-15.0627	-0.0636	-0.4176
979	SLE RA 4	-0.73	-0.23	33.16	-15.0605	-0.0635	-0.4179
979	SLE RA 5	-0.72	-0.21	32.97	-14.9762	-0.0631	-0.4161
979	SLE RA 6	-0.73	-0.25	33.46	-15.1937	-0.0642	-0.422
979	SLE RA 7	-0.73	-0.23	33.46	-15.1915	-0.0642	-0.4223
979	SLE RA 8	-0.73	-0.25	33.28	-15.111	-0.0638	-0.42
979	SLE RA 9	-0.73	-0.23	33.27	-15.1087	-0.0638	-0.4203
979	SLE RA 10	-0.76	-0.23	35.38	-16.0524	-0.0686	-0.4378
979	SLE RA 11	-0.77	-0.27	35.87	-16.2699	-0.0697	-0.4437
979	SLE RA 12	-0.77	-0.25	35.87	-16.2677	-0.0696	-0.444
979	SLE RA 13	-0.77	-0.24	35.68	-16.1834	-0.0692	-0.4422
979	SLE RA 14	-0.78	-0.27	36.17	-16.4009	-0.0703	-0.4481
979	SLE RA 15	-0.78	-0.25	36.16	-16.3987	-0.0703	-0.4484
979	SLE RA 16	-0.78	-0.28	35.98	-16.3182	-0.0699	-0.4461
979	SLE RA 17	-0.78	-0.25	35.97	-16.3159	-0.0698	-0.4464
979	SLE RA 18	-0.78	-0.28	36.55	-16.5735	-0.0712	-0.4485
979	SLE RA 19	-0.78	-0.26	36.54	-16.5713	-0.0712	-0.4488
979	SLE RA 20	-0.79	-0.28	36.84	-16.7046	-0.0719	-0.4529
979	SLE RA 21	-0.79	-0.26	36.84	-16.7023	-0.0718	-0.4532
979	SLE FR 1	-0.72	-0.25	32.69	-14.8489	-0.0625	-0.4112
979	SLE FR 2	-0.72	-0.24	32.68	-14.8482	-0.0625	-0.4113
979	SLE FR 3	-0.72	-0.25	32.8	-14.9013	-0.0628	-0.413
979	SLE FR 4	-0.74	-0.25	33.84	-15.3656	-0.0651	-0.4225
979	SLE FR 5	-0.74	-0.26	33.96	-15.4187	-0.0654	-0.4242
979	SLE FR 6	-0.75	-0.27	34.62	-15.7112	-0.0669	-0.4299
979	SLE QP 1	-0.72	-0.25	32.69	-14.8489	-0.0625	-0.4112
979	SLE QP 2	-0.73	-0.26	33.84	-15.3663	-0.0651	-0.4224

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
979	SLD 1	3.28	0.81	38.46	-17.1624	-0.0653	1.883
979	SLD 2	2.87	0.4	38.68	-17.2558	-0.0657	1.6507
979	SLD 3	3.18	-0.21	38.9	-17.3778	-0.0673	1.8278
979	SLD 4	2.78	-0.62	39.12	-17.4712	-0.0678	1.5954
979	SLD 5	0.69	1.69	34.52	-15.5619	-0.062	0.3943
979	SLD 6	0.42	1.42	34.67	-15.6231	-0.0623	0.242
979	SLD 7	0.37	-1.73	35.99	-16.2799	-0.0688	0.2102
979	SLD 8	0.1	-2	36.13	-16.3411	-0.0691	0.0579
979	SLD 9	-1.57	1.48	31.56	-14.3915	-0.0612	-0.9027
979	SLD 10	-1.84	1.21	31.7	-14.4528	-0.0614	-1.055
979	SLD 11	-1.89	-1.94	33.02	-15.1096	-0.068	-1.0868
979	SLD 12	-2.16	-2.21	33.16	-15.1708	-0.0682	-1.2391
979	SLD 13	-4.25	0.1	28.57	-13.2614	-0.0625	-2.4403
979	SLD 14	-4.65	-0.31	28.79	-13.3548	-0.0629	-2.6727
979	SLD 15	-4.34	-0.92	29.01	-13.4768	-0.0645	-2.4955
979	SLD 16	-4.75	-1.33	29.23	-13.5702	-0.0649	-2.7279
979	SLV 1	8.65	2.22	44.66	-19.5774	-0.0656	4.9672
979	SLV 2	7.7	1.27	45.18	-19.7949	-0.0666	4.426
979	SLV 3	8.42	-0.12	45.66	-20.0678	-0.0703	4.8404
979	SLV 4	7.48	-1.07	46.17	-20.2853	-0.0713	4.2993
979	SLV 5	2.58	4.2	35.49	-15.8484	-0.058	1.4799
979	SLV 6	1.97	3.58	35.82	-15.9886	-0.0586	1.1311
979	SLV 7	1.84	-3.6	38.81	-17.4831	-0.0736	1.0574
979	SLV 8	1.23	-4.22	39.14	-17.6233	-0.0742	0.7087
979	SLV 9	-2.7	3.7	28.54	-13.1094	-0.056	-1.5535
979	SLV 10	-3.31	3.08	28.88	-13.2495	-0.0566	-1.9023
979	SLV 11	-3.44	-4.1	31.87	-14.744	-0.0716	-1.976
979	SLV 12	-4.05	-4.72	32.2	-14.8842	-0.0722	-2.3247
979	SLV 13	-8.95	0.56	21.51	-10.4473	-0.059	-5.1441
979	SLV 14	-9.89	-0.4	22.03	-10.6648	-0.06	-5.6853
979	SLV 15	-9.17	-1.78	22.51	-10.9377	-0.0637	-5.2708
979	SLV 16	-10.12	-2.74	23.02	-11.1552	-0.0646	-5.812
979	CRTFP Ux+	0	0	0	0	0	0
979	CRTFP Ux-	0	0	0	0	0	0
979	CRTFP Uy+	0	0	0	0	0	0
979	CRTFP Uy-	0	0	0	0	0	0
980	SLU 1	-0.7	-0.24	33.45	-16.1289	-0.0594	-0.4011
980	SLU 2	-0.7	-0.18	33.43	-16.1211	-0.0593	-0.4018
980	SLU 3	-0.71	-0.24	34.22	-16.4962	-0.061	-0.4107
980	SLU 4	-0.72	-0.2	34.21	-16.4915	-0.0609	-0.4111
980	SLU 5	-0.71	-0.19	33.91	-16.346	-0.0602	-0.4083
980	SLU 6	-0.73	-0.24	34.7	-16.7212	-0.0619	-0.4173
980	SLU 7	-0.73	-0.21	34.69	-16.7165	-0.0619	-0.4177
980	SLU 8	-0.72	-0.25	34.4	-16.5788	-0.0613	-0.4142
980	SLU 9	-0.72	-0.21	34.39	-16.5741	-0.0612	-0.4146
980	SLU 10	-0.77	-0.21	37.78	-18.1978	-0.0684	-0.4417
980	SLU 11	-0.78	-0.27	38.57	-18.573	-0.07	-0.4507
980	SLU 12	-0.79	-0.23	38.56	-18.5683	-0.07	-0.4511
980	SLU 13	-0.78	-0.22	38.25	-18.4228	-0.0693	-0.4483
980	SLU 14	-0.8	-0.27	39.04	-18.7979	-0.071	-0.4573
980	SLU 15	-0.8	-0.24	39.03	-18.7933	-0.0709	-0.4577
980	SLU 16	-0.79	-0.28	38.74	-18.6556	-0.0704	-0.4542
980	SLU 17	-0.79	-0.24	38.73	-18.6509	-0.0703	-0.4546
980	SLU 18	-0.8	-0.28	39.65	-19.0957	-0.0723	-0.4582
980	SLU 19	-0.8	-0.25	39.64	-19.091	-0.0723	-0.4586
980	SLU 20	-0.81	-0.28	40.13	-19.3207	-0.0733	-0.4647
980	SLU 21	-0.81	-0.25	40.12	-19.316	-0.0732	-0.4652
980	SLU 22	-0.77	-0.25	37.78	-18.1935	-0.0683	-0.4443
980	SLU 23	-0.77	-0.19	37.76	-18.1857	-0.0682	-0.445
980	SLU 24	-0.79	-0.25	38.55	-18.5609	-0.0699	-0.454
980	SLU 25	-0.79	-0.21	38.54	-18.5562	-0.0698	-0.4544
980	SLU 26	-0.79	-0.2	38.24	-18.4107	-0.0691	-0.4516
980	SLU 27	-0.8	-0.25	39.03	-18.7858	-0.0708	-0.4605
980	SLU 28	-0.8	-0.22	39.02	-18.7811	-0.0708	-0.4609
980	SLU 29	-0.8	-0.25	38.73	-18.6434	-0.0702	-0.4574
980	SLU 30	-0.8	-0.22	38.72	-18.6388	-0.0701	-0.4579
980	SLU 31	-0.84	-0.22	42.11	-20.2625	-0.0772	-0.485
980	SLU 32	-0.86	-0.28	42.9	-20.6376	-0.0789	-0.4939
980	SLU 33	-0.86	-0.24	42.89	-20.633	-0.0789	-0.4943
980	SLU 34	-0.86	-0.23	42.58	-20.4875	-0.0782	-0.4915
980	SLU 35	-0.87	-0.28	43.37	-20.8626	-0.0799	-0.5005
980	SLU 36	-0.87	-0.25	43.36	-20.8579	-0.0798	-0.5009
980	SLU 37	-0.87	-0.28	43.07	-20.7202	-0.0793	-0.4974
980	SLU 38	-0.87	-0.25	43.06	-20.7155	-0.0792	-0.4978
980	SLU 39	-0.87	-0.29	43.98	-21.1603	-0.0812	-0.5014
980	SLU 40	-0.87	-0.26	43.98	-21.1557	-0.0812	-0.5018
980	SLU 41	-0.88	-0.29	44.46	-21.3853	-0.0822	-0.508
980	SLU 42	-0.89	-0.26	44.45	-21.3806	-0.0821	-0.5084
980	SLU 43	-0.88	-0.31	42	-20.2596	-0.0742	-0.5066
980	SLU 44	-0.88	-0.25	41.98	-20.2518	-0.0741	-0.5073
980	SLU 45	-0.9	-0.31	42.77	-20.627	-0.0757	-0.5162
980	SLU 46	-0.9	-0.27	42.76	-20.6223	-0.0757	-0.5167
980	SLU 47	-0.89	-0.26	42.45	-20.4768	-0.075	-0.5138
980	SLU 48	-0.91	-0.31	43.24	-20.8519	-0.0767	-0.5228
980	SLU 49	-0.91	-0.28	43.24	-20.8473	-0.0766	-0.5232
980	SLU 50	-0.9	-0.31	42.94	-20.7096	-0.0761	-0.5197
980	SLU 51	-0.91	-0.28	42.94	-20.7049	-0.076	-0.5201
980	SLU 52	-0.95	-0.28	46.32	-22.3286	-0.0831	-0.5472
980	SLU 53	-0.97	-0.34	47.11	-22.7038	-0.0848	-0.5562
980	SLU 54	-0.97	-0.3	47.1	-22.6991	-0.0847	-0.5566

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
980	SLU 55	-0.96	-0.29	46.8	-22.5536	-0.0841	-0.5538
980	SLU 56	-0.98	-0.34	47.59	-22.9287	-0.0858	-0.5628
980	SLU 57	-0.98	-0.31	47.58	-22.924	-0.0857	-0.5632
980	SLU 58	-0.97	-0.34	47.29	-22.7863	-0.0851	-0.5597
980	SLU 59	-0.98	-0.31	47.28	-22.7817	-0.0851	-0.5601
980	SLU 60	-0.98	-0.35	48.2	-23.2265	-0.0871	-0.5637
980	SLU 61	-0.98	-0.32	48.19	-23.2218	-0.0871	-0.5641
980	SLU 62	-0.99	-0.35	48.68	-23.4514	-0.0881	-0.5703
980	SLU 63	-0.99	-0.32	48.67	-23.4467	-0.088	-0.5707
980	SLU 64	-0.96	-0.32	46.33	-22.3243	-0.0831	-0.5498
980	SLU 65	-0.96	-0.26	46.31	-22.3165	-0.0829	-0.5505
980	SLU 66	-0.97	-0.32	47.1	-22.6916	-0.0846	-0.5595
980	SLU 67	-0.97	-0.28	47.09	-22.6869	-0.0846	-0.5599
980	SLU 68	-0.97	-0.27	46.79	-22.5414	-0.0839	-0.5571
980	SLU 69	-0.99	-0.32	47.58	-22.9166	-0.0856	-0.566
980	SLU 70	-0.99	-0.29	47.57	-22.9119	-0.0855	-0.5664
980	SLU 71	-0.98	-0.32	47.28	-22.7742	-0.085	-0.5629
980	SLU 72	-0.98	-0.29	47.27	-22.7695	-0.0849	-0.5634
980	SLU 73	-1.03	-0.29	50.66	-24.3933	-0.092	-0.5905
980	SLU 74	-1.04	-0.34	51.45	-24.7684	-0.0937	-0.5994
980	SLU 75	-1.04	-0.31	51.44	-24.7637	-0.0936	-0.5998
980	SLU 76	-1.04	-0.29	51.13	-24.6182	-0.093	-0.597
980	SLU 77	-1.06	-0.35	51.92	-24.9934	-0.0947	-0.606
980	SLU 78	-1.06	-0.32	51.91	-24.9887	-0.0946	-0.6064
980	SLU 79	-1.05	-0.35	51.62	-24.851	-0.094	-0.6029
980	SLU 80	-1.05	-0.32	51.61	-24.8463	-0.094	-0.6033
980	SLU 81	-1.06	-0.36	52.53	-25.2911	-0.096	-0.6069
980	SLU 82	-1.06	-0.33	52.52	-25.2864	-0.0959	-0.6073
980	SLU 83	-1.07	-0.36	53.01	-25.5161	-0.097	-0.6135
980	SLU 84	-1.07	-0.33	53	-25.5114	-0.0969	-0.6139
980	SLE RA 1	-0.72	-0.24	34.68	-16.7188	-0.0619	-0.4134
980	SLE RA 2	-0.72	-0.2	34.67	-16.7136	-0.0619	-0.4139
980	SLE RA 3	-0.73	-0.24	35.2	-16.9637	-0.063	-0.4199
980	SLE RA 4	-0.73	-0.22	35.19	-16.9605	-0.0629	-0.4201
980	SLE RA 5	-0.73	-0.21	34.99	-16.8635	-0.0625	-0.4183
980	SLE RA 6	-0.74	-0.24	35.52	-17.1136	-0.0636	-0.4242
980	SLE RA 7	-0.74	-0.22	35.51	-17.1105	-0.0636	-0.4245
980	SLE RA 8	-0.73	-0.25	35.32	-17.0187	-0.0632	-0.4222
980	SLE RA 9	-0.74	-0.22	35.31	-17.0156	-0.0632	-0.4225
980	SLE RA 10	-0.77	-0.22	37.57	-18.0981	-0.0679	-0.4405
980	SLE RA 11	-0.78	-0.26	38.1	-18.3482	-0.069	-0.4465
980	SLE RA 12	-0.78	-0.24	38.09	-18.3451	-0.069	-0.4468
980	SLE RA 13	-0.77	-0.23	37.89	-18.2481	-0.0685	-0.4449
980	SLE RA 14	-0.79	-0.26	38.41	-18.4981	-0.0697	-0.4509
980	SLE RA 15	-0.79	-0.24	38.41	-18.495	-0.0696	-0.4512
980	SLE RA 16	-0.78	-0.27	38.21	-18.4032	-0.0693	-0.4488
980	SLE RA 17	-0.78	-0.24	38.21	-18.4001	-0.0692	-0.4491
980	SLE RA 18	-0.79	-0.27	38.82	-18.6967	-0.0706	-0.4515
980	SLE RA 19	-0.79	-0.25	38.82	-18.6935	-0.0705	-0.4518
980	SLE RA 20	-0.79	-0.27	39.14	-18.8466	-0.0712	-0.4559
980	SLE RA 21	-0.79	-0.25	39.13	-18.8435	-0.0712	-0.4561
980	SLE FR 1	-0.72	-0.24	34.68	-16.7188	-0.0619	-0.4134
980	SLE FR 2	-0.72	-0.23	34.68	-16.7177	-0.0619	-0.4135
980	SLE FR 3	-0.72	-0.24	34.81	-16.7788	-0.0622	-0.4152
980	SLE FR 4	-0.74	-0.24	35.92	-17.3111	-0.0645	-0.4249
980	SLE FR 5	-0.74	-0.25	36.05	-17.3721	-0.0648	-0.4266
980	SLE FR 6	-0.75	-0.26	36.75	-17.7077	-0.0663	-0.4325
980	SLE QP 1	-0.72	-0.24	34.68	-16.7188	-0.0619	-0.4134
980	SLE QP 2	-0.74	-0.25	35.93	-17.3121	-0.0645	-0.4248
980	SLD 1	3.27	0.77	40.56	-19.291	-0.065	1.878
980	SLD 2	2.87	0.39	40.79	-19.4029	-0.0656	1.6464
980	SLD 3	3.17	-0.25	41.04	-19.542	-0.0677	1.8234
980	SLD 4	2.77	-0.64	41.27	-19.6539	-0.0682	1.5919
980	SLD 5	0.68	1.68	36.54	-17.5053	-0.0606	0.3899
980	SLD 6	0.41	1.42	36.7	-17.5786	-0.061	0.2381
980	SLD 7	0.36	-1.73	38.15	-18.3418	-0.0693	0.208
980	SLD 8	0.1	-1.98	38.3	-18.4152	-0.0697	0.0563
980	SLD 9	-1.58	1.49	33.55	-16.2091	-0.0593	-0.906
980	SLD 10	-1.84	1.23	33.7	-16.2824	-0.0597	-1.0577
980	SLD 11	-1.89	-1.92	35.15	-17.0456	-0.0681	-1.0878
980	SLD 12	-2.16	-2.17	35.31	-17.119	-0.0684	-1.2396
980	SLD 13	-4.25	0.14	30.58	-14.9704	-0.0608	-2.4416
980	SLD 14	-4.65	-0.25	30.81	-15.0823	-0.0614	-2.6731
980	SLD 15	-4.34	-0.88	31.06	-15.2213	-0.0634	-2.4961
980	SLD 16	-4.75	-1.27	31.29	-15.3332	-0.064	-2.7277
980	SLV 1	8.63	2.1	46.78	-21.9536	-0.0658	4.9586
980	SLV 2	7.69	1.21	47.33	-22.2143	-0.0671	4.4193
980	SLV 3	8.42	-0.22	47.88	-22.5226	-0.0718	4.8334
980	SLV 4	7.47	-1.12	48.43	-22.7833	-0.0732	4.2941
980	SLV 5	2.56	4.14	37.43	-17.7967	-0.0556	1.473
980	SLV 6	1.96	3.57	37.78	-17.9647	-0.0564	1.1254
980	SLV 7	1.84	-3.62	41.08	-19.6934	-0.0756	1.0556
980	SLV 8	1.23	-4.2	41.43	-19.8613	-0.0765	0.7081
980	SLV 9	-2.71	3.7	30.42	-14.7629	-0.0526	-1.5578
980	SLV 10	-3.32	3.12	30.78	-14.9309	-0.0534	-1.9053
980	SLV 11	-3.44	-4.07	34.07	-16.6596	-0.0726	-1.9751
980	SLV 12	-4.04	-4.64	34.42	-16.8276	-0.0735	-2.3227
980	SLV 13	-8.95	0.62	23.42	-11.841	-0.0559	-5.1438
980	SLV 14	-9.89	-0.27	23.97	-12.1016	-0.0572	-5.6831
980	SLV 15	-9.17	-1.71	24.52	-12.41	-0.0619	-5.269

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
980	SLV 16	-10.11	-2.6	25.07	-12.6706	-0.0632	-5.8083
980	CRTFP Ux+	0	0	0	0	0	0
980	CRTFP Ux-	0	0	0	0	0	0
980	CRTFP Uy+	0	0	0	0	0	0
980	CRTFP Uy-	0	0	0	0	0	0
981	SLU 1	-0.47	-0.16	23.65	-11.989	1.4519	-0.2628
981	SLU 2	-0.47	-0.12	23.64	-11.9823	1.4512	-0.2655
981	SLU 3	-0.49	-0.15	24.21	-12.2656	1.4857	-0.2694
981	SLU 4	-0.49	-0.13	24.2	-12.2615	1.4853	-0.271
981	SLU 5	-0.48	-0.12	23.98	-12.1516	1.4719	-0.2698
981	SLU 6	-0.49	-0.16	24.54	-12.4349	1.5064	-0.2737
981	SLU 7	-0.49	-0.14	24.54	-12.4308	1.506	-0.2753
981	SLU 8	-0.49	-0.16	24.33	-12.3276	1.4933	-0.2713
981	SLU 9	-0.49	-0.14	24.32	-12.3236	1.4929	-0.273
981	SLU 10	-0.52	-0.14	26.74	-13.5468	1.6409	-0.2921
981	SLU 11	-0.53	-0.17	27.3	-13.8301	1.6754	-0.2959
981	SLU 12	-0.53	-0.15	27.29	-13.826	1.6749	-0.2976
981	SLU 13	-0.53	-0.14	27.08	-13.7161	1.6616	-0.2964
981	SLU 14	-0.54	-0.17	27.64	-13.9994	1.6961	-0.3002
981	SLU 15	-0.54	-0.15	27.63	-13.9953	1.6956	-0.3019
981	SLU 16	-0.54	-0.18	27.43	-13.8921	1.683	-0.2979
981	SLU 17	-0.54	-0.15	27.42	-13.8881	1.6825	-0.2995
981	SLU 18	-0.54	-0.18	28.08	-14.224	1.7229	-0.3007
981	SLU 19	-0.54	-0.16	28.07	-14.22	1.7225	-0.3024
981	SLU 20	-0.55	-0.18	28.41	-14.3933	1.7436	-0.305
981	SLU 21	-0.55	-0.16	28.41	-14.3893	1.7431	-0.3066
981	SLU 22	-0.53	-0.16	26.74	-13.5432	1.6409	-0.2923
981	SLU 23	-0.53	-0.12	26.73	-13.5365	1.6402	-0.2951
981	SLU 24	-0.54	-0.16	27.29	-13.8197	1.6747	-0.2989
981	SLU 25	-0.54	-0.14	27.28	-13.8157	1.6743	-0.3006
981	SLU 26	-0.53	-0.12	27.06	-13.7058	1.6609	-0.2993
981	SLU 27	-0.54	-0.16	27.63	-13.989	1.6954	-0.3032
981	SLU 28	-0.55	-0.14	27.62	-13.985	1.695	-0.3049
981	SLU 29	-0.54	-0.16	27.41	-13.8818	1.6823	-0.3009
981	SLU 30	-0.54	-0.14	27.41	-13.8777	1.6819	-0.3025
981	SLU 31	-0.57	-0.14	29.82	-15.101	1.8299	-0.3216
981	SLU 32	-0.59	-0.17	30.39	-15.3842	1.8644	-0.3255
981	SLU 33	-0.59	-0.15	30.38	-15.3802	1.8639	-0.3272
981	SLU 34	-0.58	-0.14	30.16	-15.2703	1.8506	-0.3259
981	SLU 35	-0.59	-0.18	30.72	-15.5535	1.8851	-0.3298
981	SLU 36	-0.59	-0.15	30.72	-15.5495	1.8846	-0.3314
981	SLU 37	-0.59	-0.18	30.51	-15.4463	1.872	-0.3275
981	SLU 38	-0.59	-0.16	30.5	-15.4422	1.8715	-0.3291
981	SLU 39	-0.59	-0.18	31.16	-15.7782	1.9119	-0.3303
981	SLU 40	-0.59	-0.16	31.15	-15.7741	1.9114	-0.3319
981	SLU 41	-0.6	-0.18	31.5	-15.9475	1.9326	-0.3346
981	SLU 42	-0.6	-0.16	31.49	-15.9434	1.9321	-0.3362
981	SLU 43	-0.6	-0.2	29.69	-15.0528	1.8227	-0.3315
981	SLU 44	-0.6	-0.16	29.68	-15.0461	1.822	-0.3342
981	SLU 45	-0.61	-0.2	30.24	-15.3294	1.8565	-0.3381
981	SLU 46	-0.61	-0.18	30.24	-15.3254	1.8561	-0.3397
981	SLU 47	-0.61	-0.17	30.02	-15.2154	1.8427	-0.3385
981	SLU 48	-0.62	-0.2	30.58	-15.4987	1.8772	-0.3424
981	SLU 49	-0.62	-0.18	30.57	-15.4947	1.8767	-0.344
981	SLU 50	-0.61	-0.21	30.37	-15.3914	1.8641	-0.34
981	SLU 51	-0.61	-0.18	30.36	-15.3874	1.8637	-0.3417
981	SLU 52	-0.65	-0.18	32.78	-16.6106	2.0117	-0.3608
981	SLU 53	-0.66	-0.22	33.34	-16.8939	2.0462	-0.3646
981	SLU 54	-0.66	-0.19	33.33	-16.8899	2.0457	-0.3663
981	SLU 55	-0.65	-0.18	33.11	-16.7799	2.0323	-0.365
981	SLU 56	-0.67	-0.22	33.68	-17.0632	2.0668	-0.3689
981	SLU 57	-0.67	-0.2	33.67	-17.0592	2.0664	-0.3706
981	SLU 58	-0.66	-0.22	33.46	-16.9559	2.0538	-0.3666
981	SLU 59	-0.66	-0.2	33.46	-16.9519	2.0533	-0.3682
981	SLU 60	-0.67	-0.22	34.12	-17.2878	2.0937	-0.3694
981	SLU 61	-0.67	-0.2	34.11	-17.2838	2.0932	-0.371
981	SLU 62	-0.67	-0.23	34.45	-17.4571	2.1144	-0.3737
981	SLU 63	-0.68	-0.2	34.45	-17.4531	2.1139	-0.3753
981	SLU 64	-0.65	-0.2	32.78	-16.607	2.0117	-0.361
981	SLU 65	-0.65	-0.17	32.76	-16.6003	2.011	-0.3638
981	SLU 66	-0.66	-0.2	33.33	-16.8836	2.0455	-0.3676
981	SLU 67	-0.66	-0.18	33.32	-16.8795	2.045	-0.3693
981	SLU 68	-0.66	-0.17	33.1	-16.7696	2.0317	-0.368
981	SLU 69	-0.67	-0.21	33.67	-17.0529	2.0662	-0.3719
981	SLU 70	-0.67	-0.18	33.66	-17.0488	2.0657	-0.3736
981	SLU 71	-0.67	-0.21	33.45	-16.9456	2.0531	-0.3696
981	SLU 72	-0.67	-0.19	33.44	-16.9416	2.0526	-0.3712
981	SLU 73	-0.7	-0.18	35.86	-18.1648	2.2006	-0.3903
981	SLU 74	-0.71	-0.22	36.42	-18.4481	2.2351	-0.3942
981	SLU 75	-0.71	-0.2	36.42	-18.444	2.2347	-0.3958
981	SLU 76	-0.71	-0.19	36.2	-18.3341	2.2213	-0.3946
981	SLU 77	-0.72	-0.22	36.76	-18.6174	2.2558	-0.3985
981	SLU 78	-0.72	-0.2	36.75	-18.6133	2.2554	-0.4001
981	SLU 79	-0.71	-0.23	36.55	-18.5101	2.2427	-0.3962
981	SLU 80	-0.71	-0.2	36.54	-18.5061	2.2423	-0.3978
981	SLU 81	-0.72	-0.23	37.2	-18.842	2.2827	-0.399
981	SLU 82	-0.72	-0.21	37.19	-18.838	2.2822	-0.4006
981	SLU 83	-0.73	-0.23	37.54	-19.0113	2.3033	-0.4033
981	SLU 84	-0.73	-0.21	37.53	-19.0073	2.3029	-0.4049
981	SLE RA 1	-0.49	-0.16	24.54	-12.4331	1.5059	-0.2712

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
981	SLE RA 2	-0.49	-0.13	24.53	-12.4286	1.5054	-0.273
981	SLE RA 3	-0.5	-0.16	24.9	-12.6174	1.5284	-0.2756
981	SLE RA 4	-0.5	-0.14	24.9	-12.6147	1.5282	-0.2767
981	SLE RA 5	-0.49	-0.13	24.75	-12.5414	1.5192	-0.2759
981	SLE RA 6	-0.5	-0.16	25.13	-12.7303	1.5422	-0.2785
981	SLE RA 7	-0.5	-0.14	25.12	-12.7276	1.5419	-0.2796
981	SLE RA 8	-0.5	-0.16	24.99	-12.6588	1.5335	-0.2769
981	SLE RA 9	-0.5	-0.15	24.98	-12.6561	1.5332	-0.278
981	SLE RA 10	-0.52	-0.14	26.59	-13.4716	1.6319	-0.2907
981	SLE RA 11	-0.53	-0.17	26.97	-13.6604	1.6549	-0.2933
981	SLE RA 12	-0.53	-0.15	26.96	-13.6577	1.6546	-0.2944
981	SLE RA 13	-0.53	-0.14	26.82	-13.5844	1.6457	-0.2936
981	SLE RA 14	-0.53	-0.17	27.19	-13.7733	1.6687	-0.2962
981	SLE RA 15	-0.53	-0.15	27.19	-13.7706	1.6684	-0.2973
981	SLE RA 16	-0.53	-0.17	27.05	-13.7018	1.66	-0.2946
981	SLE RA 17	-0.53	-0.16	27.04	-13.6991	1.6597	-0.2957
981	SLE RA 18	-0.53	-0.17	27.48	-13.9231	1.6866	-0.2965
981	SLE RA 19	-0.53	-0.16	27.48	-13.9204	1.6863	-0.2976
981	SLE RA 20	-0.54	-0.17	27.71	-14.0359	1.7004	-0.2994
981	SLE RA 21	-0.54	-0.16	27.7	-14.0332	1.7001	-0.3005
981	SLE FR 1	-0.49	-0.16	24.54	-12.4331	1.5059	-0.2712
981	SLE FR 2	-0.49	-0.15	24.53	-12.4322	1.5058	-0.2716
981	SLE FR 3	-0.49	-0.16	24.63	-12.4782	1.5114	-0.2724
981	SLE FR 4	-0.5	-0.16	25.42	-12.8792	1.56	-0.2792
981	SLE FR 5	-0.5	-0.16	25.51	-12.9252	1.5656	-0.2799
981	SLE FR 6	-0.51	-0.16	26.01	-13.1781	1.5962	-0.2839
981	SLE QP 1	-0.49	-0.16	24.54	-12.4331	1.5059	-0.2712
981	SLE QP 2	-0.5	-0.16	25.42	-12.8801	1.5601	-0.2788
981	SLD 1	2.21	0.5	28.56	-14.336	1.755	1.2381
981	SLD 2	1.94	0.25	28.73	-14.424	1.7654	1.0968
981	SLD 3	2.15	-0.19	28.92	-14.5346	1.7768	1.2642
981	SLD 4	1.87	-0.44	29.09	-14.6225	1.7872	1.1229
981	SLD 5	0.46	1.13	25.78	-13.0001	1.5837	0.1618
981	SLD 6	0.28	0.97	25.89	-13.0578	1.5905	0.0692
981	SLD 7	0.24	-1.18	26.99	-13.6619	1.6563	0.2488
981	SLD 8	0.07	-1.34	27.1	-13.7195	1.6631	0.1562
981	SLD 9	-1.07	1.02	23.74	-12.0406	1.4571	-0.7138
981	SLD 10	-1.25	0.86	23.85	-12.0982	1.4639	-0.8064
981	SLD 11	-1.28	-1.29	24.95	-12.7023	1.5297	-0.6268
981	SLD 12	-1.46	-1.45	25.06	-12.76	1.5366	-0.7194
981	SLD 13	-2.88	0.12	21.75	-11.1376	1.333	-1.6805
981	SLD 14	-3.15	-0.13	21.92	-11.2255	1.3434	-1.8218
981	SLD 15	-2.94	-0.58	22.11	-11.3361	1.3548	-1.6544
981	SLD 16	-3.22	-0.82	22.28	-11.4241	1.3652	-1.7957
981	SLV 1	5.84	1.36	32.78	-16.2961	2.0171	3.2683
981	SLV 2	5.21	0.79	33.18	-16.501	2.0413	2.9392
981	SLV 3	5.7	-0.21	33.6	-16.7456	2.0665	3.3289
981	SLV 4	5.06	-0.79	34	-16.9505	2.0907	2.9999
981	SLV 5	1.73	2.79	26.31	-13.1878	1.6181	0.75
981	SLV 6	1.32	2.42	26.57	-13.3199	1.6337	0.538
981	SLV 7	1.25	-2.47	29.05	-14.6862	1.7828	0.9521
981	SLV 8	0.84	-2.84	29.31	-14.8182	1.7984	0.7401
981	SLV 9	-1.84	2.52	21.53	-10.9419	1.3218	-1.2977
981	SLV 10	-2.25	2.15	21.79	-11.0739	1.3374	-1.5097
981	SLV 11	-2.33	-2.74	24.27	-12.4402	1.4865	-1.0956
981	SLV 12	-2.74	-3.11	24.53	-12.5723	1.5021	-1.3076
981	SLV 13	-6.06	0.47	16.84	-8.8097	1.0295	-3.5575
981	SLV 14	-6.7	-0.11	17.24	-9.0145	1.0537	-3.8865
981	SLV 15	-6.21	-1.11	17.66	-9.2592	1.0789	-3.4968
981	SLV 16	-6.85	-1.69	18.06	-9.464	1.1031	-3.8259
981	CRTFP Ux+	0	0	0	0	0	0
981	CRTFP Ux-	0	0	0	0	0	0
981	CRTFP Uy+	0	0	0	0	0	0
981	CRTFP Uy-	0	0	0	0	0	0
984	SLU 1	-1.99	-0.69	111.82	-29.3845	-1.9378	-0.546
984	SLU 2	-2	-0.54	111.75	-29.3657	-1.9325	-0.5462
984	SLU 3	-2.04	-0.69	114.45	-30.0751	-1.9888	-0.5591
984	SLU 4	-2.04	-0.59	114.41	-30.0638	-1.9857	-0.5592
984	SLU 5	-2.03	-0.55	113.36	-29.788	-1.9632	-0.5551
984	SLU 6	-2.07	-0.7	116.06	-30.4974	-2.0195	-0.568
984	SLU 7	-2.08	-0.61	116.02	-30.4861	-2.0163	-0.5681
984	SLU 8	-2.06	-0.72	115.04	-30.2291	-1.9991	-0.5638
984	SLU 9	-2.06	-0.62	114.99	-30.2178	-1.9959	-0.5639
984	SLU 10	-2.22	-0.58	126.47	-33.2384	-2.2208	-0.6013
984	SLU 11	-2.26	-0.74	129.18	-33.9478	-2.2771	-0.6142
984	SLU 12	-2.26	-0.64	129.13	-33.9365	-2.2739	-0.6144
984	SLU 13	-2.25	-0.59	128.08	-33.6607	-2.2514	-0.6102
984	SLU 14	-2.29	-0.75	130.79	-34.3701	-2.3077	-0.6231
984	SLU 15	-2.3	-0.65	130.74	-34.3588	-2.3046	-0.6233
984	SLU 16	-2.28	-0.76	129.76	-34.1018	-2.2873	-0.6189
984	SLU 17	-2.28	-0.67	129.72	-34.0905	-2.2842	-0.6191
984	SLU 18	-2.31	-0.76	132.85	-34.9169	-2.3495	-0.6248
984	SLU 19	-2.31	-0.67	132.81	-34.9056	-2.3464	-0.6249
984	SLU 20	-2.34	-0.77	134.46	-35.3392	-2.3802	-0.6337
984	SLU 21	-2.34	-0.68	134.42	-35.3279	-2.3771	-0.6338
984	SLU 22	-2.23	-0.69	126.5	-33.2422	-2.2204	-0.6055
984	SLU 23	-2.23	-0.53	126.43	-33.2233	-2.2151	-0.6057
984	SLU 24	-2.27	-0.68	129.14	-33.9327	-2.2714	-0.6186
984	SLU 25	-2.28	-0.59	129.09	-33.9215	-2.2683	-0.6187
984	SLU 26	-2.26	-0.54	128.04	-33.6456	-2.2458	-0.6146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
984	SLU 27	-2.31	-0.7	130.75	-34.355	-2.3021	-0.6275
984	SLU 28	-2.31	-0.6	130.7	-34.3437	-2.299	-0.6276
984	SLU 29	-2.29	-0.71	129.72	-34.0867	-2.2817	-0.6233
984	SLU 30	-2.29	-0.62	129.68	-34.0754	-2.2785	-0.6234
984	SLU 31	-2.45	-0.58	141.15	-37.096	-2.5034	-0.6609
984	SLU 32	-2.49	-0.73	143.86	-37.8054	-2.5597	-0.6738
984	SLU 33	-2.5	-0.64	143.82	-37.7941	-2.5565	-0.6739
984	SLU 34	-2.48	-0.59	142.76	-37.5183	-2.5341	-0.6698
984	SLU 35	-2.53	-0.74	145.47	-38.2277	-2.5903	-0.6827
984	SLU 36	-2.53	-0.65	145.43	-38.2164	-2.5872	-0.6828
984	SLU 37	-2.51	-0.76	144.45	-37.9594	-2.5699	-0.6785
984	SLU 38	-2.51	-0.67	144.4	-37.9481	-2.5668	-0.6786
984	SLU 39	-2.54	-0.76	147.54	-38.7745	-2.6322	-0.6843
984	SLU 40	-2.54	-0.66	147.49	-38.7632	-2.629	-0.6844
984	SLU 41	-2.57	-0.77	149.15	-39.1968	-2.6628	-0.6932
984	SLU 42	-2.57	-0.67	149.1	-39.1855	-2.6597	-0.6933
984	SLU 43	-2.51	-0.9	140.33	-36.8773	-2.4222	-0.6893
984	SLU 44	-2.51	-0.74	140.26	-36.8585	-2.417	-0.6896
984	SLU 45	-2.56	-0.9	142.96	-37.5679	-2.4733	-0.7024
984	SLU 46	-2.56	-0.8	142.92	-37.5566	-2.4701	-0.7026
984	SLU 47	-2.55	-0.76	141.87	-37.2808	-2.4476	-0.6985
984	SLU 48	-2.59	-0.91	144.57	-37.9902	-2.5039	-0.7113
984	SLU 49	-2.59	-0.82	144.53	-37.9789	-2.5008	-0.7115
984	SLU 50	-2.58	-0.93	143.55	-37.7219	-2.4835	-0.7071
984	SLU 51	-2.58	-0.83	143.51	-37.7106	-2.4804	-0.7073
984	SLU 52	-2.73	-0.79	154.98	-40.7311	-2.7052	-0.7447
984	SLU 53	-2.78	-0.95	157.69	-41.4405	-2.7615	-0.7576
984	SLU 54	-2.78	-0.85	157.64	-41.4293	-2.7584	-0.7577
984	SLU 55	-2.77	-0.8	156.59	-41.1534	-2.7359	-0.7536
984	SLU 56	-2.81	-0.96	159.3	-41.8628	-2.7922	-0.7665
984	SLU 57	-2.81	-0.86	159.25	-41.8515	-2.789	-0.7666
984	SLU 58	-2.8	-0.97	158.27	-41.5945	-2.7718	-0.7623
984	SLU 59	-2.8	-0.88	158.23	-41.5832	-2.7686	-0.7624
984	SLU 60	-2.83	-0.97	161.36	-42.4097	-2.834	-0.7681
984	SLU 61	-2.83	-0.88	161.32	-42.3984	-2.8309	-0.7683
984	SLU 62	-2.86	-0.98	162.97	-42.8319	-2.8646	-0.777
984	SLU 63	-2.86	-0.89	162.93	-42.8206	-2.8615	-0.7772
984	SLU 64	-2.74	-0.9	155.01	-40.7349	-2.7048	-0.7489
984	SLU 65	-2.75	-0.74	154.94	-40.7161	-2.6996	-0.7491
984	SLU 66	-2.79	-0.89	157.65	-41.4255	-2.7559	-0.762
984	SLU 67	-2.79	-0.8	157.6	-41.4142	-2.7527	-0.7621
984	SLU 68	-2.78	-0.75	156.55	-41.1384	-2.7302	-0.758
984	SLU 69	-2.82	-0.91	159.26	-41.8478	-2.7865	-0.7709
984	SLU 70	-2.83	-0.81	159.21	-41.8365	-2.7834	-0.771
984	SLU 71	-2.81	-0.92	158.23	-41.5795	-2.7661	-0.7667
984	SLU 72	-2.81	-0.83	158.19	-41.5682	-2.763	-0.7668
984	SLU 73	-2.97	-0.79	169.66	-44.5887	-2.9878	-0.8043
984	SLU 74	-3.01	-0.94	172.37	-45.2982	-3.0441	-0.8171
984	SLU 75	-3.01	-0.85	172.33	-45.2869	-3.041	-0.8173
984	SLU 76	-3	-0.8	171.27	-45.011	-3.0185	-0.8132
984	SLU 77	-3.04	-0.95	173.98	-45.7204	-3.0748	-0.826
984	SLU 78	-3.05	-0.86	173.94	-45.7091	-3.0716	-0.8262
984	SLU 79	-3.03	-0.97	172.96	-45.4521	-3.0544	-0.8218
984	SLU 80	-3.03	-0.87	172.91	-45.4408	-3.0512	-0.822
984	SLU 81	-3.06	-0.97	176.05	-46.2673	-3.1166	-0.8277
984	SLU 82	-3.06	-0.87	176	-46.256	-3.1135	-0.8278
984	SLU 83	-3.09	-0.98	177.66	-46.6896	-3.1472	-0.8366
984	SLU 84	-3.09	-0.88	177.61	-46.6783	-3.1441	-0.8367
984	SLE RA 1	-2.06	-0.69	116.01	-30.4867	-2.0185	-0.563
984	SLE RA 2	-2.06	-0.59	115.97	-30.4742	-2.015	-0.5631
984	SLE RA 3	-2.09	-0.69	117.77	-30.9471	-2.0525	-0.5717
984	SLE RA 4	-2.09	-0.63	117.74	-30.9396	-2.0505	-0.5718
984	SLE RA 5	-2.08	-0.59	117.04	-30.7557	-2.0355	-0.5691
984	SLE RA 6	-2.11	-0.7	118.84	-31.2286	-2.073	-0.5776
984	SLE RA 7	-2.11	-0.63	118.81	-31.2211	-2.0709	-0.5777
984	SLE RA 8	-2.1	-0.71	118.16	-31.0498	-2.0594	-0.5748
984	SLE RA 9	-2.1	-0.64	118.13	-31.0422	-2.0573	-0.5749
984	SLE RA 10	-2.21	-0.62	125.78	-33.0559	-2.2072	-0.5999
984	SLE RA 11	-2.24	-0.72	127.59	-33.5289	-2.2447	-0.6085
984	SLE RA 12	-2.24	-0.66	127.56	-33.5214	-2.2426	-0.6086
984	SLE RA 13	-2.23	-0.63	126.85	-33.3375	-2.2276	-0.6058
984	SLE RA 14	-2.26	-0.73	128.66	-33.8104	-2.2651	-0.6144
984	SLE RA 15	-2.26	-0.67	128.63	-33.8029	-2.2631	-0.6145
984	SLE RA 16	-2.25	-0.74	127.98	-33.6315	-2.2515	-0.6116
984	SLE RA 17	-2.25	-0.68	127.95	-33.624	-2.2495	-0.6117
984	SLE RA 18	-2.27	-0.74	130.04	-34.175	-2.293	-0.6155
984	SLE RA 19	-2.27	-0.67	130.01	-34.1674	-2.2909	-0.6156
984	SLE RA 20	-2.29	-0.74	131.11	-34.4565	-2.3135	-0.6214
984	SLE RA 21	-2.29	-0.68	131.08	-34.449	-2.3114	-0.6215
984	SLE FR 1	-2.06	-0.69	116.01	-30.4867	-2.0185	-0.563
984	SLE FR 2	-2.06	-0.67	116.01	-30.4842	-2.0178	-0.563
984	SLE FR 3	-2.07	-0.69	116.44	-30.5993	-2.0267	-0.5654
984	SLE FR 4	-2.12	-0.68	120.21	-31.5907	-2.1002	-0.5788
984	SLE FR 5	-2.13	-0.71	120.65	-31.7058	-2.109	-0.5811
984	SLE FR 6	-2.16	-0.71	123.03	-32.3308	-2.1558	-0.5892
984	SLE QP 1	-2.06	-0.69	116.01	-30.4867	-2.0185	-0.563
984	SLE QP 2	-2.12	-0.7	120.22	-31.5932	-2.1009	-0.5787
984	SLD 1	9.85	0.49	134.83	-35.3646	-2.1222	2.5639
984	SLD 2	8.62	-0.47	135.68	-35.5857	-2.148	2.2492
984	SLD 3	9.59	-2.51	136.8	-35.8733	-2.2392	2.4809

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
984	SLD 4	8.35	-3.47	137.64	-36.0944	-2.265	2.1661
984	SLD 5	2.09	4.38	121.47	-31.9137	-1.9252	0.5459
984	SLD 6	1.28	3.75	122.03	-32.0587	-1.9421	0.3396
984	SLD 7	1.21	-5.63	128.03	-33.6094	-2.3153	0.2692
984	SLD 8	0.4	-6.26	128.58	-33.7544	-2.3322	0.0628
984	SLD 9	-4.65	4.85	111.86	-29.4319	-1.8695	-1.2203
984	SLD 10	-5.46	4.22	112.42	-29.5769	-1.8864	-1.4266
984	SLD 11	-5.52	-5.16	118.42	-31.1277	-2.2596	-1.4971
984	SLD 12	-6.33	-5.79	118.97	-31.2727	-2.2766	-1.7034
984	SLD 13	-12.6	2.06	102.8	-27.0919	-1.9367	-3.3236
984	SLD 14	-13.84	1.1	103.65	-27.3131	-1.9625	-3.6384
984	SLD 15	-12.86	-0.94	104.77	-27.6006	-2.0537	-3.4066
984	SLD 16	-14.1	-1.9	105.61	-27.8218	-2.0795	-3.7214
984	SLV 1	25.87	1.99	154.49	-40.4397	-2.1547	6.7677
984	SLV 2	22.99	-0.25	156.46	-40.9548	-2.2148	6.0347
984	SLV 3	25.27	-4.85	158.94	-41.592	-2.4218	6.5775
984	SLV 4	22.39	-7.09	160.91	-42.1071	-2.4819	5.8444
984	SLV 5	7.68	10.86	123.41	-32.4109	-1.7015	2.04
984	SLV 6	5.83	9.42	124.68	-32.7428	-1.7403	1.5676
984	SLV 7	5.68	-11.94	138.25	-36.2517	-2.5919	1.4058
984	SLV 8	3.83	-13.38	139.52	-36.5837	-2.6306	0.9334
984	SLV 9	-8.07	11.97	100.92	-26.6027	-1.5711	-2.0909
984	SLV 10	-9.93	10.53	102.19	-26.9347	-1.6098	-2.5633
984	SLV 11	-10.07	-10.83	115.77	-30.4436	-2.4614	-2.7251
984	SLV 12	-11.93	-12.27	117.03	-30.7755	-2.5002	-3.1975
984	SLV 13	-26.64	5.68	79.53	-21.0793	-1.7198	-7.0019
984	SLV 14	-29.52	3.44	81.5	-21.5944	-1.7799	-7.735
984	SLV 15	-27.24	-1.16	83.99	-22.2315	-1.9869	-7.1921
984	SLV 16	-30.12	-3.4	85.95	-22.7467	-2.0471	-7.9252
984	CRTFP Ux+	0	0	0	0	0	0
984	CRTFP Ux-	0	0	0	0	0	0
984	CRTFP Uy+	0	0	0	0	0	0
984	CRTFP Uy-	0	0	0	0	0	0
987	SLU 1	0.59	-0.01	27.78	-8.0046	-1.7777	0.2058
987	SLU 2	0.59	0.03	27.75	-7.9985	-1.7762	0.2083
987	SLU 3	0.6	-0.01	28.41	-8.1858	-1.8184	0.2105
987	SLU 4	0.6	0.02	28.4	-8.1821	-1.8175	0.212
987	SLU 5	0.6	0.03	28.14	-8.1089	-1.8011	0.2111
987	SLU 6	0.61	-0.01	28.8	-8.2962	-1.8433	0.2132
987	SLU 7	0.61	0.02	28.79	-8.2925	-1.8424	0.2147
987	SLU 8	0.61	-0.01	28.56	-8.2254	-1.8274	0.2113
987	SLU 9	0.61	0.01	28.54	-8.2217	-1.8265	0.2128
987	SLU 10	0.64	0.04	31.41	-9.0463	-2.0098	0.2266
987	SLU 11	0.65	0	32.07	-9.2336	-2.052	0.2288
987	SLU 12	0.65	0.03	32.06	-9.2299	-2.0511	0.2303
987	SLU 13	0.65	0.04	31.8	-9.1566	-2.0346	0.2293
987	SLU 14	0.66	0	32.46	-9.3439	-2.0768	0.2315
987	SLU 15	0.66	0.03	32.44	-9.3402	-2.0759	0.233
987	SLU 16	0.66	0	32.21	-9.2731	-2.0609	0.2295
987	SLU 17	0.66	0.02	32.2	-9.2694	-2.0601	0.231
987	SLU 18	0.66	0	33	-9.5014	-2.1114	0.2319
987	SLU 19	0.66	0.03	32.98	-9.4977	-2.1105	0.2334
987	SLU 20	0.67	0	33.39	-9.6118	-2.1362	0.2346
987	SLU 21	0.67	0.03	33.37	-9.6081	-2.1353	0.2361
987	SLU 22	0.64	0.01	31.39	-9.0407	-2.0089	0.2263
987	SLU 23	0.64	0.05	31.37	-9.0345	-2.0074	0.2288
987	SLU 24	0.66	0.01	32.03	-9.2218	-2.0496	0.2309
987	SLU 25	0.66	0.04	32.02	-9.2182	-2.0487	0.2325
987	SLU 26	0.65	0.05	31.76	-9.1449	-2.0322	0.2315
987	SLU 27	0.66	0.01	32.42	-9.3322	-2.0744	0.2337
987	SLU 28	0.66	0.04	32.41	-9.3285	-2.0735	0.2352
987	SLU 29	0.66	0.01	32.17	-9.2614	-2.0585	0.2317
987	SLU 30	0.66	0.03	32.16	-9.2577	-2.0576	0.2332
987	SLU 31	0.69	0.06	35.03	-10.0823	-2.2409	0.247
987	SLU 32	0.71	0.02	35.69	-10.2696	-2.2831	0.2492
987	SLU 33	0.71	0.05	35.67	-10.2659	-2.2823	0.2507
987	SLU 34	0.7	0.06	35.41	-10.1926	-2.2658	0.2498
987	SLU 35	0.72	0.02	36.08	-10.3799	-2.308	0.2519
987	SLU 36	0.72	0.05	36.06	-10.3763	-2.3071	0.2534
987	SLU 37	0.71	0.02	35.83	-10.3091	-2.2921	0.25
987	SLU 38	0.71	0.04	35.81	-10.3054	-2.2912	0.2515
987	SLU 39	0.72	0.02	36.62	-10.5374	-2.3425	0.2524
987	SLU 40	0.72	0.05	36.6	-10.5338	-2.3416	0.2539
987	SLU 41	0.72	0.02	37	-10.6478	-2.3674	0.2551
987	SLU 42	0.72	0.05	36.99	-10.6441	-2.3665	0.2566
987	SLU 43	0.75	-0.02	34.87	-10.0508	-2.2318	0.2606
987	SLU 44	0.75	0.02	34.85	-10.0447	-2.2303	0.2631
987	SLU 45	0.76	-0.01	35.51	-10.232	-2.2725	0.2653
987	SLU 46	0.76	0.01	35.49	-10.2283	-2.2716	0.2668
987	SLU 47	0.76	0.02	35.24	-10.1551	-2.2551	0.2658
987	SLU 48	0.77	-0.02	35.9	-10.3424	-2.2973	0.268
987	SLU 49	0.77	0.01	35.88	-10.3387	-2.2964	0.2695
987	SLU 50	0.76	-0.02	35.65	-10.2715	-2.2814	0.266
987	SLU 51	0.76	0	35.63	-10.2679	-2.2805	0.2675
987	SLU 52	0.8	0.03	38.5	-11.0924	-2.4638	0.2813
987	SLU 53	0.81	-0.01	39.16	-11.2798	-2.506	0.2835
987	SLU 54	0.81	0.02	39.15	-11.2761	-2.5052	0.285
987	SLU 55	0.81	0.03	38.89	-11.2028	-2.4887	0.2841
987	SLU 56	0.82	-0.01	39.55	-11.3901	-2.5309	0.2862
987	SLU 57	0.82	0.02	39.54	-11.3864	-2.53	0.2877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
987	SLU 58	0.81	-0.01	39.3	-11.3193	-2.515	0.2843
987	SLU 59	0.81	0.01	39.29	-11.3156	-2.5141	0.2858
987	SLU 60	0.82	-0.01	40.09	-11.5476	-2.5654	0.2867
987	SLU 61	0.82	0.02	40.08	-11.5439	-2.5645	0.2882
987	SLU 62	0.83	-0.01	40.48	-11.658	-2.5903	0.2894
987	SLU 63	0.83	0.02	40.47	-11.6543	-2.5894	0.2909
987	SLU 64	0.8	0	38.49	-11.0868	-2.4629	0.281
987	SLU 65	0.8	0.04	38.46	-11.0807	-2.4614	0.2835
987	SLU 66	0.82	0	39.13	-11.268	-2.5036	0.2857
987	SLU 67	0.81	0.03	39.11	-11.2643	-2.5027	0.2872
987	SLU 68	0.81	0.04	38.85	-11.1911	-2.4863	0.2862
987	SLU 69	0.82	0	39.51	-11.3784	-2.5285	0.2884
987	SLU 70	0.82	0.03	39.5	-11.3747	-2.5276	0.2899
987	SLU 71	0.82	0	39.27	-11.3076	-2.5126	0.2864
987	SLU 72	0.82	0.02	39.25	-11.3039	-2.5117	0.2879
987	SLU 73	0.85	0.05	42.12	-12.1285	-2.695	0.3018
987	SLU 74	0.87	0.01	42.78	-12.3158	-2.7372	0.304
987	SLU 75	0.87	0.04	42.77	-12.3121	-2.7363	0.3055
987	SLU 76	0.86	0.05	42.51	-12.2388	-2.7198	0.3045
987	SLU 77	0.87	0.01	43.17	-12.4261	-2.762	0.3067
987	SLU 78	0.87	0.04	43.15	-12.4224	-2.7611	0.3082
987	SLU 79	0.87	0.01	42.92	-12.3553	-2.7462	0.3047
987	SLU 80	0.87	0.03	42.91	-12.3516	-2.7453	0.3062
987	SLU 81	0.87	0.01	43.71	-12.5836	-2.7966	0.3071
987	SLU 82	0.87	0.04	43.69	-12.5799	-2.7957	0.3086
987	SLU 83	0.88	0.01	44.1	-12.694	-2.8214	0.3098
987	SLU 84	0.88	0.04	44.08	-12.6903	-2.8205	0.3113
987	SLE RA 1	0.61	0	28.81	-8.3006	-1.8437	0.2117
987	SLE RA 2	0.61	0.02	28.8	-8.2966	-1.8428	0.2133
987	SLE RA 3	0.61	0	29.24	-8.4214	-1.8709	0.2148
987	SLE RA 4	0.61	0.01	29.23	-8.419	-1.8703	0.2158
987	SLE RA 5	0.61	0.02	29.05	-8.3701	-1.8593	0.2152
987	SLE RA 6	0.62	0	29.5	-8.495	-1.8874	0.2166
987	SLE RA 7	0.62	0.01	29.49	-8.4925	-1.8869	0.2176
987	SLE RA 8	0.62	-0.01	29.33	-8.4478	-1.8769	0.2153
987	SLE RA 9	0.62	0.01	29.32	-8.4453	-1.8763	0.2163
987	SLE RA 10	0.64	0.03	31.23	-8.9951	-1.9985	0.2255
987	SLE RA 11	0.65	0	31.67	-9.1199	-2.0266	0.227
987	SLE RA 12	0.65	0.02	31.66	-9.1175	-2.026	0.228
987	SLE RA 13	0.64	0.03	31.49	-9.0686	-2.015	0.2273
987	SLE RA 14	0.65	0	31.93	-9.1935	-2.0432	0.2288
987	SLE RA 15	0.65	0.02	31.92	-9.191	-2.0426	0.2298
987	SLE RA 16	0.65	0	31.77	-9.1463	-2.0326	0.2275
987	SLE RA 17	0.65	0.02	31.76	-9.1438	-2.032	0.2285
987	SLE RA 18	0.65	0	32.29	-9.2985	-2.0662	0.2291
987	SLE RA 19	0.65	0.02	32.28	-9.296	-2.0656	0.2301
987	SLE RA 20	0.66	0	32.55	-9.3721	-2.0828	0.2309
987	SLE RA 21	0.66	0.02	32.54	-9.3696	-2.0822	0.2319
987	SLE FR 1	0.61	0	28.81	-8.3006	-1.8437	0.2117
987	SLE FR 2	0.61	0	28.81	-8.2998	-1.8435	0.212
987	SLE FR 3	0.61	0	28.91	-8.3301	-1.8504	0.2124
987	SLE FR 4	0.62	0	29.85	-8.5992	-1.9103	0.2172
987	SLE FR 5	0.62	0	29.96	-8.6294	-1.9171	0.2176
987	SLE FR 6	0.63	0	30.55	-8.7996	-1.955	0.2204
987	SLE QP 1	0.61	0	28.81	-8.3006	-1.8437	0.2117
987	SLE QP 2	0.62	0	29.86	-8.6	-1.9105	0.2169
987	SLD 1	3.52	-0.01	26.01	-7.59	-1.6628	1.244
987	SLD 2	3.22	0.27	25.73	-7.5216	-1.6447	1.1567
987	SLD 3	3.56	-0.75	26.62	-7.7568	-1.7018	1.1946
987	SLD 4	3.26	-0.48	26.34	-7.6884	-1.6837	1.1073
987	SLD 5	1.48	1.08	27.83	-8.0562	-1.7801	0.6154
987	SLD 6	1.28	1.26	27.64	-8.0114	-1.7683	0.5582
987	SLD 7	1.62	-1.41	29.86	-8.6122	-1.9104	0.4508
987	SLD 8	1.42	-1.23	29.68	-8.5673	-1.8985	0.3936
987	SLD 9	-0.18	1.23	30.03	-8.6327	-1.9225	0.0401
987	SLD 10	-0.38	1.41	29.85	-8.5878	-1.9106	-0.0171
987	SLD 11	-0.04	-1.27	32.07	-9.1886	-2.0527	-0.1244
987	SLD 12	-0.24	-1.09	31.88	-9.1438	-2.0408	-0.1816
987	SLD 13	-2.02	0.48	33.37	-9.5116	-2.1372	-0.6736
987	SLD 14	-2.32	0.75	33.09	-9.4432	-2.1191	-0.7608
987	SLD 15	-1.98	-0.27	33.98	-9.6784	-2.1763	-0.7229
987	SLD 16	-2.28	0	33.7	-9.61	-2.1582	-0.8102
987	SLV 1	7.39	-0.03	20.88	-6.2414	-1.332	2.6172
987	SLV 2	6.69	0.61	20.23	-6.0821	-1.2899	2.414
987	SLV 3	7.49	-1.74	22.26	-6.6185	-1.4205	2.5045
987	SLV 4	6.79	-1.1	21.61	-6.4592	-1.3783	2.3013
987	SLV 5	2.63	2.47	25.18	-7.3479	-1.6101	1.1429
987	SLV 6	2.17	2.88	24.76	-7.2453	-1.5829	1.012
987	SLV 7	2.95	-3.22	29.79	-8.6049	-1.9048	0.7672
987	SLV 8	2.5	-2.81	29.37	-8.5023	-1.8776	0.6363
987	SLV 9	-1.26	2.8	30.35	-8.6978	-1.9433	-0.2025
987	SLV 10	-1.71	3.22	29.92	-8.5951	-1.9161	-0.3335
987	SLV 11	-0.93	-2.88	34.95	-9.9547	-2.238	-0.5782
987	SLV 12	-1.39	-2.47	34.53	-9.8521	-2.2108	-0.7092
987	SLV 13	-5.55	1.09	38.1	-10.7408	-2.4427	-1.8675
987	SLV 14	-6.25	1.74	37.45	-10.5815	-2.4005	-2.0707
987	SLV 15	-5.45	-0.61	39.48	-11.1179	-2.5311	-1.9802
987	SLV 16	-6.16	0.03	38.83	-10.9586	-2.4889	-2.1835
987	CRTFP Ux+	0	0	0	0	0	0
987	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
987	CRTFP Uy+	0	0	0	0	0	0
987	CRTFP Uy-	0	0	0	0	0	0
988	SLU 1	0.87	0	39.2	-10.2252	0.0559	0.3047
988	SLU 2	0.87	0.06	39.17	-10.2178	0.0558	0.3045
988	SLU 3	0.89	0.01	40.1	-10.4522	0.0574	0.3112
988	SLU 4	0.89	0.04	40.08	-10.4478	0.0573	0.3111
988	SLU 5	0.88	0.06	39.72	-10.356	0.0567	0.3086
988	SLU 6	0.9	0	40.64	-10.5904	0.0583	0.3153
988	SLU 7	0.9	0.04	40.62	-10.586	0.0583	0.3152
988	SLU 8	0.89	0	40.29	-10.5016	0.0577	0.3129
988	SLU 9	0.89	0.03	40.28	-10.4972	0.0577	0.3128
988	SLU 10	0.94	0.07	44.3	-11.5361	0.0644	0.3303
988	SLU 11	0.96	0.02	45.23	-11.7705	0.066	0.337
988	SLU 12	0.96	0.05	45.21	-11.766	0.0659	0.3369
988	SLU 13	0.95	0.07	44.85	-11.6743	0.0653	0.3344
988	SLU 14	0.97	0.02	45.77	-11.9087	0.0669	0.3411
988	SLU 15	0.97	0.05	45.75	-11.9043	0.0668	0.341
988	SLU 16	0.97	0.01	45.42	-11.8199	0.0663	0.3387
988	SLU 17	0.97	0.04	45.4	-11.8155	0.0662	0.3386
988	SLU 18	0.97	0.02	46.53	-12.1085	0.0681	0.3416
988	SLU 19	0.97	0.05	46.51	-12.104	0.0681	0.3415
988	SLU 20	0.99	0.02	47.08	-12.2467	0.069	0.3457
988	SLU 21	0.99	0.05	47.06	-12.2422	0.069	0.3456
988	SLU 22	0.95	0.03	44.28	-11.5292	0.0644	0.3328
988	SLU 23	0.95	0.08	44.25	-11.5218	0.0643	0.3326
988	SLU 24	0.97	0.03	45.17	-11.7562	0.0659	0.3393
988	SLU 25	0.97	0.07	45.16	-11.7518	0.0658	0.3392
988	SLU 26	0.96	0.08	44.79	-11.66	0.0652	0.3368
988	SLU 27	0.98	0.03	45.72	-11.8944	0.0668	0.3434
988	SLU 28	0.98	0.07	45.7	-11.89	0.0667	0.3433
988	SLU 29	0.97	0.02	45.37	-11.8056	0.0662	0.3411
988	SLU 30	0.97	0.06	45.35	-11.8012	0.0662	0.341
988	SLU 31	1.02	0.1	49.38	-12.8401	0.0728	0.3585
988	SLU 32	1.04	0.05	50.3	-13.0745	0.0744	0.3651
988	SLU 33	1.04	0.08	50.29	-13.0701	0.0744	0.365
988	SLU 34	1.03	0.1	49.92	-12.9783	0.0738	0.3626
988	SLU 35	1.05	0.04	50.85	-13.2127	0.0754	0.3693
988	SLU 36	1.05	0.08	50.83	-13.2083	0.0753	0.3692
988	SLU 37	1.05	0.04	50.5	-13.1239	0.0748	0.3669
988	SLU 38	1.05	0.07	50.48	-13.1195	0.0747	0.3668
988	SLU 39	1.05	0.04	51.61	-13.4125	0.0766	0.3697
988	SLU 40	1.05	0.08	51.59	-13.408	0.0765	0.3696
988	SLU 41	1.07	0.04	52.15	-13.5507	0.0775	0.3738
988	SLU 42	1.07	0.08	52.14	-13.5462	0.0775	0.3737
988	SLU 43	1.1	-0.01	49.22	-12.8456	0.0698	0.3864
988	SLU 44	1.1	0.05	49.19	-12.8383	0.0697	0.3862
988	SLU 45	1.12	0	50.12	-13.0726	0.0713	0.3929
988	SLU 46	1.12	0.03	50.1	-13.0682	0.0712	0.3928
988	SLU 47	1.11	0.05	49.74	-12.9765	0.0706	0.3904
988	SLU 48	1.13	-0.01	50.66	-13.2109	0.0722	0.397
988	SLU 49	1.13	0.03	50.64	-13.2064	0.0721	0.3969
988	SLU 50	1.13	-0.01	50.31	-13.1221	0.0716	0.3947
988	SLU 51	1.12	0.02	50.3	-13.1176	0.0715	0.3946
988	SLU 52	1.18	0.06	54.32	-14.1565	0.0782	0.4121
988	SLU 53	1.19	0.01	55.25	-14.3909	0.0798	0.4187
988	SLU 54	1.19	0.04	55.23	-14.3865	0.0798	0.4186
988	SLU 55	1.19	0.06	54.87	-14.2948	0.0791	0.4162
988	SLU 56	1.21	0.01	55.79	-14.5292	0.0807	0.4229
988	SLU 57	1.21	0.04	55.77	-14.5247	0.0807	0.4228
988	SLU 58	1.2	0	55.44	-14.4404	0.0802	0.4205
988	SLU 59	1.2	0.03	55.43	-14.4359	0.0801	0.4204
988	SLU 60	1.21	0.01	56.55	-14.7289	0.082	0.4233
988	SLU 61	1.21	0.04	56.53	-14.7245	0.0819	0.4232
988	SLU 62	1.22	0.01	57.1	-14.8671	0.0829	0.4274
988	SLU 63	1.22	0.04	57.08	-14.8627	0.0828	0.4273
988	SLU 64	1.18	0.02	54.3	-14.1496	0.0782	0.4146
988	SLU 65	1.18	0.07	54.27	-14.1423	0.0781	0.4144
988	SLU 66	1.2	0.02	55.19	-14.3767	0.0798	0.4211
988	SLU 67	1.2	0.06	55.18	-14.3722	0.0797	0.421
988	SLU 68	1.19	0.07	54.81	-14.2805	0.0791	0.4185
988	SLU 69	1.21	0.02	55.74	-14.5149	0.0807	0.4252
988	SLU 70	1.21	0.06	55.72	-14.5104	0.0806	0.4251
988	SLU 71	1.21	0.01	55.39	-14.4261	0.0801	0.4228
988	SLU 72	1.21	0.05	55.37	-14.4216	0.08	0.4227
988	SLU 73	1.26	0.09	59.4	-15.4606	0.0867	0.4402
988	SLU 74	1.27	0.04	60.32	-15.6949	0.0883	0.4469
988	SLU 75	1.27	0.07	60.31	-15.6905	0.0882	0.4468
988	SLU 76	1.27	0.09	59.94	-15.5988	0.0876	0.4443
988	SLU 77	1.29	0.03	60.87	-15.8332	0.0892	0.451
988	SLU 78	1.29	0.07	60.85	-15.8287	0.0892	0.4509
988	SLU 79	1.28	0.03	60.52	-15.7444	0.0886	0.4486
988	SLU 80	1.28	0.06	60.5	-15.7399	0.0886	0.4485
988	SLU 81	1.29	0.03	61.63	-16.0329	0.0905	0.4514
988	SLU 82	1.29	0.07	61.61	-16.0285	0.0904	0.4513
988	SLU 83	1.3	0.03	62.17	-16.1711	0.0914	0.4556
988	SLU 84	1.3	0.07	62.16	-16.1667	0.0913	0.4555
988	SLE RA 1	0.89	0.01	40.65	-10.5977	0.0583	0.3127
988	SLE RA 2	0.89	0.05	40.63	-10.5928	0.0583	0.3126
988	SLE RA 3	0.9	0.01	41.25	-10.7491	0.0593	0.317
988	SLE RA 4	0.9	0.03	41.24	-10.7461	0.0593	0.317

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
988	SLE RA 5	0.9	0.04	41	-10.685	0.0589	0.3153
988	SLE RA 6	0.91	0.01	41.61	-10.8412	0.0599	0.3198
988	SLE RA 7	0.91	0.03	41.6	-10.8383	0.0599	0.3197
988	SLE RA 8	0.91	0	41.38	-10.782	0.0595	0.3182
988	SLE RA 9	0.91	0.03	41.37	-10.7791	0.0595	0.3181
988	SLE RA 10	0.94	0.05	44.05	-11.4717	0.064	0.3298
988	SLE RA 11	0.95	0.02	44.67	-11.6279	0.065	0.3343
988	SLE RA 12	0.95	0.04	44.66	-11.625	0.065	0.3342
988	SLE RA 13	0.95	0.05	44.42	-11.5638	0.0646	0.3326
988	SLE RA 14	0.96	0.02	45.03	-11.7201	0.0656	0.337
988	SLE RA 15	0.96	0.04	45.02	-11.7171	0.0656	0.3369
988	SLE RA 16	0.96	0.01	44.8	-11.6609	0.0652	0.3354
988	SLE RA 17	0.96	0.04	44.79	-11.6579	0.0652	0.3354
988	SLE RA 18	0.96	0.02	45.54	-11.8533	0.0665	0.3373
988	SLE RA 19	0.96	0.04	45.53	-11.8503	0.0664	0.3372
988	SLE RA 20	0.97	0.02	45.9	-11.9454	0.0671	0.34
988	SLE RA 21	0.97	0.04	45.89	-11.9425	0.067	0.34
988	SLE FR 1	0.89	0.01	40.65	-10.5977	0.0583	0.3127
988	SLE FR 2	0.89	0.01	40.65	-10.5968	0.0583	0.3127
988	SLE FR 3	0.89	0.01	40.8	-10.6346	0.0586	0.3138
988	SLE FR 4	0.91	0.02	42.12	-10.9734	0.0608	0.3201
988	SLE FR 5	0.92	0.01	42.27	-11.0113	0.061	0.3212
988	SLE FR 6	0.93	0.01	43.1	-11.2255	0.0624	0.325
988	SLE QP 1	0.89	0.01	40.65	-10.5977	0.0583	0.3127
988	SLE QP 2	0.91	0.01	42.12	-10.9744	0.0608	0.3201
988	SLD 1	5.13	-0.08	36.52	-9.7591	0.0623	1.7935
988	SLD 2	4.69	0.34	36.11	-9.6706	0.0621	1.6404
988	SLD 3	5.19	-1.16	37.38	-9.9854	0.0652	1.8148
988	SLD 4	4.75	-0.74	36.97	-9.897	0.0651	1.6618
988	SLD 5	2.16	1.54	39.2	-10.2822	0.0567	0.7569
988	SLD 6	1.88	1.82	38.93	-10.2242	0.0566	0.6566
988	SLD 7	2.37	-2.05	42.08	-11.0367	0.0667	0.8281
988	SLD 8	2.08	-1.77	41.82	-10.9788	0.0666	0.7277
988	SLD 9	-0.25	1.79	42.42	-10.97	0.0549	-0.0876
988	SLD 10	-0.54	2.07	42.16	-10.9121	0.0549	-0.1879
988	SLD 11	-0.05	-1.8	45.31	-11.7246	0.0649	-0.0164
988	SLD 12	-0.34	-1.52	45.04	-11.6666	0.0648	-0.1168
988	SLD 13	-2.93	0.76	47.27	-12.0518	0.0564	-1.0216
988	SLD 14	-3.37	1.18	46.86	-11.9634	0.0563	-1.1747
988	SLD 15	-2.87	-0.32	48.13	-12.2782	0.0594	-1.0003
988	SLD 16	-3.31	0.1	47.72	-12.1898	0.0593	-1.1533
988	SLV 1	10.78	-0.24	29.03	-8.1369	0.0643	3.7654
988	SLV 2	9.76	0.75	28.08	-7.931	0.0641	3.4089
988	SLV 3	10.93	-2.7	31	-8.6497	0.0712	3.8153
988	SLV 4	9.9	-1.71	30.04	-8.4438	0.071	3.4587
988	SLV 5	3.83	3.49	35.38	-9.3809	0.0513	1.3395
988	SLV 6	3.17	4.13	34.77	-9.2482	0.0512	1.1098
988	SLV 7	4.31	-4.7	41.92	-11.0902	0.0745	1.5056
988	SLV 8	3.65	-4.06	41.31	-10.9575	0.0743	1.2759
988	SLV 9	-1.82	4.08	42.93	-10.9913	0.0472	-0.6357
988	SLV 10	-2.48	4.72	42.32	-10.8586	0.047	-0.8654
988	SLV 11	-1.35	-4.11	49.47	-12.7006	0.0704	-0.4696
988	SLV 12	-2.01	-3.47	48.86	-12.5679	0.0702	-0.6994
988	SLV 13	-8.08	1.73	54.19	-13.505	0.0505	-2.8186
988	SLV 14	-9.1	2.72	53.24	-13.2991	0.0503	-3.1751
988	SLV 15	-7.93	-0.73	56.16	-14.0178	0.0575	-2.7688
988	SLV 16	-8.96	0.26	55.2	-13.8119	0.0572	-3.1253
988	CRTFP Ux+	0	0	0	0	0	0
988	CRTFP Ux-	0	0	0	0	0	0
988	CRTFP Uy+	0	0	0	0	0	0
988	CRTFP Uy-	0	0	0	0	0	0
989	SLU 1	0.88	0.02	37.5	-8.6344	0.0575	0.3082
989	SLU 2	0.88	0.08	37.47	-8.6288	0.0574	0.3081
989	SLU 3	0.9	0.03	38.35	-8.8206	0.059	0.3148
989	SLU 4	0.9	0.07	38.33	-8.8172	0.059	0.3147
989	SLU 5	0.89	0.08	37.99	-8.7421	0.0584	0.3123
989	SLU 6	0.91	0.03	38.86	-8.9338	0.06	0.319
989	SLU 7	0.91	0.07	38.85	-8.9305	0.0599	0.3189
989	SLU 8	0.9	0.02	38.53	-8.861	0.0594	0.3166
989	SLU 9	0.9	0.06	38.52	-8.8576	0.0593	0.3165
989	SLU 10	0.95	0.1	42.34	-9.7155	0.0663	0.334
989	SLU 11	0.97	0.05	43.22	-9.9073	0.0679	0.3407
989	SLU 12	0.97	0.08	43.2	-9.9039	0.0678	0.3406
989	SLU 13	0.96	0.1	42.86	-9.8288	0.0672	0.3382
989	SLU 14	0.98	0.05	43.73	-10.0205	0.0688	0.3449
989	SLU 15	0.98	0.08	43.72	-10.0172	0.0688	0.3448
989	SLU 16	0.97	0.04	43.4	-9.9477	0.0682	0.3425
989	SLU 17	0.97	0.07	43.38	-9.9443	0.0682	0.3424
989	SLU 18	0.98	0.05	44.45	-10.1869	0.0702	0.3452
989	SLU 19	0.98	0.08	44.44	-10.1835	0.0701	0.3451
989	SLU 20	0.99	0.05	44.97	-10.3002	0.0711	0.3494
989	SLU 21	0.99	0.08	44.95	-10.2968	0.071	0.3493
989	SLU 22	0.96	0.05	42.32	-9.7093	0.0663	0.3365
989	SLU 23	0.96	0.11	42.29	-9.7037	0.0662	0.3363
989	SLU 24	0.98	0.06	43.16	-9.8954	0.0678	0.3431
989	SLU 25	0.98	0.1	43.15	-9.892	0.0677	0.343
989	SLU 26	0.97	0.11	42.8	-9.817	0.0671	0.3405
989	SLU 27	0.99	0.06	43.68	-10.0087	0.0687	0.3473
989	SLU 28	0.99	0.1	43.66	-10.0053	0.0687	0.3472
989	SLU 29	0.98	0.05	43.35	-9.9359	0.0681	0.3449

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
989	SLU 30	0.98	0.09	43.33	-9.9325	0.0681	0.3448
989	SLU 31	1.03	0.13	47.16	-10.7904	0.075	0.3622
989	SLU 32	1.05	0.08	48.03	-10.9821	0.0766	0.369
989	SLU 33	1.05	0.11	48.02	-10.9787	0.0766	0.3689
989	SLU 34	1.04	0.13	47.67	-10.9037	0.076	0.3664
989	SLU 35	1.06	0.08	48.55	-11.0954	0.0776	0.3732
989	SLU 36	1.06	0.11	48.53	-11.092	0.0775	0.3731
989	SLU 37	1.06	0.07	48.22	-11.0226	0.077	0.3708
989	SLU 38	1.06	0.1	48.2	-11.0192	0.0769	0.3707
989	SLU 39	1.06	0.08	49.27	-11.2617	0.0789	0.3735
989	SLU 40	1.06	0.11	49.25	-11.2584	0.0789	0.3734
989	SLU 41	1.07	0.08	49.79	-11.375	0.0798	0.3777
989	SLU 42	1.07	0.11	49.77	-11.3716	0.0798	0.3776
989	SLU 43	1.11	0.02	47.1	-10.8563	0.0718	0.391
989	SLU 44	1.11	0.08	47.07	-10.8506	0.0717	0.3909
989	SLU 45	1.13	0.03	47.94	-11.0424	0.0733	0.3976
989	SLU 46	1.13	0.06	47.93	-11.039	0.0732	0.3975
989	SLU 47	1.12	0.08	47.58	-10.9639	0.0726	0.3951
989	SLU 48	1.14	0.03	48.46	-11.1557	0.0742	0.4018
989	SLU 49	1.14	0.06	48.44	-11.1523	0.0742	0.4017
989	SLU 50	1.14	0.02	48.13	-11.0828	0.0736	0.3994
989	SLU 51	1.14	0.06	48.11	-11.0795	0.0736	0.3993
989	SLU 52	1.19	0.09	51.94	-11.9373	0.0805	0.4168
989	SLU 53	1.21	0.04	52.81	-12.1291	0.0821	0.4235
989	SLU 54	1.21	0.08	52.8	-12.1257	0.0821	0.4234
989	SLU 55	1.2	0.09	52.45	-12.0506	0.0815	0.4209
989	SLU 56	1.22	0.04	53.33	-12.2424	0.0831	0.4277
989	SLU 57	1.22	0.08	53.31	-12.239	0.083	0.4276
989	SLU 58	1.21	0.04	53	-12.1695	0.0825	0.4253
989	SLU 59	1.21	0.07	52.98	-12.1662	0.0824	0.4252
989	SLU 60	1.22	0.04	54.05	-12.4087	0.0844	0.428
989	SLU 61	1.22	0.08	54.03	-12.4053	0.0844	0.4279
989	SLU 62	1.23	0.04	54.57	-12.522	0.0853	0.4322
989	SLU 63	1.23	0.08	54.55	-12.5186	0.0853	0.4321
989	SLU 64	1.19	0.05	51.91	-11.9311	0.0805	0.4193
989	SLU 65	1.19	0.11	51.88	-11.9255	0.0804	0.4191
989	SLU 66	1.21	0.06	52.76	-12.1172	0.0821	0.4259
989	SLU 67	1.21	0.09	52.74	-12.1138	0.082	0.4258
989	SLU 68	1.2	0.11	52.4	-12.0388	0.0814	0.4233
989	SLU 69	1.22	0.06	53.28	-12.2305	0.083	0.4301
989	SLU 70	1.22	0.09	53.26	-12.2271	0.0829	0.43
989	SLU 71	1.22	0.05	52.95	-12.1577	0.0824	0.4277
989	SLU 72	1.22	0.09	52.93	-12.1543	0.0823	0.4276
989	SLU 73	1.27	0.12	56.75	-13.0122	0.0893	0.445
989	SLU 74	1.29	0.07	57.63	-13.2039	0.0909	0.4518
989	SLU 75	1.29	0.11	57.61	-13.2005	0.0908	0.4517
989	SLU 76	1.28	0.12	57.27	-13.1255	0.0902	0.4492
989	SLU 77	1.3	0.07	58.15	-13.3172	0.0918	0.456
989	SLU 78	1.3	0.11	58.13	-13.3138	0.0918	0.4559
989	SLU 79	1.29	0.07	57.82	-13.2444	0.0912	0.4536
989	SLU 80	1.29	0.1	57.8	-13.241	0.0912	0.4535
989	SLU 81	1.3	0.07	58.87	-13.4835	0.0932	0.4563
989	SLU 82	1.3	0.11	58.85	-13.4802	0.0931	0.4562
989	SLU 83	1.31	0.07	59.39	-13.5968	0.0941	0.4605
989	SLU 84	1.31	0.11	59.37	-13.5935	0.094	0.4604
989	SLE RA 1	0.9	0.03	38.87	-8.9415	0.06	0.3163
989	SLE RA 2	0.9	0.07	38.86	-8.9378	0.06	0.3162
989	SLE RA 3	0.91	0.04	39.44	-9.0656	0.061	0.3207
989	SLE RA 4	0.91	0.06	39.43	-9.0634	0.061	0.3206
989	SLE RA 5	0.91	0.07	39.2	-9.0133	0.0606	0.319
989	SLE RA 6	0.92	0.04	39.79	-9.1411	0.0617	0.3235
989	SLE RA 7	0.92	0.06	39.77	-9.1389	0.0616	0.3234
989	SLE RA 8	0.92	0.03	39.56	-9.0926	0.0613	0.3219
989	SLE RA 9	0.92	0.06	39.55	-9.0903	0.0612	0.3218
989	SLE RA 10	0.95	0.08	42.1	-9.6623	0.0659	0.3335
989	SLE RA 11	0.96	0.05	42.69	-9.7901	0.0669	0.338
989	SLE RA 12	0.96	0.07	42.67	-9.7878	0.0669	0.3379
989	SLE RA 13	0.96	0.08	42.45	-9.7378	0.0665	0.3363
989	SLE RA 14	0.97	0.05	43.03	-9.8656	0.0675	0.3408
989	SLE RA 15	0.97	0.07	43.02	-9.8634	0.0675	0.3407
989	SLE RA 16	0.97	0.04	42.81	-9.8171	0.0671	0.3392
989	SLE RA 17	0.97	0.07	42.8	-9.8148	0.0671	0.3391
989	SLE RA 18	0.97	0.05	43.51	-9.9765	0.0684	0.341
989	SLE RA 19	0.97	0.07	43.5	-9.9743	0.0684	0.3409
989	SLE RA 20	0.98	0.05	43.86	-10.052	0.0691	0.3438
989	SLE RA 21	0.98	0.07	43.84	-10.0498	0.069	0.3437
989	SLE FR 1	0.9	0.03	38.87	-8.9415	0.06	0.3163
989	SLE FR 2	0.9	0.04	38.87	-8.9408	0.06	0.3163
989	SLE FR 3	0.9	0.03	39.01	-8.9718	0.0603	0.3174
989	SLE FR 4	0.92	0.05	40.26	-9.2513	0.0625	0.3237
989	SLE FR 5	0.92	0.04	40.4	-9.2822	0.0628	0.3248
989	SLE FR 6	0.94	0.04	41.19	-9.459	0.0642	0.3286
989	SLE QP 1	0.9	0.03	38.87	-8.9415	0.06	0.3163
989	SLE QP 2	0.92	0.04	40.27	-9.252	0.0625	0.3237
989	SLD 1	5.14	-0.15	34.6	-8.2826	0.0657	1.7978
989	SLD 2	4.7	0.3	34.2	-8.2062	0.0655	1.6442
989	SLD 3	5.2	-1.21	35.44	-8.5008	0.0682	1.8194
989	SLD 4	4.76	-0.76	35.04	-8.4244	0.068	1.6658
989	SLD 5	2.17	1.52	37.36	-8.6439	0.0598	0.7605
989	SLD 6	1.88	1.81	37.09	-8.5938	0.0597	0.6598

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
989	SLD 7	2.38	-2.03	40.17	-9.3711	0.068	0.8325
989	SLD 8	2.09	-1.74	39.91	-9.3211	0.0679	0.7318
989	SLD 9	-0.25	1.81	40.63	-9.183	0.0572	-0.0844
989	SLD 10	-0.54	2.11	40.36	-9.1329	0.0571	-0.1851
989	SLD 11	-0.04	-1.74	43.44	-9.9102	0.0654	-0.0123
989	SLD 12	-0.33	-1.44	43.17	-9.8602	0.0653	-0.1131
989	SLD 13	-2.92	0.84	45.49	-10.0797	0.0571	-1.0184
989	SLD 14	-3.36	1.29	45.09	-10.0033	0.0569	-1.172
989	SLD 15	-2.86	-0.23	46.34	-10.2978	0.0595	-0.9968
989	SLD 16	-3.3	0.22	45.93	-10.2215	0.0594	-1.1504
989	SLV 1	10.79	-0.43	27.03	-6.989	0.07	3.7707
989	SLV 2	9.76	0.63	26.09	-6.8111	0.0696	3.4128
989	SLV 3	10.93	-2.85	28.94	-7.4862	0.0757	3.8211
989	SLV 4	9.9	-1.8	28	-7.3083	0.0753	3.4633
989	SLV 5	3.84	3.4	33.56	-7.8496	0.0562	1.3429
989	SLV 6	3.18	4.08	32.95	-7.735	0.0559	1.1123
989	SLV 7	4.32	-4.69	39.93	-9.507	0.0753	1.5111
989	SLV 8	3.66	-4.02	39.33	-9.3924	0.075	1.2805
989	SLV 9	-1.82	4.09	41.21	-9.1117	0.0501	-0.6331
989	SLV 10	-2.48	4.77	40.6	-8.997	0.0498	-0.8637
989	SLV 11	-1.33	-4	47.58	-10.7691	0.0692	-0.4649
989	SLV 12	-2	-3.32	46.97	-10.6544	0.0689	-0.6955
989	SLV 13	-8.06	1.88	52.53	-11.1958	0.0498	-2.8159
989	SLV 14	-9.09	2.93	51.59	-11.0179	0.0494	-3.1737
989	SLV 15	-7.92	-0.55	54.44	-11.693	0.0555	-2.7654
989	SLV 16	-8.95	0.5	53.5	-11.5151	0.0551	-3.1233
989	CRTFP Ux+	0	0	0	0	0	0
989	CRTFP Ux-	0	0	0	0	0	0
989	CRTFP Uy+	0	0	0	0	0	0
989	CRTFP Uy-	0	0	0	0	0	0
990	SLU 1	0.89	0.06	35.89	-7.2056	0.0501	0.3116
990	SLU 2	0.89	0.12	35.86	-7.2015	0.0501	0.3115
990	SLU 3	0.9	0.07	36.69	-7.3552	0.0514	0.3183
990	SLU 4	0.9	0.11	36.68	-7.3528	0.0514	0.3182
990	SLU 5	0.9	0.12	36.35	-7.2926	0.0509	0.3157
990	SLU 6	0.92	0.07	37.18	-7.4463	0.0522	0.3225
990	SLU 7	0.92	0.11	37.17	-7.4438	0.0522	0.3225
990	SLU 8	0.91	0.06	36.87	-7.3877	0.0517	0.3201
990	SLU 9	0.91	0.1	36.85	-7.3853	0.0517	0.32
990	SLU 10	0.96	0.14	40.48	-8.0794	0.0579	0.3374
990	SLU 11	0.98	0.09	41.31	-8.2331	0.0593	0.3442
990	SLU 12	0.98	0.13	41.3	-8.2307	0.0592	0.3442
990	SLU 13	0.97	0.14	40.97	-8.1705	0.0587	0.3417
990	SLU 14	0.99	0.09	41.8	-8.3242	0.0601	0.3485
990	SLU 15	0.99	0.13	41.79	-8.3217	0.06	0.3484
990	SLU 16	0.98	0.09	41.49	-8.2656	0.0596	0.3461
990	SLU 17	0.98	0.12	41.47	-8.2632	0.0595	0.346
990	SLU 18	0.99	0.09	42.49	-8.4598	0.0613	0.3487
990	SLU 19	0.99	0.13	42.47	-8.4573	0.0613	0.3486
990	SLU 20	1	0.09	42.98	-8.5508	0.0621	0.3529
990	SLU 21	1	0.13	42.96	-8.5484	0.0621	0.3529
990	SLU 22	0.97	0.1	40.46	-8.0737	0.0579	0.34
990	SLU 23	0.97	0.16	40.43	-8.0696	0.0578	0.3399
990	SLU 24	0.99	0.11	41.26	-8.2233	0.0592	0.3467
990	SLU 25	0.99	0.14	41.25	-8.2208	0.0591	0.3466
990	SLU 26	0.98	0.16	40.92	-8.1606	0.0586	0.3441
990	SLU 27	1	0.11	41.76	-8.3143	0.06	0.3509
990	SLU 28	1	0.14	41.74	-8.3119	0.0599	0.3509
990	SLU 29	0.99	0.1	41.44	-8.2558	0.0595	0.3485
990	SLU 30	0.99	0.13	41.43	-8.2533	0.0594	0.3484
990	SLU 31	1.04	0.18	45.05	-8.9475	0.0656	0.3658
990	SLU 32	1.06	0.13	45.88	-9.1012	0.067	0.3726
990	SLU 33	1.06	0.16	45.87	-9.0987	0.067	0.3726
990	SLU 34	1.05	0.18	45.54	-9.0386	0.0664	0.3701
990	SLU 35	1.07	0.13	46.37	-9.1923	0.0678	0.3769
990	SLU 36	1.07	0.16	46.36	-9.1898	0.0678	0.3768
990	SLU 37	1.06	0.12	46.06	-9.1337	0.0673	0.3745
990	SLU 38	1.06	0.15	46.04	-9.1313	0.0673	0.3744
990	SLU 39	1.07	0.13	47.06	-9.3279	0.0691	0.3771
990	SLU 40	1.07	0.16	47.04	-9.3254	0.069	0.377
990	SLU 41	1.08	0.13	47.55	-9.4189	0.0699	0.3813
990	SLU 42	1.08	0.16	47.53	-9.4165	0.0698	0.3813
990	SLU 43	1.12	0.07	45.09	-9.0697	0.0625	0.3953
990	SLU 44	1.12	0.13	45.06	-9.0656	0.0625	0.3952
990	SLU 45	1.14	0.08	45.89	-9.2193	0.0638	0.402
990	SLU 46	1.14	0.12	45.88	-9.2168	0.0638	0.4019
990	SLU 47	1.14	0.13	45.55	-9.1566	0.0632	0.3994
990	SLU 48	1.16	0.08	46.38	-9.3103	0.0646	0.4063
990	SLU 49	1.15	0.12	46.37	-9.3079	0.0646	0.4062
990	SLU 50	1.15	0.07	46.07	-9.2518	0.0641	0.4038
990	SLU 51	1.15	0.11	46.05	-9.2493	0.0641	0.4038
990	SLU 52	1.2	0.15	49.68	-9.9435	0.0703	0.4212
990	SLU 53	1.22	0.1	50.51	-10.0972	0.0717	0.428
990	SLU 54	1.22	0.14	50.49	-10.0947	0.0716	0.4279
990	SLU 55	1.21	0.15	50.17	-10.0346	0.0711	0.4254
990	SLU 56	1.23	0.1	51	-10.1882	0.0725	0.4322
990	SLU 57	1.23	0.14	50.99	-10.1858	0.0724	0.4322
990	SLU 58	1.22	0.09	50.69	-10.1297	0.0719	0.4298
990	SLU 59	1.22	0.13	50.67	-10.1272	0.0719	0.4297
990	SLU 60	1.23	0.1	51.68	-10.3239	0.0737	0.4324

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
990	SLU 61	1.23	0.14	51.67	-10.3214	0.0737	0.4323
990	SLU 62	1.24	0.1	52.18	-10.4149	0.0745	0.4367
990	SLU 63	1.24	0.14	52.16	-10.4124	0.0745	0.4366
990	SLU 64	1.2	0.11	49.66	-9.9378	0.0703	0.4237
990	SLU 65	1.2	0.16	49.63	-9.9337	0.0702	0.4236
990	SLU 66	1.22	0.12	50.46	-10.0874	0.0716	0.4304
990	SLU 67	1.22	0.15	50.45	-10.0849	0.0715	0.4303
990	SLU 68	1.22	0.16	50.12	-10.0247	0.071	0.4279
990	SLU 69	1.24	0.12	50.95	-10.1784	0.0724	0.4347
990	SLU 70	1.24	0.15	50.94	-10.1759	0.0723	0.4346
990	SLU 71	1.23	0.11	50.64	-10.1199	0.0718	0.4322
990	SLU 72	1.23	0.14	50.62	-10.1174	0.0718	0.4322
990	SLU 73	1.28	0.18	54.25	-10.8116	0.078	0.4496
990	SLU 74	1.3	0.14	55.08	-10.9653	0.0794	0.4564
990	SLU 75	1.3	0.17	55.07	-10.9628	0.0794	0.4563
990	SLU 76	1.29	0.18	54.74	-10.9026	0.0788	0.4538
990	SLU 77	1.31	0.14	55.57	-11.0563	0.0802	0.4606
990	SLU 78	1.31	0.17	55.56	-11.0539	0.0802	0.4606
990	SLU 79	1.3	0.13	55.26	-10.9978	0.0797	0.4582
990	SLU 80	1.3	0.16	55.24	-10.9953	0.0796	0.4581
990	SLU 81	1.31	0.14	56.26	-11.1919	0.0814	0.4608
990	SLU 82	1.31	0.17	56.24	-11.1895	0.0814	0.4607
990	SLU 83	1.32	0.14	56.75	-11.283	0.0822	0.4651
990	SLU 84	1.32	0.17	56.73	-11.2805	0.0822	0.465
990	SLE RA 1	0.91	0.07	37.19	-7.4536	0.0523	0.3197
990	SLE RA 2	0.91	0.11	37.18	-7.4509	0.0523	0.3196
990	SLE RA 3	0.92	0.08	37.73	-7.5534	0.0532	0.3242
990	SLE RA 4	0.92	0.1	37.72	-7.5517	0.0532	0.3241
990	SLE RA 5	0.92	0.11	37.5	-7.5116	0.0528	0.3225
990	SLE RA 6	0.93	0.08	38.06	-7.6141	0.0537	0.327
990	SLE RA 7	0.93	0.1	38.05	-7.6124	0.0537	0.3269
990	SLE RA 8	0.92	0.07	37.85	-7.5751	0.0534	0.3254
990	SLE RA 9	0.92	0.1	37.84	-7.5734	0.0534	0.3253
990	SLE RA 10	0.96	0.13	40.25	-8.0362	0.0575	0.3369
990	SLE RA 11	0.97	0.09	40.81	-8.1387	0.0584	0.3415
990	SLE RA 12	0.97	0.12	40.8	-8.137	0.0584	0.3414
990	SLE RA 13	0.97	0.13	40.58	-8.0969	0.0581	0.3398
990	SLE RA 14	0.98	0.09	41.14	-8.1994	0.059	0.3443
990	SLE RA 15	0.98	0.12	41.13	-8.1977	0.0589	0.3443
990	SLE RA 16	0.97	0.09	40.93	-8.1603	0.0586	0.3427
990	SLE RA 17	0.97	0.11	40.92	-8.1587	0.0586	0.3426
990	SLE RA 18	0.98	0.09	41.59	-8.2898	0.0598	0.3444
990	SLE RA 19	0.98	0.12	41.58	-8.2881	0.0598	0.3444
990	SLE RA 20	0.99	0.09	41.92	-8.3505	0.0603	0.3473
990	SLE RA 21	0.99	0.12	41.91	-8.3488	0.0603	0.3472
990	SLE FR 1	0.91	0.07	37.19	-7.4536	0.0523	0.3197
990	SLE FR 2	0.91	0.08	37.19	-7.4531	0.0523	0.3197
990	SLE FR 3	0.91	0.07	37.32	-7.4779	0.0526	0.3208
990	SLE FR 4	0.93	0.09	38.51	-7.7039	0.0546	0.3271
990	SLE FR 5	0.93	0.08	38.64	-7.7288	0.0548	0.3282
990	SLE FR 6	0.94	0.08	39.39	-7.8717	0.0561	0.3321
990	SLE QP 1	0.91	0.07	37.19	-7.4536	0.0523	0.3197
990	SLE QP 2	0.93	0.08	38.51	-7.7045	0.0546	0.3271
990	SLD 1	5.15	-0.17	32.69	-6.9076	0.0611	1.8017
990	SLD 2	4.71	0.3	32.29	-6.8431	0.0609	1.6477
990	SLD 3	5.21	-1.23	33.52	-7.1269	0.0628	1.8236
990	SLD 4	4.77	-0.76	33.12	-7.0623	0.0627	1.6696
990	SLD 5	2.18	1.53	35.58	-7.1444	0.0539	0.7637
990	SLD 6	1.89	1.84	35.32	-7.102	0.0538	0.6627
990	SLD 7	2.39	-2.01	38.34	-7.8752	0.0597	0.8367
990	SLD 8	2.1	-1.7	38.08	-7.8329	0.0596	0.7357
990	SLD 9	-0.24	1.86	38.95	-7.5761	0.0495	-0.0814
990	SLD 10	-0.53	2.17	38.69	-7.5338	0.0494	-0.1824
990	SLD 11	-0.03	-1.68	41.7	-8.3069	0.0553	-0.0085
990	SLD 12	-0.32	-1.37	41.44	-8.2646	0.0553	-0.1094
990	SLD 13	-2.91	0.92	43.91	-8.3466	0.0465	-1.0153
990	SLD 14	-3.35	1.39	43.51	-8.2821	0.0464	-1.1694
990	SLD 15	-2.85	-0.14	44.73	-8.5659	0.0482	-0.9934
990	SLD 16	-3.29	0.33	44.33	-8.5014	0.0481	-1.1475
990	SLV 1	10.79	-0.54	24.92	-5.8441	0.0698	3.7752
990	SLV 2	9.76	0.57	23.99	-5.6938	0.0695	3.4164
990	SLV 3	10.94	-2.96	26.79	-6.3474	0.0738	3.8263
990	SLV 4	9.91	-1.85	25.86	-6.197	0.0735	3.4675
990	SLV 5	3.84	3.37	31.75	-6.4089	0.0531	1.3458
990	SLV 6	3.18	4.08	31.15	-6.3121	0.0529	1.1146
990	SLV 7	4.33	-4.69	38	-8.0865	0.0665	1.5162
990	SLV 8	3.67	-3.98	37.41	-7.9897	0.0663	1.285
990	SLV 9	-1.81	4.14	39.62	-7.4193	0.0428	-0.6308
990	SLV 10	-2.47	4.85	39.02	-7.3224	0.0426	-0.862
990	SLV 11	-1.32	-3.92	45.88	-9.0969	0.0563	-0.4604
990	SLV 12	-1.98	-3.21	45.28	-9	0.0561	-0.6915
990	SLV 13	-8.05	2.01	51.16	-9.2119	0.0356	-2.8133
990	SLV 14	-9.08	3.12	50.23	-9.0616	0.0354	-3.1721
990	SLV 15	-7.9	-0.41	53.04	-9.7152	0.0397	-2.7622
990	SLV 16	-8.93	0.7	52.11	-9.5649	0.0394	-3.1209
990	CRTFP Ux+	0	0	0	0	0	0
990	CRTFP Ux-	0	0	0	0	0	0
990	CRTFP Uy+	0	0	0	0	0	0
990	CRTFP Uy-	0	0	0	0	0	0
991	SLU 1	0.89	0.12	34.58	-6.0302	0.0372	0.3146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
991	SLU 2	0.89	0.17	34.56	-6.0273	0.0372	0.3146
991	SLU 3	0.91	0.13	35.36	-6.1499	0.0382	0.3214
991	SLU 4	0.91	0.16	35.34	-6.1482	0.0381	0.3214
991	SLU 5	0.91	0.18	35.03	-6.1002	0.0377	0.3189
991	SLU 6	0.93	0.13	35.83	-6.2228	0.0387	0.3258
991	SLU 7	0.92	0.16	35.81	-6.2211	0.0387	0.3257
991	SLU 8	0.92	0.12	35.53	-6.176	0.0384	0.3233
991	SLU 9	0.92	0.15	35.51	-6.1742	0.0383	0.3232
991	SLU 10	0.97	0.2	38.97	-6.7326	0.0432	0.3406
991	SLU 11	0.99	0.15	39.77	-6.8553	0.0442	0.3475
991	SLU 12	0.99	0.19	39.75	-6.8535	0.0442	0.3474
991	SLU 13	0.98	0.2	39.44	-6.8055	0.0438	0.3449
991	SLU 14	1	0.15	40.24	-6.9282	0.0448	0.3518
991	SLU 15	1	0.19	40.22	-6.9264	0.0447	0.3518
991	SLU 16	0.99	0.15	39.94	-6.8813	0.0444	0.3493
991	SLU 17	0.99	0.18	39.92	-6.8796	0.0444	0.3493
991	SLU 18	1	0.16	40.89	-7.0378	0.0458	0.3519
991	SLU 19	1	0.19	40.87	-7.0361	0.0458	0.3518
991	SLU 20	1.01	0.16	41.36	-7.1107	0.0464	0.3562
991	SLU 21	1.01	0.19	41.34	-7.109	0.0464	0.3561
991	SLU 22	0.97	0.16	38.95	-6.7273	0.0431	0.3432
991	SLU 23	0.97	0.22	38.93	-6.7244	0.0431	0.3431
991	SLU 24	0.99	0.17	39.72	-6.847	0.0441	0.35
991	SLU 25	0.99	0.2	39.71	-6.8453	0.0441	0.3499
991	SLU 26	0.99	0.22	39.4	-6.7973	0.0437	0.3474
991	SLU 27	1.01	0.17	40.19	-6.9199	0.0447	0.3543
991	SLU 28	1.01	0.2	40.18	-6.9182	0.0446	0.3543
991	SLU 29	1	0.16	39.89	-6.8731	0.0443	0.3518
991	SLU 30	1	0.19	39.88	-6.8713	0.0443	0.3518
991	SLU 31	1.05	0.24	43.34	-7.4297	0.0491	0.3692
991	SLU 32	1.07	0.19	44.13	-7.5524	0.0501	0.376
991	SLU 33	1.07	0.23	44.12	-7.5506	0.0501	0.376
991	SLU 34	1.06	0.24	43.81	-7.5026	0.0497	0.3735
991	SLU 35	1.08	0.19	44.61	-7.6253	0.0507	0.3804
991	SLU 36	1.08	0.23	44.59	-7.6235	0.0507	0.3803
991	SLU 37	1.07	0.19	44.31	-7.5784	0.0503	0.3779
991	SLU 38	1.07	0.22	44.29	-7.5767	0.0503	0.3778
991	SLU 39	1.08	0.2	45.25	-7.7349	0.0517	0.3804
991	SLU 40	1.08	0.23	45.24	-7.7332	0.0517	0.3804
991	SLU 41	1.09	0.2	45.73	-7.8078	0.0523	0.3847
991	SLU 42	1.09	0.23	45.71	-7.8061	0.0523	0.3847
991	SLU 43	1.13	0.14	43.46	-7.6003	0.0463	0.3992
991	SLU 44	1.13	0.2	43.44	-7.5973	0.0463	0.3992
991	SLU 45	1.15	0.15	44.23	-7.72	0.0473	0.406
991	SLU 46	1.15	0.18	44.22	-7.7182	0.0473	0.406
991	SLU 47	1.15	0.2	43.91	-7.6702	0.0469	0.4035
991	SLU 48	1.17	0.15	44.7	-7.7929	0.0479	0.4104
991	SLU 49	1.17	0.18	44.69	-7.7911	0.0478	0.4103
991	SLU 50	1.16	0.14	44.4	-7.746	0.0475	0.4079
991	SLU 51	1.16	0.17	44.39	-7.7443	0.0475	0.4078
991	SLU 52	1.21	0.22	47.85	-8.3027	0.0523	0.4252
991	SLU 53	1.23	0.17	48.65	-8.4253	0.0533	0.4321
991	SLU 54	1.23	0.21	48.63	-8.4236	0.0533	0.432
991	SLU 55	1.22	0.22	48.32	-8.3756	0.0529	0.4295
991	SLU 56	1.24	0.18	49.12	-8.4982	0.0539	0.4364
991	SLU 57	1.24	0.21	49.1	-8.4965	0.0539	0.4364
991	SLU 58	1.23	0.17	48.82	-8.4514	0.0535	0.4339
991	SLU 59	1.23	0.2	48.8	-8.4496	0.0535	0.4339
991	SLU 60	1.24	0.18	49.76	-8.6079	0.0549	0.4365
991	SLU 61	1.24	0.21	49.75	-8.6061	0.0549	0.4364
991	SLU 62	1.25	0.18	50.24	-8.6808	0.0555	0.4408
991	SLU 63	1.25	0.21	50.22	-8.679	0.0555	0.4407
991	SLU 64	1.21	0.18	47.83	-8.2974	0.0522	0.4278
991	SLU 65	1.21	0.24	47.8	-8.2945	0.0522	0.4277
991	SLU 66	1.23	0.19	48.6	-8.4171	0.0532	0.4346
991	SLU 67	1.23	0.22	48.59	-8.4154	0.0532	0.4345
991	SLU 68	1.23	0.24	48.27	-8.3673	0.0528	0.432
991	SLU 69	1.25	0.19	49.07	-8.49	0.0538	0.4389
991	SLU 70	1.25	0.22	49.06	-8.4882	0.0538	0.4389
991	SLU 71	1.24	0.18	48.77	-8.4431	0.0534	0.4364
991	SLU 72	1.24	0.21	48.76	-8.4414	0.0534	0.4364
991	SLU 73	1.29	0.26	52.22	-8.9998	0.0582	0.4538
991	SLU 74	1.31	0.21	53.01	-9.1224	0.0592	0.4606
991	SLU 75	1.31	0.25	53	-9.1207	0.0592	0.4606
991	SLU 76	1.3	0.26	52.69	-9.0727	0.0588	0.4581
991	SLU 77	1.32	0.22	53.48	-9.1953	0.0598	0.465
991	SLU 78	1.32	0.25	53.47	-9.1936	0.0598	0.4649
991	SLU 79	1.31	0.21	53.18	-9.1485	0.0594	0.4625
991	SLU 80	1.31	0.24	53.17	-9.1467	0.0594	0.4624
991	SLU 81	1.32	0.22	54.13	-9.305	0.0609	0.465
991	SLU 82	1.32	0.25	54.12	-9.3032	0.0608	0.465
991	SLU 83	1.33	0.22	54.6	-9.3779	0.0614	0.4693
991	SLU 84	1.33	0.25	54.59	-9.3761	0.0614	0.4693
991	SLE RA 1	0.92	0.13	35.83	-6.2294	0.0389	0.3228
991	SLE RA 2	0.92	0.17	35.81	-6.2274	0.0389	0.3227
991	SLE RA 3	0.93	0.13	36.35	-6.3092	0.0395	0.3273
991	SLE RA 4	0.93	0.16	36.34	-6.308	0.0395	0.3273
991	SLE RA 5	0.92	0.17	36.13	-6.276	0.0392	0.3256
991	SLE RA 6	0.94	0.13	36.66	-6.3578	0.0399	0.3302
991	SLE RA 7	0.94	0.16	36.65	-6.3566	0.0399	0.3302

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
991	SLE RA 8	0.93	0.13	36.46	-6.3266	0.0397	0.3286
991	SLE RA 9	0.93	0.15	36.45	-6.3254	0.0396	0.3285
991	SLE RA 10	0.97	0.19	38.76	-6.6977	0.0429	0.3401
991	SLE RA 11	0.98	0.15	39.29	-6.7794	0.0435	0.3447
991	SLE RA 12	0.98	0.18	39.28	-6.7783	0.0435	0.3447
991	SLE RA 13	0.97	0.19	39.07	-6.7462	0.0433	0.343
991	SLE RA 14	0.99	0.15	39.6	-6.828	0.0439	0.3476
991	SLE RA 15	0.99	0.18	39.59	-6.8268	0.0439	0.3475
991	SLE RA 16	0.98	0.15	39.4	-6.7968	0.0437	0.3459
991	SLE RA 17	0.98	0.17	39.39	-6.7956	0.0437	0.3459
991	SLE RA 18	0.99	0.15	40.03	-6.9011	0.0446	0.3476
991	SLE RA 19	0.99	0.18	40.02	-6.9	0.0446	0.3476
991	SLE RA 20	0.99	0.15	40.35	-6.9497	0.045	0.3505
991	SLE RA 21	0.99	0.18	40.34	-6.9485	0.045	0.3505
991	SLE FR 1	0.92	0.13	35.83	-6.2294	0.0389	0.3228
991	SLE FR 2	0.92	0.14	35.83	-6.229	0.0389	0.3228
991	SLE FR 3	0.92	0.13	35.96	-6.2488	0.039	0.324
991	SLE FR 4	0.94	0.14	37.09	-6.4305	0.0406	0.3302
991	SLE FR 5	0.94	0.14	37.22	-6.4503	0.0408	0.3314
991	SLE FR 6	0.95	0.14	37.93	-6.5653	0.0418	0.3352
991	SLE QP 1	0.92	0.13	35.83	-6.2294	0.0389	0.3228
991	SLE QP 2	0.94	0.14	37.09	-6.4309	0.0406	0.3302
991	SLD 1	5.15	-0.16	31.01	-5.7269	0.0512	1.805
991	SLD 2	4.71	0.34	30.61	-5.673	0.0512	1.6508
991	SLD 3	5.22	-1.23	31.82	-5.9497	0.0522	1.8272
991	SLD 4	4.77	-0.73	31.43	-5.8958	0.0522	1.673
991	SLD 5	2.18	1.58	34.1	-5.8913	0.0423	0.7664
991	SLD 6	1.89	1.91	33.84	-5.856	0.0423	0.6653
991	SLD 7	2.4	-1.99	36.82	-6.6341	0.0455	0.8404
991	SLD 8	2.11	-1.66	36.56	-6.5988	0.0455	0.7393
991	SLD 9	-0.23	1.93	37.63	-6.263	0.0357	-0.0788
991	SLD 10	-0.52	2.26	37.37	-6.2277	0.0357	-0.1799
991	SLD 11	-0.02	-1.64	40.34	-7.0058	0.0389	-0.0048
991	SLD 12	-0.31	-1.31	40.08	-6.9705	0.0389	-0.106
991	SLD 13	-2.9	1	42.76	-6.966	0.0291	-1.0125
991	SLD 14	-3.34	1.5	42.36	-6.9121	0.0291	-1.1667
991	SLD 15	-2.84	-0.07	43.57	-7.1888	0.03	-0.9903
991	SLD 16	-3.28	0.43	43.18	-7.135	0.03	-1.1445
991	SLV 1	10.8	-0.59	22.88	-4.7868	0.0654	3.7788
991	SLV 2	9.77	0.58	21.95	-4.6614	0.0654	3.4195
991	SLV 3	10.95	-3.03	24.73	-5.3012	0.0676	3.8306
991	SLV 4	9.91	-1.86	23.81	-5.1757	0.0676	3.4713
991	SLV 5	3.85	3.41	30.18	-5.1792	0.0447	1.3481
991	SLV 6	3.18	4.17	29.58	-5.0983	0.0447	1.1166
991	SLV 7	4.34	-4.71	36.35	-6.8937	0.0521	1.5208
991	SLV 8	3.68	-3.96	35.75	-6.8129	0.0521	1.2893
991	SLV 9	-1.8	4.23	38.43	-6.0489	0.0291	-0.6288
991	SLV 10	-2.47	4.98	37.83	-5.9681	0.0292	-0.8603
991	SLV 11	-1.31	-3.89	44.6	-7.7635	0.0365	-0.4561
991	SLV 12	-1.97	-3.14	44	-7.6826	0.0365	-0.6876
991	SLV 13	-8.04	2.13	50.38	-7.6861	0.0136	-2.8108
991	SLV 14	-9.07	3.3	49.45	-7.5606	0.0136	-3.1701
991	SLV 15	-7.89	-0.31	52.23	-8.2005	0.0158	-2.759
991	SLV 16	-8.92	0.86	51.31	-8.075	0.0158	-3.1183
991	CRTFP Ux+	0	0	0	0	0	0
991	CRTFP Ux-	0	0	0	0	0	0
991	CRTFP Uy+	0	0	0	0	0	0
991	CRTFP Uy-	0	0	0	0	0	0
992	SLU 1	0.9	0.18	33.71	-5.1778	0.0215	0.3174
992	SLU 2	0.9	0.24	33.69	-5.1757	0.0214	0.3174
992	SLU 3	0.92	0.19	34.46	-5.276	0.022	0.3243
992	SLU 4	0.92	0.22	34.44	-5.2747	0.022	0.3243
992	SLU 5	0.91	0.24	34.14	-5.2355	0.0218	0.3218
992	SLU 6	0.93	0.19	34.92	-5.3358	0.0223	0.3287
992	SLU 7	0.93	0.22	34.9	-5.3345	0.0223	0.3287
992	SLU 8	0.93	0.18	34.62	-5.2974	0.0221	0.3262
992	SLU 9	0.93	0.21	34.61	-5.2961	0.0221	0.3262
992	SLU 10	0.97	0.27	37.95	-5.7543	0.0252	0.3435
992	SLU 11	0.99	0.22	38.72	-5.8546	0.0258	0.3505
992	SLU 12	0.99	0.26	38.71	-5.8533	0.0258	0.3504
992	SLU 13	0.99	0.28	38.41	-5.8141	0.0256	0.3479
992	SLU 14	1.01	0.23	39.18	-5.9144	0.0261	0.3548
992	SLU 15	1.01	0.26	39.17	-5.9131	0.0261	0.3548
992	SLU 16	1	0.22	38.89	-5.876	0.0259	0.3523
992	SLU 17	1	0.25	38.88	-5.8747	0.0259	0.3523
992	SLU 18	1.01	0.23	39.8	-6.0043	0.0269	0.3548
992	SLU 19	1.01	0.27	39.79	-6.0031	0.0269	0.3548
992	SLU 20	1.02	0.23	40.26	-6.0641	0.0272	0.3592
992	SLU 21	1.02	0.27	40.25	-6.0629	0.0272	0.3591
992	SLU 22	0.98	0.22	37.93	-5.7494	0.0252	0.3461
992	SLU 23	0.98	0.28	37.91	-5.7474	0.0252	0.3461
992	SLU 24	1	0.23	38.68	-5.8476	0.0257	0.353
992	SLU 25	1	0.27	38.67	-5.8464	0.0257	0.353
992	SLU 26	0.99	0.29	38.37	-5.8072	0.0255	0.3505
992	SLU 27	1.01	0.24	39.14	-5.9074	0.0261	0.3574
992	SLU 28	1.01	0.27	39.13	-5.9062	0.026	0.3574
992	SLU 29	1.01	0.23	38.85	-5.8691	0.0258	0.3549
992	SLU 30	1.01	0.26	38.83	-5.8678	0.0258	0.3549
992	SLU 31	1.06	0.32	42.17	-6.326	0.029	0.3723
992	SLU 32	1.08	0.27	42.95	-6.4262	0.0295	0.3792

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
992	SLU 33	1.08	0.31	42.93	-6.425	0.0295	0.3792
992	SLU 34	1.07	0.32	42.63	-6.3858	0.0293	0.3766
992	SLU 35	1.09	0.27	43.41	-6.486	0.0299	0.3835
992	SLU 36	1.09	0.31	43.39	-6.4848	0.0299	0.3835
992	SLU 37	1.08	0.27	43.11	-6.4477	0.0296	0.381
992	SLU 38	1.08	0.3	43.1	-6.4464	0.0296	0.381
992	SLU 39	1.09	0.28	44.03	-6.576	0.0306	0.3835
992	SLU 40	1.09	0.31	44.01	-6.5748	0.0306	0.3835
992	SLU 41	1.1	0.28	44.48	-6.6358	0.0309	0.3879
992	SLU 42	1.1	0.32	44.47	-6.6346	0.0309	0.3878
992	SLU 43	1.14	0.21	42.37	-6.5351	0.0266	0.4028
992	SLU 44	1.14	0.27	42.35	-6.533	0.0266	0.4028
992	SLU 45	1.16	0.22	43.12	-6.6333	0.0272	0.4097
992	SLU 46	1.16	0.26	43.11	-6.6321	0.0272	0.4097
992	SLU 47	1.16	0.27	42.81	-6.5928	0.0269	0.4072
992	SLU 48	1.18	0.22	43.58	-6.6931	0.0275	0.4141
992	SLU 49	1.18	0.26	43.57	-6.6919	0.0275	0.4141
992	SLU 50	1.17	0.21	43.29	-6.6547	0.0273	0.4116
992	SLU 51	1.17	0.25	43.28	-6.6535	0.0273	0.4116
992	SLU 52	1.22	0.31	46.62	-7.1116	0.0304	0.4289
992	SLU 53	1.24	0.26	47.39	-7.2119	0.031	0.4359
992	SLU 54	1.24	0.3	47.37	-7.2107	0.031	0.4358
992	SLU 55	1.23	0.31	47.07	-7.1714	0.0307	0.4333
992	SLU 56	1.25	0.26	47.85	-7.2717	0.0313	0.4402
992	SLU 57	1.25	0.3	47.83	-7.2705	0.0313	0.4402
992	SLU 58	1.24	0.25	47.56	-7.2333	0.0311	0.4377
992	SLU 59	1.24	0.29	47.54	-7.2321	0.0311	0.4377
992	SLU 60	1.25	0.27	48.47	-7.3617	0.0321	0.4402
992	SLU 61	1.25	0.3	48.45	-7.3604	0.0321	0.4402
992	SLU 62	1.26	0.27	48.93	-7.4215	0.0324	0.4446
992	SLU 63	1.26	0.3	48.91	-7.4202	0.0324	0.4445
992	SLU 64	1.22	0.26	46.6	-7.1067	0.0303	0.4315
992	SLU 65	1.22	0.32	46.57	-7.1047	0.0303	0.4315
992	SLU 66	1.24	0.27	47.35	-7.205	0.0309	0.4384
992	SLU 67	1.24	0.31	47.33	-7.2037	0.0309	0.4384
992	SLU 68	1.24	0.32	47.03	-7.1645	0.0306	0.4359
992	SLU 69	1.26	0.27	47.8	-7.2648	0.0312	0.4428
992	SLU 70	1.26	0.31	47.79	-7.2635	0.0312	0.4428
992	SLU 71	1.25	0.26	47.51	-7.2264	0.031	0.4403
992	SLU 72	1.25	0.3	47.5	-7.2251	0.031	0.4403
992	SLU 73	1.3	0.36	50.84	-7.6833	0.0341	0.4576
992	SLU 74	1.32	0.31	51.61	-7.7836	0.0347	0.4646
992	SLU 75	1.32	0.35	51.6	-7.7823	0.0347	0.4645
992	SLU 76	1.31	0.36	51.3	-7.7431	0.0345	0.462
992	SLU 77	1.33	0.31	52.07	-7.8434	0.035	0.4689
992	SLU 78	1.33	0.35	52.06	-7.8421	0.035	0.4689
992	SLU 79	1.32	0.3	51.78	-7.805	0.0348	0.4664
992	SLU 80	1.32	0.34	51.76	-7.8037	0.0348	0.4664
992	SLU 81	1.33	0.31	52.69	-7.9333	0.0358	0.4689
992	SLU 82	1.33	0.35	52.68	-7.9321	0.0358	0.4689
992	SLU 83	1.34	0.32	53.15	-7.9931	0.0361	0.4733
992	SLU 84	1.34	0.35	53.13	-7.9919	0.0361	0.4732
992	SLE RA 1	0.92	0.19	34.92	-5.3411	0.0225	0.3256
992	SLE RA 2	0.92	0.23	34.9	-5.3397	0.0225	0.3256
992	SLE RA 3	0.94	0.2	35.42	-5.4066	0.0229	0.3302
992	SLE RA 4	0.94	0.22	35.41	-5.4057	0.0229	0.3302
992	SLE RA 5	0.93	0.23	35.21	-5.3796	0.0227	0.3285
992	SLE RA 6	0.95	0.2	35.72	-5.4464	0.0231	0.3331
992	SLE RA 7	0.95	0.22	35.71	-5.4456	0.0231	0.3331
992	SLE RA 8	0.94	0.19	35.53	-5.4208	0.023	0.3315
992	SLE RA 9	0.94	0.22	35.52	-5.42	0.023	0.3315
992	SLE RA 10	0.97	0.26	37.74	-5.7254	0.025	0.343
992	SLE RA 11	0.99	0.22	38.26	-5.7923	0.0254	0.3477
992	SLE RA 12	0.99	0.25	38.25	-5.7915	0.0254	0.3476
992	SLE RA 13	0.98	0.26	38.05	-5.7653	0.0253	0.346
992	SLE RA 14	0.99	0.22	38.56	-5.8322	0.0256	0.3506
992	SLE RA 15	0.99	0.25	38.56	-5.8313	0.0256	0.3506
992	SLE RA 16	0.99	0.22	38.37	-5.8066	0.0255	0.3489
992	SLE RA 17	0.99	0.24	38.36	-5.8058	0.0255	0.3489
992	SLE RA 18	0.99	0.23	38.98	-5.8921	0.0261	0.3505
992	SLE RA 19	0.99	0.25	38.97	-5.8913	0.0261	0.3505
992	SLE RA 20	1	0.23	39.28	-5.932	0.0264	0.3535
992	SLE RA 21	1	0.25	39.27	-5.9312	0.0264	0.3534
992	SLE FR 1	0.92	0.19	34.92	-5.3411	0.0225	0.3256
992	SLE FR 2	0.92	0.2	34.91	-5.3408	0.0225	0.3256
992	SLE FR 3	0.93	0.19	35.04	-5.357	0.0226	0.3268
992	SLE FR 4	0.95	0.21	36.13	-5.5061	0.0236	0.3331
992	SLE FR 5	0.95	0.2	36.26	-5.5224	0.0237	0.3343
992	SLE FR 6	0.96	0.21	36.95	-5.6166	0.0243	0.3381
992	SLE QP 1	0.92	0.19	34.92	-5.3411	0.0225	0.3256
992	SLE QP 2	0.95	0.2	36.13	-5.5064	0.0236	0.3331
992	SLD 1	5.16	-0.12	29.67	-4.8181	0.0385	1.8078
992	SLD 2	4.72	0.41	29.27	-4.7726	0.0387	1.6535
992	SLD 3	5.22	-1.21	30.47	-5.041	0.0389	1.8303
992	SLD 4	4.78	-0.68	30.07	-4.9955	0.0391	1.676
992	SLD 5	2.19	1.67	33.04	-4.9699	0.0274	0.7688
992	SLD 6	1.9	2.02	32.78	-4.9401	0.0276	0.6677
992	SLD 7	2.41	-1.98	35.73	-5.7129	0.0288	0.8438
992	SLD 8	2.11	-1.63	35.47	-5.6831	0.0289	0.7426
992	SLD 9	-0.22	2.03	36.8	-5.3297	0.0183	-0.0764

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
992	SLD 10	-0.52	2.38	36.54	-5.2999	0.0184	-0.1776
992	SLD 11	-0.01	-1.62	39.49	-6.0727	0.0196	-0.0015
992	SLD 12	-0.3	-1.27	39.23	-6.0429	0.0198	-0.1026
992	SLD 13	-2.89	1.09	42.19	-6.0173	0.0081	-1.0098
992	SLD 14	-3.33	1.61	41.79	-5.9718	0.0083	-1.1641
992	SLD 15	-2.83	-0.01	43	-6.2402	0.0085	-0.9873
992	SLD 16	-3.27	0.52	42.6	-6.1947	0.0087	-1.1416
992	SLV 1	10.8	-0.58	21.03	-3.8985	0.0585	3.7814
992	SLV 2	9.77	0.65	20.1	-3.7926	0.059	3.422
992	SLV 3	10.95	-3.07	22.86	-4.4148	0.0595	3.834
992	SLV 4	9.92	-1.84	21.93	-4.3089	0.06	3.4745
992	SLV 5	3.85	3.54	28.99	-4.2593	0.0326	1.3498
992	SLV 6	3.18	4.33	28.39	-4.191	0.0329	1.1182
992	SLV 7	4.35	-4.78	35.09	-5.9801	0.0357	1.5249
992	SLV 8	3.69	-3.98	34.49	-5.9119	0.036	1.2933
992	SLV 9	-1.8	4.38	37.78	-5.1009	0.0112	-0.6271
992	SLV 10	-2.46	5.18	37.18	-5.0327	0.0115	-0.8587
992	SLV 11	-1.29	-3.93	43.88	-6.8218	0.0143	-0.452
992	SLV 12	-1.96	-3.13	43.28	-6.7535	0.0146	-0.6836
992	SLV 13	-8.03	2.24	50.34	-6.7039	-0.0127	-2.8083
992	SLV 14	-9.06	3.47	49.41	-6.598	-0.0123	-3.1677
992	SLV 15	-7.88	-0.25	52.17	-7.2202	-0.0118	-2.7558
992	SLV 16	-8.91	0.98	51.24	-7.1143	-0.0113	-3.1152
992	CRTFP Ux+	0	0	0	0	0	0
992	CRTFP Ux-	0	0	0	0	0	0
992	CRTFP Uy+	0	0	0	0	0	0
992	CRTFP Uy-	0	0	0	0	0	0
993	SLU 1	0.91	0.24	33.32	-4.6785	0.0046	0.3198
993	SLU 2	0.91	0.31	33.3	-4.6769	0.0046	0.3198
993	SLU 3	0.93	0.25	34.06	-4.7641	0.0047	0.3267
993	SLU 4	0.93	0.29	34.05	-4.7632	0.0047	0.3267
993	SLU 5	0.92	0.31	33.75	-4.7291	0.0046	0.3242
993	SLU 6	0.94	0.26	34.51	-4.8164	0.0047	0.3311
993	SLU 7	0.94	0.29	34.5	-4.8154	0.0047	0.3312
993	SLU 8	0.93	0.25	34.23	-4.7829	0.0047	0.3286
993	SLU 9	0.93	0.28	34.21	-4.782	0.0047	0.3286
993	SLU 10	0.98	0.36	37.49	-5.1786	0.006	0.346
993	SLU 11	1	0.3	38.25	-5.2658	0.0061	0.353
993	SLU 12	1	0.34	38.24	-5.2649	0.0061	0.353
993	SLU 13	0.99	0.36	37.94	-5.2308	0.0061	0.3504
993	SLU 14	1.01	0.31	38.7	-5.318	0.0062	0.3574
993	SLU 15	1.01	0.34	38.69	-5.3171	0.0062	0.3574
993	SLU 16	1.01	0.3	38.41	-5.2846	0.0061	0.3548
993	SLU 17	1.01	0.33	38.4	-5.2837	0.0061	0.3548
993	SLU 18	1.01	0.31	39.31	-5.3951	0.0066	0.3572
993	SLU 19	1.01	0.35	39.29	-5.3942	0.0066	0.3572
993	SLU 20	1.02	0.32	39.76	-5.4474	0.0067	0.3616
993	SLU 21	1.02	0.35	39.74	-5.4464	0.0067	0.3617
993	SLU 22	0.99	0.3	37.47	-5.1741	0.0059	0.3486
993	SLU 23	0.99	0.36	37.45	-5.1726	0.0059	0.3486
993	SLU 24	1.01	0.31	38.21	-5.2598	0.006	0.3556
993	SLU 25	1.01	0.35	38.2	-5.2589	0.006	0.3556
993	SLU 26	1	0.37	37.9	-5.2248	0.006	0.353
993	SLU 27	1.02	0.31	38.66	-5.312	0.0061	0.36
993	SLU 28	1.02	0.35	38.65	-5.3111	0.0061	0.36
993	SLU 29	1.01	0.3	38.37	-5.2786	0.006	0.3574
993	SLU 30	1.01	0.34	38.36	-5.2777	0.006	0.3575
993	SLU 31	1.06	0.41	41.63	-5.6742	0.0074	0.3748
993	SLU 32	1.08	0.36	42.4	-5.7615	0.0075	0.3818
993	SLU 33	1.08	0.4	42.38	-5.7605	0.0075	0.3818
993	SLU 34	1.07	0.42	42.09	-5.7265	0.0074	0.3793
993	SLU 35	1.09	0.36	42.85	-5.8137	0.0075	0.3862
993	SLU 36	1.09	0.4	42.84	-5.8128	0.0075	0.3862
993	SLU 37	1.09	0.35	42.56	-5.7803	0.0075	0.3837
993	SLU 38	1.09	0.39	42.55	-5.7793	0.0075	0.3837
993	SLU 39	1.09	0.37	43.45	-5.8908	0.008	0.3861
993	SLU 40	1.09	0.41	43.44	-5.8899	0.008	0.3861
993	SLU 41	1.11	0.37	43.9	-5.943	0.008	0.3905
993	SLU 42	1.11	0.41	43.89	-5.9421	0.008	0.3905
993	SLU 43	1.15	0.3	41.9	-5.9121	0.0055	0.4058
993	SLU 44	1.15	0.36	41.87	-5.9105	0.0055	0.4058
993	SLU 45	1.17	0.31	42.64	-5.9977	0.0056	0.4128
993	SLU 46	1.17	0.35	42.62	-5.9968	0.0056	0.4128
993	SLU 47	1.16	0.36	42.32	-5.9627	0.0055	0.4102
993	SLU 48	1.18	0.31	43.09	-6.0499	0.0056	0.4172
993	SLU 49	1.18	0.35	43.07	-6.049	0.0056	0.4172
993	SLU 50	1.18	0.3	42.8	-6.0165	0.0056	0.4146
993	SLU 51	1.18	0.34	42.79	-6.0156	0.0056	0.4147
993	SLU 52	1.22	0.41	46.06	-6.4122	0.0069	0.432
993	SLU 53	1.24	0.36	46.82	-6.4994	0.007	0.439
993	SLU 54	1.24	0.39	46.81	-6.4984	0.007	0.439
993	SLU 55	1.24	0.41	46.51	-6.4644	0.007	0.4365
993	SLU 56	1.26	0.36	47.28	-6.5516	0.0071	0.4434
993	SLU 57	1.26	0.4	47.26	-6.5507	0.0071	0.4434
993	SLU 58	1.25	0.35	46.99	-6.5182	0.007	0.4409
993	SLU 59	1.25	0.39	46.97	-6.5173	0.007	0.4409
993	SLU 60	1.26	0.37	47.88	-6.6287	0.0075	0.4433
993	SLU 61	1.26	0.4	47.87	-6.6278	0.0075	0.4433
993	SLU 62	1.27	0.37	48.33	-6.681	0.0076	0.4477
993	SLU 63	1.27	0.41	48.32	-6.68	0.0076	0.4477

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
993	SLU 64	1.23	0.35	46.04	-6.4077	0.0068	0.4346
993	SLU 65	1.23	0.42	46.02	-6.4062	0.0068	0.4347
993	SLU 66	1.25	0.37	46.78	-6.4934	0.0069	0.4416
993	SLU 67	1.25	0.4	46.77	-6.4924	0.0069	0.4416
993	SLU 68	1.24	0.42	46.47	-6.4584	0.0069	0.4391
993	SLU 69	1.26	0.37	47.24	-6.5456	0.007	0.446
993	SLU 70	1.26	0.41	47.22	-6.5447	0.007	0.446
993	SLU 71	1.26	0.36	46.95	-6.5122	0.0069	0.4435
993	SLU 72	1.26	0.4	46.93	-6.5112	0.0069	0.4435
993	SLU 73	1.31	0.47	50.21	-6.9078	0.0083	0.4609
993	SLU 74	1.33	0.42	50.97	-6.995	0.0084	0.4678
993	SLU 75	1.33	0.45	50.96	-6.9941	0.0084	0.4678
993	SLU 76	1.32	0.47	50.66	-6.9601	0.0083	0.4653
993	SLU 77	1.34	0.42	51.42	-7.0473	0.0084	0.4723
993	SLU 78	1.34	0.46	51.41	-7.0463	0.0084	0.4723
993	SLU 79	1.33	0.41	51.14	-7.0139	0.0084	0.4697
993	SLU 80	1.33	0.45	51.12	-7.0129	0.0084	0.4697
993	SLU 81	1.34	0.42	52.03	-7.1244	0.0089	0.4721
993	SLU 82	1.34	0.46	52.01	-7.1235	0.0089	0.4721
993	SLU 83	1.35	0.43	52.48	-7.1766	0.0089	0.4765
993	SLU 84	1.35	0.46	52.47	-7.1757	0.0089	0.4765
993	SLE RA 1	0.93	0.26	34.51	-4.8201	0.005	0.328
993	SLE RA 2	0.93	0.3	34.49	-4.819	0.005	0.328
993	SLE RA 3	0.94	0.27	35	-4.8772	0.005	0.3326
993	SLE RA 4	0.94	0.29	34.99	-4.8766	0.005	0.3326
993	SLE RA 5	0.94	0.3	34.79	-4.8539	0.005	0.331
993	SLE RA 6	0.95	0.27	35.3	-4.912	0.0051	0.3356
993	SLE RA 7	0.95	0.29	35.29	-4.9114	0.0051	0.3356
993	SLE RA 8	0.95	0.26	35.11	-4.8897	0.005	0.3339
993	SLE RA 9	0.95	0.29	35.1	-4.8891	0.005	0.3339
993	SLE RA 10	0.98	0.33	37.28	-5.1535	0.0059	0.3455
993	SLE RA 11	0.99	0.3	37.79	-5.2116	0.006	0.3501
993	SLE RA 12	0.99	0.33	37.78	-5.211	0.006	0.3501
993	SLE RA 13	0.99	0.34	37.58	-5.1883	0.006	0.3484
993	SLE RA 14	1	0.3	38.09	-5.2465	0.006	0.3531
993	SLE RA 15	1	0.33	38.08	-5.2458	0.006	0.3531
993	SLE RA 16	1	0.3	37.9	-5.2242	0.006	0.3514
993	SLE RA 17	1	0.32	37.89	-5.2235	0.006	0.3514
993	SLE RA 18	1	0.31	38.5	-5.2979	0.0063	0.353
993	SLE RA 19	1	0.33	38.49	-5.2972	0.0063	0.353
993	SLE RA 20	1.01	0.31	38.8	-5.3327	0.0064	0.3559
993	SLE RA 21	1.01	0.33	38.79	-5.3321	0.0064	0.3559
993	SLE FR 1	0.93	0.26	34.51	-4.8201	0.005	0.328
993	SLE FR 2	0.93	0.27	34.5	-4.8199	0.005	0.328
993	SLE FR 3	0.93	0.26	34.63	-4.834	0.005	0.3292
993	SLE FR 4	0.95	0.28	35.7	-4.9632	0.0054	0.3355
993	SLE FR 5	0.95	0.27	35.82	-4.9773	0.0054	0.3367
993	SLE FR 6	0.97	0.28	36.5	-5.059	0.0056	0.3405
993	SLE QP 1	0.93	0.26	34.51	-4.8201	0.005	0.328
993	SLE QP 2	0.95	0.27	35.7	-4.9634	0.0054	0.3355
993	SLD 1	5.16	-0.05	28.73	-4.2173	0.0252	1.8099
993	SLD 2	4.72	0.51	28.32	-4.1768	0.0256	1.6556
993	SLD 3	5.23	-1.19	29.53	-4.434	0.0243	1.8327
993	SLD 4	4.78	-0.63	29.12	-4.3936	0.0248	1.6784
993	SLD 5	2.19	1.8	32.47	-4.4181	0.0125	0.7707
993	SLD 6	1.9	2.17	32.2	-4.3916	0.0128	0.6695
993	SLD 7	2.41	-1.99	35.14	-5.1405	0.0097	0.8467
993	SLD 8	2.12	-1.62	34.87	-5.114	0.01	0.7455
993	SLD 9	-0.22	2.17	36.54	-4.8129	0.0007	-0.0745
993	SLD 10	-0.51	2.54	36.27	-4.7863	0.001	-0.1757
993	SLD 11	0	-1.62	39.2	-5.5353	-0.0021	0.0015
993	SLD 12	-0.29	-1.25	38.93	-5.5088	-0.0018	-0.0997
993	SLD 13	-2.88	1.17	42.29	-5.5333	-0.014	-1.0074
993	SLD 14	-3.33	1.74	41.88	-5.4928	-0.0136	-1.1617
993	SLD 15	-2.82	0.04	43.08	-5.75	-0.0149	-0.9846
993	SLD 16	-3.26	0.6	42.68	-5.7095	-0.0145	-1.1389
993	SLV 1	10.8	-0.52	19.41	-3.2198	0.0517	3.7831
993	SLV 2	9.77	0.79	18.46	-3.1256	0.0527	3.4237
993	SLV 3	10.95	-3.11	21.23	-3.7226	0.0498	3.8363
993	SLV 4	9.92	-1.8	20.28	-3.6284	0.0508	3.477
993	SLV 5	3.85	3.74	28.23	-3.694	0.0221	1.3509
993	SLV 6	3.18	4.58	27.61	-3.6332	0.0227	1.1193
993	SLV 7	4.36	-4.9	34.28	-5.37	0.0155	1.5284
993	SLV 8	3.7	-4.05	33.67	-5.3093	0.0162	1.2968
993	SLV 9	-1.79	4.6	37.74	-4.6175	-0.0055	-0.6258
993	SLV 10	-2.46	5.44	37.13	-4.5568	-0.0048	-0.8574
993	SLV 11	-1.28	-4.04	43.79	-6.2936	-0.012	-0.4483
993	SLV 12	-1.95	-3.19	43.18	-6.2329	-0.0114	-0.6799
993	SLV 13	-8.02	2.35	51.13	-6.2984	-0.0401	-2.806
993	SLV 14	-9.05	3.66	50.18	-6.2042	-0.0391	-3.1654
993	SLV 15	-7.86	-0.24	52.95	-6.8012	-0.042	-2.7528
993	SLV 16	-8.9	1.07	51.99	-6.707	-0.041	-3.1121
993	CRTFP Ux+	0	0	0	0	0	0
993	CRTFP Ux-	0	0	0	0	0	0
993	CRTFP Uy+	0	0	0	0	0	0
993	CRTFP Uy-	0	0	0	0	0	0
994	SLU 1	0.91	0.32	33.44	-4.5453	-0.0121	0.3216
994	SLU 2	0.91	0.38	33.41	-4.5439	-0.0121	0.3216
994	SLU 3	0.93	0.33	34.18	-4.6276	-0.0124	0.3286
994	SLU 4	0.93	0.37	34.16	-4.6268	-0.0124	0.3286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
994	SLU 5	0.92	0.39	33.86	-4.5942	-0.0123	0.3261
994	SLU 6	0.94	0.33	34.63	-4.6779	-0.0126	0.3331
994	SLU 7	0.94	0.37	34.62	-4.6771	-0.0126	0.3331
994	SLU 8	0.94	0.32	34.34	-4.6459	-0.0125	0.3305
994	SLU 9	0.94	0.36	34.33	-4.6451	-0.0125	0.3305
994	SLU 10	0.98	0.45	37.59	-5.0199	-0.013	0.3479
994	SLU 11	1	0.39	38.36	-5.1036	-0.0133	0.3549
994	SLU 12	1	0.43	38.34	-5.1028	-0.0133	0.3549
994	SLU 13	1	0.45	38.04	-5.0702	-0.0132	0.3524
994	SLU 14	1.02	0.4	38.81	-5.1539	-0.0135	0.3594
994	SLU 15	1.02	0.44	38.8	-5.1531	-0.0135	0.3594
994	SLU 16	1.01	0.39	38.52	-5.1218	-0.0134	0.3568
994	SLU 17	1.01	0.43	38.51	-5.121	-0.0134	0.3568
994	SLU 18	1.02	0.41	39.41	-5.2252	-0.0134	0.3591
994	SLU 19	1.02	0.45	39.39	-5.2244	-0.0134	0.3592
994	SLU 20	1.03	0.41	39.86	-5.2755	-0.0136	0.3636
994	SLU 21	1.03	0.45	39.85	-5.2747	-0.0136	0.3636
994	SLU 22	0.99	0.39	37.58	-5.0158	-0.0131	0.3505
994	SLU 23	0.99	0.45	37.55	-5.0145	-0.0131	0.3506
994	SLU 24	1.01	0.4	38.32	-5.0982	-0.0134	0.3576
994	SLU 25	1.01	0.44	38.31	-5.0974	-0.0134	0.3576
994	SLU 26	1.01	0.45	38.01	-5.0648	-0.0133	0.3551
994	SLU 27	1.03	0.4	38.77	-5.1485	-0.0136	0.362
994	SLU 28	1.03	0.44	38.76	-5.1477	-0.0136	0.3621
994	SLU 29	1.02	0.39	38.49	-5.1164	-0.0135	0.3594
994	SLU 30	1.02	0.43	38.47	-5.1156	-0.0135	0.3595
994	SLU 31	1.07	0.52	41.73	-5.4904	-0.014	0.3769
994	SLU 32	1.09	0.46	42.5	-5.5741	-0.0143	0.3838
994	SLU 33	1.09	0.5	42.49	-5.5733	-0.0143	0.3839
994	SLU 34	1.08	0.52	42.19	-5.5407	-0.0142	0.3813
994	SLU 35	1.1	0.47	42.95	-5.6244	-0.0145	0.3883
994	SLU 36	1.1	0.51	42.94	-5.6236	-0.0145	0.3884
994	SLU 37	1.09	0.45	42.67	-5.5924	-0.0144	0.3857
994	SLU 38	1.09	0.49	42.65	-5.5916	-0.0144	0.3858
994	SLU 39	1.1	0.48	43.55	-5.6957	-0.0144	0.3881
994	SLU 40	1.1	0.52	43.53	-5.6949	-0.0144	0.3881
994	SLU 41	1.11	0.48	44	-5.746	-0.0146	0.3925
994	SLU 42	1.11	0.52	43.99	-5.7452	-0.0146	0.3926
994	SLU 43	1.16	0.39	42.05	-5.7476	-0.0154	0.4081
994	SLU 44	1.16	0.45	42.02	-5.7462	-0.0154	0.4082
994	SLU 45	1.18	0.4	42.79	-5.8299	-0.0157	0.4151
994	SLU 46	1.18	0.44	42.77	-5.8291	-0.0157	0.4152
994	SLU 47	1.17	0.46	42.47	-5.7965	-0.0156	0.4126
994	SLU 48	1.19	0.4	43.24	-5.8802	-0.0159	0.4196
994	SLU 49	1.19	0.44	43.23	-5.8794	-0.0159	0.4197
994	SLU 50	1.18	0.39	42.95	-5.8482	-0.0158	0.417
994	SLU 51	1.18	0.43	42.94	-5.8473	-0.0158	0.4171
994	SLU 52	1.23	0.52	46.2	-6.2221	-0.0163	0.4345
994	SLU 53	1.25	0.46	46.97	-6.3058	-0.0166	0.4414
994	SLU 54	1.25	0.5	46.95	-6.305	-0.0166	0.4415
994	SLU 55	1.24	0.52	46.65	-6.2724	-0.0165	0.4389
994	SLU 56	1.26	0.47	47.42	-6.3561	-0.0168	0.4459
994	SLU 57	1.26	0.51	47.41	-6.3553	-0.0168	0.4459
994	SLU 58	1.26	0.46	47.13	-6.3241	-0.0167	0.4433
994	SLU 59	1.26	0.5	47.12	-6.3233	-0.0167	0.4434
994	SLU 60	1.26	0.48	48.02	-6.4275	-0.0167	0.4457
994	SLU 61	1.26	0.52	48	-6.4266	-0.0167	0.4457
994	SLU 62	1.27	0.48	48.47	-6.4778	-0.0169	0.4501
994	SLU 63	1.27	0.52	48.46	-6.4769	-0.0169	0.4502
994	SLU 64	1.24	0.46	46.19	-6.2181	-0.0164	0.4371
994	SLU 65	1.24	0.52	46.16	-6.2167	-0.0164	0.4371
994	SLU 66	1.26	0.47	46.93	-6.3005	-0.0167	0.4441
994	SLU 67	1.26	0.51	46.92	-6.2996	-0.0167	0.4441
994	SLU 68	1.25	0.53	46.62	-6.267	-0.0166	0.4416
994	SLU 69	1.27	0.47	47.38	-6.3508	-0.0169	0.4486
994	SLU 70	1.27	0.51	47.37	-6.3499	-0.0169	0.4486
994	SLU 71	1.26	0.46	47.1	-6.3187	-0.0168	0.446
994	SLU 72	1.26	0.5	47.08	-6.3179	-0.0168	0.446
994	SLU 73	1.31	0.59	50.34	-6.6927	-0.0173	0.4634
994	SLU 74	1.33	0.53	51.11	-6.7764	-0.0176	0.4704
994	SLU 75	1.33	0.57	51.1	-6.7756	-0.0176	0.4704
994	SLU 76	1.32	0.59	50.8	-6.743	-0.0175	0.4679
994	SLU 77	1.34	0.54	51.56	-6.8267	-0.0178	0.4749
994	SLU 78	1.34	0.58	51.55	-6.8259	-0.0178	0.4749
994	SLU 79	1.34	0.53	51.28	-6.7946	-0.0177	0.4723
994	SLU 80	1.34	0.57	51.26	-6.7938	-0.0177	0.4723
994	SLU 81	1.34	0.55	52.16	-6.898	-0.0177	0.4746
994	SLU 82	1.34	0.59	52.14	-6.8972	-0.0177	0.4747
994	SLU 83	1.36	0.55	52.61	-6.9483	-0.0179	0.4791
994	SLU 84	1.36	0.59	52.6	-6.9475	-0.0179	0.4791
994	SLE RA 1	0.93	0.34	34.62	-4.6797	-0.0124	0.3298
994	SLE RA 2	0.93	0.38	34.6	-4.6788	-0.0124	0.3299
994	SLE RA 3	0.95	0.34	35.11	-4.7346	-0.0126	0.3345
994	SLE RA 4	0.95	0.37	35.1	-4.7341	-0.0126	0.3346
994	SLE RA 5	0.94	0.38	34.91	-4.7124	-0.0125	0.3329
994	SLE RA 6	0.96	0.35	35.42	-4.7682	-0.0127	0.3375
994	SLE RA 7	0.96	0.37	35.41	-4.7676	-0.0127	0.3375
994	SLE RA 8	0.95	0.34	35.22	-4.7468	-0.0127	0.3358
994	SLE RA 9	0.95	0.37	35.21	-4.7463	-0.0126	0.3358
994	SLE RA 10	0.98	0.42	37.39	-4.9961	-0.013	0.3474

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
994	SLE RA 11	1	0.39	37.9	-5.0519	-0.0132	0.3521
994	SLE RA 12	1	0.41	37.89	-5.0514	-0.0132	0.3521
994	SLE RA 13	0.99	0.42	37.69	-5.0297	-0.0131	0.3504
994	SLE RA 14	1.01	0.39	38.2	-5.0855	-0.0133	0.355
994	SLE RA 15	1.01	0.42	38.19	-5.0849	-0.0133	0.3551
994	SLE RA 16	1	0.38	38.01	-5.0641	-0.0133	0.3533
994	SLE RA 17	1	0.41	38	-5.0636	-0.0132	0.3533
994	SLE RA 18	1	0.4	38.6	-5.133	-0.0132	0.3549
994	SLE RA 19	1	0.42	38.59	-5.1325	-0.0132	0.3549
994	SLE RA 20	1.01	0.4	38.9	-5.1665	-0.0134	0.3579
994	SLE RA 21	1.01	0.43	38.89	-5.166	-0.0134	0.3579
994	SLE FR 1	0.93	0.34	34.62	-4.6797	-0.0124	0.3298
994	SLE FR 2	0.93	0.34	34.62	-4.6796	-0.0124	0.3298
994	SLE FR 3	0.94	0.34	34.74	-4.6932	-0.0124	0.331
994	SLE FR 4	0.96	0.36	35.81	-4.8155	-0.0126	0.3374
994	SLE FR 5	0.96	0.35	35.93	-4.8291	-0.0127	0.3385
994	SLE FR 6	0.97	0.37	36.61	-4.9064	-0.0128	0.3424
994	SLE QP 1	0.93	0.34	34.62	-4.6797	-0.0124	0.3298
994	SLE QP 2	0.96	0.35	35.81	-4.8157	-0.0126	0.3373
994	SLD 1	5.17	0.03	28.21	-3.9348	0.0118	1.8113
994	SLD 2	4.72	0.64	27.78	-3.8953	0.0125	1.6571
994	SLD 3	5.23	-1.17	29	-4.1393	0.0103	1.8344
994	SLD 4	4.79	-0.56	28.58	-4.0997	0.011	1.6802
994	SLD 5	2.2	1.97	32.4	-4.2485	-0.0032	0.7719
994	SLD 6	1.91	2.37	32.12	-4.2225	-0.0027	0.6708
994	SLD 7	2.42	-2.03	35.06	-4.9298	-0.0081	0.8489
994	SLD 8	2.13	-1.63	34.78	-4.9039	-0.0077	0.7478
994	SLD 9	-0.22	2.34	36.85	-4.7275	-0.0176	-0.0731
994	SLD 10	-0.51	2.74	36.57	-4.7016	-0.0172	-0.1742
994	SLD 11	0.01	-1.66	39.51	-5.4089	-0.0225	0.0039
994	SLD 12	-0.29	-1.26	39.23	-5.383	-0.0221	-0.0972
994	SLD 13	-2.88	1.27	43.05	-5.5317	-0.0363	-1.0055
994	SLD 14	-3.32	1.87	42.62	-5.4922	-0.0356	-1.1597
994	SLD 15	-2.81	0.07	43.85	-5.7361	-0.0378	-0.9824
994	SLD 16	-3.25	0.67	43.42	-5.6966	-0.0371	-1.1366
994	SLV 1	10.8	-0.43	18.04	-2.7565	0.0446	3.7838
994	SLV 2	9.76	0.98	17.05	-2.6645	0.0461	3.4248
994	SLV 3	10.96	-3.16	19.85	-3.231	0.0411	3.8378
994	SLV 4	9.92	-1.75	18.86	-3.1389	0.0427	3.4787
994	SLV 5	3.85	4.02	27.9	-3.4943	0.0095	1.3513
994	SLV 6	3.18	4.93	27.26	-3.435	0.0105	1.1199
994	SLV 7	4.37	-5.08	33.94	-5.0757	-0.002	1.5311
994	SLV 8	3.7	-4.18	33.31	-5.0164	-0.001	1.2997
994	SLV 9	-1.79	4.88	38.32	-4.6151	-0.0243	-0.625
994	SLV 10	-2.46	5.79	37.68	-4.5557	-0.0233	-0.8564
994	SLV 11	-1.27	-4.22	44.36	-6.1965	-0.0358	-0.4452
994	SLV 12	-1.94	-3.31	43.73	-6.1372	-0.0348	-0.6766
994	SLV 13	-8.01	2.46	52.77	-6.4925	-0.068	-2.804
994	SLV 14	-9.04	3.87	51.78	-6.4005	-0.0664	-3.1631
994	SLV 15	-7.85	-0.27	54.58	-6.9669	-0.0714	-2.7501
994	SLV 16	-8.89	1.14	53.59	-6.8749	-0.0699	-3.1091
994	CRTFP Ux+	0	0	0	0	0	0
994	CRTFP Ux-	0	0	0	0	0	0
994	CRTFP Uy+	0	0	0	0	0	0
994	CRTFP Uy-	0	0	0	0	0	0
995	SLU 1	0.91	0.4	34.03	-4.7655	-0.0277	0.3228
995	SLU 2	0.91	0.47	34	-4.764	-0.0276	0.3229
995	SLU 3	0.93	0.41	34.79	-4.8533	-0.0284	0.3299
995	SLU 4	0.93	0.46	34.77	-4.8525	-0.0283	0.3299
995	SLU 5	0.93	0.47	34.47	-4.8178	-0.0281	0.3274
995	SLU 6	0.95	0.42	35.25	-4.9071	-0.0288	0.3344
995	SLU 7	0.95	0.46	35.23	-4.9063	-0.0288	0.3344
995	SLU 8	0.94	0.4	34.96	-4.873	-0.0285	0.3318
995	SLU 9	0.94	0.45	34.94	-4.8722	-0.0285	0.3318
995	SLU 10	0.99	0.55	38.24	-5.2634	-0.0307	0.3492
995	SLU 11	1.01	0.49	39.02	-5.3527	-0.0314	0.3562
995	SLU 12	1.01	0.53	39.01	-5.3518	-0.0314	0.3562
995	SLU 13	1	0.55	38.71	-5.3171	-0.0311	0.3537
995	SLU 14	1.02	0.5	39.49	-5.4065	-0.0319	0.3607
995	SLU 15	1.02	0.54	39.47	-5.4056	-0.0319	0.3607
995	SLU 16	1.01	0.48	39.19	-5.3723	-0.0316	0.3581
995	SLU 17	1.01	0.53	39.18	-5.3715	-0.0316	0.3582
995	SLU 18	1.02	0.51	40.08	-5.4788	-0.032	0.3604
995	SLU 19	1.02	0.55	40.07	-5.4779	-0.032	0.3604
995	SLU 20	1.03	0.51	40.55	-5.5326	-0.0325	0.3649
995	SLU 21	1.03	0.56	40.53	-5.5317	-0.0324	0.3649
995	SLU 22	1	0.48	38.23	-5.2597	-0.0308	0.3518
995	SLU 23	1	0.55	38.21	-5.2583	-0.0308	0.3519
995	SLU 24	1.02	0.49	38.99	-5.3476	-0.0315	0.3589
995	SLU 25	1.02	0.54	38.98	-5.3467	-0.0315	0.359
995	SLU 26	1.01	0.55	38.67	-5.312	-0.0312	0.3564
995	SLU 27	1.03	0.5	39.45	-5.4014	-0.032	0.3634
995	SLU 28	1.03	0.54	39.44	-5.4005	-0.0319	0.3634
995	SLU 29	1.02	0.49	39.16	-5.3673	-0.0317	0.3608
995	SLU 30	1.02	0.53	39.14	-5.3664	-0.0317	0.3609
995	SLU 31	1.07	0.63	42.45	-5.7576	-0.0338	0.3782
995	SLU 32	1.09	0.57	43.23	-5.8469	-0.0346	0.3852
995	SLU 33	1.09	0.62	43.21	-5.846	-0.0346	0.3853
995	SLU 34	1.08	0.63	42.91	-5.8114	-0.0343	0.3827
995	SLU 35	1.1	0.58	43.69	-5.9007	-0.035	0.3897

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
995	SLU 36	1.1	0.62	43.68	-5.8998	-0.035	0.3898
995	SLU 37	1.09	0.57	43.4	-5.8666	-0.0348	0.3871
995	SLU 38	1.09	0.61	43.38	-5.8657	-0.0347	0.3872
995	SLU 39	1.1	0.59	44.29	-5.973	-0.0352	0.3894
995	SLU 40	1.1	0.63	44.27	-5.9722	-0.0352	0.3895
995	SLU 41	1.11	0.6	44.75	-6.0268	-0.0356	0.3939
995	SLU 42	1.11	0.64	44.74	-6.0259	-0.0356	0.394
995	SLU 43	1.16	0.49	42.79	-6.0256	-0.0349	0.4097
995	SLU 44	1.16	0.56	42.77	-6.0242	-0.0348	0.4098
995	SLU 45	1.18	0.5	43.55	-6.1135	-0.0356	0.4167
995	SLU 46	1.18	0.55	43.54	-6.1127	-0.0356	0.4168
995	SLU 47	1.17	0.56	43.23	-6.078	-0.0353	0.4143
995	SLU 48	1.19	0.51	44.02	-6.1673	-0.036	0.4212
995	SLU 49	1.19	0.55	44	-6.1665	-0.036	0.4213
995	SLU 50	1.19	0.5	43.72	-6.1332	-0.0358	0.4186
995	SLU 51	1.19	0.54	43.71	-6.1323	-0.0357	0.4187
995	SLU 52	1.23	0.64	47.01	-6.5235	-0.0379	0.4361
995	SLU 53	1.25	0.58	47.79	-6.6129	-0.0386	0.4431
995	SLU 54	1.25	0.63	47.78	-6.612	-0.0386	0.4431
995	SLU 55	1.25	0.64	47.47	-6.5773	-0.0383	0.4406
995	SLU 56	1.27	0.59	48.26	-6.6666	-0.0391	0.4476
995	SLU 57	1.27	0.63	48.24	-6.6658	-0.0391	0.4476
995	SLU 58	1.26	0.58	47.96	-6.6325	-0.0388	0.445
995	SLU 59	1.26	0.62	47.95	-6.6317	-0.0388	0.445
995	SLU 60	1.27	0.6	48.85	-6.739	-0.0392	0.4473
995	SLU 61	1.27	0.65	48.84	-6.7381	-0.0392	0.4473
995	SLU 62	1.28	0.61	49.31	-6.7928	-0.0397	0.4517
995	SLU 63	1.28	0.65	49.3	-6.7919	-0.0397	0.4518
995	SLU 64	1.24	0.57	47	-6.5199	-0.038	0.4387
995	SLU 65	1.24	0.64	46.97	-6.5184	-0.038	0.4388
995	SLU 66	1.26	0.58	47.76	-6.6078	-0.0387	0.4458
995	SLU 67	1.26	0.63	47.74	-6.6069	-0.0387	0.4458
995	SLU 68	1.25	0.65	47.44	-6.5722	-0.0384	0.4433
995	SLU 69	1.27	0.59	48.22	-6.6615	-0.0392	0.4503
995	SLU 70	1.27	0.63	48.21	-6.6607	-0.0392	0.4503
995	SLU 71	1.27	0.58	47.93	-6.6274	-0.0389	0.4477
995	SLU 72	1.27	0.62	47.91	-6.6266	-0.0389	0.4477
995	SLU 73	1.32	0.72	51.21	-7.0178	-0.041	0.4651
995	SLU 74	1.34	0.66	52	-7.1071	-0.0418	0.4721
995	SLU 75	1.34	0.71	51.98	-7.1062	-0.0418	0.4722
995	SLU 76	1.33	0.72	51.68	-7.0716	-0.0415	0.4696
995	SLU 77	1.35	0.67	52.46	-7.1609	-0.0422	0.4766
995	SLU 78	1.35	0.71	52.44	-7.16	-0.0422	0.4766
995	SLU 79	1.34	0.66	52.17	-7.1268	-0.042	0.474
995	SLU 80	1.34	0.7	52.15	-7.1259	-0.0419	0.4741
995	SLU 81	1.35	0.68	53.06	-7.2332	-0.0424	0.4763
995	SLU 82	1.35	0.73	53.04	-7.2323	-0.0424	0.4763
995	SLU 83	1.36	0.69	53.52	-7.287	-0.0428	0.4808
995	SLU 84	1.36	0.73	53.5	-7.2861	-0.0428	0.4808
995	SLE RA 1	0.94	0.42	35.23	-4.9067	-0.0286	0.3311
995	SLE RA 2	0.94	0.47	35.21	-4.9057	-0.0285	0.3311
995	SLE RA 3	0.95	0.43	35.73	-4.9653	-0.029	0.3358
995	SLE RA 4	0.95	0.46	35.72	-4.9647	-0.029	0.3358
995	SLE RA 5	0.95	0.47	35.52	-4.9416	-0.0288	0.3341
995	SLE RA 6	0.96	0.43	36.04	-5.0011	-0.0293	0.3388
995	SLE RA 7	0.96	0.46	36.03	-5.0005	-0.0293	0.3388
995	SLE RA 8	0.95	0.43	35.85	-4.9784	-0.0291	0.3371
995	SLE RA 9	0.95	0.45	35.84	-4.9778	-0.0291	0.3371
995	SLE RA 10	0.99	0.52	38.04	-5.2386	-0.0306	0.3487
995	SLE RA 11	1	0.48	38.56	-5.2981	-0.0311	0.3533
995	SLE RA 12	1	0.51	38.55	-5.2976	-0.0311	0.3534
995	SLE RA 13	0.99	0.52	38.35	-5.2745	-0.0309	0.3517
995	SLE RA 14	1.01	0.49	38.87	-5.334	-0.0314	0.3563
995	SLE RA 15	1.01	0.51	38.86	-5.3334	-0.0314	0.3564
995	SLE RA 16	1	0.48	38.67	-5.3113	-0.0312	0.3546
995	SLE RA 17	1	0.51	38.66	-5.3107	-0.0312	0.3547
995	SLE RA 18	1.01	0.5	39.27	-5.3822	-0.0315	0.3561
995	SLE RA 19	1.01	0.53	39.26	-5.3816	-0.0315	0.3562
995	SLE RA 20	1.02	0.5	39.58	-5.4181	-0.0318	0.3591
995	SLE RA 21	1.02	0.53	39.57	-5.4175	-0.0318	0.3592
995	SLE FR 1	0.94	0.42	35.23	-4.9067	-0.0286	0.3311
995	SLE FR 2	0.94	0.43	35.23	-4.9065	-0.0285	0.3311
995	SLE FR 3	0.94	0.42	35.35	-4.921	-0.0287	0.3323
995	SLE FR 4	0.96	0.45	36.44	-5.0491	-0.0294	0.3386
995	SLE FR 5	0.96	0.44	36.56	-5.0637	-0.0295	0.3398
995	SLE FR 6	0.97	0.46	37.25	-5.1444	-0.03	0.3436
995	SLE QP 1	0.94	0.42	35.23	-4.9067	-0.0286	0.3311
995	SLE QP 2	0.96	0.44	36.44	-5.0493	-0.0294	0.3386
995	SLD 1	5.17	0.14	28.07	-3.9523	-0.0005	1.812
995	SLD 2	4.72	0.79	27.62	-3.9094	0.0004	1.658
995	SLD 3	5.23	-1.14	28.87	-4.1408	-0.0025	1.8353
995	SLD 4	4.79	-0.49	28.43	-4.0978	-0.0016	1.6813
995	SLD 5	2.2	2.18	32.78	-4.4421	-0.0178	0.7725
995	SLD 6	1.91	2.6	32.49	-4.4139	-0.0172	0.6716
995	SLD 7	2.42	-2.09	35.48	-5.0702	-0.0246	0.8504
995	SLD 8	2.13	-1.66	35.18	-5.042	-0.024	0.7495
995	SLD 9	-0.21	2.55	37.7	-5.0566	-0.0348	-0.0723
995	SLD 10	-0.51	2.97	37.4	-5.0285	-0.0343	-0.1732
995	SLD 11	0.01	-1.72	40.39	-5.6848	-0.0416	0.0056
995	SLD 12	-0.28	-1.29	40.1	-5.6566	-0.041	-0.0954

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
995	SLD 13	-2.87	1.38	44.45	-6.0009	-0.0572	-1.0042
995	SLD 14	-3.32	2.03	44.01	-5.9579	-0.0563	-1.1581
995	SLD 15	-2.8	0.1	45.26	-6.1893	-0.0593	-0.9808
995	SLD 16	-3.25	0.75	44.81	-6.1463	-0.0584	-1.1348
995	SLV 1	10.8	-0.31	16.87	-2.4843	0.0383	3.7838
995	SLV 2	9.76	1.21	15.83	-2.3843	0.0403	3.4252
995	SLV 3	10.95	-3.22	18.7	-2.9213	0.0335	3.8383
995	SLV 4	9.92	-1.7	17.66	-2.8212	0.0356	3.4797
995	SLV 5	3.85	4.37	27.97	-3.6344	-0.0023	1.3511
995	SLV 6	3.18	5.35	27.3	-3.5699	-0.001	1.12
995	SLV 7	4.37	-5.33	34.08	-5.0908	-0.0181	1.533
995	SLV 8	3.71	-4.36	33.41	-5.0263	-0.0167	1.3019
995	SLV 9	-1.79	5.24	39.48	-5.0723	-0.0421	-0.6248
995	SLV 10	-2.46	6.22	38.8	-5.0078	-0.0408	-0.8559
995	SLV 11	-1.27	-4.47	45.58	-6.5288	-0.0579	-0.4429
995	SLV 12	-1.93	-3.49	44.91	-6.4643	-0.0566	-0.674
995	SLV 13	-8	2.59	55.22	-7.2775	-0.0945	-2.8025
995	SLV 14	-9.04	4.11	54.18	-7.1774	-0.0924	-3.1612
995	SLV 15	-7.84	-0.32	57.05	-7.7144	-0.0992	-2.748
995	SLV 16	-8.88	1.2	56.01	-7.6143	-0.0971	-3.1066
995	CRTFP Ux+	0	0	0	0	0	0
995	CRTFP Ux-	0	0	0	0	0	0
995	CRTFP Uy+	0	0	0	0	0	0
995	CRTFP Uy-	0	0	0	0	0	0
996	SLU 1	0.92	0.49	35.05	-5.3065	-0.041	0.3235
996	SLU 2	0.92	0.56	35.02	-5.3048	-0.0409	0.3236
996	SLU 3	0.94	0.5	35.83	-5.4079	-0.042	0.3306
996	SLU 4	0.94	0.55	35.82	-5.4069	-0.042	0.3307
996	SLU 5	0.93	0.57	35.5	-5.367	-0.0415	0.3281
996	SLU 6	0.95	0.51	36.31	-5.4701	-0.0427	0.3351
996	SLU 7	0.95	0.55	36.3	-5.4691	-0.0426	0.3352
996	SLU 8	0.94	0.5	36.01	-5.4308	-0.0423	0.3325
996	SLU 9	0.94	0.54	35.99	-5.4298	-0.0422	0.3326
996	SLU 10	0.99	0.66	39.38	-5.8719	-0.0458	0.3499
996	SLU 11	1.01	0.6	40.19	-5.975	-0.0469	0.3569
996	SLU 12	1.01	0.65	40.18	-5.974	-0.0469	0.357
996	SLU 13	1	0.66	39.86	-5.934	-0.0465	0.3544
996	SLU 14	1.02	0.6	40.67	-6.0372	-0.0476	0.3614
996	SLU 15	1.02	0.65	40.66	-6.0362	-0.0475	0.3615
996	SLU 16	1.01	0.59	40.37	-5.9979	-0.0472	0.3588
996	SLU 17	1.01	0.64	40.35	-5.9969	-0.0471	0.3589
996	SLU 18	1.02	0.62	41.28	-6.1166	-0.048	0.361
996	SLU 19	1.02	0.67	41.26	-6.1156	-0.0479	0.3611
996	SLU 20	1.03	0.63	41.76	-6.1788	-0.0486	0.3656
996	SLU 21	1.03	0.67	41.74	-6.1778	-0.0486	0.3657
996	SLU 22	1	0.58	39.38	-5.8685	-0.0459	0.3525
996	SLU 23	1	0.66	39.35	-5.8668	-0.0459	0.3527
996	SLU 24	1.02	0.6	40.16	-5.9699	-0.047	0.3596
996	SLU 25	1.02	0.64	40.14	-5.9689	-0.047	0.3597
996	SLU 26	1.01	0.66	39.83	-5.9289	-0.0465	0.3572
996	SLU 27	1.03	0.6	40.64	-6.0321	-0.0476	0.3641
996	SLU 28	1.03	0.65	40.62	-6.031	-0.0476	0.3642
996	SLU 29	1.02	0.59	40.34	-5.9928	-0.0472	0.3615
996	SLU 30	1.02	0.64	40.32	-5.9918	-0.0472	0.3616
996	SLU 31	1.07	0.75	43.71	-6.4339	-0.0508	0.379
996	SLU 32	1.09	0.69	44.52	-6.537	-0.0519	0.3859
996	SLU 33	1.09	0.74	44.5	-6.536	-0.0519	0.386
996	SLU 34	1.08	0.76	44.19	-6.496	-0.0514	0.3835
996	SLU 35	1.1	0.7	45	-6.5992	-0.0525	0.3904
996	SLU 36	1.1	0.74	44.98	-6.5981	-0.0525	0.3905
996	SLU 37	1.1	0.69	44.69	-6.5599	-0.0521	0.3878
996	SLU 38	1.1	0.73	44.68	-6.5589	-0.0521	0.3879
996	SLU 39	1.1	0.72	45.6	-6.6786	-0.0529	0.3901
996	SLU 40	1.1	0.77	45.59	-6.6776	-0.0529	0.3902
996	SLU 41	1.11	0.72	46.08	-6.7408	-0.0536	0.3946
996	SLU 42	1.11	0.77	46.07	-6.7397	-0.0536	0.3947
996	SLU 43	1.16	0.6	44.08	-6.7058	-0.0515	0.4105
996	SLU 44	1.16	0.68	44.06	-6.7041	-0.0515	0.4107
996	SLU 45	1.18	0.62	44.87	-6.8072	-0.0526	0.4177
996	SLU 46	1.18	0.66	44.85	-6.8062	-0.0525	0.4178
996	SLU 47	1.17	0.68	44.54	-6.7662	-0.0521	0.4152
996	SLU 48	1.19	0.62	45.35	-6.8694	-0.0532	0.4222
996	SLU 49	1.19	0.67	45.33	-6.8683	-0.0532	0.4223
996	SLU 50	1.19	0.61	45.04	-6.8301	-0.0528	0.4196
996	SLU 51	1.19	0.66	45.03	-6.8291	-0.0528	0.4197
996	SLU 52	1.24	0.77	48.41	-7.2711	-0.0564	0.437
996	SLU 53	1.26	0.71	49.22	-7.3743	-0.0575	0.444
996	SLU 54	1.26	0.76	49.21	-7.3733	-0.0575	0.4441
996	SLU 55	1.25	0.78	48.89	-7.3333	-0.057	0.4415
996	SLU 56	1.27	0.72	49.7	-7.4364	-0.0581	0.4485
996	SLU 57	1.27	0.76	49.69	-7.4354	-0.0581	0.4486
996	SLU 58	1.26	0.71	49.4	-7.3972	-0.0577	0.4459
996	SLU 59	1.26	0.75	49.38	-7.3962	-0.0577	0.446
996	SLU 60	1.27	0.74	50.31	-7.5159	-0.0585	0.4481
996	SLU 61	1.27	0.78	50.29	-7.5149	-0.0585	0.4482
996	SLU 62	1.28	0.74	50.79	-7.578	-0.0592	0.4526
996	SLU 63	1.28	0.79	50.77	-7.577	-0.0592	0.4527
996	SLU 64	1.24	0.69	48.41	-7.2677	-0.0565	0.4396
996	SLU 65	1.24	0.77	48.38	-7.266	-0.0565	0.4397
996	SLU 66	1.26	0.71	49.19	-7.3692	-0.0576	0.4467

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
996	SLU 67	1.26	0.76	49.18	-7.3681	-0.0575	0.4468
996	SLU 68	1.26	0.78	48.86	-7.3282	-0.0571	0.4443
996	SLU 69	1.28	0.72	49.67	-7.4313	-0.0582	0.4512
996	SLU 70	1.28	0.76	49.66	-7.4303	-0.0582	0.4513
996	SLU 71	1.27	0.7	49.37	-7.3921	-0.0578	0.4486
996	SLU 72	1.27	0.75	49.35	-7.3911	-0.0578	0.4487
996	SLU 73	1.32	0.87	52.74	-7.8331	-0.0614	0.4661
996	SLU 74	1.34	0.81	53.55	-7.9363	-0.0625	0.473
996	SLU 75	1.34	0.85	53.53	-7.9352	-0.0624	0.4731
996	SLU 76	1.33	0.87	53.22	-7.8953	-0.062	0.4706
996	SLU 77	1.35	0.81	54.03	-7.9984	-0.0631	0.4775
996	SLU 78	1.35	0.86	54.01	-7.9974	-0.0631	0.4776
996	SLU 79	1.34	0.8	53.73	-7.9592	-0.0627	0.4749
996	SLU 80	1.34	0.85	53.71	-7.9581	-0.0627	0.475
996	SLU 81	1.35	0.83	54.63	-8.0779	-0.0635	0.4772
996	SLU 82	1.35	0.88	54.62	-8.0768	-0.0635	0.4773
996	SLU 83	1.36	0.84	55.11	-8.14	-0.0642	0.4817
996	SLU 84	1.36	0.88	55.1	-8.139	-0.0641	0.4818
996	SLE RA 1	0.94	0.51	36.29	-5.4671	-0.0424	0.3318
996	SLE RA 2	0.94	0.57	36.27	-5.4659	-0.0423	0.3319
996	SLE RA 3	0.95	0.52	36.81	-5.5347	-0.0431	0.3365
996	SLE RA 4	0.95	0.56	36.8	-5.534	-0.0431	0.3366
996	SLE RA 5	0.95	0.57	36.59	-5.5074	-0.0428	0.3349
996	SLE RA 6	0.96	0.53	37.13	-5.5761	-0.0435	0.3395
996	SLE RA 7	0.96	0.56	37.12	-5.5754	-0.0435	0.3396
996	SLE RA 8	0.96	0.52	36.93	-5.5499	-0.0432	0.3378
996	SLE RA 9	0.96	0.55	36.92	-5.5493	-0.0432	0.3378
996	SLE RA 10	0.99	0.63	39.17	-5.844	-0.0456	0.3494
996	SLE RA 11	1	0.59	39.71	-5.9127	-0.0463	0.354
996	SLE RA 12	1	0.62	39.7	-5.9121	-0.0463	0.3541
996	SLE RA 13	1	0.63	39.49	-5.8854	-0.046	0.3524
996	SLE RA 14	1.01	0.59	40.03	-5.9542	-0.0468	0.3571
996	SLE RA 15	1.01	0.62	40.02	-5.9535	-0.0468	0.3571
996	SLE RA 16	1	0.58	39.83	-5.928	-0.0465	0.3553
996	SLE RA 17	1	0.61	39.82	-5.9273	-0.0465	0.3554
996	SLE RA 18	1.01	0.61	40.44	-6.0071	-0.047	0.3568
996	SLE RA 19	1.01	0.64	40.43	-6.0065	-0.047	0.3569
996	SLE RA 20	1.02	0.61	40.76	-6.0486	-0.0475	0.3598
996	SLE RA 21	1.02	0.64	40.75	-6.0479	-0.0475	0.3599
996	SLE FR 1	0.94	0.51	36.29	-5.4671	-0.0424	0.3318
996	SLE FR 2	0.94	0.52	36.28	-5.4668	-0.0424	0.3318
996	SLE FR 3	0.94	0.51	36.41	-5.4836	-0.0425	0.333
996	SLE FR 4	0.96	0.55	37.53	-5.6289	-0.0438	0.3393
996	SLE FR 5	0.96	0.54	37.66	-5.6457	-0.044	0.3405
996	SLE FR 6	0.97	0.56	38.36	-5.7371	-0.0447	0.3443
996	SLE QP 1	0.94	0.51	36.29	-5.4671	-0.0424	0.3318
996	SLE QP 2	0.96	0.54	37.53	-5.6291	-0.0438	0.3393
996	SLD 1	5.17	0.25	28.27	-4.2359	-0.0108	1.8121
996	SLD 2	4.72	0.96	27.79	-4.1856	-0.0098	1.6583
996	SLD 3	5.23	-1.12	29.1	-4.4079	-0.0133	1.8357
996	SLD 4	4.79	-0.42	28.62	-4.3575	-0.0122	1.6819
996	SLD 5	2.2	2.42	33.58	-4.9593	-0.0304	0.7727
996	SLD 6	1.91	2.88	33.26	-4.9263	-0.0296	0.6719
996	SLD 7	2.42	-2.17	36.35	-5.5324	-0.0386	0.8513
996	SLD 8	2.13	-1.71	36.03	-5.4994	-0.0379	0.7505
996	SLD 9	-0.21	2.79	39.03	-5.7588	-0.0497	-0.0719
996	SLD 10	-0.5	3.25	38.72	-5.7257	-0.049	-0.1728
996	SLD 11	0.01	-1.8	41.8	-6.3318	-0.0579	0.0067
996	SLD 12	-0.28	-1.33	41.49	-6.2988	-0.0572	-0.0942
996	SLD 13	-2.87	1.5	46.45	-6.9007	-0.0753	-1.0033
996	SLD 14	-3.31	2.2	45.97	-6.8503	-0.0742	-1.1571
996	SLD 15	-2.8	0.12	47.28	-7.0726	-0.0778	-0.9798
996	SLD 16	-3.25	0.83	46.8	-7.0222	-0.0767	-1.1336
996	SLV 1	10.79	-0.17	15.87	-2.3712	0.0333	3.7832
996	SLV 2	9.76	1.47	14.76	-2.2539	0.0358	3.425
996	SLV 3	10.95	-3.3	17.76	-2.7689	0.0276	3.8383
996	SLV 4	9.92	-1.66	16.64	-2.6516	0.0301	3.4801
996	SLV 5	3.85	4.79	28.37	-4.0688	-0.0125	1.3506
996	SLV 6	3.18	5.85	27.65	-3.9932	-0.0108	1.1198
996	SLV 7	4.38	-5.65	34.65	-5.3944	-0.0315	1.5342
996	SLV 8	3.71	-4.59	33.93	-5.3188	-0.0298	1.3033
996	SLV 9	-1.79	5.67	41.14	-5.9394	-0.0577	-0.6248
996	SLV 10	-2.46	6.73	40.42	-5.8638	-0.0561	-0.8556
996	SLV 11	-1.26	-4.77	47.41	-7.265	-0.0767	-0.4412
996	SLV 12	-1.93	-3.71	46.69	-7.1894	-0.0751	-0.6721
996	SLV 13	-8	2.74	58.42	-8.6065	-0.1176	-2.8015
996	SLV 14	-9.03	4.39	57.31	-8.4892	-0.1151	-3.1597
996	SLV 15	-7.84	-0.39	60.3	-9.0042	-0.1233	-2.7465
996	SLV 16	-8.87	1.25	59.19	-8.8869	-0.1208	-3.1047
996	CRTFP Ux+	0	0	0	0	0	0
996	CRTFP Ux-	0	0	0	0	0	0
996	CRTFP Uy+	0	0	0	0	0	0
996	CRTFP Uy-	0	0	0	0	0	0
997	SLU 1	0.79	0.5	31.38	-5.1834	0.8436	0.2651
997	SLU 2	0.79	0.57	31.36	-5.1817	0.843	0.2632
997	SLU 3	0.81	0.51	32.09	-5.286	0.8625	0.2708
997	SLU 4	0.81	0.56	32.07	-5.285	0.8621	0.2697
997	SLU 5	0.8	0.57	31.79	-5.2446	0.8545	0.267
997	SLU 6	0.82	0.52	32.52	-5.349	0.874	0.2746
997	SLU 7	0.82	0.56	32.51	-5.3479	0.8736	0.2735

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
997	SLU 8	0.81	0.51	32.25	-5.3093	0.8667	0.2727
997	SLU 9	0.81	0.55	32.23	-5.3083	0.8663	0.2715
997	SLU 10	0.85	0.67	35.26	-5.7486	0.9478	0.2831
997	SLU 11	0.87	0.61	35.99	-5.8529	0.9673	0.2907
997	SLU 12	0.87	0.65	35.97	-5.8519	0.9669	0.2896
997	SLU 13	0.87	0.67	35.69	-5.8115	0.9594	0.2868
997	SLU 14	0.88	0.61	36.42	-5.9159	0.9789	0.2945
997	SLU 15	0.88	0.66	36.41	-5.9148	0.9785	0.2933
997	SLU 16	0.88	0.6	36.15	-5.8762	0.9715	0.2925
997	SLU 17	0.88	0.65	36.13	-5.8752	0.9712	0.2914
997	SLU 18	0.88	0.64	36.95	-5.9932	0.9934	0.2935
997	SLU 19	0.88	0.68	36.94	-5.9922	0.993	0.2923
997	SLU 20	0.89	0.64	37.39	-6.0562	1.0049	0.2972
997	SLU 21	0.89	0.68	37.37	-6.0552	1.0045	0.2961
997	SLU 22	0.86	0.59	35.26	-5.7457	0.9477	0.2875
997	SLU 23	0.86	0.66	35.23	-5.744	0.947	0.2856
997	SLU 24	0.88	0.61	35.96	-5.8483	0.9665	0.2932
997	SLU 25	0.88	0.65	35.95	-5.8473	0.9662	0.2921
997	SLU 26	0.87	0.67	35.66	-5.807	0.9586	0.2894
997	SLU 27	0.89	0.61	36.4	-5.9113	0.9781	0.297
997	SLU 28	0.89	0.65	36.38	-5.9103	0.9777	0.2959
997	SLU 29	0.88	0.6	36.12	-5.8716	0.9708	0.2951
997	SLU 30	0.88	0.64	36.11	-5.8706	0.9704	0.2939
997	SLU 31	0.92	0.76	39.13	-6.3109	1.0519	0.3054
997	SLU 32	0.94	0.7	39.86	-6.4152	1.0714	0.3131
997	SLU 33	0.94	0.75	39.85	-6.4142	1.071	0.3119
997	SLU 34	0.94	0.76	39.56	-6.3738	1.0634	0.3092
997	SLU 35	0.95	0.71	40.29	-6.4782	1.0829	0.3169
997	SLU 36	0.95	0.75	40.28	-6.4771	1.0826	0.3157
997	SLU 37	0.95	0.7	40.02	-6.4385	1.0756	0.3149
997	SLU 38	0.95	0.74	40.01	-6.4375	1.0752	0.3138
997	SLU 39	0.95	0.73	40.83	-6.5556	1.0975	0.3158
997	SLU 40	0.95	0.77	40.81	-6.5545	1.0971	0.3147
997	SLU 41	0.96	0.73	41.26	-6.6185	1.109	0.3196
997	SLU 42	0.96	0.78	41.25	-6.6175	1.1086	0.3185
997	SLU 43	1	0.61	39.47	-6.5456	1.061	0.337
997	SLU 44	1	0.69	39.45	-6.5439	1.0604	0.3351
997	SLU 45	1.02	0.63	40.18	-6.6482	1.0799	0.3427
997	SLU 46	1.02	0.67	40.16	-6.6472	1.0795	0.3416
997	SLU 47	1.02	0.69	39.88	-6.6069	1.0719	0.3389
997	SLU 48	1.03	0.63	40.61	-6.7112	1.0914	0.3465
997	SLU 49	1.03	0.68	40.59	-6.7102	1.091	0.3454
997	SLU 50	1.03	0.62	40.34	-6.6716	1.0841	0.3445
997	SLU 51	1.03	0.67	40.32	-6.6705	1.0837	0.3434
997	SLU 52	1.07	0.78	43.35	-7.1108	1.1652	0.3549
997	SLU 53	1.09	0.73	44.08	-7.2151	1.1847	0.3626
997	SLU 54	1.09	0.77	44.06	-7.2141	1.1843	0.3614
997	SLU 55	1.08	0.79	43.78	-7.1738	1.1767	0.3587
997	SLU 56	1.1	0.73	44.51	-7.2781	1.1963	0.3663
997	SLU 57	1.1	0.77	44.49	-7.2771	1.1959	0.3652
997	SLU 58	1.09	0.72	44.23	-7.2384	1.1889	0.3644
997	SLU 59	1.09	0.76	44.22	-7.2374	1.1886	0.3632
997	SLU 60	1.09	0.75	45.04	-7.3555	1.2108	0.3653
997	SLU 61	1.09	0.8	45.03	-7.3544	1.2104	0.3642
997	SLU 62	1.11	0.76	45.47	-7.4184	1.2223	0.3691
997	SLU 63	1.11	0.8	45.46	-7.4174	1.2219	0.368
997	SLU 64	1.07	0.71	43.34	-7.1079	1.1651	0.3594
997	SLU 65	1.07	0.78	43.32	-7.1062	1.1644	0.3575
997	SLU 66	1.09	0.72	44.05	-7.2106	1.1839	0.3651
997	SLU 67	1.09	0.77	44.04	-7.2095	1.1836	0.364
997	SLU 68	1.09	0.78	43.75	-7.1692	1.176	0.3612
997	SLU 69	1.1	0.73	44.48	-7.2735	1.1955	0.3689
997	SLU 70	1.1	0.77	44.47	-7.2725	1.1951	0.3677
997	SLU 71	1.1	0.72	44.21	-7.2339	1.1882	0.3669
997	SLU 72	1.1	0.76	44.19	-7.2328	1.1878	0.3658
997	SLU 73	1.14	0.88	47.22	-7.6731	1.2693	0.3773
997	SLU 74	1.16	0.82	47.95	-7.7774	1.2888	0.3849
997	SLU 75	1.16	0.86	47.93	-7.7764	1.2884	0.3838
997	SLU 76	1.15	0.88	47.65	-7.7361	1.2808	0.3811
997	SLU 77	1.17	0.82	48.38	-7.8404	1.3003	0.3887
997	SLU 78	1.17	0.87	48.37	-7.8394	1.2999	0.3876
997	SLU 79	1.16	0.81	48.11	-7.8008	1.293	0.3868
997	SLU 80	1.16	0.86	48.09	-7.7997	1.2926	0.3856
997	SLU 81	1.17	0.85	48.91	-7.9178	1.3148	0.3877
997	SLU 82	1.17	0.89	48.9	-7.9168	1.3145	0.3866
997	SLU 83	1.18	0.85	49.35	-7.9807	1.3264	0.3915
997	SLU 84	1.18	0.89	49.33	-7.9797	1.326	0.3904
997	SLE RA 1	0.81	0.52	32.49	-5.3441	0.8733	0.2715
997	SLE RA 2	0.81	0.57	32.47	-5.3429	0.8729	0.2702
997	SLE RA 3	0.82	0.53	32.96	-5.4125	0.8859	0.2753
997	SLE RA 4	0.82	0.56	32.95	-5.4118	0.8857	0.2746
997	SLE RA 5	0.82	0.57	32.76	-5.3849	0.8806	0.2728
997	SLE RA 6	0.83	0.54	33.25	-5.4544	0.8936	0.2779
997	SLE RA 7	0.83	0.57	33.24	-5.4538	0.8934	0.2771
997	SLE RA 8	0.83	0.53	33.07	-5.428	0.8887	0.2766
997	SLE RA 9	0.83	0.56	33.06	-5.4273	0.8885	0.2758
997	SLE RA 10	0.85	0.64	35.07	-5.7208	0.9428	0.2835
997	SLE RA 11	0.87	0.6	35.56	-5.7904	0.9558	0.2886
997	SLE RA 12	0.87	0.63	35.55	-5.7897	0.9556	0.2878
997	SLE RA 13	0.86	0.64	35.36	-5.7628	0.9505	0.286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
997	SLE RA 14	0.87	0.6	35.85	-5.8324	0.9635	0.2911
997	SLE RA 15	0.87	0.63	35.84	-5.8317	0.9633	0.2903
997	SLE RA 16	0.87	0.59	35.67	-5.8059	0.9586	0.2898
997	SLE RA 17	0.87	0.62	35.66	-5.8052	0.9584	0.289
997	SLE RA 18	0.87	0.62	36.2	-5.884	0.9732	0.2904
997	SLE RA 19	0.87	0.65	36.19	-5.8833	0.9729	0.2896
997	SLE RA 20	0.88	0.62	36.49	-5.9259	0.9809	0.2929
997	SLE RA 21	0.88	0.65	36.48	-5.9252	0.9806	0.2922
997	SLE FR 1	0.81	0.52	32.49	-5.3441	0.8733	0.2715
997	SLE FR 2	0.81	0.53	32.49	-5.3438	0.8732	0.2713
997	SLE FR 3	0.81	0.52	32.61	-5.3609	0.8764	0.2725
997	SLE FR 4	0.83	0.56	33.6	-5.5058	0.9032	0.2769
997	SLE FR 5	0.83	0.55	33.72	-5.5228	0.9064	0.2782
997	SLE FR 6	0.84	0.57	34.35	-5.614	0.9233	0.281
997	SLE QP 1	0.81	0.52	32.49	-5.3441	0.8733	0.2715
997	SLE QP 2	0.83	0.55	33.6	-5.506	0.9033	0.2772
997	SLD 1	4.46	0.32	24.79	-4.0226	0.6799	1.5554
997	SLD 2	4.08	0.97	24.35	-3.9718	0.6684	1.4039
997	SLD 3	4.52	-0.96	25.54	-4.1577	0.6999	1.5971
997	SLD 4	4.14	-0.3	25.1	-4.1069	0.6884	1.4455
997	SLD 5	1.9	2.3	29.91	-4.8652	0.808	0.6244
997	SLD 6	1.65	2.73	29.62	-4.8319	0.8005	0.525
997	SLD 7	2.09	-1.95	32.4	-5.3154	0.8746	0.7633
997	SLD 8	1.84	-1.52	32.11	-5.2821	0.8671	0.6639
997	SLD 9	-0.18	2.63	35.1	-5.73	0.9395	-0.1096
997	SLD 10	-0.44	3.06	34.81	-5.6967	0.9319	-0.209
997	SLD 11	0.01	-1.63	37.59	-6.1802	1.0061	0.0293
997	SLD 12	-0.24	-1.2	37.3	-6.1469	0.9986	-0.07
997	SLD 13	-2.48	1.41	42.11	-6.9052	1.1182	-0.8912
997	SLD 14	-2.86	2.06	41.67	-6.8544	1.1067	-1.0428
997	SLD 15	-2.42	0.13	42.86	-7.0402	1.1382	-0.8495
997	SLD 16	-2.8	0.79	42.42	-6.9895	1.1266	-1.0011
997	SLV 1	9.32	-0.04	13.01	-2.0368	0.3813	3.2669
997	SLV 2	8.43	1.49	11.98	-1.9186	0.3545	2.9139
997	SLV 3	9.46	-2.94	14.7	-2.3482	0.4266	3.3626
997	SLV 4	8.57	-1.41	13.68	-2.23	0.3997	3.0095
997	SLV 5	3.32	4.52	25.04	-4.0134	0.6826	1.0899
997	SLV 6	2.75	5.5	24.38	-3.9372	0.6654	0.8624
997	SLV 7	3.78	-5.17	30.68	-5.0513	0.8336	1.4086
997	SLV 8	3.21	-4.18	30.01	-4.9751	0.8163	1.1811
997	SLV 9	-1.55	5.28	37.19	-6.037	0.9903	-0.6268
997	SLV 10	-2.12	6.27	36.53	-5.9608	0.973	-0.8543
997	SLV 11	-1.09	-4.4	42.83	-7.0749	1.1412	-0.308
997	SLV 12	-1.66	-3.41	42.17	-6.9987	1.1239	-0.5355
997	SLV 13	-6.91	2.52	53.53	-8.7821	1.4068	-2.4552
997	SLV 14	-7.8	4.05	52.51	-8.6639	1.38	-2.8082
997	SLV 15	-6.77	-0.39	55.23	-9.0935	1.4521	-2.3596
997	SLV 16	-7.67	1.14	54.2	-8.9752	1.4253	-2.7126
997	CRTFP Ux+	0	0	0	0	0	0
997	CRTFP Ux-	0	0	0	0	0	0
997	CRTFP Uy+	0	0	0	0	0	0
997	CRTFP Uy-	0	0	0	0	0	0
998	SLU 1	0.58	0.41	23.83	-4.1776	3.1161	0.1504
998	SLU 2	0.58	0.47	23.81	-4.1764	3.1137	0.1431
998	SLU 3	0.59	0.42	24.37	-4.2623	3.1865	0.1534
998	SLU 4	0.59	0.46	24.36	-4.2615	3.185	0.149
998	SLU 5	0.59	0.47	24.14	-4.2283	3.1567	0.1455
998	SLU 6	0.6	0.43	24.7	-4.3142	3.2295	0.1558
998	SLU 7	0.6	0.46	24.69	-4.3134	3.2281	0.1514
998	SLU 8	0.6	0.42	24.49	-4.2816	3.2023	0.1552
998	SLU 9	0.6	0.45	24.48	-4.2808	3.2008	0.1508
998	SLU 10	0.63	0.55	26.77	-4.6402	3.5008	0.1489
998	SLU 11	0.64	0.51	27.33	-4.7261	3.5736	0.1592
998	SLU 12	0.64	0.54	27.32	-4.7253	3.5721	0.1548
998	SLU 13	0.64	0.55	27.1	-4.6922	3.5439	0.1513
998	SLU 14	0.65	0.51	27.66	-4.7781	3.6166	0.1617
998	SLU 15	0.65	0.54	27.65	-4.7773	3.6152	0.1572
998	SLU 16	0.64	0.5	27.45	-4.7454	3.5894	0.1611
998	SLU 17	0.64	0.53	27.44	-4.7446	3.5879	0.1567
998	SLU 18	0.65	0.53	28.06	-4.8403	3.6691	0.1588
998	SLU 19	0.65	0.56	28.05	-4.8395	3.6677	0.1543
998	SLU 20	0.66	0.53	28.39	-4.8922	3.7122	0.1612
998	SLU 21	0.66	0.57	28.38	-4.8915	3.7107	0.1568
998	SLU 22	0.63	0.49	26.78	-4.638	3.5009	0.1587
998	SLU 23	0.63	0.54	26.76	-4.6367	3.4984	0.1514
998	SLU 24	0.65	0.5	27.31	-4.7226	3.5712	0.1617
998	SLU 25	0.65	0.53	27.3	-4.7219	3.5697	0.1573
998	SLU 26	0.64	0.55	27.09	-4.6887	3.5415	0.1538
998	SLU 27	0.65	0.5	27.64	-4.7746	3.6143	0.1641
998	SLU 28	0.65	0.54	27.63	-4.7738	3.6128	0.1597
998	SLU 29	0.65	0.49	27.43	-4.7419	3.587	0.1636
998	SLU 30	0.65	0.53	27.42	-4.7412	3.5855	0.1592
998	SLU 31	0.68	0.63	29.72	-5.1006	3.8855	0.1572
998	SLU 32	0.69	0.58	30.27	-5.1865	3.9583	0.1676
998	SLU 33	0.69	0.61	30.26	-5.1857	3.9568	0.1632
998	SLU 34	0.69	0.63	30.05	-5.1525	3.9286	0.1597
998	SLU 35	0.7	0.58	30.6	-5.2384	4.0014	0.17
998	SLU 36	0.7	0.62	30.59	-5.2377	3.9999	0.1656
998	SLU 37	0.7	0.58	30.4	-5.2058	3.9741	0.1694
998	SLU 38	0.7	0.61	30.38	-5.205	3.9727	0.165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
998	SLU 39	0.7	0.6	31.01	-5.3006	4.0539	0.1671
998	SLU 40	0.7	0.64	30.99	-5.2999	4.0524	0.1627
998	SLU 41	0.71	0.61	31.33	-5.3526	4.097	0.1695
998	SLU 42	0.71	0.64	31.32	-5.3518	4.0955	0.1651
998	SLU 43	0.74	0.51	29.97	-5.2731	3.919	0.1927
998	SLU 44	0.74	0.57	29.95	-5.2718	3.9166	0.1853
998	SLU 45	0.75	0.52	30.51	-5.3577	3.9894	0.1957
998	SLU 46	0.75	0.56	30.5	-5.357	3.9879	0.1912
998	SLU 47	0.75	0.57	30.28	-5.3238	3.9597	0.1877
998	SLU 48	0.76	0.53	30.84	-5.4097	4.0325	0.1981
998	SLU 49	0.76	0.56	30.83	-5.4089	4.031	0.1937
998	SLU 50	0.76	0.52	30.63	-5.377	4.0052	0.1975
998	SLU 51	0.76	0.55	30.62	-5.3762	4.0037	0.1931
998	SLU 52	0.79	0.65	32.92	-5.7357	4.3037	0.1912
998	SLU 53	0.8	0.6	33.47	-5.8216	4.3765	0.2015
998	SLU 54	0.8	0.64	33.46	-5.8208	4.375	0.1971
998	SLU 55	0.79	0.65	33.25	-5.7876	4.3468	0.1936
998	SLU 56	0.81	0.61	33.8	-5.8735	4.4196	0.2039
998	SLU 57	0.81	0.64	33.79	-5.8727	4.4181	0.1995
998	SLU 58	0.8	0.6	33.59	-5.8408	4.3923	0.2033
998	SLU 59	0.8	0.63	33.58	-5.8401	4.3908	0.1989
998	SLU 60	0.81	0.63	34.2	-5.9357	4.4721	0.201
998	SLU 61	0.81	0.66	34.19	-5.935	4.4706	0.1966
998	SLU 62	0.81	0.63	34.53	-5.9877	4.5151	0.2034
998	SLU 63	0.81	0.66	34.52	-5.9869	4.5137	0.199
998	SLU 64	0.79	0.59	32.92	-5.7335	4.3038	0.201
998	SLU 65	0.79	0.64	32.9	-5.7322	4.3013	0.1937
998	SLU 66	0.8	0.6	33.45	-5.8181	4.3741	0.204
998	SLU 67	0.8	0.63	33.44	-5.8173	4.3726	0.1996
998	SLU 68	0.8	0.65	33.23	-5.7842	4.3444	0.1961
998	SLU 69	0.81	0.6	33.78	-5.87	4.4172	0.2064
998	SLU 70	0.81	0.63	33.77	-5.8693	4.4157	0.202
998	SLU 71	0.81	0.59	33.58	-5.8374	4.3899	0.2058
998	SLU 72	0.81	0.63	33.56	-5.8366	4.3885	0.2014
998	SLU 73	0.84	0.72	35.86	-6.196	4.6884	0.1995
998	SLU 74	0.85	0.68	36.42	-6.2819	4.7612	0.2098
998	SLU 75	0.85	0.71	36.4	-6.2812	4.7598	0.2054
998	SLU 76	0.85	0.73	36.19	-6.248	4.7315	0.2019
998	SLU 77	0.86	0.68	36.75	-6.3339	4.8043	0.2122
998	SLU 78	0.86	0.72	36.73	-6.3331	4.8028	0.2078
998	SLU 79	0.85	0.67	36.54	-6.3012	4.7771	0.2117
998	SLU 80	0.85	0.71	36.53	-6.3004	4.7756	0.2073
998	SLU 81	0.86	0.7	37.15	-6.3961	4.8568	0.2093
998	SLU 82	0.86	0.74	37.13	-6.3953	4.8553	0.2049
998	SLU 83	0.87	0.7	37.48	-6.448	4.8999	0.2118
998	SLU 84	0.87	0.74	37.46	-6.4473	4.8984	0.2074
998	SLE RA 1	0.6	0.43	24.67	-4.3092	3.226	0.1528
998	SLE RA 2	0.6	0.47	24.66	-4.3083	3.2244	0.1479
998	SLE RA 3	0.61	0.44	25.03	-4.3656	3.2729	0.1548
998	SLE RA 4	0.61	0.46	25.02	-4.3651	3.272	0.1518
998	SLE RA 5	0.6	0.47	24.88	-4.343	3.2531	0.1495
998	SLE RA 6	0.61	0.44	25.25	-4.4002	3.3017	0.1564
998	SLE RA 7	0.61	0.47	25.24	-4.3997	3.3007	0.1534
998	SLE RA 8	0.61	0.44	25.11	-4.3785	3.2835	0.156
998	SLE RA 9	0.61	0.46	25.11	-4.3779	3.2825	0.1531
998	SLE RA 10	0.63	0.53	26.63	-4.6176	3.4825	0.1518
998	SLE RA 11	0.64	0.5	27.01	-4.6748	3.531	0.1587
998	SLE RA 12	0.64	0.52	27	-4.6743	3.53	0.1557
998	SLE RA 13	0.63	0.53	26.85	-4.6522	3.5112	0.1534
998	SLE RA 14	0.64	0.5	27.23	-4.7095	3.5597	0.1603
998	SLE RA 15	0.64	0.52	27.22	-4.7089	3.5587	0.1573
998	SLE RA 16	0.64	0.49	27.09	-4.6877	3.5416	0.1599
998	SLE RA 17	0.64	0.52	27.08	-4.6872	3.5406	0.157
998	SLE RA 18	0.64	0.51	27.49	-4.7509	3.5947	0.1583
998	SLE RA 19	0.64	0.53	27.49	-4.7504	3.5937	0.1554
998	SLE RA 20	0.65	0.51	27.71	-4.7856	3.6234	0.16
998	SLE RA 21	0.65	0.54	27.71	-4.7851	3.6225	0.157
998	SLE FR 1	0.6	0.43	24.67	-4.3092	3.226	0.1528
998	SLE FR 2	0.6	0.44	24.67	-4.309	3.2257	0.1518
998	SLE FR 3	0.6	0.44	24.76	-4.323	3.2375	0.1534
998	SLE FR 4	0.61	0.46	25.52	-4.4415	3.3363	0.1535
998	SLE FR 5	0.61	0.46	25.61	-4.4556	3.3481	0.1551
998	SLE FR 6	0.62	0.47	26.08	-4.5301	3.4104	0.1556
998	SLE QP 1	0.6	0.43	24.67	-4.3092	3.226	0.1528
998	SLE QP 2	0.61	0.46	25.52	-4.4417	3.3367	0.1545
998	SLD 1	3.28	0.29	18.53	-3.1857	2.4281	1.0881
998	SLD 2	3	0.8	18.19	-3.1452	2.3835	0.9223
998	SLD 3	3.33	-0.71	19.1	-3.2749	2.5028	1.2208
998	SLD 4	3.04	-0.19	18.76	-3.2344	2.4582	1.0551
998	SLD 5	1.4	1.82	22.62	-3.9369	2.9587	0.2627
998	SLD 6	1.21	2.16	22.39	-3.9104	2.9295	0.154
998	SLD 7	1.54	-1.49	24.52	-4.2341	3.2077	0.7052
998	SLD 8	1.36	-1.15	24.3	-4.2075	3.1785	0.5965
998	SLD 9	-0.14	2.07	26.74	-4.6759	3.4948	-0.2876
998	SLD 10	-0.32	2.41	26.52	-4.6493	3.4656	-0.3963
998	SLD 11	0.01	-1.25	28.65	-4.9731	3.7438	0.1549
998	SLD 12	-0.18	-0.91	28.42	-4.9465	3.7146	0.0462
998	SLD 13	-1.82	1.11	32.28	-5.649	4.2151	-0.7462
998	SLD 14	-2.11	1.62	31.94	-5.6085	4.1705	-0.9119
998	SLD 15	-1.78	0.11	32.85	-5.7382	4.2898	-0.6134

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
998	SLD 16	-2.06	0.63	32.51	-5.6977	4.2452	-0.7792
998	SLV 1	6.86	0.04	9.18	-1.5043	1.213	2.3413
998	SLV 2	6.2	1.23	8.39	-1.4099	1.1091	1.9552
998	SLV 3	6.96	-2.23	10.48	-1.7092	1.3821	2.6437
998	SLV 4	6.3	-1.03	9.68	-1.6149	1.2782	2.2577
998	SLV 5	2.44	3.56	18.79	-3.2659	2.461	0.4183
998	SLV 6	2.02	4.33	18.28	-3.2051	2.3941	0.1695
998	SLV 7	2.78	-3.99	23.11	-3.949	3.0246	1.4264
998	SLV 8	2.36	-3.22	22.59	-3.8882	2.9576	1.1776
998	SLV 9	-1.14	4.13	28.44	-4.9952	3.7157	-0.8687
998	SLV 10	-1.56	4.9	27.93	-4.9344	3.6487	-1.1175
998	SLV 11	-0.8	-3.41	32.76	-5.6783	4.2792	0.1394
998	SLV 12	-1.22	-2.64	32.25	-5.6175	4.2123	-0.1094
998	SLV 13	-5.08	1.95	41.36	-7.2686	5.3951	-1.9488
998	SLV 14	-5.74	3.14	40.56	-7.1742	5.2912	-2.3348
998	SLV 15	-4.98	-0.31	42.65	-7.4735	5.5642	-1.6463
998	SLV 16	-5.64	0.88	41.86	-7.3791	5.4603	-2.0324
998	CRTFP Ux+	0	0	0	0	0	0
998	CRTFP Ux-	0	0	0	0	0	0
998	CRTFP Uy+	0	0	0	0	0	0
998	CRTFP Uy-	0	0	0	0	0	0
1000	SLU 1	-0.43	0.96	72.69	2.1664	0.8229	0.0564
1000	SLU 2	-0.43	1.06	72.62	2.1633	0.8238	0.0565
1000	SLU 3	-0.44	1.01	74.4	2.2181	0.8453	0.058
1000	SLU 4	-0.44	1.07	74.36	2.2162	0.8458	0.058
1000	SLU 5	-0.43	1.08	73.66	2.1947	0.8371	0.0575
1000	SLU 6	-0.44	1.03	75.44	2.2494	0.8585	0.0589
1000	SLU 7	-0.44	1.09	75.4	2.2476	0.859	0.059
1000	SLU 8	-0.44	0.99	74.77	2.2291	0.8494	0.0583
1000	SLU 9	-0.44	1.06	74.73	2.2272	0.85	0.0584
1000	SLU 10	-0.5	1.17	82.34	2.4496	0.9606	0.0655
1000	SLU 11	-0.51	1.12	84.12	2.5044	0.9821	0.0669
1000	SLU 12	-0.51	1.18	84.08	2.5025	0.9826	0.067
1000	SLU 13	-0.51	1.19	83.38	2.481	0.9739	0.0664
1000	SLU 14	-0.52	1.13	85.17	2.5357	0.9953	0.0679
1000	SLU 15	-0.52	1.2	85.12	2.5338	0.9959	0.0679
1000	SLU 16	-0.51	1.1	84.5	2.5154	0.9862	0.0672
1000	SLU 17	-0.51	1.16	84.45	2.5135	0.9868	0.0673
1000	SLU 18	-0.53	1.11	86.58	2.5754	1.0184	0.0692
1000	SLU 19	-0.53	1.18	86.54	2.5735	1.0189	0.0692
1000	SLU 20	-0.54	1.13	87.62	2.6067	1.0316	0.0701
1000	SLU 21	-0.54	1.19	87.58	2.6049	1.0322	0.0702
1000	SLU 22	-0.49	1.15	82.32	2.4523	0.9543	0.0651
1000	SLU 23	-0.49	1.25	82.24	2.4492	0.9552	0.0652
1000	SLU 24	-0.51	1.2	84.03	2.5039	0.9767	0.0667
1000	SLU 25	-0.51	1.26	83.98	2.5021	0.9772	0.0668
1000	SLU 26	-0.5	1.27	83.28	2.4805	0.9685	0.0662
1000	SLU 27	-0.51	1.21	85.07	2.5352	0.9899	0.0676
1000	SLU 28	-0.51	1.28	85.02	2.5334	0.9905	0.0677
1000	SLU 29	-0.51	1.18	84.4	2.5149	0.9808	0.067
1000	SLU 30	-0.51	1.24	84.35	2.5131	0.9814	0.0671
1000	SLU 31	-0.57	1.36	91.97	2.7355	1.0921	0.0742
1000	SLU 32	-0.58	1.3	93.75	2.7902	1.1135	0.0756
1000	SLU 33	-0.58	1.37	93.7	2.7883	1.114	0.0757
1000	SLU 34	-0.57	1.38	93.01	2.7668	1.1053	0.0751
1000	SLU 35	-0.58	1.32	94.79	2.8215	1.1268	0.0766
1000	SLU 36	-0.58	1.38	94.75	2.8197	1.1273	0.0766
1000	SLU 37	-0.58	1.29	94.12	2.8012	1.1177	0.076
1000	SLU 38	-0.58	1.35	94.08	2.7994	1.1182	0.076
1000	SLU 39	-0.6	1.3	96.21	2.8612	1.1498	0.0779
1000	SLU 40	-0.6	1.36	96.16	2.8594	1.1503	0.078
1000	SLU 41	-0.6	1.32	97.25	2.8926	1.1631	0.0788
1000	SLU 42	-0.6	1.38	97.2	2.8907	1.1636	0.0789
1000	SLU 43	-0.53	1.18	91.2	2.7183	1.0247	0.0703
1000	SLU 44	-0.53	1.29	91.12	2.7153	1.0256	0.0705
1000	SLU 45	-0.54	1.23	92.91	2.77	1.0471	0.0719
1000	SLU 46	-0.54	1.29	92.86	2.7682	1.0476	0.072
1000	SLU 47	-0.54	1.3	92.17	2.7466	1.0389	0.0714
1000	SLU 48	-0.55	1.25	93.95	2.8013	1.0603	0.0728
1000	SLU 49	-0.55	1.31	93.9	2.7995	1.0609	0.0729
1000	SLU 50	-0.54	1.22	93.28	2.781	1.0512	0.0722
1000	SLU 51	-0.54	1.28	93.24	2.7792	1.0518	0.0723
1000	SLU 52	-0.6	1.4	100.85	3.0016	1.1624	0.0794
1000	SLU 53	-0.61	1.34	102.63	3.0563	1.1839	0.0808
1000	SLU 54	-0.62	1.4	102.59	3.0544	1.1844	0.0809
1000	SLU 55	-0.61	1.41	101.89	3.0329	1.1757	0.0803
1000	SLU 56	-0.62	1.36	103.67	3.0876	1.1971	0.0818
1000	SLU 57	-0.62	1.42	103.63	3.0858	1.1977	0.0819
1000	SLU 58	-0.61	1.33	103.01	3.0673	1.1881	0.0812
1000	SLU 59	-0.62	1.39	102.96	3.0654	1.1886	0.0812
1000	SLU 60	-0.63	1.34	105.09	3.1273	1.2202	0.0831
1000	SLU 61	-0.63	1.4	105.05	3.1255	1.2207	0.0832
1000	SLU 62	-0.64	1.36	106.13	3.1586	1.2334	0.0841
1000	SLU 63	-0.64	1.42	106.09	3.1568	1.234	0.0841
1000	SLU 64	-0.6	1.37	100.82	3.0042	1.1561	0.0791
1000	SLU 65	-0.6	1.48	100.75	3.0011	1.157	0.0792
1000	SLU 66	-0.61	1.42	102.53	3.0558	1.1785	0.0806
1000	SLU 67	-0.61	1.48	102.49	3.054	1.179	0.0807
1000	SLU 68	-0.61	1.49	101.79	3.0324	1.1703	0.0801
1000	SLU 69	-0.62	1.44	103.57	3.0872	1.1917	0.0816

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1000	SLU 70	-0.62	1.5	103.53	3.0853	1.1923	0.0816
1000	SLU 71	-0.61	1.41	102.91	3.0668	1.1827	0.081
1000	SLU 72	-0.61	1.47	102.86	3.065	1.1832	0.081
1000	SLU 73	-0.67	1.58	110.47	3.2874	1.2939	0.0881
1000	SLU 74	-0.68	1.53	112.26	3.3421	1.3153	0.0896
1000	SLU 75	-0.68	1.59	112.21	3.3403	1.3159	0.0896
1000	SLU 76	-0.68	1.6	111.51	3.3187	1.3071	0.0891
1000	SLU 77	-0.69	1.55	113.3	3.3734	1.3286	0.0905
1000	SLU 78	-0.69	1.61	113.25	3.3716	1.3291	0.0906
1000	SLU 79	-0.68	1.51	112.63	3.3531	1.3195	0.0899
1000	SLU 80	-0.68	1.58	112.58	3.3513	1.32	0.09
1000	SLU 81	-0.7	1.53	114.72	3.4131	1.3516	0.0918
1000	SLU 82	-0.7	1.59	114.67	3.4113	1.3521	0.0919
1000	SLU 83	-0.71	1.54	115.76	3.4445	1.3649	0.0928
1000	SLU 84	-0.71	1.61	115.71	3.4426	1.3654	0.0928
1000	SLE RA 1	-0.45	1.01	75.44	2.2481	0.8605	0.0589
1000	SLE RA 2	-0.45	1.08	75.39	2.246	0.8611	0.059
1000	SLE RA 3	-0.45	1.05	76.58	2.2825	0.8754	0.0599
1000	SLE RA 4	-0.45	1.09	76.55	2.2813	0.8757	0.06
1000	SLE RA 5	-0.45	1.09	76.09	2.2669	0.8699	0.0596
1000	SLE RA 6	-0.46	1.06	77.27	2.3034	0.8842	0.0606
1000	SLE RA 7	-0.46	1.1	77.24	2.3022	0.8845	0.0606
1000	SLE RA 8	-0.45	1.04	76.83	2.2899	0.8781	0.0602
1000	SLE RA 9	-0.45	1.08	76.8	2.2886	0.8785	0.0602
1000	SLE RA 10	-0.49	1.16	81.87	2.4369	0.9523	0.0649
1000	SLE RA 11	-0.5	1.12	83.06	2.4734	0.9666	0.0659
1000	SLE RA 12	-0.5	1.16	83.03	2.4721	0.9669	0.0659
1000	SLE RA 13	-0.5	1.17	82.57	2.4578	0.9611	0.0656
1000	SLE RA 14	-0.51	1.13	83.76	2.4943	0.9754	0.0665
1000	SLE RA 15	-0.51	1.17	83.73	2.493	0.9758	0.0666
1000	SLE RA 16	-0.5	1.11	83.31	2.4807	0.9693	0.0661
1000	SLE RA 17	-0.5	1.15	83.28	2.4795	0.9697	0.0662
1000	SLE RA 18	-0.51	1.12	84.7	2.5207	0.9908	0.0674
1000	SLE RA 19	-0.51	1.16	84.67	2.5195	0.9911	0.0675
1000	SLE RA 20	-0.52	1.13	85.4	2.5416	0.9996	0.068
1000	SLE RA 21	-0.52	1.17	85.37	2.5404	1	0.0681
1000	SLE FR 1	-0.45	1.01	75.44	2.2481	0.8605	0.0589
1000	SLE FR 2	-0.45	1.03	75.43	2.2477	0.8606	0.0589
1000	SLE FR 3	-0.45	1.02	75.72	2.2564	0.864	0.0591
1000	SLE FR 4	-0.47	1.06	78.21	2.3295	0.8997	0.0615
1000	SLE FR 5	-0.47	1.05	78.5	2.3382	0.9031	0.0617
1000	SLE FR 6	-0.48	1.07	80.07	2.3844	0.9256	0.0632
1000	SLE QP 1	-0.45	1.01	75.44	2.2481	0.8605	0.0589
1000	SLE QP 2	-0.47	1.04	78.22	2.3299	0.8995	0.0615
1000	SLD 1	8.47	2.58	81.06	2.4096	0.942	-0.2586
1000	SLD 2	7.57	2.31	81.24	2.4168	0.9488	-0.2159
1000	SLD 3	8.32	0.39	82.65	2.4724	0.9292	-0.2533
1000	SLD 4	7.42	0.12	82.83	2.4796	0.936	-0.2106
1000	SLD 5	2.6	4.87	76.63	2.2573	0.9305	-0.0503
1000	SLD 6	2.01	4.7	76.75	2.262	0.935	-0.0223
1000	SLD 7	2.1	-2.43	81.93	2.4666	0.8878	-0.0325
1000	SLD 8	1.51	-2.6	82.04	2.4713	0.8922	-0.0045
1000	SLD 9	-2.45	4.69	74.4	2.1885	0.9069	0.1274
1000	SLD 10	-3.04	4.52	74.51	2.1932	0.9113	0.1554
1000	SLD 11	-2.95	-2.61	79.69	2.3977	0.8641	0.1452
1000	SLD 12	-3.53	-2.79	79.81	2.4024	0.8686	0.1732
1000	SLD 13	-8.36	1.97	73.61	2.1802	0.8631	0.3335
1000	SLD 14	-9.26	1.7	73.79	2.1874	0.8699	0.3762
1000	SLD 15	-8.51	-0.22	75.2	2.2429	0.8503	0.3388
1000	SLD 16	-9.4	-0.49	75.38	2.2501	0.8571	0.3815
1000	SLV 1	20.43	4.57	84.95	2.5188	0.9997	-0.687
1000	SLV 2	18.34	3.95	85.36	2.5356	1.0155	-0.5875
1000	SLV 3	20.09	-0.42	88.54	2.6611	0.9704	-0.6745
1000	SLV 4	18	-1.04	88.96	2.6778	0.9862	-0.575
1000	SLV 5	6.69	9.78	74.71	2.1679	0.9712	-0.1991
1000	SLV 6	5.34	9.38	74.98	2.1787	0.9814	-0.135
1000	SLV 7	5.53	-6.86	86.7	2.6421	0.8737	-0.1576
1000	SLV 8	4.19	-7.26	86.97	2.6529	0.8839	-0.0935
1000	SLV 9	-5.12	9.34	69.47	2.0068	0.9152	0.2164
1000	SLV 10	-6.47	8.94	69.74	2.0176	0.9254	0.2805
1000	SLV 11	-6.27	-7.29	81.46	2.4811	0.8177	0.2579
1000	SLV 12	-7.62	-7.69	81.73	2.4919	0.8279	0.322
1000	SLV 13	-18.93	3.13	67.48	1.9819	0.8129	0.6979
1000	SLV 14	-21.02	2.51	67.9	1.9987	0.8287	0.7974
1000	SLV 15	-19.28	-1.86	71.08	2.1242	0.7836	0.7104
1000	SLV 16	-21.37	-2.48	71.49	2.1409	0.7994	0.8099
1000	CRTFP Ux+	0	0	0	0	0	0
1000	CRTFP Ux-	0	0	0	0	0	0
1000	CRTFP Uy+	0	0	0	0	0	0
1000	CRTFP Uy-	0	0	0	0	0	0
1003	SLU 1	0.56	1.82	69.47	2.118	-0.3107	0.0007
1003	SLU 2	0.55	1.92	69.39	2.1148	-0.3114	0.0007
1003	SLU 3	0.56	1.89	71.1	2.1687	-0.3187	0.001
1003	SLU 4	0.56	1.95	71.05	2.1668	-0.3191	0.001
1003	SLU 5	0.56	1.95	70.41	2.1462	-0.3163	0.0009
1003	SLU 6	0.57	1.92	72.12	2.2	-0.3236	0.0012
1003	SLU 7	0.57	1.98	72.07	2.1981	-0.3241	0.0012
1003	SLU 8	0.57	1.88	71.51	2.1808	-0.3205	0.0011
1003	SLU 9	0.57	1.94	71.46	2.1788	-0.321	0.0011
1003	SLU 10	0.6	2.17	78.48	2.3906	-0.3604	0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1003	SLU 11	0.61	2.13	80.19	2.4444	-0.3677	0.004
1003	SLU 12	0.61	2.2	80.14	2.4425	-0.3681	0.004
1003	SLU 13	0.61	2.2	79.5	2.4219	-0.3653	0.0039
1003	SLU 14	0.62	2.17	81.21	2.4758	-0.3726	0.0042
1003	SLU 15	0.62	2.23	81.16	2.4738	-0.3731	0.0042
1003	SLU 16	0.62	2.13	80.59	2.4565	-0.3696	0.0041
1003	SLU 17	0.62	2.19	80.55	2.4546	-0.37	0.0041
1003	SLU 18	0.62	2.17	82.45	2.5119	-0.3807	0.005
1003	SLU 19	0.62	2.23	82.41	2.51	-0.3811	0.005
1003	SLU 20	0.63	2.2	83.47	2.5433	-0.3856	0.0052
1003	SLU 21	0.63	2.26	83.42	2.5414	-0.3861	0.0052
1003	SLU 22	0.61	2.13	78.52	2.3946	-0.3603	0.003
1003	SLU 23	0.6	2.23	78.44	2.3914	-0.361	0.003
1003	SLU 24	0.62	2.2	80.15	2.4453	-0.3683	0.0033
1003	SLU 25	0.61	2.26	80.11	2.4434	-0.3687	0.0033
1003	SLU 26	0.61	2.26	79.46	2.4228	-0.3659	0.0033
1003	SLU 27	0.62	2.23	81.17	2.4766	-0.3732	0.0035
1003	SLU 28	0.62	2.29	81.12	2.4747	-0.3737	0.0035
1003	SLU 29	0.62	2.19	80.56	2.4574	-0.3701	0.0035
1003	SLU 30	0.62	2.25	80.51	2.4555	-0.3706	0.0035
1003	SLU 31	0.65	2.48	87.53	2.6672	-0.41	0.006
1003	SLU 32	0.66	2.44	89.24	2.721	-0.4173	0.0063
1003	SLU 33	0.66	2.51	89.19	2.7191	-0.4177	0.0063
1003	SLU 34	0.66	2.51	88.55	2.6985	-0.4149	0.0063
1003	SLU 35	0.67	2.47	90.26	2.7524	-0.4222	0.0065
1003	SLU 36	0.67	2.54	90.21	2.7504	-0.4227	0.0066
1003	SLU 37	0.67	2.43	89.65	2.7331	-0.4191	0.0065
1003	SLU 38	0.67	2.5	89.6	2.7312	-0.4196	0.0065
1003	SLU 39	0.67	2.48	91.51	2.7885	-0.4303	0.0073
1003	SLU 40	0.67	2.54	91.46	2.7866	-0.4307	0.0073
1003	SLU 41	0.68	2.51	92.53	2.8199	-0.4352	0.0075
1003	SLU 42	0.68	2.57	92.48	2.818	-0.4356	0.0075
1003	SLU 43	0.7	2.26	87.21	2.6586	-0.3869	0.0001
1003	SLU 44	0.7	2.36	87.13	2.6554	-0.3876	0.0001
1003	SLU 45	0.71	2.33	88.84	2.7092	-0.3949	0.0004
1003	SLU 46	0.71	2.39	88.79	2.7073	-0.3953	0.0004
1003	SLU 47	0.71	2.39	88.14	2.6868	-0.3925	0.0003
1003	SLU 48	0.72	2.36	89.85	2.7406	-0.3998	0.0006
1003	SLU 49	0.72	2.42	89.81	2.7387	-0.4003	0.0006
1003	SLU 50	0.72	2.32	89.24	2.7213	-0.3968	0.0005
1003	SLU 51	0.72	2.38	89.19	2.7194	-0.3972	0.0006
1003	SLU 52	0.75	2.61	96.22	2.9311	-0.4366	0.0031
1003	SLU 53	0.76	2.57	97.93	2.985	-0.4439	0.0034
1003	SLU 54	0.76	2.64	97.88	2.9831	-0.4443	0.0034
1003	SLU 55	0.76	2.64	97.23	2.9625	-0.4415	0.0034
1003	SLU 56	0.77	2.61	98.94	3.0163	-0.4488	0.0036
1003	SLU 57	0.77	2.67	98.9	3.0144	-0.4493	0.0036
1003	SLU 58	0.77	2.57	98.33	2.9971	-0.4458	0.0035
1003	SLU 59	0.77	2.63	98.28	2.9951	-0.4462	0.0036
1003	SLU 60	0.77	2.61	100.19	3.0525	-0.4569	0.0044
1003	SLU 61	0.77	2.67	100.14	3.0506	-0.4573	0.0044
1003	SLU 62	0.78	2.64	101.21	3.0839	-0.4618	0.0046
1003	SLU 63	0.78	2.7	101.16	3.0819	-0.4623	0.0046
1003	SLU 64	0.75	2.57	96.26	2.9352	-0.4365	0.0024
1003	SLU 65	0.75	2.67	96.18	2.932	-0.4372	0.0024
1003	SLU 66	0.76	2.64	97.89	2.9859	-0.4445	0.0027
1003	SLU 67	0.76	2.7	97.84	2.9839	-0.4449	0.0027
1003	SLU 68	0.76	2.7	97.2	2.9634	-0.4421	0.0027
1003	SLU 69	0.77	2.67	98.91	3.0172	-0.4494	0.0029
1003	SLU 70	0.77	2.73	98.86	3.0153	-0.4499	0.003
1003	SLU 71	0.77	2.63	98.3	2.998	-0.4463	0.0029
1003	SLU 72	0.77	2.69	98.25	2.996	-0.4468	0.0029
1003	SLU 73	0.8	2.91	105.27	3.2077	-0.4862	0.0055
1003	SLU 74	0.81	2.88	106.98	3.2616	-0.4935	0.0057
1003	SLU 75	0.81	2.94	106.93	3.2597	-0.4939	0.0058
1003	SLU 76	0.81	2.95	106.29	3.2391	-0.4911	0.0057
1003	SLU 77	0.82	2.91	108	3.2929	-0.4984	0.006
1003	SLU 78	0.82	2.98	107.95	3.291	-0.4989	0.006
1003	SLU 79	0.82	2.87	107.39	3.2737	-0.4953	0.0059
1003	SLU 80	0.82	2.94	107.34	3.2718	-0.4958	0.0059
1003	SLU 81	0.82	2.92	109.25	3.3291	-0.5065	0.0067
1003	SLU 82	0.82	2.98	109.2	3.3272	-0.5069	0.0067
1003	SLU 83	0.83	2.95	110.26	3.3605	-0.5114	0.0069
1003	SLU 84	0.83	3.01	110.22	3.3586	-0.5118	0.007
1003	SLE RA 1	0.57	1.91	72.06	2.1971	-0.3249	0.0014
1003	SLE RA 2	0.57	1.98	72	2.1949	-0.3253	0.0014
1003	SLE RA 3	0.58	1.95	73.14	2.2308	-0.3302	0.0016
1003	SLE RA 4	0.58	2	73.11	2.2295	-0.3305	0.0016
1003	SLE RA 5	0.57	2	72.68	2.2158	-0.3286	0.0015
1003	SLE RA 6	0.58	1.97	73.82	2.2517	-0.3335	0.0017
1003	SLE RA 7	0.58	2.02	73.79	2.2505	-0.3338	0.0017
1003	SLE RA 8	0.58	1.95	73.41	2.2389	-0.3314	0.0016
1003	SLE RA 9	0.58	1.99	73.38	2.2376	-0.3317	0.0017
1003	SLE RA 10	0.6	2.14	78.06	2.3787	-0.358	0.0034
1003	SLE RA 11	0.61	2.12	79.2	2.4146	-0.3629	0.0036
1003	SLE RA 12	0.61	2.16	79.17	2.4134	-0.3632	0.0036
1003	SLE RA 13	0.61	2.16	78.74	2.3997	-0.3613	0.0035
1003	SLE RA 14	0.61	2.14	79.88	2.4356	-0.3662	0.0037
1003	SLE RA 15	0.61	2.18	79.85	2.4343	-0.3664	0.0037
1003	SLE RA 16	0.61	2.11	79.47	2.4227	-0.3641	0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1003	SLE RA 17	0.61	2.15	79.44	2.4214	-0.3644	0.0037
1003	SLE RA 18	0.61	2.14	80.71	2.4597	-0.3715	0.0042
1003	SLE RA 19	0.61	2.18	80.68	2.4584	-0.3718	0.0042
1003	SLE RA 20	0.62	2.16	81.39	2.4806	-0.3748	0.0044
1003	SLE RA 21	0.62	2.2	81.36	2.4793	-0.3751	0.0044
1003	SLE FR 1	0.57	1.91	72.06	2.1971	-0.3249	0.0014
1003	SLE FR 2	0.57	1.92	72.05	2.1966	-0.325	0.0014
1003	SLE FR 3	0.57	1.91	72.33	2.2054	-0.3262	0.0014
1003	SLE FR 4	0.58	1.99	74.64	2.2754	-0.339	0.0022
1003	SLE FR 5	0.59	1.98	74.92	2.2842	-0.3402	0.0023
1003	SLE FR 6	0.59	2.02	76.38	2.3284	-0.3482	0.0028
1003	SLE QP 1	0.57	1.91	72.06	2.1971	-0.3249	0.0014
1003	SLE QP 2	0.58	1.98	74.65	2.2758	-0.3389	0.0022
1003	SLD 1	9.35	2.6	68.89	2.1024	-0.0573	-0.3138
1003	SLD 2	8.46	2.85	68.73	2.0957	-0.0549	-0.2714
1003	SLD 3	9.48	0.47	70.54	2.1675	-0.0434	-0.3085
1003	SLD 4	8.59	0.72	70.38	2.1608	-0.041	-0.2661
1003	SLD 5	3.19	5.35	70.44	2.1263	-0.2758	-0.1082
1003	SLD 6	2.6	5.51	70.33	2.1219	-0.2742	-0.0804
1003	SLD 7	3.6	-1.75	75.96	2.3432	-0.2297	-0.0905
1003	SLD 8	3.01	-1.59	75.86	2.3388	-0.2281	-0.0627
1003	SLD 9	-1.85	5.54	73.45	2.2129	-0.4496	0.0671
1003	SLD 10	-2.43	5.7	73.34	2.2085	-0.448	0.0949
1003	SLD 11	-1.44	-1.56	78.98	2.4298	-0.4035	0.0848
1003	SLD 12	-2.02	-1.39	78.87	2.4254	-0.4019	0.1126
1003	SLD 13	-7.42	3.23	78.92	2.3909	-0.6367	0.2706
1003	SLD 14	-8.31	3.48	78.76	2.3842	-0.6343	0.313
1003	SLD 15	-7.3	1.11	80.58	2.456	-0.6229	0.2759
1003	SLD 16	-8.19	1.36	80.42	2.4493	-0.6204	0.3183
1003	SLV 1	21.1	3.36	61.21	1.872	0.3207	-0.7368
1003	SLV 2	19.02	3.94	60.84	1.8564	0.3263	-0.638
1003	SLV 3	21.38	-1.49	64.98	2.0196	0.352	-0.7245
1003	SLV 4	19.31	-0.91	64.6	2.004	0.3577	-0.6257
1003	SLV 5	6.66	9.64	64.98	1.9335	-0.1895	-0.2552
1003	SLV 6	5.32	10.02	64.74	1.9235	-0.1859	-0.1915
1003	SLV 7	7.62	-6.52	77.52	2.4255	-0.085	-0.2141
1003	SLV 8	6.28	-6.14	77.28	2.4154	-0.0814	-0.1505
1003	SLV 9	-5.11	10.09	72.03	2.1363	-0.5963	0.1549
1003	SLV 10	-6.45	10.47	71.79	2.1262	-0.5927	0.2186
1003	SLV 11	-4.16	-6.07	84.57	2.6282	-0.4918	0.196
1003	SLV 12	-5.49	-5.69	84.33	2.6181	-0.4882	0.2596
1003	SLV 13	-18.14	4.86	84.71	2.5477	-1.0354	0.6301
1003	SLV 14	-20.22	5.44	84.33	2.5321	-1.0297	0.7289
1003	SLV 15	-17.86	0.01	88.47	2.6953	-1.004	0.6425
1003	SLV 16	-19.93	0.6	88.09	2.6797	-0.9984	0.7412
1003	CRTFP Ux+	0	0	0	0	0	0
1003	CRTFP Ux-	0	0	0	0	0	0
1003	CRTFP Uy+	0	0	0	0	0	0
1003	CRTFP Uy-	0	0	0	0	0	0
1006	SLU 1	0.47	-0.03	29.81	0.5847	7.4844	-0.0002
1006	SLU 2	0.47	0.01	29.78	0.584	7.4787	-0.0101
1006	SLU 3	0.48	-0.02	30.51	0.5986	7.6615	-0.0012
1006	SLU 4	0.48	0	30.49	0.5982	7.658	-0.0072
1006	SLU 5	0.48	0.01	30.21	0.5925	7.5873	-0.0098
1006	SLU 6	0.49	-0.02	30.94	0.6071	7.7701	-0.0009
1006	SLU 7	0.49	0	30.92	0.6067	7.7666	-0.0069
1006	SLU 8	0.48	-0.03	30.67	0.6017	7.7016	0.0004
1006	SLU 9	0.48	-0.01	30.65	0.6013	7.6982	-0.0056
1006	SLU 10	0.51	0.02	33.71	0.6607	8.4541	-0.0134
1006	SLU 11	0.52	-0.01	34.44	0.6753	8.6369	-0.0045
1006	SLU 12	0.52	0.01	34.42	0.6749	8.6334	-0.0104
1006	SLU 13	0.52	0.02	34.14	0.6692	8.5627	-0.0131
1006	SLU 14	0.53	-0.01	34.87	0.6838	8.7455	-0.0042
1006	SLU 15	0.53	0.01	34.85	0.6833	8.742	-0.0102
1006	SLU 16	0.53	-0.02	34.6	0.6784	8.6771	-0.0029
1006	SLU 17	0.53	0.01	34.58	0.6779	8.6736	-0.0089
1006	SLU 18	0.53	-0.01	35.43	0.6943	8.8779	-0.0049
1006	SLU 19	0.53	0.01	35.41	0.6938	8.8745	-0.0109
1006	SLU 20	0.54	-0.01	35.85	0.7028	8.9865	-0.0046
1006	SLU 21	0.54	0.01	35.83	0.7023	8.9831	-0.0106
1006	SLU 22	0.52	-0.01	33.72	0.6612	8.4558	-0.0055
1006	SLU 23	0.52	0.03	33.69	0.6605	8.4501	-0.0154
1006	SLU 24	0.53	0	34.42	0.6751	8.6328	-0.0065
1006	SLU 25	0.53	0.02	34.4	0.6747	8.6294	-0.0124
1006	SLU 26	0.52	0.03	34.11	0.669	8.5586	-0.0151
1006	SLU 27	0.53	-0.01	34.85	0.6836	8.7414	-0.0062
1006	SLU 28	0.53	0.02	34.83	0.6832	8.738	-0.0122
1006	SLU 29	0.53	-0.01	34.57	0.6782	8.673	-0.0049
1006	SLU 30	0.53	0.01	34.55	0.6778	8.6695	-0.0109
1006	SLU 31	0.56	0.04	37.62	0.7372	9.4255	-0.0187
1006	SLU 32	0.57	0.01	38.35	0.7518	9.6083	-0.0098
1006	SLU 33	0.57	0.03	38.33	0.7514	9.6048	-0.0157
1006	SLU 34	0.57	0.04	38.04	0.7457	9.5341	-0.0184
1006	SLU 35	0.58	0.01	38.78	0.7603	9.7169	-0.0095
1006	SLU 36	0.57	0.03	38.76	0.7598	9.7134	-0.0154
1006	SLU 37	0.57	0	38.5	0.7549	9.6484	-0.0082
1006	SLU 38	0.57	0.02	38.48	0.7545	9.645	-0.0142
1006	SLU 39	0.58	0.01	39.33	0.7708	9.8493	-0.0102
1006	SLU 40	0.58	0.03	39.31	0.7704	9.8458	-0.0162
1006	SLU 41	0.58	0.01	39.76	0.7793	9.9579	-0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1006	SLU 42	0.58	0.03	39.74	0.7788	9.9544	-0.0159
1006	SLU 43	0.6	-0.04	37.42	0.7339	9.3967	0.0015
1006	SLU 44	0.6	0	37.38	0.7332	9.391	-0.0084
1006	SLU 45	0.61	-0.04	38.12	0.7478	9.5738	0.0005
1006	SLU 46	0.61	-0.01	38.1	0.7474	9.5703	-0.0054
1006	SLU 47	0.6	0	37.81	0.7417	9.4996	-0.0081
1006	SLU 48	0.61	-0.04	38.55	0.7563	9.6824	0.0008
1006	SLU 49	0.61	-0.01	38.53	0.7558	9.6789	-0.0051
1006	SLU 50	0.61	-0.04	38.27	0.7509	9.6139	0.0021
1006	SLU 51	0.61	-0.02	38.25	0.7504	9.6105	-0.0038
1006	SLU 52	0.64	0.01	41.31	0.8099	10.3664	-0.0117
1006	SLU 53	0.65	-0.03	42.05	0.8245	10.5492	-0.0028
1006	SLU 54	0.65	0	42.03	0.824	10.5457	-0.0087
1006	SLU 55	0.65	0.01	41.74	0.8184	10.475	-0.0114
1006	SLU 56	0.65	-0.03	42.48	0.833	10.6578	-0.0025
1006	SLU 57	0.65	0	42.46	0.8325	10.6543	-0.0084
1006	SLU 58	0.65	-0.03	42.2	0.8276	10.5894	-0.0012
1006	SLU 59	0.65	-0.01	42.18	0.8271	10.5859	-0.0071
1006	SLU 60	0.66	-0.02	43.03	0.8435	10.7902	-0.0032
1006	SLU 61	0.66	0	43.01	0.843	10.7868	-0.0091
1006	SLU 62	0.66	-0.03	43.46	0.852	10.8988	-0.0029
1006	SLU 63	0.66	0	43.44	0.8515	10.8954	-0.0088
1006	SLU 64	0.64	-0.02	41.32	0.8104	10.3681	-0.0038
1006	SLU 65	0.64	0.02	41.29	0.8097	10.3623	-0.0137
1006	SLU 66	0.65	-0.02	42.02	0.8243	10.5451	-0.0048
1006	SLU 67	0.65	0.01	42	0.8239	10.5417	-0.0107
1006	SLU 68	0.65	0.02	41.72	0.8182	10.4709	-0.0134
1006	SLU 69	0.66	-0.02	42.45	0.8328	10.6537	-0.0045
1006	SLU 70	0.66	0	42.43	0.8323	10.6503	-0.0104
1006	SLU 71	0.65	-0.02	42.18	0.8274	10.5853	-0.0032
1006	SLU 72	0.65	0	42.16	0.827	10.5818	-0.0091
1006	SLU 73	0.68	0.03	45.22	0.8864	11.3378	-0.017
1006	SLU 74	0.69	-0.01	45.95	0.901	11.5206	-0.0081
1006	SLU 75	0.69	0.02	45.93	0.9006	11.5171	-0.014
1006	SLU 76	0.69	0.03	45.65	0.8949	11.4464	-0.0167
1006	SLU 77	0.7	-0.01	46.38	0.9095	11.6291	-0.0078
1006	SLU 78	0.7	0.01	46.36	0.909	11.6257	-0.0137
1006	SLU 79	0.7	-0.01	46.11	0.9041	11.5607	-0.0065
1006	SLU 80	0.7	0.01	46.09	0.9036	11.5573	-0.0124
1006	SLU 81	0.7	-0.01	46.94	0.92	11.7616	-0.0085
1006	SLU 82	0.7	0.02	46.92	0.9195	11.7581	-0.0144
1006	SLU 83	0.71	-0.01	47.37	0.9285	11.8702	-0.0082
1006	SLU 84	0.71	0.02	47.35	0.928	11.8667	-0.0141
1006	SLE RA 1	0.48	-0.02	30.93	0.6066	7.762	-0.0017
1006	SLE RA 2	0.48	0.01	30.91	0.6061	7.7581	-0.0083
1006	SLE RA 3	0.49	-0.02	31.4	0.6158	7.88	-0.0024
1006	SLE RA 4	0.49	0	31.38	0.6155	7.8777	-0.0064
1006	SLE RA 5	0.49	0	31.19	0.6118	7.8305	-0.0081
1006	SLE RA 6	0.49	-0.02	31.68	0.6215	7.9524	-0.0022
1006	SLE RA 7	0.49	0	31.67	0.6212	7.9501	-0.0062
1006	SLE RA 8	0.49	-0.02	31.5	0.6179	7.9068	-0.0013
1006	SLE RA 9	0.49	-0.01	31.49	0.6176	7.9045	-0.0053
1006	SLE RA 10	0.51	0.01	33.53	0.6572	8.4084	-0.0105
1006	SLE RA 11	0.52	-0.01	34.02	0.667	8.5303	-0.0046
1006	SLE RA 12	0.52	0	34	0.6667	8.528	-0.0086
1006	SLE RA 13	0.52	0.01	33.81	0.6629	8.4808	-0.0103
1006	SLE RA 14	0.52	-0.01	34.3	0.6726	8.6027	-0.0044
1006	SLE RA 15	0.52	0	34.29	0.6723	8.6004	-0.0084
1006	SLE RA 16	0.52	-0.02	34.12	0.669	8.5571	-0.0035
1006	SLE RA 17	0.52	0	34.11	0.6687	8.5548	-0.0075
1006	SLE RA 18	0.52	-0.01	34.67	0.6796	8.691	-0.0049
1006	SLE RA 19	0.52	0.01	34.66	0.6793	8.6887	-0.0088
1006	SLE RA 20	0.53	-0.01	34.96	0.6853	8.7634	-0.0047
1006	SLE RA 21	0.53	0	34.94	0.685	8.7611	-0.0086
1006	SLE FR 1	0.48	-0.02	30.93	0.6066	7.762	-0.0017
1006	SLE FR 2	0.48	-0.02	30.93	0.6065	7.7612	-0.0031
1006	SLE FR 3	0.49	-0.02	31.04	0.6089	7.7909	-0.0017
1006	SLE FR 4	0.5	-0.01	32.05	0.6284	8.0399	-0.004
1006	SLE FR 5	0.5	-0.02	32.17	0.6308	8.0696	-0.0026
1006	SLE FR 6	0.5	-0.02	32.8	0.6431	8.2265	-0.0033
1006	SLE QP 1	0.48	-0.02	30.93	0.6066	7.762	-0.0017
1006	SLE QP 2	0.5	-0.02	32.05	0.6285	8.0407	-0.0027
1006	SLD 1	3.49	0.44	27.49	0.5278	6.8074	-0.1575
1006	SLD 2	3.17	0.66	27.22	0.523	6.7708	-0.2057
1006	SLD 3	3.54	-0.3	28.26	0.5437	6.9341	0.0271
1006	SLD 4	3.21	-0.08	27.98	0.5389	6.8975	-0.021
1006	SLD 5	1.39	1.2	29.57	0.5751	7.485	-0.3206
1006	SLD 6	1.17	1.34	29.39	0.572	7.461	-0.3522
1006	SLD 7	1.53	-1.26	32.12	0.6279	7.9074	0.2949
1006	SLD 8	1.32	-1.12	31.94	0.6248	7.8834	0.2633
1006	SLD 9	-0.33	1.08	32.16	0.6322	8.1979	-0.2687
1006	SLD 10	-0.54	1.23	31.98	0.6291	8.1739	-0.3002
1006	SLD 11	-0.18	-1.38	34.71	0.685	8.6203	0.3468
1006	SLD 12	-0.4	-1.24	34.53	0.6819	8.5963	0.3153
1006	SLD 13	-2.22	0.04	36.12	0.7181	9.1839	0.0157
1006	SLD 14	-2.54	0.26	35.85	0.7133	9.1472	-0.0325
1006	SLD 15	-2.18	-0.69	36.89	0.734	9.3106	0.2003
1006	SLD 16	-2.5	-0.48	36.61	0.7292	9.274	0.1522
1006	SLV 1	7.5	1.03	21.4	0.3934	5.1577	-0.3596
1006	SLV 2	6.75	1.54	20.77	0.3822	5.0724	-0.4717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1006	SLV 3	7.6	-0.65	23.13	0.4293	5.4457	0.0611
1006	SLV 4	6.85	-0.14	22.5	0.4181	5.3604	-0.0511
1006	SLV 5	2.58	2.76	26.34	0.5054	6.7537	-0.7284
1006	SLV 6	2.09	3.09	25.93	0.4982	6.6988	-0.8007
1006	SLV 7	2.91	-2.85	32.12	0.6251	7.7136	0.6738
1006	SLV 8	2.42	-2.52	31.71	0.6179	7.6587	0.6015
1006	SLV 9	-1.43	2.48	32.4	0.6391	8.4227	-0.6069
1006	SLV 10	-1.92	2.81	31.99	0.6319	8.3677	-0.6791
1006	SLV 11	-1.1	-3.12	38.18	0.7588	9.3826	0.7954
1006	SLV 12	-1.58	-2.8	37.77	0.7516	9.3276	0.7231
1006	SLV 13	-5.85	0.11	41.6	0.8389	10.7209	0.0457
1006	SLV 14	-6.61	0.61	40.97	0.8277	10.6357	-0.0665
1006	SLV 15	-5.75	-1.58	43.34	0.8748	11.0089	0.4664
1006	SLV 16	-6.51	-1.07	42.71	0.8636	10.9236	0.3542
1006	CRTFP Ux+	0	0	0	0	0	0
1006	CRTFP Ux-	0	0	0	0	0	0
1006	CRTFP Uy+	0	0	0	0	0	0
1006	CRTFP Uy-	0	0	0	0	0	0
1009	SLU 1	-0.33	-0.13	21.33	0.0117	-6.6886	-0.0413
1009	SLU 2	-0.33	-0.1	21.32	0.0117	-6.683	-0.0324
1009	SLU 3	-0.34	-0.13	21.84	0.012	-6.8472	-0.0411
1009	SLU 4	-0.34	-0.11	21.83	0.012	-6.8438	-0.0358
1009	SLU 5	-0.34	-0.1	21.62	0.0119	-6.7796	-0.0332
1009	SLU 6	-0.35	-0.13	22.15	0.0122	-6.9439	-0.0419
1009	SLU 7	-0.35	-0.11	22.14	0.0122	-6.9405	-0.0365
1009	SLU 8	-0.34	-0.13	21.95	0.0121	-6.882	-0.0428
1009	SLU 9	-0.34	-0.11	21.94	0.012	-6.8786	-0.0375
1009	SLU 10	-0.38	-0.11	24.12	0.0131	-7.5632	-0.0347
1009	SLU 11	-0.38	-0.13	24.64	0.0134	-7.7274	-0.0434
1009	SLU 12	-0.38	-0.12	24.64	0.0134	-7.724	-0.038
1009	SLU 13	-0.38	-0.11	24.43	0.0133	-7.6599	-0.0354
1009	SLU 14	-0.39	-0.13	24.95	0.0136	-7.8241	-0.0441
1009	SLU 15	-0.39	-0.12	24.94	0.0136	-7.8207	-0.0388
1009	SLU 16	-0.39	-0.14	24.76	0.0135	-7.7622	-0.045
1009	SLU 17	-0.39	-0.12	24.75	0.0135	-7.7588	-0.0397
1009	SLU 18	-0.39	-0.14	25.34	0.0138	-7.9461	-0.0445
1009	SLU 19	-0.39	-0.12	25.33	0.0138	-7.9427	-0.0392
1009	SLU 20	-0.4	-0.14	25.65	0.0139	-8.0428	-0.0452
1009	SLU 21	-0.4	-0.12	25.64	0.0139	-8.0394	-0.0399
1009	SLU 22	-0.38	-0.12	24.14	0.0132	-7.5685	-0.0408
1009	SLU 23	-0.38	-0.1	24.12	0.0132	-7.5628	-0.0319
1009	SLU 24	-0.38	-0.12	24.65	0.0135	-7.7271	-0.0406
1009	SLU 25	-0.38	-0.11	24.64	0.0135	-7.7237	-0.0353
1009	SLU 26	-0.38	-0.1	24.43	0.0134	-7.6595	-0.0326
1009	SLU 27	-0.39	-0.13	24.95	0.0137	-7.8238	-0.0413
1009	SLU 28	-0.39	-0.11	24.94	0.0137	-7.8203	-0.036
1009	SLU 29	-0.39	-0.13	24.76	0.0136	-7.7619	-0.0423
1009	SLU 30	-0.39	-0.11	24.75	0.0136	-7.7585	-0.0369
1009	SLU 31	-0.42	-0.1	26.93	0.0146	-8.4431	-0.0341
1009	SLU 32	-0.43	-0.13	27.45	0.015	-8.6073	-0.0428
1009	SLU 33	-0.43	-0.11	27.44	0.015	-8.6039	-0.0375
1009	SLU 34	-0.42	-0.11	27.24	0.0148	-8.5397	-0.0348
1009	SLU 35	-0.43	-0.13	27.76	0.0151	-8.704	-0.0435
1009	SLU 36	-0.43	-0.12	27.75	0.0151	-8.7006	-0.0382
1009	SLU 37	-0.43	-0.14	27.56	0.015	-8.6421	-0.0445
1009	SLU 38	-0.43	-0.12	27.55	0.015	-8.6387	-0.0391
1009	SLU 39	-0.43	-0.13	28.15	0.0153	-8.826	-0.044
1009	SLU 40	-0.43	-0.12	28.14	0.0153	-8.8226	-0.0386
1009	SLU 41	-0.44	-0.14	28.46	0.0155	-8.9227	-0.0447
1009	SLU 42	-0.44	-0.12	28.45	0.0155	-8.9193	-0.0393
1009	SLU 43	-0.42	-0.16	26.77	0.0147	-8.3936	-0.0539
1009	SLU 44	-0.42	-0.14	26.75	0.0147	-8.3879	-0.045
1009	SLU 45	-0.43	-0.16	27.28	0.015	-8.5521	-0.0537
1009	SLU 46	-0.43	-0.15	27.27	0.015	-8.5487	-0.0484
1009	SLU 47	-0.42	-0.14	27.06	0.0148	-8.4845	-0.0458
1009	SLU 48	-0.43	-0.17	27.58	0.0152	-8.6488	-0.0545
1009	SLU 49	-0.43	-0.15	27.57	0.0151	-8.6454	-0.0491
1009	SLU 50	-0.43	-0.17	27.39	0.015	-8.5869	-0.0554
1009	SLU 51	-0.43	-0.15	27.38	0.015	-8.5835	-0.05
1009	SLU 52	-0.46	-0.14	29.56	0.0161	-9.2681	-0.0472
1009	SLU 53	-0.47	-0.17	30.08	0.0164	-9.4324	-0.0559
1009	SLU 54	-0.47	-0.15	30.07	0.0164	-9.4289	-0.0506
1009	SLU 55	-0.47	-0.15	29.87	0.0163	-9.3648	-0.048
1009	SLU 56	-0.47	-0.17	30.39	0.0166	-9.529	-0.0567
1009	SLU 57	-0.47	-0.16	30.38	0.0166	-9.5256	-0.0513
1009	SLU 58	-0.47	-0.18	30.19	0.0165	-9.4671	-0.0576
1009	SLU 59	-0.47	-0.16	30.18	0.0165	-9.4637	-0.0523
1009	SLU 60	-0.48	-0.17	30.78	0.0168	-9.6511	-0.0571
1009	SLU 61	-0.48	-0.16	30.77	0.0167	-9.6476	-0.0517
1009	SLU 62	-0.48	-0.18	31.09	0.0169	-9.7477	-0.0578
1009	SLU 63	-0.48	-0.16	31.08	0.0169	-9.7443	-0.0525
1009	SLU 64	-0.46	-0.16	29.58	0.0162	-9.2735	-0.0534
1009	SLU 65	-0.46	-0.14	29.56	0.0162	-9.2678	-0.0445
1009	SLU 66	-0.47	-0.16	30.08	0.0165	-9.432	-0.0532
1009	SLU 67	-0.47	-0.15	30.07	0.0165	-9.4286	-0.0479
1009	SLU 68	-0.47	-0.14	29.87	0.0164	-9.3644	-0.0452
1009	SLU 69	-0.47	-0.16	30.39	0.0167	-9.5287	-0.0539
1009	SLU 70	-0.47	-0.15	30.38	0.0167	-9.5253	-0.0486
1009	SLU 71	-0.47	-0.17	30.19	0.0166	-9.4668	-0.0548
1009	SLU 72	-0.47	-0.15	30.18	0.0166	-9.4634	-0.0495

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1009	SLU 73	-0.5	-0.14	32.37	0.0176	-10.148	-0.0467
1009	SLU 74	-0.51	-0.17	32.89	0.018	-10.3122	-0.0554
1009	SLU 75	-0.51	-0.15	32.88	0.0179	-10.3088	-0.0501
1009	SLU 76	-0.51	-0.14	32.68	0.0178	-10.2447	-0.0474
1009	SLU 77	-0.52	-0.17	33.2	0.0181	-10.4089	-0.0561
1009	SLU 78	-0.52	-0.15	33.19	0.0181	-10.4055	-0.0508
1009	SLU 79	-0.51	-0.17	33	0.018	-10.347	-0.0571
1009	SLU 80	-0.51	-0.16	32.99	0.018	-10.3436	-0.0517
1009	SLU 81	-0.52	-0.17	33.59	0.0183	-10.5309	-0.0565
1009	SLU 82	-0.52	-0.16	33.58	0.0183	-10.5275	-0.0512
1009	SLU 83	-0.53	-0.17	33.9	0.0185	-10.6276	-0.0573
1009	SLU 84	-0.53	-0.16	33.89	0.0184	-10.6242	-0.0519
1009	SLE RA 1	-0.35	-0.13	22.13	0.0121	-6.94	-0.0412
1009	SLE RA 2	-0.35	-0.11	22.12	0.0121	-6.9362	-0.0353
1009	SLE RA 3	-0.35	-0.13	22.47	0.0123	-7.0457	-0.0411
1009	SLE RA 4	-0.35	-0.11	22.47	0.0123	-7.0435	-0.0375
1009	SLE RA 5	-0.35	-0.11	22.33	0.0122	-7.0007	-0.0357
1009	SLE RA 6	-0.35	-0.13	22.68	0.0125	-7.1102	-0.0415
1009	SLE RA 7	-0.35	-0.12	22.67	0.0124	-7.1079	-0.038
1009	SLE RA 8	-0.35	-0.13	22.55	0.0124	-7.0689	-0.0422
1009	SLE RA 9	-0.35	-0.12	22.54	0.0124	-7.0667	-0.0386
1009	SLE RA 10	-0.37	-0.11	23.99	0.0131	-7.5231	-0.0367
1009	SLE RA 11	-0.38	-0.13	24.34	0.0133	-7.6326	-0.0425
1009	SLE RA 12	-0.38	-0.12	24.34	0.0133	-7.6303	-0.039
1009	SLE RA 13	-0.38	-0.11	24.2	0.0132	-7.5875	-0.0372
1009	SLE RA 14	-0.38	-0.13	24.55	0.0134	-7.697	-0.043
1009	SLE RA 15	-0.38	-0.12	24.54	0.0134	-7.6947	-0.0395
1009	SLE RA 16	-0.38	-0.13	24.42	0.0133	-7.6558	-0.0436
1009	SLE RA 17	-0.38	-0.12	24.41	0.0133	-7.6535	-0.0401
1009	SLE RA 18	-0.38	-0.13	24.81	0.0135	-7.7784	-0.0433
1009	SLE RA 19	-0.38	-0.12	24.8	0.0135	-7.7761	-0.0397
1009	SLE RA 20	-0.39	-0.13	25.01	0.0136	-7.8428	-0.0438
1009	SLE RA 21	-0.39	-0.12	25.01	0.0136	-7.8405	-0.0402
1009	SLE FR 1	-0.35	-0.13	22.13	0.0121	-6.94	-0.0412
1009	SLE FR 2	-0.35	-0.12	22.13	0.0121	-6.9393	-0.04
1009	SLE FR 3	-0.35	-0.13	22.22	0.0122	-6.9658	-0.0414
1009	SLE FR 4	-0.36	-0.12	22.93	0.0125	-7.1908	-0.0406
1009	SLE FR 5	-0.36	-0.13	23.02	0.0126	-7.2173	-0.042
1009	SLE FR 6	-0.37	-0.13	23.47	0.0128	-7.3592	-0.0422
1009	SLE QP 1	-0.35	-0.13	22.13	0.0121	-6.94	-0.0412
1009	SLE QP 2	-0.36	-0.13	22.94	0.0125	-7.1915	-0.0418
1009	SLD 1	1.83	0.07	25.81	0.0153	-8.0456	0.021
1009	SLD 2	1.6	-0.09	25.97	0.0155	-8.0989	-0.0304
1009	SLD 3	1.79	-0.46	26.22	0.0158	-8.1837	-0.1498
1009	SLD 4	1.55	-0.62	26.38	0.016	-8.237	-0.2011
1009	SLD 5	0.41	0.76	23.15	0.0126	-7.2288	0.2451
1009	SLD 6	0.26	0.65	23.26	0.0127	-7.2638	0.2114
1009	SLD 7	0.26	-1	24.51	0.0143	-7.6892	-0.324
1009	SLD 8	0.11	-1.1	24.62	0.0144	-7.7241	-0.3577
1009	SLD 9	-0.82	0.84	21.25	0.0107	-6.659	0.274
1009	SLD 10	-0.98	0.74	21.36	0.0108	-6.6939	0.2404
1009	SLD 11	-0.97	-0.91	22.62	0.0124	-7.1193	-0.295
1009	SLD 12	-1.12	-1.01	22.72	0.0125	-7.1543	-0.3287
1009	SLD 13	-2.27	0.36	19.49	0.0091	-6.1461	0.1175
1009	SLD 14	-2.5	0.2	19.66	0.0093	-6.1994	0.0661
1009	SLD 15	-2.31	-0.16	19.9	0.0096	-6.2842	-0.0532
1009	SLD 16	-2.55	-0.32	20.07	0.0098	-6.3375	-0.1046
1009	SLV 1	4.77	0.31	29.67	0.0191	-9.1954	0.0995
1009	SLV 2	4.21	-0.06	30.05	0.0194	-9.3196	-0.0201
1009	SLV 3	4.66	-0.89	30.59	0.0202	-9.5083	-0.2895
1009	SLV 4	4.11	-1.26	30.98	0.0206	-9.6326	-0.4091
1009	SLV 5	1.43	1.88	23.48	0.0127	-7.2966	0.6112
1009	SLV 6	1.08	1.64	23.73	0.0129	-7.3767	0.5341
1009	SLV 7	1.09	-2.11	26.57	0.0165	-8.3399	-0.6855
1009	SLV 8	0.73	-2.34	26.82	0.0167	-8.4199	-0.7626
1009	SLV 9	-1.45	2.09	19.05	0.0084	-5.9632	0.679
1009	SLV 10	-1.8	1.85	19.3	0.0086	-6.0432	0.6019
1009	SLV 11	-1.79	-1.9	22.14	0.0122	-7.0064	-0.6177
1009	SLV 12	-2.15	-2.14	22.39	0.0124	-7.0865	-0.6948
1009	SLV 13	-4.83	1	14.89	0.0045	-4.7505	0.3255
1009	SLV 14	-5.38	0.63	15.28	0.0049	-4.8748	0.2059
1009	SLV 15	-4.93	-0.2	15.82	0.0057	-5.0635	-0.0635
1009	SLV 16	-5.48	-0.57	16.2	0.006	-5.1877	-0.1831
1009	CRTFP Ux+	0	0	0	0	0	0
1009	CRTFP Ux-	0	0	0	0	0	0
1009	CRTFP Uy+	0	0	0	0	0	0
1009	CRTFP Uy-	0	0	0	0	0	0
1048	SLU 1	-0.31	-0.13	21.95	0.0122	-6.7967	-0.0419
1048	SLU 2	-0.31	-0.1	21.94	0.0122	-6.791	-0.033
1048	SLU 3	-0.32	-0.13	22.48	0.0125	-6.9578	-0.0417
1048	SLU 4	-0.32	-0.11	22.46	0.0125	-6.9544	-0.0364
1048	SLU 5	-0.32	-0.1	22.25	0.0123	-6.8892	-0.0337
1048	SLU 6	-0.33	-0.13	22.79	0.0127	-7.056	-0.0424
1048	SLU 7	-0.33	-0.11	22.78	0.0127	-7.0526	-0.0371
1048	SLU 8	-0.32	-0.13	22.59	0.0126	-6.9931	-0.0433
1048	SLU 9	-0.32	-0.12	22.58	0.0125	-6.9897	-0.038
1048	SLU 10	-0.35	-0.11	24.82	0.0137	-7.6818	-0.0353
1048	SLU 11	-0.36	-0.13	25.36	0.014	-7.8486	-0.044
1048	SLU 12	-0.36	-0.12	25.35	0.014	-7.8452	-0.0387
1048	SLU 13	-0.36	-0.11	25.14	0.0139	-7.78	-0.036

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1048	SLU 14	-0.37	-0.14	25.68	0.0142	-7.9468	-0.0447
1048	SLU 15	-0.37	-0.12	25.67	0.0142	-7.9434	-0.0394
1048	SLU 16	-0.36	-0.14	25.47	0.0141	-7.8839	-0.0457
1048	SLU 17	-0.36	-0.12	25.46	0.0141	-7.8805	-0.0403
1048	SLU 18	-0.37	-0.14	26.07	0.0144	-8.0693	-0.0452
1048	SLU 19	-0.37	-0.12	26.06	0.0144	-8.0658	-0.0399
1048	SLU 20	-0.38	-0.14	26.39	0.0146	-8.1675	-0.0459
1048	SLU 21	-0.38	-0.12	26.38	0.0145	-8.164	-0.0406
1048	SLU 22	-0.35	-0.13	24.84	0.0138	-7.6887	-0.0414
1048	SLU 23	-0.36	-0.1	24.83	0.0138	-7.683	-0.0326
1048	SLU 24	-0.36	-0.13	25.37	0.0141	-7.8499	-0.0413
1048	SLU 25	-0.36	-0.11	25.35	0.0141	-7.8464	-0.0359
1048	SLU 26	-0.36	-0.1	25.14	0.014	-7.7812	-0.0333
1048	SLU 27	-0.37	-0.13	25.68	0.0143	-7.9481	-0.042
1048	SLU 28	-0.37	-0.11	25.67	0.0143	-7.9446	-0.0367
1048	SLU 29	-0.36	-0.13	25.48	0.0142	-7.8851	-0.0429
1048	SLU 30	-0.36	-0.11	25.47	0.0141	-7.8817	-0.0376
1048	SLU 31	-0.4	-0.11	27.71	0.0153	-8.5738	-0.0349
1048	SLU 32	-0.4	-0.13	28.25	0.0156	-8.7407	-0.0436
1048	SLU 33	-0.4	-0.12	28.24	0.0156	-8.7372	-0.0383
1048	SLU 34	-0.4	-0.11	28.03	0.0155	-8.672	-0.0356
1048	SLU 35	-0.41	-0.14	28.57	0.0158	-8.8389	-0.0443
1048	SLU 36	-0.41	-0.12	28.56	0.0158	-8.8354	-0.039
1048	SLU 37	-0.41	-0.14	28.36	0.0157	-8.7759	-0.0452
1048	SLU 38	-0.41	-0.12	28.35	0.0157	-8.7725	-0.0399
1048	SLU 39	-0.41	-0.14	28.96	0.016	-8.9613	-0.0448
1048	SLU 40	-0.41	-0.12	28.95	0.016	-8.9579	-0.0394
1048	SLU 41	-0.42	-0.14	29.28	0.0162	-9.0595	-0.0455
1048	SLU 42	-0.42	-0.12	29.27	0.0162	-9.0561	-0.0402
1048	SLU 43	-0.39	-0.17	27.55	0.0153	-8.5299	-0.0546
1048	SLU 44	-0.39	-0.14	27.53	0.0153	-8.5241	-0.0457
1048	SLU 45	-0.4	-0.17	28.07	0.0156	-8.691	-0.0544
1048	SLU 46	-0.4	-0.15	28.06	0.0156	-8.6876	-0.0491
1048	SLU 47	-0.4	-0.14	27.85	0.0154	-8.6223	-0.0464
1048	SLU 48	-0.41	-0.17	28.39	0.0158	-8.7892	-0.0551
1048	SLU 49	-0.41	-0.15	28.38	0.0158	-8.7858	-0.0498
1048	SLU 50	-0.4	-0.17	28.19	0.0157	-8.7263	-0.056
1048	SLU 51	-0.4	-0.15	28.17	0.0156	-8.7228	-0.0507
1048	SLU 52	-0.43	-0.15	30.42	0.0168	-9.415	-0.048
1048	SLU 53	-0.44	-0.17	30.96	0.0171	-9.5818	-0.0567
1048	SLU 54	-0.44	-0.16	30.94	0.0171	-9.5784	-0.0514
1048	SLU 55	-0.44	-0.15	30.73	0.017	-9.5131	-0.0488
1048	SLU 56	-0.45	-0.18	31.27	0.0173	-9.68	-0.0575
1048	SLU 57	-0.45	-0.16	31.26	0.0173	-9.6766	-0.0521
1048	SLU 58	-0.44	-0.18	31.07	0.0172	-9.6171	-0.0584
1048	SLU 59	-0.44	-0.16	31.06	0.0172	-9.6136	-0.053
1048	SLU 60	-0.45	-0.18	31.67	0.0175	-9.8025	-0.0579
1048	SLU 61	-0.45	-0.16	31.66	0.0175	-9.799	-0.0526
1048	SLU 62	-0.46	-0.18	31.99	0.0177	-9.9007	-0.0586
1048	SLU 63	-0.46	-0.16	31.98	0.0176	-9.8972	-0.0533
1048	SLU 64	-0.43	-0.17	30.44	0.0169	-9.4219	-0.0541
1048	SLU 65	-0.43	-0.14	30.42	0.0169	-9.4162	-0.0453
1048	SLU 66	-0.44	-0.16	30.96	0.0172	-9.583	-0.054
1048	SLU 67	-0.44	-0.15	30.95	0.0172	-9.5796	-0.0486
1048	SLU 68	-0.44	-0.14	30.74	0.0171	-9.5144	-0.046
1048	SLU 69	-0.45	-0.17	31.28	0.0174	-9.6812	-0.0547
1048	SLU 70	-0.45	-0.15	31.27	0.0174	-9.6778	-0.0494
1048	SLU 71	-0.44	-0.17	31.08	0.0173	-9.6183	-0.0556
1048	SLU 72	-0.44	-0.15	31.06	0.0172	-9.6149	-0.0503
1048	SLU 73	-0.48	-0.15	33.3	0.0184	-10.307	-0.0476
1048	SLU 74	-0.48	-0.17	33.84	0.0187	-10.4738	-0.0563
1048	SLU 75	-0.48	-0.16	33.83	0.0187	-10.4704	-0.051
1048	SLU 76	-0.48	-0.15	33.62	0.0186	-10.4052	-0.0483
1048	SLU 77	-0.49	-0.17	34.16	0.0189	-10.572	-0.057
1048	SLU 78	-0.49	-0.16	34.15	0.0189	-10.5686	-0.0517
1048	SLU 79	-0.49	-0.18	33.96	0.0188	-10.5091	-0.0579
1048	SLU 80	-0.49	-0.16	33.95	0.0188	-10.5057	-0.0526
1048	SLU 81	-0.49	-0.18	34.56	0.0191	-10.6945	-0.0575
1048	SLU 82	-0.49	-0.16	34.55	0.0191	-10.6911	-0.0521
1048	SLU 83	-0.5	-0.18	34.88	0.0193	-10.7927	-0.0582
1048	SLU 84	-0.5	-0.16	34.87	0.0193	-10.7892	-0.0529
1048	SLE RA 1	-0.33	-0.13	22.78	0.0126	-7.0516	-0.0417
1048	SLE RA 2	-0.33	-0.11	22.77	0.0126	-7.0478	-0.0358
1048	SLE RA 3	-0.33	-0.13	23.13	0.0129	-7.159	-0.0416
1048	SLE RA 4	-0.33	-0.12	23.12	0.0128	-7.1567	-0.0381
1048	SLE RA 5	-0.33	-0.11	22.98	0.0127	-7.1132	-0.0363
1048	SLE RA 6	-0.33	-0.13	23.34	0.013	-7.2245	-0.0421
1048	SLE RA 7	-0.33	-0.12	23.33	0.013	-7.2222	-0.0386
1048	SLE RA 8	-0.33	-0.13	23.2	0.0129	-7.1825	-0.0427
1048	SLE RA 9	-0.33	-0.12	23.2	0.0129	-7.1802	-0.0392
1048	SLE RA 10	-0.35	-0.11	24.69	0.0136	-7.6416	-0.0374
1048	SLE RA 11	-0.36	-0.13	25.05	0.0139	-7.7529	-0.0432
1048	SLE RA 12	-0.36	-0.12	25.04	0.0139	-7.7506	-0.0396
1048	SLE RA 13	-0.36	-0.12	24.9	0.0138	-7.7071	-0.0379
1048	SLE RA 14	-0.36	-0.13	25.26	0.014	-7.8183	-0.0437
1048	SLE RA 15	-0.36	-0.12	25.25	0.014	-7.816	-0.0401
1048	SLE RA 16	-0.36	-0.14	25.13	0.0139	-7.7764	-0.0443
1048	SLE RA 17	-0.36	-0.12	25.12	0.0139	-7.7741	-0.0407
1048	SLE RA 18	-0.36	-0.13	25.53	0.0141	-7.9	-0.044
1048	SLE RA 19	-0.36	-0.12	25.52	0.0141	-7.8977	-0.0404

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1048	SLE RA 20	-0.37	-0.14	25.74	0.0142	-7.9654	-0.0444
1048	SLE RA 21	-0.37	-0.12	25.73	0.0142	-7.9631	-0.0409
1048	SLE FR 1	-0.33	-0.13	22.78	0.0126	-7.0516	-0.0417
1048	SLE FR 2	-0.33	-0.12	22.78	0.0126	-7.0508	-0.0406
1048	SLE FR 3	-0.33	-0.13	22.86	0.0127	-7.0778	-0.0419
1048	SLE FR 4	-0.34	-0.13	23.6	0.0131	-7.3053	-0.0412
1048	SLE FR 5	-0.34	-0.13	23.69	0.0131	-7.3323	-0.0426
1048	SLE FR 6	-0.34	-0.13	24.15	0.0134	-7.4758	-0.0428
1048	SLE QP 1	-0.33	-0.13	22.78	0.0126	-7.0516	-0.0417
1048	SLE QP 2	-0.34	-0.13	23.6	0.0131	-7.3061	-0.0424
1048	SLD 1	1.9	0.07	26.62	0.0158	-8.1942	0.0209
1048	SLD 2	1.65	-0.09	26.79	0.016	-8.247	-0.0305
1048	SLD 3	1.85	-0.46	27.06	0.0164	-8.3323	-0.1496
1048	SLD 4	1.61	-0.62	27.23	0.0166	-8.3851	-0.201
1048	SLD 5	0.45	0.75	23.81	0.0129	-7.3537	0.2443
1048	SLD 6	0.28	0.65	23.93	0.013	-7.3884	0.2106
1048	SLD 7	0.3	-1	25.27	0.015	-7.814	-0.324
1048	SLD 8	0.13	-1.1	25.39	0.0151	-7.8486	-0.3577
1048	SLD 9	-0.81	0.84	21.82	0.011	-6.7636	0.2729
1048	SLD 10	-0.97	0.74	21.93	0.0112	-6.7982	0.2392
1048	SLD 11	-0.96	-0.91	23.28	0.0131	-7.2238	-0.2954
1048	SLD 12	-1.12	-1.01	23.39	0.0133	-7.2585	-0.3291
1048	SLD 13	-2.28	0.36	19.98	0.0096	-6.2271	0.1162
1048	SLD 14	-2.53	0.2	20.15	0.0097	-6.2799	0.0648
1048	SLD 15	-2.33	-0.17	20.42	0.0102	-6.3652	-0.0543
1048	SLD 16	-2.57	-0.33	20.59	0.0104	-6.418	-0.1057
1048	SLV 1	4.89	0.31	30.67	0.0195	-9.3895	0.1001
1048	SLV 2	4.32	-0.06	31.08	0.0199	-9.5124	-0.0196
1048	SLV 3	4.78	-0.88	31.67	0.0209	-9.7024	-0.2884
1048	SLV 4	4.21	-1.25	32.07	0.0213	-9.8254	-0.4081
1048	SLV 5	1.49	1.88	24.15	0.0128	-7.4352	0.6102
1048	SLV 6	1.12	1.64	24.41	0.013	-7.5145	0.533
1048	SLV 7	1.14	-2.11	27.46	0.0175	-8.4785	-0.6848
1048	SLV 8	0.77	-2.34	27.72	0.0178	-8.5577	-0.762
1048	SLV 9	-1.45	2.08	19.49	0.0084	-6.0545	0.6772
1048	SLV 10	-1.81	1.85	19.75	0.0086	-6.1337	0.6
1048	SLV 11	-1.79	-1.9	22.8	0.0131	-7.0977	-0.6178
1048	SLV 12	-2.16	-2.14	23.06	0.0134	-7.177	-0.695
1048	SLV 13	-4.89	0.99	15.14	0.0049	-4.7868	0.3233
1048	SLV 14	-5.46	0.63	15.54	0.0053	-4.9098	0.2036
1048	SLV 15	-4.99	-0.2	16.13	0.0063	-5.0998	-0.0652
1048	SLV 16	-5.56	-0.57	16.53	0.0067	-5.2228	-0.1849
1048	CRTFP Ux+	0	0	0	0	0	0
1048	CRTFP Ux-	0	0	0	0	0	0
1048	CRTFP Uy+	0	0	0	0	0	0
1048	CRTFP Uy-	0	0	0	0	0	0
1052	SLU 1	-0.53	-0.23	39.23	-9.7959	-6.9438	-0.1816
1052	SLU 2	-0.53	-0.18	39.2	-9.7891	-6.9381	-0.1731
1052	SLU 3	-0.54	-0.23	40.16	-10.0278	-7.1088	-0.185
1052	SLU 4	-0.54	-0.2	40.15	-10.0237	-7.1053	-0.1798
1052	SLU 5	-0.54	-0.19	39.77	-9.9308	-7.0386	-0.1759
1052	SLU 6	-0.55	-0.23	40.73	-10.1694	-7.2094	-0.1878
1052	SLU 7	-0.55	-0.2	40.71	-10.1654	-7.2059	-0.1827
1052	SLU 8	-0.54	-0.24	40.37	-10.0792	-7.145	-0.1874
1052	SLU 9	-0.54	-0.21	40.35	-10.0751	-7.1415	-0.1822
1052	SLU 10	-0.6	-0.2	44.36	-11.0789	-7.8493	-0.1943
1052	SLU 11	-0.61	-0.24	45.33	-11.3176	-8.02	-0.2062
1052	SLU 12	-0.61	-0.22	45.31	-11.3135	-8.0166	-0.2011
1052	SLU 13	-0.61	-0.2	44.93	-11.2206	-7.9499	-0.1972
1052	SLU 14	-0.62	-0.25	45.89	-11.4593	-8.1206	-0.2091
1052	SLU 15	-0.62	-0.22	45.88	-11.4552	-8.1171	-0.204
1052	SLU 16	-0.61	-0.25	45.53	-11.3691	-8.0562	-0.2087
1052	SLU 17	-0.61	-0.22	45.51	-11.365	-8.0527	-0.2035
1052	SLU 18	-0.63	-0.25	46.6	-11.6385	-8.2456	-0.212
1052	SLU 19	-0.63	-0.22	46.58	-11.6345	-8.2421	-0.2069
1052	SLU 20	-0.64	-0.26	47.17	-11.7802	-8.3462	-0.2149
1052	SLU 21	-0.64	-0.23	47.15	-11.7761	-8.3427	-0.2097
1052	SLU 22	-0.6	-0.23	44.4	-11.0846	-7.8568	-0.2002
1052	SLU 23	-0.6	-0.18	44.37	-11.0778	-7.8511	-0.1916
1052	SLU 24	-0.61	-0.23	45.33	-11.3165	-8.0218	-0.2035
1052	SLU 25	-0.61	-0.2	45.32	-11.3124	-8.0184	-0.1984
1052	SLU 26	-0.61	-0.19	44.94	-11.2195	-7.9517	-0.1945
1052	SLU 27	-0.62	-0.23	45.9	-11.4582	-8.1224	-0.2064
1052	SLU 28	-0.62	-0.2	45.88	-11.4541	-8.1189	-0.2013
1052	SLU 29	-0.61	-0.24	45.54	-11.3679	-8.058	-0.206
1052	SLU 30	-0.62	-0.21	45.52	-11.3638	-8.0545	-0.2008
1052	SLU 31	-0.67	-0.2	49.53	-12.3676	-8.7623	-0.2129
1052	SLU 32	-0.68	-0.24	50.49	-12.6063	-8.933	-0.2248
1052	SLU 33	-0.68	-0.21	50.48	-12.6022	-8.9296	-0.2197
1052	SLU 34	-0.68	-0.2	50.1	-12.5093	-8.8629	-0.2158
1052	SLU 35	-0.69	-0.25	51.06	-12.748	-9.0336	-0.2277
1052	SLU 36	-0.69	-0.22	51.05	-12.7439	-9.0302	-0.2225
1052	SLU 37	-0.69	-0.25	50.7	-12.6578	-8.9692	-0.2272
1052	SLU 38	-0.69	-0.22	50.68	-12.6537	-8.9658	-0.2221
1052	SLU 39	-0.7	-0.25	51.77	-12.9272	-9.1586	-0.2306
1052	SLU 40	-0.7	-0.22	51.75	-12.9232	-9.1551	-0.2255
1052	SLU 41	-0.71	-0.25	52.34	-13.0689	-9.2592	-0.2335
1052	SLU 42	-0.71	-0.23	52.32	-13.0648	-9.2557	-0.2283
1052	SLU 43	-0.66	-0.3	49.23	-12.2929	-8.7139	-0.2298
1052	SLU 44	-0.66	-0.25	49.2	-12.286	-8.7082	-0.2212

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1052	SLU 45	-0.67	-0.3	50.16	-12.5247	-8.8789	-0.2331
1052	SLU 46	-0.67	-0.27	50.14	-12.5206	-8.8755	-0.2279
1052	SLU 47	-0.67	-0.26	49.76	-12.4277	-8.8087	-0.2241
1052	SLU 48	-0.68	-0.3	50.73	-12.6664	-8.9795	-0.236
1052	SLU 49	-0.68	-0.27	50.71	-12.6623	-8.976	-0.2308
1052	SLU 50	-0.68	-0.31	50.37	-12.5762	-8.9151	-0.2355
1052	SLU 51	-0.68	-0.28	50.35	-12.5721	-8.9116	-0.2304
1052	SLU 52	-0.73	-0.27	54.36	-13.5759	-9.6194	-0.2424
1052	SLU 53	-0.75	-0.31	55.32	-13.8146	-9.7901	-0.2544
1052	SLU 54	-0.75	-0.28	55.3	-13.8105	-9.7867	-0.2492
1052	SLU 55	-0.74	-0.27	54.93	-13.7175	-9.72	-0.2453
1052	SLU 56	-0.75	-0.32	55.89	-13.9562	-9.8907	-0.2572
1052	SLU 57	-0.75	-0.29	55.87	-13.9521	-9.8873	-0.2521
1052	SLU 58	-0.75	-0.32	55.53	-13.866	-9.8263	-0.2568
1052	SLU 59	-0.75	-0.29	55.51	-13.8619	-9.8229	-0.2516
1052	SLU 60	-0.76	-0.32	56.6	-14.1355	-10.0157	-0.2601
1052	SLU 61	-0.76	-0.29	56.58	-14.1314	-10.0122	-0.255
1052	SLU 62	-0.77	-0.32	57.17	-14.2771	-10.1163	-0.263
1052	SLU 63	-0.77	-0.3	57.15	-14.273	-10.1128	-0.2579
1052	SLU 64	-0.73	-0.3	54.4	-13.5816	-9.6269	-0.2483
1052	SLU 65	-0.73	-0.25	54.37	-13.5747	-9.6212	-0.2398
1052	SLU 66	-0.75	-0.3	55.33	-13.8134	-9.7919	-0.2517
1052	SLU 67	-0.75	-0.27	55.31	-13.8093	-9.7885	-0.2465
1052	SLU 68	-0.74	-0.26	54.93	-13.7164	-9.7218	-0.2426
1052	SLU 69	-0.75	-0.3	55.9	-13.9551	-9.8925	-0.2545
1052	SLU 70	-0.75	-0.27	55.88	-13.951	-9.889	-0.2494
1052	SLU 71	-0.75	-0.31	55.54	-13.8649	-9.8281	-0.2541
1052	SLU 72	-0.75	-0.28	55.52	-13.8608	-9.8246	-0.249
1052	SLU 73	-0.8	-0.27	59.53	-14.8646	-10.5324	-0.261
1052	SLU 74	-0.82	-0.31	60.49	-15.1033	-10.7032	-0.2729
1052	SLU 75	-0.82	-0.28	60.47	-15.0992	-10.6997	-0.2678
1052	SLU 76	-0.81	-0.27	60.1	-15.0062	-10.633	-0.2639
1052	SLU 77	-0.82	-0.32	61.06	-15.2449	-10.8037	-0.2758
1052	SLU 78	-0.82	-0.29	61.04	-15.2408	-10.8003	-0.2707
1052	SLU 79	-0.82	-0.32	60.7	-15.1547	-10.7393	-0.2754
1052	SLU 80	-0.82	-0.29	60.68	-15.1506	-10.7359	-0.2702
1052	SLU 81	-0.83	-0.32	61.77	-15.4242	-10.9287	-0.2787
1052	SLU 82	-0.83	-0.29	61.75	-15.4201	-10.9253	-0.2736
1052	SLU 83	-0.84	-0.32	62.34	-15.5658	-11.0293	-0.2816
1052	SLU 84	-0.84	-0.3	62.32	-15.5617	-11.0258	-0.2765
1052	SLE RA 1	-0.55	-0.23	40.71	-10.1641	-7.2047	-0.187
1052	SLE RA 2	-0.55	-0.2	40.69	-10.1596	-7.2008	-0.1812
1052	SLE RA 3	-0.56	-0.23	41.33	-10.3187	-7.3147	-0.1892
1052	SLE RA 4	-0.56	-0.21	41.32	-10.316	-7.3124	-0.1857
1052	SLE RA 5	-0.55	-0.2	41.07	-10.254	-7.2679	-0.1831
1052	SLE RA 6	-0.56	-0.23	41.71	-10.4131	-7.3817	-0.1911
1052	SLE RA 7	-0.56	-0.21	41.7	-10.4104	-7.3794	-0.1876
1052	SLE RA 8	-0.56	-0.24	41.47	-10.353	-7.3388	-0.1908
1052	SLE RA 9	-0.56	-0.22	41.45	-10.3503	-7.3365	-0.1874
1052	SLE RA 10	-0.6	-0.21	44.13	-11.0195	-7.8083	-0.1954
1052	SLE RA 11	-0.6	-0.24	44.77	-11.1786	-7.9222	-0.2033
1052	SLE RA 12	-0.6	-0.22	44.76	-11.1759	-7.9199	-0.1999
1052	SLE RA 13	-0.6	-0.21	44.51	-11.1139	-7.8754	-0.1973
1052	SLE RA 14	-0.61	-0.24	45.15	-11.273	-7.9892	-0.2053
1052	SLE RA 15	-0.61	-0.22	45.14	-11.2703	-7.9869	-0.2018
1052	SLE RA 16	-0.61	-0.25	44.91	-11.2129	-7.9463	-0.205
1052	SLE RA 17	-0.61	-0.23	44.89	-11.2102	-7.944	-0.2015
1052	SLE RA 18	-0.62	-0.24	45.62	-11.3925	-8.0725	-0.2072
1052	SLE RA 19	-0.62	-0.22	45.61	-11.3898	-8.0702	-0.2038
1052	SLE RA 20	-0.62	-0.25	46	-11.487	-8.1396	-0.2091
1052	SLE RA 21	-0.62	-0.23	45.99	-11.4842	-8.1373	-0.2057
1052	SLE FR 1	-0.55	-0.23	40.71	-10.1641	-7.2047	-0.187
1052	SLE FR 2	-0.55	-0.22	40.7	-10.1632	-7.2039	-0.1858
1052	SLE FR 3	-0.55	-0.23	40.86	-10.2019	-7.2315	-0.1877
1052	SLE FR 4	-0.57	-0.23	42.18	-10.5317	-7.4643	-0.1919
1052	SLE FR 5	-0.57	-0.24	42.33	-10.5704	-7.4919	-0.1938
1052	SLE FR 6	-0.58	-0.24	43.17	-10.7783	-7.6386	-0.1971
1052	SLE QP 1	-0.55	-0.23	40.71	-10.1641	-7.2047	-0.187
1052	SLE QP 2	-0.57	-0.23	42.18	-10.5326	-7.465	-0.193
1052	SLD 1	3.4	0.12	47.67	-11.8727	-8.4101	0.954
1052	SLD 2	2.96	-0.17	47.98	-11.9482	-8.4646	0.7883
1052	SLD 3	3.32	-0.81	48.45	-12.0476	-8.5494	0.7719
1052	SLD 4	2.89	-1.1	48.77	-12.1231	-8.6039	0.6062
1052	SLD 5	0.81	1.33	42.58	-10.6559	-7.5276	0.4567
1052	SLD 6	0.53	1.14	42.79	-10.7054	-7.5633	0.3481
1052	SLD 7	0.56	-1.76	45.2	-11.2391	-7.9919	-0.1503
1052	SLD 8	0.28	-1.95	45.4	-11.2886	-8.0276	-0.2589
1052	SLD 9	-1.41	1.48	38.96	-9.7767	-6.9024	-0.1271
1052	SLD 10	-1.69	1.29	39.17	-9.8262	-6.9381	-0.2357
1052	SLD 11	-1.67	-1.61	41.58	-10.3599	-7.3668	-0.7342
1052	SLD 12	-1.95	-1.8	41.78	-10.4094	-7.4025	-0.8428
1052	SLD 13	-4.02	0.63	35.6	-8.9422	-6.3262	-0.9923
1052	SLD 14	-4.45	0.34	35.91	-9.0177	-6.3807	-1.1579
1052	SLD 15	-4.1	-0.3	36.38	-9.1171	-6.4655	-1.1744
1052	SLD 16	-4.53	-0.59	36.7	-9.1926	-6.52	-1.34
1052	SLV 1	8.7	0.56	55.05	-13.6752	-9.6818	2.4836
1052	SLV 2	7.7	-0.11	55.79	-13.8511	-9.8086	2.0978
1052	SLV 3	8.52	-1.56	56.83	-14.0717	-9.9975	2.0685
1052	SLV 4	7.52	-2.23	57.56	-14.2476	-10.1244	1.6827
1052	SLV 5	2.65	3.33	43.22	-10.8438	-7.6293	1.3059

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1052	SLV 6	2.01	2.89	43.69	-10.9571	-7.711	1.0573
1052	SLV 7	2.06	-3.72	49.15	-12.1654	-8.6819	-0.0776
1052	SLV 8	1.42	-4.16	49.62	-12.2787	-8.7636	-0.3262
1052	SLV 9	-2.55	3.69	34.74	-8.7866	-6.1665	-0.0598
1052	SLV 10	-3.2	3.25	35.22	-8.8999	-6.2482	-0.3085
1052	SLV 11	-3.14	-3.36	40.67	-10.1082	-7.219	-1.4433
1052	SLV 12	-3.79	-3.8	41.15	-10.2215	-7.3008	-1.6919
1052	SLV 13	-8.65	1.76	26.8	-6.8177	-4.8057	-2.0688
1052	SLV 14	-9.66	1.09	27.54	-6.9936	-4.9325	-2.4546
1052	SLV 15	-8.83	-0.36	28.58	-7.2142	-5.1215	-2.4838
1052	SLV 16	-9.84	-1.03	29.32	-7.3901	-5.2483	-2.8696
1052	CRTFP Ux+	0	0	0	0	0	0
1052	CRTFP Ux-	0	0	0	0	0	0
1052	CRTFP Uy+	0	0	0	0	0	0
1052	CRTFP Uy-	0	0	0	0	0	0
1054	SLU 1	-0.49	-0.21	35.39	-10.857	-0.9369	-0.1755
1054	SLU 2	-0.49	-0.17	35.37	-10.8508	-0.9362	-0.1745
1054	SLU 3	-0.5	-0.21	36.23	-11.1111	-0.959	-0.1797
1054	SLU 4	-0.5	-0.18	36.22	-11.1073	-0.9586	-0.179
1054	SLU 5	-0.49	-0.17	35.88	-11.0062	-0.9496	-0.1772
1054	SLU 6	-0.5	-0.22	36.75	-11.2665	-0.9725	-0.1823
1054	SLU 7	-0.5	-0.19	36.73	-11.2627	-0.9721	-0.1817
1054	SLU 8	-0.5	-0.22	36.42	-11.1678	-0.9639	-0.1809
1054	SLU 9	-0.5	-0.19	36.4	-11.1641	-0.9634	-0.1803
1054	SLU 10	-0.55	-0.18	40.01	-12.2671	-1.0587	-0.1977
1054	SLU 11	-0.56	-0.22	40.88	-12.5274	-1.0815	-0.2029
1054	SLU 12	-0.56	-0.2	40.86	-12.5237	-1.0811	-0.2023
1054	SLU 13	-0.56	-0.18	40.52	-12.4225	-1.0722	-0.2004
1054	SLU 14	-0.57	-0.23	41.39	-12.6828	-1.095	-0.2056
1054	SLU 15	-0.57	-0.2	41.37	-12.6791	-1.0946	-0.205
1054	SLU 16	-0.57	-0.23	41.06	-12.5842	-1.0864	-0.2041
1054	SLU 17	-0.57	-0.21	41.05	-12.5804	-1.086	-0.2035
1054	SLU 18	-0.58	-0.23	42.03	-12.8804	-1.1119	-0.2086
1054	SLU 19	-0.58	-0.2	42.01	-12.8766	-1.1115	-0.208
1054	SLU 20	-0.59	-0.23	42.54	-13.0358	-1.1254	-0.2113
1054	SLU 21	-0.59	-0.21	42.53	-13.032	-1.125	-0.2107
1054	SLU 22	-0.55	-0.21	40.04	-12.2711	-1.0595	-0.1982
1054	SLU 23	-0.55	-0.17	40.02	-12.2649	-1.0588	-0.1972
1054	SLU 24	-0.56	-0.21	40.88	-12.5252	-1.0816	-0.2024
1054	SLU 25	-0.56	-0.18	40.87	-12.5214	-1.0812	-0.2018
1054	SLU 26	-0.56	-0.17	40.53	-12.4203	-1.0722	-0.1999
1054	SLU 27	-0.57	-0.21	41.4	-12.6806	-1.0951	-0.2051
1054	SLU 28	-0.57	-0.19	41.38	-12.6768	-1.0947	-0.2045
1054	SLU 29	-0.57	-0.22	41.07	-12.5819	-1.0865	-0.2036
1054	SLU 30	-0.57	-0.19	41.05	-12.5782	-1.086	-0.203
1054	SLU 31	-0.62	-0.18	44.66	-13.6812	-1.1813	-0.2205
1054	SLU 32	-0.63	-0.22	45.53	-13.9415	-1.2042	-0.2256
1054	SLU 33	-0.63	-0.19	45.51	-13.9378	-1.2037	-0.225
1054	SLU 34	-0.62	-0.18	45.17	-13.8366	-1.1948	-0.2232
1054	SLU 35	-0.64	-0.23	46.04	-14.0969	-1.2176	-0.2283
1054	SLU 36	-0.64	-0.2	46.02	-14.0932	-1.2172	-0.2277
1054	SLU 37	-0.63	-0.23	45.71	-13.9983	-1.209	-0.2269
1054	SLU 38	-0.63	-0.2	45.7	-13.9945	-1.2086	-0.2263
1054	SLU 39	-0.64	-0.23	46.68	-14.2945	-1.2345	-0.2314
1054	SLU 40	-0.64	-0.2	46.66	-14.2907	-1.2341	-0.2308
1054	SLU 41	-0.65	-0.23	47.19	-14.4499	-1.248	-0.2341
1054	SLU 42	-0.65	-0.2	47.18	-14.4461	-1.2476	-0.2335
1054	SLU 43	-0.61	-0.28	44.42	-13.6293	-1.1759	-0.2203
1054	SLU 44	-0.61	-0.23	44.39	-13.6231	-1.1752	-0.2193
1054	SLU 45	-0.62	-0.28	45.26	-13.8833	-1.1981	-0.2245
1054	SLU 46	-0.62	-0.25	45.24	-13.8796	-1.1976	-0.2239
1054	SLU 47	-0.62	-0.24	44.9	-13.7785	-1.1887	-0.222
1054	SLU 48	-0.63	-0.28	45.77	-14.0387	-1.2115	-0.2272
1054	SLU 49	-0.63	-0.25	45.75	-14.035	-1.2111	-0.2266
1054	SLU 50	-0.62	-0.28	45.44	-13.9401	-1.2029	-0.2257
1054	SLU 51	-0.62	-0.26	45.42	-13.9364	-1.2025	-0.2251
1054	SLU 52	-0.67	-0.24	49.04	-15.0394	-1.2977	-0.2425
1054	SLU 53	-0.69	-0.29	49.9	-15.2997	-1.3206	-0.2477
1054	SLU 54	-0.69	-0.26	49.89	-15.2959	-1.3201	-0.2471
1054	SLU 55	-0.68	-0.25	49.55	-15.1948	-1.3112	-0.2452
1054	SLU 56	-0.69	-0.29	50.41	-15.4551	-1.3341	-0.2504
1054	SLU 57	-0.69	-0.26	50.4	-15.4513	-1.3336	-0.2498
1054	SLU 58	-0.69	-0.3	50.09	-15.3564	-1.3254	-0.2489
1054	SLU 59	-0.69	-0.27	50.07	-15.3527	-1.325	-0.2483
1054	SLU 60	-0.7	-0.29	51.05	-15.6526	-1.351	-0.2535
1054	SLU 61	-0.7	-0.27	51.04	-15.6489	-1.3505	-0.2529
1054	SLU 62	-0.71	-0.3	51.57	-15.808	-1.3645	-0.2562
1054	SLU 63	-0.71	-0.27	51.55	-15.8043	-1.364	-0.2556
1054	SLU 64	-0.67	-0.27	49.07	-15.0434	-1.2985	-0.2431
1054	SLU 65	-0.67	-0.23	49.04	-15.0372	-1.2978	-0.2421
1054	SLU 66	-0.69	-0.27	49.91	-15.2974	-1.3207	-0.2473
1054	SLU 67	-0.69	-0.25	49.89	-15.2937	-1.3202	-0.2467
1054	SLU 68	-0.68	-0.23	49.55	-15.1926	-1.3113	-0.2448
1054	SLU 69	-0.69	-0.28	50.42	-15.4528	-1.3342	-0.25
1054	SLU 70	-0.69	-0.25	50.4	-15.4491	-1.3337	-0.2494
1054	SLU 71	-0.69	-0.28	50.09	-15.3542	-1.3255	-0.2485
1054	SLU 72	-0.69	-0.26	50.08	-15.3505	-1.3251	-0.2479
1054	SLU 73	-0.74	-0.24	53.69	-16.4535	-1.4203	-0.2653
1054	SLU 74	-0.75	-0.29	54.55	-16.7138	-1.4432	-0.2705
1054	SLU 75	-0.75	-0.26	54.54	-16.71	-1.4427	-0.2699

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1054	SLU 76	-0.75	-0.25	54.2	-16.6089	-1.4338	-0.268
1054	SLU 77	-0.76	-0.29	55.06	-16.8692	-1.4567	-0.2732
1054	SLU 78	-0.76	-0.26	55.05	-16.8654	-1.4562	-0.2726
1054	SLU 79	-0.75	-0.29	54.74	-16.7705	-1.448	-0.2717
1054	SLU 80	-0.75	-0.27	54.72	-16.7668	-1.4476	-0.2711
1054	SLU 81	-0.77	-0.29	55.7	-17.0667	-1.4736	-0.2763
1054	SLU 82	-0.77	-0.27	55.69	-17.063	-1.4731	-0.2757
1054	SLU 83	-0.77	-0.3	56.22	-17.2221	-1.4871	-0.2789
1054	SLU 84	-0.78	-0.27	56.2	-17.2184	-1.4866	-0.2783
1054	SLE RA 1	-0.5	-0.21	36.72	-11.2611	-0.9719	-0.182
1054	SLE RA 2	-0.5	-0.18	36.7	-11.2569	-0.9714	-0.1813
1054	SLE RA 3	-0.51	-0.21	37.28	-11.4304	-0.9867	-0.1848
1054	SLE RA 4	-0.51	-0.19	37.27	-11.4279	-0.9864	-0.1844
1054	SLE RA 5	-0.51	-0.18	37.05	-11.3605	-0.9804	-0.1831
1054	SLE RA 6	-0.52	-0.21	37.62	-11.534	-0.9957	-0.1866
1054	SLE RA 7	-0.52	-0.2	37.61	-11.5315	-0.9954	-0.1862
1054	SLE RA 8	-0.51	-0.22	37.41	-11.4683	-0.9899	-0.1856
1054	SLE RA 9	-0.51	-0.2	37.39	-11.4658	-0.9896	-0.1852
1054	SLE RA 10	-0.55	-0.19	39.8	-12.2011	-1.0531	-0.1968
1054	SLE RA 11	-0.56	-0.22	40.38	-12.3746	-1.0684	-0.2002
1054	SLE RA 12	-0.56	-0.2	40.37	-12.3722	-1.0681	-0.1998
1054	SLE RA 13	-0.55	-0.19	40.14	-12.3047	-1.0621	-0.1986
1054	SLE RA 14	-0.56	-0.22	40.72	-12.4782	-1.0774	-0.202
1054	SLE RA 15	-0.56	-0.2	40.71	-12.4758	-1.0771	-0.2016
1054	SLE RA 16	-0.56	-0.23	40.5	-12.4125	-1.0716	-0.2011
1054	SLE RA 17	-0.56	-0.21	40.49	-12.41	-1.0713	-0.2007
1054	SLE RA 18	-0.57	-0.22	41.15	-12.6099	-1.0886	-0.2041
1054	SLE RA 19	-0.57	-0.21	41.14	-12.6075	-1.0883	-0.2037
1054	SLE RA 20	-0.57	-0.23	41.49	-12.7135	-1.0976	-0.2059
1054	SLE RA 21	-0.57	-0.21	41.48	-12.7111	-1.0973	-0.2055
1054	SLE FR 1	-0.5	-0.21	36.72	-11.2611	-0.9719	-0.182
1054	SLE FR 2	-0.5	-0.21	36.72	-11.2602	-0.9718	-0.1819
1054	SLE FR 3	-0.51	-0.21	36.86	-11.3025	-0.9755	-0.1827
1054	SLE FR 4	-0.52	-0.21	38.05	-11.6649	-1.0068	-0.1885
1054	SLE FR 5	-0.52	-0.22	38.19	-11.7072	-1.0105	-0.1893
1054	SLE FR 6	-0.53	-0.22	38.93	-11.9355	-1.0303	-0.193
1054	SLE QP 1	-0.5	-0.21	36.72	-11.2611	-0.9719	-0.182
1054	SLE QP 2	-0.52	-0.22	38.05	-11.6657	-1.0069	-0.1886
1054	SLD 1	3.24	0.12	42.8	-13.1067	-1.1259	1.1379
1054	SLD 2	2.83	-0.15	43.07	-13.1825	-1.1327	0.9896
1054	SLD 3	3.17	-0.76	43.49	-13.2755	-1.1439	1.0935
1054	SLD 4	2.76	-1.02	43.76	-13.3514	-1.1507	0.9451
1054	SLD 5	0.78	1.25	38.38	-11.8284	-1.014	0.3031
1054	SLD 6	0.52	1.08	38.56	-11.8781	-1.0185	0.2059
1054	SLD 7	0.55	-1.65	40.68	-12.3913	-1.0742	0.155
1054	SLD 8	0.28	-1.83	40.86	-12.441	-1.0787	0.0577
1054	SLD 9	-1.33	1.39	35.24	-10.8904	-0.9352	-0.435
1054	SLD 10	-1.59	1.22	35.42	-10.9401	-0.9396	-0.5322
1054	SLD 11	-1.56	-1.51	37.54	-11.4533	-0.9954	-0.5831
1054	SLD 12	-1.83	-1.68	37.72	-11.5031	-0.9998	-0.6804
1054	SLD 13	-3.81	0.59	32.34	-9.9801	-0.8631	-1.3224
1054	SLD 14	-4.21	0.33	32.61	-10.0559	-0.8699	-1.4707
1054	SLD 15	-3.88	-0.28	33.03	-10.1489	-0.8812	-1.3668
1054	SLD 16	-4.28	-0.55	33.3	-10.2248	-0.888	-1.5152
1054	SLV 1	8.27	0.53	49.19	-15.0441	-1.286	2.9122
1054	SLV 2	7.33	-0.08	49.83	-15.2207	-1.3018	2.5667
1054	SLV 3	8.1	-1.46	50.76	-15.4272	-1.3269	2.8105
1054	SLV 4	7.16	-2.07	51.39	-15.6038	-1.3427	2.465
1054	SLV 5	2.52	3.13	38.92	-12.0678	-1.0258	0.9555
1054	SLV 6	1.92	2.73	39.32	-12.1816	-1.036	0.7328
1054	SLV 7	1.98	-3.5	44.12	-13.3448	-1.1623	0.6163
1054	SLV 8	1.37	-3.89	44.53	-13.4586	-1.1725	0.3936
1054	SLV 9	-2.42	3.46	31.57	-9.8728	-0.8414	-0.7709
1054	SLV 10	-3.03	3.07	31.98	-9.9867	-0.8515	-0.9935
1054	SLV 11	-2.96	-3.17	36.78	-11.1498	-0.9779	-1.11
1054	SLV 12	-3.57	-3.56	37.18	-11.2637	-0.9881	-1.3327
1054	SLV 13	-8.21	1.64	24.71	-7.7276	-0.6711	-2.8422
1054	SLV 14	-9.15	1.03	25.34	-7.9043	-0.6869	-3.1877
1054	SLV 15	-8.37	-0.35	26.27	-8.1107	-0.7121	-2.944
1054	SLV 16	-9.31	-0.96	26.91	-8.2874	-0.7279	-3.2895
1054	CRTFP Ux+	0	0	0	0	0	0
1054	CRTFP Ux-	0	0	0	0	0	0
1054	CRTFP Uy+	0	0	0	0	0	0
1054	CRTFP Uy-	0	0	0	0	0	0
1055	SLU 1	-0.55	-0.24	39.08	-11.0663	0.0761	-0.1919
1055	SLU 2	-0.55	-0.18	39.05	-11.0606	0.076	-0.1923
1055	SLU 3	-0.56	-0.23	40	-11.3216	0.078	-0.1967
1055	SLU 4	-0.56	-0.2	39.99	-11.3181	0.078	-0.1969
1055	SLU 5	-0.56	-0.19	39.61	-11.2168	0.0772	-0.1952
1055	SLU 6	-0.57	-0.24	40.57	-11.4778	0.0792	-0.1996
1055	SLU 7	-0.57	-0.21	40.55	-11.4744	0.0792	-0.1998
1055	SLU 8	-0.57	-0.24	40.21	-11.3788	0.0784	-0.1978
1055	SLU 9	-0.57	-0.21	40.19	-11.3753	0.0784	-0.198
1055	SLU 10	-0.63	-0.2	44.16	-12.4886	0.0866	-0.2185
1055	SLU 11	-0.64	-0.25	45.11	-12.7497	0.0886	-0.2229
1055	SLU 12	-0.64	-0.22	45.1	-12.7462	0.0885	-0.2231
1055	SLU 13	-0.63	-0.2	44.72	-12.6448	0.0878	-0.2214
1055	SLU 14	-0.65	-0.25	45.68	-12.9059	0.0897	-0.2259
1055	SLU 15	-0.65	-0.22	45.66	-12.9024	0.0897	-0.2261
1055	SLU 16	-0.64	-0.26	45.32	-12.8068	0.089	-0.224

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLU 17	-0.64	-0.23	45.3	-12.8034	0.089	-0.2242
1055	SLU 18	-0.66	-0.25	46.38	-13.1064	0.0912	-0.2294
1055	SLU 19	-0.66	-0.22	46.36	-13.1029	0.0911	-0.2296
1055	SLU 20	-0.67	-0.26	46.94	-13.2626	0.0923	-0.2323
1055	SLU 21	-0.67	-0.23	46.93	-13.2592	0.0923	-0.2325
1055	SLU 22	-0.62	-0.23	44.19	-12.4906	0.0867	-0.218
1055	SLU 23	-0.63	-0.18	44.16	-12.4848	0.0867	-0.2183
1055	SLU 24	-0.64	-0.23	45.12	-12.7459	0.0887	-0.2228
1055	SLU 25	-0.64	-0.2	45.1	-12.7424	0.0886	-0.223
1055	SLU 26	-0.63	-0.18	44.73	-12.641	0.0879	-0.2213
1055	SLU 27	-0.65	-0.23	45.68	-12.9021	0.0898	-0.2257
1055	SLU 28	-0.65	-0.2	45.66	-12.8986	0.0898	-0.2259
1055	SLU 29	-0.64	-0.24	45.32	-12.8031	0.0891	-0.2239
1055	SLU 30	-0.64	-0.21	45.3	-12.7996	0.0891	-0.2241
1055	SLU 31	-0.7	-0.19	49.27	-13.9129	0.0972	-0.2446
1055	SLU 32	-0.71	-0.24	50.23	-14.1739	0.0992	-0.249
1055	SLU 33	-0.71	-0.21	50.21	-14.1705	0.0992	-0.2492
1055	SLU 34	-0.71	-0.2	49.84	-14.0691	0.0984	-0.2475
1055	SLU 35	-0.72	-0.24	50.79	-14.3302	0.1004	-0.2519
1055	SLU 36	-0.72	-0.21	50.77	-14.3267	0.1004	-0.2521
1055	SLU 37	-0.72	-0.25	50.43	-14.2311	0.0997	-0.2501
1055	SLU 38	-0.72	-0.22	50.41	-14.2276	0.0996	-0.2503
1055	SLU 39	-0.73	-0.25	51.5	-14.5307	0.1018	-0.2555
1055	SLU 40	-0.73	-0.22	51.48	-14.5272	0.1018	-0.2557
1055	SLU 41	-0.74	-0.25	52.06	-14.6869	0.103	-0.2584
1055	SLU 42	-0.74	-0.22	52.04	-14.6834	0.103	-0.2586
1055	SLU 43	-0.69	-0.31	49.05	-13.8979	0.0952	-0.2406
1055	SLU 44	-0.69	-0.26	49.02	-13.8921	0.0952	-0.2409
1055	SLU 45	-0.7	-0.31	49.98	-14.1532	0.0972	-0.2453
1055	SLU 46	-0.7	-0.28	49.96	-14.1497	0.0971	-0.2455
1055	SLU 47	-0.7	-0.26	49.58	-14.0484	0.0964	-0.2438
1055	SLU 48	-0.71	-0.31	50.54	-14.3094	0.0983	-0.2483
1055	SLU 49	-0.71	-0.28	50.52	-14.3059	0.0983	-0.2485
1055	SLU 50	-0.71	-0.32	50.18	-14.2104	0.0976	-0.2464
1055	SLU 51	-0.71	-0.29	50.16	-14.2069	0.0976	-0.2466
1055	SLU 52	-0.77	-0.27	54.13	-15.3202	0.1057	-0.2671
1055	SLU 53	-0.78	-0.32	55.09	-15.5812	0.1077	-0.2716
1055	SLU 54	-0.78	-0.29	55.07	-15.5778	0.1077	-0.2718
1055	SLU 55	-0.77	-0.27	54.69	-15.4764	0.1069	-0.2701
1055	SLU 56	-0.79	-0.32	55.65	-15.7375	0.1089	-0.2745
1055	SLU 57	-0.79	-0.29	55.63	-15.734	0.1089	-0.2747
1055	SLU 58	-0.78	-0.33	55.29	-15.6384	0.1082	-0.2727
1055	SLU 59	-0.78	-0.3	55.27	-15.635	0.1081	-0.2729
1055	SLU 60	-0.8	-0.33	56.35	-15.938	0.1103	-0.2781
1055	SLU 61	-0.8	-0.3	56.33	-15.9345	0.1103	-0.2783
1055	SLU 62	-0.8	-0.33	56.92	-16.0942	0.1115	-0.281
1055	SLU 63	-0.81	-0.3	56.9	-16.0908	0.1115	-0.2812
1055	SLU 64	-0.76	-0.3	54.17	-15.3222	0.1059	-0.2667
1055	SLU 65	-0.76	-0.25	54.13	-15.3164	0.1058	-0.267
1055	SLU 66	-0.78	-0.3	55.09	-15.5775	0.1078	-0.2714
1055	SLU 67	-0.78	-0.27	55.07	-15.574	0.1078	-0.2716
1055	SLU 68	-0.77	-0.26	54.7	-15.4726	0.107	-0.2699
1055	SLU 69	-0.79	-0.31	55.65	-15.7337	0.109	-0.2744
1055	SLU 70	-0.79	-0.27	55.63	-15.7302	0.109	-0.2745
1055	SLU 71	-0.78	-0.31	55.29	-15.6346	0.1083	-0.2725
1055	SLU 72	-0.78	-0.28	55.27	-15.6312	0.1082	-0.2727
1055	SLU 73	-0.84	-0.26	59.25	-16.7445	0.1164	-0.2932
1055	SLU 74	-0.85	-0.31	60.2	-17.0055	0.1184	-0.2977
1055	SLU 75	-0.85	-0.28	60.18	-17.002	0.1184	-0.2979
1055	SLU 76	-0.85	-0.27	59.81	-16.9007	0.1176	-0.2961
1055	SLU 77	-0.86	-0.32	60.76	-17.1617	0.1196	-0.3006
1055	SLU 78	-0.86	-0.29	60.74	-17.1583	0.1195	-0.3008
1055	SLU 79	-0.86	-0.32	60.4	-17.0627	0.1188	-0.2987
1055	SLU 80	-0.86	-0.29	60.38	-17.0592	0.1188	-0.2989
1055	SLU 81	-0.87	-0.32	61.47	-17.3623	0.121	-0.3041
1055	SLU 82	-0.87	-0.29	61.45	-17.3588	0.1209	-0.3043
1055	SLU 83	-0.88	-0.32	62.03	-17.5185	0.1222	-0.3071
1055	SLU 84	-0.88	-0.29	62.01	-17.515	0.1221	-0.3073
1055	SLE RA 1	-0.57	-0.23	40.54	-11.4733	0.0791	-0.1994
1055	SLE RA 2	-0.57	-0.2	40.52	-11.4694	0.0791	-0.1996
1055	SLE RA 3	-0.58	-0.23	41.16	-11.6435	0.0804	-0.2026
1055	SLE RA 4	-0.58	-0.21	41.15	-11.6411	0.0804	-0.2027
1055	SLE RA 5	-0.58	-0.2	40.9	-11.5736	0.0799	-0.2016
1055	SLE RA 6	-0.59	-0.24	41.53	-11.7476	0.0812	-0.2045
1055	SLE RA 7	-0.59	-0.22	41.52	-11.7453	0.0812	-0.2046
1055	SLE RA 8	-0.58	-0.24	41.29	-11.6816	0.0807	-0.2033
1055	SLE RA 9	-0.58	-0.22	41.28	-11.6793	0.0807	-0.2034
1055	SLE RA 10	-0.62	-0.21	43.93	-12.4215	0.0861	-0.2171
1055	SLE RA 11	-0.63	-0.24	44.56	-12.5955	0.0874	-0.2201
1055	SLE RA 12	-0.63	-0.22	44.55	-12.5932	0.0874	-0.2202
1055	SLE RA 13	-0.63	-0.21	44.3	-12.5256	0.0869	-0.219
1055	SLE RA 14	-0.64	-0.24	44.94	-12.6996	0.0882	-0.222
1055	SLE RA 15	-0.64	-0.22	44.93	-12.6973	0.0882	-0.2221
1055	SLE RA 16	-0.63	-0.25	44.7	-12.6336	0.0877	-0.2208
1055	SLE RA 17	-0.63	-0.23	44.69	-12.6313	0.0877	-0.2209
1055	SLE RA 18	-0.64	-0.25	45.41	-12.8333	0.0892	-0.2244
1055	SLE RA 19	-0.64	-0.23	45.4	-12.831	0.0891	-0.2245
1055	SLE RA 20	-0.65	-0.25	45.78	-12.9375	0.09	-0.2263
1055	SLE RA 21	-0.65	-0.23	45.77	-12.9352	0.0899	-0.2265
1055	SLE FR 1	-0.57	-0.23	40.54	-11.4733	0.0791	-0.1994

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLE FR 2	-0.57	-0.23	40.54	-11.4725	0.0791	-0.1994
1055	SLE FR 3	-0.57	-0.24	40.69	-11.5149	0.0794	-0.2002
1055	SLE FR 4	-0.59	-0.23	42	-11.8805	0.0821	-0.2069
1055	SLE FR 5	-0.59	-0.24	42.15	-11.923	0.0824	-0.2077
1055	SLE FR 6	-0.61	-0.24	42.98	-12.1533	0.0841	-0.2119
1055	SLE QP 1	-0.57	-0.23	40.54	-11.4733	0.0791	-0.1994
1055	SLE QP 2	-0.59	-0.24	42	-11.8813	0.0821	-0.2069
1055	SLD 1	3.82	0.15	46.92	-13.2558	0.1033	1.3377
1055	SLD 2	3.35	-0.14	47.2	-13.3261	0.1045	1.1727
1055	SLD 3	3.74	-0.85	47.68	-13.4246	0.1052	1.3094
1055	SLD 4	3.26	-1.14	47.96	-13.4949	0.1064	1.1444
1055	SLD 5	0.94	1.46	42.28	-12.0251	0.0854	0.3288
1055	SLD 6	0.63	1.27	42.46	-12.0711	0.0862	0.2206
1055	SLD 7	0.67	-1.9	44.8	-12.5879	0.0917	0.2344
1055	SLD 8	0.36	-2.09	44.99	-12.634	0.0925	0.1262
1055	SLD 9	-1.54	1.61	39.02	-11.1286	0.0717	-0.54
1055	SLD 10	-1.85	1.42	39.2	-11.1747	0.0725	-0.6482
1055	SLD 11	-1.81	-1.74	41.54	-11.6914	0.0781	-0.6344
1055	SLD 12	-2.12	-1.93	41.73	-11.7375	0.0789	-0.7425
1055	SLD 13	-4.45	0.67	36.04	-10.2677	0.0578	-1.5582
1055	SLD 14	-4.92	0.38	36.33	-10.338	0.059	-1.7232
1055	SLD 15	-4.53	-0.34	36.8	-10.4365	0.0597	-1.5865
1055	SLD 16	-5.01	-0.63	37.08	-10.5068	0.0609	-1.7515
1055	SLV 1	9.72	0.64	53.54	-15.1036	0.1318	3.4047
1055	SLV 2	8.62	-0.03	54.2	-15.2673	0.1346	3.0205
1055	SLV 3	9.53	-1.65	55.26	-15.4878	0.1362	3.3393
1055	SLV 4	8.43	-2.32	55.92	-15.6515	0.1389	2.955
1055	SLV 5	2.98	3.62	42.75	-12.2371	0.0899	1.0421
1055	SLV 6	2.27	3.19	43.17	-12.3426	0.0917	0.7944
1055	SLV 7	2.35	-4.02	48.47	-13.5178	0.1045	0.8238
1055	SLV 8	1.64	-4.46	48.9	-13.6232	0.1063	0.5762
1055	SLV 9	-2.82	3.98	35.11	-10.1393	0.058	-0.99
1055	SLV 10	-3.53	3.55	35.53	-10.2448	0.0598	-1.2376
1055	SLV 11	-3.45	-3.66	40.84	-11.42	0.0726	-1.2082
1055	SLV 12	-4.16	-4.09	41.26	-11.5255	0.0743	-1.4559
1055	SLV 13	-9.62	1.85	28.09	-8.1111	0.0253	-3.3688
1055	SLV 14	-10.72	1.18	28.74	-8.2748	0.0281	-3.753
1055	SLV 15	-9.81	-0.45	29.81	-8.4952	0.0297	-3.4342
1055	SLV 16	-10.91	-1.12	30.46	-8.6589	0.0325	-3.8185
1055	CRTFP Ux+	0	0	0	0	0	0
1055	CRTFP Ux-	0	0	0	0	0	0
1055	CRTFP Uy+	0	0	0	0	0	0
1055	CRTFP Uy-	0	0	0	0	0	0
1056	SLU 1	-0.53	-0.21	36.87	-9.5583	0.0624	-0.1849
1056	SLU 2	-0.53	-0.16	36.84	-9.5534	0.0624	-0.1852
1056	SLU 3	-0.54	-0.21	37.73	-9.7751	0.064	-0.1895
1056	SLU 4	-0.54	-0.18	37.72	-9.7722	0.064	-0.1896
1056	SLU 5	-0.54	-0.17	37.37	-9.6861	0.0634	-0.188
1056	SLU 6	-0.55	-0.22	38.26	-9.9078	0.065	-0.1923
1056	SLU 7	-0.55	-0.19	38.24	-9.9049	0.0649	-0.1925
1056	SLU 8	-0.55	-0.22	37.92	-9.8237	0.0644	-0.1905
1056	SLU 9	-0.55	-0.19	37.91	-9.8208	0.0643	-0.1907
1056	SLU 10	-0.6	-0.18	41.64	-10.7729	0.0709	-0.2108
1056	SLU 11	-0.62	-0.22	42.54	-10.9946	0.0725	-0.2151
1056	SLU 12	-0.62	-0.19	42.52	-10.9917	0.0725	-0.2153
1056	SLU 13	-0.61	-0.18	42.17	-10.9056	0.0719	-0.2136
1056	SLU 14	-0.63	-0.23	43.07	-11.1273	0.0735	-0.2179
1056	SLU 15	-0.63	-0.2	43.05	-11.1244	0.0735	-0.2181
1056	SLU 16	-0.62	-0.23	42.73	-11.0432	0.0729	-0.2161
1056	SLU 17	-0.62	-0.2	42.71	-11.0403	0.0729	-0.2163
1056	SLU 18	-0.64	-0.23	43.73	-11.3004	0.0746	-0.2214
1056	SLU 19	-0.64	-0.2	43.71	-11.2975	0.0746	-0.2216
1056	SLU 20	-0.64	-0.23	44.26	-11.4331	0.0756	-0.2242
1056	SLU 21	-0.64	-0.2	44.24	-11.4302	0.0756	-0.2244
1056	SLU 22	-0.6	-0.21	41.67	-10.7724	0.0711	-0.2102
1056	SLU 23	-0.6	-0.16	41.64	-10.7675	0.071	-0.2105
1056	SLU 24	-0.62	-0.2	42.54	-10.9892	0.0726	-0.2148
1056	SLU 25	-0.62	-0.17	42.52	-10.9863	0.0726	-0.215
1056	SLU 26	-0.61	-0.16	42.17	-10.9002	0.072	-0.2133
1056	SLU 27	-0.62	-0.21	43.07	-11.1219	0.0736	-0.2176
1056	SLU 28	-0.63	-0.18	43.05	-11.1189	0.0736	-0.2178
1056	SLU 29	-0.62	-0.21	42.73	-11.0377	0.073	-0.2158
1056	SLU 30	-0.62	-0.18	42.71	-11.0348	0.073	-0.216
1056	SLU 31	-0.68	-0.17	46.45	-11.987	0.0796	-0.2362
1056	SLU 32	-0.69	-0.21	47.34	-12.2086	0.0812	-0.2404
1056	SLU 33	-0.69	-0.18	47.33	-12.2057	0.0812	-0.2406
1056	SLU 34	-0.69	-0.17	46.97	-12.1197	0.0805	-0.239
1056	SLU 35	-0.7	-0.22	47.87	-12.3413	0.0821	-0.2432
1056	SLU 36	-0.7	-0.19	47.85	-12.3384	0.0821	-0.2434
1056	SLU 37	-0.69	-0.22	47.53	-12.2572	0.0815	-0.2414
1056	SLU 38	-0.69	-0.19	47.51	-12.2543	0.0815	-0.2416
1056	SLU 39	-0.71	-0.22	48.54	-12.5145	0.0833	-0.2468
1056	SLU 40	-0.71	-0.19	48.52	-12.5116	0.0832	-0.247
1056	SLU 41	-0.72	-0.23	49.06	-12.6472	0.0842	-0.2496
1056	SLU 42	-0.72	-0.2	49.05	-12.6443	0.0842	-0.2498
1056	SLU 43	-0.66	-0.28	46.28	-12.0095	0.0782	-0.2316
1056	SLU 44	-0.67	-0.23	46.25	-12.0047	0.0781	-0.2319
1056	SLU 45	-0.68	-0.28	47.15	-12.2263	0.0797	-0.2362
1056	SLU 46	-0.68	-0.25	47.13	-12.2234	0.0797	-0.2364
1056	SLU 47	-0.67	-0.24	46.78	-12.1374	0.0791	-0.2347

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1056	SLU 48	-0.69	-0.28	47.67	-12.359	0.0807	-0.239
1056	SLU 49	-0.69	-0.25	47.66	-12.3561	0.0807	-0.2392
1056	SLU 50	-0.68	-0.29	47.34	-12.2749	0.0801	-0.2372
1056	SLU 51	-0.68	-0.26	47.32	-12.272	0.0801	-0.2374
1056	SLU 52	-0.74	-0.24	51.05	-13.2242	0.0867	-0.2576
1056	SLU 53	-0.75	-0.29	51.95	-13.4458	0.0883	-0.2618
1056	SLU 54	-0.75	-0.26	51.93	-13.4429	0.0883	-0.262
1056	SLU 55	-0.75	-0.25	51.58	-13.3569	0.0877	-0.2604
1056	SLU 56	-0.76	-0.29	52.48	-13.5785	0.0893	-0.2646
1056	SLU 57	-0.76	-0.26	52.46	-13.5756	0.0892	-0.2648
1056	SLU 58	-0.75	-0.3	52.14	-13.4944	0.0887	-0.2628
1056	SLU 59	-0.75	-0.27	52.12	-13.4915	0.0886	-0.263
1056	SLU 60	-0.77	-0.3	53.14	-13.7516	0.0904	-0.2682
1056	SLU 61	-0.77	-0.27	53.13	-13.7487	0.0904	-0.2684
1056	SLU 62	-0.78	-0.3	53.67	-13.8843	0.0913	-0.271
1056	SLU 63	-0.78	-0.27	53.65	-13.8814	0.0913	-0.2712
1056	SLU 64	-0.74	-0.27	51.08	-13.2236	0.0868	-0.257
1056	SLU 65	-0.74	-0.22	51.05	-13.2187	0.0868	-0.2573
1056	SLU 66	-0.75	-0.27	51.95	-13.4404	0.0884	-0.2616
1056	SLU 67	-0.75	-0.24	51.93	-13.4375	0.0884	-0.2618
1056	SLU 68	-0.75	-0.23	51.58	-13.3514	0.0878	-0.2601
1056	SLU 69	-0.76	-0.27	52.48	-13.5731	0.0894	-0.2644
1056	SLU 70	-0.76	-0.24	52.46	-13.5702	0.0894	-0.2646
1056	SLU 71	-0.75	-0.28	52.14	-13.489	0.0888	-0.2626
1056	SLU 72	-0.75	-0.25	52.12	-13.4861	0.0888	-0.2628
1056	SLU 73	-0.81	-0.23	55.86	-14.4382	0.0953	-0.2829
1056	SLU 74	-0.82	-0.28	56.76	-14.6599	0.0969	-0.2872
1056	SLU 75	-0.82	-0.25	56.74	-14.657	0.0969	-0.2874
1056	SLU 76	-0.82	-0.24	56.39	-14.5709	0.0963	-0.2857
1056	SLU 77	-0.83	-0.29	57.28	-14.7926	0.0979	-0.29
1056	SLU 78	-0.83	-0.26	57.27	-14.7897	0.0979	-0.2902
1056	SLU 79	-0.83	-0.29	56.95	-14.7085	0.0973	-0.2882
1056	SLU 80	-0.83	-0.26	56.93	-14.7056	0.0973	-0.2884
1056	SLU 81	-0.84	-0.29	57.95	-14.9657	0.099	-0.2936
1056	SLU 82	-0.84	-0.26	57.93	-14.9628	0.099	-0.2938
1056	SLU 83	-0.85	-0.29	58.48	-15.0984	0.1	-0.2964
1056	SLU 84	-0.85	-0.26	58.46	-15.0955	0.1	-0.2966
1056	SLE RA 1	-0.55	-0.21	38.24	-9.9052	0.0649	-0.1921
1056	SLE RA 2	-0.55	-0.18	38.22	-9.9019	0.0649	-0.1923
1056	SLE RA 3	-0.56	-0.21	38.82	-10.0497	0.0659	-0.1952
1056	SLE RA 4	-0.56	-0.19	38.81	-10.0478	0.0659	-0.1953
1056	SLE RA 5	-0.56	-0.18	38.57	-9.9904	0.0655	-0.1942
1056	SLE RA 6	-0.57	-0.21	39.17	-10.1382	0.0666	-0.197
1056	SLE RA 7	-0.57	-0.19	39.16	-10.1362	0.0666	-0.1972
1056	SLE RA 8	-0.56	-0.22	38.94	-10.0821	0.0662	-0.1958
1056	SLE RA 9	-0.56	-0.2	38.93	-10.0802	0.0662	-0.196
1056	SLE RA 10	-0.6	-0.19	41.42	-10.7149	0.0706	-0.2094
1056	SLE RA 11	-0.61	-0.22	42.02	-10.8627	0.0716	-0.2122
1056	SLE RA 12	-0.61	-0.2	42.01	-10.8607	0.0716	-0.2124
1056	SLE RA 13	-0.61	-0.19	41.78	-10.8034	0.0712	-0.2113
1056	SLE RA 14	-0.61	-0.22	42.37	-10.9511	0.0723	-0.2141
1056	SLE RA 15	-0.61	-0.2	42.36	-10.9492	0.0723	-0.2142
1056	SLE RA 16	-0.61	-0.22	42.15	-10.8951	0.0719	-0.2129
1056	SLE RA 17	-0.61	-0.2	42.14	-10.8931	0.0719	-0.213
1056	SLE RA 18	-0.62	-0.22	42.82	-11.0666	0.073	-0.2165
1056	SLE RA 19	-0.62	-0.2	42.8	-11.0646	0.073	-0.2166
1056	SLE RA 20	-0.63	-0.22	43.17	-11.155	0.0737	-0.2184
1056	SLE RA 21	-0.63	-0.2	43.16	-11.1531	0.0737	-0.2185
1056	SLE FR 1	-0.55	-0.21	38.24	-9.9052	0.0649	-0.1921
1056	SLE FR 2	-0.55	-0.21	38.24	-9.9045	0.0649	-0.1921
1056	SLE FR 3	-0.55	-0.21	38.38	-9.9406	0.0651	-0.1929
1056	SLE FR 4	-0.57	-0.21	39.61	-10.2529	0.0673	-0.1995
1056	SLE FR 5	-0.57	-0.22	39.75	-10.289	0.0676	-0.2002
1056	SLE FR 6	-0.59	-0.22	40.53	-10.4859	0.069	-0.2043
1056	SLE QP 1	-0.55	-0.21	38.24	-9.9052	0.0649	-0.1921
1056	SLE QP 2	-0.57	-0.22	39.61	-10.2536	0.0673	-0.1994
1056	SLD 1	3.85	0.19	43.87	-11.3123	0.087	1.3499
1056	SLD 2	3.38	-0.09	44.12	-11.366	0.0881	1.1848
1056	SLD 3	3.77	-0.81	44.6	-11.4669	0.0883	1.3218
1056	SLD 4	3.3	-1.08	44.84	-11.5207	0.0894	1.1568
1056	SLD 5	0.96	1.46	39.75	-10.3271	0.0711	0.3373
1056	SLD 6	0.65	1.28	39.91	-10.3623	0.0718	0.2291
1056	SLD 7	0.69	-1.85	42.16	-10.8426	0.0754	0.2437
1056	SLD 8	0.38	-2.03	42.32	-10.8778	0.0761	0.1355
1056	SLD 9	-1.53	1.6	36.9	-9.6294	0.0585	-0.5344
1056	SLD 10	-1.84	1.42	37.07	-9.6646	0.0592	-0.6426
1056	SLD 11	-1.8	-1.71	39.31	-10.1449	0.0629	-0.6279
1056	SLD 12	-2.11	-1.89	39.47	-10.1801	0.0636	-0.7361
1056	SLD 13	-4.44	0.65	34.38	-8.9865	0.0453	-1.5556
1056	SLD 14	-4.92	0.38	34.63	-9.0402	0.0463	-1.7206
1056	SLD 15	-4.52	-0.35	35.11	-9.1411	0.0466	-1.5837
1056	SLD 16	-5	-0.62	35.35	-9.1949	0.0476	-1.7487
1056	SLV 1	9.77	0.69	49.61	-12.7358	0.1135	3.4231
1056	SLV 2	8.67	0.06	50.18	-12.861	0.1159	3.0387
1056	SLV 3	9.58	-1.57	51.25	-13.0892	0.1165	3.3581
1056	SLV 4	8.48	-2.2	51.82	-13.2144	0.1189	2.9738
1056	SLV 5	3	3.59	40.03	-10.4406	0.0762	1.052
1056	SLV 6	2.29	3.19	40.4	-10.5213	0.0778	0.8043
1056	SLV 7	2.38	-3.94	45.49	-11.6188	0.0862	0.8356
1056	SLV 8	1.67	-4.35	45.86	-11.6995	0.0878	0.5879

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1056	SLV 9	-2.82	3.92	33.37	-8.8077	0.0469	-0.9867
1056	SLV 10	-3.53	3.51	33.74	-8.8884	0.0485	-1.2344
1056	SLV 11	-3.44	-3.62	38.83	-9.9859	0.0569	-1.2032
1056	SLV 12	-4.15	-4.02	39.2	-10.0666	0.0584	-1.4509
1056	SLV 13	-9.63	1.77	27.4	-7.2928	0.0158	-3.3726
1056	SLV 14	-10.73	1.14	27.98	-7.4179	0.0182	-3.757
1056	SLV 15	-9.81	-0.49	29.04	-7.6462	0.0188	-3.4375
1056	SLV 16	-10.92	-1.12	29.62	-7.7714	0.0212	-3.8219
1056	CRTFP Ux+	0	0	0	0	0	0
1056	CRTFP Ux-	0	0	0	0	0	0
1056	CRTFP Uy+	0	0	0	0	0	0
1056	CRTFP Uy-	0	0	0	0	0	0
1057	SLU 1	-0.51	-0.18	35.16	-8.4406	0.0445	-0.1774
1057	SLU 2	-0.51	-0.13	35.13	-8.4362	0.0445	-0.1777
1057	SLU 3	-0.52	-0.18	35.98	-8.629	0.0456	-0.1818
1057	SLU 4	-0.52	-0.15	35.97	-8.6264	0.0456	-0.182
1057	SLU 5	-0.52	-0.14	35.63	-8.5515	0.0452	-0.1803
1057	SLU 6	-0.53	-0.18	36.49	-8.7443	0.0463	-0.1845
1057	SLU 7	-0.53	-0.15	36.47	-8.7417	0.0463	-0.1846
1057	SLU 8	-0.53	-0.19	36.16	-8.6711	0.0459	-0.1827
1057	SLU 9	-0.53	-0.16	36.15	-8.6685	0.0459	-0.1829
1057	SLU 10	-0.58	-0.14	39.71	-9.5039	0.0504	-0.2026
1057	SLU 11	-0.59	-0.19	40.56	-9.6968	0.0515	-0.2067
1057	SLU 12	-0.59	-0.16	40.54	-9.6942	0.0515	-0.2069
1057	SLU 13	-0.59	-0.15	40.21	-9.6192	0.0511	-0.2053
1057	SLU 14	-0.6	-0.19	41.06	-9.8121	0.0522	-0.2094
1057	SLU 15	-0.6	-0.16	41.04	-9.8094	0.0522	-0.2095
1057	SLU 16	-0.6	-0.2	40.74	-9.7389	0.0518	-0.2076
1057	SLU 17	-0.6	-0.17	40.72	-9.7363	0.0518	-0.2078
1057	SLU 18	-0.61	-0.2	41.7	-9.966	0.053	-0.2129
1057	SLU 19	-0.61	-0.17	41.68	-9.9633	0.053	-0.2131
1057	SLU 20	-0.62	-0.2	42.2	-10.0812	0.0536	-0.2156
1057	SLU 21	-0.62	-0.17	42.18	-10.0786	0.0536	-0.2158
1057	SLU 22	-0.58	-0.17	39.73	-9.5009	0.0506	-0.2019
1057	SLU 23	-0.58	-0.12	39.7	-9.4966	0.0506	-0.2022
1057	SLU 24	-0.59	-0.17	40.55	-9.6894	0.0517	-0.2063
1057	SLU 25	-0.59	-0.14	40.54	-9.6868	0.0517	-0.2065
1057	SLU 26	-0.59	-0.12	40.2	-9.6118	0.0512	-0.2049
1057	SLU 27	-0.6	-0.17	41.06	-9.8047	0.0524	-0.209
1057	SLU 28	-0.6	-0.14	41.04	-9.8021	0.0524	-0.2092
1057	SLU 29	-0.6	-0.18	40.73	-9.7315	0.0519	-0.2073
1057	SLU 30	-0.6	-0.15	40.72	-9.7289	0.0519	-0.2075
1057	SLU 31	-0.65	-0.13	44.28	-10.5643	0.0565	-0.2271
1057	SLU 32	-0.66	-0.18	45.13	-10.7572	0.0576	-0.2313
1057	SLU 33	-0.67	-0.15	45.11	-10.7545	0.0576	-0.2314
1057	SLU 34	-0.66	-0.13	44.78	-10.6796	0.0572	-0.2298
1057	SLU 35	-0.67	-0.18	45.63	-10.8725	0.0583	-0.2339
1057	SLU 36	-0.67	-0.15	45.61	-10.8698	0.0583	-0.2341
1057	SLU 37	-0.67	-0.19	45.31	-10.7993	0.0578	-0.2322
1057	SLU 38	-0.67	-0.16	45.29	-10.7967	0.0578	-0.2324
1057	SLU 39	-0.68	-0.18	46.27	-11.0263	0.059	-0.2375
1057	SLU 40	-0.68	-0.15	46.25	-11.0237	0.059	-0.2377
1057	SLU 41	-0.69	-0.19	46.77	-11.1416	0.0597	-0.2402
1057	SLU 42	-0.69	-0.16	46.75	-11.139	0.0597	-0.2404
1057	SLU 43	-0.64	-0.24	44.14	-10.6092	0.0558	-0.2221
1057	SLU 44	-0.64	-0.19	44.11	-10.6048	0.0558	-0.2225
1057	SLU 45	-0.65	-0.24	44.97	-10.7976	0.0569	-0.2266
1057	SLU 46	-0.65	-0.21	44.95	-10.795	0.0569	-0.2268
1057	SLU 47	-0.65	-0.2	44.61	-10.7201	0.0565	-0.2251
1057	SLU 48	-0.66	-0.24	45.47	-10.9129	0.0576	-0.2292
1057	SLU 49	-0.66	-0.21	45.45	-10.9103	0.0576	-0.2294
1057	SLU 50	-0.65	-0.25	45.14	-10.8398	0.0572	-0.2275
1057	SLU 51	-0.65	-0.22	45.13	-10.8371	0.0572	-0.2277
1057	SLU 52	-0.71	-0.2	48.69	-11.6726	0.0617	-0.2474
1057	SLU 53	-0.72	-0.25	49.54	-11.8654	0.0628	-0.2515
1057	SLU 54	-0.72	-0.22	49.52	-11.8628	0.0628	-0.2517
1057	SLU 55	-0.72	-0.2	49.19	-11.7878	0.0624	-0.25
1057	SLU 56	-0.73	-0.25	50.04	-11.9807	0.0635	-0.2541
1057	SLU 57	-0.73	-0.22	50.02	-11.9781	0.0635	-0.2543
1057	SLU 58	-0.73	-0.26	49.72	-11.9075	0.0631	-0.2524
1057	SLU 59	-0.73	-0.23	49.7	-11.9049	0.0631	-0.2526
1057	SLU 60	-0.74	-0.25	50.68	-12.1346	0.0642	-0.2577
1057	SLU 61	-0.74	-0.23	50.66	-12.1319	0.0642	-0.2579
1057	SLU 62	-0.75	-0.26	51.18	-12.2499	0.0649	-0.2604
1057	SLU 63	-0.75	-0.23	51.16	-12.2472	0.0649	-0.2606
1057	SLU 64	-0.71	-0.23	48.71	-11.6696	0.0619	-0.2467
1057	SLU 65	-0.71	-0.18	48.68	-11.6652	0.0618	-0.247
1057	SLU 66	-0.72	-0.23	49.54	-11.858	0.063	-0.2511
1057	SLU 67	-0.72	-0.2	49.52	-11.8554	0.063	-0.2513
1057	SLU 68	-0.72	-0.18	49.18	-11.7805	0.0625	-0.2497
1057	SLU 69	-0.73	-0.23	50.04	-11.9733	0.0636	-0.2538
1057	SLU 70	-0.73	-0.2	50.02	-11.9707	0.0636	-0.254
1057	SLU 71	-0.72	-0.24	49.71	-11.9001	0.0632	-0.2521
1057	SLU 72	-0.73	-0.21	49.7	-11.8975	0.0632	-0.2522
1057	SLU 73	-0.78	-0.19	53.26	-12.7329	0.0678	-0.2719
1057	SLU 74	-0.79	-0.23	54.11	-12.9258	0.0689	-0.276
1057	SLU 75	-0.79	-0.21	54.09	-12.9231	0.0689	-0.2762
1057	SLU 76	-0.79	-0.19	53.76	-12.8482	0.0684	-0.2746
1057	SLU 77	-0.8	-0.24	54.61	-13.0411	0.0696	-0.2787
1057	SLU 78	-0.8	-0.21	54.59	-13.0384	0.0696	-0.2789

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1057	SLU 79	-0.8	-0.24	54.29	-12.9679	0.0691	-0.277
1057	SLU 80	-0.8	-0.22	54.27	-12.9653	0.0691	-0.2771
1057	SLU 81	-0.81	-0.24	55.25	-13.1949	0.0703	-0.2823
1057	SLU 82	-0.81	-0.21	55.23	-13.1923	0.0703	-0.2825
1057	SLU 83	-0.82	-0.25	55.75	-13.3102	0.071	-0.285
1057	SLU 84	-0.82	-0.22	55.73	-13.3076	0.071	-0.2851
1057	SLE RA 1	-0.53	-0.18	36.47	-8.7435	0.0463	-0.1844
1057	SLE RA 2	-0.53	-0.15	36.45	-8.7406	0.0462	-0.1846
1057	SLE RA 3	-0.54	-0.18	37.02	-8.8692	0.047	-0.1873
1057	SLE RA 4	-0.54	-0.16	37	-8.8674	0.047	-0.1875
1057	SLE RA 5	-0.54	-0.15	36.78	-8.8175	0.0467	-0.1864
1057	SLE RA 6	-0.54	-0.18	37.35	-8.946	0.0474	-0.1891
1057	SLE RA 7	-0.54	-0.16	37.34	-8.9443	0.0474	-0.1892
1057	SLE RA 8	-0.54	-0.18	37.13	-8.8973	0.0472	-0.1879
1057	SLE RA 9	-0.54	-0.16	37.12	-8.8955	0.0472	-0.1881
1057	SLE RA 10	-0.58	-0.15	39.5	-9.4524	0.0502	-0.2012
1057	SLE RA 11	-0.59	-0.18	40.07	-9.581	0.0509	-0.2039
1057	SLE RA 12	-0.59	-0.16	40.05	-9.5793	0.0509	-0.2041
1057	SLE RA 13	-0.58	-0.15	39.83	-9.5293	0.0506	-0.203
1057	SLE RA 14	-0.59	-0.18	40.4	-9.6579	0.0514	-0.2057
1057	SLE RA 15	-0.59	-0.17	40.39	-9.6561	0.0514	-0.2058
1057	SLE RA 16	-0.59	-0.19	40.18	-9.6091	0.0511	-0.2045
1057	SLE RA 17	-0.59	-0.17	40.17	-9.6073	0.0511	-0.2047
1057	SLE RA 18	-0.6	-0.19	40.82	-9.7605	0.0519	-0.2081
1057	SLE RA 19	-0.6	-0.17	40.81	-9.7587	0.0519	-0.2082
1057	SLE RA 20	-0.6	-0.19	41.16	-9.8373	0.0523	-0.2099
1057	SLE RA 21	-0.6	-0.17	41.15	-9.8356	0.0523	-0.21
1057	SLE FR 1	-0.53	-0.18	36.47	-8.7435	0.0463	-0.1844
1057	SLE FR 2	-0.53	-0.17	36.46	-8.7429	0.0463	-0.1844
1057	SLE FR 3	-0.53	-0.18	36.6	-8.7743	0.0464	-0.1851
1057	SLE FR 4	-0.55	-0.18	37.77	-9.048	0.0479	-0.1915
1057	SLE FR 5	-0.55	-0.18	37.91	-9.0794	0.0481	-0.1922
1057	SLE FR 6	-0.56	-0.18	38.64	-9.252	0.0491	-0.1962
1057	SLE QP 1	-0.53	-0.18	36.47	-8.7435	0.0463	-0.1844
1057	SLE QP 2	-0.55	-0.18	37.77	-9.0486	0.0479	-0.1915
1057	SLD 1	3.88	0.23	41.43	-9.8308	0.0656	1.3616
1057	SLD 2	3.41	-0.02	41.65	-9.8717	0.0665	1.1966
1057	SLD 3	3.8	-0.75	42.14	-9.9812	0.0663	1.3337
1057	SLD 4	3.33	-1.01	42.35	-10.0221	0.0672	1.1687
1057	SLD 5	0.98	1.48	37.77	-9.0479	0.0521	0.346
1057	SLD 6	0.67	1.31	37.91	-9.0747	0.0527	0.2379
1057	SLD 7	0.72	-1.8	40.11	-9.5492	0.0543	0.2531
1057	SLD 8	0.41	-1.96	40.25	-9.576	0.0549	0.145
1057	SLD 9	-1.51	1.6	35.3	-8.5212	0.041	-0.528
1057	SLD 10	-1.82	1.43	35.44	-8.548	0.0416	-0.6361
1057	SLD 11	-1.78	-1.67	37.64	-9.0225	0.0432	-0.6208
1057	SLD 12	-2.09	-1.84	37.78	-9.0493	0.0438	-0.729
1057	SLD 13	-4.43	0.64	33.19	-8.0752	0.0287	-1.5517
1057	SLD 14	-4.9	0.39	33.41	-8.1161	0.0296	-1.7167
1057	SLD 15	-4.51	-0.34	33.9	-8.2256	0.0294	-1.5795
1057	SLD 16	-4.98	-0.59	34.11	-8.2665	0.0303	-1.7446
1057	SLV 1	9.82	0.75	46.37	-10.8831	0.0893	3.4399
1057	SLV 2	8.71	0.16	46.87	-10.9784	0.0914	3.0556
1057	SLV 3	9.63	-1.48	47.96	-11.2281	0.0908	3.3754
1057	SLV 4	8.53	-2.08	48.46	-11.3233	0.0929	2.9911
1057	SLV 5	3.03	3.59	37.85	-9.0594	0.0577	1.0619
1057	SLV 6	2.32	3.21	38.17	-9.1208	0.059	0.8143
1057	SLV 7	2.41	-3.86	43.16	-10.2092	0.0628	0.847
1057	SLV 8	1.7	-4.25	43.48	-10.2706	0.0641	0.5993
1057	SLV 9	-2.8	3.88	32.06	-7.8266	0.0318	-0.9823
1057	SLV 10	-3.51	3.5	32.38	-7.888	0.0331	-1.2299
1057	SLV 11	-3.42	-3.57	37.38	-8.9765	0.0369	-1.1972
1057	SLV 12	-4.13	-3.96	37.7	-9.0378	0.0382	-1.4449
1057	SLV 13	-9.63	1.72	27.09	-6.7739	0.003	-3.3741
1057	SLV 14	-10.73	1.12	27.59	-6.8691	0.0051	-3.7584
1057	SLV 15	-9.82	-0.52	28.68	-7.1188	0.0045	-3.4386
1057	SLV 16	-10.92	-1.12	29.18	-7.2141	0.0066	-3.8229
1057	CRTFP Ux+	0	0	0	0	0	0
1057	CRTFP Ux-	0	0	0	0	0	0
1057	CRTFP Uy+	0	0	0	0	0	0
1057	CRTFP Uy-	0	0	0	0	0	0
1058	SLU 1	-0.49	-0.14	34.05	-7.7776	0.025	-0.1693
1058	SLU 2	-0.49	-0.09	34.02	-7.7733	0.025	-0.1696
1058	SLU 3	-0.5	-0.13	34.85	-7.9495	0.0256	-0.1735
1058	SLU 4	-0.5	-0.1	34.83	-7.9468	0.0256	-0.1737
1058	SLU 5	-0.5	-0.09	34.51	-7.8783	0.0254	-0.1721
1058	SLU 6	-0.51	-0.14	35.33	-8.0545	0.026	-0.1761
1058	SLU 7	-0.51	-0.11	35.32	-8.0519	0.026	-0.1763
1058	SLU 8	-0.5	-0.14	35.02	-7.9877	0.0258	-0.1744
1058	SLU 9	-0.5	-0.11	35	-7.985	0.0258	-0.1746
1058	SLU 10	-0.56	-0.1	38.46	-8.7551	0.0281	-0.1937
1058	SLU 11	-0.57	-0.14	39.28	-8.9313	0.0287	-0.1976
1058	SLU 12	-0.57	-0.11	39.26	-8.9287	0.0287	-0.1978
1058	SLU 13	-0.57	-0.1	38.94	-8.8601	0.0285	-0.1962
1058	SLU 14	-0.58	-0.14	39.77	-9.0363	0.029	-0.2002
1058	SLU 15	-0.58	-0.11	39.75	-9.0337	0.0291	-0.2004
1058	SLU 16	-0.57	-0.15	39.46	-8.9695	0.0288	-0.1985
1058	SLU 17	-0.57	-0.12	39.44	-8.9669	0.0288	-0.1987
1058	SLU 18	-0.59	-0.15	40.39	-9.1803	0.0294	-0.2037
1058	SLU 19	-0.59	-0.12	40.37	-9.1777	0.0294	-0.2039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1058	SLU 20	-0.59	-0.15	40.87	-9.2853	0.0297	-0.2063
1058	SLU 21	-0.59	-0.12	40.85	-9.2827	0.0298	-0.2064
1058	SLU 22	-0.56	-0.12	38.48	-8.7498	0.0282	-0.193
1058	SLU 23	-0.56	-0.07	38.45	-8.7454	0.0282	-0.1933
1058	SLU 24	-0.57	-0.12	39.27	-8.9216	0.0288	-0.1972
1058	SLU 25	-0.57	-0.09	39.26	-8.919	0.0288	-0.1974
1058	SLU 26	-0.56	-0.08	38.93	-8.8504	0.0286	-0.1958
1058	SLU 27	-0.58	-0.12	39.76	-9.0266	0.0292	-0.1997
1058	SLU 28	-0.58	-0.09	39.74	-9.024	0.0292	-0.1999
1058	SLU 29	-0.57	-0.13	39.45	-8.9598	0.029	-0.198
1058	SLU 30	-0.57	-0.1	39.43	-8.9572	0.029	-0.1982
1058	SLU 31	-0.63	-0.08	42.88	-9.7273	0.0313	-0.2174
1058	SLU 32	-0.64	-0.12	43.71	-9.9035	0.0319	-0.2213
1058	SLU 33	-0.64	-0.09	43.69	-9.9009	0.0319	-0.2215
1058	SLU 34	-0.63	-0.08	43.36	-9.8323	0.0317	-0.2199
1058	SLU 35	-0.65	-0.12	44.19	-10.0085	0.0322	-0.2238
1058	SLU 36	-0.65	-0.1	44.17	-10.0059	0.0323	-0.224
1058	SLU 37	-0.64	-0.13	43.88	-9.9417	0.032	-0.2221
1058	SLU 38	-0.64	-0.1	43.86	-9.9391	0.032	-0.2223
1058	SLU 39	-0.66	-0.13	44.81	-10.1525	0.0326	-0.2274
1058	SLU 40	-0.66	-0.1	44.79	-10.1498	0.0326	-0.2276
1058	SLU 41	-0.66	-0.13	45.29	-10.2575	0.0329	-0.2299
1058	SLU 42	-0.66	-0.1	45.27	-10.2548	0.0329	-0.2301
1058	SLU 43	-0.61	-0.19	42.75	-9.7776	0.0314	-0.212
1058	SLU 44	-0.61	-0.14	42.72	-9.7732	0.0314	-0.2123
1058	SLU 45	-0.62	-0.18	43.55	-9.9494	0.032	-0.2162
1058	SLU 46	-0.62	-0.15	43.53	-9.9468	0.032	-0.2164
1058	SLU 47	-0.62	-0.14	43.21	-9.8783	0.0318	-0.2148
1058	SLU 48	-0.63	-0.18	44.03	-10.0545	0.0324	-0.2187
1058	SLU 49	-0.63	-0.15	44.02	-10.0518	0.0324	-0.2189
1058	SLU 50	-0.63	-0.19	43.72	-9.9877	0.0322	-0.2171
1058	SLU 51	-0.63	-0.16	43.7	-9.985	0.0322	-0.2172
1058	SLU 52	-0.68	-0.14	47.16	-10.7551	0.0345	-0.2364
1058	SLU 53	-0.69	-0.19	47.98	-10.9313	0.0351	-0.2403
1058	SLU 54	-0.69	-0.16	47.96	-10.9287	0.0351	-0.2405
1058	SLU 55	-0.69	-0.15	47.64	-10.8601	0.0349	-0.2389
1058	SLU 56	-0.7	-0.19	48.47	-11.0363	0.0355	-0.2428
1058	SLU 57	-0.7	-0.16	48.45	-11.0337	0.0355	-0.243
1058	SLU 58	-0.7	-0.2	48.15	-10.9695	0.0352	-0.2412
1058	SLU 59	-0.7	-0.17	48.14	-10.9669	0.0352	-0.2413
1058	SLU 60	-0.71	-0.2	49.09	-11.1803	0.0358	-0.2464
1058	SLU 61	-0.71	-0.17	49.07	-11.1777	0.0358	-0.2466
1058	SLU 62	-0.72	-0.2	49.57	-11.2853	0.0361	-0.2489
1058	SLU 63	-0.72	-0.17	49.55	-11.2827	0.0362	-0.2491
1058	SLU 64	-0.68	-0.17	47.18	-10.7498	0.0346	-0.2356
1058	SLU 65	-0.68	-0.12	47.15	-10.7454	0.0346	-0.2359
1058	SLU 66	-0.69	-0.16	47.97	-10.9216	0.0352	-0.2399
1058	SLU 67	-0.69	-0.13	47.96	-10.919	0.0352	-0.2401
1058	SLU 68	-0.69	-0.12	47.63	-10.8504	0.035	-0.2385
1058	SLU 69	-0.7	-0.17	48.46	-11.0266	0.0356	-0.2424
1058	SLU 70	-0.7	-0.14	48.44	-11.024	0.0356	-0.2426
1058	SLU 71	-0.69	-0.17	48.15	-10.9598	0.0354	-0.2407
1058	SLU 72	-0.69	-0.14	48.13	-10.9572	0.0354	-0.2409
1058	SLU 73	-0.75	-0.13	51.58	-11.7273	0.0377	-0.26
1058	SLU 74	-0.76	-0.17	52.41	-11.9035	0.0383	-0.264
1058	SLU 75	-0.76	-0.14	52.39	-11.9008	0.0383	-0.2642
1058	SLU 76	-0.76	-0.13	52.06	-11.8323	0.0381	-0.2626
1058	SLU 77	-0.77	-0.17	52.89	-12.0085	0.0386	-0.2665
1058	SLU 78	-0.77	-0.14	52.87	-12.0058	0.0387	-0.2667
1058	SLU 79	-0.76	-0.18	52.58	-11.9417	0.0384	-0.2648
1058	SLU 80	-0.76	-0.15	52.56	-11.939	0.0384	-0.265
1058	SLU 81	-0.78	-0.18	53.51	-12.1524	0.039	-0.2701
1058	SLU 82	-0.78	-0.15	53.49	-12.1498	0.039	-0.2703
1058	SLU 83	-0.79	-0.18	53.99	-12.2575	0.0393	-0.2726
1058	SLU 84	-0.79	-0.15	53.97	-12.2548	0.0394	-0.2728
1058	SLE RA 1	-0.51	-0.13	35.32	-8.0554	0.0259	-0.1761
1058	SLE RA 2	-0.51	-0.1	35.3	-8.0525	0.0259	-0.1763
1058	SLE RA 3	-0.52	-0.13	35.85	-8.17	0.0263	-0.1789
1058	SLE RA 4	-0.52	-0.11	35.84	-8.1682	0.0263	-0.179
1058	SLE RA 5	-0.51	-0.1	35.62	-8.1225	0.0262	-0.178
1058	SLE RA 6	-0.52	-0.13	36.17	-8.24	0.0266	-0.1806
1058	SLE RA 7	-0.52	-0.11	36.16	-8.2382	0.0266	-0.1807
1058	SLE RA 8	-0.52	-0.14	35.96	-8.1954	0.0264	-0.1794
1058	SLE RA 9	-0.52	-0.12	35.95	-8.1937	0.0264	-0.1796
1058	SLE RA 10	-0.55	-0.11	38.25	-8.7071	0.028	-0.1923
1058	SLE RA 11	-0.56	-0.13	38.8	-8.8245	0.0284	-0.195
1058	SLE RA 12	-0.56	-0.12	38.79	-8.8228	0.0284	-0.1951
1058	SLE RA 13	-0.56	-0.11	38.58	-8.7771	0.0282	-0.194
1058	SLE RA 14	-0.57	-0.14	39.13	-8.8945	0.0286	-0.1966
1058	SLE RA 15	-0.57	-0.12	39.11	-8.8928	0.0286	-0.1968
1058	SLE RA 16	-0.56	-0.14	38.92	-8.85	0.0285	-0.1955
1058	SLE RA 17	-0.56	-0.12	38.91	-8.8482	0.0285	-0.1956
1058	SLE RA 18	-0.57	-0.14	39.54	-8.9905	0.0288	-0.199
1058	SLE RA 19	-0.57	-0.12	39.53	-8.9888	0.0288	-0.1991
1058	SLE RA 20	-0.58	-0.14	39.86	-9.0605	0.0291	-0.2007
1058	SLE RA 21	-0.58	-0.12	39.85	-9.0588	0.0291	-0.2008
1058	SLE FR 1	-0.51	-0.13	35.32	-8.0554	0.0259	-0.1761
1058	SLE FR 2	-0.51	-0.13	35.31	-8.0548	0.0259	-0.1761
1058	SLE FR 3	-0.51	-0.13	35.45	-8.0834	0.026	-0.1767
1058	SLE FR 4	-0.53	-0.13	36.58	-8.3354	0.0268	-0.183

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1058	SLE FR 5	-0.53	-0.14	36.71	-8.3639	0.0269	-0.1836
1058	SLE FR 6	-0.54	-0.14	37.43	-8.523	0.0274	-0.1875
1058	SLE QP 1	-0.51	-0.13	35.32	-8.0554	0.0259	-0.1761
1058	SLE QP 2	-0.53	-0.14	36.58	-8.3359	0.0268	-0.1829
1058	SLD 1	3.91	0.67	39.72	-8.8911	0.0421	1.373
1058	SLD 2	3.44	0.43	39.91	-8.9229	0.0428	1.2081
1058	SLD 3	3.83	-0.31	40.41	-9.0413	0.0423	1.3453
1058	SLD 4	3.36	-0.55	40.6	-9.0731	0.0431	1.1804
1058	SLD 5	1.01	1.63	36.43	-8.2691	0.0309	0.3551
1058	SLD 6	0.7	1.47	36.56	-8.29	0.0314	0.247
1058	SLD 7	0.75	-1.63	38.76	-8.7696	0.0317	0.2628
1058	SLD 8	0.44	-1.79	38.88	-8.7904	0.0322	0.1548
1058	SLD 9	-1.49	1.51	34.29	-7.8814	0.0214	-0.5206
1058	SLD 10	-1.8	1.36	34.41	-7.9023	0.0219	-0.6287
1058	SLD 11	-1.75	-1.74	36.61	-8.3819	0.0222	-0.6129
1058	SLD 12	-2.06	-1.9	36.74	-8.4027	0.0227	-0.721
1058	SLD 13	-4.42	0.28	32.56	-7.5988	0.0105	-1.5463
1058	SLD 14	-4.89	0.04	32.75	-7.6306	0.0113	-1.7112
1058	SLD 15	-4.5	-0.7	33.26	-7.7489	0.0107	-1.574
1058	SLD 16	-4.97	-0.94	33.45	-7.7807	0.0115	-1.7389
1058	SLV 1	9.86	1.72	43.94	-9.6395	0.0626	3.4552
1058	SLV 2	8.76	1.15	44.38	-9.7135	0.0643	3.0711
1058	SLV 3	9.67	-0.51	45.52	-9.9843	0.0632	3.3911
1058	SLV 4	8.57	-1.08	45.96	-10.0583	0.0649	3.007
1058	SLV 5	3.05	3.9	36.31	-8.1914	0.0364	1.0718
1058	SLV 6	2.35	3.53	36.6	-8.2391	0.0375	0.8243
1058	SLV 7	2.44	-3.53	41.59	-9.3406	0.0383	0.8582
1058	SLV 8	1.74	-3.89	41.88	-9.3883	0.0394	0.6107
1058	SLV 9	-2.79	3.62	31.29	-7.2836	0.0142	-0.9766
1058	SLV 10	-3.5	3.26	31.58	-7.3313	0.0153	-1.2241
1058	SLV 11	-3.4	-3.8	36.57	-8.4328	0.0161	-1.1902
1058	SLV 12	-4.11	-4.17	36.85	-8.4805	0.0172	-1.4377
1058	SLV 13	-9.63	0.81	27.2	-6.6136	-0.0113	-3.3729
1058	SLV 14	-10.73	0.24	27.64	-6.6876	-0.0096	-3.757
1058	SLV 15	-9.81	-1.42	28.79	-6.9583	-0.0107	-3.437
1058	SLV 16	-10.91	-1.99	29.23	-7.0324	-0.009	-3.8211
1058	CRTFP Ux+	0	0	0	0	0	0
1058	CRTFP Ux-	0	0	0	0	0	0
1058	CRTFP Uy+	0	0	0	0	0	0
1058	CRTFP Uy-	0	0	0	0	0	0
1059	SLU 1	-0.46	-0.08	33.56	-7.5779	0.006	-0.1606
1059	SLU 2	-0.47	-0.03	33.53	-7.5731	0.006	-0.1609
1059	SLU 3	-0.48	-0.07	34.35	-7.7449	0.0061	-0.1646
1059	SLU 4	-0.48	-0.05	34.33	-7.7421	0.0061	-0.1648
1059	SLU 5	-0.47	-0.04	34.01	-7.6751	0.0061	-0.1633
1059	SLU 6	-0.48	-0.08	34.83	-7.8469	0.0062	-0.167
1059	SLU 7	-0.48	-0.05	34.81	-7.8441	0.0062	-0.1672
1059	SLU 8	-0.48	-0.08	34.52	-7.7818	0.0062	-0.1654
1059	SLU 9	-0.48	-0.06	34.5	-7.779	0.0062	-0.1656
1059	SLU 10	-0.53	-0.04	37.91	-8.5358	0.0063	-0.1841
1059	SLU 11	-0.54	-0.08	38.73	-8.7076	0.0064	-0.1878
1059	SLU 12	-0.54	-0.05	38.71	-8.7047	0.0064	-0.188
1059	SLU 13	-0.54	-0.04	38.39	-8.6378	0.0064	-0.1865
1059	SLU 14	-0.55	-0.08	39.21	-8.8096	0.0065	-0.1902
1059	SLU 15	-0.55	-0.05	39.19	-8.8067	0.0065	-0.1904
1059	SLU 16	-0.55	-0.09	38.9	-8.7445	0.0064	-0.1886
1059	SLU 17	-0.55	-0.06	38.88	-8.7416	0.0064	-0.1888
1059	SLU 18	-0.56	-0.09	39.82	-8.9531	0.0064	-0.1937
1059	SLU 19	-0.56	-0.06	39.8	-8.9502	0.0064	-0.1939
1059	SLU 20	-0.57	-0.09	40.3	-9.0551	0.0065	-0.1961
1059	SLU 21	-0.57	-0.06	40.28	-9.0522	0.0065	-0.1963
1059	SLU 22	-0.53	-0.06	37.93	-8.5282	0.0064	-0.1833
1059	SLU 23	-0.53	-0.01	37.9	-8.5234	0.0065	-0.1836
1059	SLU 24	-0.54	-0.05	38.71	-8.6953	0.0065	-0.1873
1059	SLU 25	-0.54	-0.02	38.7	-8.6924	0.0066	-0.1875
1059	SLU 26	-0.54	-0.01	38.38	-8.6254	0.0066	-0.186
1059	SLU 27	-0.55	-0.05	39.19	-8.7973	0.0066	-0.1897
1059	SLU 28	-0.55	-0.02	39.17	-8.7944	0.0067	-0.1899
1059	SLU 29	-0.54	-0.06	38.88	-8.7322	0.0066	-0.1881
1059	SLU 30	-0.54	-0.03	38.87	-8.7293	0.0066	-0.1883
1059	SLU 31	-0.6	-0.01	42.28	-9.4861	0.0067	-0.2068
1059	SLU 32	-0.61	-0.05	43.09	-9.658	0.0068	-0.2105
1059	SLU 33	-0.61	-0.03	43.08	-9.6551	0.0068	-0.2107
1059	SLU 34	-0.6	-0.02	42.76	-9.5881	0.0068	-0.2092
1059	SLU 35	-0.62	-0.06	43.57	-9.7599	0.0069	-0.2129
1059	SLU 36	-0.62	-0.03	43.55	-9.7571	0.0069	-0.2131
1059	SLU 37	-0.61	-0.06	43.26	-9.6949	0.0069	-0.2113
1059	SLU 38	-0.61	-0.04	43.25	-9.692	0.0069	-0.2114
1059	SLU 39	-0.63	-0.06	44.19	-9.9035	0.0068	-0.2164
1059	SLU 40	-0.63	-0.03	44.17	-9.9006	0.0068	-0.2166
1059	SLU 41	-0.63	-0.06	44.66	-10.0054	0.0069	-0.2188
1059	SLU 42	-0.63	-0.04	44.65	-10.0026	0.0069	-0.219
1059	SLU 43	-0.58	-0.11	42.14	-9.5254	0.0076	-0.201
1059	SLU 44	-0.58	-0.07	42.11	-9.5206	0.0077	-0.2013
1059	SLU 45	-0.59	-0.11	42.92	-9.6925	0.0078	-0.2051
1059	SLU 46	-0.59	-0.08	42.9	-9.6896	0.0078	-0.2052
1059	SLU 47	-0.59	-0.07	42.58	-9.6226	0.0078	-0.2037
1059	SLU 48	-0.6	-0.11	43.4	-9.7945	0.0078	-0.2075
1059	SLU 49	-0.6	-0.08	43.38	-9.7916	0.0079	-0.2076
1059	SLU 50	-0.6	-0.12	43.09	-9.7294	0.0078	-0.2058

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1059	SLU 51	-0.6	-0.09	43.07	-9.7265	0.0078	-0.206
1059	SLU 52	-0.65	-0.07	46.49	-10.4833	0.008	-0.2245
1059	SLU 53	-0.66	-0.11	47.3	-10.6551	0.008	-0.2282
1059	SLU 54	-0.66	-0.08	47.28	-10.6523	0.0081	-0.2284
1059	SLU 55	-0.66	-0.07	46.96	-10.5853	0.008	-0.2269
1059	SLU 56	-0.67	-0.11	47.78	-10.7571	0.0081	-0.2306
1059	SLU 57	-0.67	-0.08	47.76	-10.7543	0.0081	-0.2308
1059	SLU 58	-0.66	-0.12	47.47	-10.692	0.0081	-0.229
1059	SLU 59	-0.66	-0.09	47.45	-10.6892	0.0081	-0.2292
1059	SLU 60	-0.68	-0.12	48.39	-10.9006	0.008	-0.2342
1059	SLU 61	-0.68	-0.09	48.37	-10.8978	0.0081	-0.2343
1059	SLU 62	-0.68	-0.12	48.87	-11.0026	0.0081	-0.2365
1059	SLU 63	-0.68	-0.09	48.85	-10.9998	0.0081	-0.2367
1059	SLU 64	-0.65	-0.09	46.5	-10.4757	0.0081	-0.2237
1059	SLU 65	-0.65	-0.04	46.47	-10.471	0.0081	-0.224
1059	SLU 66	-0.66	-0.08	47.29	-10.6428	0.0082	-0.2277
1059	SLU 67	-0.66	-0.06	47.27	-10.64	0.0082	-0.2279
1059	SLU 68	-0.65	-0.04	46.95	-10.573	0.0082	-0.2264
1059	SLU 69	-0.67	-0.09	47.76	-10.7448	0.0083	-0.2301
1059	SLU 70	-0.67	-0.06	47.75	-10.7419	0.0083	-0.2303
1059	SLU 71	-0.66	-0.09	47.46	-10.6797	0.0082	-0.2285
1059	SLU 72	-0.66	-0.06	47.44	-10.6769	0.0083	-0.2287
1059	SLU 73	-0.71	-0.05	50.85	-11.4336	0.0084	-0.2472
1059	SLU 74	-0.73	-0.09	51.67	-11.6055	0.0085	-0.2509
1059	SLU 75	-0.73	-0.06	51.65	-11.6026	0.0085	-0.2511
1059	SLU 76	-0.72	-0.05	51.33	-11.5356	0.0085	-0.2496
1059	SLU 77	-0.73	-0.09	52.14	-11.7075	0.0085	-0.2533
1059	SLU 78	-0.73	-0.06	52.13	-11.7046	0.0086	-0.2535
1059	SLU 79	-0.73	-0.1	51.84	-11.6424	0.0085	-0.2517
1059	SLU 80	-0.73	-0.07	51.82	-11.6395	0.0085	-0.2519
1059	SLU 81	-0.74	-0.1	52.76	-11.851	0.0085	-0.2568
1059	SLU 82	-0.74	-0.07	52.74	-11.8481	0.0085	-0.257
1059	SLU 83	-0.75	-0.1	53.24	-11.953	0.0085	-0.2592
1059	SLU 84	-0.75	-0.07	53.22	-11.9501	0.0086	-0.2594
1059	SLE RA 1	-0.48	-0.08	34.81	-7.8494	0.0061	-0.1671
1059	SLE RA 2	-0.48	-0.04	34.79	-7.8462	0.0061	-0.1673
1059	SLE RA 3	-0.49	-0.07	35.33	-7.9608	0.0062	-0.1698
1059	SLE RA 4	-0.49	-0.05	35.32	-7.9589	0.0062	-0.1699
1059	SLE RA 5	-0.49	-0.04	35.11	-7.9142	0.0062	-0.1689
1059	SLE RA 6	-0.5	-0.07	35.65	-8.0288	0.0063	-0.1714
1059	SLE RA 7	-0.5	-0.05	35.64	-8.0269	0.0063	-0.1715
1059	SLE RA 8	-0.49	-0.08	35.45	-7.9854	0.0062	-0.1703
1059	SLE RA 9	-0.49	-0.06	35.44	-7.9835	0.0062	-0.1704
1059	SLE RA 10	-0.53	-0.05	37.71	-8.488	0.0063	-0.1827
1059	SLE RA 11	-0.54	-0.07	38.25	-8.6026	0.0064	-0.1852
1059	SLE RA 12	-0.54	-0.05	38.24	-8.6007	0.0064	-0.1854
1059	SLE RA 13	-0.53	-0.05	38.03	-8.556	0.0064	-0.1843
1059	SLE RA 14	-0.54	-0.07	38.57	-8.6706	0.0064	-0.1868
1059	SLE RA 15	-0.54	-0.05	38.56	-8.6686	0.0064	-0.187
1059	SLE RA 16	-0.54	-0.08	38.37	-8.6272	0.0064	-0.1857
1059	SLE RA 17	-0.54	-0.06	38.36	-8.6253	0.0064	-0.1859
1059	SLE RA 18	-0.55	-0.08	38.98	-8.7662	0.0064	-0.1892
1059	SLE RA 19	-0.55	-0.06	38.97	-8.7643	0.0064	-0.1893
1059	SLE RA 20	-0.55	-0.08	39.3	-8.8342	0.0064	-0.1908
1059	SLE RA 21	-0.55	-0.06	39.29	-8.8323	0.0064	-0.1909
1059	SLE FR 1	-0.48	-0.08	34.81	-7.8494	0.0061	-0.1671
1059	SLE FR 2	-0.48	-0.07	34.81	-7.8488	0.0061	-0.1671
1059	SLE FR 3	-0.49	-0.08	34.94	-7.8766	0.0061	-0.1677
1059	SLE FR 4	-0.5	-0.07	36.06	-8.1238	0.0062	-0.1738
1059	SLE FR 5	-0.5	-0.08	36.19	-8.1516	0.0062	-0.1744
1059	SLE FR 6	-0.51	-0.08	36.9	-8.3078	0.0062	-0.1781
1059	SLE QP 1	-0.48	-0.08	34.81	-7.8494	0.0061	-0.1671
1059	SLE QP 2	-0.5	-0.08	36.06	-8.1244	0.0062	-0.1737
1059	SLD 1	3.94	0.73	38.74	-8.5072	0.0194	1.3841
1059	SLD 2	3.47	0.5	38.91	-8.5333	0.02	1.2194
1059	SLD 3	3.87	-0.25	39.45	-8.6582	0.0187	1.3566
1059	SLD 4	3.39	-0.48	39.62	-8.6843	0.0193	1.1919
1059	SLD 5	1.03	1.69	35.77	-8.0057	0.0112	0.3646
1059	SLD 6	0.73	1.54	35.88	-8.0228	0.0116	0.2567
1059	SLD 7	0.77	-1.57	38.12	-8.5089	0.0087	0.2729
1059	SLD 8	0.46	-1.72	38.23	-8.526	0.0091	0.165
1059	SLD 9	-1.47	1.57	33.9	-7.7229	0.0033	-0.5124
1059	SLD 10	-1.78	1.42	34.01	-7.74	0.0037	-0.6203
1059	SLD 11	-1.73	-1.69	36.25	-8.2261	0.0008	-0.6041
1059	SLD 12	-2.04	-1.84	36.36	-8.2432	0.0012	-0.7121
1059	SLD 13	-4.4	0.33	32.51	-7.5646	-0.0069	-1.5394
1059	SLD 14	-4.87	0.1	32.68	-7.5907	-0.0063	-1.704
1059	SLD 15	-4.48	-0.65	33.21	-7.7156	-0.0076	-1.5669
1059	SLD 16	-4.95	-0.88	33.38	-7.7417	-0.007	-1.7316
1059	SLV 1	9.89	1.78	42.36	-9.0254	0.0371	3.4688
1059	SLV 2	8.8	1.24	42.75	-9.0862	0.0385	3.0853
1059	SLV 3	9.71	-0.45	43.96	-9.3715	0.0354	3.4051
1059	SLV 4	8.62	-0.99	44.35	-9.4323	0.0368	3.0216
1059	SLV 5	3.08	3.96	35.46	-7.8593	0.0178	1.0817
1059	SLV 6	2.37	3.61	35.71	-7.8985	0.0187	0.8346
1059	SLV 7	2.48	-3.48	40.79	-9.013	0.0122	0.8694
1059	SLV 8	1.77	-3.83	41.04	-9.0522	0.0131	0.6222
1059	SLV 9	-2.77	3.68	31.08	-7.1967	-0.0007	-0.9696
1059	SLV 10	-3.48	3.33	31.33	-7.2359	0.0002	-1.2168
1059	SLV 11	-3.38	-3.76	36.42	-8.3504	-0.0063	-1.182

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1059	SLV 12	-4.09	-4.11	36.67	-8.3896	-0.0054	-1.4292
1059	SLV 13	-9.62	0.84	27.77	-6.8166	-0.0244	-3.3691
1059	SLV 14	-10.72	0.3	28.16	-6.8774	-0.023	-3.7526
1059	SLV 15	-9.8	-1.39	29.37	-7.1627	-0.0261	-3.4328
1059	SLV 16	-10.9	-1.93	29.76	-7.2235	-0.0247	-3.8163
1059	CRTFP Ux+	0	0	0	0	0	0
1059	CRTFP Ux-	0	0	0	0	0	0
1059	CRTFP Uy+	0	0	0	0	0	0
1059	CRTFP Uy-	0	0	0	0	0	0
1060	SLU 1	-0.44	-0.01	33.64	-7.8056	-0.0106	-0.1513
1060	SLU 2	-0.44	0.03	33.61	-7.8001	-0.0105	-0.1516
1060	SLU 3	-0.45	0	34.43	-7.9789	-0.0109	-0.1551
1060	SLU 4	-0.45	0.03	34.41	-7.9756	-0.0109	-0.1553
1060	SLU 5	-0.45	0.03	34.09	-7.9057	-0.0107	-0.1538
1060	SLU 6	-0.46	0	34.91	-8.0845	-0.0111	-0.1574
1060	SLU 7	-0.46	0.03	34.89	-8.0812	-0.011	-0.1575
1060	SLU 8	-0.45	-0.01	34.6	-8.0169	-0.011	-0.1558
1060	SLU 9	-0.45	0.02	34.58	-8.0136	-0.0109	-0.1559
1060	SLU 10	-0.5	0.04	38.02	-8.8048	-0.0127	-0.1738
1060	SLU 11	-0.51	0	38.84	-8.9836	-0.013	-0.1773
1060	SLU 12	-0.51	0.03	38.82	-8.9802	-0.013	-0.1775
1060	SLU 13	-0.51	0.04	38.5	-8.9104	-0.0128	-0.176
1060	SLU 14	-0.52	0	39.32	-9.0892	-0.0132	-0.1796
1060	SLU 15	-0.52	0.03	39.3	-9.0859	-0.0132	-0.1797
1060	SLU 16	-0.52	-0.01	39.01	-9.0216	-0.0131	-0.178
1060	SLU 17	-0.52	0.02	38.99	-9.0183	-0.013	-0.1781
1060	SLU 18	-0.53	-0.01	39.95	-9.2409	-0.0136	-0.183
1060	SLU 19	-0.53	0.02	39.93	-9.2376	-0.0136	-0.1832
1060	SLU 20	-0.54	-0.01	40.42	-9.3465	-0.0138	-0.1852
1060	SLU 21	-0.54	0.02	40.4	-9.3432	-0.0138	-0.1854
1060	SLU 22	-0.5	0.02	38.04	-8.7952	-0.0125	-0.1729
1060	SLU 23	-0.5	0.07	38	-8.7896	-0.0125	-0.1732
1060	SLU 24	-0.51	0.03	38.82	-8.9684	-0.0129	-0.1767
1060	SLU 25	-0.51	0.06	38.8	-8.9651	-0.0128	-0.1769
1060	SLU 26	-0.51	0.07	38.48	-8.8953	-0.0127	-0.1754
1060	SLU 27	-0.52	0.03	39.3	-9.0741	-0.013	-0.179
1060	SLU 28	-0.52	0.06	39.28	-9.0707	-0.013	-0.1791
1060	SLU 29	-0.51	0.02	38.99	-9.0064	-0.0129	-0.1774
1060	SLU 30	-0.52	0.05	38.97	-9.0031	-0.0129	-0.1776
1060	SLU 31	-0.57	0.07	42.41	-9.7943	-0.0146	-0.1954
1060	SLU 32	-0.58	0.03	43.23	-9.9731	-0.015	-0.1989
1060	SLU 33	-0.58	0.06	43.22	-9.9698	-0.0149	-0.1991
1060	SLU 34	-0.57	0.07	42.89	-9.9	-0.0148	-0.1976
1060	SLU 35	-0.58	0.03	43.71	-10.0787	-0.0152	-0.2012
1060	SLU 36	-0.58	0.06	43.69	-10.0754	-0.0151	-0.2013
1060	SLU 37	-0.58	0.02	43.4	-10.0111	-0.015	-0.1996
1060	SLU 38	-0.58	0.05	43.38	-10.0078	-0.015	-0.1997
1060	SLU 39	-0.59	0.02	44.34	-10.2304	-0.0156	-0.2046
1060	SLU 40	-0.59	0.05	44.32	-10.2271	-0.0156	-0.2048
1060	SLU 41	-0.6	0.02	44.82	-10.3361	-0.0158	-0.2068
1060	SLU 42	-0.6	0.05	44.8	-10.3327	-0.0157	-0.207
1060	SLU 43	-0.55	-0.03	42.23	-9.808	-0.0131	-0.1893
1060	SLU 44	-0.55	0.02	42.2	-9.8025	-0.013	-0.1896
1060	SLU 45	-0.56	-0.02	43.02	-9.9813	-0.0134	-0.1931
1060	SLU 46	-0.56	0.01	43	-9.978	-0.0134	-0.1933
1060	SLU 47	-0.56	0.02	42.68	-9.9081	-0.0132	-0.1918
1060	SLU 48	-0.57	-0.02	43.5	-10.0869	-0.0136	-0.1954
1060	SLU 49	-0.57	0.01	43.48	-10.0836	-0.0136	-0.1955
1060	SLU 50	-0.56	-0.03	43.19	-10.0193	-0.0135	-0.1938
1060	SLU 51	-0.56	0	43.17	-10.016	-0.0134	-0.1939
1060	SLU 52	-0.61	0.02	46.61	-10.8072	-0.0152	-0.2117
1060	SLU 53	-0.62	-0.02	47.43	-10.986	-0.0155	-0.2153
1060	SLU 54	-0.62	0.01	47.41	-10.9827	-0.0155	-0.2155
1060	SLU 55	-0.62	0.02	47.09	-10.9128	-0.0153	-0.214
1060	SLU 56	-0.63	-0.02	47.91	-11.0916	-0.0157	-0.2175
1060	SLU 57	-0.63	0.01	47.89	-11.0883	-0.0157	-0.2177
1060	SLU 58	-0.63	-0.03	47.6	-11.024	-0.0156	-0.216
1060	SLU 59	-0.63	0	47.58	-11.0207	-0.0156	-0.2161
1060	SLU 60	-0.64	-0.03	48.53	-11.2433	-0.0161	-0.221
1060	SLU 61	-0.64	0	48.51	-11.24	-0.0161	-0.2212
1060	SLU 62	-0.65	-0.03	49.01	-11.3489	-0.0163	-0.2232
1060	SLU 63	-0.65	0	48.99	-11.3456	-0.0163	-0.2234
1060	SLU 64	-0.61	0	46.62	-10.7976	-0.0151	-0.2109
1060	SLU 65	-0.61	0.05	46.59	-10.792	-0.015	-0.2112
1060	SLU 66	-0.62	0.01	47.41	-10.9708	-0.0154	-0.2147
1060	SLU 67	-0.62	0.04	47.39	-10.9675	-0.0153	-0.2149
1060	SLU 68	-0.62	0.05	47.07	-10.8977	-0.0152	-0.2134
1060	SLU 69	-0.63	0.01	47.89	-11.0765	-0.0155	-0.217
1060	SLU 70	-0.63	0.04	47.87	-11.0732	-0.0155	-0.2171
1060	SLU 71	-0.62	0	47.58	-11.0088	-0.0154	-0.2154
1060	SLU 72	-0.63	0.03	47.56	-11.0055	-0.0154	-0.2155
1060	SLU 73	-0.68	0.05	51	-11.7967	-0.0171	-0.2333
1060	SLU 74	-0.69	0.01	51.82	-11.9755	-0.0175	-0.2369
1060	SLU 75	-0.69	0.04	51.8	-11.9722	-0.0175	-0.2371
1060	SLU 76	-0.68	0.05	51.48	-11.9024	-0.0173	-0.2356
1060	SLU 77	-0.69	0.01	52.3	-12.0812	-0.0177	-0.2391
1060	SLU 78	-0.69	0.04	52.28	-12.0778	-0.0176	-0.2393
1060	SLU 79	-0.69	0	51.99	-12.0135	-0.0175	-0.2376
1060	SLU 80	-0.69	0.03	51.97	-12.0102	-0.0175	-0.2377
1060	SLU 81	-0.7	0.01	52.92	-12.2328	-0.0181	-0.2426

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1060	SLU 82	-0.7	0.03	52.9	-12.2295	-0.0181	-0.2428
1060	SLU 83	-0.71	0.01	53.4	-12.3385	-0.0183	-0.2448
1060	SLU 84	-0.71	0.03	53.38	-12.3352	-0.0182	-0.245
1060	SLE RA 1	-0.46	0	34.9	-8.0883	-0.0111	-0.1575
1060	SLE RA 2	-0.46	0.03	34.88	-8.0846	-0.0111	-0.1577
1060	SLE RA 3	-0.46	0	35.42	-8.2038	-0.0114	-0.16
1060	SLE RA 4	-0.46	0.02	35.41	-8.2016	-0.0113	-0.1601
1060	SLE RA 5	-0.46	0.03	35.2	-8.1551	-0.0112	-0.1591
1060	SLE RA 6	-0.47	0	35.74	-8.2743	-0.0115	-0.1615
1060	SLE RA 7	-0.47	0.02	35.73	-8.2721	-0.0115	-0.1616
1060	SLE RA 8	-0.47	0	35.54	-8.2292	-0.0114	-0.1605
1060	SLE RA 9	-0.47	0.02	35.52	-8.227	-0.0114	-0.1606
1060	SLE RA 10	-0.5	0.03	37.82	-8.7544	-0.0125	-0.1724
1060	SLE RA 11	-0.51	0	38.37	-8.8736	-0.0128	-0.1748
1060	SLE RA 12	-0.51	0.02	38.35	-8.8714	-0.0128	-0.1749
1060	SLE RA 13	-0.5	0.03	38.14	-8.8249	-0.0126	-0.1739
1060	SLE RA 14	-0.51	0	38.68	-8.9441	-0.0129	-0.1763
1060	SLE RA 15	-0.51	0.02	38.67	-8.9419	-0.0129	-0.1764
1060	SLE RA 16	-0.51	0	38.48	-8.899	-0.0128	-0.1753
1060	SLE RA 17	-0.51	0.02	38.47	-8.8968	-0.0128	-0.1754
1060	SLE RA 18	-0.52	0	39.1	-9.0452	-0.0132	-0.1786
1060	SLE RA 19	-0.52	0.02	39.09	-9.043	-0.0132	-0.1787
1060	SLE RA 20	-0.52	0	39.42	-9.1156	-0.0133	-0.1801
1060	SLE RA 21	-0.52	0.02	39.41	-9.1134	-0.0133	-0.1802
1060	SLE FR 1	-0.46	0	34.9	-8.0883	-0.0111	-0.1575
1060	SLE FR 2	-0.46	0	34.89	-8.0876	-0.0111	-0.1575
1060	SLE FR 3	-0.46	0	35.03	-8.1165	-0.0112	-0.1581
1060	SLE FR 4	-0.48	0	36.15	-8.3747	-0.0117	-0.1639
1060	SLE FR 5	-0.48	0	36.29	-8.4036	-0.0118	-0.1644
1060	SLE FR 6	-0.49	0	37	-8.5668	-0.0122	-0.168
1060	SLE QP 1	-0.46	0	34.9	-8.0883	-0.0111	-0.1575
1060	SLE QP 2	-0.48	0	36.16	-8.3754	-0.0118	-0.1638
1060	SLD 1	3.97	0.82	38.46	-8.6411	-0.0007	1.3949
1060	SLD 2	3.5	0.6	38.61	-8.6643	-0.0002	1.2305
1060	SLD 3	3.9	-0.17	39.19	-8.7948	-0.002	1.3675
1060	SLD 4	3.43	-0.39	39.34	-8.818	-0.0015	1.2032
1060	SLD 5	1.06	1.78	35.72	-8.2179	-0.0066	0.3745
1060	SLD 6	0.75	1.64	35.82	-8.2331	-0.0063	0.2667
1060	SLD 7	0.8	-1.51	38.14	-8.7301	-0.0108	0.2833
1060	SLD 8	0.49	-1.66	38.24	-8.7453	-0.0105	0.1756
1060	SLD 9	-1.44	1.65	34.08	-8.0054	-0.013	-0.5032
1060	SLD 10	-1.75	1.5	34.18	-8.0206	-0.0127	-0.611
1060	SLD 11	-1.7	-1.64	36.5	-8.5176	-0.0172	-0.5944
1060	SLD 12	-2.01	-1.79	36.59	-8.5328	-0.0169	-0.7021
1060	SLD 13	-4.38	0.38	32.98	-7.9328	-0.022	-1.5308
1060	SLD 14	-4.85	0.16	33.13	-7.956	-0.0215	-1.6952
1060	SLD 15	-4.45	-0.61	33.71	-8.0865	-0.0233	-1.5582
1060	SLD 16	-4.92	-0.83	33.86	-8.1097	-0.0228	-1.7225
1060	SLV 1	9.93	1.89	41.57	-9.0042	0.0141	3.4808
1060	SLV 2	8.83	1.38	41.93	-9.0582	0.0152	3.098
1060	SLV 3	9.75	-0.36	43.22	-9.3552	0.0112	3.4175
1060	SLV 4	8.65	-0.87	43.57	-9.4092	0.0123	3.0347
1060	SLV 5	3.11	4.07	35.23	-8.0223	0.0002	1.0915
1060	SLV 6	2.4	3.74	35.46	-8.0571	0.0009	0.8448
1060	SLV 7	2.51	-3.44	40.71	-9.1924	-0.0095	0.8805
1060	SLV 8	1.8	-3.77	40.94	-9.2272	-0.0088	0.6338
1060	SLV 9	-2.75	3.76	31.38	-7.5235	-0.0147	-0.9615
1060	SLV 10	-3.46	3.43	31.61	-7.5583	-0.014	-1.2081
1060	SLV 11	-3.35	-3.74	36.86	-8.6936	-0.0244	-1.1725
1060	SLV 12	-4.06	-4.08	37.09	-8.7284	-0.0237	-1.4191
1060	SLV 13	-9.6	0.87	28.75	-7.3415	-0.0358	-3.3624
1060	SLV 14	-10.7	0.35	29.1	-7.3955	-0.0347	-3.7451
1060	SLV 15	-9.78	-1.39	30.39	-7.6926	-0.0387	-3.4257
1060	SLV 16	-10.88	-1.9	30.74	-7.7466	-0.0376	-3.8084
1060	CRTFP Ux+	0	0	0	0	0	0
1060	CRTFP Ux-	0	0	0	0	0	0
1060	CRTFP Uy+	0	0	0	0	0	0
1060	CRTFP Uy-	0	0	0	0	0	0
1061	SLU 1	-0.41	0.07	34.19	-8.3849	-0.0227	-0.1414
1061	SLU 2	-0.41	0.12	34.15	-8.3783	-0.0226	-0.1416
1061	SLU 3	-0.42	0.08	34.99	-8.5733	-0.0233	-0.145
1061	SLU 4	-0.42	0.11	34.97	-8.5694	-0.0232	-0.1451
1061	SLU 5	-0.42	0.12	34.64	-8.4931	-0.023	-0.1437
1061	SLU 6	-0.43	0.08	35.48	-8.6881	-0.0236	-0.1471
1061	SLU 7	-0.43	0.11	35.46	-8.6841	-0.0236	-0.1472
1061	SLU 8	-0.42	0.07	35.16	-8.6144	-0.0234	-0.1456
1061	SLU 9	-0.42	0.1	35.14	-8.6105	-0.0234	-0.1457
1061	SLU 10	-0.47	0.12	38.66	-9.4747	-0.0264	-0.1627
1061	SLU 11	-0.48	0.09	39.5	-9.6696	-0.0271	-0.1661
1061	SLU 12	-0.48	0.12	39.48	-9.6657	-0.0271	-0.1662
1061	SLU 13	-0.48	0.13	39.15	-9.5894	-0.0268	-0.1648
1061	SLU 14	-0.49	0.09	39.98	-9.7844	-0.0275	-0.1682
1061	SLU 15	-0.49	0.12	39.96	-9.7805	-0.0274	-0.1683
1061	SLU 16	-0.48	0.08	39.67	-9.7108	-0.0272	-0.1667
1061	SLU 17	-0.49	0.11	39.65	-9.7069	-0.0272	-0.1668
1061	SLU 18	-0.5	0.08	40.62	-9.9511	-0.0281	-0.1715
1061	SLU 19	-0.5	0.11	40.6	-9.9471	-0.0281	-0.1717
1061	SLU 20	-0.5	0.08	41.11	-10.0659	-0.0285	-0.1736
1061	SLU 21	-0.51	0.11	41.09	-10.0619	-0.0285	-0.1738
1061	SLU 22	-0.47	0.11	38.67	-9.4633	-0.0263	-0.1618

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1061	SLU 23	-0.47	0.16	38.63	-9.4567	-0.0262	-0.1621
1061	SLU 24	-0.48	0.12	39.47	-9.6517	-0.0269	-0.1654
1061	SLU 25	-0.48	0.15	39.45	-9.6478	-0.0269	-0.1656
1061	SLU 26	-0.48	0.16	39.12	-9.5715	-0.0266	-0.1642
1061	SLU 27	-0.49	0.12	39.96	-9.7665	-0.0273	-0.1675
1061	SLU 28	-0.49	0.15	39.94	-9.7625	-0.0273	-0.1677
1061	SLU 29	-0.48	0.11	39.64	-9.6928	-0.0271	-0.166
1061	SLU 30	-0.48	0.14	39.62	-9.6889	-0.027	-0.1661
1061	SLU 31	-0.53	0.16	43.14	-10.553	-0.0301	-0.1832
1061	SLU 32	-0.54	0.13	43.98	-10.748	-0.0308	-0.1865
1061	SLU 33	-0.54	0.16	43.96	-10.7441	-0.0307	-0.1867
1061	SLU 34	-0.54	0.16	43.63	-10.6678	-0.0305	-0.1853
1061	SLU 35	-0.55	0.13	44.47	-10.8628	-0.0311	-0.1886
1061	SLU 36	-0.55	0.16	44.45	-10.8589	-0.0311	-0.1888
1061	SLU 37	-0.54	0.12	44.15	-10.7892	-0.0309	-0.1871
1061	SLU 38	-0.54	0.15	44.13	-10.7853	-0.0309	-0.1872
1061	SLU 39	-0.56	0.12	45.11	-11.0295	-0.0318	-0.192
1061	SLU 40	-0.56	0.15	45.09	-11.0255	-0.0317	-0.1921
1061	SLU 41	-0.56	0.12	45.59	-11.1443	-0.0322	-0.1941
1061	SLU 42	-0.56	0.15	45.57	-11.1403	-0.0321	-0.1942
1061	SLU 43	-0.51	0.07	42.9	-10.5306	-0.0282	-0.1768
1061	SLU 44	-0.52	0.12	42.87	-10.524	-0.0281	-0.177
1061	SLU 45	-0.53	0.09	43.71	-10.719	-0.0288	-0.1804
1061	SLU 46	-0.53	0.12	43.69	-10.7151	-0.0288	-0.1805
1061	SLU 47	-0.52	0.12	43.36	-10.6388	-0.0285	-0.1791
1061	SLU 48	-0.53	0.09	44.2	-10.8338	-0.0292	-0.1825
1061	SLU 49	-0.53	0.12	44.18	-10.8299	-0.0291	-0.1826
1061	SLU 50	-0.53	0.08	43.88	-10.7602	-0.0289	-0.181
1061	SLU 51	-0.53	0.11	43.86	-10.7562	-0.0289	-0.1811
1061	SLU 52	-0.58	0.13	47.38	-11.6204	-0.032	-0.1981
1061	SLU 53	-0.59	0.09	48.22	-11.8154	-0.0326	-0.2015
1061	SLU 54	-0.59	0.12	48.19	-11.8114	-0.0326	-0.2016
1061	SLU 55	-0.58	0.13	47.86	-11.7352	-0.0323	-0.2002
1061	SLU 56	-0.59	0.1	48.7	-11.9302	-0.033	-0.2036
1061	SLU 57	-0.59	0.12	48.68	-11.9262	-0.033	-0.2037
1061	SLU 58	-0.59	0.09	48.39	-11.8565	-0.0328	-0.2021
1061	SLU 59	-0.59	0.11	48.37	-11.8526	-0.0327	-0.2022
1061	SLU 60	-0.6	0.09	49.34	-12.0968	-0.0337	-0.2069
1061	SLU 61	-0.6	0.11	49.32	-12.0929	-0.0336	-0.2071
1061	SLU 62	-0.61	0.09	49.83	-12.2116	-0.034	-0.209
1061	SLU 63	-0.61	0.12	49.81	-12.2077	-0.034	-0.2092
1061	SLU 64	-0.57	0.11	47.39	-11.609	-0.0319	-0.1972
1061	SLU 65	-0.58	0.16	47.35	-11.6024	-0.0318	-0.1975
1061	SLU 66	-0.58	0.13	48.19	-11.7974	-0.0325	-0.2008
1061	SLU 67	-0.59	0.15	48.17	-11.7935	-0.0324	-0.201
1061	SLU 68	-0.58	0.16	47.84	-11.7172	-0.0322	-0.1996
1061	SLU 69	-0.59	0.13	48.68	-11.9122	-0.0328	-0.2029
1061	SLU 70	-0.59	0.16	48.66	-11.9083	-0.0328	-0.2031
1061	SLU 71	-0.59	0.12	48.36	-11.8386	-0.0326	-0.2014
1061	SLU 72	-0.59	0.15	48.34	-11.8346	-0.0326	-0.2015
1061	SLU 73	-0.64	0.17	51.86	-12.6988	-0.0356	-0.2186
1061	SLU 74	-0.65	0.13	52.7	-12.8938	-0.0363	-0.2219
1061	SLU 75	-0.65	0.16	52.68	-12.8898	-0.0363	-0.2221
1061	SLU 76	-0.64	0.17	52.35	-12.8136	-0.036	-0.2207
1061	SLU 77	-0.65	0.14	53.19	-13.0086	-0.0367	-0.224
1061	SLU 78	-0.65	0.16	53.16	-13.0046	-0.0366	-0.2242
1061	SLU 79	-0.65	0.12	52.87	-12.9349	-0.0364	-0.2225
1061	SLU 80	-0.65	0.15	52.85	-12.931	-0.0364	-0.2227
1061	SLU 81	-0.66	0.13	53.83	-13.1752	-0.0373	-0.2274
1061	SLU 82	-0.66	0.15	53.8	-13.1713	-0.0373	-0.2275
1061	SLU 83	-0.67	0.13	54.31	-13.29	-0.0377	-0.2295
1061	SLU 84	-0.67	0.16	54.29	-13.2861	-0.0377	-0.2296
1061	SLE RA 1	-0.43	0.08	35.47	-8.693	-0.0237	-0.1472
1061	SLE RA 2	-0.43	0.11	35.44	-8.6886	-0.0237	-0.1474
1061	SLE RA 3	-0.44	0.09	36	-8.8186	-0.0241	-0.1496
1061	SLE RA 4	-0.44	0.11	35.99	-8.816	-0.0241	-0.1497
1061	SLE RA 5	-0.43	0.11	35.77	-8.7651	-0.0239	-0.1488
1061	SLE RA 6	-0.44	0.09	36.33	-8.8951	-0.0244	-0.151
1061	SLE RA 7	-0.44	0.11	36.31	-8.8925	-0.0243	-0.1511
1061	SLE RA 8	-0.44	0.08	36.12	-8.846	-0.0242	-0.15
1061	SLE RA 9	-0.44	0.1	36.1	-8.8434	-0.0242	-0.1501
1061	SLE RA 10	-0.47	0.12	38.45	-9.4195	-0.0262	-0.1615
1061	SLE RA 11	-0.48	0.09	39.01	-9.5495	-0.0267	-0.1637
1061	SLE RA 12	-0.48	0.11	38.99	-9.5469	-0.0266	-0.1638
1061	SLE RA 13	-0.47	0.12	38.77	-9.496	-0.0265	-0.1628
1061	SLE RA 14	-0.48	0.09	39.33	-9.626	-0.0269	-0.1651
1061	SLE RA 15	-0.48	0.11	39.32	-9.6234	-0.0269	-0.1652
1061	SLE RA 16	-0.48	0.09	39.12	-9.5769	-0.0268	-0.1641
1061	SLE RA 17	-0.48	0.11	39.11	-9.5743	-0.0267	-0.1642
1061	SLE RA 18	-0.49	0.09	39.76	-9.7371	-0.0274	-0.1673
1061	SLE RA 19	-0.49	0.11	39.74	-9.7345	-0.0273	-0.1674
1061	SLE RA 20	-0.49	0.09	40.08	-9.8137	-0.0276	-0.1687
1061	SLE RA 21	-0.49	0.11	40.07	-9.811	-0.0276	-0.1688
1061	SLE FR 1	-0.43	0.08	35.47	-8.693	-0.0237	-0.1472
1061	SLE FR 2	-0.43	0.09	35.46	-8.6921	-0.0237	-0.1473
1061	SLE FR 3	-0.43	0.08	35.6	-8.7236	-0.0238	-0.1478
1061	SLE FR 4	-0.45	0.09	36.75	-9.0054	-0.0248	-0.1533
1061	SLE FR 5	-0.45	0.08	36.88	-9.0368	-0.0249	-0.1538
1061	SLE FR 6	-0.46	0.08	37.61	-9.2151	-0.0255	-0.1573
1061	SLE QP 1	-0.43	0.08	35.47	-8.693	-0.0237	-0.1472

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1061	SLE QP 2	-0.45	0.08	36.75	-9.0062	-0.0248	-0.1533
1061	SLD 1	4	0.93	38.75	-9.209	-0.0158	1.4053
1061	SLD 2	3.53	0.72	38.88	-9.2312	-0.0154	1.2414
1061	SLD 3	3.93	-0.07	39.5	-9.3705	-0.0175	1.3781
1061	SLD 4	3.46	-0.28	39.64	-9.3927	-0.0171	1.2143
1061	SLD 5	1.09	1.89	36.18	-8.8181	-0.0197	0.3846
1061	SLD 6	0.78	1.75	36.27	-8.8327	-0.0194	0.2771
1061	SLD 7	0.83	-1.45	38.7	-9.3565	-0.0252	0.2942
1061	SLD 8	0.53	-1.58	38.79	-9.3711	-0.0249	0.1867
1061	SLD 9	-1.42	1.75	34.72	-8.6414	-0.0247	-0.4932
1061	SLD 10	-1.73	1.61	34.81	-8.6559	-0.0244	-0.6007
1061	SLD 11	-1.67	-1.59	37.23	-9.1798	-0.0302	-0.5837
1061	SLD 12	-1.98	-1.73	37.32	-9.1943	-0.0299	-0.6911
1061	SLD 13	-4.35	0.45	33.87	-8.6198	-0.0325	-1.5208
1061	SLD 14	-4.82	0.24	34.01	-8.642	-0.0321	-1.6846
1061	SLD 15	-4.43	-0.55	34.62	-8.7813	-0.0342	-1.5479
1061	SLD 16	-4.9	-0.76	34.76	-8.8035	-0.0338	-1.7118
1061	SLV 1	9.96	2.03	41.45	-9.49	-0.0038	3.4909
1061	SLV 2	8.87	1.54	41.77	-9.5417	-0.0029	3.1093
1061	SLV 3	9.78	-0.25	43.16	-9.8573	-0.0076	3.4281
1061	SLV 4	8.69	-0.74	43.48	-9.9091	-0.0067	3.0464
1061	SLV 5	3.13	4.21	35.51	-8.5853	-0.0129	1.101
1061	SLV 6	2.43	3.9	35.72	-8.6187	-0.0123	0.855
1061	SLV 7	2.54	-3.4	41.22	-9.8098	-0.0255	0.8916
1061	SLV 8	1.84	-3.71	41.42	-9.8431	-0.025	0.6457
1061	SLV 9	-2.73	3.87	32.09	-8.1694	-0.0246	-0.9522
1061	SLV 10	-3.43	3.56	32.29	-8.2027	-0.024	-1.1981
1061	SLV 11	-3.32	-3.73	37.79	-9.3938	-0.0373	-1.1616
1061	SLV 12	-4.03	-4.05	38	-9.4271	-0.0367	-1.4075
1061	SLV 13	-9.58	0.9	30.03	-8.1034	-0.0429	-3.353
1061	SLV 14	-10.67	0.42	30.35	-8.1551	-0.042	-3.7346
1061	SLV 15	-9.76	-1.38	31.74	-8.4707	-0.0467	-3.4158
1061	SLV 16	-10.85	-1.87	32.06	-8.5224	-0.0458	-3.7974
1061	CRTFP Ux+	0	0	0	0	0	0
1061	CRTFP Ux-	0	0	0	0	0	0
1061	CRTFP Uy+	0	0	0	0	0	0
1061	CRTFP Uy-	0	0	0	0	0	0
1062	SLU 1	-0.38	0.16	35	-9.1997	-0.0277	-0.1308
1062	SLU 2	-0.38	0.21	34.97	-9.1919	-0.0277	-0.1311
1062	SLU 3	-0.39	0.18	35.83	-9.4092	-0.0285	-0.1342
1062	SLU 4	-0.39	0.2	35.81	-9.4046	-0.0284	-0.1343
1062	SLU 5	-0.39	0.21	35.47	-9.3195	-0.0281	-0.133
1062	SLU 6	-0.4	0.18	36.33	-9.5368	-0.0289	-0.1361
1062	SLU 7	-0.4	0.21	36.31	-9.5321	-0.0289	-0.1363
1062	SLU 8	-0.39	0.17	36.01	-9.4549	-0.0286	-0.1347
1062	SLU 9	-0.39	0.2	35.99	-9.4502	-0.0286	-0.1348
1062	SLU 10	-0.44	0.23	39.61	-10.4117	-0.0321	-0.151
1062	SLU 11	-0.45	0.19	40.47	-10.6291	-0.0329	-0.1541
1062	SLU 12	-0.45	0.22	40.45	-10.6244	-0.0329	-0.1543
1062	SLU 13	-0.45	0.23	40.11	-10.5393	-0.0326	-0.1529
1062	SLU 14	-0.46	0.19	40.97	-10.7567	-0.0334	-0.1561
1062	SLU 15	-0.46	0.22	40.95	-10.752	-0.0333	-0.1562
1062	SLU 16	-0.45	0.18	40.65	-10.6747	-0.0331	-0.1546
1062	SLU 17	-0.45	0.21	40.63	-10.67	-0.033	-0.1548
1062	SLU 18	-0.47	0.18	41.64	-10.9423	-0.0341	-0.1593
1062	SLU 19	-0.47	0.21	41.61	-10.9377	-0.0341	-0.1595
1062	SLU 20	-0.47	0.19	42.14	-11.0699	-0.0346	-0.1612
1062	SLU 21	-0.47	0.22	42.12	-11.0652	-0.0345	-0.1614
1062	SLU 22	-0.44	0.21	39.62	-10.3992	-0.0321	-0.1501
1062	SLU 23	-0.44	0.26	39.58	-10.3914	-0.032	-0.1503
1062	SLU 24	-0.45	0.23	40.44	-10.6087	-0.0328	-0.1534
1062	SLU 25	-0.45	0.25	40.42	-10.604	-0.0327	-0.1536
1062	SLU 26	-0.45	0.26	40.08	-10.519	-0.0324	-0.1522
1062	SLU 27	-0.45	0.23	40.94	-10.7363	-0.0332	-0.1553
1062	SLU 28	-0.45	0.26	40.92	-10.7316	-0.0332	-0.1555
1062	SLU 29	-0.45	0.22	40.62	-10.6544	-0.033	-0.1539
1062	SLU 30	-0.45	0.25	40.6	-10.6497	-0.0329	-0.154
1062	SLU 31	-0.5	0.28	44.22	-11.6112	-0.0364	-0.1702
1062	SLU 32	-0.51	0.24	45.08	-11.8286	-0.0373	-0.1734
1062	SLU 33	-0.51	0.27	45.06	-11.8239	-0.0372	-0.1735
1062	SLU 34	-0.5	0.28	44.72	-11.7388	-0.0369	-0.1721
1062	SLU 35	-0.51	0.24	45.59	-11.9562	-0.0377	-0.1753
1062	SLU 36	-0.51	0.27	45.56	-11.9515	-0.0377	-0.1754
1062	SLU 37	-0.51	0.23	45.26	-11.8742	-0.0374	-0.1738
1062	SLU 38	-0.51	0.26	45.24	-11.8695	-0.0374	-0.174
1062	SLU 39	-0.52	0.23	46.25	-12.1418	-0.0384	-0.1785
1062	SLU 40	-0.52	0.26	46.23	-12.1371	-0.0384	-0.1787
1062	SLU 41	-0.53	0.24	46.75	-12.2694	-0.0389	-0.1805
1062	SLU 42	-0.53	0.27	46.73	-12.2647	-0.0388	-0.1806
1062	SLU 43	-0.48	0.19	43.93	-11.5484	-0.0346	-0.1635
1062	SLU 44	-0.48	0.24	43.89	-11.5406	-0.0345	-0.1637
1062	SLU 45	-0.49	0.21	44.75	-11.7579	-0.0353	-0.1669
1062	SLU 46	-0.49	0.24	44.73	-11.7532	-0.0353	-0.167
1062	SLU 47	-0.48	0.24	44.39	-11.6681	-0.0349	-0.1657
1062	SLU 48	-0.49	0.21	45.25	-11.8855	-0.0358	-0.1688
1062	SLU 49	-0.49	0.24	45.23	-11.8808	-0.0357	-0.1689
1062	SLU 50	-0.49	0.2	44.93	-11.8035	-0.0355	-0.1673
1062	SLU 51	-0.49	0.23	44.91	-11.7989	-0.0354	-0.1675
1062	SLU 52	-0.54	0.26	48.53	-12.7604	-0.039	-0.1837
1062	SLU 53	-0.55	0.22	49.39	-12.9777	-0.0398	-0.1868

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1062	SLU 54	-0.55	0.25	49.37	-12.9731	-0.0397	-0.187
1062	SLU 55	-0.54	0.26	49.03	-12.888	-0.0394	-0.1856
1062	SLU 56	-0.55	0.23	49.89	-13.1053	-0.0402	-0.1887
1062	SLU 57	-0.55	0.25	49.87	-13.1007	-0.0402	-0.1889
1062	SLU 58	-0.55	0.21	49.57	-13.0234	-0.0399	-0.1873
1062	SLU 59	-0.55	0.24	49.55	-13.0187	-0.0399	-0.1874
1062	SLU 60	-0.56	0.21	50.56	-13.291	-0.0409	-0.192
1062	SLU 61	-0.56	0.24	50.53	-13.2863	-0.0409	-0.1921
1062	SLU 62	-0.57	0.22	51.06	-13.4186	-0.0414	-0.1939
1062	SLU 63	-0.57	0.25	51.04	-13.4139	-0.0413	-0.194
1062	SLU 64	-0.53	0.24	48.54	-12.7478	-0.0389	-0.1827
1062	SLU 65	-0.54	0.29	48.5	-12.74	-0.0388	-0.183
1062	SLU 66	-0.54	0.26	49.36	-12.9574	-0.0396	-0.1861
1062	SLU 67	-0.54	0.29	49.34	-12.9527	-0.0396	-0.1862
1062	SLU 68	-0.54	0.29	49	-12.8676	-0.0393	-0.1849
1062	SLU 69	-0.55	0.26	49.86	-13.085	-0.0401	-0.188
1062	SLU 70	-0.55	0.29	49.84	-13.0803	-0.04	-0.1881
1062	SLU 71	-0.55	0.25	49.54	-13.003	-0.0398	-0.1866
1062	SLU 72	-0.55	0.28	49.52	-12.9983	-0.0397	-0.1867
1062	SLU 73	-0.59	0.31	53.14	-13.9599	-0.0433	-0.2029
1062	SLU 74	-0.6	0.27	54	-14.1772	-0.0441	-0.206
1062	SLU 75	-0.6	0.3	53.98	-14.1725	-0.044	-0.2062
1062	SLU 76	-0.6	0.31	53.64	-14.0875	-0.0437	-0.2048
1062	SLU 77	-0.61	0.28	54.51	-14.3048	-0.0445	-0.2079
1062	SLU 78	-0.61	0.3	54.48	-14.3001	-0.0445	-0.2081
1062	SLU 79	-0.6	0.26	54.18	-14.2229	-0.0443	-0.2065
1062	SLU 80	-0.6	0.29	54.16	-14.2182	-0.0442	-0.2066
1062	SLU 81	-0.62	0.26	55.17	-14.4905	-0.0453	-0.2112
1062	SLU 82	-0.62	0.29	55.15	-14.4858	-0.0452	-0.2114
1062	SLU 83	-0.62	0.27	55.67	-14.6181	-0.0457	-0.2131
1062	SLU 84	-0.62	0.3	55.65	-14.6134	-0.0457	-0.2133
1062	SLE RA 1	-0.4	0.18	36.32	-9.5424	-0.029	-0.1363
1062	SLE RA 2	-0.4	0.21	36.3	-9.5372	-0.0289	-0.1365
1062	SLE RA 3	-0.41	0.18	36.87	-9.6821	-0.0295	-0.1386
1062	SLE RA 4	-0.41	0.2	36.86	-9.679	-0.0294	-0.1387
1062	SLE RA 5	-0.4	0.21	36.63	-9.6223	-0.0292	-0.1378
1062	SLE RA 6	-0.41	0.19	37.21	-9.7672	-0.0298	-0.1399
1062	SLE RA 7	-0.41	0.21	37.19	-9.764	-0.0297	-0.1399
1062	SLE RA 8	-0.41	0.18	36.99	-9.7125	-0.0296	-0.1389
1062	SLE RA 9	-0.41	0.2	36.98	-9.7094	-0.0295	-0.139
1062	SLE RA 10	-0.44	0.22	39.39	-10.3504	-0.0319	-0.1498
1062	SLE RA 11	-0.44	0.2	39.97	-10.4953	-0.0324	-0.1519
1062	SLE RA 12	-0.44	0.21	39.95	-10.4922	-0.0324	-0.152
1062	SLE RA 13	-0.44	0.22	39.73	-10.4355	-0.0322	-0.1511
1062	SLE RA 14	-0.45	0.2	40.3	-10.5804	-0.0327	-0.1531
1062	SLE RA 15	-0.45	0.22	40.29	-10.5773	-0.0327	-0.1532
1062	SLE RA 16	-0.44	0.19	40.09	-10.5258	-0.0325	-0.1522
1062	SLE RA 17	-0.45	0.21	40.07	-10.5226	-0.0325	-0.1523
1062	SLE RA 18	-0.45	0.19	40.74	-10.7042	-0.0332	-0.1553
1062	SLE RA 19	-0.45	0.21	40.73	-10.701	-0.0332	-0.1554
1062	SLE RA 20	-0.46	0.19	41.08	-10.7892	-0.0335	-0.1566
1062	SLE RA 21	-0.46	0.21	41.06	-10.7861	-0.0335	-0.1567
1062	SLE FR 1	-0.4	0.18	36.32	-9.5424	-0.029	-0.1363
1062	SLE FR 2	-0.4	0.18	36.32	-9.5414	-0.029	-0.1364
1062	SLE FR 3	-0.4	0.18	36.46	-9.5764	-0.0291	-0.1369
1062	SLE FR 4	-0.42	0.19	37.64	-9.8899	-0.0302	-0.1421
1062	SLE FR 5	-0.42	0.18	37.78	-9.925	-0.0304	-0.1425
1062	SLE FR 6	-0.43	0.18	38.53	-10.1233	-0.0311	-0.1458
1062	SLE QP 1	-0.4	0.18	36.32	-9.5424	-0.029	-0.1363
1062	SLE QP 2	-0.42	0.18	37.65	-9.8909	-0.0302	-0.142
1062	SLD 1	4.03	1.04	39.4	-10.081	-0.0232	1.4153
1062	SLD 2	3.57	0.84	39.53	-10.1034	-0.0229	1.252
1062	SLD 3	3.96	0.02	40.19	-10.2578	-0.025	1.3884
1062	SLD 4	3.49	-0.18	40.32	-10.2802	-0.0247	1.2251
1062	SLD 5	1.12	2.02	36.95	-9.6759	-0.0254	0.3949
1062	SLD 6	0.81	1.89	37.03	-9.6906	-0.0252	0.2879
1062	SLD 7	0.86	-1.38	39.59	-10.2651	-0.0315	0.3054
1062	SLD 8	0.56	-1.51	39.68	-10.2798	-0.0313	0.1984
1062	SLD 9	-1.39	1.87	35.62	-9.5021	-0.0292	-0.4824
1062	SLD 10	-1.7	1.74	35.71	-9.5168	-0.029	-0.5895
1062	SLD 11	-1.64	-1.53	38.27	-10.0913	-0.0352	-0.5719
1062	SLD 12	-1.95	-1.66	38.35	-10.106	-0.0351	-0.679
1062	SLD 13	-4.32	0.54	34.98	-9.5017	-0.0357	-1.5092
1062	SLD 14	-4.79	0.34	35.11	-9.5241	-0.0354	-1.6725
1062	SLD 15	-4.4	-0.48	35.77	-9.6785	-0.0376	-1.5361
1062	SLD 16	-4.86	-0.68	35.9	-9.7009	-0.0373	-1.6993
1062	SLV 1	9.99	2.16	41.77	-10.3472	-0.0139	3.4993
1062	SLV 2	8.9	1.7	42.07	-10.3994	-0.0132	3.119
1062	SLV 3	9.81	-0.16	43.57	-10.748	-0.018	3.4371
1062	SLV 4	8.72	-0.62	43.87	-10.8002	-0.0174	3.0568
1062	SLV 5	3.16	4.37	36.11	-9.411	-0.0191	1.1102
1062	SLV 6	2.46	4.08	36.3	-9.4447	-0.0187	0.8651
1062	SLV 7	2.57	-3.36	42.1	-10.7469	-0.033	0.9029
1062	SLV 8	1.87	-3.66	42.29	-10.7805	-0.0326	0.6578
1062	SLV 9	-2.7	4.02	33.01	-9.0014	-0.0279	-0.9419
1062	SLV 10	-3.4	3.72	33.2	-9.035	-0.0275	-1.1869
1062	SLV 11	-3.29	-3.72	39	-10.3372	-0.0418	-1.1492
1062	SLV 12	-3.99	-4.01	39.19	-10.3708	-0.0414	-1.3943
1062	SLV 13	-9.55	0.98	31.43	-8.9817	-0.0431	-3.3409
1062	SLV 14	-10.64	0.52	31.73	-9.0339	-0.0424	-3.7212

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1062	SLV 15	-9.73	-1.34	33.23	-9.3824	-0.0473	-3.4031
1062	SLV 16	-10.82	-1.8	33.52	-9.4346	-0.0466	-3.7834
1062	CRTFP Ux+	0	0	0	0	0	0
1062	CRTFP Ux-	0	0	0	0	0	0
1062	CRTFP Uy+	0	0	0	0	0	0
1062	CRTFP Uy-	0	0	0	0	0	0
1063	SLU 1	-0.35	0.26	35.83	-10.0926	-0.0227	-0.1195
1063	SLU 2	-0.35	0.31	35.79	-10.0835	-0.0226	-0.1197
1063	SLU 3	-0.36	0.28	36.68	-10.3251	-0.0233	-0.1226
1063	SLU 4	-0.36	0.31	36.66	-10.3196	-0.0233	-0.1228
1063	SLU 5	-0.36	0.32	36.31	-10.2251	-0.023	-0.1215
1063	SLU 6	-0.37	0.29	37.2	-10.4666	-0.0237	-0.1244
1063	SLU 7	-0.37	0.32	37.17	-10.4612	-0.0236	-0.1245
1063	SLU 8	-0.36	0.27	36.86	-10.3757	-0.0234	-0.123
1063	SLU 9	-0.36	0.3	36.84	-10.3703	-0.0234	-0.1231
1063	SLU 10	-0.41	0.34	40.57	-11.4343	-0.0262	-0.1384
1063	SLU 11	-0.41	0.31	41.45	-11.6759	-0.0268	-0.1413
1063	SLU 12	-0.42	0.34	41.43	-11.6704	-0.0268	-0.1414
1063	SLU 13	-0.41	0.34	41.08	-11.5759	-0.0265	-0.1401
1063	SLU 14	-0.42	0.31	41.97	-11.8174	-0.0272	-0.143
1063	SLU 15	-0.42	0.34	41.94	-11.812	-0.0272	-0.1432
1063	SLU 16	-0.42	0.3	41.64	-11.7265	-0.027	-0.1417
1063	SLU 17	-0.42	0.33	41.61	-11.7211	-0.0269	-0.1418
1063	SLU 18	-0.43	0.3	42.65	-12.0223	-0.0278	-0.1462
1063	SLU 19	-0.43	0.33	42.63	-12.0168	-0.0277	-0.1463
1063	SLU 20	-0.43	0.31	43.17	-12.1638	-0.0281	-0.1479
1063	SLU 21	-0.43	0.34	43.14	-12.1584	-0.0281	-0.1481
1063	SLU 22	-0.4	0.33	40.57	-11.4215	-0.0262	-0.1374
1063	SLU 23	-0.4	0.38	40.53	-11.4124	-0.0261	-0.1376
1063	SLU 24	-0.41	0.34	41.42	-11.654	-0.0268	-0.1405
1063	SLU 25	-0.41	0.37	41.4	-11.6486	-0.0267	-0.1407
1063	SLU 26	-0.41	0.38	41.05	-11.554	-0.0265	-0.1394
1063	SLU 27	-0.42	0.35	41.93	-11.7956	-0.0271	-0.1423
1063	SLU 28	-0.42	0.38	41.91	-11.7902	-0.0271	-0.1424
1063	SLU 29	-0.41	0.34	41.6	-11.7046	-0.0269	-0.1409
1063	SLU 30	-0.41	0.37	41.58	-11.6992	-0.0269	-0.141
1063	SLU 31	-0.46	0.4	45.31	-12.7632	-0.0296	-0.1563
1063	SLU 32	-0.47	0.37	46.19	-13.0048	-0.0303	-0.1592
1063	SLU 33	-0.47	0.4	46.17	-12.9994	-0.0302	-0.1593
1063	SLU 34	-0.46	0.41	45.82	-12.9048	-0.03	-0.158
1063	SLU 35	-0.47	0.38	46.71	-13.1464	-0.0307	-0.1609
1063	SLU 36	-0.47	0.41	46.68	-13.1409	-0.0306	-0.1611
1063	SLU 37	-0.47	0.36	46.37	-13.0554	-0.0304	-0.1596
1063	SLU 38	-0.47	0.39	46.35	-13.05	-0.0304	-0.1597
1063	SLU 39	-0.48	0.36	47.39	-13.3512	-0.0312	-0.1641
1063	SLU 40	-0.48	0.39	47.37	-13.3458	-0.0312	-0.1642
1063	SLU 41	-0.49	0.37	47.91	-13.4928	-0.0316	-0.1658
1063	SLU 42	-0.49	0.4	47.88	-13.4873	-0.0315	-0.1659
1063	SLU 43	-0.44	0.32	44.96	-12.6647	-0.0283	-0.1492
1063	SLU 44	-0.44	0.37	44.92	-12.6556	-0.0283	-0.1495
1063	SLU 45	-0.45	0.34	45.81	-12.8972	-0.0289	-0.1523
1063	SLU 46	-0.45	0.37	45.78	-12.8918	-0.0289	-0.1525
1063	SLU 47	-0.44	0.38	45.43	-12.7972	-0.0286	-0.1512
1063	SLU 48	-0.45	0.34	46.32	-13.0388	-0.0293	-0.1541
1063	SLU 49	-0.45	0.37	46.3	-13.0333	-0.0293	-0.1542
1063	SLU 50	-0.45	0.33	45.99	-12.9478	-0.0291	-0.1527
1063	SLU 51	-0.45	0.36	45.96	-12.9424	-0.029	-0.1528
1063	SLU 52	-0.49	0.4	49.69	-14.0064	-0.0318	-0.1681
1063	SLU 53	-0.5	0.37	50.58	-14.248	-0.0325	-0.171
1063	SLU 54	-0.5	0.4	50.55	-14.2426	-0.0324	-0.1711
1063	SLU 55	-0.5	0.4	50.21	-14.148	-0.0322	-0.1699
1063	SLU 56	-0.51	0.37	51.09	-14.3896	-0.0328	-0.1728
1063	SLU 57	-0.51	0.4	51.07	-14.3841	-0.0328	-0.1729
1063	SLU 58	-0.5	0.36	50.76	-14.2986	-0.0326	-0.1714
1063	SLU 59	-0.5	0.39	50.74	-14.2932	-0.0326	-0.1715
1063	SLU 60	-0.52	0.36	51.78	-14.5944	-0.0334	-0.1759
1063	SLU 61	-0.52	0.39	51.75	-14.589	-0.0333	-0.176
1063	SLU 62	-0.52	0.36	52.29	-14.736	-0.0338	-0.1776
1063	SLU 63	-0.52	0.39	52.27	-14.7305	-0.0337	-0.1778
1063	SLU 64	-0.49	0.38	49.7	-13.9936	-0.0318	-0.1671
1063	SLU 65	-0.49	0.43	49.66	-13.9846	-0.0317	-0.1674
1063	SLU 66	-0.5	0.4	50.54	-14.2261	-0.0324	-0.1702
1063	SLU 67	-0.5	0.43	50.52	-14.2207	-0.0323	-0.1704
1063	SLU 68	-0.5	0.44	50.17	-14.1261	-0.0321	-0.1691
1063	SLU 69	-0.51	0.41	51.06	-14.3677	-0.0328	-0.172
1063	SLU 70	-0.51	0.44	51.04	-14.3623	-0.0327	-0.1721
1063	SLU 71	-0.5	0.39	50.73	-14.2768	-0.0325	-0.1706
1063	SLU 72	-0.5	0.42	50.7	-14.2713	-0.0325	-0.1707
1063	SLU 73	-0.55	0.46	54.43	-15.3354	-0.0352	-0.186
1063	SLU 74	-0.55	0.43	55.32	-15.5769	-0.0359	-0.1889
1063	SLU 75	-0.55	0.46	55.29	-15.5715	-0.0359	-0.189
1063	SLU 76	-0.55	0.46	54.95	-15.4769	-0.0356	-0.1878
1063	SLU 77	-0.56	0.43	55.83	-15.7185	-0.0363	-0.1906
1063	SLU 78	-0.56	0.46	55.81	-15.7131	-0.0362	-0.1908
1063	SLU 79	-0.56	0.42	55.5	-15.6276	-0.0361	-0.1893
1063	SLU 80	-0.56	0.45	55.48	-15.6221	-0.036	-0.1894
1063	SLU 81	-0.57	0.42	56.52	-15.9233	-0.0368	-0.1938
1063	SLU 82	-0.57	0.45	56.49	-15.9179	-0.0368	-0.1939
1063	SLU 83	-0.57	0.43	57.03	-16.0649	-0.0372	-0.1955
1063	SLU 84	-0.57	0.46	57.01	-16.0595	-0.0372	-0.1957

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1063	SLE RA 1	-0.37	0.28	37.19	-10.4723	-0.0237	-0.1246
1063	SLE RA 2	-0.37	0.31	37.16	-10.4662	-0.0237	-0.1248
1063	SLE RA 3	-0.37	0.29	37.75	-10.6273	-0.0241	-0.1267
1063	SLE RA 4	-0.37	0.31	37.74	-10.6236	-0.0241	-0.1268
1063	SLE RA 5	-0.37	0.32	37.5	-10.5606	-0.0239	-0.1259
1063	SLE RA 6	-0.38	0.3	38.1	-10.7216	-0.0243	-0.1279
1063	SLE RA 7	-0.38	0.32	38.08	-10.718	-0.0243	-0.1279
1063	SLE RA 8	-0.37	0.29	37.87	-10.661	-0.0242	-0.1269
1063	SLE RA 9	-0.37	0.31	37.86	-10.6574	-0.0242	-0.127
1063	SLE RA 10	-0.4	0.33	40.34	-11.3667	-0.026	-0.1372
1063	SLE RA 11	-0.41	0.31	40.93	-11.5278	-0.0265	-0.1391
1063	SLE RA 12	-0.41	0.33	40.92	-11.5242	-0.0264	-0.1392
1063	SLE RA 13	-0.41	0.34	40.69	-11.4611	-0.0262	-0.1384
1063	SLE RA 14	-0.41	0.31	41.28	-11.6222	-0.0267	-0.1403
1063	SLE RA 15	-0.41	0.33	41.26	-11.6186	-0.0267	-0.1404
1063	SLE RA 16	-0.41	0.31	41.06	-11.5615	-0.0265	-0.1394
1063	SLE RA 17	-0.41	0.33	41.04	-11.5579	-0.0265	-0.1395
1063	SLE RA 18	-0.42	0.31	41.73	-11.7587	-0.0271	-0.1424
1063	SLE RA 19	-0.42	0.33	41.72	-11.7551	-0.027	-0.1425
1063	SLE RA 20	-0.42	0.31	42.08	-11.8531	-0.0273	-0.1436
1063	SLE RA 21	-0.42	0.33	42.06	-11.8495	-0.0273	-0.1437
1063	SLE FR 1	-0.37	0.28	37.19	-10.4723	-0.0237	-0.1246
1063	SLE FR 2	-0.37	0.29	37.18	-10.471	-0.0237	-0.1247
1063	SLE FR 3	-0.37	0.28	37.32	-10.51	-0.0238	-0.1251
1063	SLE FR 4	-0.38	0.3	38.55	-10.857	-0.0247	-0.13
1063	SLE FR 5	-0.38	0.29	38.69	-10.8959	-0.0248	-0.1304
1063	SLE FR 6	-0.39	0.29	39.46	-11.1155	-0.0254	-0.1335
1063	SLE QP 1	-0.37	0.28	37.19	-10.4723	-0.0237	-0.1246
1063	SLE QP 2	-0.38	0.29	38.55	-10.8582	-0.0247	-0.13
1063	SLD 1	4.06	1.14	40.12	-11.0839	-0.0196	1.4252
1063	SLD 2	3.6	0.96	40.23	-11.1071	-0.0194	1.2626
1063	SLD 3	3.99	0.11	40.95	-11.2814	-0.0213	1.3987
1063	SLD 4	3.52	-0.07	41.07	-11.3047	-0.021	1.2361
1063	SLD 5	1.15	2.15	37.73	-10.6222	-0.0207	0.4057
1063	SLD 6	0.84	2.03	37.81	-10.6374	-0.0205	0.2991
1063	SLD 7	0.9	-1.3	40.52	-11.2806	-0.0263	0.3173
1063	SLD 8	0.59	-1.42	40.59	-11.2959	-0.0261	0.2107
1063	SLD 9	-1.36	2	36.51	-10.4205	-0.0233	-0.4707
1063	SLD 10	-1.66	1.88	36.58	-10.4358	-0.0232	-0.5772
1063	SLD 11	-1.61	-1.45	39.29	-11.079	-0.0289	-0.559
1063	SLD 12	-1.91	-1.57	39.37	-11.0942	-0.0287	-0.6656
1063	SLD 13	-4.29	0.65	36.03	-10.4117	-0.0284	-1.496
1063	SLD 14	-4.75	0.47	36.15	-10.435	-0.0281	-1.6586
1063	SLD 15	-4.36	-0.38	36.87	-10.6093	-0.03	-1.5225
1063	SLD 16	-4.83	-0.56	36.98	-10.6325	-0.0298	-1.6851
1063	SLV 1	10.01	2.25	42.25	-11.399	-0.0129	3.5063
1063	SLV 2	8.93	1.83	42.53	-11.4531	-0.0123	3.1277
1063	SLV 3	9.84	-0.11	44.14	-11.8463	-0.0167	3.4449
1063	SLV 4	8.75	-0.53	44.42	-11.9005	-0.0161	3.0663
1063	SLV 5	3.19	4.53	36.74	-10.3326	-0.0155	1.1193
1063	SLV 6	2.49	4.26	36.92	-10.3675	-0.0151	0.8753
1063	SLV 7	2.61	-3.34	43.05	-11.8238	-0.0282	0.9145
1063	SLV 8	1.91	-3.6	43.23	-11.8587	-0.0278	0.6705
1063	SLV 9	-2.67	4.18	33.87	-9.8577	-0.0216	-0.9304
1063	SLV 10	-3.37	3.91	34.05	-9.8926	-0.0212	-1.1745
1063	SLV 11	-3.25	-3.68	40.18	-11.3489	-0.0343	-1.1352
1063	SLV 12	-3.95	-3.95	40.36	-11.3838	-0.034	-1.3792
1063	SLV 13	-9.52	1.11	32.68	-9.8159	-0.0333	-3.3262
1063	SLV 14	-10.6	0.69	32.96	-9.8701	-0.0327	-3.7048
1063	SLV 15	-9.69	-1.25	34.58	-10.2633	-0.0371	-3.3876
1063	SLV 16	-10.78	-1.67	34.85	-10.3174	-0.0365	-3.7663
1063	CRTFP Ux+	0	0	0	0	0	0
1063	CRTFP Ux-	0	0	0	0	0	0
1063	CRTFP Uy+	0	0	0	0	0	0
1063	CRTFP Uy-	0	0	0	0	0	0
1064	SLU 1	-0.29	0.33	32.77	-9.8098	0.606	-0.1038
1064	SLU 2	-0.29	0.38	32.73	-9.8006	0.6053	-0.1048
1064	SLU 3	-0.29	0.35	33.54	-10.0374	0.6203	-0.1067
1064	SLU 4	-0.29	0.38	33.52	-10.032	0.6199	-0.1074
1064	SLU 5	-0.29	0.38	33.2	-9.9393	0.614	-0.1064
1064	SLU 6	-0.3	0.36	34.01	-10.1761	0.629	-0.1083
1064	SLU 7	-0.3	0.38	33.99	-10.1706	0.6286	-0.1089
1064	SLU 8	-0.29	0.34	33.71	-10.0871	0.6234	-0.1068
1064	SLU 9	-0.29	0.37	33.69	-10.0816	0.623	-0.1075
1064	SLU 10	-0.33	0.41	37.1	-11.1175	0.6862	-0.1212
1064	SLU 11	-0.34	0.38	37.91	-11.3543	0.7012	-0.1231
1064	SLU 12	-0.34	0.41	37.89	-11.3488	0.7008	-0.1237
1064	SLU 13	-0.34	0.42	37.57	-11.2562	0.6949	-0.1227
1064	SLU 14	-0.34	0.39	38.38	-11.493	0.7099	-0.1246
1064	SLU 15	-0.34	0.42	38.36	-11.4875	0.7095	-0.1252
1064	SLU 16	-0.34	0.38	38.08	-11.404	0.7043	-0.1232
1064	SLU 17	-0.34	0.4	38.06	-11.3985	0.7039	-0.1238
1064	SLU 18	-0.35	0.38	39.01	-11.691	0.7215	-0.1272
1064	SLU 19	-0.35	0.41	38.99	-11.6855	0.7211	-0.1278
1064	SLU 20	-0.36	0.39	39.48	-11.8297	0.7302	-0.1287
1064	SLU 21	-0.36	0.41	39.46	-11.8242	0.7298	-0.1293
1064	SLU 22	-0.33	0.4	37.11	-11.107	0.6863	-0.1201
1064	SLU 23	-0.33	0.44	37.07	-11.0979	0.6856	-0.1211
1064	SLU 24	-0.34	0.42	37.88	-11.3347	0.7006	-0.123
1064	SLU 25	-0.34	0.45	37.86	-11.3292	0.7002	-0.1236

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1064	SLU 26	-0.33	0.45	37.54	-11.2365	0.6943	-0.1226
1064	SLU 27	-0.34	0.42	38.35	-11.4733	0.7093	-0.1245
1064	SLU 28	-0.34	0.45	38.33	-11.4679	0.7089	-0.1251
1064	SLU 29	-0.34	0.41	38.05	-11.3843	0.7037	-0.1231
1064	SLU 30	-0.34	0.44	38.03	-11.3789	0.7033	-0.1237
1064	SLU 31	-0.38	0.48	41.44	-12.4147	0.7665	-0.1374
1064	SLU 32	-0.38	0.45	42.25	-12.6515	0.7815	-0.1393
1064	SLU 33	-0.38	0.48	42.23	-12.646	0.7811	-0.14
1064	SLU 34	-0.38	0.49	41.91	-12.5534	0.7752	-0.1389
1064	SLU 35	-0.39	0.46	42.72	-12.7902	0.7902	-0.1409
1064	SLU 36	-0.39	0.49	42.7	-12.7847	0.7898	-0.1415
1064	SLU 37	-0.38	0.45	42.42	-12.7012	0.7845	-0.1394
1064	SLU 38	-0.38	0.47	42.4	-12.6957	0.7841	-0.1401
1064	SLU 39	-0.4	0.45	43.35	-12.9882	0.8018	-0.1434
1064	SLU 40	-0.4	0.48	43.33	-12.9827	0.8014	-0.144
1064	SLU 41	-0.4	0.46	43.82	-13.1269	0.8105	-0.1449
1064	SLU 42	-0.4	0.48	43.8	-13.1214	0.8101	-0.1455
1064	SLU 43	-0.36	0.41	41.11	-12.3079	0.7603	-0.1294
1064	SLU 44	-0.36	0.45	41.07	-12.2988	0.7596	-0.1304
1064	SLU 45	-0.36	0.42	41.88	-12.5356	0.7746	-0.1323
1064	SLU 46	-0.36	0.45	41.86	-12.5301	0.7742	-0.1329
1064	SLU 47	-0.36	0.46	41.54	-12.4375	0.7683	-0.1319
1064	SLU 48	-0.37	0.43	42.35	-12.6743	0.7833	-0.1338
1064	SLU 49	-0.37	0.46	42.33	-12.6688	0.7829	-0.1344
1064	SLU 50	-0.37	0.42	42.05	-12.5853	0.7777	-0.1324
1064	SLU 51	-0.37	0.44	42.03	-12.5798	0.7773	-0.133
1064	SLU 52	-0.4	0.49	45.44	-13.6157	0.8405	-0.1467
1064	SLU 53	-0.41	0.46	46.25	-13.8525	0.8555	-0.1487
1064	SLU 54	-0.41	0.49	46.23	-13.847	0.8551	-0.1493
1064	SLU 55	-0.41	0.49	45.91	-13.7543	0.8492	-0.1483
1064	SLU 56	-0.41	0.47	46.73	-13.9911	0.8642	-0.1502
1064	SLU 57	-0.41	0.49	46.7	-13.9857	0.8638	-0.1508
1064	SLU 58	-0.41	0.45	46.42	-13.9021	0.8585	-0.1488
1064	SLU 59	-0.41	0.48	46.4	-13.8967	0.8581	-0.1494
1064	SLU 60	-0.42	0.46	47.35	-14.1892	0.8758	-0.1527
1064	SLU 61	-0.42	0.48	47.33	-14.1837	0.8754	-0.1533
1064	SLU 62	-0.43	0.46	47.82	-14.3278	0.8845	-0.1542
1064	SLU 63	-0.43	0.49	47.8	-14.3224	0.8841	-0.1549
1064	SLU 64	-0.4	0.47	45.45	-13.6052	0.8405	-0.1456
1064	SLU 65	-0.4	0.52	45.41	-13.596	0.8399	-0.1466
1064	SLU 66	-0.41	0.49	46.22	-13.8328	0.8549	-0.1486
1064	SLU 67	-0.41	0.52	46.2	-13.8274	0.8545	-0.1492
1064	SLU 68	-0.41	0.53	45.88	-13.7347	0.8486	-0.1482
1064	SLU 69	-0.41	0.5	46.69	-13.9715	0.8636	-0.1501
1064	SLU 70	-0.41	0.53	46.67	-13.966	0.8632	-0.1507
1064	SLU 71	-0.41	0.49	46.39	-13.8825	0.8579	-0.1487
1064	SLU 72	-0.41	0.51	46.37	-13.877	0.8576	-0.1493
1064	SLU 73	-0.45	0.55	49.78	-14.9129	0.9207	-0.163
1064	SLU 74	-0.45	0.53	50.59	-15.1497	0.9357	-0.1649
1064	SLU 75	-0.45	0.56	50.57	-15.1442	0.9353	-0.1655
1064	SLU 76	-0.45	0.56	50.25	-15.0516	0.9294	-0.1645
1064	SLU 77	-0.46	0.53	51.07	-15.2884	0.9444	-0.1664
1064	SLU 78	-0.46	0.56	51.04	-15.2829	0.944	-0.167
1064	SLU 79	-0.45	0.52	50.76	-15.1994	0.9388	-0.165
1064	SLU 80	-0.45	0.55	50.74	-15.1939	0.9384	-0.1656
1064	SLU 81	-0.47	0.52	51.69	-15.4864	0.956	-0.169
1064	SLU 82	-0.47	0.55	51.67	-15.4809	0.9556	-0.1696
1064	SLU 83	-0.47	0.53	52.16	-15.6251	0.9647	-0.1705
1064	SLU 84	-0.47	0.56	52.14	-15.6196	0.9644	-0.1711
1064	SLE RA 1	-0.3	0.35	34.01	-10.1804	0.6289	-0.1084
1064	SLE RA 2	-0.3	0.38	33.98	-10.1743	0.6285	-0.1091
1064	SLE RA 3	-0.3	0.36	34.52	-10.3322	0.6385	-0.1104
1064	SLE RA 4	-0.3	0.38	34.51	-10.3285	0.6382	-0.1108
1064	SLE RA 5	-0.3	0.38	34.29	-10.2668	0.6343	-0.1101
1064	SLE RA 6	-0.31	0.37	34.84	-10.4246	0.6443	-0.1114
1064	SLE RA 7	-0.31	0.38	34.82	-10.421	0.644	-0.1118
1064	SLE RA 8	-0.3	0.36	34.63	-10.3653	0.6405	-0.1105
1064	SLE RA 9	-0.3	0.38	34.62	-10.3616	0.6403	-0.1109
1064	SLE RA 10	-0.33	0.4	36.89	-11.0522	0.6824	-0.12
1064	SLE RA 11	-0.33	0.39	37.44	-11.2101	0.6924	-0.1213
1064	SLE RA 12	-0.33	0.4	37.42	-11.2064	0.6921	-0.1217
1064	SLE RA 13	-0.33	0.41	37.21	-11.1447	0.6882	-0.121
1064	SLE RA 14	-0.34	0.39	37.75	-11.3025	0.6982	-0.1223
1064	SLE RA 15	-0.34	0.41	37.74	-11.2989	0.6979	-0.1227
1064	SLE RA 16	-0.33	0.38	37.55	-11.2432	0.6944	-0.1214
1064	SLE RA 17	-0.33	0.4	37.53	-11.2396	0.6942	-0.1218
1064	SLE RA 18	-0.34	0.38	38.17	-11.4346	0.7059	-0.124
1064	SLE RA 19	-0.34	0.4	38.15	-11.4309	0.7057	-0.1244
1064	SLE RA 20	-0.34	0.39	38.48	-11.527	0.7117	-0.125
1064	SLE RA 21	-0.35	0.41	38.47	-11.5233	0.7115	-0.1254
1064	SLE FR 1	-0.3	0.35	34.01	-10.1804	0.6289	-0.1084
1064	SLE FR 2	-0.3	0.36	34	-10.1792	0.6288	-0.1086
1064	SLE FR 3	-0.3	0.35	34.13	-10.2174	0.6312	-0.1089
1064	SLE FR 4	-0.31	0.37	35.25	-10.5554	0.6519	-0.1133
1064	SLE FR 5	-0.31	0.36	35.38	-10.5936	0.6543	-0.1135
1064	SLE FR 6	-0.32	0.37	36.09	-10.8075	0.6674	-0.1162
1064	SLE QP 1	-0.3	0.35	34.01	-10.1804	0.6289	-0.1084
1064	SLE QP 2	-0.31	0.36	35.25	-10.5566	0.652	-0.1131
1064	SLD 1	3.7	1.1	36.56	-10.8353	0.6786	1.2629
1064	SLD 2	3.28	0.95	36.66	-10.8574	0.6806	1.1193

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1064	SLD 3	3.63	0.15	37.35	-11.0315	0.6925	1.2827
1064	SLD 4	3.21	0.01	37.45	-11.0536	0.6946	1.1391
1064	SLD 5	1.07	2.04	34.44	-10.3386	0.6385	0.2952
1064	SLD 6	0.79	1.95	34.5	-10.3531	0.6399	0.2011
1064	SLD 7	0.84	-1.11	37.06	-10.9929	0.6849	0.3612
1064	SLD 8	0.57	-1.21	37.12	-11.0074	0.6862	0.2671
1064	SLD 9	-1.19	1.93	33.39	-10.1059	0.6178	-0.4933
1064	SLD 10	-1.47	1.83	33.45	-10.1204	0.6191	-0.5874
1064	SLD 11	-1.42	-1.23	36.01	-10.7602	0.6642	-0.4273
1064	SLD 12	-1.69	-1.32	36.07	-10.7747	0.6655	-0.5214
1064	SLD 13	-3.83	0.71	33.06	-10.0597	0.6095	-1.3654
1064	SLD 14	-4.25	0.57	33.16	-10.0817	0.6115	-1.5089
1064	SLD 15	-3.9	-0.23	33.85	-10.2559	0.6234	-1.3456
1064	SLD 16	-4.32	-0.38	33.95	-10.278	0.6254	-1.4891
1064	SLV 1	9.06	2.05	38.34	-11.22	0.7148	3.1047
1064	SLV 2	8.09	1.72	38.57	-11.2714	0.7196	2.7704
1064	SLV 3	8.91	-0.1	40.12	-11.6645	0.7463	3.1509
1064	SLV 4	7.93	-0.44	40.35	-11.716	0.7511	2.8165
1064	SLV 5	2.91	4.19	33.44	-10.0726	0.6222	0.8398
1064	SLV 6	2.28	3.98	33.59	-10.1057	0.6253	0.6244
1064	SLV 7	2.39	-2.99	39.38	-11.5544	0.7273	0.9937
1064	SLV 8	1.76	-3.2	39.53	-11.5875	0.7304	0.7782
1064	SLV 9	-2.38	3.92	30.98	-9.5257	0.5737	-1.0044
1064	SLV 10	-3.01	3.71	31.13	-9.5589	0.5767	-1.2199
1064	SLV 11	-2.9	-3.26	36.92	-11.0076	0.6787	-0.8506
1064	SLV 12	-3.53	-3.47	37.07	-11.0407	0.6818	-1.066
1064	SLV 13	-8.56	1.16	30.15	-9.3973	0.553	-3.0428
1064	SLV 14	-9.53	0.82	30.39	-9.4488	0.5577	-3.3771
1064	SLV 15	-8.71	-1	31.93	-9.8418	0.5845	-2.9966
1064	SLV 16	-9.69	-1.33	32.17	-9.8933	0.5892	-3.331
1064	CRTFP Ux+	0	0	0	0	0	0
1064	CRTFP Ux-	0	0	0	0	0	0
1064	CRTFP Uy+	0	0	0	0	0	0
1064	CRTFP Uy-	0	0	0	0	0	0
1066	SLU 1	-0.86	1.34	105.11	-25.5179	0.3161	-0.1806
1066	SLU 2	-0.86	1.49	104.98	-25.49	0.3171	-0.1806
1066	SLU 3	-0.89	1.41	107.6	-26.1173	0.3255	-0.1854
1066	SLU 4	-0.89	1.5	107.52	-26.1006	0.326	-0.1854
1066	SLU 5	-0.88	1.51	106.49	-25.8549	0.3225	-0.1832
1066	SLU 6	-0.9	1.44	109.11	-26.4821	0.3309	-0.1879
1066	SLU 7	-0.9	1.52	109.03	-26.4654	0.3315	-0.1879
1066	SLU 8	-0.89	1.39	108.14	-26.2476	0.3269	-0.1856
1066	SLU 9	-0.89	1.48	108.06	-26.2309	0.3275	-0.1856
1066	SLU 10	-1.01	1.64	118.94	-28.8932	0.3775	-0.2112
1066	SLU 11	-1.03	1.56	121.56	-29.5205	0.3859	-0.2159
1066	SLU 12	-1.03	1.65	121.49	-29.5037	0.3865	-0.216
1066	SLU 13	-1.02	1.66	120.46	-29.2581	0.383	-0.2137
1066	SLU 14	-1.04	1.59	123.08	-29.8853	0.3914	-0.2185
1066	SLU 15	-1.04	1.67	123	-29.8686	0.3919	-0.2185
1066	SLU 16	-1.03	1.54	122.1	-29.6507	0.3874	-0.2162
1066	SLU 17	-1.03	1.63	122.02	-29.634	0.388	-0.2162
1066	SLU 18	-1.07	1.56	125.06	-30.3795	0.4025	-0.2243
1066	SLU 19	-1.07	1.65	124.98	-30.3628	0.4031	-0.2243
1066	SLU 20	-1.08	1.58	126.57	-30.7444	0.4079	-0.2268
1066	SLU 21	-1.08	1.67	126.49	-30.7277	0.4085	-0.2268
1066	SLU 22	-1	1.61	119	-28.8894	0.3732	-0.2091
1066	SLU 23	-1	1.75	118.87	-28.8616	0.3742	-0.2091
1066	SLU 24	-1.02	1.67	121.49	-29.4888	0.3825	-0.2139
1066	SLU 25	-1.02	1.76	121.41	-29.4721	0.3831	-0.2139
1066	SLU 26	-1.01	1.77	120.38	-29.2264	0.3796	-0.2117
1066	SLU 27	-1.03	1.7	123	-29.8537	0.388	-0.2164
1066	SLU 28	-1.04	1.78	122.93	-29.837	0.3886	-0.2164
1066	SLU 29	-1.02	1.65	122.03	-29.6191	0.384	-0.2141
1066	SLU 30	-1.02	1.74	121.95	-29.6024	0.3846	-0.2141
1066	SLU 31	-1.14	1.9	132.83	-32.2647	0.4346	-0.2397
1066	SLU 32	-1.16	1.82	135.46	-32.892	0.443	-0.2444
1066	SLU 33	-1.17	1.91	135.38	-32.8753	0.4436	-0.2445
1066	SLU 34	-1.15	1.92	134.35	-32.6296	0.4401	-0.2422
1066	SLU 35	-1.18	1.85	136.97	-33.2568	0.4484	-0.247
1066	SLU 36	-1.18	1.93	136.89	-33.2401	0.449	-0.247
1066	SLU 37	-1.17	1.8	135.99	-33.0223	0.4445	-0.2447
1066	SLU 38	-1.17	1.89	135.91	-33.0056	0.4451	-0.2447
1066	SLU 39	-1.2	1.82	138.95	-33.7511	0.4596	-0.2528
1066	SLU 40	-1.2	1.91	138.87	-33.7344	0.4602	-0.2528
1066	SLU 41	-1.21	1.85	140.46	-34.1159	0.465	-0.2553
1066	SLU 42	-1.22	1.93	140.38	-34.0992	0.4656	-0.2553
1066	SLU 43	-1.08	1.66	131.88	-32.0173	0.3913	-0.225
1066	SLU 44	-1.08	1.8	131.75	-31.9895	0.3923	-0.225
1066	SLU 45	-1.1	1.73	134.37	-32.6167	0.4007	-0.2298
1066	SLU 46	-1.1	1.81	134.29	-32.6	0.4013	-0.2298
1066	SLU 47	-1.09	1.82	133.26	-32.3543	0.3977	-0.2276
1066	SLU 48	-1.11	1.75	135.88	-32.9816	0.4061	-0.2323
1066	SLU 49	-1.11	1.84	135.8	-32.9649	0.4067	-0.2323
1066	SLU 50	-1.1	1.71	134.9	-32.747	0.4022	-0.23
1066	SLU 51	-1.1	1.79	134.83	-32.7303	0.4028	-0.2301
1066	SLU 52	-1.22	1.95	145.71	-35.3926	0.4528	-0.2556
1066	SLU 53	-1.24	1.88	148.33	-36.0199	0.4612	-0.2603
1066	SLU 54	-1.24	1.96	148.26	-36.0032	0.4618	-0.2604
1066	SLU 55	-1.23	1.98	147.23	-35.7575	0.4582	-0.2581
1066	SLU 56	-1.25	1.9	149.85	-36.3847	0.4666	-0.2629

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1066	SLU 57	-1.25	1.99	149.77	-36.368	0.4672	-0.2629
1066	SLU 58	-1.24	1.86	148.87	-36.1502	0.4627	-0.2606
1066	SLU 59	-1.24	1.94	148.79	-36.1335	0.4633	-0.2606
1066	SLU 60	-1.28	1.87	151.83	-36.879	0.4777	-0.2687
1066	SLU 61	-1.28	1.96	151.75	-36.8623	0.4783	-0.2687
1066	SLU 62	-1.29	1.9	153.34	-37.2438	0.4832	-0.2712
1066	SLU 63	-1.29	1.98	153.26	-37.2271	0.4837	-0.2712
1066	SLU 64	-1.21	1.92	145.77	-35.3888	0.4484	-0.2535
1066	SLU 65	-1.21	2.06	145.64	-35.361	0.4494	-0.2535
1066	SLU 66	-1.23	1.99	148.26	-35.9882	0.4578	-0.2583
1066	SLU 67	-1.24	2.07	148.18	-35.9715	0.4584	-0.2583
1066	SLU 68	-1.23	2.09	147.15	-35.7258	0.4548	-0.2561
1066	SLU 69	-1.25	2.01	149.77	-36.3531	0.4632	-0.2608
1066	SLU 70	-1.25	2.1	149.7	-36.3364	0.4638	-0.2608
1066	SLU 71	-1.24	1.97	148.8	-36.1185	0.4593	-0.2585
1066	SLU 72	-1.24	2.05	148.72	-36.1018	0.4599	-0.2586
1066	SLU 73	-1.35	2.21	159.6	-38.7641	0.5099	-0.2841
1066	SLU 74	-1.38	2.14	162.23	-39.3914	0.5183	-0.2888
1066	SLU 75	-1.38	2.22	162.15	-39.3747	0.5189	-0.2889
1066	SLU 76	-1.37	2.24	161.12	-39.129	0.5153	-0.2866
1066	SLU 77	-1.39	2.16	163.74	-39.7562	0.5237	-0.2914
1066	SLU 78	-1.39	2.25	163.66	-39.7395	0.5243	-0.2914
1066	SLU 79	-1.38	2.12	162.76	-39.5217	0.5198	-0.2891
1066	SLU 80	-1.38	2.2	162.68	-39.505	0.5204	-0.2891
1066	SLU 81	-1.41	2.13	165.72	-40.2505	0.5348	-0.2972
1066	SLU 82	-1.42	2.22	165.64	-40.2338	0.5354	-0.2972
1066	SLU 83	-1.43	2.16	167.23	-40.6153	0.5402	-0.2997
1066	SLU 84	-1.43	2.24	167.15	-40.5986	0.5408	-0.2997
1066	SLE RA 1	-0.9	1.42	109.08	-26.4812	0.3324	-0.1887
1066	SLE RA 2	-0.9	1.51	108.99	-26.4626	0.333	-0.1888
1066	SLE RA 3	-0.92	1.46	110.74	-26.8808	0.3386	-0.1919
1066	SLE RA 4	-0.92	1.52	110.68	-26.8696	0.339	-0.1919
1066	SLE RA 5	-0.91	1.53	110	-26.7059	0.3367	-0.1904
1066	SLE RA 6	-0.93	1.48	111.75	-27.124	0.3423	-0.1936
1066	SLE RA 7	-0.93	1.54	111.69	-27.1129	0.3427	-0.1936
1066	SLE RA 8	-0.92	1.45	111.09	-26.9676	0.3396	-0.1921
1066	SLE RA 9	-0.92	1.51	111.04	-26.9565	0.34	-0.1921
1066	SLE RA 10	-1	1.62	118.3	-28.7314	0.3734	-0.2091
1066	SLE RA 11	-1.01	1.56	120.05	-29.1496	0.379	-0.2123
1066	SLE RA 12	-1.01	1.62	120	-29.1384	0.3793	-0.2123
1066	SLE RA 13	-1.01	1.63	119.31	-28.9746	0.377	-0.2108
1066	SLE RA 14	-1.02	1.58	121.06	-29.3928	0.3826	-0.214
1066	SLE RA 15	-1.02	1.64	121	-29.3817	0.383	-0.214
1066	SLE RA 16	-1.01	1.55	120.41	-29.2364	0.38	-0.2125
1066	SLE RA 17	-1.01	1.61	120.35	-29.2253	0.3803	-0.2125
1066	SLE RA 18	-1.04	1.56	122.38	-29.7223	0.39	-0.2178
1066	SLE RA 19	-1.04	1.62	122.32	-29.7111	0.3904	-0.2179
1066	SLE RA 20	-1.05	1.58	123.39	-29.9655	0.3936	-0.2195
1066	SLE RA 21	-1.05	1.64	123.33	-29.9544	0.394	-0.2195
1066	SLE FR 1	-0.9	1.42	109.08	-26.4812	0.3324	-0.1887
1066	SLE FR 2	-0.9	1.44	109.06	-26.4775	0.3325	-0.1887
1066	SLE FR 3	-0.91	1.42	109.48	-26.5785	0.3338	-0.1894
1066	SLE FR 4	-0.94	1.48	113.05	-27.4498	0.3498	-0.1975
1066	SLE FR 5	-0.95	1.47	113.47	-27.5508	0.3511	-0.1981
1066	SLE FR 6	-0.97	1.49	115.73	-28.1017	0.3612	-0.2033
1066	SLE QP 1	-0.9	1.42	109.08	-26.4812	0.3324	-0.1887
1066	SLE QP 2	-0.94	1.46	113.07	-27.4535	0.3497	-0.1975
1066	SLD 1	11.9	3.58	117.05	-28.4362	0.3829	3.0549
1066	SLD 2	10.55	3.22	117.36	-28.5022	0.3888	2.7202
1066	SLD 3	11.69	0.55	119.76	-29.0208	0.3668	2.9964
1066	SLD 4	10.33	0.18	120.07	-29.0868	0.3726	2.6617
1066	SLD 5	3.47	6.76	110.09	-26.8499	0.3831	0.9265
1066	SLD 6	2.59	6.52	110.3	-26.8932	0.3869	0.7071
1066	SLD 7	2.76	-3.34	119.13	-28.7986	0.3293	0.7315
1066	SLD 8	1.88	-3.59	119.34	-28.8419	0.3331	0.5121
1066	SLD 9	-3.76	6.51	106.8	-26.0652	0.3662	-0.907
1066	SLD 10	-4.65	6.27	107	-26.1084	0.37	-1.1264
1066	SLD 11	-4.47	-3.6	115.84	-28.0138	0.3124	-1.102
1066	SLD 12	-5.36	-3.84	116.04	-28.0571	0.3163	-1.3214
1066	SLD 13	-12.22	2.74	106.06	-25.8203	0.3267	-3.0566
1066	SLD 14	-13.57	2.37	106.37	-25.8862	0.3325	-3.3913
1066	SLD 15	-12.43	-0.29	108.77	-26.4049	0.3106	-3.1151
1066	SLD 16	-13.78	-0.66	109.08	-26.4708	0.3164	-3.4498
1066	SLV 1	29.09	6.34	122.5	-29.7787	0.4279	7.4073
1066	SLV 2	25.93	5.48	123.22	-29.9324	0.4415	6.6278
1066	SLV 3	28.59	-0.57	128.64	-31.1034	0.3912	7.272
1066	SLV 4	25.44	-1.42	129.36	-31.2571	0.4048	6.4925
1066	SLV 5	9.36	13.54	106.45	-26.1155	0.4264	2.4234
1066	SLV 6	7.33	12.99	106.91	-26.2145	0.4352	1.921
1066	SLV 7	7.71	-9.47	126.94	-30.5312	0.3041	1.9724
1066	SLV 8	5.68	-10.02	127.4	-30.6302	0.3129	1.4701
1066	SLV 9	-7.56	12.95	98.73	-24.2769	0.3864	-1.865
1066	SLV 10	-9.6	12.4	99.19	-24.3759	0.3952	-2.3674
1066	SLV 11	-9.21	-10.07	119.22	-28.6925	0.2641	-2.316
1066	SLV 12	-11.24	-10.62	119.68	-28.7915	0.2729	-2.8183
1066	SLV 13	-27.32	4.35	96.77	-23.65	0.2945	-6.8874
1066	SLV 14	-30.48	3.49	97.49	-23.8036	0.3082	-7.6669
1066	SLV 15	-27.82	-2.56	102.92	-24.9747	0.2578	-7.0227
1066	SLV 16	-30.97	-3.41	103.64	-25.1283	0.2715	-7.8022
1066	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1066	CRTFP Ux-	0	0	0	0	0	0
1066	CRTFP Uy+	0	0	0	0	0	0
1066	CRTFP Uy-	0	0	0	0	0	0
1068	SLU 1	-0.23	0.52	33.61	-9.6472	-0.5895	-0.0709
1068	SLU 2	-0.23	0.57	33.57	-9.6367	-0.5887	-0.0703
1068	SLU 3	-0.24	0.54	34.4	-9.8675	-0.6033	-0.0727
1068	SLU 4	-0.24	0.57	34.38	-9.8612	-0.6028	-0.0723
1068	SLU 5	-0.24	0.58	34.05	-9.7711	-0.5971	-0.0712
1068	SLU 6	-0.24	0.55	34.88	-10.0019	-0.6117	-0.0737
1068	SLU 7	-0.24	0.58	34.86	-9.9956	-0.6112	-0.0733
1068	SLU 8	-0.24	0.54	34.57	-9.916	-0.6063	-0.0729
1068	SLU 9	-0.24	0.57	34.55	-9.9097	-0.6058	-0.0725
1068	SLU 10	-0.28	0.63	38.01	-10.9055	-0.6658	-0.0833
1068	SLU 11	-0.28	0.61	38.85	-11.1363	-0.6803	-0.0857
1068	SLU 12	-0.28	0.63	38.82	-11.13	-0.6799	-0.0853
1068	SLU 13	-0.28	0.64	38.49	-11.0399	-0.6742	-0.0843
1068	SLU 14	-0.28	0.62	39.33	-11.2707	-0.6887	-0.0867
1068	SLU 15	-0.28	0.64	39.3	-11.2644	-0.6883	-0.0863
1068	SLU 16	-0.28	0.6	39.02	-11.1848	-0.6834	-0.0859
1068	SLU 17	-0.28	0.63	38.99	-11.1785	-0.6829	-0.0855
1068	SLU 18	-0.29	0.61	39.96	-11.4598	-0.6996	-0.0895
1068	SLU 19	-0.29	0.64	39.93	-11.4535	-0.6991	-0.0891
1068	SLU 20	-0.3	0.62	40.44	-11.5942	-0.708	-0.0905
1068	SLU 21	-0.3	0.65	40.42	-11.5879	-0.7075	-0.0901
1068	SLU 22	-0.27	0.62	38.03	-10.9002	-0.6662	-0.0824
1068	SLU 23	-0.27	0.67	37.99	-10.8897	-0.6655	-0.0817
1068	SLU 24	-0.28	0.64	38.82	-11.1205	-0.68	-0.0842
1068	SLU 25	-0.28	0.67	38.8	-11.1142	-0.6796	-0.0838
1068	SLU 26	-0.28	0.68	38.47	-11.0241	-0.6739	-0.0827
1068	SLU 27	-0.28	0.65	39.3	-11.2549	-0.6884	-0.0852
1068	SLU 28	-0.28	0.68	39.28	-11.2486	-0.688	-0.0848
1068	SLU 29	-0.28	0.64	38.99	-11.169	-0.683	-0.0844
1068	SLU 30	-0.28	0.67	38.97	-11.1627	-0.6826	-0.084
1068	SLU 31	-0.31	0.73	42.43	-12.1585	-0.7425	-0.0948
1068	SLU 32	-0.32	0.7	43.26	-12.3893	-0.7571	-0.0972
1068	SLU 33	-0.32	0.73	43.24	-12.383	-0.7566	-0.0968
1068	SLU 34	-0.32	0.74	42.91	-12.2929	-0.7509	-0.0957
1068	SLU 35	-0.32	0.71	43.75	-12.5237	-0.7655	-0.0982
1068	SLU 36	-0.32	0.74	43.72	-12.5174	-0.765	-0.0978
1068	SLU 37	-0.32	0.7	43.44	-12.4378	-0.7601	-0.0974
1068	SLU 38	-0.32	0.73	43.41	-12.4315	-0.7596	-0.097
1068	SLU 39	-0.33	0.71	44.38	-12.7128	-0.7763	-0.101
1068	SLU 40	-0.33	0.73	44.35	-12.7065	-0.7758	-0.1006
1068	SLU 41	-0.33	0.71	44.86	-12.8472	-0.7847	-0.102
1068	SLU 42	-0.33	0.74	44.83	-12.8409	-0.7843	-0.1016
1068	SLU 43	-0.29	0.64	42.18	-12.1118	-0.74	-0.0883
1068	SLU 44	-0.29	0.69	42.14	-12.1013	-0.7393	-0.0876
1068	SLU 45	-0.3	0.67	42.97	-12.3321	-0.7538	-0.0901
1068	SLU 46	-0.3	0.7	42.95	-12.3258	-0.7534	-0.0897
1068	SLU 47	-0.29	0.7	42.62	-12.2357	-0.7477	-0.0886
1068	SLU 48	-0.3	0.68	43.45	-12.4665	-0.7622	-0.091
1068	SLU 49	-0.3	0.71	43.43	-12.4602	-0.7618	-0.0906
1068	SLU 50	-0.3	0.66	43.14	-12.3806	-0.7568	-0.0902
1068	SLU 51	-0.3	0.69	43.12	-12.3743	-0.7564	-0.0898
1068	SLU 52	-0.33	0.75	46.58	-13.37	-0.8163	-0.1006
1068	SLU 53	-0.34	0.73	47.41	-13.6008	-0.8309	-0.1031
1068	SLU 54	-0.34	0.76	47.39	-13.5945	-0.8304	-0.1027
1068	SLU 55	-0.34	0.76	47.06	-13.5045	-0.8247	-0.1016
1068	SLU 56	-0.34	0.74	47.9	-13.7353	-0.8393	-0.1041
1068	SLU 57	-0.34	0.77	47.87	-13.7289	-0.8388	-0.1037
1068	SLU 58	-0.34	0.72	47.59	-13.6494	-0.8339	-0.1032
1068	SLU 59	-0.34	0.75	47.56	-13.6431	-0.8334	-0.1028
1068	SLU 60	-0.35	0.73	48.53	-13.9243	-0.8501	-0.1069
1068	SLU 61	-0.35	0.76	48.5	-13.918	-0.8496	-0.1065
1068	SLU 62	-0.35	0.74	49.01	-14.0587	-0.8585	-0.1078
1068	SLU 63	-0.35	0.77	48.98	-14.0524	-0.8581	-0.1074
1068	SLU 64	-0.33	0.74	46.6	-13.3648	-0.8168	-0.0997
1068	SLU 65	-0.33	0.79	46.56	-13.3543	-0.816	-0.0991
1068	SLU 66	-0.34	0.76	47.39	-13.5851	-0.8306	-0.1015
1068	SLU 67	-0.34	0.79	47.36	-13.5787	-0.8301	-0.1011
1068	SLU 68	-0.33	0.8	47.04	-13.4887	-0.8244	-0.1001
1068	SLU 69	-0.34	0.77	47.87	-13.7195	-0.839	-0.1025
1068	SLU 70	-0.34	0.8	47.85	-13.7132	-0.8385	-0.1021
1068	SLU 71	-0.34	0.76	47.56	-13.6336	-0.8336	-0.1017
1068	SLU 72	-0.34	0.79	47.54	-13.6273	-0.8331	-0.1013
1068	SLU 73	-0.37	0.85	51	-14.623	-0.8931	-0.1121
1068	SLU 74	-0.38	0.83	51.83	-14.8538	-0.9076	-0.1146
1068	SLU 75	-0.38	0.85	51.81	-14.8475	-0.9072	-0.1142
1068	SLU 76	-0.37	0.86	51.48	-14.7575	-0.9015	-0.1131
1068	SLU 77	-0.38	0.84	52.31	-14.9883	-0.916	-0.1155
1068	SLU 78	-0.38	0.86	52.29	-14.9819	-0.9156	-0.1151
1068	SLU 79	-0.38	0.82	52	-14.9024	-0.9106	-0.1147
1068	SLU 80	-0.38	0.85	51.98	-14.8961	-0.9102	-0.1143
1068	SLU 81	-0.39	0.83	52.94	-15.1773	-0.9268	-0.1183
1068	SLU 82	-0.39	0.86	52.92	-15.171	-0.9264	-0.1179
1068	SLU 83	-0.39	0.84	53.43	-15.3117	-0.9352	-0.1193
1068	SLU 84	-0.39	0.87	53.4	-15.3054	-0.9348	-0.1189
1068	SLE RA 1	-0.24	0.55	34.87	-10.0052	-0.6114	-0.0742
1068	SLE RA 2	-0.24	0.58	34.85	-9.9982	-0.6109	-0.0738
1068	SLE RA 3	-0.25	0.56	35.4	-10.1521	-0.6206	-0.0754

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1068	SLE RA 4	-0.25	0.58	35.38	-10.1479	-0.6203	-0.0751
1068	SLE RA 5	-0.25	0.59	35.17	-10.0878	-0.6165	-0.0744
1068	SLE RA 6	-0.25	0.57	35.72	-10.2417	-0.6262	-0.076
1068	SLE RA 7	-0.25	0.59	35.71	-10.2375	-0.6259	-0.0758
1068	SLE RA 8	-0.25	0.56	35.52	-10.1844	-0.6226	-0.0755
1068	SLE RA 9	-0.25	0.58	35.5	-10.1802	-0.6223	-0.0752
1068	SLE RA 10	-0.27	0.62	37.81	-10.8441	-0.6623	-0.0824
1068	SLE RA 11	-0.28	0.61	38.36	-10.9979	-0.672	-0.0841
1068	SLE RA 12	-0.28	0.62	38.35	-10.9937	-0.6717	-0.0838
1068	SLE RA 13	-0.27	0.63	38.13	-10.9337	-0.6679	-0.0831
1068	SLE RA 14	-0.28	0.61	38.68	-11.0875	-0.6776	-0.0847
1068	SLE RA 15	-0.28	0.63	38.67	-11.0833	-0.6773	-0.0845
1068	SLE RA 16	-0.28	0.6	38.48	-11.0303	-0.674	-0.0842
1068	SLE RA 17	-0.28	0.62	38.46	-11.0261	-0.6737	-0.0839
1068	SLE RA 18	-0.28	0.61	39.1	-11.2136	-0.6848	-0.0866
1068	SLE RA 19	-0.28	0.63	39.09	-11.2094	-0.6845	-0.0863
1068	SLE RA 20	-0.29	0.61	39.43	-11.3032	-0.6904	-0.0873
1068	SLE RA 21	-0.29	0.63	39.41	-11.299	-0.6901	-0.087
1068	SLE FR 1	-0.24	0.55	34.87	-10.0052	-0.6114	-0.0742
1068	SLE FR 2	-0.24	0.55	34.87	-10.0038	-0.6113	-0.0741
1068	SLE FR 3	-0.25	0.55	35	-10.0411	-0.6137	-0.0745
1068	SLE FR 4	-0.26	0.57	36.14	-10.3663	-0.6333	-0.0778
1068	SLE FR 5	-0.26	0.57	36.27	-10.4036	-0.6357	-0.0782
1068	SLE FR 6	-0.26	0.58	36.99	-10.6094	-0.6481	-0.0804
1068	SLE QP 1	-0.24	0.55	34.87	-10.0052	-0.6114	-0.0742
1068	SLE QP 2	-0.26	0.57	36.14	-10.3677	-0.6334	-0.0779
1068	SLD 1	4.03	1.22	37.36	-10.8263	-0.652	1.4285
1068	SLD 2	3.59	1.13	37.45	-10.85	-0.6532	1.271
1068	SLD 3	3.96	0.21	38.23	-11.0482	-0.6677	1.3907
1068	SLD 4	3.52	0.12	38.31	-11.072	-0.6689	1.2333
1068	SLD 5	1.22	2.31	35.19	-10.1644	-0.615	0.4593
1068	SLD 6	0.92	2.25	35.24	-10.18	-0.6158	0.3561
1068	SLD 7	0.98	-1.06	38.06	-10.9043	-0.6673	0.3334
1068	SLD 8	0.69	-1.12	38.12	-10.9198	-0.6681	0.2302
1068	SLD 9	-1.2	2.25	34.17	-9.8156	-0.5988	-0.386
1068	SLD 10	-1.5	2.19	34.23	-9.8311	-0.5996	-0.4892
1068	SLD 11	-1.44	-1.12	37.04	-10.5555	-0.6511	-0.5119
1068	SLD 12	-1.73	-1.18	37.1	-10.571	-0.6519	-0.6151
1068	SLD 13	-4.03	1.01	33.97	-9.6635	-0.5979	-1.3891
1068	SLD 14	-4.47	0.92	34.06	-9.6872	-0.5992	-1.5465
1068	SLD 15	-4.1	0	34.84	-9.8854	-0.6136	-1.4269
1068	SLD 16	-4.54	-0.09	34.92	-9.9092	-0.6149	-1.5843
1068	SLV 1	9.77	2.07	39.03	-11.4517	-0.6774	3.4439
1068	SLV 2	8.73	1.86	39.23	-11.5069	-0.6803	3.0772
1068	SLV 3	9.61	-0.23	40.99	-11.9544	-0.713	3.3571
1068	SLV 4	8.57	-0.45	41.19	-12.0096	-0.7159	2.9905
1068	SLV 5	3.18	4.54	34.01	-9.9209	-0.5922	1.1733
1068	SLV 6	2.51	4.41	34.14	-9.9565	-0.5941	0.937
1068	SLV 7	2.64	-3.13	40.52	-11.5967	-0.7107	0.8842
1068	SLV 8	1.97	-3.27	40.65	-11.6323	-0.7126	0.6479
1068	SLV 9	-2.48	4.4	31.63	-9.1032	-0.5542	-0.8037
1068	SLV 10	-3.15	4.26	31.76	-9.1388	-0.5561	-1.04
1068	SLV 11	-3.02	-3.28	38.14	-10.7789	-0.6728	-1.0929
1068	SLV 12	-3.69	-3.41	38.27	-10.8145	-0.6747	-1.3292
1068	SLV 13	-9.08	1.58	31.1	-8.7258	-0.551	-3.1463
1068	SLV 14	-10.12	1.36	31.3	-8.7811	-0.5539	-3.513
1068	SLV 15	-9.24	-0.72	33.05	-9.2285	-0.5865	-3.233
1068	SLV 16	-10.28	-0.94	33.25	-9.2838	-0.5895	-3.5997
1068	CRTFP Ux+	0	0	0	0	0	0
1068	CRTFP Ux-	0	0	0	0	0	0
1068	CRTFP Uy+	0	0	0	0	0	0
1068	CRTFP Uy-	0	0	0	0	0	0
1069	SLU 1	-0.22	0.6	35.51	-9.2276	0.0547	-0.076
1069	SLU 2	-0.22	0.65	35.47	-9.2166	0.0547	-0.0763
1069	SLU 3	-0.23	0.63	36.34	-9.4336	0.0561	-0.0783
1069	SLU 4	-0.23	0.66	36.32	-9.427	0.0561	-0.0784
1069	SLU 5	-0.22	0.66	35.97	-9.3425	0.0555	-0.0774
1069	SLU 6	-0.23	0.64	36.85	-9.5595	0.057	-0.0793
1069	SLU 7	-0.23	0.67	36.82	-9.5529	0.0569	-0.0795
1069	SLU 8	-0.23	0.62	36.53	-9.4794	0.0564	-0.0782
1069	SLU 9	-0.23	0.65	36.5	-9.4728	0.0564	-0.0784
1069	SLU 10	-0.26	0.72	40.13	-10.4061	0.0631	-0.0906
1069	SLU 11	-0.27	0.7	41	-10.6232	0.0646	-0.0925
1069	SLU 12	-0.27	0.73	40.98	-10.6166	0.0646	-0.0927
1069	SLU 13	-0.26	0.74	40.63	-10.532	0.064	-0.0917
1069	SLU 14	-0.27	0.71	41.51	-10.7491	0.0654	-0.0936
1069	SLU 15	-0.27	0.74	41.48	-10.7425	0.0654	-0.0938
1069	SLU 16	-0.27	0.69	41.19	-10.6689	0.0649	-0.0925
1069	SLU 17	-0.27	0.73	41.16	-10.6623	0.0648	-0.0927
1069	SLU 18	-0.28	0.7	42.17	-10.9269	0.0668	-0.0964
1069	SLU 19	-0.28	0.73	42.14	-10.9203	0.0668	-0.0966
1069	SLU 20	-0.28	0.71	42.68	-11.0528	0.0677	-0.0975
1069	SLU 21	-0.28	0.75	42.65	-11.0462	0.0676	-0.0977
1069	SLU 22	-0.26	0.71	40.15	-10.4026	0.063	-0.0893
1069	SLU 23	-0.26	0.76	40.1	-10.3916	0.0629	-0.0896
1069	SLU 24	-0.26	0.74	40.98	-10.6087	0.0644	-0.0916
1069	SLU 25	-0.26	0.77	40.96	-10.6021	0.0644	-0.0917
1069	SLU 26	-0.26	0.78	40.61	-10.5175	0.0638	-0.0907
1069	SLU 27	-0.27	0.75	41.49	-10.7346	0.0652	-0.0926
1069	SLU 28	-0.27	0.78	41.46	-10.728	0.0652	-0.0928

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1069	SLU 29	-0.26	0.73	41.16	-10.6544	0.0647	-0.0915
1069	SLU 30	-0.26	0.77	41.14	-10.6478	0.0646	-0.0917
1069	SLU 31	-0.3	0.84	44.76	-11.5812	0.0714	-0.1039
1069	SLU 32	-0.3	0.81	45.64	-11.7982	0.0729	-0.1058
1069	SLU 33	-0.31	0.84	45.62	-11.7916	0.0728	-0.106
1069	SLU 34	-0.3	0.85	45.27	-11.7071	0.0722	-0.105
1069	SLU 35	-0.31	0.82	46.15	-11.9241	0.0737	-0.1069
1069	SLU 36	-0.31	0.85	46.12	-11.9175	0.0737	-0.1071
1069	SLU 37	-0.3	0.81	45.82	-11.8439	0.0731	-0.1058
1069	SLU 38	-0.3	0.84	45.8	-11.8373	0.0731	-0.1059
1069	SLU 39	-0.32	0.82	46.81	-12.1019	0.0751	-0.1097
1069	SLU 40	-0.32	0.85	46.78	-12.0954	0.0751	-0.1099
1069	SLU 41	-0.32	0.83	47.31	-12.2278	0.0759	-0.1108
1069	SLU 42	-0.32	0.86	47.29	-12.2213	0.0759	-0.111
1069	SLU 43	-0.27	0.74	44.57	-11.593	0.0683	-0.0943
1069	SLU 44	-0.27	0.79	44.53	-11.582	0.0683	-0.0946
1069	SLU 45	-0.28	0.77	45.41	-11.799	0.0697	-0.0965
1069	SLU 46	-0.28	0.8	45.38	-11.7924	0.0697	-0.0967
1069	SLU 47	-0.28	0.81	45.04	-11.7079	0.0691	-0.0957
1069	SLU 48	-0.28	0.78	45.91	-11.9249	0.0706	-0.0976
1069	SLU 49	-0.28	0.81	45.89	-11.9183	0.0705	-0.0978
1069	SLU 50	-0.28	0.76	45.59	-11.8448	0.07	-0.0965
1069	SLU 51	-0.28	0.8	45.56	-11.8382	0.07	-0.0966
1069	SLU 52	-0.31	0.87	49.19	-12.7715	0.0767	-0.1089
1069	SLU 53	-0.32	0.84	50.07	-12.9886	0.0782	-0.1108
1069	SLU 54	-0.32	0.87	50.04	-12.982	0.0782	-0.111
1069	SLU 55	-0.32	0.88	49.7	-12.8974	0.0776	-0.1099
1069	SLU 56	-0.32	0.85	50.57	-13.1145	0.079	-0.1119
1069	SLU 57	-0.32	0.88	50.55	-13.1079	0.079	-0.112
1069	SLU 58	-0.32	0.84	50.25	-13.0343	0.0784	-0.1108
1069	SLU 59	-0.32	0.87	50.22	-13.0277	0.0784	-0.1109
1069	SLU 60	-0.33	0.85	51.23	-13.2923	0.0804	-0.1147
1069	SLU 61	-0.33	0.88	51.2	-13.2857	0.0804	-0.1149
1069	SLU 62	-0.33	0.86	51.74	-13.4182	0.0812	-0.1158
1069	SLU 63	-0.33	0.89	51.71	-13.4116	0.0812	-0.1159
1069	SLU 64	-0.31	0.85	49.21	-12.768	0.0766	-0.1076
1069	SLU 65	-0.31	0.91	49.17	-12.757	0.0765	-0.1079
1069	SLU 66	-0.32	0.88	50.05	-12.9741	0.078	-0.1098
1069	SLU 67	-0.32	0.91	50.02	-12.9675	0.078	-0.11
1069	SLU 68	-0.31	0.92	49.67	-12.8829	0.0774	-0.1089
1069	SLU 69	-0.32	0.89	50.55	-13.1	0.0788	-0.1109
1069	SLU 70	-0.32	0.92	50.53	-13.0934	0.0788	-0.1111
1069	SLU 71	-0.32	0.88	50.23	-13.0198	0.0783	-0.1098
1069	SLU 72	-0.32	0.91	50.2	-13.0132	0.0782	-0.1099
1069	SLU 73	-0.35	0.98	53.83	-13.9466	0.085	-0.1221
1069	SLU 74	-0.36	0.95	54.71	-14.1636	0.0864	-0.1241
1069	SLU 75	-0.36	0.99	54.68	-14.157	0.0864	-0.1242
1069	SLU 76	-0.35	0.99	54.33	-14.0725	0.0858	-0.1232
1069	SLU 77	-0.36	0.96	55.21	-14.2895	0.0873	-0.1252
1069	SLU 78	-0.36	1	55.19	-14.2829	0.0873	-0.1253
1069	SLU 79	-0.36	0.95	54.89	-14.2093	0.0867	-0.124
1069	SLU 80	-0.36	0.98	54.86	-14.2027	0.0867	-0.1242
1069	SLU 81	-0.37	0.96	55.87	-14.4673	0.0887	-0.128
1069	SLU 82	-0.37	0.99	55.84	-14.4608	0.0886	-0.1282
1069	SLU 83	-0.37	0.97	56.38	-14.5932	0.0895	-0.1291
1069	SLU 84	-0.37	1	56.35	-14.5866	0.0895	-0.1292
1069	SLE RA 1	-0.23	0.63	36.84	-9.5633	0.0571	-0.0798
1069	SLE RA 2	-0.23	0.67	36.81	-9.556	0.0571	-0.08
1069	SLE RA 3	-0.23	0.65	37.39	-9.7007	0.058	-0.0813
1069	SLE RA 4	-0.23	0.67	37.37	-9.6963	0.058	-0.0814
1069	SLE RA 5	-0.23	0.67	37.14	-9.6399	0.0576	-0.0807
1069	SLE RA 6	-0.24	0.66	37.73	-9.7846	0.0586	-0.082
1069	SLE RA 7	-0.24	0.68	37.71	-9.7802	0.0586	-0.0821
1069	SLE RA 8	-0.23	0.65	37.51	-9.7311	0.0582	-0.0813
1069	SLE RA 9	-0.23	0.67	37.49	-9.7268	0.0582	-0.0814
1069	SLE RA 10	-0.26	0.72	39.91	-10.349	0.0627	-0.0895
1069	SLE RA 11	-0.26	0.7	40.5	-10.4937	0.0637	-0.0908
1069	SLE RA 12	-0.26	0.72	40.48	-10.4893	0.0636	-0.0909
1069	SLE RA 13	-0.26	0.72	40.25	-10.4329	0.0633	-0.0903
1069	SLE RA 14	-0.26	0.71	40.84	-10.5776	0.0642	-0.0916
1069	SLE RA 15	-0.26	0.73	40.82	-10.5732	0.0642	-0.0917
1069	SLE RA 16	-0.26	0.69	40.62	-10.5242	0.0638	-0.0908
1069	SLE RA 17	-0.26	0.72	40.6	-10.5198	0.0638	-0.0909
1069	SLE RA 18	-0.27	0.7	41.27	-10.6962	0.0651	-0.0934
1069	SLE RA 19	-0.27	0.72	41.26	-10.6918	0.0651	-0.0936
1069	SLE RA 20	-0.27	0.71	41.61	-10.7801	0.0657	-0.0942
1069	SLE RA 21	-0.27	0.73	41.59	-10.7757	0.0657	-0.0943
1069	SLE FR 1	-0.23	0.63	36.84	-9.5633	0.0571	-0.0798
1069	SLE FR 2	-0.23	0.64	36.83	-9.5618	0.0571	-0.0799
1069	SLE FR 3	-0.23	0.64	36.97	-9.5969	0.0573	-0.0801
1069	SLE FR 4	-0.24	0.66	38.16	-9.9017	0.0595	-0.084
1069	SLE FR 5	-0.24	0.66	38.3	-9.9367	0.0597	-0.0842
1069	SLE FR 6	-0.25	0.67	39.06	-10.1297	0.0611	-0.0866
1069	SLE QP 1	-0.23	0.63	36.84	-9.5633	0.0571	-0.0798
1069	SLE QP 2	-0.24	0.65	38.17	-9.9032	0.0595	-0.0839
1069	SLD 1	4.49	1.12	39.31	-10.3946	0.0676	1.5698
1069	SLD 2	4	1.05	39.39	-10.4171	0.0682	1.3982
1069	SLD 3	4.41	0.03	40.24	-10.627	0.0692	1.5436
1069	SLD 4	3.92	-0.05	40.32	-10.6495	0.0698	1.3719
1069	SLD 5	1.38	2.47	37.09	-9.6941	0.0594	0.4825

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1069	SLD 6	1.06	2.42	37.14	-9.7089	0.0598	0.37
1069	SLD 7	1.13	-1.19	40.18	-10.4688	0.0648	0.395
1069	SLD 8	0.8	-1.23	40.23	-10.4835	0.0651	0.2825
1069	SLD 9	-1.29	2.54	36.1	-9.3228	0.0539	-0.4504
1069	SLD 10	-1.61	2.49	36.15	-9.3375	0.0542	-0.5629
1069	SLD 11	-1.54	-1.12	39.19	-10.0974	0.0593	-0.5378
1069	SLD 12	-1.86	-1.17	39.25	-10.1122	0.0596	-0.6503
1069	SLD 13	-4.4	1.35	36.02	-9.1568	0.0492	-1.5398
1069	SLD 14	-4.9	1.28	36.1	-9.1793	0.0498	-1.7114
1069	SLD 15	-4.48	0.26	36.95	-9.3892	0.0509	-1.566
1069	SLD 16	-4.97	0.18	37.03	-9.4117	0.0514	-1.7377
1069	SLV 1	10.82	1.72	40.87	-11.0644	0.0785	3.7831
1069	SLV 2	9.67	1.54	41.06	-11.1167	0.0798	3.3833
1069	SLV 3	10.64	-0.78	42.98	-11.5907	0.0822	3.7221
1069	SLV 4	9.5	-0.96	43.16	-11.643	0.0835	3.3224
1069	SLV 5	3.54	4.79	35.76	-9.4443	0.0593	1.2374
1069	SLV 6	2.8	4.68	35.88	-9.478	0.0602	0.9798
1069	SLV 7	2.95	-3.54	42.77	-11.1986	0.0718	1.0343
1069	SLV 8	2.21	-3.65	42.89	-11.2323	0.0726	0.7767
1069	SLV 9	-2.7	4.96	33.45	-8.574	0.0464	-0.9446
1069	SLV 10	-3.44	4.84	33.57	-8.6077	0.0472	-1.2022
1069	SLV 11	-3.29	-3.37	40.46	-10.3283	0.0589	-1.1476
1069	SLV 12	-4.03	-3.49	40.58	-10.362	0.0597	-1.4053
1069	SLV 13	-9.98	2.26	33.17	-8.1633	0.0355	-3.4902
1069	SLV 14	-11.13	2.09	33.36	-8.2156	0.0368	-3.89
1069	SLV 15	-10.16	-0.24	35.27	-8.6896	0.0392	-3.5512
1069	SLV 16	-11.3	-0.41	35.46	-8.7419	0.0405	-3.9509
1069	CRTFP Ux+	0	0	0	0	0	0
1069	CRTFP Ux-	0	0	0	0	0	0
1069	CRTFP Uy+	0	0	0	0	0	0
1069	CRTFP Uy-	0	0	0	0	0	0
1070	SLU 1	-0.18	0.61	33.89	-7.9099	0.052	-0.0633
1070	SLU 2	-0.18	0.66	33.85	-7.8999	0.052	-0.0636
1070	SLU 3	-0.19	0.64	34.68	-8.0817	0.0533	-0.0653
1070	SLU 4	-0.19	0.67	34.66	-8.0757	0.0533	-0.0655
1070	SLU 5	-0.18	0.67	34.33	-8.0051	0.0527	-0.0645
1070	SLU 6	-0.19	0.65	35.17	-8.187	0.0541	-0.0662
1070	SLU 7	-0.19	0.68	35.14	-8.181	0.0541	-0.0664
1070	SLU 8	-0.19	0.63	34.86	-8.1203	0.0536	-0.0651
1070	SLU 9	-0.19	0.66	34.83	-8.1143	0.0536	-0.0653
1070	SLU 10	-0.22	0.74	38.26	-8.8933	0.06	-0.0766
1070	SLU 11	-0.22	0.71	39.1	-9.0752	0.0613	-0.0782
1070	SLU 12	-0.22	0.75	39.07	-9.0692	0.0613	-0.0784
1070	SLU 13	-0.22	0.75	38.74	-8.9985	0.0607	-0.0775
1070	SLU 14	-0.23	0.73	39.58	-9.1804	0.0621	-0.0791
1070	SLU 15	-0.23	0.76	39.55	-9.1744	0.0621	-0.0793
1070	SLU 16	-0.22	0.71	39.27	-9.1138	0.0616	-0.0781
1070	SLU 17	-0.22	0.74	39.24	-9.1078	0.0616	-0.0783
1070	SLU 18	-0.23	0.72	40.19	-9.329	0.0634	-0.0818
1070	SLU 19	-0.24	0.75	40.17	-9.323	0.0634	-0.082
1070	SLU 20	-0.24	0.73	40.68	-9.4343	0.0642	-0.0827
1070	SLU 21	-0.24	0.76	40.65	-9.4283	0.0642	-0.0829
1070	SLU 22	-0.22	0.73	38.29	-8.8915	0.0598	-0.0753
1070	SLU 23	-0.22	0.78	38.24	-8.8814	0.0598	-0.0755
1070	SLU 24	-0.22	0.75	39.08	-9.0633	0.0612	-0.0772
1070	SLU 25	-0.22	0.78	39.05	-9.0573	0.0611	-0.0774
1070	SLU 26	-0.22	0.79	38.73	-8.9867	0.0606	-0.0764
1070	SLU 27	-0.22	0.76	39.56	-9.1686	0.062	-0.0781
1070	SLU 28	-0.22	0.8	39.54	-9.1626	0.0619	-0.0783
1070	SLU 29	-0.22	0.75	39.25	-9.1019	0.0614	-0.0771
1070	SLU 30	-0.22	0.78	39.23	-9.0959	0.0614	-0.0772
1070	SLU 31	-0.25	0.85	42.65	-9.8749	0.0678	-0.0885
1070	SLU 32	-0.26	0.83	43.49	-10.0568	0.0692	-0.0902
1070	SLU 33	-0.26	0.86	43.46	-10.0507	0.0691	-0.0903
1070	SLU 34	-0.26	0.86	43.14	-9.9801	0.0686	-0.0894
1070	SLU 35	-0.26	0.84	43.97	-10.162	0.07	-0.0911
1070	SLU 36	-0.26	0.87	43.95	-10.156	0.0699	-0.0912
1070	SLU 37	-0.26	0.82	43.66	-10.0954	0.0694	-0.09
1070	SLU 38	-0.26	0.85	43.64	-10.0893	0.0694	-0.0902
1070	SLU 39	-0.27	0.83	44.59	-10.3106	0.0713	-0.0938
1070	SLU 40	-0.27	0.86	44.56	-10.3046	0.0712	-0.0939
1070	SLU 41	-0.27	0.84	45.07	-10.4159	0.0721	-0.0947
1070	SLU 42	-0.27	0.87	45.04	-10.4099	0.072	-0.0948
1070	SLU 43	-0.22	0.76	42.55	-9.9463	0.0649	-0.0783
1070	SLU 44	-0.23	0.81	42.51	-9.9363	0.0649	-0.0785
1070	SLU 45	-0.23	0.78	43.35	-10.1182	0.0663	-0.0802
1070	SLU 46	-0.23	0.82	43.32	-10.1122	0.0662	-0.0804
1070	SLU 47	-0.23	0.82	42.99	-10.0415	0.0657	-0.0794
1070	SLU 48	-0.23	0.8	43.83	-10.2234	0.067	-0.0811
1070	SLU 49	-0.23	0.83	43.8	-10.2174	0.067	-0.0813
1070	SLU 50	-0.23	0.78	43.52	-10.1568	0.0665	-0.0801
1070	SLU 51	-0.23	0.81	43.49	-10.1507	0.0665	-0.0802
1070	SLU 52	-0.26	0.88	46.92	-10.9297	0.0729	-0.0915
1070	SLU 53	-0.27	0.86	47.76	-11.1116	0.0743	-0.0932
1070	SLU 54	-0.27	0.89	47.73	-11.1056	0.0742	-0.0933
1070	SLU 55	-0.26	0.89	47.4	-11.0349	0.0737	-0.0924
1070	SLU 56	-0.27	0.87	48.24	-11.2168	0.0751	-0.0941
1070	SLU 57	-0.27	0.9	48.21	-11.2108	0.075	-0.0942
1070	SLU 58	-0.27	0.85	47.93	-11.1502	0.0745	-0.093
1070	SLU 59	-0.27	0.88	47.9	-11.1442	0.0745	-0.0932

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1070	SLU 60	-0.28	0.86	48.86	-11.3655	0.0764	-0.0968
1070	SLU 61	-0.28	0.89	48.83	-11.3595	0.0763	-0.0969
1070	SLU 62	-0.28	0.87	49.34	-11.4707	0.0772	-0.0977
1070	SLU 63	-0.28	0.9	49.31	-11.4647	0.0771	-0.0978
1070	SLU 64	-0.26	0.87	46.95	-10.9279	0.0728	-0.0902
1070	SLU 65	-0.26	0.92	46.91	-10.9179	0.0727	-0.0904
1070	SLU 66	-0.26	0.9	47.74	-11.0998	0.0741	-0.0921
1070	SLU 67	-0.26	0.93	47.71	-11.0937	0.0741	-0.0923
1070	SLU 68	-0.26	0.93	47.39	-11.0231	0.0735	-0.0913
1070	SLU 69	-0.27	0.91	48.22	-11.205	0.0749	-0.093
1070	SLU 70	-0.27	0.94	48.2	-11.199	0.0748	-0.0932
1070	SLU 71	-0.26	0.89	47.91	-11.1383	0.0743	-0.092
1070	SLU 72	-0.26	0.92	47.89	-11.1323	0.0743	-0.0921
1070	SLU 73	-0.3	1	51.32	-11.9113	0.0807	-0.1034
1070	SLU 74	-0.3	0.97	52.15	-12.0932	0.0821	-0.1051
1070	SLU 75	-0.3	1	52.12	-12.0872	0.0821	-0.1052
1070	SLU 76	-0.3	1.01	51.8	-12.0165	0.0815	-0.1043
1070	SLU 77	-0.3	0.98	52.63	-12.1984	0.0829	-0.106
1070	SLU 78	-0.3	1.01	52.61	-12.1924	0.0829	-0.1061
1070	SLU 79	-0.3	0.97	52.32	-12.1318	0.0823	-0.1049
1070	SLU 80	-0.3	1	52.3	-12.1258	0.0823	-0.1051
1070	SLU 81	-0.31	0.98	53.25	-12.3471	0.0842	-0.1087
1070	SLU 82	-0.31	1.01	53.22	-12.341	0.0842	-0.1088
1070	SLU 83	-0.31	0.99	53.73	-12.4523	0.085	-0.1096
1070	SLU 84	-0.31	1.02	53.71	-12.4463	0.0849	-0.1097
1070	SLE RA 1	-0.19	0.64	35.15	-8.1903	0.0542	-0.0667
1070	SLE RA 2	-0.19	0.68	35.12	-8.1836	0.0542	-0.0669
1070	SLE RA 3	-0.2	0.66	35.68	-8.3049	0.0551	-0.068
1070	SLE RA 4	-0.2	0.68	35.66	-8.3009	0.0551	-0.0682
1070	SLE RA 5	-0.19	0.69	35.44	-8.2538	0.0547	-0.0675
1070	SLE RA 6	-0.2	0.67	36	-8.3751	0.0557	-0.0686
1070	SLE RA 7	-0.2	0.69	35.98	-8.3711	0.0556	-0.0688
1070	SLE RA 8	-0.19	0.66	35.79	-8.3306	0.0553	-0.0679
1070	SLE RA 9	-0.2	0.68	35.78	-8.3266	0.0553	-0.0681
1070	SLE RA 10	-0.22	0.73	38.06	-8.8459	0.0595	-0.0756
1070	SLE RA 11	-0.22	0.71	38.62	-8.9672	0.0605	-0.0767
1070	SLE RA 12	-0.22	0.73	38.6	-8.9632	0.0605	-0.0768
1070	SLE RA 13	-0.22	0.74	38.38	-8.9161	0.0601	-0.0762
1070	SLE RA 14	-0.22	0.72	38.94	-9.0373	0.061	-0.0773
1070	SLE RA 15	-0.22	0.74	38.92	-9.0333	0.061	-0.0774
1070	SLE RA 16	-0.22	0.71	38.73	-8.9929	0.0606	-0.0766
1070	SLE RA 17	-0.22	0.73	38.72	-8.9889	0.0606	-0.0767
1070	SLE RA 18	-0.23	0.72	39.35	-9.1364	0.0619	-0.0791
1070	SLE RA 19	-0.23	0.74	39.33	-9.1324	0.0618	-0.0792
1070	SLE RA 20	-0.23	0.72	39.67	-9.2066	0.0624	-0.0797
1070	SLE RA 21	-0.23	0.74	39.65	-9.2026	0.0624	-0.0798
1070	SLE FR 1	-0.19	0.64	35.15	-8.1903	0.0542	-0.0667
1070	SLE FR 2	-0.19	0.65	35.14	-8.189	0.0542	-0.0668
1070	SLE FR 3	-0.19	0.65	35.28	-8.2184	0.0545	-0.067
1070	SLE FR 4	-0.2	0.67	36.4	-8.4728	0.0565	-0.0705
1070	SLE FR 5	-0.2	0.67	36.54	-8.5022	0.0567	-0.0707
1070	SLE FR 6	-0.21	0.68	37.25	-8.6634	0.0581	-0.0729
1070	SLE QP 1	-0.19	0.64	35.15	-8.1903	0.0542	-0.0667
1070	SLE QP 2	-0.2	0.67	36.41	-8.4742	0.0565	-0.0704
1070	SLD 1	4.54	1.11	37.27	-8.9065	0.0665	1.5873
1070	SLD 2	4.04	1.06	37.33	-8.9237	0.0671	1.4153
1070	SLD 3	4.46	0.04	38.17	-9.1244	0.0683	1.5615
1070	SLD 4	3.97	-0.02	38.23	-9.1416	0.0689	1.3895
1070	SLD 5	1.42	2.44	35.29	-8.2703	0.0567	0.4967
1070	SLD 6	1.1	2.41	35.33	-8.2816	0.0571	0.3839
1070	SLD 7	1.17	-1.15	38.29	-8.9966	0.0627	0.4105
1070	SLD 8	0.85	-1.18	38.33	-9.0079	0.0631	0.2977
1070	SLD 9	-1.25	2.51	34.49	-7.9404	0.05	-0.4386
1070	SLD 10	-1.58	2.48	34.53	-7.9517	0.0504	-0.5514
1070	SLD 11	-1.5	-1.08	37.48	-8.6667	0.056	-0.5248
1070	SLD 12	-1.83	-1.11	37.53	-8.678	0.0564	-0.6376
1070	SLD 13	-4.37	1.35	34.59	-7.8067	0.0442	-1.5304
1070	SLD 14	-4.87	1.3	34.65	-7.8239	0.0448	-1.7024
1070	SLD 15	-4.45	0.27	35.49	-8.0246	0.046	-1.5562
1070	SLD 16	-4.94	0.22	35.55	-8.0418	0.0466	-1.7282
1070	SLV 1	10.88	1.67	38.45	-9.4958	0.0799	3.806
1070	SLV 2	9.73	1.55	38.6	-9.5359	0.0813	3.4054
1070	SLV 3	10.71	-0.78	40.49	-9.9896	0.0841	3.7459
1070	SLV 4	9.56	-0.91	40.64	-10.0298	0.0855	3.3453
1070	SLV 5	3.58	4.71	33.91	-8.0248	0.057	1.2526
1070	SLV 6	2.84	4.63	34	-8.0506	0.0579	0.9944
1070	SLV 7	3	-3.47	40.7	-9.6709	0.0709	1.0523
1070	SLV 8	2.26	-3.55	40.79	-9.6967	0.0718	0.7942
1070	SLV 9	-2.67	4.88	32.03	-7.2516	0.0413	-0.9351
1070	SLV 10	-3.41	4.8	32.12	-7.2774	0.0422	-1.1932
1070	SLV 11	-3.25	-3.3	38.82	-8.8977	0.0552	-1.1353
1070	SLV 12	-3.99	-3.38	38.91	-8.9236	0.0561	-1.3935
1070	SLV 13	-9.96	2.24	32.18	-6.9186	0.0276	-3.4862
1070	SLV 14	-11.11	2.11	32.33	-6.9587	0.029	-3.8868
1070	SLV 15	-10.14	-0.22	34.22	-7.4124	0.0317	-3.5463
1070	SLV 16	-11.28	-0.34	34.37	-7.4525	0.0331	-3.9469
1070	CRTFP Ux+	0	0	0	0	0	0
1070	CRTFP Ux-	0	0	0	0	0	0
1070	CRTFP Uy+	0	0	0	0	0	0
1070	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1071	SLU 1	-0.14	0.62	32.48	-6.8236	0.0418	-0.0503
1071	SLU 2	-0.15	0.67	32.43	-6.8146	0.0418	-0.0506
1071	SLU 3	-0.15	0.65	33.23	-6.9675	0.0429	-0.052
1071	SLU 4	-0.15	0.68	33.21	-6.9621	0.0428	-0.0521
1071	SLU 5	-0.15	0.68	32.9	-6.903	0.0424	-0.0513
1071	SLU 6	-0.15	0.66	33.69	-7.0559	0.0435	-0.0527
1071	SLU 7	-0.15	0.69	33.67	-7.0505	0.0435	-0.0529
1071	SLU 8	-0.15	0.64	33.4	-7.0004	0.0431	-0.0518
1071	SLU 9	-0.15	0.67	33.37	-6.995	0.043	-0.0519
1071	SLU 10	-0.18	0.74	36.63	-7.6463	0.0482	-0.0621
1071	SLU 11	-0.18	0.72	37.42	-7.7993	0.0493	-0.0635
1071	SLU 12	-0.18	0.75	37.4	-7.7938	0.0493	-0.0637
1071	SLU 13	-0.18	0.76	37.09	-7.7347	0.0488	-0.0628
1071	SLU 14	-0.18	0.73	37.88	-7.8876	0.0499	-0.0642
1071	SLU 15	-0.18	0.76	37.86	-7.8822	0.0499	-0.0644
1071	SLU 16	-0.18	0.72	37.59	-7.8321	0.0495	-0.0633
1071	SLU 17	-0.18	0.75	37.57	-7.8267	0.0495	-0.0634
1071	SLU 18	-0.19	0.73	38.46	-8.0118	0.051	-0.0668
1071	SLU 19	-0.19	0.76	38.44	-8.0064	0.051	-0.0669
1071	SLU 20	-0.19	0.74	38.93	-8.1002	0.0516	-0.0675
1071	SLU 21	-0.19	0.77	38.9	-8.0948	0.0516	-0.0676
1071	SLU 22	-0.17	0.73	36.66	-7.6457	0.0481	-0.0608
1071	SLU 23	-0.17	0.78	36.61	-7.6367	0.0481	-0.061
1071	SLU 24	-0.18	0.76	37.41	-7.7896	0.0492	-0.0624
1071	SLU 25	-0.18	0.79	37.39	-7.7842	0.0492	-0.0626
1071	SLU 26	-0.18	0.79	37.08	-7.7251	0.0487	-0.0617
1071	SLU 27	-0.18	0.77	37.87	-7.878	0.0498	-0.0632
1071	SLU 28	-0.18	0.8	37.85	-7.8726	0.0498	-0.0633
1071	SLU 29	-0.18	0.75	37.58	-7.8225	0.0494	-0.0622
1071	SLU 30	-0.18	0.78	37.55	-7.8171	0.0493	-0.0624
1071	SLU 31	-0.21	0.86	40.81	-8.4685	0.0545	-0.0725
1071	SLU 32	-0.21	0.84	41.6	-8.6214	0.0556	-0.074
1071	SLU 33	-0.21	0.87	41.58	-8.616	0.0556	-0.0741
1071	SLU 34	-0.21	0.87	41.27	-8.5568	0.0551	-0.0733
1071	SLU 35	-0.21	0.85	42.06	-8.7098	0.0563	-0.0747
1071	SLU 36	-0.21	0.88	42.04	-8.7043	0.0562	-0.0748
1071	SLU 37	-0.21	0.83	41.77	-8.6543	0.0558	-0.0737
1071	SLU 38	-0.21	0.86	41.75	-8.6488	0.0558	-0.0739
1071	SLU 39	-0.22	0.84	42.64	-8.834	0.0573	-0.0772
1071	SLU 40	-0.22	0.87	42.62	-8.8285	0.0573	-0.0774
1071	SLU 41	-0.22	0.85	43.11	-8.9223	0.058	-0.0779
1071	SLU 42	-0.22	0.88	43.08	-8.9169	0.0579	-0.0781
1071	SLU 43	-0.18	0.77	40.79	-8.5888	0.0522	-0.0618
1071	SLU 44	-0.18	0.82	40.74	-8.5798	0.0521	-0.0621
1071	SLU 45	-0.18	0.79	41.54	-8.7327	0.0533	-0.0635
1071	SLU 46	-0.18	0.82	41.52	-8.7273	0.0532	-0.0637
1071	SLU 47	-0.18	0.83	41.21	-8.6682	0.0528	-0.0628
1071	SLU 48	-0.18	0.8	42	-8.8211	0.0539	-0.0642
1071	SLU 49	-0.18	0.83	41.98	-8.8157	0.0539	-0.0644
1071	SLU 50	-0.18	0.79	41.71	-8.7656	0.0534	-0.0633
1071	SLU 51	-0.18	0.82	41.68	-8.7602	0.0534	-0.0634
1071	SLU 52	-0.21	0.89	44.94	-9.4116	0.0586	-0.0736
1071	SLU 53	-0.22	0.87	45.73	-9.5645	0.0597	-0.075
1071	SLU 54	-0.22	0.9	45.71	-9.5591	0.0597	-0.0752
1071	SLU 55	-0.21	0.9	45.4	-9.4999	0.0592	-0.0743
1071	SLU 56	-0.22	0.88	46.19	-9.6529	0.0603	-0.0757
1071	SLU 57	-0.22	0.91	46.17	-9.6474	0.0603	-0.0759
1071	SLU 58	-0.21	0.86	45.9	-9.5974	0.0599	-0.0748
1071	SLU 59	-0.22	0.89	45.88	-9.5919	0.0599	-0.0749
1071	SLU 60	-0.22	0.87	46.77	-9.7771	0.0614	-0.0783
1071	SLU 61	-0.23	0.9	46.75	-9.7716	0.0614	-0.0784
1071	SLU 62	-0.23	0.88	47.24	-9.8654	0.062	-0.079
1071	SLU 63	-0.23	0.92	47.21	-9.86	0.062	-0.0792
1071	SLU 64	-0.21	0.88	44.97	-9.4109	0.0585	-0.0723
1071	SLU 65	-0.21	0.93	44.92	-9.4019	0.0584	-0.0725
1071	SLU 66	-0.21	0.91	45.72	-9.5548	0.0596	-0.0739
1071	SLU 67	-0.21	0.94	45.7	-9.5494	0.0595	-0.0741
1071	SLU 68	-0.21	0.94	45.39	-9.4903	0.0591	-0.0733
1071	SLU 69	-0.21	0.92	46.18	-9.6432	0.0602	-0.0747
1071	SLU 70	-0.21	0.95	46.16	-9.6378	0.0602	-0.0748
1071	SLU 71	-0.21	0.9	45.89	-9.5877	0.0597	-0.0737
1071	SLU 72	-0.21	0.93	45.86	-9.5823	0.0597	-0.0739
1071	SLU 73	-0.24	1.01	49.12	-10.2337	0.0649	-0.0841
1071	SLU 74	-0.25	0.98	49.91	-10.3866	0.066	-0.0855
1071	SLU 75	-0.25	1.01	49.89	-10.3812	0.066	-0.0856
1071	SLU 76	-0.24	1.02	49.58	-10.3221	0.0655	-0.0848
1071	SLU 77	-0.25	0.99	50.37	-10.475	0.0666	-0.0862
1071	SLU 78	-0.25	1.02	50.35	-10.4696	0.0666	-0.0863
1071	SLU 79	-0.24	0.98	50.08	-10.4195	0.0662	-0.0852
1071	SLU 80	-0.24	1.01	50.06	-10.4141	0.0662	-0.0854
1071	SLU 81	-0.25	0.99	50.95	-10.5992	0.0677	-0.0887
1071	SLU 82	-0.25	1.02	50.93	-10.5938	0.0677	-0.0889
1071	SLU 83	-0.26	1	51.42	-10.6876	0.0683	-0.0894
1071	SLU 84	-0.26	1.03	51.39	-10.6821	0.0683	-0.0896
1071	SLE RA 1	-0.15	0.65	33.67	-7.0585	0.0436	-0.0533
1071	SLE RA 2	-0.15	0.68	33.64	-7.0525	0.0436	-0.0535
1071	SLE RA 3	-0.16	0.67	34.17	-7.1544	0.0443	-0.0544
1071	SLE RA 4	-0.16	0.69	34.16	-7.1508	0.0443	-0.0545
1071	SLE RA 5	-0.15	0.69	33.95	-7.1114	0.044	-0.054
1071	SLE RA 6	-0.16	0.68	34.48	-7.2134	0.0447	-0.0549

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1071	SLE RA 7	-0.16	0.7	34.46	-7.2097	0.0447	-0.055
1071	SLE RA 8	-0.16	0.67	34.29	-7.1764	0.0444	-0.0543
1071	SLE RA 9	-0.16	0.69	34.27	-7.1727	0.0444	-0.0544
1071	SLE RA 10	-0.18	0.74	36.44	-7.607	0.0479	-0.0612
1071	SLE RA 11	-0.18	0.72	36.97	-7.7089	0.0486	-0.0621
1071	SLE RA 12	-0.18	0.74	36.95	-7.7053	0.0486	-0.0622
1071	SLE RA 13	-0.18	0.74	36.74	-7.6659	0.0483	-0.0616
1071	SLE RA 14	-0.18	0.73	37.28	-7.7679	0.049	-0.0626
1071	SLE RA 15	-0.18	0.75	37.26	-7.7642	0.049	-0.0627
1071	SLE RA 16	-0.18	0.72	37.08	-7.7309	0.0487	-0.0619
1071	SLE RA 17	-0.18	0.74	37.06	-7.7272	0.0487	-0.062
1071	SLE RA 18	-0.18	0.72	37.66	-7.8507	0.0498	-0.0643
1071	SLE RA 19	-0.18	0.74	37.65	-7.847	0.0497	-0.0644
1071	SLE RA 20	-0.19	0.73	37.97	-7.9096	0.0502	-0.0647
1071	SLE RA 21	-0.19	0.75	37.95	-7.906	0.0502	-0.0649
1071	SLE FR 1	-0.15	0.65	33.67	-7.0585	0.0436	-0.0533
1071	SLE FR 2	-0.15	0.66	33.66	-7.0573	0.0436	-0.0533
1071	SLE FR 3	-0.15	0.65	33.79	-7.0821	0.0438	-0.0535
1071	SLE FR 4	-0.16	0.68	34.86	-7.2949	0.0455	-0.0566
1071	SLE FR 5	-0.16	0.68	34.99	-7.3197	0.0456	-0.0568
1071	SLE FR 6	-0.17	0.69	35.67	-7.4546	0.0467	-0.0588
1071	SLE QP 1	-0.15	0.65	33.67	-7.0585	0.0436	-0.0533
1071	SLE QP 2	-0.16	0.67	34.87	-7.2962	0.0455	-0.0566
1071	SLD 1	4.58	1.11	35.4	-7.6332	0.0566	1.6042
1071	SLD 2	4.09	1.07	35.44	-7.6449	0.0573	1.4319
1071	SLD 3	4.51	0.05	36.27	-7.841	0.0582	1.5786
1071	SLD 4	4.02	0.01	36.31	-7.8526	0.0588	1.4063
1071	SLD 5	1.46	2.41	33.7	-7.0801	0.0464	0.511
1071	SLD 6	1.14	2.39	33.72	-7.0878	0.0468	0.3981
1071	SLD 7	1.21	-1.11	36.6	-7.7726	0.0515	0.4258
1071	SLD 8	0.89	-1.13	36.63	-7.7802	0.0519	0.3129
1071	SLD 9	-1.22	2.48	33.1	-6.8121	0.039	-0.4261
1071	SLD 10	-1.54	2.45	33.13	-6.8197	0.0394	-0.539
1071	SLD 11	-1.46	-1.04	36.01	-7.5045	0.0442	-0.5113
1071	SLD 12	-1.79	-1.07	36.04	-7.5122	0.0446	-0.6242
1071	SLD 13	-4.34	1.33	33.42	-6.7397	0.0321	-1.5195
1071	SLD 14	-4.83	1.29	33.47	-6.7513	0.0327	-1.6918
1071	SLD 15	-4.41	0.27	34.29	-6.9474	0.0337	-1.5451
1071	SLD 16	-4.91	0.24	34.34	-6.9591	0.0343	-1.7173
1071	SLV 1	10.93	1.65	36.14	-8.0936	0.0717	3.8268
1071	SLV 2	9.78	1.57	36.24	-8.1207	0.0731	3.4256
1071	SLV 3	10.76	-0.75	38.12	-8.5654	0.0753	3.7674
1071	SLV 4	9.61	-0.84	38.22	-8.5925	0.0767	3.3662
1071	SLV 5	3.63	4.63	32.23	-6.8151	0.0476	1.2676
1071	SLV 6	2.88	4.58	32.3	-6.8326	0.0486	1.0091
1071	SLV 7	3.05	-3.39	38.83	-8.3878	0.0596	1.0696
1071	SLV 8	2.31	-3.44	38.89	-8.4053	0.0605	0.8111
1071	SLV 9	-2.64	4.79	30.84	-6.187	0.0304	-0.9242
1071	SLV 10	-3.38	4.74	30.91	-6.2045	0.0313	-1.1828
1071	SLV 11	-3.21	-3.23	37.44	-7.7597	0.0424	-1.1223
1071	SLV 12	-3.95	-3.28	37.5	-7.7772	0.0433	-1.3808
1071	SLV 13	-9.94	2.18	31.51	-5.9998	0.0142	-3.4794
1071	SLV 14	-11.09	2.1	31.62	-6.0269	0.0157	-3.8806
1071	SLV 15	-10.11	-0.22	33.49	-6.4716	0.0178	-3.5388
1071	SLV 16	-11.26	-0.31	33.6	-6.4987	0.0193	-3.94
1071	CRTFP Ux+	0	0	0	0	0	0
1071	CRTFP Ux-	0	0	0	0	0	0
1071	CRTFP Uy+	0	0	0	0	0	0
1071	CRTFP Uy-	0	0	0	0	0	0
1072	SLU 1	-0.11	0.63	31.44	-6.0598	0.0271	-0.0367
1072	SLU 2	-0.11	0.68	31.4	-6.0515	0.027	-0.037
1072	SLU 3	-0.11	0.65	32.17	-6.1841	0.0277	-0.0381
1072	SLU 4	-0.11	0.68	32.14	-6.1792	0.0277	-0.0383
1072	SLU 5	-0.11	0.69	31.84	-6.1283	0.0274	-0.0375
1072	SLU 6	-0.11	0.67	32.61	-6.2609	0.0281	-0.0386
1072	SLU 7	-0.11	0.7	32.59	-6.2559	0.0281	-0.0388
1072	SLU 8	-0.11	0.65	32.33	-6.2132	0.0278	-0.0378
1072	SLU 9	-0.11	0.68	32.31	-6.2083	0.0278	-0.0379
1072	SLU 10	-0.14	0.75	35.43	-6.7694	0.0313	-0.047
1072	SLU 11	-0.14	0.73	36.2	-6.902	0.032	-0.0481
1072	SLU 12	-0.14	0.76	36.17	-6.8971	0.032	-0.0482
1072	SLU 13	-0.14	0.77	35.87	-6.8462	0.0316	-0.0475
1072	SLU 14	-0.14	0.74	36.64	-6.9788	0.0324	-0.0486
1072	SLU 15	-0.14	0.77	36.62	-6.9738	0.0323	-0.0488
1072	SLU 16	-0.14	0.73	36.36	-6.9311	0.0321	-0.0478
1072	SLU 17	-0.14	0.76	36.34	-6.9262	0.032	-0.0479
1072	SLU 18	-0.15	0.74	37.2	-7.0854	0.0331	-0.051
1072	SLU 19	-0.15	0.77	37.17	-7.0804	0.0331	-0.0511
1072	SLU 20	-0.15	0.75	37.64	-7.1621	0.0335	-0.0515
1072	SLU 21	-0.15	0.78	37.62	-7.1571	0.0335	-0.0517
1072	SLU 22	-0.13	0.74	35.46	-6.7696	0.0312	-0.0456
1072	SLU 23	-0.13	0.79	35.42	-6.7614	0.0312	-0.0459
1072	SLU 24	-0.14	0.77	36.19	-6.8939	0.0319	-0.047
1072	SLU 25	-0.14	0.8	36.16	-6.889	0.0318	-0.0471
1072	SLU 26	-0.13	0.8	35.87	-6.8381	0.0315	-0.0464
1072	SLU 27	-0.14	0.78	36.64	-6.9707	0.0322	-0.0475
1072	SLU 28	-0.14	0.81	36.61	-6.9657	0.0322	-0.0477
1072	SLU 29	-0.13	0.76	36.35	-6.9231	0.0319	-0.0467
1072	SLU 30	-0.13	0.79	36.33	-6.9181	0.0319	-0.0468
1072	SLU 31	-0.16	0.87	39.45	-7.4793	0.0354	-0.0558

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1072	SLU 32	-0.16	0.85	40.22	-7.6119	0.0361	-0.0569
1072	SLU 33	-0.16	0.88	40.2	-7.6069	0.0361	-0.0571
1072	SLU 34	-0.16	0.88	39.9	-7.556	0.0358	-0.0563
1072	SLU 35	-0.17	0.86	40.67	-7.6886	0.0365	-0.0575
1072	SLU 36	-0.17	0.89	40.64	-7.6836	0.0365	-0.0576
1072	SLU 37	-0.16	0.84	40.38	-7.641	0.0362	-0.0566
1072	SLU 38	-0.16	0.87	40.36	-7.636	0.0362	-0.0568
1072	SLU 39	-0.17	0.85	41.22	-7.7952	0.0372	-0.0598
1072	SLU 40	-0.17	0.88	41.19	-7.7902	0.0372	-0.06
1072	SLU 41	-0.17	0.86	41.67	-7.8719	0.0376	-0.0604
1072	SLU 42	-0.17	0.89	41.64	-7.867	0.0376	-0.0605
1072	SLU 43	-0.13	0.78	39.49	-7.6343	0.0338	-0.0447
1072	SLU 44	-0.13	0.83	39.45	-7.6261	0.0337	-0.045
1072	SLU 45	-0.13	0.8	40.22	-7.7587	0.0345	-0.0461
1072	SLU 46	-0.13	0.83	40.19	-7.7537	0.0344	-0.0462
1072	SLU 47	-0.13	0.84	39.89	-7.7028	0.0341	-0.0455
1072	SLU 48	-0.13	0.81	40.66	-7.8354	0.0348	-0.0466
1072	SLU 49	-0.13	0.84	40.64	-7.8305	0.0348	-0.0468
1072	SLU 50	-0.13	0.8	40.38	-7.7878	0.0345	-0.0458
1072	SLU 51	-0.13	0.83	40.36	-7.7829	0.0345	-0.0459
1072	SLU 52	-0.16	0.9	43.48	-8.344	0.038	-0.0549
1072	SLU 53	-0.16	0.88	44.25	-8.4766	0.0387	-0.0561
1072	SLU 54	-0.16	0.91	44.22	-8.4716	0.0387	-0.0562
1072	SLU 55	-0.16	0.91	43.93	-8.4207	0.0384	-0.0555
1072	SLU 56	-0.16	0.89	44.69	-8.5533	0.0391	-0.0566
1072	SLU 57	-0.16	0.92	44.67	-8.5484	0.039	-0.0567
1072	SLU 58	-0.16	0.88	44.41	-8.5057	0.0388	-0.0557
1072	SLU 59	-0.16	0.91	44.39	-8.5008	0.0387	-0.0559
1072	SLU 60	-0.17	0.89	45.25	-8.6599	0.0398	-0.059
1072	SLU 61	-0.17	0.92	45.22	-8.655	0.0398	-0.0591
1072	SLU 62	-0.17	0.9	45.69	-8.7367	0.0402	-0.0595
1072	SLU 63	-0.17	0.93	45.67	-8.7317	0.0402	-0.0596
1072	SLU 64	-0.15	0.89	43.51	-8.3442	0.0379	-0.0536
1072	SLU 65	-0.16	0.94	43.47	-8.3359	0.0379	-0.0538
1072	SLU 66	-0.16	0.92	44.24	-8.4685	0.0386	-0.055
1072	SLU 67	-0.16	0.95	44.22	-8.4636	0.0386	-0.0551
1072	SLU 68	-0.16	0.95	43.92	-8.4127	0.0382	-0.0544
1072	SLU 69	-0.16	0.93	44.69	-8.5452	0.039	-0.0555
1072	SLU 70	-0.16	0.96	44.66	-8.5403	0.0389	-0.0556
1072	SLU 71	-0.16	0.91	44.4	-8.4976	0.0387	-0.0546
1072	SLU 72	-0.16	0.94	44.38	-8.4927	0.0386	-0.0548
1072	SLU 73	-0.18	1.02	47.5	-9.0538	0.0421	-0.0638
1072	SLU 74	-0.19	1	48.27	-9.1864	0.0428	-0.0649
1072	SLU 75	-0.19	1.03	48.25	-9.1815	0.0428	-0.0651
1072	SLU 76	-0.19	1.03	47.95	-9.1306	0.0425	-0.0643
1072	SLU 77	-0.19	1.01	48.72	-9.2631	0.0432	-0.0655
1072	SLU 78	-0.19	1.04	48.69	-9.2582	0.0432	-0.0656
1072	SLU 79	-0.19	0.99	48.44	-9.2155	0.0429	-0.0646
1072	SLU 80	-0.19	1.02	48.41	-9.2106	0.0429	-0.0648
1072	SLU 81	-0.2	1	49.27	-9.3698	0.0439	-0.0678
1072	SLU 82	-0.2	1.03	49.25	-9.3648	0.0439	-0.068
1072	SLU 83	-0.2	1.01	49.72	-9.4465	0.0443	-0.0683
1072	SLU 84	-0.2	1.04	49.69	-9.4415	0.0443	-0.0685
1072	SLE RA 1	-0.11	0.66	32.59	-6.2626	0.0282	-0.0393
1072	SLE RA 2	-0.11	0.69	32.56	-6.2571	0.0282	-0.0394
1072	SLE RA 3	-0.12	0.68	33.07	-6.3455	0.0287	-0.0402
1072	SLE RA 4	-0.12	0.7	33.06	-6.3422	0.0287	-0.0403
1072	SLE RA 5	-0.11	0.7	32.86	-6.3082	0.0285	-0.0398
1072	SLE RA 6	-0.12	0.69	33.37	-6.3966	0.029	-0.0405
1072	SLE RA 7	-0.12	0.71	33.35	-6.3933	0.0289	-0.0406
1072	SLE RA 8	-0.12	0.67	33.18	-6.3649	0.0288	-0.04
1072	SLE RA 9	-0.12	0.69	33.17	-6.3616	0.0287	-0.0401
1072	SLE RA 10	-0.13	0.74	35.25	-6.7357	0.031	-0.0461
1072	SLE RA 11	-0.13	0.73	35.76	-6.8241	0.0315	-0.0468
1072	SLE RA 12	-0.14	0.75	35.74	-6.8208	0.0315	-0.0469
1072	SLE RA 13	-0.13	0.75	35.54	-6.7868	0.0313	-0.0464
1072	SLE RA 14	-0.14	0.74	36.06	-6.8752	0.0318	-0.0472
1072	SLE RA 15	-0.14	0.76	36.04	-6.8719	0.0318	-0.0473
1072	SLE RA 16	-0.13	0.73	35.87	-6.8435	0.0316	-0.0466
1072	SLE RA 17	-0.13	0.75	35.85	-6.8402	0.0316	-0.0467
1072	SLE RA 18	-0.14	0.73	36.43	-6.9463	0.0323	-0.0488
1072	SLE RA 19	-0.14	0.75	36.41	-6.943	0.0323	-0.0489
1072	SLE RA 20	-0.14	0.74	36.72	-6.9975	0.0325	-0.0491
1072	SLE RA 21	-0.14	0.76	36.71	-6.9942	0.0325	-0.0492
1072	SLE FR 1	-0.11	0.66	32.59	-6.2626	0.0282	-0.0393
1072	SLE FR 2	-0.11	0.67	32.58	-6.2615	0.0282	-0.0393
1072	SLE FR 3	-0.11	0.66	32.71	-6.2831	0.0283	-0.0394
1072	SLE FR 4	-0.12	0.69	33.73	-6.4666	0.0294	-0.0421
1072	SLE FR 5	-0.12	0.68	33.86	-6.4882	0.0296	-0.0423
1072	SLE FR 6	-0.13	0.7	34.51	-6.6044	0.0303	-0.044
1072	SLE QP 1	-0.11	0.66	32.59	-6.2626	0.0282	-0.0393
1072	SLE QP 2	-0.12	0.68	33.74	-6.4677	0.0295	-0.0421
1072	SLD 1	4.63	1.12	33.91	-6.6832	0.0414	1.6205
1072	SLD 2	4.13	1.1	33.94	-6.6895	0.0421	1.4481
1072	SLD 3	4.56	0.08	34.77	-6.8868	0.0425	1.5951
1072	SLD 4	4.06	0.06	34.79	-6.8931	0.0431	1.4227
1072	SLD 5	1.5	2.39	32.49	-6.2224	0.0314	0.5257
1072	SLD 6	1.18	2.38	32.51	-6.2266	0.0318	0.4127
1072	SLD 7	1.26	-1.07	35.34	-6.9011	0.0348	0.4413
1072	SLD 8	0.93	-1.09	35.36	-6.9052	0.0352	0.3283

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1072	SLD 9	-1.18	2.45	32.12	-6.0302	0.0237	-0.4125
1072	SLD 10	-1.5	2.44	32.14	-6.0343	0.0241	-0.5255
1072	SLD 11	-1.42	-1.01	34.97	-6.7088	0.0271	-0.4969
1072	SLD 12	-1.74	-1.03	34.99	-6.713	0.0275	-0.61
1072	SLD 13	-4.3	1.31	32.68	-6.0423	0.0158	-1.507
1072	SLD 14	-4.8	1.29	32.71	-6.0486	0.0164	-1.6793
1072	SLD 15	-4.38	0.27	33.54	-6.2459	0.0168	-1.5323
1072	SLD 16	-4.87	0.25	33.56	-6.2522	0.0175	-1.7047
1072	SLV 1	10.98	1.66	34.17	-6.9795	0.0576	3.8456
1072	SLV 2	9.83	1.61	34.24	-6.9943	0.059	3.4441
1072	SLV 3	10.81	-0.71	36.11	-7.4431	0.0599	3.7867
1072	SLV 4	9.66	-0.76	36.17	-7.4579	0.0613	3.3852
1072	SLV 5	3.67	4.58	30.92	-5.9156	0.0341	1.2826
1072	SLV 6	2.92	4.54	30.96	-5.9251	0.035	1.0239
1072	SLV 7	3.1	-3.32	37.38	-7.4609	0.0419	1.0864
1072	SLV 8	2.36	-3.35	37.42	-7.4704	0.0428	0.8276
1072	SLV 9	-2.6	4.71	30.06	-5.465	0.0161	-0.9119
1072	SLV 10	-3.34	4.68	30.1	-5.4745	0.017	-1.1706
1072	SLV 11	-3.17	-3.18	36.52	-7.0103	0.0239	-1.1081
1072	SLV 12	-3.91	-3.21	36.56	-7.0198	0.0248	-1.3669
1072	SLV 13	-9.91	2.12	31.3	-5.4775	-0.0024	-3.4694
1072	SLV 14	-11.06	2.07	31.36	-5.4923	-0.001	-3.8709
1072	SLV 15	-10.08	-0.25	33.24	-5.9411	-0.0001	-3.5283
1072	SLV 16	-11.23	-0.3	33.3	-5.9559	0.0013	-3.9298
1072	CRTFP Ux+	0	0	0	0	0	0
1072	CRTFP Ux-	0	0	0	0	0	0
1072	CRTFP Uy+	0	0	0	0	0	0
1072	CRTFP Uy-	0	0	0	0	0	0
1073	SLU 1	-0.07	0.64	30.88	-5.6726	0.01	-0.0225
1073	SLU 2	-0.07	0.69	30.84	-5.6648	0.01	-0.0228
1073	SLU 3	-0.07	0.67	31.59	-5.7872	0.0102	-0.0236
1073	SLU 4	-0.07	0.7	31.57	-5.7825	0.0102	-0.0238
1073	SLU 5	-0.07	0.7	31.28	-5.7359	0.0101	-0.0231
1073	SLU 6	-0.07	0.68	32.03	-5.8583	0.0103	-0.0239
1073	SLU 7	-0.07	0.71	32.01	-5.8536	0.0103	-0.0241
1073	SLU 8	-0.07	0.66	31.76	-5.8148	0.0102	-0.0232
1073	SLU 9	-0.07	0.69	31.73	-5.8101	0.0102	-0.0234
1073	SLU 10	-0.09	0.77	34.78	-6.3245	0.0116	-0.0311
1073	SLU 11	-0.09	0.75	35.54	-6.4469	0.0119	-0.0319
1073	SLU 12	-0.09	0.78	35.51	-6.4422	0.0119	-0.032
1073	SLU 13	-0.09	0.78	35.22	-6.3956	0.0117	-0.0314
1073	SLU 14	-0.09	0.76	35.98	-6.518	0.012	-0.0322
1073	SLU 15	-0.09	0.79	35.95	-6.5133	0.012	-0.0324
1073	SLU 16	-0.09	0.74	35.7	-6.4745	0.0119	-0.0315
1073	SLU 17	-0.09	0.77	35.68	-6.4698	0.0119	-0.0316
1073	SLU 18	-0.1	0.76	36.51	-6.6151	0.0124	-0.0344
1073	SLU 19	-0.1	0.78	36.49	-6.6104	0.0124	-0.0345
1073	SLU 20	-0.1	0.77	36.95	-6.6861	0.0125	-0.0347
1073	SLU 21	-0.1	0.8	36.93	-6.6814	0.0125	-0.0349
1073	SLU 22	-0.09	0.76	34.82	-6.3252	0.0116	-0.0297
1073	SLU 23	-0.09	0.81	34.78	-6.3173	0.0116	-0.0299
1073	SLU 24	-0.09	0.78	35.53	-6.4397	0.0118	-0.0308
1073	SLU 25	-0.09	0.81	35.51	-6.435	0.0118	-0.0309
1073	SLU 26	-0.09	0.82	35.22	-6.3884	0.0117	-0.0303
1073	SLU 27	-0.09	0.8	35.97	-6.5108	0.0119	-0.0311
1073	SLU 28	-0.09	0.83	35.95	-6.5061	0.0119	-0.0312
1073	SLU 29	-0.09	0.78	35.69	-6.4673	0.0118	-0.0304
1073	SLU 30	-0.09	0.81	35.67	-6.4626	0.0118	-0.0305
1073	SLU 31	-0.11	0.89	38.72	-6.977	0.0132	-0.0382
1073	SLU 32	-0.11	0.86	39.47	-7.0994	0.0135	-0.0391
1073	SLU 33	-0.11	0.89	39.45	-7.0947	0.0135	-0.0392
1073	SLU 34	-0.11	0.9	39.16	-7.0481	0.0133	-0.0386
1073	SLU 35	-0.11	0.88	39.91	-7.1705	0.0136	-0.0394
1073	SLU 36	-0.12	0.91	39.89	-7.1658	0.0136	-0.0395
1073	SLU 37	-0.11	0.86	39.64	-7.127	0.0134	-0.0386
1073	SLU 38	-0.11	0.89	39.61	-7.1223	0.0134	-0.0388
1073	SLU 39	-0.12	0.87	40.45	-7.2676	0.0139	-0.0415
1073	SLU 40	-0.12	0.9	40.42	-7.2629	0.0139	-0.0417
1073	SLU 41	-0.12	0.88	40.89	-7.3387	0.014	-0.0419
1073	SLU 42	-0.12	0.91	40.86	-7.3339	0.014	-0.042
1073	SLU 43	-0.08	0.79	38.79	-7.1507	0.0124	-0.0268
1073	SLU 44	-0.08	0.84	38.75	-7.1429	0.0124	-0.0271
1073	SLU 45	-0.08	0.82	39.51	-7.2653	0.0127	-0.0279
1073	SLU 46	-0.08	0.85	39.48	-7.2606	0.0127	-0.0281
1073	SLU 47	-0.08	0.85	39.19	-7.214	0.0125	-0.0274
1073	SLU 48	-0.08	0.83	39.95	-7.3364	0.0128	-0.0283
1073	SLU 49	-0.08	0.86	39.92	-7.3317	0.0128	-0.0284
1073	SLU 50	-0.08	0.82	39.67	-7.2929	0.0126	-0.0275
1073	SLU 51	-0.08	0.85	39.65	-7.2882	0.0126	-0.0277
1073	SLU 52	-0.1	0.92	42.7	-7.8026	0.0141	-0.0354
1073	SLU 53	-0.11	0.9	43.45	-7.925	0.0143	-0.0362
1073	SLU 54	-0.11	0.93	43.43	-7.9203	0.0143	-0.0363
1073	SLU 55	-0.1	0.93	43.13	-7.8737	0.0142	-0.0357
1073	SLU 56	-0.11	0.91	43.89	-7.9961	0.0144	-0.0365
1073	SLU 57	-0.11	0.94	43.87	-7.9914	0.0144	-0.0367
1073	SLU 58	-0.1	0.9	43.61	-7.9526	0.0143	-0.0358
1073	SLU 59	-0.11	0.93	43.59	-7.9479	0.0143	-0.0359
1073	SLU 60	-0.11	0.91	44.42	-8.0931	0.0148	-0.0387
1073	SLU 61	-0.11	0.94	44.4	-8.0884	0.0148	-0.0388
1073	SLU 62	-0.11	0.92	44.86	-8.1642	0.0149	-0.039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1073	SLU 63	-0.11	0.95	44.84	-8.1595	0.0149	-0.0392
1073	SLU 64	-0.1	0.91	42.73	-7.8032	0.014	-0.034
1073	SLU 65	-0.1	0.96	42.69	-7.7954	0.014	-0.0342
1073	SLU 66	-0.1	0.94	43.45	-7.9178	0.0143	-0.0351
1073	SLU 67	-0.1	0.97	43.42	-7.9131	0.0143	-0.0352
1073	SLU 68	-0.1	0.97	43.13	-7.8665	0.0141	-0.0346
1073	SLU 69	-0.1	0.95	43.88	-7.9889	0.0144	-0.0354
1073	SLU 70	-0.1	0.98	43.86	-7.9842	0.0144	-0.0356
1073	SLU 71	-0.1	0.93	43.61	-7.9454	0.0142	-0.0347
1073	SLU 72	-0.1	0.96	43.58	-7.9407	0.0142	-0.0348
1073	SLU 73	-0.12	1.04	46.63	-8.4551	0.0157	-0.0425
1073	SLU 74	-0.13	1.02	47.39	-8.5775	0.0159	-0.0434
1073	SLU 75	-0.13	1.05	47.36	-8.5728	0.0159	-0.0435
1073	SLU 76	-0.13	1.05	47.07	-8.5262	0.0158	-0.0429
1073	SLU 77	-0.13	1.03	47.83	-8.6486	0.016	-0.0437
1073	SLU 78	-0.13	1.06	47.8	-8.6439	0.016	-0.0438
1073	SLU 79	-0.13	1.01	47.55	-8.6051	0.0159	-0.043
1073	SLU 80	-0.13	1.04	47.53	-8.6004	0.0159	-0.0431
1073	SLU 81	-0.13	1.02	48.36	-8.7456	0.0164	-0.0458
1073	SLU 82	-0.13	1.05	48.34	-8.7409	0.0164	-0.046
1073	SLU 83	-0.13	1.03	48.8	-8.8167	0.0165	-0.0462
1073	SLU 84	-0.13	1.06	48.78	-8.812	0.0165	-0.0463
1073	SLE RA 1	-0.07	0.67	32	-5.8591	0.0104	-0.0246
1073	SLE RA 2	-0.07	0.71	31.98	-5.8538	0.0104	-0.0247
1073	SLE RA 3	-0.07	0.69	32.48	-5.9355	0.0106	-0.0253
1073	SLE RA 4	-0.07	0.71	32.46	-5.9323	0.0106	-0.0254
1073	SLE RA 5	-0.07	0.71	32.27	-5.9012	0.0105	-0.025
1073	SLE RA 6	-0.07	0.7	32.77	-5.9828	0.0107	-0.0255
1073	SLE RA 7	-0.07	0.72	32.76	-5.9797	0.0107	-0.0256
1073	SLE RA 8	-0.07	0.69	32.59	-5.9539	0.0106	-0.025
1073	SLE RA 9	-0.07	0.71	32.57	-5.9507	0.0106	-0.0251
1073	SLE RA 10	-0.09	0.76	34.61	-6.2936	0.0115	-0.0303
1073	SLE RA 11	-0.09	0.75	35.11	-6.3752	0.0117	-0.0308
1073	SLE RA 12	-0.09	0.77	35.09	-6.3721	0.0117	-0.0309
1073	SLE RA 13	-0.09	0.77	34.9	-6.341	0.0116	-0.0305
1073	SLE RA 14	-0.09	0.75	35.4	-6.4226	0.0118	-0.031
1073	SLE RA 15	-0.09	0.77	35.39	-6.4195	0.0118	-0.0311
1073	SLE RA 16	-0.09	0.74	35.22	-6.3937	0.0117	-0.0306
1073	SLE RA 17	-0.09	0.76	35.2	-6.3905	0.0117	-0.0306
1073	SLE RA 18	-0.09	0.75	35.76	-6.4874	0.012	-0.0325
1073	SLE RA 19	-0.1	0.77	35.74	-6.4842	0.012	-0.0326
1073	SLE RA 20	-0.1	0.76	36.05	-6.5347	0.0121	-0.0327
1073	SLE RA 21	-0.1	0.78	36.04	-6.5316	0.0121	-0.0328
1073	SLE FR 1	-0.07	0.67	32	-5.8591	0.0104	-0.0246
1073	SLE FR 2	-0.07	0.68	32	-5.858	0.0104	-0.0246
1073	SLE FR 3	-0.07	0.68	32.12	-5.878	0.0105	-0.0247
1073	SLE FR 4	-0.08	0.7	33.13	-6.0465	0.0109	-0.027
1073	SLE FR 5	-0.08	0.7	33.25	-6.0665	0.0109	-0.027
1073	SLE FR 6	-0.08	0.71	33.88	-6.1732	0.0112	-0.0285
1073	SLE QP 1	-0.07	0.67	32	-5.8591	0.0104	-0.0246
1073	SLE QP 2	-0.08	0.7	33.13	-6.0476	0.0109	-0.027
1073	SLD 1	4.67	1.14	32.94	-6.1251	0.0235	1.6362
1073	SLD 2	4.18	1.13	32.94	-6.1266	0.0242	1.4638
1073	SLD 3	4.6	0.11	33.78	-6.3282	0.0239	1.6111
1073	SLD 4	4.11	0.1	33.79	-6.3296	0.0245	1.4387
1073	SLD 5	1.54	2.39	31.79	-5.7625	0.0141	0.5408
1073	SLD 6	1.22	2.39	31.79	-5.7635	0.0145	0.4277
1073	SLD 7	1.3	-1.04	34.61	-6.4395	0.0152	0.457
1073	SLD 8	0.98	-1.04	34.62	-6.4405	0.0156	0.344
1073	SLD 9	-1.14	2.44	31.65	-5.6547	0.0062	-0.3979
1073	SLD 10	-1.46	2.43	31.65	-5.6556	0.0066	-0.5109
1073	SLD 11	-1.38	-0.99	34.47	-6.3316	0.0073	-0.4817
1073	SLD 12	-1.7	-1	34.48	-6.3326	0.0077	-0.5947
1073	SLD 13	-4.26	1.29	32.47	-5.7655	-0.0027	-1.4926
1073	SLD 14	-4.76	1.28	32.48	-5.767	-0.0021	-1.665
1073	SLD 15	-4.34	0.26	33.32	-5.9686	-0.0023	-1.5177
1073	SLD 16	-4.83	0.25	33.32	-5.9701	-0.0017	-1.6901
1073	SLV 1	11.03	1.7	32.71	-6.236	0.0405	3.8621
1073	SLV 2	9.88	1.68	32.72	-6.2394	0.0419	3.4606
1073	SLV 3	10.86	-0.65	34.63	-6.6992	0.0413	3.8037
1073	SLV 4	9.71	-0.67	34.65	-6.7027	0.0427	3.4022
1073	SLV 5	3.71	4.56	30.08	-5.4009	0.0184	1.2975
1073	SLV 6	2.97	4.54	30.09	-5.4032	0.0193	1.0388
1073	SLV 7	3.15	-3.26	36.49	-6.945	0.0209	1.1028
1073	SLV 8	2.41	-3.27	36.51	-6.9473	0.0219	0.844
1073	SLV 9	-2.56	4.67	29.76	-5.1478	0	-0.8979
1073	SLV 10	-3.3	4.65	29.77	-5.1501	0.0009	-1.1567
1073	SLV 11	-3.12	-3.15	36.17	-6.692	0.0025	-1.0927
1073	SLV 12	-3.86	-3.16	36.18	-6.6942	0.0034	-1.3514
1073	SLV 13	-9.87	2.06	31.61	-5.3924	-0.0209	-3.4561
1073	SLV 14	-11.02	2.04	31.63	-5.3959	-0.0194	-3.8576
1073	SLV 15	-10.04	-0.28	33.54	-5.8557	-0.0201	-3.5145
1073	SLV 16	-11.19	-0.31	33.55	-5.8592	-0.0187	-3.916
1073	CRTFP Ux+	0	0	0	0	0	0
1073	CRTFP Ux-	0	0	0	0	0	0
1073	CRTFP Uy+	0	0	0	0	0	0
1073	CRTFP Uy-	0	0	0	0	0	0
1074	SLU 1	-0.02	0.66	30.84	-5.6824	-0.0077	-0.0078
1074	SLU 2	-0.03	0.71	30.8	-5.6745	-0.0076	-0.008
1074	SLU 3	-0.03	0.69	31.56	-5.7974	-0.0079	-0.0085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1074	SLU 4	-0.03	0.72	31.54	-5.7927	-0.0079	-0.0087
1074	SLU 5	-0.03	0.72	31.24	-5.7463	-0.0078	-0.0081
1074	SLU 6	-0.03	0.7	32	-5.8692	-0.0081	-0.0087
1074	SLU 7	-0.03	0.73	31.98	-5.8644	-0.008	-0.0088
1074	SLU 8	-0.03	0.69	31.72	-5.8259	-0.008	-0.0081
1074	SLU 9	-0.03	0.72	31.7	-5.8212	-0.008	-0.0082
1074	SLU 10	-0.04	0.79	34.74	-6.3344	-0.0086	-0.0145
1074	SLU 11	-0.05	0.77	35.49	-6.4573	-0.0089	-0.015
1074	SLU 12	-0.05	0.8	35.47	-6.4526	-0.0089	-0.0152
1074	SLU 13	-0.04	0.81	35.18	-6.4061	-0.0088	-0.0146
1074	SLU 14	-0.05	0.79	35.93	-6.529	-0.009	-0.0152
1074	SLU 15	-0.05	0.82	35.91	-6.5243	-0.009	-0.0153
1074	SLU 16	-0.04	0.77	35.66	-6.4858	-0.009	-0.0145
1074	SLU 17	-0.04	0.8	35.63	-6.481	-0.009	-0.0147
1074	SLU 18	-0.05	0.78	36.46	-6.6251	-0.0091	-0.017
1074	SLU 19	-0.05	0.81	36.44	-6.6203	-0.0091	-0.0172
1074	SLU 20	-0.05	0.79	36.9	-6.6968	-0.0092	-0.0172
1074	SLU 21	-0.05	0.82	36.88	-6.6921	-0.0092	-0.0173
1074	SLU 22	-0.04	0.78	34.77	-6.3353	-0.0087	-0.0131
1074	SLU 23	-0.04	0.83	34.73	-6.3274	-0.0087	-0.0134
1074	SLU 24	-0.04	0.81	35.49	-6.4504	-0.0089	-0.0139
1074	SLU 25	-0.04	0.84	35.46	-6.4456	-0.0089	-0.014
1074	SLU 26	-0.04	0.84	35.17	-6.3992	-0.0088	-0.0135
1074	SLU 27	-0.04	0.82	35.93	-6.5221	-0.0091	-0.014
1074	SLU 28	-0.04	0.85	35.9	-6.5174	-0.0091	-0.0142
1074	SLU 29	-0.04	0.8	35.65	-6.4788	-0.009	-0.0134
1074	SLU 30	-0.04	0.83	35.63	-6.4741	-0.009	-0.0135
1074	SLU 31	-0.06	0.91	38.67	-6.9873	-0.0097	-0.0198
1074	SLU 32	-0.06	0.89	39.42	-7.1102	-0.0099	-0.0204
1074	SLU 33	-0.06	0.92	39.4	-7.1055	-0.0099	-0.0205
1074	SLU 34	-0.06	0.92	39.11	-7.0591	-0.0098	-0.02
1074	SLU 35	-0.06	0.9	39.86	-7.182	-0.0101	-0.0205
1074	SLU 36	-0.06	0.93	39.84	-7.1772	-0.0101	-0.0206
1074	SLU 37	-0.06	0.89	39.59	-7.1387	-0.01	-0.0199
1074	SLU 38	-0.06	0.92	39.56	-7.134	-0.01	-0.02
1074	SLU 39	-0.07	0.9	40.39	-7.278	-0.0101	-0.0224
1074	SLU 40	-0.07	0.93	40.37	-7.2733	-0.0101	-0.0225
1074	SLU 41	-0.07	0.91	40.83	-7.3498	-0.0103	-0.0225
1074	SLU 42	-0.07	0.94	40.81	-7.345	-0.0103	-0.0227
1074	SLU 43	-0.03	0.82	38.75	-7.1633	-0.0096	-0.0083
1074	SLU 44	-0.03	0.87	38.71	-7.1554	-0.0096	-0.0085
1074	SLU 45	-0.03	0.85	39.47	-7.2783	-0.0098	-0.009
1074	SLU 46	-0.03	0.88	39.44	-7.2735	-0.0098	-0.0092
1074	SLU 47	-0.03	0.88	39.15	-7.2271	-0.0098	-0.0087
1074	SLU 48	-0.03	0.86	39.91	-7.35	-0.01	-0.0092
1074	SLU 49	-0.03	0.89	39.88	-7.3453	-0.01	-0.0093
1074	SLU 50	-0.03	0.84	39.63	-7.3068	-0.01	-0.0086
1074	SLU 51	-0.03	0.87	39.61	-7.302	-0.01	-0.0087
1074	SLU 52	-0.05	0.95	42.64	-7.8152	-0.0106	-0.015
1074	SLU 53	-0.05	0.93	43.4	-7.9381	-0.0108	-0.0155
1074	SLU 54	-0.05	0.96	43.37	-7.9334	-0.0108	-0.0157
1074	SLU 55	-0.05	0.96	43.08	-7.887	-0.0108	-0.0151
1074	SLU 56	-0.05	0.94	43.84	-8.0099	-0.011	-0.0157
1074	SLU 57	-0.05	0.97	43.81	-8.0052	-0.011	-0.0158
1074	SLU 58	-0.05	0.93	43.56	-7.9666	-0.0109	-0.015
1074	SLU 59	-0.05	0.96	43.54	-7.9619	-0.0109	-0.0152
1074	SLU 60	-0.05	0.94	44.37	-8.1059	-0.011	-0.0176
1074	SLU 61	-0.05	0.97	44.34	-8.1012	-0.011	-0.0177
1074	SLU 62	-0.05	0.95	44.81	-8.1777	-0.0112	-0.0177
1074	SLU 63	-0.05	0.98	44.78	-8.1729	-0.0112	-0.0178
1074	SLU 64	-0.04	0.94	42.68	-7.8162	-0.0106	-0.0136
1074	SLU 65	-0.04	0.99	42.64	-7.8083	-0.0106	-0.0139
1074	SLU 66	-0.04	0.97	43.4	-7.9312	-0.0109	-0.0144
1074	SLU 67	-0.04	1	43.37	-7.9265	-0.0108	-0.0145
1074	SLU 68	-0.04	1	43.08	-7.8801	-0.0108	-0.014
1074	SLU 69	-0.05	0.98	43.84	-8.003	-0.011	-0.0145
1074	SLU 70	-0.05	1.01	43.81	-7.9982	-0.011	-0.0147
1074	SLU 71	-0.04	0.96	43.56	-7.9597	-0.011	-0.0139
1074	SLU 72	-0.04	0.99	43.54	-7.955	-0.011	-0.014
1074	SLU 73	-0.06	1.07	46.57	-8.4682	-0.0116	-0.0203
1074	SLU 74	-0.06	1.05	47.33	-8.5911	-0.0118	-0.0209
1074	SLU 75	-0.06	1.08	47.3	-8.5863	-0.0118	-0.021
1074	SLU 76	-0.06	1.08	47.01	-8.5399	-0.0118	-0.0205
1074	SLU 77	-0.06	1.06	47.77	-8.6628	-0.012	-0.021
1074	SLU 78	-0.06	1.09	47.74	-8.6581	-0.012	-0.0211
1074	SLU 79	-0.06	1.05	47.49	-8.6196	-0.012	-0.0204
1074	SLU 80	-0.06	1.07	47.47	-8.6148	-0.012	-0.0205
1074	SLU 81	-0.07	1.06	48.3	-8.7589	-0.012	-0.0229
1074	SLU 82	-0.07	1.09	48.27	-8.7541	-0.012	-0.023
1074	SLU 83	-0.07	1.07	48.74	-8.8306	-0.0122	-0.023
1074	SLU 84	-0.07	1.1	48.71	-8.8259	-0.0122	-0.0232
1074	SLE RA 1	-0.03	0.7	31.97	-5.869	-0.008	-0.0093
1074	SLE RA 2	-0.03	0.73	31.94	-5.8637	-0.0079	-0.0095
1074	SLE RA 3	-0.03	0.72	32.44	-5.9456	-0.0081	-0.0098
1074	SLE RA 4	-0.03	0.74	32.43	-5.9425	-0.0081	-0.0099
1074	SLE RA 5	-0.03	0.74	32.23	-5.9115	-0.0081	-0.0096
1074	SLE RA 6	-0.03	0.72	32.74	-5.9935	-0.0082	-0.0099
1074	SLE RA 7	-0.03	0.74	32.72	-5.9903	-0.0082	-0.01
1074	SLE RA 8	-0.03	0.71	32.55	-5.9646	-0.0082	-0.0095
1074	SLE RA 9	-0.03	0.73	32.54	-5.9615	-0.0082	-0.0096

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1074	SLE RA 10	-0.04	0.78	34.56	-6.3036	-0.0086	-0.0138
1074	SLE RA 11	-0.04	0.77	35.07	-6.3855	-0.0088	-0.0141
1074	SLE RA 12	-0.04	0.79	35.05	-6.3824	-0.0088	-0.0142
1074	SLE RA 13	-0.04	0.79	34.86	-6.3514	-0.0087	-0.0139
1074	SLE RA 14	-0.04	0.78	35.36	-6.4334	-0.0089	-0.0142
1074	SLE RA 15	-0.04	0.8	35.34	-6.4302	-0.0089	-0.0143
1074	SLE RA 16	-0.04	0.77	35.18	-6.4045	-0.0088	-0.0138
1074	SLE RA 17	-0.04	0.79	35.16	-6.4014	-0.0088	-0.0139
1074	SLE RA 18	-0.05	0.78	35.71	-6.4974	-0.0089	-0.0155
1074	SLE RA 19	-0.05	0.8	35.7	-6.4942	-0.0089	-0.0156
1074	SLE RA 20	-0.05	0.78	36.01	-6.5452	-0.009	-0.0156
1074	SLE RA 21	-0.05	0.8	35.99	-6.5421	-0.009	-0.0157
1074	SLE FR 1	-0.03	0.7	31.97	-5.869	-0.008	-0.0093
1074	SLE FR 2	-0.03	0.7	31.96	-5.8679	-0.008	-0.0093
1074	SLE FR 3	-0.03	0.7	32.08	-5.8881	-0.008	-0.0094
1074	SLE FR 4	-0.03	0.73	33.09	-6.0564	-0.0082	-0.0112
1074	SLE FR 5	-0.03	0.72	33.21	-6.0766	-0.0083	-0.0112
1074	SLE FR 6	-0.04	0.74	33.84	-6.1832	-0.0084	-0.0124
1074	SLE QP 1	-0.03	0.7	31.97	-5.869	-0.008	-0.0093
1074	SLE QP 2	-0.03	0.72	33.09	-6.0575	-0.0082	-0.0112
1074	SLD 1	4.71	1.17	32.48	-5.9948	0.0051	1.6513
1074	SLD 2	4.22	1.18	32.47	-5.9917	0.0057	1.479
1074	SLD 3	4.64	0.15	33.33	-6.1986	0.0045	1.6264
1074	SLD 4	4.15	0.15	33.32	-6.1955	0.0051	1.4541
1074	SLD 5	1.59	2.41	31.62	-5.7302	-0.0035	0.5561
1074	SLD 6	1.26	2.41	31.61	-5.7282	-0.0031	0.4431
1074	SLD 7	1.35	-1.01	34.46	-6.4094	-0.0054	0.4729
1074	SLD 8	1.02	-1.01	34.45	-6.4073	-0.005	0.3599
1074	SLD 9	-1.09	2.45	31.73	-5.7076	-0.0115	-0.3823
1074	SLD 10	-1.42	2.45	31.73	-5.7056	-0.0111	-0.4952
1074	SLD 11	-1.33	-0.97	34.57	-6.3868	-0.0134	-0.4655
1074	SLD 12	-1.65	-0.97	34.56	-6.3847	-0.013	-0.5784
1074	SLD 13	-4.22	1.29	32.86	-5.9195	-0.0216	-1.4764
1074	SLD 14	-4.71	1.29	32.85	-5.9164	-0.021	-1.6487
1074	SLD 15	-4.29	0.26	33.71	-6.1232	-0.0222	-1.5014
1074	SLD 16	-4.78	0.27	33.7	-6.1201	-0.0215	-1.6737
1074	SLV 1	11.07	1.75	31.69	-5.9186	0.0229	3.8763
1074	SLV 2	9.92	1.75	31.67	-5.9114	0.0243	3.4751
1074	SLV 3	10.9	-0.59	33.62	-6.3832	0.0216	3.8183
1074	SLV 4	9.75	-0.59	33.6	-6.3761	0.0231	3.4171
1074	SLV 5	3.75	4.57	29.75	-5.3123	0.0028	1.3121
1074	SLV 6	3.01	4.58	29.73	-5.3077	0.0037	1.0536
1074	SLV 7	3.19	-3.22	36.18	-6.8612	-0.0015	1.1188
1074	SLV 8	2.45	-3.22	36.17	-6.8566	-0.0005	0.8602
1074	SLV 9	-2.52	4.66	30.02	-5.2584	-0.0159	-0.8826
1074	SLV 10	-3.26	4.66	30	-5.2538	-0.015	-1.1412
1074	SLV 11	-3.07	-3.14	36.45	-6.8073	-0.0202	-1.0759
1074	SLV 12	-3.81	-3.13	36.44	-6.8027	-0.0193	-1.3345
1074	SLV 13	-9.82	2.03	32.59	-5.7389	-0.0395	-3.4394
1074	SLV 14	-10.97	2.03	32.56	-5.7317	-0.0381	-3.8407
1074	SLV 15	-9.99	-0.31	34.52	-6.2036	-0.0408	-3.4974
1074	SLV 16	-11.14	-0.31	34.49	-6.1964	-0.0394	-3.8987
1074	CRTFP Ux+	0	0	0	0	0	0
1074	CRTFP Ux-	0	0	0	0	0	0
1074	CRTFP Uy+	0	0	0	0	0	0
1074	CRTFP Uy-	0	0	0	0	0	0
1075	SLU 1	0.02	0.69	31.33	-6.0808	-0.0242	0.0074
1075	SLU 2	0.02	0.74	31.29	-6.0724	-0.0242	0.0072
1075	SLU 3	0.02	0.72	32.05	-6.2063	-0.0248	0.007
1075	SLU 4	0.02	0.75	32.03	-6.2013	-0.0248	0.0069
1075	SLU 5	0.02	0.76	31.73	-6.151	-0.0246	0.0073
1075	SLU 6	0.02	0.74	32.5	-6.2849	-0.0253	0.0071
1075	SLU 7	0.02	0.77	32.48	-6.2799	-0.0253	0.007
1075	SLU 8	0.02	0.72	32.23	-6.238	-0.0251	0.0076
1075	SLU 9	0.02	0.75	32.2	-6.233	-0.0251	0.0074
1075	SLU 10	0	0.83	35.28	-6.7894	-0.0276	0.0026
1075	SLU 11	0	0.81	36.05	-6.9233	-0.0283	0.0024
1075	SLU 12	0	0.84	36.03	-6.9183	-0.0283	0.0023
1075	SLU 13	0	0.84	35.73	-6.868	-0.0281	0.0027
1075	SLU 14	0	0.82	36.5	-7.0019	-0.0287	0.0025
1075	SLU 15	0	0.85	36.48	-6.9969	-0.0287	0.0024
1075	SLU 16	0	0.8	36.22	-6.955	-0.0285	0.003
1075	SLU 17	0	0.83	36.2	-6.95	-0.0285	0.0029
1075	SLU 18	0	0.82	37.04	-7.1051	-0.0291	0.0009
1075	SLU 19	0	0.85	37.02	-7.1001	-0.0291	0.0008
1075	SLU 20	0	0.83	37.49	-7.1837	-0.0296	0.0009
1075	SLU 21	0	0.86	37.46	-7.1787	-0.0296	0.0008
1075	SLU 22	0.01	0.82	35.32	-6.7906	-0.0277	0.004
1075	SLU 23	0.01	0.86	35.28	-6.7822	-0.0276	0.0038
1075	SLU 24	0.01	0.84	36.05	-6.9161	-0.0283	0.0036
1075	SLU 25	0.01	0.87	36.03	-6.9111	-0.0283	0.0034
1075	SLU 26	0.01	0.88	35.73	-6.8609	-0.0281	0.0038
1075	SLU 27	0.01	0.86	36.5	-6.9947	-0.0288	0.0036
1075	SLU 28	0.01	0.89	36.48	-6.9897	-0.0287	0.0035
1075	SLU 29	0.01	0.84	36.22	-6.9479	-0.0286	0.0041
1075	SLU 30	0.01	0.87	36.2	-6.9428	-0.0285	0.004
1075	SLU 31	-0.01	0.95	39.28	-7.4992	-0.0311	-0.0008
1075	SLU 32	-0.01	0.93	40.05	-7.6331	-0.0318	-0.001
1075	SLU 33	-0.01	0.96	40.03	-7.6281	-0.0318	-0.0012
1075	SLU 34	-0.01	0.96	39.73	-7.5779	-0.0315	-0.0008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1075	SLU 35	-0.01	0.94	40.5	-7.7117	-0.0322	-0.001
1075	SLU 36	-0.01	0.97	40.48	-7.7067	-0.0322	-0.0011
1075	SLU 37	-0.01	0.93	40.22	-7.6649	-0.032	-0.0005
1075	SLU 38	-0.01	0.96	40.2	-7.6598	-0.032	-0.0006
1075	SLU 39	-0.01	0.94	41.04	-7.8149	-0.0326	-0.0026
1075	SLU 40	-0.01	0.97	41.01	-7.8099	-0.0326	-0.0027
1075	SLU 41	-0.01	0.95	41.49	-7.8935	-0.0331	-0.0025
1075	SLU 42	-0.01	0.98	41.46	-7.8885	-0.033	-0.0026
1075	SLU 43	0.03	0.86	39.35	-7.6617	-0.0303	0.0108
1075	SLU 44	0.03	0.91	39.31	-7.6533	-0.0302	0.0106
1075	SLU 45	0.03	0.89	40.08	-7.7872	-0.0309	0.0104
1075	SLU 46	0.02	0.92	40.06	-7.7821	-0.0309	0.0103
1075	SLU 47	0.03	0.92	39.76	-7.7319	-0.0307	0.0107
1075	SLU 48	0.03	0.9	40.53	-7.8658	-0.0314	0.0105
1075	SLU 49	0.03	0.93	40.51	-7.8608	-0.0313	0.0104
1075	SLU 50	0.03	0.88	40.25	-7.8189	-0.0312	0.011
1075	SLU 51	0.03	0.91	40.23	-7.8139	-0.0311	0.0109
1075	SLU 52	0.01	1	43.31	-8.3703	-0.0337	0.006
1075	SLU 53	0.01	0.98	44.08	-8.5042	-0.0344	0.0058
1075	SLU 54	0.01	1.01	44.06	-8.4991	-0.0344	0.0057
1075	SLU 55	0.01	1.01	43.76	-8.4489	-0.0341	0.0061
1075	SLU 56	0.01	0.99	44.53	-8.5828	-0.0348	0.0059
1075	SLU 57	0.01	1.02	44.51	-8.5778	-0.0348	0.0058
1075	SLU 58	0.01	0.97	44.25	-8.5359	-0.0346	0.0064
1075	SLU 59	0.01	1	44.23	-8.5309	-0.0346	0.0063
1075	SLU 60	0.01	0.98	45.07	-8.686	-0.0352	0.0043
1075	SLU 61	0.01	1.01	45.04	-8.6809	-0.0352	0.0042
1075	SLU 62	0.01	1	45.52	-8.7646	-0.0357	0.0044
1075	SLU 63	0.01	1.03	45.49	-8.7595	-0.0356	0.0042
1075	SLU 64	0.02	0.98	43.35	-8.3715	-0.0337	0.0074
1075	SLU 65	0.02	1.03	43.31	-8.3631	-0.0337	0.0072
1075	SLU 66	0.02	1.01	44.08	-8.497	-0.0344	0.007
1075	SLU 67	0.01	1.04	44.05	-8.492	-0.0344	0.0068
1075	SLU 68	0.02	1.04	43.76	-8.4417	-0.0341	0.0072
1075	SLU 69	0.02	1.02	44.53	-8.5756	-0.0348	0.007
1075	SLU 70	0.01	1.05	44.5	-8.5706	-0.0348	0.0069
1075	SLU 71	0.02	1.01	44.25	-8.5287	-0.0346	0.0075
1075	SLU 72	0.02	1.04	44.23	-8.5237	-0.0346	0.0074
1075	SLU 73	0	1.12	47.31	-9.0801	-0.0372	0.0026
1075	SLU 74	0	1.1	48.08	-9.214	-0.0378	0.0024
1075	SLU 75	0	1.13	48.05	-9.209	-0.0378	0.0023
1075	SLU 76	0	1.13	47.76	-9.1587	-0.0376	0.0027
1075	SLU 77	0	1.11	48.53	-9.2926	-0.0383	0.0025
1075	SLU 78	0	1.14	48.5	-9.2876	-0.0383	0.0023
1075	SLU 79	0	1.09	48.25	-9.2457	-0.0381	0.0029
1075	SLU 80	0	1.12	48.22	-9.2407	-0.0381	0.0028
1075	SLU 81	0	1.11	49.06	-9.3958	-0.0387	0.0008
1075	SLU 82	0	1.14	49.04	-9.3908	-0.0387	0.0007
1075	SLU 83	0	1.12	49.51	-9.4744	-0.0391	0.0009
1075	SLU 84	0	1.15	49.49	-9.4694	-0.0391	0.0008
1075	SLE RA 1	0.01	0.73	32.47	-6.2836	-0.0252	0.0064
1075	SLE RA 2	0.01	0.76	32.44	-6.278	-0.0252	0.0063
1075	SLE RA 3	0.01	0.75	32.95	-6.3673	-0.0256	0.0062
1075	SLE RA 4	0.01	0.77	32.94	-6.3639	-0.0256	0.0061
1075	SLE RA 5	0.01	0.77	32.74	-6.3304	-0.0255	0.0063
1075	SLE RA 6	0.01	0.76	33.25	-6.4197	-0.0259	0.0062
1075	SLE RA 7	0.01	0.78	33.24	-6.4163	-0.0259	0.0061
1075	SLE RA 8	0.02	0.74	33.07	-6.3884	-0.0258	0.0065
1075	SLE RA 9	0.01	0.76	33.05	-6.3851	-0.0258	0.0064
1075	SLE RA 10	0.01	0.82	35.11	-6.756	-0.0275	0.0032
1075	SLE RA 11	0	0.81	35.62	-6.8453	-0.0279	0.0031
1075	SLE RA 12	0	0.83	35.6	-6.8419	-0.0279	0.003
1075	SLE RA 13	0.01	0.83	35.41	-6.8084	-0.0278	0.0033
1075	SLE RA 14	0.01	0.81	35.92	-6.8977	-0.0282	0.0032
1075	SLE RA 15	0	0.83	35.9	-6.8943	-0.0282	0.0031
1075	SLE RA 16	0.01	0.8	35.73	-6.8664	-0.0281	0.0035
1075	SLE RA 17	0.01	0.82	35.72	-6.8631	-0.0281	0.0034
1075	SLE RA 18	0	0.81	36.28	-6.9665	-0.0285	0.0021
1075	SLE RA 19	0	0.83	36.26	-6.9631	-0.0285	0.002
1075	SLE RA 20	0	0.82	36.58	-7.0189	-0.0288	0.0021
1075	SLE RA 21	0	0.84	36.56	-7.0155	-0.0288	0.002
1075	SLE FR 1	0.01	0.73	32.47	-6.2836	-0.0252	0.0064
1075	SLE FR 2	0.01	0.74	32.46	-6.2825	-0.0252	0.0064
1075	SLE FR 3	0.01	0.73	32.59	-6.3046	-0.0253	0.0065
1075	SLE FR 4	0.01	0.76	33.61	-6.4874	-0.0262	0.0051
1075	SLE FR 5	0.01	0.76	33.73	-6.5094	-0.0263	0.0051
1075	SLE FR 6	0.01	0.77	34.37	-6.625	-0.0268	0.0043
1075	SLE QP 1	0.01	0.73	32.47	-6.2836	-0.0252	0.0064
1075	SLE QP 2	0.01	0.75	33.61	-6.4885	-0.0262	0.0051
1075	SLD 1	4.75	1.21	32.61	-6.2656	-0.0123	1.6657
1075	SLD 2	4.26	1.23	32.58	-6.2578	-0.0117	1.4936
1075	SLD 3	4.68	0.18	33.48	-6.4714	-0.0135	1.6409
1075	SLD 4	4.19	0.2	33.45	-6.4636	-0.0129	1.4689
1075	SLD 5	1.63	2.45	32	-6.1108	-0.0202	0.5714
1075	SLD 6	1.31	2.46	31.98	-6.1057	-0.0198	0.4587
1075	SLD 7	1.39	-0.98	34.89	-6.7969	-0.0244	0.4889
1075	SLD 8	1.07	-0.97	34.87	-6.7918	-0.024	0.3761
1075	SLD 9	-1.05	2.48	32.35	-6.1852	-0.0284	-0.3659
1075	SLD 10	-1.37	2.49	32.33	-6.1801	-0.028	-0.4786
1075	SLD 11	-1.28	-0.95	35.24	-6.8712	-0.0325	-0.4484

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1075	SLD 12	-1.61	-0.94	35.22	-6.8661	-0.0321	-0.5612
1075	SLD 13	-4.17	1.31	33.77	-6.5133	-0.0394	-1.4586
1075	SLD 14	-4.66	1.33	33.75	-6.5056	-0.0388	-1.6306
1075	SLD 15	-4.24	0.28	34.64	-6.7192	-0.0407	-1.4834
1075	SLD 16	-4.73	0.3	34.61	-6.7114	-0.0401	-1.6554
1075	SLV 1	11.1	1.79	31.3	-5.9734	0.0063	3.8881
1075	SLV 2	9.95	1.82	31.23	-5.9553	0.0077	3.4874
1075	SLV 3	10.94	-0.56	33.26	-6.4419	0.0035	3.8305
1075	SLV 4	9.79	-0.53	33.19	-6.4238	0.0048	3.4298
1075	SLV 5	3.78	4.62	29.95	-5.6264	-0.0123	1.3263
1075	SLV 6	3.04	4.64	29.91	-5.6148	-0.0114	1.0681
1075	SLV 7	3.24	-3.21	36.5	-7.1882	-0.0219	1.1344
1075	SLV 8	2.5	-3.19	36.45	-7.1766	-0.021	0.8762
1075	SLV 9	-2.48	4.69	30.77	-5.8004	-0.0313	-0.866
1075	SLV 10	-3.22	4.72	30.73	-5.7887	-0.0304	-1.1242
1075	SLV 11	-3.02	-3.14	37.31	-7.3622	-0.041	-1.0579
1075	SLV 12	-3.76	-3.11	37.27	-7.3505	-0.0401	-1.3161
1075	SLV 13	-9.77	2.03	34.03	-6.5531	-0.0572	-3.4196
1075	SLV 14	-10.92	2.07	33.96	-6.535	-0.0558	-3.8202
1075	SLV 15	-9.93	-0.31	35.99	-7.0217	-0.0601	-3.4771
1075	SLV 16	-11.08	-0.28	35.92	-7.0036	-0.0587	-3.8778
1075	CRTFP Ux+	0	0	0	0	0	0
1075	CRTFP Ux-	0	0	0	0	0	0
1075	CRTFP Uy+	0	0	0	0	0	0
1075	CRTFP Uy-	0	0	0	0	0	0
1076	SLU 1	0.06	0.74	32.26	-6.8318	-0.0378	0.023
1076	SLU 2	0.06	0.79	32.22	-6.8225	-0.0377	0.0228
1076	SLU 3	0.06	0.77	33.02	-6.9769	-0.0388	0.0229
1076	SLU 4	0.06	0.8	32.99	-6.9713	-0.0387	0.0228
1076	SLU 5	0.06	0.8	32.69	-6.9136	-0.0384	0.0231
1076	SLU 6	0.06	0.78	33.48	-7.0679	-0.0394	0.0232
1076	SLU 7	0.06	0.81	33.46	-7.0624	-0.0394	0.0231
1076	SLU 8	0.06	0.76	33.19	-7.014	-0.0391	0.0236
1076	SLU 9	0.06	0.79	33.17	-7.0084	-0.0391	0.0234
1076	SLU 10	0.05	0.88	36.36	-7.6481	-0.0432	0.0202
1076	SLU 11	0.05	0.86	37.15	-7.8025	-0.0443	0.0203
1076	SLU 12	0.05	0.89	37.12	-7.7969	-0.0442	0.0202
1076	SLU 13	0.05	0.89	36.82	-7.7392	-0.0439	0.0205
1076	SLU 14	0.05	0.87	37.62	-7.8936	-0.0449	0.0206
1076	SLU 15	0.05	0.9	37.59	-7.888	-0.0449	0.0205
1076	SLU 16	0.05	0.85	37.33	-7.8396	-0.0446	0.0209
1076	SLU 17	0.05	0.88	37.3	-7.834	-0.0446	0.0208
1076	SLU 18	0.05	0.87	38.17	-8.0113	-0.0456	0.0193
1076	SLU 19	0.05	0.9	38.14	-8.0057	-0.0456	0.0192
1076	SLU 20	0.05	0.88	38.64	-8.1023	-0.0463	0.0196
1076	SLU 21	0.05	0.91	38.61	-8.0968	-0.0463	0.0194
1076	SLU 22	0.06	0.86	36.4	-7.6497	-0.0433	0.0215
1076	SLU 23	0.06	0.91	36.35	-7.6404	-0.0432	0.0213
1076	SLU 24	0.06	0.89	37.15	-7.7947	-0.0443	0.0214
1076	SLU 25	0.06	0.92	37.12	-7.7892	-0.0442	0.0213
1076	SLU 26	0.06	0.92	36.82	-7.7315	-0.0439	0.0216
1076	SLU 27	0.06	0.9	37.61	-7.8858	-0.0449	0.0217
1076	SLU 28	0.06	0.93	37.59	-7.8802	-0.0449	0.0216
1076	SLU 29	0.06	0.89	37.33	-7.8318	-0.0446	0.022
1076	SLU 30	0.06	0.92	37.3	-7.8263	-0.0445	0.0219
1076	SLU 31	0.05	1	40.49	-8.466	-0.0487	0.0187
1076	SLU 32	0.05	0.98	41.28	-8.6203	-0.0498	0.0188
1076	SLU 33	0.05	1.01	41.26	-8.6148	-0.0497	0.0187
1076	SLU 34	0.05	1.02	40.95	-8.5571	-0.0494	0.019
1076	SLU 35	0.05	1	41.75	-8.7114	-0.0504	0.0191
1076	SLU 36	0.05	1.03	41.72	-8.7059	-0.0504	0.019
1076	SLU 37	0.05	0.98	41.46	-8.6575	-0.0501	0.0194
1076	SLU 38	0.05	1.01	41.44	-8.6519	-0.05	0.0193
1076	SLU 39	0.04	0.99	42.3	-8.8291	-0.0511	0.0178
1076	SLU 40	0.04	1.02	42.28	-8.8236	-0.0511	0.0177
1076	SLU 41	0.05	1.01	42.77	-8.9202	-0.0518	0.018
1076	SLU 42	0.05	1.04	42.74	-8.9147	-0.0517	0.0179
1076	SLU 43	0.08	0.91	40.53	-8.6009	-0.0472	0.0304
1076	SLU 44	0.08	0.96	40.48	-8.5916	-0.0472	0.0302
1076	SLU 45	0.08	0.94	41.28	-8.746	-0.0482	0.0304
1076	SLU 46	0.08	0.97	41.25	-8.7404	-0.0482	0.0303
1076	SLU 47	0.08	0.98	40.95	-8.6827	-0.0478	0.0305
1076	SLU 48	0.08	0.96	41.74	-8.8371	-0.0489	0.0306
1076	SLU 49	0.08	0.99	41.72	-8.8315	-0.0489	0.0305
1076	SLU 50	0.08	0.94	41.46	-8.7831	-0.0485	0.031
1076	SLU 51	0.08	0.97	41.43	-8.7775	-0.0485	0.0309
1076	SLU 52	0.07	1.05	44.62	-9.4173	-0.0527	0.0276
1076	SLU 53	0.07	1.04	45.41	-9.5716	-0.0537	0.0278
1076	SLU 54	0.07	1.07	45.39	-9.566	-0.0537	0.0276
1076	SLU 55	0.07	1.07	45.08	-9.5084	-0.0533	0.0279
1076	SLU 56	0.07	1.05	45.88	-9.6627	-0.0544	0.028
1076	SLU 57	0.07	1.08	45.85	-9.6571	-0.0543	0.0279
1076	SLU 58	0.07	1.03	45.59	-9.6087	-0.054	0.0284
1076	SLU 59	0.07	1.06	45.57	-9.6032	-0.054	0.0283
1076	SLU 60	0.07	1.04	46.43	-9.7804	-0.0551	0.0267
1076	SLU 61	0.07	1.07	46.41	-9.7748	-0.0551	0.0266
1076	SLU 62	0.07	1.06	46.9	-9.8715	-0.0557	0.027
1076	SLU 63	0.07	1.09	46.87	-9.8659	-0.0557	0.0269
1076	SLU 64	0.08	1.04	44.66	-9.4188	-0.0527	0.0289
1076	SLU 65	0.08	1.09	44.62	-9.4095	-0.0527	0.0287

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1076	SLU 66	0.08	1.07	45.41	-9.5638	-0.0537	0.0289
1076	SLU 67	0.08	1.1	45.39	-9.5583	-0.0537	0.0287
1076	SLU 68	0.08	1.1	45.08	-9.5006	-0.0533	0.029
1076	SLU 69	0.08	1.08	45.88	-9.6549	-0.0544	0.0291
1076	SLU 70	0.08	1.11	45.85	-9.6494	-0.0543	0.029
1076	SLU 71	0.08	1.06	45.59	-9.601	-0.054	0.0295
1076	SLU 72	0.08	1.09	45.56	-9.5954	-0.054	0.0294
1076	SLU 73	0.07	1.18	48.75	-10.2351	-0.0582	0.0261
1076	SLU 74	0.07	1.16	49.55	-10.3895	-0.0592	0.0262
1076	SLU 75	0.07	1.19	49.52	-10.3839	-0.0592	0.0261
1076	SLU 76	0.07	1.19	49.22	-10.3262	-0.0588	0.0264
1076	SLU 77	0.07	1.17	50.01	-10.4806	-0.0599	0.0265
1076	SLU 78	0.07	1.2	49.99	-10.475	-0.0598	0.0264
1076	SLU 79	0.07	1.16	49.72	-10.4266	-0.0595	0.0269
1076	SLU 80	0.07	1.19	49.7	-10.421	-0.0595	0.0267
1076	SLU 81	0.07	1.17	50.56	-10.5982	-0.0606	0.0252
1076	SLU 82	0.06	1.2	50.54	-10.5927	-0.0605	0.0251
1076	SLU 83	0.07	1.18	51.03	-10.6893	-0.0612	0.0255
1076	SLU 84	0.07	1.21	51.01	-10.6838	-0.0612	0.0254
1076	SLE RA 1	0.06	0.77	33.44	-7.0655	-0.0394	0.0226
1076	SLE RA 2	0.06	0.8	33.42	-7.0593	-0.0393	0.0225
1076	SLE RA 3	0.06	0.79	33.95	-7.1622	-0.04	0.0225
1076	SLE RA 4	0.06	0.81	33.93	-7.1585	-0.04	0.0225
1076	SLE RA 5	0.06	0.81	33.73	-7.12	-0.0398	0.0226
1076	SLE RA 6	0.06	0.8	34.26	-7.2229	-0.0405	0.0227
1076	SLE RA 7	0.06	0.82	34.24	-7.2192	-0.0404	0.0226
1076	SLE RA 8	0.06	0.79	34.07	-7.1869	-0.0402	0.0229
1076	SLE RA 9	0.06	0.81	34.05	-7.1832	-0.0402	0.0229
1076	SLE RA 10	0.05	0.87	36.17	-7.6097	-0.043	0.0207
1076	SLE RA 11	0.05	0.85	36.7	-7.7126	-0.0437	0.0208
1076	SLE RA 12	0.05	0.87	36.69	-7.7089	-0.0437	0.0207
1076	SLE RA 13	0.05	0.87	36.48	-7.6704	-0.0434	0.0209
1076	SLE RA 14	0.05	0.86	37.01	-7.7733	-0.0441	0.021
1076	SLE RA 15	0.05	0.88	37	-7.7696	-0.0441	0.0209
1076	SLE RA 16	0.06	0.85	36.82	-7.7373	-0.0439	0.0212
1076	SLE RA 17	0.06	0.87	36.8	-7.7336	-0.0439	0.0211
1076	SLE RA 18	0.05	0.86	37.38	-7.8518	-0.0446	0.0201
1076	SLE RA 19	0.05	0.88	37.37	-7.8481	-0.0446	0.02
1076	SLE RA 20	0.05	0.87	37.69	-7.9125	-0.045	0.0203
1076	SLE RA 21	0.05	0.89	37.68	-7.9088	-0.045	0.0202
1076	SLE FR 1	0.06	0.77	33.44	-7.0655	-0.0394	0.0226
1076	SLE FR 2	0.06	0.78	33.44	-7.0642	-0.0393	0.0226
1076	SLE FR 3	0.06	0.77	33.57	-7.0898	-0.0395	0.0227
1076	SLE FR 4	0.06	0.8	34.62	-7.3001	-0.0409	0.0218
1076	SLE FR 5	0.06	0.8	34.75	-7.3256	-0.0411	0.0219
1076	SLE FR 6	0.06	0.81	35.41	-7.4586	-0.042	0.0213
1076	SLE QP 1	0.06	0.77	33.44	-7.0655	-0.0394	0.0226
1076	SLE QP 2	0.06	0.8	34.63	-7.3014	-0.0409	0.0218
1076	SLD 1	4.79	1.36	33.21	-6.9306	-0.0265	1.6792
1076	SLD 2	4.3	1.39	33.17	-6.9179	-0.0259	1.5075
1076	SLD 3	4.72	0.32	34.1	-7.1428	-0.0283	1.6546
1076	SLD 4	4.23	0.35	34.06	-7.1301	-0.0277	1.483
1076	SLD 5	1.67	2.54	32.86	-6.8706	-0.034	0.5868
1076	SLD 6	1.35	2.56	32.83	-6.8622	-0.0336	0.4743
1076	SLD 7	1.44	-0.93	35.83	-7.5779	-0.0399	0.505
1076	SLD 8	1.12	-0.91	35.8	-7.5695	-0.0396	0.3924
1076	SLD 9	-1	2.51	33.45	-7.0332	-0.0423	-0.3488
1076	SLD 10	-1.32	2.53	33.42	-7.0248	-0.0419	-0.4613
1076	SLD 11	-1.23	-0.97	36.42	-7.7405	-0.0482	-0.4306
1076	SLD 12	-1.56	-0.95	36.39	-7.7321	-0.0479	-0.5431
1076	SLD 13	-4.12	1.25	35.19	-7.4726	-0.0541	-1.4393
1076	SLD 14	-4.61	1.28	35.15	-7.4599	-0.0536	-1.611
1076	SLD 15	-4.19	0.21	36.08	-7.6848	-0.0559	-1.4638
1076	SLD 16	-4.68	0.24	36.04	-7.6721	-0.0553	-1.6355
1076	SLV 1	11.13	2.09	31.35	-6.4413	-0.0072	3.8973
1076	SLV 2	9.98	2.15	31.24	-6.4116	-0.0059	3.4975
1076	SLV 3	10.97	-0.29	33.37	-6.9231	-0.0113	3.8402
1076	SLV 4	9.82	-0.22	33.26	-6.8935	-0.01	3.4404
1076	SLV 5	3.82	4.77	30.6	-6.3176	-0.0248	1.3399
1076	SLV 6	3.08	4.82	30.53	-6.2985	-0.0239	1.0822
1076	SLV 7	3.28	-3.14	37.33	-7.9238	-0.0385	1.1497
1076	SLV 8	2.54	-3.1	37.26	-7.9047	-0.0377	0.892
1076	SLV 9	-2.43	4.69	31.99	-6.698	-0.0442	-0.8483
1076	SLV 10	-3.17	4.74	31.92	-6.6789	-0.0433	-1.106
1076	SLV 11	-2.97	-3.22	38.72	-8.3042	-0.0579	-1.0386
1076	SLV 12	-3.71	-3.18	38.65	-8.2851	-0.0571	-1.2962
1076	SLV 13	-9.71	1.82	35.99	-7.7093	-0.0719	-3.3968
1076	SLV 14	-10.85	1.88	35.88	-7.6796	-0.0705	-3.7966
1076	SLV 15	-9.87	-0.56	38.01	-8.1911	-0.076	-3.4538
1076	SLV 16	-11.01	-0.49	37.9	-8.1615	-0.0747	-3.8536
1076	CRTFP Ux+	0	0	0	0	0	0
1076	CRTFP Ux-	0	0	0	0	0	0
1076	CRTFP Uy+	0	0	0	0	0	0
1076	CRTFP Uy-	0	0	0	0	0	0
1077	SLU 1	0.11	0.79	33.53	-7.8654	-0.0461	0.039
1077	SLU 2	0.11	0.84	33.49	-7.855	-0.046	0.0388
1077	SLU 3	0.11	0.82	34.32	-8.0373	-0.0473	0.0393
1077	SLU 4	0.11	0.85	34.29	-8.0311	-0.0472	0.0392
1077	SLU 5	0.11	0.85	33.98	-7.9631	-0.0468	0.0393
1077	SLU 6	0.11	0.83	34.81	-8.1454	-0.0481	0.0397

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1077	SLU 7	0.11	0.86	34.78	-8.1392	-0.048	0.0396
1077	SLU 8	0.11	0.81	34.51	-8.0815	-0.0476	0.0399
1077	SLU 9	0.11	0.84	34.48	-8.0753	-0.0476	0.0398
1077	SLU 10	0.1	0.94	37.81	-8.8304	-0.0528	0.0382
1077	SLU 11	0.1	0.92	38.64	-9.0127	-0.054	0.0387
1077	SLU 12	0.1	0.95	38.61	-9.0065	-0.054	0.0386
1077	SLU 13	0.1	0.95	38.3	-8.9385	-0.0535	0.0387
1077	SLU 14	0.11	0.93	39.13	-9.1208	-0.0548	0.0392
1077	SLU 15	0.11	0.96	39.1	-9.1146	-0.0548	0.0391
1077	SLU 16	0.11	0.91	38.83	-9.0569	-0.0544	0.0394
1077	SLU 17	0.11	0.94	38.8	-9.0507	-0.0544	0.0393
1077	SLU 18	0.1	0.93	39.71	-9.2588	-0.0557	0.0382
1077	SLU 19	0.1	0.96	39.68	-9.2526	-0.0557	0.0381
1077	SLU 20	0.1	0.94	40.19	-9.3669	-0.0565	0.0386
1077	SLU 21	0.1	0.97	40.17	-9.3606	-0.0565	0.0385
1077	SLU 22	0.11	0.92	37.85	-8.8323	-0.0528	0.0395
1077	SLU 23	0.11	0.97	37.81	-8.8219	-0.0527	0.0393
1077	SLU 24	0.11	0.95	38.64	-9.0042	-0.054	0.0398
1077	SLU 25	0.11	0.98	38.61	-8.998	-0.054	0.0396
1077	SLU 26	0.11	0.98	38.29	-8.93	-0.0535	0.0398
1077	SLU 27	0.11	0.96	39.12	-9.1123	-0.0548	0.0402
1077	SLU 28	0.11	1	39.1	-9.1061	-0.0548	0.0401
1077	SLU 29	0.11	0.95	38.83	-9.0484	-0.0544	0.0404
1077	SLU 30	0.11	0.98	38.8	-9.0422	-0.0543	0.0403
1077	SLU 31	0.1	1.07	42.13	-9.7973	-0.0595	0.0387
1077	SLU 32	0.1	1.05	42.96	-9.9796	-0.0608	0.0392
1077	SLU 33	0.1	1.08	42.93	-9.9734	-0.0607	0.0391
1077	SLU 34	0.1	1.08	42.61	-9.9054	-0.0603	0.0392
1077	SLU 35	0.11	1.06	43.44	-10.0877	-0.0615	0.0397
1077	SLU 36	0.11	1.09	43.42	-10.0815	-0.0615	0.0395
1077	SLU 37	0.11	1.05	43.15	-10.0238	-0.0611	0.0399
1077	SLU 38	0.11	1.08	43.12	-10.0176	-0.0611	0.0397
1077	SLU 39	0.1	1.06	44.02	-10.2257	-0.0625	0.0387
1077	SLU 40	0.1	1.09	44	-10.2195	-0.0624	0.0385
1077	SLU 41	0.1	1.07	44.51	-10.3338	-0.0632	0.0391
1077	SLU 42	0.1	1.1	44.48	-10.3276	-0.0632	0.039
1077	SLU 43	0.14	0.98	42.11	-9.8935	-0.0576	0.0505
1077	SLU 44	0.14	1.03	42.07	-9.8831	-0.0575	0.0503
1077	SLU 45	0.14	1.01	42.9	-10.0654	-0.0588	0.0508
1077	SLU 46	0.14	1.04	42.87	-10.0592	-0.0588	0.0507
1077	SLU 47	0.14	1.04	42.56	-9.9912	-0.0583	0.0508
1077	SLU 48	0.14	1.02	43.39	-10.1735	-0.0596	0.0513
1077	SLU 49	0.14	1.05	43.36	-10.1673	-0.0595	0.0512
1077	SLU 50	0.14	1	43.09	-10.1096	-0.0592	0.0515
1077	SLU 51	0.14	1.03	43.06	-10.1034	-0.0591	0.0514
1077	SLU 52	0.13	1.13	46.39	-10.8585	-0.0643	0.0498
1077	SLU 53	0.14	1.11	47.22	-11.0408	-0.0656	0.0502
1077	SLU 54	0.14	1.14	47.19	-11.0346	-0.0655	0.0501
1077	SLU 55	0.14	1.14	46.88	-10.9666	-0.0651	0.0502
1077	SLU 56	0.14	1.12	47.71	-11.1489	-0.0663	0.0507
1077	SLU 57	0.14	1.15	47.68	-11.1427	-0.0663	0.0506
1077	SLU 58	0.14	1.1	47.41	-11.085	-0.0659	0.0509
1077	SLU 59	0.14	1.13	47.38	-11.0788	-0.0659	0.0508
1077	SLU 60	0.13	1.12	48.29	-11.2869	-0.0673	0.0497
1077	SLU 61	0.13	1.15	48.26	-11.2807	-0.0672	0.0496
1077	SLU 62	0.14	1.13	48.77	-11.395	-0.068	0.0502
1077	SLU 63	0.14	1.16	48.75	-11.3887	-0.068	0.0501
1077	SLU 64	0.14	1.11	46.43	-10.8604	-0.0643	0.051
1077	SLU 65	0.14	1.16	46.39	-10.85	-0.0643	0.0508
1077	SLU 66	0.14	1.14	47.22	-11.0323	-0.0655	0.0513
1077	SLU 67	0.14	1.17	47.19	-11.0261	-0.0655	0.0512
1077	SLU 68	0.14	1.17	46.87	-10.9581	-0.065	0.0513
1077	SLU 69	0.14	1.16	47.7	-11.1404	-0.0663	0.0518
1077	SLU 70	0.14	1.19	47.68	-11.1342	-0.0663	0.0516
1077	SLU 71	0.14	1.14	47.41	-11.0765	-0.0659	0.052
1077	SLU 72	0.14	1.17	47.38	-11.0703	-0.0658	0.0518
1077	SLU 73	0.14	1.26	50.71	-11.8254	-0.071	0.0502
1077	SLU 74	0.14	1.24	51.54	-12.0077	-0.0723	0.0507
1077	SLU 75	0.14	1.27	51.51	-12.0015	-0.0722	0.0506
1077	SLU 76	0.14	1.27	51.19	-11.9335	-0.0718	0.0507
1077	SLU 77	0.14	1.25	52.02	-12.1158	-0.0731	0.0512
1077	SLU 78	0.14	1.28	52	-12.1096	-0.073	0.0511
1077	SLU 79	0.14	1.24	51.73	-12.0519	-0.0726	0.0514
1077	SLU 80	0.14	1.27	51.7	-12.0457	-0.0726	0.0513
1077	SLU 81	0.13	1.25	52.6	-12.2538	-0.074	0.0502
1077	SLU 82	0.13	1.28	52.58	-12.2476	-0.0739	0.0501
1077	SLU 83	0.14	1.26	53.09	-12.3619	-0.0748	0.0507
1077	SLU 84	0.14	1.3	53.06	-12.3557	-0.0747	0.0505
1077	SLE RA 1	0.11	0.82	34.77	-8.1416	-0.048	0.0391
1077	SLE RA 2	0.11	0.86	34.74	-8.1347	-0.048	0.039
1077	SLE RA 3	0.11	0.85	35.29	-8.2563	-0.0488	0.0393
1077	SLE RA 4	0.11	0.87	35.27	-8.2521	-0.0488	0.0392
1077	SLE RA 5	0.11	0.87	35.06	-8.2068	-0.0485	0.0393
1077	SLE RA 6	0.11	0.85	35.62	-8.3283	-0.0493	0.0396
1077	SLE RA 7	0.11	0.88	35.6	-8.3242	-0.0493	0.0396
1077	SLE RA 8	0.11	0.84	35.42	-8.2857	-0.049	0.0398
1077	SLE RA 9	0.11	0.86	35.4	-8.2816	-0.049	0.0397
1077	SLE RA 10	0.1	0.92	37.62	-8.785	-0.0525	0.0386
1077	SLE RA 11	0.11	0.91	38.17	-8.9065	-0.0533	0.0389
1077	SLE RA 12	0.1	0.93	38.15	-8.9024	-0.0533	0.0389

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1077	SLE RA 13	0.11	0.93	37.94	-8.857	-0.053	0.0389
1077	SLE RA 14	0.11	0.92	38.5	-8.9786	-0.0538	0.0392
1077	SLE RA 15	0.11	0.94	38.48	-8.9744	-0.0538	0.0392
1077	SLE RA 16	0.11	0.91	38.3	-8.936	-0.0535	0.0394
1077	SLE RA 17	0.11	0.93	38.28	-8.9318	-0.0535	0.0393
1077	SLE RA 18	0.1	0.92	38.88	-9.0706	-0.0544	0.0386
1077	SLE RA 19	0.1	0.94	38.86	-9.0664	-0.0544	0.0385
1077	SLE RA 20	0.1	0.93	39.21	-9.1426	-0.055	0.0389
1077	SLE RA 21	0.1	0.95	39.19	-9.1385	-0.0549	0.0388
1077	SLE FR 1	0.11	0.82	34.77	-8.1416	-0.048	0.0391
1077	SLE FR 2	0.11	0.83	34.76	-8.1403	-0.048	0.0391
1077	SLE FR 3	0.11	0.83	34.9	-8.1705	-0.0482	0.0392
1077	SLE FR 4	0.11	0.86	36	-8.4189	-0.0499	0.0389
1077	SLE FR 5	0.11	0.86	36.13	-8.4491	-0.0501	0.0391
1077	SLE FR 6	0.11	0.87	36.82	-8.6061	-0.0512	0.0388
1077	SLE QP 1	0.11	0.82	34.77	-8.1416	-0.048	0.0391
1077	SLE QP 2	0.11	0.85	36	-8.4203	-0.0499	0.039
1077	SLD 1	4.83	1.42	34.17	-7.9012	-0.0353	1.6919
1077	SLD 2	4.34	1.47	34.1	-7.8834	-0.0347	1.5208
1077	SLD 3	4.76	0.36	35.09	-8.1262	-0.0373	1.6676
1077	SLD 4	4.27	0.41	35.03	-8.1085	-0.0367	1.4965
1077	SLD 5	1.71	2.62	34.06	-7.9264	-0.0426	0.6021
1077	SLD 6	1.39	2.65	34.02	-7.9147	-0.0422	0.4899
1077	SLD 7	1.48	-0.91	37.14	-8.6766	-0.0493	0.5212
1077	SLD 8	1.16	-0.88	37.1	-8.665	-0.0489	0.409
1077	SLD 9	-0.95	2.58	34.91	-8.1757	-0.051	-0.331
1077	SLD 10	-1.27	2.61	34.86	-8.1641	-0.0506	-0.4432
1077	SLD 11	-1.18	-0.94	37.98	-8.9259	-0.0576	-0.412
1077	SLD 12	-1.5	-0.91	37.94	-8.9143	-0.0573	-0.5242
1077	SLD 13	-4.06	1.3	36.98	-8.7322	-0.0632	-1.4186
1077	SLD 14	-4.55	1.34	36.91	-8.7144	-0.0626	-1.5897
1077	SLD 15	-4.13	0.24	37.9	-8.9572	-0.0652	-1.4428
1077	SLD 16	-4.62	0.28	37.84	-8.9395	-0.0646	-1.614
1077	SLV 1	11.15	2.16	31.74	-7.2137	-0.0156	3.9042
1077	SLV 2	10.01	2.26	31.59	-7.1724	-0.0144	3.5055
1077	SLV 3	10.99	-0.25	33.83	-7.7239	-0.0202	3.8477
1077	SLV 4	9.85	-0.14	33.68	-7.6826	-0.019	3.4491
1077	SLV 5	3.86	4.88	31.57	-7.2917	-0.0328	1.3528
1077	SLV 6	3.12	4.95	31.48	-7.265	-0.032	1.0959
1077	SLV 7	3.33	-3.15	38.55	-8.9923	-0.0483	1.1646
1077	SLV 8	2.59	-3.08	38.46	-8.9657	-0.0475	0.9077
1077	SLV 9	-2.38	4.79	33.55	-7.875	-0.0524	-0.8298
1077	SLV 10	-3.11	4.86	33.45	-7.8483	-0.0516	-1.0867
1077	SLV 11	-2.91	-3.24	40.52	-9.5756	-0.0679	-1.018
1077	SLV 12	-3.65	-3.17	40.43	-9.549	-0.0671	-1.2749
1077	SLV 13	-9.64	1.85	38.32	-9.1581	-0.0809	-3.3712
1077	SLV 14	-10.78	1.96	38.17	-9.1168	-0.0796	-3.7698
1077	SLV 15	-9.8	-0.56	40.41	-9.6683	-0.0855	-3.4276
1077	SLV 16	-10.94	-0.45	40.26	-9.6269	-0.0843	-3.8262
1077	CRTFP Ux+	0	0	0	0	0	0
1077	CRTFP Ux-	0	0	0	0	0	0
1077	CRTFP Uy+	0	0	0	0	0	0
1077	CRTFP Uy-	0	0	0	0	0	0
1078	SLU 1	0.15	0.85	34.93	-9.0738	-0.046	0.0555
1078	SLU 2	0.15	0.9	34.89	-9.0624	-0.0459	0.0553
1078	SLU 3	0.15	0.88	35.76	-9.2772	-0.0472	0.0561
1078	SLU 4	0.15	0.91	35.73	-9.2703	-0.0472	0.056
1078	SLU 5	0.15	0.91	35.4	-9.1902	-0.0467	0.056
1078	SLU 6	0.16	0.89	36.27	-9.405	-0.048	0.0568
1078	SLU 7	0.16	0.92	36.24	-9.3982	-0.0479	0.0567
1078	SLU 8	0.16	0.87	35.96	-9.3294	-0.0475	0.0569
1078	SLU 9	0.16	0.91	35.93	-9.3226	-0.0475	0.0567
1078	SLU 10	0.16	1.01	39.41	-10.2127	-0.0527	0.0569
1078	SLU 11	0.16	0.99	40.28	-10.4275	-0.054	0.0577
1078	SLU 12	0.16	1.02	40.25	-10.4207	-0.0539	0.0576
1078	SLU 13	0.16	1.02	39.92	-10.3405	-0.0535	0.0575
1078	SLU 14	0.16	1	40.79	-10.5554	-0.0547	0.0584
1078	SLU 15	0.16	1.03	40.77	-10.5485	-0.0547	0.0583
1078	SLU 16	0.16	0.98	40.48	-10.4798	-0.0543	0.0584
1078	SLU 17	0.16	1.01	40.45	-10.4729	-0.0543	0.0583
1078	SLU 18	0.16	1	41.4	-10.7171	-0.0557	0.0577
1078	SLU 19	0.16	1.03	41.37	-10.7103	-0.0557	0.0576
1078	SLU 20	0.16	1.01	41.91	-10.8449	-0.0565	0.0584
1078	SLU 21	0.16	1.04	41.88	-10.8381	-0.0564	0.0583
1078	SLU 22	0.16	0.99	39.46	-10.2151	-0.0528	0.058
1078	SLU 23	0.16	1.04	39.41	-10.2036	-0.0527	0.0579
1078	SLU 24	0.16	1.02	40.28	-10.4185	-0.0539	0.0587
1078	SLU 25	0.16	1.05	40.25	-10.4116	-0.0539	0.0586
1078	SLU 26	0.16	1.05	39.92	-10.3314	-0.0535	0.0585
1078	SLU 27	0.16	1.03	40.79	-10.5463	-0.0547	0.0594
1078	SLU 28	0.16	1.07	40.76	-10.5394	-0.0547	0.0593
1078	SLU 29	0.16	1.02	40.48	-10.4707	-0.0543	0.0594
1078	SLU 30	0.16	1.05	40.45	-10.4638	-0.0542	0.0593
1078	SLU 31	0.16	1.15	43.94	-11.354	-0.0595	0.0594
1078	SLU 32	0.16	1.13	44.8	-11.5688	-0.0607	0.0602
1078	SLU 33	0.16	1.16	44.78	-11.562	-0.0607	0.0601
1078	SLU 34	0.16	1.16	44.45	-11.4818	-0.0602	0.0601
1078	SLU 35	0.17	1.14	45.32	-11.6966	-0.0615	0.0609
1078	SLU 36	0.17	1.17	45.29	-11.6898	-0.0614	0.0608
1078	SLU 37	0.17	1.12	45	-11.621	-0.0611	0.061

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1078	SLU 38	0.17	1.15	44.98	-11.6142	-0.061	0.0609
1078	SLU 39	0.16	1.14	45.92	-11.8584	-0.0624	0.0603
1078	SLU 40	0.16	1.17	45.89	-11.8515	-0.0624	0.0601
1078	SLU 41	0.17	1.15	46.43	-11.9862	-0.0632	0.0609
1078	SLU 42	0.17	1.19	46.41	-11.9794	-0.0632	0.0608
1078	SLU 43	0.2	1.05	43.86	-11.4046	-0.0575	0.0713
1078	SLU 44	0.2	1.1	43.82	-11.3932	-0.0574	0.0711
1078	SLU 45	0.2	1.08	44.69	-11.6081	-0.0587	0.0719
1078	SLU 46	0.2	1.12	44.66	-11.6012	-0.0587	0.0718
1078	SLU 47	0.2	1.12	44.33	-11.521	-0.0582	0.0718
1078	SLU 48	0.2	1.1	45.2	-11.7359	-0.0595	0.0726
1078	SLU 49	0.2	1.13	45.17	-11.729	-0.0594	0.0725
1078	SLU 50	0.2	1.08	44.89	-11.6603	-0.059	0.0726
1078	SLU 51	0.2	1.11	44.86	-11.6534	-0.059	0.0725
1078	SLU 52	0.2	1.21	48.34	-12.5435	-0.0642	0.0726
1078	SLU 53	0.2	1.19	49.21	-12.7584	-0.0655	0.0735
1078	SLU 54	0.2	1.22	49.18	-12.7515	-0.0654	0.0733
1078	SLU 55	0.2	1.22	48.85	-12.6713	-0.065	0.0733
1078	SLU 56	0.2	1.21	49.72	-12.8862	-0.0662	0.0741
1078	SLU 57	0.2	1.24	49.69	-12.8793	-0.0662	0.074
1078	SLU 58	0.2	1.19	49.41	-12.8106	-0.0658	0.0742
1078	SLU 59	0.2	1.22	49.38	-12.8037	-0.0658	0.0741
1078	SLU 60	0.2	1.2	50.33	-13.048	-0.0672	0.0735
1078	SLU 61	0.2	1.24	50.3	-13.0411	-0.0671	0.0734
1078	SLU 62	0.2	1.22	50.84	-13.1758	-0.0679	0.0742
1078	SLU 63	0.2	1.25	50.81	-13.1689	-0.0679	0.074
1078	SLU 64	0.2	1.19	48.39	-12.5459	-0.0642	0.0738
1078	SLU 65	0.2	1.24	48.34	-12.5345	-0.0642	0.0736
1078	SLU 66	0.2	1.23	49.21	-12.7493	-0.0654	0.0745
1078	SLU 67	0.2	1.26	49.18	-12.7425	-0.0654	0.0743
1078	SLU 68	0.2	1.26	48.85	-12.6623	-0.0649	0.0743
1078	SLU 69	0.21	1.24	49.72	-12.8771	-0.0662	0.0751
1078	SLU 70	0.21	1.27	49.69	-12.8703	-0.0662	0.075
1078	SLU 71	0.21	1.22	49.41	-12.8015	-0.0658	0.0752
1078	SLU 72	0.21	1.25	49.38	-12.7947	-0.0657	0.0751
1078	SLU 73	0.21	1.35	52.87	-13.6848	-0.071	0.0752
1078	SLU 74	0.21	1.33	53.73	-13.8997	-0.0722	0.076
1078	SLU 75	0.21	1.36	53.71	-13.8928	-0.0722	0.0759
1078	SLU 76	0.21	1.37	53.38	-13.8126	-0.0717	0.0759
1078	SLU 77	0.21	1.35	54.25	-14.0275	-0.073	0.0767
1078	SLU 78	0.21	1.38	54.22	-14.0206	-0.0729	0.0766
1078	SLU 79	0.21	1.33	53.93	-13.9519	-0.0725	0.0767
1078	SLU 80	0.21	1.36	53.91	-13.945	-0.0725	0.0766
1078	SLU 81	0.21	1.35	54.85	-14.1892	-0.0739	0.076
1078	SLU 82	0.21	1.38	54.82	-14.1824	-0.0739	0.0759
1078	SLU 83	0.21	1.36	55.36	-14.3171	-0.0747	0.0767
1078	SLU 84	0.21	1.39	55.34	-14.3102	-0.0746	0.0766
1078	SLE RA 1	0.15	0.89	36.23	-9.3999	-0.0479	0.0562
1078	SLE RA 2	0.15	0.92	36.2	-9.3922	-0.0479	0.0561
1078	SLE RA 3	0.16	0.91	36.77	-9.5355	-0.0487	0.0566
1078	SLE RA 4	0.16	0.93	36.76	-9.5309	-0.0487	0.0566
1078	SLE RA 5	0.16	0.93	36.54	-9.4775	-0.0484	0.0566
1078	SLE RA 6	0.16	0.92	37.11	-9.6207	-0.0492	0.0571
1078	SLE RA 7	0.16	0.94	37.1	-9.6161	-0.0492	0.057
1078	SLE RA 8	0.16	0.9	36.91	-9.5703	-0.049	0.0571
1078	SLE RA 9	0.16	0.93	36.89	-9.5657	-0.0489	0.0571
1078	SLE RA 10	0.16	0.99	39.21	-10.1591	-0.0524	0.0571
1078	SLE RA 11	0.16	0.98	39.79	-10.3024	-0.0532	0.0577
1078	SLE RA 12	0.16	1	39.77	-10.2978	-0.0532	0.0576
1078	SLE RA 13	0.16	1	39.55	-10.2443	-0.0529	0.0576
1078	SLE RA 14	0.16	0.99	40.13	-10.3876	-0.0538	0.0581
1078	SLE RA 15	0.16	1.01	40.11	-10.383	-0.0537	0.0581
1078	SLE RA 16	0.16	0.98	39.92	-10.3372	-0.0535	0.0582
1078	SLE RA 17	0.16	1	39.91	-10.3326	-0.0534	0.0581
1078	SLE RA 18	0.16	0.99	40.54	-10.4954	-0.0544	0.0577
1078	SLE RA 19	0.16	1.01	40.52	-10.4909	-0.0544	0.0576
1078	SLE RA 20	0.16	1	40.88	-10.5806	-0.0549	0.0582
1078	SLE RA 21	0.16	1.02	40.86	-10.5761	-0.0549	0.0581
1078	SLE FR 1	0.15	0.89	36.23	-9.3999	-0.0479	0.0562
1078	SLE FR 2	0.15	0.89	36.22	-9.3983	-0.0479	0.0562
1078	SLE FR 3	0.16	0.89	36.36	-9.434	-0.0481	0.0564
1078	SLE FR 4	0.16	0.92	37.51	-9.727	-0.0499	0.0566
1078	SLE FR 5	0.16	0.92	37.66	-9.7626	-0.0501	0.0568
1078	SLE FR 6	0.16	0.94	38.38	-9.9477	-0.0512	0.057
1078	SLE QP 1	0.15	0.89	36.23	-9.3999	-0.0479	0.0562
1078	SLE QP 2	0.16	0.92	37.52	-9.7285	-0.0499	0.0567
1078	SLD 1	4.87	1.35	35.26	-9.0617	-0.0354	1.7041
1078	SLD 2	4.38	1.42	35.18	-9.0396	-0.035	1.5336
1078	SLD 3	4.8	0.28	36.22	-9.3039	-0.0372	1.6802
1078	SLD 4	4.31	0.34	36.14	-9.2817	-0.0368	1.5096
1078	SLD 5	1.76	2.66	35.4	-9.1652	-0.0429	0.6175
1078	SLD 6	1.44	2.71	35.35	-9.1507	-0.0426	0.5057
1078	SLD 7	1.53	-0.92	38.6	-9.9723	-0.0488	0.5377
1078	SLD 8	1.21	-0.87	38.55	-9.9578	-0.0485	0.4259
1078	SLD 9	-0.9	2.7	36.49	-9.4993	-0.0512	-0.3126
1078	SLD 10	-1.22	2.75	36.44	-9.4848	-0.0509	-0.4244
1078	SLD 11	-1.13	-0.87	39.69	-10.3064	-0.0571	-0.3924
1078	SLD 12	-1.45	-0.83	39.64	-10.2919	-0.0568	-0.5042
1078	SLD 13	-4	1.49	38.9	-10.1754	-0.063	-1.3963
1078	SLD 14	-4.49	1.56	38.82	-10.1532	-0.0625	-1.5668

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1078	SLD 15	-4.07	0.42	39.86	-10.4175	-0.0648	-1.4202
1078	SLD 16	-4.56	0.48	39.78	-10.3953	-0.0643	-1.5908
1078	SLV 1	11.17	1.89	32.26	-8.1771	-0.0161	3.909
1078	SLV 2	10.03	2.05	32.08	-8.1255	-0.015	3.5118
1078	SLV 3	11.01	-0.56	34.44	-8.7258	-0.0202	3.8533
1078	SLV 4	9.87	-0.4	34.25	-8.6742	-0.0191	3.4561
1078	SLV 5	3.9	4.89	32.68	-8.4398	-0.0337	1.3653
1078	SLV 6	3.16	4.99	32.56	-8.4065	-0.033	1.1093
1078	SLV 7	3.37	-3.26	39.92	-10.2688	-0.0474	1.1796
1078	SLV 8	2.63	-3.16	39.8	-10.2356	-0.0467	0.9236
1078	SLV 9	-2.32	4.99	35.23	-9.2215	-0.053	-0.8103
1078	SLV 10	-3.06	5.09	35.12	-9.1883	-0.0523	-1.0662
1078	SLV 11	-2.85	-3.16	42.48	-11.0505	-0.0667	-0.9959
1078	SLV 12	-3.59	-3.06	42.36	-11.0173	-0.066	-1.2519
1078	SLV 13	-9.56	2.23	40.79	-10.7829	-0.0806	-3.3427
1078	SLV 14	-10.7	2.39	40.6	-10.7313	-0.0795	-3.74
1078	SLV 15	-9.72	-0.21	42.96	-11.3316	-0.0847	-3.3985
1078	SLV 16	-10.86	-0.06	42.78	-11.28	-0.0836	-3.7957
1078	CRTFP Ux+	0	0	0	0	0	0
1078	CRTFP Ux-	0	0	0	0	0	0
1078	CRTFP Uy+	0	0	0	0	0	0
1078	CRTFP Uy-	0	0	0	0	0	0
1079	SLU 1	0.18	0.82	32.81	-9.3456	0.5848	0.0501
1079	SLU 2	0.18	0.87	32.77	-9.3345	0.584	0.0491
1079	SLU 3	0.19	0.85	33.58	-9.5591	0.5985	0.0504
1079	SLU 4	0.19	0.88	33.56	-9.5525	0.598	0.0498
1079	SLU 5	0.18	0.88	33.25	-9.4686	0.5925	0.0496
1079	SLU 6	0.19	0.86	34.07	-9.6932	0.607	0.051
1079	SLU 7	0.19	0.89	34.04	-9.6865	0.6066	0.0503
1079	SLU 8	0.19	0.85	33.77	-9.6136	0.6018	0.0512
1079	SLU 9	0.19	0.87	33.75	-9.607	0.6014	0.0506
1079	SLU 10	0.19	0.97	37.04	-10.5387	0.6596	0.0504
1079	SLU 11	0.19	0.96	37.86	-10.7632	0.6741	0.0518
1079	SLU 12	0.19	0.98	37.83	-10.7566	0.6737	0.0511
1079	SLU 13	0.19	0.99	37.52	-10.6727	0.6681	0.0509
1079	SLU 14	0.2	0.97	38.34	-10.8973	0.6827	0.0523
1079	SLU 15	0.2	1	38.31	-10.8907	0.6822	0.0517
1079	SLU 16	0.2	0.95	38.04	-10.8178	0.6775	0.0526
1079	SLU 17	0.2	0.98	38.02	-10.8111	0.677	0.0519
1079	SLU 18	0.2	0.97	38.91	-11.0657	0.6928	0.0521
1079	SLU 19	0.2	1	38.88	-11.0591	0.6923	0.0514
1079	SLU 20	0.2	0.98	39.39	-11.1998	0.7013	0.0526
1079	SLU 21	0.2	1.01	39.37	-11.1932	0.7009	0.052
1079	SLU 22	0.19	0.95	37.08	-10.5413	0.6603	0.0518
1079	SLU 23	0.19	1	37.03	-10.5303	0.6595	0.0507
1079	SLU 24	0.2	0.99	37.85	-10.7549	0.6741	0.0521
1079	SLU 25	0.2	1.01	37.83	-10.7482	0.6736	0.0514
1079	SLU 26	0.2	1.02	37.52	-10.6643	0.6681	0.0512
1079	SLU 27	0.2	1	38.33	-10.8889	0.6826	0.0526
1079	SLU 28	0.2	1.03	38.31	-10.8823	0.6821	0.052
1079	SLU 29	0.2	0.98	38.04	-10.8094	0.6774	0.0529
1079	SLU 30	0.2	1.01	38.01	-10.8027	0.6769	0.0522
1079	SLU 31	0.2	1.11	41.3	-11.7344	0.7352	0.052
1079	SLU 32	0.21	1.09	42.12	-11.959	0.7497	0.0534
1079	SLU 33	0.21	1.12	42.1	-11.9523	0.7492	0.0528
1079	SLU 34	0.2	1.12	41.79	-11.8684	0.7437	0.0526
1079	SLU 35	0.21	1.11	42.6	-12.093	0.7582	0.054
1079	SLU 36	0.21	1.14	42.58	-12.0864	0.7578	0.0533
1079	SLU 37	0.21	1.09	42.31	-12.0135	0.753	0.0542
1079	SLU 38	0.21	1.12	42.28	-12.0069	0.7526	0.0536
1079	SLU 39	0.21	1.11	43.18	-12.2615	0.7684	0.0537
1079	SLU 40	0.21	1.13	43.15	-12.2548	0.7679	0.0531
1079	SLU 41	0.21	1.12	43.66	-12.3955	0.7769	0.0542
1079	SLU 42	0.21	1.15	43.63	-12.3889	0.7764	0.0536
1079	SLU 43	0.23	1.02	41.19	-11.7393	0.7343	0.0646
1079	SLU 44	0.23	1.06	41.15	-11.7283	0.7335	0.0635
1079	SLU 45	0.24	1.05	41.97	-11.9528	0.748	0.0649
1079	SLU 46	0.24	1.08	41.94	-11.9462	0.7475	0.0643
1079	SLU 47	0.24	1.08	41.63	-11.8623	0.742	0.0641
1079	SLU 48	0.24	1.06	42.45	-12.0869	0.7566	0.0655
1079	SLU 49	0.24	1.09	42.42	-12.0803	0.7561	0.0648
1079	SLU 50	0.24	1.04	42.15	-12.0074	0.7513	0.0657
1079	SLU 51	0.24	1.07	42.13	-12.0007	0.7509	0.0651
1079	SLU 52	0.24	1.17	45.42	-12.9324	0.8091	0.0649
1079	SLU 53	0.25	1.15	46.24	-13.157	0.8236	0.0663
1079	SLU 54	0.24	1.18	46.21	-13.1503	0.8232	0.0656
1079	SLU 55	0.24	1.18	45.9	-13.0664	0.8177	0.0654
1079	SLU 56	0.25	1.17	46.72	-13.291	0.8322	0.0668
1079	SLU 57	0.25	1.2	46.69	-13.2844	0.8317	0.0662
1079	SLU 58	0.25	1.15	46.42	-13.2115	0.827	0.0671
1079	SLU 59	0.25	1.18	46.4	-13.2048	0.8265	0.0664
1079	SLU 60	0.25	1.17	47.29	-13.4595	0.8423	0.0665
1079	SLU 61	0.25	1.2	47.27	-13.4528	0.8418	0.0659
1079	SLU 62	0.25	1.18	47.77	-13.5935	0.8509	0.0671
1079	SLU 63	0.25	1.21	47.75	-13.5869	0.8504	0.0664
1079	SLU 64	0.25	1.15	45.46	-12.935	0.8098	0.0663
1079	SLU 65	0.24	1.2	45.41	-12.924	0.8091	0.0652
1079	SLU 66	0.25	1.18	46.23	-13.1486	0.8236	0.0666
1079	SLU 67	0.25	1.21	46.21	-13.142	0.8231	0.0659
1079	SLU 68	0.25	1.21	45.9	-13.058	0.8176	0.0657

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1079	SLU 69	0.25	1.2	46.71	-13.2826	0.8321	0.0671
1079	SLU 70	0.25	1.23	46.69	-13.276	0.8317	0.0665
1079	SLU 71	0.25	1.18	46.42	-13.2031	0.8269	0.0674
1079	SLU 72	0.25	1.21	46.39	-13.1965	0.8265	0.0667
1079	SLU 73	0.25	1.31	49.68	-14.1281	0.8847	0.0665
1079	SLU 74	0.26	1.29	50.5	-14.3527	0.8992	0.0679
1079	SLU 75	0.26	1.32	50.48	-14.3461	0.8987	0.0673
1079	SLU 76	0.26	1.32	50.17	-14.2621	0.8932	0.0671
1079	SLU 77	0.26	1.31	50.98	-14.4867	0.9078	0.0685
1079	SLU 78	0.26	1.33	50.96	-14.4801	0.9073	0.0678
1079	SLU 79	0.26	1.29	50.69	-14.4072	0.9026	0.0687
1079	SLU 80	0.26	1.32	50.66	-14.4006	0.9021	0.068
1079	SLU 81	0.26	1.3	51.56	-14.6552	0.9179	0.0682
1079	SLU 82	0.26	1.33	51.53	-14.6486	0.9174	0.0675
1079	SLU 83	0.26	1.32	52.04	-14.7892	0.9264	0.0687
1079	SLU 84	0.26	1.35	52.01	-14.7826	0.926	0.0681
1079	SLE RA 1	0.19	0.86	34.03	-9.6872	0.6063	0.0506
1079	SLE RA 2	0.19	0.89	34	-9.6799	0.6058	0.0499
1079	SLE RA 3	0.19	0.88	34.55	-9.8296	0.6155	0.0508
1079	SLE RA 4	0.19	0.9	34.53	-9.8252	0.6152	0.0504
1079	SLE RA 5	0.19	0.9	34.32	-9.7692	0.6115	0.0503
1079	SLE RA 6	0.19	0.89	34.87	-9.9189	0.6212	0.0512
1079	SLE RA 7	0.19	0.91	34.85	-9.9145	0.6209	0.0507
1079	SLE RA 8	0.19	0.88	34.67	-9.8659	0.6177	0.0513
1079	SLE RA 9	0.19	0.89	34.65	-9.8615	0.6174	0.0509
1079	SLE RA 10	0.19	0.96	36.85	-10.4826	0.6562	0.0508
1079	SLE RA 11	0.19	0.95	37.39	-10.6323	0.6659	0.0517
1079	SLE RA 12	0.19	0.97	37.38	-10.6279	0.6656	0.0513
1079	SLE RA 13	0.19	0.97	37.17	-10.572	0.6619	0.0511
1079	SLE RA 14	0.2	0.96	37.71	-10.7217	0.6716	0.0521
1079	SLE RA 15	0.2	0.98	37.7	-10.7173	0.6713	0.0516
1079	SLE RA 16	0.2	0.95	37.52	-10.6687	0.6682	0.0522
1079	SLE RA 17	0.19	0.97	37.5	-10.6643	0.6678	0.0518
1079	SLE RA 18	0.19	0.96	38.1	-10.834	0.6784	0.0519
1079	SLE RA 19	0.19	0.98	38.08	-10.8296	0.6781	0.0515
1079	SLE RA 20	0.2	0.97	38.42	-10.9233	0.6841	0.0523
1079	SLE RA 21	0.2	0.99	38.4	-10.9189	0.6838	0.0518
1079	SLE FR 1	0.19	0.86	34.03	-9.6872	0.6063	0.0506
1079	SLE FR 2	0.19	0.86	34.02	-9.6858	0.6062	0.0505
1079	SLE FR 3	0.19	0.86	34.16	-9.723	0.6086	0.0508
1079	SLE FR 4	0.19	0.89	35.24	-10.0298	0.6278	0.0508
1079	SLE FR 5	0.19	0.89	35.38	-10.067	0.6302	0.0511
1079	SLE FR 6	0.19	0.91	36.06	-10.2606	0.6424	0.0512
1079	SLE QP 1	0.19	0.86	34.03	-9.6872	0.6063	0.0506
1079	SLE QP 2	0.19	0.89	35.25	-10.0313	0.628	0.051
1079	SLD 1	4.46	1.25	32.84	-9.299	0.593	1.5221
1079	SLD 2	4.01	1.34	32.76	-9.2766	0.5917	1.366
1079	SLD 3	4.39	0.27	33.73	-9.5312	0.6092	1.5446
1079	SLD 4	3.95	0.35	33.65	-9.5088	0.608	1.3885
1079	SLD 5	1.64	2.48	33.19	-9.4633	0.5931	0.4859
1079	SLD 6	1.35	2.53	33.13	-9.4486	0.5923	0.3836
1079	SLD 7	1.44	-0.81	36.17	-10.2375	0.6472	0.561
1079	SLD 8	1.15	-0.75	36.11	-10.2228	0.6463	0.4587
1079	SLD 9	-0.77	2.53	34.39	-9.8397	0.6096	-0.3567
1079	SLD 10	-1.06	2.58	34.33	-9.825	0.6088	-0.459
1079	SLD 11	-0.97	-0.76	37.37	-10.6139	0.6636	-0.2816
1079	SLD 12	-1.26	-0.7	37.31	-10.5992	0.6628	-0.3839
1079	SLD 13	-3.57	1.42	36.85	-10.5537	0.648	-1.2865
1079	SLD 14	-4.02	1.51	36.76	-10.5313	0.6467	-1.4426
1079	SLD 15	-3.63	0.44	37.74	-10.7859	0.6642	-1.264
1079	SLD 16	-4.08	0.52	37.66	-10.7635	0.6629	-1.4201
1079	SLV 1	10.17	1.71	29.64	-8.326	0.5467	3.4913
1079	SLV 2	9.13	1.9	29.45	-8.2739	0.5438	3.1277
1079	SLV 3	10.02	-0.54	31.67	-8.8525	0.5835	3.5436
1079	SLV 4	8.99	-0.34	31.48	-8.8004	0.5805	3.1801
1079	SLV 5	3.58	4.5	30.52	-8.7301	0.5483	1.0663
1079	SLV 6	2.91	4.63	30.4	-8.6965	0.5464	0.832
1079	SLV 7	3.1	-2.98	37.28	-10.4852	0.6709	1.2408
1079	SLV 8	2.44	-2.85	37.16	-10.4516	0.669	1.0065
1079	SLV 9	-2.06	4.62	33.34	-9.611	0.5869	-0.9045
1079	SLV 10	-2.72	4.75	33.22	-9.5774	0.585	-1.1388
1079	SLV 11	-2.53	-2.85	40.1	-11.366	0.7095	-0.73
1079	SLV 12	-3.2	-2.73	39.97	-11.3324	0.7076	-0.9643
1079	SLV 13	-8.61	2.11	39.02	-11.2621	0.6754	-3.0781
1079	SLV 14	-9.65	2.31	38.83	-11.21	0.6724	-3.4416
1079	SLV 15	-8.76	-0.13	41.05	-11.7886	0.7121	-3.0257
1079	SLV 16	-9.79	0.07	40.86	-11.7365	0.7092	-3.3893
1079	CRTFP Ux+	0	0	0	0	0	0
1079	CRTFP Ux-	0	0	0	0	0	0
1079	CRTFP Uy+	0	0	0	0	0	0
1079	CRTFP Uy-	0	0	0	0	0	0
1081	SLU 1	0.68	2.54	102.06	-24.5389	-0.0528	0.1772
1081	SLU 2	0.67	2.69	101.93	-24.5095	-0.0535	0.1765
1081	SLU 3	0.69	2.64	104.49	-25.1145	-0.0545	0.1799
1081	SLU 4	0.68	2.73	104.4	-25.0968	-0.0549	0.1795
1081	SLU 5	0.68	2.73	103.43	-24.8687	-0.0545	0.1787
1081	SLU 6	0.69	2.69	105.99	-25.4737	-0.0555	0.1821
1081	SLU 7	0.69	2.77	105.91	-25.456	-0.0559	0.1817
1081	SLU 8	0.69	2.63	105.07	-25.2573	-0.0548	0.1817
1081	SLU 9	0.69	2.72	104.99	-25.2397	-0.0553	0.1813

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1081	SLU 10	0.71	3.03	115.25	-27.7121	-0.066	0.189
1081	SLU 11	0.72	2.98	117.8	-28.3171	-0.067	0.1924
1081	SLU 12	0.72	3.07	117.72	-28.2994	-0.0674	0.192
1081	SLU 13	0.72	3.07	116.75	-28.0714	-0.0671	0.1912
1081	SLU 14	0.73	3.03	119.31	-28.6763	-0.068	0.1946
1081	SLU 15	0.73	3.12	119.23	-28.6587	-0.0685	0.1942
1081	SLU 16	0.73	2.97	118.39	-28.46	-0.0674	0.1942
1081	SLU 17	0.73	3.06	118.31	-28.4423	-0.0678	0.1937
1081	SLU 18	0.73	3.03	121.09	-29.1141	-0.0707	0.195
1081	SLU 19	0.73	3.12	121.01	-29.0965	-0.0711	0.1946
1081	SLU 20	0.74	3.08	122.6	-29.4733	-0.0717	0.1973
1081	SLU 21	0.74	3.16	122.51	-29.4557	-0.0721	0.1969
1081	SLU 22	0.72	2.97	115.38	-27.7316	-0.0657	0.191
1081	SLU 23	0.72	3.12	115.25	-27.7022	-0.0664	0.1903
1081	SLU 24	0.73	3.07	117.81	-28.3072	-0.0674	0.1937
1081	SLU 25	0.73	3.16	117.72	-28.2895	-0.0678	0.1933
1081	SLU 26	0.73	3.16	116.75	-28.0614	-0.0674	0.1925
1081	SLU 27	0.74	3.12	119.31	-28.6664	-0.0684	0.196
1081	SLU 28	0.74	3.2	119.23	-28.6487	-0.0688	0.1955
1081	SLU 29	0.74	3.06	118.39	-28.45	-0.0677	0.1955
1081	SLU 30	0.74	3.15	118.31	-28.4324	-0.0682	0.1951
1081	SLU 31	0.76	3.46	128.57	-30.9048	-0.0789	0.2028
1081	SLU 32	0.77	3.41	131.13	-31.5098	-0.0799	0.2062
1081	SLU 33	0.77	3.5	131.04	-31.4921	-0.0803	0.2058
1081	SLU 34	0.77	3.5	130.07	-31.264	-0.0799	0.205
1081	SLU 35	0.78	3.46	132.63	-31.869	-0.0809	0.2085
1081	SLU 36	0.78	3.55	132.55	-31.8514	-0.0813	0.208
1081	SLU 37	0.78	3.4	131.71	-31.6527	-0.0802	0.208
1081	SLU 38	0.78	3.49	131.63	-31.635	-0.0807	0.2076
1081	SLU 39	0.78	3.46	134.41	-32.3068	-0.0836	0.2089
1081	SLU 40	0.78	3.55	134.33	-32.2892	-0.084	0.2084
1081	SLU 41	0.79	3.51	135.92	-32.666	-0.0846	0.2111
1081	SLU 42	0.79	3.59	135.83	-32.6484	-0.085	0.2107
1081	SLU 43	0.86	3.16	128.12	-30.806	-0.0642	0.2256
1081	SLU 44	0.86	3.3	127.98	-30.7765	-0.0649	0.2249
1081	SLU 45	0.87	3.26	130.54	-31.3815	-0.0659	0.2283
1081	SLU 46	0.87	3.34	130.45	-31.3639	-0.0663	0.2279
1081	SLU 47	0.87	3.35	129.48	-31.1358	-0.066	0.2271
1081	SLU 48	0.88	3.3	132.04	-31.7407	-0.0669	0.2305
1081	SLU 49	0.88	3.39	131.96	-31.7231	-0.0674	0.2301
1081	SLU 50	0.88	3.25	131.13	-31.5244	-0.0663	0.2301
1081	SLU 51	0.88	3.33	131.04	-31.5067	-0.0667	0.2297
1081	SLU 52	0.9	3.64	141.3	-33.9792	-0.0775	0.2374
1081	SLU 53	0.91	3.6	143.86	-34.5841	-0.0784	0.2408
1081	SLU 54	0.91	3.69	143.77	-34.5665	-0.0789	0.2404
1081	SLU 55	0.91	3.69	142.8	-34.3384	-0.0785	0.2396
1081	SLU 56	0.92	3.64	145.36	-34.9433	-0.0795	0.243
1081	SLU 57	0.92	3.73	145.28	-34.9257	-0.0799	0.2426
1081	SLU 58	0.92	3.59	144.45	-34.727	-0.0788	0.2426
1081	SLU 59	0.92	3.68	144.36	-34.7094	-0.0792	0.2422
1081	SLU 60	0.92	3.65	147.14	-35.3811	-0.0821	0.2434
1081	SLU 61	0.92	3.73	147.06	-35.3635	-0.0825	0.243
1081	SLU 62	0.93	3.69	148.65	-35.7403	-0.0831	0.2457
1081	SLU 63	0.93	3.78	148.57	-35.7227	-0.0836	0.2453
1081	SLU 64	0.91	3.59	141.44	-33.9986	-0.0771	0.2394
1081	SLU 65	0.91	3.73	141.3	-33.9692	-0.0778	0.2387
1081	SLU 66	0.92	3.69	143.86	-34.5742	-0.0788	0.2421
1081	SLU 67	0.92	3.77	143.78	-34.5565	-0.0792	0.2417
1081	SLU 68	0.92	3.78	142.8	-34.3285	-0.0788	0.241
1081	SLU 69	0.93	3.73	145.36	-34.9334	-0.0798	0.2444
1081	SLU 70	0.93	3.82	145.28	-34.9158	-0.0802	0.244
1081	SLU 71	0.93	3.67	144.45	-34.7171	-0.0792	0.2439
1081	SLU 72	0.92	3.76	144.36	-34.6994	-0.0796	0.2435
1081	SLU 73	0.95	4.07	154.62	-37.1719	-0.0903	0.2512
1081	SLU 74	0.96	4.03	157.18	-37.7768	-0.0913	0.2546
1081	SLU 75	0.96	4.12	157.09	-37.7592	-0.0917	0.2542
1081	SLU 76	0.96	4.12	156.12	-37.5311	-0.0914	0.2535
1081	SLU 77	0.97	4.07	158.68	-38.136	-0.0923	0.2569
1081	SLU 78	0.97	4.16	158.6	-38.1184	-0.0928	0.2565
1081	SLU 79	0.96	4.02	157.77	-37.9197	-0.0917	0.2564
1081	SLU 80	0.96	4.1	157.68	-37.9021	-0.0921	0.256
1081	SLU 81	0.97	4.08	160.46	-38.5738	-0.095	0.2573
1081	SLU 82	0.96	4.16	160.38	-38.5562	-0.0954	0.2568
1081	SLU 83	0.97	4.12	161.97	-38.933	-0.096	0.2595
1081	SLU 84	0.97	4.21	161.89	-38.9154	-0.0964	0.2591
1081	SLE RA 1	0.69	2.66	105.87	-25.4511	-0.0565	0.1811
1081	SLE RA 2	0.69	2.76	105.78	-25.4315	-0.057	0.1807
1081	SLE RA 3	0.7	2.73	107.48	-25.8348	-0.0576	0.1829
1081	SLE RA 4	0.69	2.79	107.43	-25.823	-0.0579	0.1827
1081	SLE RA 5	0.69	2.79	106.78	-25.671	-0.0576	0.1822
1081	SLE RA 6	0.7	2.76	108.49	-26.0743	-0.0583	0.1844
1081	SLE RA 7	0.7	2.82	108.43	-26.0625	-0.0586	0.1842
1081	SLE RA 8	0.7	2.72	107.88	-25.9301	-0.0578	0.1841
1081	SLE RA 9	0.7	2.78	107.82	-25.9183	-0.0581	0.1838
1081	SLE RA 10	0.71	2.99	114.66	-27.5666	-0.0653	0.189
1081	SLE RA 11	0.72	2.96	116.36	-27.9699	-0.066	0.1913
1081	SLE RA 12	0.72	3.02	116.31	-27.9581	-0.0662	0.191
1081	SLE RA 13	0.72	3.02	115.66	-27.8061	-0.066	0.1905
1081	SLE RA 14	0.73	2.99	117.37	-28.2094	-0.0666	0.1928
1081	SLE RA 15	0.73	3.05	117.31	-28.1976	-0.0669	0.1925

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1081	SLE RA 16	0.73	2.95	116.76	-28.0651	-0.0662	0.1925
1081	SLE RA 17	0.73	3.01	116.7	-28.0534	-0.0665	0.1922
1081	SLE RA 18	0.73	2.99	118.55	-28.5012	-0.0684	0.193
1081	SLE RA 19	0.73	3.05	118.5	-28.4895	-0.0687	0.1927
1081	SLE RA 20	0.73	3.02	119.56	-28.7407	-0.0691	0.1945
1081	SLE RA 21	0.73	3.08	119.5	-28.7289	-0.0694	0.1942
1081	SLE FR 1	0.69	2.66	105.87	-25.4511	-0.0565	0.1811
1081	SLE FR 2	0.69	2.68	105.85	-25.4472	-0.0566	0.181
1081	SLE FR 3	0.69	2.68	106.27	-25.5469	-0.0568	0.1817
1081	SLE FR 4	0.7	2.78	109.66	-26.3622	-0.0602	0.1846
1081	SLE FR 5	0.7	2.77	110.08	-26.4619	-0.0603	0.1853
1081	SLE FR 6	0.71	2.83	112.21	-26.9762	-0.0624	0.1871
1081	SLE QP 1	0.69	2.66	105.87	-25.4511	-0.0565	0.1811
1081	SLE QP 2	0.7	2.76	109.68	-26.3662	-0.0601	0.1847
1081	SLD 1	13.32	3.63	101.27	-24.334	0.1536	3.3855
1081	SLD 2	11.97	3.97	100.99	-24.2742	0.1565	3.0528
1081	SLD 3	13.5	0.67	104.1	-24.946	0.1677	3.4298
1081	SLD 4	12.15	1.02	103.81	-24.8862	0.1706	3.0971
1081	SLD 5	4.45	7.44	102.92	-24.839	-0.0179	1.137
1081	SLD 6	3.57	7.67	102.73	-24.7998	-0.016	0.9189
1081	SLD 7	5.06	-2.41	112.34	-26.8789	0.0291	1.2845
1081	SLD 8	4.17	-2.18	112.15	-26.8397	0.0311	1.0664
1081	SLD 9	-2.77	7.71	107.2	-25.8926	-0.1512	-0.697
1081	SLD 10	-3.66	7.93	107.01	-25.8534	-0.1492	-0.9151
1081	SLD 11	-2.17	-2.14	116.62	-27.9325	-0.1042	-0.5495
1081	SLD 12	-3.05	-1.92	116.43	-27.8933	-0.1022	-0.7676
1081	SLD 13	-10.75	4.51	115.54	-27.8461	-0.2907	-2.7277
1081	SLD 14	-12.1	4.85	115.25	-27.7863	-0.2878	-3.0604
1081	SLD 15	-10.57	1.55	118.36	-28.4581	-0.2766	-2.6834
1081	SLD 16	-11.92	1.9	118.08	-28.3983	-0.2737	-3.0161
1081	SLV 1	30.21	4.68	90.11	-21.6314	0.4404	7.6699
1081	SLV 2	27.07	5.49	89.44	-21.4921	0.4473	6.895
1081	SLV 3	30.63	-2.05	96.52	-23.0194	0.4724	7.7731
1081	SLV 4	27.5	-1.24	95.85	-22.8801	0.4793	6.9983
1081	SLV 5	9.45	13.4	94.2	-22.8646	0.0404	2.4071
1081	SLV 6	7.43	13.93	93.77	-22.7748	0.0449	1.9078
1081	SLV 7	10.86	-9.03	115.57	-27.4913	0.147	2.7512
1081	SLV 8	8.84	-8.5	115.14	-27.4015	0.1514	2.2519
1081	SLV 9	-7.44	14.03	104.21	-25.3308	-0.2715	-1.8825
1081	SLV 10	-9.46	14.55	103.78	-25.241	-0.2671	-2.3818
1081	SLV 11	-6.03	-8.4	125.58	-29.9575	-0.165	-1.5384
1081	SLV 12	-8.05	-7.88	125.16	-29.8677	-0.1606	-2.0377
1081	SLV 13	-26.1	6.76	123.5	-29.8522	-0.5994	-6.6289
1081	SLV 14	-29.23	7.57	122.83	-29.7129	-0.5925	-7.4037
1081	SLV 15	-25.67	0.03	129.91	-31.2402	-0.5674	-6.5256
1081	SLV 16	-28.81	0.84	129.25	-31.1009	-0.5606	-7.3005
1081	CRTFP Ux+	0	0	0	0	0	0
1081	CRTFP Ux-	0	0	0	0	0	0
1081	CRTFP Uy+	0	0	0	0	0	0
1081	CRTFP Uy-	0	0	0	0	0	0
1083	SLU 1	0.26	0.8	31.9	-9.2495	-0.5846	0.1034
1083	SLU 2	0.26	0.84	31.85	-9.2396	-0.5838	0.104
1083	SLU 3	0.26	0.83	32.65	-9.4622	-0.5983	0.1054
1083	SLU 4	0.26	0.86	32.62	-9.4563	-0.5979	0.1058
1083	SLU 5	0.26	0.86	32.32	-9.373	-0.5924	0.1054
1083	SLU 6	0.26	0.84	33.12	-9.5956	-0.6069	0.1067
1083	SLU 7	0.26	0.87	33.09	-9.5897	-0.6065	0.1071
1083	SLU 8	0.26	0.83	32.83	-9.5162	-0.6017	0.106
1083	SLU 9	0.26	0.85	32.81	-9.5103	-0.6013	0.1064
1083	SLU 10	0.27	0.96	36.02	-10.4419	-0.66	0.1125
1083	SLU 11	0.28	0.94	36.81	-10.6646	-0.6745	0.1139
1083	SLU 12	0.28	0.97	36.79	-10.6586	-0.674	0.1143
1083	SLU 13	0.28	0.97	36.49	-10.5753	-0.6685	0.1139
1083	SLU 14	0.28	0.96	37.28	-10.7979	-0.683	0.1152
1083	SLU 15	0.28	0.98	37.26	-10.792	-0.6826	0.1156
1083	SLU 16	0.28	0.94	37	-10.7186	-0.6778	0.1145
1083	SLU 17	0.28	0.97	36.97	-10.7126	-0.6774	0.1149
1083	SLU 18	0.28	0.96	37.84	-10.9671	-0.6933	0.1155
1083	SLU 19	0.28	0.99	37.82	-10.9612	-0.6929	0.1159
1083	SLU 20	0.29	0.97	38.31	-11.1005	-0.7019	0.1168
1083	SLU 21	0.29	1	38.29	-11.0946	-0.7015	0.1172
1083	SLU 22	0.28	0.94	36.06	-10.4445	-0.6606	0.1131
1083	SLU 23	0.28	0.98	36.02	-10.4347	-0.6599	0.1137
1083	SLU 24	0.28	0.97	36.81	-10.6573	-0.6744	0.1151
1083	SLU 25	0.28	1	36.79	-10.6513	-0.674	0.1155
1083	SLU 26	0.28	1	36.48	-10.568	-0.6685	0.1151
1083	SLU 27	0.28	0.98	37.28	-10.7906	-0.683	0.1164
1083	SLU 28	0.28	1.01	37.25	-10.7847	-0.6826	0.1168
1083	SLU 29	0.28	0.97	36.99	-10.7113	-0.6778	0.1158
1083	SLU 30	0.28	0.99	36.97	-10.7054	-0.6774	0.1162
1083	SLU 31	0.29	1.09	40.18	-11.637	-0.7361	0.1222
1083	SLU 32	0.3	1.08	40.97	-11.8596	-0.7506	0.1236
1083	SLU 33	0.3	1.11	40.95	-11.8537	-0.7501	0.124
1083	SLU 34	0.3	1.11	40.65	-11.7704	-0.7446	0.1236
1083	SLU 35	0.3	1.09	41.44	-11.993	-0.7591	0.1249
1083	SLU 36	0.3	1.12	41.42	-11.9871	-0.7587	0.1253
1083	SLU 37	0.3	1.08	41.16	-11.9136	-0.7539	0.1243
1083	SLU 38	0.3	1.1	41.13	-11.9077	-0.7535	0.1247
1083	SLU 39	0.3	1.1	42	-12.1622	-0.7694	0.1252
1083	SLU 40	0.3	1.12	41.98	-12.1562	-0.769	0.1256

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1083	SLU 41	0.31	1.11	42.47	-12.2955	-0.778	0.1266
1083	SLU 42	0.31	1.14	42.45	-12.2896	-0.7775	0.127
1083	SLU 43	0.33	0.99	40.04	-11.6146	-0.7338	0.131
1083	SLU 44	0.33	1.04	40	-11.6047	-0.7331	0.1317
1083	SLU 45	0.33	1.02	40.79	-11.8273	-0.7476	0.133
1083	SLU 46	0.33	1.05	40.77	-11.8214	-0.7472	0.1334
1083	SLU 47	0.33	1.05	40.47	-11.7381	-0.7417	0.133
1083	SLU 48	0.33	1.04	41.26	-11.9607	-0.7562	0.1344
1083	SLU 49	0.33	1.06	41.24	-11.9548	-0.7558	0.1348
1083	SLU 50	0.33	1.02	40.98	-11.8813	-0.751	0.1337
1083	SLU 51	0.33	1.05	40.95	-11.8754	-0.7505	0.1341
1083	SLU 52	0.34	1.15	44.16	-12.807	-0.8093	0.1402
1083	SLU 53	0.35	1.13	44.95	-13.0297	-0.8238	0.1415
1083	SLU 54	0.35	1.16	44.93	-13.0237	-0.8233	0.1419
1083	SLU 55	0.35	1.16	44.63	-12.9404	-0.8178	0.1415
1083	SLU 56	0.35	1.15	45.42	-13.163	-0.8323	0.1429
1083	SLU 57	0.35	1.18	45.4	-13.1571	-0.8319	0.1433
1083	SLU 58	0.35	1.13	45.14	-13.0837	-0.8271	0.1422
1083	SLU 59	0.35	1.16	45.11	-13.0777	-0.8267	0.1426
1083	SLU 60	0.35	1.15	45.99	-13.3322	-0.8426	0.1432
1083	SLU 61	0.35	1.18	45.96	-13.3263	-0.8422	0.1436
1083	SLU 62	0.36	1.17	46.45	-13.4656	-0.8512	0.1445
1083	SLU 63	0.35	1.19	46.43	-13.4597	-0.8507	0.1449
1083	SLU 64	0.35	1.13	44.2	-12.8096	-0.8099	0.1407
1083	SLU 65	0.35	1.18	44.16	-12.7998	-0.8092	0.1414
1083	SLU 66	0.35	1.16	44.95	-13.0224	-0.8237	0.1428
1083	SLU 67	0.35	1.19	44.93	-13.0164	-0.8233	0.1432
1083	SLU 68	0.35	1.19	44.63	-12.9331	-0.8178	0.1428
1083	SLU 69	0.35	1.17	45.42	-13.1558	-0.8323	0.1441
1083	SLU 70	0.35	1.2	45.4	-13.1498	-0.8319	0.1445
1083	SLU 71	0.35	1.16	45.14	-13.0764	-0.8271	0.1434
1083	SLU 72	0.35	1.19	45.11	-13.0705	-0.8266	0.1438
1083	SLU 73	0.36	1.29	48.32	-14.0021	-0.8853	0.1499
1083	SLU 74	0.37	1.27	49.12	-14.2247	-0.8998	0.1513
1083	SLU 75	0.37	1.3	49.09	-14.2188	-0.8994	0.1517
1083	SLU 76	0.37	1.3	48.79	-14.1355	-0.8939	0.1513
1083	SLU 77	0.37	1.29	49.58	-14.3581	-0.9084	0.1526
1083	SLU 78	0.37	1.31	49.56	-14.3522	-0.908	0.153
1083	SLU 79	0.37	1.27	49.3	-14.2787	-0.9032	0.1519
1083	SLU 80	0.37	1.3	49.28	-14.2728	-0.9028	0.1523
1083	SLU 81	0.37	1.29	50.15	-14.5273	-0.9187	0.1529
1083	SLU 82	0.37	1.32	50.12	-14.5213	-0.9183	0.1533
1083	SLU 83	0.38	1.3	50.61	-14.6607	-0.9273	0.1542
1083	SLU 84	0.38	1.33	50.59	-14.6547	-0.9268	0.1546
1083	SLE RA 1	0.26	0.84	33.08	-9.5909	-0.6063	0.1061
1083	SLE RA 2	0.26	0.87	33.06	-9.5843	-0.6058	0.1066
1083	SLE RA 3	0.26	0.86	33.59	-9.7327	-0.6155	0.1075
1083	SLE RA 4	0.26	0.88	33.57	-9.7288	-0.6152	0.1077
1083	SLE RA 5	0.26	0.88	33.37	-9.6732	-0.6115	0.1075
1083	SLE RA 6	0.27	0.87	33.9	-9.8217	-0.6212	0.1084
1083	SLE RA 7	0.27	0.89	33.88	-9.8177	-0.6209	0.1086
1083	SLE RA 8	0.27	0.86	33.71	-9.7688	-0.6177	0.1079
1083	SLE RA 9	0.27	0.88	33.69	-9.7648	-0.6174	0.1082
1083	SLE RA 10	0.27	0.94	35.83	-10.3859	-0.6566	0.1122
1083	SLE RA 11	0.28	0.93	36.36	-10.5343	-0.6662	0.1131
1083	SLE RA 12	0.28	0.95	36.35	-10.5304	-0.666	0.1134
1083	SLE RA 13	0.28	0.95	36.15	-10.4748	-0.6623	0.1131
1083	SLE RA 14	0.28	0.94	36.68	-10.6232	-0.672	0.114
1083	SLE RA 15	0.28	0.96	36.66	-10.6193	-0.6717	0.1143
1083	SLE RA 16	0.28	0.93	36.49	-10.5703	-0.6685	0.1136
1083	SLE RA 17	0.28	0.95	36.47	-10.5664	-0.6682	0.1139
1083	SLE RA 18	0.28	0.94	37.05	-10.736	-0.6788	0.1142
1083	SLE RA 19	0.28	0.96	37.03	-10.7321	-0.6785	0.1145
1083	SLE RA 20	0.28	0.95	37.36	-10.8249	-0.6845	0.1151
1083	SLE RA 21	0.28	0.97	37.35	-10.821	-0.6842	0.1154
1083	SLE FR 1	0.26	0.84	33.08	-9.5909	-0.6063	0.1061
1083	SLE FR 2	0.26	0.84	33.08	-9.5896	-0.6062	0.1062
1083	SLE FR 3	0.26	0.84	33.21	-9.6265	-0.6086	0.1065
1083	SLE FR 4	0.27	0.88	34.27	-9.9331	-0.628	0.1087
1083	SLE FR 5	0.27	0.87	34.4	-9.97	-0.6303	0.1089
1083	SLE FR 6	0.27	0.89	35.07	-10.1635	-0.6426	0.1102
1083	SLE QP 1	0.26	0.84	33.08	-9.5909	-0.6063	0.1061
1083	SLE QP 2	0.27	0.87	34.27	-9.9344	-0.6281	0.1086
1083	SLD 1	4.27	1.06	31.38	-9.118	-0.5689	1.5283
1083	SLD 2	3.85	1.2	31.29	-9.0994	-0.5671	1.3835
1083	SLD 3	4.33	0.13	32.22	-9.3277	-0.5838	1.4979
1083	SLD 4	3.9	0.27	32.13	-9.3091	-0.582	1.3531
1083	SLD 5	1.46	2.32	32.15	-9.3748	-0.588	0.6063
1083	SLD 6	1.18	2.41	32.1	-9.3626	-0.5868	0.5114
1083	SLD 7	1.65	-0.79	34.94	-10.0737	-0.6377	0.505
1083	SLD 8	1.37	-0.7	34.88	-10.0615	-0.6365	0.4101
1083	SLD 9	-0.84	2.44	33.67	-9.8074	-0.6196	-0.193
1083	SLD 10	-1.11	2.54	33.61	-9.7952	-0.6184	-0.2879
1083	SLD 11	-0.64	-0.67	36.45	-10.5063	-0.6693	-0.2942
1083	SLD 12	-0.92	-0.58	36.39	-10.4941	-0.6681	-0.3892
1083	SLD 13	-3.37	1.47	36.42	-10.5598	-0.6741	-1.136
1083	SLD 14	-3.79	1.61	36.33	-10.5412	-0.6723	-1.2808
1083	SLD 15	-3.31	0.54	37.26	-10.7695	-0.689	-1.1664
1083	SLD 16	-3.73	0.68	37.16	-10.7509	-0.6872	-1.3112
1083	SLV 1	9.63	1.29	27.54	-8.0313	-0.4902	3.428

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1083	SLV 2	8.64	1.62	27.32	-7.988	-0.4859	3.0907
1083	SLV 3	9.76	-0.84	29.43	-8.5067	-0.5239	3.3581
1083	SLV 4	8.77	-0.51	29.22	-8.4635	-0.5197	3.0208
1083	SLV 5	3.04	4.17	29.41	-8.6498	-0.5362	1.2685
1083	SLV 6	2.41	4.38	29.28	-8.6219	-0.5334	1.0511
1083	SLV 7	3.49	-2.93	35.73	-10.2347	-0.6488	1.0356
1083	SLV 8	2.85	-2.72	35.6	-10.2068	-0.6461	0.8182
1083	SLV 9	-2.32	4.46	32.95	-9.6621	-0.61	-0.601
1083	SLV 10	-2.95	4.67	32.81	-9.6342	-0.6073	-0.8184
1083	SLV 11	-1.87	-2.64	39.27	-11.247	-0.7227	-0.834
1083	SLV 12	-2.51	-2.43	39.13	-11.2191	-0.7199	-1.0514
1083	SLV 13	-8.24	2.25	39.33	-11.4054	-0.7364	-2.8037
1083	SLV 14	-9.22	2.58	39.12	-11.3622	-0.7322	-3.141
1083	SLV 15	-8.11	0.12	41.22	-11.8809	-0.7702	-2.8735
1083	SLV 16	-9.09	0.45	41.01	-11.8376	-0.7659	-3.2109
1083	CRTFP Ux+	0	0	0	0	0	0
1083	CRTFP Ux-	0	0	0	0	0	0
1083	CRTFP Uy+	0	0	0	0	0	0
1083	CRTFP Uy-	0	0	0	0	0	0
1084	SLU 1	0.32	0.82	34.69	-9.3552	0.0241	0.1099
1084	SLU 2	0.32	0.87	34.65	-9.3453	0.0241	0.1097
1084	SLU 3	0.33	0.85	35.51	-9.5678	0.0248	0.1117
1084	SLU 4	0.33	0.88	35.48	-9.5619	0.0248	0.1115
1084	SLU 5	0.33	0.88	35.16	-9.4786	0.0245	0.111
1084	SLU 6	0.33	0.86	36.02	-9.7012	0.0252	0.113
1084	SLU 7	0.33	0.89	35.99	-9.6952	0.0252	0.1129
1084	SLU 8	0.33	0.85	35.71	-9.6219	0.025	0.1125
1084	SLU 9	0.33	0.88	35.68	-9.6159	0.025	0.1124
1084	SLU 10	0.35	0.99	39.17	-10.5518	0.0278	0.1182
1084	SLU 11	0.35	0.97	40.03	-10.7744	0.0285	0.1202
1084	SLU 12	0.35	1	40	-10.7684	0.0284	0.1201
1084	SLU 13	0.35	1	39.67	-10.6851	0.0282	0.1195
1084	SLU 14	0.36	0.98	40.54	-10.9077	0.0289	0.1215
1084	SLU 15	0.36	1.01	40.51	-10.9017	0.0289	0.1214
1084	SLU 16	0.35	0.96	40.23	-10.8284	0.0287	0.121
1084	SLU 17	0.35	1	40.2	-10.8224	0.0286	0.1209
1084	SLU 18	0.36	0.99	41.14	-11.0788	0.0294	0.122
1084	SLU 19	0.36	1.02	41.12	-11.0729	0.0294	0.1219
1084	SLU 20	0.36	1	41.65	-11.2122	0.0298	0.1233
1084	SLU 21	0.36	1.03	41.63	-11.2062	0.0298	0.1232
1084	SLU 22	0.35	0.96	39.21	-10.5542	0.0278	0.1191
1084	SLU 23	0.35	1.01	39.16	-10.5443	0.0277	0.1189
1084	SLU 24	0.35	1	40.02	-10.7668	0.0284	0.1209
1084	SLU 25	0.35	1.03	40	-10.7609	0.0284	0.1208
1084	SLU 26	0.35	1.03	39.67	-10.6776	0.0282	0.1202
1084	SLU 27	0.36	1.01	40.53	-10.9002	0.0289	0.1222
1084	SLU 28	0.36	1.04	40.51	-10.8942	0.0288	0.1221
1084	SLU 29	0.36	0.99	40.22	-10.8209	0.0286	0.1218
1084	SLU 30	0.36	1.02	40.2	-10.8149	0.0286	0.1216
1084	SLU 31	0.37	1.13	43.68	-11.7508	0.0314	0.1274
1084	SLU 32	0.38	1.11	44.54	-11.9734	0.0321	0.1294
1084	SLU 33	0.38	1.14	44.52	-11.9674	0.0321	0.1293
1084	SLU 34	0.38	1.15	44.19	-11.8841	0.0318	0.1287
1084	SLU 35	0.38	1.13	45.05	-12.1067	0.0325	0.1308
1084	SLU 36	0.38	1.16	45.02	-12.1007	0.0325	0.1306
1084	SLU 37	0.38	1.11	44.74	-12.0274	0.0323	0.1303
1084	SLU 38	0.38	1.14	44.71	-12.0214	0.0323	0.1301
1084	SLU 39	0.39	1.13	45.66	-12.2778	0.033	0.1313
1084	SLU 40	0.38	1.16	45.63	-12.2719	0.033	0.1312
1084	SLU 41	0.39	1.15	46.17	-12.4112	0.0335	0.1326
1084	SLU 42	0.39	1.18	46.14	-12.4052	0.0334	0.1325
1084	SLU 43	0.41	1.01	43.55	-11.7507	0.0301	0.1397
1084	SLU 44	0.41	1.06	43.51	-11.7407	0.0301	0.1394
1084	SLU 45	0.41	1.04	44.37	-11.9633	0.0308	0.1415
1084	SLU 46	0.41	1.07	44.34	-11.9573	0.0307	0.1413
1084	SLU 47	0.41	1.08	44.02	-11.8741	0.0305	0.1408
1084	SLU 48	0.42	1.06	44.88	-12.0966	0.0312	0.1428
1084	SLU 49	0.42	1.09	44.85	-12.0907	0.0312	0.1426
1084	SLU 50	0.42	1.04	44.57	-12.0173	0.031	0.1423
1084	SLU 51	0.42	1.07	44.54	-12.0114	0.0309	0.1422
1084	SLU 52	0.43	1.18	48.03	-12.9473	0.0337	0.148
1084	SLU 53	0.44	1.16	48.89	-13.1699	0.0345	0.15
1084	SLU 54	0.44	1.19	48.86	-13.1639	0.0344	0.1498
1084	SLU 55	0.44	1.2	48.53	-13.0806	0.0342	0.1493
1084	SLU 56	0.44	1.18	49.4	-13.3032	0.0349	0.1513
1084	SLU 57	0.44	1.21	49.37	-13.2972	0.0348	0.1512
1084	SLU 58	0.44	1.16	49.09	-13.2239	0.0347	0.1508
1084	SLU 59	0.44	1.19	49.06	-13.2179	0.0346	0.1507
1084	SLU 60	0.45	1.18	50	-13.4743	0.0354	0.1518
1084	SLU 61	0.44	1.21	49.98	-13.4683	0.0353	0.1517
1084	SLU 62	0.45	1.2	50.51	-13.6076	0.0358	0.1531
1084	SLU 63	0.45	1.23	50.49	-13.6017	0.0358	0.153
1084	SLU 64	0.44	1.16	48.07	-12.9497	0.0338	0.1489
1084	SLU 65	0.44	1.21	48.02	-12.9397	0.0337	0.1487
1084	SLU 66	0.44	1.19	48.88	-13.1623	0.0344	0.1507
1084	SLU 67	0.44	1.22	48.86	-13.1563	0.0344	0.1506
1084	SLU 68	0.44	1.22	48.53	-13.0731	0.0342	0.15
1084	SLU 69	0.45	1.2	49.39	-13.2956	0.0349	0.152
1084	SLU 70	0.45	1.23	49.37	-13.2897	0.0348	0.1519
1084	SLU 71	0.44	1.19	49.08	-13.2163	0.0346	0.1515

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1084	SLU 72	0.44	1.22	49.06	-13.2104	0.0346	0.1514
1084	SLU 73	0.46	1.33	52.54	-14.1463	0.0374	0.1572
1084	SLU 74	0.47	1.31	53.4	-14.3688	0.0381	0.1592
1084	SLU 75	0.47	1.34	53.38	-14.3629	0.0381	0.1591
1084	SLU 76	0.47	1.34	53.05	-14.2796	0.0378	0.1585
1084	SLU 77	0.47	1.32	53.91	-14.5022	0.0385	0.1605
1084	SLU 78	0.47	1.35	53.88	-14.4962	0.0385	0.1604
1084	SLU 79	0.47	1.31	53.6	-14.4229	0.0383	0.1601
1084	SLU 80	0.47	1.34	53.57	-14.4169	0.0383	0.1599
1084	SLU 81	0.47	1.33	54.52	-14.6733	0.039	0.1611
1084	SLU 82	0.47	1.36	54.49	-14.6673	0.039	0.1609
1084	SLU 83	0.48	1.34	55.03	-14.8066	0.0395	0.1624
1084	SLU 84	0.48	1.37	55	-14.8007	0.0394	0.1623
1084	SLE RA 1	0.33	0.86	35.98	-9.6978	0.0252	0.1125
1084	SLE RA 2	0.33	0.89	35.95	-9.6911	0.0251	0.1124
1084	SLE RA 3	0.33	0.88	36.53	-9.8395	0.0256	0.1137
1084	SLE RA 4	0.33	0.9	36.51	-9.8355	0.0256	0.1136
1084	SLE RA 5	0.33	0.9	36.29	-9.78	0.0254	0.1133
1084	SLE RA 6	0.34	0.89	36.87	-9.9284	0.0259	0.1146
1084	SLE RA 7	0.34	0.91	36.85	-9.9244	0.0259	0.1145
1084	SLE RA 8	0.34	0.88	36.66	-9.8755	0.0258	0.1143
1084	SLE RA 9	0.33	0.9	36.64	-9.8716	0.0257	0.1142
1084	SLE RA 10	0.35	0.97	38.96	-10.4955	0.0276	0.1181
1084	SLE RA 11	0.35	0.96	39.54	-10.6439	0.0281	0.1194
1084	SLE RA 12	0.35	0.98	39.52	-10.6399	0.028	0.1193
1084	SLE RA 13	0.35	0.98	39.3	-10.5844	0.0279	0.1189
1084	SLE RA 14	0.35	0.97	39.88	-10.7328	0.0284	0.1203
1084	SLE RA 15	0.35	0.99	39.86	-10.7288	0.0283	0.1202
1084	SLE RA 16	0.35	0.96	39.67	-10.6799	0.0282	0.1199
1084	SLE RA 17	0.35	0.98	39.65	-10.6759	0.0282	0.1199
1084	SLE RA 18	0.35	0.97	40.28	-10.8469	0.0287	0.1206
1084	SLE RA 19	0.35	0.99	40.27	-10.8429	0.0287	0.1205
1084	SLE RA 20	0.36	0.98	40.62	-10.9358	0.029	0.1215
1084	SLE RA 21	0.36	1	40.61	-10.9318	0.0289	0.1214
1084	SLE FR 1	0.33	0.86	35.98	-9.6978	0.0252	0.1125
1084	SLE FR 2	0.33	0.86	35.98	-9.6964	0.0252	0.1125
1084	SLE FR 3	0.33	0.86	36.12	-9.7333	0.0253	0.1129
1084	SLE FR 4	0.34	0.9	37.27	-10.0412	0.0262	0.1149
1084	SLE FR 5	0.34	0.9	37.41	-10.0781	0.0264	0.1153
1084	SLE FR 6	0.34	0.91	38.13	-10.2723	0.0269	0.1166
1084	SLE QP 1	0.33	0.86	35.98	-9.6978	0.0252	0.1125
1084	SLE QP 2	0.34	0.89	37.27	-10.0425	0.0262	0.1149
1084	SLD 1	4.76	1.06	33.89	-9.1858	0.0316	1.6637
1084	SLD 2	4.29	1.24	33.78	-9.1664	0.0318	1.5003
1084	SLD 3	4.83	0.04	34.78	-9.3991	0.0331	1.6857
1084	SLD 4	4.36	0.22	34.68	-9.3797	0.0334	1.5223
1084	SLD 5	1.65	2.46	34.92	-9.4656	0.0255	0.5753
1084	SLD 6	1.34	2.58	34.85	-9.4528	0.0256	0.4681
1084	SLD 7	1.86	-0.94	37.9	-10.1763	0.0306	0.6486
1084	SLD 8	1.56	-0.83	37.83	-10.1636	0.0307	0.5414
1084	SLD 9	-0.88	2.61	36.72	-9.9214	0.0217	-0.3116
1084	SLD 10	-1.19	2.73	36.65	-9.9087	0.0219	-0.4187
1084	SLD 11	-0.67	-0.79	39.69	-10.6322	0.0268	-0.2382
1084	SLD 12	-0.98	-0.68	39.62	-10.6194	0.027	-0.3454
1084	SLD 13	-3.68	1.57	39.87	-10.7053	0.0191	-1.2924
1084	SLD 14	-4.15	1.74	39.76	-10.6859	0.0193	-1.4558
1084	SLD 15	-3.62	0.55	40.76	-10.9186	0.0206	-1.2704
1084	SLD 16	-4.09	0.72	40.65	-10.8992	0.0209	-1.4338
1084	SLV 1	10.69	1.26	29.39	-8.0455	0.0388	3.7368
1084	SLV 2	9.6	1.67	29.14	-8.0003	0.0394	3.3561
1084	SLV 3	10.84	-1.07	31.41	-8.5289	0.0424	3.7881
1084	SLV 4	9.74	-0.66	31.16	-8.4838	0.0429	3.4073
1084	SLV 5	3.41	4.46	31.88	-8.7179	0.0246	1.1893
1084	SLV 6	2.7	4.72	31.72	-8.6888	0.0249	0.944
1084	SLV 7	3.9	-3.3	38.63	-10.3295	0.0363	1.3602
1084	SLV 8	3.19	-3.03	38.47	-10.3004	0.0367	1.1148
1084	SLV 9	-2.52	4.82	36.07	-9.7846	0.0158	-0.8849
1084	SLV 10	-3.22	5.08	35.91	-9.7555	0.0162	-1.1303
1084	SLV 11	-2.03	-2.94	42.83	-11.3962	0.0275	-0.7141
1084	SLV 12	-2.73	-2.68	42.67	-11.3671	0.0279	-0.9594
1084	SLV 13	-9.07	2.45	43.38	-11.6012	0.0096	-3.1775
1084	SLV 14	-10.16	2.85	43.13	-11.5561	0.0101	-3.5582
1084	SLV 15	-8.92	0.12	45.41	-12.0847	0.0131	-3.1262
1084	SLV 16	-10.01	0.53	45.16	-12.0396	0.0136	-3.5069
1084	CRTFP Ux+	0	0	0	0	0	0
1084	CRTFP Ux-	0	0	0	0	0	0
1084	CRTFP Uy+	0	0	0	0	0	0
1084	CRTFP Uy-	0	0	0	0	0	0
1085	SLU 1	0.36	0.71	33.91	-8.4681	0.0247	0.1219
1085	SLU 2	0.36	0.76	33.87	-8.4592	0.0246	0.1217
1085	SLU 3	0.36	0.74	34.7	-8.6576	0.0253	0.124
1085	SLU 4	0.36	0.77	34.68	-8.6523	0.0253	0.1238
1085	SLU 5	0.36	0.78	34.36	-8.578	0.0251	0.1232
1085	SLU 6	0.37	0.76	35.2	-8.7764	0.0258	0.1254
1085	SLU 7	0.37	0.79	35.17	-8.7711	0.0258	0.1253
1085	SLU 8	0.37	0.74	34.9	-8.7056	0.0256	0.1248
1085	SLU 9	0.37	0.77	34.87	-8.7003	0.0255	0.1247
1085	SLU 10	0.39	0.87	38.26	-9.5379	0.0284	0.1316
1085	SLU 11	0.39	0.85	39.1	-9.7363	0.0292	0.1339
1085	SLU 12	0.39	0.88	39.07	-9.731	0.0291	0.1337

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1085	SLU 13	0.39	0.89	38.76	-9.6567	0.0289	0.1331
1085	SLU 14	0.4	0.87	39.59	-9.8551	0.0296	0.1353
1085	SLU 15	0.4	0.9	39.57	-9.8498	0.0296	0.1352
1085	SLU 16	0.4	0.85	39.29	-9.7843	0.0294	0.1347
1085	SLU 17	0.4	0.88	39.27	-9.779	0.0293	0.1346
1085	SLU 18	0.4	0.87	40.19	-10.0091	0.0301	0.1361
1085	SLU 19	0.4	0.9	40.16	-10.0038	0.0301	0.1359
1085	SLU 20	0.4	0.88	40.68	-10.1279	0.0306	0.1375
1085	SLU 21	0.4	0.91	40.66	-10.1225	0.0305	0.1374
1085	SLU 22	0.39	0.85	38.3	-9.5398	0.0285	0.1325
1085	SLU 23	0.39	0.9	38.26	-9.5309	0.0284	0.1323
1085	SLU 24	0.4	0.88	39.1	-9.7294	0.0292	0.1346
1085	SLU 25	0.4	0.91	39.07	-9.724	0.0291	0.1345
1085	SLU 26	0.39	0.91	38.75	-9.6497	0.0289	0.1338
1085	SLU 27	0.4	0.89	39.59	-9.8481	0.0296	0.136
1085	SLU 28	0.4	0.92	39.57	-9.8428	0.0296	0.1359
1085	SLU 29	0.4	0.87	39.29	-9.7774	0.0294	0.1354
1085	SLU 30	0.4	0.9	39.26	-9.772	0.0293	0.1353
1085	SLU 31	0.42	1.01	42.66	-10.6096	0.0322	0.1422
1085	SLU 32	0.43	0.99	43.49	-10.8081	0.033	0.1445
1085	SLU 33	0.43	1.02	43.47	-10.8027	0.0329	0.1443
1085	SLU 34	0.42	1.02	43.15	-10.7284	0.0327	0.1437
1085	SLU 35	0.43	1	43.99	-10.9268	0.0334	0.1459
1085	SLU 36	0.43	1.03	43.96	-10.9215	0.0334	0.1458
1085	SLU 37	0.43	0.98	43.69	-10.8561	0.0332	0.1453
1085	SLU 38	0.43	1.01	43.66	-10.8507	0.0332	0.1452
1085	SLU 39	0.43	1.01	44.58	-11.0808	0.0339	0.1467
1085	SLU 40	0.43	1.04	44.56	-11.0755	0.0339	0.1465
1085	SLU 41	0.44	1.02	45.07	-11.1996	0.0344	0.1481
1085	SLU 42	0.44	1.05	45.05	-11.1943	0.0343	0.148
1085	SLU 43	0.46	0.88	42.57	-10.6411	0.0308	0.1549
1085	SLU 44	0.46	0.93	42.53	-10.6322	0.0307	0.1547
1085	SLU 45	0.46	0.91	43.37	-10.8306	0.0314	0.1569
1085	SLU 46	0.46	0.94	43.34	-10.8253	0.0314	0.1568
1085	SLU 47	0.46	0.94	43.03	-10.751	0.0312	0.1561
1085	SLU 48	0.47	0.92	43.86	-10.9494	0.0319	0.1583
1085	SLU 49	0.47	0.95	43.84	-10.9441	0.0319	0.1582
1085	SLU 50	0.46	0.91	43.56	-10.8786	0.0317	0.1577
1085	SLU 51	0.46	0.94	43.54	-10.8733	0.0316	0.1576
1085	SLU 52	0.48	1.04	46.93	-11.7109	0.0345	0.1646
1085	SLU 53	0.49	1.02	47.76	-11.9093	0.0353	0.1668
1085	SLU 54	0.49	1.05	47.74	-11.904	0.0352	0.1667
1085	SLU 55	0.49	1.05	47.42	-11.8297	0.035	0.166
1085	SLU 56	0.5	1.03	48.26	-12.0281	0.0357	0.1682
1085	SLU 57	0.49	1.06	48.23	-12.0228	0.0357	0.1681
1085	SLU 58	0.49	1.02	47.96	-11.9573	0.0355	0.1676
1085	SLU 59	0.49	1.05	47.93	-11.952	0.0354	0.1675
1085	SLU 60	0.5	1.04	48.85	-12.1821	0.0362	0.169
1085	SLU 61	0.5	1.07	48.83	-12.1768	0.0362	0.1689
1085	SLU 62	0.5	1.05	49.35	-12.3009	0.0367	0.1704
1085	SLU 63	0.5	1.08	49.32	-12.2955	0.0366	0.1703
1085	SLU 64	0.49	1.02	46.97	-11.7128	0.0346	0.1655
1085	SLU 65	0.49	1.07	46.92	-11.7039	0.0345	0.1653
1085	SLU 66	0.49	1.05	47.76	-11.9023	0.0353	0.1675
1085	SLU 67	0.49	1.08	47.74	-11.897	0.0352	0.1674
1085	SLU 68	0.49	1.08	47.42	-11.8227	0.035	0.1667
1085	SLU 69	0.5	1.06	48.26	-12.0211	0.0357	0.169
1085	SLU 70	0.5	1.09	48.23	-12.0158	0.0357	0.1688
1085	SLU 71	0.5	1.04	47.95	-11.9503	0.0355	0.1684
1085	SLU 72	0.5	1.07	47.93	-11.945	0.0354	0.1682
1085	SLU 73	0.52	1.18	51.32	-12.7826	0.0383	0.1752
1085	SLU 74	0.52	1.16	52.16	-12.981	0.0391	0.1774
1085	SLU 75	0.52	1.19	52.13	-12.9757	0.039	0.1773
1085	SLU 76	0.52	1.19	51.82	-12.9014	0.0388	0.1766
1085	SLU 77	0.53	1.17	52.65	-13.0998	0.0395	0.1788
1085	SLU 78	0.53	1.2	52.63	-13.0945	0.0395	0.1787
1085	SLU 79	0.52	1.15	52.35	-13.029	0.0393	0.1782
1085	SLU 80	0.52	1.18	52.33	-13.0237	0.0393	0.1781
1085	SLU 81	0.53	1.17	53.25	-13.2538	0.04	0.1796
1085	SLU 82	0.53	1.2	53.22	-13.2485	0.04	0.1795
1085	SLU 83	0.53	1.19	53.74	-13.3726	0.0405	0.181
1085	SLU 84	0.53	1.22	53.72	-13.3672	0.0404	0.1809
1085	SLE RA 1	0.37	0.75	35.16	-8.7743	0.0258	0.125
1085	SLE RA 2	0.37	0.79	35.13	-8.7684	0.0257	0.1248
1085	SLE RA 3	0.37	0.77	35.69	-8.9007	0.0262	0.1263
1085	SLE RA 4	0.37	0.79	35.68	-8.8971	0.0262	0.1262
1085	SLE RA 5	0.37	0.79	35.46	-8.8476	0.026	0.1258
1085	SLE RA 6	0.37	0.78	36.02	-8.9798	0.0265	0.1273
1085	SLE RA 7	0.37	0.8	36.01	-8.9763	0.0265	0.1272
1085	SLE RA 8	0.37	0.77	35.82	-8.9327	0.0264	0.1269
1085	SLE RA 9	0.37	0.79	35.8	-8.9291	0.0263	0.1268
1085	SLE RA 10	0.39	0.86	38.06	-9.4875	0.0283	0.1314
1085	SLE RA 11	0.39	0.85	38.62	-9.6198	0.0288	0.1329
1085	SLE RA 12	0.39	0.87	38.61	-9.6162	0.0287	0.1328
1085	SLE RA 13	0.39	0.87	38.39	-9.5667	0.0286	0.1324
1085	SLE RA 14	0.39	0.85	38.95	-9.699	0.0291	0.1339
1085	SLE RA 15	0.39	0.87	38.94	-9.6954	0.029	0.1338
1085	SLE RA 16	0.39	0.84	38.75	-9.6518	0.0289	0.1335
1085	SLE RA 17	0.39	0.86	38.74	-9.6482	0.0289	0.1334
1085	SLE RA 18	0.4	0.86	39.35	-9.8016	0.0294	0.1344

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1085	SLE RA 19	0.4	0.88	39.33	-9.7981	0.0294	0.1343
1085	SLE RA 20	0.4	0.87	39.68	-9.8808	0.0297	0.1353
1085	SLE RA 21	0.4	0.89	39.66	-9.8773	0.0297	0.1353
1085	SLE FR 1	0.37	0.75	35.16	-8.7743	0.0258	0.125
1085	SLE FR 2	0.37	0.76	35.16	-8.7731	0.0258	0.1249
1085	SLE FR 3	0.37	0.76	35.29	-8.806	0.0259	0.1253
1085	SLE FR 4	0.38	0.79	36.41	-9.0813	0.0268	0.1278
1085	SLE FR 5	0.38	0.79	36.55	-9.1142	0.027	0.1282
1085	SLE FR 6	0.38	0.8	37.26	-9.288	0.0276	0.1297
1085	SLE QP 1	0.37	0.75	35.16	-8.7743	0.0258	0.125
1085	SLE QP 2	0.38	0.78	36.42	-9.0825	0.0269	0.1278
1085	SLD 1	4.8	0.94	32.87	-8.2776	0.032	1.678
1085	SLD 2	4.33	1.13	32.75	-8.2575	0.0323	1.514
1085	SLD 3	4.87	-0.07	33.73	-8.4739	0.0335	1.7
1085	SLD 4	4.4	0.12	33.61	-8.4538	0.0339	1.5359
1085	SLD 5	1.69	2.32	34.07	-8.5469	0.026	0.5887
1085	SLD 6	1.38	2.45	33.99	-8.5337	0.0262	0.4811
1085	SLD 7	1.9	-1.03	36.94	-9.2012	0.0311	0.6619
1085	SLD 8	1.59	-0.91	36.86	-9.1881	0.0314	0.5544
1085	SLD 9	-0.84	2.47	35.98	-8.9769	0.0223	-0.2988
1085	SLD 10	-1.15	2.6	35.9	-8.9638	0.0226	-0.4064
1085	SLD 11	-0.63	-0.88	38.84	-9.6313	0.0275	-0.2256
1085	SLD 12	-0.94	-0.76	38.77	-9.6182	0.0277	-0.3331
1085	SLD 13	-3.64	1.44	39.22	-9.7112	0.0198	-1.2804
1085	SLD 14	-4.11	1.64	39.11	-9.6911	0.0202	-1.4444
1085	SLD 15	-3.58	0.44	40.08	-9.9075	0.0214	-1.2584
1085	SLD 16	-4.05	0.63	39.97	-9.8874	0.0217	-1.4224
1085	SLV 1	10.73	1.11	28.14	-7.2057	0.0389	3.7529
1085	SLV 2	9.64	1.56	27.87	-7.1591	0.0396	3.3709
1085	SLV 3	10.88	-1.18	30.09	-7.6511	0.0425	3.8041
1085	SLV 4	9.78	-0.73	29.82	-7.6045	0.0432	3.4221
1085	SLV 5	3.45	4.28	31.02	-7.852	0.0249	1.2034
1085	SLV 6	2.74	4.57	30.85	-7.822	0.0254	0.9573
1085	SLV 7	3.94	-3.36	37.52	-9.3366	0.0368	1.3742
1085	SLV 8	3.23	-3.07	37.35	-9.3066	0.0373	1.128
1085	SLV 9	-2.48	4.64	35.48	-8.8584	0.0164	-0.8724
1085	SLV 10	-3.19	4.93	35.31	-8.8284	0.0169	-1.1186
1085	SLV 11	-1.99	-3.01	41.99	-10.3431	0.0283	-0.7017
1085	SLV 12	-2.7	-2.72	41.81	-10.313	0.0288	-0.9479
1085	SLV 13	-9.03	2.3	43.02	-10.5605	0.0105	-3.1666
1085	SLV 14	-10.13	2.75	42.75	-10.5139	0.0112	-3.5486
1085	SLV 15	-8.88	0.01	44.97	-11.0059	0.0141	-3.1154
1085	SLV 16	-9.98	0.46	44.7	-10.9593	0.0148	-3.4974
1085	CRTFP Ux+	0	0	0	0	0	0
1085	CRTFP Ux-	0	0	0	0	0	0
1085	CRTFP Uy+	0	0	0	0	0	0
1085	CRTFP Uy-	0	0	0	0	0	0
1086	SLU 1	0.39	0.59	33.25	-7.7417	0.0163	0.1336
1086	SLU 2	0.39	0.64	33.21	-7.7337	0.0162	0.1334
1086	SLU 3	0.4	0.62	34.03	-7.9122	0.0167	0.1359
1086	SLU 4	0.4	0.65	34	-7.9074	0.0167	0.1358
1086	SLU 5	0.4	0.65	33.69	-7.8404	0.0165	0.135
1086	SLU 6	0.4	0.63	34.51	-8.0189	0.017	0.1374
1086	SLU 7	0.4	0.66	34.49	-8.0141	0.017	0.1373
1086	SLU 8	0.4	0.61	34.21	-7.955	0.0169	0.1367
1086	SLU 9	0.4	0.64	34.19	-7.9502	0.0169	0.1366
1086	SLU 10	0.43	0.74	37.5	-8.706	0.0188	0.1446
1086	SLU 11	0.43	0.72	38.32	-8.8845	0.0194	0.1471
1086	SLU 12	0.43	0.75	38.3	-8.8797	0.0193	0.147
1086	SLU 13	0.43	0.75	37.99	-8.8127	0.0192	0.1462
1086	SLU 14	0.44	0.73	38.8	-8.9912	0.0197	0.1486
1086	SLU 15	0.44	0.76	38.78	-8.9864	0.0196	0.1485
1086	SLU 16	0.44	0.71	38.51	-8.9273	0.0195	0.1479
1086	SLU 17	0.44	0.74	38.48	-8.9225	0.0195	0.1478
1086	SLU 18	0.44	0.73	39.38	-9.1307	0.02	0.1496
1086	SLU 19	0.44	0.76	39.36	-9.1259	0.02	0.1495
1086	SLU 20	0.45	0.74	39.87	-9.2374	0.0203	0.1512
1086	SLU 21	0.45	0.77	39.84	-9.2326	0.0203	0.1511
1086	SLU 22	0.43	0.71	37.54	-8.7075	0.0189	0.1455
1086	SLU 23	0.43	0.76	37.5	-8.6995	0.0189	0.1453
1086	SLU 24	0.44	0.74	38.32	-8.878	0.0194	0.1478
1086	SLU 25	0.44	0.77	38.3	-8.8732	0.0193	0.1477
1086	SLU 26	0.43	0.77	37.98	-8.8061	0.0192	0.1469
1086	SLU 27	0.44	0.75	38.8	-8.9846	0.0197	0.1494
1086	SLU 28	0.44	0.78	38.78	-8.9798	0.0197	0.1492
1086	SLU 29	0.44	0.73	38.51	-8.9208	0.0195	0.1486
1086	SLU 30	0.44	0.76	38.48	-8.916	0.0195	0.1485
1086	SLU 31	0.46	0.86	41.79	-9.6718	0.0215	0.1565
1086	SLU 32	0.47	0.84	42.61	-9.8503	0.022	0.159
1086	SLU 33	0.47	0.87	42.59	-9.8455	0.022	0.1589
1086	SLU 34	0.47	0.87	42.28	-9.7784	0.0218	0.1581
1086	SLU 35	0.47	0.85	43.09	-9.9569	0.0223	0.1606
1086	SLU 36	0.47	0.88	43.07	-9.9521	0.0223	0.1605
1086	SLU 37	0.47	0.83	42.8	-9.8931	0.0222	0.1599
1086	SLU 38	0.47	0.86	42.77	-9.8883	0.0221	0.1597
1086	SLU 39	0.48	0.85	43.67	-10.0965	0.0227	0.1615
1086	SLU 40	0.48	0.88	43.65	-10.0917	0.0226	0.1614
1086	SLU 41	0.48	0.86	44.16	-10.2031	0.023	0.1631
1086	SLU 42	0.48	0.89	44.13	-10.1983	0.0229	0.163
1086	SLU 43	0.5	0.73	41.75	-9.7332	0.0202	0.1696

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1086	SLU 44	0.5	0.78	41.71	-9.7251	0.0202	0.1694
1086	SLU 45	0.51	0.76	42.53	-9.9037	0.0207	0.1718
1086	SLU 46	0.51	0.79	42.51	-9.8988	0.0207	0.1717
1086	SLU 47	0.5	0.79	42.2	-9.8318	0.0205	0.1709
1086	SLU 48	0.51	0.77	43.01	-10.0103	0.021	0.1734
1086	SLU 49	0.51	0.8	42.99	-10.0055	0.021	0.1733
1086	SLU 50	0.51	0.75	42.72	-9.9464	0.0209	0.1727
1086	SLU 51	0.51	0.78	42.7	-9.9416	0.0208	0.1726
1086	SLU 52	0.53	0.88	46.01	-10.6974	0.0228	0.1806
1086	SLU 53	0.54	0.85	46.83	-10.876	0.0233	0.1831
1086	SLU 54	0.54	0.88	46.8	-10.8711	0.0233	0.183
1086	SLU 55	0.54	0.89	46.49	-10.8041	0.0231	0.1822
1086	SLU 56	0.54	0.86	47.31	-10.9826	0.0236	0.1846
1086	SLU 57	0.54	0.89	47.28	-10.9778	0.0236	0.1845
1086	SLU 58	0.54	0.85	47.01	-10.9188	0.0235	0.1839
1086	SLU 59	0.54	0.88	46.99	-10.9139	0.0235	0.1838
1086	SLU 60	0.55	0.87	47.89	-11.1222	0.024	0.1856
1086	SLU 61	0.55	0.9	47.86	-11.1173	0.024	0.1855
1086	SLU 62	0.55	0.88	48.37	-11.2288	0.0243	0.1872
1086	SLU 63	0.55	0.91	48.35	-11.224	0.0243	0.187
1086	SLU 64	0.53	0.85	46.04	-10.6989	0.0229	0.1815
1086	SLU 65	0.53	0.9	46.01	-10.6909	0.0228	0.1813
1086	SLU 66	0.54	0.87	46.82	-10.8694	0.0233	0.1838
1086	SLU 67	0.54	0.9	46.8	-10.8646	0.0233	0.1837
1086	SLU 68	0.54	0.91	46.49	-10.7975	0.0231	0.1829
1086	SLU 69	0.55	0.89	47.31	-10.976	0.0237	0.1853
1086	SLU 70	0.55	0.92	47.28	-10.9712	0.0236	0.1852
1086	SLU 71	0.54	0.87	47.01	-10.9122	0.0235	0.1846
1086	SLU 72	0.54	0.9	46.99	-10.9074	0.0235	0.1845
1086	SLU 73	0.57	1	50.3	-11.6632	0.0255	0.1925
1086	SLU 74	0.57	0.97	51.12	-11.8417	0.026	0.195
1086	SLU 75	0.57	1	51.09	-11.8369	0.0259	0.1949
1086	SLU 76	0.57	1.01	50.78	-11.7698	0.0258	0.1941
1086	SLU 77	0.58	0.98	51.6	-11.9483	0.0263	0.1966
1086	SLU 78	0.58	1.01	51.57	-11.9435	0.0263	0.1964
1086	SLU 79	0.58	0.97	51.3	-11.8845	0.0261	0.1958
1086	SLU 80	0.58	1	51.28	-11.8797	0.0261	0.1957
1086	SLU 81	0.58	0.99	52.18	-12.0879	0.0266	0.1975
1086	SLU 82	0.58	1.02	52.15	-12.0831	0.0266	0.1974
1086	SLU 83	0.59	1	52.66	-12.1945	0.0269	0.1991
1086	SLU 84	0.59	1.03	52.64	-12.1897	0.0269	0.199
1086	SLE RA 1	0.4	0.63	34.48	-8.0177	0.017	0.137
1086	SLE RA 2	0.4	0.66	34.45	-8.0123	0.017	0.1369
1086	SLE RA 3	0.41	0.64	35	-8.1313	0.0173	0.1385
1086	SLE RA 4	0.41	0.66	34.98	-8.1281	0.0173	0.1384
1086	SLE RA 5	0.41	0.67	34.77	-8.0834	0.0172	0.1379
1086	SLE RA 6	0.41	0.65	35.32	-8.2024	0.0175	0.1396
1086	SLE RA 7	0.41	0.67	35.3	-8.1992	0.0175	0.1395
1086	SLE RA 8	0.41	0.64	35.12	-8.1599	0.0174	0.1391
1086	SLE RA 9	0.41	0.66	35.1	-8.1567	0.0174	0.139
1086	SLE RA 10	0.43	0.73	37.31	-8.6605	0.0187	0.1443
1086	SLE RA 11	0.43	0.71	37.86	-8.7795	0.0191	0.146
1086	SLE RA 12	0.43	0.73	37.84	-8.7763	0.0191	0.1459
1086	SLE RA 13	0.43	0.73	37.63	-8.7316	0.0189	0.1454
1086	SLE RA 14	0.43	0.72	38.18	-8.8506	0.0193	0.147
1086	SLE RA 15	0.43	0.74	38.16	-8.8474	0.0193	0.147
1086	SLE RA 16	0.43	0.71	37.98	-8.8081	0.0192	0.1466
1086	SLE RA 17	0.43	0.73	37.97	-8.8049	0.0192	0.1465
1086	SLE RA 18	0.44	0.72	38.56	-8.9437	0.0195	0.1477
1086	SLE RA 19	0.43	0.74	38.55	-8.9405	0.0195	0.1476
1086	SLE RA 20	0.44	0.73	38.89	-9.0148	0.0197	0.1487
1086	SLE RA 21	0.44	0.75	38.87	-9.0116	0.0197	0.1486
1086	SLE FR 1	0.4	0.63	34.48	-8.0177	0.017	0.137
1086	SLE FR 2	0.4	0.63	34.47	-8.0166	0.017	0.137
1086	SLE FR 3	0.4	0.63	34.6	-8.0461	0.0171	0.1374
1086	SLE FR 4	0.41	0.66	35.7	-8.2944	0.0178	0.1402
1086	SLE FR 5	0.41	0.66	35.83	-8.3239	0.0178	0.1406
1086	SLE FR 6	0.42	0.67	36.52	-8.4807	0.0183	0.1423
1086	SLE QP 1	0.4	0.63	34.48	-8.0177	0.017	0.137
1086	SLE QP 2	0.41	0.65	35.7	-8.2955	0.0178	0.1402
1086	SLD 1	4.84	0.81	31.97	-7.5237	0.0238	1.6908
1086	SLD 2	4.37	1.02	31.84	-7.5009	0.0243	1.5263
1086	SLD 3	4.9	-0.18	32.81	-7.7106	0.0251	1.7128
1086	SLD 4	4.43	0.02	32.68	-7.6879	0.0255	1.5483
1086	SLD 5	1.73	2.17	33.34	-7.7844	0.0176	0.6012
1086	SLD 6	1.42	2.31	33.26	-7.7695	0.0179	0.4934
1086	SLD 7	1.94	-1.14	36.12	-8.4076	0.0218	0.6746
1086	SLD 8	1.63	-1.01	36.04	-8.3927	0.0221	0.5668
1086	SLD 9	-0.8	2.32	35.37	-8.1982	0.0135	-0.2864
1086	SLD 10	-1.11	2.45	35.28	-8.1833	0.0138	-0.3942
1086	SLD 11	-0.59	-1	38.15	-8.8214	0.0176	-0.213
1086	SLD 12	-0.9	-0.86	38.07	-8.8065	0.0179	-0.3208
1086	SLD 13	-3.61	1.29	38.73	-8.903	0.01	-1.2679
1086	SLD 14	-4.08	1.49	38.6	-8.8803	0.0104	-1.4324
1086	SLD 15	-3.54	0.29	39.56	-9.09	0.0112	-1.2459
1086	SLD 16	-4.01	0.5	39.43	-9.0673	0.0117	-1.4104
1086	SLV 1	10.76	0.99	27	-6.4955	0.032	3.7662
1086	SLV 2	9.67	1.47	26.7	-6.4426	0.0331	3.3832
1086	SLV 3	10.91	-1.28	28.89	-6.9204	0.0349	3.8175
1086	SLV 4	9.81	-0.79	28.59	-6.8675	0.0359	3.4345

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1086	SLV 5	3.48	4.11	30.27	-7.1202	0.0175	1.2162
1086	SLV 6	2.78	4.42	30.08	-7.0861	0.0182	0.9694
1086	SLV 7	3.97	-3.44	36.58	-8.5364	0.0271	1.3871
1086	SLV 8	3.27	-3.13	36.39	-8.5023	0.0278	1.1403
1086	SLV 9	-2.44	4.44	35.02	-8.0886	0.0078	-0.8599
1086	SLV 10	-3.15	4.75	34.82	-8.0545	0.0085	-1.1067
1086	SLV 11	-1.95	-3.11	41.33	-9.5048	0.0173	-0.689
1086	SLV 12	-2.66	-2.8	41.14	-9.4707	0.018	-0.9358
1086	SLV 13	-8.99	2.1	42.81	-9.7235	-0.0004	-3.1541
1086	SLV 14	-10.09	2.59	42.52	-9.6705	0.0007	-3.5371
1086	SLV 15	-8.84	-0.16	44.71	-10.1483	0.0025	-3.1028
1086	SLV 16	-9.94	0.32	44.41	-10.0954	0.0035	-3.4858
1086	CRTFP Ux+	0	0	0	0	0	0
1086	CRTFP Ux-	0	0	0	0	0	0
1086	CRTFP Uy+	0	0	0	0	0	0
1086	CRTFP Uy-	0	0	0	0	0	0
1087	SLU 1	0.43	0.46	32.96	-7.3096	0.0017	0.145
1087	SLU 2	0.43	0.51	32.92	-7.3021	0.0017	0.1448
1087	SLU 3	0.43	0.48	33.73	-7.4685	0.0018	0.1475
1087	SLU 4	0.43	0.51	33.7	-7.464	0.0018	0.1474
1087	SLU 5	0.43	0.52	33.4	-7.4012	0.0018	0.1465
1087	SLU 6	0.44	0.49	34.2	-7.5676	0.0019	0.1492
1087	SLU 7	0.44	0.52	34.18	-7.5631	0.0019	0.1491
1087	SLU 8	0.44	0.48	33.91	-7.5078	0.0019	0.1484
1087	SLU 9	0.44	0.51	33.89	-7.5033	0.0019	0.1483
1087	SLU 10	0.46	0.6	37.16	-8.2095	0.0022	0.1574
1087	SLU 11	0.47	0.57	37.97	-8.3759	0.0024	0.16
1087	SLU 12	0.47	0.6	37.95	-8.3714	0.0024	0.1599
1087	SLU 13	0.47	0.61	37.64	-8.3086	0.0023	0.1591
1087	SLU 14	0.48	0.58	38.45	-8.475	0.0025	0.1617
1087	SLU 15	0.48	0.61	38.42	-8.4705	0.0025	0.1616
1087	SLU 16	0.47	0.56	38.15	-8.4152	0.0025	0.1609
1087	SLU 17	0.47	0.59	38.13	-8.4107	0.0024	0.1608
1087	SLU 18	0.48	0.58	39.02	-8.6059	0.0025	0.1629
1087	SLU 19	0.48	0.61	39	-8.6014	0.0025	0.1628
1087	SLU 20	0.48	0.59	39.49	-8.705	0.0026	0.1646
1087	SLU 21	0.48	0.62	39.47	-8.7005	0.0026	0.1645
1087	SLU 22	0.47	0.57	37.2	-8.2105	0.0023	0.1582
1087	SLU 23	0.47	0.62	37.16	-8.203	0.0023	0.1581
1087	SLU 24	0.47	0.59	37.97	-8.3695	0.0024	0.1608
1087	SLU 25	0.47	0.62	37.94	-8.3649	0.0024	0.1607
1087	SLU 26	0.47	0.62	37.63	-8.3021	0.0024	0.1598
1087	SLU 27	0.48	0.6	38.44	-8.4685	0.0025	0.1624
1087	SLU 28	0.48	0.63	38.42	-8.464	0.0025	0.1623
1087	SLU 29	0.48	0.58	38.15	-8.4087	0.0025	0.1616
1087	SLU 30	0.48	0.61	38.13	-8.4042	0.0025	0.1615
1087	SLU 31	0.5	0.7	41.4	-9.1104	0.0028	0.1706
1087	SLU 32	0.51	0.67	42.21	-9.2768	0.0029	0.1733
1087	SLU 33	0.51	0.7	42.19	-9.2723	0.0029	0.1732
1087	SLU 34	0.51	0.71	41.88	-9.2095	0.0029	0.1723
1087	SLU 35	0.52	0.68	42.68	-9.3759	0.003	0.175
1087	SLU 36	0.51	0.71	42.66	-9.3714	0.003	0.1749
1087	SLU 37	0.51	0.67	42.39	-9.3161	0.003	0.1741
1087	SLU 38	0.51	0.7	42.37	-9.3116	0.003	0.174
1087	SLU 39	0.52	0.69	43.26	-9.5068	0.0031	0.1761
1087	SLU 40	0.52	0.72	43.23	-9.5023	0.003	0.176
1087	SLU 41	0.52	0.7	43.73	-9.6059	0.0032	0.1778
1087	SLU 42	0.52	0.73	43.71	-9.6014	0.0031	0.1777
1087	SLU 43	0.54	0.57	41.39	-9.1936	0.0021	0.184
1087	SLU 44	0.54	0.62	41.35	-9.1861	0.002	0.1838
1087	SLU 45	0.55	0.59	42.16	-9.3525	0.0022	0.1865
1087	SLU 46	0.55	0.62	42.14	-9.348	0.0022	0.1864
1087	SLU 47	0.55	0.62	41.83	-9.2852	0.0021	0.1855
1087	SLU 48	0.55	0.6	42.64	-9.4516	0.0023	0.1882
1087	SLU 49	0.55	0.63	42.61	-9.4471	0.0023	0.1881
1087	SLU 50	0.55	0.58	42.34	-9.3918	0.0023	0.1874
1087	SLU 51	0.55	0.61	42.32	-9.3873	0.0023	0.1873
1087	SLU 52	0.58	0.7	45.6	-10.0935	0.0026	0.1963
1087	SLU 53	0.59	0.67	46.4	-10.2599	0.0027	0.199
1087	SLU 54	0.59	0.7	46.38	-10.2554	0.0027	0.1989
1087	SLU 55	0.58	0.71	46.07	-10.1926	0.0027	0.198
1087	SLU 56	0.59	0.68	46.88	-10.359	0.0028	0.2007
1087	SLU 57	0.59	0.71	46.86	-10.3545	0.0028	0.2006
1087	SLU 58	0.59	0.67	46.59	-10.2992	0.0028	0.1999
1087	SLU 59	0.59	0.7	46.56	-10.2947	0.0028	0.1998
1087	SLU 60	0.59	0.69	47.45	-10.4899	0.0028	0.2019
1087	SLU 61	0.59	0.72	47.43	-10.4854	0.0028	0.2018
1087	SLU 62	0.6	0.7	47.93	-10.589	0.0029	0.2035
1087	SLU 63	0.6	0.73	47.91	-10.5845	0.0029	0.2034
1087	SLU 64	0.58	0.67	45.63	-10.0945	0.0026	0.1972
1087	SLU 65	0.58	0.72	45.59	-10.087	0.0026	0.197
1087	SLU 66	0.59	0.69	46.4	-10.2535	0.0027	0.1997
1087	SLU 67	0.59	0.72	46.38	-10.2489	0.0027	0.1996
1087	SLU 68	0.58	0.73	46.07	-10.1861	0.0027	0.1987
1087	SLU 69	0.59	0.7	46.88	-10.3526	0.0028	0.2014
1087	SLU 70	0.59	0.73	46.85	-10.348	0.0028	0.2013
1087	SLU 71	0.59	0.69	46.58	-10.2927	0.0028	0.2006
1087	SLU 72	0.59	0.72	46.56	-10.2882	0.0028	0.2005
1087	SLU 73	0.62	0.8	49.83	-10.9944	0.0031	0.2095
1087	SLU 74	0.62	0.78	50.64	-11.1608	0.0033	0.2122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1087	SLU 75	0.62	0.81	50.62	-11.1563	0.0032	0.2121
1087	SLU 76	0.62	0.81	50.31	-11.0935	0.0032	0.2112
1087	SLU 77	0.63	0.78	51.12	-11.2599	0.0034	0.2139
1087	SLU 78	0.63	0.81	51.09	-11.2554	0.0033	0.2138
1087	SLU 79	0.63	0.77	50.82	-11.2001	0.0034	0.2131
1087	SLU 80	0.63	0.8	50.8	-11.1956	0.0033	0.213
1087	SLU 81	0.63	0.79	51.69	-11.3908	0.0034	0.2151
1087	SLU 82	0.63	0.82	51.67	-11.3863	0.0034	0.215
1087	SLU 83	0.64	0.8	52.17	-11.4899	0.0035	0.2168
1087	SLU 84	0.64	0.83	52.14	-11.4854	0.0035	0.2167
1087	SLE RA 1	0.44	0.49	34.17	-7.567	0.0019	0.1488
1087	SLE RA 2	0.44	0.53	34.14	-7.562	0.0019	0.1487
1087	SLE RA 3	0.44	0.51	34.68	-7.673	0.002	0.1505
1087	SLE RA 4	0.44	0.53	34.67	-7.67	0.002	0.1504
1087	SLE RA 5	0.44	0.53	34.46	-7.6281	0.002	0.1498
1087	SLE RA 6	0.45	0.51	35	-7.739	0.002	0.1516
1087	SLE RA 7	0.45	0.53	34.98	-7.736	0.002	0.1515
1087	SLE RA 8	0.44	0.5	34.8	-7.6991	0.002	0.151
1087	SLE RA 9	0.44	0.52	34.79	-7.6961	0.002	0.151
1087	SLE RA 10	0.46	0.58	36.97	-8.1669	0.0022	0.157
1087	SLE RA 11	0.47	0.56	37.51	-8.2779	0.0023	0.1588
1087	SLE RA 12	0.47	0.58	37.49	-8.2749	0.0023	0.1587
1087	SLE RA 13	0.47	0.59	37.29	-8.233	0.0023	0.1581
1087	SLE RA 14	0.47	0.57	37.83	-8.344	0.0024	0.1599
1087	SLE RA 15	0.47	0.59	37.81	-8.3409	0.0024	0.1599
1087	SLE RA 16	0.47	0.56	37.63	-8.3041	0.0024	0.1594
1087	SLE RA 17	0.47	0.58	37.62	-8.3011	0.0024	0.1593
1087	SLE RA 18	0.47	0.57	38.21	-8.4312	0.0024	0.1607
1087	SLE RA 19	0.47	0.59	38.19	-8.4282	0.0024	0.1606
1087	SLE RA 20	0.48	0.58	38.53	-8.4972	0.0025	0.1618
1087	SLE RA 21	0.48	0.6	38.51	-8.4942	0.0025	0.1618
1087	SLE FR 1	0.44	0.49	34.17	-7.567	0.0019	0.1488
1087	SLE FR 2	0.44	0.5	34.16	-7.566	0.0019	0.1488
1087	SLE FR 3	0.44	0.49	34.3	-7.5934	0.0019	0.1492
1087	SLE FR 4	0.45	0.52	35.38	-7.8253	0.002	0.1523
1087	SLE FR 5	0.45	0.52	35.51	-7.8527	0.0021	0.1528
1087	SLE FR 6	0.46	0.53	36.19	-7.9991	0.0021	0.1547
1087	SLE QP 1	0.44	0.49	34.17	-7.567	0.0019	0.1488
1087	SLE QP 2	0.45	0.52	35.38	-7.8263	0.002	0.1524
1087	SLD 1	4.87	0.68	31.42	-7.0517	0.0099	1.7022
1087	SLD 2	4.4	0.9	31.28	-7.0236	0.0105	1.5375
1087	SLD 3	4.93	-0.3	32.25	-7.2381	0.0106	1.7243
1087	SLD 4	4.46	-0.08	32.1	-7.2099	0.0113	1.5595
1087	SLD 5	1.76	2.02	32.97	-7.3163	0.0032	0.6132
1087	SLD 6	1.45	2.17	32.88	-7.2978	0.0036	0.5052
1087	SLD 7	1.97	-1.26	35.71	-7.9375	0.0056	0.6866
1087	SLD 8	1.66	-1.12	35.62	-7.919	0.006	0.5786
1087	SLD 9	-0.77	2.15	35.14	-7.7335	-0.0019	-0.2739
1087	SLD 10	-1.08	2.3	35.05	-7.7151	-0.0015	-0.3819
1087	SLD 11	-0.56	-1.13	37.89	-8.3547	0.0005	-0.2004
1087	SLD 12	-0.87	-0.99	37.79	-8.3363	0.0009	-0.3085
1087	SLD 13	-3.57	1.12	38.66	-8.4426	-0.0072	-1.2548
1087	SLD 14	-4.04	1.34	38.52	-8.4144	-0.0065	-1.4195
1087	SLD 15	-3.5	0.13	39.48	-8.629	-0.0064	-1.2327
1087	SLD 16	-3.98	0.35	39.34	-8.6008	-0.0058	-1.3975
1087	SLV 1	10.79	0.88	26.15	-6.0194	0.0204	3.7767
1087	SLV 2	9.69	1.39	25.81	-5.9538	0.0219	3.393
1087	SLV 3	10.94	-1.37	28.01	-6.4437	0.0221	3.8281
1087	SLV 4	9.84	-0.86	27.68	-6.3781	0.0236	3.4443
1087	SLV 5	3.52	3.95	29.84	-6.652	0.0047	1.2278
1087	SLV 6	2.81	4.28	29.62	-6.6097	0.0057	0.9805
1087	SLV 7	4.01	-3.54	36.06	-8.0663	0.0104	1.3991
1087	SLV 8	3.3	-3.21	35.84	-8.0241	0.0114	1.1518
1087	SLV 9	-2.4	4.25	34.92	-7.6285	-0.0073	-0.8471
1087	SLV 10	-3.11	4.58	34.7	-7.5862	-0.0063	-1.0943
1087	SLV 11	-1.91	-3.24	41.14	-9.0428	-0.0016	-0.6758
1087	SLV 12	-2.62	-2.91	40.93	-9.0006	-0.0006	-0.9231
1087	SLV 13	-8.94	1.89	43.09	-9.2744	-0.0195	-3.1396
1087	SLV 14	-10.04	2.4	42.75	-9.2088	-0.018	-3.5233
1087	SLV 15	-8.8	-0.36	44.95	-9.6987	-0.0178	-3.0883
1087	SLV 16	-9.9	0.15	44.62	-9.6331	-0.0163	-3.472
1087	CRTFP Ux+	0	0	0	0	0	0
1087	CRTFP Ux-	0	0	0	0	0	0
1087	CRTFP Uy+	0	0	0	0	0	0
1087	CRTFP Uy-	0	0	0	0	0	0
1088	SLU 1	0.46	0.33	33.19	-7.27	-0.0166	0.1562
1088	SLU 2	0.46	0.38	33.15	-7.2625	-0.0166	0.156
1088	SLU 3	0.47	0.35	33.96	-7.4273	-0.017	0.1589
1088	SLU 4	0.47	0.38	33.93	-7.4228	-0.017	0.1589
1088	SLU 5	0.46	0.39	33.62	-7.3601	-0.0168	0.1579
1088	SLU 6	0.47	0.36	34.43	-7.5249	-0.0172	0.1608
1088	SLU 7	0.47	0.39	34.41	-7.5204	-0.0172	0.1607
1088	SLU 8	0.47	0.35	34.14	-7.4653	-0.017	0.1598
1088	SLU 9	0.47	0.38	34.12	-7.4608	-0.017	0.1598
1088	SLU 10	0.5	0.45	37.41	-8.161	-0.0188	0.1698
1088	SLU 11	0.51	0.42	38.22	-8.3258	-0.0191	0.1727
1088	SLU 12	0.51	0.45	38.2	-8.3213	-0.0191	0.1726
1088	SLU 13	0.5	0.46	37.89	-8.2587	-0.019	0.1716
1088	SLU 14	0.51	0.43	38.7	-8.4235	-0.0193	0.1746
1088	SLU 15	0.51	0.46	38.68	-8.419	-0.0193	0.1745

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1088	SLU 16	0.51	0.42	38.41	-8.3638	-0.0192	0.1736
1088	SLU 17	0.51	0.45	38.38	-8.3593	-0.0192	0.1735
1088	SLU 18	0.52	0.43	39.28	-8.5536	-0.0197	0.1759
1088	SLU 19	0.52	0.46	39.26	-8.5491	-0.0197	0.1758
1088	SLU 20	0.52	0.44	39.76	-8.6513	-0.0199	0.1777
1088	SLU 21	0.52	0.47	39.73	-8.6468	-0.0199	0.1776
1088	SLU 22	0.5	0.42	37.45	-8.1617	-0.0187	0.1707
1088	SLU 23	0.5	0.47	37.41	-8.1542	-0.0187	0.1705
1088	SLU 24	0.51	0.44	38.22	-8.319	-0.0191	0.1734
1088	SLU 25	0.51	0.47	38.2	-8.3145	-0.0191	0.1734
1088	SLU 26	0.51	0.48	37.88	-8.2518	-0.0189	0.1724
1088	SLU 27	0.51	0.44	38.7	-8.4166	-0.0193	0.1753
1088	SLU 28	0.51	0.47	38.67	-8.4121	-0.0192	0.1752
1088	SLU 29	0.51	0.43	38.4	-8.357	-0.0191	0.1743
1088	SLU 30	0.51	0.46	38.38	-8.3525	-0.0191	0.1742
1088	SLU 31	0.54	0.54	41.68	-9.0527	-0.0209	0.1843
1088	SLU 32	0.55	0.51	42.49	-9.2175	-0.0212	0.1872
1088	SLU 33	0.55	0.54	42.46	-9.213	-0.0212	0.1871
1088	SLU 34	0.55	0.55	42.15	-9.1504	-0.021	0.1861
1088	SLU 35	0.56	0.51	42.96	-9.3152	-0.0214	0.1891
1088	SLU 36	0.55	0.54	42.94	-9.3107	-0.0214	0.189
1088	SLU 37	0.55	0.5	42.67	-9.2555	-0.0212	0.1881
1088	SLU 38	0.55	0.53	42.64	-9.251	-0.0212	0.188
1088	SLU 39	0.56	0.52	43.54	-9.4453	-0.0218	0.1903
1088	SLU 40	0.56	0.55	43.52	-9.4408	-0.0218	0.1903
1088	SLU 41	0.56	0.53	44.02	-9.543	-0.022	0.1922
1088	SLU 42	0.56	0.56	44	-9.5385	-0.022	0.1921
1088	SLU 43	0.58	0.4	41.68	-9.1452	-0.0209	0.1981
1088	SLU 44	0.58	0.45	41.64	-9.1377	-0.0209	0.1979
1088	SLU 45	0.59	0.42	42.45	-9.3025	-0.0213	0.2008
1088	SLU 46	0.59	0.45	42.43	-9.298	-0.0213	0.2007
1088	SLU 47	0.59	0.46	42.12	-9.2354	-0.0211	0.1997
1088	SLU 48	0.59	0.43	42.93	-9.4002	-0.0215	0.2027
1088	SLU 49	0.59	0.46	42.91	-9.3957	-0.0214	0.2026
1088	SLU 50	0.59	0.42	42.63	-9.3405	-0.0213	0.2017
1088	SLU 51	0.59	0.45	42.61	-9.336	-0.0213	0.2016
1088	SLU 52	0.62	0.52	45.91	-10.0363	-0.0231	0.2117
1088	SLU 53	0.63	0.49	46.72	-10.2011	-0.0234	0.2146
1088	SLU 54	0.63	0.52	46.7	-10.1966	-0.0234	0.2145
1088	SLU 55	0.63	0.53	46.38	-10.1339	-0.0232	0.2135
1088	SLU 56	0.63	0.5	47.2	-10.2987	-0.0236	0.2164
1088	SLU 57	0.63	0.53	47.17	-10.2942	-0.0236	0.2163
1088	SLU 58	0.63	0.49	46.9	-10.2391	-0.0234	0.2155
1088	SLU 59	0.63	0.52	46.88	-10.2346	-0.0234	0.2154
1088	SLU 60	0.64	0.5	47.77	-10.4289	-0.024	0.2177
1088	SLU 61	0.64	0.53	47.75	-10.4244	-0.024	0.2176
1088	SLU 62	0.64	0.51	48.25	-10.5265	-0.0242	0.2196
1088	SLU 63	0.64	0.54	48.23	-10.522	-0.0242	0.2195
1088	SLU 64	0.62	0.49	45.94	-10.0369	-0.023	0.2125
1088	SLU 65	0.62	0.54	45.9	-10.0294	-0.023	0.2124
1088	SLU 66	0.63	0.51	46.71	-10.1942	-0.0233	0.2153
1088	SLU 67	0.63	0.54	46.69	-10.1897	-0.0233	0.2152
1088	SLU 68	0.63	0.55	46.38	-10.1271	-0.0232	0.2142
1088	SLU 69	0.64	0.51	47.19	-10.2919	-0.0235	0.2172
1088	SLU 70	0.64	0.54	47.17	-10.2874	-0.0235	0.2171
1088	SLU 71	0.63	0.5	46.89	-10.2322	-0.0234	0.2162
1088	SLU 72	0.63	0.53	46.87	-10.2278	-0.0234	0.2161
1088	SLU 73	0.66	0.61	50.17	-10.928	-0.0251	0.2262
1088	SLU 74	0.67	0.58	50.98	-11.0928	-0.0255	0.2291
1088	SLU 75	0.67	0.61	50.96	-11.0883	-0.0255	0.229
1088	SLU 76	0.67	0.62	50.65	-11.0257	-0.0253	0.228
1088	SLU 77	0.68	0.58	51.46	-11.1904	-0.0257	0.2309
1088	SLU 78	0.68	0.61	51.43	-11.1859	-0.0257	0.2308
1088	SLU 79	0.67	0.57	51.16	-11.1308	-0.0255	0.23
1088	SLU 80	0.67	0.6	51.14	-11.1263	-0.0255	0.2299
1088	SLU 81	0.68	0.59	52.04	-11.3206	-0.0261	0.2322
1088	SLU 82	0.68	0.62	52.01	-11.3161	-0.0261	0.2321
1088	SLU 83	0.69	0.6	52.51	-11.4182	-0.0262	0.2341
1088	SLU 84	0.69	0.63	52.49	-11.4137	-0.0262	0.234
1088	SLE RA 1	0.47	0.36	34.4	-7.5247	-0.0172	0.1603
1088	SLE RA 2	0.47	0.39	34.38	-7.5198	-0.0172	0.1602
1088	SLE RA 3	0.48	0.37	34.92	-7.6296	-0.0175	0.1622
1088	SLE RA 4	0.48	0.39	34.9	-7.6266	-0.0175	0.1621
1088	SLE RA 5	0.47	0.4	34.69	-7.5849	-0.0173	0.1614
1088	SLE RA 6	0.48	0.37	35.24	-7.6947	-0.0176	0.1634
1088	SLE RA 7	0.48	0.39	35.22	-7.6917	-0.0176	0.1633
1088	SLE RA 8	0.48	0.37	35.04	-7.655	-0.0175	0.1628
1088	SLE RA 9	0.48	0.39	35.02	-7.652	-0.0175	0.1627
1088	SLE RA 10	0.5	0.44	37.22	-8.1188	-0.0187	0.1694
1088	SLE RA 11	0.5	0.42	37.76	-8.2286	-0.0189	0.1713
1088	SLE RA 12	0.5	0.44	37.75	-8.2256	-0.0189	0.1713
1088	SLE RA 13	0.5	0.44	37.54	-8.1839	-0.0188	0.1706
1088	SLE RA 14	0.51	0.42	38.08	-8.2937	-0.019	0.1726
1088	SLE RA 15	0.51	0.44	38.06	-8.2907	-0.019	0.1725
1088	SLE RA 16	0.5	0.41	37.88	-8.254	-0.0189	0.1719
1088	SLE RA 17	0.5	0.43	37.87	-8.251	-0.0189	0.1719
1088	SLE RA 18	0.51	0.43	38.47	-8.3805	-0.0193	0.1734
1088	SLE RA 19	0.51	0.45	38.45	-8.3775	-0.0193	0.1734
1088	SLE RA 20	0.51	0.43	38.78	-8.4456	-0.0194	0.1747
1088	SLE RA 21	0.51	0.45	38.77	-8.4426	-0.0194	0.1746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1088	SLE FR 1	0.47	0.36	34.4	-7.5247	-0.0172	0.1603
1088	SLE FR 2	0.47	0.37	34.4	-7.5237	-0.0172	0.1603
1088	SLE FR 3	0.47	0.36	34.53	-7.5508	-0.0173	0.1608
1088	SLE FR 4	0.48	0.39	35.62	-7.7805	-0.0178	0.1642
1088	SLE FR 5	0.48	0.38	35.75	-7.8075	-0.0179	0.1647
1088	SLE FR 6	0.49	0.39	36.43	-7.9526	-0.0182	0.1669
1088	SLE QP 1	0.47	0.36	34.4	-7.5247	-0.0172	0.1603
1088	SLE QP 2	0.48	0.38	35.62	-7.7815	-0.0178	0.1642
1088	SLD 1	4.9	0.55	31.38	-6.9591	-0.0074	1.7123
1088	SLD 2	4.43	0.78	31.21	-6.9219	-0.0066	1.5473
1088	SLD 3	4.96	-0.43	32.2	-7.152	-0.0079	1.7344
1088	SLD 4	4.49	-0.2	32.04	-7.1148	-0.007	1.5694
1088	SLD 5	1.8	1.88	33.12	-7.2487	-0.0141	0.6245
1088	SLD 6	1.49	2.03	33.01	-7.2243	-0.0136	0.5163
1088	SLD 7	2.01	-1.4	35.88	-7.8919	-0.0157	0.6981
1088	SLD 8	1.7	-1.25	35.77	-7.8675	-0.0152	0.59
1088	SLD 9	-0.73	2	35.47	-7.6954	-0.0205	-0.2615
1088	SLD 10	-1.04	2.16	35.36	-7.671	-0.02	-0.3696
1088	SLD 11	-0.52	-1.28	38.23	-8.3387	-0.0221	-0.1878
1088	SLD 12	-0.83	-1.12	38.12	-8.3143	-0.0216	-0.296
1088	SLD 13	-3.53	0.96	39.21	-8.4481	-0.0286	-1.2409
1088	SLD 14	-4	1.19	39.04	-8.4109	-0.0278	-1.4059
1088	SLD 15	-3.46	-0.03	40.03	-8.6411	-0.0291	-1.2188
1088	SLD 16	-3.94	0.2	39.87	-8.6039	-0.0283	-1.3838
1088	SLV 1	10.81	0.76	25.71	-5.8625	0.0066	3.7844
1088	SLV 2	9.71	1.3	25.32	-5.7758	0.0086	3.4002
1088	SLV 3	10.96	-1.48	27.59	-6.3021	0.0055	3.8359
1088	SLV 4	9.86	-0.95	27.2	-6.2154	0.0075	3.4517
1088	SLV 5	3.55	3.8	29.87	-6.554	-0.0092	1.2383
1088	SLV 6	2.84	4.15	29.62	-6.4981	-0.0079	0.9908
1088	SLV 7	4.04	-3.67	36.12	-8.0193	-0.0128	1.41
1088	SLV 8	3.33	-3.33	35.87	-7.9635	-0.0116	1.1624
1088	SLV 9	-2.37	4.08	35.37	-7.5995	-0.0241	-0.8339
1088	SLV 10	-3.07	4.43	35.12	-7.5437	-0.0229	-1.0815
1088	SLV 11	-1.88	-3.39	41.62	-9.0648	-0.0277	-0.6623
1088	SLV 12	-2.58	-3.04	41.37	-9.009	-0.0265	-0.9098
1088	SLV 13	-8.9	1.7	44.05	-9.3475	-0.0431	-3.1232
1088	SLV 14	-10	2.24	43.66	-9.2609	-0.0412	-3.5074
1088	SLV 15	-8.75	-0.54	45.92	-9.7871	-0.0442	-3.0717
1088	SLV 16	-9.85	0	45.53	-9.7005	-0.0423	-3.4559
1088	CRTFP Ux+	0	0	0	0	0	0
1088	CRTFP Ux-	0	0	0	0	0	0
1088	CRTFP Uy+	0	0	0	0	0	0
1088	CRTFP Uy-	0	0	0	0	0	0
1089	SLU 1	0.49	0.21	34.02	-7.6865	-0.0369	0.167
1089	SLU 2	0.49	0.26	33.98	-7.6785	-0.0368	0.1669
1089	SLU 3	0.5	0.23	34.81	-7.8537	-0.0377	0.1701
1089	SLU 4	0.5	0.26	34.79	-7.8489	-0.0377	0.17
1089	SLU 5	0.49	0.27	34.47	-7.7817	-0.0373	0.1689
1089	SLU 6	0.5	0.23	35.3	-7.957	-0.0382	0.172
1089	SLU 7	0.5	0.26	35.28	-7.9522	-0.0382	0.172
1089	SLU 8	0.5	0.22	34.99	-7.8931	-0.0379	0.171
1089	SLU 9	0.5	0.25	34.97	-7.8882	-0.0379	0.1709
1089	SLU 10	0.53	0.32	38.36	-8.6337	-0.0419	0.1819
1089	SLU 11	0.54	0.28	39.19	-8.809	-0.0429	0.185
1089	SLU 12	0.54	0.31	39.17	-8.8042	-0.0428	0.185
1089	SLU 13	0.54	0.32	38.85	-8.737	-0.0425	0.1839
1089	SLU 14	0.55	0.29	39.68	-8.9123	-0.0434	0.187
1089	SLU 15	0.55	0.32	39.66	-8.9074	-0.0433	0.1869
1089	SLU 16	0.54	0.28	39.37	-8.8484	-0.043	0.186
1089	SLU 17	0.54	0.31	39.35	-8.8435	-0.043	0.1859
1089	SLU 18	0.55	0.29	40.28	-9.0512	-0.0442	0.1884
1089	SLU 19	0.55	0.32	40.25	-9.0464	-0.0442	0.1884
1089	SLU 20	0.56	0.3	40.76	-9.1545	-0.0447	0.1904
1089	SLU 21	0.56	0.33	40.74	-9.1496	-0.0447	0.1903
1089	SLU 22	0.53	0.28	38.39	-8.634	-0.0419	0.1828
1089	SLU 23	0.53	0.33	38.35	-8.6259	-0.0418	0.1826
1089	SLU 24	0.54	0.3	39.18	-8.8012	-0.0428	0.1858
1089	SLU 25	0.54	0.33	39.16	-8.7963	-0.0427	0.1857
1089	SLU 26	0.54	0.34	38.84	-8.7292	-0.0423	0.1846
1089	SLU 27	0.55	0.3	39.67	-8.9045	-0.0433	0.1878
1089	SLU 28	0.55	0.33	39.65	-8.8996	-0.0432	0.1877
1089	SLU 29	0.55	0.29	39.37	-8.8405	-0.0429	0.1867
1089	SLU 30	0.55	0.32	39.34	-8.8357	-0.0429	0.1866
1089	SLU 31	0.58	0.39	42.73	-9.5812	-0.047	0.1976
1089	SLU 32	0.59	0.35	43.56	-9.7564	-0.0479	0.2008
1089	SLU 33	0.59	0.38	43.54	-9.7516	-0.0478	0.2007
1089	SLU 34	0.58	0.39	43.22	-9.6845	-0.0475	0.1996
1089	SLU 35	0.59	0.36	44.05	-9.8597	-0.0484	0.2027
1089	SLU 36	0.59	0.39	44.03	-9.8549	-0.0483	0.2027
1089	SLU 37	0.59	0.35	43.75	-9.7958	-0.048	0.2017
1089	SLU 38	0.59	0.38	43.72	-9.791	-0.048	0.2016
1089	SLU 39	0.6	0.36	44.65	-9.9987	-0.0492	0.2042
1089	SLU 40	0.6	0.39	44.63	-9.9938	-0.0492	0.2041
1089	SLU 41	0.6	0.37	45.14	-10.1019	-0.0497	0.2061
1089	SLU 42	0.6	0.4	45.11	-10.0971	-0.0497	0.2061
1089	SLU 43	0.62	0.25	42.73	-9.6676	-0.0462	0.2118
1089	SLU 44	0.62	0.3	42.69	-9.6596	-0.0462	0.2116
1089	SLU 45	0.63	0.27	43.52	-9.8348	-0.0471	0.2148
1089	SLU 46	0.63	0.3	43.5	-9.83	-0.0471	0.2147

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1089	SLU 47	0.62	0.31	43.17	-9.7629	-0.0467	0.2136
1089	SLU 48	0.63	0.27	44.01	-9.9381	-0.0476	0.2168
1089	SLU 49	0.63	0.3	43.98	-9.9333	-0.0476	0.2167
1089	SLU 50	0.63	0.26	43.7	-9.8742	-0.0472	0.2157
1089	SLU 51	0.63	0.29	43.68	-9.8694	-0.0472	0.2156
1089	SLU 52	0.66	0.36	47.07	-10.6149	-0.0513	0.2266
1089	SLU 53	0.67	0.32	47.9	-10.7901	-0.0522	0.2298
1089	SLU 54	0.67	0.35	47.88	-10.7853	-0.0522	0.2297
1089	SLU 55	0.67	0.36	47.56	-10.7181	-0.0518	0.2286
1089	SLU 56	0.68	0.33	48.39	-10.8934	-0.0527	0.2317
1089	SLU 57	0.68	0.36	48.36	-10.8886	-0.0527	0.2317
1089	SLU 58	0.67	0.32	48.08	-10.8295	-0.0523	0.2307
1089	SLU 59	0.67	0.35	48.06	-10.8246	-0.0523	0.2306
1089	SLU 60	0.68	0.33	48.98	-11.0323	-0.0535	0.2332
1089	SLU 61	0.68	0.36	48.96	-11.0275	-0.0535	0.2331
1089	SLU 62	0.69	0.34	49.47	-11.1356	-0.054	0.2351
1089	SLU 63	0.69	0.37	49.45	-11.1308	-0.054	0.2351
1089	SLU 64	0.66	0.32	47.1	-10.6151	-0.0512	0.2275
1089	SLU 65	0.66	0.37	47.06	-10.607	-0.0512	0.2274
1089	SLU 66	0.67	0.34	47.89	-10.7823	-0.0521	0.2305
1089	SLU 67	0.67	0.37	47.87	-10.7775	-0.0521	0.2304
1089	SLU 68	0.67	0.38	47.55	-10.7103	-0.0517	0.2293
1089	SLU 69	0.68	0.34	48.38	-10.8856	-0.0526	0.2325
1089	SLU 70	0.68	0.37	48.35	-10.8807	-0.0526	0.2324
1089	SLU 71	0.68	0.33	48.07	-10.8216	-0.0522	0.2314
1089	SLU 72	0.68	0.36	48.05	-10.8168	-0.0522	0.2314
1089	SLU 73	0.71	0.43	51.44	-11.5623	-0.0563	0.2423
1089	SLU 74	0.72	0.39	52.27	-11.7376	-0.0572	0.2455
1089	SLU 75	0.72	0.42	52.25	-11.7327	-0.0572	0.2454
1089	SLU 76	0.71	0.43	51.93	-11.6656	-0.0568	0.2443
1089	SLU 77	0.72	0.4	52.76	-11.8408	-0.0577	0.2475
1089	SLU 78	0.72	0.43	52.74	-11.836	-0.0577	0.2474
1089	SLU 79	0.72	0.39	52.45	-11.7769	-0.0573	0.2464
1089	SLU 80	0.72	0.42	52.43	-11.7721	-0.0573	0.2463
1089	SLU 81	0.73	0.4	53.36	-11.9798	-0.0585	0.2489
1089	SLU 82	0.73	0.43	53.33	-11.9749	-0.0585	0.2488
1089	SLU 83	0.73	0.41	53.84	-12.083	-0.059	0.2509
1089	SLU 84	0.73	0.44	53.82	-12.0782	-0.059	0.2508
1089	SLE RA 1	0.5	0.23	35.27	-7.9572	-0.0383	0.1715
1089	SLE RA 2	0.5	0.27	35.24	-7.9519	-0.0383	0.1715
1089	SLE RA 3	0.51	0.24	35.8	-8.0687	-0.0389	0.1736
1089	SLE RA 4	0.51	0.26	35.78	-8.0655	-0.0389	0.1735
1089	SLE RA 5	0.5	0.27	35.57	-8.0207	-0.0386	0.1728
1089	SLE RA 6	0.51	0.25	36.12	-8.1375	-0.0392	0.1749
1089	SLE RA 7	0.51	0.27	36.11	-8.1343	-0.0392	0.1748
1089	SLE RA 8	0.51	0.24	35.92	-8.0949	-0.039	0.1742
1089	SLE RA 9	0.51	0.26	35.9	-8.0917	-0.039	0.1741
1089	SLE RA 10	0.53	0.3	38.16	-8.5887	-0.0417	0.1814
1089	SLE RA 11	0.54	0.28	38.72	-8.7055	-0.0423	0.1835
1089	SLE RA 12	0.54	0.3	38.7	-8.7023	-0.0423	0.1835
1089	SLE RA 13	0.53	0.31	38.49	-8.6576	-0.042	0.1828
1089	SLE RA 14	0.54	0.28	39.04	-8.7744	-0.0426	0.1849
1089	SLE RA 15	0.54	0.3	39.03	-8.7712	-0.0426	0.1848
1089	SLE RA 16	0.54	0.28	38.84	-8.7318	-0.0424	0.1842
1089	SLE RA 17	0.54	0.3	38.82	-8.7286	-0.0424	0.1841
1089	SLE RA 18	0.54	0.29	39.44	-8.867	-0.0432	0.1858
1089	SLE RA 19	0.54	0.31	39.42	-8.8638	-0.0432	0.1858
1089	SLE RA 20	0.55	0.29	39.77	-8.9359	-0.0435	0.1871
1089	SLE RA 21	0.55	0.31	39.75	-8.9326	-0.0435	0.1871
1089	SLE FR 1	0.5	0.23	35.27	-7.9572	-0.0383	0.1715
1089	SLE FR 2	0.5	0.24	35.26	-7.9561	-0.0383	0.1715
1089	SLE FR 3	0.5	0.23	35.4	-7.9848	-0.0384	0.1721
1089	SLE FR 4	0.51	0.26	36.52	-8.2291	-0.0398	0.1758
1089	SLE FR 5	0.52	0.25	36.65	-8.2577	-0.0399	0.1763
1089	SLE FR 6	0.52	0.26	37.35	-8.4121	-0.0407	0.1787
1089	SLE QP 1	0.5	0.23	35.27	-7.9572	-0.0383	0.1715
1089	SLE QP 2	0.51	0.25	36.52	-8.2302	-0.0398	0.1758
1089	SLD 1	4.92	0.83	31.91	-7.3109	-0.0268	1.721
1089	SLD 2	4.45	1.07	31.71	-7.2601	-0.0257	1.5559
1089	SLD 3	4.99	-0.16	32.76	-7.517	-0.0279	1.7431
1089	SLD 4	4.51	0.08	32.56	-7.4662	-0.0268	1.5781
1089	SLD 5	1.82	1.88	33.89	-7.6508	-0.0344	0.6351
1089	SLD 6	1.51	2.04	33.76	-7.6174	-0.0337	0.5269
1089	SLD 7	2.04	-1.42	36.71	-8.3379	-0.038	0.7089
1089	SLD 8	1.73	-1.26	36.58	-8.3046	-0.0374	0.6007
1089	SLD 9	-0.7	1.75	36.46	-8.1557	-0.0422	-0.2491
1089	SLD 10	-1.01	1.92	36.33	-8.1224	-0.0415	-0.3573
1089	SLD 11	-0.49	-1.54	39.28	-8.8429	-0.0458	-0.1753
1089	SLD 12	-0.8	-1.38	39.16	-8.8095	-0.0451	-0.2835
1089	SLD 13	-3.49	0.42	40.48	-8.9941	-0.0527	-1.2265
1089	SLD 14	-3.96	0.66	40.28	-8.9433	-0.0517	-1.3915
1089	SLD 15	-3.42	-0.57	41.33	-9.2003	-0.0538	-1.2043
1089	SLD 16	-3.9	-0.33	41.13	-9.1494	-0.0528	-1.3694
1089	SLV 1	10.83	1.57	25.76	-6.085	-0.0093	3.7892
1089	SLV 2	9.73	2.14	25.3	-5.9666	-0.0069	3.4048
1089	SLV 3	10.97	-0.68	27.68	-6.554	-0.0118	3.8408
1089	SLV 4	9.87	-0.11	27.22	-6.4356	-0.0094	3.4564
1089	SLV 5	3.57	3.96	30.45	-6.8956	-0.0273	1.2478
1089	SLV 6	2.86	4.33	30.16	-6.8193	-0.0257	1
1089	SLV 7	4.06	-3.54	36.87	-8.4591	-0.0356	1.4198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1089	SLV 8	3.35	-3.18	36.57	-8.3828	-0.034	1.1721
1089	SLV 9	-2.33	3.68	36.47	-8.0776	-0.0455	-0.8204
1089	SLV 10	-3.04	4.04	36.17	-8.0013	-0.0439	-1.0682
1089	SLV 11	-1.84	-3.83	42.88	-9.641	-0.0538	-0.6484
1089	SLV 12	-2.55	-3.47	42.59	-9.5647	-0.0522	-0.8961
1089	SLV 13	-8.85	0.61	45.82	-10.0247	-0.0701	-3.1048
1089	SLV 14	-9.95	1.18	45.36	-9.9063	-0.0677	-3.4892
1089	SLV 15	-8.7	-1.64	47.74	-10.4938	-0.0726	-3.0532
1089	SLV 16	-9.8	-1.08	47.28	-10.3754	-0.0702	-3.4376
1089	CRTFP Ux+	0	0	0	0	0	0
1089	CRTFP Ux-	0	0	0	0	0	0
1089	CRTFP Uy+	0	0	0	0	0	0
1089	CRTFP Uy-	0	0	0	0	0	0
1090	SLU 1	0.52	0.11	35.49	-8.587	-0.0571	0.1776
1090	SLU 2	0.52	0.16	35.45	-8.5777	-0.057	0.1775
1090	SLU 3	0.53	0.12	36.32	-8.7763	-0.0585	0.1809
1090	SLU 4	0.53	0.15	36.29	-8.7707	-0.0584	0.1808
1090	SLU 5	0.52	0.16	35.96	-8.6941	-0.0578	0.1796
1090	SLU 6	0.53	0.12	36.83	-8.8927	-0.0593	0.183
1090	SLU 7	0.53	0.15	36.8	-8.8871	-0.0592	0.1829
1090	SLU 8	0.53	0.11	36.51	-8.8197	-0.0587	0.1818
1090	SLU 9	0.53	0.14	36.48	-8.8142	-0.0587	0.1818
1090	SLU 10	0.56	0.2	40.04	-9.6594	-0.0651	0.1936
1090	SLU 11	0.57	0.16	40.91	-9.8579	-0.0665	0.197
1090	SLU 12	0.57	0.19	40.88	-9.8524	-0.0665	0.1969
1090	SLU 13	0.57	0.21	40.55	-9.7758	-0.0659	0.1957
1090	SLU 14	0.58	0.16	41.41	-9.9743	-0.0673	0.1991
1090	SLU 15	0.58	0.19	41.39	-9.9688	-0.0673	0.199
1090	SLU 16	0.58	0.15	41.09	-9.9014	-0.0668	0.1979
1090	SLU 17	0.58	0.19	41.07	-9.8959	-0.0667	0.1979
1090	SLU 18	0.58	0.17	42.04	-10.1322	-0.0686	0.2006
1090	SLU 19	0.58	0.2	42.02	-10.1267	-0.0686	0.2005
1090	SLU 20	0.59	0.17	42.55	-10.2486	-0.0694	0.2027
1090	SLU 21	0.59	0.2	42.53	-10.2431	-0.0694	0.2027
1090	SLU 22	0.57	0.16	40.07	-9.6592	-0.065	0.1945
1090	SLU 23	0.57	0.22	40.02	-9.65	-0.0649	0.1944
1090	SLU 24	0.58	0.18	40.89	-9.8485	-0.0664	0.1978
1090	SLU 25	0.57	0.21	40.87	-9.843	-0.0663	0.1977
1090	SLU 26	0.57	0.22	40.53	-9.7664	-0.0657	0.1965
1090	SLU 27	0.58	0.18	41.4	-9.9649	-0.0672	0.1999
1090	SLU 28	0.58	0.21	41.38	-9.9594	-0.0672	0.1998
1090	SLU 29	0.58	0.17	41.08	-9.892	-0.0666	0.1987
1090	SLU 30	0.58	0.2	41.06	-9.8864	-0.0666	0.1987
1090	SLU 31	0.61	0.26	44.61	-10.7317	-0.073	0.2105
1090	SLU 32	0.62	0.22	45.48	-10.9302	-0.0745	0.2139
1090	SLU 33	0.62	0.25	45.46	-10.9247	-0.0744	0.2138
1090	SLU 34	0.62	0.26	45.12	-10.848	-0.0738	0.2126
1090	SLU 35	0.63	0.22	45.99	-11.0466	-0.0753	0.216
1090	SLU 36	0.63	0.25	45.96	-11.041	-0.0752	0.2159
1090	SLU 37	0.63	0.21	45.67	-10.9736	-0.0747	0.2148
1090	SLU 38	0.62	0.24	45.64	-10.9681	-0.0747	0.2148
1090	SLU 39	0.63	0.22	46.62	-11.2044	-0.0765	0.2175
1090	SLU 40	0.63	0.26	46.59	-11.1989	-0.0765	0.2174
1090	SLU 41	0.64	0.23	47.13	-11.3208	-0.0773	0.2196
1090	SLU 42	0.64	0.26	47.1	-11.3153	-0.0773	0.2196
1090	SLU 43	0.65	0.12	44.57	-10.7954	-0.0715	0.2251
1090	SLU 44	0.65	0.18	44.53	-10.7862	-0.0714	0.2249
1090	SLU 45	0.66	0.13	45.4	-10.9847	-0.0729	0.2283
1090	SLU 46	0.66	0.17	45.37	-10.9792	-0.0728	0.2283
1090	SLU 47	0.66	0.18	45.04	-10.9026	-0.0722	0.2271
1090	SLU 48	0.67	0.14	45.91	-11.1011	-0.0737	0.2304
1090	SLU 49	0.67	0.17	45.88	-11.0956	-0.0736	0.2304
1090	SLU 50	0.67	0.13	45.59	-11.0282	-0.0731	0.2293
1090	SLU 51	0.67	0.16	45.56	-11.0227	-0.0731	0.2292
1090	SLU 52	0.7	0.22	49.12	-11.8679	-0.0795	0.2411
1090	SLU 53	0.71	0.18	49.98	-12.0664	-0.0809	0.2444
1090	SLU 54	0.71	0.21	49.96	-12.0609	-0.0809	0.2444
1090	SLU 55	0.71	0.22	49.62	-11.9843	-0.0803	0.2432
1090	SLU 56	0.72	0.18	50.49	-12.1828	-0.0817	0.2466
1090	SLU 57	0.72	0.21	50.47	-12.1773	-0.0817	0.2465
1090	SLU 58	0.71	0.17	50.17	-12.1099	-0.0812	0.2454
1090	SLU 59	0.71	0.2	50.15	-12.1043	-0.0811	0.2453
1090	SLU 60	0.72	0.18	51.12	-12.3407	-0.083	0.2481
1090	SLU 61	0.72	0.21	51.1	-12.3351	-0.083	0.248
1090	SLU 62	0.73	0.18	51.63	-12.4571	-0.0838	0.2502
1090	SLU 63	0.73	0.22	51.61	-12.4515	-0.0838	0.2501
1090	SLU 64	0.7	0.18	49.14	-11.8677	-0.0794	0.242
1090	SLU 65	0.7	0.23	49.1	-11.8584	-0.0793	0.2419
1090	SLU 66	0.71	0.19	49.97	-12.057	-0.0808	0.2452
1090	SLU 67	0.71	0.22	49.95	-12.0514	-0.0807	0.2452
1090	SLU 68	0.71	0.23	49.61	-11.9748	-0.0801	0.244
1090	SLU 69	0.72	0.19	50.48	-12.1734	-0.0816	0.2474
1090	SLU 70	0.72	0.22	50.46	-12.1678	-0.0816	0.2473
1090	SLU 71	0.72	0.18	50.16	-12.1004	-0.081	0.2462
1090	SLU 72	0.72	0.21	50.14	-12.0949	-0.081	0.2461
1090	SLU 73	0.75	0.27	53.69	-12.9401	-0.0874	0.258
1090	SLU 74	0.76	0.23	54.56	-13.1386	-0.0889	0.2614
1090	SLU 75	0.76	0.26	54.53	-13.1331	-0.0888	0.2613
1090	SLU 76	0.76	0.27	54.2	-13.0565	-0.0882	0.2601
1090	SLU 77	0.77	0.23	55.07	-13.255	-0.0897	0.2635

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1090	SLU 78	0.77	0.26	55.04	-13.2495	-0.0896	0.2634
1090	SLU 79	0.76	0.22	54.75	-13.1821	-0.0891	0.2623
1090	SLU 80	0.76	0.25	54.72	-13.1766	-0.0891	0.2623
1090	SLU 81	0.77	0.24	55.7	-13.4129	-0.0909	0.265
1090	SLU 82	0.77	0.27	55.67	-13.4074	-0.0909	0.2649
1090	SLU 83	0.78	0.24	56.21	-13.5293	-0.0917	0.2671
1090	SLU 84	0.78	0.27	56.18	-13.5238	-0.0917	0.267
1090	SLE RA 1	0.53	0.13	36.8	-8.8933	-0.0593	0.1824
1090	SLE RA 2	0.53	0.16	36.77	-8.8872	-0.0593	0.1823
1090	SLE RA 3	0.54	0.13	37.35	-9.0195	-0.0603	0.1846
1090	SLE RA 4	0.54	0.15	37.33	-9.0158	-0.0602	0.1845
1090	SLE RA 5	0.53	0.16	37.11	-8.9648	-0.0598	0.1837
1090	SLE RA 6	0.54	0.13	37.69	-9.0971	-0.0608	0.186
1090	SLE RA 7	0.54	0.15	37.67	-9.0934	-0.0608	0.186
1090	SLE RA 8	0.54	0.13	37.48	-9.0485	-0.0604	0.1852
1090	SLE RA 9	0.54	0.15	37.46	-9.0448	-0.0604	0.1852
1090	SLE RA 10	0.56	0.19	39.83	-9.6083	-0.0647	0.1931
1090	SLE RA 11	0.57	0.16	40.41	-9.7406	-0.0656	0.1953
1090	SLE RA 12	0.57	0.18	40.39	-9.737	-0.0656	0.1953
1090	SLE RA 13	0.57	0.19	40.17	-9.6859	-0.0652	0.1945
1090	SLE RA 14	0.57	0.16	40.75	-9.8182	-0.0662	0.1968
1090	SLE RA 15	0.57	0.18	40.73	-9.8145	-0.0662	0.1967
1090	SLE RA 16	0.57	0.16	40.53	-9.7696	-0.0658	0.196
1090	SLE RA 17	0.57	0.18	40.52	-9.7659	-0.0658	0.1959
1090	SLE RA 18	0.58	0.17	41.17	-9.9235	-0.067	0.1978
1090	SLE RA 19	0.57	0.19	41.15	-9.9198	-0.067	0.1977
1090	SLE RA 20	0.58	0.17	41.51	-10.0011	-0.0676	0.1992
1090	SLE RA 21	0.58	0.19	41.49	-9.9974	-0.0675	0.1991
1090	SLE FR 1	0.53	0.13	36.8	-8.8933	-0.0593	0.1824
1090	SLE FR 2	0.53	0.13	36.79	-8.8921	-0.0593	0.1824
1090	SLE FR 3	0.53	0.13	36.93	-8.9243	-0.0595	0.183
1090	SLE FR 4	0.54	0.14	38.1	-9.2011	-0.0616	0.187
1090	SLE FR 5	0.55	0.14	38.24	-9.2334	-0.0619	0.1876
1090	SLE FR 6	0.55	0.15	38.98	-9.4084	-0.0632	0.1901
1090	SLE QP 1	0.53	0.13	36.8	-8.8933	-0.0593	0.1824
1090	SLE QP 2	0.54	0.14	38.11	-9.2024	-0.0616	0.187
1090	SLD 1	4.94	0.74	33.05	-8.1347	-0.046	1.7283
1090	SLD 2	4.47	0.99	32.82	-8.065	-0.0447	1.5633
1090	SLD 3	5.01	-0.26	33.94	-8.3626	-0.0479	1.7505
1090	SLD 4	4.53	-0.01	33.71	-8.2929	-0.0466	1.5854
1090	SLD 5	1.85	1.79	35.29	-8.5488	-0.0543	0.6451
1090	SLD 6	1.54	1.96	35.13	-8.5031	-0.0535	0.5369
1090	SLD 7	2.06	-1.54	38.25	-9.3085	-0.0606	0.719
1090	SLD 8	1.75	-1.38	38.1	-9.2628	-0.0598	0.6108
1090	SLD 9	-0.67	1.65	38.12	-9.1419	-0.0635	-0.2368
1090	SLD 10	-0.98	1.82	37.97	-9.0962	-0.0627	-0.345
1090	SLD 11	-0.45	-1.68	41.08	-9.9016	-0.0698	-0.1629
1090	SLD 12	-0.76	-1.51	40.93	-9.856	-0.069	-0.2711
1090	SLD 13	-3.45	0.28	42.51	-10.1118	-0.0767	-1.2114
1090	SLD 14	-3.92	0.54	42.27	-10.0421	-0.0754	-1.3765
1090	SLD 15	-3.38	-0.72	43.4	-10.3397	-0.0786	-1.1892
1090	SLD 16	-3.86	-0.46	43.16	-10.2701	-0.0773	-1.3543
1090	SLV 1	10.83	1.51	26.31	-6.7107	-0.0251	3.7914
1090	SLV 2	9.73	2.11	25.76	-6.5485	-0.0221	3.4069
1090	SLV 3	10.98	-0.77	28.32	-7.2281	-0.0294	3.843
1090	SLV 4	9.88	-0.17	27.78	-7.0659	-0.0264	3.4586
1090	SLV 5	3.6	3.9	31.6	-7.6981	-0.0446	1.2561
1090	SLV 6	2.89	4.29	31.25	-7.5936	-0.0427	1.0084
1090	SLV 7	4.09	-3.69	38.32	-9.4227	-0.059	1.4284
1090	SLV 8	3.38	-3.3	37.97	-9.3182	-0.0571	1.1807
1090	SLV 9	-2.29	3.58	38.24	-9.0865	-0.0662	-0.8066
1090	SLV 10	-3	3.97	37.89	-8.982	-0.0642	-1.0544
1090	SLV 11	-1.8	-4.01	44.96	-10.8111	-0.0806	-0.6344
1090	SLV 12	-2.51	-3.62	44.61	-10.7066	-0.0786	-0.8821
1090	SLV 13	-8.79	0.44	48.44	-11.3388	-0.0969	-3.0846
1090	SLV 14	-9.89	1.04	47.89	-11.1766	-0.0939	-3.469
1090	SLV 15	-8.64	-1.83	50.45	-11.8562	-0.1012	-3.0329
1090	SLV 16	-9.75	-1.23	49.91	-11.694	-0.0982	-3.4173
1090	CRTFP Ux+	0	0	0	0	0	0
1090	CRTFP Ux-	0	0	0	0	0	0
1090	CRTFP Uy+	0	0	0	0	0	0
1090	CRTFP Uy-	0	0	0	0	0	0
1091	SLU 1	0.54	0.03	37.56	-9.9633	-0.075	0.1878
1091	SLU 2	0.54	0.08	37.52	-9.9524	-0.0749	0.1877
1091	SLU 3	0.55	0.04	38.44	-10.1868	-0.0768	0.1913
1091	SLU 4	0.55	0.07	38.42	-10.1802	-0.0768	0.1913
1091	SLU 5	0.55	0.08	38.06	-10.0892	-0.076	0.19
1091	SLU 6	0.56	0.04	38.98	-10.3236	-0.0779	0.1936
1091	SLU 7	0.56	0.07	38.95	-10.3171	-0.0779	0.1935
1091	SLU 8	0.56	0.03	38.64	-10.237	-0.0772	0.1924
1091	SLU 9	0.56	0.06	38.61	-10.2304	-0.0771	0.1923
1091	SLU 10	0.59	0.11	42.4	-11.229	-0.0856	0.2049
1091	SLU 11	0.6	0.07	43.32	-11.4634	-0.0875	0.2085
1091	SLU 12	0.6	0.1	43.3	-11.4568	-0.0875	0.2085
1091	SLU 13	0.6	0.11	42.94	-11.3658	-0.0867	0.2072
1091	SLU 14	0.61	0.07	43.86	-11.6002	-0.0886	0.2108
1091	SLU 15	0.61	0.1	43.84	-11.5937	-0.0886	0.2107
1091	SLU 16	0.61	0.06	43.52	-11.5136	-0.0879	0.2095
1091	SLU 17	0.61	0.09	43.5	-11.5071	-0.0878	0.2095
1091	SLU 18	0.61	0.07	44.54	-11.787	-0.0903	0.2124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1091	SLU 19	0.61	0.11	44.51	-11.7805	-0.0902	0.2123
1091	SLU 20	0.62	0.07	45.08	-11.9239	-0.0914	0.2146
1091	SLU 21	0.62	0.11	45.05	-11.9173	-0.0913	0.2146
1091	SLU 22	0.6	0.07	42.43	-11.2282	-0.0855	0.2058
1091	SLU 23	0.59	0.13	42.38	-11.2173	-0.0854	0.2057
1091	SLU 24	0.61	0.08	43.31	-11.4517	-0.0874	0.2094
1091	SLU 25	0.61	0.11	43.28	-11.4451	-0.0873	0.2093
1091	SLU 26	0.6	0.13	42.92	-11.3542	-0.0865	0.208
1091	SLU 27	0.61	0.08	43.84	-11.5885	-0.0885	0.2116
1091	SLU 28	0.61	0.11	43.82	-11.582	-0.0884	0.2116
1091	SLU 29	0.61	0.07	43.5	-11.5019	-0.0877	0.2104
1091	SLU 30	0.61	0.1	43.48	-11.4954	-0.0877	0.2103
1091	SLU 31	0.64	0.16	47.27	-12.4939	-0.0961	0.2229
1091	SLU 32	0.66	0.11	48.19	-12.7283	-0.0981	0.2266
1091	SLU 33	0.66	0.14	48.16	-12.7217	-0.098	0.2265
1091	SLU 34	0.65	0.16	47.8	-12.6308	-0.0972	0.2252
1091	SLU 35	0.66	0.11	48.73	-12.8652	-0.0992	0.2288
1091	SLU 36	0.66	0.14	48.7	-12.8586	-0.0991	0.2288
1091	SLU 37	0.66	0.1	48.39	-12.7785	-0.0984	0.2276
1091	SLU 38	0.66	0.13	48.36	-12.772	-0.0984	0.2275
1091	SLU 39	0.67	0.12	49.4	-13.052	-0.1008	0.2304
1091	SLU 40	0.67	0.15	49.38	-13.0454	-0.1008	0.2303
1091	SLU 41	0.67	0.12	49.94	-13.1888	-0.1019	0.2327
1091	SLU 42	0.67	0.15	49.91	-13.1823	-0.1018	0.2326
1091	SLU 43	0.69	0.02	47.17	-12.5186	-0.0939	0.238
1091	SLU 44	0.69	0.08	47.12	-12.5077	-0.0938	0.2379
1091	SLU 45	0.7	0.03	48.04	-12.7421	-0.0957	0.2415
1091	SLU 46	0.7	0.06	48.02	-12.7355	-0.0957	0.2414
1091	SLU 47	0.69	0.08	47.66	-12.6445	-0.0949	0.2401
1091	SLU 48	0.7	0.03	48.58	-12.8789	-0.0968	0.2438
1091	SLU 49	0.7	0.06	48.56	-12.8724	-0.0968	0.2437
1091	SLU 50	0.7	0.02	48.24	-12.7923	-0.0961	0.2425
1091	SLU 51	0.7	0.06	48.22	-12.7857	-0.096	0.2425
1091	SLU 52	0.74	0.11	52	-13.7843	-0.1045	0.2551
1091	SLU 53	0.75	0.06	52.92	-14.0187	-0.1064	0.2587
1091	SLU 54	0.75	0.09	52.9	-14.0121	-0.1064	0.2586
1091	SLU 55	0.74	0.11	52.54	-13.9211	-0.1056	0.2573
1091	SLU 56	0.75	0.06	53.46	-14.1555	-0.1075	0.261
1091	SLU 57	0.75	0.09	53.44	-14.149	-0.1075	0.2609
1091	SLU 58	0.75	0.05	53.12	-14.0689	-0.1068	0.2597
1091	SLU 59	0.75	0.09	53.1	-14.0624	-0.1067	0.2596
1091	SLU 60	0.76	0.07	54.14	-14.3423	-0.1092	0.2625
1091	SLU 61	0.76	0.1	54.11	-14.3358	-0.1091	0.2625
1091	SLU 62	0.77	0.07	54.68	-14.4792	-0.1103	0.2648
1091	SLU 63	0.77	0.1	54.65	-14.4726	-0.1102	0.2647
1091	SLU 64	0.74	0.07	52.03	-13.7835	-0.1044	0.256
1091	SLU 65	0.74	0.12	51.99	-13.7726	-0.1043	0.2559
1091	SLU 66	0.75	0.07	52.91	-14.007	-0.1063	0.2595
1091	SLU 67	0.75	0.11	52.88	-14.0004	-0.1062	0.2595
1091	SLU 68	0.75	0.12	52.52	-13.9095	-0.1054	0.2582
1091	SLU 69	0.76	0.07	53.45	-14.1438	-0.1074	0.2618
1091	SLU 70	0.76	0.11	53.42	-14.1373	-0.1073	0.2617
1091	SLU 71	0.75	0.07	53.11	-14.0572	-0.1066	0.2605
1091	SLU 72	0.75	0.1	53.08	-14.0507	-0.1065	0.2605
1091	SLU 73	0.79	0.15	56.87	-15.0492	-0.115	0.2731
1091	SLU 74	0.8	0.1	57.79	-15.2836	-0.117	0.2767
1091	SLU 75	0.8	0.14	57.76	-15.277	-0.1169	0.2767
1091	SLU 76	0.8	0.15	57.41	-15.1861	-0.1161	0.2754
1091	SLU 77	0.81	0.1	58.33	-15.4205	-0.1181	0.279
1091	SLU 78	0.81	0.14	58.3	-15.4139	-0.118	0.2789
1091	SLU 79	0.8	0.1	57.99	-15.3338	-0.1173	0.2777
1091	SLU 80	0.8	0.13	57.96	-15.3273	-0.1172	0.2777
1091	SLU 81	0.81	0.11	59	-15.6073	-0.1197	0.2806
1091	SLU 82	0.81	0.14	58.98	-15.6007	-0.1196	0.2805
1091	SLU 83	0.82	0.11	59.54	-15.7441	-0.1208	0.2828
1091	SLU 84	0.82	0.14	59.52	-15.7376	-0.1207	0.2828
1091	SLE RA 1	0.56	0.04	38.95	-10.3247	-0.078	0.193
1091	SLE RA 2	0.56	0.08	38.92	-10.3174	-0.0779	0.1929
1091	SLE RA 3	0.56	0.05	39.54	-10.4737	-0.0792	0.1953
1091	SLE RA 4	0.56	0.07	39.52	-10.4693	-0.0792	0.1953
1091	SLE RA 5	0.56	0.08	39.28	-10.4087	-0.0787	0.1944
1091	SLE RA 6	0.57	0.05	39.9	-10.5649	-0.08	0.1968
1091	SLE RA 7	0.57	0.07	39.88	-10.5606	-0.0799	0.1968
1091	SLE RA 8	0.57	0.04	39.67	-10.5072	-0.0795	0.196
1091	SLE RA 9	0.57	0.06	39.65	-10.5028	-0.0794	0.196
1091	SLE RA 10	0.59	0.1	42.18	-11.1685	-0.0851	0.2044
1091	SLE RA 11	0.6	0.07	42.79	-11.3248	-0.0864	0.2068
1091	SLE RA 12	0.6	0.09	42.78	-11.3204	-0.0863	0.2067
1091	SLE RA 13	0.6	0.1	42.54	-11.2597	-0.0858	0.2059
1091	SLE RA 14	0.6	0.07	43.15	-11.416	-0.0871	0.2083
1091	SLE RA 15	0.6	0.09	43.13	-11.4116	-0.0871	0.2082
1091	SLE RA 16	0.6	0.06	42.93	-11.3583	-0.0866	0.2074
1091	SLE RA 17	0.6	0.08	42.91	-11.3539	-0.0866	0.2074
1091	SLE RA 18	0.61	0.07	43.6	-11.5405	-0.0882	0.2093
1091	SLE RA 19	0.61	0.09	43.59	-11.5362	-0.0882	0.2093
1091	SLE RA 20	0.61	0.07	43.96	-11.6318	-0.0889	0.2108
1091	SLE RA 21	0.61	0.09	43.94	-11.6274	-0.0889	0.2108
1091	SLE FR 1	0.56	0.04	38.95	-10.3247	-0.078	0.193
1091	SLE FR 2	0.56	0.05	38.95	-10.3233	-0.078	0.193
1091	SLE FR 3	0.56	0.04	39.1	-10.3612	-0.0783	0.1936

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1091	SLE FR 4	0.57	0.06	40.34	-10.688	-0.0811	0.1979
1091	SLE FR 5	0.57	0.05	40.49	-10.726	-0.0814	0.1985
1091	SLE FR 6	0.58	0.06	41.28	-10.9326	-0.0831	0.2012
1091	SLE QP 1	0.56	0.04	38.95	-10.3247	-0.078	0.193
1091	SLE QP 2	0.57	0.05	40.35	-10.6895	-0.0811	0.1979
1091	SLD 1	4.96	0.68	34.77	-9.4195	-0.0631	1.7344
1091	SLD 2	4.49	0.95	34.5	-9.3259	-0.0616	1.5694
1091	SLD 3	5.02	-0.34	35.72	-9.6809	-0.0658	1.7566
1091	SLD 4	4.55	-0.07	35.45	-9.5873	-0.0643	1.5915
1091	SLD 5	1.88	1.73	37.29	-9.9286	-0.072	0.6545
1091	SLD 6	1.57	1.91	37.1	-9.8673	-0.071	0.5464
1091	SLD 7	2.09	-1.66	40.45	-10.8	-0.0807	0.7284
1091	SLD 8	1.78	-1.48	40.27	-10.7387	-0.0798	0.6203
1091	SLD 9	-0.63	1.58	40.43	-10.6402	-0.0824	-0.2245
1091	SLD 10	-0.94	1.76	40.25	-10.5789	-0.0814	-0.3327
1091	SLD 11	-0.42	-1.81	43.59	-11.5117	-0.0912	-0.1506
1091	SLD 12	-0.73	-1.63	43.41	-11.4503	-0.0902	-0.2588
1091	SLD 13	-3.41	0.17	45.25	-11.7916	-0.0979	-1.1958
1091	SLD 14	-3.88	0.44	44.97	-11.698	-0.0963	-1.3608
1091	SLD 15	-3.34	-0.85	46.2	-12.053	-0.1005	-1.1736
1091	SLD 16	-3.82	-0.57	45.92	-11.9595	-0.099	-1.3386
1091	SLV 1	10.83	1.48	27.33	-7.7258	-0.0392	3.791
1091	SLV 2	9.73	2.12	26.69	-7.5079	-0.0357	3.4067
1091	SLV 3	10.98	-0.83	29.48	-8.318	-0.0452	3.8426
1091	SLV 4	9.88	-0.19	28.84	-8.1001	-0.0417	3.4583
1091	SLV 5	3.62	3.88	33.29	-8.9397	-0.06	1.2636
1091	SLV 6	2.91	4.29	32.88	-8.7993	-0.0577	1.016
1091	SLV 7	4.11	-3.83	40.46	-10.9138	-0.08	1.4359
1091	SLV 8	3.4	-3.42	40.05	-10.7733	-0.0777	1.1882
1091	SLV 9	-2.25	3.52	40.65	-10.6056	-0.0844	-0.7924
1091	SLV 10	-2.96	3.93	40.23	-10.4652	-0.0821	-1.0401
1091	SLV 11	-1.76	-4.19	47.82	-12.5797	-0.1044	-0.6202
1091	SLV 12	-2.47	-3.78	47.4	-12.4392	-0.1021	-0.8679
1091	SLV 13	-8.73	0.3	51.86	-13.2788	-0.1205	-3.0626
1091	SLV 14	-9.84	0.93	51.21	-13.0609	-0.1169	-3.4469
1091	SLV 15	-8.59	-2.02	54.01	-13.871	-0.1265	-3.0109
1091	SLV 16	-9.69	-1.38	53.36	-13.6531	-0.1229	-3.3952
1091	CRTFP Ux+	0	0	0	0	0	0
1091	CRTFP Ux-	0	0	0	0	0	0
1091	CRTFP Uy+	0	0	0	0	0	0
1091	CRTFP Uy-	0	0	0	0	0	0
1092	SLU 1	0.57	-0.02	40.13	-11.784	-0.0879	0.1979
1092	SLU 2	0.57	0.04	40.08	-11.7709	-0.0878	0.1978
1092	SLU 3	0.58	-0.01	41.07	-12.0529	-0.09	0.2017
1092	SLU 4	0.58	0.02	41.04	-12.0451	-0.09	0.2017
1092	SLU 5	0.58	0.03	40.65	-11.9351	-0.0891	0.2003
1092	SLU 6	0.59	-0.01	41.64	-12.2172	-0.0913	0.2041
1092	SLU 7	0.59	0.02	41.61	-12.2093	-0.0913	0.2041
1092	SLU 8	0.58	-0.02	41.28	-12.1125	-0.0905	0.2028
1092	SLU 9	0.58	0.01	41.25	-12.1046	-0.0904	0.2027
1092	SLU 10	0.62	0.06	45.33	-13.306	-0.1003	0.2161
1092	SLU 11	0.63	0.01	46.31	-13.5881	-0.1026	0.2199
1092	SLU 12	0.63	0.04	46.29	-13.5802	-0.1026	0.2199
1092	SLU 13	0.63	0.06	45.9	-13.4703	-0.1016	0.2185
1092	SLU 14	0.64	0.01	46.89	-13.7523	-0.1039	0.2223
1092	SLU 15	0.64	0.04	46.86	-13.7445	-0.1039	0.2223
1092	SLU 16	0.64	0	46.52	-13.6476	-0.1031	0.221
1092	SLU 17	0.64	0.03	46.5	-13.6398	-0.103	0.2209
1092	SLU 18	0.64	0.01	47.62	-13.9771	-0.1059	0.224
1092	SLU 19	0.64	0.04	47.59	-13.9692	-0.1058	0.2239
1092	SLU 20	0.65	0.01	48.2	-14.1413	-0.1072	0.2264
1092	SLU 21	0.65	0.04	48.17	-14.1334	-0.1071	0.2263
1092	SLU 22	0.62	0.01	45.35	-13.3048	-0.1003	0.2171
1092	SLU 23	0.62	0.07	45.3	-13.2917	-0.1002	0.217
1092	SLU 24	0.63	0.02	46.29	-13.5738	-0.1024	0.2208
1092	SLU 25	0.63	0.05	46.26	-13.5659	-0.1024	0.2208
1092	SLU 26	0.63	0.07	45.88	-13.456	-0.1014	0.2194
1092	SLU 27	0.64	0.02	46.87	-13.738	-0.1037	0.2233
1092	SLU 28	0.64	0.05	46.84	-13.7302	-0.1037	0.2232
1092	SLU 29	0.64	0.01	46.5	-13.6333	-0.1029	0.2219
1092	SLU 30	0.64	0.04	46.47	-13.6255	-0.1028	0.2218
1092	SLU 31	0.68	0.09	50.55	-14.8269	-0.1127	0.2352
1092	SLU 32	0.69	0.04	51.54	-15.1089	-0.115	0.239
1092	SLU 33	0.69	0.07	51.51	-15.1011	-0.115	0.239
1092	SLU 34	0.68	0.09	51.13	-14.9911	-0.114	0.2376
1092	SLU 35	0.69	0.04	52.11	-15.2732	-0.1163	0.2415
1092	SLU 36	0.69	0.07	52.09	-15.2653	-0.1162	0.2414
1092	SLU 37	0.69	0.03	51.75	-15.1685	-0.1154	0.2401
1092	SLU 38	0.69	0.06	51.72	-15.1606	-0.1154	0.24
1092	SLU 39	0.7	0.04	52.85	-15.4979	-0.1183	0.2431
1092	SLU 40	0.7	0.08	52.82	-15.4901	-0.1182	0.243
1092	SLU 41	0.71	0.04	53.42	-15.6622	-0.1196	0.2455
1092	SLU 42	0.71	0.08	53.39	-15.6543	-0.1195	0.2454
1092	SLU 43	0.72	-0.04	50.37	-14.7978	-0.11	0.2508
1092	SLU 44	0.72	0.02	50.32	-14.7846	-0.1099	0.2507
1092	SLU 45	0.73	-0.03	51.31	-15.0667	-0.1122	0.2546
1092	SLU 46	0.73	0	51.28	-15.0588	-0.1121	0.2545
1092	SLU 47	0.73	0.02	50.9	-14.9489	-0.1112	0.2531
1092	SLU 48	0.74	-0.03	51.89	-15.2309	-0.1134	0.257
1092	SLU 49	0.74	0	51.86	-15.2231	-0.1134	0.2569

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1092	SLU 50	0.73	-0.04	51.52	-15.1262	-0.1126	0.2556
1092	SLU 51	0.73	-0.01	51.49	-15.1184	-0.1125	0.2556
1092	SLU 52	0.77	0.04	55.57	-16.3198	-0.1225	0.2689
1092	SLU 53	0.78	-0.01	56.56	-16.6018	-0.1247	0.2728
1092	SLU 54	0.78	0.02	56.53	-16.594	-0.1247	0.2727
1092	SLU 55	0.78	0.04	56.15	-16.484	-0.1238	0.2713
1092	SLU 56	0.79	-0.01	57.14	-16.7661	-0.126	0.2752
1092	SLU 57	0.79	0.02	57.11	-16.7582	-0.126	0.2751
1092	SLU 58	0.79	-0.02	56.77	-16.6614	-0.1252	0.2738
1092	SLU 59	0.79	0.02	56.74	-16.6535	-0.1251	0.2738
1092	SLU 60	0.8	-0.01	57.87	-16.9908	-0.128	0.2768
1092	SLU 61	0.8	0.03	57.84	-16.983	-0.1279	0.2767
1092	SLU 62	0.8	-0.01	58.44	-17.1551	-0.1293	0.2792
1092	SLU 63	0.8	0.03	58.42	-17.1472	-0.1292	0.2791
1092	SLU 64	0.78	0	55.6	-16.3186	-0.1224	0.2699
1092	SLU 65	0.78	0.05	55.55	-16.3055	-0.1223	0.2698
1092	SLU 66	0.79	0	56.54	-16.5875	-0.1245	0.2737
1092	SLU 67	0.79	0.04	56.51	-16.5797	-0.1245	0.2736
1092	SLU 68	0.78	0.05	56.13	-16.4697	-0.1236	0.2722
1092	SLU 69	0.79	0	57.11	-16.7518	-0.1258	0.2761
1092	SLU 70	0.79	0.03	57.09	-16.7439	-0.1258	0.276
1092	SLU 71	0.79	-0.01	56.75	-16.6471	-0.125	0.2747
1092	SLU 72	0.79	0.03	56.72	-16.6392	-0.1249	0.2747
1092	SLU 73	0.83	0.07	60.8	-17.8407	-0.1349	0.288
1092	SLU 74	0.84	0.02	61.79	-18.1227	-0.1371	0.2919
1092	SLU 75	0.84	0.06	61.76	-18.1148	-0.1371	0.2918
1092	SLU 76	0.83	0.07	61.37	-18.0049	-0.1361	0.2904
1092	SLU 77	0.85	0.02	62.36	-18.2869	-0.1384	0.2943
1092	SLU 78	0.85	0.06	62.33	-18.2791	-0.1384	0.2942
1092	SLU 79	0.84	0.01	62	-18.1822	-0.1376	0.2929
1092	SLU 80	0.84	0.05	61.97	-18.1744	-0.1375	0.2929
1092	SLU 81	0.85	0.03	63.09	-18.5117	-0.1404	0.2959
1092	SLU 82	0.85	0.06	63.06	-18.5038	-0.1403	0.2958
1092	SLU 83	0.86	0.03	63.67	-18.6759	-0.1417	0.2983
1092	SLU 84	0.86	0.06	63.64	-18.6681	-0.1416	0.2983
1092	SLE RA 1	0.58	-0.01	41.62	-12.2185	-0.0914	0.2034
1092	SLE RA 2	0.58	0.03	41.59	-12.2098	-0.0913	0.2033
1092	SLE RA 3	0.59	-0.01	42.25	-12.3978	-0.0929	0.2059
1092	SLE RA 4	0.59	0.02	42.23	-12.3926	-0.0928	0.2059
1092	SLE RA 5	0.59	0.03	41.97	-12.3193	-0.0922	0.205
1092	SLE RA 6	0.6	-0.01	42.63	-12.5073	-0.0937	0.2075
1092	SLE RA 7	0.6	0.02	42.61	-12.5021	-0.0937	0.2075
1092	SLE RA 8	0.59	-0.01	42.39	-12.4375	-0.0931	0.2066
1092	SLE RA 9	0.59	0.01	42.37	-12.4323	-0.0931	0.2066
1092	SLE RA 10	0.62	0.04	45.09	-13.2332	-0.0997	0.2155
1092	SLE RA 11	0.63	0.01	45.74	-13.4212	-0.1013	0.2181
1092	SLE RA 12	0.63	0.03	45.73	-13.416	-0.1012	0.218
1092	SLE RA 13	0.62	0.04	45.47	-13.3427	-0.1006	0.2171
1092	SLE RA 14	0.63	0.01	46.13	-13.5307	-0.1021	0.2197
1092	SLE RA 15	0.63	0.03	46.11	-13.5255	-0.1021	0.2196
1092	SLE RA 16	0.63	0	45.88	-13.4609	-0.1015	0.2188
1092	SLE RA 17	0.63	0.02	45.87	-13.4557	-0.1015	0.2187
1092	SLE RA 18	0.63	0.01	46.62	-13.6806	-0.1034	0.2207
1092	SLE RA 19	0.63	0.03	46.6	-13.6753	-0.1034	0.2207
1092	SLE RA 20	0.64	0.01	47	-13.7901	-0.1043	0.2224
1092	SLE RA 21	0.64	0.03	46.98	-13.7848	-0.1042	0.2223
1092	SLE FR 1	0.58	-0.01	41.62	-12.2185	-0.0914	0.2034
1092	SLE FR 2	0.58	0	41.61	-12.2168	-0.0914	0.2034
1092	SLE FR 3	0.59	-0.01	41.77	-12.2623	-0.0918	0.2041
1092	SLE FR 4	0.6	0	43.11	-12.6554	-0.095	0.2086
1092	SLE FR 5	0.6	0	43.27	-12.7009	-0.0954	0.2093
1092	SLE FR 6	0.61	0	44.12	-12.9495	-0.0974	0.2121
1092	SLE QP 1	0.58	-0.01	41.62	-12.2185	-0.0914	0.2034
1092	SLE QP 2	0.6	0	43.12	-12.6571	-0.095	0.2086
1092	SLD 1	4.97	0.64	36.97	-11.1209	-0.0756	1.7394
1092	SLD 2	4.5	0.93	36.64	-11.0001	-0.0739	1.5745
1092	SLD 3	5.04	-0.39	37.99	-11.4279	-0.0788	1.7615
1092	SLD 4	4.56	-0.1	37.66	-11.3071	-0.0771	1.5966
1092	SLD 5	1.9	1.71	39.77	-11.7521	-0.0846	0.6636
1092	SLD 6	1.59	1.9	39.56	-11.673	-0.0835	0.5555
1092	SLD 7	2.11	-1.74	43.2	-12.7754	-0.0953	0.7373
1092	SLD 8	1.8	-1.55	42.98	-12.6962	-0.0942	0.6292
1092	SLD 9	-0.6	1.54	43.25	-12.618	-0.0959	-0.212
1092	SLD 10	-0.91	1.73	43.04	-12.5389	-0.0947	-0.3201
1092	SLD 11	-0.39	-1.91	46.68	-13.6413	-0.1065	-0.1383
1092	SLD 12	-0.7	-1.71	46.46	-13.5621	-0.1054	-0.2464
1092	SLD 13	-3.36	0.09	48.57	-14.0072	-0.113	-1.1794
1092	SLD 14	-3.84	0.39	48.24	-13.8864	-0.1113	-1.3443
1092	SLD 15	-3.3	-0.94	49.6	-14.3142	-0.1162	-1.1573
1092	SLD 16	-3.77	-0.65	49.27	-14.1934	-0.1145	-1.3222
1092	SLV 1	10.83	1.47	28.75	-9.0719	-0.0496	3.7883
1092	SLV 2	9.73	2.15	27.99	-8.7906	-0.0456	3.4043
1092	SLV 3	10.98	-0.88	31.08	-9.7667	-0.0569	3.8399
1092	SLV 4	9.87	-0.2	30.32	-9.4854	-0.0529	3.4558
1092	SLV 5	3.64	3.9	35.41	-10.5763	-0.071	1.2705
1092	SLV 6	2.93	4.33	34.92	-10.395	-0.0684	1.023
1092	SLV 7	4.12	-3.96	43.17	-12.8922	-0.0953	1.4423
1092	SLV 8	3.41	-3.52	42.68	-12.7109	-0.0928	1.1948
1092	SLV 9	-2.22	3.51	43.56	-12.6034	-0.0973	-0.7776
1092	SLV 10	-2.93	3.95	43.07	-12.4221	-0.0947	-1.0251

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1092	SLV 11	-1.73	-4.34	51.32	-14.9193	-0.1216	-0.6058
1092	SLV 12	-2.44	-3.9	50.83	-14.738	-0.119	-0.8533
1092	SLV 13	-8.67	0.19	55.92	-15.8289	-0.1371	-3.0386
1092	SLV 14	-9.78	0.87	55.16	-15.5476	-0.1331	-3.4227
1092	SLV 15	-8.53	-2.16	58.25	-16.5237	-0.1444	-2.9871
1092	SLV 16	-9.63	-1.48	57.48	-16.2424	-0.1404	-3.3711
1092	CRTFP Ux+	0	0	0	0	0	0
1092	CRTFP Ux-	0	0	0	0	0	0
1092	CRTFP Uy+	0	0	0	0	0	0
1092	CRTFP Uy-	0	0	0	0	0	0
1093	SLU 1	0.67	-0.04	49.19	-10.8526	1.6716	0.1607
1093	SLU 2	0.67	0.02	49.13	-10.8402	1.6702	0.1578
1093	SLU 3	0.69	-0.04	50.35	-11.1059	1.7107	0.1636
1093	SLU 4	0.69	0	50.31	-11.0984	1.7098	0.1619
1093	SLU 5	0.68	0.02	49.84	-10.9948	1.6943	0.1599
1093	SLU 6	0.7	-0.04	51.06	-11.2605	1.7348	0.1657
1093	SLU 7	0.7	0	51.02	-11.253	1.7339	0.164
1093	SLU 8	0.69	-0.05	50.61	-11.1618	1.7198	0.1649
1093	SLU 9	0.69	-0.01	50.57	-11.1543	1.7189	0.1632
1093	SLU 10	0.74	0.04	55.59	-12.2686	1.8833	0.172
1093	SLU 11	0.75	-0.02	56.81	-12.5342	1.9238	0.1778
1093	SLU 12	0.75	0.02	56.78	-12.5268	1.923	0.176
1093	SLU 13	0.75	0.04	56.3	-12.4232	1.9074	0.1741
1093	SLU 14	0.76	-0.02	57.52	-12.6888	1.9479	0.1799
1093	SLU 15	0.76	0.02	57.49	-12.6814	1.947	0.1781
1093	SLU 16	0.76	-0.03	57.07	-12.5901	1.9329	0.1791
1093	SLU 17	0.76	0.01	57.03	-12.5827	1.932	0.1773
1093	SLU 18	0.77	-0.02	58.42	-12.8931	1.9761	0.181
1093	SLU 19	0.77	0.02	58.38	-12.8857	1.9752	0.1792
1093	SLU 20	0.78	-0.02	59.13	-13.0477	2.0002	0.1831
1093	SLU 21	0.77	0.02	59.09	-13.0403	1.9993	0.1813
1093	SLU 22	0.74	-0.01	55.62	-12.271	1.8846	0.1751
1093	SLU 23	0.74	0.05	55.56	-12.2586	1.8832	0.1722
1093	SLU 24	0.76	-0.01	56.79	-12.5242	1.9236	0.178
1093	SLU 25	0.75	0.03	56.75	-12.5168	1.9228	0.1762
1093	SLU 26	0.75	0.05	56.27	-12.4132	1.9072	0.1743
1093	SLU 27	0.76	-0.01	57.49	-12.6788	1.9477	0.18
1093	SLU 28	0.76	0.03	57.46	-12.6714	1.9469	0.1783
1093	SLU 29	0.76	-0.02	57.04	-12.5801	1.9327	0.1793
1093	SLU 30	0.76	0.02	57.01	-12.5727	1.9319	0.1775
1093	SLU 31	0.81	0.07	62.03	-13.687	2.0963	0.1864
1093	SLU 32	0.82	0.01	63.25	-13.9526	2.1368	0.1921
1093	SLU 33	0.82	0.05	63.21	-13.9452	2.1359	0.1904
1093	SLU 34	0.81	0.07	62.74	-13.8415	2.1204	0.1884
1093	SLU 35	0.83	0.01	63.96	-14.1072	2.1609	0.1942
1093	SLU 36	0.83	0.05	63.92	-14.0998	2.16	0.1925
1093	SLU 37	0.82	0	63.51	-14.0085	2.1459	0.1934
1093	SLU 38	0.82	0.04	63.47	-14.0011	2.145	0.1917
1093	SLU 39	0.83	0.01	64.86	-14.3115	2.1891	0.1953
1093	SLU 40	0.83	0.05	64.82	-14.3041	2.1882	0.1936
1093	SLU 41	0.84	0.01	65.57	-14.4661	2.2131	0.1974
1093	SLU 42	0.84	0.05	65.53	-14.4587	2.2123	0.1957
1093	SLU 43	0.85	-0.06	61.74	-13.6221	2.1001	0.204
1093	SLU 44	0.85	0	61.68	-13.6097	2.0987	0.2011
1093	SLU 45	0.87	-0.06	62.9	-13.8754	2.1391	0.2069
1093	SLU 46	0.87	-0.02	62.86	-13.8679	2.1383	0.2052
1093	SLU 47	0.86	0	62.39	-13.7643	2.1227	0.2032
1093	SLU 48	0.88	-0.06	63.61	-14.0299	2.1632	0.209
1093	SLU 49	0.88	-0.02	63.57	-14.0225	2.1624	0.2073
1093	SLU 50	0.87	-0.07	63.16	-13.9313	2.1482	0.2082
1093	SLU 51	0.87	-0.03	63.12	-13.9238	2.1474	0.2065
1093	SLU 52	0.92	0.02	68.14	-15.0381	2.3118	0.2153
1093	SLU 53	0.93	-0.04	69.36	-15.3037	2.3523	0.2211
1093	SLU 54	0.93	0	69.33	-15.2963	2.3514	0.2193
1093	SLU 55	0.93	0.01	68.85	-15.1927	2.3359	0.2174
1093	SLU 56	0.94	-0.04	70.07	-15.4583	2.3764	0.2232
1093	SLU 57	0.94	-0.01	70.03	-15.4509	2.3755	0.2214
1093	SLU 58	0.94	-0.05	69.62	-15.3596	2.3614	0.2224
1093	SLU 59	0.93	-0.01	69.58	-15.3522	2.3605	0.2206
1093	SLU 60	0.95	-0.04	70.97	-15.6626	2.4046	0.2243
1093	SLU 61	0.95	0	70.93	-15.6552	2.4037	0.2225
1093	SLU 62	0.95	-0.04	71.68	-15.8172	2.4286	0.2264
1093	SLU 63	0.95	0	71.64	-15.8098	2.4278	0.2246
1093	SLU 64	0.92	-0.03	68.17	-15.0405	2.313	0.2184
1093	SLU 65	0.92	0.03	68.11	-15.0281	2.3116	0.2155
1093	SLU 66	0.93	-0.03	69.33	-15.2937	2.3521	0.2213
1093	SLU 67	0.93	0.01	69.3	-15.2863	2.3513	0.2195
1093	SLU 68	0.93	0.03	68.82	-15.1827	2.3357	0.2176
1093	SLU 69	0.94	-0.03	70.04	-15.4483	2.3762	0.2234
1093	SLU 70	0.94	0.01	70.01	-15.4409	2.3753	0.2216
1093	SLU 71	0.94	-0.04	69.59	-15.3496	2.3612	0.2226
1093	SLU 72	0.94	0	69.56	-15.3422	2.3603	0.2208
1093	SLU 73	0.98	0.05	74.58	-16.4565	2.5248	0.2297
1093	SLU 74	1	-0.01	75.8	-16.7221	2.5652	0.2354
1093	SLU 75	1	0.03	75.76	-16.7147	2.5644	0.2337
1093	SLU 76	0.99	0.04	75.29	-16.611	2.5488	0.2317
1093	SLU 77	1.01	-0.01	76.51	-16.8767	2.5893	0.2375
1093	SLU 78	1.01	0.02	76.47	-16.8692	2.5885	0.2358
1093	SLU 79	1	-0.02	76.06	-16.778	2.5743	0.2367
1093	SLU 80	1	0.02	76.02	-16.7706	2.5735	0.235

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1093	SLU 81	1.01	-0.01	77.41	-17.081	2.6175	0.2386
1093	SLU 82	1.01	0.03	77.37	-17.0736	2.6167	0.2369
1093	SLU 83	1.02	-0.01	78.12	-17.2356	2.6416	0.2407
1093	SLU 84	1.02	0.03	78.08	-17.2281	2.6408	0.239
1093	SLE RA 1	0.69	-0.03	51.03	-11.2579	1.7325	0.1648
1093	SLE RA 2	0.69	0.01	50.99	-11.2496	1.7315	0.1629
1093	SLE RA 3	0.7	-0.03	51.8	-11.4267	1.7585	0.1668
1093	SLE RA 4	0.7	0	51.78	-11.4217	1.7579	0.1656
1093	SLE RA 5	0.7	0.01	51.46	-11.3527	1.7476	0.1643
1093	SLE RA 6	0.71	-0.03	52.27	-11.5298	1.7746	0.1681
1093	SLE RA 7	0.71	-0.01	52.25	-11.5248	1.774	0.167
1093	SLE RA 8	0.71	-0.04	51.97	-11.464	1.7646	0.1676
1093	SLE RA 9	0.7	-0.01	51.95	-11.459	1.764	0.1665
1093	SLE RA 10	0.74	0.02	55.3	-12.2018	1.8736	0.1724
1093	SLE RA 11	0.75	-0.02	56.11	-12.3789	1.9006	0.1762
1093	SLE RA 12	0.75	0.01	56.09	-12.374	1.9	0.175
1093	SLE RA 13	0.74	0.02	55.77	-12.3049	1.8897	0.1737
1093	SLE RA 14	0.75	-0.02	56.58	-12.482	1.9166	0.1776
1093	SLE RA 15	0.75	0.01	56.56	-12.477	1.9161	0.1764
1093	SLE RA 16	0.75	-0.02	56.28	-12.4162	1.9067	0.1771
1093	SLE RA 17	0.75	0	56.26	-12.4113	1.9061	0.1759
1093	SLE RA 18	0.76	-0.02	57.18	-12.6182	1.9354	0.1783
1093	SLE RA 19	0.75	0.01	57.16	-12.6133	1.9349	0.1772
1093	SLE RA 20	0.76	-0.02	57.65	-12.7213	1.9515	0.1797
1093	SLE RA 21	0.76	0.01	57.63	-12.7163	1.9509	0.1786
1093	SLE FR 1	0.69	-0.03	51.03	-11.2579	1.7325	0.1648
1093	SLE FR 2	0.69	-0.02	51.02	-11.2562	1.7323	0.1645
1093	SLE FR 3	0.7	-0.03	51.22	-11.2991	1.7389	0.1654
1093	SLE FR 4	0.71	-0.02	52.86	-11.6643	1.7932	0.1685
1093	SLE FR 5	0.71	-0.03	53.06	-11.7072	1.7998	0.1694
1093	SLE FR 6	0.72	-0.02	54.1	-11.938	1.834	0.1716
1093	SLE QP 1	0.69	-0.03	51.03	-11.2579	1.7325	0.1648
1093	SLE QP 2	0.71	-0.03	52.87	-11.666	1.7934	0.1689
1093	SLD 1	5.66	0.71	44.88	-10.0747	1.5387	1.3226
1093	SLD 2	5.12	1.06	44.46	-9.9712	1.5334	1.1804
1093	SLD 3	5.73	-0.48	46.17	-10.3545	1.5703	1.3739
1093	SLD 4	5.19	-0.13	45.75	-10.2509	1.565	1.2317
1093	SLD 5	2.19	1.94	48.59	-10.7827	1.6699	0.4625
1093	SLD 6	1.83	2.17	48.32	-10.7148	1.6664	0.3693
1093	SLD 7	2.42	-2.03	52.89	-11.7152	1.7754	0.6334
1093	SLD 8	2.07	-1.8	52.62	-11.6473	1.7719	0.5402
1093	SLD 9	-0.64	1.75	53.13	-11.6846	1.8148	-0.2024
1093	SLD 10	-1	1.98	52.85	-11.6167	1.8113	-0.2956
1093	SLD 11	-0.41	-2.22	57.43	-12.6171	1.9203	-0.0315
1093	SLD 12	-0.76	-1.99	57.15	-12.5492	1.9168	-0.1247
1093	SLD 13	-3.77	0.07	59.99	-13.081	2.0217	-0.8939
1093	SLD 14	-4.31	0.43	59.58	-12.9774	2.0164	-1.0361
1093	SLD 15	-3.7	-1.12	61.28	-13.3608	2.0533	-0.8426
1093	SLD 16	-4.24	-0.77	60.86	-13.2572	2.048	-0.9848
1093	SLV 1	12.29	1.66	34.21	-7.9509	1.1981	2.868
1093	SLV 2	11.03	2.48	33.24	-7.7096	1.1858	2.5368
1093	SLV 3	12.46	-1.05	37.13	-8.5844	1.2703	2.9851
1093	SLV 4	11.19	-0.23	36.16	-8.3432	1.2579	2.654
1093	SLV 5	4.15	4.45	43.01	-9.632	1.5075	0.8579
1093	SLV 6	3.34	4.98	42.38	-9.4766	1.4996	0.6445
1093	SLV 7	4.7	-4.59	52.75	-11.744	1.748	1.2485
1093	SLV 8	3.89	-4.06	52.12	-11.5885	1.74	1.0351
1093	SLV 9	-2.46	4.01	53.62	-11.7434	1.8467	-0.6973
1093	SLV 10	-3.28	4.53	52.99	-11.5879	1.8388	-0.9107
1093	SLV 11	-1.91	-5.03	63.36	-13.8554	2.0872	-0.3067
1093	SLV 12	-2.73	-4.51	62.74	-13.6999	2.0792	-0.5202
1093	SLV 13	-9.77	0.18	69.59	-14.9887	2.3288	-2.3162
1093	SLV 14	-11.03	0.99	68.61	-14.7475	2.3165	-2.6474
1093	SLV 15	-9.6	-2.54	72.51	-15.6223	2.4009	-2.199
1093	SLV 16	-10.87	-1.72	71.54	-15.3811	2.3886	-2.5302
1093	CRTFP Ux+	0	0	0	0	0	0
1093	CRTFP Ux-	0	0	0	0	0	0
1093	CRTFP Uy+	0	0	0	0	0	0
1093	CRTFP Uy-	0	0	0	0	0	0
18451	SLU 1	0.22	-10.4	29.19	4.9369	0.0472	-0.0017
18451	SLU 2	0.22	8.7	29.12	4.7642	0.0478	-0.0017
18451	SLU 3	0.35	-12.74	36.87	5.4178	0.0882	-0.0022
18451	SLU 4	0.35	-1.28	36.82	5.3141	0.0885	-0.0022
18451	SLU 5	0.38	8.87	37.96	5.2105	0.097	-0.0022
18451	SLU 6	0.5	-12.56	45.71	5.8641	0.1374	-0.0026
18451	SLU 7	0.5	-1.1	45.67	5.7604	0.1377	-0.0026
18451	SLU 8	0.54	-10.05	46.87	5.8295	0.1457	-0.0026
18451	SLU 9	0.54	1.41	46.83	5.7259	0.146	-0.0026
18451	SLU 10	0.17	0.45	31.64	5.4803	0.0449	-0.0021
18451	SLU 11	0.29	-20.99	39.39	6.1338	0.0853	-0.0025
18451	SLU 12	0.29	-9.53	39.35	6.0302	0.0856	-0.0025
18451	SLU 13	0.32	0.62	40.48	5.9266	0.0941	-0.0026
18451	SLU 14	0.44	-20.81	48.23	6.5801	0.1345	-0.003
18451	SLU 15	0.45	-9.35	48.19	6.4765	0.1349	-0.003
18451	SLU 16	0.48	-18.3	49.4	6.5456	0.1428	-0.003
18451	SLU 17	0.48	-6.84	49.35	6.442	0.1431	-0.003
18451	SLU 18	0.14	-22.19	32.79	5.9599	0.0431	-0.0022
18451	SLU 19	0.14	-10.73	32.75	5.8562	0.0434	-0.0023
18451	SLU 20	0.3	-22.01	41.63	6.4062	0.0923	-0.0027
18451	SLU 21	0.3	-10.55	41.59	6.3025	0.0927	-0.0027

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18451	SLU 22	0.33	-22.08	36.73	5.9077	0.0767	-0.0022
18451	SLU 23	0.34	-2.98	36.66	5.735	0.0773	-0.0022
18451	SLU 24	0.46	-24.41	44.41	6.3886	0.1177	-0.0026
18451	SLU 25	0.46	-12.95	44.37	6.2849	0.118	-0.0026
18451	SLU 26	0.49	-2.8	45.5	6.1813	0.1265	-0.0027
18451	SLU 27	0.61	-24.24	53.25	6.8349	0.1669	-0.0031
18451	SLU 28	0.62	-12.78	53.21	6.7312	0.1673	-0.0031
18451	SLU 29	0.65	-21.73	54.42	6.8004	0.1752	-0.0031
18451	SLU 30	0.65	-10.27	54.37	6.6967	0.1755	-0.0031
18451	SLU 31	0.28	-11.23	39.18	6.4511	0.0744	-0.0026
18451	SLU 32	0.4	-32.66	46.93	7.1046	0.1148	-0.003
18451	SLU 33	0.4	-21.2	46.89	7.001	0.1152	-0.003
18451	SLU 34	0.43	-11.05	48.03	6.8974	0.1236	-0.003
18451	SLU 35	0.56	-32.49	55.78	7.5509	0.1641	-0.0034
18451	SLU 36	0.56	-21.03	55.73	7.4473	0.1644	-0.0034
18451	SLU 37	0.59	-29.98	56.94	7.5164	0.1723	-0.0035
18451	SLU 38	0.59	-18.52	56.9	7.4128	0.1726	-0.0035
18451	SLU 39	0.25	-33.86	40.34	6.9307	0.0726	-0.0027
18451	SLU 40	0.25	-22.4	40.29	6.827	0.073	-0.0027
18451	SLU 41	0.41	-33.69	49.18	7.377	0.1219	-0.0032
18451	SLU 42	0.41	-22.23	49.14	7.2733	0.1222	-0.0032
18451	SLU 43	0.25	-9.52	35.36	6.0852	0.0513	-0.0021
18451	SLU 44	0.25	9.58	35.29	5.9125	0.0518	-0.0021
18451	SLU 45	0.37	-11.86	43.04	6.566	0.0922	-0.0025
18451	SLU 46	0.38	-0.39	42.99	6.4624	0.0925	-0.0025
18451	SLU 47	0.41	9.76	44.13	6.3588	0.101	-0.0026
18451	SLU 48	0.53	-11.68	51.88	7.0123	0.1414	-0.003
18451	SLU 49	0.53	-0.22	51.84	6.9087	0.1418	-0.003
18451	SLU 50	0.56	-9.17	53.04	6.9778	0.1497	-0.003
18451	SLU 51	0.57	2.29	53	6.8741	0.15	-0.003
18451	SLU 52	0.19	1.33	37.81	6.6285	0.0489	-0.0025
18451	SLU 53	0.32	-20.11	45.56	7.282	0.0893	-0.0029
18451	SLU 54	0.32	-8.64	45.52	7.1784	0.0897	-0.0029
18451	SLU 55	0.35	1.51	46.65	7.0748	0.0981	-0.0029
18451	SLU 56	0.47	-19.93	54.4	7.7283	0.1386	-0.0033
18451	SLU 57	0.47	-8.47	54.36	7.6247	0.1389	-0.0033
18451	SLU 58	0.51	-17.42	55.57	7.6938	0.1468	-0.0033
18451	SLU 59	0.51	-5.96	55.52	7.5902	0.1472	-0.0034
18451	SLU 60	0.17	-21.3	38.96	7.1081	0.0471	-0.0026
18451	SLU 61	0.17	-9.84	38.92	7.0045	0.0475	-0.0026
18451	SLU 62	0.32	-21.13	47.8	7.5544	0.0964	-0.0031
18451	SLU 63	0.32	-9.67	47.76	7.4508	0.0967	-0.0031
18451	SLU 64	0.36	-21.2	42.9	7.056	0.0808	-0.0026
18451	SLU 65	0.36	-2.09	42.83	6.8833	0.0813	-0.0026
18451	SLU 66	0.49	-23.53	50.58	7.5368	0.1217	-0.003
18451	SLU 67	0.49	-12.07	50.54	7.4332	0.1221	-0.003
18451	SLU 68	0.52	-1.92	51.67	7.3296	0.1306	-0.003
18451	SLU 69	0.64	-23.36	59.42	7.9831	0.171	-0.0034
18451	SLU 70	0.64	-11.9	59.38	7.8795	0.1713	-0.0034
18451	SLU 71	0.68	-20.85	60.59	7.9486	0.1792	-0.0035
18451	SLU 72	0.68	-9.39	60.54	7.845	0.1796	-0.0035
18451	SLU 73	0.31	-10.34	45.35	7.5993	0.0785	-0.0029
18451	SLU 74	0.43	-31.78	53.1	8.2529	0.1189	-0.0033
18451	SLU 75	0.43	-20.32	53.06	8.1492	0.1192	-0.0033
18451	SLU 76	0.46	-10.17	54.2	8.0456	0.1277	-0.0034
18451	SLU 77	0.58	-31.61	61.95	8.6992	0.1681	-0.0038
18451	SLU 78	0.59	-20.15	61.9	8.5955	0.1684	-0.0038
18451	SLU 79	0.62	-29.1	63.11	8.6646	0.1764	-0.0038
18451	SLU 80	0.62	-17.64	63.07	8.561	0.1767	-0.0038
18451	SLU 81	0.28	-32.98	46.51	8.0789	0.0767	-0.0031
18451	SLU 82	0.28	-21.52	46.46	7.9753	0.077	-0.0031
18451	SLU 83	0.44	-32.81	55.35	8.5252	0.1259	-0.0035
18451	SLU 84	0.44	-21.35	55.31	8.4216	0.1262	-0.0035
18451	SLE RA 1	0.25	-13.74	31.34	5.2143	0.0557	-0.0019
18451	SLE RA 2	0.25	-1	31.3	5.0992	0.056	-0.0019
18451	SLE RA 3	0.34	-15.3	36.46	5.5349	0.083	-0.0021
18451	SLE RA 4	0.34	-7.65	36.43	5.4658	0.0832	-0.0022
18451	SLE RA 5	0.36	-0.89	37.19	5.3967	0.0888	-0.0022
18451	SLE RA 6	0.44	-15.18	42.36	5.8324	0.1158	-0.0024
18451	SLE RA 7	0.44	-7.54	42.33	5.7633	0.116	-0.0024
18451	SLE RA 8	0.46	-13.51	43.13	5.8094	0.1213	-0.0025
18451	SLE RA 9	0.46	-5.86	43.1	5.7403	0.1215	-0.0025
18451	SLE RA 10	0.22	-6.5	32.98	5.5765	0.0541	-0.0021
18451	SLE RA 11	0.3	-20.8	38.14	6.0122	0.081	-0.0024
18451	SLE RA 12	0.3	-13.15	38.12	5.9431	0.0813	-0.0024
18451	SLE RA 13	0.32	-6.39	38.87	5.8741	0.0869	-0.0024
18451	SLE RA 14	0.4	-20.68	44.04	6.3098	0.1139	-0.0027
18451	SLE RA 15	0.4	-13.04	44.01	6.2407	0.1141	-0.0027
18451	SLE RA 16	0.42	-19.01	44.82	6.2868	0.1194	-0.0027
18451	SLE RA 17	0.43	-11.36	44.79	6.2177	0.1196	-0.0027
18451	SLE RA 18	0.2	-21.6	33.75	5.8963	0.0529	-0.0022
18451	SLE RA 19	0.2	-13.95	33.72	5.8272	0.0531	-0.0022
18451	SLE RA 20	0.3	-21.48	39.64	6.1938	0.0857	-0.0025
18451	SLE RA 21	0.3	-13.84	39.61	6.1247	0.0859	-0.0025
18451	SLE FR 1	0.25	-13.74	31.34	5.2143	0.0557	-0.0019
18451	SLE FR 2	0.25	-11.19	31.33	5.1913	0.0557	-0.0019
18451	SLE FR 3	0.3	-13.69	33.7	5.3333	0.0688	-0.002
18451	SLE FR 4	0.24	-13.55	32.05	5.3959	0.0549	-0.002
18451	SLE FR 5	0.28	-16.05	34.42	5.5379	0.068	-0.0021
18451	SLE FR 6	0.23	-17.67	32.54	5.5553	0.0543	-0.002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18451	SLE QP 1	0.25	-13.74	31.34	5.2143	0.0557	-0.0019
18451	SLE QP 2	0.24	-16.1	32.06	5.4189	0.0548	-0.002
18451	SLD 1	26.28	111.44	30.43	3.9318	1.3789	0.0211
18451	SLD 2	25.83	245.61	29.84	2.7141	1.3611	0.0286
18451	SLD 3	25.96	-142.26	31.36	6.2009	1.3576	0.0218
18451	SLD 4	25.51	-8.1	30.77	4.9832	1.3398	0.0293
18451	SLD 5	8.61	383.11	30.27	1.7478	0.4877	0.0026
18451	SLD 6	8.32	471.06	29.89	0.9495	0.476	0.0075
18451	SLD 7	7.55	-462.59	33.36	9.3114	0.4164	0.0049
18451	SLD 8	7.25	-374.64	32.98	8.5132	0.4047	0.0098
18451	SLD 9	-6.78	342.45	31.15	2.3246	-0.295	-0.0138
18451	SLD 10	-7.07	430.4	30.76	1.5264	-0.3067	-0.0089
18451	SLD 11	-7.85	-503.25	34.24	9.8883	-0.3663	-0.0114
18451	SLD 12	-8.14	-415.3	33.86	9.09	-0.378	-0.0065
18451	SLD 13	-25.04	-24.09	33.36	5.8546	-1.2301	-0.0333
18451	SLD 14	-25.48	110.07	32.77	4.6369	-1.2479	-0.0258
18451	SLD 15	-25.36	-277.8	34.29	8.1237	-1.2515	-0.0326
18451	SLD 16	-25.8	-143.63	33.7	6.906	-1.2693	-0.0251
18451	SLV 1	61.18	274.08	28.26	2.0122	3.1529	0.0521
18451	SLV 2	60.14	586.55	26.89	-0.8239	3.1115	0.0696
18451	SLV 3	60.43	-301.94	30.38	7.1636	3.1036	0.0538
18451	SLV 4	59.39	10.52	29.01	4.3276	3.0621	0.0712
18451	SLV 5	19.83	890.79	27.94	-2.9277	1.0662	0.0088
18451	SLV 6	19.16	1092.15	27.06	-4.7553	1.0395	0.02
18451	SLV 7	17.34	-1029.3	35.01	14.2437	0.9017	0.0142
18451	SLV 8	16.67	-827.94	34.13	12.4161	0.875	0.0255
18451	SLV 9	-16.19	795.75	30	-1.5783	-0.7654	-0.0294
18451	SLV 10	-16.86	997.11	29.12	-3.4059	-0.7921	-0.0182
18451	SLV 11	-18.69	-1124.34	37.07	15.5931	-0.9299	-0.0239
18451	SLV 12	-19.36	-922.98	36.18	13.7655	-0.9566	-0.0127
18451	SLV 13	-58.91	-42.71	35.12	6.5102	-2.9525	-0.0752
18451	SLV 14	-59.95	269.75	33.75	3.6742	-2.9939	-0.0577
18451	SLV 15	-59.66	-618.74	37.24	11.6617	-3.0018	-0.0735
18451	SLV 16	-60.7	-306.27	35.87	8.8256	-3.0433	-0.0561
18451	CRTFP Ux+	0	0	0	0	0	0
18451	CRTFP Ux-	0	0	0	0	0	0
18451	CRTFP Uy+	0	0	0	0	0	0
18451	CRTFP Uy-	0	0	0	0	0	0
18452	SLU 1	-0.06	28.79	27.13	11.4941	-0.0377	-0.0069
18452	SLU 2	-0.06	48.39	27.07	11.2841	-0.0376	-0.0068
18452	SLU 3	-0.19	27.45	33.84	11.6842	-0.0706	-0.0082
18452	SLU 4	-0.19	39.2	33.8	11.5582	-0.0706	-0.0081
18452	SLU 5	-0.2	48.74	34.74	11.2055	-0.0759	-0.0084
18452	SLU 6	-0.32	27.8	41.51	11.6056	-0.1089	-0.0098
18452	SLU 7	-0.32	39.56	41.47	11.4796	-0.1088	-0.0097
18452	SLU 8	-0.33	29.51	42.48	11.337	-0.1142	-0.0101
18452	SLU 9	-0.33	41.26	42.44	11.211	-0.1142	-0.01
18452	SLU 10	-0.14	48.64	29.48	13.0009	-0.0416	-0.0067
18452	SLU 11	-0.26	27.7	36.26	13.401	-0.0746	-0.0081
18452	SLU 12	-0.26	39.46	36.22	13.275	-0.0746	-0.0081
18452	SLU 13	-0.27	49	37.16	12.9223	-0.0799	-0.0083
18452	SLU 14	-0.39	28.06	43.93	13.3224	-0.1129	-0.0097
18452	SLU 15	-0.39	39.82	43.89	13.1964	-0.1128	-0.0097
18452	SLU 16	-0.41	29.76	44.9	13.0538	-0.1182	-0.01
18452	SLU 17	-0.41	41.52	44.86	12.9278	-0.1182	-0.01
18452	SLU 18	-0.17	29.16	30.59	13.9467	-0.0434	-0.0068
18452	SLU 19	-0.17	40.92	30.55	13.8207	-0.0434	-0.0067
18452	SLU 20	-0.3	29.52	38.26	13.8681	-0.0816	-0.0084
18452	SLU 21	-0.3	41.27	38.22	13.7421	-0.0816	-0.0083
18452	SLU 22	-0.13	23.29	33.91	13.1555	-0.0605	-0.0087
18452	SLU 23	-0.13	42.88	33.84	12.9454	-0.0605	-0.0087
18452	SLU 24	-0.25	21.95	40.62	13.3456	-0.0934	-0.0101
18452	SLU 25	-0.25	33.7	40.58	13.2195	-0.0934	-0.01
18452	SLU 26	-0.26	43.24	41.52	12.8669	-0.0987	-0.0102
18452	SLU 27	-0.38	22.3	48.29	13.267	-0.1317	-0.0117
18452	SLU 28	-0.38	34.06	48.25	13.141	-0.1317	-0.0116
18452	SLU 29	-0.39	24.01	49.25	12.9984	-0.137	-0.0119
18452	SLU 30	-0.39	35.76	49.21	12.8723	-0.137	-0.0119
18452	SLU 31	-0.2	43.14	36.26	14.6622	-0.0645	-0.0086
18452	SLU 32	-0.32	22.2	43.03	15.0624	-0.0974	-0.01
18452	SLU 33	-0.32	33.96	42.99	14.9363	-0.0974	-0.01
18452	SLU 34	-0.33	43.5	43.93	14.5837	-0.1027	-0.0102
18452	SLU 35	-0.46	22.56	50.71	14.9838	-0.1357	-0.0116
18452	SLU 36	-0.46	34.32	50.67	14.8577	-0.1357	-0.0116
18452	SLU 37	-0.47	24.26	51.67	14.7152	-0.141	-0.0119
18452	SLU 38	-0.47	36.02	51.63	14.5891	-0.141	-0.0118
18452	SLU 39	-0.23	23.66	37.36	15.6081	-0.0662	-0.0087
18452	SLU 40	-0.23	35.41	37.32	15.482	-0.0662	-0.0086
18452	SLU 41	-0.36	24.02	45.04	15.5295	-0.1045	-0.0103
18452	SLU 42	-0.36	35.77	45	15.4035	-0.1045	-0.0102
18452	SLU 43	-0.06	39.32	32.95	14.3728	-0.0411	-0.0083
18452	SLU 44	-0.06	58.91	32.88	14.1627	-0.0411	-0.0082
18452	SLU 45	-0.19	37.97	39.66	14.5628	-0.0741	-0.0096
18452	SLU 46	-0.19	49.73	39.62	14.4368	-0.0741	-0.0096
18452	SLU 47	-0.2	59.27	40.56	14.0841	-0.0794	-0.0098
18452	SLU 48	-0.32	38.33	47.33	14.4843	-0.1123	-0.0112
18452	SLU 49	-0.32	50.08	47.29	14.3582	-0.1123	-0.0111
18452	SLU 50	-0.33	40.03	48.29	14.2156	-0.1177	-0.0115
18452	SLU 51	-0.33	51.79	48.25	14.0896	-0.1176	-0.0114
18452	SLU 52	-0.14	59.17	35.3	15.8795	-0.0451	-0.0081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18452	SLU 53	-0.26	38.23	42.07	16.2796	-0.0781	-0.0096
18452	SLU 54	-0.26	49.98	42.03	16.1536	-0.0781	-0.0095
18452	SLU 55	-0.27	59.52	42.97	15.8009	-0.0834	-0.0097
18452	SLU 56	-0.39	38.59	49.75	16.2011	-0.1163	-0.0112
18452	SLU 57	-0.39	50.34	49.71	16.075	-0.1163	-0.0111
18452	SLU 58	-0.4	40.29	50.71	15.9324	-0.1217	-0.0114
18452	SLU 59	-0.4	52.04	50.67	15.8064	-0.1216	-0.0114
18452	SLU 60	-0.17	39.68	36.4	16.8253	-0.0469	-0.0082
18452	SLU 61	-0.17	51.44	36.36	16.6993	-0.0468	-0.0082
18452	SLU 62	-0.3	40.04	44.08	16.7468	-0.0851	-0.0098
18452	SLU 63	-0.3	51.8	44.04	16.6207	-0.0851	-0.0098
18452	SLU 64	-0.12	33.82	39.73	16.0341	-0.064	-0.0102
18452	SLU 65	-0.12	53.41	39.66	15.8241	-0.0639	-0.0101
18452	SLU 66	-0.25	32.47	46.43	16.2242	-0.0969	-0.0115
18452	SLU 67	-0.25	44.23	46.39	16.0982	-0.0969	-0.0114
18452	SLU 68	-0.26	53.77	47.33	15.7455	-0.1022	-0.0117
18452	SLU 69	-0.38	32.83	54.11	16.1456	-0.1352	-0.0131
18452	SLU 70	-0.38	44.58	54.07	16.0196	-0.1351	-0.013
18452	SLU 71	-0.39	34.53	55.07	15.877	-0.1405	-0.0133
18452	SLU 72	-0.39	46.29	55.03	15.751	-0.1405	-0.0133
18452	SLU 73	-0.2	53.67	42.08	17.5409	-0.0679	-0.01
18452	SLU 74	-0.32	32.73	48.85	17.941	-0.1009	-0.0114
18452	SLU 75	-0.32	44.48	48.81	17.815	-0.1009	-0.0114
18452	SLU 76	-0.33	54.02	49.75	17.4623	-0.1062	-0.0116
18452	SLU 77	-0.45	33.08	56.52	17.8624	-0.1392	-0.013
18452	SLU 78	-0.45	44.84	56.48	17.7364	-0.1391	-0.013
18452	SLU 79	-0.47	34.79	57.49	17.5938	-0.1445	-0.0133
18452	SLU 80	-0.47	46.54	57.45	17.4678	-0.1445	-0.0132
18452	SLU 81	-0.23	34.18	43.18	18.4867	-0.0697	-0.0101
18452	SLU 82	-0.23	45.94	43.14	18.3607	-0.0697	-0.01
18452	SLU 83	-0.36	34.54	50.85	18.4081	-0.108	-0.0117
18452	SLU 84	-0.36	46.3	50.81	18.2821	-0.1079	-0.0116
18452	SLE RA 1	-0.08	27.22	29.07	11.9688	-0.0442	-0.0074
18452	SLE RA 2	-0.08	40.28	29.02	11.8288	-0.0442	-0.0073
18452	SLE RA 3	-0.16	26.32	33.54	12.0955	-0.0662	-0.0083
18452	SLE RA 4	-0.16	34.16	33.51	12.0115	-0.0661	-0.0083
18452	SLE RA 5	-0.17	40.52	34.14	11.7764	-0.0697	-0.0084
18452	SLE RA 6	-0.25	26.56	38.66	12.0431	-0.0917	-0.0093
18452	SLE RA 7	-0.25	34.4	38.63	11.9591	-0.0916	-0.0093
18452	SLE RA 8	-0.26	27.7	39.3	11.8641	-0.0952	-0.0095
18452	SLE RA 9	-0.26	35.53	39.27	11.78	-0.0952	-0.0095
18452	SLE RA 10	-0.13	40.45	30.64	12.9733	-0.0468	-0.0073
18452	SLE RA 11	-0.21	26.5	35.15	13.2401	-0.0688	-0.0083
18452	SLE RA 12	-0.21	34.33	35.13	13.156	-0.0688	-0.0082
18452	SLE RA 13	-0.22	40.69	35.75	12.9209	-0.0723	-0.0084
18452	SLE RA 14	-0.3	26.73	40.27	13.1877	-0.0943	-0.0093
18452	SLE RA 15	-0.3	34.57	40.24	13.1036	-0.0943	-0.0093
18452	SLE RA 16	-0.31	27.87	40.91	13.0086	-0.0979	-0.0095
18452	SLE RA 17	-0.31	35.71	40.88	12.9246	-0.0979	-0.0095
18452	SLE RA 18	-0.15	27.47	31.37	13.6039	-0.048	-0.0074
18452	SLE RA 19	-0.15	35.3	31.35	13.5198	-0.048	-0.0073
18452	SLE RA 20	-0.24	27.7	36.49	13.5515	-0.0735	-0.0084
18452	SLE RA 21	-0.24	35.54	36.46	13.4675	-0.0735	-0.0084
18452	SLE FR 1	-0.08	27.22	29.07	11.9688	-0.0442	-0.0074
18452	SLE FR 2	-0.08	29.83	29.06	11.9408	-0.0442	-0.0074
18452	SLE FR 3	-0.12	27.32	31.11	11.9479	-0.0544	-0.0078
18452	SLE FR 4	-0.1	29.91	29.75	12.4313	-0.0453	-0.0074
18452	SLE FR 5	-0.14	27.39	31.81	12.4384	-0.0555	-0.0078
18452	SLE FR 6	-0.12	27.34	30.22	12.7863	-0.0461	-0.0074
18452	SLE QP 1	-0.08	27.22	29.07	11.9688	-0.0442	-0.0074
18452	SLE QP 2	-0.1	27.29	29.76	12.4593	-0.0453	-0.0074
18452	SLD 1	29.15	156.18	30.09	12.2137	1.1407	-0.3617
18452	SLD 2	28.63	21.68	30.66	13.5973	1.1218	-0.3429
18452	SLD 3	29.52	-106.05	30.89	14.9889	1.1568	-0.3665
18452	SLD 4	29	-240.55	31.47	16.3725	1.138	-0.3477
18452	SLD 5	8.21	487.59	28.54	7.9306	0.2893	-0.1098
18452	SLD 6	7.87	399.41	28.92	8.8377	0.2769	-0.0975
18452	SLD 7	9.43	-386.51	31.21	17.1813	0.3432	-0.1257
18452	SLD 8	9.09	-474.69	31.59	18.0883	0.3308	-0.1133
18452	SLD 9	-9.3	529.27	27.93	6.8304	-0.4215	0.0986
18452	SLD 10	-9.64	441.1	28.3	7.7374	-0.4339	0.1109
18452	SLD 11	-8.07	-344.82	30.6	16.081	-0.3676	0.0827
18452	SLD 12	-8.42	-433	30.98	16.9881	-0.38	0.095
18452	SLD 13	-29.2	295.14	28.05	8.5462	-1.2287	0.3329
18452	SLD 14	-29.73	160.64	28.63	9.9298	-1.2475	0.3517
18452	SLD 15	-28.84	32.91	28.86	11.3214	-1.2125	0.3281
18452	SLD 16	-29.36	-101.59	29.43	12.705	-1.2314	0.3469
18452	SLV 1	68.36	319.37	30.55	11.9861	2.7301	-0.8365
18452	SLV 2	67.14	6.11	31.9	15.2086	2.6862	-0.7927
18452	SLV 3	69.22	-276.32	32.39	18.2874	2.7676	-0.8476
18452	SLV 4	68	-589.58	33.73	21.5099	2.7237	-0.8038
18452	SLV 5	19.35	1072.32	26.98	2.2055	0.738	-0.2469
18452	SLV 6	18.56	870.45	27.85	4.2821	0.7097	-0.2186
18452	SLV 7	22.2	-913.3	33.1	23.2097	0.863	-0.2838
18452	SLV 8	21.42	-1115.17	33.97	25.2864	0.8347	-0.2556
18452	SLV 9	-21.62	1169.76	25.55	-0.3677	-0.9254	0.2408
18452	SLV 10	-22.41	967.89	26.42	1.7089	-0.9537	0.269
18452	SLV 11	-18.77	-815.86	31.67	20.6365	-0.8004	0.2039
18452	SLV 12	-19.56	-1017.73	32.54	22.7132	-0.8287	0.2321
18452	SLV 13	-68.21	644.16	25.79	3.4088	-2.8144	0.789

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18452	SLV 14	-69.43	330.91	27.13	6.6313	-2.8583	0.8328
18452	SLV 15	-67.35	48.48	27.62	9.7101	-2.7769	0.7779
18452	SLV 16	-68.57	-264.78	28.97	12.9325	-2.8208	0.8217
18452	CRTFP Ux+	0	0	0	0	0	0
18452	CRTFP Ux-	0	0	0	0	0	0
18452	CRTFP Uy+	0	0	0	0.0001	0	0
18452	CRTFP Uy-	0	0	0	-0.0001	0	0

1.3 Pressioni massime sul terreno

***Nodo**: Nodo che interagisce col terreno.*
***Ind.**: indice del nodo.*
***Pressione minima**: situazione in cui si verifica la pressione minima nel nodo.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.*
***uz**: spostamento massimo verticale del nodo. [m]*
***Valore**: pressione minima sul terreno del nodo. [kN/m²]*
***Pressione massima**: situazione in cui si verifica la pressione massima nel nodo.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.*
***uz**: spostamento minimo verticale del nodo. [m]*
***Valore**: pressione massima sul terreno del nodo. [kN/m²]*

Compressione estrema massima -168.731 al nodo di indice 969, di coordinate x = -24.4, y = 5.88, z = -0.98, nel contesto SLV 4.
Spostamento estremo minimo -0.0056244 al nodo di indice 969, di coordinate x = -24.4, y = 5.88, z = -0.98, nel contesto SLV 4.
Spostamento estremo massimo -0.0007208 al nodo di indice 962, di coordinate x = -0.47, y = 5.53, z = -0.98, nel contesto SLV 2.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
10	SLU 84	-0.0040108	-120.324	SLU 1	-0.0025249	-75.748
11	SLU 84	-0.0040066	-120.197	SLU 1	-0.0025246	-75.737
12	SLU 84	-0.0040018	-120.053	SLU 1	-0.002524	-75.721
13	SLU 84	-0.0039962	-119.887	SLU 1	-0.0025232	-75.696
14	SLU 84	-0.003989	-119.671	SLU 1	-0.0025213	-75.64
15	SLU 84	-0.0039749	-119.246	SLU 1	-0.002515	-75.449
16	SLU 84	-0.0039535	-118.606	SLV 4	-0.0024706	-74.117
17	SLU 84	-0.0039818	-119.455	SLU 1	-0.0025094	-75.283
18	SLU 84	-0.0039754	-119.263	SLU 1	-0.0025071	-75.212
19	SLU 84	-0.0039649	-118.946	SLU 1	-0.0025026	-75.078
20	SLU 84	-0.0039568	-118.705	SLU 1	-0.0024997	-74.99
21	SLU 84	-0.0039495	-118.486	SLU 1	-0.0024934	-74.803
22	SLU 84	-0.0039458	-118.375	SLU 1	-0.0024921	-74.762
23	SLU 84	-0.0039715	-119.146	SLU 1	-0.0024985	-74.954
26	SLU 84	-0.0039654	-118.961	SLU 1	-0.0024967	-74.901
27	SLU 84	-0.0039584	-118.753	SLU 1	-0.0024936	-74.809
29	SLU 84	-0.00395	-118.5	SLU 1	-0.00249	-74.699
31	SLU 84	-0.0039427	-118.281	SLU 1	-0.002487	-74.61
33	SLU 84	-0.0039363	-118.088	SLU 1	-0.0024846	-74.539
35	SLU 84	-0.0039298	-117.894	SLU 1	-0.0024822	-74.465
36	SLU 84	-0.0039201	-117.604	SLU 1	-0.0024777	-74.33
37	SLU 84	-0.0038964	-116.891	SLV 4	-0.0024376	-73.129
38	SLU 84	-0.0039248	-117.743	SLU 1	-0.0024677	-74.031
39	SLU 84	-0.003911	-117.33	SLU 1	-0.0024609	-73.828
40	SLU 84	-0.003897	-116.909	SLU 1	-0.0024534	-73.601
41	SLU 84	-0.0038815	-116.445	SLU 1	-0.002445	-73.351
42	SLU 84	-0.0038689	-116.068	SLU 1	-0.0024385	-73.155
43	SLU 84	-0.0038605	-115.815	SLU 1	-0.0024345	-73.036
44	SLU 84	-0.0038548	-115.644	SLU 1	-0.0024323	-72.968
45	SLU 84	-0.0038478	-115.434	SLU 1	-0.0024292	-72.876
46	SLU 84	-0.0038264	-114.791	SLV 4	-0.0023943	-71.83
48	SLU 83	-0.003873	-116.189	SLU 2	-0.0024338	-73.015
49	SLU 84	-0.0038533	-115.6	SLU 1	-0.0024232	-72.695
50	SLU 84	-0.0038332	-114.995	SLU 1	-0.0024116	-72.347
51	SLU 84	-0.0038119	-114.357	SLU 1	-0.0023993	-71.979
52	SLU 84	-0.0037947	-113.842	SLU 1	-0.0023896	-71.687
53	SLU 84	-0.0037834	-113.502	SLU 1	-0.0023835	-71.505
54	SLU 84	-0.0037766	-113.298	SLU 1	-0.0023802	-71.406
55	SLU 84	-0.0037691	-113.074	SLU 1	-0.0023765	-71.295
56	SLU 84	-0.0037463	-112.39	SLV 2	-0.0023379	-70.138
57	SLU 83	-0.0038188	-114.563	SLU 2	-0.0023977	-71.931
58	SLU 83	-0.0037969	-113.906	SLU 2	-0.0023853	-71.559
59	SLU 83	-0.0037749	-113.248	SLU 2	-0.0023725	-71.174
60	SLU 83	-0.0037518	-112.554	SLU 2	-0.0023588	-70.765
61	SLU 83	-0.0037317	-111.952	SLU 2	-0.0023471	-70.414
62	SLU 83	-0.0037163	-111.489	SLU 2	-0.0023383	-70.149
63	SLU 83	-0.0037044	-111.133	SLU 2	-0.0023317	-69.952
64	SLU 84	-0.0036922	-110.765	SLU 1	-0.0023248	-69.744
65	SLU 84	-0.0036642	-109.925	SLV 2	-0.0022728	-68.185
66	SLU 83	-0.0037611	-112.832	SLV 9	-0.0023528	-70.583
67	SLU 83	-0.0037395	-112.185	SLU 2	-0.0023467	-70.4
68	SLU 83	-0.0037195	-111.585	SLU 2	-0.0023348	-70.043
69	SLU 83	-0.0036973	-110.919	SLU 2	-0.0023214	-69.643
70	SLU 83	-0.0036755	-110.266	SLU 2	-0.0023084	-69.251
71	SLU 83	-0.0036555	-109.664	SLU 2	-0.0022964	-68.891
72	SLU 83	-0.0036367	-109.1	SLU 2	-0.0022852	-68.557
73	SLU 83	-0.0036173	-108.518	SLV 2	-0.0022622	-67.867
74	SLU 83	-0.0035836	-107.508	SLV 2	-0.0022049	-66.147

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
75	SLU 83	-0.0036874	-110.622	SLU 2	-0.0023147	-69.441
76	SLU 83	-0.003703	-111.09	SLU 2	-0.0023237	-69.712
77	SLU 83	-0.003617	-108.511	SLU 2	-0.0022719	-68.158
78	SLU 83	-0.0037017	-111.052	SLU 2	-0.0023228	-69.685
79	SLU 83	-0.003634	-109.02	SLU 2	-0.0022819	-68.457
80	SLU 83	-0.0036564	-109.691	SLU 2	-0.0022951	-68.853
81	SLU 83	-0.0037287	-111.86	SLV 10	-0.0023076	-69.227
82	SLU 83	-0.0037067	-111.2	SLV 6	-0.0023136	-69.408
83	SLU 83	-0.0036765	-110.294	SLV 6	-0.0023026	-69.079
84	SLU 83	-0.0036425	-109.274	SLV 6	-0.0022849	-68.548
85	SLU 83	-0.0036092	-108.277	SLV 6	-0.0022652	-67.955
86	SLU 83	-0.0035762	-107.285	SLV 2	-0.0022257	-66.77
87	SLU 83	-0.0035409	-106.227	SLV 2	-0.0021679	-65.036
151	SLU 84	-0.0049009	-147.026	SLV 12	-0.0027866	-83.597
152	SLU 84	-0.0048947	-146.842	SLV 12	-0.0028076	-84.227
153	SLU 84	-0.004908	-147.239	SLV 12	-0.0028375	-85.126
154	SLU 84	-0.0049384	-148.151	SLV 12	-0.0028744	-86.231
155	SLU 84	-0.0049812	-149.437	SLV 12	-0.0029133	-87.398
156	SLU 84	-0.0050078	-150.234	SLV 8	-0.0029307	-87.922
157	SLU 84	-0.0050302	-150.905	SLV 16	-0.0026907	-80.721
158	SLU 84	-0.0049681	-149.043	SLV 16	-0.0027379	-82.136
159	SLU 84	-0.0049231	-147.693	SLV 12	-0.0027757	-83.271
172	SLU 84	-0.0047853	-143.559	SLV 7	-0.0027851	-83.553
174	SLU 84	-0.0047729	-143.188	SLV 7	-0.0027677	-83.031
176	SLU 84	-0.0047692	-143.077	SLV 7	-0.0027573	-82.718
178	SLU 84	-0.0047665	-142.996	SLV 7	-0.0027447	-82.342
180	SLU 84	-0.0047651	-142.954	SLV 7	-0.0027301	-81.903
182	SLU 84	-0.0047686	-143.057	SLV 7	-0.0027157	-81.471
184	SLU 84	-0.0047801	-143.403	SLV 7	-0.0027039	-81.118
186	SLU 84	-0.0048018	-144.054	SLV 3	-0.0026772	-80.317
187	SLU 84	-0.004831	-144.929	SLV 3	-0.0026375	-79.124
188	SLU 84	-0.0048763	-146.29	SLV 3	-0.0025973	-77.919
189	SLU 84	-0.0049322	-147.966	SLV 3	-0.0025633	-76.9
198	SLU 84	-0.004667	-140.011	SLV 7	-0.0027547	-82.642
200	SLU 84	-0.0046496	-139.487	SLV 7	-0.0027349	-82.048
201	SLU 84	-0.0046359	-139.076	SLV 7	-0.0027192	-81.577
202	SLU 84	-0.0046214	-138.641	SLV 7	-0.0027008	-81.025
203	SLU 84	-0.004611	-138.33	SLV 7	-0.0026826	-80.478
204	SLU 84	-0.004611	-138.329	SLV 7	-0.0026684	-80.052
205	SLU 84	-0.0046258	-138.773	SLV 7	-0.0026611	-79.832
206	SLU 84	-0.004657	-139.71	SLV 3	-0.0026308	-78.923
207	SLU 84	-0.0047033	-141.099	SLV 3	-0.0025993	-77.98
208	SLU 84	-0.0047611	-142.832	SLV 3	-0.0025739	-77.216
209	SLU 84	-0.004825	-144.749	SLV 3	-0.0025516	-76.547
210	SLU 84	-0.0048303	-144.909	SLV 8	-0.002878	-86.34
211	SLU 84	-0.00479	-143.7	SLV 8	-0.0028534	-85.603
212	SLU 84	-0.0047462	-142.385	SLV 8	-0.0028272	-84.817
213	SLU 84	-0.0047077	-141.232	SLV 8	-0.0028039	-84.116
214	SLU 84	-0.0046784	-140.353	SLV 7	-0.0027832	-83.497
215	SLU 84	-0.0046587	-139.762	SLV 7	-0.0027648	-82.945
216	SLU 84	-0.0046467	-139.401	SLV 7	-0.0027502	-82.505
217	SLU 84	-0.0046373	-139.12	SLV 7	-0.0027368	-82.103
218	SLU 84	-0.0047845	-143.535	SLV 16	-0.0026807	-80.42
219	SLU 84	-0.0047144	-141.433	SLV 16	-0.002716	-81.48
220	SLU 84	-0.0046698	-140.095	SLV 12	-0.0027136	-81.409
221	SLU 84	-0.0046565	-139.696	SLV 12	-0.0027268	-81.803
222	SLU 84	-0.0046767	-140.301	SLV 12	-0.0027578	-82.734
223	SLU 84	-0.0047277	-141.83	SLV 12	-0.0028048	-84.143
224	SLU 84	-0.0047987	-143.96	SLV 12	-0.0028586	-85.758
225	SLU 84	-0.0048728	-146.185	SLV 8	-0.002899	-86.971
226	SLU 84	-0.0048696	-146.089	SLV 16	-0.0026518	-79.553
228	SLU 84	-0.0045543	-136.629	SLV 7	-0.0027269	-81.807
230	SLU 84	-0.0045291	-135.874	SLV 7	-0.0027033	-81.1
231	SLU 84	-0.0045059	-135.178	SLV 7	-0.0026827	-80.48
232	SLU 84	-0.0044789	-134.366	SLV 7	-0.0026579	-79.738
233	SLU 84	-0.0044586	-133.757	SLV 7	-0.0026356	-79.068
234	SLU 84	-0.0044546	-133.637	SLV 7	-0.0026213	-78.638
235	SLU 84	-0.0044728	-134.183	SLV 3	-0.0026139	-78.417
236	SLU 84	-0.004514	-135.421	SLV 3	-0.0025851	-77.554
237	SLU 84	-0.0045739	-137.217	SLV 3	-0.0025658	-76.975
238	SLU 84	-0.004645	-139.349	SLV 3	-0.0025525	-76.574
239	SLU 84	-0.0047207	-141.622	SLV 3	-0.0025415	-76.245
240	SLU 84	-0.0045942	-137.827	SLV 16	-0.0026227	-78.681
241	SLU 84	-0.0044975	-134.924	SLV 16	-0.0026383	-79.148
242	SLU 84	-0.0044354	-133.063	SLV 12	-0.0026369	-79.106
243	SLU 84	-0.004417	-132.51	SLV 12	-0.0026434	-79.302
244	SLU 84	-0.0044456	-133.369	SLV 12	-0.0026766	-80.297
245	SLU 84	-0.0045187	-135.562	SLV 12	-0.0027347	-82.042
246	SLU 84	-0.0046264	-138.793	SLV 8	-0.0028057	-84.171
247	SLU 84	-0.0047552	-142.657	SLV 8	-0.0028704	-86.112
248	SLU 84	-0.0047127	-141.38	SLV 16	-0.0026146	-78.438
251	SLU 84	-0.004444	-133.321	SLV 7	-0.0026988	-80.965
253	SLU 84	-0.0044113	-132.339	SLV 7	-0.0026719	-80.157
254	SLU 84	-0.0043791	-131.372	SLV 7	-0.0026467	-79.4
255	SLU 84	-0.004339	-130.17	SLV 7	-0.0026155	-78.464
256	SLU 84	-0.0043078	-129.233	SLV 7	-0.0025885	-77.654
257	SLU 84	-0.0042991	-128.974	SLV 7	-0.0025737	-77.212
258	SLU 84	-0.0043205	-129.616	SLV 3	-0.0025581	-76.743
259	SLU 84	-0.0043719	-131.158	SLV 3	-0.002539	-76.17
260	SLU 84	-0.0044454	-133.361	SLV 3	-0.0025313	-75.94

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
261	SLU 84	-0.0045281	-135.844	SLV 3	-0.0025292	-75.875
262	SLU 84	-0.0046137	-138.412	SLV 3	-0.0025285	-75.854
263	SLU 84	-0.0043859	-131.578	SLV 16	-0.0025535	-76.604
264	SLU 84	-0.0042682	-128.046	SLV 16	-0.0025516	-76.547
265	SLU 84	-0.0041942	-125.826	SLV 12	-0.0025533	-76.599
266	SLU 84	-0.0041737	-125.21	SLV 12	-0.0025552	-76.656
267	SLU 84	-0.0042112	-126.335	SLV 12	-0.0025908	-77.723
268	SLU 84	-0.0043059	-129.177	SLV 12	-0.0026593	-79.78
269	SLU 84	-0.00445	-133.5	SLV 8	-0.002741	-82.229
270	SLU 84	-0.0046211	-138.632	SLV 8	-0.0028285	-84.856
271	SLU 84	-0.0045408	-136.224	SLV 16	-0.0025654	-76.961
273	SLU 84	-0.0043294	-129.883	SLV 7	-0.0026658	-79.973
275	SLU 84	-0.0042913	-128.738	SLV 7	-0.0026371	-79.112
276	SLU 84	-0.0042529	-127.588	SLV 7	-0.0026093	-78.28
277	SLU 84	-0.0041994	-125.982	SLV 7	-0.0025717	-77.15
278	SLU 84	-0.0041567	-124.701	SLV 7	-0.0025399	-76.198
279	SLU 84	-0.0041431	-124.293	SLV 7	-0.0025246	-75.737
280	SLU 84	-0.0041669	-125.008	SLV 3	-0.0025003	-75.009
281	SLU 84	-0.004228	-126.839	SLV 3	-0.0024896	-74.689
282	SLU 84	-0.0043153	-129.459	SLV 3	-0.0024926	-74.778
283	SLU 84	-0.0044038	-132.113	SLV 3	-0.0024983	-74.949
284	SLU 84	-0.0044914	-134.743	SLV 3	-0.0025032	-75.096
286	SLV 1	-0.0055114	-165.341	SLV 16	-0.0010819	-32.457
301	SLU 83	-0.0043097	-129.29	SLV 16	-0.0021934	-65.801
303	SLU 83	-0.0043965	-131.894	SLV 16	-0.0023103	-69.31
307	SLU 84	-0.0043113	-129.34	SLV 16	-0.0024741	-74.223
308	SLU 84	-0.0041321	-123.963	SLV 16	-0.0024589	-73.767
309	SLU 84	-0.0040174	-120.523	SLV 16	-0.0024497	-73.49
310	SLU 84	-0.0039428	-118.283	SLV 12	-0.0024604	-73.813
311	SLU 84	-0.0039241	-117.723	SLV 12	-0.0024603	-73.809
312	SLU 84	-0.0039693	-119.079	SLV 12	-0.0024974	-74.923
313	SLU 84	-0.0040794	-122.383	SLV 8	-0.0025673	-77.018
314	SLU 84	-0.0042502	-127.505	SLV 8	-0.0026541	-79.622
315	SLU 84	-0.0043066	-129.198	SLV 8	-0.0026829	-80.486
316	SLU 84	-0.0044298	-132.894	SLV 8	-0.002748	-82.439
318	SLU 84	-0.0042029	-126.088	SLV 7	-0.0026223	-78.669
320	SLU 84	-0.0041625	-124.875	SLV 7	-0.002595	-77.849
321	SLU 84	-0.0041254	-123.762	SLV 7	-0.002569	-77.071
322	SLU 84	-0.004057	-121.71	SLV 7	-0.0025246	-75.739
323	SLU 84	-0.0040038	-120.113	SLV 7	-0.002489	-74.671
324	SLU 84	-0.003985	-119.549	SLV 3	-0.0024656	-73.969
325	SLU 84	-0.00401	-120.301	SLV 3	-0.0024393	-73.18
326	SLU 84	-0.0040787	-122.361	SLV 3	-0.0024341	-73.024
327	SLU 84	-0.0041817	-125.452	SLV 3	-0.0024438	-73.315
328	SLU 84	-0.0042593	-127.778	SLV 3	-0.00245	-73.499
329	SLU 84	-0.0043344	-130.032	SLV 3	-0.0024518	-73.555
333	SLU 83	-0.0044038	-132.115	SLV 3	-0.0023101	-69.302
335	SLU 83	-0.0043207	-129.621	SLV 3	-0.002211	-66.33
350	SLV 14	-0.0051434	-154.301	SLV 3	-0.0010889	-32.667
352	SLV 14	-0.0053075	-159.225	SLV 3	-0.0010633	-31.898
353	SLV 14	-0.0047359	-142.076	SLV 3	-0.0010352	-31.056
354	SLV 14	-0.0042405	-127.216	SLV 3	-0.0010213	-30.639
355	SLV 14	-0.0038317	-114.951	SLV 3	-0.0010237	-30.712
356	SLV 1	-0.00545	-163.5	SLV 16	-0.0010257	-30.772
357	SLV 1	-0.0048921	-146.763	SLV 16	-0.0010104	-30.313
358	SLV 1	-0.0043947	-131.842	SLV 16	-0.0010049	-30.146
359	SLV 1	-0.0039738	-119.214	SLV 16	-0.0010117	-30.352
360	SLV 1	-0.0036339	-109.017	SLV 16	-0.0010322	-30.967
361	SLV 1	-0.0033731	-101.192	SLV 16	-0.0010672	-32.017
362	SLV 1	-0.0031859	-95.577	SLV 16	-0.0011176	-33.528
363	SLU 83	-0.0031187	-93.561	SLV 16	-0.0011843	-35.528
364	SLU 83	-0.0031378	-94.135	SLV 16	-0.0012682	-38.045
365	SLU 83	-0.0032104	-96.312	SLV 16	-0.0013699	-41.097
366	SLU 83	-0.0033313	-99.938	SLV 16	-0.0014892	-44.676
367	SLU 83	-0.003493	-104.791	SLV 16	-0.0016244	-48.731
368	SLU 83	-0.0036834	-110.503	SLV 16	-0.0017712	-53.137
369	SLU 83	-0.0038823	-116.47	SLV 16	-0.0019219	-57.658
370	SLU 83	-0.0040576	-121.727	SLV 16	-0.0020629	-61.886
371	SLU 83	-0.0041636	-124.907	SLV 16	-0.002174	-65.22
372	SLU 83	-0.0042048	-126.145	SLV 16	-0.0022506	-67.517
373	SLU 83	-0.0041919	-125.756	SLV 16	-0.0023059	-69.178
374	SLU 83	-0.0041386	-124.159	SLV 16	-0.0023419	-70.257
375	SLU 83	-0.0040505	-121.515	SLV 16	-0.0023559	-70.677
376	SLU 83	-0.0038979	-116.938	SLV 16	-0.0023567	-70.702
377	SLU 84	-0.0037857	-113.572	SLV 16	-0.0023472	-70.417
378	SLU 84	-0.0037079	-111.238	SLU 1	-0.0023465	-70.395
379	SLU 84	-0.0036874	-110.622	SLU 1	-0.0023318	-69.954
380	SLU 84	-0.0037344	-112.032	SLU 1	-0.0023587	-70.76
381	SLU 84	-0.0038491	-115.474	SLU 1	-0.0024273	-72.819
382	SLU 84	-0.0040221	-120.664	SLU 1	-0.0025319	-75.956
383	SLU 84	-0.0042902	-128.705	SLV 8	-0.0026862	-80.587
384	SLV 14	-0.0035097	-105.29	SLV 3	-0.0010433	-31.298
385	SLV 14	-0.0032696	-98.088	SLV 3	-0.0010804	-32.411
386	SLU 83	-0.0031108	-93.324	SLV 3	-0.0011356	-34.067
387	SLU 83	-0.0030938	-92.813	SLV 3	-0.0012094	-36.283
388	SLU 83	-0.0031354	-94.063	SLV 3	-0.0013024	-39.073
389	SLU 83	-0.0032305	-96.915	SLV 3	-0.0014144	-42.433
390	SLU 83	-0.0033723	-101.168	SLV 3	-0.001544	-46.321
391	SLU 83	-0.003551	-106.529	SLV 3	-0.0016878	-50.633
392	SLU 83	-0.0037507	-112.52	SLV 3	-0.0018389	-55.167

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
393	SLU 83	-0.003946	-118.379	SLV 3	-0.0019856	-59.569
394	SLU 83	-0.0041325	-123.975	SLV 3	-0.0021452	-64.357
395	SLU 83	-0.0040973	-122.918	SLV 3	-0.0021091	-63.273
396	SLU 83	-0.004231	-126.929	SLV 3	-0.0022657	-67.971
397	SLU 83	-0.0042157	-126.47	SLV 3	-0.0022443	-67.329
398	SLU 83	-0.0042393	-127.179	SLV 3	-0.0023205	-69.614
399	SLU 83	-0.0042004	-126.013	SLV 3	-0.0023565	-70.696
400	SLU 83	-0.0041244	-123.732	SLV 3	-0.0023722	-71.165
401	SLU 83	-0.0040599	-121.797	SLV 3	-0.0023772	-71.315
402	SLU 84	-0.0039874	-119.623	SLV 3	-0.0023738	-71.213
403	SLU 84	-0.003889	-116.669	SLV 3	-0.0023651	-70.953
404	SLU 84	-0.0038212	-114.637	SLV 3	-0.0023673	-71.02
405	SLU 84	-0.0037991	-113.972	SLV 3	-0.0023909	-71.728
406	SLU 84	-0.0038244	-114.733	SLU 1	-0.002417	-72.51
407	SLU 84	-0.0038868	-116.604	SLU 1	-0.0024538	-73.614
408	SLU 84	-0.0039623	-118.869	SLU 1	-0.0024989	-74.967
409	SLU 84	-0.0040232	-120.697	SLU 1	-0.0025349	-76.048
410	SLU 84	-0.0040538	-121.614	SLU 1	-0.0025529	-76.587
413	SLU 83	-0.0041163	-123.488	SLV 16	-0.0021146	-63.439
415	SLU 83	-0.0042013	-126.039	SLV 16	-0.0022303	-66.909
416	SLV 14	-0.0047784	-143.351	SLV 3	-0.0010336	-31.009
417	SLU 83	-0.0042084	-126.251	SLV 3	-0.0022422	-67.265
420	SLU 83	-0.0041279	-123.838	SLV 3	-0.0021459	-64.378
422	SLV 1	-0.0050546	-151.638	SLV 16	-0.0010086	-30.259
424	SLU 84	-0.0039321	-117.964	SLU 1	-0.0024767	-74.3
427	SLU 83	-0.0039829	-119.487	SLV 16	-0.0020623	-61.868
429	SLU 83	-0.0040632	-121.897	SLV 16	-0.0021746	-65.237
430	SLV 14	-0.0044881	-134.643	SLV 3	-0.0009947	-29.841
431	SLU 83	-0.0040654	-121.961	SLV 3	-0.0021952	-65.855
434	SLU 83	-0.0039922	-119.767	SLV 3	-0.0021066	-63.197
436	SLV 1	-0.0047021	-141.063	SLV 16	-0.0009567	-28.7
438	SLU 84	-0.0038479	-115.437	SLU 1	-0.0024246	-72.739
441	SLU 83	-0.0038924	-116.771	SLV 16	-0.0020286	-60.858
443	SLU 83	-0.0039681	-119.044	SLV 16	-0.0021376	-64.129
444	SLV 14	-0.0042867	-128.601	SLV 3	-0.0009743	-29.23
445	SLU 83	-0.0039621	-118.862	SLV 3	-0.0021646	-64.937
448	SLU 83	-0.0038962	-116.886	SLV 3	-0.0020835	-62.506
450	SLV 1	-0.0044596	-133.788	SLV 16	-0.0009257	-27.772
451	SLU 84	-0.0036537	-109.61	SLU 1	-0.0022984	-68.953
452	SLU 84	-0.003803	-114.089	SLU 1	-0.0023975	-71.924
456	SLU 83	-0.0038316	-114.947	SLV 16	-0.0020081	-60.243
458	SLU 83	-0.0039028	-117.084	SLV 16	-0.0021139	-63.418
459	SLV 14	-0.0041786	-125.358	SLV 3	-0.0009728	-29.183
460	SLU 83	-0.0038849	-116.547	SLV 3	-0.002144	-64.32
463	SLU 83	-0.0038261	-114.784	SLV 3	-0.0020705	-62.114
465	SLV 1	-0.0043232	-129.697	SLV 16	-0.0009136	-27.408
466	SLU 84	-0.0037911	-113.733	SLU 1	-0.002391	-71.729
470	SLU 83	-0.0037919	-113.758	SLV 16	-0.0019972	-59.915
472	SLU 83	-0.0038587	-115.762	SLV 16	-0.0020997	-62.992
473	SLV 14	-0.0041614	-124.843	SLV 3	-0.0009887	-29.662
474	SLU 83	-0.0038244	-114.732	SLV 3	-0.0021287	-63.86
477	SLU 83	-0.0037727	-113.181	SLV 3	-0.0020627	-61.881
479	SLV 1	-0.0042844	-128.532	SLV 16	-0.0009172	-27.516
480	SLU 84	-0.0037982	-113.945	SLU 1	-0.0023959	-71.877
484	SLU 83	-0.0037682	-113.047	SLV 16	-0.0019927	-59.78
486	SLU 83	-0.0038307	-114.92	SLV 16	-0.0020892	-62.677
487	SLV 14	-0.004227	-126.809	SLV 3	-0.0010198	-30.595
488	SLU 83	-0.0037748	-113.245	SLV 3	-0.0021131	-63.394
491	SLU 83	-0.0037301	-111.902	SLV 3	-0.0020567	-61.702
498	SLV 1	-0.0043313	-129.939	SLV 16	-0.0009329	-27.986
499	SLU 84	-0.0038029	-114.086	SLU 1	-0.0023987	-71.96
501	SLU 84	-0.0036428	-109.284	SLV 2	-0.0022477	-67.432
502	SLU 84	-0.0036625	-109.875	SLU 1	-0.0023049	-69.146
503	SLU 84	-0.0036143	-108.43	SLU 1	-0.0022882	-68.646
504	SLU 84	-0.0038025	-114.075	SLU 1	-0.0023983	-71.949
505	SLU 83	-0.0037568	-112.704	SLV 16	-0.0019856	-59.569
507	SLU 83	-0.003815	-114.449	SLV 16	-0.0020743	-62.228
508	SLV 14	-0.0043603	-130.81	SLV 3	-0.001062	-31.86
509	SLU 83	-0.0037331	-111.992	SLV 3	-0.0020875	-62.626
512	SLU 83	-0.0036952	-110.857	SLV 3	-0.0020453	-61.36
514	SLV 1	-0.004448	-133.441	SLV 16	-0.0009555	-28.665
518	SLU 84	-0.0037892	-113.676	SLU 1	-0.0023886	-71.658
521	SLU 83	-0.0037542	-112.627	SLV 14	-0.0019777	-59.331
523	SLU 83	-0.0038081	-114.244	SLV 14	-0.0020627	-61.881
524	SLV 14	-0.0045382	-136.147	SLV 3	-0.0011091	-33.272
525	SLU 83	-0.0036983	-110.948	SLV 1	-0.002059	-61.769
528	SLU 83	-0.0036673	-110.018	SLV 1	-0.0020256	-60.768
531	SLV 1	-0.004611	-138.33	SLV 16	-0.0009792	-29.376
534	SLU 83	-0.0037615	-112.846	SLU 2	-0.002368	-71.04
537	SLU 83	-0.0037557	-112.671	SLV 14	-0.0019718	-59.155
539	SLU 83	-0.0038054	-114.162	SLV 13	-0.0020523	-61.57
540	SLV 14	-0.0047251	-141.752	SLV 3	-0.0011528	-34.583
541	SLU 83	-0.0036716	-110.148	SLV 1	-0.0020298	-60.894
544	SLU 83	-0.0036474	-109.422	SLV 1	-0.0020044	-60.133
547	SLV 4	-0.0047865	-143.594	SLV 13	-0.0009932	-29.797
550	SLU 83	-0.0037272	-111.817	SLU 2	-0.0023418	-70.255
553	SLV 14	-0.004868	-146.041	SLV 3	-0.0011823	-35.47
554	SLU 83	-0.0037536	-112.607	SLV 13	-0.0019609	-58.828
556	SLU 83	-0.0037992	-113.975	SLV 13	-0.0020381	-61.143
557	SLU 83	-0.0036564	-109.691	SLV 2	-0.0019966	-59.897

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
560	SLU 83	-0.0036389	-109.168	SLV 2	-0.0019814	-59.443
562	SLV 4	-0.0050576	-151.727	SLV 13	-0.0009432	-28.296
563	SLV 4	-0.0048782	-146.346	SLV 13	-0.0010303	-30.91
564	SLV 4	-0.0047304	-141.913	SLV 13	-0.0011213	-33.638
565	SLV 4	-0.0045975	-137.924	SLV 13	-0.0012121	-36.363
566	SLV 4	-0.0044691	-134.074	SLV 13	-0.0013006	-39.018
567	SLV 4	-0.0043408	-130.225	SLV 13	-0.0013859	-41.577
568	SLV 4	-0.0042107	-126.322	SLV 13	-0.0014679	-44.038
569	SLU 84	-0.004161	-124.831	SLV 13	-0.0015467	-46.401
570	SLU 84	-0.0041185	-123.555	SLV 13	-0.001622	-48.659
571	SLU 84	-0.0040704	-122.112	SLV 13	-0.0016927	-50.782
572	SLU 84	-0.0040158	-120.473	SLV 13	-0.0017571	-52.713
573	SLU 84	-0.0039542	-118.627	SLV 14	-0.0018119	-54.356
574	SLU 84	-0.0038875	-116.624	SLV 14	-0.0018538	-55.614
575	SLU 84	-0.003822	-114.659	SLV 14	-0.0018809	-56.427
576	SLU 84	-0.0037698	-113.095	SLV 13	-0.0018955	-56.866
577	SLU 83	-0.0037731	-113.194	SLV 13	-0.0019942	-59.825
578	SLU 83	-0.0038186	-114.558	SLV 13	-0.0020774	-62.321
579	SLU 83	-0.0038572	-115.716	SLV 13	-0.0021749	-65.246
580	SLU 83	-0.0038832	-116.496	SLV 13	-0.002279	-68.369
581	SLU 84	-0.0038916	-116.748	SLV 13	-0.0023791	-71.373
582	SLU 84	-0.0038799	-116.398	SLU 1	-0.0024236	-72.707
583	SLU 84	-0.0038475	-115.424	SLU 1	-0.0024026	-72.077
584	SLU 84	-0.0037982	-113.945	SLU 1	-0.0023717	-71.15
585	SLU 84	-0.0037518	-112.555	SLU 1	-0.002343	-70.29
586	SLU 84	-0.0037133	-111.398	SLV 2	-0.0023067	-69.201
587	SLU 83	-0.0036847	-110.542	SLV 2	-0.002247	-67.411
588	SLU 83	-0.0037076	-111.227	SLU 2	-0.002329	-69.869
589	SLU 83	-0.0037098	-111.295	SLV 2	-0.0022702	-68.107
590	SLU 83	-0.003714	-111.421	SLV 2	-0.0021979	-65.936
591	SLU 83	-0.0037124	-111.373	SLV 2	-0.002124	-63.72
592	SLU 83	-0.0037018	-111.054	SLV 2	-0.0020598	-61.793
593	SLU 83	-0.0036845	-110.535	SLV 2	-0.002017	-60.509
594	SLU 83	-0.0036532	-109.597	SLV 2	-0.0019846	-59.538
595	SLU 83	-0.0036383	-109.148	SLV 2	-0.0019723	-59.17
596	SLU 83	-0.0036509	-109.528	SLV 2	-0.0019758	-59.274
597	SLU 84	-0.0037022	-111.067	SLV 2	-0.0019895	-59.686
598	SLU 84	-0.0037978	-113.933	SLV 1	-0.0020047	-60.142
599	SLU 84	-0.0038792	-116.376	SLV 1	-0.0019889	-59.667
600	SLU 84	-0.0039556	-118.667	SLV 1	-0.0019446	-58.338
601	SLU 84	-0.0040234	-120.703	SLV 1	-0.0018809	-56.428
602	SLU 84	-0.0040832	-122.495	SLV 1	-0.0018056	-54.168
603	SLU 84	-0.0041364	-124.091	SLV 1	-0.0017238	-51.714
604	SLU 84	-0.0041849	-125.546	SLV 1	-0.0016384	-49.153
605	SLU 84	-0.0042305	-126.916	SLV 1	-0.0015508	-46.523
606	SLV 15	-0.0043304	-129.913	SLV 2	-0.0014614	-43.842
607	SLV 15	-0.0044936	-134.807	SLV 2	-0.0013711	-41.132
608	SLV 13	-0.0046777	-140.332	SLV 4	-0.0012821	-38.463
609	SLV 13	-0.0049056	-147.168	SLV 4	-0.0011998	-35.993
610	SLV 13	-0.0052104	-156.312	SLV 4	-0.0011331	-33.994
612	SLV 4	-0.0049065	-147.195	SLV 13	-0.0009991	-29.972
621	SLV 4	-0.0049205	-147.616	SLV 13	-0.0009964	-29.893
635	SLU 84	-0.0037807	-113.422	SLV 13	-0.0018746	-56.239
639	SLU 84	-0.0037361	-112.083	SLV 13	-0.0019406	-58.218
642	SLU 83	-0.0037802	-113.405	SLV 13	-0.0020167	-60.502
651	SLU 84	-0.0036884	-110.651	SLU 1	-0.0023026	-69.079
653	SLU 84	-0.0036292	-108.877	SLU 1	-0.0022671	-68.013
655	SLU 83	-0.0036188	-108.563	SLV 2	-0.0022378	-67.134
662	SLU 83	-0.0036723	-110.169	SLU 2	-0.0023026	-69.077
667	SLU 83	-0.0035664	-106.991	SLU 2	-0.00224	-67.2
676	SLU 83	-0.0036599	-109.797	SLV 2	-0.0019699	-59.096
679	SLU 83	-0.0036449	-109.348	SLV 2	-0.0019576	-58.729
682	SLU 84	-0.0037339	-112.018	SLV 1	-0.0019878	-59.633
695	SLV 13	-0.0049054	-147.161	SLV 4	-0.0011816	-35.448
697	SLU 84	-0.0036202	-108.605	SLV 2	-0.0019509	-58.528
699	SLU 84	-0.0037174	-111.521	SLV 1	-0.0019738	-59.214
701	SLV 4	-0.0050498	-151.495	SLV 13	-0.0009302	-27.907
702	SLV 4	-0.0048701	-146.102	SLV 13	-0.0010173	-30.519
703	SLV 4	-0.0047216	-141.647	SLV 13	-0.0011076	-33.227
704	SLV 4	-0.0045879	-137.636	SLV 13	-0.0011976	-35.929
705	SLV 4	-0.0044589	-133.766	SLV 13	-0.0012853	-38.559
706	SLV 4	-0.0043299	-129.896	SLV 13	-0.0013697	-41.091
707	SLV 4	-0.0041991	-125.972	SLV 13	-0.0014507	-43.522
708	SLU 84	-0.0041384	-124.153	SLV 13	-0.0015284	-45.851
709	SLU 84	-0.0040945	-122.835	SLV 13	-0.0016024	-48.071
710	SLU 84	-0.0040449	-121.347	SLV 13	-0.0016718	-50.154
711	SLU 84	-0.0039887	-119.661	SLV 13	-0.0017347	-52.042
712	SLU 84	-0.0039255	-117.765	SLV 13	-0.0017883	-53.65
713	SLU 84	-0.003857	-115.711	SLV 13	-0.0018292	-54.876
714	SLU 84	-0.0037897	-113.692	SLV 13	-0.0018552	-55.655
715	SLU 84	-0.0037365	-112.095	SLV 13	-0.0018698	-56.095
716	SLU 84	-0.0037089	-111.268	SLV 13	-0.0018773	-56.318
717	SLU 84	-0.0037212	-111.636	SLV 13	-0.001925	-57.751
718	SLU 84	-0.0037441	-112.322	SLV 13	-0.0019695	-59.085
719	SLU 84	-0.0037724	-113.173	SLV 13	-0.0020384	-61.152
720	SLU 84	-0.0038015	-114.046	SLV 13	-0.0021271	-63.813
721	SLU 84	-0.003818	-114.539	SLV 13	-0.0022223	-66.668
722	SLU 84	-0.0038167	-114.5	SLV 13	-0.0023134	-69.401
723	SLU 84	-0.003795	-113.851	SLU 1	-0.0023685	-71.055
724	SLU 84	-0.0037525	-112.574	SLU 1	-0.0023413	-70.24

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
725	SLU 84	-0.0036929	-110.786	SLU 1	-0.0023041	-69.124
726	SLU 84	-0.0036227	-108.68	SLU 1	-0.0022612	-67.835
727	SLU 84	-0.0035635	-106.906	SLU 1	-0.0022256	-66.769
728	SLU 83	-0.003595	-107.85	SLV 2	-0.0022379	-67.136
729	SLU 83	-0.0036212	-108.635	SLV 2	-0.0022446	-67.339
730	SLU 83	-0.0036385	-109.156	SLV 2	-0.0022538	-67.613
731	SLU 83	-0.0036553	-109.659	SLV 6	-0.002272	-68.161
732	SLU 83	-0.0036549	-109.646	SLV 6	-0.0022729	-68.187
733	SLU 83	-0.0036321	-108.962	SLU 2	-0.0022753	-68.259
734	SLU 83	-0.0035812	-107.436	SLU 2	-0.0022458	-67.374
735	SLU 83	-0.0035265	-105.794	SLU 2	-0.0022131	-66.392
736	SLU 83	-0.0034468	-103.403	SLU 2	-0.0021649	-64.948
737	SLU 84	-0.0034172	-102.515	SLV 1	-0.0021317	-63.951
738	SLU 84	-0.0034115	-102.344	SLV 1	-0.0020906	-62.719
739	SLU 84	-0.003414	-102.421	SLV 1	-0.0020264	-60.791
740	SLU 84	-0.0034183	-102.55	SLV 2	-0.0019547	-58.641
741	SLU 84	-0.0034165	-102.495	SLV 2	-0.0018816	-56.448
742	SLU 84	-0.0034052	-102.156	SLV 2	-0.0018181	-54.544
743	SLU 84	-0.0033869	-101.608	SLV 2	-0.0017759	-53.277
744	SLU 84	-0.0033979	-101.938	SLV 2	-0.0018086	-54.258
745	SLU 84	-0.0036118	-108.353	SLV 2	-0.0019464	-58.392
746	SLU 84	-0.0037143	-111.43	SLV 1	-0.0019716	-59.148
747	SLU 84	-0.0037567	-112.7	SLV 1	-0.0019779	-59.337
748	SLU 84	-0.0038412	-115.236	SLV 3	-0.0019627	-58.88
749	SLU 84	-0.0039205	-117.616	SLV 3	-0.0019199	-57.597
750	SLU 84	-0.0039913	-119.739	SLV 3	-0.0018582	-55.746
751	SLU 84	-0.0040538	-121.614	SLV 4	-0.0017848	-53.544
752	SLU 84	-0.0041097	-123.291	SLV 4	-0.0017042	-51.127
753	SLU 84	-0.0041607	-124.822	SLV 2	-0.0016199	-48.597
754	SLU 84	-0.0042088	-126.265	SLV 2	-0.0015331	-45.993
755	SLV 15	-0.004321	-129.631	SLV 2	-0.0014444	-43.332
756	SLV 15	-0.0044866	-134.598	SLV 2	-0.0013547	-40.642
757	SLV 15	-0.004673	-140.191	SLV 2	-0.0012665	-37.995
758	SLV 15	-0.0049028	-147.085	SLV 2	-0.0011852	-35.555
759	SLV 13	-0.0052084	-156.252	SLV 4	-0.0011188	-33.564
760	SLV 15	-0.0048606	-145.817	SLV 2	-0.0011618	-34.855
763	SLU 84	-0.0036084	-108.253	SLV 1	-0.0019385	-58.156
765	SLU 84	-0.0037037	-111.11	SLV 3	-0.0019577	-58.731
766	SLV 15	-0.0046979	-140.938	SLV 2	-0.0011199	-33.596
768	SLU 84	-0.0033152	-99.455	SLU 1	-0.0020694	-62.083
770	SLU 84	-0.0032154	-96.462	SLU 1	-0.0020092	-60.277
771	SLU 84	-0.0029621	-88.864	SLV 3	-0.0017643	-52.928
773	SLU 84	-0.0030212	-90.637	SLV 3	-0.0017143	-51.43
774	SLV 15	-0.0044775	-134.326	SLV 2	-0.0010673	-32.019
777	SLV 4	-0.0045316	-135.948	SLV 13	-0.0009335	-28.006
778	SLU 84	-0.0036674	-110.021	SLV 15	-0.0017961	-53.884
780	SLU 84	-0.0037103	-111.308	SLV 13	-0.0018583	-55.749
781	SLU 84	-0.0036669	-110.007	SLV 3	-0.0019183	-57.55
783	SLU 84	-0.0036578	-109.735	SLV 3	-0.0018876	-56.628
784	SLU 84	-0.0032142	-96.426	SLV 16	-0.0019559	-58.678
786	SLU 84	-0.002848	-85.441	SLV 3	-0.0016306	-48.919
788	SLU 84	-0.0029147	-87.441	SLV 3	-0.001585	-47.551
790	SLV 4	-0.0043565	-130.694	SLV 13	-0.0009072	-27.215
791	SLV 15	-0.0042446	-127.337	SLV 2	-0.0010124	-30.372
793	SLU 84	-0.003706	-111.179	SLV 4	-0.0019217	-57.652
795	SLU 84	-0.0036831	-110.494	SLV 4	-0.0018848	-56.543
796	SLU 84	-0.003673	-110.189	SLV 13	-0.0017942	-53.827
798	SLU 84	-0.0037236	-111.708	SLV 13	-0.0018572	-55.717
799	SLU 84	-0.003195	-95.851	SLV 16	-0.0019016	-57.049
801	SLU 84	-0.002797	-83.91	SLV 3	-0.0015634	-46.902
803	SLU 84	-0.0028714	-86.143	SLV 3	-0.001522	-45.661
805	SLV 4	-0.0042176	-126.529	SLV 13	-0.000882	-26.459
806	SLV 15	-0.0040255	-120.764	SLV 2	-0.0009599	-28.796
808	SLU 84	-0.0037484	-112.451	SLV 2	-0.0019339	-58.017
810	SLU 84	-0.0037117	-111.351	SLV 4	-0.0018916	-56.747
811	SLU 84	-0.0036754	-110.261	SLV 13	-0.0017905	-53.714
813	SLU 84	-0.0037338	-112.015	SLV 13	-0.00185	-55.5
814	SLU 84	-0.0030818	-92.454	SLV 16	-0.0017979	-53.937
815	SLU 84	-0.0024637	-73.91	SLV 16	-0.0012661	-37.983
816	SLU 84	-0.0023365	-70.095	SLV 16	-0.0011799	-35.397
817	SLU 84	-0.002273	-68.189	SLV 16	-0.0011713	-35.14
818	SLU 84	-0.0022634	-67.903	SLV 16	-0.0012273	-36.818
819	SLU 84	-0.0022959	-68.878	SLV 16	-0.0013299	-39.898
820	SLU 84	-0.0023597	-70.79	SLV 15	-0.0014621	-43.862
821	SLU 84	-0.0024458	-73.374	SLU 1	-0.0015492	-46.476
822	SLU 84	-0.0025463	-76.388	SLV 3	-0.0016071	-48.214
823	SLU 84	-0.002652	-79.559	SLV 3	-0.0015829	-47.488
824	SLU 84	-0.0027508	-82.524	SLV 3	-0.0015581	-46.742
825	SLU 84	-0.0028266	-84.799	SLV 3	-0.0015291	-45.874
826	SLU 84	-0.0032463	-97.388	SLV 16	-0.0019274	-57.823
828	SLU 84	-0.0026782	-80.345	SLV 16	-0.0014178	-42.534
829	SLU 84	-0.0030058	-90.175	SLV 16	-0.0017309	-51.926
840	SLU 84	-0.0028063	-84.188	SLV 3	-0.0015587	-46.761
842	SLU 84	-0.0028849	-86.548	SLV 3	-0.0015195	-45.586
844	SLV 4	-0.0041342	-124.025	SLV 13	-0.0008596	-25.788
845	SLV 15	-0.0038327	-114.98	SLV 2	-0.000912	-27.36
847	SLU 84	-0.0037891	-113.672	SLV 2	-0.001946	-58.38
849	SLU 84	-0.0037385	-112.155	SLV 2	-0.0019008	-57.023
850	SLU 84	-0.0036694	-110.081	SLV 13	-0.0017702	-53.106
852	SLU 83	-0.0037359	-112.077	SLV 13	-0.0018316	-54.949

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
853	SLU 84	-0.0031703	-95.11	SLV 16	-0.0018609	-55.827
854	SLU 84	-0.002513	-75.389	SLV 16	-0.0013188	-39.565
855	SLU 84	-0.0023843	-71.529	SLV 16	-0.0012324	-36.971
856	SLU 84	-0.0023193	-69.58	SLV 16	-0.0012236	-36.708
857	SLU 84	-0.0023085	-69.254	SLV 16	-0.0012794	-38.383
858	SLU 84	-0.0023397	-70.19	SLV 16	-0.001382	-41.461
859	SLU 84	-0.0024022	-72.066	SLV 16	-0.0015143	-45.429
860	SLU 84	-0.0024872	-74.616	SLU 1	-0.0015759	-47.276
861	SLU 84	-0.0025866	-77.598	SLV 3	-0.0016324	-48.972
862	SLU 84	-0.0026913	-80.739	SLV 3	-0.0016055	-48.166
863	SLU 84	-0.0027892	-83.676	SLV 3	-0.0015789	-47.368
864	SLU 84	-0.0028646	-85.937	SLV 3	-0.0015491	-46.474
865	SLU 84	-0.003323	-99.69	SLV 14	-0.0019842	-59.527
867	SLU 84	-0.0030929	-92.788	SLV 14	-0.001798	-53.94
868	SLU 84	-0.0028553	-85.659	SLV 1	-0.0015904	-47.712
870	SLU 84	-0.0029312	-87.937	SLV 3	-0.0015516	-46.548
872	SLV 4	-0.0041211	-123.632	SLV 13	-0.0008424	-25.272
873	SLV 15	-0.0036689	-110.066	SLV 2	-0.0008692	-26.076
875	SLU 83	-0.0038296	-114.888	SLV 2	-0.0019481	-58.444
877	SLU 84	-0.003765	-112.949	SLV 2	-0.0018987	-56.962
878	SLU 83	-0.0036609	-109.827	SLV 13	-0.0017425	-52.274
880	SLU 83	-0.0037356	-112.069	SLV 13	-0.0018074	-54.223
881	SLU 84	-0.0034041	-102.123	SLV 14	-0.0020484	-61.451
883	SLU 84	-0.0031924	-95.771	SLV 14	-0.0018792	-56.377
884	SLU 84	-0.0029402	-88.207	SLV 1	-0.0016519	-49.556
886	SLU 84	-0.0030113	-90.338	SLV 1	-0.0016159	-48.477
888	SLV 4	-0.0041918	-125.755	SLV 13	-0.0008338	-25.013
889	SLV 15	-0.0035301	-105.903	SLV 2	-0.0008306	-24.919
891	SLU 83	-0.0038764	-116.292	SLV 2	-0.0019451	-58.354
893	SLU 83	-0.0037976	-113.928	SLV 2	-0.0018891	-56.674
894	SLU 83	-0.0036659	-109.976	SLV 13	-0.0017177	-51.53
896	SLU 83	-0.0037489	-112.467	SLV 13	-0.0017864	-53.592
898	SLV 4	-0.004361	-130.831	SLV 13	-0.000838	-25.14
899	SLU 83	-0.0034821	-104.464	SLV 13	-0.002089	-62.67
901	SLU 83	-0.0032884	-98.653	SLV 13	-0.0019372	-58.116
902	SLU 83	-0.003046	-91.38	SLV 2	-0.0017107	-51.321
904	SLU 83	-0.0031122	-93.367	SLV 2	-0.0016775	-50.324
905	SLV 15	-0.003408	-102.24	SLV 2	-0.0007946	-23.837
907	SLU 83	-0.0039396	-118.189	SLV 2	-0.0019425	-58.274
909	SLU 83	-0.0038466	-115.397	SLV 2	-0.0018796	-56.389
910	SLU 83	-0.0037107	-111.32	SLV 13	-0.0017081	-51.244
912	SLU 83	-0.0038022	-114.066	SLV 13	-0.0017808	-53.425
914	SLV 4	-0.0046453	-139.358	SLV 13	-0.0008601	-25.804
915	SLU 83	-0.0035586	-106.759	SLV 13	-0.0021208	-63.623
917	SLU 83	-0.0033826	-101.478	SLV 13	-0.001987	-59.609
918	SLU 83	-0.0031671	-95.012	SLV 2	-0.0017772	-53.316
920	SLU 83	-0.0032287	-96.86	SLV 2	-0.0017439	-52.318
921	SLV 15	-0.0032916	-98.747	SLV 2	-0.0007588	-22.763
923	SLU 83	-0.0040339	-121.017	SLV 2	-0.0019434	-58.303
925	SLU 83	-0.0039264	-117.793	SLV 2	-0.0018738	-56.214
926	SLV 4	-0.0051335	-154.006	SLV 13	-0.0008724	-26.173
927	SLV 4	-0.0045634	-136.902	SLV 13	-0.0008569	-25.707
928	SLV 4	-0.0040508	-121.523	SLV 13	-0.0008504	-25.512
929	SLV 4	-0.0036185	-108.556	SLV 13	-0.0008575	-25.726
930	SLV 4	-0.0032786	-98.358	SLV 13	-0.0008815	-26.446
931	SLV 4	-0.003035	-91.049	SLV 13	-0.0009247	-27.74
932	SLV 4	-0.0028859	-86.576	SLV 13	-0.0009884	-29.651
933	SLU 83	-0.0028628	-85.885	SLV 13	-0.0010729	-32.186
934	SLU 83	-0.0029554	-88.661	SLV 13	-0.0011767	-35.3
935	SLU 83	-0.0031079	-93.237	SLV 13	-0.0012961	-38.882
936	SLU 83	-0.0033016	-99.049	SLV 13	-0.0014243	-42.73
937	SLU 83	-0.0035101	-105.304	SLV 13	-0.0015514	-46.541
938	SLU 83	-0.0036971	-110.913	SLV 13	-0.0016629	-49.887
939	SLU 83	-0.0037497	-112.492	SLV 13	-0.0016954	-50.862
941	SLV 4	-0.0050623	-151.87	SLV 13	-0.000906	-27.181
942	SLU 83	-0.0036449	-109.348	SLV 13	-0.0021542	-64.627
944	SLU 83	-0.0034863	-104.588	SLV 13	-0.0020383	-61.15
945	SLU 83	-0.0033083	-99.248	SLV 2	-0.0018557	-55.671
947	SLU 83	-0.0033654	-100.962	SLV 2	-0.0018224	-54.671
948	SLU 83	-0.0041701	-125.104	SLV 2	-0.0019487	-58.461
950	SLU 83	-0.0040571	-121.714	SLV 2	-0.0018762	-56.287
951	SLU 83	-0.004	-119.999	SLV 2	-0.0018392	-55.175
952	SLU 83	-0.0038502	-115.506	SLV 2	-0.0017397	-52.19
953	SLU 83	-0.0036762	-110.286	SLV 2	-0.0016156	-48.468
954	SLU 83	-0.003512	-105.359	SLV 2	-0.0014848	-44.544
955	SLU 83	-0.0033787	-101.361	SLV 2	-0.0013587	-40.761
956	SLU 83	-0.0032885	-98.655	SLV 2	-0.0012437	-37.31
957	SLV 15	-0.0032758	-98.274	SLV 2	-0.0011424	-34.271
958	SLV 15	-0.003377	-101.309	SLV 2	-0.0010548	-31.644
959	SLV 15	-0.0035303	-105.91	SLV 2	-0.0009794	-29.381
960	SLV 15	-0.0037317	-111.952	SLV 2	-0.0009136	-27.408
961	SLV 15	-0.0039728	-119.184	SLV 2	-0.0008546	-25.637
962	SLV 15	-0.0031685	-95.056	SLV 2	-0.0007208	-21.625
964	SLV 15	-0.0042388	-127.163	SLV 2	-0.000799	-23.971
966	SLU 83	-0.0042775	-128.326	SLV 2	-0.001949	-58.471
969	SLV 4	-0.0056244	-168.731	SLV 13	-0.0009805	-29.414
982	SLU 83	-0.0040959	-122.876	SLV 13	-0.00179	-53.699
985	SLU 83	-0.004271	-128.13	SLV 13	-0.0019003	-57.008
999	SLU 83	-0.0037622	-112.866	SLV 13	-0.0022022	-66.065
1001	SLU 83	-0.0036206	-108.618	SLV 13	-0.0021041	-63.123

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
1002	SLU 83	-0.0034857	-104.572	SLV 2	-0.0019544	-58.632
1004	SLU 83	-0.0035385	-106.155	SLV 2	-0.001921	-57.63
1005	SLU 83	-0.004405	-132.151	SLV 2	-0.0019371	-58.112
1010	SLU 83	-0.0044021	-132.064	SLV 13	-0.0019342	-58.025
1011	SLU 83	-0.0046627	-139.88	SLV 13	-0.0019854	-59.562
1012	SLU 83	-0.004388	-131.641	SLV 13	-0.0019246	-57.739
1013	SLU 83	-0.0041163	-123.489	SLV 13	-0.001864	-55.92
1014	SLU 83	-0.0038797	-116.39	SLV 13	-0.0018182	-54.547
1015	SLU 83	-0.0036982	-110.945	SLV 13	-0.0017968	-53.905
1016	SLU 83	-0.0035815	-107.446	SLV 13	-0.0018047	-54.14
1017	SLU 83	-0.0035316	-105.947	SLV 13	-0.0018426	-55.277
1018	SLU 83	-0.0035431	-106.294	SLV 13	-0.0019077	-57.231
1019	SLU 83	-0.0036043	-108.13	SLV 13	-0.0019931	-59.792
1020	SLU 83	-0.0036956	-110.867	SLV 13	-0.0020868	-62.605
1021	SLU 83	-0.0037875	-113.626	SLV 13	-0.0021711	-65.133
1022	SLU 83	-0.003839	-115.17	SLV 13	-0.0022203	-66.609
1023	SLU 83	-0.0037981	-113.944	SLV 13	-0.0022023	-66.068
1024	SLU 83	-0.0036852	-110.557	SLV 13	-0.0021438	-64.313
1025	SLU 83	-0.0035261	-105.783	SLV 13	-0.0020742	-62.227
1026	SLU 83	-0.0033595	-100.786	SLV 9	-0.0020023	-60.069
1027	SLU 83	-0.003214	-96.419	SLV 9	-0.0019279	-57.838
1028	SLU 83	-0.0031073	-93.219	SLV 9	-0.0018784	-56.353
1029	SLU 83	-0.0030499	-91.496	SLV 9	-0.0018595	-55.786
1030	SLU 83	-0.0030459	-91.378	SLV 6	-0.001858	-55.74
1031	SLU 83	-0.0030947	-92.841	SLV 6	-0.0018693	-56.08
1032	SLU 83	-0.0031901	-95.702	SLV 6	-0.0019086	-57.257
1033	SLU 83	-0.0033197	-99.591	SLV 6	-0.0019683	-59.049
1034	SLU 83	-0.0034631	-103.893	SLV 2	-0.0020066	-60.198
1035	SLU 83	-0.0035889	-107.668	SLV 2	-0.0020288	-60.864
1036	SLU 83	-0.0036551	-109.654	SLV 2	-0.0020181	-60.542
1037	SLU 83	-0.0036576	-109.727	SLV 2	-0.0019763	-59.289
1038	SLU 83	-0.0035936	-107.807	SLV 2	-0.0019028	-57.085
1039	SLU 83	-0.0035081	-105.243	SLV 2	-0.0018192	-54.576
1040	SLU 83	-0.0034366	-103.097	SLV 2	-0.0017423	-52.27
1041	SLU 83	-0.0034037	-102.112	SLV 2	-0.001684	-50.521
1042	SLU 83	-0.0034259	-102.778	SLV 2	-0.001652	-49.559
1043	SLU 83	-0.0035127	-105.38	SLV 2	-0.0016505	-49.515
1044	SLU 83	-0.003667	-110.01	SLV 2	-0.0016809	-50.427
1045	SLU 83	-0.0038853	-116.558	SLV 2	-0.0017414	-52.243
1046	SLU 83	-0.0041556	-124.669	SLV 2	-0.0018267	-54.8
1047	SLU 83	-0.0044562	-133.685	SLV 2	-0.0019264	-57.793
1049	SLU 83	-0.0045288	-135.865	SLV 13	-0.0019656	-58.969
1053	SLU 83	-0.0046715	-140.145	SLV 13	-0.0020042	-60.126
1065	SLU 83	-0.0040689	-122.068	SLV 13	-0.0023416	-70.249
1067	SLU 83	-0.0039617	-118.851	SLV 13	-0.0022801	-68.404
1080	SLU 83	-0.0038909	-116.728	SLV 2	-0.0021776	-65.329
1082	SLU 83	-0.003935	-118.05	SLV 2	-0.0021441	-64.324
1093	SLU 83	-0.0046963	-140.89	SLV 2	-0.0019255	-57.765

1.4 Cedimenti fondazioni superficiali

Nodo: *nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
spostamento nodale massimo: *situazione in cui si verifica lo spostamento massimo verticale nel nodo calcolato dal solutore ad elementi finiti. Lo spostamento massimo con segno è quello con valore massimo lungo l'asse Z, dove valori positivi rappresentano spostamenti verso l'alto.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
spostamento nodale minimo: *situazione in cui si verifica lo spostamento minimo verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento minimo con segno è quello con valore minimo lungo l'asse Z, dove valori negativi rappresentano spostamenti verso il basso.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
Cedimento elastico: *cedimento teorico elastico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico elastico massimo.*
v.: *valore del cedimento teorico elastico massimo. [m]*
Cedimento edometrico: *cedimento teorico edometrico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico edometrico massimo.*
v.: *valore del cedimento teorico edometrico massimo. [m]*
Cedimento di consolidazione: *cedimento teorico di consolidazione massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico di consolidazione massimo.*
v.: *valore del cedimento teorico di consolidazione massimo. [m]*

Spostamento estremo minimo -0.0042959 al nodo di indice 969, di coordinate x = -24.4, y = 5.88, z = -0.98, nel contesto SLD 4.
Spostamento estremo massimo -0.0013863 al nodo di indice 817, di coordinate x = -12.99, y = 3.18, z = -0.98, nel contesto SLD 16.
Cedimento elastico estremo massimo 0.0028903 al nodo di indice 550, di coordinate x = -11.36, y = 0.59, z = -0.98, nel contesto SLE rara 21.

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
10	SLE RA 1	-2.6E-03	-78.342	SLE RA 21	-3.0E-03	-88.932	SLE RA 21	2.22E-03				
11	SLE RA 1	-2.6E-03	-78.33	SLE RA 21	-3.0E-03	-88.846	SLE RA 21	2.22E-03				
12	SLE RA 1	-2.6E-03	-78.313	SLE RA 21	-3.0E-03	-88.749	SLE RA 21	2.21E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
13	SLE RA 1	-2.6E-03	-78.285	SLE RA 21	-3.0E-03	-88.636	SLE RA 21	2.18E-03				
14	SLE RA 1	-2.6E-03	-78.226	SLE RA 21	-2.9E-03	-88.487	SLE RA 21	2.13E-03				
15	SLE RA 1	-2.6E-03	-78.027	SLE RA 21	-2.9E-03	-88.182	SLE RA 21	2.06E-03				
16	SLE RA 1	-2.6E-03	-77.683	SLE RA 21	-2.9E-03	-87.718	SLE RA 21	1.97E-03				
17	SLE RA 1	-2.6E-03	-77.869	SLE RA 21	-2.9E-03	-88.295	SLE RA 21	2.27E-03				
18	SLE RA 1	-2.6E-03	-77.795	SLE RA 21	-2.9E-03	-88.159	SLE RA 21	2.26E-03				
19	SLE RA 1	-2.6E-03	-77.656	SLE RA 21	-2.9E-03	-87.932	SLE RA 21	2.24E-03				
20	SLE RA 1	-2.6E-03	-77.565	SLE RA 21	-2.9E-03	-87.762	SLE RA 21	2.20E-03				
21	SLE RA 1	-2.6E-03	-77.376	SLE RA 21	-2.9E-03	-87.592	SLE RA 21	2.25E-03				
22	SLE RA 1	-2.6E-03	-77.334	SLE RA 21	-2.9E-03	-87.513	SLE RA 21	2.23E-03				
23	SLE RA 1	-2.6E-03	-77.536	SLE RA 21	-2.9E-03	-88.047	SLE RA 21	2.32E-03				
26	SLE RA 1	-2.6E-03	-77.482	SLE RA 21	-2.9E-03	-87.917	SLE RA 21	2.33E-03				
27	SLE RA 1	-2.6E-03	-77.387	SLE RA 21	-2.9E-03	-87.768	SLE RA 21	2.33E-03				
29	SLE RA 1	-2.6E-03	-77.273	SLE RA 21	-2.9E-03	-87.587	SLE RA 21	2.32E-03				
31	SLE RA 1	-2.6E-03	-77.181	SLE RA 21	-2.9E-03	-87.431	SLE RA 21	2.30E-03				
33	SLE RA 1	-2.6E-03	-77.106	SLE RA 21	-2.9E-03	-87.294	SLE RA 21	2.27E-03				
35	SLE RA 1	-2.6E-03	-77.03	SLE RA 21	-2.9E-03	-87.157	SLE RA 21	2.23E-03				
36	SLE RA 1	-2.6E-03	-76.89	SLE RA 21	-2.9E-03	-86.948	SLE RA 21	2.19E-03				
37	SLE RA 1	-2.5E-03	-76.495	SLE RA 21	-2.9E-03	-86.429	SLE RA 21	2.10E-03				
38	SLE RA 1	-2.6E-03	-76.596	SLE RA 21	-2.9E-03	-86.998	SLE RA 21	2.39E-03				
39	SLE RA 1	-2.5E-03	-76.387	SLE RA 21	-0.00289	-86.699	SLE RA 21	0.002381				
40	SLE RA 1	-2.5E-03	-76.153	SLE RA 21	-2.9E-03	-86.392	SLE RA 21	2.38E-03				
41	SLE RA 1	-2.5E-03	-75.895	SLE RA 21	-2.9E-03	-86.054	SLE RA 21	2.37E-03				
42	SLE RA 1	-2.5E-03	-75.692	SLE RA 21	-2.9E-03	-85.779	SLE RA 21	2.35E-03				
43	SLE RA 1	-2.5E-03	-75.57	SLE RA 21	-2.9E-03	-85.596	SLE RA 21	2.32E-03				
44	SLE RA 1	-2.5E-03	-75.501	SLE RA 21	-2.8E-03	-85.474	SLE RA 21	0.002316				
45	SLE RA 1	-2.5E-03	-75.406	SLE RA 21	-2.8E-03	-85.323	SLE RA 21	2.27E-03				
46	SLE RA 1	-2.5E-03	-75.049	SLE RA 21	-2.8E-03	-84.854	SLE RA 21	2.20E-03				
48	SLE RA 2	-2.5E-03	-75.559	SLE RA 20	-2.9E-03	-85.839	SLE RA 21	0.002434				
49	SLE RA 1	-2.5E-03	-75.23	SLE RA 21	-2.8E-03	-85.407	SLE RA 21	2.42E-03				
50	SLE RA 1	-2.5E-03	-74.871	SLE RA 21	-2.8E-03	-84.963	SLE RA 21	2.42E-03				
51	SLE RA 1	-2.5E-03	-74.492	SLE RA 21	-2.8E-03	-84.495	SLE RA 21	0.002409				
52	SLE RA 1	-2.5E-03	-74.192	SLE RA 21	-2.8E-03	-84.117	SLE RA 21	2.39E-03				
53	SLE RA 1	-2.5E-03	-74.005	SLE RA 21	-2.8E-03	-83.868	SLE RA 21	2.37E-03				
54	SLE RA 1	-2.5E-03	-73.906	SLE RA 21	-2.8E-03	-83.72	SLE RA 21	2.34E-03				
55	SLE RA 1	-2.5E-03	-73.793	SLE RA 21	-2.8E-03	-83.556	SLE RA 21	2.30E-03				
56	SLE RA 1	-2.4E-03	-73.402	SLE RA 21	-2.8E-03	-83.056	SLE RA 21	2.25E-03				
57	SLE RA 2	-2.5E-03	-74.458	SLE RA 20	-2.8E-03	-84.625	SLE RA 21	2.44E-03				
58	SLE RA 2	-2.5E-03	-74.076	SLE RA 20	-2.8E-03	-84.141	SLE RA 21	0.002428				
59	SLE RA 2	-2.5E-03	-73.679	SLE RA 20	-2.8E-03	-83.657	SLE RA 21	2.43E-03				
60	SLE RA 2	-2.4E-03	-73.258	SLE RA 20	-2.8E-03	-83.145	SLE RA 21	2.42E-03				
61	SLE RA 2	-2.4E-03	-72.897	SLE RA 20	-2.8E-03	-82.701	SLE RA 21	2.40E-03				
62	SLE RA 2	-2.4E-03	-72.625	SLE RA 20	-2.7E-03	-82.36	SLE RA 21	2.38E-03				
63	SLE RA 2	-2.4E-03	-72.423	SLE RA 20	-2.7E-03	-82.098	SLE RA 21	2.34E-03				
64	SLE RA 1	-2.4E-03	-72.211	SLE RA 21	-2.7E-03	-81.827	SLE RA 21	2.31E-03				
65	SLE RA 1	-2.4E-03	-71.71	SLE RA 21	-2.7E-03	-81.209	SLE RA 21	2.26E-03				
66	SLE RA 2	-2.4E-03	-73.282	SLE RA 20	-2.8E-03	-83.332	SLE RA 21	2.41E-03				
67	SLE RA 2	-0.00243	-72.9	SLE RA 20	-2.8E-03	-82.855	SLE RA 21	2.40E-03				
68	SLE RA 2	-2.4E-03	-72.533	SLE RA 20	-2.7E-03	-82.41	SLE RA 21	2.40E-03				
69	SLE RA 2	-2.4E-03	-72.123	SLE RA 20	-2.7E-03	-81.918	SLE RA 21	2.39E-03				
70	SLE RA 2	-2.4E-03	-71.72	SLE RA 20	-2.7E-03	-81.434	SLE RA 21	2.37E-03				
71	SLE RA 2	-2.4E-03	-71.351	SLE RA 20	-2.7E-03	-80.989	SLE RA 21	2.35E-03				
72	SLE RA 2	-2.4E-03	-71.008	SLE RA 20	-2.7E-03	-80.572	SLE RA 21	2.32E-03				
73	SLE RA 2	-2.4E-03	-70.656	SLE RA 20	-2.7E-03	-80.143	SLE RA 21	2.28E-03				
74	SLD 2	-2.3E-03	-69.883	SLE RA 20	-2.6E-03	-79.399	SLE RA 21	2.24E-03				
75	SLE RA 2	-2.4E-03	-71.918	SLE RA 20	-2.7E-03	-81.695	SLE RA 21	2.38E-03				
76	SLE RA 2	-2.4E-03	-72.197	SLE RA 20	-2.7E-03	-82.04	SLE RA 21	0.002387				
77	SLE RA 2	-2.4E-03	-70.602	SLE RA 20	-2.7E-03	-80.131	SLE RA 21	2.31E-03				
78	SLE RA 2	-2.4E-03	-72.17	SLE RA 20	-2.7E-03	-82.012	SLE RA 21	2.39E-03				
79	SLE RA 2	-2.4E-03	-70.91	SLE RA 20	-2.7E-03	-80.507	SLE RA 21	2.33E-03				
80	SLE RA 2	-2.4E-03	-71.317	SLE RA 20	-2.7E-03	-81.003	SLE RA 21	2.36E-03				
81	SLE RA 2	-2.4E-03	-72.62	SLE RA 20	-2.8E-03	-82.606	SLE RA 21	2.38E-03				
82	SLE RA 2	-2.4E-03	-72.227	SLE RA 20	-2.7E-03	-82.118	SLE RA 21	2.39E-03				
83	SLE RA 2	-2.4E-03	-71.667	SLE RA 20	-2.7E-03	-81.446	SLE RA 21	2.37E-03				
84	SLE RA 2	-2.4E-03	-71.032	SLE RA 20	-2.7E-03	-80.691	SLE RA 21	2.35E-03				
85	SLE RA 2	-2.3E-03	-70.413	SLE RA 20	-2.7E-03	-79.952	SLE RA 21	2.31E-03				
86	SLE RA 2	-2.3E-03	-69.804	SLE RA 20	-2.6E-03	-79.219	SLE RA 21	2.26E-03				
87	SLD 2	-2.3E-03	-68.888	SLE RA 20	-2.6E-03	-78.44	SLE RA 21	2.21E-03				
151	SLD 12	-3.1E-03	-92.602	SLE RA 21	-3.6E-03	-108.771	SLE RA 21	4.42E-04				
152	SLD 12	-3.1E-03	-92.786	SLE RA 21	-3.6E-03	-108.634	SLE RA 21	4.98E-04				
153	SLD 12	-3.1E-03	-93.303	SLE RA 21	-3.6E-03	-108.923	SLE RA 21	5.47E-04				
154	SLD 12	-3.1E-03	-94.101	SLE RA 21	-3.7E-03	-109.589	SLE RA 21	5.90E-04				
155	SLD 12	-3.2E-03	-95.066	SLE RA 21	-3.7E-03	-110.53	SLE RA 21	6.27E-04				
156	SLD 8	-3.2E-03	-95.575	SLE RA 21	-3.7E-03	-111.111	SLE RA 21	6.67E-04				
157	SLD 16	-3.1E-03	-93.012	SLE RA 21	-3.7E-03	-111.623	SLE RA 21	2.17E-04				
158	SLD 16	-3.1E-03	-92.897	SLE RA 21	-3.7E-03	-110.254	SLE RA 21	3.10E-04				
159	SLD 12	-3.1E-03	-92.728	SLE RA 21	-3.6E-03	-109.262	SLE RA 21	3.87E-04				
172	SLD 7	-3.0E-03	-91.176	SLE RA 21	-3.5E-03	-106.185	SLE RA 21	8.47E-04				
174	SLD 7	-3.0E-03	-90.838	SLE RA 21	-3.5E-03	-105.919	SLE RA 21	8.13E-04				
176	SLD 7	-3.0E-03	-90.68	SLE RA 21	-3.5E-03	-105.842	SLE RA 21	7.45E-04				
178	SLD 7	-3.0E-03	-90.507	SLE RA 21	-3.5E-03	-105.788	SLE RA 21	6.92E-04				
180	SLD 7	-3.0E-03	-90.321	SLE RA 21	-3.5E-03	-105.761	SLE RA 21	6.38E-04				
182	SLD 7	-3.0E-03	-90.191	SLE RA 21	-3.5E-03	-105.841	SLE RA 21	5.81E-04				
184	SLD 7	-3.0E-03	-90.186	SLE RA 21	-3.5E-03	-106.098	SLE RA 21	5.19E-04				
186	SLD 3	-3.0E-03	-90.226	SLE RA 21	-3.6E-03	-106.579	SLE RA 21	4.53E-04				
187	SLD 3	-3.0E-03	-90.059	SLE RA 21	-3.6E-03	-107.223	SLE RA 21	3.88E-04				
188	SLD 3	-3.0E-03	-90.072	SLD 14	-3.6E-03	-108.4	SLE RA 21	3.05E-04				
189	SLD 3	-3.0E-03	-90.284	SLD 14	-3.7E-03	-110.452	SLE RA 21	2.12E-04				
198	SLD 7	-3.0E-03	-89.407	SLE RA 21	-3.5E-03	-103.551	SLE RA 21	1.07E-03				
200	SLD 7	-3.0E-03	-88.981	SLE RA 21	-3.4E-03	-103.173	SLE RA 21	1.04E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
201	SLD 7	-3.0E-03	-88.642	SLE RA 21	-3.4E-03	-102.875	SLE RA 21	1.01E-03				
202	SLD 7	-2.9E-03	-88.261	SLE RA 21	-3.4E-03	-102.56	SLE RA 21	9.46E-04				
203	SLD 7	-2.9E-03	-87.929	SLE RA 21	-3.4E-03	-102.336	SLE RA 21	8.87E-04				
204	SLD 7	-2.9E-03	-87.765	SLE RA 21	-3.4E-03	-102.339	SLE RA 21	8.24E-04				
205	SLD 7	-2.9E-03	-87.857	SLE RA 21	-3.4E-03	-102.669	SLE RA 21	7.57E-04				
206	SLD 3	-2.9E-03	-87.949	SLE RA 21	-3.4E-03	-103.361	SLE RA 21	6.87E-04				
207	SLD 3	-2.9E-03	-88.089	SLE RA 21	-3.5E-03	-104.384	SLE RA 21	6.11E-04				
208	SLD 3	-2.9E-03	-88.435	SLE RA 21	-3.5E-03	-105.66	SLE RA 21	5.21E-04				
209	SLD 3	-3.0E-03	-88.891	SLD 14	-3.6E-03	-107.484	SLE RA 21	4.13E-04				
210	SLD 8	-3.1E-03	-92.834	SLE RA 21	-3.6E-03	-107.161	SLE RA 21	9.82E-04				
211	SLD 8	-3.1E-03	-92.052	SLE RA 21	-3.5E-03	-106.267	SLE RA 21	9.85E-04				
212	SLD 8	-3.0E-03	-91.214	SLE RA 21	-3.5E-03	-105.296	SLE RA 21	1.01E-03				
213	SLD 8	-3.0E-03	-90.477	SLE RA 21	-3.5E-03	-104.446	SLE RA 21	1.04E-03				
214	SLD 7	-3.0E-03	-89.882	SLE RA 21	-3.5E-03	-103.798	SLE RA 21	1.07E-03				
215	SLD 7	-3.0E-03	-89.427	SLE RA 21	-3.4E-03	-103.363	SLE RA 21	1.10E-03				
216	SLD 7	-3.0E-03	-89.112	SLE RA 21	-3.4E-03	-103.099	SLE RA 21	1.11E-03				
217	SLD 7	-3.0E-03	-88.851	SLE RA 21	-3.4E-03	-102.896	SLE RA 21	1.09E-03				
218	SLD 16	-3.0E-03	-90.037	SLE RA 21	-3.5E-03	-106.175	SLE RA 21	5.83E-04				
219	SLD 12	-3.0E-03	-89.578	SLE RA 21	-3.5E-03	-104.627	SLE RA 21	6.69E-04				
220	SLD 12	-3.0E-03	-89.008	SLE RA 21	-3.5E-03	-103.641	SLE RA 21	7.36E-04				
221	SLD 12	-3.0E-03	-89.004	SLE RA 21	-3.4E-03	-103.345	SLE RA 21	7.95E-04				
222	SLD 12	-3.0E-03	-89.61	SLE RA 21	-3.5E-03	-103.786	SLE RA 21	8.48E-04				
223	SLD 12	-3.0E-03	-90.77	SLE RA 21	-3.5E-03	-104.907	SLE RA 21	8.93E-04				
224	SLD 12	-3.1E-03	-92.246	SLE RA 21	-3.5E-03	-106.469	SLE RA 21	9.31E-04				
225	SLD 8	-3.1E-03	-93.587	SLE RA 21	-3.6E-03	-108.101	SLE RA 21	9.76E-04				
226	SLD 16	-3.0E-03	-90.655	SLE RA 21	-3.6E-03	-108.054	SLE RA 21	0.00047				
228	SLD 7	-2.9E-03	-87.734	SLE RA 21	-3.4E-03	-101.041	SLE RA 21	1.28E-03				
230	SLD 7	-2.9E-03	-87.173	SLE RA 21	-3.3E-03	-100.492	SLE RA 21	1.25E-03				
231	SLD 7	-2.9E-03	-86.663	SLE RA 21	-3.3E-03	-99.985	SLE RA 21	1.23E-03				
232	SLD 7	-2.9E-03	-86.059	SLE RA 21	-3.3E-03	-99.392	SLE RA 21	1.17E-03				
233	SLD 7	-2.9E-03	-85.563	SLE RA 21	-3.3E-03	-98.949	SLE RA 21	1.11E-03				
234	SLD 7	-2.8E-03	-85.355	SLE RA 21	-3.3E-03	-98.865	SLE RA 21	1.05E-03				
235	SLD 7	-2.9E-03	-85.549	SLE RA 21	-3.3E-03	-99.27	SLE RA 21	9.78E-04				
236	SLD 3	-2.9E-03	-85.703	SLE RA 21	-3.3E-03	-100.184	SLE RA 21	0.000904				
237	SLD 3	-2.9E-03	-86.158	SLE RA 21	-3.4E-03	-101.507	SLE RA 21	0.000823				
238	SLD 3	-2.9E-03	-86.814	SLE RA 21	-3.4E-03	-103.078	SLE RA 21	7.28E-04				
239	SLD 3	-2.9E-03	-87.554	SLE RA 21	-3.5E-03	-104.752	SLE RA 21	6.20E-04				
240	SLD 16	-2.9E-03	-87.09	SLE RA 21	-3.4E-03	-101.947	SLE RA 21	8.43E-04				
241	SLD 16	-2.9E-03	-86.161	SLE RA 21	-3.3E-03	-99.809	SLE RA 21	9.31E-04				
242	SLD 12	-2.8E-03	-85.325	SLE RA 21	-3.3E-03	-98.436	SLE RA 21	1.00E-03				
243	SLD 12	-2.8E-03	-85.173	SLE RA 21	-3.3E-03	-98.025	SLE RA 21	1.06E-03				
244	SLD 12	-2.9E-03	-85.899	SLE RA 21	-3.3E-03	-98.653	SLE RA 21	1.11E-03				
245	SLD 12	-2.9E-03	-87.453	SLE RA 21	-3.3E-03	-100.263	SLE RA 21	1.16E-03				
246	SLD 8	-3.0E-03	-89.566	SLE RA 21	-3.4E-03	-102.636	SLE RA 21	1.20E-03				
247	SLD 8	-3.1E-03	-91.84	SLE RA 21	-3.5E-03	-105.475	SLE RA 21	1.21E-03				
248	SLD 16	-2.9E-03	-88.361	SLE RA 21	-3.5E-03	-104.564	SLE RA 21	7.24E-04				
251	SLD 7	-2.9E-03	-86.09	SLE RA 21	-3.3E-03	-98.585	SLE RA 21	1.46E-03				
253	SLD 7	-2.8E-03	-85.399	SLE RA 21	-3.3E-03	-97.869	SLE RA 21	1.44E-03				
254	SLD 7	-2.8E-03	-84.728	SLE RA 21	-3.2E-03	-97.162	SLE RA 21	1.42E-03				
255	SLD 7	-2.8E-03	-83.893	SLE RA 21	-3.2E-03	-96.282	SLE RA 21	1.37E-03				
256	SLD 7	-2.8E-03	-83.215	SLE RA 21	-3.2E-03	-95.597	SLE RA 21	1.31E-03				
257	SLD 7	-2.8E-03	-82.952	SLE RA 21	-3.2E-03	-95.412	SLE RA 21	1.25E-03				
258	SLD 3	-2.8E-03	-83.097	SLE RA 21	-3.2E-03	-95.888	SLE RA 21	1.17E-03				
259	SLD 3	-2.8E-03	-83.462	SLE RA 21	-3.2E-03	-97.026	SLE RA 21	1.10E-03				
260	SLD 3	-2.8E-03	-84.224	SLE RA 21	-3.3E-03	-98.65	SLE RA 21	1.02E-03				
261	SLD 3	-2.8E-03	-85.16	SLE RA 21	-3.3E-03	-100.479	SLE RA 21	9.28E-04				
262	SLD 3	-2.9E-03	-86.146	SLE RA 21	-3.4E-03	-102.37	SLE RA 21	8.23E-04				
263	SLD 16	-2.8E-03	-83.789	SLE RA 21	-3.2E-03	-97.321	SLE RA 21	1.09E-03				
264	SLD 16	-2.7E-03	-82.392	SLE RA 21	-3.2E-03	-94.718	SLE RA 21	1.17E-03				
265	SLD 12	-2.7E-03	-81.475	SLE RA 21	-3.1E-03	-93.08	SLE RA 21	1.21E-03				
266	SLD 12	-2.7E-03	-81.236	SLE RA 21	-3.1E-03	-92.623	SLE RA 21	1.27E-03				
267	SLD 12	-2.7E-03	-82.092	SLE RA 21	-3.1E-03	-93.446	SLE RA 21	1.33E-03				
268	SLD 12	-2.8E-03	-84.024	SLE RA 21	-3.2E-03	-95.534	SLE RA 21	1.37E-03				
269	SLD 8	-2.9E-03	-86.687	SLE RA 21	-3.3E-03	-98.712	SLE RA 21	1.40E-03				
270	SLD 8	-3.0E-03	-89.737	SLE RA 21	-3.4E-03	-102.485	SLE RA 21	1.44E-03				
271	SLD 16	-2.9E-03	-85.738	SLE RA 21	-3.4E-03	-100.743	SLE RA 21	9.74E-04				
273	SLD 7	-2.8E-03	-84.335	SLE RA 21	-3.2E-03	-96.036	SLE RA 21	1.62E-03				
275	SLD 7	-2.8E-03	-83.559	SLE RA 21	-3.2E-03	-95.199	SLE RA 21	1.62E-03				
276	SLD 7	-2.8E-03	-82.785	SLE RA 21	-3.1E-03	-94.357	SLE RA 21	1.59E-03				
277	SLD 7	-2.7E-03	-81.715	SLE RA 21	-3.1E-03	-93.179	SLE RA 21	1.54E-03				
278	SLD 7	-2.7E-03	-80.846	SLE RA 21	-3.1E-03	-92.241	SLE RA 21	1.48E-03				
279	SLD 7	-2.7E-03	-80.521	SLE RA 21	-3.1E-03	-91.945	SLE RA 21	1.41E-03				
280	SLD 3	-2.7E-03	-80.572	SLE RA 21	-3.1E-03	-92.475	SLE RA 21	1.34E-03				
281	SLD 3	-2.7E-03	-81.158	SLE RA 21	-3.1E-03	-93.827	SLE RA 21	1.26E-03				
282	SLD 3	-2.7E-03	-82.218	SLE RA 21	-3.2E-03	-95.758	SLE RA 21	1.20E-03				
283	SLD 3	-2.8E-03	-83.321	SLE RA 21	-3.3E-03	-97.713	SLE RA 21	1.12E-03				
284	SLD 3	-2.8E-03	-84.402	SLE RA 21	-3.3E-03	-99.65	SLE RA 21	1.03E-03				
286	SLD 16	-2.3E-03	-70.469	SLD 1	-4.2E-03	-127.33	SLE RA 20	0.000129				
301	SLD 16	-2.6E-03	-78.294	SLD 1	-3.2E-03	-97.049	SLE RA 20	8.93E-04				
303	SLD 16	-2.7E-03	-80.789	SLD 1	-3.3E-03	-98.027	SLE RA 21	1.02E-03				
307	SLD 16	-2.7E-03	-81.909	SLE RA 21	-3.2E-03	-95.646	SLE RA 21	1.23E-03				
308	SLD 16	-2.7E-03	-79.634	SLE RA 21	-3.1E-03	-91.686	SLE RA 21	1.29E-03				
309	SLD 16	-2.6E-03	-78.178	SLE RA 21	-3.0E-03	-89.151	SLE RA 21	1.35E-03				
310	SLE RA 1	-2.6E-03	-77.356	SLE RA 21	-2.9E-03	-87.499	SLE RA 21	1.41E-03				
311	SLE RA 1	-2.6E-03	-76.929	SLE RA 21	-2.9E-03	-87.082	SLE RA 21	1.47E-03				
312	SLE RA 1	-2.6E-03	-77.728	SLE RA 21	-2.9E-03	-88.077	SLE RA 21	1.52E-03				
313	SLE RA 1	-2.7E-03	-79.77	SLE RA 21	-3.0E-03	-90.505	SLE RA 21	1.56E-03				
314	SLE RA 1	-2.8E-03	-82.973	SLE RA 21	-3.1E-03	-94.27	SLE RA 21	1.59E-03				
315	SLE RA 1	-2.8E-03	-84.036	SLE RA 21	-3.2E-03	-95.516	SLE RA 21	1.60E-03				
316	SLE RA 1	-2.9E-03	-86.364	SLE RA 21	-3.3E-03	-98.235	SLE RA 21	1.61E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
318	SLE RA 1	-2.7E-03	-82.09	SLE RA 21	-3.1E-03	-93.225	SLE RA 21	1.77E-03				
320	SLE RA 1	-2.7E-03	-81.368	SLE RA 21	-3.1E-03	-92.337	SLE RA 21	1.77E-03				
321	SLE RA 1	-2.7E-03	-80.696	SLE RA 21	-3.1E-03	-91.522	SLE RA 21	1.74E-03				
322	SLE RA 1	-2.6E-03	-79.439	SLE RA 21	-3.0E-03	-90.015	SLE RA 21	1.70E-03				
323	SLD 7	-2.6E-03	-78.427	SLE RA 21	-3.0E-03	-88.844	SLE RA 21	1.64E-03				
324	SLD 3	-2.6E-03	-77.991	SLE RA 21	-2.9E-03	-88.432	SLE RA 21	1.57E-03				
325	SLD 3	-2.6E-03	-77.968	SLE RA 21	-3.0E-03	-88.99	SLE RA 21	1.49E-03				
326	SLD 3	-2.6E-03	-78.714	SLE RA 21	-3.0E-03	-90.51	SLE RA 21	1.41E-03				
327	SLD 3	-2.7E-03	-80.043	SLE RA 21	-3.1E-03	-92.789	SLE RA 21	1.33E-03				
328	SLD 3	-2.7E-03	-81.024	SLE RA 21	-3.2E-03	-94.502	SLE RA 21	1.28E-03				
329	SLD 3	-2.7E-03	-81.921	SLE RA 21	-3.2E-03	-96.162	SLE RA 21	1.22E-03				
333	SLD 3	-2.7E-03	-80.898	SLD 14	-3.3E-03	-98.298	SLE RA 21	9.59E-04				
335	SLD 3	-2.6E-03	-78.666	SLD 14	-3.2E-03	-97.177	SLE RA 21	8.23E-04				
350	SLD 3	-2.2E-03	-67.459	SLD 14	-4.0E-03	-119.508	SLE RA 20	8.29E-05				
352	SLD 3	-2.3E-03	-68.324	SLD 14	-4.1E-03	-122.8	SLE RA 20	8.59E-05				
353	SLD 3	-2.1E-03	-62.815	SLD 14	-3.7E-03	-110.317	SLE RA 20	1.08E-04				
354	SLD 3	-1.9E-03	-58.265	SLD 14	-3.3E-03	-99.59	SLE RA 20	1.28E-04				
355	SLD 3	-1.8E-03	-54.807	SLD 14	-3.0E-03	-90.856	SLE RA 20	1.29E-04				
356	SLD 16	-2.3E-03	-68.743	SLD 1	-4.2E-03	-125.529	SLE RA 20	8.32E-05				
357	SLD 16	-2.1E-03	-63.626	SLD 1	-3.8E-03	-113.45	SLE RA 20	8.86E-05				
358	SLD 16	-2.0E-03	-59.237	SLD 1	-3.4E-03	-102.751	SLE RA 20	1.03E-04				
359	SLD 16	-1.9E-03	-55.77	SLD 1	-3.1E-03	-93.796	SLE RA 20	1.06E-04				
360	SLD 16	-1.8E-03	-53.291	SLD 1	-2.9E-03	-86.693	SLE RA 20	1.02E-04				
361	SLD 16	-1.7E-03	-51.801	SLD 1	-2.7E-03	-81.408	SLE RA 20	0.000106				
362	SLD 16	-1.7E-03	-51.272	SLD 1	-2.6E-03	-77.832	SLE RA 20	1.25E-04				
363	SLD 16	-1.7E-03	-51.668	SLD 1	-2.5E-03	-75.833	SLE RA 20	1.72E-04				
364	SLD 16	-1.8E-03	-52.952	SLD 1	-2.5E-03	-75.277	SLE RA 20	0.000234				
365	SLD 16	-1.8E-03	-55.082	SLD 1	-2.5E-03	-76.033	SLE RA 20	3.33E-04				
366	SLD 16	-1.9E-03	-57.996	SLD 1	-2.6E-03	-77.959	SLE RA 20	4.53E-04				
367	SLD 16	-2.1E-03	-61.585	SLD 1	-2.7E-03	-80.859	SLE RA 20	5.88E-04				
368	SLD 16	-2.2E-03	-65.657	SLD 1	-2.8E-03	-84.436	SLE RA 20	7.42E-04				
369	SLD 16	-2.3E-03	-69.877	SLD 1	-2.9E-03	-88.21	SLE RA 20	8.98E-04				
370	SLD 16	-2.5E-03	-73.701	SLD 1	-3.0E-03	-91.429	SLE RA 20	1.04E-03				
371	SLD 16	-2.5E-03	-76.344	SLD 1	-3.1E-03	-93.037	SLE RA 20	1.17E-03				
372	SLD 16	-2.6E-03	-77.799	SLE RA 20	-3.1E-03	-93.253	SLE RA 21	1.24E-03				
373	SLD 16	-2.6E-03	-78.359	SLE RA 20	-3.1E-03	-92.971	SLE RA 21	1.30E-03				
374	SLD 16	-2.6E-03	-78.206	SLE RA 20	-0.00306	-91.799	SLE RA 21	1.35E-03				
375	SLD 16	-2.6E-03	-77.367	SLE RA 20	-3.0E-03	-89.855	SLE RA 21	1.39E-03				
376	SLD 16	-2.5E-03	-75.61	SLE RA 20	-2.9E-03	-86.487	SLE RA 21	1.45E-03				
377	SLD 16	-2.5E-03	-74.18	SLE RA 21	-2.8E-03	-84.007	SLE RA 21	1.50E-03				
378	SLE RA 1	-2.4E-03	-72.756	SLE RA 21	-2.7E-03	-82.286	SLE RA 21	0.00155				
379	SLE RA 1	-2.4E-03	-72.292	SLE RA 21	-2.7E-03	-81.828	SLE RA 21	1.61E-03				
380	SLE RA 1	-2.4E-03	-73.123	SLE RA 21	-2.8E-03	-82.862	SLE RA 21	1.66E-03				
381	SLE RA 1	-2.5E-03	-75.255	SLE RA 21	-2.8E-03	-85.393	SLE RA 21	1.70E-03				
382	SLE RA 1	-2.6E-03	-78.506	SLE RA 21	-3.0E-03	-89.21	SLE RA 21	1.74E-03				
383	SLE RA 1	-2.8E-03	-83.565	SLE RA 21	-3.2E-03	-95.125	SLE RA 21	1.76E-03				
384	SLD 3	-1.7E-03	-52.461	SLD 14	-2.8E-03	-84.127	SLE RA 20	1.20E-04				
385	SLD 3	-1.7E-03	-51.194	SLD 14	-2.6E-03	-79.305	SLE RA 20	1.25E-04				
386	SLD 3	-1.7E-03	-50.957	SLD 14	-2.5E-03	-76.24	SLE RA 20	1.37E-04				
387	SLD 3	-1.7E-03	-51.697	SLD 14	-2.5E-03	-74.775	SLE RA 20	1.75E-04				
388	SLD 3	-1.8E-03	-53.36	SLD 14	-2.5E-03	-74.757	SLE RA 20	2.26E-04				
389	SLD 3	-1.9E-03	-55.884	SLD 14	-2.5E-03	-76.035	SLE RA 20	3.13E-04				
390	SLD 3	-2.0E-03	-59.174	SLD 14	-2.6E-03	-78.435	SLE RA 20	4.20E-04				
391	SLD 3	-2.1E-03	-63.072	SLD 14	-2.7E-03	-81.718	SLE RA 20	5.42E-04				
392	SLD 3	-2.2E-03	-67.309	SLD 14	-2.9E-03	-85.516	SLE RA 20	6.85E-04				
393	SLD 3	-2.4E-03	-71.441	SLD 14	-3.0E-03	-89.246	SLE RA 20	8.31E-04				
394	SLD 3	-2.5E-03	-75.64	SLD 14	-3.1E-03	-92.562	SLE RA 21	1.02E-03				
395	SLD 3	-2.5E-03	-74.77	SLD 14	-3.1E-03	-92.012	SLE RA 20	9.72E-04				
396	SLD 3	-2.6E-03	-78.324	SLD 14	-3.1E-03	-93.85	SLE RA 21	1.19E-03				
397	SLD 3	-2.6E-03	-77.872	SLD 14	-3.1E-03	-93.684	SLE RA 21	1.16E-03				
398	SLD 3	-2.6E-03	-79.124	SLE RA 20	-3.1E-03	-94.027	SLE RA 21	1.26E-03				
399	SLD 3	-2.6E-03	-79.139	SLE RA 20	-3.1E-03	-93.173	SLE RA 21	1.33E-03				
400	SLD 3	-2.6E-03	-78.46	SLE RA 20	-3.0E-03	-91.497	SLE RA 21	1.40E-03				
401	SLD 3	-2.6E-03	-77.776	SLE RA 20	-3.0E-03	-90.073	SLE RA 21	1.45E-03				
402	SLD 3	-2.6E-03	-76.89	SLE RA 21	-2.9E-03	-88.472	SLE RA 21	1.50E-03				
403	SLD 3	-2.5E-03	-75.626	SLE RA 21	-2.9E-03	-86.295	SLE RA 21	1.57E-03				
404	SLD 3	-2.5E-03	-74.851	SLE RA 21	-2.8E-03	-84.796	SLE RA 21	1.65E-03				
405	SLE RA 1	-2.5E-03	-74.517	SLE RA 21	-2.8E-03	-84.303	SLE RA 21	0.001725				
406	SLE RA 1	-2.5E-03	-74.941	SLE RA 21	-2.8E-03	-84.86	SLE RA 21	1.79E-03				
407	SLE RA 1	-2.5E-03	-76.082	SLE RA 21	-2.9E-03	-86.235	SLE RA 21	1.85E-03				
408	SLE RA 1	-2.6E-03	-77.483	SLE RA 21	-0.00293	-87.899	SLE RA 21	1.90E-03				
409	SLE RA 1	-2.6E-03	-78.603	SLE RA 21	-3.0E-03	-89.242	SLE RA 21	0.001923				
410	SLE RA 1	-2.6E-03	-79.161	SLE RA 21	-3.0E-03	-89.915	SLE RA 21	0.001919				
413	SLD 16	-2.5E-03	-75.037	SLD 1	-3.1E-03	-92.442	SLE RA 20	1.12E-03				
415	SLD 16	-2.6E-03	-77.496	SLD 1	-3.1E-03	-93.384	SLE RA 20	0.001246				
416	SLD 3	-2.1E-03	-63.147	SLD 14	-3.7E-03	-111.213	SLE RA 20	1.08E-04				
417	SLD 3	-2.6E-03	-77.759	SLD 14	-3.1E-03	-93.495	SLE RA 21	1.18E-03				
420	SLD 3	-2.5E-03	-75.594	SLD 14	-3.1E-03	-92.416	SLE RA 21	1.05E-03				
422	SLD 16	-2.2E-03	-64.983	SLD 1	-3.9E-03	-116.914	SLE RA 20	8.85E-05				
424	SLE RA 1	-2.6E-03	-76.798	SLE RA 21	-2.9E-03	-87.217	SLE RA 21	2.06E-03				
427	SLD 16	-2.4E-03	-72.811	SLD 1	-3.0E-03	-89.222	SLE RA 20	1.31E-03				
429	SLD 16	-2.5E-03	-75.171	SLE RA 20	-3.0E-03	-90.101	SLE RA 20	1.43E-03				
430	SLD 3	-2.0E-03	-59.825	SLD 14	-3.5E-03	-104.658	SLE RA 20	0.000145				
431	SLD 3	-2.5E-03	-75.492	SLE RA 20	-3.0E-03	-90.156	SLE RA 21	1.38E-03				
434	SLD 3	-2.5E-03	-73.51	SLD 14	-3.0E-03	-88.967	SLE RA 21	0.001237				
436	SLD 16	-2.0E-03	-60.849	SLD 1	-3.6E-03	-108.914	SLE RA 20	1.08E-04				
438	SLE RA 1	-2.5E-03	-75.184	SLE RA 21	-2.8E-03	-85.352	SLE RA 21	2.20E-03				
441	SLD 16	-2.4E-03	-71.318	SLD 1	-2.9E-03	-86.992	SLE RA 20	1.46E-03				
443	SLD 16	-2.5E-03	-73.582	SLE RA 20	-2.9E-03	-87.98	SLE RA 21	1.59E-03				
444	SLD 3	-1.9E-03	-57.665	SLD 14	-3.3E-03	-100.167	SLE RA 20	1.69E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
445	SLD 3	-2.5E-03	-73.893	SLE RA 20	-2.9E-03	-87.856	SLE RA 21	1.54E-03				
448	SLD 3	-2.4E-03	-72.091	SLD 14	-2.9E-03	-86.446	SLE RA 21	1.40E-03				
450	SLD 16	-1.9E-03	-58.109	SLD 1	-3.4E-03	-103.451	SLE RA 20	1.27E-04				
451	SLE RA 1	-2.4E-03	-71.285	SLE RA 21	-2.7E-03	-81.023	SLE RA 21	2.03E-03				
452	SLE RA 1	-2.5E-03	-74.344	SLE RA 21	-2.8E-03	-84.358	SLE RA 21	2.34E-03				
456	SLD 16	-2.3E-03	-70.335	SLD 1	-2.8E-03	-85.444	SLE RA 20	1.60E-03				
458	SLD 16	-2.4E-03	-72.505	SLE RA 20	-2.9E-03	-86.516	SLE RA 21	1.72E-03				
459	SLD 3	-1.9E-03	-56.707	SLD 14	-3.3E-03	-97.833	SLE RA 20	2.12E-04				
460	SLD 3	-2.4E-03	-72.722	SLE RA 20	-2.9E-03	-86.134	SLE RA 21	1.67E-03				
463	SLD 3	-0.00237	-71.099	SLE RA 20	-2.8E-03	-84.827	SLE RA 21	1.54E-03				
465	SLD 16	-1.9E-03	-56.683	SLD 1	-3.3E-03	-100.422	SLE RA 20	1.44E-04				
466	SLE RA 1	-2.5E-03	-74.147	SLE RA 21	-2.8E-03	-84.096	SLE RA 21	2.49E-03				
470	SLD 16	-2.3E-03	-69.717	SLD 1	-2.8E-03	-84.378	SLE RA 20	0.001726				
472	SLD 16	-2.4E-03	-71.793	SLE RA 20	-2.9E-03	-85.523	SLE RA 21	1.83E-03				
473	SLD 3	-1.9E-03	-56.906	SLD 14	-3.3E-03	-97.599	SLE RA 20	2.60E-04				
474	SLD 3	-2.4E-03	-71.811	SLE RA 20	-2.8E-03	-84.78	SLE RA 21	1.79E-03				
477	SLD 3	-2.3E-03	-70.366	SLE RA 20	-2.8E-03	-83.629	SLE RA 21	1.67E-03				
479	SLD 16	-1.9E-03	-56.432	SLD 1	-3.3E-03	-99.617	SLE RA 20	1.89E-04				
480	SLE RA 1	-2.5E-03	-74.308	SLE RA 21	-2.8E-03	-84.25	SLE RA 21	2.65E-03				
484	SLD 16	-2.3E-03	-69.362	SLD 1	-2.8E-03	-83.681	SLE RA 20	0.00185				
486	SLD 16	-2.4E-03	-71.31	SLE RA 20	-2.8E-03	-84.882	SLE RA 21	1.95E-03				
487	SLD 3	-1.9E-03	-58.139	SLD 14	-3.3E-03	-99.266	SLE RA 20	3.20E-04				
488	SLD 3	-2.4E-03	-71.02	SLE RA 20	-2.8E-03	-83.667	SLE RA 21	1.91E-03				
491	SLD 3	-2.3E-03	-69.778	SLE RA 20	-2.8E-03	-82.67	SLE RA 21	1.79E-03				
498	SLD 16	-1.9E-03	-57.174	SLD 1	-3.4E-03	-100.751	SLE RA 20	2.44E-04				
499	SLE RA 1	-2.5E-03	-74.404	SLE RA 21	-2.8E-03	-84.349	SLE RA 21	2.76E-03				
501	SLE RA 1	-2.4E-03	-71.001	SLE RA 21	-2.7E-03	-80.732	SLE RA 21	2.34E-03				
502	SLE RA 1	-2.4E-03	-71.519	SLE RA 21	-2.7E-03	-81.205	SLE RA 21	2.37E-03				
503	SLE RA 1	-2.4E-03	-70.922	SLE RA 21	-2.7E-03	-80.226	SLE RA 21	0.002519				
504	SLE RA 1	-2.5E-03	-74.395	SLE RA 21	-2.8E-03	-84.338	SLE RA 21	0.002781				
505	SLD 16	-2.3E-03	-69.11	SLD 1	-2.8E-03	-83.37	SLE RA 21	1.95E-03				
507	SLD 16	-2.4E-03	-70.902	SLE RA 20	-2.8E-03	-84.513	SLE RA 21	2.07E-03				
508	SLD 3	-2.0E-03	-60.19	SLD 14	-3.4E-03	-102.479	SLE RA 21	4.00E-04				
509	SLD 3	-2.3E-03	-70.182	SLE RA 20	-2.8E-03	-82.727	SLE RA 21	2.01E-03				
512	SLD 3	-2.3E-03	-69.206	SLE RA 20	-2.7E-03	-81.882	SLE RA 21	1.90E-03				
514	SLD 16	-2.0E-03	-58.665	SLD 1	-3.4E-03	-103.442	SLE RA 20	3.09E-04				
518	SLE RA 1	-2.5E-03	-74.11	SLE RA 21	-2.8E-03	-84.03	SLE RA 21	2.87E-03				
521	SLD 14	-2.3E-03	-68.944	SLD 3	-2.8E-03	-83.322	SLE RA 21	2.06E-03				
523	SLD 14	-2.4E-03	-70.639	SLE RA 20	-2.8E-03	-84.339	SLE RA 21	2.14E-03				
524	SLD 3	-2.1E-03	-62.728	SLD 14	-3.6E-03	-106.69	SLE RA 21	4.83E-04				
525	SLD 1	-2.3E-03	-69.383	SLE RA 20	-2.7E-03	-81.939	SLE RA 21	0.002086				
528	SLD 1	-2.3E-03	-68.6	SLE RA 20	-2.7E-03	-81.246	SLE RA 21	1.98E-03				
531	SLD 16	-2.0E-03	-60.573	SLD 1	-3.6E-03	-107.133	SLE RA 21	3.88E-04				
534	SLE RA 2	-0.00245	-73.499	SLE RA 20	-2.8E-03	-83.392	SLE RA 21	2.82E-03				
537	SLD 14	-2.3E-03	-68.852	SLD 3	-2.8E-03	-83.361	SLE RA 21	2.14E-03				
539	SLD 13	-2.3E-03	-70.439	SLE RA 20	-2.8E-03	-84.256	SLE RA 21	2.22E-03				
540	SLD 3	-2.2E-03	-65.27	SLD 14	-3.7E-03	-111.064	SLE RA 21	5.59E-04				
541	SLD 1	-2.3E-03	-68.669	SLE RA 20	-2.7E-03	-81.33	SLE RA 21	2.15E-03				
544	SLD 1	-2.3E-03	-68.067	SLE RA 20	-2.7E-03	-80.787	SLE RA 21	2.05E-03				
547	SLD 13	-2.1E-03	-62.379	SLD 4	-3.7E-03	-111.013	SLE RA 21	4.54E-04				
550	SLE RA 2	-2.4E-03	-72.724	SLE RA 20	-2.8E-03	-82.601	SLE RA 21	2.89E-03				
553	SLD 3	-2.2E-03	-67.132	SLD 14	-3.8E-03	-114.38	SLE RA 21	6.14E-04				
554	SLD 13	-2.3E-03	-68.657	SLD 4	-2.8E-03	-83.366	SLE RA 21	2.19E-03				
556	SLD 13	-2.3E-03	-70.152	SLE RA 20	-2.8E-03	-84.095	SLE RA 21	2.26E-03				
557	SLD 2	-2.3E-03	-68.032	SLE RA 20	-2.7E-03	-80.974	SLE RA 21	2.18E-03				
560	SLD 2	-2.3E-03	-67.64	SLE RA 20	-2.7E-03	-80.58	SLE RA 21	0.002094				
562	SLD 13	-2.1E-03	-63.634	SLD 4	-3.9E-03	-116.389	SLE RA 21	3.87E-04				
563	SLD 13	-2.1E-03	-63.959	SLD 4	-3.8E-03	-113.296	SLE RA 21	5.27E-04				
564	SLD 13	-2.2E-03	-64.638	SLD 4	-3.7E-03	-110.913	SLE RA 21	6.39E-04				
565	SLD 13	-2.2E-03	-65.441	SLD 4	-3.6E-03	-108.846	SLE RA 21	7.36E-04				
566	SLD 13	-2.2E-03	-66.233	SLD 4	-3.6E-03	-106.859	SLE RA 21	8.34E-04				
567	SLD 13	-2.2E-03	-66.958	SLD 4	-3.5E-03	-104.845	SLE RA 21	9.22E-04				
568	SLD 13	-2.3E-03	-67.596	SLD 4	-3.4E-03	-102.764	SLE RA 21	1.01E-03				
569	SLD 13	-2.3E-03	-68.144	SLD 4	-3.4E-03	-100.603	SLE RA 21	1.11E-03				
570	SLD 13	-2.3E-03	-68.593	SLD 4	-3.3E-03	-98.354	SLE RA 21	1.22E-03				
571	SLD 13	-2.3E-03	-68.924	SLD 4	-3.2E-03	-96.01	SLE RA 21	1.34E-03				
572	SLD 13	-2.3E-03	-69.101	SLD 4	-3.1E-03	-93.57	SLE RA 21	1.47E-03				
573	SLD 14	-2.3E-03	-69.079	SLD 3	-3.0E-03	-91.063	SLE RA 21	1.61E-03				
574	SLD 14	-2.3E-03	-68.836	SLD 3	-3.0E-03	-88.581	SLE RA 21	1.73E-03				
575	SLD 14	-2.3E-03	-68.42	SLD 3	-2.9E-03	-86.335	SLE RA 21	1.86E-03				
576	SLD 13	-2.3E-03	-68.001	SLD 4	-2.8E-03	-84.641	SLE RA 21	1.98E-03				
577	SLD 13	-2.3E-03	-69.289	SLE RA 20	-2.8E-03	-83.516	SLE RA 21	2.24E-03				
578	SLD 13	-2.4E-03	-70.859	SLE RA 20	-2.8E-03	-84.513	SLE RA 21	2.28E-03				
579	SLD 13	-2.4E-03	-72.532	SLE RA 20	-2.8E-03	-85.357	SLE RA 21	2.31E-03				
580	SLD 13	-2.5E-03	-74.146	SLE RA 20	-2.9E-03	-85.922	SLE RA 21	2.32E-03				
581	SLD 13	-2.5E-03	-75.509	SLE RA 21	-0.00287	-86.1	SLE RA 21	2.35E-03				
582	SLE RA 1	-2.5E-03	-75.439	SLE RA 21	-2.9E-03	-85.836	SLE RA 21	2.38E-03				
583	SLE RA 1	-2.5E-03	-74.784	SLE RA 21	-2.8E-03	-85.116	SLE RA 21	2.41E-03				
584	SLE RA 1	-2.5E-03	-73.815	SLE RA 21	-2.8E-03	-84.029	SLE RA 21	2.43E-03				
585	SLE RA 1	-2.4E-03	-72.911	SLE RA 21	-2.8E-03	-83.01	SLE RA 21	0.002474				
586	SLE RA 1	-2.4E-03	-72.167	SLE RA 21	-2.7E-03	-82.168	SLE RA 21	2.51E-03				
587	SLD 2	-2.4E-03	-71.418	SLE RA 20	-2.7E-03	-81.584	SLE RA 21	2.56E-03				
588	SLE RA 2	-2.4E-03	-72.377	SLE RA 20	-2.7E-03	-82.135	SLE RA 21	2.71E-03				
589	SLD 2	-2.4E-03	-72.135	SLE RA 20	-2.7E-03	-82.176	SLE RA 21	2.72E-03				
590	SLD 2	-2.4E-03	-71.247	SLE RA 20	-2.7E-03	-82.26	SLE RA 21	2.60E-03				
591	SLD 2	-2.3E-03	-70.277	SLE RA 20	-2.7E-03	-82.219	SLE RA 21	2.47E-03				
592	SLD 2	-2.3E-03	-69.33	SLE RA 20	-2.7E-03	-81.98	SLE RA 21	2.38E-03				
593	SLD 2	-2.3E-03	-68.588	SLE RA 20	-2.7E-03	-81.596	SLE RA 21	2.32E-03				
594	SLD 2	-2.3E-03	-67.829	SLE RA 20	-2.7E-03	-80.897	SLE RA 21	2.18E-03				
595	SLD 2	-2.3E-03	-67.503	SLE RA 20	-2.7E-03	-80.558	SLE RA 21	2.10E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
596	SLD 2	-2.3E-03	-67.694	SLE RA 20	-2.7E-03	-80.827	SLE RA 21	1.97E-03				
597	SLD 2	-2.3E-03	-68.463	SLE RA 21	-2.7E-03	-81.958	SLE RA 21	1.90E-03				
598	SLD 1	-2.3E-03	-69.763	SLD 16	-2.8E-03	-84.137	SLE RA 21	1.76E-03				
599	SLD 1	-2.4E-03	-70.505	SLD 16	-2.9E-03	-86.692	SLE RA 21	1.66E-03				
600	SLD 1	-2.4E-03	-70.829	SLD 16	-3.0E-03	-89.479	SLE RA 21	1.52E-03				
601	SLD 1	-2.4E-03	-70.811	SLD 16	-3.1E-03	-92.284	SLE RA 21	1.40E-03				
602	SLD 1	-2.4E-03	-70.555	SLD 16	-3.2E-03	-95.017	SLE RA 21	1.28E-03				
603	SLD 1	-2.3E-03	-70.144	SLD 16	-3.3E-03	-97.656	SLE RA 21	1.18E-03				
604	SLD 1	-2.3E-03	-69.637	SLD 16	-3.3E-03	-100.214	SLE RA 21	1.09E-03				
605	SLD 1	-2.3E-03	-69.072	SLD 16	-3.4E-03	-102.727	SLE RA 21	1.01E-03				
606	SLD 2	-2.3E-03	-68.487	SLD 15	-3.5E-03	-105.268	SLE RA 21	9.42E-04				
607	SLD 2	-2.3E-03	-67.954	SLD 15	-3.6E-03	-107.985	SLE RA 21	8.56E-04				
608	SLD 4	-2.3E-03	-67.632	SLD 13	-3.7E-03	-111.163	SLE RA 21	7.53E-04				
609	SLD 4	-2.3E-03	-67.827	SLD 13	-3.8E-03	-115.333	SLE RA 21	6.37E-04				
610	SLD 4	-2.3E-03	-69.019	SLD 13	-4.0E-03	-121.287	SLE RA 21	4.81E-04				
612	SLD 13	-2.1E-03	-63.534	SLD 4	-3.8E-03	-113.633	SLE RA 21	4.90E-04				
621	SLD 13	-2.1E-03	-63.598	SLD 4	-3.8E-03	-113.911	SLE RA 21	4.93E-04				
635	SLD 13	-2.3E-03	-67.861	SLD 4	-2.8E-03	-85.217	SLE RA 21	1.92E-03				
639	SLD 13	-2.3E-03	-68.172	SLD 4	-2.8E-03	-83.063	SLE RA 21	2.20E-03				
642	SLD 13	-2.3E-03	-69.637	SLE RA 20	-2.8E-03	-83.658	SLE RA 21	2.26E-03				
651	SLE RA 1	-2.4E-03	-71.663	SLE RA 21	-0.00272	-81.6	SLE RA 21	2.49E-03				
653	SLE RA 1	-2.4E-03	-70.534	SLE RA 21	-2.7E-03	-80.309	SLE RA 21	2.53E-03				
655	SLE RA 2	-2.3E-03	-70.348	SLE RA 20	-2.7E-03	-80.103	SLE RA 21	2.55E-03				
662	SLE RA 2	-2.4E-03	-71.542	SLE RA 20	-2.7E-03	-81.351	SLE RA 21	2.81E-03				
667	SLE RA 2	-2.3E-03	-69.611	SLE RA 20	-2.6E-03	-79.005	SLE RA 21	2.69E-03				
676	SLD 2	-2.3E-03	-67.696	SLE RA 20	-2.7E-03	-81.033	SLE RA 21	2.16E-03				
679	SLD 2	-2.2E-03	-67.37	SLE RA 20	-2.7E-03	-80.693	SLE RA 21	2.09E-03				
682	SLD 1	-2.3E-03	-68.807	SLE RA 21	-2.8E-03	-82.655	SLE RA 21	1.84E-03				
695	SLD 4	-2.2E-03	-67.436	SLD 13	-3.8E-03	-115.172	SLE RA 21	6.31E-04				
697	SLD 2	-2.2E-03	-67.02	SLE RA 21	-2.7E-03	-80.141	SLE RA 21	1.96E-03				
699	SLD 1	-2.3E-03	-68.436	SLE RA 21	-2.7E-03	-82.287	SLE RA 21	1.84E-03				
701	SLD 13	-2.1E-03	-63.292	SLD 4	-3.9E-03	-116.11	SLE RA 21	0.000382				
702	SLD 13	-2.1E-03	-63.612	SLD 4	-3.8E-03	-113.008	SLE RA 21	0.000523				
703	SLD 13	-2.1E-03	-64.27	SLD 4	-3.7E-03	-110.604	SLE RA 21	6.36E-04				
704	SLD 13	-2.2E-03	-65.05	SLD 4	-3.6E-03	-108.515	SLE RA 21	7.37E-04				
705	SLD 13	-2.2E-03	-65.819	SLD 4	-3.6E-03	-106.506	SLE RA 21	8.38E-04				
706	SLD 13	-2.2E-03	-66.518	SLD 4	-3.5E-03	-104.469	SLE RA 21	9.29E-04				
707	SLD 13	-2.2E-03	-67.129	SLD 4	-3.4E-03	-102.364	SLE RA 21	1.02E-03				
708	SLD 13	-2.3E-03	-67.647	SLD 4	-3.3E-03	-100.179	SLE RA 21	1.12E-03				
709	SLD 13	-2.3E-03	-68.064	SLD 4	-3.3E-03	-97.904	SLE RA 21	1.24E-03				
710	SLD 13	-2.3E-03	-68.36	SLD 4	-3.2E-03	-95.534	SLE RA 21	1.36E-03				
711	SLD 13	-2.3E-03	-68.5	SLD 4	-3.1E-03	-93.065	SLE RA 21	1.50E-03				
712	SLD 13	-2.3E-03	-68.443	SLD 4	-3.0E-03	-90.524	SLE RA 21	1.64E-03				
713	SLD 13	-2.3E-03	-68.166	SLD 4	-2.9E-03	-88.005	SLE RA 21	0.001749				
714	SLD 13	-2.3E-03	-67.715	SLD 4	-2.9E-03	-85.72	SLE RA 21	1.87E-03				
715	SLD 13	-2.2E-03	-67.284	SLD 4	-2.8E-03	-83.992	SLE RA 21	1.99E-03				
716	SLD 13	-2.2E-03	-67.058	SLD 4	-0.00277	-83.1	SLE RA 21	2.06E-03				
717	SLD 13	-2.3E-03	-67.788	SLD 4	-2.8E-03	-82.796	SLE RA 21	2.18E-03				
718	SLD 13	-2.3E-03	-68.61	SLD 4	-2.8E-03	-82.858	SLE RA 21	2.21E-03				
719	SLD 13	-2.3E-03	-69.803	SLE RA 21	-2.8E-03	-83.471	SLE RA 21	2.25E-03				
720	SLD 13	-2.4E-03	-71.256	SLE RA 21	-2.8E-03	-84.105	SLE RA 21	2.27E-03				
721	SLD 13	-2.4E-03	-72.646	SLE RA 21	-2.8E-03	-84.459	SLE RA 21	2.31E-03				
722	SLD 13	-2.5E-03	-73.781	SLE RA 21	-2.8E-03	-84.422	SLE RA 21	2.33E-03				
723	SLE RA 1	-2.5E-03	-73.745	SLE RA 21	-2.8E-03	-83.94	SLE RA 21	2.37E-03				
724	SLE RA 1	-2.4E-03	-72.898	SLE RA 21	-2.8E-03	-82.997	SLE RA 21	2.39E-03				
725	SLE RA 1	-2.4E-03	-71.733	SLE RA 21	-2.7E-03	-81.683	SLE RA 21	2.44E-03				
726	SLE RA 1	-2.3E-03	-70.38	SLE RA 21	-2.7E-03	-80.141	SLE RA 21	2.48E-03				
727	SLE RA 1	-2.3E-03	-69.251	SLE RA 21	-2.6E-03	-78.85	SLE RA 21	2.52E-03				
728	SLE RA 2	-2.3E-03	-69.864	SLE RA 20	-2.7E-03	-79.565	SLE RA 21	2.54E-03				
729	SLE RA 2	-2.3E-03	-70.365	SLE RA 20	-2.7E-03	-80.149	SLE RA 21	2.54E-03				
730	SLE RA 2	-2.4E-03	-70.697	SLE RA 20	-2.7E-03	-80.54	SLE RA 21	2.55E-03				
731	SLE RA 2	-2.4E-03	-71.039	SLE RA 20	-2.7E-03	-80.929	SLE RA 21	2.55E-03				
732	SLE RA 2	-2.4E-03	-71.051	SLE RA 20	-2.7E-03	-80.927	SLE RA 21	2.58E-03				
733	SLE RA 2	-2.4E-03	-70.714	SLE RA 20	-2.7E-03	-80.446	SLE RA 21	2.76E-03				
734	SLE RA 2	-2.3E-03	-69.789	SLE RA 20	-2.6E-03	-79.328	SLE RA 21	2.73E-03				
735	SLE RA 2	-2.3E-03	-68.768	SLE RA 20	-2.6E-03	-78.121	SLE RA 21	2.72E-03				
736	SLE RA 2	-2.2E-03	-67.272	SLE RA 20	-2.5E-03	-76.358	SLE RA 21	2.68E-03				
737	SLE RA 1	-2.2E-03	-66.71	SLE RA 21	-2.5E-03	-75.695	SLE RA 21	2.62E-03				
738	SLD 1	-2.2E-03	-66.378	SLE RA 21	-2.5E-03	-75.564	SLE RA 21	2.58E-03				
739	SLD 1	-2.2E-03	-65.575	SLE RA 21	-2.5E-03	-75.612	SLE RA 21	2.52E-03				
740	SLD 2	-2.2E-03	-64.697	SLE RA 21	-2.5E-03	-75.699	SLE RA 21	2.49E-03				
741	SLD 2	-2.1E-03	-63.733	SLE RA 21	-2.5E-03	-75.652	SLE RA 21	2.39E-03				
742	SLD 2	-2.1E-03	-62.79	SLE RA 21	-2.5E-03	-75.399	SLE RA 21	2.31E-03				
743	SLD 2	-2.1E-03	-62.043	SLD 15	-2.5E-03	-75.143	SLE RA 21	2.23E-03				
744	SLD 2	-2.1E-03	-62.614	SLE RA 21	-2.5E-03	-75.235	SLE RA 21	2.12E-03				
745	SLD 2	-2.2E-03	-66.864	SLE RA 21	-2.7E-03	-79.955	SLE RA 21	0.00196				
746	SLD 1	-2.3E-03	-68.373	SLE RA 21	-2.7E-03	-82.219	SLE RA 21	1.84E-03				
747	SLD 1	-2.3E-03	-68.942	SLD 16	-2.8E-03	-83.277	SLE RA 21	1.78E-03				
748	SLD 3	-2.3E-03	-69.727	SLD 14	-2.9E-03	-85.915	SLE RA 21	1.65E-03				
749	SLD 3	-2.3E-03	-70.104	SLD 14	-3.0E-03	-88.77	SLE RA 21	1.55E-03				
750	SLD 3	-2.3E-03	-70.145	SLD 14	-3.1E-03	-91.635	SLE RA 21	1.42E-03				
751	SLD 4	-2.3E-03	-69.946	SLD 13	-3.1E-03	-94.424	SLE RA 21	1.30E-03				
752	SLD 4	-2.3E-03	-69.583	SLD 13	-3.2E-03	-97.125	SLE RA 21	1.19E-03				
753	SLD 2	-2.3E-03	-69.119	SLD 15	-3.3E-03	-99.744	SLE RA 21	0.0011				
754	SLD 2	-2.3E-03	-68.593	SLD 15	-3.4E-03	-102.318	SLE RA 21	1.02E-03				
755	SLD 2	-2.3E-03	-68.043	SLD 15	-3.5E-03	-104.92	SLE RA 21	9.42E-04				
756	SLD 2	-2.3E-03	-67.546	SLD 15	-3.6E-03	-107.694	SLE RA 21	0.000854				
757	SLD 2	-2.2E-03	-67.258	SLD 15	-3.7E-03	-110.928	SLE RA 21	7.48E-04				
758	SLD 2	-2.2E-03	-67.491	SLD 15	-3.8E-03	-115.148	SLE RA 21	6.32E-04				
759	SLD 4	-2.3E-03	-68.696	SLD 13	-4.0E-03	-121.12	SLE RA 21	4.75E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
760	SLD 2	-2.2E-03	-66.628	SLD 15	-3.8E-03	-114.043	SLE RA 21	6.04E-04				
763	SLD 1	-2.2E-03	-66.727	SLE RA 21	-2.7E-03	-79.88	SLE RA 21	1.94E-03				
765	SLD 3	-2.3E-03	-68.071	SLD 14	-2.7E-03	-82.009	SLE RA 21	1.82E-03				
766	SLD 2	-2.1E-03	-64.333	SLD 15	-3.7E-03	-110.201	SLE RA 21	5.36E-04				
768	SLE RA 1	-2.1E-03	-64.429	SLE RA 21	-2.4E-03	-73.33	SLE RA 21	2.35E-03				
770	SLE RA 1	-2.1E-03	-62.53	SLE RA 21	-2.4E-03	-71.144	SLE RA 21	2.31E-03				
771	SLD 3	-1.9E-03	-56.991	SLE RA 21	-2.2E-03	-65.615	SLE RA 21	0.002254				
773	SLD 3	-1.9E-03	-57.016	SLE RA 21	-2.2E-03	-66.91	SLE RA 21	2.32E-03				
774	SLD 2	-2.0E-03	-61.313	SLD 15	-3.5E-03	-105.032	SLE RA 21	4.46E-04				
777	SLD 13	-2.0E-03	-58.914	SLD 4	-3.5E-03	-105.04	SLE RA 21	3.44E-04				
778	SLD 15	-2.2E-03	-65.549	SLD 2	-2.8E-03	-82.96	SLE RA 21	1.75E-03				
780	SLD 13	-2.2E-03	-66.83	SLD 4	-2.8E-03	-83.36	SLE RA 21	1.87E-03				
781	SLD 3	-2.2E-03	-67.138	SLD 14	-2.7E-03	-81.446	SLE RA 21	1.77E-03				
783	SLD 3	-2.2E-03	-66.645	SLD 14	-2.7E-03	-81.603	SLE RA 21	1.66E-03				
784	SLD 16	-2.1E-03	-62.264	SLE RA 21	-2.4E-03	-71.096	SLE RA 21	2.24E-03				
786	SLD 3	-1.8E-03	-53.961	SLE RA 21	-2.1E-03	-63.086	SLE RA 21	2.12E-03				
788	SLD 3	-1.8E-03	-54.129	SLE RA 21	-2.2E-03	-64.548	SLE RA 21	2.17E-03				
790	SLD 13	-1.9E-03	-56.845	SLD 4	-3.4E-03	-101.064	SLE RA 21	2.71E-04				
791	SLD 2	-1.9E-03	-58.135	SLD 15	-3.3E-03	-99.574	SLE RA 21	3.48E-04				
793	SLD 4	-2.3E-03	-67.637	SLD 13	-2.8E-03	-82.533	SLE RA 20	1.66E-03				
795	SLD 4	-2.2E-03	-66.906	SLD 13	-2.7E-03	-82.376	SLE RA 21	1.56E-03				
796	SLD 13	-2.2E-03	-65.595	SLD 4	-2.8E-03	-83.151	SLE RA 21	1.64E-03				
798	SLD 13	-2.2E-03	-66.974	SLD 4	-2.8E-03	-83.761	SLE RA 21	1.76E-03				
799	SLD 16	-2.0E-03	-61.356	SLE RA 21	-2.4E-03	-70.669	SLE RA 21	2.12E-03				
801	SLD 3	-1.8E-03	-52.522	SLE RA 21	-2.1E-03	-61.955	SLE RA 21	2.07E-03				
803	SLD 3	-1.8E-03	-52.831	SLE RA 21	-2.1E-03	-63.588	SLE RA 21	2.03E-03				
805	SLD 13	-1.8E-03	-55.111	SLD 4	-3.3E-03	-97.876	SLE RA 21	2.12E-04				
806	SLD 2	-1.8E-03	-55.125	SLD 15	-3.1E-03	-94.435	SLE RA 21	2.54E-04				
808	SLD 2	-2.3E-03	-68.292	SLD 15	-2.8E-03	-83.609	SLE RA 20	1.52E-03				
810	SLD 4	-2.2E-03	-67.334	SLD 13	-2.8E-03	-83.126	SLE RA 20	1.43E-03				
811	SLD 13	-2.2E-03	-65.582	SLD 4	-2.8E-03	-83.282	SLE RA 20	1.50E-03				
813	SLD 13	-2.2E-03	-67.003	SLD 4	-2.8E-03	-84.164	SLE RA 20	1.61E-03				
814	SLD 16	-2.0E-03	-58.748	SLE RA 21	-2.3E-03	-68.183	SLE RA 21	0.002104				
815	SLD 16	-1.5E-03	-44.944	SLD 1	-1.8E-03	-55.312	SLE RA 21	0.001712				
816	SLD 16	-1.4E-03	-42.409	SLD 1	-1.8E-03	-52.862	SLE RA 21	1.66E-03				
817	SLD 16	-1.4E-03	-41.588	SLD 1	-1.7E-03	-51.203	SLE RA 21	1.64E-03				
818	SLD 16	-1.4E-03	-42.204	SLE RA 21	-1.7E-03	-50.235	SLE RA 21	1.64E-03				
819	SLD 16	-1.5E-03	-43.891	SLE RA 21	-1.7E-03	-50.95	SLE RA 21	1.66E-03				
820	SLD 15	-1.5E-03	-46.311	SLE RA 21	-1.7E-03	-52.351	SLE RA 21	1.69E-03				
821	SLE RA 1	-1.6E-03	-48.108	SLE RA 21	-1.8E-03	-54.243	SLE RA 21	1.73E-03				
822	SLE RA 1	-1.7E-03	-49.999	SLE RA 21	-1.9E-03	-56.449	SLE RA 21	1.91E-03				
823	SLD 3	-1.7E-03	-51.143	SLE RA 21	-2.0E-03	-58.769	SLE RA 21	1.93E-03				
824	SLD 3	-1.7E-03	-51.936	SLE RA 21	-2.0E-03	-60.939	SLE RA 21	2.01E-03				
825	SLD 3	-1.7E-03	-52.42	SLE RA 21	-2.1E-03	-62.603	SLE RA 21	1.99E-03				
826	SLD 16	-2.1E-03	-62.289	SLE RA 21	-2.4E-03	-71.8	SLE RA 21	2.00E-03				
828	SLD 16	-1.6E-03	-49.253	SLE RA 21	-2.0E-03	-59.281	SLE RA 21	1.83E-03				
829	SLD 16	-1.9E-03	-57.043	SLE RA 21	-2.2E-03	-66.52	SLE RA 21	1.98E-03				
840	SLD 3	-1.8E-03	-52.583	SLE RA 21	-2.1E-03	-62.159	SLE RA 21	1.93E-03				
842	SLD 3	-1.8E-03	-52.969	SLD 14	-2.1E-03	-64.027	SLE RA 21	1.91E-03				
844	SLD 13	-1.8E-03	-53.913	SLD 4	-3.2E-03	-95.9	SLE RA 21	1.64E-04				
845	SLD 2	-1.7E-03	-52.441	SLD 15	-3.0E-03	-89.899	SLE RA 20	1.83E-04				
847	SLD 2	-2.3E-03	-68.929	SLD 15	-2.8E-03	-84.646	SLE RA 20	1.38E-03				
849	SLD 2	-2.3E-03	-67.775	SLD 15	-2.8E-03	-83.802	SLE RA 20	1.30E-03				
850	SLD 13	-2.2E-03	-65.258	SLD 4	-0.00278	-83.4	SLE RA 20	1.37E-03				
852	SLD 13	-2.2E-03	-66.794	SLD 4	-2.8E-03	-84.485	SLE RA 20	1.46E-03				
853	SLD 16	-2.0E-03	-60.59	SLE RA 21	-2.3E-03	-70.137	SLE RA 21	1.94E-03				
854	SLD 16	-1.5E-03	-46.205	SLD 1	-1.9E-03	-56.082	SLE RA 21	1.75E-03				
855	SLD 16	-1.5E-03	-43.649	SLD 1	-1.8E-03	-53.593	SLE RA 17	1.60E-03				
856	SLD 16	-1.4E-03	-42.81	SLD 1	-1.7E-03	-51.896	SLE RA 21	1.55E-03				
857	SLD 16	-1.4E-03	-43.408	SLE RA 21	-1.7E-03	-51.229	SLE RA 21	1.55E-03				
858	SLD 16	-1.5E-03	-45.081	SLE RA 21	-1.7E-03	-51.916	SLE RA 21	1.56E-03				
859	SLE RA 1	-1.6E-03	-47.343	SLE RA 21	-1.8E-03	-53.29	SLE RA 21	1.72E-03				
860	SLE RA 1	-1.6E-03	-48.945	SLE RA 21	-1.8E-03	-55.157	SLE RA 21	1.75E-03				
861	SLE RA 1	-1.7E-03	-50.816	SLE RA 21	-1.9E-03	-57.34	SLE RA 21	1.84E-03				
862	SLD 3	-1.7E-03	-51.904	SLE RA 21	-2.0E-03	-59.638	SLE RA 21	1.85E-03				
863	SLD 3	-1.8E-03	-52.665	SLE RA 21	-2.1E-03	-61.787	SLE RA 21	1.85E-03				
864	SLD 3	-1.8E-03	-53.133	SLE RA 21	-2.1E-03	-63.442	SLE RA 20	1.86E-03				
865	SLD 14	-2.1E-03	-63.915	SLE RA 21	-2.4E-03	-73.495	SLE RA 21	1.85E-03				
867	SLD 14	-2.0E-03	-58.919	SLE RA 21	-2.3E-03	-68.442	SLE RA 21	1.90E-03				
868	SLD 1	-1.8E-03	-53.572	SLE RA 21	-2.1E-03	-63.243	SLE RA 20	1.82E-03				
870	SLD 3	-1.8E-03	-53.931	SLD 14	-2.2E-03	-64.976	SLE RA 20	0.001756				
872	SLD 13	-1.8E-03	-53.429	SLD 4	-3.2E-03	-95.475	SLE RA 20	1.25E-04				
873	SLD 2	-1.7E-03	-50.115	SLD 15	-2.9E-03	-86.028	SLE RA 20	1.22E-04				
875	SLD 2	-2.3E-03	-69.429	SLD 15	-2.9E-03	-85.82	SLE RA 20	1.25E-03				
877	SLD 2	-2.3E-03	-68.063	SLD 15	-2.8E-03	-84.629	SLE RA 20	1.17E-03				
878	SLD 13	-2.2E-03	-64.813	SLD 4	-2.8E-03	-83.551	SLE RA 20	1.23E-03				
880	SLD 13	-2.2E-03	-66.487	SLD 4	-2.8E-03	-84.823	SLE RA 20	1.32E-03				
881	SLD 14	-2.2E-03	-65.69	SLE RA 21	-2.5E-03	-75.29	SLE RA 20	1.72E-03				
883	SLD 14	-2.0E-03	-61.121	SLE RA 21	-2.4E-03	-70.639	SLE RA 20	1.74E-03				
884	SLD 1	-1.8E-03	-55.357	SLE RA 21	-2.2E-03	-65.12	SLE RA 20	1.66E-03				
886	SLD 1	-1.9E-03	-55.7	SLE RA 21	-2.2E-03	-66.679	SLE RA 20	1.60E-03				
888	SLD 13	-1.8E-03	-53.848	SLD 4	-3.2E-03	-96.921	SLE RA 20	1.12E-04				
889	SLD 2	-1.6E-03	-48.094	SLD 15	-2.8E-03	-82.729	SLE RA 20	8.77E-05				
891	SLD 2	-2.3E-03	-69.935	SLD 15	-2.9E-03	-87.241	SLE RA 20	1.12E-03				
893	SLD 2	-2.3E-03	-68.322	SLD 15	-2.9E-03	-85.732	SLE RA 20	1.05E-03				
894	SLD 13	-2.2E-03	-64.568	SLD 4	-2.8E-03	-84.07	SLE RA 20	1.10E-03				
896	SLD 13	-2.2E-03	-66.385	SLD 4	-2.9E-03	-85.53	SLE RA 20	1.18E-03				
898	SLD 13	-1.8E-03	-55.386	SLD 4	-3.4E-03	-100.585	SLE RA 20	9.96E-05				
899	SLD 13	-2.2E-03	-67.122	SLE RA 20	-2.6E-03	-77.02	SLE RA 20	1.56E-03				
901	SLD 13	-2.1E-03	-62.979	SLE RA 20	-2.4E-03	-72.766	SLE RA 20	1.58E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
902	SLD 2	-1.9E-03	-57.34	SLE RA 20	-2.2E-03	-67.459	SLE RA 20	1.49E-03				
904	SLD 2	-1.9E-03	-57.666	SLE RA 20	-2.3E-03	-68.913	SLE RA 20	1.45E-03				
905	SLD 2	-1.5E-03	-46.269	SLD 15	-2.7E-03	-79.807	SLE RA 20	6.07E-05				
907	SLD 2	-2.4E-03	-70.639	SLD 15	-3.0E-03	-89.139	SLE RA 20	9.87E-04				
909	SLD 2	-2.3E-03	-68.776	SLD 15	-2.9E-03	-87.311	SLE RA 20	9.22E-04				
910	SLD 13	-2.2E-03	-64.99	SLD 4	-2.9E-03	-85.562	SLE RA 20	9.64E-04				
912	SLD 13	-2.2E-03	-66.956	SLD 4	-2.9E-03	-87.215	SLE RA 20	0.001036				
914	SLD 13	-1.9E-03	-58.296	SLD 4	-3.6E-03	-106.866	SLE RA 20	8.25E-05				
915	SLD 13	-2.3E-03	-68.426	SLE RA 20	-2.6E-03	-78.722	SLE RA 20	1.39E-03				
917	SLD 13	-2.2E-03	-64.714	SLE RA 20	-2.5E-03	-74.855	SLE RA 20	1.40E-03				
918	SLD 2	-2.0E-03	-59.599	SLE RA 20	-2.3E-03	-70.138	SLE RA 20	1.30E-03				
920	SLD 2	-2.0E-03	-59.873	SLE RA 20	-2.4E-03	-71.491	SLE RA 20	1.28E-03				
921	SLD 2	-1.5E-03	-44.499	SLD 15	-2.6E-03	-77.011	SLE RA 20	5.12E-05				
923	SLD 2	-2.4E-03	-71.753	SLD 15	-3.1E-03	-91.897	SLE RA 20	8.50E-04				
925	SLD 2	-2.3E-03	-69.637	SLD 15	-3.0E-03	-89.744	SLE RA 20	7.84E-04				
926	SLD 13	-2.1E-03	-62.748	SLD 4	-3.9E-03	-117.431	SLE RA 20	7.68E-05				
927	SLD 13	-1.9E-03	-57.522	SLD 4	-3.5E-03	-105.087	SLE RA 20	8.08E-05				
928	SLD 13	-1.8E-03	-52.983	SLD 4	-3.1E-03	-94.052	SLE RA 20	9.14E-05				
929	SLD 13	-1.6E-03	-49.426	SLD 4	-2.8E-03	-84.857	SLE RA 20	9.79E-05				
930	SLD 13	-1.6E-03	-47.022	SLD 4	-2.6E-03	-77.782	SLE RA 20	1.00E-04				
931	SLD 13	-1.5E-03	-45.854	SLD 4	-2.4E-03	-72.934	SLE RA 20	1.25E-04				
932	SLD 13	-1.5E-03	-45.939	SLD 4	-2.3E-03	-70.287	SLE RA 20	0.000165				
933	SLD 13	-1.6E-03	-47.228	SLD 4	-2.3E-03	-69.715	SLE RA 20	2.33E-04				
934	SLD 13	-1.7E-03	-49.606	SLD 4	-2.4E-03	-70.994	SLE RA 20	3.16E-04				
935	SLD 13	-1.8E-03	-52.875	SLD 4	-0.00246	-73.8	SLE RA 20	4.21E-04				
936	SLD 13	-1.9E-03	-56.733	SLD 4	-2.6E-03	-77.677	SLE RA 20	0.000546				
937	SLD 13	-2.0E-03	-60.744	SLD 4	-2.7E-03	-81.993	SLE RA 20	6.67E-04				
938	SLD 13	-2.1E-03	-64.307	SLD 4	-2.9E-03	-85.889	SLE RA 20	7.69E-04				
939	SLD 13	-2.2E-03	-65.322	SLD 4	-2.9E-03	-86.968	SLE RA 20	7.99E-04				
941	SLD 13	-2.1E-03	-62.855	SLD 4	-3.9E-03	-116.196	SLE RA 20	0.00008				
942	SLD 13	-2.3E-03	-69.871	SLE RA 20	-2.7E-03	-80.643	SLE RA 20	1.20E-03				
944	SLD 13	-2.2E-03	-66.587	SLE RA 20	-2.6E-03	-77.157	SLE RA 20	1.23E-03				
945	SLD 2	-2.1E-03	-62.25	SLE RA 20	-2.4E-03	-73.265	SLE RA 20	1.14E-03				
947	SLD 2	-2.1E-03	-62.473	SLE RA 20	-2.5E-03	-74.52	SLE RA 20	1.10E-03				
948	SLD 2	-2.4E-03	-73.414	SLD 15	-3.2E-03	-95.819	SLE RA 20	6.95E-04				
950	SLD 2	-2.4E-03	-71.199	SLD 15	-3.1E-03	-93.544	SLE RA 20	6.35E-04				
951	SLD 2	-2.3E-03	-70.072	SLD 15	-3.1E-03	-92.397	SLE RA 20	5.91E-04				
952	SLD 2	-2.2E-03	-67.087	SLD 15	-3.0E-03	-89.41	SLE RA 20	0.000491				
953	SLD 2	-2.1E-03	-63.51	SLD 15	-2.9E-03	-86.045	SLE RA 20	3.86E-04				
954	SLD 2	-2.0E-03	-59.96	SLD 15	-2.8E-03	-83.049	SLE RA 20	2.94E-04				
955	SLD 2	-1.9E-03	-56.827	SLD 15	-2.7E-03	-80.884	SLE RA 20	2.09E-04				
956	SLD 2	-1.8E-03	-54.332	SLD 15	-2.7E-03	-79.815	SLE RA 20	1.43E-04				
957	SLD 2	-1.8E-03	-52.574	SLD 15	-2.7E-03	-79.97	SLE RA 20	9.66E-05				
958	SLD 2	-1.7E-03	-51.568	SLD 15	-2.7E-03	-81.385	SLE RA 20	7.64E-05				
959	SLD 2	-1.7E-03	-51.27	SLD 15	-2.8E-03	-84.022	SLE RA 20	5.97E-05				
960	SLD 2	-1.7E-03	-51.59	SLD 15	-2.9E-03	-87.77	SLE RA 20	5.87E-05				
961	SLD 2	-1.7E-03	-52.395	SLD 15	-3.1E-03	-92.426	SLE RA 20	0.000055				
962	SLD 2	-1.4E-03	-42.627	SLD 15	-2.5E-03	-74.054	SLE RA 20	4.15E-05				
964	SLD 2	-1.8E-03	-53.489	SLD 15	-3.3E-03	-97.645	SLE RA 20	7.22E-05				
966	SLD 2	-2.5E-03	-74.675	SLD 15	-3.3E-03	-98.958	SLE RA 20	5.78E-04				
969	SLD 13	-2.3E-03	-69.27	SLD 4	-4.3E-03	-128.876	SLE RA 20	7.97E-05				
982	SLD 13	-2.4E-03	-70.576	SLD 4	-3.2E-03	-95.842	SLE RA 20	5.65E-04				
985	SLD 13	-2.5E-03	-73.98	SLD 4	-3.3E-03	-99.399	SLE RA 20	6.46E-04				
999	SLD 13	-2.4E-03	-71.867	SLE RA 20	-2.8E-03	-83.252	SLE RA 20	9.93E-04				
1001	SLD 13	-2.3E-03	-69.005	SLE RA 20	-2.7E-03	-80.141	SLE RA 20	0.001009				
1002	SLD 2	-2.2E-03	-65.583	SLE RA 20	-2.6E-03	-77.195	SLE RA 20	9.24E-04				
1004	SLD 2	-2.2E-03	-65.756	SLE RA 20	-2.6E-03	-78.355	SLE RA 20	8.95E-04				
1005	SLD 2	-2.5E-03	-76.013	SLD 15	-3.4E-03	-102.837	SLE RA 20	4.47E-04				
1010	SLD 13	-2.5E-03	-75.945	SLD 4	-3.4E-03	-102.785	SLE RA 20	5.38E-04				
1011	SLD 13	-2.7E-03	-79.614	SLD 4	-3.7E-03	-109.647	SLE RA 20	4.37E-04				
1012	SLD 13	-2.5E-03	-75.669	SLD 4	-3.4E-03	-102.527	SLE RA 20	4.86E-04				
1013	SLD 13	-2.4E-03	-71.757	SLD 4	-3.2E-03	-95.483	SLE RA 20	5.11E-04				
1014	SLD 13	-2.3E-03	-68.437	SLD 4	-3.0E-03	-89.252	SLE RA 20	0.000518				
1015	SLD 13	-2.2E-03	-66.062	SLD 4	-2.8E-03	-84.285	SLE RA 20	5.20E-04				
1016	SLD 13	-2.2E-03	-64.806	SLD 4	-2.7E-03	-80.801	SLE RA 20	5.28E-04				
1017	SLD 13	-2.2E-03	-64.7	SLD 4	-2.6E-03	-78.84	SLE RA 20	5.51E-04				
1018	SLD 13	-2.2E-03	-65.65	SLE RA 20	-2.6E-03	-78.46	SLE RA 20	5.90E-04				
1019	SLD 13	-2.2E-03	-67.431	SLE RA 20	-2.7E-03	-79.802	SLE RA 20	6.41E-04				
1020	SLD 13	-2.3E-03	-69.667	SLE RA 20	-2.7E-03	-81.806	SLE RA 20	7.02E-04				
1021	SLD 13	-2.4E-03	-71.794	SLE RA 20	-2.8E-03	-83.831	SLE RA 20	7.63E-04				
1022	SLD 13	-2.4E-03	-73.013	SLE RA 20	-2.8E-03	-84.965	SLE RA 20	8.13E-04				
1023	SLD 13	-2.4E-03	-72.32	SLE RA 20	-2.8E-03	-84.068	SLE RA 20	8.39E-04				
1024	SLD 13	-2.3E-03	-70.285	SLE RA 20	-2.7E-03	-81.584	SLE RA 20	8.34E-04				
1025	SLD 13	-2.3E-03	-67.577	SLE RA 20	-2.6E-03	-78.08	SLE RA 20	8.00E-04				
1026	SLD 9	-2.2E-03	-64.69	SLE RA 20	-2.5E-03	-74.412	SLE RA 20	7.53E-04				
1027	SLD 9	-2.1E-03	-62.076	SLE RA 20	-2.4E-03	-71.205	SLE RA 20	7.06E-04				
1028	SLD 9	-2.0E-03	-60.226	SLE RA 20	-2.3E-03	-68.856	SLE RA 20	6.68E-04				
1029	SLD 9	-2.0E-03	-59.33	SLE RA 20	-2.3E-03	-67.592	SLE RA 20	6.45E-04				
1030	SLD 6	-2.0E-03	-59.269	SLE RA 20	-2.3E-03	-67.507	SLE RA 20	6.38E-04				
1031	SLD 6	-2.0E-03	-59.974	SLE RA 20	-2.3E-03	-68.584	SLE RA 20	6.47E-04				
1032	SLD 6	-2.1E-03	-61.569	SLE RA 20	-2.4E-03	-70.688	SLE RA 20	6.71E-04				
1033	SLD 6	-2.1E-03	-63.819	SLE RA 20	-2.5E-03	-73.547	SLE RA 20	7.04E-04				
1034	SLD 2	-2.2E-03	-66.019	SLE RA 20	-2.6E-03	-76.71	SLE RA 20	7.38E-04				
1035	SLD 2	-2.3E-03	-67.746	SLE RA 20	-2.6E-03	-79.484	SLE RA 20	7.58E-04				
1036	SLD 2	-2.3E-03	-68.367	SLE RA 20	-2.7E-03	-80.943	SLE RA 20	7.53E-04				
1037	SLD 2	-2.3E-03	-67.859	SLE RA 20	-2.7E-03	-80.996	SLE RA 20	7.20E-04				
1038	SLD 2	-2.2E-03	-66.186	SLD 15	-2.7E-03	-79.857	SLE RA 20	6.66E-04				
1039	SLD 2	-2.1E-03	-64.14	SLD 15	-2.6E-03	-78.498	SLE RA 20	6.01E-04				
1040	SLD 2	-2.1E-03	-62.343	SLD 15	-2.6E-03	-77.455	SLE RA 20	5.39E-04				
1041	SLD 2	-2.0E-03	-61.228	SLD 15	-2.6E-03	-77.284	SLE RA 20	0.000487				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
1042	SLD 2	-2.0E-03	-61.082	SLD 15	-2.6E-03	-78.356	SLE RA 20	4.50E-04				
1043	SLD 2	-2.1E-03	-62.069	SLD 15	-2.7E-03	-80.884	SLE RA 20	4.31E-04				
1044	SLD 2	-2.1E-03	-64.241	SLD 15	-2.8E-03	-84.94	SLE RA 20	4.23E-04				
1045	SLD 2	-2.3E-03	-67.532	SLD 15	-3.0E-03	-90.441	SLE RA 20	4.19E-04				
1046	SLD 2	-2.4E-03	-71.738	SLD 15	-3.2E-03	-97.118	SLE RA 20	4.10E-04				
1047	SLD 2	-2.5E-03	-76.477	SLD 15	-3.5E-03	-104.472	SLE RA 20	3.91E-04				
1049	SLD 13	-2.6E-03	-77.825	SLD 4	-3.5E-03	-106.07	SLE RA 20	4.22E-04				
1053	SLD 13	-2.7E-03	-79.978	SLD 4	-3.7E-03	-109.719	SLE RA 20	3.20E-04				
1065	SLD 13	-2.6E-03	-77.245	SLE RA 20	-3.0E-03	-90.059	SLE RA 20	6.13E-04				
1067	SLD 13	-2.5E-03	-75.24	SLE RA 20	-2.9E-03	-87.701	SLE RA 20	6.22E-04				
1080	SLD 2	-2.4E-03	-73.154	SLE RA 20	-2.9E-03	-86.163	SLE RA 20	5.51E-04				
1082	SLD 2	-2.4E-03	-73.228	SLE RA 20	-2.9E-03	-87.133	SLE RA 20	5.32E-04				
1093	SLD 2	-2.6E-03	-79.265	SLD 15	-3.7E-03	-111.467	SLE RA 20	2.67E-04				

1.5 Baricentri delle rigidezze

Quota: *quota alla quale è stato valutato il baricentro delle rigidezze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
Posizione: *posizione in pianta del baricentro delle rigidezze.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Baricentro masse: *posizione in pianta del baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Distanza: *distanza in pianta tra il baricentro delle rigidezze e il baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Rialzato	-12.224	1.191	-12.384	1.255	0.161	-0.064
Primo	-12.319	1.332	-12.413	1.222	0.094	0.11
Secondo	-12.426	1.524	-12.404	1.217	-0.022	0.306
Terzo	-12.468	1.572	-12.388	1.222	-0.08	0.35
Sottotetto	-12.475	1.607	-12.375	1.586	-0.1	0.021

1.6 Risposta modale

Modo: *identificativo del modo di vibrare.*
Periodo: *periodo. [s]*
Massa X: *massa partecipante in direzione globale X. Il valore è adimensionale.*
Massa Y: *massa partecipante in direzione globale Y. Il valore è adimensionale.*
Massa Z: *massa partecipante in direzione globale Z. Il valore è adimensionale.*
Massa rot. X: *massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.*
Massa rot. Y: *massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.*
Massa rot. Z: *massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.*
Massa sX: *massa partecipante in direzione Sisma X. Il valore è adimensionale.*
Massa sY: *massa partecipante in direzione Sisma Y. Il valore è adimensionale.*

Totale masse partecipanti:

Traslazione X: 0.994264
Traslazione Y: 0.988857
Traslazione Z: 0
Rotazione X: 0.73464
Rotazione Y: 0.953382
Rotazione Z: 0.699584

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	1.210793415	0.000003886	0	0	0.000000002	0.000000927	0.000000713	0.000003886	0
2	1.117214447	0.000007475	0.000000003	0	0.000000001	0.000002975	0.000000978	0.000007475	0.000000003
3	0.878131647	0.000150304	0	0	0.00000002	0.000044631	0.00001683	0.000150304	0
4	0.82927779	0.000214835	0.000000024	0	0.000000006	0.000036397	0.000021546	0.000214835	0.000000024
5	0.822272813	0.000018084	0.000000066	0	0.000000023	0.000068088	0.00000078	0.000018084	0.000000066
6	0.764452376	0.000133951	0.000000035	0	0.000000034	0.000000387	0.00001524	0.000133951	0.000000035
7	0.76411143	0.000060351	0	0	0	0.000003709	0.000007834	0.000060351	0
8	0.735773942	0.000059827	0.000000002	0	0.000000084	0.000035587	0.000004709	0.000059827	0.000000002
9	0.734987451	0.000007657	0.00000003	0	0	0.000127361	0	0.000007657	0.00000003
10	0.702273855	0.000408553	0.00000006	0	0.000000923	0.000210491	0.000038775	0.000408553	0.00000006
11	0.689596373	0.000364099	0.000000002	0	0.00000056	0.001076356	0.000028821	0.000364099	0.000000002
12	0.658174458	0.002257556	0.000000049	0	0.000000449	0.00747314	0.000125254	0.002257556	0.000000049
13	0.64205459	0.000096104	0.000001776	0	0.000058255	0.000078468	0.000007309	0.000096104	0.000001776
14	0.633966162	0.010442009	0.000000048	0	0.000000144	0.01317976	0.000821717	0.010442009	0.000000048
15	0.603509327	0.000006042	0.000012427	0	0.000028025	0.000000369	0.000001529	0.000006042	0.000012427
16	0.591266775	0.01326157	0.000000017	0	0.000000166	0.009185992	0.000694117	0.01326157	0.000000017
17	0.547441357	0.012710866	0.000000225	0	0.000000521	0.012178648	0.000432103	0.012710866	0.000000225
18	0.533670929	0.000043214	0.000237229	0	0.000190715	0.000047326	0.000042332	0.000043214	0.000237229
19	0.504752118	0.019477863	0.000006511	0	0.000004867	0.021146936	0.000010236	0.019477863	0.000006511
20	0.502040158	0.000088663	0.000312065	0	0.000386058	0.000157952	0.000035653	0.000088663	0.000312065

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
21	0.444143633	0.000042036	0.00465626	0	0.002265286	0.000059044	0.003940972	0.000042036	0.00465626
22	0.424220644	0.004935513	0.000172059	0	0.000102613	0.008912919	0.000058567	0.004935513	0.000172059
23	0.406345856	0.000307476	0.003279322	0	0.003205841	0.000480103	0.001538698	0.000307476	0.003279322
24	0.347412007	0.05075725	0.00002337	0	0.000031596	0.051114097	0.000081421	0.05075725	0.00002337
25	0.324855935	0.001914991	0.072417306	0	0.082815217	0.00193524	0.041532588	0.001914991	0.072417306
26	0.310709345	0.343040662	0.000985004	0	0.000913417	0.377833722	0.000271985	0.343040662	0.000985004
27	0.292198149	0.001249332	0.092513083	0	0.063240564	0.001506235	0.072320136	0.001249332	0.092513083
28	0.256987928	0.205825545	0.000734904	0	0.000648338	0.240774105	0.001192716	0.205825545	0.000734904
29	0.237933935	0.003055334	0.057444392	0	0.058765765	0.003247573	0.048710295	0.003055334	0.057444392
30	0.225054455	0.183814118	0.000230973	0	0.000194532	0.184481334	0.002048624	0.183814118	0.000230973
31	0.174874799	0.00002554	0.144570051	0	0.038882584	0.00002355	0.097482082	0.00002554	0.144570051
32	0.132954079	0.018616207	0.005957259	0	0.004284969	0.000034234	0.000666716	0.018616207	0.005957259
33	0.128919468	0.000254007	0.558623304	0	0.421947162	0.000000998	0.399783499	0.000254007	0.558623304
34	0.075288852	0.120575922	0.000058498	0	0.000078848	0.017922618	0.000002716	0.120575922	0.000058498
35	0.063528628	0.000036777	0.04662016	0	0.056592498	0.00000079	0.027646741	0.000036777	0.04662016

1.7 Equilibrio globale forze

Contributo: Nome attribuito al sistema risultante.
Fx: Componente X di forza del sistema risultante. [kN]
Fy: Componente Y di forza del sistema risultante. [kN]
Fz: Componente Z di forza del sistema risultante. [kN]
*Mx: Componente di momento attorno l'asse X del sistema risultante. [kN*m]*
*My: Componente di momento attorno l'asse Y del sistema risultante. [kN*m]*
*Mz: Componente di momento attorno l'asse Z del sistema risultante. [kN*m]*

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-0.48193	6.68315	-14459.84757	-14200.4372	-178999.9713	-80.7416
Reazioni	0.48193	-6.68315	14459.84757	14199.3678	179001.4437	80.7416
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-1.0694	1.4724	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-3046.20145	-3919.1562	-37796.1003	0
Reazioni	0	0	3046.20145	3914.5385	37794.8012	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.6176	-1.2991	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-2126.72587	-2335.896	-26366.4508	0
Reazioni	0	0	2126.72587	2332.9908	26366.1207	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-2.9052	-0.3301	0

Bilancio in condizione di carico: Neve

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-341.81787	-389.568	-4245.8285	0
Reazioni	0	0	341.81787	389.9313	4244.4638	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.3633	-1.3647	0

Bilancio in condizione di carico: Variabile H

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-261.82323	-353.4413	-3250.3739	0
Reazioni	0	0	261.82323	352.8181	3249.5422	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.6232	-0.8318	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	-44.44416	0	398.4498	0	549.1847
Reazioni	0	44.44416	0	-398.5105	-0.015	-549.1847
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0607	-0.015	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	5936.7287	0	0	0	65165.6087	-6505.5498
Reazioni	-5936.7287	0	0	-21.3304	-65138.3408	6505.5498
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-21.3304	27.2679	0

Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	5419.30124	0	-59485.9698	0	-67314.7006
Reazioni	0	-5419.30124	0	59476.8271	-1.8414	67314.7006
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-9.1427	-1.8414	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-2939.9625
Reazioni	0	0	0	-0.3243	0.1647	2939.9625
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.3243	0.1647	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	1255.2903
Reazioni	0	0	0	0.1385	-0.0703	-1255.2903
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.1385	-0.0703	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	2538.49961	0	0	0	27864.3139	-2781.7231
Reazioni	-2538.49961	0	0	-9.1207	-27852.6544	2781.7231
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-9.1207	11.6595	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	2402.01165	0	-26366.1284	0	-29836.0781
Reazioni	0	-2402.01165	0	26362.0761	-0.8162	29836.0781
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.0523	-0.8162	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-1257.1054
Reazioni	0	0	0	-0.1387	0.0704	1257.1054
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.1387	0.0704	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	556.3858
Reazioni	0	0	0	0.0614	-0.0312	-556.3858
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.0614	-0.0312	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0.01	0	0	0	0.1566	-0.0159
Reazioni	-0.01	0	0	-0.0001	-0.1566	0.0159
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0001	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0.01	0	-0.1566	0	-0.1237
Reazioni	0	-0.01	0	0.1566	0	0.1237
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0.0001
Reazioni	0	0	0	0	0	-0.0001
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.8 Risposta di spettro

Spettro: condizione elementare corrispondente allo spettro.
N.b.: nome breve della condizione elementare.
Fx: componente della forza lungo l'asse X. [kN]
Fy: componente della forza lungo l'asse Y. [kN]
Fz: componente della forza lungo l'asse Z. [kN]
*Mx: componente della coppia attorno all'asse X. [kN*m]*
*My: componente della coppia attorno all'asse Y. [kN*m]*
*Mz: componente della coppia attorno all'asse Z. [kN*m]*
Max X: massima reazione lungo l'asse X.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Y: massima reazione lungo l'asse Y.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Z: massima reazione lungo l'asse Z.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	3835.4475	84.798	0	7.509E02	3.666E04	3.980E03	3835.4475	0	4046.3964	90	0	0
SLV Y	84.798	4046.3964	0	3.190E04	7.677E02	5.036E04	3835.4475	0	4046.3964	90	0	0
X SLD	1639.7899	36.4489	0	3.226E02	1.567E04	1.705E03	1639.7899	0	1782.1604	90	0	0
Y SLD	36.4489	1782.1604	0	1.406E04	3.283E02	2.218E04	1639.7899	0	1782.1604	90	0	0

1.9 Annotazioni solutore

Informazioni: *informazioni fornite dal solutore al termine del calcolo del modello.*

Informazioni

1.10 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	101676
Elemento min. diagonale	1014.17379291
Elemento max diagonale	133383628788845
Rapporto max/min	131519498650.998
Elementi non nulli	4370937

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICO 33
STATO DI PROGETTO

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1.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:
Descr: descrizione livello.
Quota: quota livello. [m]
Q: quota livello. [m]
Qinf: quota livello precedente. [m]
Comb: combinazione.
A1: a1 (Distribuzione masse).
A1n: a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]
A1d: a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]
A1r: a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).
A2: a2 (Distribuzione rigidezze).
A2n: a2 numeratore (rigidezza max [x o y globale]).
A2d: a2 denominatore (rigidezza min [x o y globale]).
A2r: a2 rapporto (rigidezza max/min).
A3: a3 (Forma compatta).
A3n: a3 numeratore (area convessa). [m²]
A3d: a3 denominatore (area piano). [m²]
A3r: a3 rapporto (area convessa/area piano).
B: b (Rapporto lati).
Bn: b numeratore (lato max [x o y globale]). [m]
Bd: b denominatore (lato min [x o y globale]). [m]
Br: b rapporto (lato max/min).
C: c (Rapporto rigidezze piano).
Cn: c numeratore (rigidezza elementi verticali).
Cd: c denominatore (rigidezza piano).
Cr: c rapporto (rigidezza elementi verticali/rigidezza piano).
E1: e1 (Variazione masse).
E1n: e1 numeratore (massa max). [daN]
E1d: e1 denominatore (massa min). [daN]
E1r: e1 rapporto (massa max/min).
E2: e2 (Riduzione rigidezze).
E2n: e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]
E2d: e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]
E2r: e2 rapporto (variazione massima in decremento Kmax/Kmin).
E3: e3 (Incremento rigidezze).
E3n: e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]
E3d: e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]
E3r: e3 rapporto (variazione massima in incremento Kmax/Kmin).
F: f (Rapporto Capacità/Domanda).
Fn: f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]
Fd: f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]
Fr: f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).
G1: g1 (Rastremazione di piano).
G1n: g1 numeratore (L1). [m]
G1d: g1 denominatore (L2). [m]
G1r: g1 rapporto (L1/L2).
G2: g2 (Rastremazione totale).
G2n: g2 numeratore (L0). [m]
G2d: g2 denominatore (Li). [m]
G2r: g2 rapporto (L0/Li).
Capacità/Domanda in X:
VrdX: taglio resistente complessivo in direzione X. [daN]
VedX: taglio agente complessivo in direzione X). [daN]
|Rd/Ed|: |Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).
Capacità/Domanda in Y:
VrdY: taglio resistente complessivo in direzione Y. [daN]
VedY: taglio agente complessivo in direzione Y). [daN]

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.
Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione

Livelli di fondazione o di struttura scatolare non dissipativa: Fondazione ascensore(L1), Fondazione(L2),
Livelli di elevazione considerati: Rialzato(L4), Primo(L5), Secondo(L6), Terzo(L7), Sottotetto(L8),

Regolarità in pianta - NO
L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio A1 (Distribuzione masse) rispettato, con rapporto massimo 0,03 (limite=0,2) al livello Terzo
N.V. - Criterio A2 (Distribuzione rigidezze) non valutabile al livello Rialzato
No - Criterio A3 (Forma compatta) NON rispettato, con rapporto massimo 2801458.2/2536828.4=1.1 (limite=1,05) al livello Rialzato
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 2,13 (limite=4) al livello Terzo
Ok - Criterio C (Rapporto rigidezze piano) rispettato, con rapporto massimo 0 (limite=0,1) al livello Rialzato

Regolarità in altezza - NO
L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
No - Criterio E1 (Variazione masse) NON rispettato, con rapporto massimo 184896.1/141507.2=1.3 (limite=1,25) tra il livello Sottotetto ed il precedente
N.V. - Criterio E2 (Riduzione rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio E3 (Incremento rigidezze) non valutabile tra il livello Primo ed il precedente
No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo 2884.7/12.7=226.9 (limite=1) tra il livello Terzo ed il precedente
Ok - Criterio G1 (Rastremazione di piano) rispettato, con rapporto massimo 0,01 (limite=0,1) tra il livello Primo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0,01 (limite=0,3) tra il livello Terzo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	1.99	0.16	24.98	0.01				280.1458	253.6828	1.1	24.98	11.81	2.12	0	+∞	0
Primo	5.46	0.11	11.64	0.01				273.4594	254.3379	1.08	24.78	11.64	2.13	0	+∞	0
Secondo	8.98	0.31	11.64	0.03				273.4594	258.49	1.06	24.78	11.64	2.13	0	+∞	0
Terzo	12.5	0.35	11.64	0.03				273.4594	254.3484	1.08	24.78	11.64	2.13	0	+∞	0
Sottotetto	15.66	0.1	24.89	0				275.3597	259.1018	1.06	24.89	11.69	2.13	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 16.64/16.64=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	5.46	1.99	171728	141387	1.21							24.2	14.1	1.71	0.13	11.81	0.01	0.13	11.81	0.01
Secondo	8.98	5.46	141507	141387	1							2884.7	26.1	110.71	0	11.64	0	0.13	11.81	0.01
Terzo	12.5	8.98	141507	141507	1							2884.7	12.7	226.86	0	11.64	0	0.13	11.81	0.01
Sottotetto	15.66	12.5	184896	141507	1.31							58.6	19.8	2.96	0.05	24.78	0	0	0.01	0

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	1.99	SLD 1	1061899	-144993	7.3	712713	-19054	37.4
Rialzato	1.99	SLD 2	1061707	-145090	7.3	712456	-19088	37.3
Rialzato	1.99	SLD 3	1063850	-144628	7.4	712070	23399	30.4
Rialzato	1.99	SLD 4	1063653	-144725	7.3	711736	23365	30.5
Rialzato	1.99	SLD 5	1060354	-44066	24.1	716164	-68896	10.4
Rialzato	1.99	SLD 6	1060352	-44130	24	716193	-68918	10.4
Rialzato	1.99	SLD 7	1066444	-42851	24.9	714525	72613	9.8
Rialzato	1.99	SLD 8	1066443	-42915	24.9	714367	72591	9.8
Rialzato	1.99	SLD 9	1060443	42821	24.8	716598	-69160	10.4
Rialzato	1.99	SLD 10	1060442	42757	24.8	717086	-69182	10.4
Rialzato	1.99	SLD 11	1066534	44036	24.2	716728	72349	9.9
Rialzato	1.99	SLD 12	1066532	43973	24.3	716557	72327	9.9
Rialzato	1.99	SLD 13	1059935	144632	7.3	712511	-19934	35.7
Rialzato	1.99	SLD 14	1060164	144535	7.3	713533	-19968	35.7
Rialzato	1.99	SLD 15	1062182	144996	7.3	714529	22519	31.7
Rialzato	1.99	SLD 16	1062396	144899	7.3	714634	22485	31.8
Rialzato	1.99	SLV 1	1053620	-339232	3.1	705270	-45346	15.6
Rialzato	1.99	SLV 2	1053184	-339458	3.1	704484	-45425	15.5
Rialzato	1.99	SLV 3	1059139	-338338	3.1	703728	50586	13.9
Rialzato	1.99	SLV 4	1058594	-338564	3.1	702976	50507	13.9
Rialzato	1.99	SLV 5	1056280	-103119	10.2	714836	-157886	4.5
Rialzato	1.99	SLV 6	1055705	-103265	10.2	714978	-157937	4.5
Rialzato	1.99	SLV 7	1070400	-100140	10.7	711671	161887	4.4
Rialzato	1.99	SLV 8	1070397	-100285	10.7	711230	161836	4.4
Rialzato	1.99	SLV 9	1053694	100192	10.5	692420	-158405	4.4
Rialzato	1.99	SLV 10	1054145	100046	10.5	710083	-158456	4.5
Rialzato	1.99	SLV 11	1070166	103171	10.4	714671	161368	4.4
Rialzato	1.99	SLV 12	1070060	103025	10.4	714338	161317	4.4
Rialzato	1.99	SLV 13	1036496	338470	3.1	686331	-47076	14.6
Rialzato	1.99	SLV 14	1036927	338245	3.1	687224	-47155	14.6
Rialzato	1.99	SLV 15	1043155	339364	3.1	688226	48856	14.1
Rialzato	1.99	SLV 16	1043507	339139	3.1	688140	48777	14.1
Primo	5.46	SLD 1	925202	-123085	7.5	718797	-11478	62.6
Primo	5.46	SLD 2	923689	-123182	7.5	718817	-11512	62.4
Primo	5.46	SLD 3	925202	-122599	7.5	718595	14789	48.6
Primo	5.46	SLD 4	925202	-122696	7.5	718614	14755	48.7
Primo	5.46	SLD 5	925202	-37636	24.6	720712	-42492	17
Primo	5.46	SLD 6	925202	-37700	24.5	720725	-42514	17
Primo	5.46	SLD 7	925202	-36016	25.7	719939	45065	16

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Primo	5.46	SLD 8	925202	-36080	25.6	719951	45043	16
Primo	5.46	SLD 9	925202	36106	25.6	720761	-42803	16.8
Primo	5.46	SLD 10	925202	36042	25.7	720763	-42825	16.8
Primo	5.46	SLD 11	925202	37726	24.5	720167	44754	16.1
Primo	5.46	SLD 12	925202	37662	24.6	720169	44732	16.1
Primo	5.46	SLD 13	925202	122722	7.5	719445	-12515	57.5
Primo	5.46	SLD 14	925202	122625	7.5	719450	-12549	57.3
Primo	5.46	SLD 15	925202	123208	7.5	719282	13752	52.3
Primo	5.46	SLD 16	925202	123111	7.5	719284	13718	52.4
Primo	5.46	SLV 1	890416	-287794	3.1	715712	-27390	26.1
Primo	5.46	SLV 2	896103	-288020	3.1	715758	-27469	26.1
Primo	5.46	SLV 3	911741	-286676	3.2	715248	31965	22.4
Primo	5.46	SLV 4	900230	-286902	3.1	715294	31885	22.4
Primo	5.46	SLV 5	925202	-87985	10.5	720179	-97440	7.4
Primo	5.46	SLV 6	917336	-88131	10.4	720209	-97491	7.4
Primo	5.46	SLV 7	919514	-84260	10.9	718632	100408	7.2
Primo	5.46	SLV 8	919514	-84405	10.9	718662	100357	7.2
Primo	5.46	SLV 9	925202	84431	11	720232	-98117	7.3
Primo	5.46	SLV 10	925202	84286	11	720240	-98168	7.3
Primo	5.46	SLV 11	925117	88157	10.5	719154	99731	7.2
Primo	5.46	SLV 12	925054	88011	10.5	719158	99680	7.2
Primo	5.46	SLV 13	911543	286928	3.2	716975	-29645	24.2
Primo	5.46	SLV 14	911543	286702	3.2	716970	-29725	24.1
Primo	5.46	SLV 15	917521	288046	3.2	716820	29709	24.1
Primo	5.46	SLV 16	913278	287820	3.2	716815	29630	24.2
Secondo	8.98	SLD 1	914372	-95085	9.6	650143	738	880.9
Secondo	8.98	SLD 2	912674	-95182	9.6	650151	704	923.4
Secondo	8.98	SLD 3	913954	-94747	9.6	649702	2975	218.4
Secondo	8.98	SLD 4	913920	-94844	9.6	649710	2941	220.9
Secondo	8.98	SLD 5	914576	-29012	31.5	650624	-2381	273.3
Secondo	8.98	SLD 6	914554	-29076	31.5	650630	-2403	270.8
Secondo	8.98	SLD 7	913182	-27884	32.7	649153	5075	127.9
Secondo	8.98	SLD 8	913160	-27947	32.7	649159	5052	128.5
Secondo	8.98	SLD 9	914327	27974	32.7	650594	-2812	231.3
Secondo	8.98	SLD 10	914299	27911	32.8	650600	-2835	229.5
Secondo	8.98	SLD 11	912944	29103	31.4	649123	4643	139.8
Secondo	8.98	SLD 12	912921	29039	31.4	649128	4621	140.5
Secondo	8.98	SLD 13	913577	94871	9.6	650043	-701	927.8
Secondo	8.98	SLD 14	913543	94774	9.6	650051	-735	884.9
Secondo	8.98	SLD 15	913159	95209	9.6	649602	1536	422.9
Secondo	8.98	SLD 16	913125	95112	9.6	649610	1502	432.5
Secondo	8.98	SLV 1	888677	-222236	4	650238	305	2134.5
Secondo	8.98	SLV 2	883645	-222462	4	650263	225	2884.7
Secondo	8.98	SLV 3	896571	-221460	4	649483	5256	123.6
Secondo	8.98	SLV 4	888823	-221685	4	649497	5177	125.5
Secondo	8.98	SLV 5	900347	-67800	13.3	647822	-6621	97.8
Secondo	8.98	SLV 6	900347	-67945	13.3	647261	-6672	97
Secondo	8.98	SLV 7	900822	-65212	13.8	634014	9884	64.1
Secondo	8.98	SLV 8	900771	-65358	13.8	633337	9833	64.4
Secondo	8.98	SLV 9	908010	65385	13.9	646396	-7593	85.1
Secondo	8.98	SLV 10	907946	65239	13.9	646849	-7644	84.6
Secondo	8.98	SLV 11	906102	67972	13.3	642005	8912	72
Secondo	8.98	SLV 12	906051	67827	13.4	633421	8861	71.5
Secondo	8.98	SLV 13	904930	221712	4.1	649562	-2937	221.2
Secondo	8.98	SLV 14	904119	221487	4.1	649605	-3016	215.4
Secondo	8.98	SLV 15	903873	222489	4.1	649249	2015	322.3
Secondo	8.98	SLV 16	904585	222263	4.1	649268	1935	335.5
Terzo	12.5	SLD 1	907371	-63470	14.3	501511	17959	27.9
Terzo	12.5	SLD 2	907374	-63567	14.3	501515	17925	28
Terzo	12.5	SLD 3	906978	-63731	14.2	501517	-13571	37
Terzo	12.5	SLD 4	906981	-63828	14.2	501521	-13605	36.9
Terzo	12.5	SLD 5	908986	-18618	48.8	501482	53999	9.3
Terzo	12.5	SLD 6	908988	-18682	48.7	501485	53976	9.3
Terzo	12.5	SLD 7	907677	-19489	46.6	501503	-51102	9.8
Terzo	12.5	SLD 8	907679	-19552	46.4	501506	-51124	9.8
Terzo	12.5	SLD 9	908550	19579	46.4	501463	53364	9.4
Terzo	12.5	SLD 10	908552	19516	46.6	501466	53342	9.4
Terzo	12.5	SLD 11	907241	18709	48.5	501484	-51736	9.7
Terzo	12.5	SLD 12	907243	18645	48.7	501487	-51759	9.7
Terzo	12.5	SLD 13	907583	63855	14.2	501447	15845	31.6
Terzo	12.5	SLD 14	907586	63758	14.2	501452	15811	31.7
Terzo	12.5	SLD 15	907191	63594	14.3	501454	-15685	32
Terzo	12.5	SLD 16	907194	63497	14.3	501458	-15719	31.9
Terzo	12.5	SLV 1	869615	-148164	5.9	501546	39522	12.7
Terzo	12.5	SLV 2	854452	-148389	5.8	501556	39443	12.7
Terzo	12.5	SLV 3	868197	-148774	5.8	501559	-32191	15.6
Terzo	12.5	SLV 4	868739	-149000	5.8	501569	-32270	15.5
Terzo	12.5	SLV 5	892350	-43475	20.5	494930	121419	4.1
Terzo	12.5	SLV 6	892355	-43620	20.5	494909	121368	4.1
Terzo	12.5	SLV 7	901296	-45510	19.8	494546	-117625	4.2
Terzo	12.5	SLV 8	901301	-45655	19.7	494664	-117676	4.2
Terzo	12.5	SLV 9	902615	45682	19.8	488821	119916	4.1
Terzo	12.5	SLV 10	902619	45537	19.8	488915	119865	4.1
Terzo	12.5	SLV 11	900307	43647	20.6	495371	-119128	4.2
Terzo	12.5	SLV 12	894366	43502	20.6	495384	-119179	4.2
Terzo	12.5	SLV 13	895536	149027	6	501399	34510	14.5
Terzo	12.5	SLV 14	894260	148801	6	501409	34431	14.6
Terzo	12.5	SLV 15	889026	148416	6	489575	-37203	13.2

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Terzo	12.5	SLV 16	881657	148191	5.9	489586	-37282	13.1
Sottotetto	15.66	SLD 1	702263	-17403	40.4	524413	29126	18
Sottotetto	15.66	SLD 2	702261	-17499	40.1	524413	29091	18
Sottotetto	15.66	SLD 3	701919	-17398	40.3	521079	-22474	23.2
Sottotetto	15.66	SLD 4	701917	-17495	40.1	521161	-22508	23.2
Sottotetto	15.66	SLD 5	710338	-5200	136.6	512587	87616	5.9
Sottotetto	15.66	SLD 6	710337	-5263	135	512587	87593	5.9
Sottotetto	15.66	SLD 7	701375	-5185	135.3	514475	-84381	6.1
Sottotetto	15.66	SLD 8	701373	-5248	133.6	514493	-84404	6.1
Sottotetto	15.66	SLD 9	716236	5279	135.7	512511	86157	5.9
Sottotetto	15.66	SLD 10	716235	5215	137.3	512511	86134	6
Sottotetto	15.66	SLD 11	703547	5294	132.9	528904	-85841	6.2
Sottotetto	15.66	SLD 12	709566	5231	135.7	528924	-85863	6.2
Sottotetto	15.66	SLD 13	709456	17526	40.5	525554	24261	21.7
Sottotetto	15.66	SLD 14	709260	17429	40.7	525554	24226	21.7
Sottotetto	15.66	SLD 15	707790	17530	40.4	523412	-27338	19.1
Sottotetto	15.66	SLD 16	707579	17434	40.6	523469	-27373	19.1
Sottotetto	15.66	SLV 1	681247	-40477	16.8	524636	65276	8
Sottotetto	15.66	SLV 2	687736	-40702	16.9	523707	65195	8
Sottotetto	15.66	SLV 3	661897	-40474	16.4	510854	-51954	9.8
Sottotetto	15.66	SLV 4	663053	-40699	16.3	510846	-52034	9.8
Sottotetto	15.66	SLV 5	704676	-12098	58.2	477598	198008	2.4
Sottotetto	15.66	SLV 6	704673	-12243	57.6	476945	197957	2.4
Sottotetto	15.66	SLV 7	683575	-12088	56.5	508569	-192757	2.6
Sottotetto	15.66	SLV 8	683872	-12233	55.9	508573	-192809	2.6
Sottotetto	15.66	SLV 9	710411	12264	57.9	481077	194562	2.5
Sottotetto	15.66	SLV 10	710408	12119	58.6	480841	194510	2.5
Sottotetto	15.66	SLV 11	689196	12274	56.2	492035	-196204	2.5
Sottotetto	15.66	SLV 12	689182	12129	56.8	492209	-196255	2.5
Sottotetto	15.66	SLV 13	688416	40730	16.9	505014	53787	9.4
Sottotetto	15.66	SLV 14	687979	40505	17	513856	53707	9.6
Sottotetto	15.66	SLV 15	691515	40733	17	520159	-63443	8.2
Sottotetto	15.66	SLV 16	685035	40508	16.9	521368	-63523	8.2

1.2 Verifiche travate C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

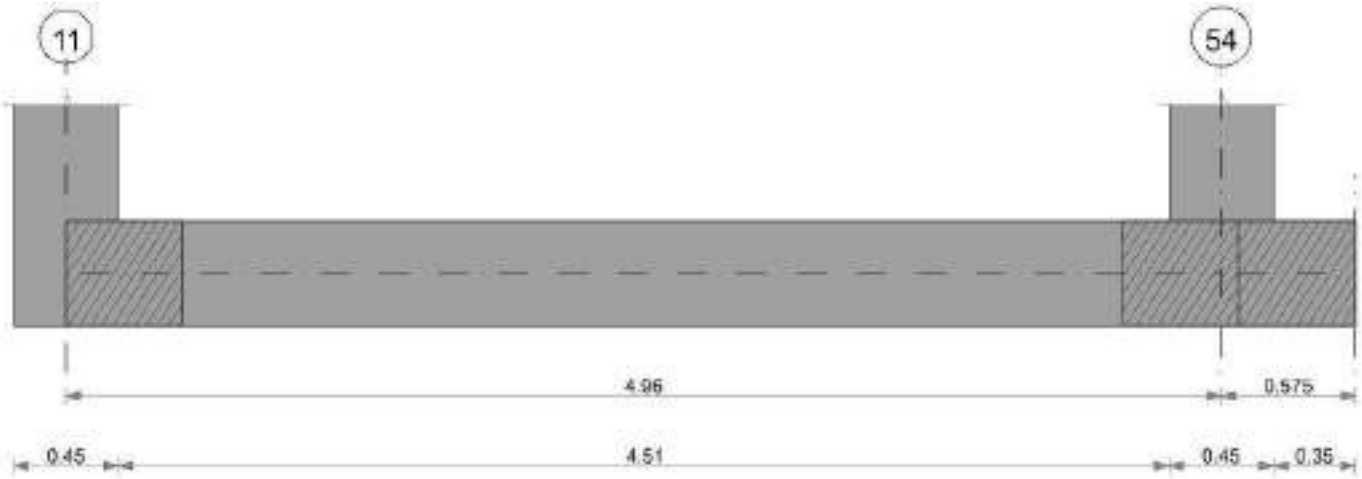
N°: indice progressivo della sezione.
Descrizione: descrizione della sezione.
Tipo: tipo di sezione.
Base: base della sezione. [m]
Altezza: altezza della sezione. [m]
Copriferro sup.: distanza del bordo della staffa dalla superficie superiore del getto. [m]
Copriferro inf.: distanza del bordo della staffa dalla superficie inferiore del getto. [m]
Copriferro lat.: distanza del bordo della staffa dalle superfici laterali del getto. [m]
x: distanza da asse appoggio sinistro. [m]
A sup.: area efficace di armatura longitudinale superiore. [m²]
C.b. sup.: distanza dal bordo del baricentro dell'armatura longitudinale superiore. [m]
A inf.: area efficace di armatura longitudinale inferiore. [m²]
C.b. inf.: distanza dal bordo del baricentro dell'armatura longitudinale inferiore. [m]
*M+ela: momento flettente desunto dal solutore che tende le fibre inferiori. [daN*m]*
Comb.: combinazione.
*M+des: momento flettente di progetto che tende le fibre inferiori. [daN*m]*
*M+ult: momento ultimo per trazione delle fibre inferiori. [daN*m]*
x/d: rapporto tra posizione asse neutro e altezza utile.
coeff: coefficiente di sicurezza.
*M-ela: momento flettente desunto dal solutore che tende le fibre superiori. [daN*m]*
*M-des: momento flettente di progetto che tende le fibre superiori. [daN*m]*
*M-ult: momento ultimo per trazione delle fibre superiori. [daN*m]*
Verifica: stato di verifica.
A st: area di staffe per unità di lunghezza. [m²]
A sl: area di armatura longitudinale tesa per valutazione resistenza taglio in assenza di armature a taglio. [m²]
A sag: area equivalente di barre piegate per unità di lunghezza. [m²]
Vela: taglio elastico. [daN]
Vdes: taglio di progetto. [daN]
Vrd: resistenza a taglio della sezione senza armature. [daN]
Vrcd: sforzo di taglio che produce il cedimento delle bielle. [daN]
Vrsd: resistenza a taglio per la presenza delle armature. [daN]
Vult: taglio ultimo. [daN]
cotgϑ: cotg dell'angolo di inclinazione dei puntoni in calcestruzzo.
Rara: famiglia di combinazione di verifica.
*Mela: momento elastico. [daN*m]*
*Mdes: momento di progetto. [daN*m]*
σ c: tensione di compressione nel calcestruzzo. [daN/m²]

σ c lim.: tensione limite di compressione nel calcestruzzo. [daN/m²]
σ f.: tensione di trazione nell'acciaio. [daN/m²]
σ f lim.: tensione limite di trazione nell'acciaio. [daN/m²]
Elastica+: massima freccia a sezione interamente reagente di solo calcestruzzo. [m]
Elastica-: minima freccia a sezione interamente reagente di solo calcestruzzo. [m]
Fess.+: massima freccia a sezione fessurata ed omogeneizzata. [m]
Fess.-: minima freccia a sezione fessurata ed omogeneizzata. [m]
Quasi permanente: famiglia di combinazione di verifica.
σ FRP: tensione di trazione nell'FRP. [daN/m²]
σ FRP lim.: tensione limite di trazione nell'FRP. [daN/m²]
Fess. viscosa+: massima freccia a sezione fessurata ed omogeneizzata a viscosità esaurita. [m]
Fess. viscosa-: minima freccia a sezione fessurata ed omogeneizzata a viscosità esaurita. [m]
l/f: rapporto luce su freccia in combinazione quasi permanente.
Frequente: famiglia di combinazione di verifica.
Bordo: bordo interessato dalla fessura.
Rara: famiglia di combinazione per verifica inferiore.
Dmax: distanza massima tra le fessure. [m]
Esm: dilatazione media delle barre di armatura.
Wd: valore di calcolo di apertura delle fessure. [m]
Comb: combinazione.
Frequente: famiglia di combinazione per verifica inferiore.
Quasi permanente: famiglia di combinazione per verifica inferiore.
d: altezza utile. [m]
Af: area di armatura inferiore per unità di lunghezza. [m]
M: momento flettente. [daN*m/m]
Mult: momento ultimo. [daN*m/m]
V: sforzo di taglio. [daN/m]
Vult: sforzo di taglio ultimo. [daN/m]
Aste: numero delle aste del tratto in verifica.
Size X: misura dell'impronta al suolo lungo la direzione X locale. [m]
Size Y: misura dell'impronta al suolo lungo la direzione Y locale. [m]
Type: indicazione del tipo di combinazione statica o sismica.
Cond: indicazione della condizione di carico (BT breve termine o LT lungo termine).
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza alla capacità portante.
Fx: componente orizzontale del carico lungo x. [daN]
Fy: componente orizzontale del carico lungo y. [daN]
Fz: componente verticale del carico. [daN]
Mx: momento risultante agente attorno x. [daN*m]
My: momento risultante agente attorno y. [daN*m]
Inc.x: inclinazione del carico lungo x. [deg]
Inc.y: inclinazione del carico lungo y. [deg]
Ecc.x: eccentricità del carico lungo x. [m]
Ecc.y: eccentricità del carico lungo y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
qd: sovraccarico di progetto. [daN/m²]
γs: peso specifico di progetto del suolo. [daN/m³]
Fi: angolo di attrito di progetto. [deg]
Coes: coesione di progetto. [daN/m²]
Amax: accelerazione normalizzata max al suolo.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.

Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
Tipo: tipologia di cedimento considerato (E = elastico, D = edometrico, Z = consolidazione primaria).
Assoluto: cedimento assoluto massimo.
Sa adm: cedimento assoluto ammissibile. [m]
Sa: cedimento assoluto massimo. [m]
Nodo: nodo dove avviene il cedimento assoluto massimo.
Differenziale: cedimento differenziale massimo.
Sd adm: cedimento differenziale ammissibile. [m]
Sd: cedimento differenziale massimo. [m]
Nodo I: nodo dove avviene il cedimento differenziale massimo.
Nodo j: nodo dove avviene il cedimento differenziale massimo.
Relativo: cedimento relativo massimo.
Sr adm: cedimento relativo ammissibile. [m]
Sr: cedimento relativo massimo. [m]
Nodo: nodo dove avviene il cedimento relativo massimo.
Rapp. inflessione: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).
RI adm: rapporto di inflessione ammissibile.
RI: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).
Rotazione rigida: rotazione rigida valutata tra primo ed ultimo punto.
RR adm: rotazione rigida ammissibile. [deg]
RR: rotazione rigida massima (tra primo ed ultimo punto). [deg]
Rotazione assoluta: rotazione assoluta dei singoli tratti.
R Adm: rotazione assoluta ammissibile. [deg]
R Max: rotazione assoluta massima. [deg]
Nodo I: dal nodo.
Nodo J: al nodo.
Distorsione angolare positiva: distorsione angolare positiva (concavità verso l'alto).
D+ adm: distorsione angolare ammissibile. [deg]
D+: distorsione angolare massima positiva (concavità verso l'alto). [deg]
Nodo: nodo dove avviene la distorsione angolare massima positiva (concavità verso l'alto).
Distorsione angolare negativa: distorsione angolare negativa (concavità verso il basso).
D- adm: distorsione angolare ammissibile. [deg]
D-: distorsione angolare massima negativa (concavità verso il basso). [deg]
Nodo: nodo dove avviene la distorsione angolare massima negativa (concavità verso il basso).

CORDOLO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Campata 1 tra i fili 11 - 54, sezione R 70x45, aste 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-9001.57	SLU 83	-9276.37	-15057.39	0.129	1.62	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-9955.77	SLV 4	-10209.26	-14321.38	0.232	1.4	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-7720.86	SLD 4	-7935.95	-14321.38	0.232	1.8	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-18592	SLU 83	-18592	-11837	-100005	-21243	-21243	1	1.14	Si
0.23	0.0000134	0	0	-15180	SLU 83	-15180	-11837	-100005	-21243	-21243	1	1.4	Si
2.48	0.0000129	0.001018	0	1801	SLU 84	1801	11926	88449	18150	18150	1	10.08	Si
4.63	0.0000134	0	0	18554	SLU 83	18554	10870	88449	18788	18788	1	1.01	Si
4.74	0.0000134	0	0	19897	SLU 83	19897	11837	100005	21243	21243	1	1.07	Si
4.96	0.0000134	0	0	20056	SLU 83	20056	11837	100005	21243	21243	1	1.06	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-20735	SLV 4	-20735	-11837	-100005	-21243	-21243	1	1.02	Si
0.23	0.0000134	0	0	-16707	SLV 4	-16707	-11837	-100005	-21243	-21243	1	1.27	Si
2.48	0.0000129	0.001018	0	2604	SLV 4	2604	11926	88449	18150	18150	1	6.97	Si
2.48	0.0000129	0.001018	0	-173	SLV 13	-173	-11926	-88449	-18150	-18150	1	104.96	Si
4.74	0.0000134	0	0	19468	SLV 4	19468	11837	100005	21243	21243	1	1.09	Si
4.96	0.0000134	0	0	19517	SLV 4	19517	11837	100005	21243	21243	1	1.09	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-16034	SLD 4	-16034	-11837	-100005	-21243	-21243	1	1.32	Si
0.23	0.0000134	0	0	-12995	SLD 4	-12995	-11837	-100005	-21243	-21243	1	1.63	Si
2.48	0.0000129	0.001018	0	1809	SLD 4	1809	11926	88449	18150	18150	1	10.03	Si
4.63	0.0000134	0	0	14923	SLD 4	14923	10870	88449	18788	18788	1	1.26	Si
4.74	0.0000134	0	0	15963	SLD 4	15963	11837	100005	21243	21243	1	1.33	Si
4.96	0.0000134	0	0	16041	SLD 4	16041	11837	100005	21243	21243	1	1.32	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-667.66	20	-667.66	-28261	1494000	0	36000000	-612.65	2	-612.65	-25932	1120500			Si
0.23	-3366.32	20	-4448.69	-188304	1494000	0	36000000	-3078.97	2	-4068.01	-172191	1120500			Si
2.48	-6629.24	20	-6832.21	253589	1494000	3739050	36000000	-6050.23	2	-6236.75	231487	1120500			Si
4.74	5122.2	21	5122.2	216813	1494000	0	36000000	4670.61	2	4670.61	197698	1120500			Si

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
512,513,514,515,516,517,518,519,520,521,522,523,524	5.19	1.3	SLU 83	ST	BT	2.3	225535	68099	3.31	Si
512,513,514,515,516,517,518,519,520,521,522,523,524	5.19	1.3	SLV 4	SIS	BT	2.3	202291	67986	2.98	Si
512,513,514,515,516,517,518,519,520,521,522,523,524	5.19	1.3	SLD 4	SIS	BT	2.3	213837	55916	3.82	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	365	-68099	-8171.27	-2554.37	0	0	-0.04	-0.12	1.06	5.11	1496	2060	0	14430	
0	1477	-67986	-9222.77	-15227.09	0	1	-0.22	-0.14	1.03	4.74	1496	2060	0	14430	0.07
0	799	-55916	-7106.02	-7553.41	0	1	-0.14	-0.13	1.05	4.91	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

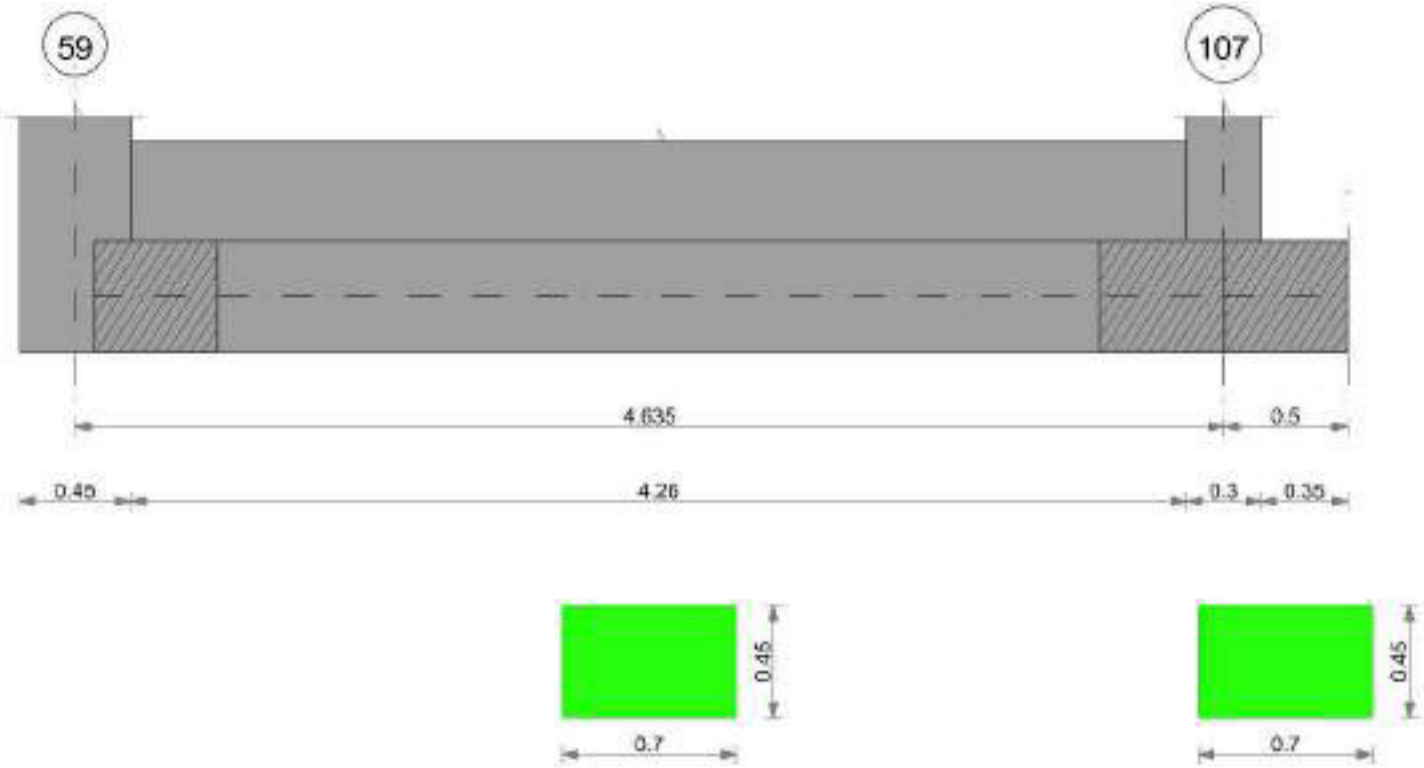
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	939	SLE RA 20	0.05	0.001	939	926	SLE RA 20	0.05	0	939	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	939	SLE RA 1	0.05	0	939	939	SLE RA 1	0.05	0	939	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	939	SLE RA 1	0.05	0	939	939	SLE RA 1	0.05	0	939	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	939	926	SLE RA 20	0.19	0	939	SLE RA 1	0.1	0	939	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	939	926	SLE RA 1	0.19	0	939	SLE RA 1	0.1	0	939	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	939	926	SLE RA 1	0.19	0	939	SLE RA 1	0.1	0	939	SLE RA 1	Si

CORDOLO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

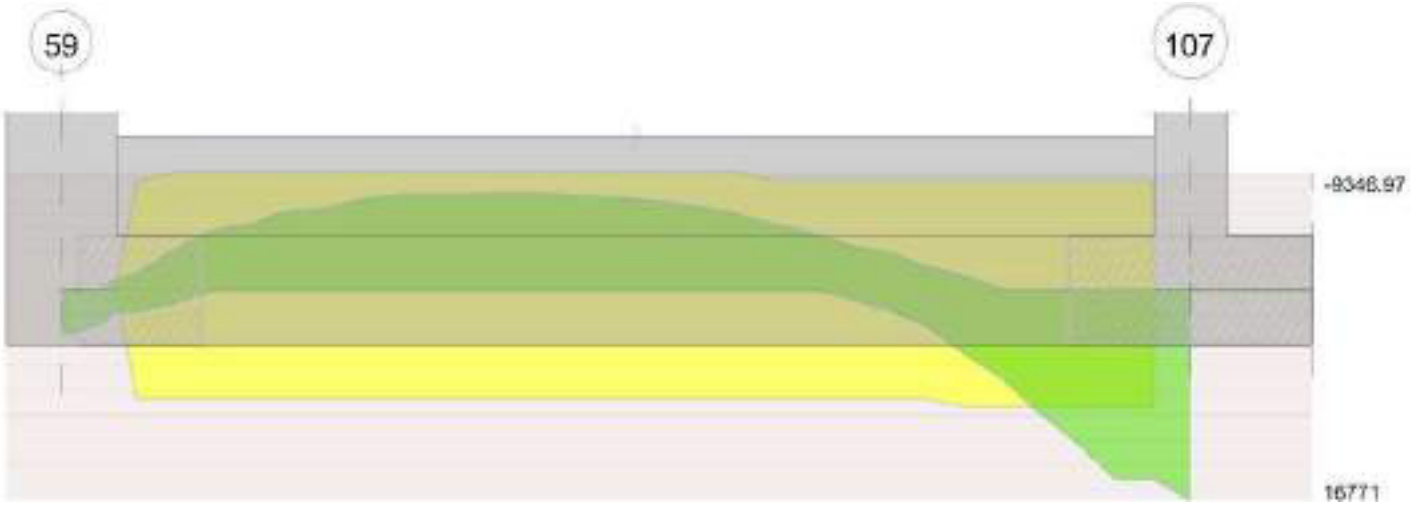


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 59 - 107, sezione R 70x45, aste 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3762	SLU 83	0.029	5426	9707	SLU 83	15877	Si
0.23	0.41	0.0003	3619	SLU 83	0.029	5426	9339	SLU 83	15877	Si
2.32	0.41	0.0003	2743	SLU 83	0.029	5426	7077	SLU 83	15877	Si
4.49	0.41	0.0003	3009	SLU 83	0.029	5426	7766	SLU 83	15877	Si
4.64	0.41	0.0003	2983	SLU 83	0.029	5426	7697	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2955	SLD 4	0.098	6064	7626	SLD 4	15877	Si
0.23	0.41	0.0003	2831	SLD 4	0.098	6064	7307	SLD 4	15877	Si
2.32	0.41	0.0003	2030	SLD 4	0.098	6064	5238	SLD 4	15877	Si
4.49	0.41	0.0003	2136	SLD 4	0.098	6064	5511	SLD 4	15877	Si
4.64	0.41	0.0003	2117	SLD 4	0.098	6064	5463	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000341	2762	SLE RA 20	78185	1494000	969499	36000000	2504	SLE QP 2	70886	1120500	Si
0.23	0.41	0.00000341	2657	SLE RA 20	75212	1494000	932631	36000000	2408	SLE QP 2	68174	1120500	Si
2.32	0.41	0.00000341	2011	SLE RA 20	56929	1494000	705925	36000000	1817	SLE QP 2	51451	1120500	Si
4.49	0.41	0.00000341	2206	SLE RA 20	62456	1494000	774457	36000000	1993	SLE QP 2	56419	1120500	Si
4.64	0.41	0.00000341	2187	SLE RA 20	61906	1494000	767640	36000000	1975	SLE QP 2	55923	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
535,536,537,538,539,540,541,542,543,544,545,546	4.86	1.3	SLU 83	ST	BT	2.3	229126	75274	3.04	Si
535,536,537,538,539,540,541,542,543,544,545,546	4.86	1.3	SLV 4	SIS	BT	2.3	205506	62860	3.27	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
535,536,537,538,539,540,541,542,543,544,545,546	4.86	1.3	SLD 4	SIS	BT	2.3	217942	56379	3.87	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-11	-75274	-5693.59	-3781.7	0	0	-0.05	-0.08	1.15	4.76	1496	2060	0	14430	
0	1553	-62860	-6009.73	-13105.99	0	1	-0.21	-0.1	1.11	4.44	1496	2060	0	14430	0.07
0	682	-56379	-4778	-7090.11	0	1	-0.13	-0.08	1.13	4.61	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

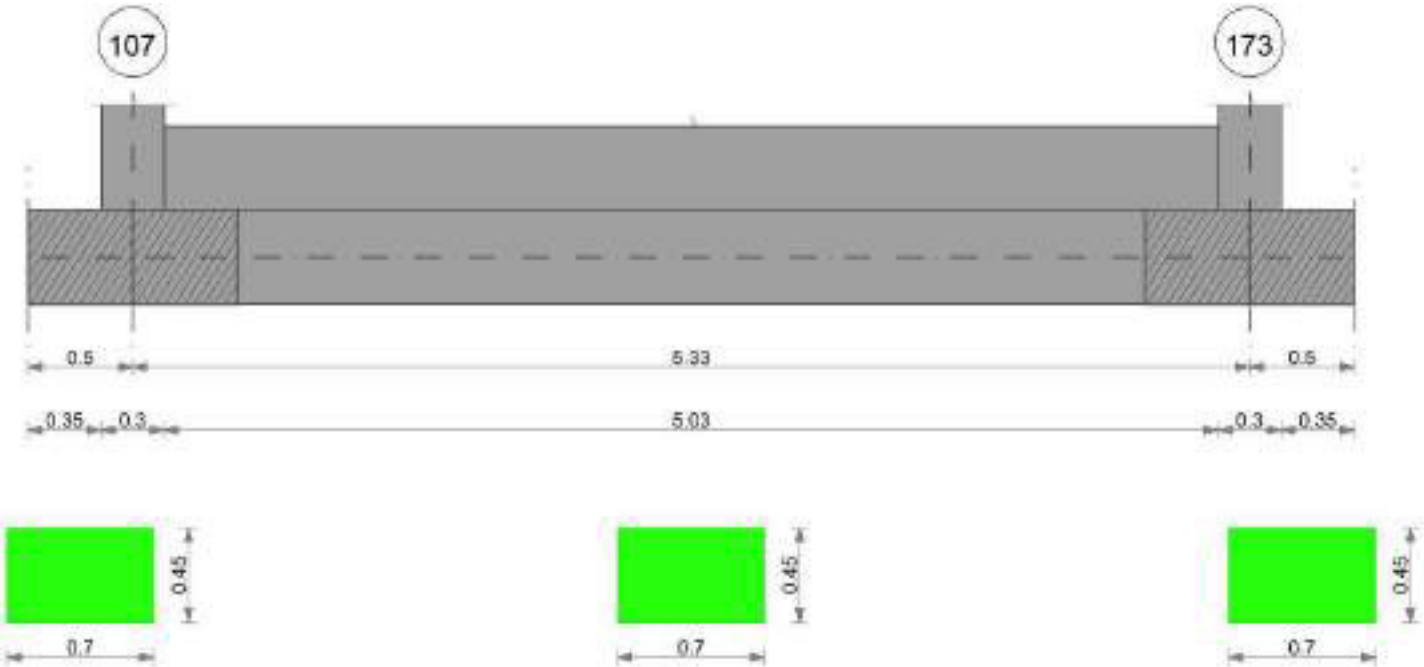
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	1023	SLE RA 20	0.05	0	1023	1011	SLE RA 20	0.05	0	1023	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1023	SLE RA 1	0.05	0	1023	1023	SLE RA 1	0.05	0	1023	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1023	SLE RA 1	0.05	0	1023	1023	SLE RA 1	0.05	0	1023	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	1023	1011	SLE RA 20	0.19	0	1023	SLE RA 1	0.1	0	1023	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1023	1011	SLE RA 1	0.19	0	1023	SLE RA 1	0.1	0	1023	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1023	1011	SLE RA 1	0.19	0	1023	SLE RA 1	0.1	0	1023	SLE RA 1	Si

CORDOLO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

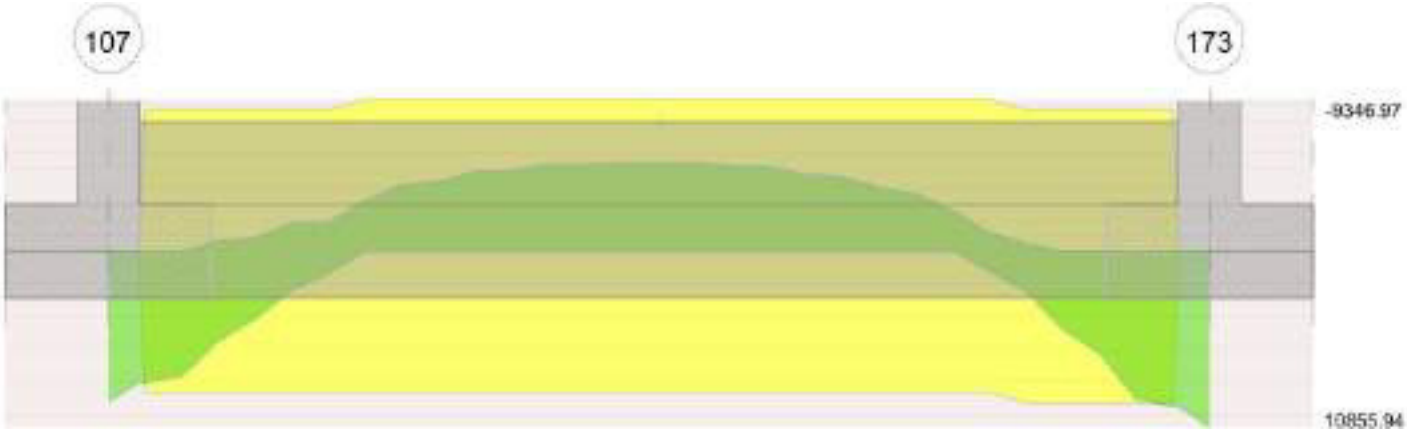
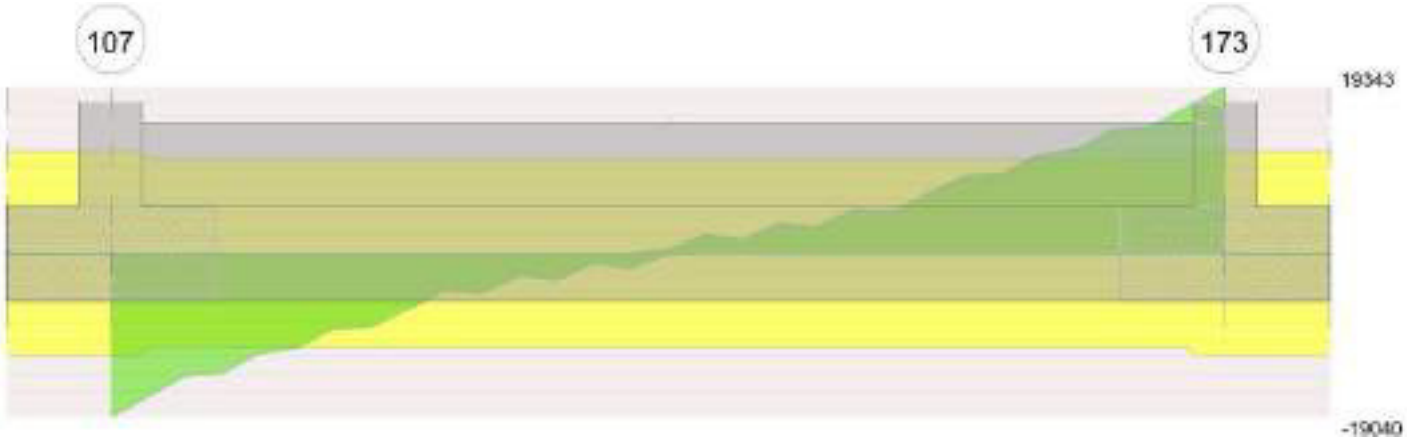


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 107 - 173, sezione R 70x45, aste 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2983	SLU 83	0.023	4058	7697	SLU 83	15877	Si
0.15	0.41	0.0003	2952	SLU 83	0.023	4058	7619	SLU 83	15877	Si
2.67	0.41	0.0003	2301	SLU 83	0.023	4058	5937	SLU 83	15877	Si
5.18	0.41	0.0003	2840	SLU 83	0.023	4058	7330	SLU 83	15877	Si
5.33	0.41	0.0003	2854	SLU 83	0.023	4058	7365	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2117	SLD 4	0.085	4549	5463	SLD 4	15877	Si
0.15	0.41	0.0003	2096	SLD 4	0.085	4549	5408	SLD 4	15877	Si
2.67	0.41	0.0003	1603	SLD 7	0.085	4549	4138	SLD 7	15877	Si
5.18	0.41	0.0003	2052	SLD 15	0.085	4549	5297	SLD 15	15877	Si
5.33	0.41	0.0003	2069	SLD 15	0.085	4549	5339	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000255	2187	SLE RA 20	62615	1494000	776428	36000000	1975	SLE QP 2	56564	1120500	Si
0.15	0.41	0.00000255	2165	SLE RA 20	61979	1494000	768536	36000000	1955	SLE QP 2	55990	1120500	Si
2.67	0.41	0.00000255	1686	SLE RA 20	48283	1494000	598710	36000000	1522	SLE QP 2	43591	1120500	Si
5.18	0.41	0.00000255	2083	SLE RA 20	59645	1494000	739596	36000000	1883	SLE QP 2	53918	1120500	Si
5.33	0.41	0.00000255	2093	SLE RA 20	59928	1494000	743112	36000000	1892	SLE QP 2	54175	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
556,557,558,559,560,561,562,563,564,565,566,567,568	5.33	1.3	SLU 83	ST	BT	2.3	244594	76092	3.21	Si
556,557,558,559,560,561,562,563,564,565,566,567,568	5.33	1.3	SLV 12	SIS	BT	2.3	218735	56709	3.86	Si
556,557,558,559,560,561,562,563,564,565,566,567,568	5.33	1.3	SLD 7	SIS	BT	2.3	234135	54139	4.32	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1454	-76092	-7207.31	-904.35	0	-1	-0.01	-0.09	1.11	5.31	1496	2060	0	14430	

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	4229	-56709	-7784.01	3584.93	0	4	0.06	-0.14	1.03	5.2	1496	2060	0	14430	0.07
0	1342	-54139	-6089.79	-2164.25	0	1	-0.04	-0.11	1.08	5.25	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

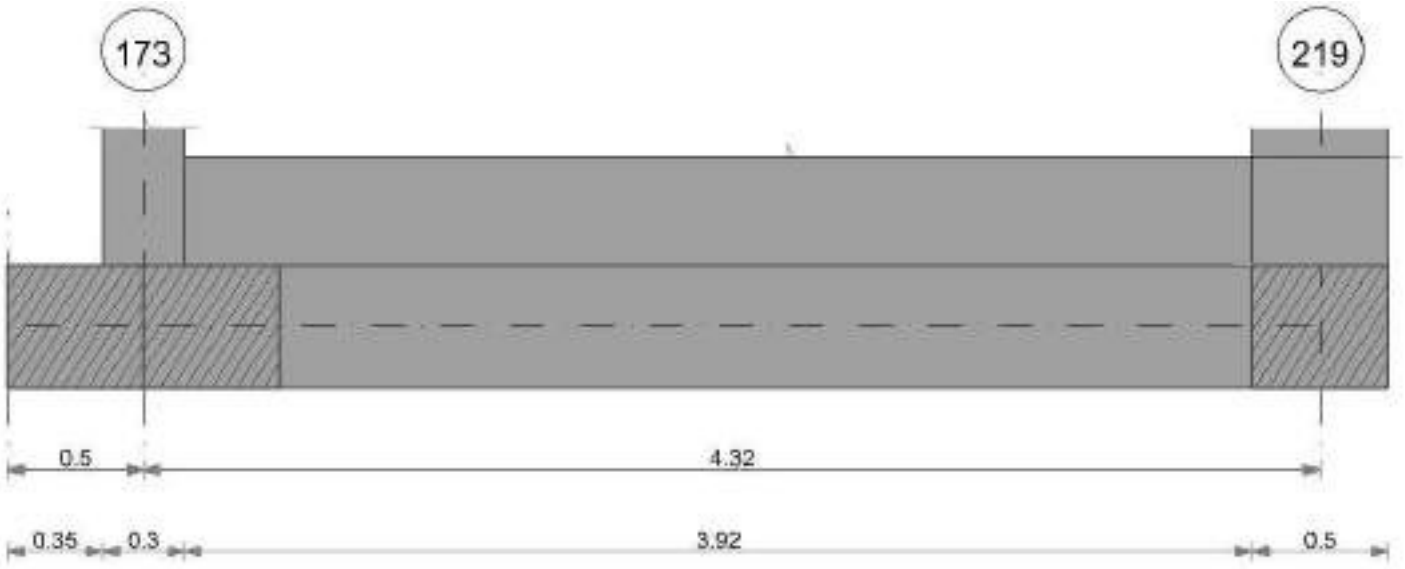
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	1023	SLE RA 20	0.05	0	1023	1036	SLE RA 21	0.05	0	1036	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1036	SLE RA 1	0.05	0	1036	1036	SLE RA 1	0.05	0	1036	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1036	SLE RA 1	0.05	0	1036	1036	SLE RA 1	0.05	0	1036	SLE RA 1	0.0033	0	SLE RA 1	Si

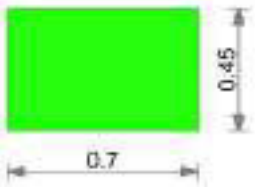
Verifiche geotecniche - Rotazioni assolute e differenziali

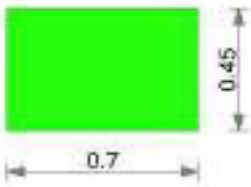
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	1036	1023	SLE RA 21	0.19	0	1036	SLE RA 1	0.1	0	1036	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1036	1023	SLE RA 1	0.19	0	1036	SLE RA 1	0.1	0	1036	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1036	1023	SLE RA 1	0.19	0	1036	SLE RA 1	0.1	0	1036	SLE RA 1	Si

CORDOLO 4

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 173 - 219, sezione R 70x45, aste 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2854	SLU 83	0.02	3335	7365	SLU 83	15877	Si
0.15	0.41	0.0002	2864	SLU 83	0.02	3335	7391	SLU 83	15877	Si
2.16	0.41	0.0002	2630	SLU 83	0.02	3335	6788	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2069	SLD 15	0.077	3746	5339	SLD 15	15877	Si
0.15	0.41	0.0002	2083	SLD 15	0.077	3746	5374	SLD 15	15877	Si
2.16	0.41	0.0002	1994	SLD 15	0.077	3746	5146	SLD 15	15877	Si
4.07	0.41	0.0002	2658	SLD 15	0.077	3746	6858	SLD 15	15877	Si
4.32	0.41	0.0002	2800	SLD 15	0.077	3746	7225	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000209	2093	SLE RA 20	60292	1494000	747619	36000000	1892	SLE QP 2	54504	1120500	Si
0.15	0.41	0.00000209	2100	SLE RA 20	60504	1494000	750251	36000000	1899	SLE QP 2	54696	1120500	Si
2.16	0.41	0.00000209	1929	SLE RA 20	55576	1494000	689139	36000000	1744	SLE QP 2	50249	1120500	Si
4.07	0.41	0.00000209	2497	SLE RA 20	71930	1494000	891930	36000000	2262	SLE QP 2	65172	1120500	Si
4.32	0.41	0.00000209	2625	SLE RA 20	75624	1494000	937736	36000000	2379	SLE QP 2	68538	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
569,570,571,572,573,574,575,576,577,578,579	4.57	1.3	SLU 83	ST	BT	2.3	214234	67487	3.17	Si
569,570,571,572,573,574,575,576,577,578,579	4.57	1.3	SLV 15	SIS	BT	2.3	195290	57997	3.37	Si
569,570,571,572,573,574,575,576,577,578,579	4.57	1.3	SLD 15	SIS	BT	2.3	205761	51292	4.01	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	ys	Fi	Coes	Amax
0	-787	-67487	-5308.53	3143.64	0	-1	0.05	-0.08	1.14	4.48	1496	2060	0	14430	
0	921	-57997	-5635.26	10252.91	0	1	0.18	-0.1	1.11	4.22	1496	2060	0	14430	0.07
0	117	-51292	-4469.45	5599.61	0	0	0.11	-0.09	1.13	4.35	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

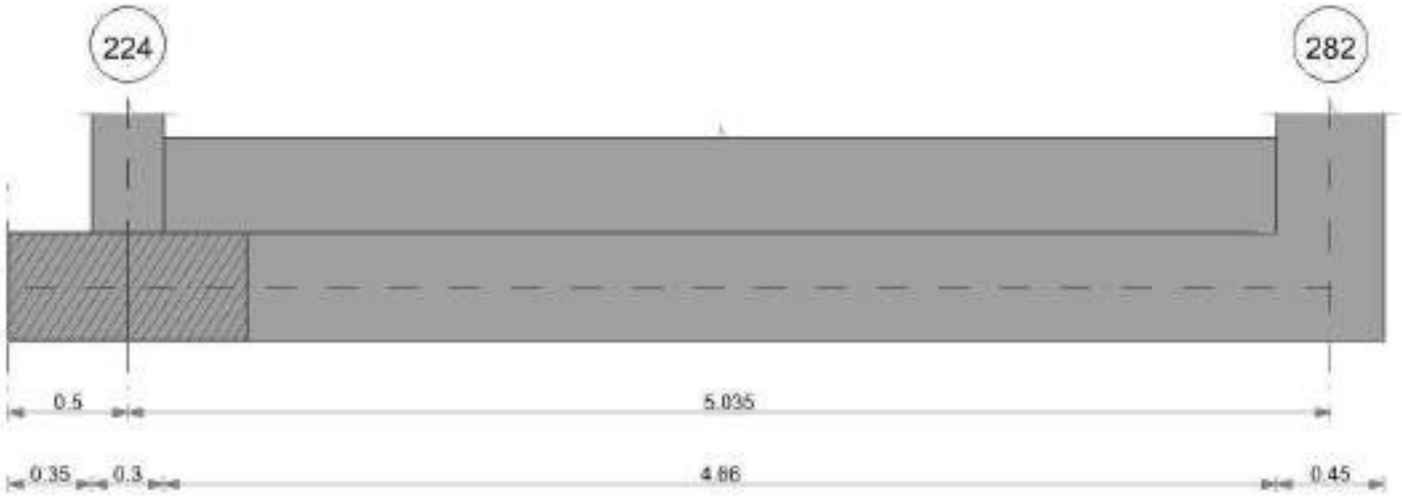
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	1036	SLE RA 20	0.05	0	1036	1047	SLE RA 20	0.05	0	1047	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1047	SLE RA 1	0.05	0	1047	1047	SLE RA 1	0.05	0	1047	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1047	SLE RA 1	0.05	0	1047	1047	SLE RA 1	0.05	0	1047	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	1047	1036	SLE RA 20	0.19	0	1047	SLE RA 1	0.1	0	1047	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1047	1036	SLE RA 1	0.19	0	1047	SLE RA 1	0.1	0	1047	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1047	1036	SLE RA 1	0.19	0	1047	SLE RA 1	0.1	0	1047	SLE RA 1	Si

CORDOLO 5

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

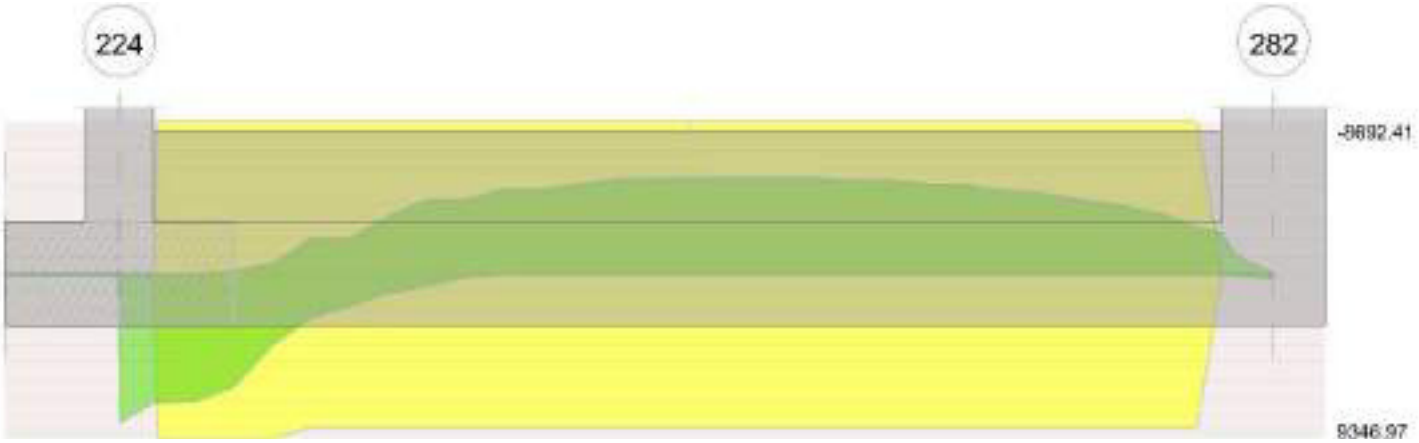


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 224 - 282, sezione R 70x45, aste 610, 609, 608, 607, 606, 605, 604, 603, 602, 601, 600, 599

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
2.52	0.41	0.0002	2576	SLV 15	0.085	2672	6647	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2471	SLD 15	0.07	3092	6378	SLD 15	15877	Si
0.15	0.41	0.0002	2451	SLD 15	0.07	3092	6326	SLD 15	15877	Si
2.52	0.41	0.0002	2057	SLD 15	0.07	3092	5308	SLD 15	15877	Si
4.81	0.41	0.0002	2512	SLD 15	0.07	3092	6484	SLD 15	15877	Si
5.04	0.41	0.0002	2595	SLD 15	0.07	3092	6696	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	2360	SLE RA 20	68319	1494000	847151	36000000	2136	SLE QP 2	61831	1120500	Si
0.15	0.41	0.00000172	2338	SLE RA 20	67682	1494000	839251	36000000	2116	SLE QP 2	61256	1120500	Si
2.52	0.41	0.00000172	1843	SLE RA 20	53355	1494000	661602	36000000	1668	SLE QP 2	48301	1120500	Si
4.81	0.41	0.00000172	2072	SLE RA 20	59994	1494000	743931	36000000	1882	SLE QP 2	54472	1120500	Si
5.04	0.41	0.00000172	2127	SLE RA 20	61564	1494000	763390	36000000	1932	SLE QP 2	55915	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
610,609,608,607,606,605,604,603,602,601,600,599	5.26	1.3	SLU 83	ST	BT	2.3	216037	72134	2.99	Si
610,609,608,607,606,605,604,603,602,601,600,599	5.26	1.3	SLV 15	SIS	BT	2.3	202800	70294	2.89	Si
610,609,608,607,606,605,604,603,602,601,600,599	5.26	1.3	SLD 15	SIS	BT	2.3	214680	58464	3.67	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-485	-72134	-10392.47	-4373.62	0	0	-0.06	-0.14	1.01	5.14	1496	2060	0	14430	
0	514	-70294	-11587.35	7914.02	0	0	0.11	-0.16	0.97	5.03	1496	2060	0	14430	0.07

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	63	-58464	-8974.87	1746.48	0	0	0.03	-0.15	0.99	5.2	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

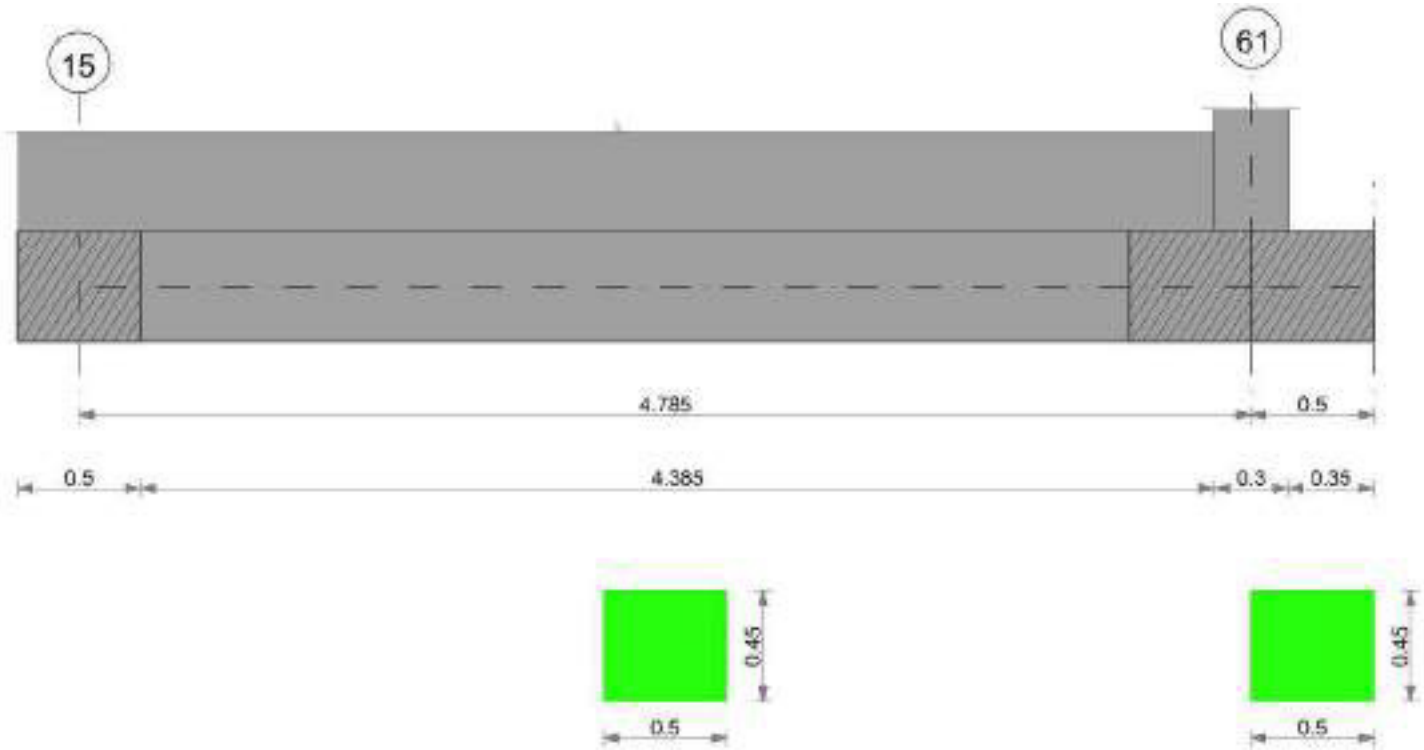
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	950	SLE RA 20	0.05	0.001	950	964	SLE RA 20	0.05	0	964	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	964	SLE RA 1	0.05	0	964	964	SLE RA 1	0.05	0	964	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	964	SLE RA 1	0.05	0	964	964	SLE RA 1	0.05	0	964	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	964	950	SLE RA 20	0.19	0	964	SLE RA 1	0.1	0	964	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	964	950	SLE RA 1	0.19	0	964	SLE RA 1	0.1	0	964	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	964	950	SLE RA 1	0.19	0	964	SLE RA 1	0.1	0	964	SLE RA 1	Si

CORDOLO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

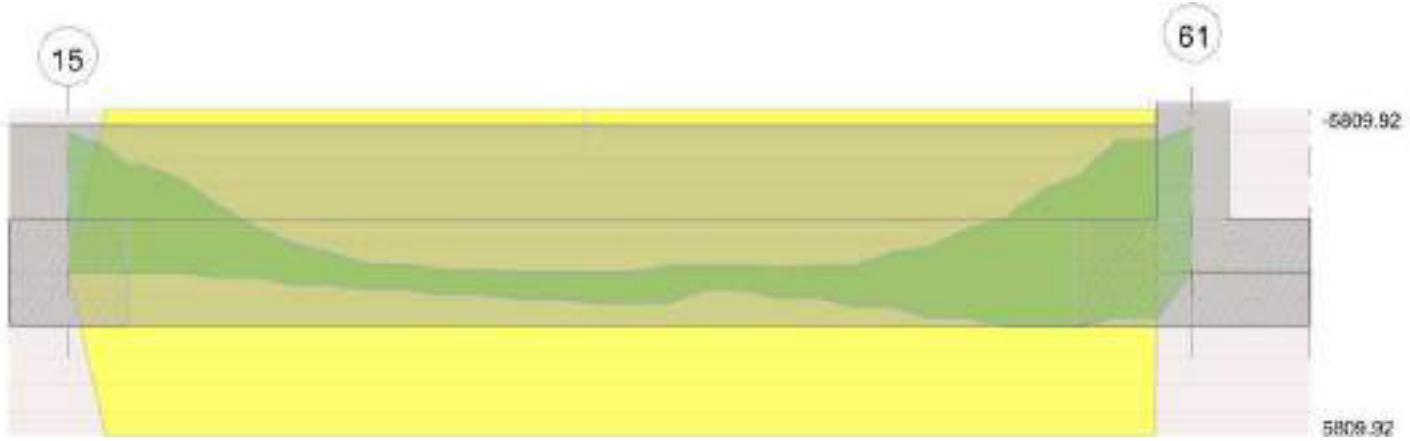
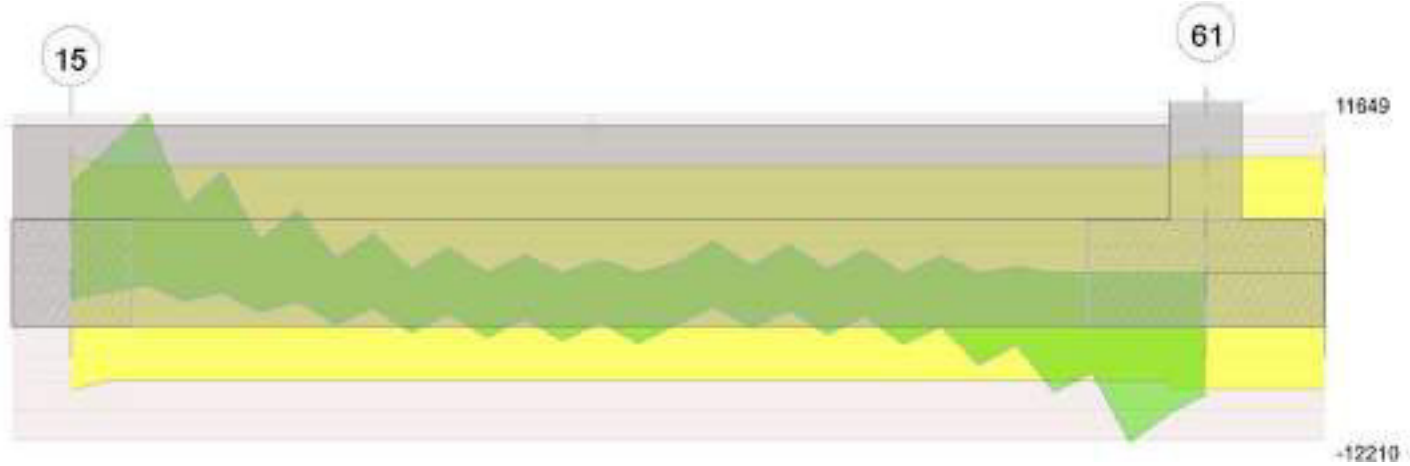


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 15 - 61, sezione R 50x45, aste 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2318	SLV 4	0.085	2637	8064	SLV 4	15877	Si
0.25	0.41	0.0002	2251	SLV 4	0.085	2637	7830	SLV 4	15877	Si
2.39	0.41	0.0002	1829	SLV 4	0.085	2637	6360	SLV 4	15877	Si
4.63	0.41	0.0002	1620	SLU 84	0.017	2711	5636	SLU 84	15877	Si
4.78	0.41	0.0002	1611	SLU 84	0.017	2711	5605	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1733	SLD 4	0.07	3051	6029	SLD 4	15877	Si
0.25	0.41	0.0002	1694	SLD 4	0.07	3051	5894	SLD 4	15877	Si
2.39	0.41	0.0002	1469	SLD 4	0.07	3051	5110	SLD 4	15877	Si
4.63	0.41	0.0002	1212	SLD 4	0.07	3051	4217	SLD 4	15877	Si
4.78	0.41	0.0002	1203	SLD 4	0.07	3051	4183	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	1428	SLE RA 21	41361	1494000	512879	36000000	1297	SLE QP 2	37555	1120500	Si
0.25	0.41	0.0000017	1409	SLE RA 21	40809	1494000	506037	36000000	1279	SLE QP 2	37036	1120500	Si
2.39	0.41	0.0000017	1328	SLE RA 21	38462	1494000	476926	36000000	1201	SLE QP 2	34773	1120500	Si
4.63	0.41	0.0000017	1188	SLE RA 21	34396	1494000	426506	36000000	1071	SLE QP 2	31003	1120500	Si
4.78	0.41	0.0000017	1181	SLE RA 21	34200	1494000	424082	36000000	1064	SLE QP 2	30823	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
350,351,352,353,354,355,356,357,358,359,360,361,362,363	5.03	1.1	SLU 83	ST	BT	2.3	233359	73547	3.17	Si
350,351,352,353,354,355,356,357,358,359,360,361,362,363	5.03	1.1	SLV 4	SIS	BT	2.3	206225	71570	2.88	Si
350,351,352,353,354,355,356,357,358,359,360,361,362,363	5.03	1.1	SLD 4	SIS	BT	2.3	219304	59357	3.69	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	266	-73547	-44.04	-3976.66	0	0	-0.05	0	1.1	4.93	1496	2060	0	14430	
0	3477	-71570	-1544.86	-16369.59	0	3	-0.23	-0.02	1.06	4.58	1496	2060	0	14430	0.07
0	1619	-59357	-690.08	-8593.56	0	2	-0.14	-0.01	1.08	4.75	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

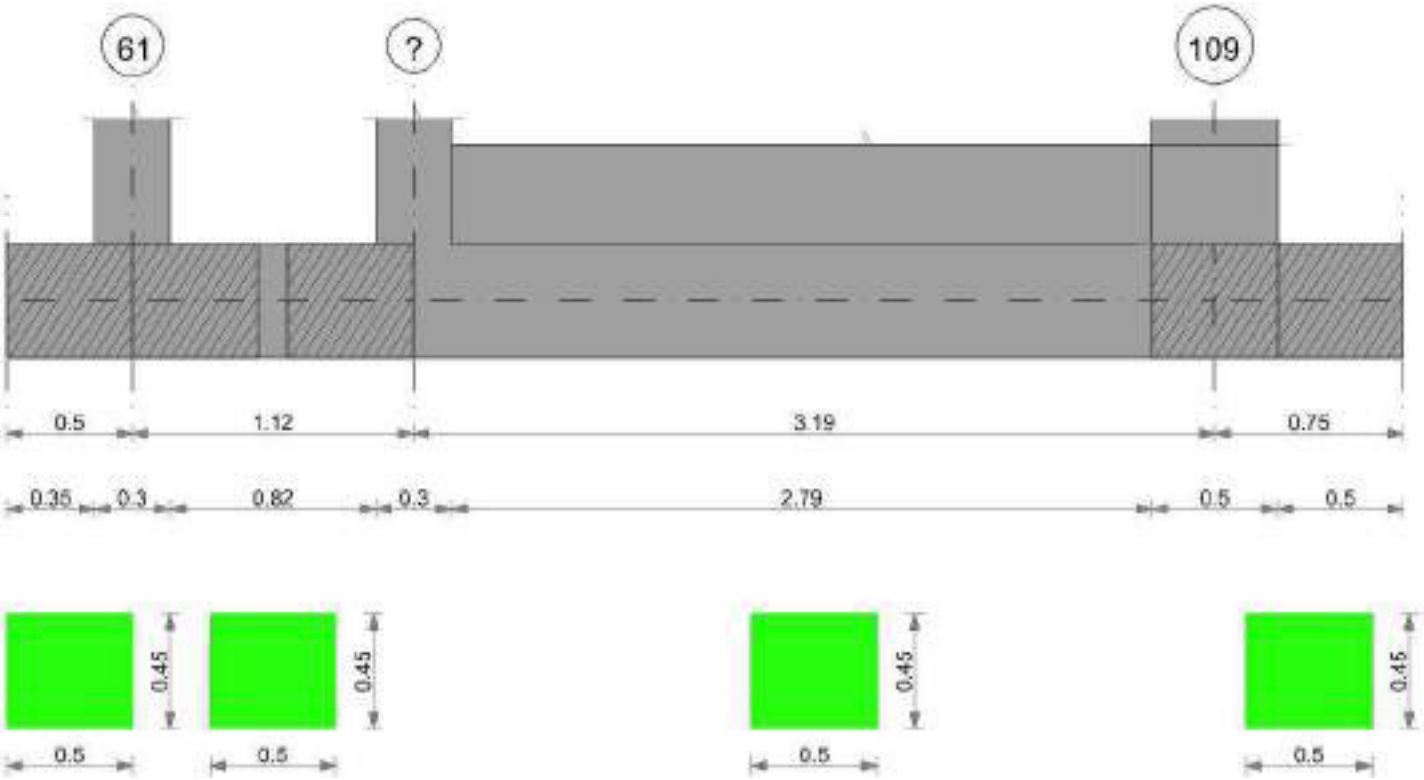
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	715	SLE RA 21	0.05	0.002	715	701	SLE RA 21	0.05	0	715	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	715	SLE RA 1	0.05	0	715	715	SLE RA 1	0.05	0	715	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	715	SLE RA 1	0.05	0	715	715	SLE RA 1	0.05	0	715	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	715	701	SLE RA 21	0.19	0	715	SLE RA 1	0.1	0	715	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	715	701	SLE RA 1	0.19	0	715	SLE RA 1	0.1	0	715	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	715	701	SLE RA 1	0.19	0	715	SLE RA 1	0.1	0	715	SLE RA 1	Si

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

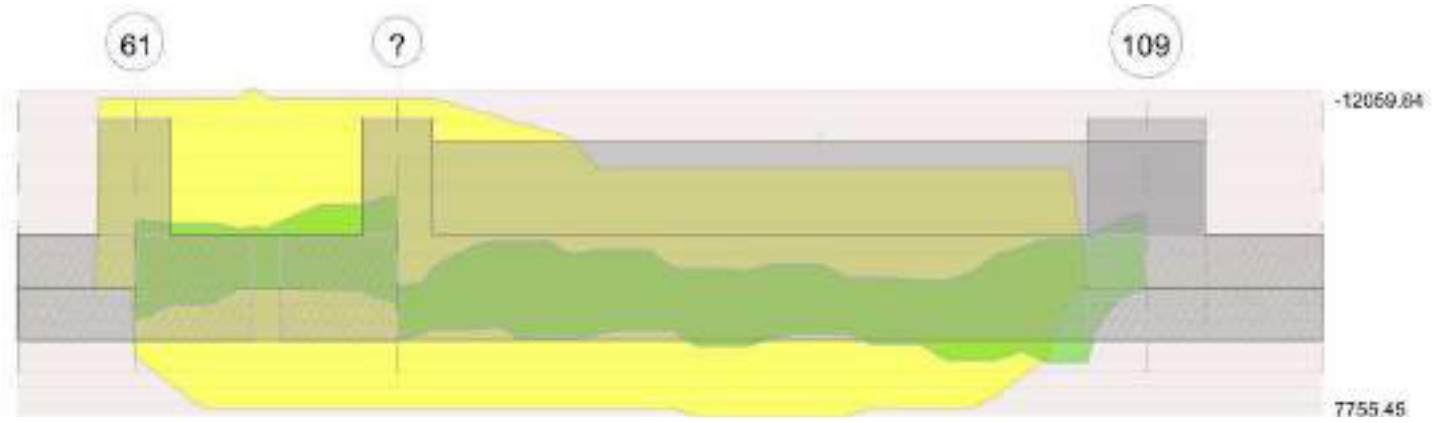
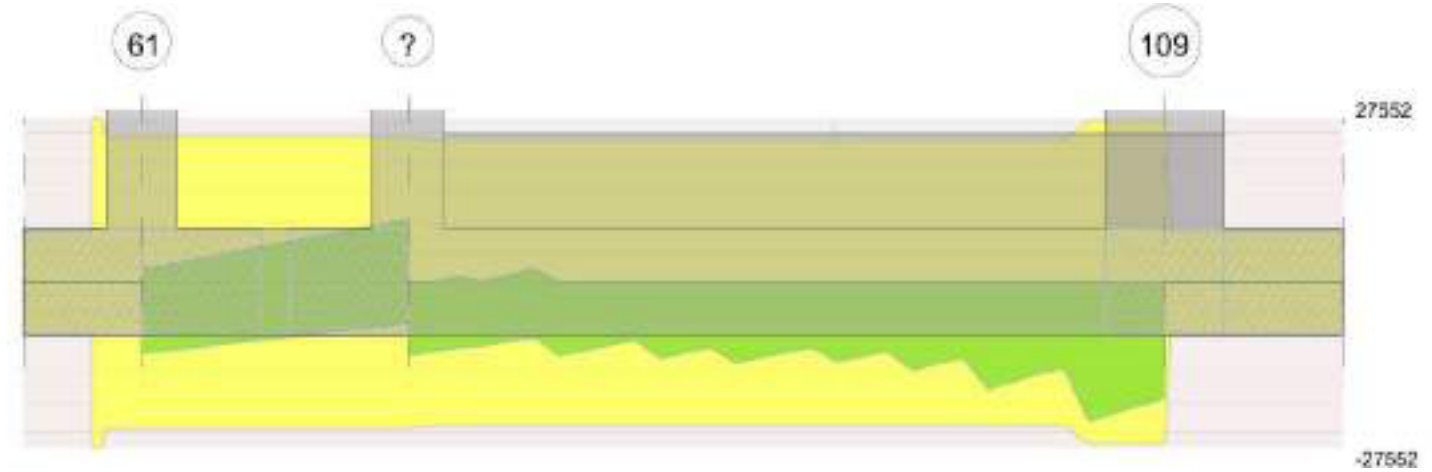


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 525

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052							-1520.32	SLU 83	-1520.32	-12063.16	0.138	7.93	Si
0.15	0.000823	0.052	0.0004	0.052							-2273.15	SLU 83	-2967.95	-12061.17	0.137	4.06	Si
0.56	0.000823	0.052	0.000509	0.052							-3536.43	SLU 84	-3722.85	-12059.84	0.137	3.24	Si
0.67	0.000823	0.052	0.000509	0.052							-3679.4	SLU 84	-3735.42	-12059.84	0.137	3.23	Si
0.97	0.000823	0.052	0.000509	0.052							-3636.18	SLU 84	-3735.31	-12059.84	0.137	3.23	Si
1.12	0.000823	0.052	0.000509	0.052							-3381.18	SLU 84	-3381.18	-12059.84	0.137	3.57	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	2286.21	SLV 13	1790.06	4127.78	0.15	2.31	-4209.63	SLV 4	-4148.05	-11479.46	0.252	2.77	Si
0.15	0.000823	0.052	0.0004	0.052	954.35	SLV 13	954.35	5753.79	0.174	6.03	-3907.72	SLV 4	-3907.72	-11484.22	0.249	2.94	Si
0.56	0.000823	0.052	0.000509	0.052							-2658.46	SLV 6	-3603.24	-11488.1	0.247	3.19	Si
0.97	0.000823	0.052	0.000509	0.052	132.31	SLV 4	132.31	7261.11	0.193	54.88	-5018.92	SLV 13	-5018.92	-11488.1	0.247	2.29	Si
1.12	0.000823	0.052	0.000509	0.052	1284.81	SLV 4	835.17	7261.11	0.193	8.69	-5850.02	SLV 13	-5582.19	-11488.1	0.247	2.06	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	432.03	SLD 13	94.94	4127.78	0.15	43.48	-2355.46	SLD 4	-2355.46	-11479.46	0.252	4.87	Si
0.15	0.000823	0.052	0.0004	0.052							-2519.6	SLD 4	-2569.1	-11484.22	0.249	4.47	Si
0.56	0.000823	0.052	0.000509	0.052							-2481.84	SLD 6	-2966	-11488.1	0.247	3.87	Si
0.97	0.000823	0.052	0.000509	0.052							-3549.21	SLD 13	-3549.21	-11488.1	0.247	3.24	Si
1.12	0.000823	0.052	0.000509	0.052							-3814.15	SLD 13	-3751.08	-11488.1	0.247	3.06	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	-7160	SLU 84	-7160	-8875	-63117	-24344	-24344	1	3.4	Si
0.15	0.0000174	0.000823	0	-5810	SLU 84	-5810	-8875	-63117	-24344	-24344	1	4.19	Si
0.56	0.0000174	0.000823	0	-2146	SLU 78	-2146	-8875	-63117	-24344	-24344	1	11.35	Si
0.97	0.0000174	0.000823	0	1540	SLU 83	1540	8875	63117	24344	24344	1	15.81	Si
1.12	0.0000174	0.000823	0	2884	SLU 83	2884	8875	63117	24344	24344	1	8.44	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	2062	SLV 4	2062	8875	63117	24344	24344	1	11.8	Si
0	0.0000174	0.0004	0	-11805	SLV 13	-11805	-7764	-63178	-24368	-24368	1	2.06	Si
0.15	0.0000174	0.000823	0	3204	SLV 4	3204	8875	63117	24344	24344	1	7.6	Si
0.15	0.0000174	0.0004	0	-11143	SLV 13	-11143	-7764	-63178	-24368	-24368	1	2.19	Si
0.56	0.0000174	0.000823	0	6298	SLV 4	6298	8875	63117	24344	24344	1	3.87	Si
0.56	0.0000174	0.000823	0	-9332	SLV 13	-9332	-8875	-63117	-24344	-24344	1	2.61	Si
0.97	0.0000174	0.000509	0	9371	SLV 4	9371	7764	63178	24368	24368	1	2.6	Si
0.97	0.0000174	0.000823	0	-7510	SLV 13	-7510	-8875	-63117	-24344	-24344	1	3.24	Si
1.12	0.0000174	0.000509	0	10493	SLV 4	10493	7764	63178	24368	24368	1	2.32	Si
1.12	0.0000174	0.000823	0	-6835	SLV 13	-6835	-8875	-63117	-24344	-24344	1	3.56	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-7849	SLD 13	-7849	-7764	-63178	-24368	-24368	1	3.1	Si
0.15	0.0000174	0.000823	0	-7050	SLD 13	-7050	-8875	-63117	-24344	-24344	1	3.45	Si
0.56	0.0000174	0.000823	0	1838	SLD 4	1838	8875	63117	24344	24344	1	13.25	Si
0.56	0.0000174	0.000823	0	-4871	SLD 13	-4871	-8875	-63117	-24344	-24344	1	5	Si
0.97	0.0000174	0.000823	0	4553	SLD 4	4553	8875	63117	24344	24344	1	5.35	Si
0.97	0.0000174	0.000823	0	-2692	SLD 13	-2692	-8875	-63117	-24344	-24344	1	9.04	Si
1.12	0.0000174	0.000823	0	5547	SLD 4	5547	8875	63117	24344	24344	1	4.39	Si
1.12	0.0000174	0.000823	0	-1889	SLD 13	-1889	-8875	-63117	-24344	-24344	1	12.89	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1101.19	20	-1101.19	59322	1494000	845276	36000000	-961.71	2	-961.71	51808	1120500			Si
0.15	-1659.02	20	-2174.89	115024	1494000	1657773	36000000	-1476.69	2	-1954.79	103383	1120500			Si
0.56	-2598.94	21	-2740.61	142511	1494000	2075714	36000000	-2349.91	2	-2486.24	129284	1120500			Si
0.97	-2682.68	21	-2751.45	143075	1494000	2083924	36000000	-2443.3	2	-2499.54	129975	1120500			Si
1.12	-2498.87	21	-2498.87	129941	1494000	1892623	36000000	-2282.6	2	-2282.6	118695	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 525

Campata 3 tra i fili ? - 109, sezione R 50x45, aste 526, 527, 528, 529, 530, 531, 532, 533, 534

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1604	SLU 84	0.073	13570	5578	SLU 84	34033	Si
0.15	0.41	0.0009	1610	SLU 84	0.072	13292	5602	SLU 84	33314	Si
1.59	0.41	0.0009	1652	SLU 84	0.072	13292	5747	SLU 84	33314	Si
2.94	0.41	0.0009	1576	SLU 84	0.072	13292	5482	SLU 84	33314	Si
3.19	0.41	0.0009	1555	SLU 84	0.072	13292	5408	SLU 84	33314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1183	SLD 4	0.155	15077	4114	SLD 4	39138	Si
0.15	0.41	0.0009	1184	SLD 4	0.154	14769	4118	SLD 4	38311	Si
1.59	0.41	0.0009	1150	SLD 4	0.154	14769	3998	SLD 4	38311	Si
2.94	0.41	0.0009	1049	SLD 15	0.154	14769	3650	SLD 15	38311	Si
3.19	0.41	0.0009	1041	SLD 15	0.154	14769	3620	SLD 15	38311	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000869	1175	SLE RA 21	31127	1494000	385976	36000000	1059	SLE QP 2	28038	1120500	Si
0.15	0.41	0.00000851	1180	SLE RA 21	31328	1494000	388471	36000000	1063	SLE QP 2	28217	1120500	Si
1.59	0.41	0.00000851	1210	SLE RA 21	32129	1494000	398398	36000000	1089	SLE QP 2	28899	1120500	Si
2.94	0.41	0.00000851	1154	SLE RA 21	30642	1494000	379955	36000000	1037	SLE QP 2	27520	1120500	Si
3.19	0.41	0.00000851	1139	SLE RA 21	30228	1494000	374831	36000000	1023	SLE QP 2	27144	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
525,526,527,528,529,530,531,532,533,534	4.31	1.1	SLU 84	ST	BT	2.3	204081	57996	3.52	Si
525,526,527,528,529,530,531,532,533,534	4.31	1.1	SLV 4	SIS	BT	2.3	184171	44418	4.15	Si
525,526,527,528,529,530,531,532,533,534	4.31	1.1	SLD 4	SIS	BT	2.3	196148	41607	4.71	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	189	-57996	147.22	203.32	0	0	0	0	1.09	4.3	1496	2060	0	14430	
0	1824	-44418	-681.09	-6972.91	0	2	-0.16	-0.02	1.07	4	1496	2060	0	14430	0.07
0	889	-41607	-247.85	-2926.03	0	1	-0.07	-0.01	1.09	4.17	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

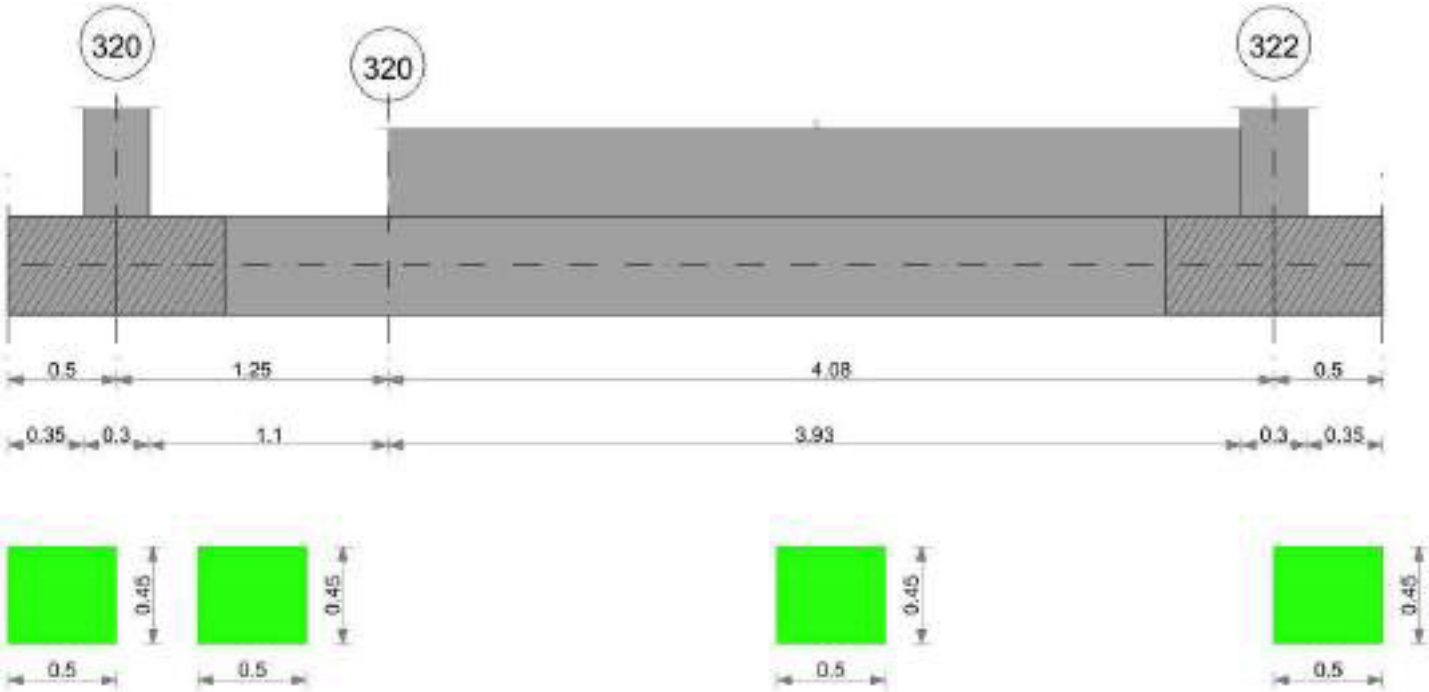
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	726	SLE RA 21	0.05	0	726	715	SLE RA 21	0.05	0	717	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	726	SLE RA 1	0.05	0	726	726	SLE RA 1	0.05	0	717	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	726	SLE RA 1	0.05	0	726	726	SLE RA 1	0.05	0	717	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	717	715	SLE RA 20	0.19	0.01	717	SLE RA 20	0.1	0	726	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	726	717	SLE RA 1	0.19	0	726	SLE RA 1	0.1	0	717	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	726	717	SLE RA 1	0.19	0	726	SLE RA 1	0.1	0	717	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

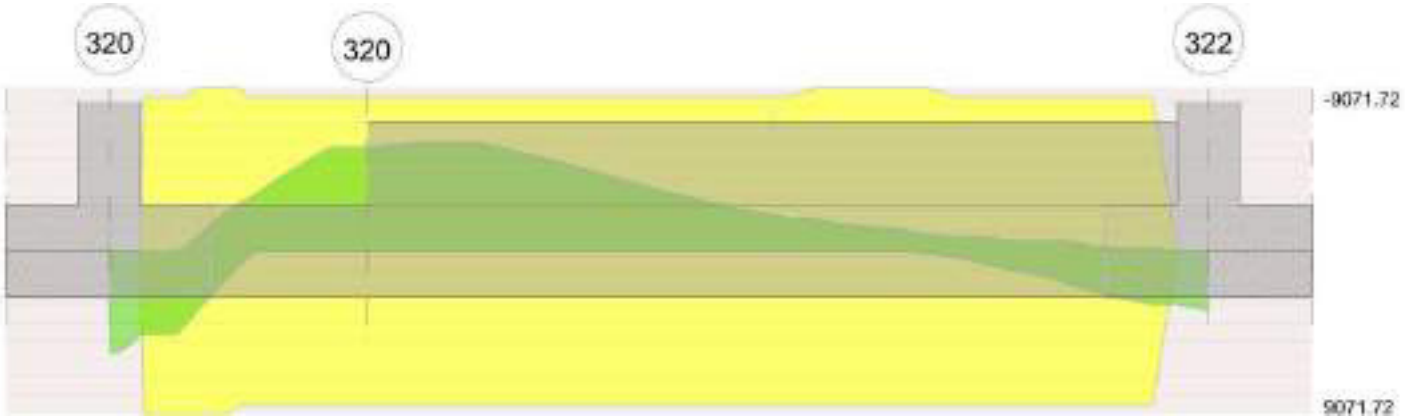
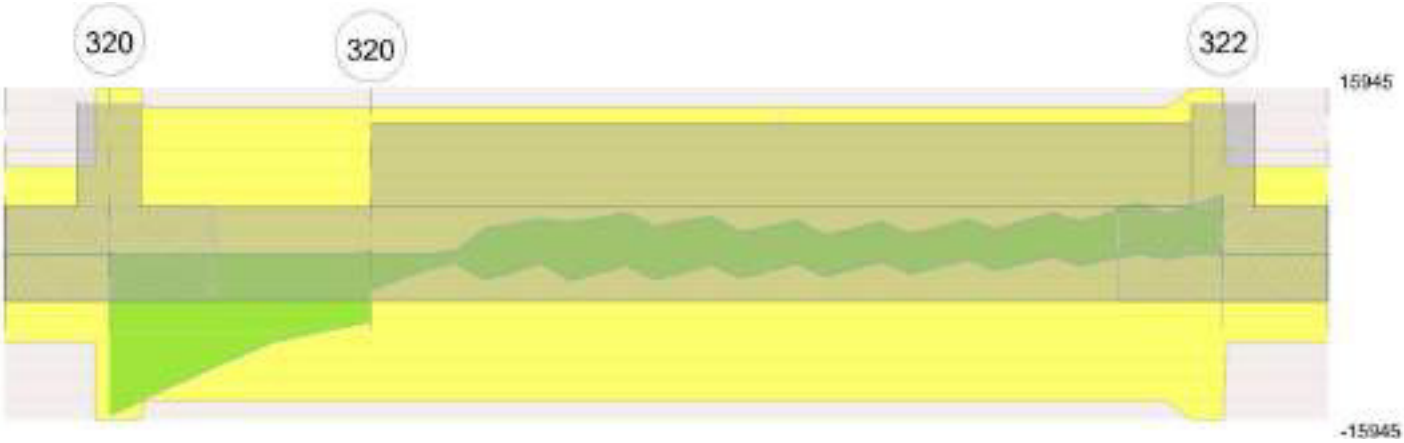


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 320 - 320, sezione R 50x45, asta 828

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-642.1	SLU 1	877.41	9071.72	0.119	10.34	-1023.4	SLU 84	-2643.09	-9071.72	0.119	3.43	Si
1.25	0.000603	0.051	0.000603	0.051							-5536.74	SLU 84	-5536.74	-9071.72	0.119	1.64	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-453.71	SLV 3	844.43	8578.86	0.211	10.16	-928.02	SLV 14	-2480.2	-8578.86	0.211	3.46	Si
1.25	0.000603	0.051	0.000603	0.051							-5768.38	SLV 16	-5768.38	-8578.86	0.211	1.49	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-589.32	SLD 3	683.57	8578.86	0.211	12.55	-792.41	SLD 14	-2067.23	-8578.86	0.211	4.15	Si
1.25	0.000603	0.051	0.000603	0.051							-4558.65	SLD 16	-4558.65	-8578.86	0.211	1.88	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-15534	SLU 84	-15534	-8455	-71432	-15945	-15945	1	1.03	Si
0.15	0.0000101	0	0	-14092	SLU 84	-14092	-8455	-71432	-15945	-15945	1	1.13	Si
0.17	0.0000101	0	0	-13934	SLU 84	-13934	-7777	-63336	-14138	-14138	1	1.01	Si
0.62	0.0000101	0.000603	0	-9792	SLU 83	-9792	-8014	-63336	-14138	-14138	1	1.44	Si
1.25	0.0000101	0.000603	0	-4762	SLU 83	-4762	-8014	-63336	-14138	-14138	1	2.97	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-12477	SLV 16	-12477	-8455	-71432	-15945	-15945	1	1.28	Si
0.15	0.0000101	0	0	-11626	SLV 16	-11626	-8455	-71432	-15945	-15945	1	1.37	Si
0.17	0.0000101	0	0	-11533	SLV 16	-11533	-7777	-63336	-14138	-14138	1	1.23	Si
0.62	0.0000101	0.000603	0	-9173	SLV 16	-9173	-8014	-63336	-14138	-14138	1	1.54	Si
1.25	0.0000101	0.000603	0	319	SLV 1	319	8014	63336	14138	14138	1	44.34	Si
1.25	0.0000101	0.000603	0	-6510	SLV 16	-6510	-8014	-63336	-14138	-14138	1	2.17	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-11225	SLD 16	-11225	-8455	-71432	-15945	-15945	1	1.42	Si
0.15	0.0000101	0	0	-10311	SLD 16	-10311	-8455	-71432	-15945	-15945	1	1.55	Si
0.17	0.0000101	0	0	-10211	SLD 16	-10211	-7777	-63336	-14138	-14138	1	1.38	Si
0.62	0.0000101	0.000603	0	-7620	SLD 16	-7620	-8014	-63336	-14138	-14138	1	1.86	Si
1.25	0.0000101	0.000603	0	-4556	SLD 16	-4556	-8014	-63336	-14138	-14138	1	3.1	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	5022.18	20	4169.23	247066	1494000	0	36000000	4519.71	2	3749.46	222190	1120500			Si
0.15	3393.92	20	3393.92	201121	1494000	0	36000000	3049.66	2	3049.66	180721	1120500			Si
0.62	-754.99	21	-1941.63	100551	1494000	1508264	36000000	-690.87	2	-1758.32	91058	1120500			Si
1.25	-4058.21	21	-4058.21	210162	1494000	3152423	36000000	-3654.6	2	-3654.6	189260	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 320 - 320, sezione R 50x45, asta 828

Campata 3 tra i fili 320 - 322, sezione R 50x45, aste 827, 826, 825, 824, 823, 822, 821, 820, 819, 818

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1284	SLU 84	0.042	7953	3950	SLU 84	17882	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
2.04	0.41	0.0005	1213	SLU 84	0.042	7953	3734	SLU 84	17882	Si
3.93	0.41	0.0005	1491	SLU 84	0.042	7953	4588	SLU 84	17882	Si
4.08	0.41	0.0005	1506	SLU 84	0.042	7953	4635	SLU 84	17882	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	947	SLD 1	0.119	8861	2914	SLD 1	20565	Si
2.04	0.41	0.0005	830	SLD 1	0.119	8861	2552	SLD 1	20565	Si
3.93	0.41	0.0005	1078	SLD 14	0.119	8861	3316	SLD 14	20565	Si
4.08	0.41	0.0005	1095	SLD 14	0.119	8861	3370	SLD 14	20565	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000503	939	SLE RA 21	26036	1494000	322844	36000000	843	SLE QP 2	23364	1120500	Si
2.04	0.41	0.00000503	888	SLE RA 21	24621	1494000	305302	36000000	798	SLE QP 2	22111	1120500	Si
3.93	0.41	0.00000503	1091	SLE RA 21	30255	1494000	375159	36000000	980	SLE QP 2	27167	1120500	Si
4.08	0.41	0.00000503	1103	SLE RA 21	30566	1494000	379023	36000000	990	SLE QP 2	27448	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
828,827,826,825,824,823,822,821,820,819,818	5.33	1.1	SLU 84	ST	BT	2.3	245632	51035	4.81	Si
828,827,826,825,824,823,822,821,820,819,818	5.33	1.1	SLV 1	SIS	BT	2.3	214679	37624	5.71	Si
828,827,826,825,824,823,822,821,820,819,818	5.33	1.1	SLD 1	SIS	BT	2.3	232043	36194	6.41	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1220	-51035	394.28	-1168.77	0	-1	-0.02	0.01	1.08	5.28	1496	2060	0	14430	
0	-2047	-37624	881.13	-10693.34	0	-3	-0.28	0.02	1.05	4.76	1496	2060	0	14430	0.07
0	-1345	-36194	527.87	-4994.04	0	-2	-0.14	0.01	1.07	5.05	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

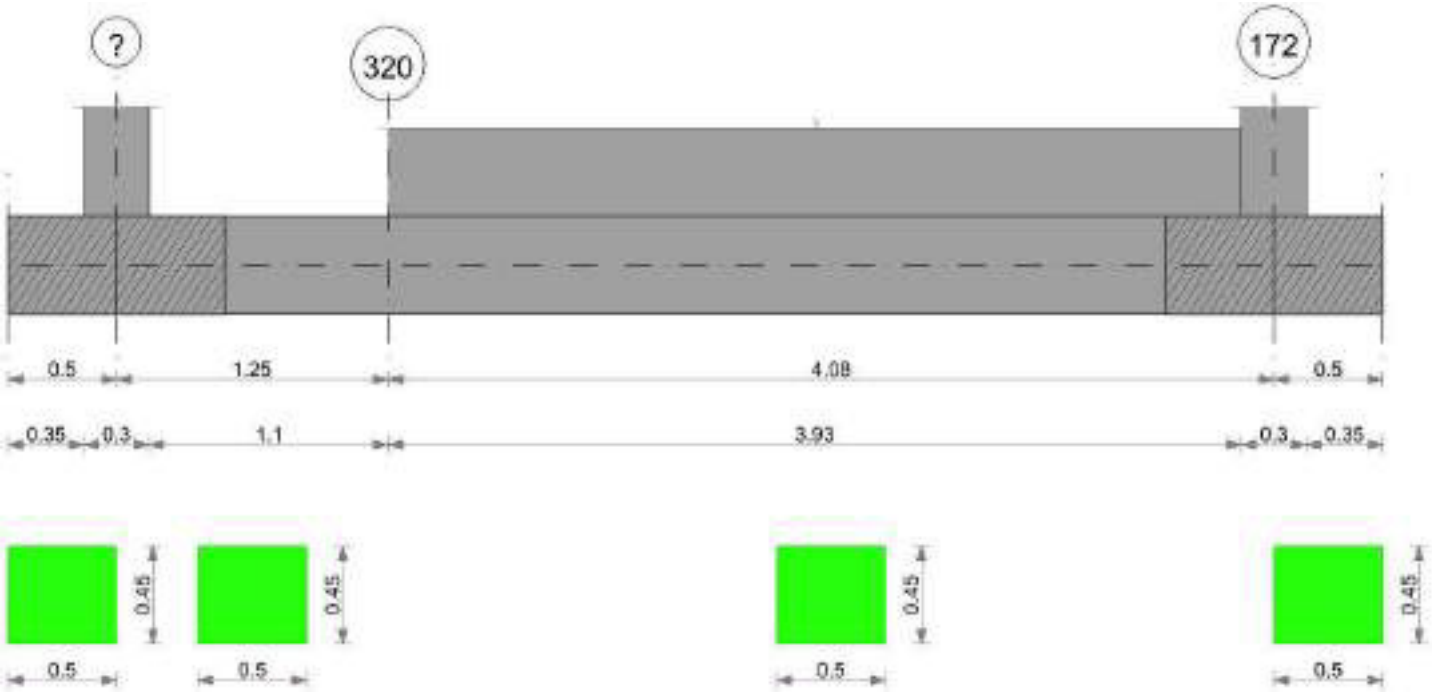
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	853	SLE RA 21	0.05	0	853	854	SLE RA 20	0.05	0	854	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	864	SLE RA 1	0.05	0	864	864	SLE RA 1	0.05	0	854	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	864	SLE RA 1	0.05	0	864	864	SLE RA 1	0.05	0	854	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	854	853	SLE RA 20	0.19	0	864	SLE RA 1	0.1	0.01	854	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	864	854	SLE RA 1	0.19	0	864	SLE RA 1	0.1	0	854	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	864	854	SLE RA 1	0.19	0	864	SLE RA 1	0.1	0	854	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

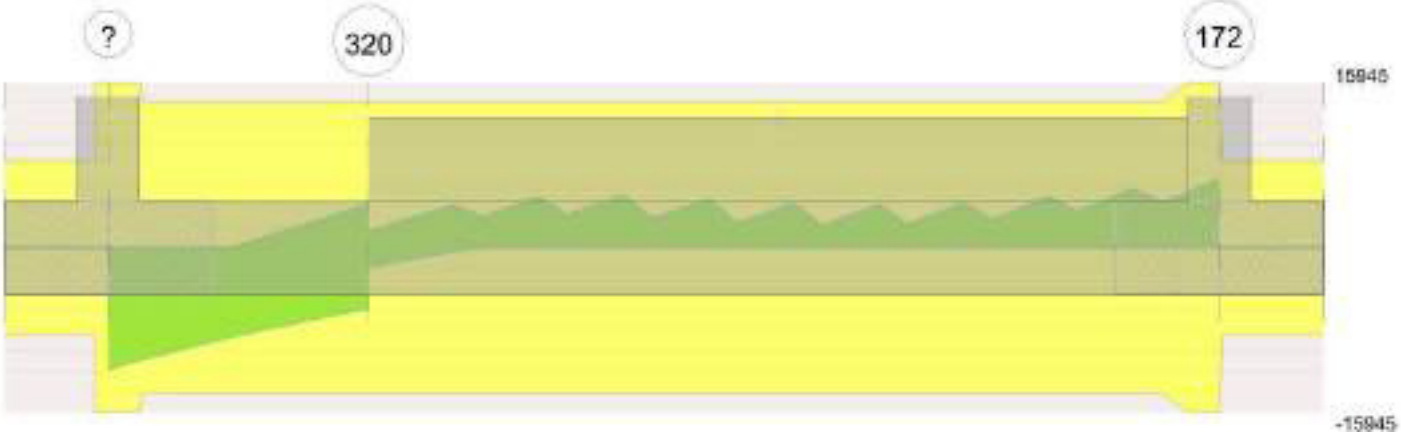
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili ? - 320, sezione R 50x45, asta 839

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-713.65	SLU 1	133.64	9071.72	0.119	67.88	-1140.17	SLU 84	-2141.04	-9071.72	0.119	4.24	Si
1.25	0.000603	0.051	0.000603	0.051							-3526.17	SLU 84	-3526.17	-9071.72	0.119	2.57	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-587.98	SLV 3	706.44	8578.86	0.211	12.14	-949.14	SLV 14	-2372.42	-8578.86	0.211	3.62	Si
1.25	0.000603	0.051	0.000603	0.051	753.45	SLV 4	753.45	8578.86	0.211	11.39	-5381.87	SLV 13	-5381.87	-8578.86	0.211	1.59	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.62	0.000603	0.051	0.000603	0.051	-691.18	SLD 3	341.22	8578.86	0.211	25.14	-845.93	SLD 14	-1829.56	-8578.86	0.211	4.69	Si
1.25	0.000603	0.051	0.000603	0.051							-3626.39	SLD 13	-3626.39	-8578.86	0.211	2.37	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-11896	SLU 84	-11896	-8455	-71432	-15945	-15945	1	1.34	Si
0.15	0.0000101	0	0	-10499	SLU 84	-10499	-8455	-71432	-15945	-15945	1	1.52	Si
0.62	0.0000101	0.000603	0	-6325	SLU 84	-6325	-8014	-63336	-14138	-14138	1	2.24	Si
1.25	0.0000101	0.000603	0	-1412	SLU 84	-1412	-8014	-63336	-14138	-14138	1	10.01	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-11746	SLV 13	-11746	-8455	-71432	-15945	-15945	1	1.36	Si
0.15	0.0000101	0	0	-10916	SLV 13	-10916	-8455	-71432	-15945	-15945	1	1.46	Si
0.17	0.0000101	0	0	-10825	SLV 13	-10825	-7777	-63336	-14138	-14138	1	1.31	Si
0.62	0.0000101	0.000603	0	220	SLV 4	220	8014	63336	14138	14138	1	64.15	Si
0.62	0.0000101	0.000603	0	-8517	SLV 13	-8517	-8014	-63336	-14138	-14138	1	1.66	Si
1.25	0.0000101	0.000603	0	4175	SLV 4	4175	8014	63336	14138	14138	1	3.39	Si
1.25	0.0000101	0.000603	0	-5904	SLV 13	-5904	-8014	-63336	-14138	-14138	1	2.39	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-9526	SLD 13	-9526	-8455	-71432	-15945	-15945	1	1.67	Si
0.15	0.0000101	0	0	-8637	SLD 13	-8637	-8455	-71432	-15945	-15945	1	1.85	Si
0.17	0.0000101	0	0	-8540	SLD 13	-8540	-7777	-63336	-14138	-14138	1	1.66	Si
0.62	0.0000101	0.000603	0	-6017	SLD 13	-6017	-8014	-63336	-14138	-14138	1	2.35	Si
1.25	0.0000101	0.000603	0	1290	SLD 4	1290	8014	63336	14138	14138	1	10.96	Si
1.25	0.0000101	0.000603	0	-3019	SLD 13	-3019	-8014	-63336	-14138	-14138	1	4.68	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3304.9	21	2652.47	157183	1494000	0	36000000	2962.21	2	2373.99	140681	1120500			Si
0.15	2075.33	21	2075.33	122983	1494000	0	36000000	1854.04	2	1854.04	109869	1120500			Si
0.62	-840.87	21	-1572.4	81430	1494000	1221444	36000000	-768.56	2	-1423.38	73712	1120500			Si
1.25	-2579.56	21	-2579.56	133587	1494000	2003810	36000000	-2314.21	2	-2314.21	119845	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili ? - 320, sezione R 50x45, asta 839

Campata 3 tra i fili 320 - 172, sezione R 50x45, aste 838, 837, 836, 835, 834, 833, 832, 831, 830, 829

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1252	SLU 84	0.042	7953	3854	SLU 84	17882	Si
2.04	0.41	0.0005	1186	SLU 84	0.042	7953	3651	SLU 84	17882	Si
3.93	0.41	0.0005	1467	SLU 84	0.042	7953	4514	SLU 84	17882	Si
4.08	0.41	0.0005	1482	SLU 84	0.042	7953	4561	SLU 84	17882	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	931	SLD 1	0.119	8861	2864	SLD 1	20565	Si
2.04	0.41	0.0005	817	SLD 2	0.119	8861	2514	SLD 2	20565	Si
3.93	0.41	0.0005	1059	SLD 14	0.119	8861	3260	SLD 14	20565	Si
4.08	0.41	0.0005	1077	SLD 14	0.119	8861	3314	SLD 14	20565	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000503	916	SLE RA 21	25398	1494000	314939	36000000	821	SLE QP 2	22769	1120500	Si
2.04	0.41	0.00000503	868	SLE RA 21	24071	1494000	298481	36000000	779	SLE QP 2	21595	1120500	Si
3.93	0.41	0.00000503	1074	SLE RA 21	29763	1494000	369062	36000000	963	SLE QP 2	26703	1120500	Si
4.08	0.41	0.00000503	1085	SLE RA 21	30075	1494000	372935	36000000	973	SLE QP 2	26984	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
839,838,837,836,835,834,833,832,831,830,829	5.33	1.1	SLU 84	ST	BT	2.3	246022	50169	4.9	Si
839,838,837,836,835,834,833,832,831,830,829	5.33	1.1	SLV 5	SIS	BT	2.3	210463	36638	5.74	Si
839,838,837,836,835,834,833,832,831,830,829	5.33	1.1	SLD 5	SIS	BT	2.3	230220	35452	6.49	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1220	-50169	394.28	-897.85	0	-1	-0.02	0.01	1.08	5.29	1496	2060	0	14430	
0	-5119	-36638	2316.91	-3592.12	0	-8	-0.1	0.06	0.97	5.13	1496	2060	0	14430	0.07
0	-2694	-35452	1158.28	-1862.05	0	-4	-0.05	0.03	1.03	5.22	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

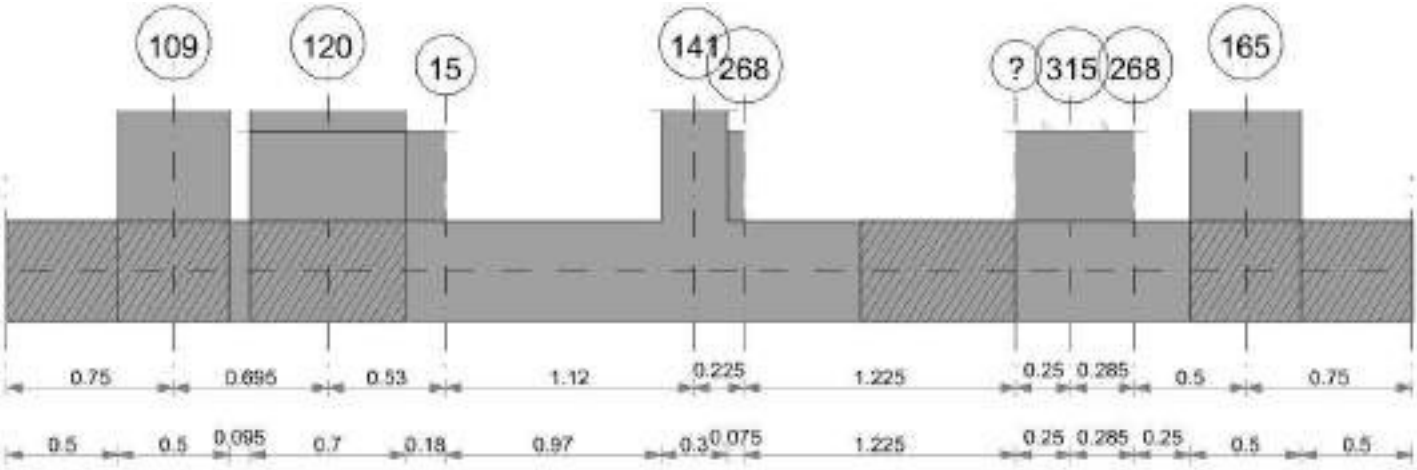
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	814	SLE RA 21	0.05	0	814	815	SLE RA 20	0.05	0	815	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	825	SLE RA 1	0.05	0	825	825	SLE RA 1	0.05	0	815	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	825	SLE RA 1	0.05	0	825	825	SLE RA 1	0.05	0	815	SLE RA 1	0.0033	0	SLE RA 1	Si

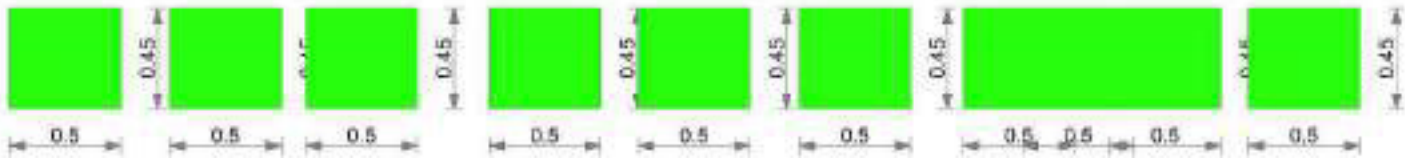
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.02	815	814	SLE RA 20	0.19	0	825	SLE RA 1	0.1	0.02	815	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	825	815	SLE RA 1	0.19	0	825	SLE RA 1	0.1	0	815	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	825	815	SLE RA 1	0.19	0	825	SLE RA 1	0.1	0	815	SLE RA 1	Si

CORDOLO 10

Geometria





Caratteristiche dei materiali

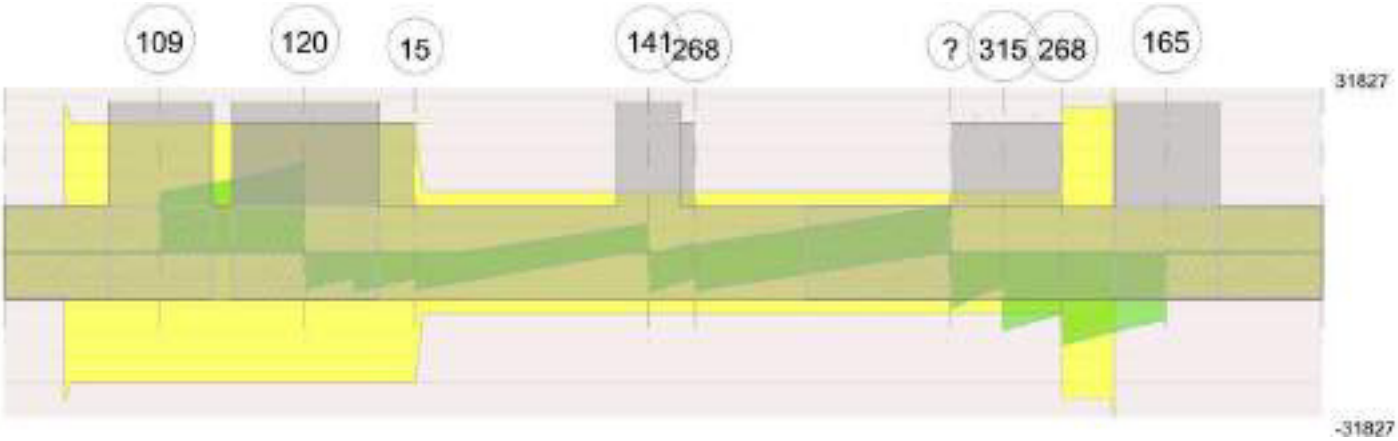
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 547

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-8316.82	SLU 83	-7099.21	-13662.92	0.147	1.92	Si
0.25	0.000942	0.053	0.000628	0.053							-5538.48	SLU 83	-5538.48	-13662.92	0.147	2.47	Si
0.35	0.000942	0.053	0.000628	0.053							-4302.9	SLU 83	-5538.48	-13662.92	0.147	2.47	Si
0.35	0.000942	0.053	0.000628	0.053							-4269.32	SLU 83	-4269.19	-13662.92	0.147	3.2	Si
0.7	0.000942	0.053	0.000628	0.053	1109.16	SLU 83	1109.16	9390.61	0.127	8.47							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-8321.32	SLV 8	-6898.82	-13063.86	0.261	1.89	Si
0.25	0.000942	0.053	0.000628	0.053							-5326.54	SLV 8	-5326.54	-13063.86	0.261	2.45	Si
0.35	0.000942	0.053	0.000628	0.053							-4285.28	SLV 4	-5326.54	-13063.86	0.261	2.45	Si
0.35	0.000942	0.053	0.000628	0.053							-4260.67	SLV 4	-4260.67	-13063.86	0.261	3.07	Si
0.7	0.000942	0.053	0.000628	0.053	2400.23	SLV 16	1089.92	8866.46	0.211	8.13	-948.26	SLV 1	-948.26	-13063.86	0.261	13.78	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-6762.75	SLD 8	-5686.34	-13063.86	0.261	2.3	Si
0.25	0.000942	0.053	0.000628	0.053							-4410.76	SLD 8	-4410.76	-13063.86	0.261	2.96	Si
0.35	0.000942	0.053	0.000628	0.053							-3481.71	SLD 4	-4410.76	-13063.86	0.261	2.96	Si
0.35	0.000942	0.053	0.000628	0.053							-3458.36	SLD 4	-3458.36	-13063.86	0.261	3.78	Si
0.7	0.000942	0.053	0.000628	0.053	1442.39	SLD 16	1145.12	8866.46	0.211	7.74							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	9736	SLU 83	9736	9278	63019	25025	25025	1	2.57	Si
0.25	0.0000179	0.000942	0	12486	SLU 83	12486	9278	63019	25025	25025	1	2	Si
0.35	0.0000179	0.000942	0	13531	SLU 83	13531	9278	63019	25025	25025	1	1.85	Si
0.35	0.0000179	0.000942	0	13558	SLU 83	13558	9278	63019	25025	25025	1	1.85	Si
0.7	0.0000179	0.000628	0	17404	SLU 83	17404	8105	63019	25025	25025	1	1.44	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	11478	SLV 12	11478	9278	63019	25025	25025	1	2.18	Si
0.25	0.0000179	0.000942	0	13353	SLV 12	13353	9278	63019	25025	25025	1	1.87	Si
0.35	0.0000179	0.000942	0	14070	SLV 12	14070	9278	63019	25025	25025	1	1.78	Si
0.35	0.0000179	0.000942	0	14089	SLV 12	14089	9278	63019	25025	25025	1	1.78	Si
0.7	0.0000179	0.000628	0	16754	SLV 12	16754	8105	63019	25025	25025	1	1.49	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	8664	SLD 12	8664	9278	63019	25025	25025	1	2.89	Si
0.25	0.0000179	0.000942	0	10516	SLD 12	10516	9278	63019	25025	25025	1	2.38	Si
0.35	0.0000179	0.000942	0	11221	SLD 12	11221	9278	63019	25025	25025	1	2.23	Si
0.35	0.0000179	0.000942	0	11240	SLD 12	11240	9278	63019	25025	25025	1	2.23	Si
0.7	0.0000179	0.000628	0	13849	SLD 12	13849	8105	63019	25025	25025	1	1.81	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-6121.05	20	-5225.59	429409	1494000	15568722	36000000	-5546.54	2	-4736.83	389246	1120500			Si
0.25	-4077.75	20	-4077.75	207244	1494000	3019838	36000000	-3698.4	2	-3698.4	187964	1120500			Si
0.35	-3169.04	20	-4077.75	207244	1494000	3019838	36000000	-2876.24	2	-3698.4	187964	1120500			Si
0.35	-3144.35	20	-3144.25	159800	1494000	2328521	36000000	-2853.9	2	-2853.81	145039	1120500			Si
0.7	811.37	20	811.37	40058	1494000	618546	36000000	725.98	2	725.98	35843	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	superiore	0.347	0.00045	0.000157	20	0.347	0.00042	0.000146	6	0.347	0.00041	0.000143	2	Si

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 550

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1672.22	SLU 83	1672.22	9390.61	0.127	5.62							Si
0.56	0.000942	0.053	0.000628	0.053	-38.28	SLU 16	201.88	9390.61	0.127	46.52	-93.64	SLU 65	-121.91	-13662.92	0.147	112.07	Si
0.97	0.000942	0.053	0.000628	0.053	338.5	SLU 83	338.5	9390.61	0.127	27.74	183.84	SLU 2	-48.82	-13662.92	0.147	279.86	Si
1.12	0.000942	0.053	0.000628	0.053	844.99	SLU 83	575.78	9390.61	0.127	16.31							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	2838.09	SLV 16	2838.09	8866.46	0.211	3.12	-618	SLV 1	-752.2	-13063.86	0.261	17.37	Si
0.56	0.000942	0.053	0.000628	0.053	491.09	SLV 12	955.03	8866.46	0.211	9.28	-609.56	SLV 5	-711.07	-13063.86	0.261	18.37	Si
0.97	0.000942	0.053	0.000628	0.053	962.64	SLV 3	962.64	8866.46	0.211	9.21	-544.14	SLV 14	-551.41	-13063.86	0.261	23.69	Si
1.12	0.000942	0.053	0.000628	0.053	1601.51	SLV 3	1305.03	8866.46	0.211	6.79	-510.99	SLV 14	-510.99	-13063.86	0.261	25.57	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1850.65	SLD 16	1850.65	8866.46	0.211	4.79	369.45	SLD 1	-11.02	-13063.86	0.261	1186	Si
0.56	0.000942	0.053	0.000628	0.053	181.22	SLD 12	479.49	8866.46	0.211	18.49	-299.69	SLD 5	-304.71	-13063.86	0.261	42.87	Si
0.97	0.000942	0.053	0.000628	0.053	532.84	SLD 3	532.84	8866.46	0.211	16.64	-114.35	SLD 14	-254.12	-13063.86	0.261	51.41	Si
1.12	0.000942	0.053	0.000628	0.053	998.24	SLD 3	769.22	8866.46	0.211	11.53							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-6333	SLU 83	-6333	-8105	-63019	-25025	-25025	1	3.95	Si
0.04	0.0000084	0.000628	0	-5968	SLU 83	-5968	-8105	-63019	-11771	-11771	1	1.97	Si
0.56	0.0000084	0.000942	0	-855	SLU 83	-855	-9278	-63019	-11771	-11771	1	13.77	Si
0.97	0.0000084	0.000628	0	3164	SLU 83	3164	8105	63019	11771	11771	1	3.72	Si
1.12	0.0000084	0.000628	0	4635	SLU 83	4635	8105	63019	11771	11771	1	2.54	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-7113	SLV 15	-7113	-8105	-63019	-25025	-25025	1	3.52	Si
0.04	0.0000084	0.000628	0	-6851	SLV 15	-6851	-8105	-63019	-11771	-11771	1	1.72	Si
0.56	0.0000084	0.000942	0	2027	SLV 1	2027	9278	63019	11771	11771	1	5.81	Si
0.56	0.0000084	0.000628	0	-3195	SLV 16	-3195	-8105	-63019	-11771	-11771	1	3.68	Si
0.97	0.0000084	0.000628	0	4565	SLV 3	4565	8105	63019	11771	11771	1	2.58	Si
0.97	0.0000084	0.000942	0	-373	SLV 14	-373	-9278	-63019	-11771	-11771	1	31.59	Si
1.12	0.0000084	0.000628	0	5508	SLV 3	5508	8105	63019	11771	11771	1	2.14	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-5468	SLD 15	-5468	-8105	-63019	-25025	-25025	1	4.58	Si
0.04	0.0000084	0.000628	0	-5216	SLD 15	-5216	-8105	-63019	-11771	-11771	1	2.26	Si
0.56	0.0000084	0.000942	0	533	SLD 1	533	9278	63019	11771	11771	1	22.09	Si
0.56	0.0000084	0.000628	0	-1700	SLD 16	-1700	-8105	-63019	-11771	-11771	1	6.92	Si
0.97	0.0000084	0.000628	0	3152	SLD 3	3152	8105	63019	11771	11771	1	3.73	Si
1.12	0.0000084	0.000628	0	4117	SLD 3	4117	8105	63019	11771	11771	1	2.86	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1234.55	20	1234.55	60951	1494000	941150	36000000	1110.05	2	1110.05	54804	1120500			Si
0.56	-65.87	2	-87.24	4434	1494000	64605	36000000	-61.66	1	-83.05	4221	1120500			Si
0.97	248.79	20	248.79	12283	1494000	189664	36000000	209.25	2	209.25	10331	1120500			Si
1.12	620.87	20	423.03	20885	1494000	322493	36000000	545.26	2	366.47	18093	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 552

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	725.83	SLU 83	725.83	9390.61	0.127	12.94							Si
0.61	0.000942	0.053	0.000628	0.053	-59.99	SLU 8	193.68	9390.61	0.127	48.48	-121.41	SLU 73	-178.5	-13662.92	0.147	76.54	Si
1.06	0.000942	0.053	0.000628	0.053	1072.31	SLU 83	1878.1	9390.61	0.127	5							Si
1.23	0.000942	0.053	0.000628	0.053	1878.1	SLU 83	1878.1	9390.61	0.127	5							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1603.9	SLV 15	1603.9	8866.46	0.211	5.53	-687.18	SLV 2	-687.18	-13063.86	0.261	19.01	Si
0.61	0.000942	0.053	0.000628	0.053	1194.67	SLV 3	2019.63	8866.46	0.211	4.39	-1350.97	SLV 14	-1776.3	-13063.86	0.261	7.35	Si
1.06	0.000942	0.053	0.000628	0.053	3580.34	SLV 3	4705.4	8866.46	0.211	1.88	-2126.7	SLV 14	-2167.17	-13063.86	0.261	6.03	Si
1.23	0.000942	0.053	0.000628	0.053	4705.4	SLV 3	4705.4	8866.46	0.211	1.88	-2164.33	SLV 14	-2167.17	-13063.86	0.261	6.03	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	948.12	SLD 15	948.12	8866.46	0.211	9.35	-31.41	SLD 2	-147.21	-13063.86	0.261	88.74	Si
0.61	0.000942	0.053	0.000628	0.053	468.37	SLD 3	935.88	8866.46	0.211	9.47	-624.67	SLD 14	-693.81	-13063.86	0.261	18.83	Si
1.06	0.000942	0.053	0.000628	0.053	1950.23	SLD 3	2742.92	8866.46	0.211	3.23	-496.59	SLD 14	-666.4	-13063.86	0.261	19.6	Si
1.23	0.000942	0.053	0.000628	0.053	2742.92	SLD 3	2742.92	8866.46	0.211	3.23	-201.85	SLD 14	-516.47	-13063.86	0.261	25.29	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-4505	SLU 84	-4505	-8105	-63019	-11771	-11771	1	2.61	Si
0.61	0.0000084	0.000942	0	1155	SLU 83	1155	9278	63019	11771	11771	1	10.19	Si
1.23	0.0000084	0.000628	0	6794	SLU 83	6794	8105	63019	11771	11771	1	1.73	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	1393	SLV 4	1393	9278	63019	11771	11771	1	8.45	Si
0	0.0000084	0.000628	0	-7315	SLV 13	-7315	-8105	-63019	-11771	-11771	1	1.61	Si
0.61	0.0000084	0.000628	0	5148	SLV 4	5148	8105	63019	11771	11771	1	2.29	Si
0.61	0.0000084	0.000942	0	-3521	SLV 13	-3521	-9278	-63019	-11771	-11771	1	3.34	Si
1.23	0.0000084	0.000628	0	8968	SLV 4	8968	8105	63019	11771	11771	1	1.31	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-4824	SLD 13	-4824	-8105	-63019	-11771	-11771	1	2.44	Si
0.61	0.0000084	0.000628	0	2669	SLD 4	2669	8105	63019	11771	11771	1	4.41	Si
0.61	0.0000084	0.000942	0	-1042	SLD 13	-1042	-9278	-63019	-11771	-11771	1	11.3	Si
1.23	0.0000084	0.000628	0	6459	SLD 4	6459	8105	63019	11771	11771	1	1.82	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	529.77	20	529.77	26155	1494000	403868	36000000	458.36	2	458.36	22630	1120500			Si
0.61	-85.25	10	-128.98	6555	1494000	95519	36000000	-78.15	2	-121.81	6191	1120500			Si
1.23	1393.86	20	1393.86	68816	1494000	1062602	36000000	1270.54	2	1270.54	62728	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 555

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	508.83	SLU 83	508.83	9390.61	0.127	18.46	348.59	SLU 2	-2507.54	-13662.92	0.147	5.45	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1569.94	SLV 3	1569.94	8866.46	0.211	5.65	-844.21	SLV 14	-2917.14	-13063.86	0.261	4.48	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	880.44	SLD 3	880.44	8866.46	0.211	10.07	-154.72	SLD 14	-2183.01	-13063.86	0.261	5.98	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-17856	SLU 83	-17856	-7751	-63019	-28078	-28078	1	1.57	Si
0.25	0.0000201	0	0	-15149	SLU 83	-15149	-8455	-71432	-31827	-31827	1	2.1	Si
0.25	0.0000201	0	0	-15148	SLU 83	-15148	-8455	-71432	-31827	-31827	1	2.1	Si
0.27	0	0	0	-14970	SLU 83	-14970	-8455	-71432	0	-8455	1	0.56	Si
0.5	0	0	0	-12476	SLU 83	-12476	-8455	-71432	0	-8455	1	0.68	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-16753	SLV 11	-16753	-7751	-63019	-28078	-28078	1	1.68	Si
0.25	0.0000201	0	0	-14855	SLV 11	-14855	-8455	-71432	-31827	-31827	1	2.14	Si
0.25	0.0000201	0	0	-14854	SLV 11	-14854	-8455	-71432	-31827	-31827	1	2.14	Si
0.27	0	0	0	-14730	SLV 11	-14730	-8455	-71432	0	-8455	1	0.57	Si
0.5	0	0	0	-12992	SLV 11	-12992	-8455	-71432	0	-8455	1	0.65	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-13993	SLD 11	-13993	-7751	-63019	-28078	-28078	1	2.01	Si
0.25	0.0000201	0	0	-12143	SLD 11	-12143	-8455	-71432	-31827	-31827	1	2.62	Si
0.25	0.0000201	0	0	-12142	SLD 11	-12142	-8455	-71432	-31827	-31827	1	2.62	Si
0.27	0	0	0	-12021	SLD 11	-12021	-8455	-71432	0	-8455	1	0.7	Si
0.5	0	0	0	-10323	SLD 11	-10323	-8455	-71432	0	-8455	1	0.82	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	385.94	20	385.94	19054	1494000	294222	36000000	362.86	2	362.86	17915	1120500			Si
0.25	-2649.76	20	-2651.37	-157118	1494000	0	36000000	-2368.59	2	-2370.04	-140447	1120500			Si
0.25	-2651.37	20	-2651.37	-157118	1494000	0	36000000	-2370.04	2	-2370.04	-140447	1120500			Si
0.5	-5190.2	20	-4043.92	-239640	1494000	0	36000000	-4650.26	2	-3621.98	-214636	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 547

Campata 3 tra i fili 120 - 15, sezione R 50x45, aste 548, 549

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1541	SLU 83	0.075	13958	5360	SLU 83	35038	Si
0.26	0.41	0.0009	1555	SLU 83	0.075	13958	5409	SLU 83	35038	Si
0.35	0.41	0.0009	1558	SLU 83	0.075	13958	5420	SLU 83	35038	Si
0.53	0.41	0.0009	1563	SLU 83	0.075	13958	5436	SLU 83	35038	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1053	SLD 15	0.158	15508	3661	SLD 15	40294	Si
0.26	0.41	0.0009	1064	SLD 15	0.158	15508	3702	SLD 15	40294	Si
0.35	0.41	0.0009	1067	SLD 15	0.158	15508	3711	SLD 15	40294	Si
0.53	0.41	0.0009	1070	SLD 15	0.158	15508	3722	SLD 15	40294	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000895	1129	SLE RA 20	29815	1494000	369702	36000000	1014	SLE QP 2	26767	1120500	Si
0.26	0.41	0.00000895	1140	SLE RA 20	30091	1494000	373127	36000000	1023	SLE QP 2	27016	1120500	Si
0.35	0.41	0.00000895	1142	SLE RA 20	30152	1494000	373883	36000000	1025	SLE QP 2	27071	1120500	Si
0.53	0.41	0.00000895	1145	SLE RA 20	30240	1494000	374980	36000000	1028	SLE QP 2	27151	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 550

Campata 5 tra i fili 141 - 268, sezione R 50x45, asta 551

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1571	SLU 83	0.036	6674	5464	SLU 83	16481	Si
0.11	0.41	0.0004	1572	SLU 83	0.036	6674	5467	SLU 83	16481	Si
0.15	0.41	0.0004	1572	SLU 83	0.036	6674	5466	SLU 83	16481	Si
0.22	0.41	0.0004	1571	SLU 83	0.036	6674	5464	SLU 83	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1075	SLD 11	0.109	7446	3741	SLD 11	18953	Si
0.11	0.41	0.0004	1076	SLD 11	0.109	7446	3743	SLD 11	18953	Si
0.15	0.41	0.0004	1076	SLD 11	0.109	7446	3743	SLD 11	18953	Si
0.22	0.41	0.0004	1076	SLD 11	0.109	7446	3741	SLD 11	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1152	SLE RA 20	32273	1494000	400186	36000000	1034	SLE QP 2	28982	1120500	Si
0.11	0.41	0.00000421	1152	SLE RA 20	32289	1494000	400384	36000000	1035	SLE QP 2	28999	1120500	Si
0.15	0.41	0.00000421	1152	SLE RA 20	32286	1494000	400351	36000000	1035	SLE QP 2	28998	1120500	Si
0.22	0.41	0.00000421	1152	SLE RA 20	32272	1494000	400173	36000000	1035	SLE QP 2	28987	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 552

Campata 7 tra i fili ? - 315, sezione R 50x45, asta 553

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1560	SLU 83	0.036	6674	5424	SLU 83	16481	Si
0.12	0.41	0.0004	1552	SLU 83	0.036	6674	5399	SLU 83	16481	Si
0.25	0.41	0.0004	1534	SLU 83	0.036	6674	5337	SLU 83	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1064	SLD 11	0.109	7446	3700	SLD 11	18953	Si
0.12	0.41	0.0004	1057	SLD 11	0.109	7446	3677	SLD 11	18953	Si
0.25	0.41	0.0004	1042	SLD 11	0.109	7446	3626	SLD 11	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1144	SLE RA 20	32049	1494000	397410	36000000	1028	SLE QP 2	28813	1120500	Si
0.12	0.41	0.00000421	1139	SLE RA 20	31898	1494000	395537	36000000	1024	SLE QP 2	28683	1120500	Si
0.25	0.41	0.00000421	1125	SLE RA 20	31532	1494000	390992	36000000	1012	SLE QP 2	28358	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 8 tra i fili 315 - 268, sezione R 50x45, asta 554

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1534	SLU 83	0.036	6674	5337	SLU 83	16481	Si
0.14	0.41	0.0004	1521	SLU 83	0.036	6674	5292	SLU 83	16481	Si
0.28	0.41	0.001	1507	SLU 83	0.085	15602	5242	SLU 83	39314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1042	SLD 11	0.109	7446	3626	SLD 11	18953	Si
0.14	0.41	0.0004	1032	SLD 11	0.109	7446	3590	SLD 11	18953	Si
0.28	0.41	0.001	1021	SLD 12	0.167	17333	3551	SLD 12	45211	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1125	SLE RA 20	31532	1494000	390992	36000000	1012	SLE QP 2	28358	1120500	Si
0.14	0.41	0.00000421	1116	SLE RA 20	31267	1494000	387709	36000000	1004	SLE QP 2	28123	1120500	Si
0.28	0.41	0.00001004	1105	SLE RA 20	28802	1494000	357141	36000000	994	SLE QP 2	25907	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 555

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
547,548,549,550,551,552,553,554,555	4.83	1.1	SLU 84	ST	BT	2.3	218639	62660	3.49	Si
547,548,549,550,551,552,553,554,555	4.83	1.1	SLV 9	SIS	BT	2.3	193443	41156	4.7	Si
547,548,549,550,551,552,553,554,555	4.83	1.1	SLD 9	SIS	BT	2.3	208408	42023	4.96	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	178	-62660	1452.9	-444.22	0	0	-0.01	0.02	1.05	4.82	1496	2060	0	14430	
0	-4358	-41156	3095.51	92.16	0	-6	0	0.08	0.95	4.83	1496	2060	0	14430	0.07
0	-1816	-42023	1888.77	-103.08	0	-2	0	0.04	1.01	4.83	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

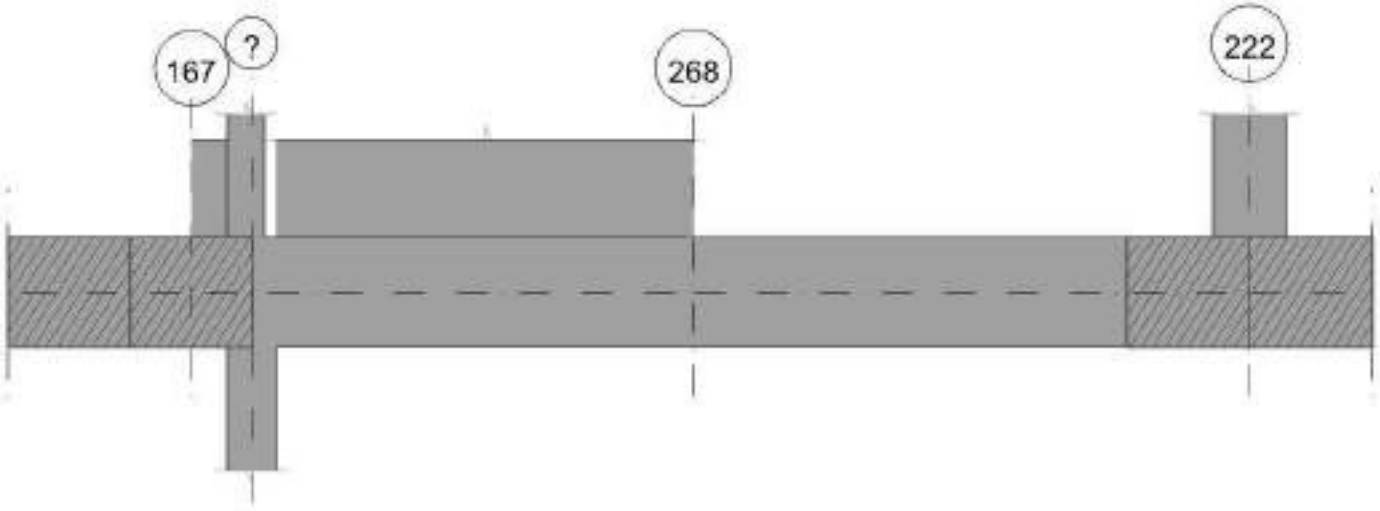
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	733	SLE RA 21	0.05	0	733	727	SLE RA 20	0.05	0	733	SLE RA 21	0.0033	0	SLE RA 20	Si
D	0.05	0	736	SLE RA 1	0.05	0	736	736	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	736	SLE RA 1	0.05	0	736	736	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	733	732	SLE RA 20	0.19	0.01	733	SLE RA 21	0.1	0.01	732	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	736	735	SLE RA 1	0.19	0	736	SLE RA 1	0.1	0	735	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	736	735	SLE RA 1	0.19	0	736	SLE RA 1	0.1	0	735	SLE RA 1	Si

CORDOLO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

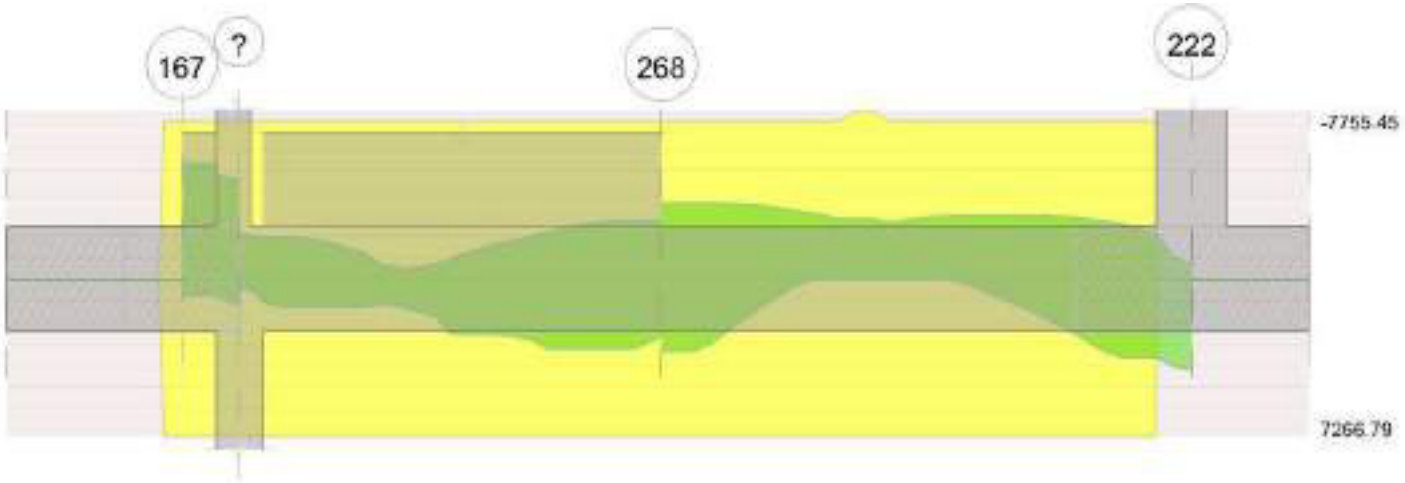


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 586, 587

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-155.01	SLU 82	-1190.69	-7755.45	0.113	6.51	Si
1.14	0.000509	0.052	0.000509	0.052							-2565.32	SLU 84	-2679.66	-7755.45	0.113	2.89	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3299.38	SLV 15	3299.38	7266.79	0.197	2.2	-3523.46	SLV 2	-3523.46	-7266.79	0.197	2.06	Si
1.14	0.000509	0.052	0.000509	0.052							-2575.49	SLV 14	-2843.86	-7266.79	0.197	2.56	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1347.38	SLD 15	1347.38	7266.79	0.197	5.39	-1571.46	SLD 2	-1933.05	-7266.79	0.197	3.76	Si
1.14	0.000509	0.052	0.000509	0.052							-2081.26	SLD 14	-2141.78	-7266.79	0.197	3.39	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7416	SLU 84	-7416	-7764	-63178	-11880	-11880	1	1.6	Si
1.14	0.0000085	0.000509	0	116	SLU 66	116	7764	63178	11880	11880	1	102.15	Si
2.12	0.0000085	0	0	9554	SLU 84	9554	8455	71432	13432	13432	1	1.41	Si
2.27	0	0	0	11041	SLU 84	11041	8455	71432	0	8455	1	0.77	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	166	SLV 2	166	7764	63178	11880	11880	1	71.75	Si
0	0.0000085	0.000509	0	-10044	SLV 15	-10044	-7764	-63178	-11880	-11880	1	1.18	Si
1.14	0.0000085	0.000509	0	2738	SLV 2	2738	7764	63178	11880	11880	1	4.34	Si
1.14	0.0000085	0.000509	0	-2573	SLV 15	-2573	-7764	-63178	-11880	-11880	1	4.62	Si
2.12	0.0000085	0	0	7753	SLV 2	7753	8455	71432	13432	13432	1	1.73	Si
2.27	0	0	0	8553	SLV 2	8553	8455	71432	0	8455	1	0.99	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7121	SLD 15	-7121	-7764	-63178	-11880	-11880	1	1.67	Si
1.14	0.0000085	0.000509	0	1218	SLD 2	1218	7764	63178	11880	11880	1	9.75	Si
1.14	0.0000085	0.000509	0	-1053	SLD 15	-1053	-7764	-63178	-11880	-11880	1	11.28	Si
2.12	0.0000085	0	0	6984	SLD 2	6984	8455	71432	13432	13432	1	1.92	Si
2.27	0	0	0	7896	SLD 2	7896	8455	71432	0	8455	1	1.07	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-116.6	19	-879.01	46494	1494000	697405	36000000	-112.04	2	-807.72	42723	1120500			Si
1.14	-1888.32	21	-1973.08	104363	1494000	1565448	36000000	-1710.22	2	-1789.79	94668	1120500			Si
2.12	1202.9	20	1202.9	71283	1494000	0	36000000	1110.71	2	1110.71	65820	1120500			Si
2.27	2213.2	20	1730.37	102541	1494000	0	36000000	2031.37	2	1591.45	94308	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 167 - ?, sezione R 50x45, asta 580

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1453	SLU 84	0.036	6718	5054	SLU 84	16592	Si
0.12	0.41	0.0004	1451	SLU 84	0.036	6718	5045	SLU 84	16592	Si
0.15	0.41	0.0004	1450	SLU 84	0.036	6718	5045	SLU 84	16592	Si
0.25	0.41	0.0004	1450	SLU 84	0.036	6718	5044	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	996	SLD 16	0.109	7495	3464	SLD 16	19081	Si
0.12	0.41	0.0004	998	SLD 16	0.109	7495	3471	SLD 16	19081	Si
0.15	0.41	0.0004	999	SLD 16	0.109	7495	3473	SLD 16	19081	Si
0.25	0.41	0.0004	1002	SLD 16	0.109	7495	3485	SLD 16	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1065	SLE RA 21	29838	1494000	369992	36000000	959	SLE QP 2	26847	1120500	Si
0.12	0.41	0.00000424	1064	SLE RA 21	29788	1494000	369371	36000000	957	SLE QP 2	26801	1120500	Si
0.15	0.41	0.00000424	1063	SLE RA 21	29784	1494000	369319	36000000	957	SLE QP 2	26798	1120500	Si
0.25	0.41	0.00000424	1063	SLE RA 21	29777	1494000	369239	36000000	957	SLE QP 2	26791	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 268, sezione R 50x45, aste 581, 582, 583, 584, 585

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1450	SLU 84	0.036	6718	5044	SLU 84	16592	Si
0.1	0.41	0.0004	1450	SLU 84	0.036	6718	5044	SLU 84	16592	Si
0.9	0.41	0.0004	1454	SLU 84	0.036	6718	5056	SLU 84	16592	Si
1.8	0.41	0.0004	1438	SLU 84	0.036	6718	5001	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1002	SLD 16	0.109	7495	3485	SLD 16	19081	Si
0.1	0.41	0.0004	1005	SLD 16	0.109	7495	3497	SLD 16	19081	Si
0.9	0.41	0.0004	1041	SLD 15	0.109	7495	3620	SLD 15	19081	Si
1.8	0.41	0.0004	1056	SLD 15	0.109	7495	3674	SLD 15	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1063	SLE RA 21	29777	1494000	369239	36000000	957	SLE QP 2	26791	1120500	Si
0.1	0.41	0.00000424	1063	SLE RA 21	29775	1494000	369213	36000000	956	SLE QP 2	26788	1120500	Si
0.9	0.41	0.00000424	1065	SLE RA 21	29839	1494000	370003	36000000	958	SLE QP 2	26839	1120500	Si
1.8	0.41	0.00000424	1054	SLE RA 21	29513	1494000	365961	36000000	948	SLE QP 2	26550	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 586, 587

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
580,581,582,583,584,585,586,587	4.32	1.1	SLU 84	ST	BT	2.3	197344	50665	3.9	Si
580,581,582,583,584,585,586,587	4.32	1.1	SLV 14	SIS	BT	2.3	187571	39854	4.71	Si
580,581,582,583,584,585,586,587	4.32	1.1	SLD 14	SIS	BT	2.3	192981	36870	5.23	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-154	-50665	1073.18	175.11	0	0	0	0.02	1.06	4.31	1496	2060	0	14430	
0	-1099	-39854	850.1	4194.96	0	-2	0.11	0.02	1.06	4.11	1496	2060	0	14430	0.07
0	-523	-36870	773.93	1860.67	0	-1	0.05	0.02	1.06	4.22	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

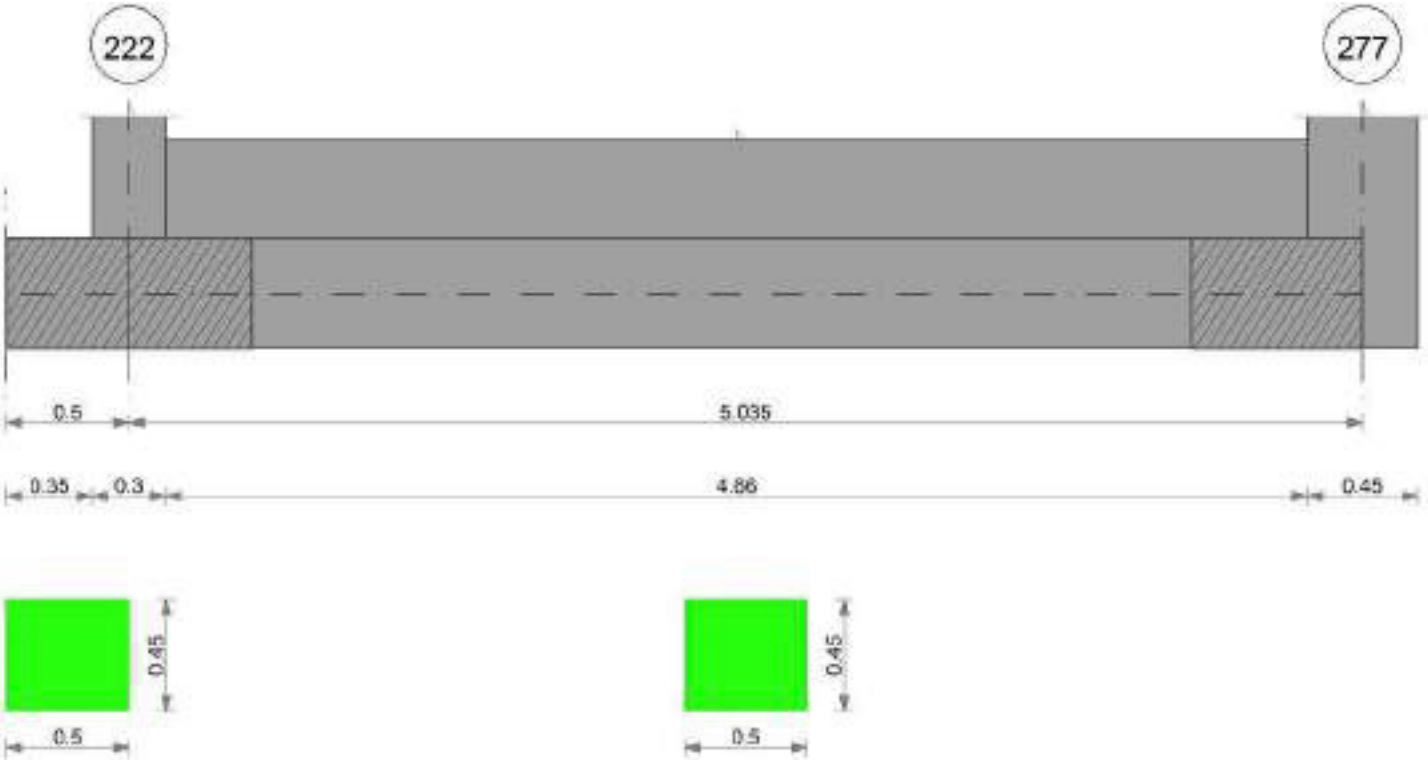
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	737	SLE RA 21	0.05	0.001	737	745	SLE RA 21	0.05	0	743	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	745	SLE RA 1	0.05	0	745	745	SLE RA 1	0.05	0	743	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	745	SLE RA 1	0.05	0	745	745	SLE RA 1	0.05	0	743	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	743	738	SLE RA 21	0.19	0	738	SLE RA 21	0.1	0	743	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	745	743	SLE RA 1	0.19	0	745	SLE RA 1	0.1	0	743	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	745	743	SLE RA 1	0.19	0	745	SLE RA 1	0.1	0	743	SLE RA 1	Si

CORDOLO 12

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

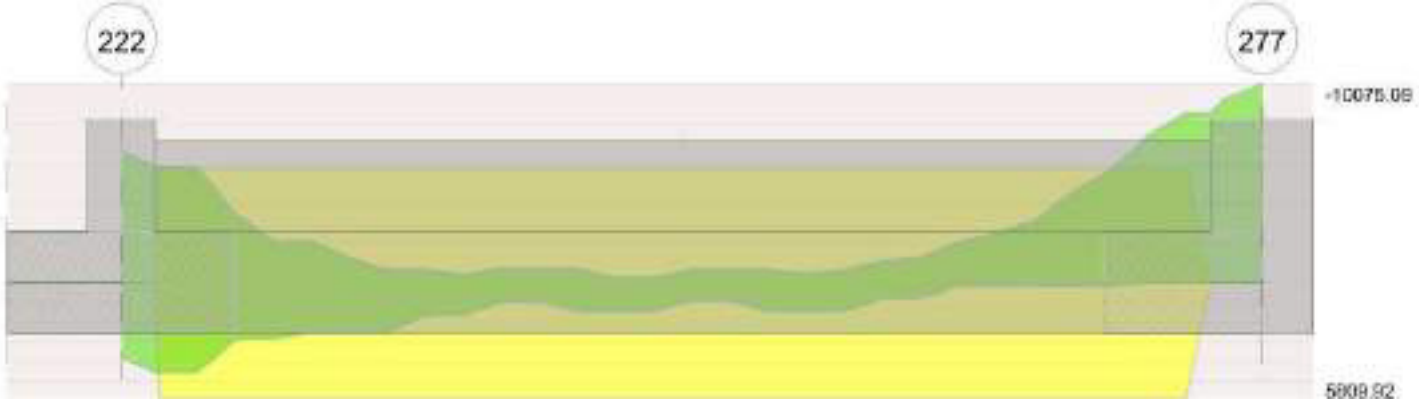
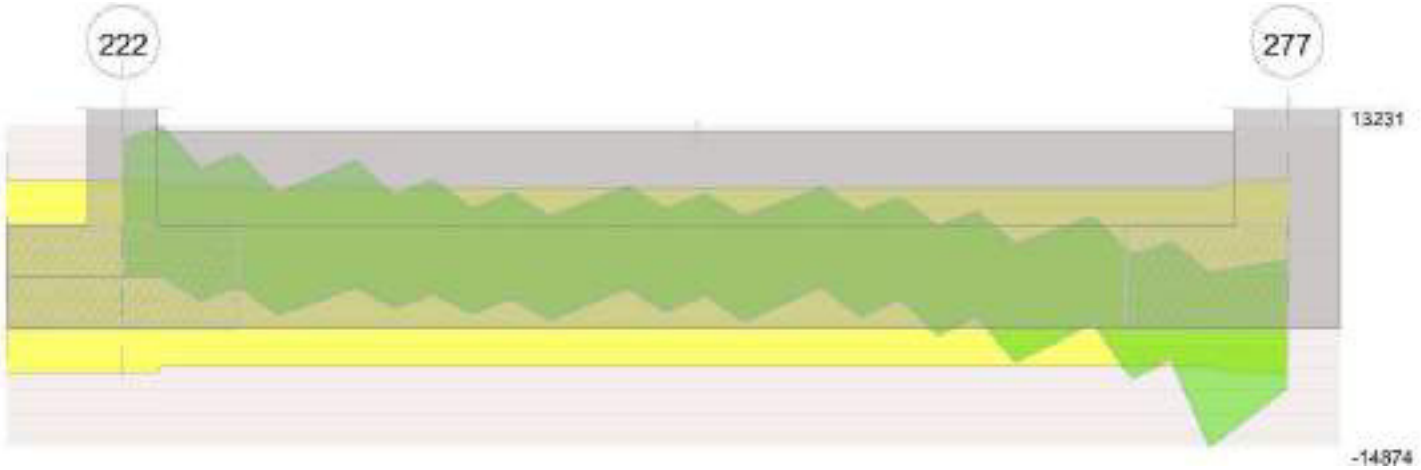


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 222 - 277, sezione R 50x45, aste 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1600	SLU 84	0.017	2681	5566	SLU 84	15877	Si
0.15	0.41	0.0002	1615	SLU 84	0.017	2681	5617	SLU 84	15877	Si
2.52	0.41	0.0002	1782	SLV 15	0.084	2609	6314	SLU 84	15877	Si
4.81	0.41	0.0002	2307	SLV 15	0.084	2609	8024	SLV 15	15877	Si
5.04	0.41	0.0002	2397	SLV 13	0.084	2609	8338	SLV 13	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1172	SLD 16	0.069	3019	4076	SLD 16	15877	Si
0.15	0.41	0.0002	1185	SLD 16	0.069	3019	4121	SLD 16	15877	Si
2.52	0.41	0.0002	1452	SLD 15	0.069	3019	5049	SLD 15	15877	Si
4.81	0.41	0.0002	1757	SLD 15	0.069	3019	6111	SLD 15	15877	Si
5.04	0.41	0.0002	1816	SLD 13	0.069	3019	6318	SLD 13	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1173	SLE RA 21	33982	1494000	421379	36000000	1058	SLE QP 2	30648	1120500	Si
0.15	0.41	0.00000168	1184	SLE RA 21	34294	1494000	425250	36000000	1068	SLE QP 2	30933	1120500	Si
2.52	0.41	0.00000168	1332	SLE RA 21	38591	1494000	478526	36000000	1205	SLE QP 2	34909	1120500	Si
4.81	0.41	0.00000168	1483	SLE RA 21	42945	1494000	532512	36000000	1347	SLE QP 2	39002	1120500	Si
5.04	0.41	0.00000168	1522	SLE RA 21	44087	1494000	546676	36000000	1383	SLE QP 2	40058	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
622,623,624,625,626,627,628,629,630,631,632,633,634	5.26	1.1	SLU 84	ST	BT	2.3	241795	71044	3.4	Si
622,623,624,625,626,627,628,629,630,631,632,633,634	5.26	1.1	SLV 14	SIS	BT	2.3	216846	67128	3.23	Si
622,623,624,625,626,627,628,629,630,631,632,633,634	5.26	1.1	SLD 14	SIS	BT	2.3	229222	56514	4.06	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-270	-71044	199.28	4511.48	0	0	0.06	0	1.09	5.13	1496	2060	0	14430	
0	-2934	-67128	1335.49	15687.82	0	-3	0.23	0.02	1.06	4.79	1496	2060	0	14430	0.07
0	-1346	-56514	642.96	8501.17	0	-1	0.15	0.01	1.08	4.96	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

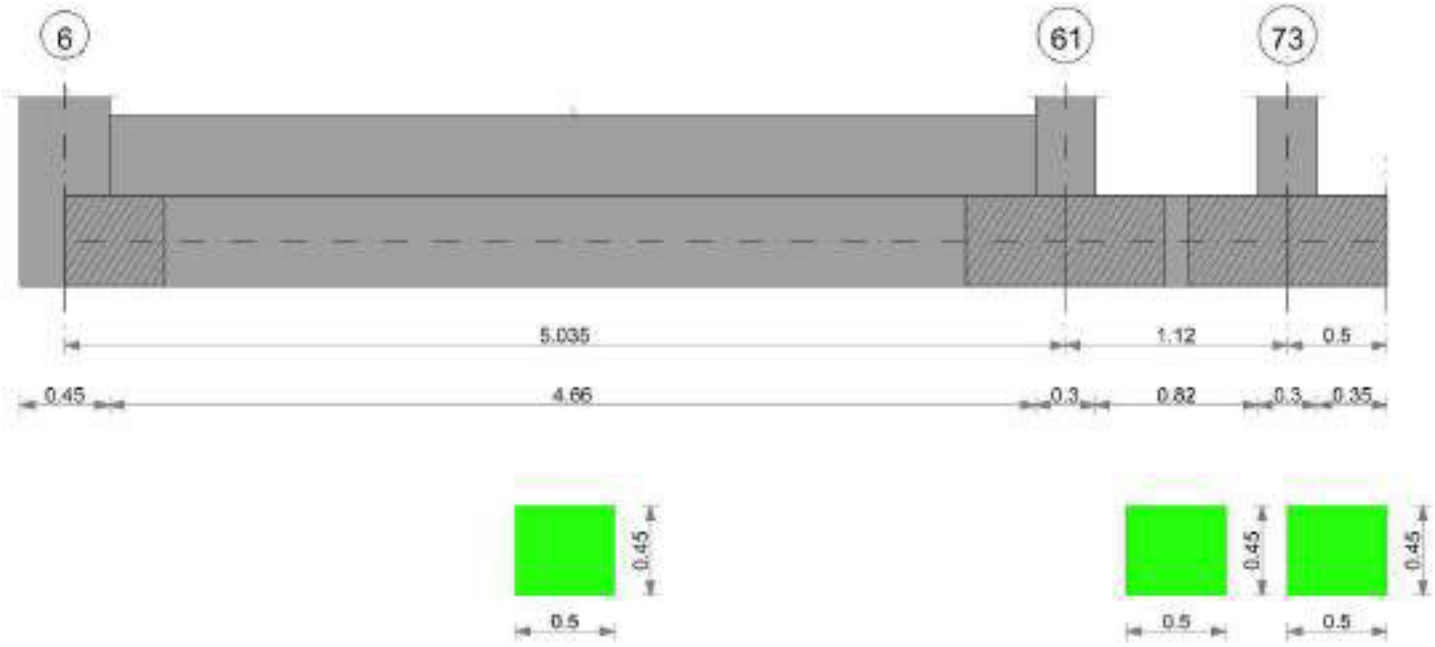
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	746	SLE RA 21	0.05	0.001	746	759	SLE RA 21	0.05	0	759	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	759	SLE RA 1	0.05	0	759	759	SLE RA 1	0.05	0	759	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	759	SLE RA 1	0.05	0	759	759	SLE RA 1	0.05	0	759	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	759	746	SLE RA 21	0.19	0	759	SLE RA 1	0.1	0	759	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	759	746	SLE RA 1	0.19	0	759	SLE RA 1	0.1	0	759	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	759	746	SLE RA 1	0.19	0	759	SLE RA 1	0.1	0	759	SLE RA 1	Si

CORDOLO 13

Geometria



Caratteristiche dei materiali

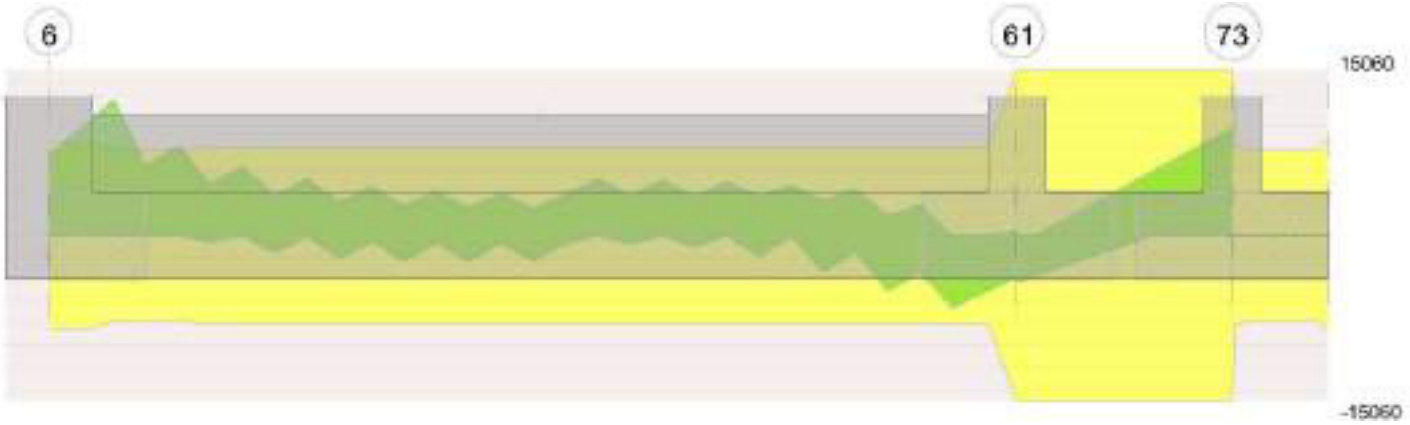
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 724

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2455.02	SLU 83	-2455.02	-9384.5	0.124	3.82	Si
0.15	0.000628	0.053	0.000628	0.053							-2929.98	SLU 83	-3153.07	-9384.5	0.124	2.98	Si
0.19	0.000628	0.053	0.000628	0.053							-3006.32	SLU 83	-3155.7	-9384.5	0.124	2.97	Si
0.56	0.000628	0.053	0.000628	0.053							-2895.93	SLU 84	-3148.75	-9384.5	0.124	2.98	Si
0.97	0.000628	0.053	0.000628	0.053							-913.67	SLU 82	-2015.02	-9384.5	0.124	4.66	Si
1.12	0.000628	0.053	0.000628	0.053	503.39	SLU 48	322.02	9384.5	0.124	29.14							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2902.04	SLV 4	-2902.04	-8869.39	0.216	3.06	Si
0.11	0.000628	0.053	0.000628	0.053							-2947.18	SLV 4	-2947.18	-8869.39	0.216	3.01	Si
0.15	0.000628	0.053	0.000628	0.053							-2935.38	SLV 4	-2935.38	-8869.39	0.216	3.02	Si
0.56	0.000628	0.053	0.000628	0.053							-2160.35	SLV 6	-2572.9	-8869.39	0.216	3.45	Si
0.97	0.000628	0.053	0.000628	0.053	729.12	SLV 4	729.12	8869.39	0.216	12.16	-1796.49	SLV 13	-2002.39	-8869.39	0.216	4.43	Si
1.12	0.000628	0.053	0.000628	0.053	2085.63	SLV 4	1356.86	8869.39	0.216	6.54	-1479.84	SLV 13	-1479.84	-8869.39	0.216	5.99	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2222.39	SLD 4	-2222.39	-8869.39	0.216	3.99	Si
0.15	0.000628	0.053	0.000628	0.053							-2406.06	SLD 4	-2426.35	-8869.39	0.216	3.66	Si
0.19	0.000628	0.053	0.000628	0.053							-2421.96	SLD 4	-2426.35	-8869.39	0.216	3.66	Si
0.56	0.000628	0.053	0.000628	0.053							-2025.94	SLD 6	-2315.07	-8869.39	0.216	3.83	Si
0.97	0.000628	0.053	0.000628	0.053	5.7	SLD 4	5.7	8869.39	0.216	1554.7	-1073.08	SLD 13	-1599.97	-8869.39	0.216	5.54	Si
1.12	0.000628	0.053	0.000628	0.053	1064.51	SLD 4	488.34	8869.39	0.216	18.16	-458.72	SLD 13	-458.72	-8869.39	0.216	19.34	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-4056	SLU 84	-4056	-8105	-63019	-15060	-15060	1	3.71	Si
0.15	0.0000108	0.000628	0	-2304	SLU 84	-2304	-8105	-63019	-15060	-15060	1	6.54	Si
0.56	0.0000108	0.000628	0	2500	SLU 77	2500	8105	63019	15060	15060	1	6.02	Si
0.97	0.0000108	0.000628	0	7240	SLU 83	7240	8105	63019	15060	15060	1	2.08	Si
1.12	0.0000108	0.000628	0	8995	SLU 83	8995	8105	63019	15060	15060	1	1.67	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-4266	SLV 13	-4266	-8105	-63019	-15060	-15060	1	3.53	Si
0.15	0.0000108	0.000628	0	563	SLV 4	563	8105	63019	15060	15060	1	26.74	Si
0.15	0.0000108	0.000628	0	-3333	SLV 13	-3333	-8105	-63019	-15060	-15060	1	4.52	Si
0.56	0.0000108	0.000628	0	4459	SLV 4	4459	8105	63019	15060	15060	1	3.38	Si
0.56	0.0000108	0.000628	0	-856	SLV 13	-856	-8105	-63019	-15060	-15060	1	17.59	Si
0.97	0.0000108	0.000628	0	8370	SLV 4	8370	8105	63019	15060	15060	1	1.8	Si
1.12	0.0000108	0.000628	0	9801	SLV 4	9801	8105	63019	15060	15060	1	1.54	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-3285	SLD 13	-3285	-8105	-63019	-15060	-15060	1	4.58	Si
0.15	0.0000108	0.000628	0	-2216	SLD 13	-2216	-8105	-63019	-15060	-15060	1	6.8	Si
0.56	0.0000108	0.000628	0	2937	SLD 4	2937	8105	63019	15060	15060	1	5.13	Si
0.97	0.0000108	0.000628	0	6435	SLD 4	6435	8105	63019	15060	15060	1	2.34	Si
1.12	0.0000108	0.000628	0	7719	SLD 4	7719	8105	63019	15060	15060	1	1.95	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1835.58	20	-1835.58	94845	1494000	1422677	36000000	-1715.81	2	-1715.81	88657	1120500			Si
0.15	-2176.68	20	-2330.82	120435	1494000	1806521	36000000	-2011.32	2	-2133.71	110250	1120500			Si
0.56	-2128.5	21	-2324.66	120116	1494000	1801743	36000000	-1925.55	2	-2122.59	109675	1120500			Si
0.97	-646.48	19	-1467.2	75811	1494000	1137166	36000000	-533.69	2	-1300.15	67179	1120500			Si
1.12	348.81	6	246.62	12743	1494000	191144	36000000	324.12	1	159.34	8233	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 61, sezione R 50x45, aste 738, 737, 736, 735, 734, 733, 732, 731, 730, 729, 728, 727, 726, 725

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2322	SLV 4	0.085	2672	8077	SLV 4	15877	Si
0.23	0.41	0.0002	2264	SLV 4	0.085	2672	7875	SLV 4	15877	Si
2.52	0.41	0.0002	1835	SLV 4	0.085	2672	6382	SLV 4	15877	Si
4.89	0.41	0.0002	1636	SLU 84	0.017	2747	5692	SLU 84	15877	Si
5.04	0.41	0.0005	1628	SLU 84	0.045	8504	5662	SLU 84	21085	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1738	SLD 4	0.07	3092	6045	SLD 4	15877	Si
0.23	0.41	0.0002	1704	SLD 4	0.07	3092	5928	SLD 4	15877	Si
2.52	0.41	0.0002	1476	SLD 4	0.07	3092	5134	SLD 4	15877	Si
4.89	0.41	0.0002	1222	SLD 4	0.07	3092	4252	SLD 4	15877	Si
5.04	0.41	0.0005	1213	SLD 4	0.123	9470	4220	SLD 4	24248	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	1434	SLE RA 21	41513	1494000	514760	36000000	1302	SLE QP 2	37692	1120500	Si
0.23	0.41	0.00000172	1417	SLE RA 21	41031	1494000	508789	36000000	1286	SLE QP 2	37240	1120500	Si
2.52	0.41	0.00000172	1337	SLE RA 21	38691	1494000	479773	36000000	1208	SLE QP 2	34983	1120500	Si
4.89	0.41	0.00000172	1200	SLE RA 21	34728	1494000	430631	36000000	1081	SLE QP 2	31308	1120500	Si
5.04	0.41	0.00000539	1193	SLE RA 21	32934	1494000	408379	36000000	1076	SLE QP 2	29688	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 724

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
738,737,736,735,734,733,732,731,730,729,728,727,726,725,724	6.38	1.1	SLU 83	ST	BT	2.3	292207	89237	3.27	Si
738,737,736,735,734,733,732,731,730,729,728,727,726,725,724	6.38	1.1	SLV 4	SIS	BT	2.3	258082	84455	3.06	Si
738,737,736,735,734,733,732,731,730,729,728,727,726,725,724	6.38	1.1	SLD 4	SIS	BT	2.3	274754	71008	3.87	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	397	-89237	-83.51	-7254.68	0	0	-0.08	0	1.1	6.22	1496	2060	0	14430	
0	4113	-84455	-1824.18	-25887.7	0	3	-0.31	-0.02	1.06	5.77	1496	2060	0	14430	0.07
0	1948	-71008	-827.32	-13955.45	0	2	-0.2	-0.01	1.08	5.99	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

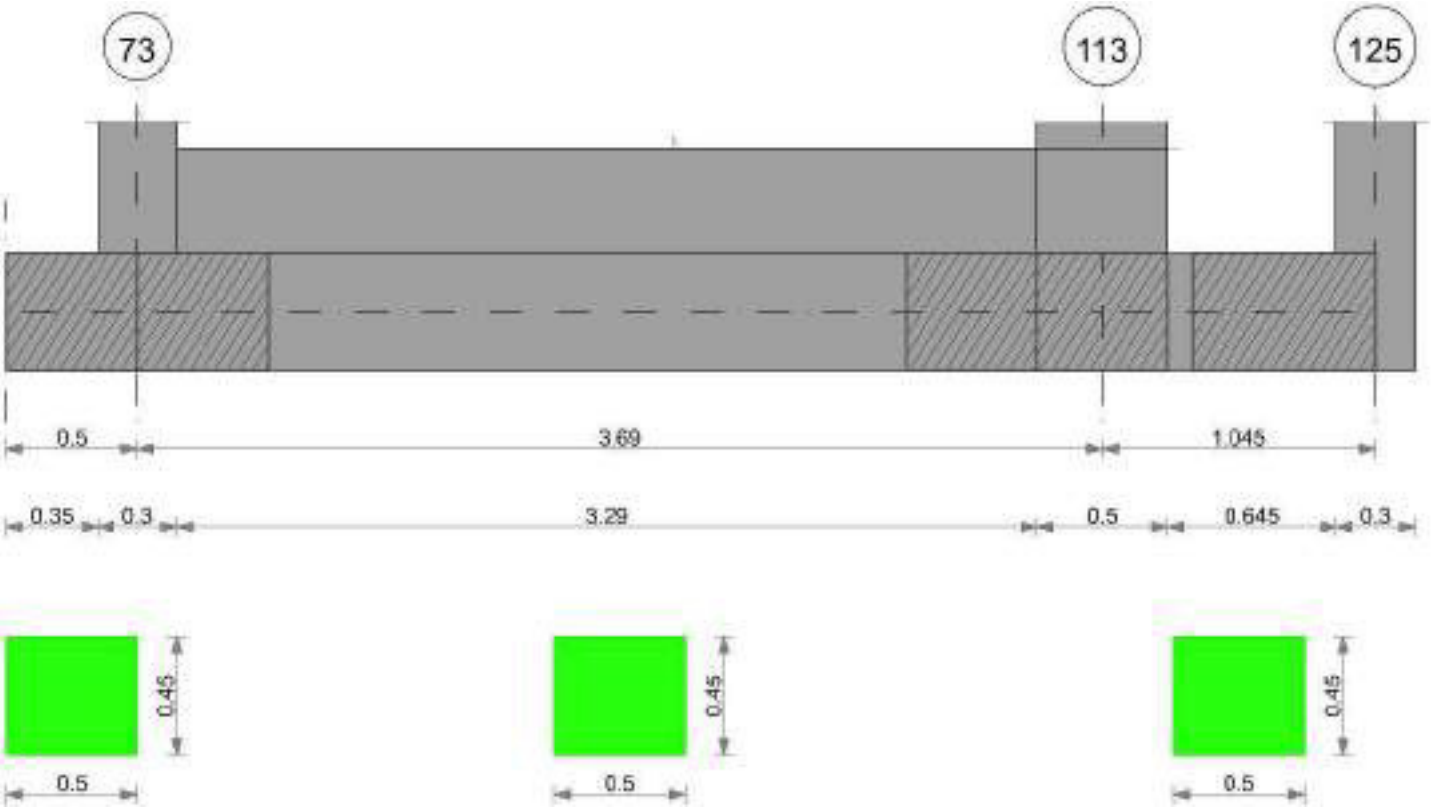
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	577	SLE RA 21	0.05	0.002	577	562	SLE RA 21	0.05	0	576	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	577	SLE RA 1	0.05	0	577	577	SLE RA 1	0.05	0	576	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	577	SLE RA 1	0.05	0	577	577	SLE RA 1	0.05	0	576	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	576	562	SLE RA 21	0.19	0.01	576	SLE RA 20	0.1	0	577	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	577	576	SLE RA 1	0.19	0	577	SLE RA 1	0.1	0	576	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	577	576	SLE RA 1	0.19	0	577	SLE RA 1	0.1	0	576	SLE RA 1	Si

CORDOLO 14

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

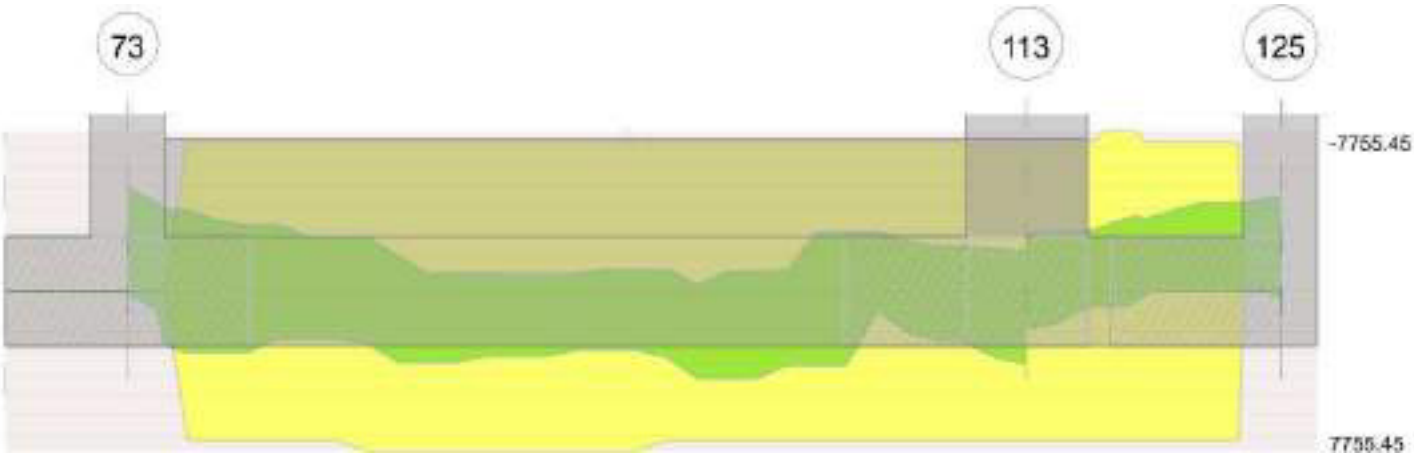
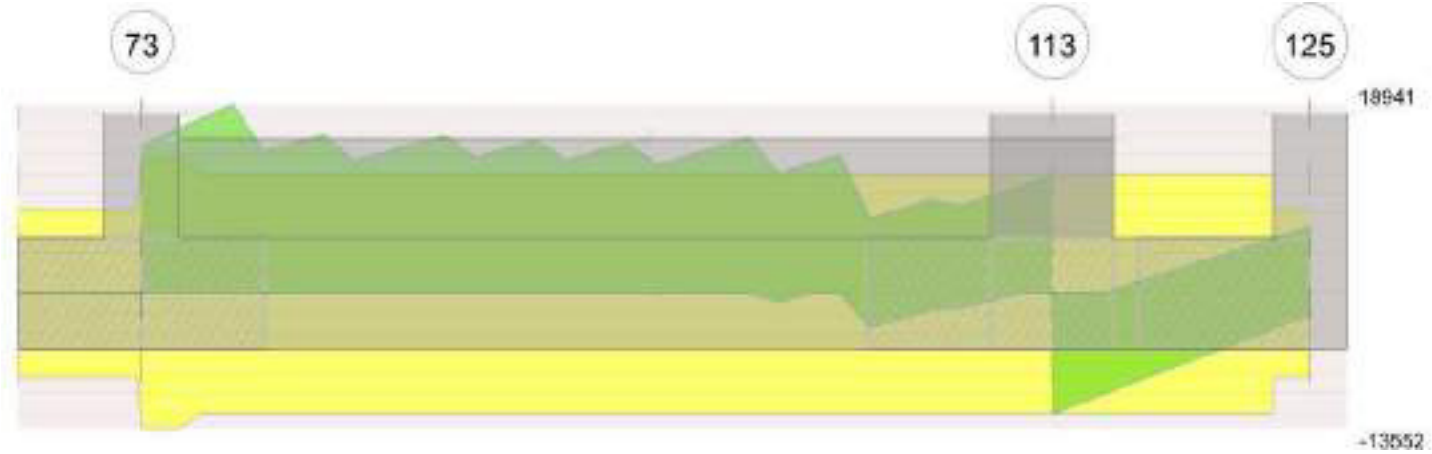


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 703

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	877.99	SLU 83	737.71	7755.45	0.113	10.51							Si
0.25	0.000509	0.052	0.000509	0.052							-1617.68	SLU 84	-2829.34	-7755.45	0.113	2.74	Si
0.52	0.000509	0.052	0.000509	0.052							-3269.31	SLU 83	-3748.69	-7755.45	0.113	2.07	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3768.68	SLV 16	1813.97	7266.79	0.197	4.01	-2668.75	SLV 1	-2668.75	-7266.79	0.197	2.72	Si
0.25	0.000509	0.052	0.000509	0.052	723.89	SLV 13	723.89	7266.79	0.197	10.04	-2919.7	SLV 4	-2944.81	-7266.79	0.197	2.47	Si
0.52	0.000509	0.052	0.000509	0.052							-2951.69	SLV 8	-3622.84	-7266.79	0.197	2.01	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1924.13	SLD 16	478.06	7266.79	0.197	15.2	-824.2	SLD 1	-824.2	-7266.79	0.197	8.82	Si
0.25	0.000509	0.052	0.000509	0.052							-1875.98	SLD 4	-2331.54	-7266.79	0.197	3.12	Si
0.52	0.000509	0.052	0.000509	0.052							-2518.62	SLD 8	-2984.33	-7266.79	0.197	2.43	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-10346	SLU 83	-10346	-7764	-63178	-11986	-11986	1	1.16	Si
0.25	0.0000086	0.000509	0	-7054	SLU 83	-7054	-7764	-63178	-11986	-11986	1	1.7	Si
0.52	0.0000086	0	0	-3498	SLU 83	-3498	-7764	-63178	-11986	-11986	1	3.43	Si
0.9	0.0000086	0	0	1398	SLU 63	1398	8455	71432	13552	13552	1	9.69	Si
1.05	0	0	0	3326	SLU 84	3326	8455	71432	0	8455	1	2.54	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-12046	SLV 16	-12046	-7764	-63178	-11986	-11986	1	0.99	Si
0.25	0.0000086	0.000509	0	371	SLV 1	371	7764	63178	11986	11986	1	32.27	Si
0.25	0.0000086	0.000509	0	-9666	SLV 16	-9666	-7764	-63178	-11986	-11986	1	1.24	Si
0.52	0.0000086	0	0	2532	SLV 1	2532	7764	63178	11986	11986	1	4.73	Si
0.52	0.0000086	0	0	-7083	SLV 16	-7083	-7764	-63178	-11986	-11986	1	1.69	Si
0.9	0.0000086	0	0	5472	SLV 1	5472	8455	71432	13552	13552	1	2.48	Si
0.9	0.0000086	0	0	-3557	SLV 16	-3557	-8455	-71432	-13552	-13552	1	3.81	Si
1.05	0	0	0	6660	SLV 1	6660	8455	71432	0	8455	1	1.27	Si
1.05	0	0	0	-2126	SLV 16	-2126	-8455	-71432	0	-8455	1	3.98	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-9066	SLD 16	-9066	-7764	-63178	-11986	-11986	1	1.32	Si
0.25	0.0000086	0.000509	0	-6791	SLD 16	-6791	-7764	-63178	-11986	-11986	1	1.76	Si
0.52	0.0000086	0	0	-4329	SLD 16	-4329	-7764	-63178	-11986	-11986	1	2.77	Si
0.9	0.0000086	0	0	2885	SLD 1	2885	8455	71432	13552	13552	1	4.7	Si
0.9	0.0000086	0	0	-969	SLD 16	-969	-8455	-71432	-13552	-13552	1	13.98	Si
1.05	0	0	0	4142	SLD 1	4142	8455	71432	0	8455	1	2.04	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	623.41	20	559.18	29577	1494000	443651	36000000	549.97	2	516.98	27345	1120500			Si
0.25	-1202.11	21	-2085.98	110334	1494000	1655017	36000000	-1097.91	2	-1894.22	100192	1120500			Si
0.52	-2405.74	20	-2750.79	145499	1494000	2182483	36000000	-2181.52	2	-2489.36	131671	1120500			Si
0.9	-2726.95	20	-2790.87	-165385	1494000	0	36000000	-2462.43	2	-2522.96	-149508	1120500			Si
1.05	-2426.6	20	-2426.6	-143799	1494000	0	36000000	-2186.04	2	-2186.04	-129543	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 73 - 113, sezione R 50x45, aste 712, 711, 710, 709, 708, 707, 706, 705, 704

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1629	SLU 83	0.036	6777	5668	SLU 83	16740	Si
0.15	0.41	0.0004	1636	SLU 83	0.036	6777	5691	SLU 83	16740	Si
1.84	0.41	0.0004	1687	SLU 84	0.036	6777	5867	SLU 84	16740	Si
3.44	0.41	0.0004	1612	SLU 84	0.036	6777	5607	SLU 84	16740	Si
3.69	0.41	0.0004	1600	SLU 84	0.036	6777	5564	SLU 84	16740	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1194	SLD 4	0.11	7560	4152	SLD 4	19251	Si
0.15	0.41	0.0004	1195	SLD 4	0.11	7560	4156	SLD 4	19251	Si
1.84	0.41	0.0004	1155	SLD 4	0.11	7560	4016	SLD 4	19251	Si
3.44	0.41	0.0004	1096	SLD 15	0.11	7560	3812	SLD 15	19251	Si
3.69	0.41	0.0004	1094	SLD 15	0.11	7560	3806	SLD 15	19251	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000428	1195	SLE RA 20	33442	1494000	414687	36000000	1077	SLE QP 2	30137	1120500	Si
0.15	0.41	0.00000428	1199	SLE RA 20	33577	1494000	416359	36000000	1081	SLE QP 2	30256	1120500	Si
1.84	0.41	0.00000428	1236	SLE RA 21	34609	1494000	429151	36000000	1112	SLE QP 2	31141	1120500	Si
3.44	0.41	0.00000428	1181	SLE RA 21	33068	1494000	410038	36000000	1061	SLE QP 2	29713	1120500	Si
3.69	0.41	0.00000428	1172	SLE RA 21	32819	1494000	406953	36000000	1053	SLE QP 2	29486	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 703

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
712,711,710,709,708,707,706,705,704,703	4.89	1.1	SLU 84	ST	BT	2.3	229463	64456	3.56	Si
712,711,710,709,708,707,706,705,704,703	4.89	1.1	SLV 8	SIS	BT	2.3	204384	45468	4.5	Si
712,711,710,709,708,707,706,705,704,703	4.89	1.1	SLD 8	SIS	BT	2.3	218798	44588	4.91	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	101	-64456	90.53	-1237.38	0	0	-0.02	0	1.1	4.85	1496	2060	0	14430	
0	4460	-45468	-1854.53	-3350.16	0	6	-0.07	-0.04	1.02	4.74	1496	2060	0	14430	0.07
0	2020	-44588	-787.52	-1921.7	0	3	-0.04	-0.02	1.06	4.8	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

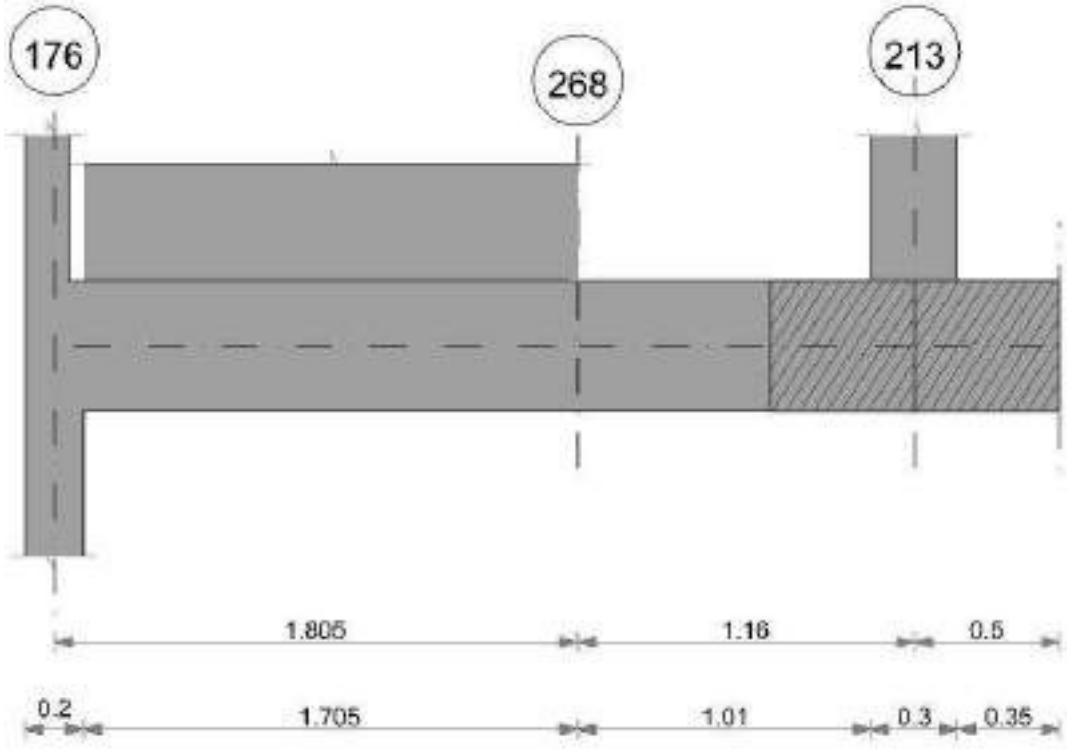
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	587	SLE RA 21	0.05	0	587	577	SLE RA 21	0.05	0	586	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	587	SLE RA 1	0.05	0	587	587	SLE RA 1	0.05	0	586	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	587	SLE RA 1	0.05	0	587	587	SLE RA 1	0.05	0	586	SLE RA 1	0.0033	0	SLE RA 1	Si

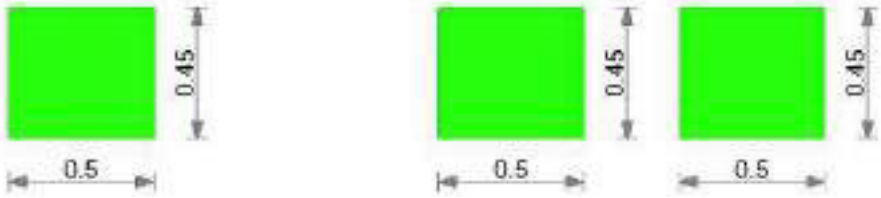
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	586	577	SLE RA 21	0.19	0	586	SLE RA 21	0.1	0	587	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	587	586	SLE RA 1	0.19	0	587	SLE RA 1	0.1	0	586	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	587	586	SLE RA 1	0.19	0	587	SLE RA 1	0.1	0	586	SLE RA 1	Si

CORDOLO 15

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

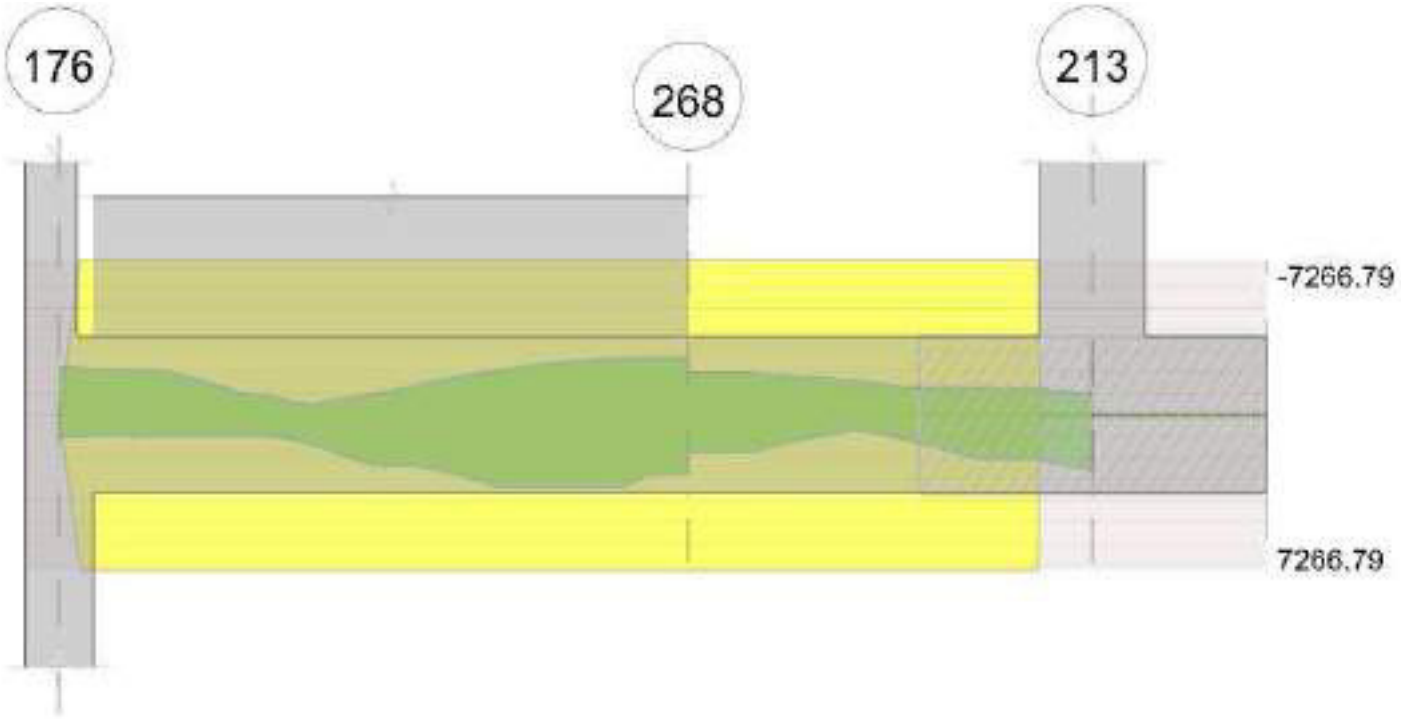
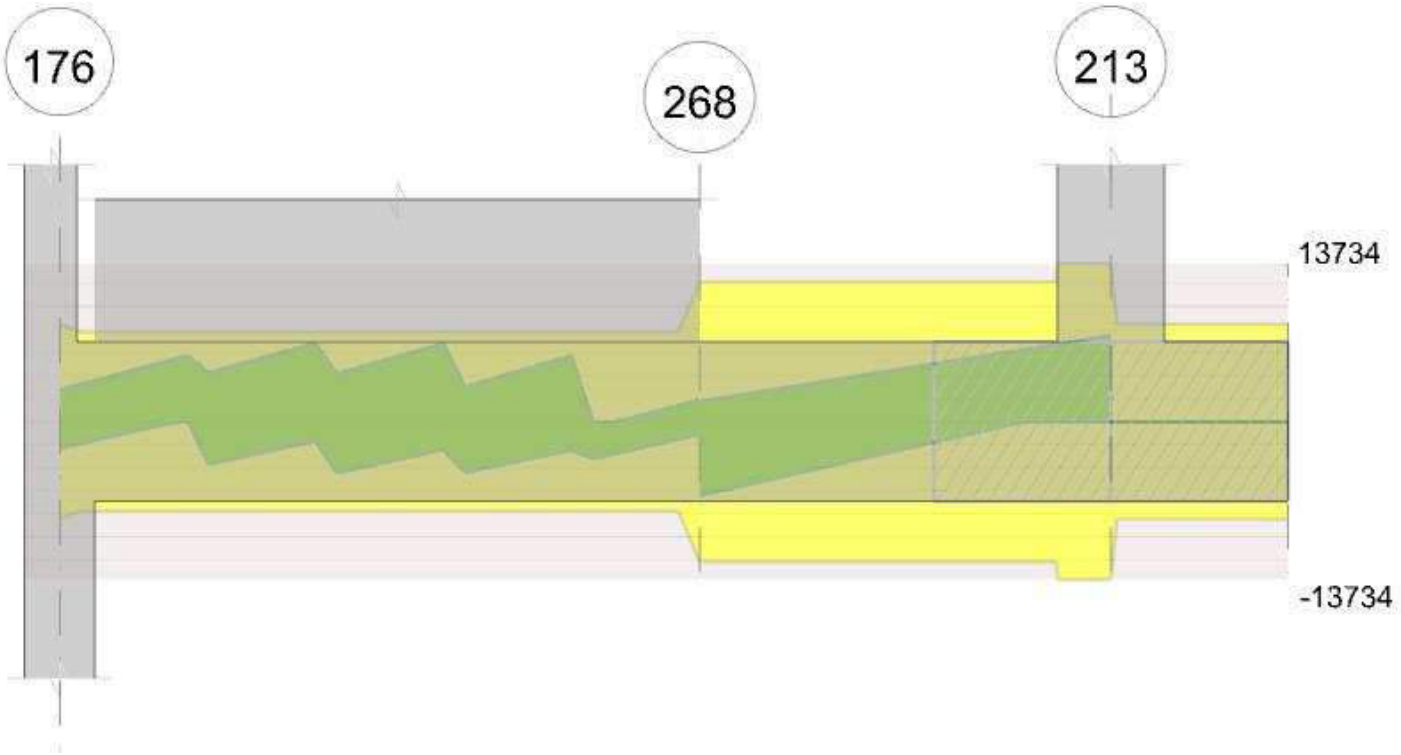


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 646

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-151.43	SLU 72	-499.53	-7755.45	0.113	15.53	Si
0.58	0.000509	0.052	0.000509	0.052							-579.92	SLU 82	-681.78	-7755.45	0.113	11.38	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1751.04	SLV 15	1751.04	7266.79	0.197	4.15	-1924.11	SLV 2	-1924.11	-7266.79	0.197	3.78	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.58	0.000509	0.052	0.000509	0.052	554.5	SLV 11	990.58	7266.79	0.197	7.34	-1282.6	SLV 6	-1368.97	-7266.79	0.197	5.31	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	698.48	SLD 15	698.48	7266.79	0.197	10.4	-871.55	SLD 2	-935.46	-7266.79	0.197	7.77	Si
0.58	0.000509	0.052	0.000509	0.052	38.98	SLD 11	362.45	7266.79	0.197	20.05	-767.08	SLD 6	-842.18	-7266.79	0.197	8.63	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-3645	SLU 84	-3645	-7764	-63178	-12147	-12147	1	3.33	Si
0.58	0.0000087	0.000509	0	1592	SLU 79	1592	7764	63178	12147	12147	1	7.63	Si
1.01	0.0000087	0	0	5374	SLU 83	5374	8455	71432	13734	13734	1	2.56	Si
1.16	0.0000087	0	0	6708	SLU 83	6708	8455	71432	13734	13734	1	2.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	1747	SLV 3	1747	7764	63178	12147	12147	1	6.95	Si
0	0.0000087	0.000509	0	-6440	SLV 14	-6440	-7764	-63178	-12147	-12147	1	1.89	Si
0.58	0.0000087	0.000509	0	4615	SLV 3	4615	7764	63178	12147	12147	1	2.63	Si
0.58	0.0000087	0.000509	0	-2369	SLV 14	-2369	-7764	-63178	-12147	-12147	1	5.13	Si
1.01	0.0000087	0	0	6710	SLV 3	6710	7764	63178	12147	12147	1	1.81	Si
1.01	0.0000087	0	0	6733	SLV 3	6733	8455	71432	13734	13734	1	2.04	Si
1.16	0.0000087	0	0	7470	SLV 3	7470	8455	71432	13734	13734	1	1.84	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-4100	SLD 14	-4100	-7764	-63178	-12147	-12147	1	2.96	Si
0.58	0.0000087	0.000509	0	2621	SLD 3	2621	7764	63178	12147	12147	1	4.64	Si
0.58	0.0000087	0.000509	0	-374	SLD 14	-374	-7764	-63178	-12147	-12147	1	32.44	Si
1.01	0.0000087	0	0	4994	SLD 3	4994	8455	71432	13734	13734	1	2.75	Si
1.16	0.0000087	0	0	5821	SLD 3	5821	8455	71432	13734	13734	1	2.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-107.96	9	-365.51	19333	1494000	289993	36000000	-94.87	1	-340.36	18003	1120500			Si
0.58	-419.57	19	-496.69	26272	1494000	394075	36000000	-364.05	2	-445.95	23588	1120500			Si
1.01	482.75	8	482.75	28608	1494000	0	36000000	452.99	1	452.99	26844	1120500			Si
1.16	988.9	14	764.83	45324	1494000	0	36000000	933.35	2	723.97	42902	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 268, sezione R 50x45, aste 651, 650, 649, 648, 647

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1597	SLU 83	0.018	2949	5555	SLU 83	15877	Si
0.1	0.41	0.0002	1597	SLU 83	0.018	2949	5554	SLU 83	15877	Si
0.9	0.41	0.0002	1600	SLU 83	0.018	2949	5566	SLU 83	15877	Si
1.8	0.41	0.0004	1586	SLU 83	0.037	6867	5515	SLU 83	16965	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1092	SLD 15	0.073	3317	3799	SLD 15	15877	Si
0.1	0.41	0.0002	1096	SLD 15	0.073	3317	3811	SLD 15	15877	Si
0.9	0.41	0.0002	1131	SLD 15	0.073	3317	3935	SLD 15	15877	Si
1.8	0.41	0.0004	1148	SLD 15	0.111	7660	3993	SLD 15	19510	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000185	1172	SLE RA 20	33866	1494000	419934	36000000	1056	SLE QP 2	30520	1120500	Si
0.1	0.41	0.00000185	1172	SLE RA 20	33863	1494000	419902	36000000	1056	SLE QP 2	30517	1120500	Si
0.9	0.41	0.00000185	1174	SLE RA 20	33926	1494000	420682	36000000	1058	SLE QP 2	30566	1120500	Si
1.8	0.41	0.00000433	1163	SLE RA 20	32530	1494000	403372	36000000	1048	SLE QP 2	29313	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 646

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
651,650,649,648,647,646	3.06	1.1	SLU 84	ST	BT	2.3	143889	36375	3.96	Si
651,650,649,648,647,646	3.06	1.1	SLV 15	SIS	BT	2.3	136807	28331	4.83	Si
651,650,649,648,647,646	3.06	1.1	SLD 14	SIS	BT	2.3	140085	26031	5.38	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-295	-142	-36375	472.3	-264.62	0	0	-0.01	0.01	1.07	3.05	1496	2060	0	14430	
3965	851	-28331	-171.49	2376.23	8	2	0.08	-0.01	1.09	2.9	1496	2060	0	14430	0.07
1562	-392	-26031	400.02	895.74	3	-1	0.03	0.02	1.07	3	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

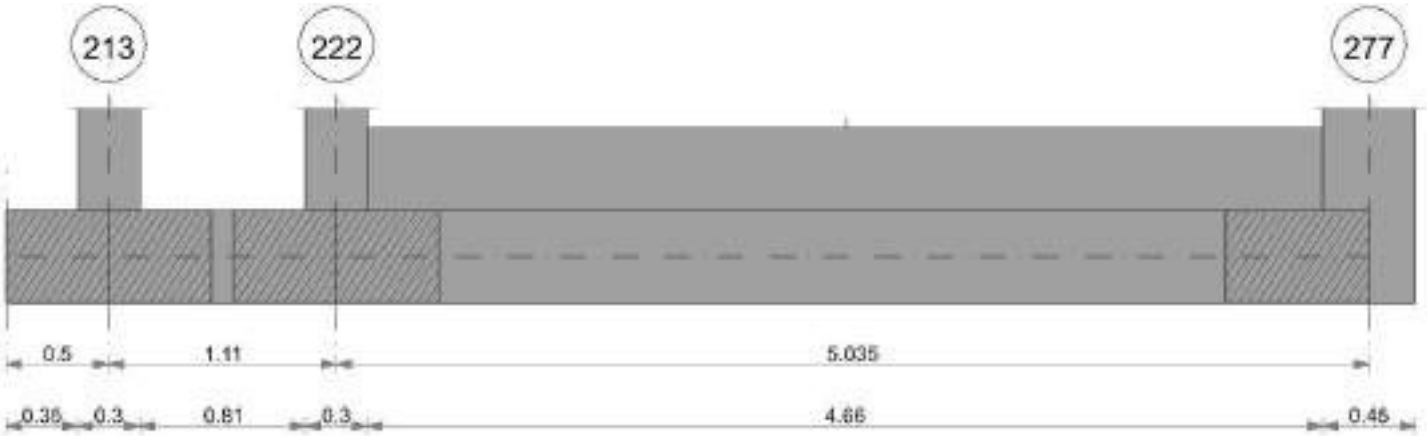
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	588	SLE RA 21	0.05	0.001	588	594	SLE RA 21	0.05	0	593	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	594	SLE RA 1	0.05	0	594	594	SLE RA 1	0.05	0	593	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	594	SLE RA 1	0.05	0	594	594	SLE RA 1	0.05	0	593	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	593	588	SLE RA 21	0.19	0	594	SLE RA 1	0.1	0	593	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	594	593	SLE RA 1	0.19	0	594	SLE RA 1	0.1	0	593	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	594	593	SLE RA 1	0.19	0	594	SLE RA 1	0.1	0	593	SLE RA 1	Si

CORDOLO 16

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

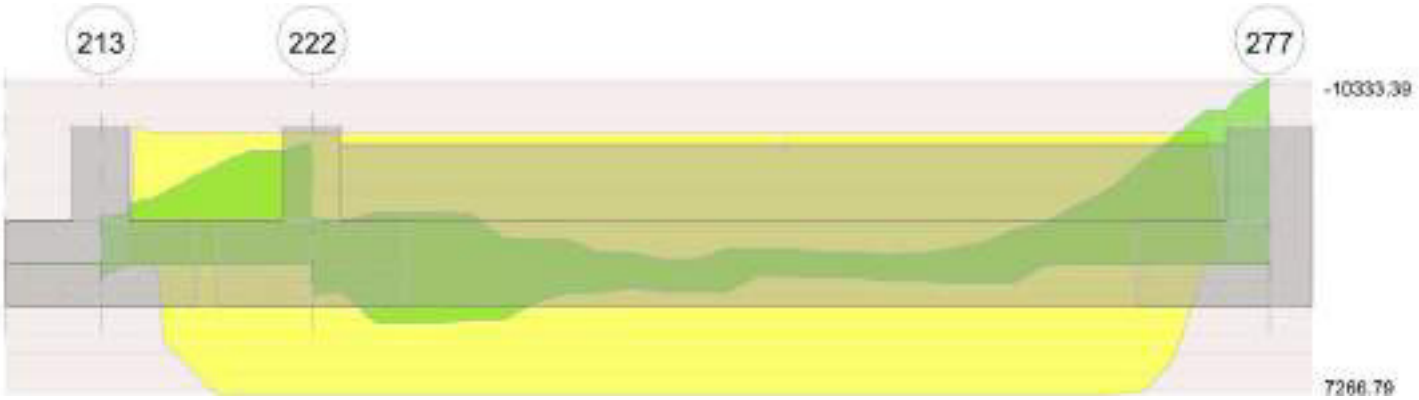
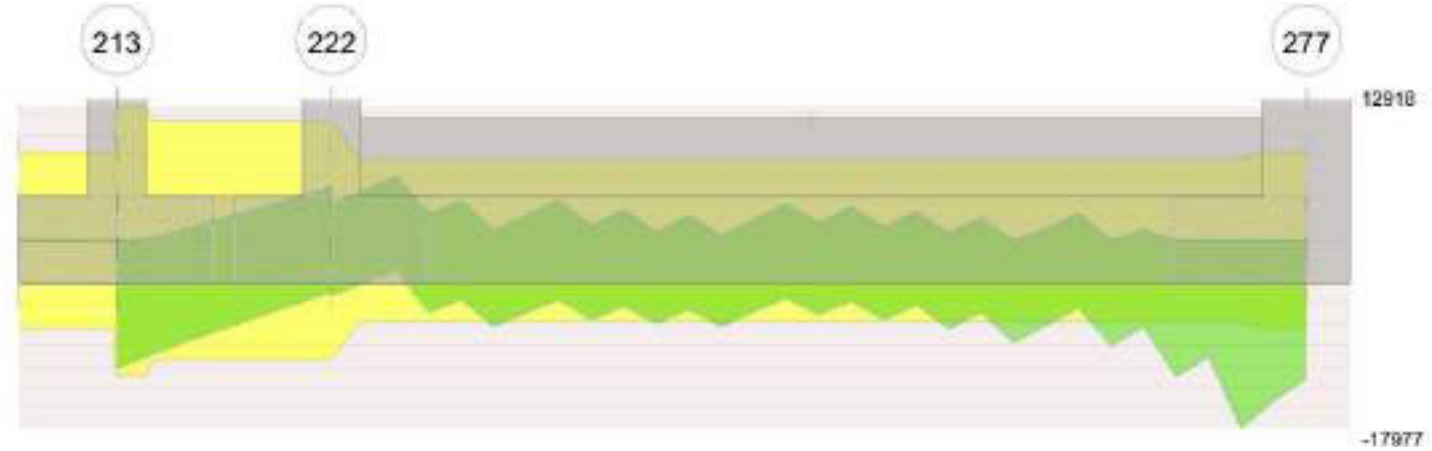


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 443

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-4186.12	SLU 84	-4704.6	-7752.71	0.113	1.65	Si
0.96	0.000509	0.052	0.000509	0.052							-5049.18	SLU 83	-5049.18	-7755.45	0.113	1.54	Si
1.11	0.000509	0.052	0.000509	0.052							-5085.61	SLU 83	-5085.61	-7755.45	0.113	1.52	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-4189.61	SLV 15	-5183.72	-7267.41	0.198	1.4	Si
0.96	0.000509	0.052	0.000509	0.052							-6250.64	SLV 15	-6250.64	-7266.79	0.197	1.16	Si
1.11	0.000509	0.052	0.000509	0.052							-6812.86	SLV 15	-6659.12	-7266.79	0.197	1.09	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3400.63	SLD 15	-4037.1	-7267.41	0.198	1.8	Si
0.96	0.000509	0.052	0.000509	0.052							-4640.06	SLD 15	-4640.06	-7266.79	0.197	1.57	Si
1.11	0.000509	0.052	0.000509	0.052							-4904.15	SLD 15	-4849.05	-7266.79	0.197	1.5	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-9379	SLU 83	-9379	-8455	-71432	-12918	-12918	1	1.38	Si
0.15	0.0000082	0	0	-8069	SLU 83	-8069	-8455	-71432	-12918	-12918	1	1.6	Si
0.56	0.0000082	0	0	-4534	SLU 83	-4534	-7764	-63178	-11425	-11425	1	2.52	Si
0.96	0.0000082	0.000509	0	-1096	SLU 48	-1096	-7764	-63178	-11425	-11425	1	10.42	Si
1.11	0.0000082	0.000509	0	445	SLU 40	445	7764	63178	11425	11425	1	25.68	Si
1.11	0.0000082	0.000509	0	-33	SLU 48	-33	-7764	-63178	-11425	-11425	1	344.42	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-12213	SLV 15	-12213	-8455	-71432	-12918	-12918	1	1.06	Si
0.15	0.0000082	0	0	115	SLV 2	115	8455	71432	12918	12918	1	112.17	Si
0.15	0.0000082	0	0	-11156	SLV 15	-11156	-8455	-71432	-12918	-12918	1	1.16	Si
0.19	0.0000082	0	0	278	SLV 2	278	7764	63178	11425	11425	1	41.12	Si
0.19	0.0000082	0	0	-10910	SLV 15	-10910	-7764	-63178	-11425	-11425	1	1.05	Si
0.56	0.0000082	0	0	2134	SLV 6	2134	7764	63178	11425	11425	1	5.35	Si
0.56	0.0000082	0	0	-8441	SLV 11	-8441	-7764	-63178	-11425	-11425	1	1.35	Si
0.96	0.0000082	0.000509	0	4314	SLV 6	4314	7764	63178	11425	11425	1	2.65	Si
0.96	0.0000082	0.000509	0	-5857	SLV 11	-5857	-7764	-63178	-11425	-11425	1	1.95	Si
1.11	0.0000082	0.000509	0	5133	SLV 6	5133	7764	63178	11425	11425	1	2.23	Si
1.11	0.0000082	0.000509	0	-4895	SLV 11	-4895	-7764	-63178	-11425	-11425	1	2.33	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-8900	SLD 15	-8900	-8455	-71432	-12918	-12918	1	1.45	Si
0.15	0.0000082	0	0	-7946	SLD 15	-7946	-8455	-71432	-12918	-12918	1	1.63	Si
0.56	0.0000082	0	0	-5467	SLD 11	-5467	-7764	-63178	-11425	-11425	1	2.09	Si
0.96	0.0000082	0.000509	0	1455	SLD 6	1455	7764	63178	11425	11425	1	7.85	Si
0.96	0.0000082	0.000509	0	-2998	SLD 11	-2998	-7764	-63178	-11425	-11425	1	3.81	Si
1.11	0.0000082	0.000509	0	2315	SLD 6	2315	7764	63178	11425	11425	1	4.93	Si
1.11	0.0000082	0.000509	0	-2077	SLD 11	-2077	-7764	-63178	-11425	-11425	1	5.5	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-884.88	19	-884.88	-52437	1494000	0	36000000	-757.35	2	-757.35	-44880	1120500			Si
0.15	-1629.03	21	-2377.28	-140876	1494000	0	36000000	-1449.95	2	-2145.02	-127112	1120500			Si
0.56	-3089.97	21	-3477.61	185081	1494000	2765537	36000000	-2811.41	2	-3176.6	169061	1120500			Si
0.96	-3738.59	20	-3738.59	197747	1494000	2966202	36000000	-3427.89	2	-3427.89	181313	1120500			Si
1.11	-3770.32	20	-3770.32	199425	1494000	2991379	36000000	-3465.98	2	-3465.98	183328	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 443

Campata 3 tra i fili 222 - 277, sezione R 50x45, aste 442, 441, 440, 439, 438, 437, 436, 435, 434, 433, 432, 431, 430

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1594	SLU 84	0.034	6464	5545	SLU 84	15957	Si
0.15	0.41	0.0002	1610	SLU 84	0.017	2747	5599	SLU 84	15877	Si
2.52	0.41	0.0002	1820	SLU 84	0.017	2747	6329	SLU 84	15877	Si
4.81	0.41	0.0002	2304	SLV 13	0.085	2672	8013	SLV 13	15877	Si
5.04	0.41	0.0002	2398	SLV 13	0.085	2672	8341	SLV 13	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1163	SLD 15	0.107	7214	4044	SLD 15	18350	Si
0.15	0.41	0.0002	1176	SLD 15	0.07	3092	4090	SLD 15	15877	Si
2.52	0.41	0.0002	1446	SLD 16	0.07	3092	5029	SLD 16	15877	Si
4.81	0.41	0.0002	1757	SLD 13	0.07	3092	6111	SLD 13	15877	Si
5.04	0.41	0.0002	1819	SLD 13	0.07	3092	6327	SLD 13	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000408	1169	SLE RA 21	32807	1494000	406802	36000000	1054	SLE QP 2	29589	1120500	Si
0.15	0.41	0.00000172	1180	SLE RA 21	34165	1494000	423645	36000000	1065	SLE QP 2	30818	1120500	Si
2.52	0.41	0.00000172	1336	SLE RA 21	38664	1494000	479433	36000000	1208	SLE QP 2	34972	1120500	Si
4.81	0.41	0.00000172	1485	SLE RA 21	42999	1494000	533183	36000000	1349	SLE QP 2	39052	1120500	Si
5.04	0.41	0.00000172	1526	SLE RA 21	44190	1494000	547959	36000000	1387	SLE QP 2	40153	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
443,442,441,440,439,438,437,436,435,434,433,432,431,430	6.37	1.1	SLU 84	ST	BT	2.3	289557	86075	3.36	Si
443,442,441,440,439,438,437,436,435,434,433,432,431,430	6.37	1.1	SLV 14	SIS	BT	2.3	258623	78868	3.28	Si
443,442,441,440,439,438,437,436,435,434,433,432,431,430	6.37	1.1	SLD 14	SIS	BT	2.3	274154	67410	4.07	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-202	-86075	181.86	8604.19	0	0	0.1	0	1.1	6.17	1496	2060	0	14430	
0	-3087	-78868	1401.18	25765.54	0	-2	0.33	0.02	1.06	5.72	1496	2060	0	14430	0.07
0	-1383	-67410	663.36	14415.02	0	-1	0.21	0.01	1.08	5.94	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

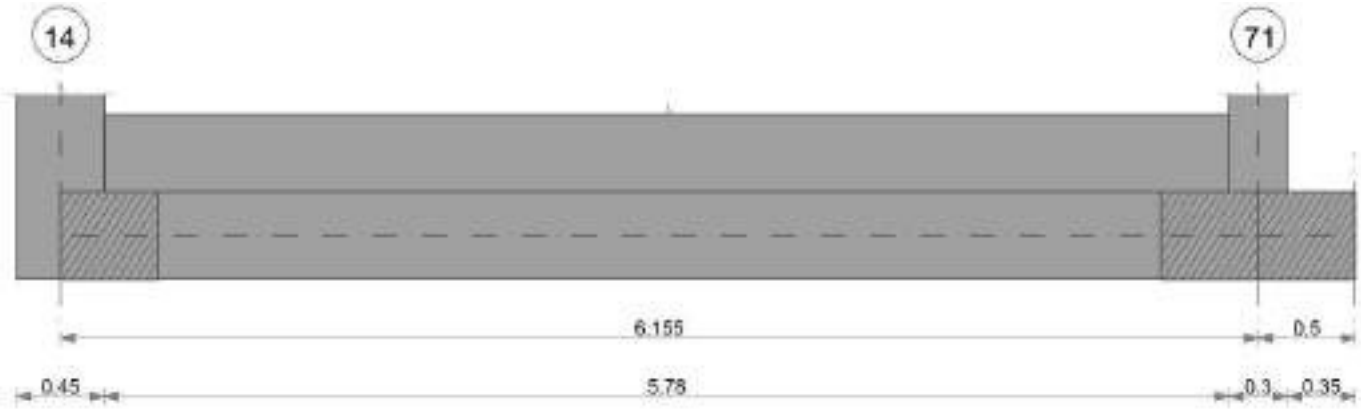
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	595	SLE RA 21	0.05	0.002	595	610	SLE RA 20	0.05	0	597	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	610	SLE RA 1	0.05	0	610	610	SLE RA 1	0.05	0	597	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	610	SLE RA 1	0.05	0	610	610	SLE RA 1	0.05	0	597	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.02	610	597	SLE RA 20	0.19	0	597	SLE RA 21	0.1	0	610	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	610	597	SLE RA 1	0.19	0	610	SLE RA 1	0.1	0	597	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	610	597	SLE RA 1	0.19	0	610	SLE RA 1	0.1	0	597	SLE RA 1	Si

CORDOLO 17

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

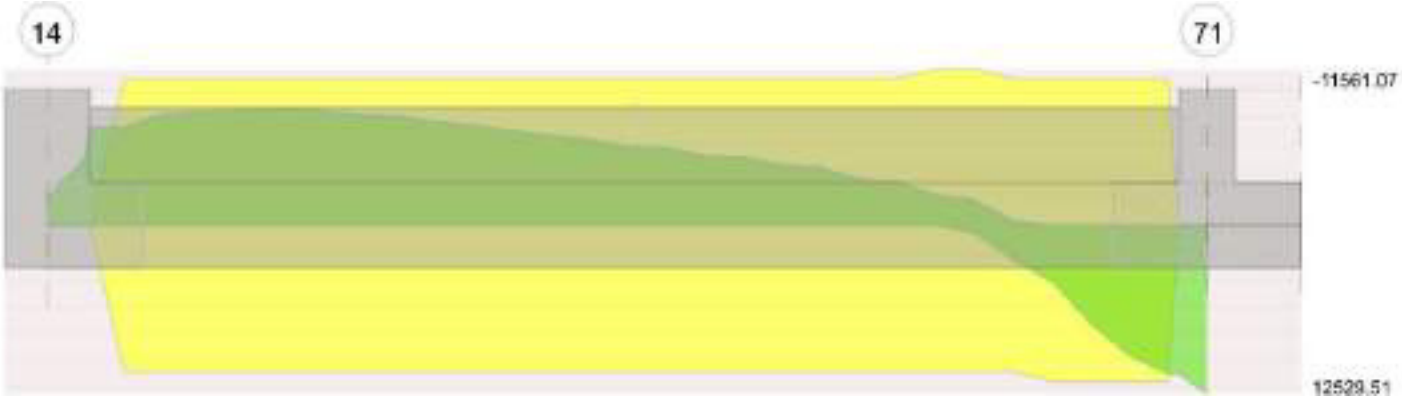
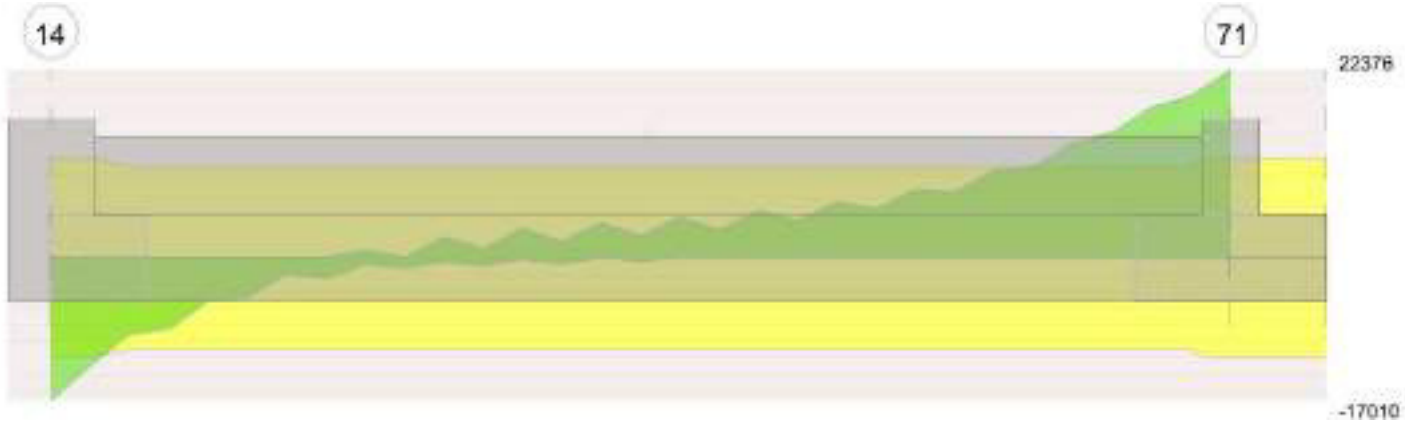


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 71, sezione R 70x45, aste 764, 763, 762, 761, 760, 759, 758, 757, 756, 755, 754, 753, 752, 751, 750

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	4572	SLV 1	0.119	5189	11799	SLV 1	15877	Si
0.23	0.41	0.0003	4291	SLV 1	0.119	5189	11075	SLV 1	15877	Si
3.08	0.41	0.0003	2391	SLV 1	0.119	5189	6170	SLV 1	15877	Si
6.01	0.41	0.0003	3287	SLU 83	0.029	5386	8482	SLU 83	15877	Si
6.16	0.41	0.0003	3312	SLU 83	0.029	5386	8547	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3432	SLD 1	0.098	6020	8857	SLD 1	15877	Si
0.23	0.41	0.0003	3229	SLD 1	0.098	6020	8333	SLD 1	15877	Si
3.08	0.41	0.0003	1926	SLD 1	0.098	6020	4970	SLD 1	15877	Si
6.01	0.41	0.0003	2446	SLD 1	0.098	6020	6312	SLD 1	15877	Si
6.16	0.41	0.0003	2456	SLD 1	0.098	6020	6338	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000339	2834	SLE RA 20	80264	1494000	995279	36000000	2579	SLE QP 2	73041	1120500	Si
0.23	0.41	0.00000339	2676	SLE RA 20	75792	1494000	939826	36000000	2435	SLE QP 2	68944	1120500	Si
3.08	0.41	0.00000339	1743	SLE RA 20	49365	1494000	612124	36000000	1578	SLE QP 2	44683	1120500	Si
6.01	0.41	0.00000339	2417	SLE RA 20	68432	1494000	848556	36000000	2189	SLE QP 2	61979	1120500	Si
6.16	0.41	0.00000339	2435	SLE RA 20	68960	1494000	855107	36000000	2206	SLE QP 2	62456	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
764,763,762,761,760,759,758,757,756,755,754,753,752,751,750	6.38	1.3	SLU 83	ST	BT	2.3	272406	94726	2.88	Si
764,763,762,761,760,759,758,757,756,755,754,753,752,751,750	6.38	1.3	SLV 1	SIS	BT	2.3	241773	91240	2.65	Si
764,763,762,761,760,759,758,757,756,755,754,753,752,751,750	6.38	1.3	SLD 1	SIS	BT	2.3	257599	76322	3.38	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	438	-94726	12430.88	-1466.98	0	0	-0.02	0.13	1.04	6.35	1496	2060	0	14430	
0	-1627	-91240	13635.96	-23840.53	0	-1	-0.26	0.15	1	5.86	1496	2060	0	14430	0.07
0	-532	-76322	10626.98	-10824.89	0	0	-0.14	0.14	1.02	6.1	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

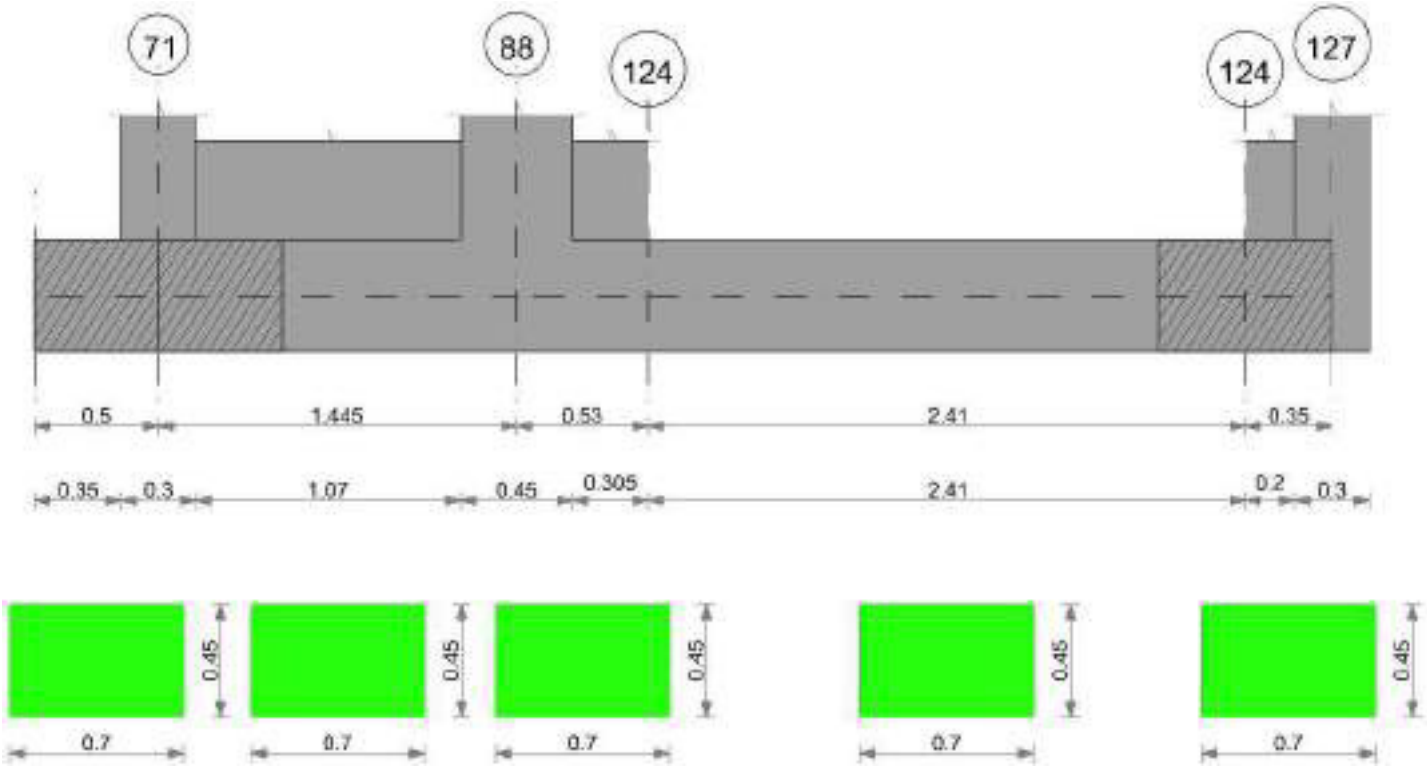
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	371	SLE RA 20	0.05	0.001	371	356	SLE RA 21	0.05	0	371	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	371	SLE RA 1	0.05	0	371	371	SLE RA 1	0.05	0	371	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	371	SLE RA 1	0.05	0	371	371	SLE RA 1	0.05	0	371	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	371	356	SLE RA 21	0.19	0	371	SLE RA 1	0.1	0	371	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	371	356	SLE RA 1	0.19	0	371	SLE RA 1	0.1	0	371	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	371	356	SLE RA 1	0.19	0	371	SLE RA 1	0.1	0	371	SLE RA 1	Si

CORDOLO 18

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

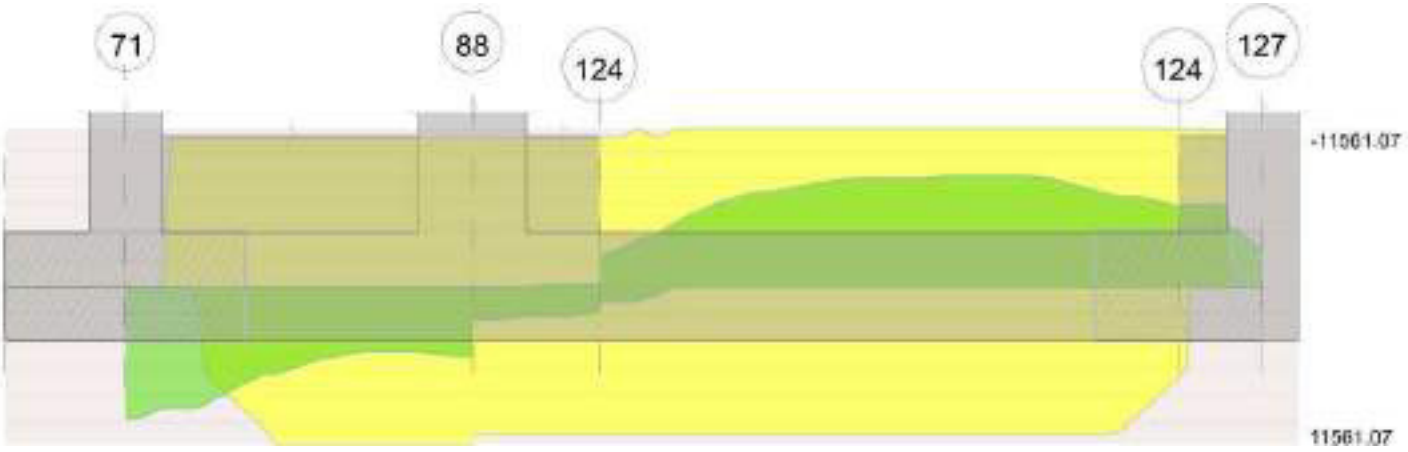
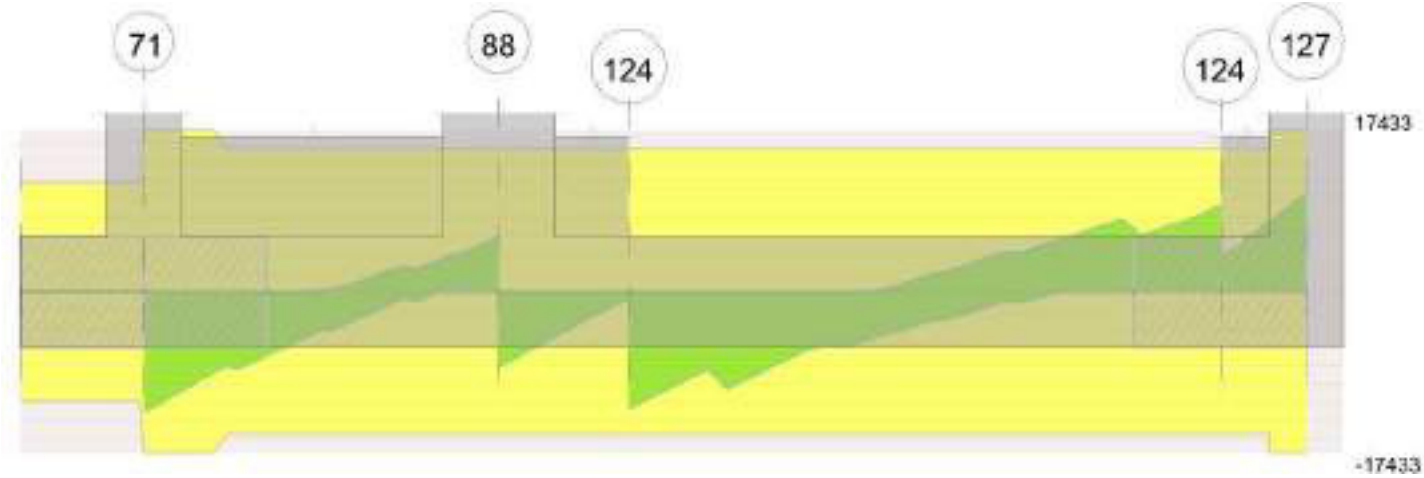


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 694, 693, 692, 691, 690, 689

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052							-97.38	SLU 42	-2051.7	-11561.07	0.116	5.63	Si
1.21	0.000763	0.052	0.000763	0.052							-7816.91	SLU 84	-7921.46	-11561.07	0.116	1.46	Si
1.77	0.000763	0.052	0.000763	0.052							-7599.34	SLU 84	-8119.11	-11561.07	0.116	1.42	Si
2.41	0.000763	0.052	0.000465	0.052							-4374.31	SLU 83	-5754.94	-11541.17	0.112	2.01	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	1115.93	SLV 16	1115.93	10870.29	0.203	9.74	-1161.68	SLV 1	-2293.66	-10870.29	0.203	4.74	Si
1.21	0.000763	0.052	0.000763	0.052							-5611.08	SLV 5	-6040.11	-10870.29	0.203	1.8	Si
1.69	0.000763	0.052	0.000763	0.052							-5881.02	SLV 5	-6190.92	-10870.29	0.203	1.76	Si
2.41	0.000763	0.052	0.000465	0.052							-3639.58	SLV 15	-4182.91	-10874.01	0.207	2.6	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	465.94	SLD 16	465.94	10870.29	0.203	23.33	-511.68	SLD 1	-1748.58	-10870.29	0.203	6.22	Si
1.21	0.000763	0.052	0.000763	0.052							-5388.11	SLD 5	-5600.62	-10870.29	0.203	1.94	Si
1.69	0.000763	0.052	0.000763	0.052							-5537.04	SLD 5	-5754.95	-10870.29	0.203	1.89	Si
2.41	0.000763	0.052	0.000465	0.052							-3216.79	SLD 15	-3983.71	-10874.01	0.207	2.73	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-12672	SLU 83	-12672	-10870	-88449	-15418	-15418	1	1.22	Si
1.21	0.000011	0.000763	0	-1232	SLU 83	-1232	-10870	-88449	-15418	-15418	1	12.51	Si
2.41	0.000011	0.000763	0	9362	SLU 84	9362	10870	88449	15418	15418	1	1.65	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-9661	SLV 13	-9661	-10870	-88449	-15418	-15418	1	1.6	Si
1.21	0.000011	0.000763	0	1632	SLV 1	1632	10870	88449	15418	15418	1	9.45	Si
1.21	0.000011	0.000763	0	-3331	SLV 16	-3331	-10870	-88449	-15418	-15418	1	4.63	Si
2.41	0.000011	0.000763	0	9067	SLV 5	9067	10870	88449	15418	15418	1	1.7	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-9004	SLD 13	-9004	-10870	-88449	-15418	-15418	1	1.71	Si
1.21	0.000011	0.000763	0	213	SLD 1	213	10870	88449	15418	15418	1	72.39	Si
1.21	0.000011	0.000763	0	-1913	SLD 16	-1913	-10870	-88449	-15418	-15418	1	8.06	Si
2.41	0.000011	0.000763	0	7519	SLD 5	7519	10870	88449	15418	15418	1	2.05	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-63.33	21	-1504.53	56410	1494000	846147	36000000	-22.87	2	-1337.96	50165	1120500			Si
1.21	-5754.07	21	-5832.25	218671	1494000	3280060	36000000	-5213.43	2	-5279.02	197928	1120500			Si
2.41	-3215.11	20	-4235.85	164176	1494000	2412264	36000000	-2899.9	2	-3834.41	148617	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 71 - 88, sezione R 70x45, aste 699, 698, 697, 696

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3312	SLU 83	0.031	5824	8547	SLU 83	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.15	0.41	0.0004	3334	SLU 83	0.031	5824	8604	SLU 83	15877	Si
0.72	0.41	0.0004	3337	SLU 83	0.031	5824	8613	SLU 83	15877	Si
1.22	0.41	0.0004	3263	SLU 83	0.031	5824	8420	SLU 83	15877	Si
1.45	0.41	0.0004	3210	SLU 83	0.031	5824	8284	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2456	SLD 1	0.102	6505	6338	SLD 1	15877	Si
0.15	0.41	0.0004	2464	SLD 1	0.102	6505	6358	SLD 1	15877	Si
0.72	0.41	0.0004	2429	SLD 1	0.102	6505	6269	SLD 1	15877	Si
1.22	0.41	0.0004	2341	SLD 1	0.102	6505	6040	SLD 1	15877	Si
1.45	0.41	0.0004	2287	SLD 1	0.102	6505	5903	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2435	SLE RA 20	68710	1494000	852003	36000000	2206	SLE QP 2	62230	1120500	Si
0.15	0.41	0.00000367	2451	SLE RA 20	69168	1494000	857686	36000000	2220	SLE QP 2	62644	1120500	Si
0.72	0.41	0.00000367	2454	SLE RA 20	69246	1494000	858656	36000000	2222	SLE QP 2	62704	1120500	Si
1.22	0.41	0.00000367	2399	SLE RA 20	67702	1494000	839508	36000000	2172	SLE QP 2	61287	1120500	Si
1.45	0.41	0.00000367	2361	SLE RA 20	66606	1494000	825918	36000000	2136	SLE QP 2	60282	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 88 - 124, sezione R 70x45, asta 695

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3210	SLU 83	0.031	5824	8284	SLU 83	15877	Si
0.23	0.41	0.0004	3155	SLU 83	0.031	5824	8141	SLU 83	15877	Si
0.26	0.41	0.0004	3144	SLU 83	0.031	5824	8114	SLU 83	15877	Si
0.53	0.41	0.0004	3073	SLU 83	0.031	5824	7929	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2287	SLD 1	0.102	6505	5903	SLD 1	15877	Si
0.23	0.41	0.0004	2233	SLD 1	0.102	6505	5761	SLD 1	15877	Si
0.26	0.41	0.0004	2223	SLD 1	0.102	6505	5736	SLD 1	15877	Si
0.53	0.41	0.0004	2154	SLD 1	0.102	6505	5560	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2361	SLE RA 20	66606	1494000	825918	36000000	2136	SLE QP 2	60282	1120500	Si
0.23	0.41	0.00000367	2320	SLE RA 20	65457	1494000	811670	36000000	2099	SLE QP 2	59228	1120500	Si
0.26	0.41	0.00000367	2312	SLE RA 20	65243	1494000	809011	36000000	2092	SLE QP 2	59032	1120500	Si
0.53	0.41	0.00000367	2259	SLE RA 20	63752	1494000	790524	36000000	2044	SLE QP 2	57663	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 694, 693, 692, 691, 690, 689

Campata 5 tra i fili 124 - 127, sezione R 70x45, asta 688

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3184	SLU 84	0.031	5824	8218	SLU 84	15877	Si
0.18	0.41	0.0004	3299	SLU 84	0.031	5824	8513	SLU 84	15877	Si
0.2	0.41	0.0004	3316	SLU 84	0.031	5824	8558	SLU 84	15877	Si
0.35	0.41	0.0004	3426	SLU 84	0.031	5824	8841	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2176	SLD 9	0.102	6505	5616	SLD 9	15877	Si
0.18	0.41	0.0004	2259	SLD 9	0.102	6505	5829	SLD 9	15877	Si
0.2	0.41	0.0004	2271	SLD 9	0.102	6505	5861	SLD 9	15877	Si
0.35	0.41	0.0004	2350	SLD 9	0.102	6505	6063	SLD 9	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2341	SLE RA 21	66059	1494000	819137	36000000	2109	SLE QP 2	59511	1120500	Si
0.18	0.41	0.00000367	2425	SLE RA 21	68432	1494000	848561	36000000	2184	SLE QP 2	61634	1120500	Si
0.2	0.41	0.00000367	2438	SLE RA 21	68796	1494000	853074	36000000	2196	SLE QP 2	61960	1120500	Si
0.35	0.41	0.00000367	2519	SLE RA 21	71072	1494000	881289	36000000	2268	SLE QP 2	63998	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	383	SLE RA 21	0.05	0.001	383	371	SLE RA 21	0.05	0	375	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	383	SLE RA 1	0.05	0	383	383	SLE RA 1	0.05	0	382	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	383	SLE RA 1	0.05	0	383	383	SLE RA 1	0.05	0	382	SLE RA 1	0.0033	0	SLE RA 1	Si

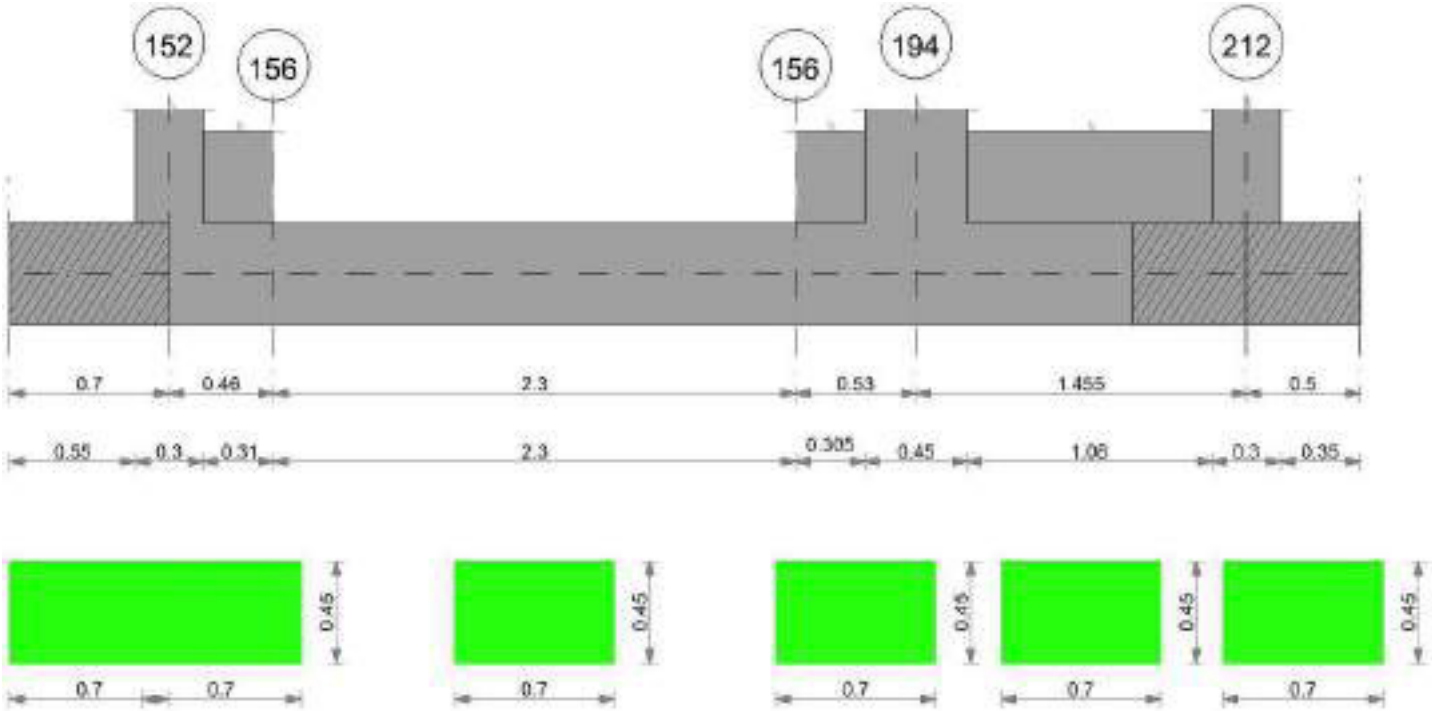
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	375	371	SLE RA 21	0.19	0	382	SLE RA 21	0.1	0	376	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	383	382	SLE RA 1	0.19	0	383	SLE RA 1	0.1	0	382	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	383	382	SLE RA 1	0.19	0	383	SLE RA 1	0.1	0	382	SLE RA 1	Si

CORDOLO 19

Geometria



Caratteristiche dei materiali

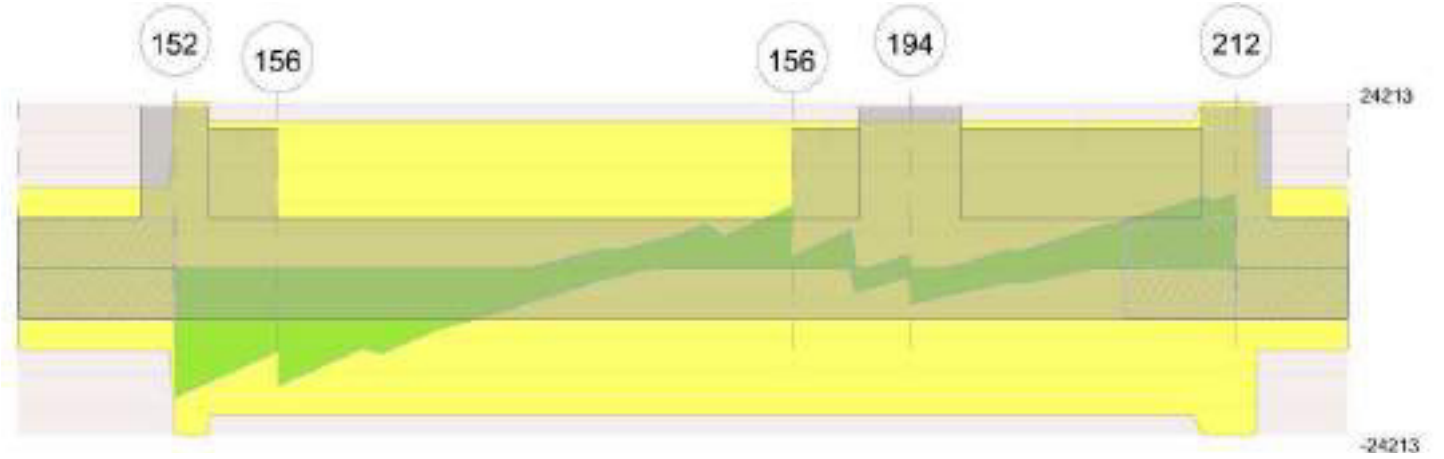
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 663, 662, 661, 660, 659, 658

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	3259.16	SLU 84	3259.16	11561.07	0.116	3.55							Si
1	0.000763	0.052	0.000763	0.052							-5293.42	SLU 84	-5656.31	-11561.07	0.116	2.04	Si
1.15	0.000763	0.052	0.000763	0.052							-5176.5	SLU 83	-5656.31	-11561.07	0.116	2.04	Si
2.3	0.000763	0.052	0.000763	0.052							-868.36	SLU 84	-2240.1	-11561.07	0.116	5.16	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	2797.5	SLV 10	2797.5	10870.29	0.203	3.89							Si
1.15	0.000763	0.052	0.000763	0.052							-3982.23	SLV 14	-4892.94	-10870.29	0.203	2.22	Si
1.3	0.000763	0.052	0.000763	0.052							-4567.78	SLV 14	-4919.3	-10870.29	0.203	2.21	Si
2.3	0.000763	0.052	0.000763	0.052	671.22	SLV 3	671.22	10870.29	0.203	16.19	-1755.68	SLV 14	-2554.81	-10870.29	0.203	4.25	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	2442.22	SLD 10	2442.22	10870.29	0.203	4.45							Si
1	0.000763	0.052	0.000763	0.052							-3931.46	SLD 14	-4258.17	-10870.29	0.203	2.55	Si
1.15	0.000763	0.052	0.000763	0.052							-3685.67	SLD 14	-4258.17	-10870.29	0.203	2.55	Si
2.3	0.000763	0.052	0.000763	0.052							-1062.85	SLD 14	-1934.88	-10870.29	0.203	5.62	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000153	0.000763	0	-16999	SLU 84	-16999	-10870	-88449	-21415	-21415	1	1.26	Si
1.15	0.0000153	0.000763	0	-3365	SLU 84	-3365	-10870	-88449	-21415	-21415	1	6.36	Si
2.3	0.0000153	0.000763	0	9000	SLU 83	9000	10870	88449	21415	21415	1	2.38	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000153	0.000763	0	-14581	SLV 14	-14581	-10870	-88449	-21415	-21415	1	1.47	Si
1.15	0.0000153	0.000763	0	181	SLV 3	181	10870	88449	21415	21415	1	118.02	Si
1.15	0.0000153	0.000763	0	-4605	SLV 14	-4605	-10870	-88449	-21415	-21415	1	4.65	Si
2.3	0.0000153	0.000763	0	6798	SLV 2	6798	10870	88449	21415	21415	1	3.15	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000153	0.000763	0	-12778	SLD 14	-12778	-10870	-88449	-21415	-21415	1	1.68	Si
1.15	0.0000153	0.000763	0	-3238	SLD 14	-3238	-10870	-88449	-21415	-21415	1	6.61	Si
2.3	0.0000153	0.000763	0	6380	SLD 2	6380	10870	88449	21415	21415	1	3.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2404.62	21	2404.62	90157	1494000	1352357	36000000	2166.09	2	2166.09	81214	1120500			Si
1.15	-3810.56	20	-4166.22	156205	1494000	2343080	36000000	-3462.61	2	-3781.27	141773	1120500			Si
2.3	-633.32	21	-1644.24	61648	1494000	924720	36000000	-542.23	2	-1468.75	55068	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 152 - 156, sezione R 70x45, asta 664

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3185	SLU 84	0.043	8050	8221	SLU 84	15877	Si
0.15	0.41	0.0005	3173	SLU 84	0.043	8050	8190	SLU 84	15877	Si
0.23	0.41	0.0005	3164	SLU 84	0.043	8050	8166	SLU 84	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.46	0.41	0.0005	3131	SLU 84	0.043	8050	8079	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2179	SLD 10	0.12	8968	5622	SLD 10	15877	Si
0.15	0.41	0.0005	2171	SLD 10	0.12	8968	5603	SLD 10	15877	Si
0.23	0.41	0.0005	2165	SLD 10	0.12	8968	5587	SLD 10	15877	Si
0.46	0.41	0.0005	2142	SLD 10	0.12	8968	5529	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000509	2342	SLE RA 21	64882	1494000	804538	36000000	2112	SLE QP 2	58495	1120500	Si
0.15	0.41	0.00000509	2333	SLE RA 21	64639	1494000	801517	36000000	2104	SLE QP 2	58284	1120500	Si
0.23	0.41	0.00000509	2327	SLE RA 21	64455	1494000	799246	36000000	2098	SLE QP 2	58123	1120500	Si
0.46	0.41	0.00000509	2302	SLE RA 21	63765	1494000	790683	36000000	2076	SLE QP 2	57512	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 663, 662, 661, 660, 659, 658

Campata 4 tra i fili 156 - 194, sezione R 70x45, aste 657, 656

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3153	SLU 84	0.043	8050	8137	SLU 84	15877	Si
0.26	0.41	0.0005	3218	SLU 83	0.043	8050	8306	SLU 83	15877	Si
0.3	0.41	0.0005	3228	SLU 83	0.043	8050	8330	SLU 83	15877	Si
0.53	0.41	0.0005	3276	SLU 83	0.043	8050	8456	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2227	SLD 14	0.12	8968	5747	SLD 14	15877	Si
0.26	0.41	0.0005	2289	SLD 14	0.12	8968	5907	SLD 14	15877	Si
0.3	0.41	0.0005	2298	SLD 14	0.12	8968	5931	SLD 14	15877	Si
0.53	0.41	0.0005	2347	SLD 14	0.12	8968	6057	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000509	2319	SLE RA 21	64239	1494000	796567	36000000	2099	SLE QP 2	58149	1120500	Si
0.26	0.41	0.00000509	2367	SLE RA 20	65571	1494000	813078	36000000	2143	SLE QP 2	59374	1120500	Si
0.3	0.41	0.00000509	2374	SLE RA 20	65763	1494000	815464	36000000	2150	SLE QP 2	59551	1120500	Si
0.53	0.41	0.00000509	2410	SLE RA 20	66755	1494000	827761	36000000	2183	SLE QP 2	60462	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 194 - 212, sezione R 70x45, aste 655, 654, 653, 652

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3276	SLU 83	0.043	8050	8456	SLU 83	15877	Si
0.23	0.41	0.0005	3315	SLU 83	0.043	8050	8555	SLU 83	15877	Si
0.73	0.41	0.0005	3372	SLU 83	0.043	8050	8702	SLU 83	15877	Si
1.3	0.41	0.0005	3373	SLU 83	0.043	8050	8706	SLU 83	15877	Si
1.45	0.41	0.0005	3359	SLU 83	0.043	8050	8668	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2347	SLD 14	0.12	8968	6057	SLD 14	15877	Si
0.23	0.41	0.0005	2386	SLD 14	0.12	8968	6158	SLD 14	15877	Si
0.73	0.41	0.0005	2453	SLD 14	0.12	8968	6331	SLD 14	15877	Si
1.3	0.41	0.0005	2481	SLD 14	0.12	8968	6402	SLD 14	15877	Si
1.45	0.41	0.0005	2475	SLD 14	0.12	8968	6388	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000509	2410	SLE RA 20	66755	1494000	827761	36000000	2183	SLE QP 2	60462	1120500	Si
0.23	0.41	0.00000509	2438	SLE RA 20	67541	1494000	837510	36000000	2209	SLE QP 2	61183	1120500	Si
0.73	0.41	0.00000509	2480	SLE RA 20	68700	1494000	851879	36000000	2247	SLE QP 2	62248	1120500	Si
1.3	0.41	0.00000509	2481	SLE RA 20	68720	1494000	852128	36000000	2248	SLE QP 2	62271	1120500	Si
1.45	0.41	0.00000509	2470	SLE RA 20	68417	1494000	848369	36000000	2238	SLE QP 2	61996	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

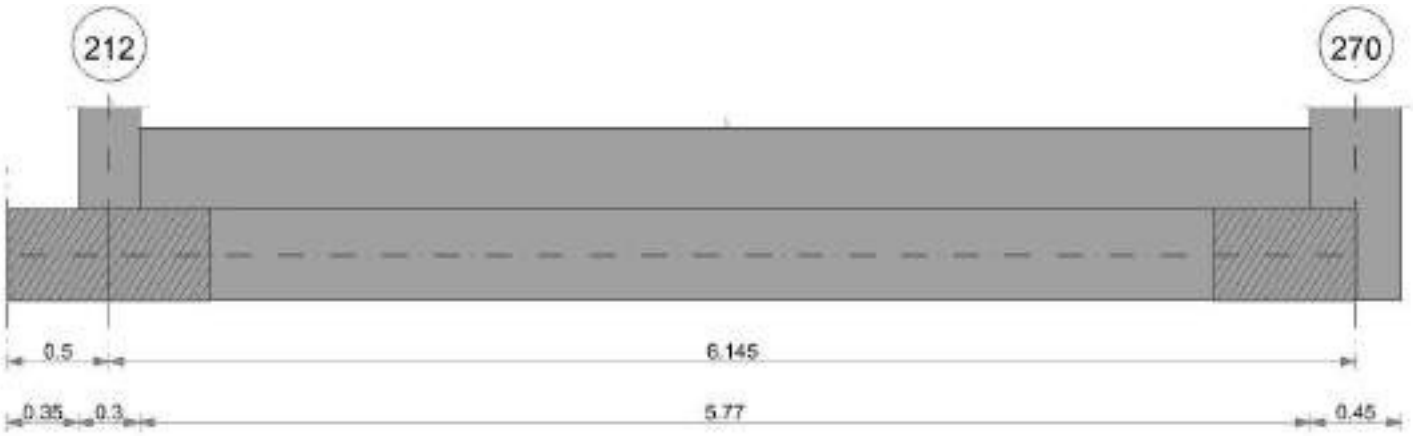
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	409	SLE RA 21	0.05	0.001	409	397	SLE RA 21	0.05	0	408	SLE RA 21	0.0033	0	SLE RA 5	Si
D	0.05	0	397	SLE RA 1	0.05	0	397	397	SLE RA 1	0.05	0	400	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	397	SLE RA 1	0.05	0	397	397	SLE RA 1	0.05	0	400	SLE RA 1	0.0033	0	SLE RA 1	Si

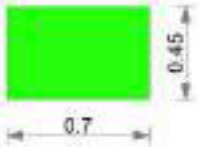
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	397	400	SLE RA 21	0.19	0.01	408	SLE RA 21	0.1	0	400	SLE RA 5	Si
D	0.19	0	SLE RA 1	0.19	0	397	400	SLE RA 1	0.19	0	397	SLE RA 1	0.1	0	400	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	397	400	SLE RA 1	0.19	0	397	SLE RA 1	0.1	0	400	SLE RA 1	Si

CORDOLO 20

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

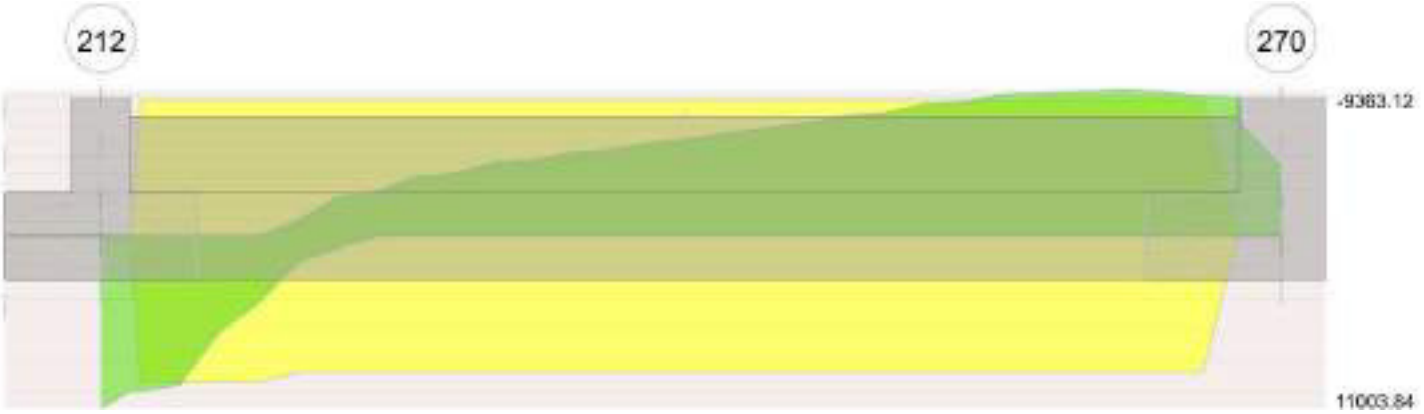
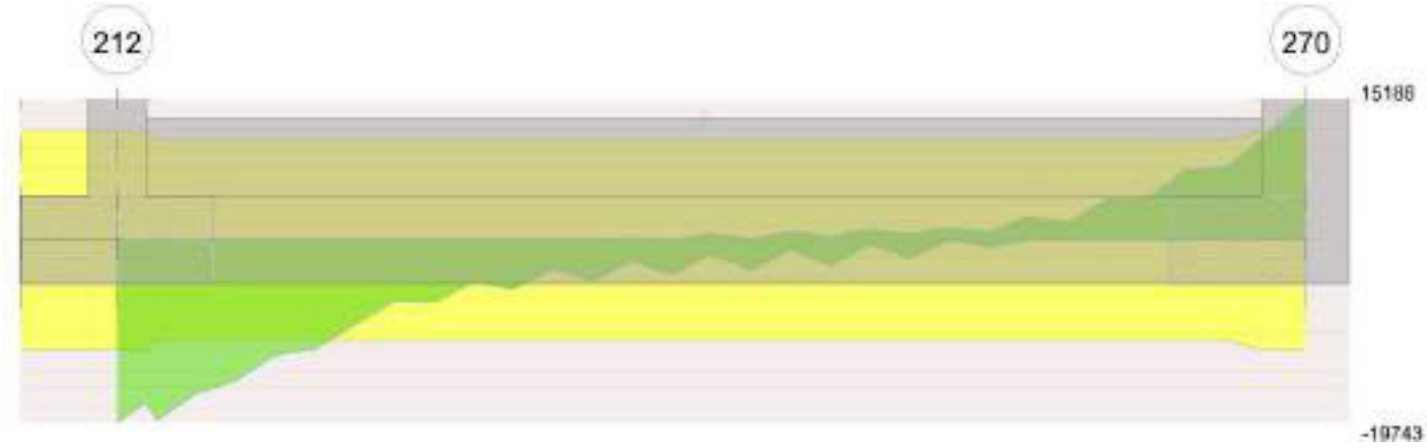


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 212 - 270, sezione R 70x45, aste 312, 311, 310, 309, 308, 307, 306, 305, 304, 303, 302, 301, 300, 299, 298

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
3.07	0.41	0.0002	2360	SLV 14	0.086	2696	6090	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2442	SLD 14	0.071	3120	6301	SLD 14	15877	Si
0.15	0.41	0.0002	2427	SLD 14	0.071	3120	6264	SLD 14	15877	Si
3.07	0.41	0.0002	1904	SLD 14	0.071	3120	4914	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000174	2414	SLE RA 20	69878	1494000	866488	36000000	2188	SLE QP 2	63317	1120500	Si
0.15	0.41	0.00000174	2394	SLE RA 20	69280	1494000	859072	36000000	2169	SLE QP 2	62773	1120500	Si
3.07	0.41	0.00000174	1727	SLE RA 20	49985	1494000	619810	36000000	1563	SLE QP 2	45241	1120500	Si
5.92	0.41	0.00000174	2623	SLE RA 20	75930	1494000	941535	36000000	2385	SLE QP 2	69028	1120500	Si
6.15	0.41	0.00000174	2784	SLE RA 20	80566	1494000	999023	36000000	2532	SLE QP 2	73270	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
312,311,310,309,308,307,306,305,304,303,302,301,300,299,298	6.37	1.3	SLU 83	ST	BT	2.3	270865	90111	3.01	Si
312,311,310,309,308,307,306,305,304,303,302,301,300,299,298	6.37	1.3	SLV 14	SIS	BT	2.3	236824	86304	2.74	Si
312,311,310,309,308,307,306,305,304,303,302,301,300,299,298	6.37	1.3	SLD 14	SIS	BT	2.3	254145	72414	3.51	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-87	-90111	12057.89	1413.27	0	0	0.02	0.13	1.03	6.34	1496	2060	0	14430	
0	-2907	-86304	13677.27	21484.27	0	-2	0.25	0.16	0.98	5.87	1496	2060	0	14430	0.07
0	-1282	-72414	10501.22	9777.36	0	-1	0.14	0.15	1.01	6.1	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

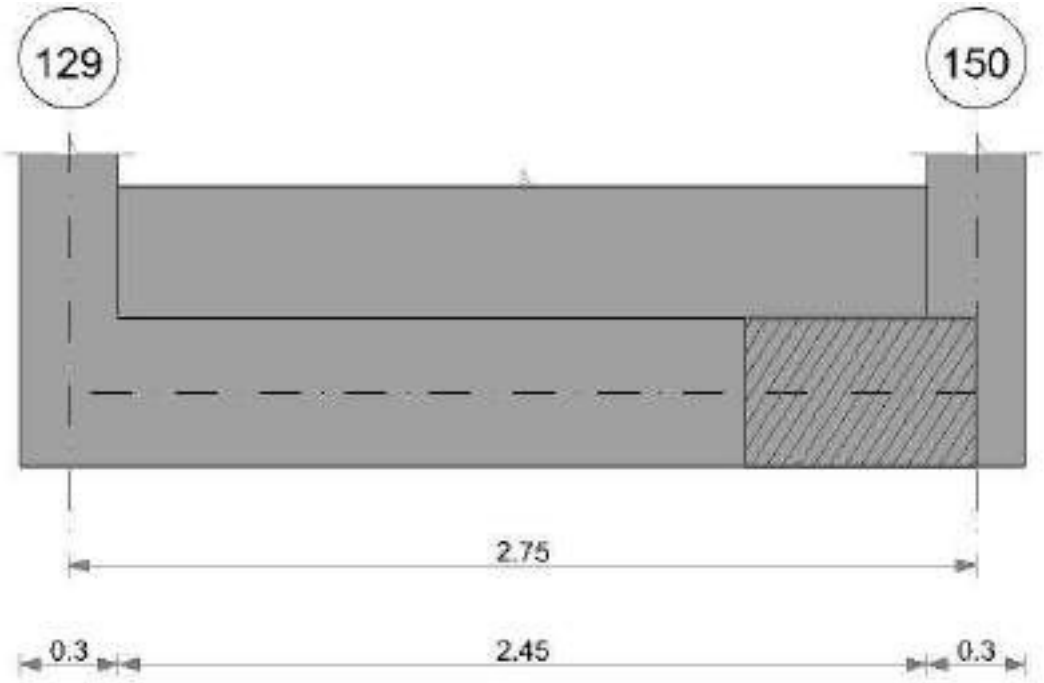
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	394	SLE RA 21	0.05	0.001	394	352	SLE RA 21	0.05	0	352	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	352	SLE RA 1	0.05	0	352	352	SLE RA 1	0.05	0	352	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	352	SLE RA 1	0.05	0	352	352	SLE RA 1	0.05	0	352	SLE RA 1	0.0033	0	SLE RA 1	Si

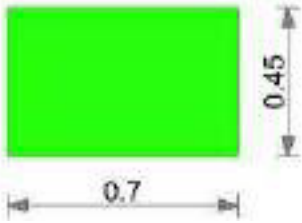
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	352	394	SLE RA 21	0.19	0	352	SLE RA 1	0.1	0	352	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	352	394	SLE RA 1	0.19	0	352	SLE RA 1	0.1	0	352	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	352	394	SLE RA 1	0.19	0	352	SLE RA 1	0.1	0	352	SLE RA 1	Si

CORDOLO 21

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

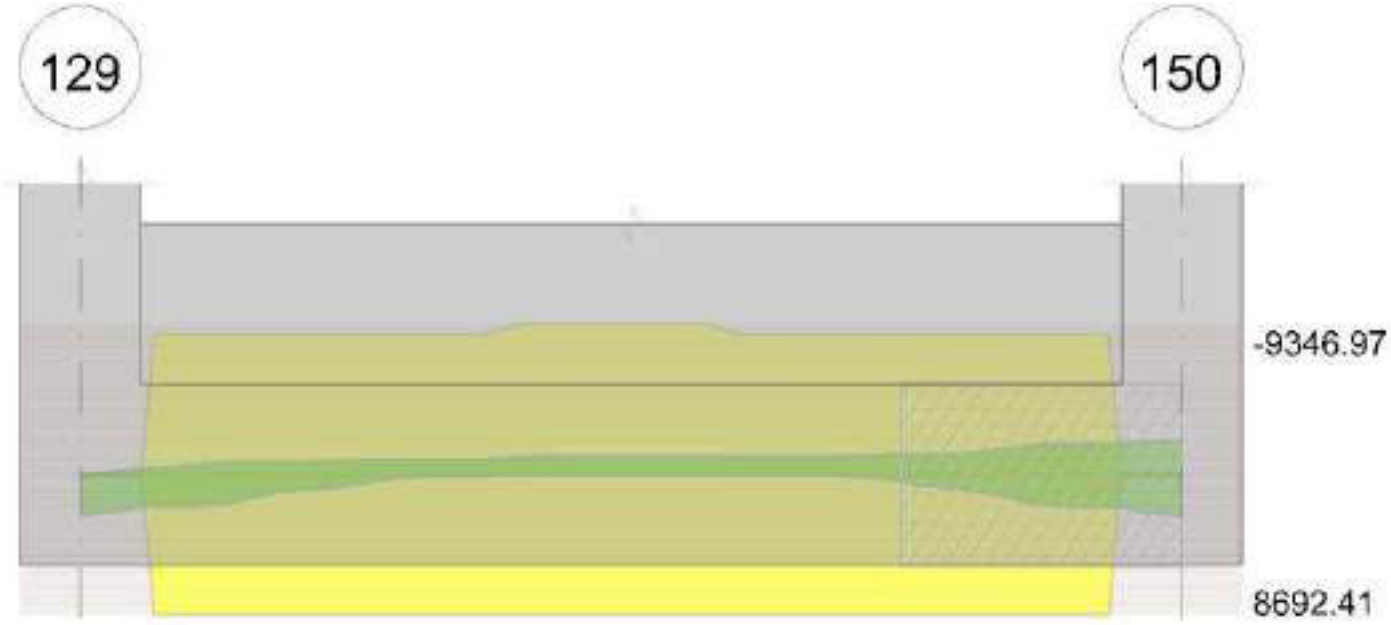
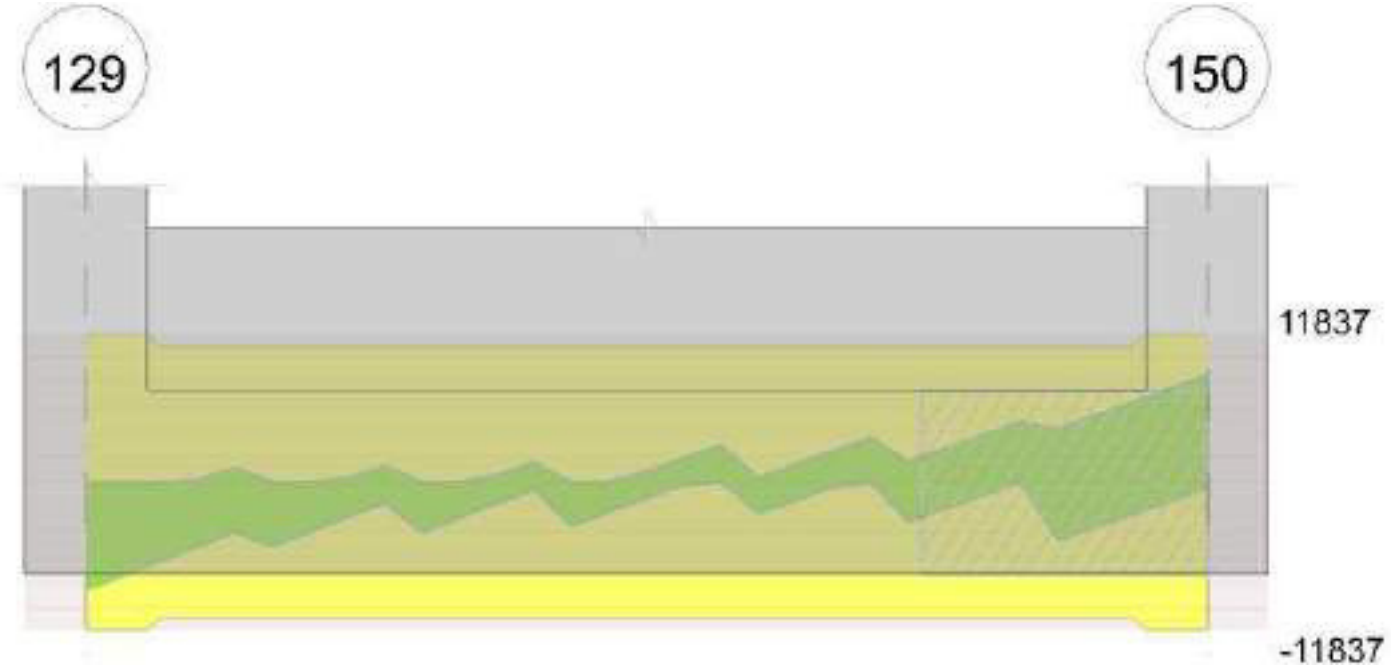


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 129 - 150, sezione R 70x45, aste 681, 682, 683, 684, 685, 686, 687

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2968	SLU 84	0.029	5501	8794	SLU 84	15877	Si
0.15	0.41	0.0003	2958	SLU 84	0.029	5501	8765	SLU 84	15877	Si
1.38	0.41	0.0003	2873	SLU 84	0.029	5501	8514	SLU 84	15877	Si
2.6	0.41	0.0003	2839	SLU 84	0.029	5501	8411	SLU 84	15877	Si
2.75	0.41	0.0003	2836	SLU 84	0.029	5501	8403	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2091	SLD 9	0.099	6147	6197	SLD 9	15877	Si
0.15	0.41	0.0003	2085	SLD 9	0.099	6147	6177	SLD 9	15877	Si
1.38	0.41	0.0003	2025	SLD 9	0.099	6147	6001	SLD 9	15877	Si
2.6	0.41	0.0003	2009	SLD 10	0.099	6147	5954	SLD 10	15877	Si
2.75	0.41	0.0003	2009	SLD 10	0.099	6147	5953	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000346	2185	SLE RA 21	61816	1494000	766519	36000000	1975	SLE QP 2	55877	1120500	Si
0.15	0.41	0.00000346	2178	SLE RA 21	61612	1494000	763987	36000000	1968	SLE QP 2	55689	1120500	Si
1.38	0.41	0.00000346	2115	SLE RA 21	59839	1494000	742002	36000000	1912	SLE QP 2	54084	1120500	Si
2.6	0.41	0.00000346	2090	SLE RA 21	59118	1494000	733062	36000000	1890	SLE QP 2	53465	1120500	Si
2.75	0.41	0.00000346	2088	SLE RA 21	59067	1494000	732435	36000000	1888	SLE QP 2	53427	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
681,682,683,684,685,686,687	3.05	1.3	SLU 84	ST	BT	2.3	167239	54364	3.08	Si
681,682,683,684,685,686,687	3.05	1.3	SLV 9	SIS	BT	2.3	152622	41213	3.7	Si
681,682,683,684,685,686,687	3.05	1.3	SLD 6	SIS	BT	2.3	160217	38729	4.14	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
262	166	-54364	537.85	-370.91	0	0	-0.01	0.01	1.28	3.04	1496	2060	0	14430	
2398	-2995	-41213	2060.6	756.08	3	-4	0.02	0.05	1.2	3.01	1496	2060	0	14430	0.07
-930	-1165	-38729	1072.8	-752.94	-1	-2	-0.02	0.03	1.24	3.01	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

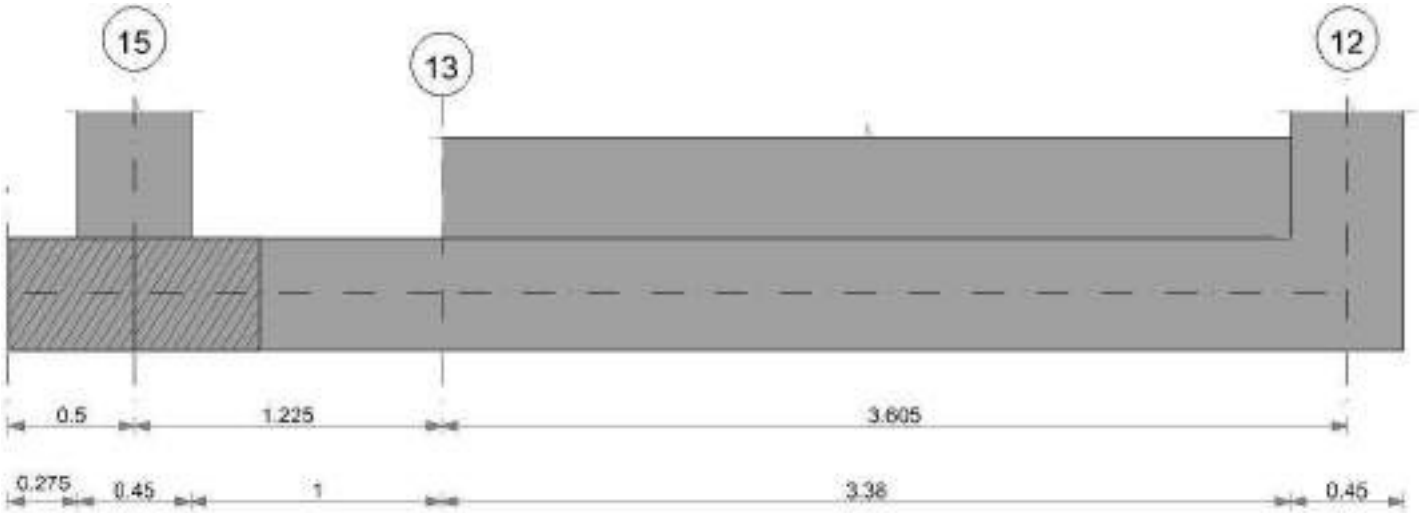
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	217	SLE RA 21	0.05	0	217	210	SLE RA 21	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	217	SLE RA 1	0.05	0	217	217	SLE RA 1	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	217	SLE RA 1	0.05	0	217	217	SLE RA 1	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	217	210	SLE RA 21	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	217	210	SLE RA 1	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	217	210	SLE RA 1	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si

CORDOLO 22

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

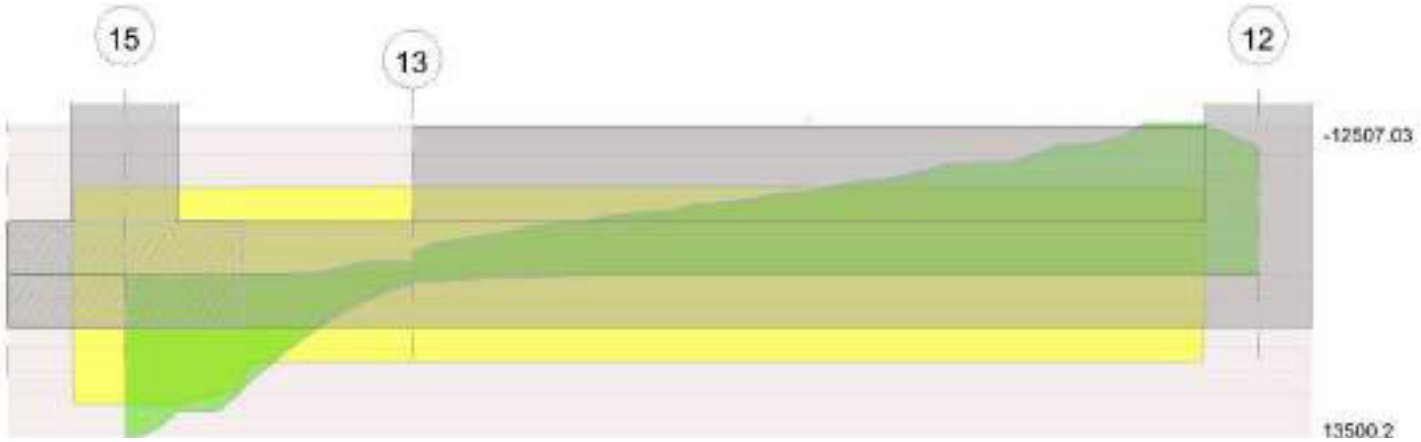
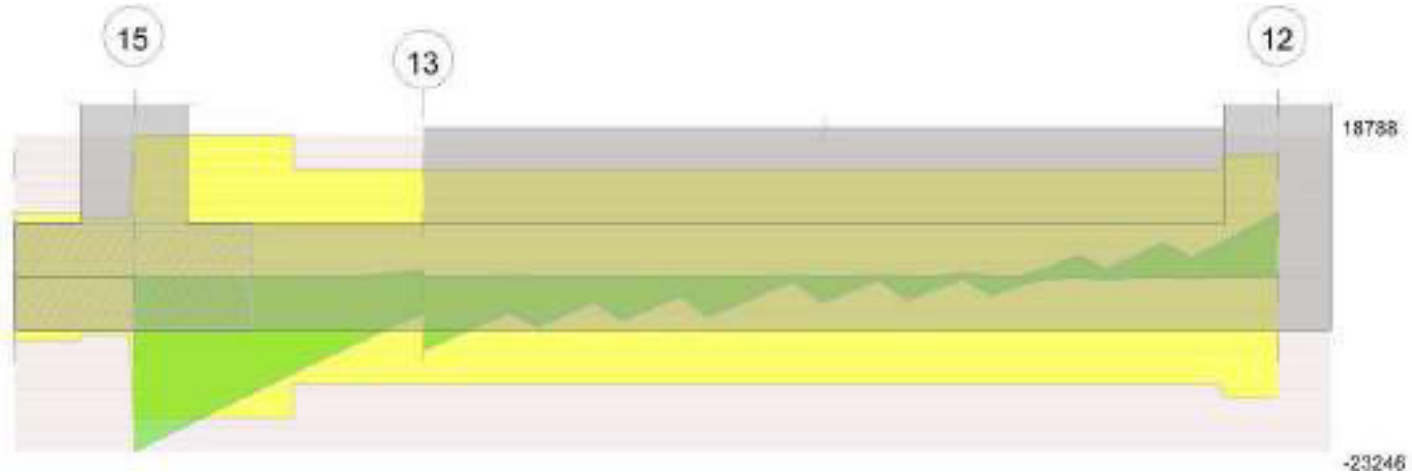


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 297

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	13071.85	SLU 84	10906.47	11254.02	0.132	1.03							Si
0.23	0.000509	0.052	0.000763	0.052	9083.51	SLU 84	9083.51	11254.02	0.132	1.24							Si
0.61	0.000509	0.052	0.000509	0.052	3818.08	SLU 84	6007.41	7755.45	0.113	1.29							Si
1.23	0.000509	0.052	0.000509	0.052	-269.78	SLU 2	299.34	7755.45	0.113	25.91	-458.7	SLU 83	-458.7	-7755.45	0.113	16.91	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.23	0.000509	0.052	0.000509	0.052	514.4	SLV 9	768.98	7266.79	0.197	9.45	-1118.55	SLV 8	-1118.55	-7266.79	0.197	6.5	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	11886.1	SLD 4	9940.05	10716.86	0.238	1.08							Si
0.23	0.000509	0.052	0.000763	0.052	8291.84	SLD 4	8291.84	10716.86	0.238	1.29							Si
0.61	0.000509	0.052	0.000509	0.052	3512.15	SLD 4	5504.91	7266.79	0.197	1.32							Si
1.23	0.000509	0.052	0.000509	0.052	56.28	SLD 9	446.5	7266.79	0.197	16.28	-660.43	SLD 8	-660.43	-7266.79	0.197	11	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-19275	SLU 83	-19275	-8381	-63178	-18788	-18788	1	0.97	Si
0.23	0.0000134	0.000509	0	-16205	SLU 83	-16205	-7764	-63178	-18788	-18788	1	1.16	Si
0.61	0.0000134	0.000509	0	-10979	SLU 83	-10979	-7764	-63178	-18788	-18788	1	1.71	Si
1.23	0.0000102	0.000509	0	-3056	SLU 83	-3056	-7764	-63178	-14244	-14244	1	4.66	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-23246	SLV 4	-23246	-8381	-63178	-18788	-18788	1	0.81	Si
0.61	0.0000134	0.000509	0	-13754	SLV 4	-13754	-7764	-63178	-18788	-18788	1	1.37	Si
1.23	0.0000102	0.000509	0	810	SLV 13	810	7764	63178	14244	14244	1	17.59	Si
1.23	0.0000102	0.000509	0	-4796	SLV 4	-4796	-7764	-63178	-14244	-14244	1	2.97	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-17337	SLD 4	-17337	-8381	-63178	-18788	-18788	1	1.08	Si
0.23	0.0000134	0.000509	0	-14651	SLD 4	-14651	-7764	-63178	-18788	-18788	1	1.28	Si
0.61	0.0000134	0.000509	0	-10081	SLD 4	-10081	-7764	-63178	-18788	-18788	1	1.86	Si
1.23	0.0000102	0.000509	0	-3195	SLD 4	-3195	-7764	-63178	-14244	-14244	1	4.46	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	9609.8	21	8016.23	721234	1494000	29164753	36000000	8732.58	2	7281.07	655091	1120500			Si
0.23	6675.04	21	6675.04	600565	1494000	24285213	36000000	6060.18	2	6060.18	545245	1120500			Si
0.61	2802.52	21	4412.29	233381	1494000	3500716	36000000	2537.61	2	4001.13	211634	1120500			Si
1.23	-335.96	20	-335.96	17770	1494000	266554	36000000	-302.08	2	-302.08	15978	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.23	inferiore	0.375	0.00071	0.000265	21	0.375	0.00066	0.000247	6	0.375	0.00064	0.000241	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 297

Campata 3 tra i fili 13 - 12, sezione R 50x45, aste 296, 295, 294, 293, 292, 291, 290, 289, 288

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2061	SLV 4	0.145	7698	7170	SLV 4	19893	Si
1.8	0.41	0.0005	1870	SLV 4	0.145	7698	6503	SLV 4	19893	Si
3.38	0.41	0.0005	2438	SLV 4	0.145	7698	8481	SLV 4	19893	Si
3.6	0.41	0.0005	2603	SLV 4	0.145	7698	9055	SLV 4	19893	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1550	SLD 4	0.12	8948	5393	SLD 4	22877	Si
1.8	0.41	0.0005	1400	SLD 4	0.12	8948	4870	SLD 4	22877	Si
3.38	0.41	0.0005	1820	SLD 4	0.12	8948	6331	SLD 4	22877	Si
3.6	0.41	0.0005	1945	SLD 4	0.12	8948	6763	SLD 4	22877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000508	1288	SLE RA 21	35691	1494000	442564	36000000	1169	SLE QP 2	32394	1120500	Si
1.8	0.41	0.00000508	1155	SLE RA 20	32014	1494000	396968	36000000	1049	SLE QP 2	29073	1120500	Si
3.38	0.41	0.00000508	1493	SLE RA 20	41361	1494000	512879	36000000	1358	SLE QP 2	37626	1120500	Si
3.6	0.41	0.00000508	1595	SLE RA 20	44203	1494000	548113	36000000	1452	SLE QP 2	40224	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
297,296,295,294,293,292,291,290,289,288	5.05	1.1	SLU 84	ST	BT	2.3	196047	69146	2.84	Si
297,296,295,294,293,292,291,290,289,288	5.05	1.1	SLV 1	SIS	BT	2.3	163234	75040	2.18	Si
297,296,295,294,293,292,291,290,289,288	5.05	1.1	SLD 1	SIS	BT	2.3	180023	59261	3.04	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1115	-69146	-6600.36	-41.96	0	-1	0	-0.1	0.91	5.05	1496	2060	0	14430	
0	7477	-75040	-11533.34	-2113.45	0	6	-0.03	-0.15	0.79	5	1496	2060	0	14430	0.07
0	2750	-59261	-7481.83	-891.1	0	3	-0.02	-0.13	0.85	5.02	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.05	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

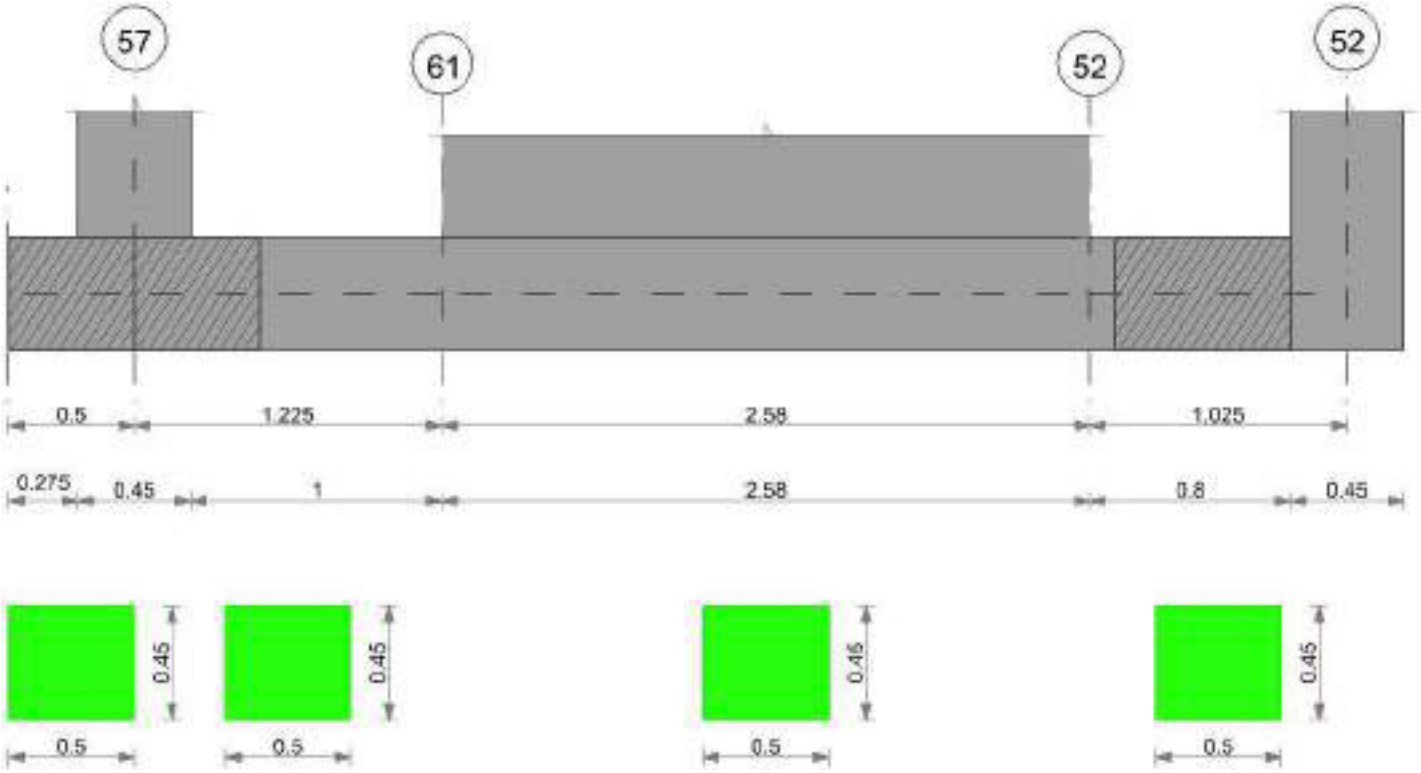
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	621	SLE RA 21	0.05	0	621	969	SLE RA 21	0.05	0	777	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	621	SLE RA 1	0.05	0	621	621	SLE RA 1	0.05	0	777	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	621	SLE RA 1	0.05	0	621	621	SLE RA 1	0.05	0	777	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	621	777	SLE RA 21	0.19	0	621	SLE RA 1	0.1	0	777	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	621	777	SLE RA 1	0.19	0	621	SLE RA 1	0.1	0	777	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	621	777	SLE RA 1	0.19	0	621	SLE RA 1	0.1	0	777	SLE RA 1	Si

CORDOLO 23

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

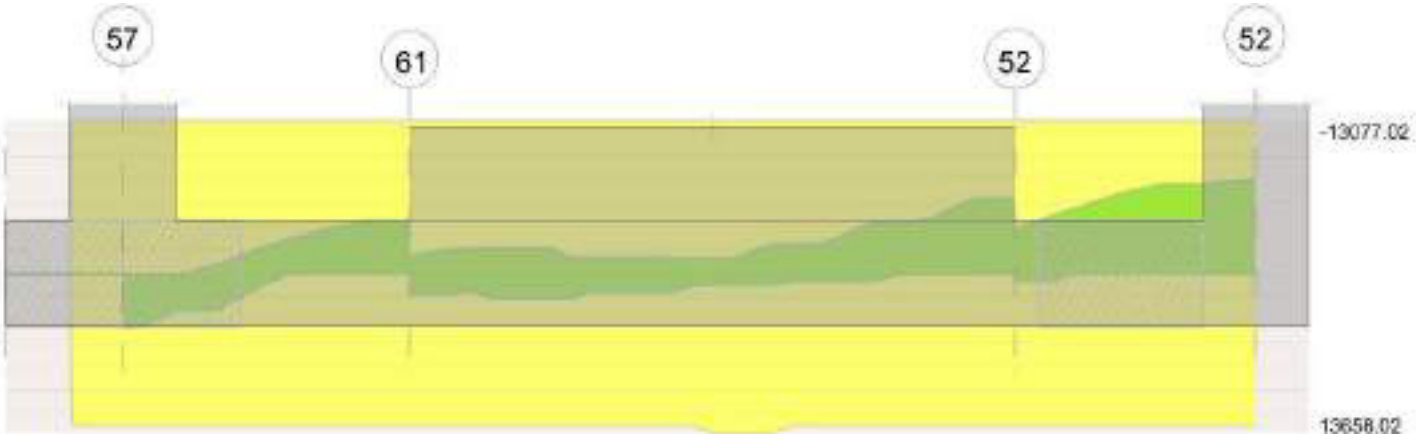


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 371

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6436.22	SLU 83	4672.08	13658.02	0.143	2.92							Si
0.23	0.000942	0.053	0.000942	0.053	3202.03	SLU 84	3202.03	13658.02	0.143	4.27							Si
0.61	0.000942	0.053	0.000942	0.053	-624.61	SLU 2	728.47	13658.02	0.143	18.75	-991.21	SLU 83	-2336.89	-13658.02	0.143	5.84	Si
1.23	0.000942	0.053	0.000942	0.053							-4094.77	SLU 83	-4094.77	-13658.02	0.143	3.34	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6228.81	SLV 4	4610.06	13077.02	0.254	2.84							Si
0.23	0.000942	0.053	0.000942	0.053	3238.06	SLV 4	3238.06	13077.02	0.254	4.04							Si
0.61	0.000942	0.053	0.000942	0.053	-325.9	SLV 5	884.67	13077.02	0.254	14.78	-1022.64	SLV 12	-2317.94	-13077.02	0.254	5.64	Si
1.23	0.000942	0.053	0.000942	0.053							-4490.67	SLV 8	-4490.67	-13077.02	0.254	2.91	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	5114.98	SLD 4	3748.16	13077.02	0.254	3.49							Si
0.23	0.000942	0.053	0.000942	0.053	2599.39	SLD 4	2599.39	13077.02	0.254	5.03							Si
0.61	0.000942	0.053	0.000942	0.053	-520.87	SLD 5	647.26	13077.02	0.254	20.2	-827.67	SLD 12	-1898.81	-13077.02	0.254	6.89	Si
1.23	0.000942	0.053	0.000942	0.053							-3504.44	SLD 8	-3504.44	-13077.02	0.254	3.73	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-15705	SLU 83	-15705	-9278	-63019	-18741	-18741	1	1.19	Si
0.23	0.0000134	0.000942	0	-13069	SLU 83	-13069	-9278	-63019	-18741	-18741	1	1.43	Si
0.61	0.0000134	0.000942	0	-8572	SLU 83	-8572	-9278	-63019	-18741	-18741	1	2.19	Si
1.23	0.0000101	0.000942	0	-1578	SLU 83	-1578	-9278	-63019	-14132	-14132	1	8.95	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-14455	SLV 4	-14455	-9278	-63019	-18741	-18741	1	1.3	Si
0.23	0.0000134	0.000942	0	-12196	SLV 4	-12196	-9278	-63019	-18741	-18741	1	1.54	Si
0.61	0.0000134	0.000942	0	-8343	SLV 4	-8343	-9278	-63019	-18741	-18741	1	2.25	Si
1.23	0.0000101	0.000942	0	1216	SLV 9	1216	9278	63019	14132	14132	1	11.62	Si
1.23	0.0000101	0.000942	0	-3281	SLV 8	-3281	-9278	-63019	-14132	-14132	1	4.31	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-12187	SLD 4	-12187	-9278	-63019	-18741	-18741	1	1.54	Si
0.23	0.0000134	0.000942	0	-10211	SLD 4	-10211	-9278	-63019	-18741	-18741	1	1.84	Si
0.61	0.0000134	0.000942	0	-6842	SLD 4	-6842	-9278	-63019	-18741	-18741	1	2.74	Si
1.23	0.0000101	0.000942	0	-2015	SLD 8	-2015	-9278	-63019	-14132	-14132	1	7.01	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4724.03	20	3427.44	166440	1494000	2496604	36000000	4280.1	2	3102.57	150664	1120500			Si
0.23	2347.22	21	2347.22	113983	1494000	1709749	36000000	2121.68	2	2121.68	103031	1120500			Si
0.61	-733.24	20	-1721.18	83582	1494000	1253736	36000000	-674.27	2	-1570.3	76255	1120500			Si
1.23	-3009.46	20	-3009.46	146142	1494000	2192136	36000000	-2736.11	2	-2736.11	132868	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 364

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-1005.95	SLU 84	-3192.34	-13658.02	0.143	4.28	Si
0.51	0.000942	0.053	0.000942	0.053							-6283.19	SLU 83	-7393.19	-13658.02	0.143	1.85	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.8	0.000942	0.053	0.000942	0.053							-7879.73	SLU 83	-7879.73	-13658.02	0.143	1.73	Si
1.02	0.000942	0.053	0.000942	0.053							-8421.06	SLU 83	-8307.82	-13658.02	0.143	1.64	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	684.4	SLV 12	684.4	13077.02	0.254	19.11	-2132.06	SLV 5	-3680.76	-13077.02	0.254	3.55	Si
0.51	0.000942	0.053	0.000942	0.053							-6076.31	SLV 4	-7130.84	-13077.02	0.254	1.83	Si
0.8	0.000942	0.053	0.000942	0.053							-7602.77	SLV 4	-7602.77	-13077.02	0.254	1.72	Si
1.02	0.000942	0.053	0.000942	0.053							-8156.8	SLV 4	-8045.87	-13077.02	0.254	1.63	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-1338.3	SLD 5	-2821	-13077.02	0.254	4.64	Si
0.51	0.000942	0.053	0.000942	0.053							-5013.12	SLD 4	-5881.37	-13077.02	0.254	2.22	Si
0.8	0.000942	0.053	0.000942	0.053							-6264.47	SLD 4	-6264.47	-13077.02	0.254	2.09	Si
1.02	0.000942	0.053	0.000942	0.053							-6697.46	SLD 4	-6612.38	-13077.02	0.254	1.98	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-13291	SLU 83	-13291	-9278	-63019	-14132	-14132	1	1.06	Si
0.51	0.0000101	0.000942	0	-7293	SLU 83	-7293	-9278	-63019	-14132	-14132	1	1.94	Si
0.8	0.0000101	0.000942	0	-3805	SLU 83	-3805	-9278	-63019	-14132	-14132	1	3.71	Si
1.02	0.0000101	0.000942	0	-979	SLU 83	-979	-9278	-63019	-14132	-14132	1	14.44	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-12372	SLV 4	-12372	-9278	-63019	-14132	-14132	1	1.14	Si
0.51	0.0000101	0.000942	0	-7580	SLV 8	-7580	-9278	-63019	-14132	-14132	1	1.86	Si
0.8	0.0000101	0.000942	0	3	SLV 9	3	9278	63019	14132	14132	1	5310.65	Si
0.8	0.0000101	0.000942	0	-4912	SLV 8	-4912	-9278	-63019	-14132	-14132	1	2.88	Si
1.02	0.0000101	0.000942	0	1763	SLV 5	1763	9278	63019	14132	14132	1	8.01	Si
1.02	0.0000101	0.000942	0	-2875	SLV 12	-2875	-9278	-63019	-14132	-14132	1	4.92	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-10344	SLD 4	-10344	-9278	-63019	-14132	-14132	1	1.37	Si
0.51	0.0000101	0.000942	0	-6010	SLD 8	-6010	-9278	-63019	-14132	-14132	1	2.35	Si
0.8	0.0000101	0.000942	0	-3526	SLD 8	-3526	-9278	-63019	-14132	-14132	1	4.01	Si
1.02	0.0000101	0.000942	0	455	SLD 5	455	9278	63019	14132	14132	1	31.05	Si
1.02	0.0000101	0.000942	0	-1567	SLD 12	-1567	-9278	-63019	-14132	-14132	1	9.02	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-758.55	21	-2361.88	114696	1494000	1720433	36000000	-723.83	2	-2174.93	105617	1120500			Si
0.51	-4625.79	20	-5436.67	427982	1494000	16194850	36000000	-4219.07	2	-4946.43	389389	1120500			Si
0.8	-5791.04	20	-5791.04	455878	1494000	17250424	36000000	-5262.2	2	-5262.2	414247	1120500			Si
1.02	-6181.6	20	-6102.23	480375	1494000	18177406	36000000	-5602.99	2	-5538.34	435985	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.51	superiore	0.349	0.00047	0.000165	20	0.349	0.00044	0.000154	6	0.349	0.00043	0.00015	2	Si
0.8	superiore	0.349	0.0005	0.000175	20	0.349	0.00047	0.000163	6	0.349	0.00046	0.000159	2	Si
1.02	superiore	0.349	0.00053	0.000185	20	0.349	0.00049	0.000172	6	0.349	0.00048	0.000168	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 371

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 370, 369, 368, 367, 366, 365

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2015	SLU 84	0.043	7989	6201	SLU 84	17964	Si
1.29	0.41	0.0005	2017	SLU 84	0.043	7989	6205	SLU 84	17964	Si
2.58	0.41	0.0005	2043	SLU 83	0.043	7989	6285	SLU 83	17964	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1515	SLD 2	0.119	8901	4661	SLD 2	20659	Si
1.29	0.41	0.0005	1524	SLD 4	0.119	8901	4690	SLD 4	20659	Si
2.58	0.41	0.0005	1570	SLD 4	0.119	8901	4830	SLD 4	20659	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000505	1477	SLE RA 21	40930	1494000	507538	36000000	1331	SLE QP 2	36888	1120500	Si
1.29	0.41	0.00000505	1478	SLE RA 21	40955	1494000	507841	36000000	1333	SLE QP 2	36932	1120500	Si
2.58	0.41	0.00000505	1498	SLE RA 20	41505	1494000	514666	36000000	1353	SLE QP 2	37486	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 364

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
371,370,369,368,367,366,365,364	5.05	1.1	SLU 83	ST	BT	2.3	233523	64760	3.61	Si
371,370,369,368,367,366,365,364	5.05	1.1	SLV 16	SIS	LT	2.3	120323	33423	3.6	Si
371,370,369,368,367,366,365,364	5.05	1.1	SLD 4	SIS	BT	2.3	223667	49297	4.54	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-852	-64760	563.69	1146.12	0	-1	0.02	0.01	1.08	5.02	1496	2060	0	14430	
0	-9100	-33423	4322.31	960.23	0	-15	0.03	0.13	0.84	5	1496	2060	37	0	0.07
0	2756	-49297	-1145.42	1915.45	0	3	0.04	-0.02	1.05	4.98	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.13	1.13	0.93	1.16	1.27	1	0.55	0.54	0.4	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

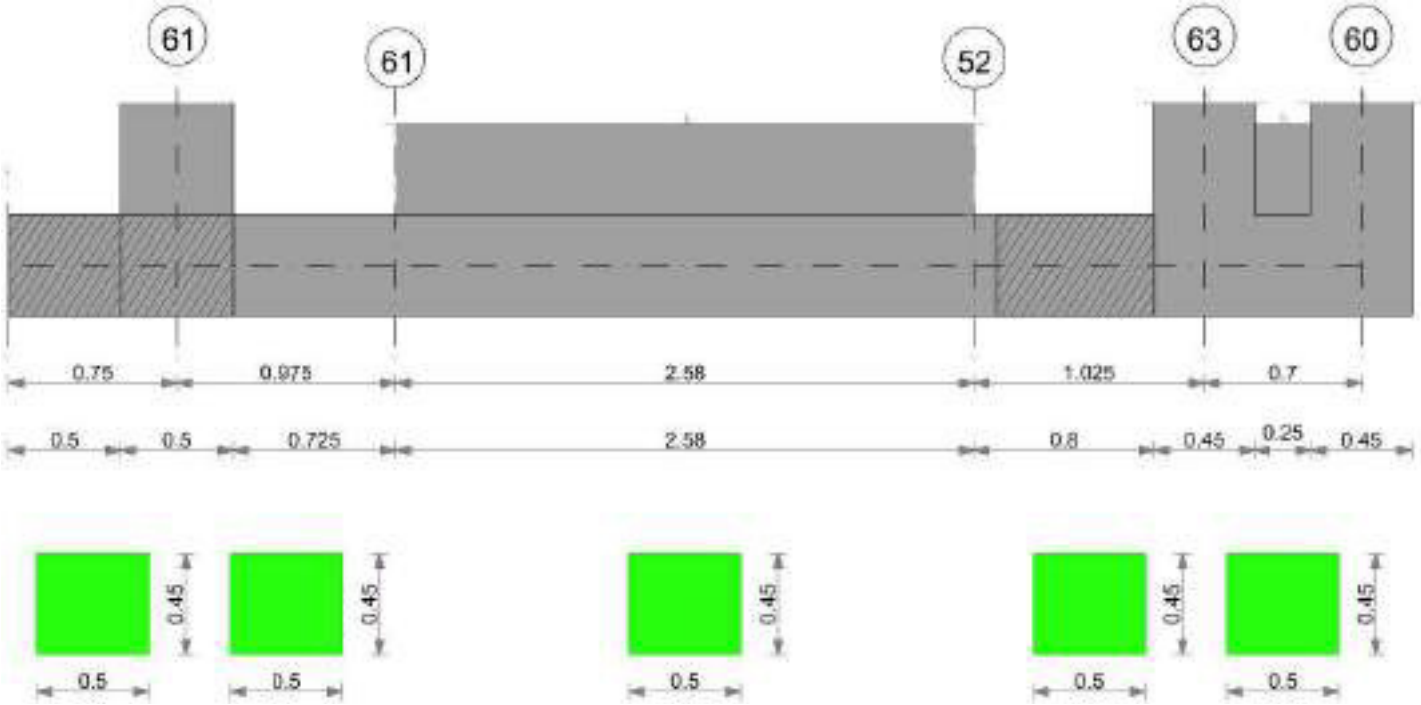
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.002	635	SLE RA 21	0.05	0.001	635	982	SLE RA 21	0.05	0	778	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	635	SLE RA 1	0.05	0	635	635	SLE RA 1	0.05	0	778	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	635	SLE RA 1	0.05	0	635	635	SLE RA 1	0.05	0	778	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	910	982	SLE RA 21	0.19	0.01	778	SLE RA 21	0.1	0	635	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	635	778	SLE RA 1	0.19	0	635	SLE RA 1	0.1	0	778	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	635	778	SLE RA 1	0.19	0	635	SLE RA 1	0.1	0	778	SLE RA 1	Si

CORDOLO 24

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 382

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3637.5	SLU 84	-3526.3	-9373.94	0.122	2.66	Si
0.25	0.000628	0.053	0.000509	0.052							-3058.89	SLU 83	-3058.89	-9373.94	0.122	3.06	Si
0.49	0.000628	0.053	0.000509	0.052							-1848.98	SLU 83	-2822.73	-9373.94	0.122	3.32	Si
0.98	0.000628	0.053	0.000509	0.052	2674.31	SLU 84	2674.31	7773.51	0.117	2.91							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3141.7	SLV 1	-2878.97	-8872.37	0.218	3.08	Si
0.25	0.000628	0.053	0.000509	0.052							-2493.56	SLV 4	-2493.56	-8872.37	0.218	3.56	Si
0.49	0.000628	0.053	0.000509	0.052	-746.42	SLV 9	466.1	7263.39	0.196	15.58	-1753.59	SLV 8	-2297.23	-8872.37	0.218	3.86	Si
0.81	0.000628	0.053	0.000509	0.052	1692.18	SLV 5	3275.64	7263.39	0.196	2.22	-567.75	SLV 12	-1282.21	-8872.37	0.218	6.92	Si
0.98	0.000628	0.053	0.000509	0.052	3275.64	SLV 5	3275.64	7263.39	0.196	2.22	269.65	SLV 12	-644.04	-8872.37	0.218	13.78	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-2741.3	SLD 1	-2587.34	-8872.37	0.218	3.43	Si
0.25	0.000628	0.053	0.000509	0.052							-2244.27	SLD 4	-2244.27	-8872.37	0.218	3.95	Si
0.49	0.000628	0.053	0.000509	0.052	-1028.06	SLD 9	9.86	7263.39	0.196	736.7	-1471.95	SLD 8	-2070.68	-8872.37	0.218	4.28	Si
0.81	0.000628	0.053	0.000509	0.052	1057.89	SLD 5	2430.87	7263.39	0.196	2.99	66.53	SLD 12	-865.44	-8872.37	0.218	10.25	Si
0.98	0.000628	0.053	0.000509	0.052	2430.87	SLD 5	2430.87	7263.39	0.196	2.99	1114.42	SLD 12	-31.14	-8872.37	0.218	284.88	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000628	0	880	SLU 84	880	8105	63019	14164	14164	1	16.1	Si
0.25	0.0000101	0.000628	0	3751	SLU 84	3751	8105	63019	14164	14164	1	3.78	Si
0.49	0.0000101	0.000628	0	6472	SLU 84	6472	8105	63019	14164	14164	1	2.19	Si
0.98	0.0000101	0.000509	0	12072	SLU 84	12072	7764	63178	14199	14199	1	1.18	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000628	0	2531	SLV 5	2531	8105	63019	14164	14164	1	5.6	Si
0	0.0000101	0.000628	0	-1350	SLV 12	-1350	-8105	-63019	-14164	-14164	1	10.49	Si
0.25	0.0000101	0.000628	0	4498	SLV 5	4498	8105	63019	14164	14164	1	3.15	Si
0.49	0.0000101	0.000628	0	6421	SLV 5	6421	8105	63019	14164	14164	1	2.21	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.98	0.0000101	0.000509	0	10886	SLV 1	10886	7764	63178	14199	14199	1	1.3	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000628	0	1437	SLD 5	1437	8105	63019	14164	14164	1	9.86	Si
0	0.0000101	0.000628	0	-256	SLD 12	-256	-8105	-63019	-14164	-14164	1	55.37	Si
0.25	0.0000101	0.000628	0	3377	SLD 5	3377	8105	63019	14164	14164	1	4.19	Si
0.49	0.0000101	0.000628	0	5242	SLD 5	5242	8105	63019	14164	14164	1	2.7	Si
0.98	0.0000101	0.000509	0	9275	SLD 1	9275	7764	63178	14199	14199	1	1.53	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-2678.47	21	-2597.16	136526	1494000	2025432	36000000	-2449.98	2	-2375.13	124855	1120500			Si
0.25	-2253.71	20	-2253.71	118472	1494000	1757589	36000000	-2061.37	2	-2061.37	108362	1120500			Si
0.49	-1364.41	20	-2080.17	109350	1494000	1622252	36000000	-1250.01	2	-1902.9	100031	1120500			Si
0.98	1960.84	21	1960.84	101946	1494000	1546152	36000000	1772.65	2	1772.65	92162	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 375

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-8170.68	SLU 84	-8170.68	-16326.36	0.165	2	Si
0.51	0.001137	0.053	0.000509	0.052							-5411.28	SLU 83	-6737.77	-16326.36	0.165	2.42	Si
0.8	0.001137	0.053	0.000509	0.052							-2448.78	SLU 83	-4421.03	-16326.36	0.165	3.69	Si
1.02	0.001137	0.053	0.000509	0.052	614.07	SLU 84	614.07	7785.55	0.121	12.68							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-8087.01	SLV 1	-8087.01	-15592.05	0.288	1.93	Si
0.51	0.001137	0.053	0.000509	0.052							-5287.57	SLV 4	-6506.37	-15592.05	0.288	2.4	Si
0.8	0.001137	0.053	0.000509	0.052							-2719.25	SLV 4	-4430.73	-15592.05	0.288	3.52	Si
1.02	0.001137	0.053	0.000509	0.052	1161.57	SLV 9	405.57	7255.57	0.189	17.89	-331.49	SLV 8	-331.49	-15592.05	0.288	47.04	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-6608.3	SLD 1	-6608.3	-15592.05	0.288	2.36	Si
0.51	0.001137	0.053	0.000509	0.052							-4343.17	SLD 4	-5375.88	-15592.05	0.288	2.9	Si
0.8	0.001137	0.053	0.000509	0.052							-2104.44	SLD 4	-3595.45	-15592.05	0.288	4.34	Si
1.02	0.001137	0.053	0.000509	0.052	741.98	SLD 9	582.23	7255.57	0.189	12.46							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.001137	0	2318	SLU 84	2318	9883	63090	14180	14180	1	6.12	Si
0.51	0.0000101	0.001137	0	8501	SLU 84	8501	9883	63090	14180	14180	1	1.67	Si
0.8	0.0000101	0.001137	0	12138	SLU 84	12138	9883	63090	14180	14180	1	1.17	Si
1.02	0.0000101	0.000509	0	15093	SLU 84	15093	7764	63178	14199	14199	1	0.94	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.001137	0	3442	SLV 5	3442	9883	63090	14180	14180	1	4.12	Si
0	0.0000101	0.001137	0	-287	SLV 12	-287	-9883	-63090	-14180	-14180	1	49.35	Si
0.51	0.0000101	0.001137	0	8271	SLV 1	8271	9883	63090	14180	14180	1	1.71	Si
0.8	0.0000101	0.001137	0	11418	SLV 1	11418	9883	63090	14180	14180	1	1.24	Si
1.02	0.0000101	0.000509	0	13999	SLV 1	13999	7764	63178	14199	14199	1	1.01	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.001137	0	2395	SLD 5	2395	9883	63090	14180	14180	1	5.92	Si
0.51	0.0000101	0.001137	0	6817	SLD 1	6817	9883	63090	14180	14180	1	2.08	Si
0.8	0.0000101	0.001137	0	9559	SLD 1	9559	9883	63090	14180	14180	1	1.48	Si
1.02	0.0000101	0.000509	0	11798	SLD 1	11798	7764	63178	14199	14199	1	1.2	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-6019.82	21	-6019.82	468802	1494000	14988208	36000000	-5499.68	2	-5499.68	428295	1120500			Si
0.51	-3985.52	20	-4962.98	254060	1494000	3597143	36000000	-3637.93	2	-4531.48	231971	1120500			Si
0.8	-1803.05	20	-3255.93	166674	1494000	2359876	36000000	-1642.92	2	-2970.77	152077	1120500			Si
1.02	452.63	21	452.63	21871	1494000	347557	36000000	415.04	2	415.04	20055	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	superiore	0.299	0.00044	0.000131	21	0.299	0.00041	0.000122	6	0.299	0.0004	0.000119	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 382

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 381, 380, 379, 378, 377, 376

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2042	SLU 84	0.043	8007	6284	SLU 84	18005	Si
1.29	0.41	0.0005	2059	SLU 83	0.043	8007	6334	SLU 83	18005	Si
2.58	0.41	0.0005	2101	SLU 83	0.043	8007	6464	SLU 83	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1523	SLD 4	0.119	8921	4687	SLD 4	20705	Si
1.29	0.41	0.0005	1547	SLD 4	0.119	8921	4760	SLD 4	20705	Si
2.58	0.41	0.0005	1605	SLD 4	0.119	8921	4938	SLD 4	20705	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1497	SLE RA 21	41476	1494000	514298	36000000	1349	SLE QP 2	37375	1120500	Si
1.29	0.41	0.00000507	1509	SLE RA 20	41804	1494000	518376	36000000	1360	SLE QP 2	37694	1120500	Si
2.58	0.41	0.00000507	1540	SLE RA 20	42677	1494000	529195	36000000	1391	SLE QP 2	38540	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 375

Campata 5 tra i fili 63 - 60, sezione R 50x45, aste 374, 373, 372

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2398	SLU 83	0.043	8007	7378	SLU 83	18005	Si
0.23	0.41	0.0005	2478	SLU 83	0.043	8007	7625	SLU 83	18005	Si
0.35	0.41	0.0005	2521	SLU 83	0.043	8007	7756	SLU 83	18005	Si
0.48	0.41	0.0005	2564	SLU 83	0.043	8007	7890	SLU 83	18005	Si
0.7	0.41	0.0005	2652	SLU 83	0.043	8007	8159	SLU 83	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1862	SLD 4	0.119	8921	5730	SLD 4	20705	Si
0.23	0.41	0.0005	1931	SLD 4	0.119	8921	5942	SLD 4	20705	Si
0.35	0.41	0.0005	1968	SLD 4	0.119	8921	6056	SLD 4	20705	Si
0.48	0.41	0.0005	2006	SLD 4	0.119	8921	6171	SLD 4	20705	Si
0.7	0.41	0.0005	2080	SLD 4	0.119	8921	6400	SLD 4	20705	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1760	SLE RA 20	48765	1494000	604686	36000000	1594	SLE QP 2	44162	1120500	Si
0.23	0.41	0.00000507	1819	SLE RA 20	50408	1494000	625055	36000000	1648	SLE QP 2	45675	1120500	Si
0.35	0.41	0.00000507	1850	SLE RA 20	51279	1494000	635858	36000000	1677	SLE QP 2	46477	1120500	Si
0.48	0.41	0.00000507	1883	SLE RA 20	52170	1494000	646908	36000000	1707	SLE QP 2	47296	1120500	Si
0.7	0.41	0.00000507	1947	SLE RA 20	53958	1494000	669075	36000000	1766	SLE QP 2	48939	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
382,381,380,379,378,377,376,375,374,373,372	5.51	1.1	SLU 83	ST	BT	2.3	249039	73478	3.39	Si
382,381,380,379,378,377,376,375,374,373,372	5.51	1.1	SLV 3	SIS	BT	2.3	211987	63122	3.36	Si
382,381,380,379,378,377,376,375,374,373,372	5.51	1.1	SLD 4	SIS	BT	2.3	236176	55929	4.22	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-967	-73478	500.22	5861.41	0	-1	0.08	0.01	1.09	5.35	1496	2060	0	14430	
0	8800	-63122	-4033.98	7986.59	0	8	0.13	-0.06	0.97	5.25	1496	2060	0	14430	0.07
0	3090	-55929	-1395.96	6105.32	0	3	0.11	-0.02	1.05	5.29	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

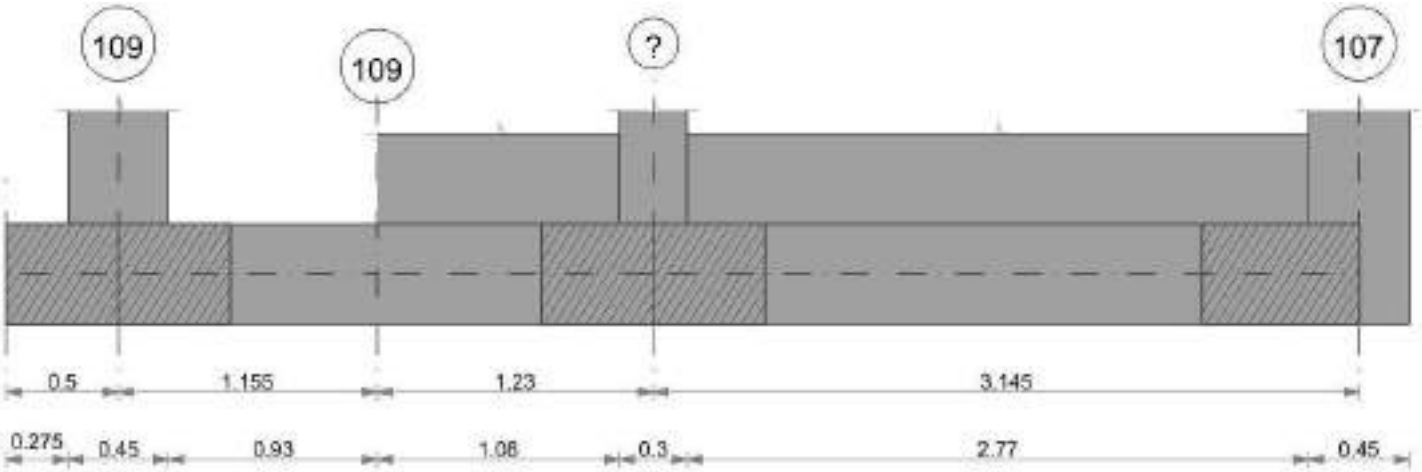
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	716	SLE RA 21	0.05	0.002	716	1053	SLE RA 21	0.05	0	912	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	716	SLE RA 1	0.05	0	716	716	SLE RA 1	0.05	0	780	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	716	SLE RA 1	0.05	0	716	716	SLE RA 1	0.05	0	780	SLE RA 1	0.0033	0	SLE RA 1	Si

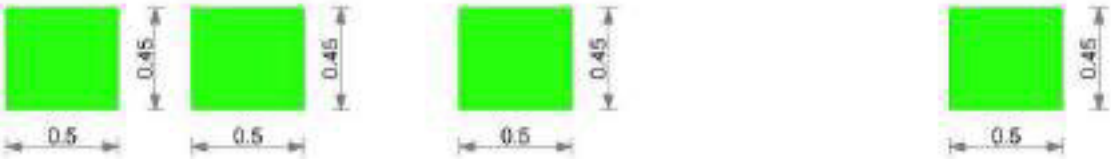
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.03	985	1053	SLE RA 20	0.19	0.01	780	SLE RA 21	0.1	0	716	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	716	780	SLE RA 1	0.19	0	716	SLE RA 1	0.1	0	780	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	716	780	SLE RA 1	0.19	0	716	SLE RA 1	0.1	0	780	SLE RA 1	Si

CORDOLO 25

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

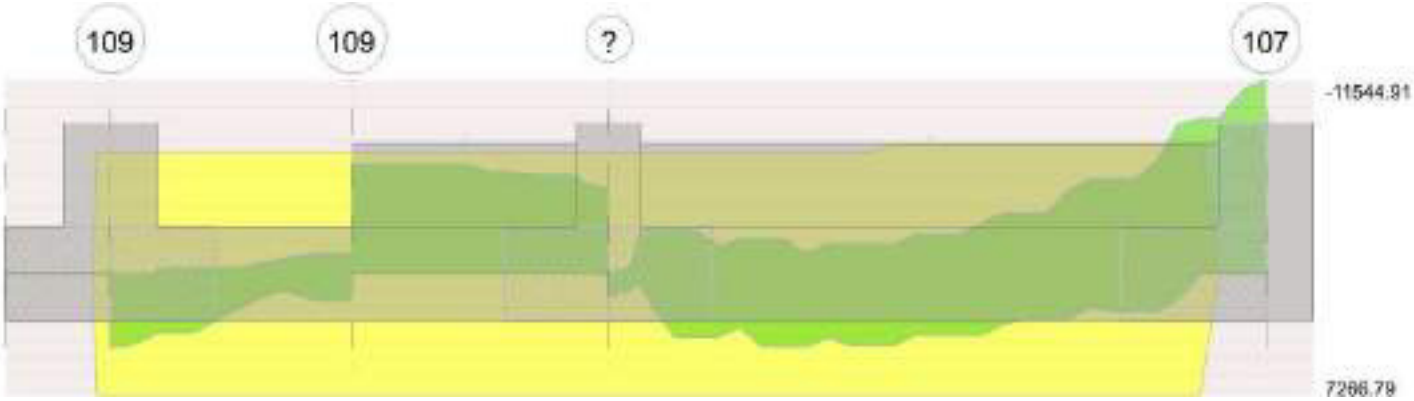
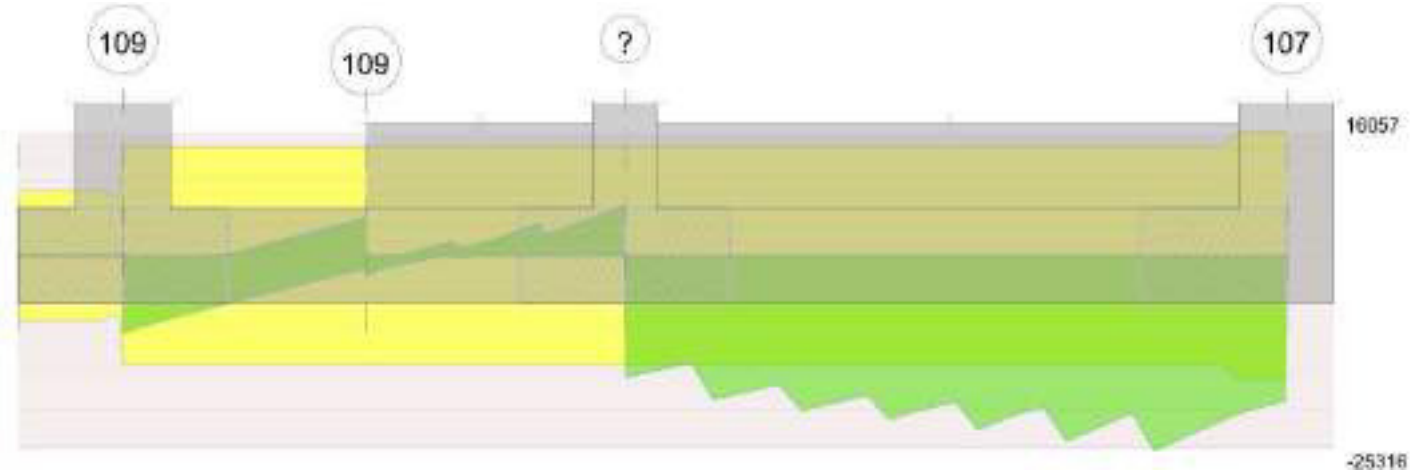


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 393

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	4667.21	SLU 83	3529.43	7755.45	0.113	2.2							Si
0.23	0.000509	0.052	0.000509	0.052	2676.76	SLU 83	2676.76	7755.45	0.113	2.9							Si
0.58	0.000509	0.052	0.000509	0.052	694.71	SLU 83	1533.87	7755.45	0.113	5.06							Si
1.16	0.000509	0.052	0.000509	0.052	353.31	SLU 84	353.31	7755.45	0.113	21.95							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	5445.77	SLV 16	4378.79	7266.79	0.197	1.66							Si
0.23	0.000509	0.052	0.000509	0.052	3505.48	SLV 16	3505.48	7266.79	0.197	2.07	32.06	SLV 1	-280.89	-7266.79	0.197	25.87	Si
0.58	0.000509	0.052	0.000509	0.052	1253.99	SLV 16	2282.52	7266.79	0.197	3.18	-369.01	SLV 1	-372.17	-7266.79	0.197	19.53	Si
1.16	0.000509	0.052	0.000509	0.052	1597.73	SLV 5	1597.73	7266.79	0.197	4.55	-1199.18	SLV 12	-1199.18	-7266.79	0.197	6.06	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	4099.02	SLD 16	3208.18	7266.79	0.197	2.27							Si
0.23	0.000509	0.052	0.000509	0.052	2509.09	SLD 16	2509.09	7266.79	0.197	2.9							Si
0.58	0.000509	0.052	0.000509	0.052	788.59	SLD 16	1549.44	7266.79	0.197	4.69	96.39	SLD 1	-93.37	-7266.79	0.197	77.83	Si
1.16	0.000509	0.052	0.000509	0.052	810.56	SLD 5	810.56	7266.79	0.197	8.97	-412.01	SLD 12	-414.57	-7266.79	0.197	17.53	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-10131	SLU 83	-10131	-7764	-63178	-14201	-14201	1	1.4	Si
0.23	0.0000101	0.000509	0	-7579	SLU 83	-7579	-7764	-63178	-14201	-14201	1	1.87	Si
0.58	0.0000101	0.000509	0	-3682	SLU 83	-3682	-7764	-63178	-14201	-14201	1	3.86	Si
1.16	0.0000101	0.000509	0	2421	SLU 84	2421	7764	63178	14201	14201	1	5.87	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-9955	SLV 12	-9955	-7764	-63178	-14201	-14201	1	1.43	Si
0.23	0.0000101	0.000509	0	-8218	SLV 12	-8218	-7764	-63178	-14201	-14201	1	1.73	Si
0.58	0.0000101	0.000509	0	673	SLV 5	673	7764	63178	14201	14201	1	21.09	Si
0.58	0.0000101	0.000509	0	-5612	SLV 12	-5612	-7764	-63178	-14201	-14201	1	2.53	Si
1.16	0.0000101	0.000509	0	4859	SLV 5	4859	7764	63178	14201	14201	1	2.92	Si
1.16	0.0000101	0.000509	0	-1690	SLV 12	-1690	-7764	-63178	-14201	-14201	1	8.4	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-8159	SLD 12	-8159	-7764	-63178	-14201	-14201	1	1.74	Si
0.23	0.0000101	0.000509	0	-6442	SLD 12	-6442	-7764	-63178	-14201	-14201	1	2.2	Si
0.58	0.0000101	0.000509	0	-3841	SLD 12	-3841	-7764	-63178	-14201	-14201	1	3.7	Si
1.16	0.0000101	0.000509	0	3014	SLD 5	3014	7764	63178	14201	14201	1	4.71	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3429	20	2591.68	137083	1494000	2056247	36000000	3098.76	2	2338.74	123704	1120500			Si
0.23	1964.03	20	1964.03	103884	1494000	1558261	36000000	1768.77	2	1768.77	93556	1120500			Si
0.58	504.48	20	1122.61	59379	1494000	890682	36000000	442.49	2	1004.47	53130	1120500			Si
1.16	248.98	21	248.98	13169	1494000	197538	36000000	199.28	2	199.28	10540	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 393

Campata 3 tra i fili 109 - ?, sezione R 50x45, aste 392, 391, 390

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1792	SLU 84	0.043	8008	5514	SLU 84	18007	Si
0.62	0.41	0.0005	1716	SLU 84	0.043	8008	5280	SLU 84	18007	Si
1.08	0.41	0.0005	1732	SLU 84	0.043	8008	5330	SLU 84	18007	Si
1.23	0.41	0.0005	1748	SLU 84	0.043	8008	5380	SLU 84	18007	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1212	SLD 1	0.119	8922	3729	SLD 1	20708	Si
0.62	0.41	0.0005	1188	SLD 1	0.119	8922	3654	SLD 1	20708	Si
1.08	0.41	0.0005	1206	SLD 1	0.119	8922	3710	SLD 1	20708	Si
1.23	0.41	0.0005	1217	SLD 1	0.119	8922	3744	SLD 1	20708	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1311	SLE RA 21	36341	1494000	450633	36000000	1176	SLE QP 2	32588	1120500	Si
0.62	0.41	0.00000507	1255	SLE RA 21	34785	1494000	431334	36000000	1125	SLE QP 2	31183	1120500	Si
1.08	0.41	0.00000507	1267	SLE RA 21	35115	1494000	435425	36000000	1136	SLE QP 2	31493	1120500	Si
1.23	0.41	0.00000507	1279	SLE RA 21	35445	1494000	439523	36000000	1147	SLE QP 2	31798	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili ? - 107, sezione R 50x45, aste 389, 388, 387, 386, 385, 384, 383

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1748	SLU 84	0.043	8008	5380	SLU 84	18007	Si
0.15	0.41	0.0005	1765	SLU 84	0.043	8008	5431	SLU 84	18007	Si
1.57	0.41	0.0005	1934	SLU 83	0.043	8008	5952	SLU 83	18007	Si
2.92	0.41	0.0005	2185	SLU 83	0.043	8008	6723	SLU 83	18007	Si
3.14	0.41	0.0005	2270	SLU 83	0.043	8008	6984	SLU 83	18007	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1217	SLD 1	0.119	8922	3744	SLD 1	20708	Si
0.15	0.41	0.0005	1228	SLD 1	0.119	8922	3778	SLD 1	20708	Si
1.57	0.41	0.0005	1349	SLD 4	0.119	8922	4151	SLD 4	20708	Si
2.92	0.41	0.0005	1552	SLD 4	0.119	8922	4777	SLD 4	20708	Si
3.14	0.41	0.0005	1617	SLD 4	0.119	8922	4976	SLD 4	20708	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1279	SLE RA 21	35445	1494000	439523	36000000	1147	SLE QP 2	31798	1120500	Si
0.15	0.41	0.00000507	1291	SLE RA 21	35787	1494000	443757	36000000	1159	SLE QP 2	32112	1120500	Si
1.57	0.41	0.00000507	1417	SLE RA 20	39253	1494000	486736	36000000	1275	SLE QP 2	35331	1120500	Si
2.92	0.41	0.00000507	1602	SLE RA 20	44397	1494000	550523	36000000	1448	SLE QP 2	40123	1120500	Si
3.14	0.41	0.00000507	1665	SLE RA 20	46134	1494000	572063	36000000	1506	SLE QP 2	41724	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
393,392,391,390,389,388,387,386,385,384,383	5.75	1.1	SLU 83	ST	BT	2.3	264585	69674	3.8	Si
393,392,391,390,389,388,387,386,385,384,383	5.75	1.1	SLV 3	SIS	LT	2.3	184313	51086	3.61	Si
393,392,391,390,389,388,387,386,385,384,383	5.75	1.1	SLD 3	SIS	BT	2.3	239302	49045	4.88	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	259	-69674	-348.51	3440.62	0	0	0.05	-0.01	1.09	5.66	1496	2060	0	14430	
0	10103	-51086	-4668.02	6185.55	0	11	0.12	-0.09	0.92	5.51	1496	2060	37	0	0.07
0	4417	-49045	-2126.94	4048.41	0	5	0.08	-0.04	1.01	5.59	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.13	1.13	0.93	1.16	1.27	1	0.66	0.66	0.53	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

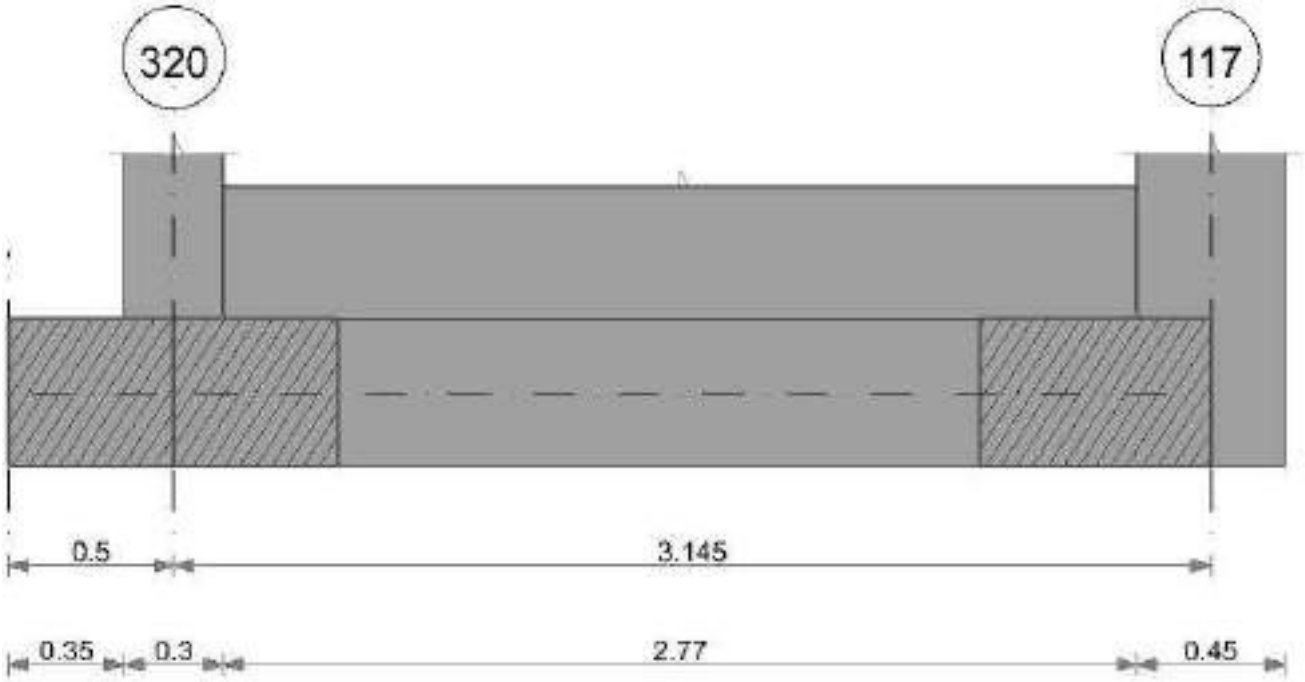
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	651	SLE RA 21	0.05	0.002	651	1065	SLE RA 21	0.05	0	826	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	768	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	768	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.03	826	1065	SLE RA 21	0.19	0.01	768	SLE RA 21	0.1	0	651	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	651	768	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	768	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	651	768	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	768	SLE RA 1	Si

CORDOLO 26

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

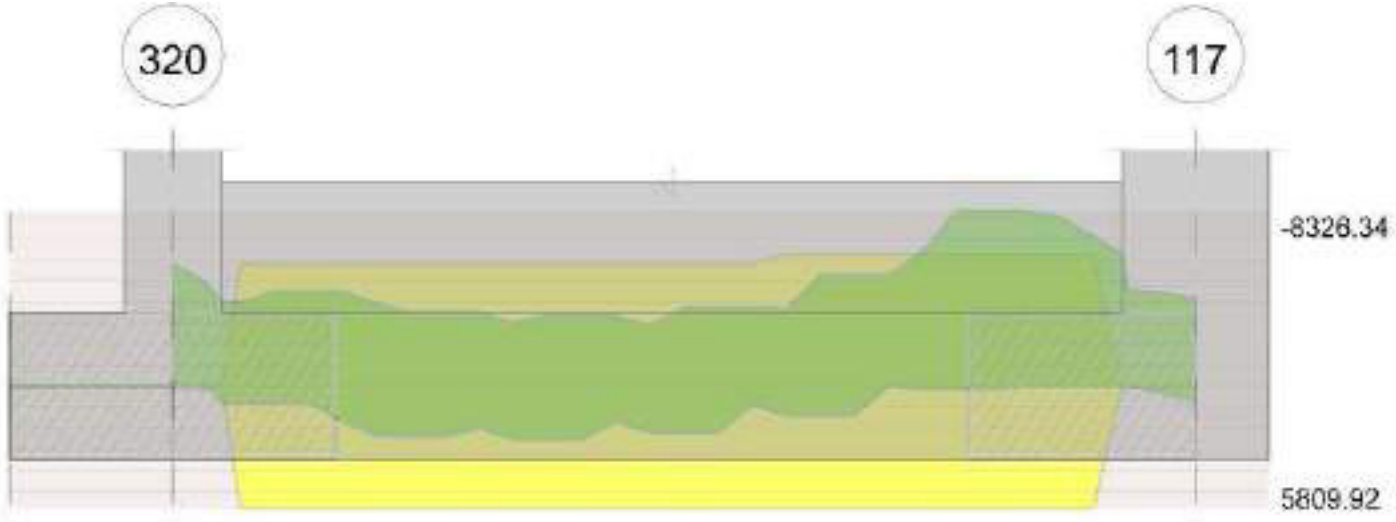
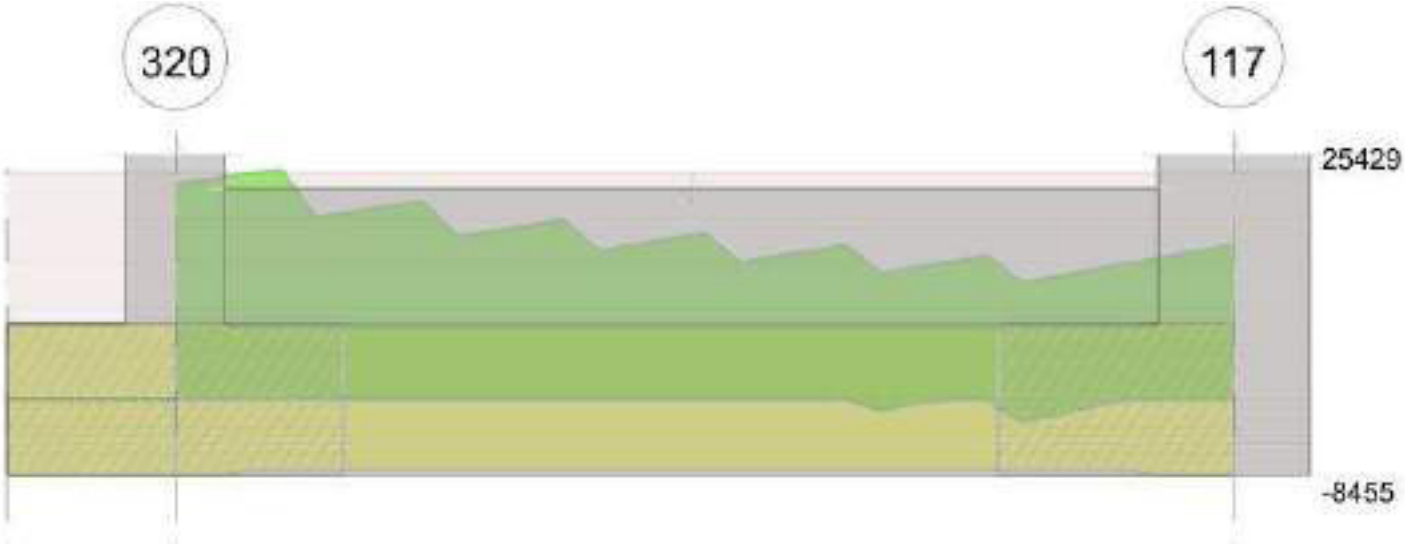


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 320 - 117, sezione R 50x45, aste 400, 399, 398, 397, 396, 395, 394

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1596	SLU 84	0.018	2858	4911	SLU 84	15877	Si
0.15	0.41	0.0002	1614	SLU 84	0.018	2858	4965	SLU 84	15877	Si
1.57	0.41	0.0002	1821	SLU 83	0.018	2858	5604	SLU 83	15877	Si
2.92	0.41	0.0002	2114	SLU 83	0.018	2858	6506	SLU 83	15877	Si
3.14	0.41	0.0002	2202	SLU 83	0.018	2858	6775	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1127	SLD 1	0.072	3215	3468	SLD 1	15877	Si
0.15	0.41	0.0002	1139	SLD 1	0.072	3215	3504	SLD 1	15877	Si
1.57	0.41	0.0002	1280	SLD 4	0.072	3215	3938	SLD 4	15877	Si
2.92	0.41	0.0002	1504	SLD 4	0.072	3215	4627	SLD 4	15877	Si
3.14	0.41	0.0002	1570	SLD 4	0.072	3215	4830	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000179	1168	SLE RA 21	33769	1494000	418732	36000000	1047	SLE QP 2	30289	1120500	Si
0.15	0.41	0.00000179	1180	SLE RA 21	34142	1494000	423362	36000000	1059	SLE QP 2	30633	1120500	Si
1.57	0.41	0.00000179	1334	SLE RA 20	38574	1494000	478319	36000000	1201	SLE QP 2	34722	1120500	Si
2.92	0.41	0.00000179	1550	SLE RA 20	44843	1494000	556057	36000000	1401	SLE QP 2	40531	1120500	Si
3.14	0.41	0.00000179	1615	SLE RA 20	46710	1494000	579206	36000000	1461	SLE QP 2	42250	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
400,399,398,397,396,395,394	3.37	1.1	SLU 83	ST	BT	2.3	154354	38801	3.98	Si
400,399,398,397,396,395,394	3.37	1.1	SLV 3	SIS	LT	2.3	107286	29667	3.62	Si
400,399,398,397,396,395,394	3.37	1.1	SLD 3	SIS	BT	2.3	139583	27877	5.01	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	74	-38801	-390.17	2106.24	0	0	0.05	-0.01	1.08	3.26	1496	2060	0	14430	
0	6188	-29667	-2972.79	2031.99	0	12	0.07	-0.1	0.9	3.23	1496	2060	37	0	0.07
0	2674	-27877	-1418.39	1705.65	0	5	0.06	-0.05	1	3.25	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.21	1.21	0.89	1.16	1.27	1	0.66	0.65	0.52	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

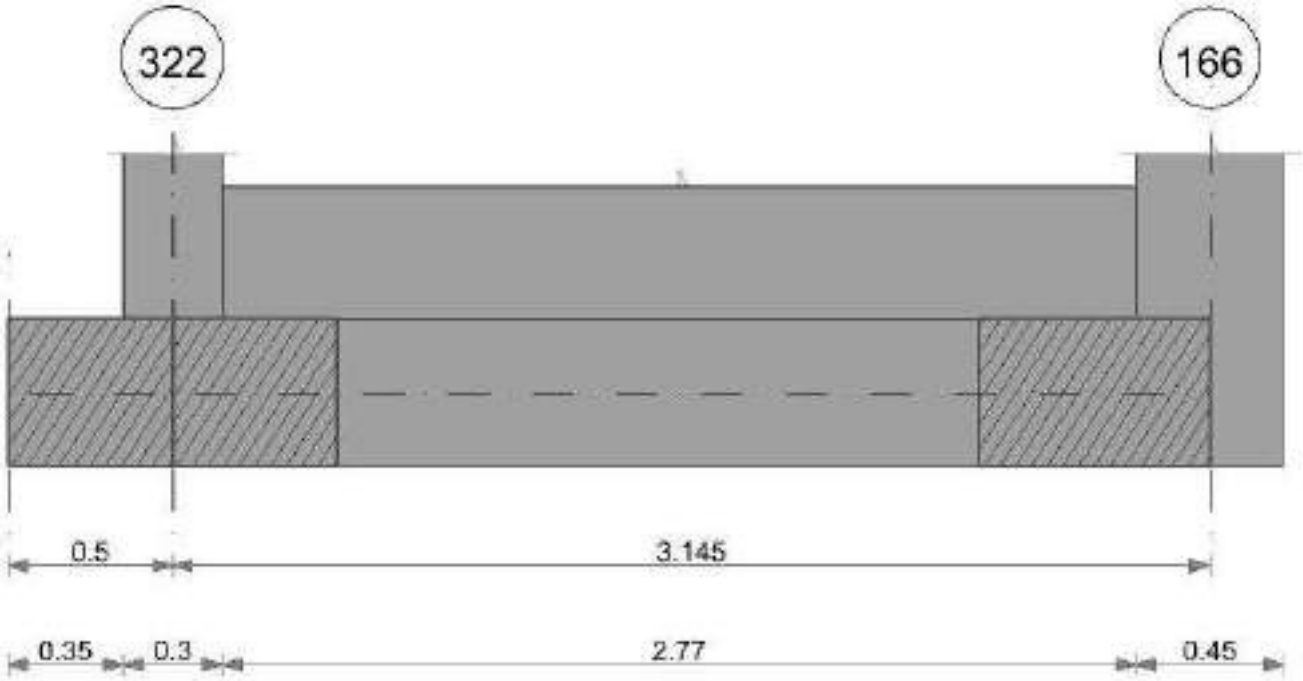
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	829	SLE RA 21	0.05	0.001	829	1067	SLE RA 21	0.05	0	829	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	829	SLE RA 1	0.05	0	829	829	SLE RA 1	0.05	0	829	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	829	SLE RA 1	0.05	0	829	829	SLE RA 1	0.05	0	829	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	829	1067	SLE RA 21	0.19	0	829	SLE RA 1	0.1	0	829	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	829	1067	SLE RA 1	0.19	0	829	SLE RA 1	0.1	0	829	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	829	1067	SLE RA 1	0.19	0	829	SLE RA 1	0.1	0	829	SLE RA 1	Si

CORDOLO 27

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

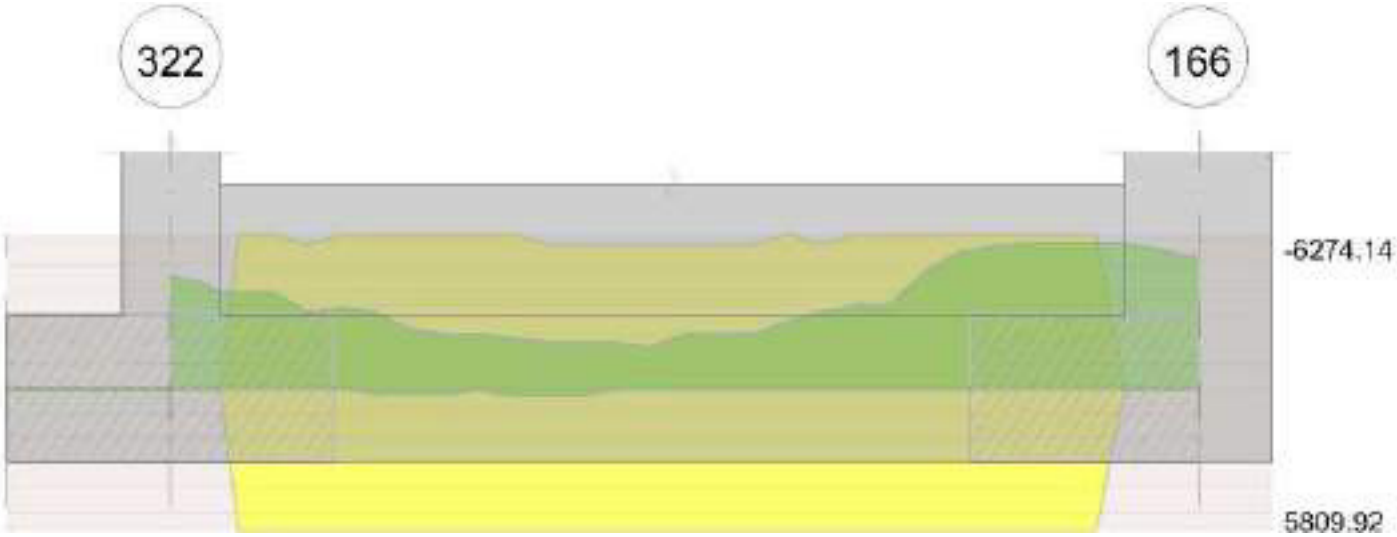
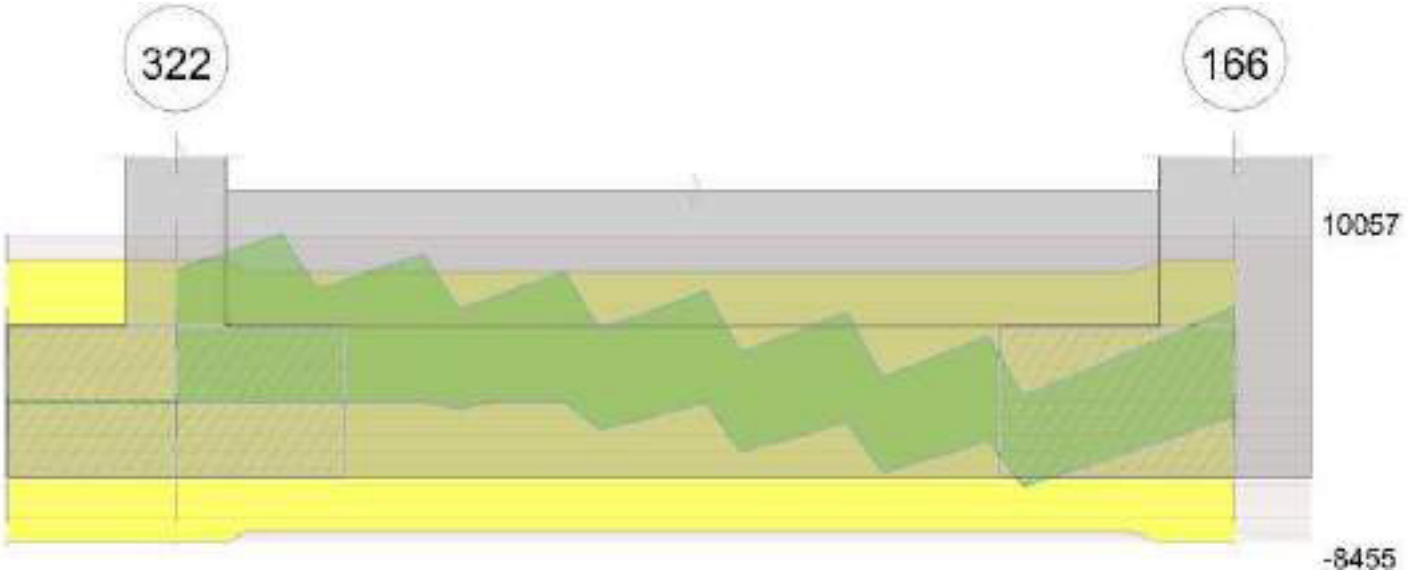


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 322 - 166, sezione R 50x45, aste 418, 417, 416, 415, 414, 413, 412

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1470	SLU 84	0.018	2858	4522	SLU 84	15877	Si
0.15	0.41	0.0002	1477	SLU 84	0.018	2858	4546	SLU 84	15877	Si
1.57	0.41	0.0002	1680	SLU 83	0.018	2858	5168	SLU 83	15877	Si
2.92	0.41	0.0002	2054	SLU 83	0.018	2858	6319	SLU 83	15877	Si
3.15	0.41	0.0002	2157	SLU 83	0.018	2858	6637	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1057	SLD 14	0.072	3215	3254	SLD 14	15877	Si
0.15	0.41	0.0002	1063	SLD 14	0.072	3215	3272	SLD 14	15877	Si
1.57	0.41	0.0002	1207	SLD 15	0.072	3215	3713	SLD 15	15877	Si
2.92	0.41	0.0002	1481	SLD 15	0.072	3215	4558	SLD 15	15877	Si
3.15	0.41	0.0002	1557	SLD 15	0.072	3215	4790	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000179	1075	SLE RA 21	31104	1494000	385694	36000000	965	SLE QP 2	27918	1120500	Si
0.15	0.41	0.00000179	1081	SLE RA 21	31272	1494000	387770	36000000	971	SLE QP 2	28075	1120500	Si
1.57	0.41	0.00000179	1230	SLE RA 20	35585	1494000	441256	36000000	1108	SLE QP 2	32056	1120500	Si
2.92	0.41	0.00000179	1506	SLE RA 20	43571	1494000	540278	36000000	1362	SLE QP 2	39404	1120500	Si
3.15	0.41	0.00000179	1583	SLE RA 20	45770	1494000	567552	36000000	1432	SLE QP 2	41423	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
418,417,416,415,414,413,412	3.37	1.1	SLU 83	ST	BT	2.3	155591	36792	4.23	Si
418,417,416,415,414,413,412	3.37	1.1	SLV 3	SIS	LT	2.3	73398	22077	3.32	Si
418,417,416,415,414,413,412	3.37	1.1	SLD 16	SIS	BT	2.3	140911	26855	5.25	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	419	-36792	-64.13	2397.55	0	1	0.07	0	1.1	3.24	1496	2060	0	14430	
0	6504	-22077	-3001.48	2332.11	0	16	0.11	-0.14	0.83	3.16	1496	2060	37	0	0.07
0	-2343	-26855	1200.26	1886.89	0	-5	0.07	0.04	1.01	3.23	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.2	1.2	0.9	1.16	1.27	1	0.53	0.52	0.38	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

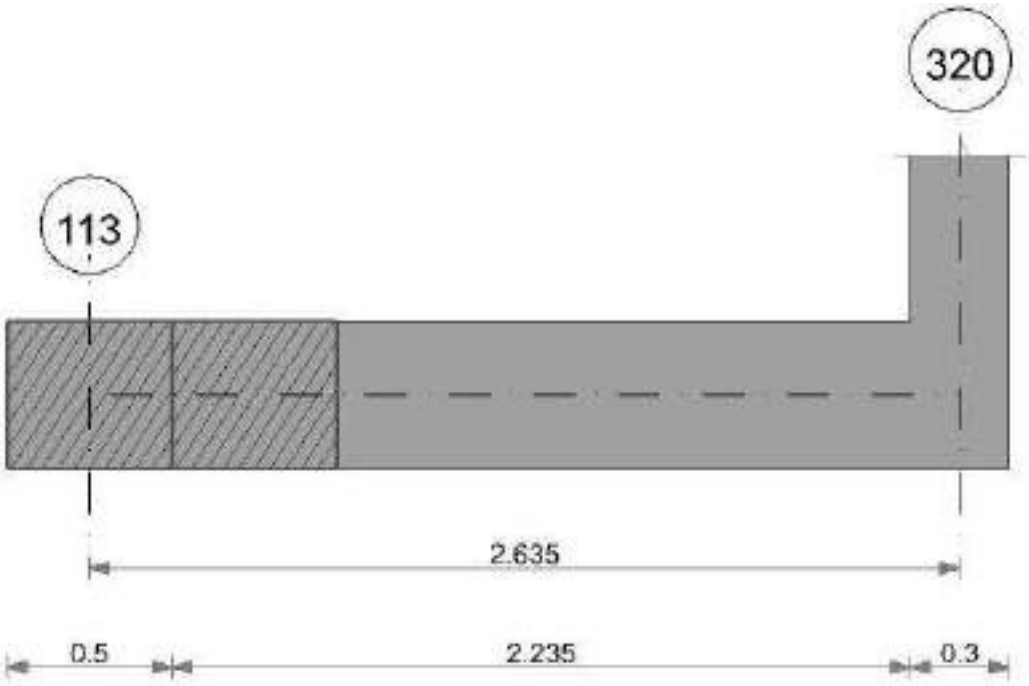
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	840	SLE RA 21	0.05	0.001	840	1080	SLE RA 21	0.05	0	840	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	840	SLE RA 1	0.05	0	840	840	SLE RA 1	0.05	0	840	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	840	SLE RA 1	0.05	0	840	840	SLE RA 1	0.05	0	840	SLE RA 1	0.0033	0	SLE RA 1	Si

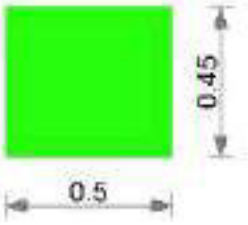
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.03	SLE RA 21	0.19	0.03	840	1080	SLE RA 21	0.19	0	840	SLE RA 1	0.1	0	840	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	840	1080	SLE RA 1	0.19	0	840	SLE RA 1	0.1	0	840	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	840	1080	SLE RA 1	0.19	0	840	SLE RA 1	0.1	0	840	SLE RA 1	Si

CORDOLO 28

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

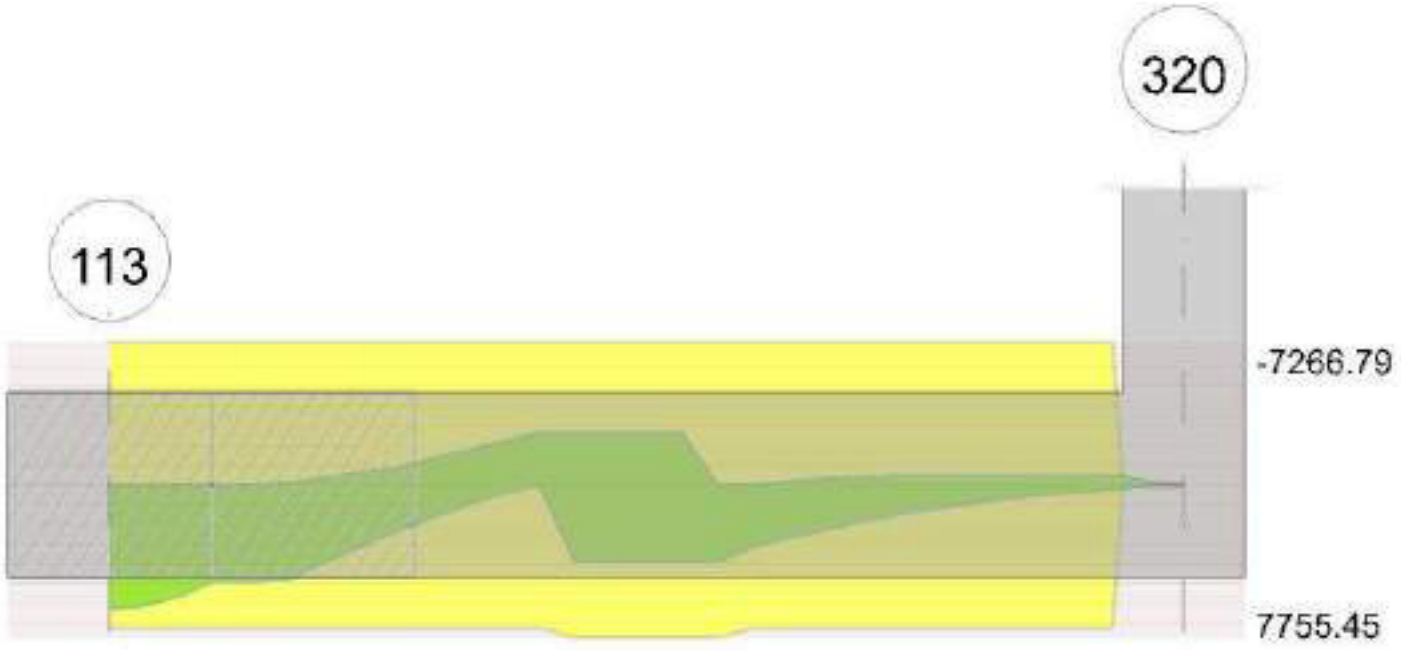
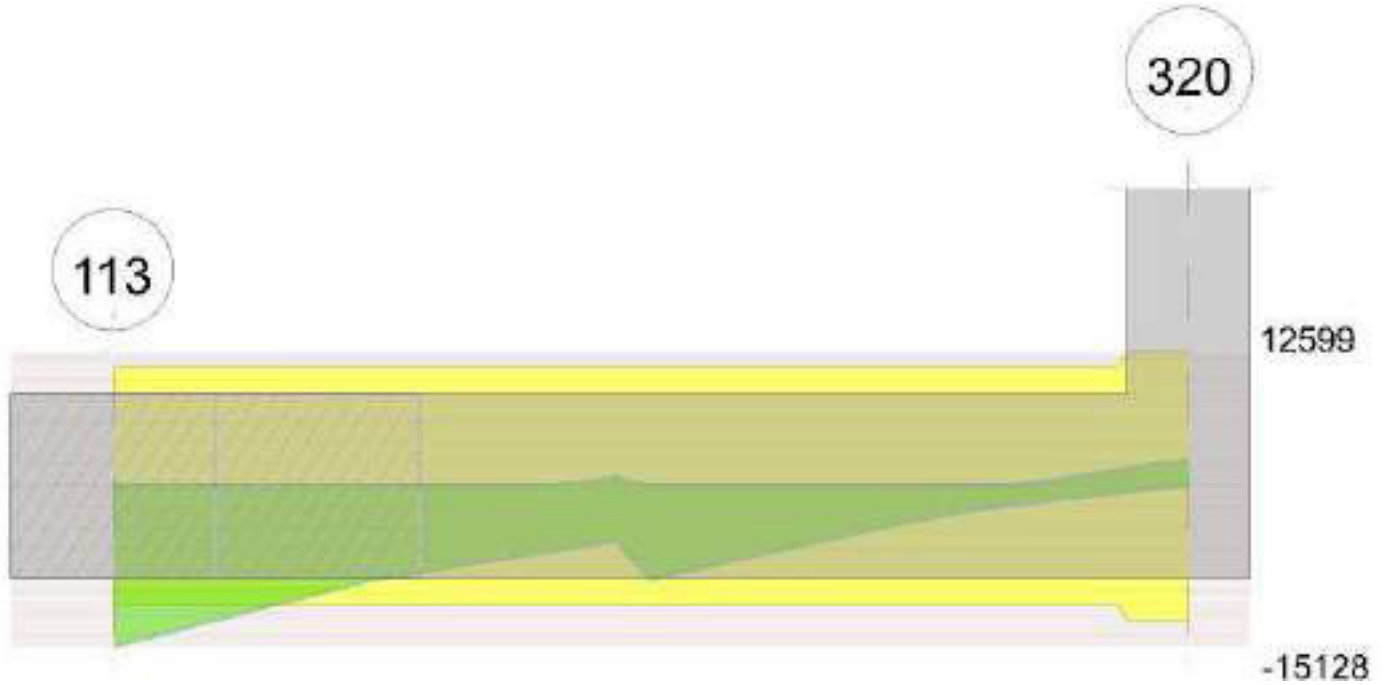


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 113 - 320, sezione R 50x45, aste 813, 812

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	7886.92	SLU 83	6326.59	7755.45	0.113	1.23							Si
0.25	0.000509	0.052	0.000509	0.052	4750.79	SLU 83	4750.79	7755.45	0.113	1.63							Si
1.32	0.000509	0.052	0.000509	0.052	3919.48	SLU 84	3919.48	7755.45	0.113	1.98	2358.58	SLU 1	-2229.5	-7755.45	0.113	3.48	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	7663.86	SLV 16	6327.44	7266.79	0.197	1.15							Si
0.25	0.000509	0.052	0.000509	0.052	4924.63	SLV 16	4924.63	7266.79	0.197	1.48							Si
1.32	0.000509	0.052	0.000509	0.052	3607.32	SLV 13	3607.32	7266.79	0.197	2.01	1548.56	SLV 4	-2653.17	-7266.79	0.197	2.74	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	6269.7	SLD 16	5103.42	7266.79	0.197	1.42							Si
0.25	0.000509	0.052	0.000509	0.052	3903.05	SLD 16	3903.05	7266.79	0.197	1.86							Si
1.32	0.000509	0.052	0.000509	0.052	3019.74	SLD 13	3019.74	7266.79	0.197	2.41	2136.14	SLD 4	-2006.43	-7266.79	0.197	3.62	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000079	0.000509	0	-15128	SLU 83	-15128	-7764	-63178	-11143	-11143	1	0.74	Si
1.32	0.0000079	0.000509	0	-8823	SLU 84	-8823	-7764	-63178	-11143	-11143	1	1.26	Si
2.49	0.0000079	0	0	788	SLU 83	788	8455	71432	12599	12599	1	15.99	Si
2.64	0.0000079	0	0	1902	SLU 83	1902	8455	71432	12599	12599	1	6.62	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000079	0.000509	0	-13158	SLV 12	-13158	-7764	-63178	-11143	-11143	1	0.85	Si
1.32	0.0000079	0.000509	0	-6644	SLV 9	-6644	-7764	-63178	-11143	-11143	1	1.68	Si
2.49	0.0000079	0	0	1653	SLV 3	1653	8455	71432	12599	12599	1	7.62	Si
2.49	0.0000079	0	0	-551	SLV 14	-551	-8455	-71432	-12599	-12599	1	22.88	Si
2.64	0.0000079	0	0	2516	SLV 3	2516	8455	71432	12599	12599	1	5.01	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000079	0.000509	0	-11419	SLD 12	-11419	-7764	-63178	-11143	-11143	1	0.98	Si
0.25	0.0000079	0.000509	0	-9712	SLD 12	-9712	-7764	-63178	-11143	-11143	1	1.15	Si
1.32	0.0000079	0.000509	0	-6197	SLD 9	-6197	-7764	-63178	-11143	-11143	1	1.8	Si
2.49	0.0000079	0	0	1023	SLD 3	1023	8455	71432	12599	12599	1	12.31	Si
2.64	0.0000079	0	0	1817	SLD 3	1817	8455	71432	12599	12599	1	6.94	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	5793.04	20	4645.58	245721	1494000	3685808	36000000	5225.64	2	4187.18	221474	1120500			Si
0.25	3486.78	20	3486.78	184428	1494000	2766414	36000000	3138.8	2	3138.8	166022	1120500			Si
1.32	2870.79	21	2870.79	151846	1494000	2277689	36000000	2577.94	2	2577.94	136356	1120500			Si
2.49	-135.11	20	-163.42	-9684	1494000	0	36000000	-124.99	2	-152.55	-9040	1120500			Si
2.64	-0.65	20	-0.65	-39	1494000	0	36000000	-0.57	2	-0.57	-34	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
813,812	3.04	1.1	SLU 84	ST	BT	2.3	140413	28333	4.96	Si
813,812	3.04	1.1	SLV 1	SIS	LT	2.3	106976	20176	5.3	Si
813,812	3.04	1.1	SLD 1	SIS	BT	2.3	130252	19722	6.6	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-29	182	-28333	-163.48	-1518.85	0	0	-0.05	-0.01	1.09	2.93	1496	2060	0	14430	
-886	3858	-20176	-1835.09	-517.16	-3	11	-0.03	-0.09	0.92	2.98	1496	2060	37	0	0.07
-387	1717	-19722	-846.04	-802.3	-1	5	-0.04	-0.04	1.01	2.95	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.23	1.24	0.88	1.16	1.27	1	0.68	0.68	0.55	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

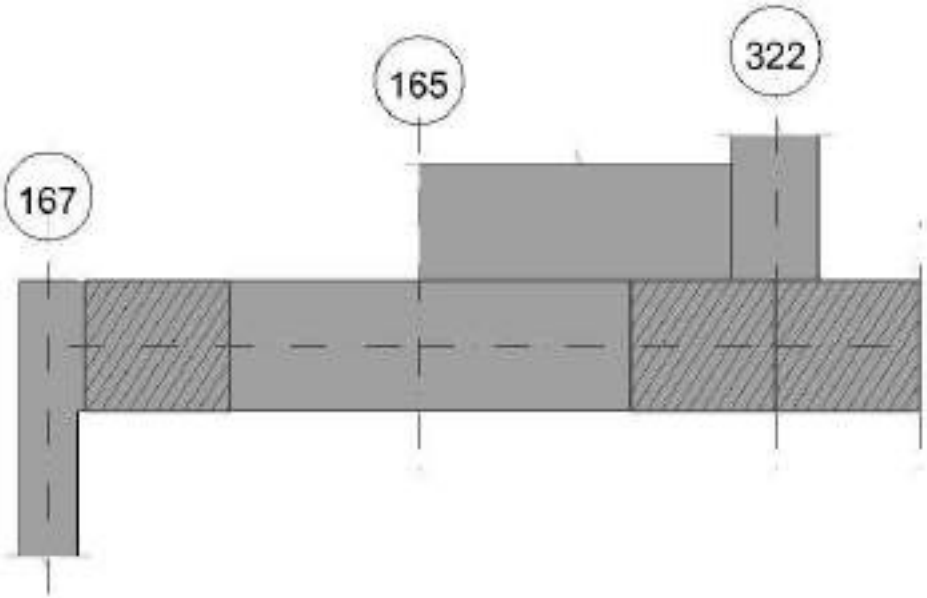
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	653	SLE RA 21	0.05	0.001	653	828	SLE RA 20	0.05	0	653	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	653	SLE RA 1	0.05	0	653	653	SLE RA 1	0.05	0	653	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	653	SLE RA 1	0.05	0	653	653	SLE RA 1	0.05	0	653	SLE RA 1	0.0033	0	SLE RA 1	Si

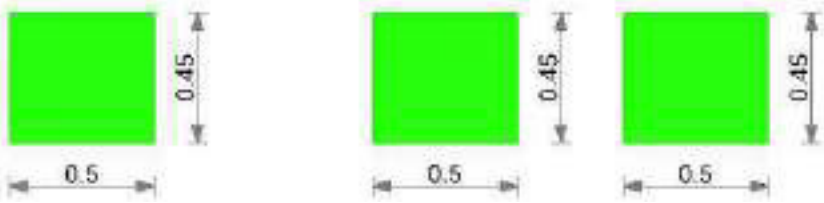
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.02	653	828	SLE RA 20	0.19	0	653	SLE RA 1	0.1	0	653	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	653	828	SLE RA 1	0.19	0	653	SLE RA 1	0.1	0	653	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	653	828	SLE RA 1	0.19	0	653	SLE RA 1	0.1	0	653	SLE RA 1	Si

CORDOLO 29

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

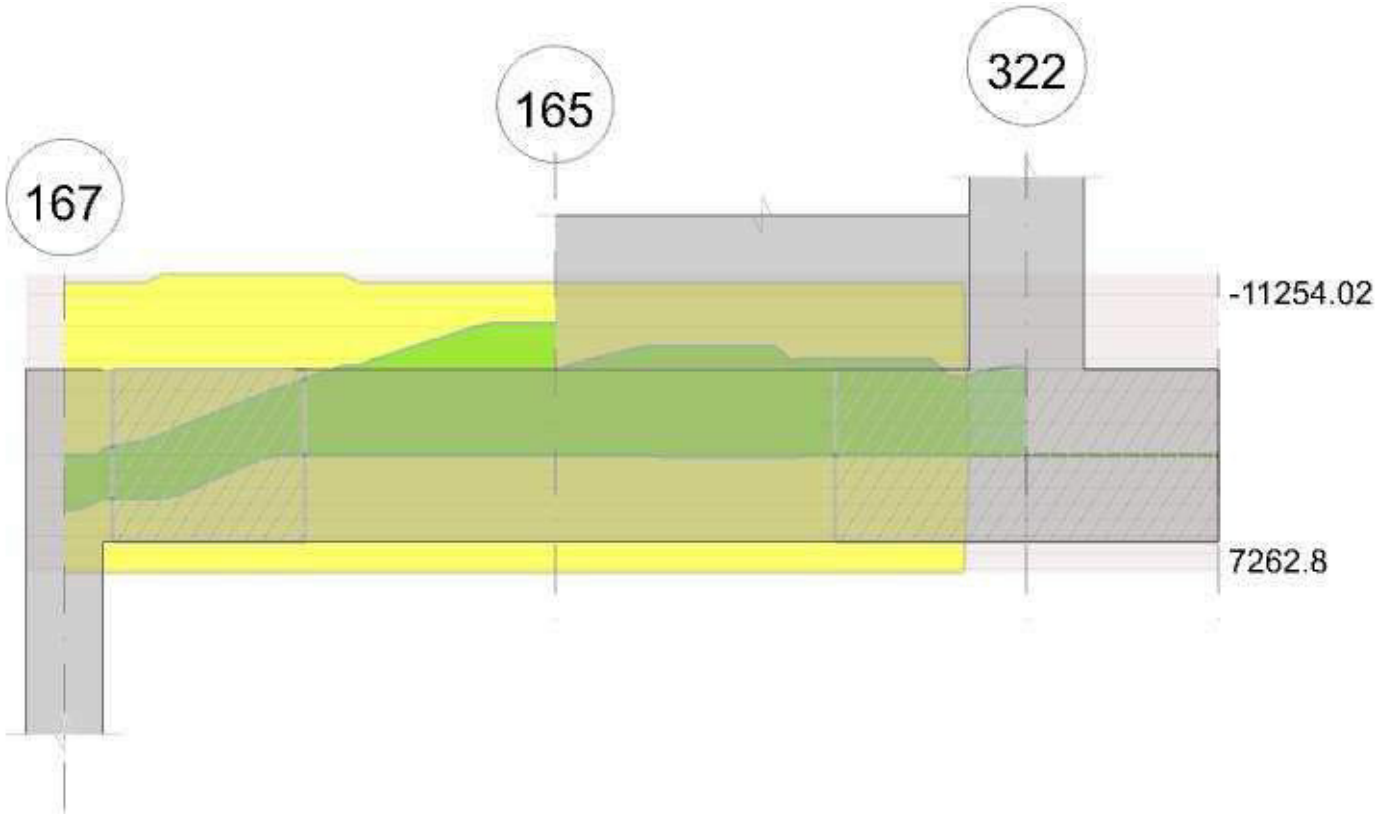
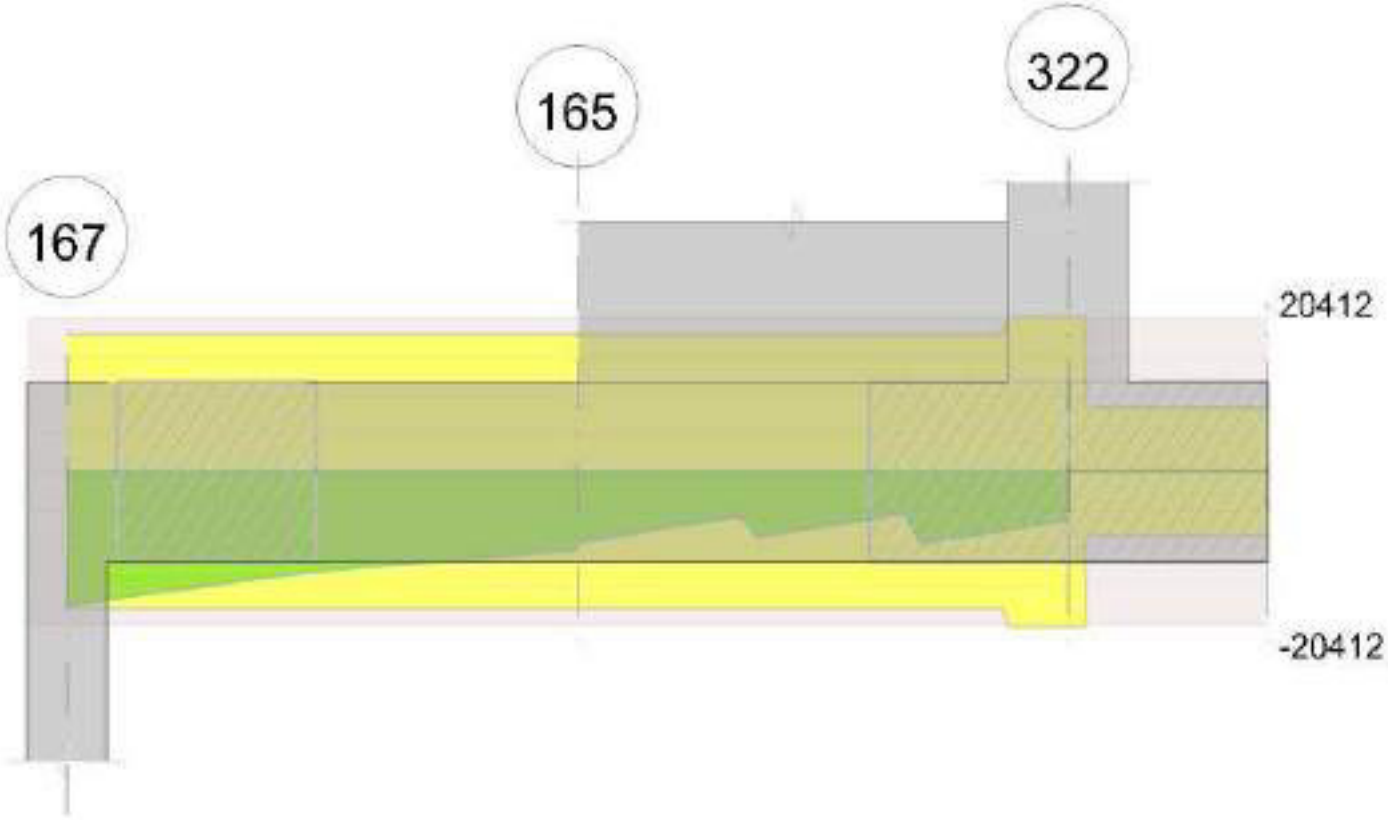


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 817

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3626.15	SLU 83	3252.21	7767.92	0.117	2.39							Si
0.1	0.000763	0.052	0.000509	0.052	2410.15	SLU 83	2410.15	7767.92	0.117	3.22							Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000763	0.052	0.000509	0.052							-3273.56	SLU 83	-4838.33	-11254.02	0.132	2.33	Si
1.11	0.000763	0.052	0.000509	0.052							-7053.1	SLU 83	-8173.38	-11254.02	0.132	1.38	Si
1.28	0.000763	0.052	0.000509	0.052							-8173.38	SLU 83	-8173.38	-11254.02	0.132	1.38	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3752.17	SLV 8	3418.22	7262.8	0.194	2.12							Si
0.1	0.000763	0.052	0.000509	0.052	2638.43	SLV 8	2638.43	7262.8	0.194	2.75	397.2	SLV 9	-424.4	-10716.86	0.238	25.25	Si
0.64	0.000763	0.052	0.000509	0.052							-2954.03	SLV 11	-4515.53	-10716.86	0.238	2.37	Si
1.15	0.000763	0.052	0.000509	0.052							-7220.65	SLV 7	-8178.96	-10716.86	0.238	1.31	Si
1.28	0.000763	0.052	0.000509	0.052							-8178.96	SLV 7	-8178.96	-10716.86	0.238	1.31	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	2948.17	SLD 8	2662.44	7262.8	0.194	2.73							Si
0.1	0.000763	0.052	0.000509	0.052	2007.33	SLD 8	2007.33	7262.8	0.194	3.62	1028.3	SLD 9	-92.44	-10716.86	0.238	115.94	Si
0.64	0.000763	0.052	0.000509	0.052							-2554.73	SLD 11	-3819.75	-10716.86	0.238	2.81	Si
1.15	0.000763	0.052	0.000509	0.052							-5933.66	SLD 7	-6659.4	-10716.86	0.238	1.61	Si
1.28	0.000763	0.052	0.000509	0.052							-6659.4	SLD 7	-6659.4	-10716.86	0.238	1.61	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-17589	SLU 83	-17589	-7764	-63178	-18053	-18053	1	1.03	Si
0.1	0.0000129	0.000509	0	-16841	SLU 83	-16841	-7764	-63178	-18053	-18053	1	1.07	Si
0.64	0.0000129	0.000763	0	-12975	SLU 83	-12975	-8659	-63178	-18053	-18053	1	1.39	Si
1.28	0.0000129	0.000763	0	-8736	SLU 83	-8736	-8659	-63178	-18053	-18053	1	2.07	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-16165	SLV 7	-16165	-7764	-63178	-18053	-18053	1	1.12	Si
0.1	0.0000129	0.000509	0	-15655	SLV 7	-15655	-7764	-63178	-18053	-18053	1	1.15	Si
0.64	0.0000129	0.000763	0	-13071	SLV 7	-13071	-8659	-63178	-18053	-18053	1	1.38	Si
1.28	0.0000129	0.000763	0	-10364	SLV 7	-10364	-8659	-63178	-18053	-18053	1	1.74	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-13632	SLD 7	-13632	-7764	-63178	-18053	-18053	1	1.32	Si
0.1	0.0000129	0.000509	0	-13128	SLD 7	-13128	-7764	-63178	-18053	-18053	1	1.38	Si
0.64	0.0000129	0.000763	0	-10544	SLD 7	-10544	-8659	-63178	-18053	-18053	1	1.71	Si
1.28	0.0000129	0.000763	0	-7765	SLD 7	-7765	-8659	-63178	-18053	-18053	1	2.32	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2649.35	20	2374.32	120881	1494000	1857343	36000000	2322.99	2	2075.27	105655	1120500			Si
0.1	1755.07	20	1755.07	89353	1494000	1372923	36000000	1517.81	2	1517.81	77274	1120500			Si
0.64	-2424.18	20	-3574.49	186412	1494000	2729741	36000000	-2239.95	2	-3272.14	170645	1120500			Si
1.28	-6025.59	20	-6025.59	542133	1494000	21922371	36000000	-5466.11	2	-5466.11	491796	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.11	superiore	0.375	0.00064	0.000239	20	0.375	0.00059	0.000223	6	0.375	0.00058	0.000217	2	Si
1.28	superiore	0.375	0.00064	0.000239	20	0.375	0.00059	0.000223	6	0.375	0.00058	0.000217	2	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 817

Campata 2 tra i fili 165 - 322, sezione R 50x45, aste 816, 815, 814

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1568	SLU 84	0.054	10132	4826	SLU 84	22892	Si
0.62	0.41	0.0006	1475	SLU 84	0.054	10132	4538	SLU 84	22892	Si
1.08	0.41	0.0006	1463	SLU 84	0.054	10132	4502	SLU 84	22892	Si
1.23	0.41	0.0006	1470	SLU 84	0.054	10132	4522	SLU 84	22892	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1095	SLD 14	0.134	11271	3369	SLD 14	26326	Si
0.62	0.41	0.0006	1053	SLD 14	0.134	11271	3242	SLD 14	26326	Si
1.08	0.41	0.0006	1052	SLD 14	0.134	11271	3238	SLD 14	26326	Si
1.23	0.41	0.0006	1057	SLD 14	0.134	11271	3254	SLD 14	26326	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000644	1148	SLE RA 21	31275	1494000	387816	36000000	1031	SLE QP 2	28066	1120500	Si
0.62	0.41	0.00000644	1079	SLE RA 21	29397	1494000	364524	36000000	968	SLE QP 2	26367	1120500	Si
1.08	0.41	0.00000644	1071	SLE RA 21	29159	1494000	361567	36000000	961	SLE QP 2	26165	1120500	Si
1.23	0.41	0.00000644	1075	SLE RA 21	29287	1494000	363163	36000000	965	SLE QP 2	26287	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
817,816,815,814	2.61	1.1	SLU 84	ST	BT	2.3	122239	23834	5.13	Si
817,816,815,814	2.61	1.1	SLV 1	SIS	LT	2.3	73886	14870	4.97	Si
817,816,815,814	2.61	1.1	SLD 14	SIS	BT	2.3	114069	17092	6.67	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-528	325	-23834	-86.85	-1053.27	-1	1	-0.04	0	1.09	2.52	1496	2060	0	14430	
-692	3595	-14870	-1681	-1099.51	-3	14	-0.07	-0.11	0.87	2.46	1496	2060	37	0	0.07
-667	-1206	-17092	630.72	-691.44	-2	-4	-0.04	0.04	1.03	2.53	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.27	1.27	0.86	1.16	1.27	1	0.61	0.61	0.46	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.08	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

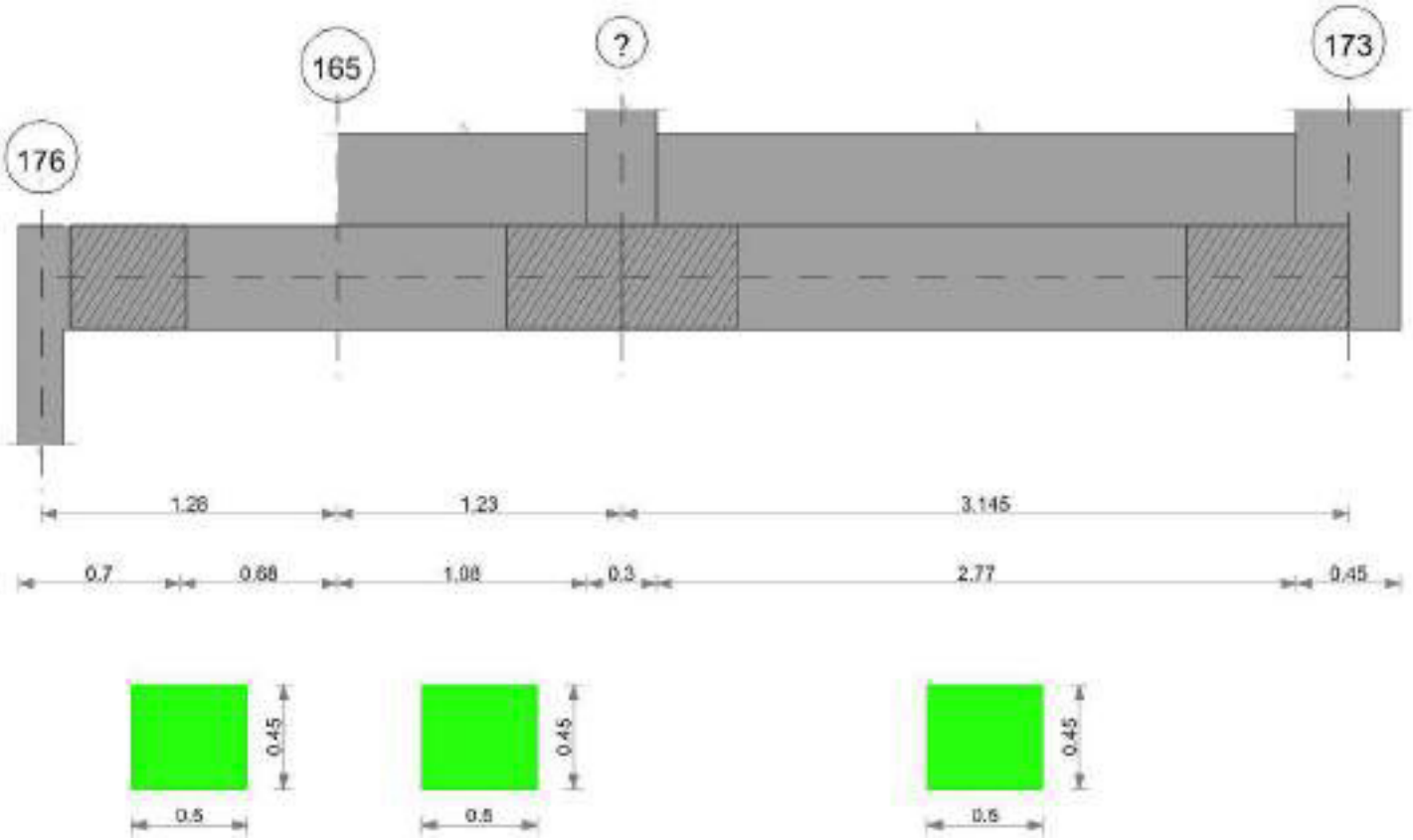
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	736	SLE RA 21	0.05	0.001	736	840	SLE RA 21	0.05	0	771	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	736	SLE RA 1	0.05	0	736	736	SLE RA 1	0.05	0	771	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	736	SLE RA 1	0.05	0	736	736	SLE RA 1	0.05	0	771	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.03	736	771	SLE RA 20	0.19	0	736	SLE RA 1	0.1	0.01	771	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	736	771	SLE RA 1	0.19	0	736	SLE RA 1	0.1	0	771	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	736	771	SLE RA 1	0.19	0	736	SLE RA 1	0.1	0	771	SLE RA 1	Si

CORDOLO 30

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

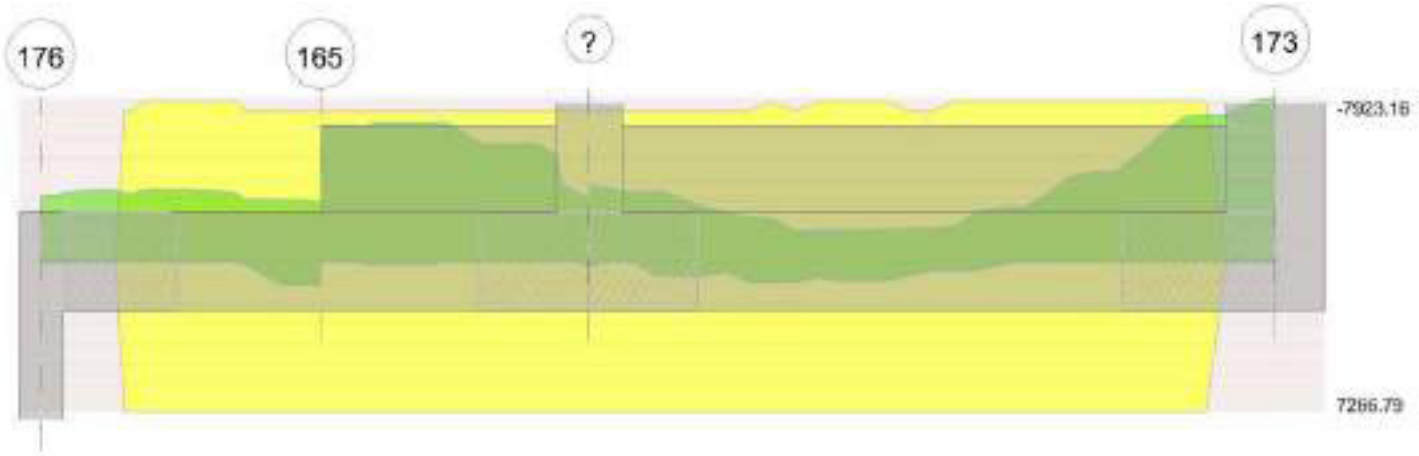
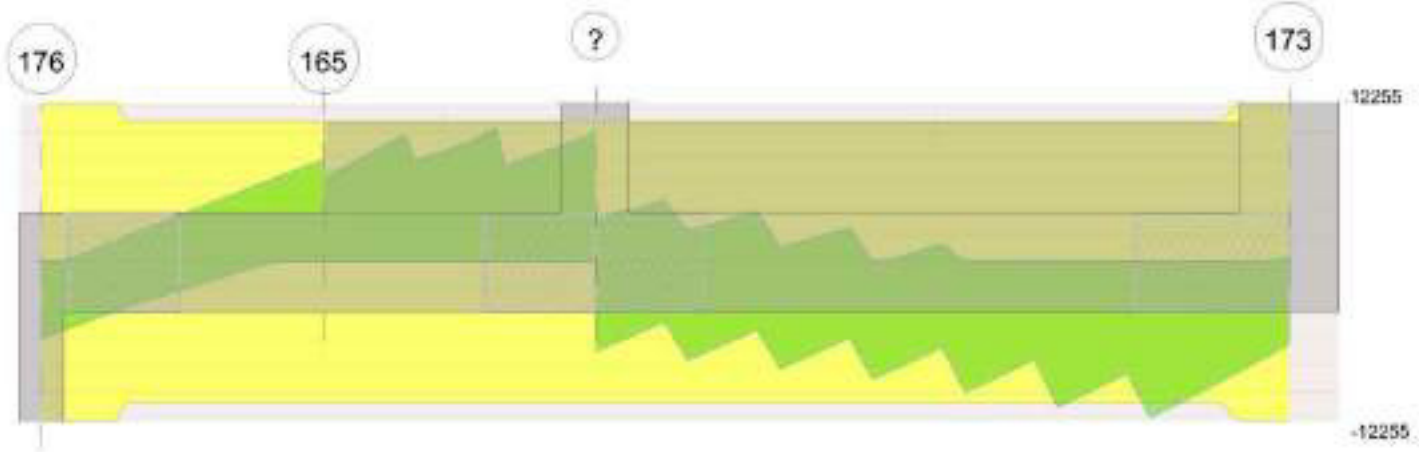


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 411

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-3377.87	SLU 83	-3461.08	-7755.45	0.113	2.24	Si
1.28	0.000509	0.052	0.000509	0.052							-1019.57	SLU 81	-1990.67	-7755.45	0.113	3.9	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2968.6	SLV 11	-3027.18	-7266.79	0.197	2.4	Si
1.28	0.000509	0.052	0.000509	0.052	1108.63	SLV 10	1108.63	7266.79	0.197	6.55	-2606.75	SLV 7	-2867.03	-7266.79	0.197	2.53	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2587.77	SLD 11	-2627.69	-7266.79	0.197	2.77	Si
1.28	0.000509	0.052	0.000509	0.052	62.17	SLD 10	62.17	7266.79	0.197	116.88	-1560.3	SLD 7	-2038.8	-7266.79	0.197	3.56	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-4759	SLU 83	-4759	-8455	-71432	-12255	-12255	1	2.58	Si
0.1	0.0000077	0	0	-3774	SLU 81	-3774	-8455	-71432	-12255	-12255	1	3.25	Si
0.64	0.0000077	0	0	1310	SLU 84	1310	7764	63178	10839	10839	1	8.27	Si
1.28	0.0000077	0.000509	0	6853	SLU 84	6853	7764	63178	10839	10839	1	1.58	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5881	SLV 3	-5881	-8455	-71432	-12255	-12255	1	2.08	Si
0.1	0.0000077	0	0	43	SLV 14	43	8455	71432	12255	12255	1	287.95	Si
0.1	0.0000077	0	0	-5250	SLV 3	-5250	-8455	-71432	-12255	-12255	1	2.33	Si
0.64	0.0000077	0	0	3685	SLV 14	3685	7764	63178	10839	10839	1	2.94	Si
0.64	0.0000077	0	0	-2108	SLV 3	-2108	-7764	-63178	-10839	-10839	1	5.14	Si
1.28	0.0000077	0.000509	0	7891	SLV 14	7891	7764	63178	10839	10839	1	1.37	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-4387	SLD 3	-4387	-8455	-71432	-12255	-12255	1	2.79	Si
0.1	0.0000077	0	0	-3739	SLD 3	-3739	-8455	-71432	-12255	-12255	1	3.28	Si
0.64	0.0000077	0	0	2031	SLD 14	2031	7764	63178	10839	10839	1	5.34	Si
0.64	0.0000077	0	0	-453	SLD 3	-453	-7764	-63178	-10839	-10839	1	23.92	Si
1.28	0.0000077	0.000509	0	5949	SLD 14	5949	7764	63178	10839	10839	1	1.82	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1773.76	21	-1773.76	-105112	1494000	0	36000000	-1592.86	2	-1592.86	-94392	1120500			Si
0.1	-2056.62	20	-2404.98	-142517	1494000	0	36000000	-1856.31	2	-2183.6	-129398	1120500			Si
0.64	-2496.05	20	-2555.48	135168	1494000	2027526	36000000	-2288.07	2	-2334.33	123471	1120500			Si
1.28	-768.46	18	-1481.59	78367	1494000	1175499	36000000	-749.06	2	-1394.54	73762	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 411

Campata 2 tra i fili 165 - ?, sezione R 50x45, aste 410, 409, 408

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1606	SLU 84	0.033	6137	4941	SLU 84	15877	Si
0.61	0.41	0.0004	1520	SLU 84	0.033	6137	4676	SLU 84	15877	Si
1.08	0.41	0.0004	1513	SLU 84	0.033	6137	4654	SLU 84	15877	Si
1.23	0.41	0.0004	1519	SLU 84	0.033	6137	4675	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1144	SLD 14	0.105	6852	3519	SLD 14	15877	Si
0.61	0.41	0.0004	1107	SLD 14	0.105	6852	3407	SLD 14	15877	Si
1.08	0.41	0.0004	1110	SLD 14	0.105	6852	3414	SLD 14	15877	Si
1.23	0.41	0.0004	1115	SLD 14	0.105	6852	3431	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1176	SLE RA 21	33090	1494000	410317	36000000	1055	SLE QP 2	29698	1120500	Si
0.61	0.41	0.00000387	1112	SLE RA 21	31299	1494000	388112	36000000	998	SLE QP 2	28077	1120500	Si
1.08	0.41	0.00000387	1107	SLE RA 21	31152	1494000	386289	36000000	993	SLE QP 2	27957	1120500	Si
1.23	0.41	0.00000387	1112	SLE RA 21	31292	1494000	388027	36000000	998	SLE QP 2	28089	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 173, sezione R 50x45, aste 407, 406, 405, 404, 403, 402, 401

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1519	SLU 84	0.033	6137	4675	SLU 84	15877	Si
0.15	0.41	0.0004	1527	SLU 84	0.033	6137	4699	SLU 84	15877	Si
1.57	0.41	0.0004	1719	SLU 83	0.033	6137	5290	SLU 83	15877	Si
2.92	0.41	0.0004	2082	SLU 83	0.033	6137	6407	SLU 83	15877	Si
3.15	0.41	0.0004	2185	SLU 83	0.033	6137	6723	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1115	SLD 14	0.105	6852	3431	SLD 14	15877	Si
0.15	0.41	0.0004	1121	SLD 14	0.105	6852	3448	SLD 14	15877	Si
1.57	0.41	0.0004	1253	SLD 15	0.105	6852	3856	SLD 15	15877	Si
2.92	0.41	0.0004	1518	SLD 15	0.105	6852	4669	SLD 15	15877	Si
3.15	0.41	0.0004	1592	SLD 15	0.105	6852	4899	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1112	SLE RA 21	31292	1494000	388027	36000000	998	SLE QP 2	28089	1120500	Si
0.15	0.41	0.00000387	1118	SLE RA 21	31451	1494000	389992	36000000	1003	SLE QP 2	28239	1120500	Si
1.57	0.41	0.00000387	1259	SLE RA 20	35439	1494000	439438	36000000	1134	SLE QP 2	31925	1120500	Si
2.92	0.41	0.00000387	1527	SLE RA 20	42986	1494000	533025	36000000	1381	SLE QP 2	38876	1120500	Si
3.15	0.41	0.00000387	1603	SLE RA 20	45113	1494000	559400	36000000	1451	SLE QP 2	40828	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
411,410,409,408,407,406,405,404,403,402,401	5.98	1.1	SLU 83	ST	BT	2.3	275730	64486	4.28	Si
411,410,409,408,407,406,405,404,403,402,401	5.98	1.1	SLV 3	SIS	LT	2.3	138133	37825	3.65	Si
411,410,409,408,407,406,405,404,403,402,401	5.98	1.1	SLD 16	SIS	BT	2.3	251704	47082	5.35	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	777	-64486	-164.28	3143.23	0	1	0.05	0	1.09	5.88	1496	2060	0	14430	
0	10455	-37825	-4860.69	1969.96	0	15	0.05	-0.13	0.84	5.88	1496	2060	37	0	0.07
0	-3709	-47082	1901.13	3439.83	0	-5	0.07	0.04	1.02	5.83	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.11	1.11	0.94	1.16	1.27	1	0.55	0.53	0.39	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.03	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

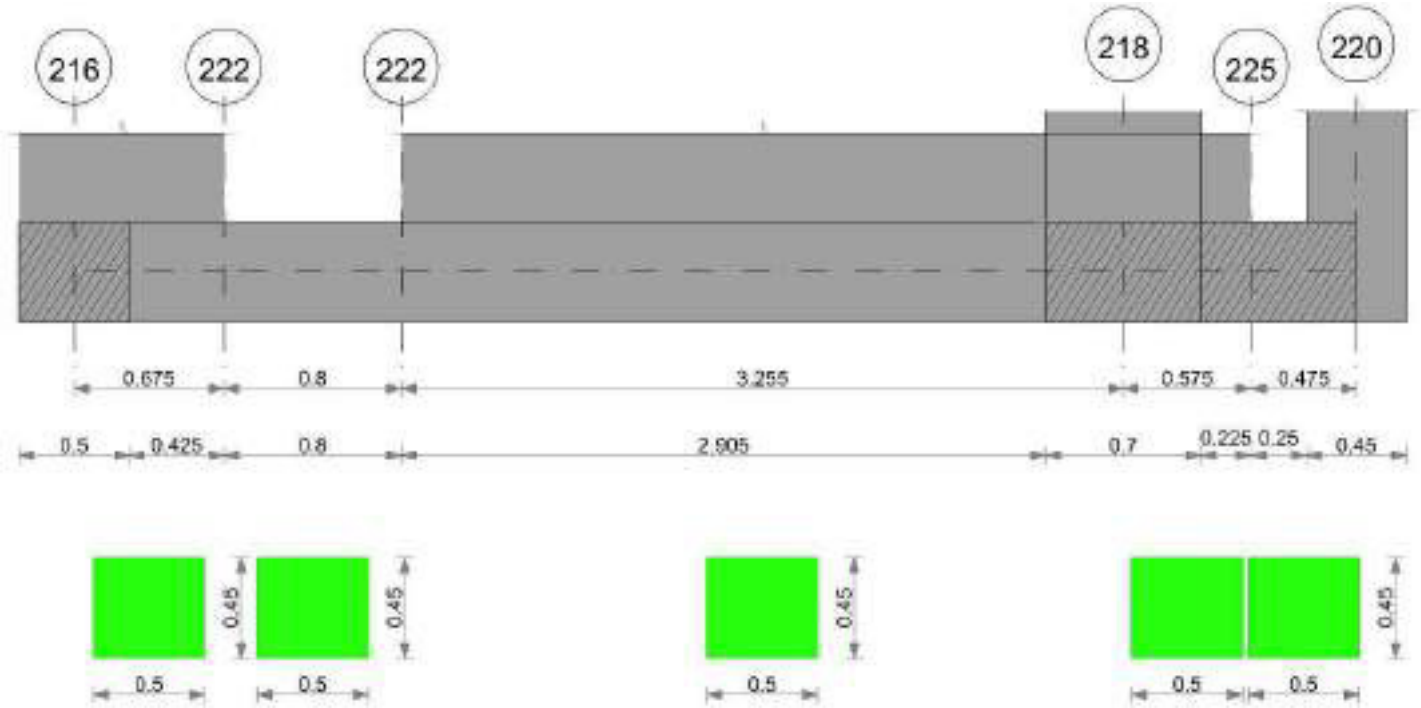
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	667	SLE RA 21	0.05	0.002	667	1082	SLE RA 21	0.05	0	842	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	667	SLE RA 1	0.05	0	667	667	SLE RA 1	0.05	0	773	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	667	SLE RA 1	0.05	0	667	667	SLE RA 1	0.05	0	773	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.03	842	1082	SLE RA 21	0.19	0.01	842	SLE RA 20	0.1	0	667	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	667	773	SLE RA 1	0.19	0	667	SLE RA 1	0.1	0	773	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	667	773	SLE RA 1	0.19	0	667	SLE RA 1	0.1	0	773	SLE RA 1	Si

CORDOLO 31

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

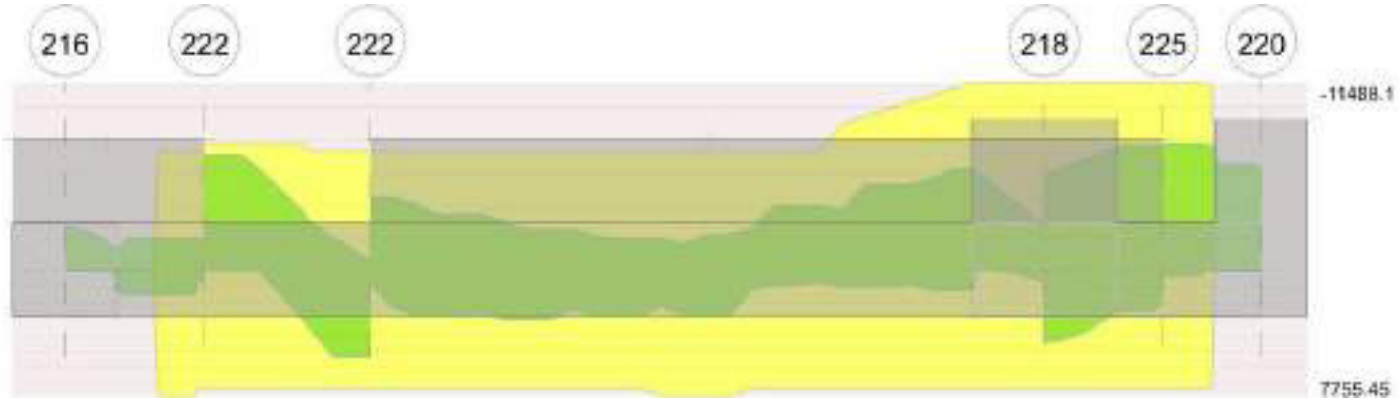


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 324

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-7058.31	SLU 83	-7058.31	-7755.45	0.113	1.1	Si
0.03	0.000509	0.052	0.000509	0.052							-6778.87	SLU 83	-7058.31	-7755.45	0.113	1.1	Si
0.4	0.000509	0.052	0.000509	0.052	-1260.41	SLU 2	817.56	7755.45	0.113	9.49	-2032.32	SLU 83	-4508.88	-7755.45	0.113	1.72	Si
0.8	0.000509	0.052	0.000509	0.052	4804.47	SLU 84	4804.47	7755.45	0.113	1.61							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6294.49	SLV 16	-6294.49	-7266.79	0.197	1.15	Si
0.03	0.000509	0.052	0.000509	0.052							-6026.71	SLV 16	-6294.49	-7266.79	0.197	1.15	Si
0.4	0.000509	0.052	0.000509	0.052	-401.49	SLV 6	1960.36	7266.79	0.197	3.71	-2339.54	SLV 11	-3994.07	-7266.79	0.197	1.82	Si
0.8	0.000509	0.052	0.000509	0.052	5360.88	SLV 10	5360.88	7266.79	0.197	1.36	1019.36	SLV 7	-572.7	-7266.79	0.197	12.69	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-5395.48	SLD 16	-5395.48	-7266.79	0.197	1.35	Si
0.05	0.000509	0.052	0.000509	0.052							-4948.9	SLD 16	-5395.48	-7266.79	0.197	1.35	Si
0.4	0.000509	0.052	0.000509	0.052	-943.74	SLD 6	1157.09	7266.79	0.197	6.28	-1797.29	SLD 11	-3440.74	-7266.79	0.197	2.11	Si
0.8	0.000509	0.052	0.000509	0.052	4141.08	SLD 10	4141.08	7266.79	0.197	1.75							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	10343	SLU 84	10343	7764	63178	15852	15852	1	1.53	Si
0.4	0.0000113	0.000509	0	14818	SLU 84	14818	7764	63178	15852	15852	1	1.07	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	10574	SLV 14	10574	7764	63178	15852	15852	1	1.5	Si
0.4	0.0000113	0.000509	0	14215	SLV 14	14215	7764	63178	15852	15852	1	1.12	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	8470	SLD 14	8470	7764	63178	15852	15852	1	1.87	Si
0.4	0.0000113	0.000509	0	11741	SLD 14	11741	7764	63178	15852	15852	1	1.35	Si
0.8	0.0000113	0.000509	0	15067	SLD 14	15067	7764	63178	15852	15852	1	1.05	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5190.16	20	-5190.16	548878	1494000	27934979	36000000	-4727.65	2	-4727.65	499966	1120500			Si
0.4	-1498.55	20	-3317.89	175495	1494000	2632419	36000000	-1370.52	2	-3025.06	160006	1120500			Si
0.8	3524.6	21	3524.6	186428	1494000	2796423	36000000	3190.12	2	3190.12	168737	1120500			Si

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 313

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-5471.73	SLU 84	-6196.74	-12059.84	0.137	1.95	Si
0.24	0.000823	0.052	0.000509	0.052							-6335.2	SLU 83	-6358.43	-12059.84	0.137	1.9	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052	355.81	SLV 3	355.81	7261.11	0.193	20.41	-7733.61	SLV 14	-7733.61	-11488.1	0.247	1.49	Si
0.24	0.000823	0.052	0.000509	0.052							-6803.56	SLV 16	-7561.59	-11488.1	0.247	1.52	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-5419.07	SLD 14	-5456.1	-11488.1	0.247	2.11	Si
0.24	0.000823	0.052	0.000509	0.052							-5344.73	SLD 16	-5456.1	-11488.1	0.247	2.11	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-5300	SLU 83	-5300	-7759	-63117	-17138	-17138	1	3.23	Si
0.02	0.0000115	0	0	-5081	SLU 83	-5081	-7759	-63117	-16088	-16088	1	3.17	Si
0.24	0.0000115	0	0	-1973	SLU 81	-1973	-7759	-63117	-16088	-16088	1	8.15	Si
0.25	0.0000115	0	0	-1797	SLU 81	-1797	-8455	-71432	-18208	-18208	1	10.13	Si
0.48	0.0000115	0	0	1513	SLU 78	1513	8455	71432	18208	18208	1	12.03	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	2723	SLV 14	2723	7759	63117	17138	17138	1	6.29	Si
0	0.0000122	0	0	-9731	SLV 3	-9731	-7764	-63178	-17154	-17154	1	1.76	Si
0.02	0.0000115	0	0	2913	SLV 14	2913	7759	63117	16088	16088	1	5.52	Si
0.02	0.0000115	0	0	-9627	SLV 3	-9627	-7764	-63178	-16104	-16104	1	1.67	Si
0.24	0.0000115	0	0	5636	SLV 14	5636	7759	63117	16088	16088	1	2.85	Si
0.24	0.0000115	0	0	-8170	SLV 3	-8170	-7759	-63117	-16088	-16088	1	1.97	Si
0.25	0.0000115	0	0	5794	SLV 14	5794	8455	71432	18208	18208	1	3.14	Si
0.25	0.0000115	0	0	-8088	SLV 3	-8088	-8455	-71432	-18208	-18208	1	2.25	Si
0.48	0.0000115	0	0	8709	SLV 14	8709	8455	71432	18208	18208	1	2.09	Si
0.48	0.0000115	0	0	-6613	SLV 3	-6613	-8455	-71432	-18208	-18208	1	2.75	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-6175	SLD 3	-6175	-7759	-63117	-17138	-17138	1	2.78	Si
0.02	0.0000115	0	0	-6046	SLD 3	-6046	-7759	-63117	-16088	-16088	1	2.66	Si
0.24	0.0000115	0	0	1692	SLD 14	1692	7759	63117	16088	16088	1	9.51	Si
0.24	0.0000115	0	0	-4226	SLD 3	-4226	-7759	-63117	-16088	-16088	1	3.81	Si
0.25	0.0000115	0	0	1828	SLD 14	1828	8455	71432	18208	18208	1	9.96	Si
0.25	0.0000115	0	0	-4122	SLD 3	-4122	-8455	-71432	-18208	-18208	1	4.42	Si
0.48	0.0000115	0	0	4329	SLD 14	4329	8455	71432	18208	18208	1	4.21	Si
0.48	0.0000115	0	0	-2234	SLD 3	-2234	-8455	-71432	-18208	-18208	1	8.15	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4033.39	21	-4564.22	237338	1494000	3456894	36000000	-3688.9	2	-4167.12	216690	1120500			Si
0.24	-4665.14	20	-4682.02	243464	1494000	3546115	36000000	-4256.85	2	-4271.74	222130	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 216 - 222, sezione R 50x45, aste 326, 325

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2005	SLU 83	0.02	3468	6169	SLU 83	15877	Si
0.25	0.41	0.0002	1993	SLU 84	0.02	3468	6133	SLU 84	15877	Si
0.34	0.41	0.0002	1990	SLU 84	0.02	3468	6123	SLU 84	15877	Si
0.68	0.41	0.0006	1978	SLU 84	0.048	8921	6086	SLU 84	20101	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1458	SLD 15	0.079	3893	4487	SLD 15	15877	Si
0.25	0.41	0.0002	1451	SLD 15	0.079	3893	4464	SLD 15	15877	Si
0.34	0.41	0.0002	1449	SLD 15	0.079	3893	4458	SLD 15	15877	Si
0.68	0.41	0.0006	1442	SLD 16	0.126	9932	4437	SLD 16	23116	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000217	1470	SLE RA 20	42293	1494000	524437	36000000	1325	SLE QP 2	38138	1120500	Si
0.25	0.41	0.00000217	1461	SLE RA 21	42048	1494000	521391	36000000	1318	SLE QP 2	37912	1120500	Si
0.34	0.41	0.00000217	1459	SLE RA 21	41979	1494000	520538	36000000	1315	SLE QP 2	37848	1120500	Si

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0.68	0.41	0.00000565	1450	SLE RA 21	39876	1494000	494458	36000000	1307	SLE QP 2	35948	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 324

Campata 3 tra i fili 222 - 218, sezione R 50x45, aste 323, 322, 321, 320, 319, 318, 317, 316

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2015	SLU 84	0.048	8921	6200	SLU 84	20101	Si
1.63	0.41	0.0005	2118	SLU 83	0.044	8295	6517	SLU 83	18663	Si
2.91	0.41	0.0005	2258	SLU 83	0.044	8295	6946	SLU 83	18663	Si
3.26	0.41	0.0006	2334	SLU 83	0.052	9638	7181	SLU 83	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1483	SLD 14	0.126	9932	4563	SLD 14	23116	Si
1.63	0.41	0.0005	1575	SLD 15	0.122	9239	4847	SLD 15	21463	Si
2.91	0.41	0.0005	1713	SLD 15	0.122	9239	5272	SLD 15	21463	Si
3.26	0.41	0.0006	1787	SLD 15	0.131	10725	5497	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000565	1477	SLE RA 21	40622	1494000	503710	36000000	1332	SLE QP 2	36629	1120500	Si
1.63	0.41	0.00000525	1553	SLE RA 20	42932	1494000	532361	36000000	1402	SLE QP 2	38764	1120500	Si
2.91	0.41	0.00000525	1656	SLE RA 20	45786	1494000	567750	36000000	1498	SLE QP 2	41407	1120500	Si
3.26	0.41	0.00000612	1713	SLE RA 20	46827	1494000	580653	36000000	1550	SLE QP 2	42378	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 218 - 225, sezione R 50x45, aste 315, 314

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2334	SLU 83	0.052	9638	7181	SLU 83	21752	Si
0.29	0.41	0.0006	2402	SLU 83	0.052	9638	7391	SLU 83	21752	Si
0.35	0.41	0.0006	2418	SLU 83	0.052	9638	7440	SLU 83	21752	Si
0.57	0.41	0.0006	2483	SLU 83	0.052	9638	7639	SLU 83	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1787	SLD 15	0.131	10725	5497	SLD 15	25014	Si
0.29	0.41	0.0006	1853	SLD 15	0.131	10725	5701	SLD 15	25014	Si
0.35	0.41	0.0006	1869	SLD 15	0.131	10725	5751	SLD 15	25014	Si
0.57	0.41	0.0006	1935	SLD 15	0.131	10725	5953	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000612	1713	SLE RA 20	46827	1494000	580653	36000000	1550	SLE QP 2	42378	1120500	Si
0.29	0.41	0.00000612	1763	SLE RA 20	48203	1494000	597721	36000000	1596	SLE QP 2	43648	1120500	Si
0.35	0.41	0.00000612	1775	SLE RA 20	48528	1494000	601741	36000000	1607	SLE QP 2	43948	1120500	Si
0.57	0.41	0.00000612	1823	SLE RA 20	49837	1494000	617978	36000000	1651	SLE QP 2	45155	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 313

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
326,325,324,323,322,321,320,319,318,317,316,315,314,313	6.26	1.1	SLU 83	ST	BT	2.3	280294	81006	3.46	Si
326,325,324,323,322,321,320,319,318,317,316,315,314,313	6.26	1.1	SLV 15	SIS	BT	2.3	241865	68495	3.53	Si
326,325,324,323,322,321,320,319,318,317,316,315,314,313	6.26	1.1	SLD 15	SIS	BT	2.3	267124	60987	4.38	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1275	-81006	-611.69	8317.23	0	1	0.1	-0.01	1.08	6.05	1496	2060	0	14430	
0	-8501	-68495	3838.45	12708.63	0	-7	0.19	0.06	0.99	5.88	1496	2060	0	14430	0.07
0	-3120	-60987	1395.65	8706.18	0	-3	0.14	0.02	1.05	5.97	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	596	SLE RA 21	0.05	0.002	596	1093	SLE RA 21	0.05	0	781	SLE RA 21	0.0033	0	SLE RA 19	Si
D	0.05	0	596	SLE RA 1	0.05	0	596	596	SLE RA 1	0.05	0	763	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	596	SLE RA 1	0.05	0	596	596	SLE RA 1	0.05	0	763	SLE RA 1	0.0033	0	SLE RA 1	Si

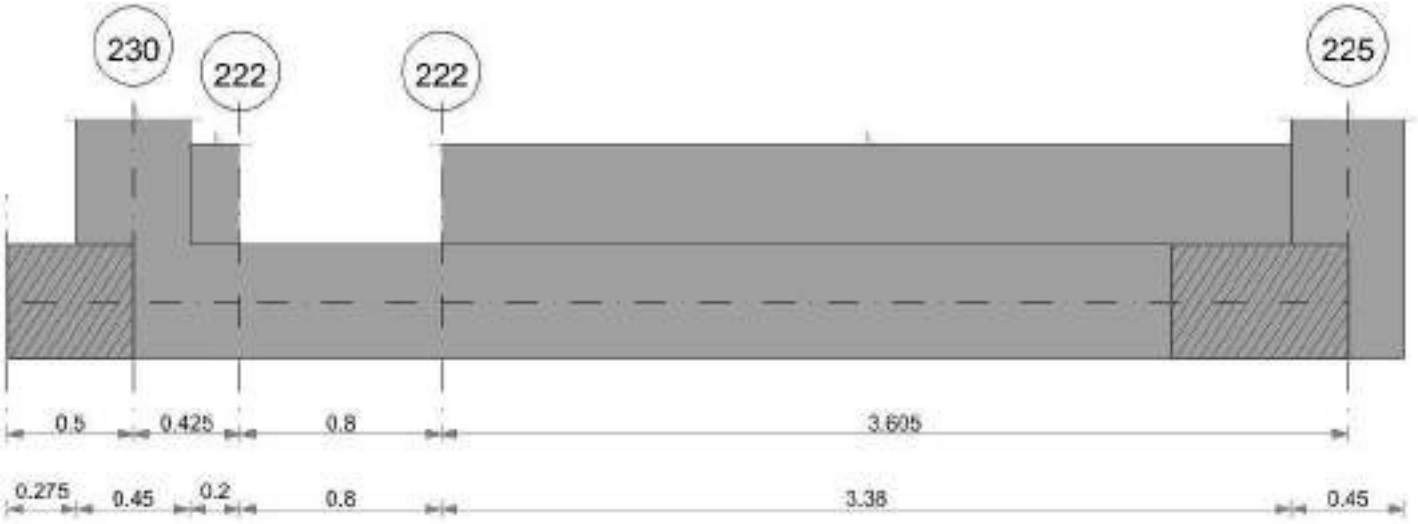
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	948	1005	SLE RA 21	0.19	0.01	763	SLE RA 21	0.1	0	1005	SLE RA 19	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
D	0.19	0	SLE RA 1	0.19	0	596	763	SLE RA 1	0.19	0	596	SLE RA 1	0.1	0	763	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	596	763	SLE RA 1	0.19	0	596	SLE RA 1	0.1	0	763	SLE RA 1	Si

CORDOLO 32

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

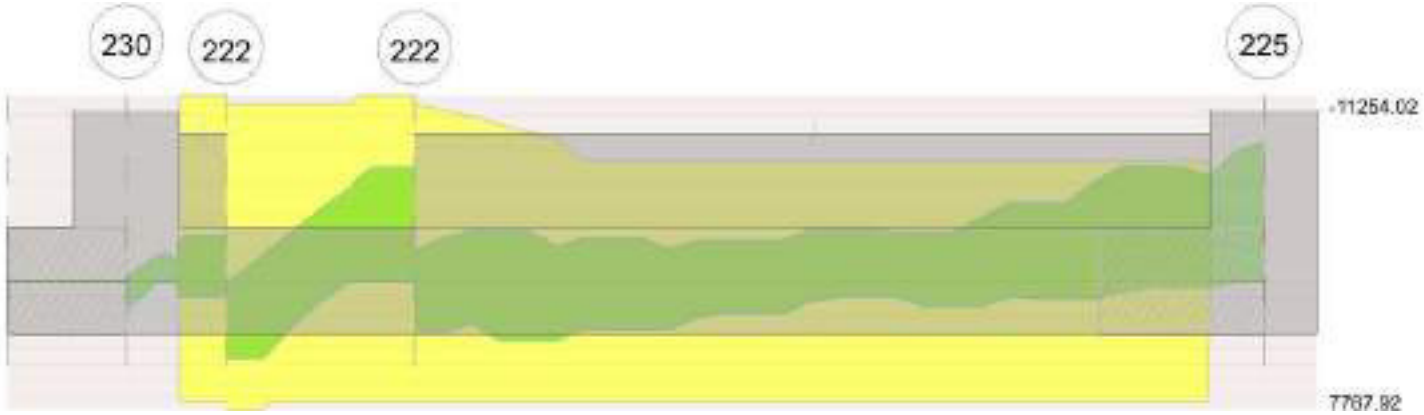
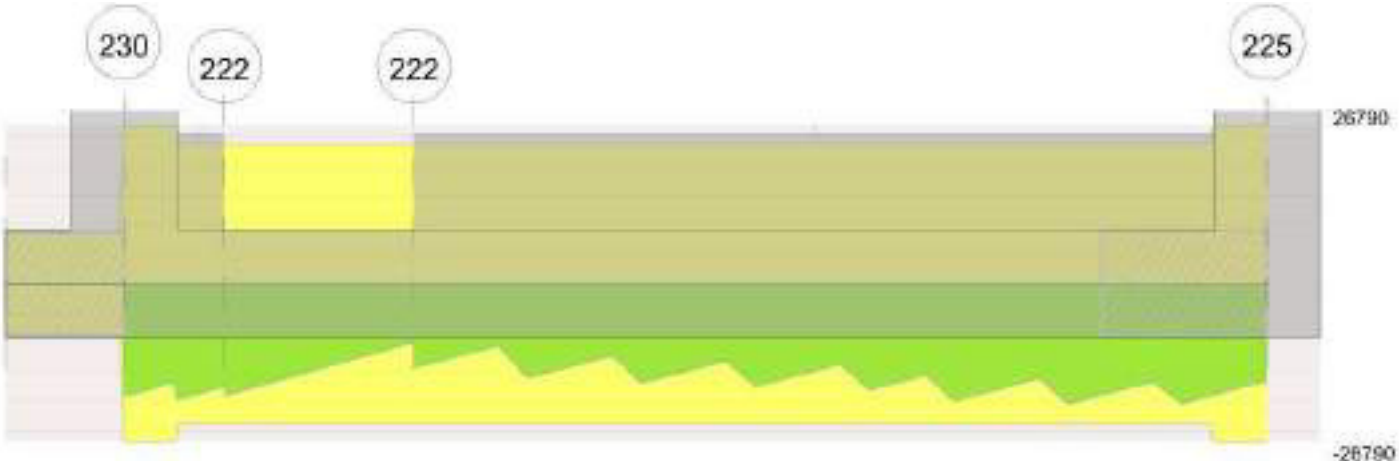


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 452

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	4628.58	SLU 84	4628.58	7767.92	0.117	1.68							Si
0.4	0.000763	0.052	0.000509	0.052	-1262.82	SLU 2	733.92	7767.92	0.117	10.58	-2036.1	SLU 83	-4431.96	-11254.02	0.132	2.54	Si
0.8	0.000763	0.052	0.000509	0.052							-6875.66	SLU 83	-6875.66	-11254.02	0.132	1.64	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	4318.92	SLV 14	4318.92	7262.8	0.194	1.68							Si
0.4	0.000763	0.052	0.000509	0.052	-404.29	SLV 6	1270.75	7262.8	0.194	5.72	-2341.87	SLV 11	-4349.62	-10716.86	0.238	2.46	Si
0.8	0.000763	0.052	0.000509	0.052							-6507.51	SLV 11	-6507.51	-10716.86	0.238	1.65	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3604.36	SLD 14	3604.36	7262.8	0.194	2.02							Si
0.4	0.000763	0.052	0.000509	0.052	-946.43	SLD 6	821.96	7262.8	0.194	8.84	-1799.74	SLD 11	-3574.23	-10716.86	0.238	3	Si
0.8	0.000763	0.052	0.000509	0.052							-5430.46	SLD 11	-5430.46	-10716.86	0.238	1.97	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-18941	SLU 83	-18941	-7764	-63178	-23694	-23694	1	1.25	Si
0.4	0.0000169	0.000763	0	-14368	SLU 83	-14368	-8659	-63178	-23694	-23694	1	1.65	Si
0.8	0.0000169	0.000763	0	-9833	SLU 83	-9833	-8659	-63178	-23694	-23694	1	2.41	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-16551	SLV 15	-16551	-7764	-63178	-23694	-23694	1	1.43	Si
0.4	0.0000169	0.000763	0	-12815	SLV 15	-12815	-8659	-63178	-23694	-23694	1	1.85	Si
0.8	0.0000169	0.000763	0	-9125	SLV 15	-9125	-8659	-63178	-23694	-23694	1	2.6	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-14314	SLD 15	-14314	-7764	-63178	-23694	-23694	1	1.66	Si
0.4	0.0000169	0.000763	0	-10964	SLD 15	-10964	-8659	-63178	-23694	-23694	1	2.16	Si
0.8	0.0000169	0.000763	0	-7652	SLD 11	-7652	-8659	-63178	-23694	-23694	1	3.1	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3393.73	21	3393.73	172780	1494000	2654782	36000000	3069.48	2	3069.48	156272	1120500			Si
0.4	-1501.34	20	-3260.37	170031	1494000	2489861	36000000	-1373.08	2	-2969.75	154875	1120500			Si
0.8	-5053.71	20	-5053.71	454691	1494000	18386480	36000000	-4596.74	2	-4596.74	413576	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.8	superiore	0.375	0.00054	0.000201	20	0.375	0.0005	0.000187	6	0.375	0.00049	0.000183	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 230 - 222, sezione R 50x45, aste 454, 453

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	2057	SLU 84	0.071	13206	6331	SLU 84	30044	Si
0.21	0.41	0.0008	2047	SLU 84	0.071	13206	6298	SLU 84	30044	Si
0.23	0.41	0.0008	2046	SLU 84	0.071	13206	6297	SLU 84	30044	Si
0.43	0.41	0.0008	2038	SLU 84	0.071	13206	6272	SLU 84	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1505	SLD 16	0.153	14673	4632	SLD 16	34551	Si
0.21	0.41	0.0008	1499	SLD 16	0.153	14673	4612	SLD 16	34551	Si
0.23	0.41	0.0008	1499	SLD 16	0.153	14673	4611	SLD 16	34551	Si
0.43	0.41	0.0008	1495	SLD 14	0.153	14673	4599	SLD 14	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1508	SLE RA 21	40066	1494000	496816	36000000	1361	SLE QP 2	36139	1120500	Si
0.21	0.41	0.00000845	1501	SLE RA 21	39859	1494000	494254	36000000	1353	SLE QP 2	35949	1120500	Si
0.23	0.41	0.00000845	1500	SLE RA 21	39849	1494000	494124	36000000	1353	SLE QP 2	35940	1120500	Si
0.43	0.41	0.00000845	1494	SLE RA 21	39688	1494000	492135	36000000	1348	SLE QP 2	35793	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 452

Campata 4 tra i fili 222 - 225, sezione R 50x45, aste 451, 450, 449, 448, 447, 446, 445, 444

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	2009	SLU 84	0.071	13206	6182	SLU 84	30044	Si
1.8	0.41	0.0008	2077	SLU 84	0.071	13206	6391	SLU 84	30044	Si
3.38	0.41	0.0008	2217	SLU 83	0.071	13206	6820	SLU 83	30044	Si
3.6	0.41	0.0008	2262	SLU 83	0.071	13206	6961	SLU 83	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1486	SLD 14	0.153	14673	4573	SLD 14	34551	Si
1.8	0.41	0.0008	1550	SLD 15	0.153	14673	4770	SLD 15	34551	Si
3.38	0.41	0.0008	1695	SLD 15	0.153	14673	5214	SLD 15	34551	Si
3.6	0.41	0.0008	1738	SLD 15	0.153	14673	5349	SLD 15	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1473	SLE RA 21	39119	1494000	485079	36000000	1328	SLE QP 2	35279	1120500	Si
1.8	0.41	0.00000845	1523	SLE RA 21	40451	1494000	501595	36000000	1375	SLE QP 2	36526	1120500	Si
3.38	0.41	0.00000845	1626	SLE RA 20	43195	1494000	535624	36000000	1471	SLE QP 2	39077	1120500	Si
3.6	0.41	0.00000845	1660	SLE RA 20	44094	1494000	546762	36000000	1502	SLE QP 2	39907	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
454,453,452,451,450,449,448,447,446,445,444	5.05	1.1	SLU 83	ST	BT	2.3	232573	61028	3.81	Si
454,453,452,451,450,449,448,447,446,445,444	5.05	1.1	SLV 15	SIS	BT	2.3	204034	51065	4	Si
454,453,452,451,450,449,448,447,446,445,444	5.05	1.1	SLD 15	SIS	BT	2.3	223852	45734	4.89	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	990	-61028	-532.91	1640	0	1	0.03	-0.01	1.08	5	1496	2060	0	14430	
0	-6326	-51065	2828.52	3582.25	0	-7	0.07	0.06	0.99	4.91	1496	2060	0	14430	0.07
0	-2305	-45734	996.89	2196.99	0	-3	0.05	0.02	1.06	4.96	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

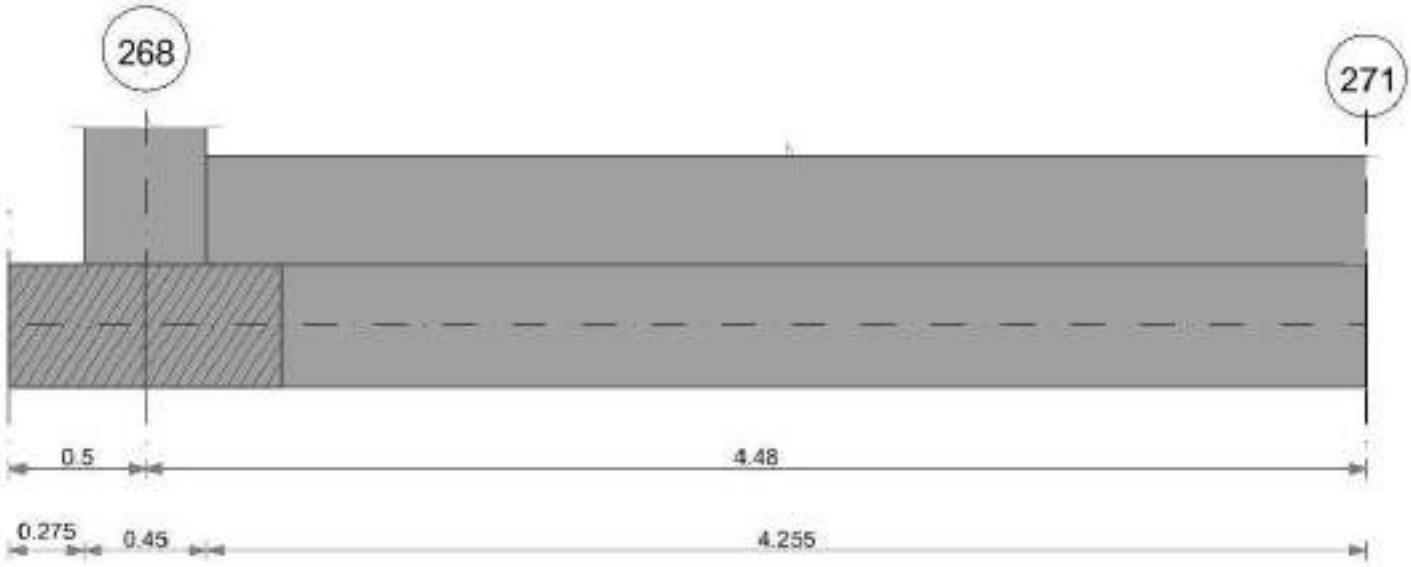
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	682	SLE RA 21	0.05	0.001	682	950	SLE RA 21	0.05	0	783	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	682	SLE RA 1	0.05	0	682	682	SLE RA 1	0.05	0	765	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	682	SLE RA 1	0.05	0	682	682	SLE RA 1	0.05	0	765	SLE RA 1	0.0033	0	SLE RA 1	Si

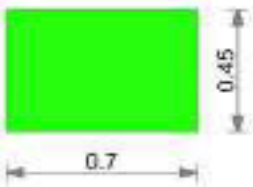
Verifiche geotecniche - Rotazioni assolute e differenziali

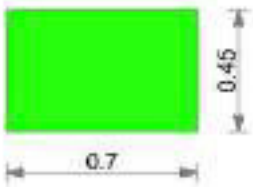
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	783	950	SLE RA 21	0.19	0.01	765	SLE RA 21	0.1	0	682	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	682	765	SLE RA 1	0.19	0	682	SLE RA 1	0.1	0	765	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	682	765	SLE RA 1	0.19	0	682	SLE RA 1	0.1	0	765	SLE RA 1	Si

CORDOLO 33

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 268 - 271, sezione R 70x45, aste 598, 597, 596, 595, 594, 593, 592, 591, 590, 589, 588

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
4.48	0.41	0.0002	2517	SLV 15	0.085	2655	6495	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
2.24	0.41	0.0002	2428	SLD 15	0.07	3073	6265	SLD 15	15877	Si
4.48	0.41	0.0002	1886	SLD 15	0.07	3073	4867	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000171	2648	SLE RA 21	76665	1494000	950648	36000000	2404	SLE QP 2	69607	1120500	Si
0.23	0.41	0.00000171	2640	SLE RA 21	76443	1494000	947895	36000000	2397	SLE QP 2	69405	1120500	Si
2.24	0.41	0.00000171	2041	SLE RA 21	59094	1494000	732770	36000000	1852	SLE QP 2	53614	1120500	Si
4.48	0.41	0.00000171	1561	SLE RA 20	45189	1494000	560338	36000000	1414	SLE QP 2	40945	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
598,597,596,595,594,593,592,591,590,589,588	4.48	1.3	SLU 84	ST	BT	2.3	176341	69324	2.54	Si
598,597,596,595,594,593,592,591,590,589,588	4.48	1.3	SLV 14	SIS	BT	2.3	150810	72915	2.07	Si
598,597,596,595,594,593,592,591,590,589,588	4.48	1.3	SLD 14	SIS	BT	2.3	164493	58453	2.81	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1155	-69324	9592.61	-12164.95	0	1	-0.18	0.14	1.02	4.13	1496	2060	0	14430	
0	-5525	-72915	13934.55	-15928.16	0	-4	-0.22	0.19	0.92	4.04	1496	2060	0	14430	0.07
0	-1902	-58453	9656.03	-11475.05	0	-2	-0.2	0.17	0.97	4.09	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

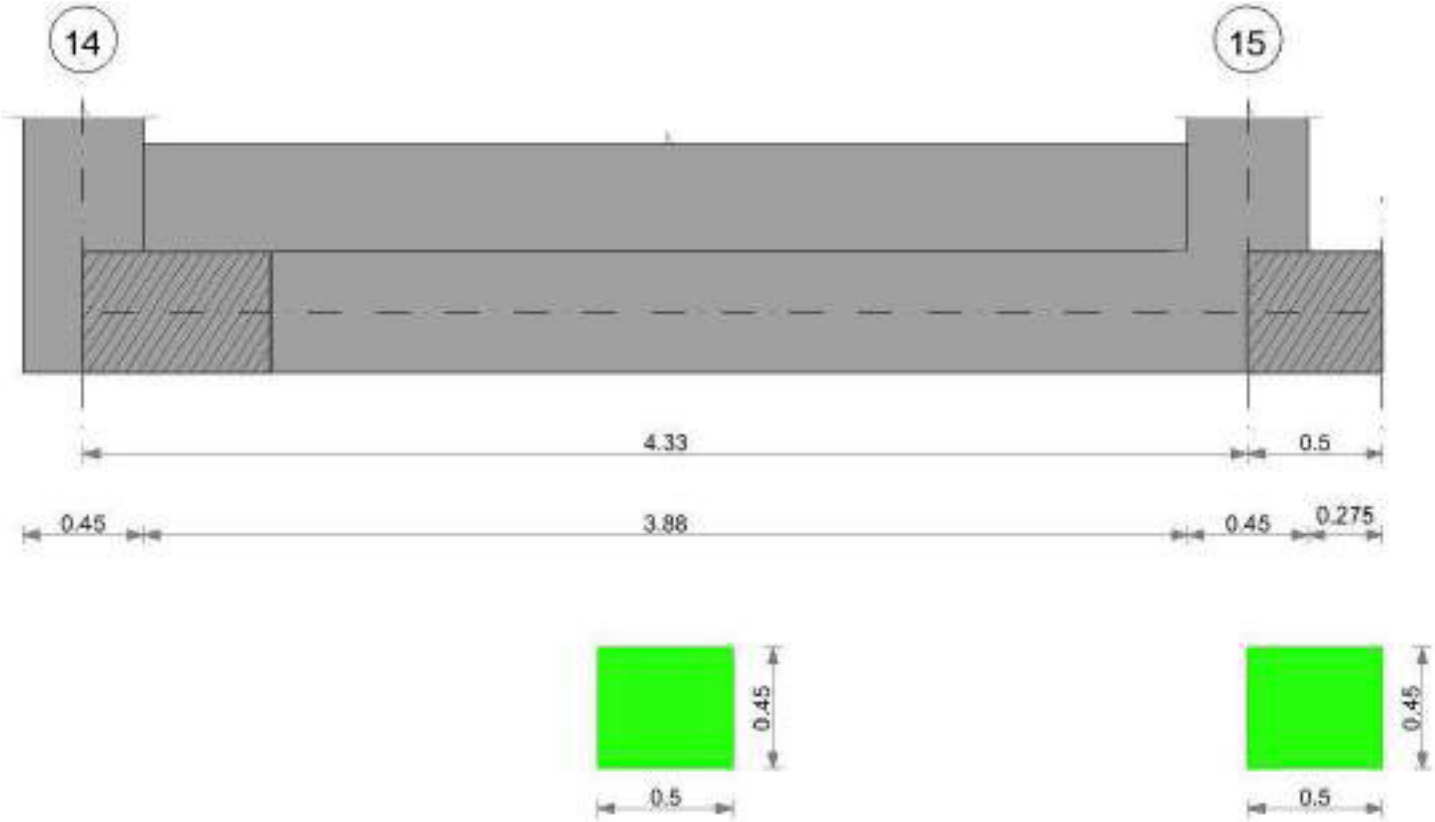
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	695	SLE RA 21	0.05	0.001	695	962	SLE RA 21	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	695	SLE RA 1	0.05	0	695	695	SLE RA 1	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	695	SLE RA 1	0.05	0	695	695	SLE RA 1	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	695	962	SLE RA 21	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	695	962	SLE RA 1	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	695	962	SLE RA 1	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si

CORDOLO 34

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

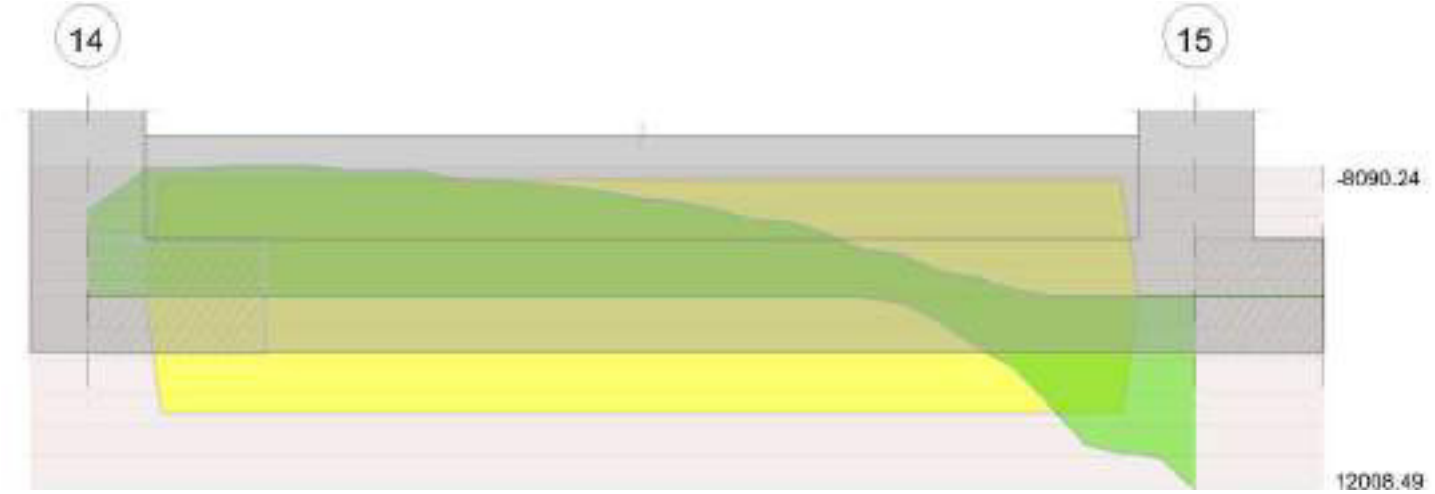


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 15, sezione R 50x45, aste 775, 774, 773, 772, 771, 770, 769, 768, 767, 766, 765

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2547	SLV 1	0.087	2741	8860	SLV 1	15877	Si
0.23	0.41	0.0002	2419	SLV 1	0.087	2741	8412	SLV 1	15877	Si
2.17	0.41	0.0002	1941	SLV 1	0.087	2741	6750	SLV 1	15877	Si
4.11	0.41	0.0002	2244	SLV 4	0.087	2741	7806	SLV 4	15877	Si
4.33	0.41	0.0002	2254	SLV 4	0.087	2741	7841	SLV 4	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1919	SLD 1	0.071	3173	6675	SLD 1	15877	Si
0.23	0.41	0.0002	1821	SLD 1	0.071	3173	6334	SLD 1	15877	Si
2.17	0.41	0.0002	1462	SLD 1	0.071	3173	5087	SLD 1	15877	Si
4.11	0.41	0.0002	1690	SLD 4	0.071	3173	5880	SLD 4	15877	Si
4.33	0.41	0.0002	1697	SLD 4	0.071	3173	5903	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1592	SLE RA 20	46061	1494000	571161	36000000	1449	SLE QP 2	41920	1120500	Si
0.23	0.41	0.00000177	1510	SLE RA 20	43696	1494000	541831	36000000	1374	SLE QP 2	39754	1120500	Si
2.17	0.41	0.00000177	1218	SLE RA 20	35232	1494000	436879	36000000	1105	SLE QP 2	31981	1120500	Si
4.11	0.41	0.00000177	1407	SLE RA 21	40707	1494000	504763	36000000	1277	SLE QP 2	36943	1120500	Si
4.33	0.41	0.00000177	1412	SLE RA 21	40844	1494000	506472	36000000	1281	SLE QP 2	37068	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
775,774,773,772,771,770,769,768,767,766,765	4.56	1.1	SLU 84	ST	BT	2.3	184059	63662	2.89	Si
775,774,773,772,771,770,769,768,767,766,765	4.56	1.1	SLV 1	SIS	BT	2.3	157032	69805	2.25	Si
775,774,773,772,771,770,769,768,767,766,765	4.56	1.1	SLD 1	SIS	BT	2.3	170714	54869	3.11	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-865	-63662	-4883.23	-691.07	0	-1	-0.01	-0.08	0.95	4.53	1496	2060	0	14430	
0	6326	-69805	-9112.27	-1804.86	0	5	-0.03	-0.13	0.84	4.5	1496	2060	0	14430	0.07
0	2353	-54869	-5780.24	-1074.03	0	2	-0.02	-0.11	0.89	4.52	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

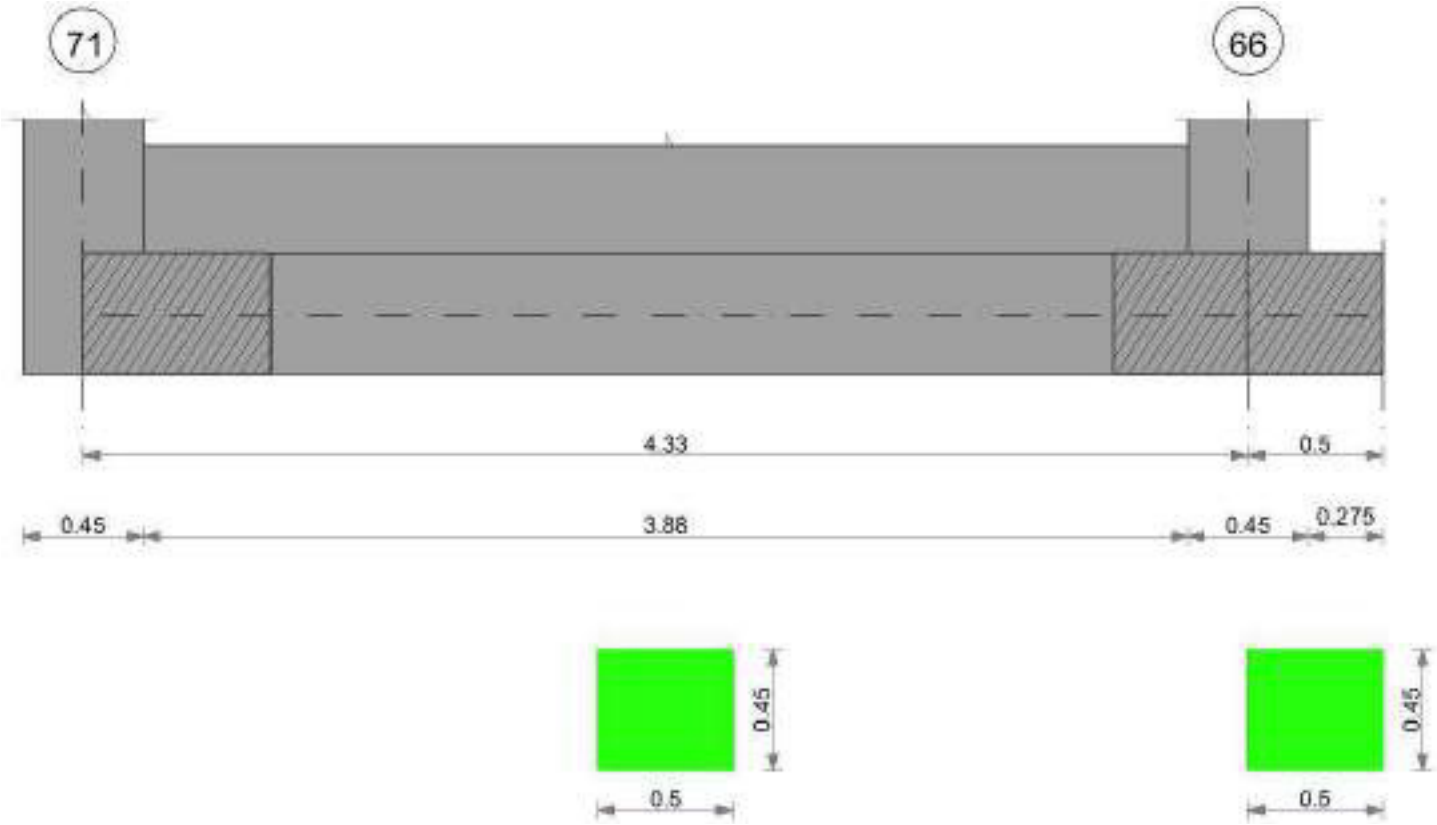
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	621	SLE RA 21	0.05	0	621	286	SLE RA 21	0.05	0	621	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	621	SLE RA 1	0.05	0	621	621	SLE RA 1	0.05	0	621	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	621	SLE RA 1	0.05	0	621	621	SLE RA 1	0.05	0	621	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	621	286	SLE RA 21	0.19	0	621	SLE RA 1	0.1	0	621	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	621	286	SLE RA 1	0.19	0	621	SLE RA 1	0.1	0	621	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	621	286	SLE RA 1	0.19	0	621	SLE RA 1	0.1	0	621	SLE RA 1	Si

CORDOLO 35

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

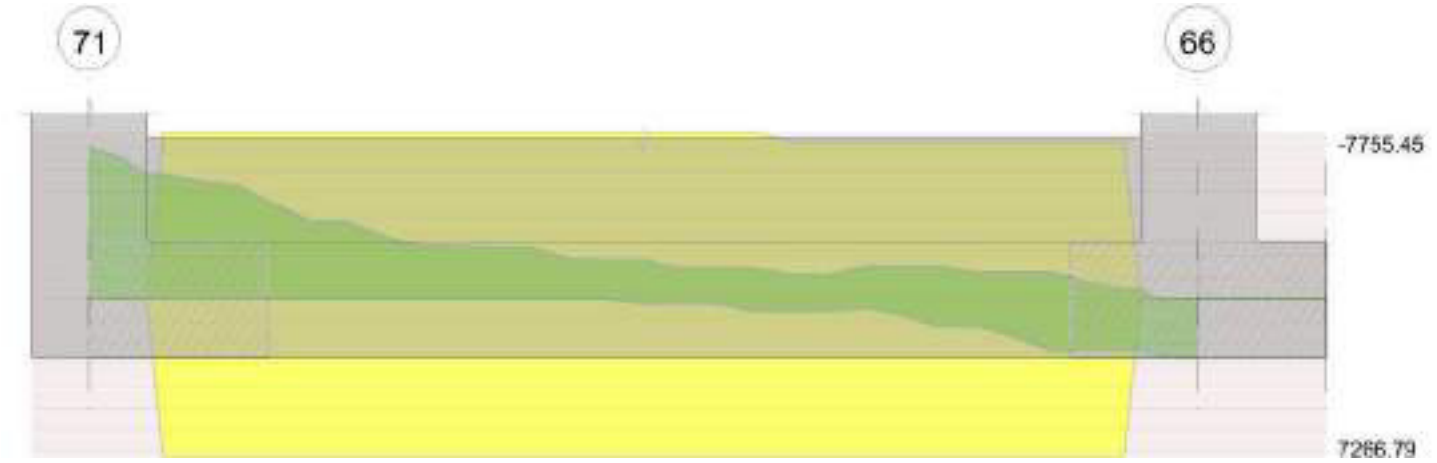
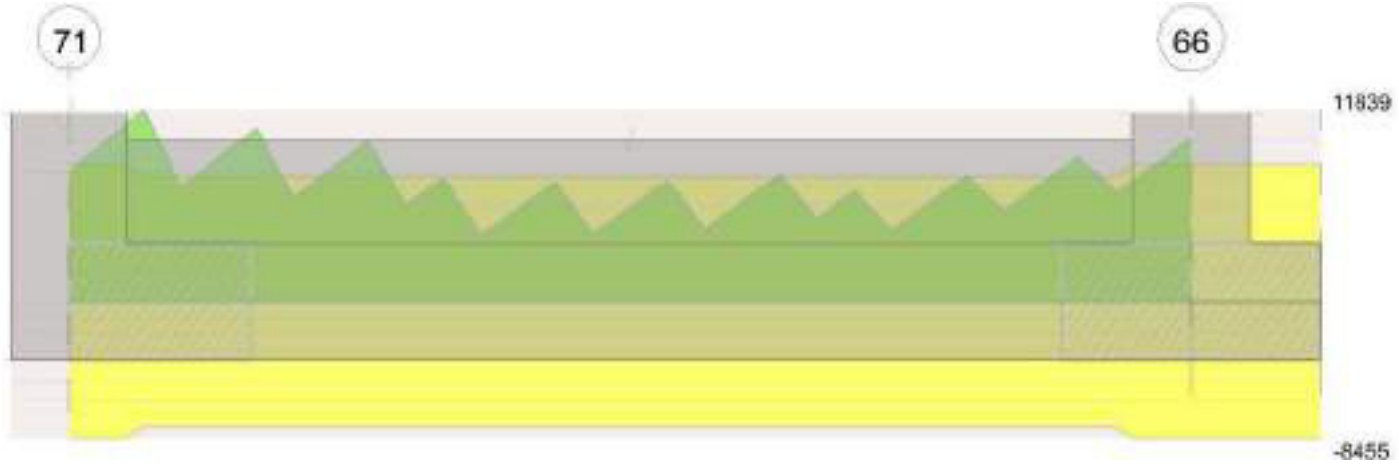


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 71 - 66, sezione R 50x45, aste 749, 748, 747, 746, 745, 744, 743, 742, 741, 740, 739

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2422	SLU 83	0.018	2820	7453	SLU 83	15877	Si
0.23	0.41	0.0002	2347	SLU 83	0.018	2820	7222	SLU 83	15877	Si
2.17	0.41	0.0002	2086	SLU 83	0.018	2820	6417	SLU 83	15877	Si
4.11	0.41	0.0002	2067	SLU 83	0.018	2820	6359	SLU 83	15877	Si
4.33	0.41	0.0002	2059	SLU 84	0.018	2820	6335	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1813	SLD 1	0.071	3173	5577	SLD 1	15877	Si
0.23	0.41	0.0002	1753	SLD 1	0.071	3173	5394	SLD 1	15877	Si
2.17	0.41	0.0002	1537	SLD 1	0.071	3173	4728	SLD 1	15877	Si
4.11	0.41	0.0002	1522	SLD 4	0.071	3173	4682	SLD 4	15877	Si
4.33	0.41	0.0002	1517	SLD 4	0.071	3173	4668	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1782	SLE RA 20	51542	1494000	639123	36000000	1614	SLE QP 2	46707	1120500	Si
0.23	0.41	0.00000177	1726	SLE RA 20	49937	1494000	619220	36000000	1564	SLE QP 2	45238	1120500	Si
2.17	0.41	0.00000177	1531	SLE RA 20	44301	1494000	549332	36000000	1384	SLE QP 2	40031	1120500	Si
4.11	0.41	0.00000177	1515	SLE RA 20	43834	1494000	543538	36000000	1365	SLE QP 2	39505	1120500	Si
4.33	0.41	0.00000177	1509	SLE RA 21	43662	1494000	541406	36000000	1360	SLE QP 2	39340	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
749,748,747,746,745,744,743,742,741,740,739	4.56	1.1	SLU 83	ST	BT	2.3	209848	59976	3.5	Si
749,748,747,746,745,744,743,742,741,740,739	4.56	1.1	SLV 13	SIS	LT	2.3	118316	33372	3.55	Si
749,748,747,746,745,744,743,742,741,740,739	4.56	1.1	SLD 1	SIS	BT	2.3	200892	44614	4.5	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-739	-59976	512.43	-1897.49	0	-1	-0.03	0.01	1.08	4.49	1496	2060	0	14430	
0	-8317	-33372	3995.39	-2682.01	0	-14	-0.08	0.12	0.86	4.39	1496	2060	37	0	0.07
0	2574	-44614	-1109.9	-1891.38	0	3	-0.04	-0.02	1.05	4.47	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.15	1.15	0.92	1.16	1.27	1	0.59	0.58	0.44	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

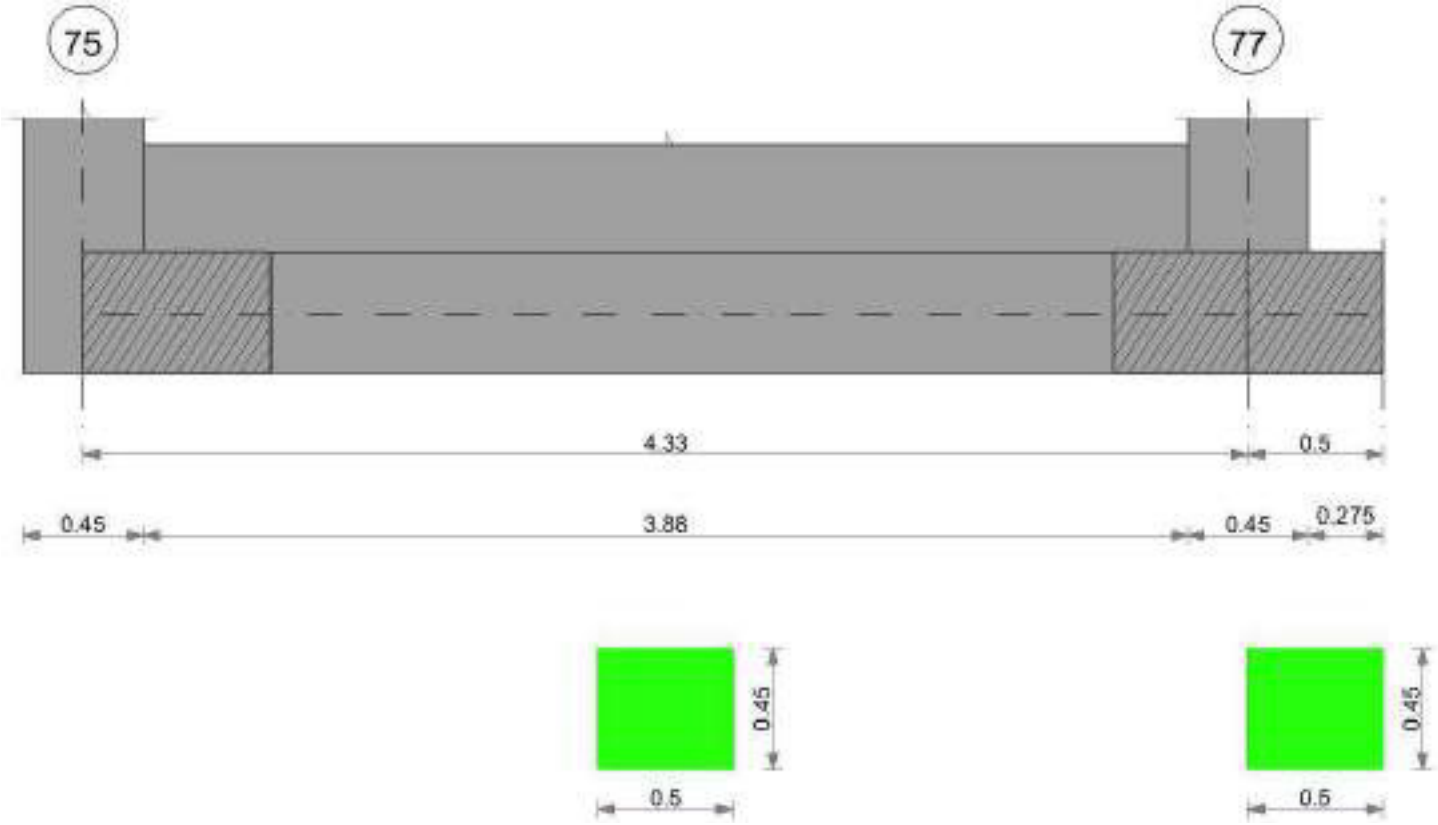
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	639	SLE RA 21	0.05	0.001	639	301	SLE RA 21	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	639	SLE RA 1	0.05	0	639	639	SLE RA 1	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	639	SLE RA 1	0.05	0	639	639	SLE RA 1	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	639	301	SLE RA 21	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	639	301	SLE RA 1	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	639	301	SLE RA 1	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si

CORDOLO 36

Geometria



Caratteristiche dei materiali

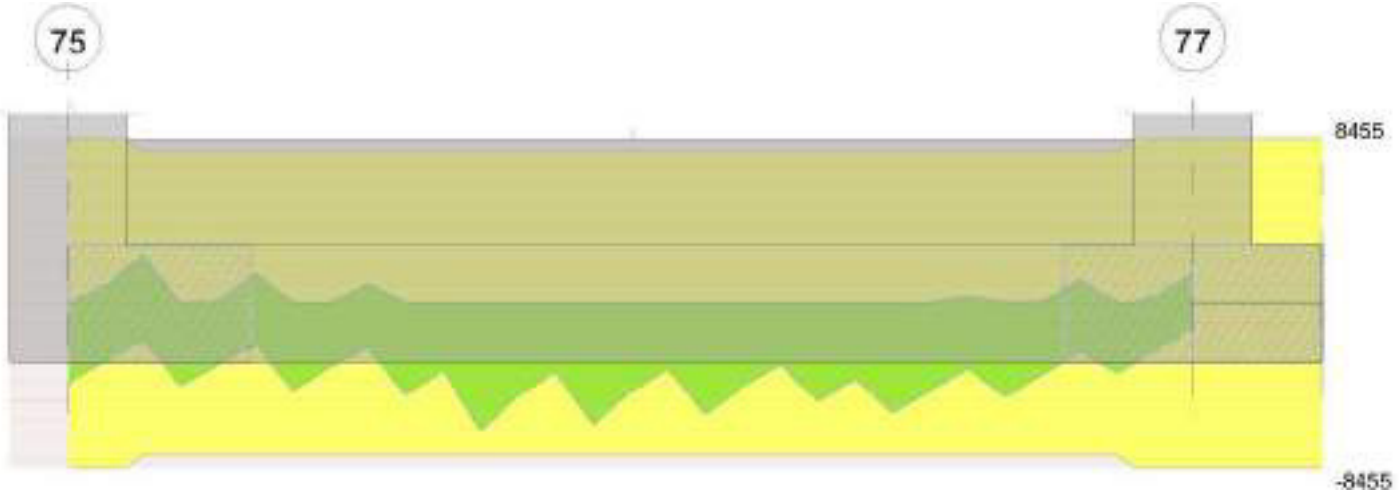
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 75 - 77, sezione R 50x45, aste 723, 722, 721, 720, 719, 718, 717, 716, 715, 714, 713

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2477	SLU 83	0.018	2820	7622	SLU 83	15877	Si
0.23	0.41	0.0002	2402	SLU 83	0.018	2820	7391	SLU 83	15877	Si
2.17	0.41	0.0002	2126	SLU 83	0.018	2820	6543	SLU 83	15877	Si
4.11	0.41	0.0002	2095	SLU 83	0.018	2820	6446	SLU 83	15877	Si
4.33	0.41	0.0002	2087	SLU 83	0.018	2820	6421	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1833	SLD 1	0.071	3173	5640	SLD 1	15877	Si
0.23	0.41	0.0002	1773	SLD 1	0.071	3173	5457	SLD 1	15877	Si
2.17	0.41	0.0002	1548	SLD 1	0.071	3173	4763	SLD 1	15877	Si
4.11	0.41	0.0002	1527	SLD 4	0.071	3173	4699	SLD 4	15877	Si
4.33	0.41	0.0002	1522	SLD 4	0.071	3173	4684	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1822	SLE RA 20	52716	1494000	653683	36000000	1651	SLE QP 2	47768	1120500	Si
0.23	0.41	0.00000177	1766	SLE RA 20	51103	1494000	633675	36000000	1600	SLE QP 2	46291	1120500	Si
2.17	0.41	0.00000177	1561	SLE RA 20	45174	1494000	560152	36000000	1411	SLE QP 2	40814	1120500	Si
4.11	0.41	0.00000177	1536	SLE RA 20	44433	1494000	550972	36000000	1384	SLE QP 2	40035	1120500	Si
4.33	0.41	0.00000177	1530	SLE RA 20	44254	1494000	548750	36000000	1378	SLE QP 2	39864	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
723,722,721,720,719,718,717,716,715,714,713	4.56	1.1	SLU 83	ST	BT	2.3	209640	60904	3.44	Si
723,722,721,720,719,718,717,716,715,714,713	4.56	1.1	SLV 13	SIS	LT	2.3	123415	34677	3.56	Si
723,722,721,720,719,718,717,716,715,714,713	4.56	1.1	SLD 2	SIS	BT	2.3	200140	44759	4.47	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-739	-60904	512.43	-2102.43	0	-1	-0.03	0.01	1.08	4.49	1496	2060	0	14430	
0	-8317	-34677	3995.39	-2739.33	0	-13	-0.08	0.12	0.87	4.4	1496	2060	37	0	0.07
0	2776	-44759	-1198.57	-1811.27	0	4	-0.04	-0.03	1.05	4.47	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.15	1.15	0.92	1.16	1.27	1	0.6	0.6	0.46	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

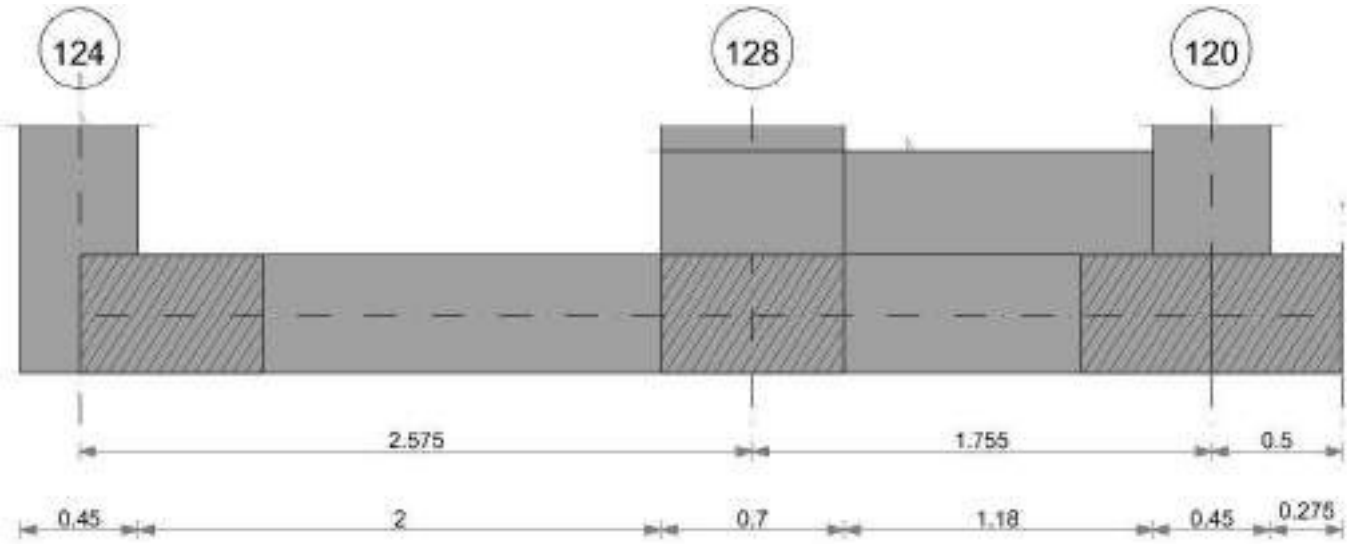
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	642	SLE RA 21	0.05	0.001	642	303	SLE RA 21	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	642	SLE RA 1	0.05	0	642	642	SLE RA 1	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	642	SLE RA 1	0.05	0	642	642	SLE RA 1	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si

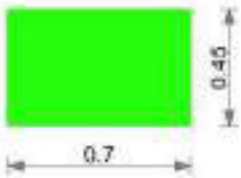
Verifiche geotecniche - Rotazioni assolute e differenziali

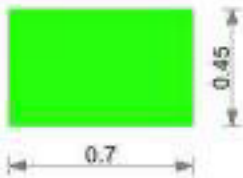
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	642	303	SLE RA 21	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	642	303	SLE RA 1	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	642	303	SLE RA 1	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si

CORDOLO 37

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

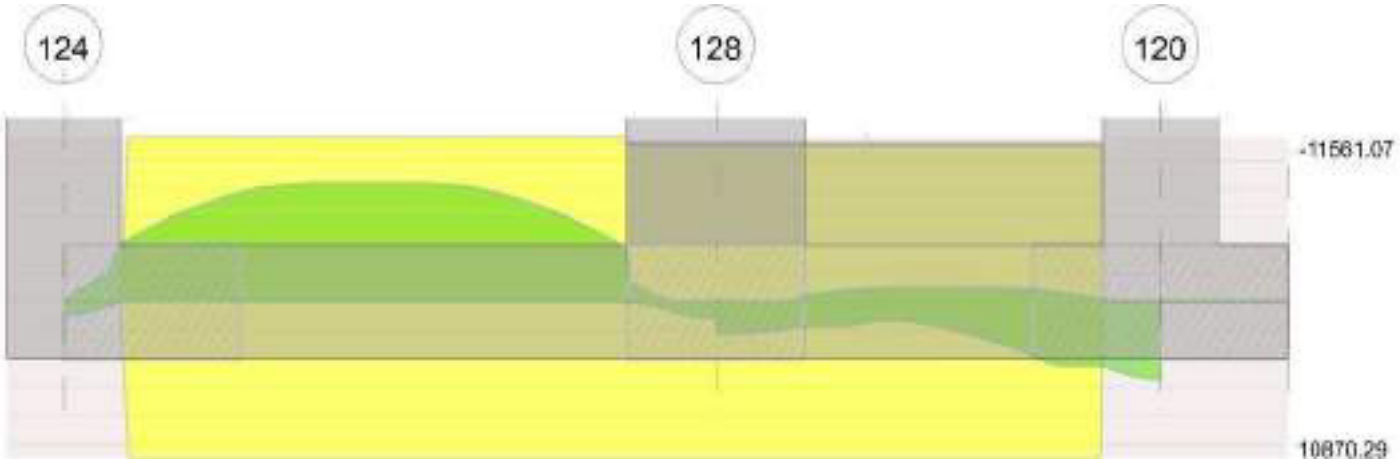
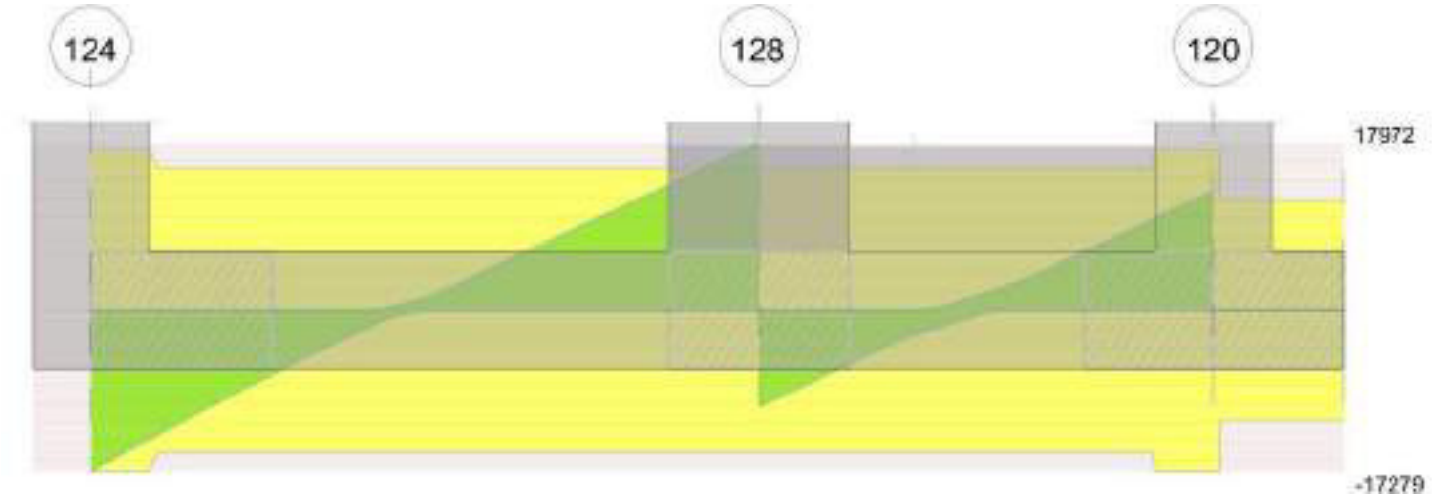


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 702, 701

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.29	0.000763	0.052	0.000763	0.052							-8314.02	SLU 84	-8364.06	-11561.07	0.116	1.38	Si
2.23	0.000763	0.052	0.000763	0.052							-1491.7	SLU 84	-3678.21	-11561.07	0.116	3.14	Si
2.58	0.000763	0.052	0.000763	0.052	3991.62	SLU 84	849.86	11561.07	0.116	13.6							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.29	0.000763	0.052	0.000763	0.052							-6341.48	SLV 5	-6428.35	-10870.29	0.203	1.69	Si
2.23	0.000763	0.052	0.000763	0.052							-1439.05	SLV 1	-2893.64	-10870.29	0.203	3.76	Si
2.58	0.000763	0.052	0.000763	0.052	3371.59	SLV 15	1124.15	10870.29	0.203	9.67							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.29	0.000763	0.052	0.000763	0.052							-5915.16	SLD 5	-5969.49	-10870.29	0.203	1.82	Si
2.23	0.000763	0.052	0.000763	0.052							-1179.8	SLD 1	-2645.69	-10870.29	0.203	4.11	Si
2.58	0.000763	0.052	0.000763	0.052	2982.32	SLD 15	816.9	10870.29	0.203	13.31							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-17279	SLU 84	-17279	-11837	-100005	-17220	-17220	1	1	Si
0.23	0.0000109	0	0	-13795	SLU 84	-13795	-11837	-100005	-17220	-17220	1	1.25	Si
1.29	0.0000109	0.000763	0	1152	SLU 84	1152	10870	88449	15230	15230	1	13.22	Si
2.23	0.0000109	0.000763	0	13378	SLU 84	13378	10870	88449	15230	15230	1	1.14	Si
2.58	0.0000109	0.000763	0	17972	SLU 84	17972	10870	88449	15230	15230	1	0.85	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-12173	SLV 13	-12173	-11837	-100005	-17220	-17220	1	1.41	Si
0.23	0.0000109	0	0	-9754	SLV 13	-9754	-11837	-100005	-17220	-17220	1	1.77	Si
1.29	0.0000109	0.000763	0	1332	SLV 5	1332	10870	88449	15230	15230	1	11.44	Si
2.23	0.0000109	0.000763	0	9753	SLV 13	9753	10870	88449	15230	15230	1	1.56	Si
2.58	0.0000109	0.000763	0	13062	SLV 13	13062	10870	88449	15230	15230	1	1.17	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-11791	SLD 13	-11791	-11837	-100005	-17220	-17220	1	1.46	Si
0.23	0.0000109	0	0	-9423	SLD 13	-9423	-11837	-100005	-17220	-17220	1	1.83	Si
1.29	0.0000109	0.000763	0	1040	SLD 5	1040	10870	88449	15230	15230	1	14.65	Si
2.23	0.0000109	0.000763	0	9309	SLD 13	9309	10870	88449	15230	15230	1	1.64	Si
2.58	0.0000109	0.000763	0	12478	SLD 13	12478	10870	88449	15230	15230	1	1.22	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1247.55	20	273.3	11568	1494000	0	36000000	1060.49	2	254.37	10767	1120500			Si
0.23	-1332.1	15	-2966.38	-125561	1494000	0	36000000	-1262.73	2	-2742.15	-116070	1120500			Si
1.29	-6129.01	21	-6166.87	231216	1494000	3468247	36000000	-5579.93	2	-5617.05	210602	1120500			Si
2.23	-1091.69	21	-2704.63	101406	1494000	1521083	36000000	-984.32	2	-2451.81	91927	1120500			Si
2.58	2951.77	21	635.34	23821	1494000	357317	36000000	2691.18	2	586.13	21976	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 702, 701

Campata 2 tra i fili 128 - 120, sezione R 70x45, asta 700

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3420	SLU 84	0.031	5754	8046	SLU 84	15877	Si
0.35	0.41	0.0004	3431	SLU 84	0.031	5754	8074	SLU 84	15877	Si
0.88	0.41	0.0004	3430	SLU 83	0.031	5754	8071	SLU 83	15877	Si
1.53	0.41	0.0004	3415	SLU 83	0.031	5754	8034	SLU 83	15877	Si
1.75	0.41	0.0004	3393	SLU 83	0.031	5754	7985	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2354	SLD 15	0.101	6427	5538	SLD 15	15877	Si
0.35	0.41	0.0004	2366	SLD 15	0.101	6427	5567	SLD 15	15877	Si
0.88	0.41	0.0004	2367	SLD 15	0.101	6427	5570	SLD 15	15877	Si
1.53	0.41	0.0004	2347	SLD 15	0.101	6427	5523	SLD 15	15877	Si
1.75	0.41	0.0004	2326	SLD 15	0.101	6427	5472	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000362	2510	SLE RA 21	70864	1494000	878713	36000000	2257	SLE QP 2	63708	1120500	Si
0.35	0.41	0.00000362	2518	SLE RA 21	71090	1494000	881517	36000000	2264	SLE QP 2	63904	1120500	Si
0.88	0.41	0.00000362	2516	SLE RA 20	71034	1494000	880825	36000000	2261	SLE QP 2	63834	1120500	Si
1.53	0.41	0.00000362	2503	SLE RA 20	70674	1494000	876361	36000000	2248	SLE QP 2	63480	1120500	Si
1.75	0.41	0.00000362	2487	SLE RA 20	70222	1494000	870755	36000000	2234	SLE QP 2	63060	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
702,701,700	4.56	1.3	SLU 84	ST	BT	2.3	242995	68628	3.54	Si
702,701,700	4.56	1.3	SLV 13	SIS	BT	2.3	205008	49671	4.13	Si
702,701,700	4.56	1.3	SLD 13	SIS	BT	2.3	226260	48049	4.71	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-523	-68628	498.72	-2338.73	0	0	-0.03	0.01	1.29	4.49	1496	2060	0	14430	
0	-9042	-49671	4238.5	-2031.4	0	-10	-0.04	0.09	1.13	4.47	1496	2060	0	14430	0.07
0	-4080	-48049	2011.7	-1796.59	0	-5	-0.04	0.04	1.22	4.48	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

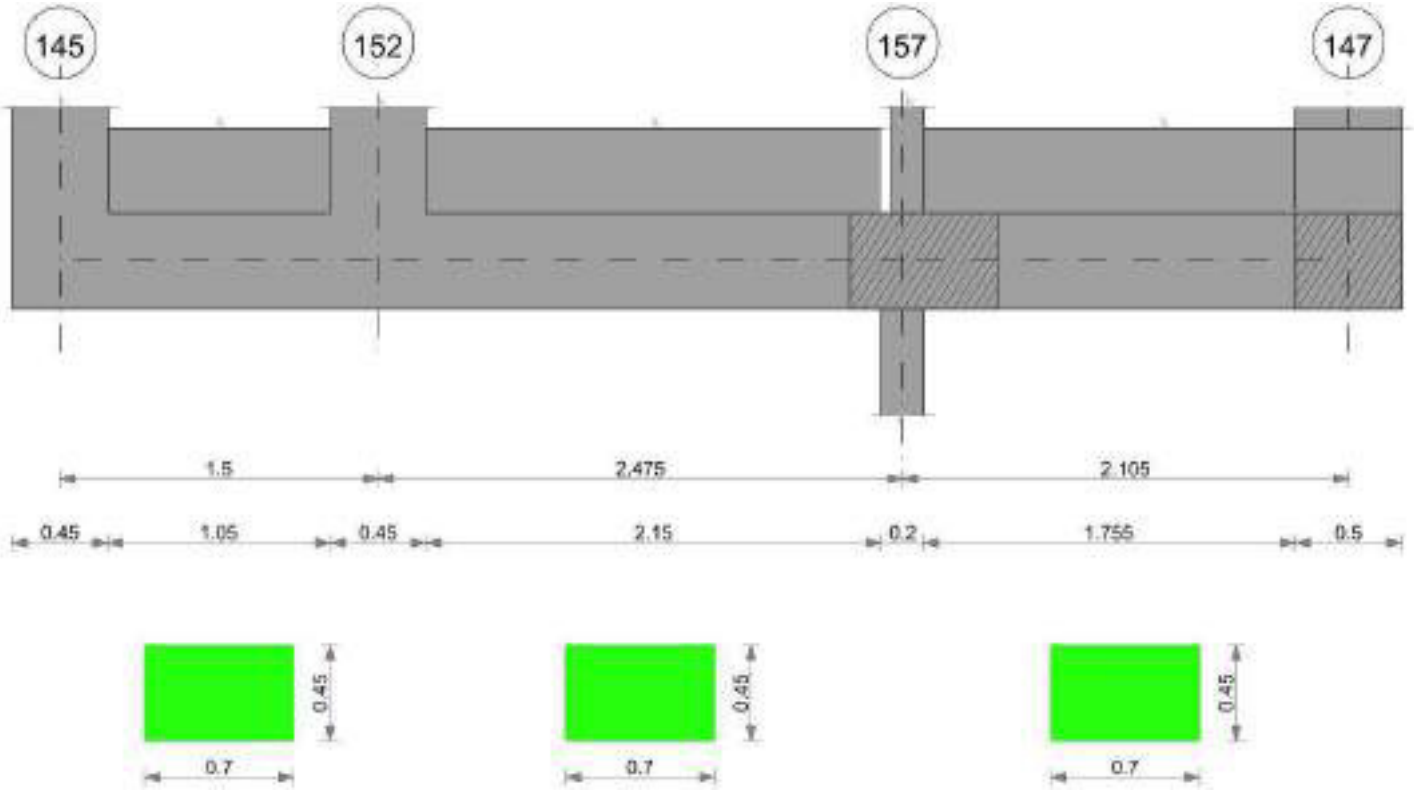
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	655	SLE RA 21	0.05	0.001	655	315	SLE RA 20	0.05	0	501	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	655	SLE RA 1	0.05	0	655	655	SLE RA 1	0.05	0	501	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	655	SLE RA 1	0.05	0	655	655	SLE RA 1	0.05	0	501	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	501	315	SLE RA 20	0.19	0.01	501	SLE RA 20	0.1	0	655	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	655	501	SLE RA 1	0.19	0	655	SLE RA 1	0.1	0	501	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	655	501	SLE RA 1	0.19	0	655	SLE RA 1	0.1	0	501	SLE RA 1	Si

CORDOLO 38

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

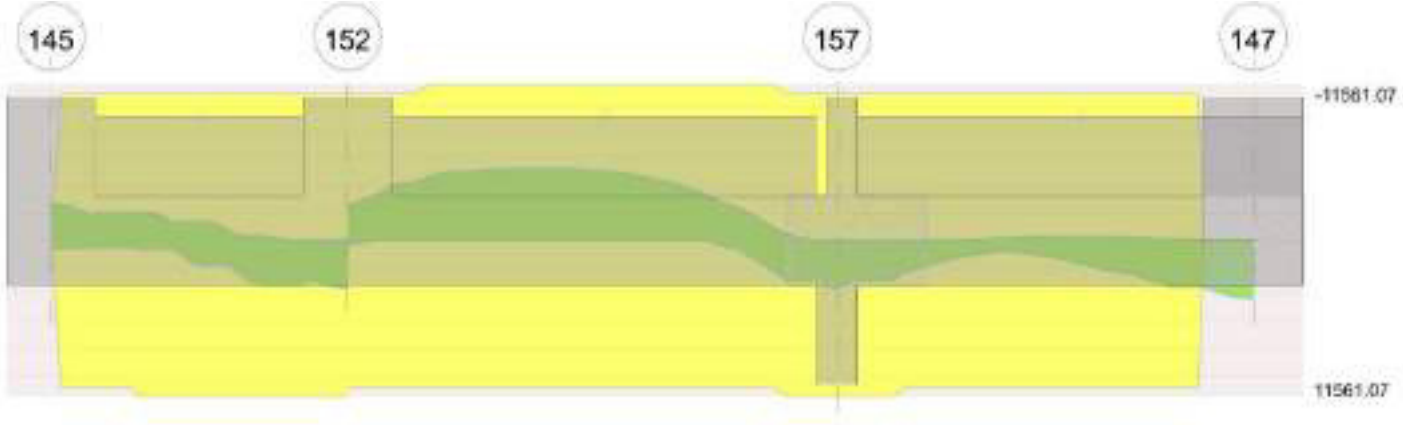
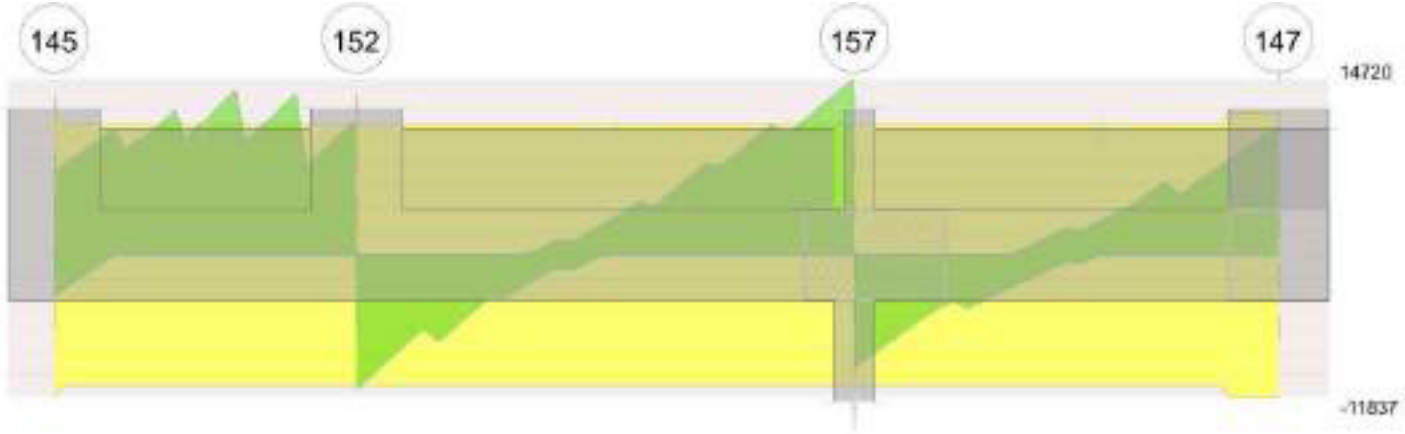


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 145 - 152, sezione R 70x45, aste 680, 679, 678, 677, 676

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	4658	SLU 84	0.043	8001	10959	SLU 84	15877	Si
0.23	0.41	0.0005	4561	SLU 84	0.043	8001	10732	SLU 84	15877	Si
0.75	0.41	0.0005	4348	SLU 84	0.043	8001	10230	SLU 84	15877	Si
1.28	0.41	0.0005	4131	SLU 84	0.043	8001	9719	SLU 84	15877	Si
1.5	0.41	0.0005	4027	SLU 84	0.043	8001	9474	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3320	SLD 10	0.119	8913	7811	SLD 10	15877	Si
0.23	0.41	0.0005	3235	SLD 10	0.119	8913	7612	SLD 10	15877	Si
0.75	0.41	0.0005	3047	SLD 10	0.119	8913	7169	SLD 10	15877	Si
1.28	0.41	0.0005	2860	SLD 10	0.119	8913	6730	SLD 10	15877	Si
1.5	0.41	0.0005	2774	SLD 10	0.119	8913	6528	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	3430	SLE RA 21	95041	1494000	1178509	36000000	3104	SLE QP 2	86009	1120500	Si
0.23	0.41	0.00000506	3358	SLE RA 21	93055	1494000	1153884	36000000	3037	SLE QP 2	84167	1120500	Si
0.75	0.41	0.00000506	3199	SLE RA 21	88662	1494000	1099413	36000000	2890	SLE QP 2	80093	1120500	Si
1.28	0.41	0.00000506	3038	SLE RA 21	84203	1494000	1044122	36000000	2742	SLE QP 2	75977	1120500	Si
1.5	0.41	0.00000506	2961	SLE RA 21	82067	1494000	1017633	36000000	2671	SLE QP 2	74017	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 152 - 157, sezione R 70x45, aste 675, 674, 673, 672, 671, 670, 669

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	4027	SLU 84	0.043	8001	9474	SLU 84	15877	Si
0.23	0.41	0.0005	3921	SLU 84	0.043	8001	9226	SLU 84	15877	Si
1.24	0.41	0.0005	3612	SLU 84	0.043	8001	8500	SLU 84	15877	Si
2.37	0.41	0.0005	3593	SLU 84	0.043	8001	8455	SLU 84	15877	Si
2.47	0.41	0.0005	3593	SLU 84	0.043	8001	8454	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2774	SLD 10	0.119	8913	6528	SLD 10	15877	Si
0.23	0.41	0.0005	2689	SLD 10	0.119	8913	6326	SLD 10	15877	Si
1.24	0.41	0.0005	2440	SLD 6	0.119	8913	5741	SLD 6	15877	Si
2.37	0.41	0.0005	2402	SLD 2	0.119	8913	5652	SLD 2	15877	Si
2.47	0.41	0.0005	2402	SLD 2	0.119	8913	5651	SLD 2	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2961	SLE RA 21	82067	1494000	1017633	36000000	2671	SLE QP 2	74017	1120500	Si
0.23	0.41	0.00000506	2883	SLE RA 21	79905	1494000	990822	36000000	2599	SLE QP 2	72035	1120500	Si
1.24	0.41	0.00000506	2655	SLE RA 21	73583	1494000	912431	36000000	2393	SLE QP 2	66310	1120500	Si
2.37	0.41	0.00000506	2641	SLE RA 21	73189	1494000	907539	36000000	2382	SLE QP 2	66018	1120500	Si
2.47	0.41	0.00000506	2641	SLE RA 21	73181	1494000	907441	36000000	2382	SLE QP 2	66012	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 157 - 147, sezione R 70x45, aste 668, 667, 666, 665

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3593	SLU 84	0.043	8001	8454	SLU 84	15877	Si
0.1	0.41	0.0005	3592	SLU 84	0.043	8001	8453	SLU 84	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
1.05	0.41	0.0005	3548	SLU 83	0.043	8001	8349	SLU 83	15877	Si
1.85	0.41	0.0005	3484	SLU 83	0.043	8001	8197	SLU 83	15877	Si
2.1	0.41	0.0005	3452	SLU 83	0.043	8001	8121	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2402	SLD 2	0.119	8913	5651	SLD 2	15877	Si
0.1	0.41	0.0005	2401	SLD 2	0.119	8913	5650	SLD 2	15877	Si
1.05	0.41	0.0005	2392	SLD 8	0.119	8913	5629	SLD 8	15877	Si
1.85	0.41	0.0005	2367	SLD 8	0.119	8913	5570	SLD 8	15877	Si
2.1	0.41	0.0005	2350	SLD 11	0.119	8913	5529	SLD 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2641	SLE RA 21	73181	1494000	907441	36000000	2382	SLE QP 2	66012	1120500	Si
0.1	0.41	0.00000506	2640	SLE RA 21	73166	1494000	907254	36000000	2382	SLE QP 2	65999	1120500	Si
1.05	0.41	0.00000506	2606	SLE RA 20	72223	1494000	895560	36000000	2349	SLE QP 2	65096	1120500	Si
1.85	0.41	0.00000506	2557	SLE RA 20	70858	1494000	878636	36000000	2301	SLE QP 2	63770	1120500	Si
2.1	0.41	0.00000506	2532	SLE RA 20	70180	1494000	870232	36000000	2278	SLE QP 2	63126	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

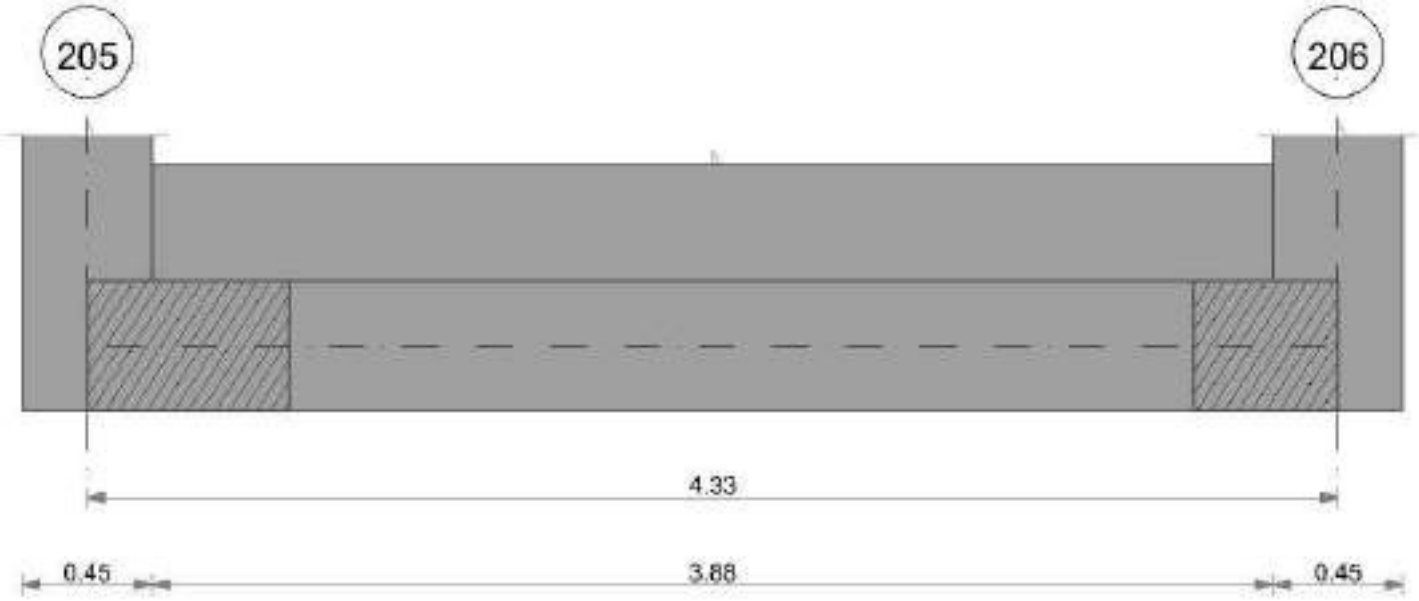
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	662	SLE RA 21	0.05	0.002	662	172	SLE RA 20	0.05	0.001	499	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	662	SLE RA 1	0.05	0	662	662	SLE RA 1	0.05	0	499	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	662	SLE RA 1	0.05	0	662	662	SLE RA 1	0.05	0	499	SLE RA 1	0.0033	0	SLE RA 1	Si

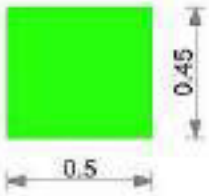
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.04	318	172	SLE RA 21	0.19	0.02	499	SLE RA 20	0.1	0	662	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	662	499	SLE RA 1	0.19	0	662	SLE RA 1	0.1	0	499	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	662	499	SLE RA 1	0.19	0	662	SLE RA 1	0.1	0	499	SLE RA 1	Si

CORDOLO 39

Geometria





Caratteristiche dei materiali

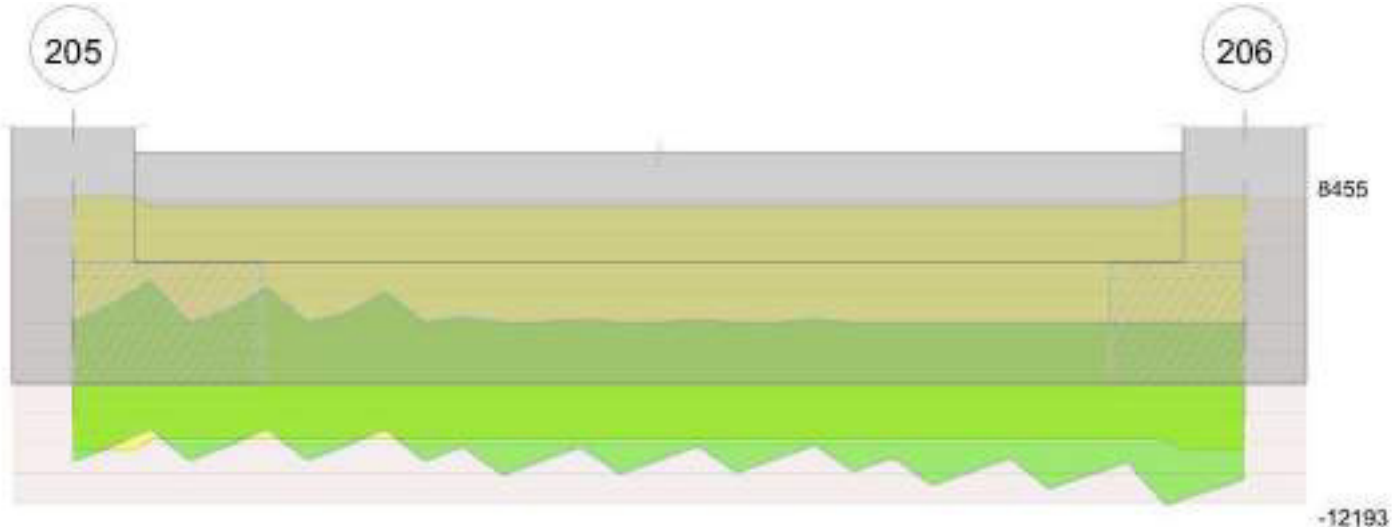
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 205 - 206, sezione R 50x45, aste 429, 428, 427, 426, 425, 424, 423, 422, 421, 420, 419

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2482	SLU 83	0.017	2687	7637	SLU 83	15877	Si
0.23	0.41	0.0002	2407	SLU 83	0.017	2687	7406	SLU 83	15877	Si
2.16	0.41	0.0002	2099	SLU 83	0.017	2687	6457	SLU 83	15877	Si
4.1	0.41	0.0002	2008	SLU 83	0.017	2687	6178	SLU 83	15877	Si
4.33	0.41	0.0002	2011	SLU 83	0.017	2687	6187	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1839	SLD 14	0.07	3025	5658	SLD 14	15877	Si
0.23	0.41	0.0002	1778	SLD 14	0.07	3025	5469	SLD 14	15877	Si
2.16	0.41	0.0002	1516	SLD 14	0.07	3025	4664	SLD 14	15877	Si
4.1	0.41	0.0002	1459	SLD 15	0.07	3025	4490	SLD 15	15877	Si
4.33	0.41	0.0002	1465	SLD 15	0.07	3025	4508	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1826	SLE RA 20	52879	1494000	655698	36000000	1655	SLE QP 2	47939	1120500	Si
0.23	0.41	0.00000168	1770	SLE RA 20	51271	1494000	635760	36000000	1604	SLE QP 2	46468	1120500	Si
2.16	0.41	0.00000168	1541	SLE RA 20	44642	1494000	553562	36000000	1394	SLE QP 2	40364	1120500	Si
4.1	0.41	0.00000168	1473	SLE RA 20	42656	1494000	528932	36000000	1328	SLE QP 2	38455	1120500	Si
4.33	0.41	0.00000168	1475	SLE RA 20	42712	1494000	529628	36000000	1329	SLE QP 2	38493	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
429,428,427,426,425,424,423,422,421,420,419	4.78	1.1	SLU 83	ST	BT	2.3	219766	60322	3.64	Si
429,428,427,426,425,424,423,422,421,420,419	4.78	1.1	SLV 2	SIS	LT	2.3	133799	34956	3.83	Si
429,428,427,426,425,424,423,422,421,420,419	4.78	1.1	SLD 13	SIS	BT	2.3	206949	44143	4.69	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	414	-60322	-320.86	-3140.15	0	0	-0.05	-0.01	1.09	4.68	1496	2060	0	14430	
0	8146	-34956	-3809.43	-3112.99	0	13	-0.09	-0.11	0.88	4.6	1496	2060	37	0	0.07
0	-3011	-44143	1299.14	-2651.94	0	-4	-0.06	0.03	1.04	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.14	1.15	0.92	1.16	1.27	1	0.61	0.6	0.47	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	676	SLE RA 21	0.05	0.001	676	333	SLE RA 20	0.05	0	676	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	676	SLE RA 1	0.05	0	676	676	SLE RA 1	0.05	0	676	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	676	SLE RA 1	0.05	0	676	676	SLE RA 1	0.05	0	676	SLE RA 1	0.0033	0	SLE RA 1	Si

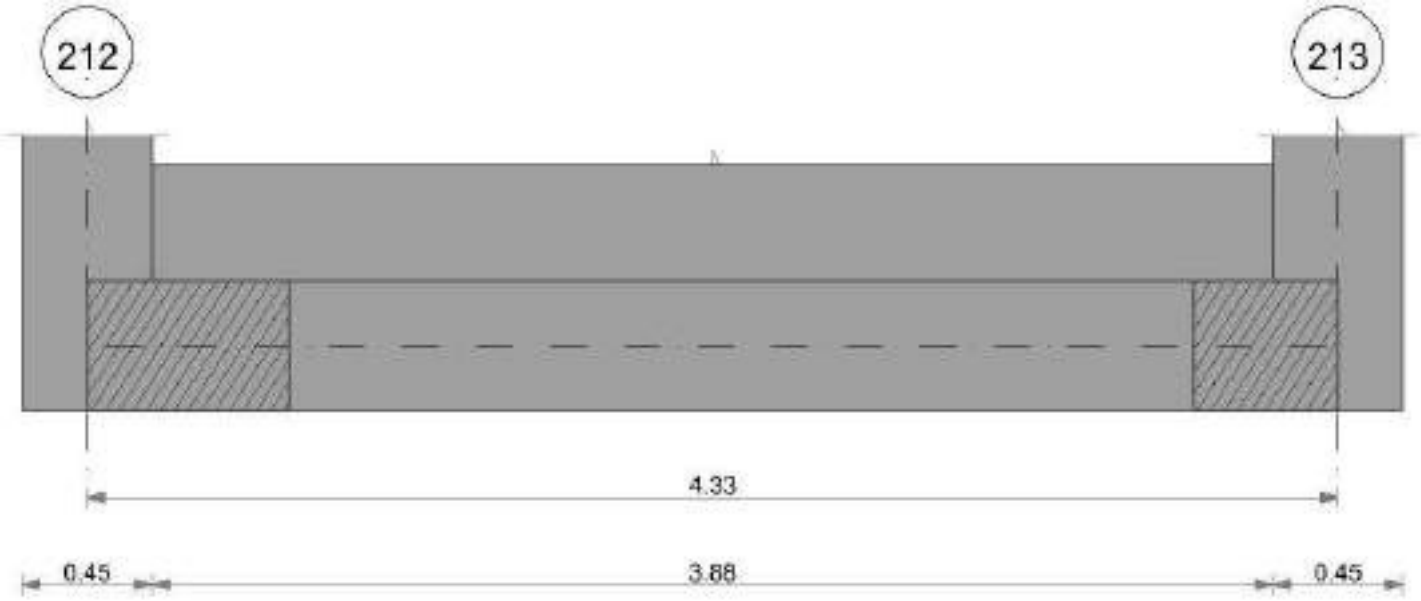
Verifiche geotecniche - Rotazioni assolute e differenziali

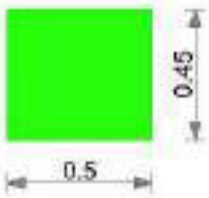
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.02	676	333	SLE RA 20	0.19	0	676	SLE RA 1	0.1	0	676	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
D	0.19	0	SLE RA 1	0.19	0	676	333	SLE RA 1	0.19	0	676	SLE RA 1	0.1	0	676	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	676	333	SLE RA 1	0.19	0	676	SLE RA 1	0.1	0	676	SLE RA 1	Si

CORDOLO 40

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

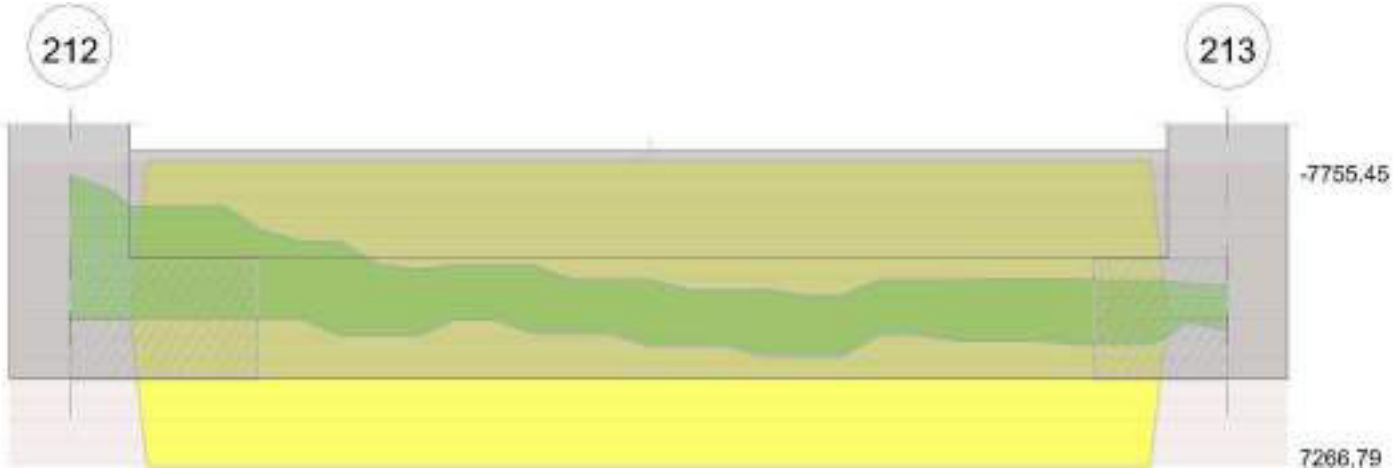
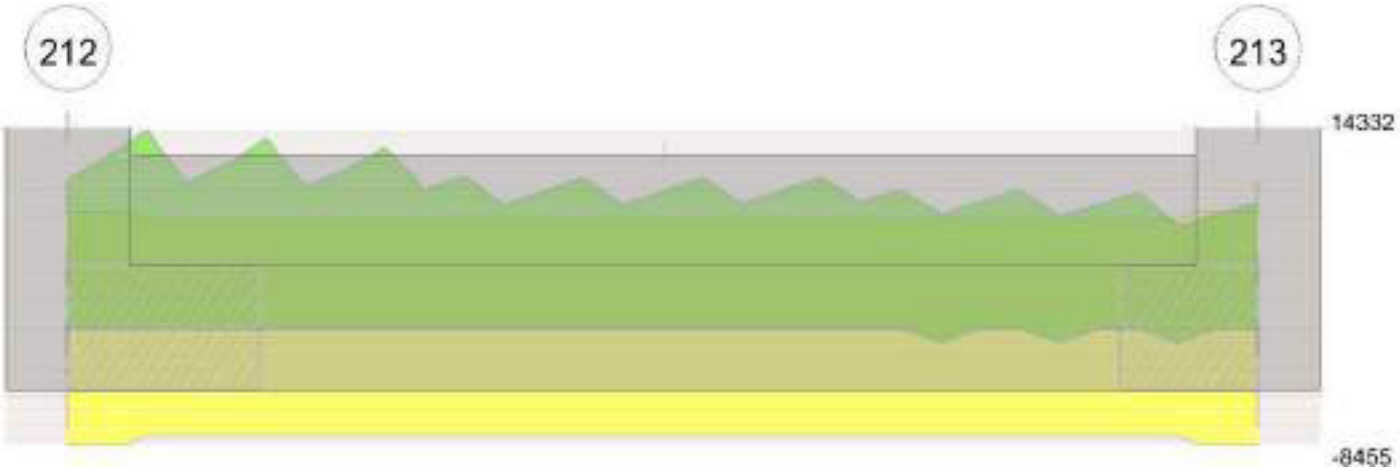


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 212 - 213, sezione R 50x45, aste 645, 644, 643, 642, 641, 640, 639, 638, 637, 636, 635

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2428	SLU 83	0.017	2687	7473	SLU 83	15877	Si
0.23	0.41	0.0002	2354	SLU 83	0.017	2687	7244	SLU 83	15877	Si
2.16	0.41	0.0002	2066	SLU 83	0.017	2687	6360	SLU 83	15877	Si
4.1	0.41	0.0002	1996	SLU 83	0.017	2687	6144	SLU 83	15877	Si
4.33	0.41	0.0002	1999	SLU 83	0.017	2687	6155	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1814	SLD 14	0.07	3025	5584	SLD 14	15877	Si
0.23	0.41	0.0002	1753	SLD 14	0.07	3025	5396	SLD 14	15877	Si
2.16	0.41	0.0002	1502	SLD 14	0.07	3025	4624	SLD 14	15877	Si
4.1	0.41	0.0002	1452	SLD 15	0.07	3025	4469	SLD 15	15877	Si
4.33	0.41	0.0002	1458	SLD 15	0.07	3025	4487	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1786	SLE RA 20	51723	1494000	641368	36000000	1619	SLE QP 2	46890	1120500	Si
0.23	0.41	0.00000168	1731	SLE RA 20	50127	1494000	621579	36000000	1568	SLE QP 2	45429	1120500	Si
2.16	0.41	0.00000168	1517	SLE RA 20	43948	1494000	544960	36000000	1372	SLE QP 2	39737	1120500	Si
4.1	0.41	0.00000168	1464	SLE RA 20	42389	1494000	525628	36000000	1320	SLE QP 2	38218	1120500	Si
4.33	0.41	0.00000168	1466	SLE RA 20	42456	1494000	526450	36000000	1321	SLE QP 2	38266	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
645,644,643,642,641,640,639,638,637,636,635	4.78	1.1	SLU 83	ST	BT	2.3	220297	59628	3.69	Si
645,644,643,642,641,640,639,638,637,636,635	4.78	1.1	SLV 2	SIS	LT	2.3	131351	34232	3.84	Si
645,644,643,642,641,640,639,638,637,636,635	4.78	1.1	SLD 14	SIS	BT	2.3	207901	43977	4.73	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	ys	Fi	Coes	Amax
0	414	-59628	-320.86	-2737.89	0	0	-0.05	-0.01	1.09	4.69	1496	2060	0	14430	
0	8146	-34232	-3809.43	-2789.19	0	13	-0.08	-0.11	0.88	4.62	1496	2060	37	0	0.07
0	-2802	-43977	1208.05	-2656.12	0	-4	-0.06	0.03	1.05	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.14	1.15	0.92	1.16	1.27	1	0.61	0.6	0.46	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

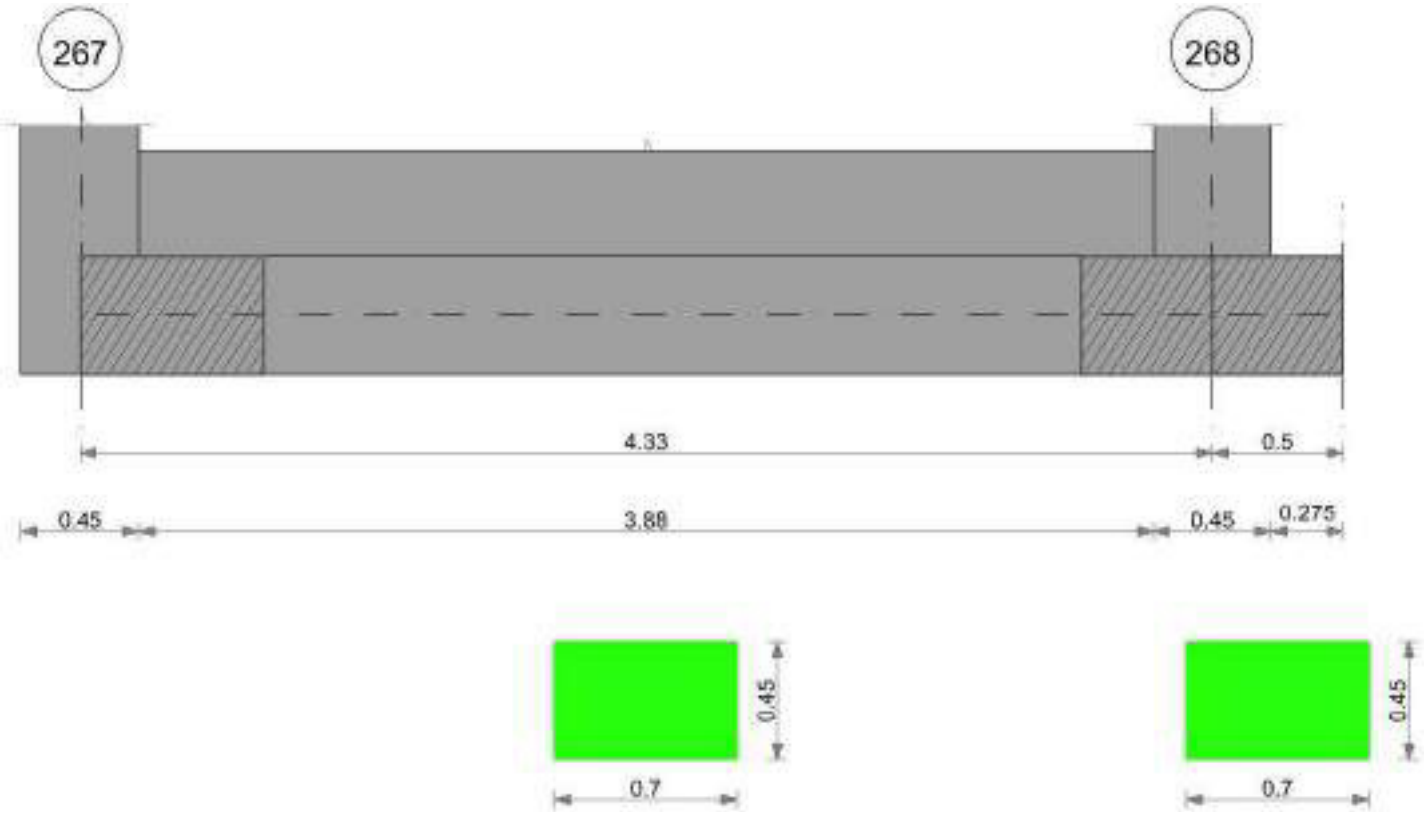
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	679	SLE RA 21	0.05	0.001	679	335	SLE RA 21	0.05	0	679	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	679	SLE RA 1	0.05	0	679	679	SLE RA 1	0.05	0	679	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	679	SLE RA 1	0.05	0	679	679	SLE RA 1	0.05	0	679	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	679	335	SLE RA 21	0.19	0	679	SLE RA 1	0.1	0	679	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	679	335	SLE RA 1	0.19	0	679	SLE RA 1	0.1	0	679	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	679	335	SLE RA 1	0.19	0	679	SLE RA 1	0.1	0	679	SLE RA 1	Si

CORDOLO 41

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

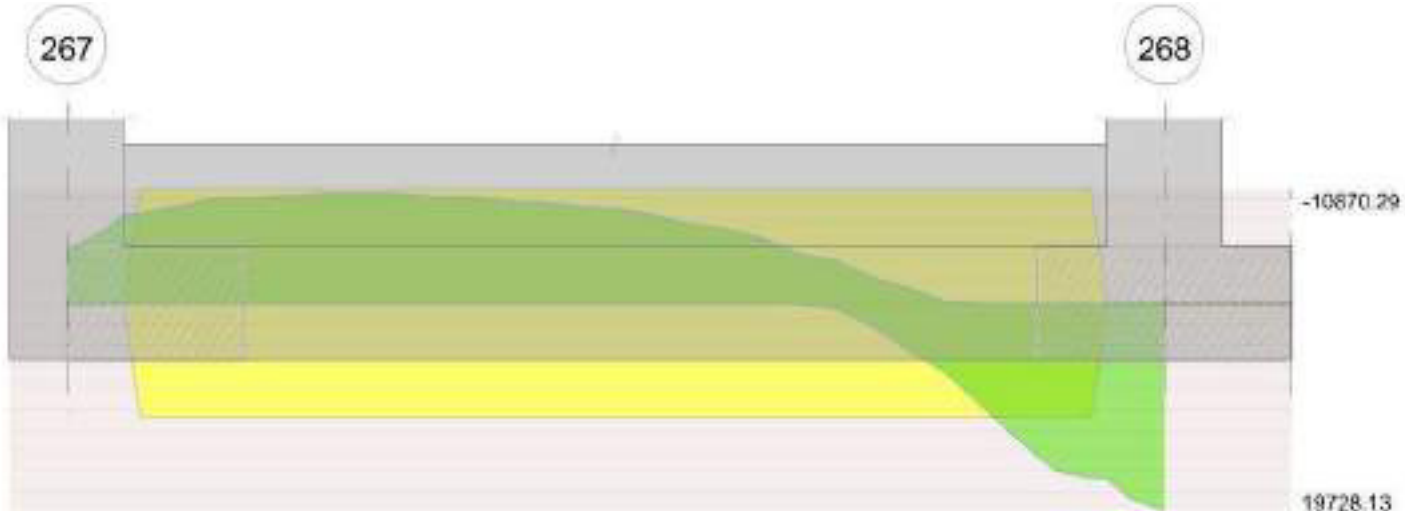
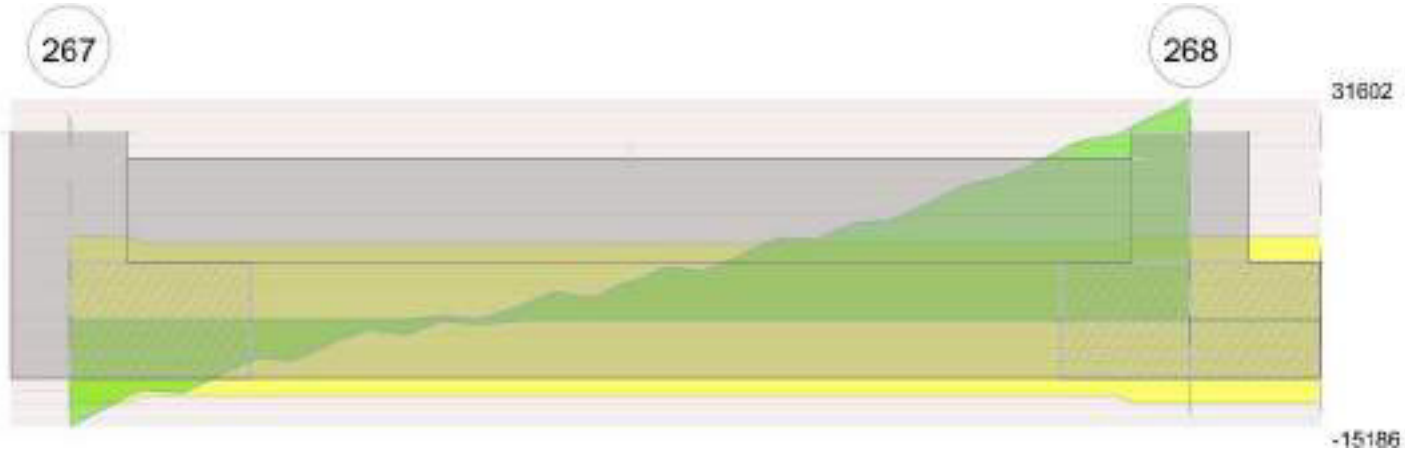


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 267 - 268, sezione R 70x45, aste 621, 620, 619, 618, 617, 616, 615, 614, 613, 612, 611

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.23	0.41	0.0002	3102	SLD 14	0.071	3173	8008	SLD 14	15877	Si
2.16	0.41	0.0002	2611	SLD 14	0.071	3173	6739	SLD 14	15877	Si
4.1	0.41	0.0002	3118	SLD 13	0.071	3173	8047	SLD 13	15877	Si
4.33	0.41	0.0002	3121	SLD 13	0.071	3173	8054	SLD 13	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	2715	SLE RA 20	78553	1494000	974059	36000000	2469	SLE QP 2	71426	1120500	Si
0.23	0.41	0.00000177	2592	SLE RA 20	75000	1494000	930005	36000000	2356	SLE QP 2	68177	1120500	Si
2.16	0.41	0.00000177	2202	SLE RA 21	63706	1494000	789956	36000000	1999	SLE QP 2	57820	1120500	Si
4.1	0.41	0.00000177	2647	SLE RA 21	76587	1494000	949678	36000000	2404	SLE QP 2	69537	1120500	Si
4.33	0.41	0.00000177	2648	SLE RA 21	76608	1494000	949934	36000000	2404	SLE QP 2	69555	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
621,620,619,618,617,616,615,614,613,612,611	4.55	1.3	SLU 83	ST	BT	2.3	215614	74914	2.88	Si
621,620,619,618,617,616,615,614,613,612,611	4.55	1.3	SLV 15	SIS	BT	2.3	183886	78901	2.33	Si
621,620,619,618,617,616,615,614,613,612,611	4.55	1.3	SLD 15	SIS	BT	2.3	200150	63166	3.17	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	780	-74914	5980.06	1436.29	0	1	0.02	0.08	1.14	4.52	1496	2060	0	14430	
0	-8556	-78901	11132.15	3000.07	0	-6	0.04	0.14	1.02	4.48	1496	2060	0	14430	0.07
0	-3341	-63166	7064.21	1840.29	0	-3	0.03	0.11	1.08	4.5	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.05	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

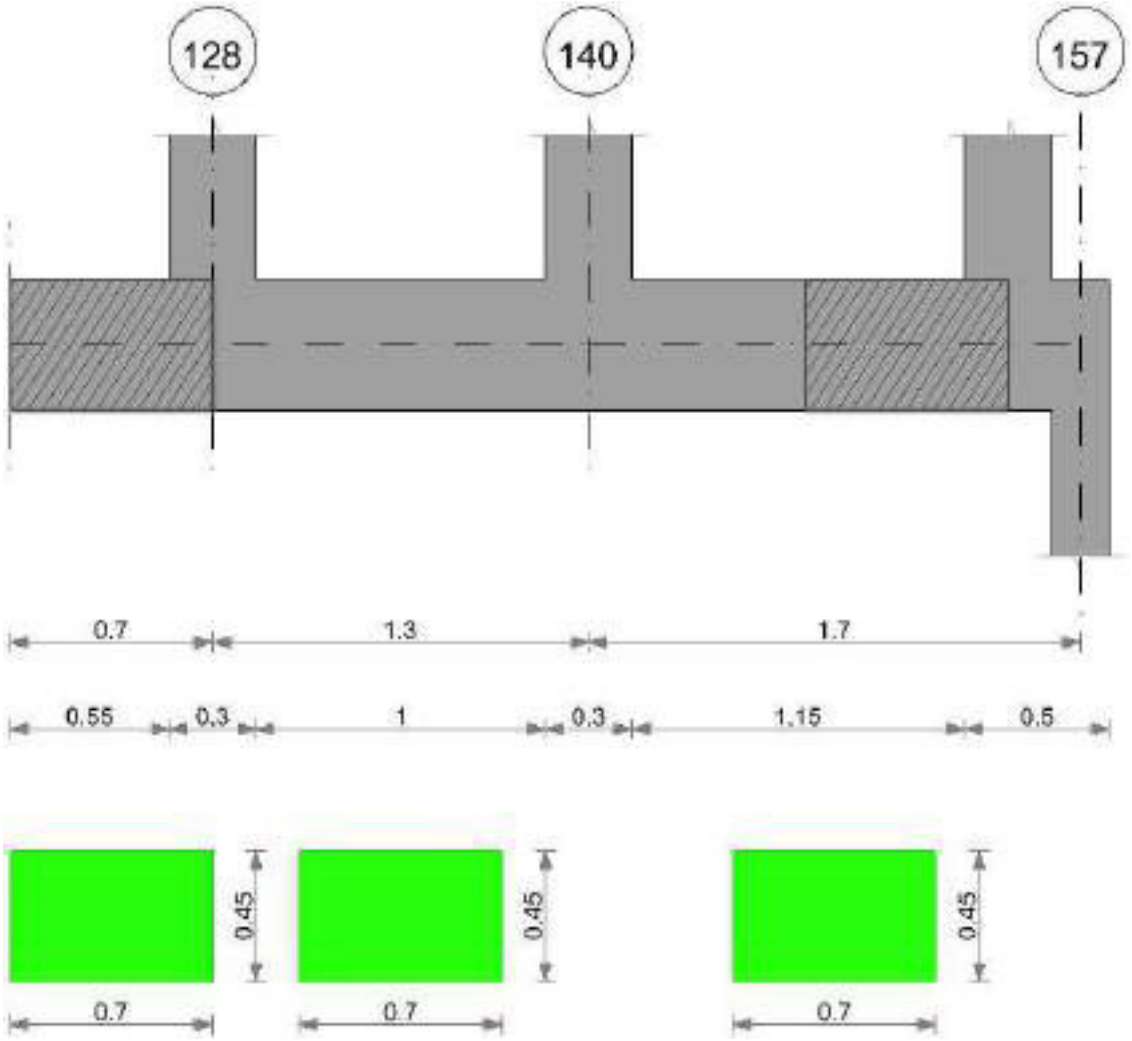
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	695	SLE RA 21	0.05	0.001	695	350	SLE RA 21	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	695	SLE RA 1	0.05	0	695	695	SLE RA 1	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	695	SLE RA 1	0.05	0	695	695	SLE RA 1	0.05	0	695	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	695	350	SLE RA 21	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	695	350	SLE RA 1	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	695	350	SLE RA 1	0.19	0	695	SLE RA 1	0.1	0	695	SLE RA 1	Si

CORDOLO 42

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

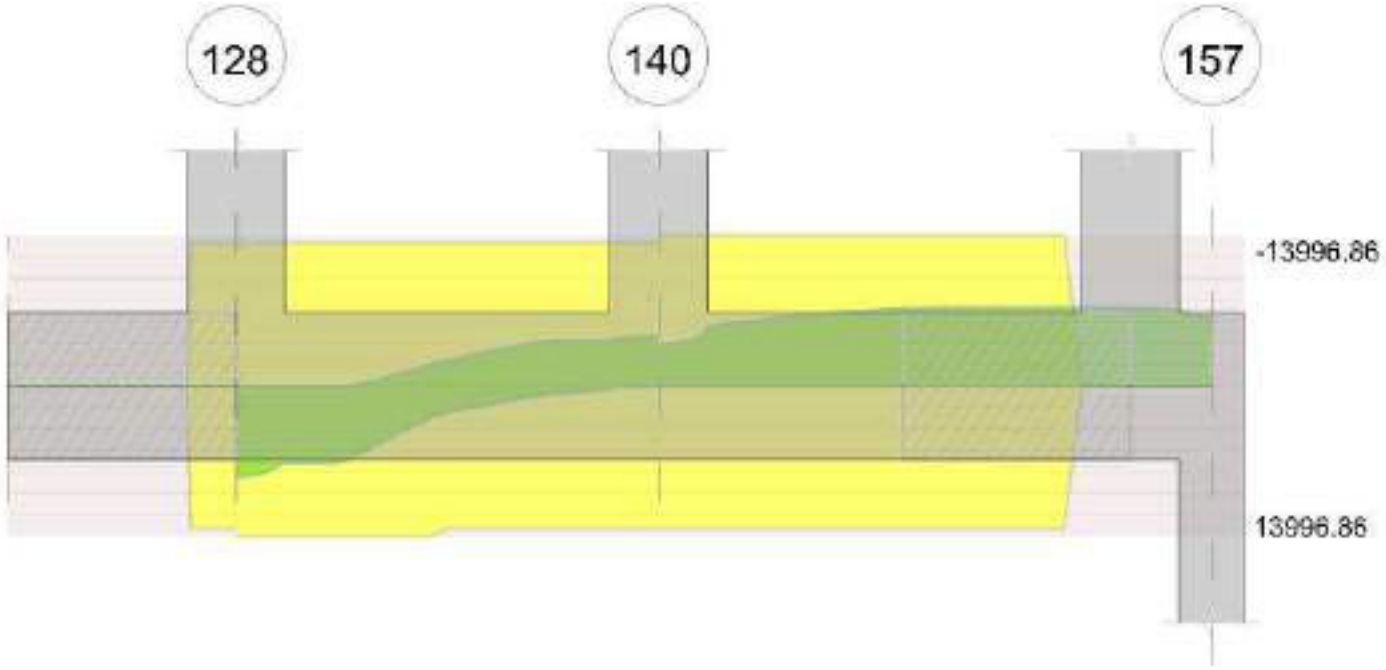
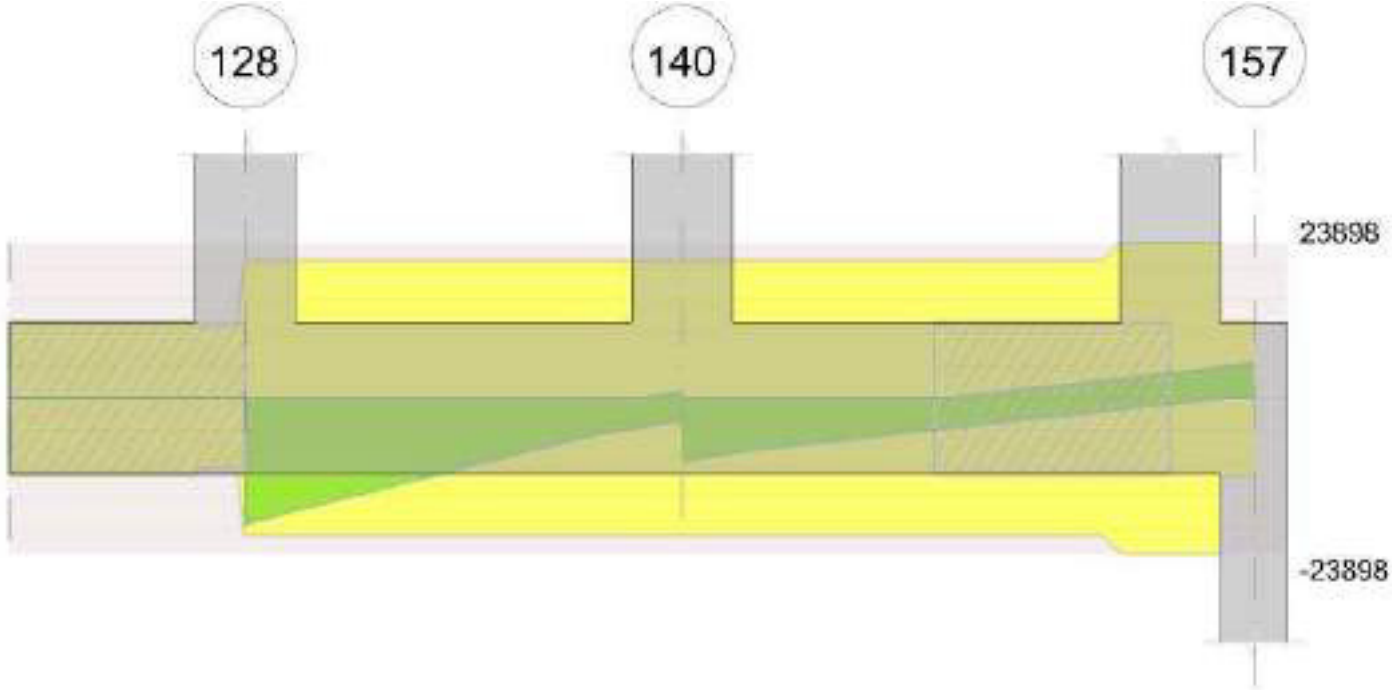


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 128 - 140, sezione R 70x45, asta 459

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	9907.44	SLU 84	8464.28	13996.86	0.128	1.65							Si
0.15	0.000942	0.053	0.000942	0.053	7167.4	SLU 84	7167.4	13996.86	0.128	1.95							Si
0.65	0.000942	0.053	0.000942	0.053	471.47	SLU 44	2306.79	13996.86	0.128	6.07	37.03	SLU 41	-1523.4	-13996.86	0.128	9.19	Si
1.15	0.000942	0.053	0.000942	0.053							-3507.3	SLU 84	-3507.3	-13996.86	0.128	3.99	Si
1.3	0.000942	0.053	0.000942	0.053							-3978.19	SLU 84	-3814.76	-13996.86	0.128	3.67	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7184.9	SLV 13	6107.89	13265.61	0.222	2.17							Si
0.15	0.000942	0.053	0.000942	0.053	5169.94	SLV 9	5169.94	13265.61	0.222	2.57							Si
0.65	0.000942	0.053	0.000942	0.053	1420.19	SLV 1	2438.91	13265.61	0.222	5.44	-896.44	SLV 16	-2363.27	-13265.61	0.222	5.61	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.15	0.000942	0.053	0.000942	0.053	103.84	SLV 3	322.87	13265.61	0.222	41.09	-4280.99	SLV 14	-4280.99	-13265.61	0.222	3.1	Si
1.3	0.000942	0.053	0.000942	0.053	140.74	SLV 4	76.83	13265.61	0.222	172.67	-4876.86	SLV 13	-4630.09	-13265.61	0.222	2.87	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6866.49	SLD 13	5865.34	13265.61	0.222	2.26							Si
0.15	0.000942	0.053	0.000942	0.053	4976.94	SLD 9	4976.94	13265.61	0.222	2.67							Si
0.65	0.000942	0.053	0.000942	0.053	757.03	SLD 1	1985.26	13265.61	0.222	6.68	-233.29	SLD 16	-1488.25	-13265.61	0.222	8.91	Si
1.15	0.000942	0.053	0.000942	0.053							-3025.74	SLD 14	-3025.74	-13265.61	0.222	4.38	Si
1.3	0.000942	0.053	0.000942	0.053							-3440.64	SLD 13	-3282.75	-13265.61	0.222	4.04	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-19283	SLU 84	-19283	-11611	-88226	-21083	-21083	1	1.09	Si
0.15	0.0000151	0.000942	0	-17292	SLU 84	-17292	-11611	-88226	-21083	-21083	1	1.22	Si
0.65	0.0000151	0.000942	0	-10663	SLU 84	-10663	-11611	-88226	-21083	-21083	1	1.98	Si
1.15	0.0000151	0.000942	0	-4100	SLU 84	-4100	-11611	-88226	-21083	-21083	1	5.14	Si
1.3	0.0000151	0.000942	0	-2138	SLU 84	-2138	-11611	-88226	-21083	-21083	1	9.86	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-15197	SLV 13	-15197	-11611	-88226	-21083	-21083	1	1.39	Si
0.15	0.0000151	0.000942	0	-13785	SLV 13	-13785	-11611	-88226	-21083	-21083	1	1.53	Si
0.65	0.0000151	0.000942	0	-9158	SLV 13	-9158	-11611	-88226	-21083	-21083	1	2.3	Si
1.15	0.0000151	0.000942	0	-4670	SLV 13	-4670	-11611	-88226	-21083	-21083	1	4.51	Si
1.3	0.0000151	0.000942	0	959	SLV 4	959	11611	88226	21083	21083	1	21.99	Si
1.3	0.0000151	0.000942	0	-3342	SLV 13	-3342	-11611	-88226	-21083	-21083	1	6.31	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-13755	SLD 13	-13755	-11611	-88226	-21083	-21083	1	1.53	Si
0.15	0.0000151	0.000942	0	-12390	SLD 13	-12390	-11611	-88226	-21083	-21083	1	1.7	Si
0.65	0.0000151	0.000942	0	-7871	SLD 13	-7871	-11611	-88226	-21083	-21083	1	2.68	Si
1.15	0.0000151	0.000942	0	-3434	SLD 13	-3434	-11611	-88226	-21083	-21083	1	6.14	Si
1.3	0.0000151	0.000942	0	-2113	SLD 13	-2113	-11611	-88226	-21083	-21083	1	9.98	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	7302.94	21	6244.91	228395	1494000	3425919	36000000	6626.24	2	5677.49	207642	1120500			Si
0.15	5294.67	21	5294.67	193642	1494000	2904624	36000000	4826.54	2	4826.54	176521	1120500			Si
0.65	297.77	2	1736.13	63495	1494000	952428	36000000	296.19	1	1646	60199	1120500			Si
1.15	-2497.31	21	-2497.31	91334	1494000	1370011	36000000	-2088.57	2	-2088.57	76385	1120500			Si
1.3	-2832.58	21	-2718.06	99408	1494000	1491113	36000000	-2368.06	2	-2276.63	83263	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 3 tra i fili 140 - 157, sezione R 70x45, asta 460

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-3715.38	SLU 84	-3715.38	-13996.86	0.128	3.77	Si
0.15	0.000942	0.053	0.000942	0.053							-4591.55	SLU 84	-5481.51	-13996.86	0.128	2.55	Si
0.85	0.000942	0.053	0.000942	0.053							-7061.57	SLU 84	-7258.46	-13996.86	0.128	1.93	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-3308.14	SLV 2	-3308.14	-13265.61	0.222	4.01	Si
0.15	0.000942	0.053	0.000942	0.053							-3719.06	SLV 2	-4118.39	-13265.61	0.222	3.22	Si
0.85	0.000942	0.053	0.000942	0.053							-5088.16	SLV 13	-5457.96	-13265.61	0.222	2.43	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-2676.03	SLD 2	-2676.03	-13265.61	0.222	4.96	Si
0.15	0.000942	0.053	0.000942	0.053							-3206.42	SLD 2	-3740.79	-13265.61	0.222	3.55	Si
0.85	0.000942	0.053	0.000942	0.053							-4826.36	SLD 9	-5080.51	-13265.61	0.222	2.61	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-9682	SLU 84	-9682	-11611	-88226	-21083	-21083	1	2.18	Si
0.15	0.0000151	0.000942	0	-8414	SLU 84	-8414	-11611	-88226	-21083	-21083	1	2.51	Si
0.85	0.0000151	0.000942	0	-2651	SLU 44	-2651	-11611	-88226	-21083	-21083	1	7.95	Si
1.6	0.0000151	0	0	4044	SLU 83	4044	11837	100005	23898	23898	1	5.91	Si
1.7	0	0	0	4934	SLU 83	4934	11837	100005	0	11837	1	2.4	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-9156	SLV 13	-9156	-11611	-88226	-21083	-21083	1	2.3	Si
0.15	0.0000151	0.000942	0	-8295	SLV 13	-8295	-11611	-88226	-21083	-21083	1	2.54	Si
0.85	0.0000151	0.000942	0	324	SLV 4	324	11611	88226	21083	21083	1	65.03	Si
0.85	0.0000151	0.000942	0	-4295	SLV 13	-4295	-11611	-88226	-21083	-21083	1	4.91	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.6	0.0000151	0	0	4721	SLV 4	4721	11837	100005	23898	23898	1	5.06	Si
1.7	0	0	0	5324	SLV 4	5324	11837	100005	0	11837	1	2.22	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-7819	SLD 13	-7819	-11611	-88226	-21083	-21083	1	2.7	Si
0.15	0.0000151	0.000942	0	-6964	SLD 13	-6964	-11611	-88226	-21083	-21083	1	3.03	Si
0.85	0.0000151	0.000942	0	-2973	SLD 13	-2973	-11611	-88226	-21083	-21083	1	7.09	Si
1.6	0.0000151	0	0	3382	SLD 4	3382	11837	100005	23898	23898	1	7.07	Si
1.7	0	0	0	3981	SLD 4	3981	11837	100005	0	11837	1	2.97	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-2642.17	21	-2642.17	96632	1494000	1449478	36000000	-2202.53	2	-2202.53	80553	1120500			Si
0.15	-3298.26	21	-3966.44	145064	1494000	2175966	36000000	-2821.87	2	-3456.67	126421	1120500			Si
0.85	-5166.03	21	-5323.07	194680	1494000	2920205	36000000	-4626.17	2	-4796.11	175408	1120500			Si
1.6	-4941.34	21	-5208.49	-220465	1494000	0	36000000	-4535.46	2	-4751.1	-201105	1120500			Si
1.7	-4735.16	21	-4735.16	-200430	1494000	0	36000000	-4363.21	2	-4363.21	-184686	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
459,460	3.1	1.3	SLU 83	ST	BT	2.3	168337	38141	4.41	Si
459,460	3.1	1.3	SLV 11	SIS	BT	2.3	151569	26265	5.77	Si
459,460	3.1	1.3	SLD 11	SIS	BT	2.3	161002	26226	6.14	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
50	194	-38141	-632.72	126.71	0	0	0	-0.02	1.27	3.09	1496	2060	0	14430	
1312	2810	-26265	-1718.5	357.05	3	6	0.01	-0.07	1.17	3.07	1496	2060	0	14430	0.07
585	1321	-26226	-993.22	206.91	1	3	0.01	-0.04	1.22	3.08	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

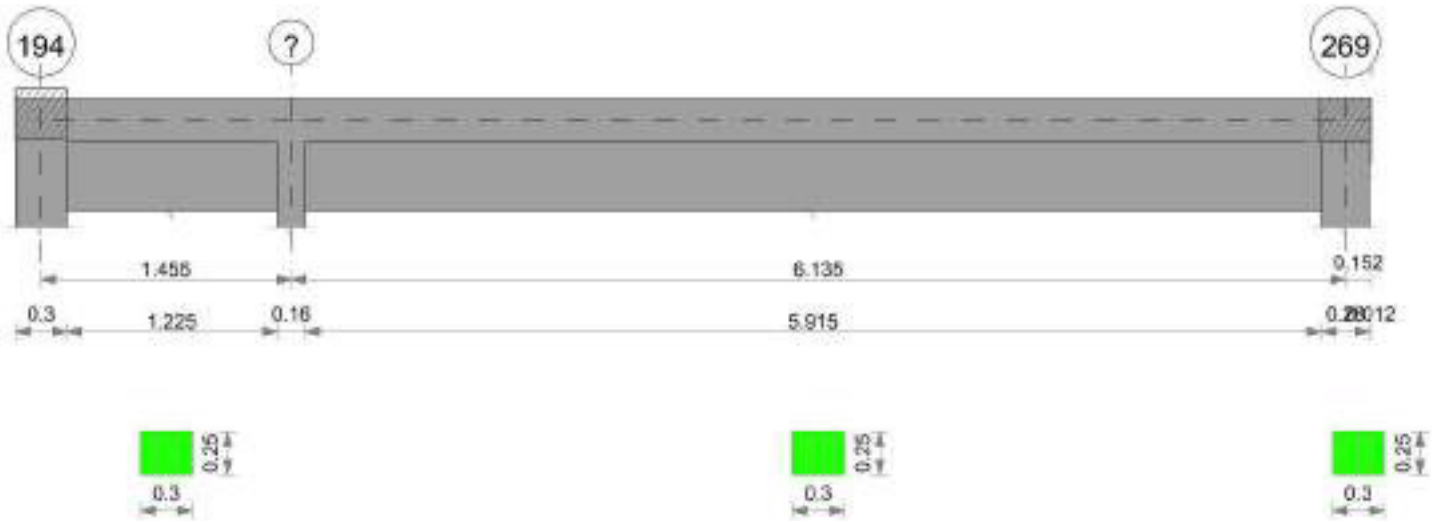
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.003	504	SLE RA 21	0.05	0	504	502	SLE RA 21	0.05	0	503	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	504	SLE RA 1	0.05	0	504	504	SLE RA 1	0.05	0	503	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	504	SLE RA 1	0.05	0	504	504	SLE RA 1	0.05	0	503	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	504	503	SLE RA 21	0.19	0	504	SLE RA 1	0.1	0.01	503	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	504	503	SLE RA 1	0.19	0	504	SLE RA 1	0.1	0	503	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	504	503	SLE RA 1	0.19	0	504	SLE RA 1	0.1	0	503	SLE RA 1	Si

CORDOLO SOTTOTETTO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

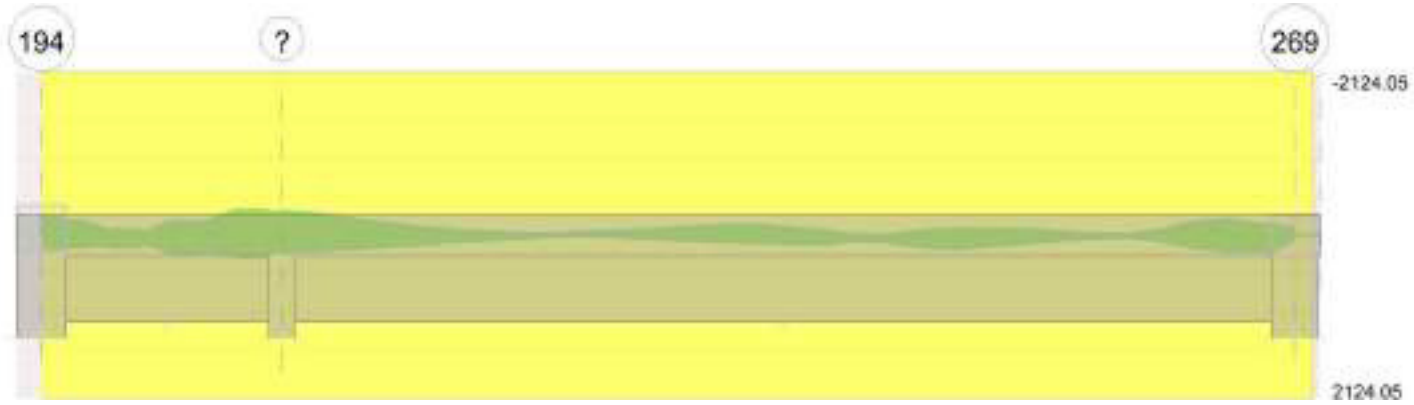


Diagramma verifica stato limite ultimo taglio

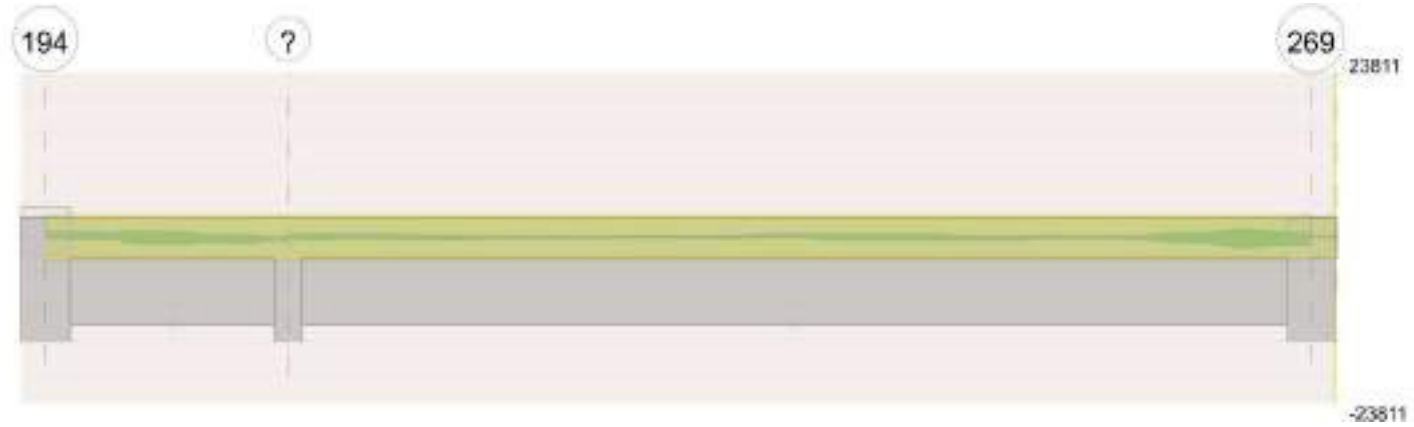
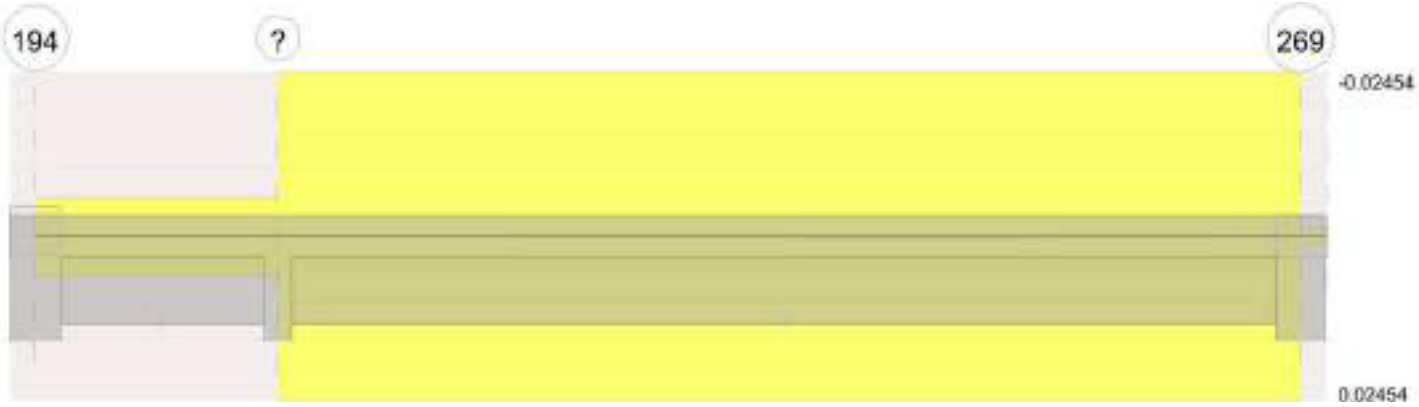


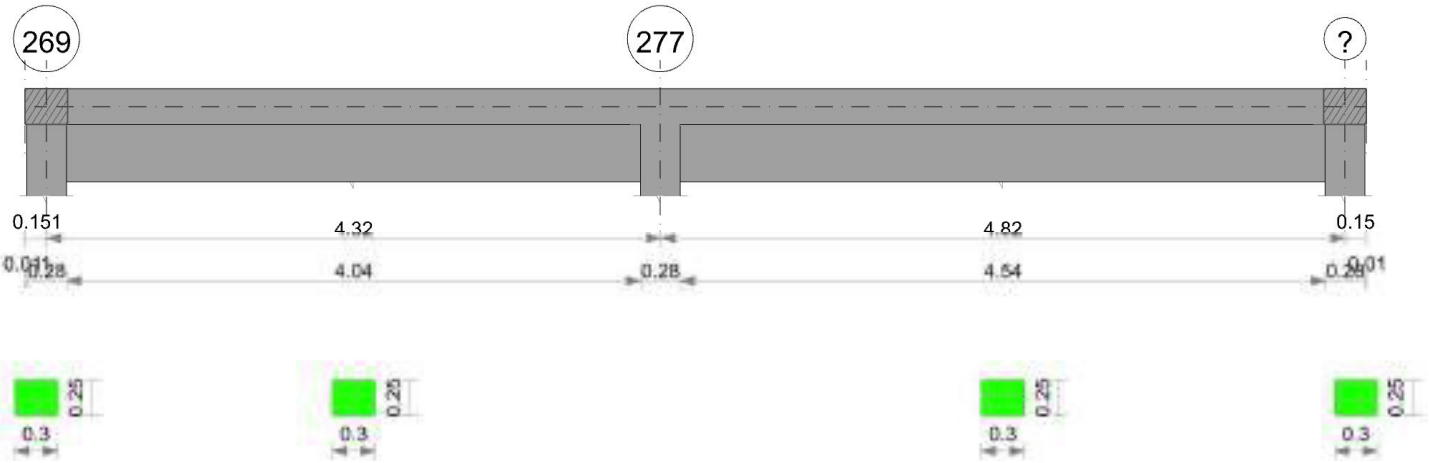
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

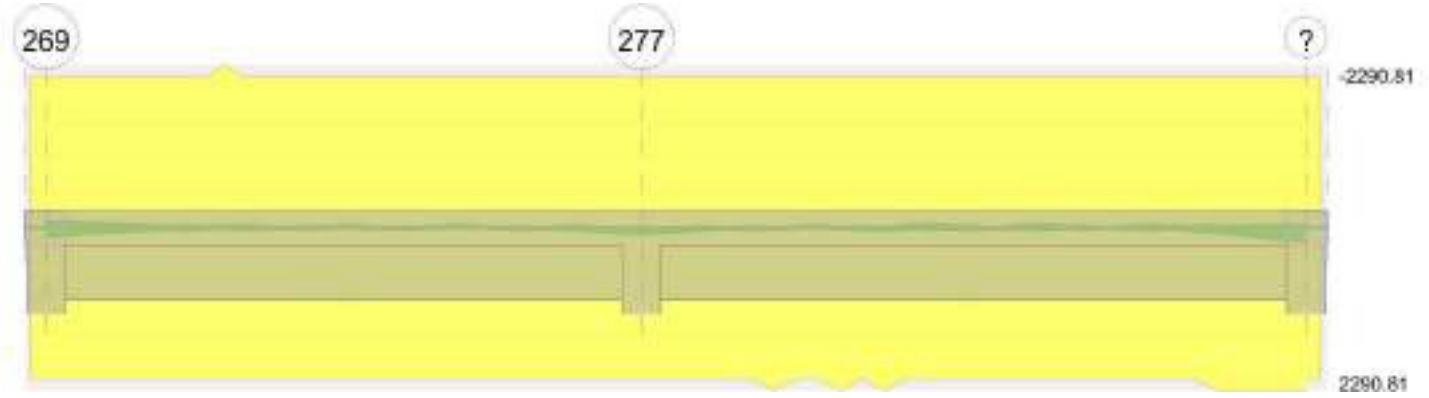


Diagramma verifica stato limite ultimo taglio

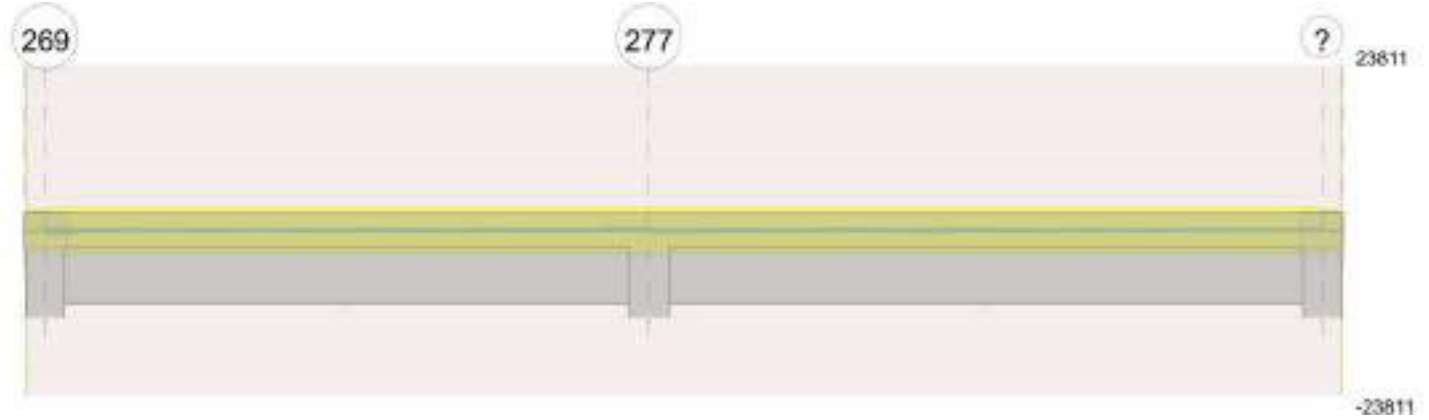
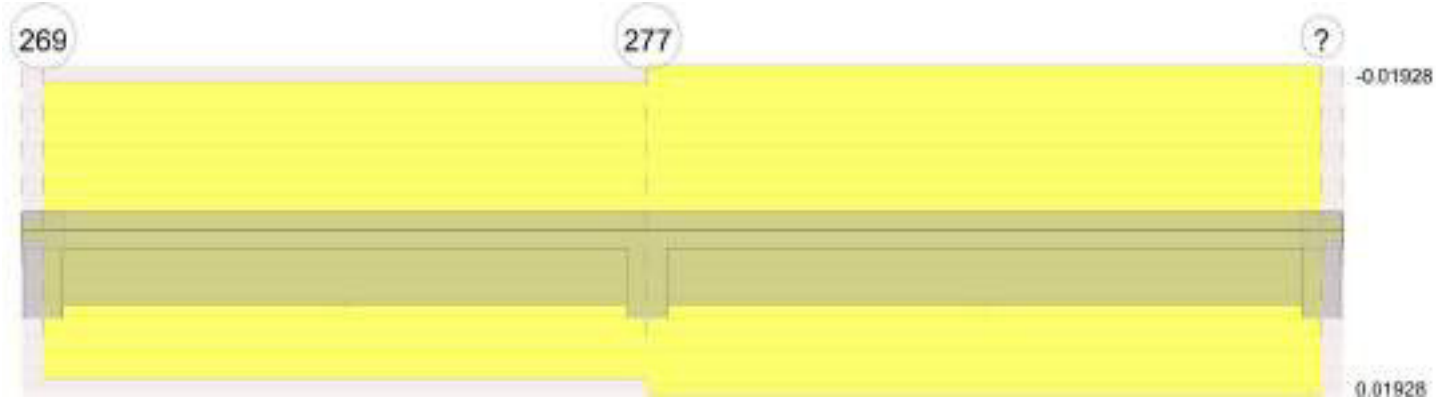


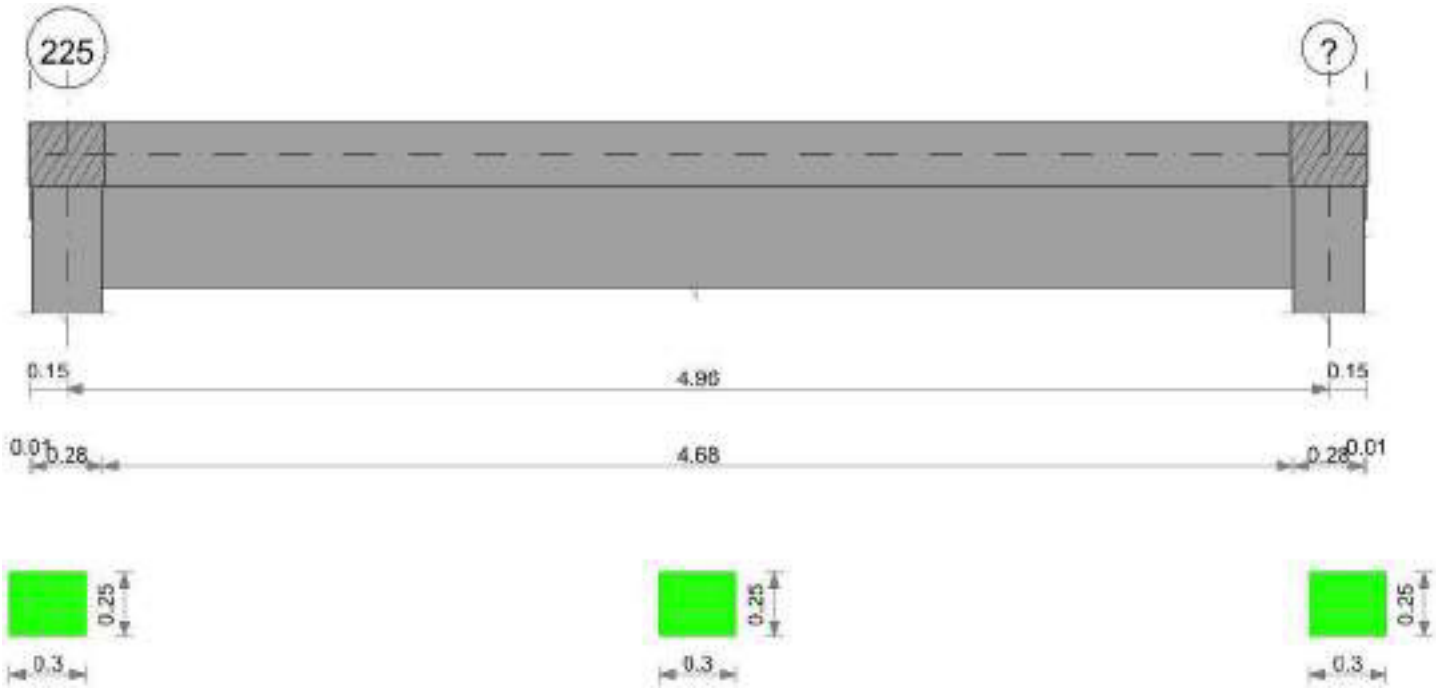
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

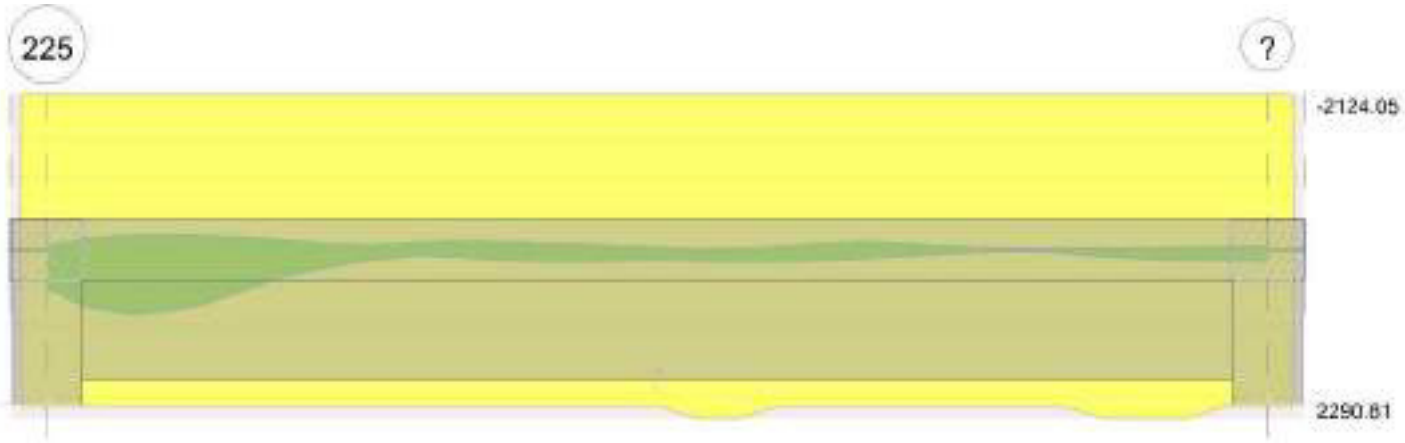


Diagramma verifica stato limite ultimo taglio

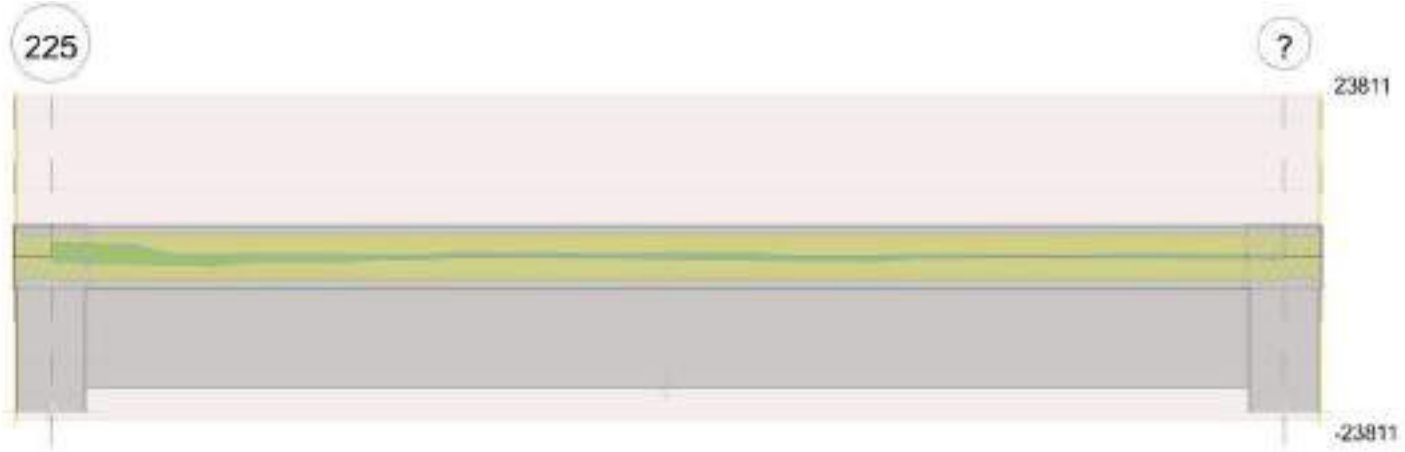
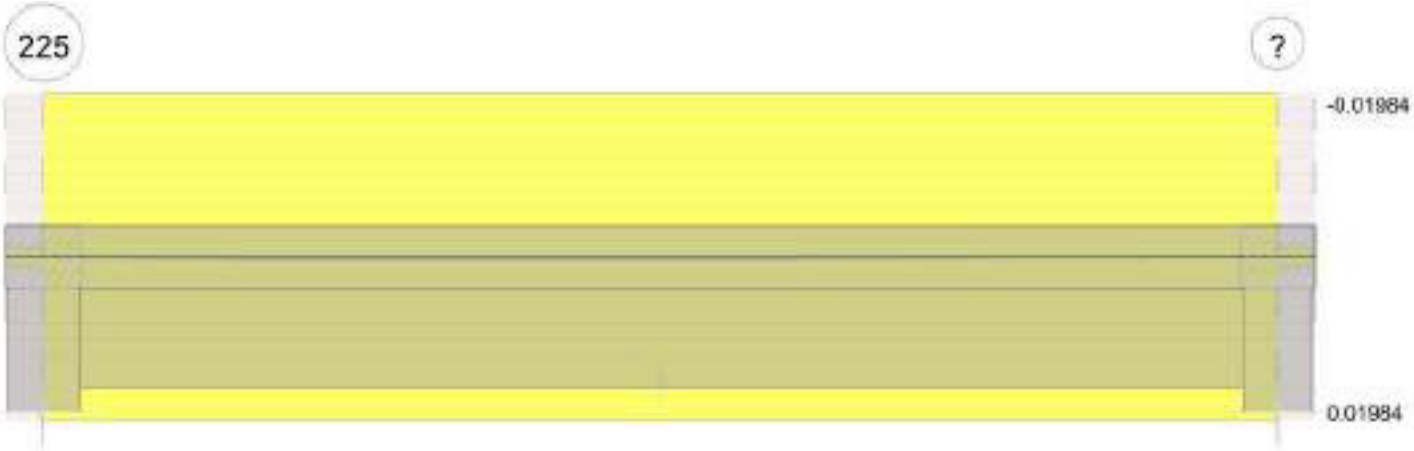


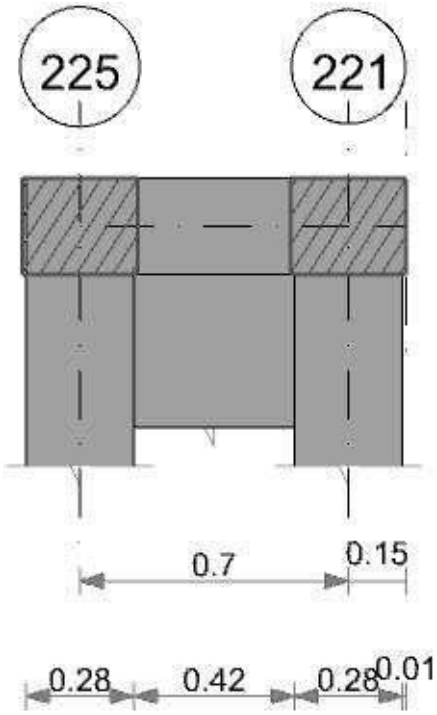
Diagramma verifica stato limite esercizio quasi permanente freccia

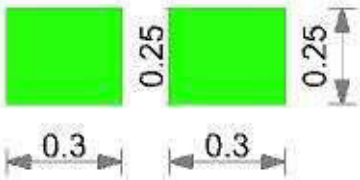


Output campate

CORDOLO SOTTOTETTO 4

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

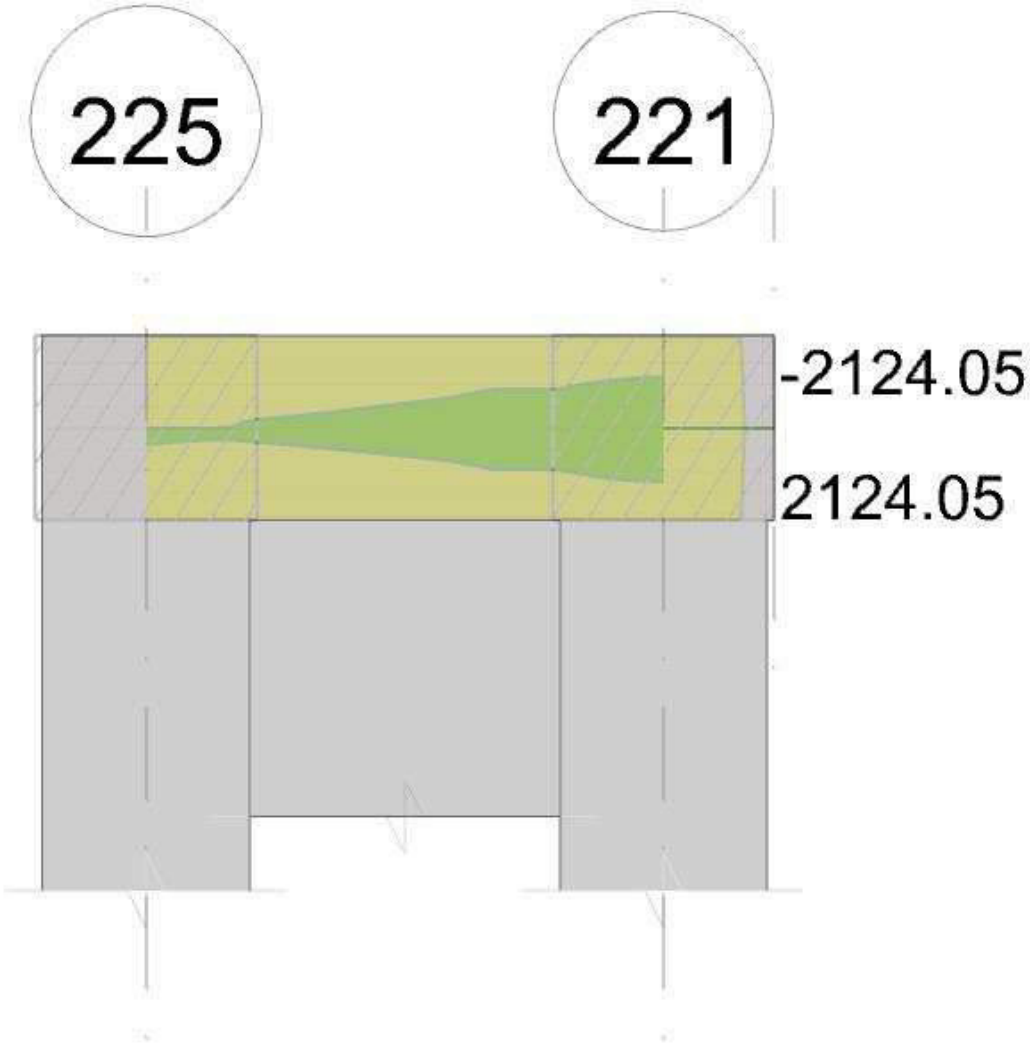


Diagramma verifica stato limite ultimo taglio

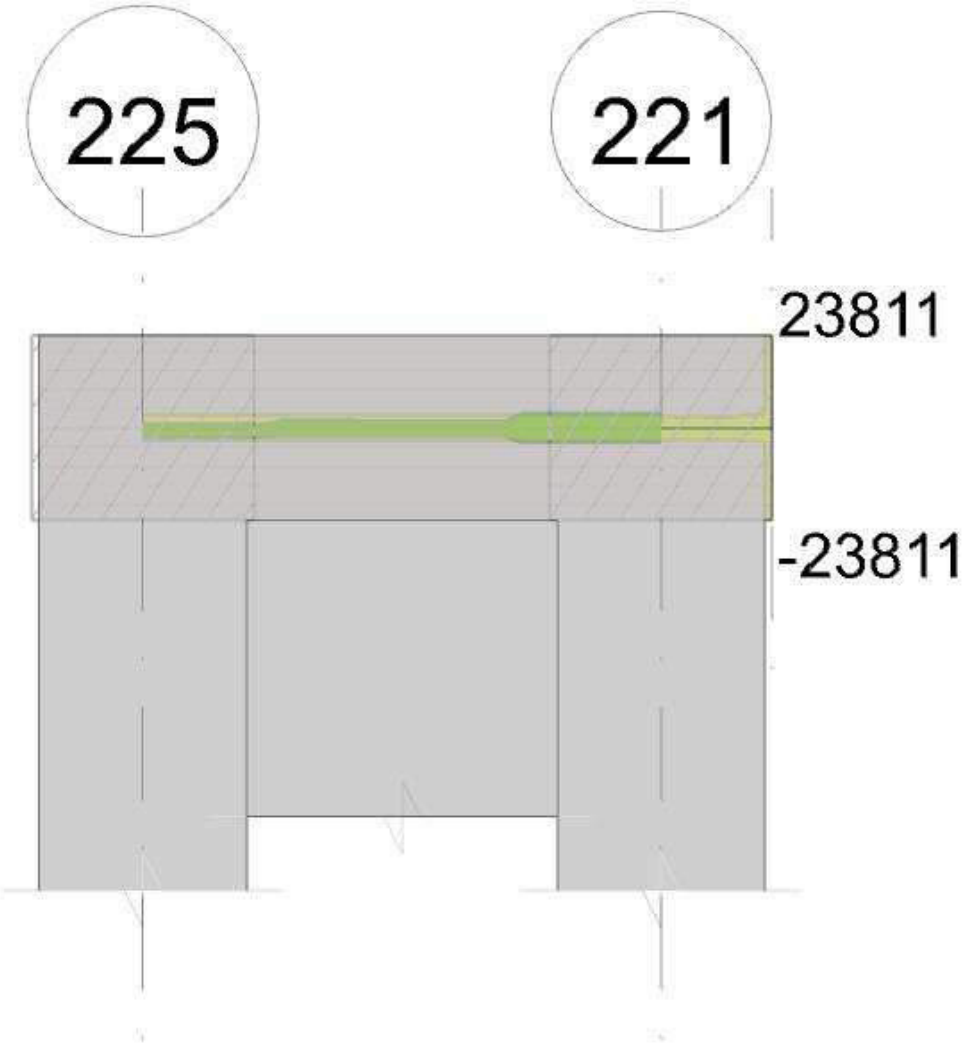
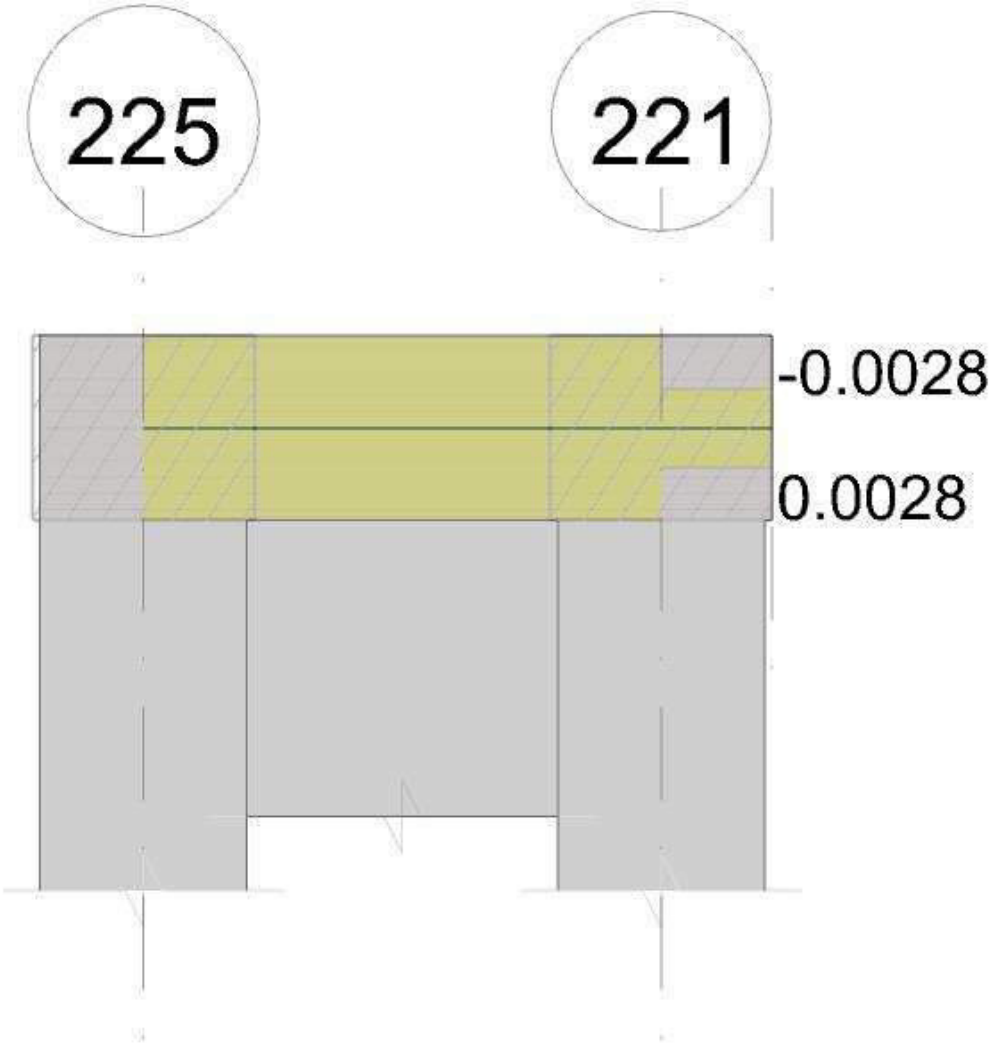


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 5

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

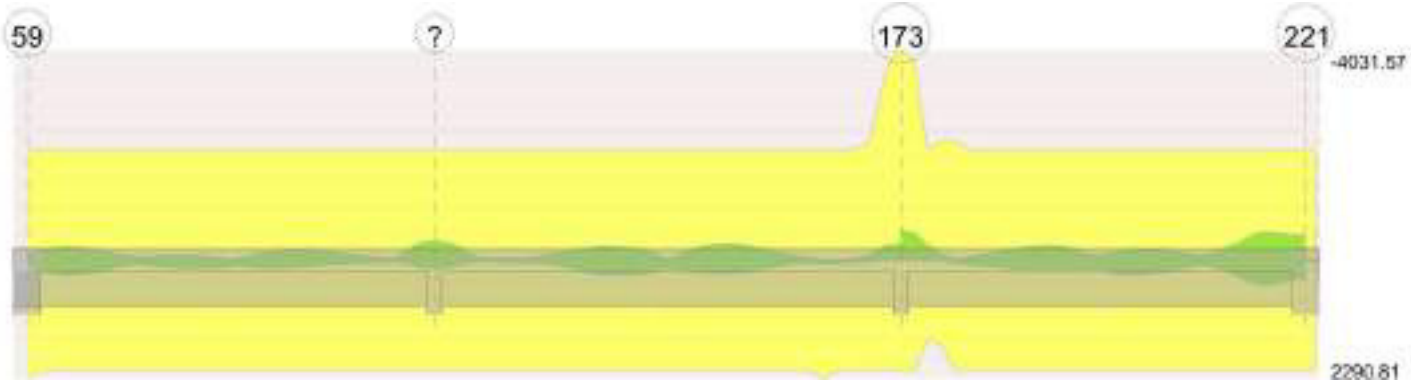


Diagramma verifica stato limite ultimo taglio

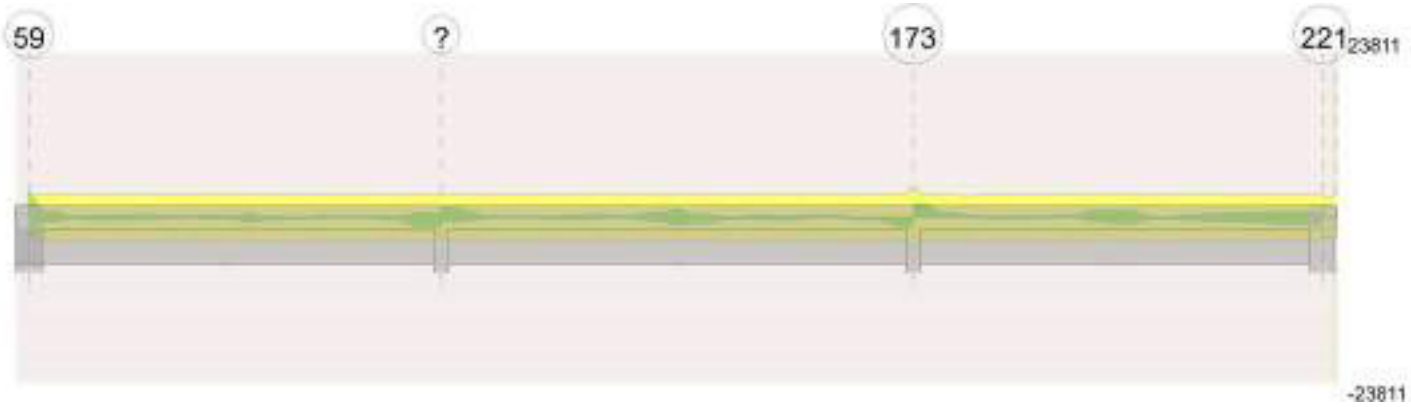
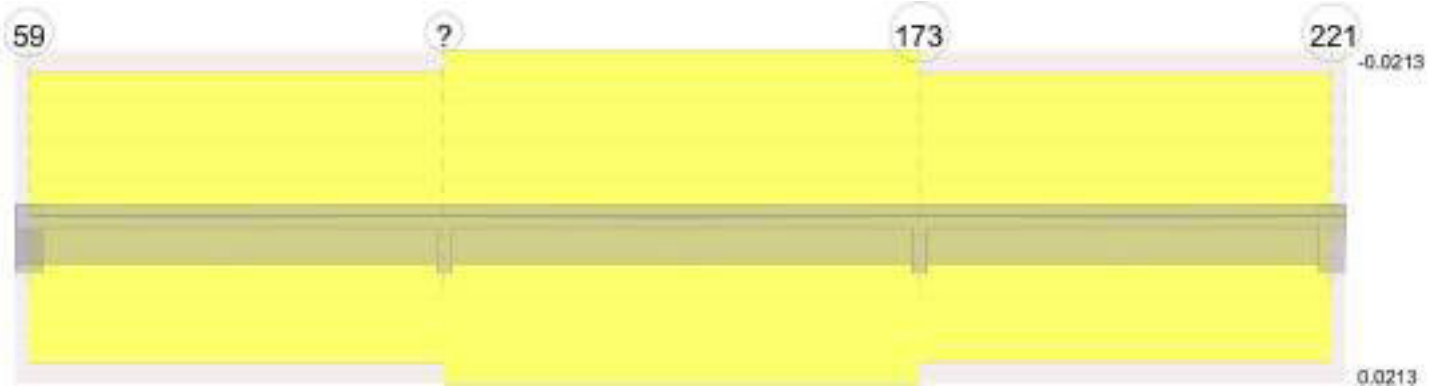


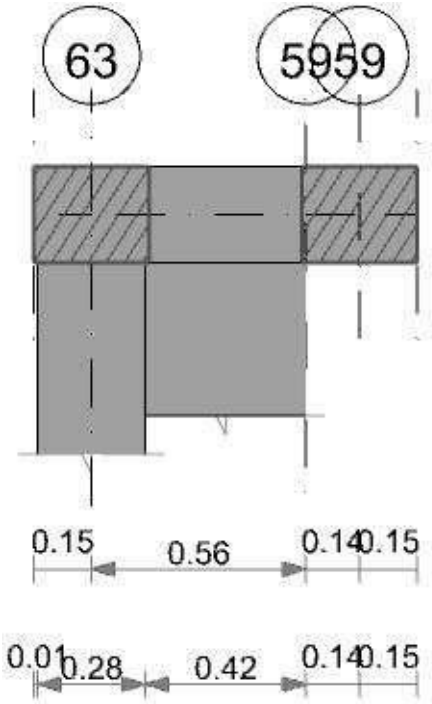
Diagramma verifica stato limite esercizio quasi permanente freccia

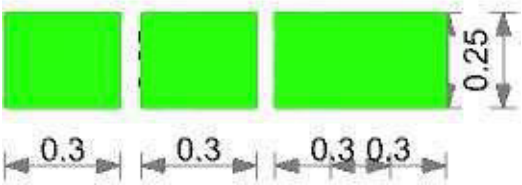


Output campate

CORDOLO SOTTOTETTO 6

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

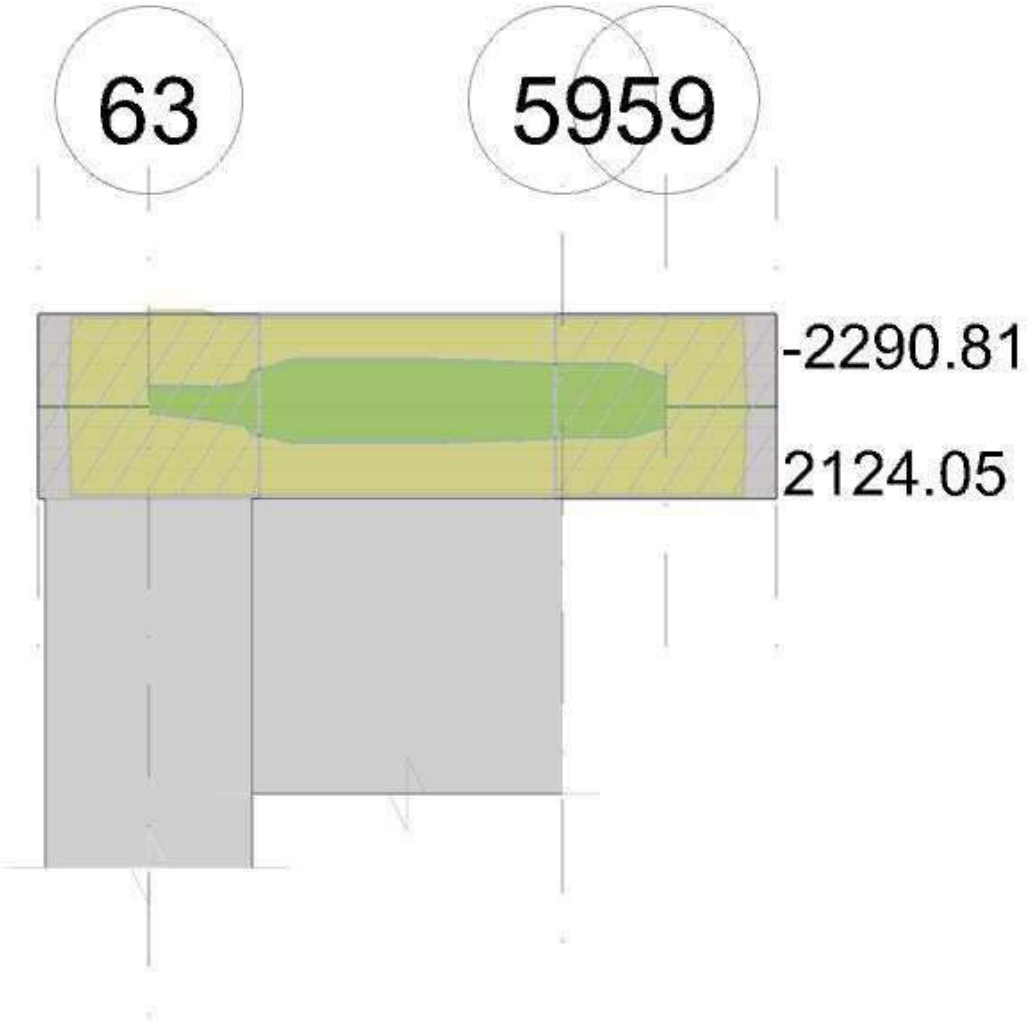


Diagramma verifica stato limite ultimo taglio

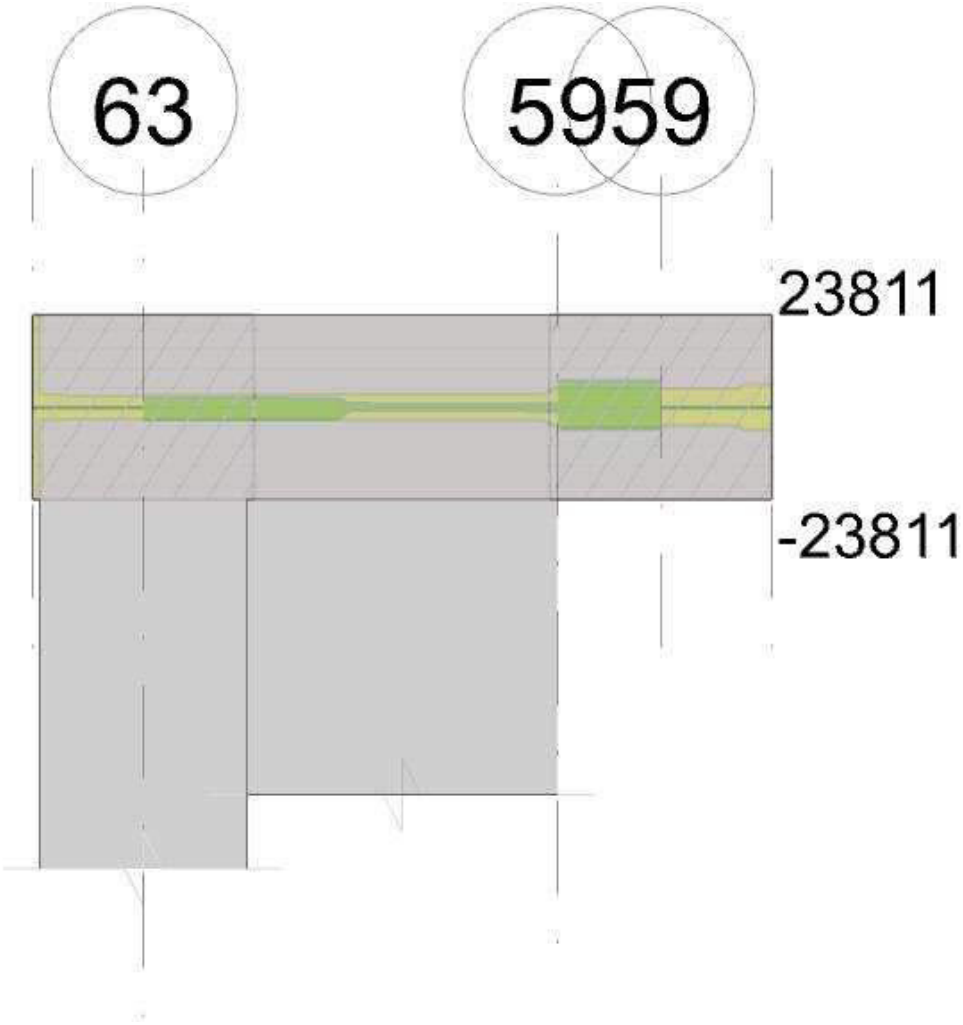
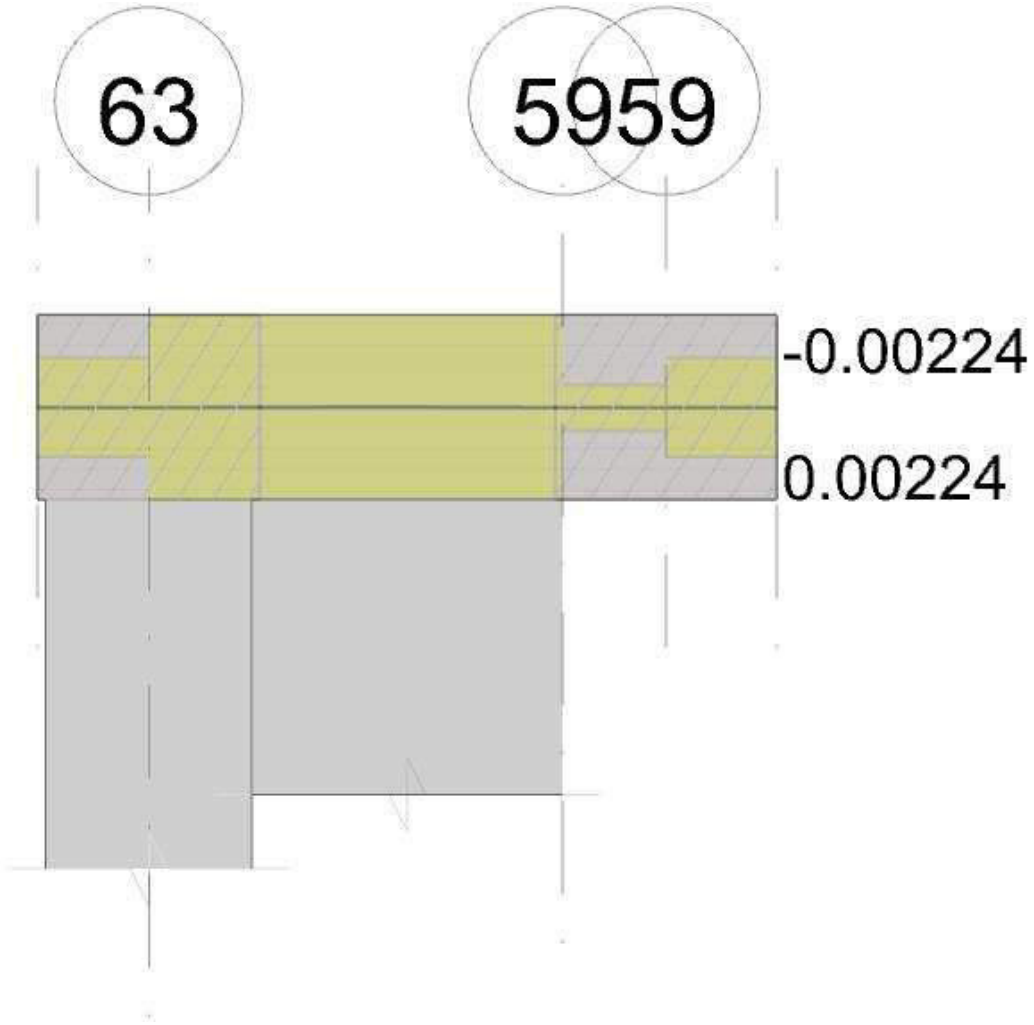


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 59 - 59, sezione R 30x25, asta 997

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	-23.83	SLU 9	68.35	2290.81	0.221	33.51	-231.42	SLU 81	-231.42	-2290.81	0.221	9.9	Si
0.02	0.000308	0.05	0.000308	0.05	-2.84	SLU 9	97.91	2290.81	0.221	23.4	-204.71	SLU 81	-231.42	-2290.81	0.221	9.9	Si
0.07	0.000308	0.05	0.000308	0.05	43.51	SLU 30	132.8	2290.81	0.221	17.25	-156.35	SLU 60	-231.42	-2290.81	0.221	9.9	Si
0.14	0.000308	0.05	0.000308	0.05	132.8	SLU 29	132.8	2290.81	0.221	17.25	-105.34	SLU 61	-173.83	-2290.81	0.221	13.18	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	737.8	SLV 14	737.8	2124.05	0.281	2.88	-1009.16	SLV 3	-1009.16	-2124.05	0.281	2.1	Si
0.02	0.000308	0.05	0.000308	0.05	612.03	SLV 14	737.8	2124.05	0.281	2.88	-854.6	SLV 3	-1009.16	-2124.05	0.281	2.1	Si
0.07	0.000308	0.05	0.000308	0.05	370.15	SLV 14	737.8	2124.05	0.281	2.88	-555.74	SLV 3	-1009.16	-2124.05	0.281	2.1	Si
0.14	0.000308	0.05	0.000308	0.05	304.34	SLV 7	469.38	2124.05	0.281	4.53	-405.98	SLV 10	-678.74	-2124.05	0.281	3.13	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	239.44	SLD 14	239.44	2124.05	0.281	8.87	-510.8	SLD 3	-510.8	-2124.05	0.281	4.16	Si
0.02	0.000308	0.05	0.000308	0.05	193.52	SLD 14	239.44	2124.05	0.281	8.87	-436.08	SLD 3	-510.8	-2124.05	0.281	4.16	Si
0.07	0.000308	0.05	0.000308	0.05	106.03	SLD 10	239.44	2124.05	0.281	8.87	-291.61	SLD 7	-510.8	-2124.05	0.281	4.16	Si
0.14	0.000308	0.05	0.000308	0.05	100.99	SLD 7	141.57	2124.05	0.281	15	-202.64	SLD 10	-350.92	-2124.05	0.281	6.05	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1573	SLU 77	1573	3366	19049	5058	5058	1	3.22	Si
0.07	0.0000072	0.000308	0	1557	SLU 35	1557	3366	19049	5058	5058	1	3.25	Si
0.14	0.0000072	0.000308	0	1544	SLU 35	1544	3366	19049	5058	5058	1	3.28	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	6920	SLV 3	6920	3366	19049	5058	5058	1	0.73	Si
0	0.0000072	0.000308	0	-5682	SLV 14	-5682	-3366	-19049	-5058	-5058	1	0.89	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.07	0.0000072	0.000308	0	6907	SLV 3	6907	3366	19049	5058	5058	1	0.73	Si
0.07	0.0000072	0.000308	0	-5695	SLV 14	-5695	-3366	-19049	-5058	-5058	1	0.89	Si
0.14	0.0000072	0.000308	0	6894	SLV 3	6894	3366	19049	5058	5058	1	0.73	Si
0.14	0.0000072	0.000308	0	-5708	SLV 14	-5708	-3366	-19049	-5058	-5058	1	0.89	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	3327	SLD 3	3327	3366	19049	5058	5058	1	1.52	Si
0	0.0000072	0.000308	0	-2089	SLD 14	-2089	-3366	-19049	-5058	-5058	1	2.42	Si
0.07	0.0000072	0.000308	0	3314	SLD 3	3314	3366	19049	5058	5058	1	1.53	Si
0.07	0.0000072	0.000308	0	-2102	SLD 14	-2102	-3366	-19049	-5058	-5058	1	2.41	Si
0.14	0.0000072	0.000308	0	3301	SLD 3	3301	3366	19049	5058	5058	1	1.53	Si
0.14	0.0000072	0.000308	0	-2115	SLD 14	-2115	-3366	-19049	-5058	-5058	1	2.39	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-166.38	18	-166.38	46993	1494000	704888	36000000	-135.68	2	-135.68	38321	1120500			Si
0.07	-113.22	18	-166.38	46993	1494000	704888	36000000	-92.79	2	-135.68	38321	1120500			Si
0.14	58.03	8	58.03	16388	1494000	245826	36000000								Si
0.14	-61.41	19	-127.97	36144	1494000	542162	36000000	-50.82	2	-104.68	29565	1120500			Si

Verifica di apertura delle fessure

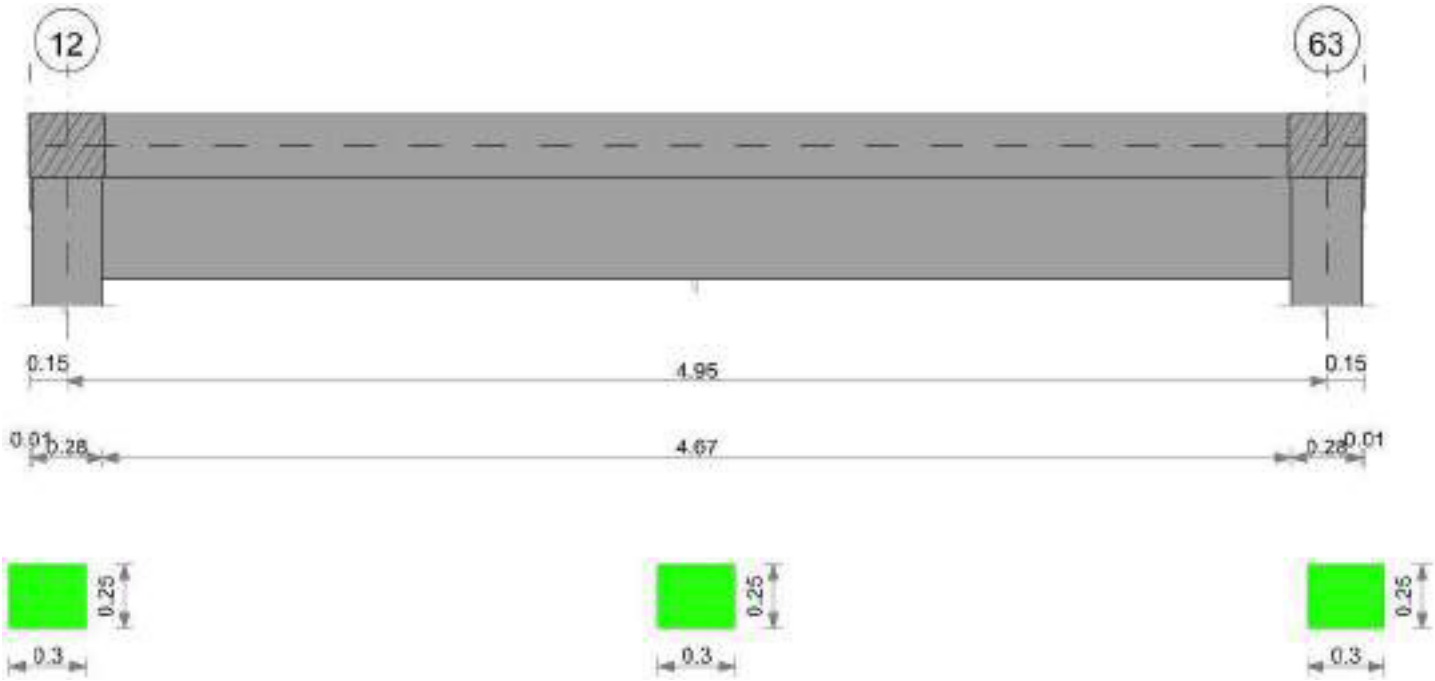
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

CORDOLO SOTTOTETTO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

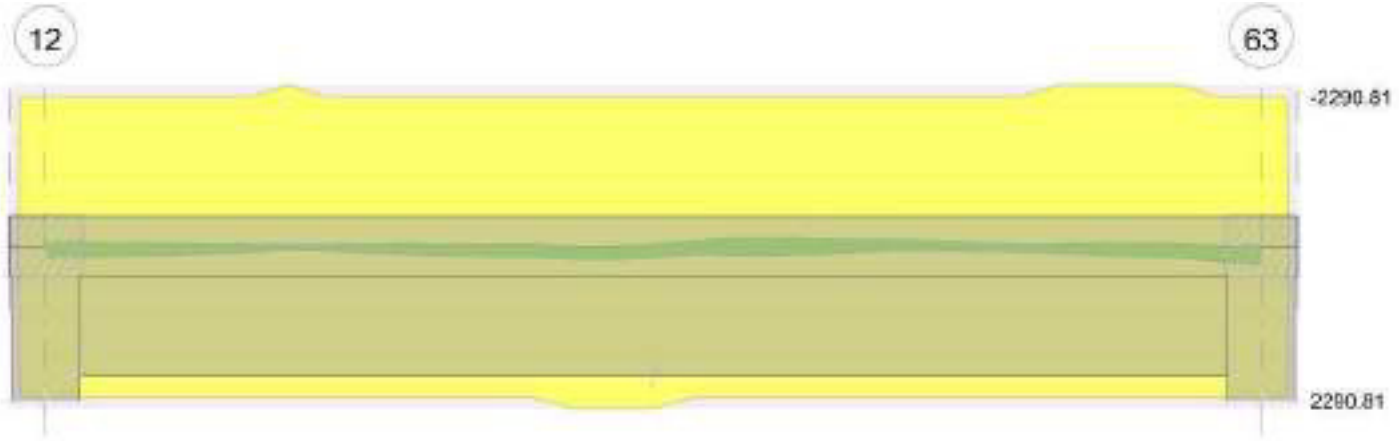


Diagramma verifica stato limite ultimo taglio

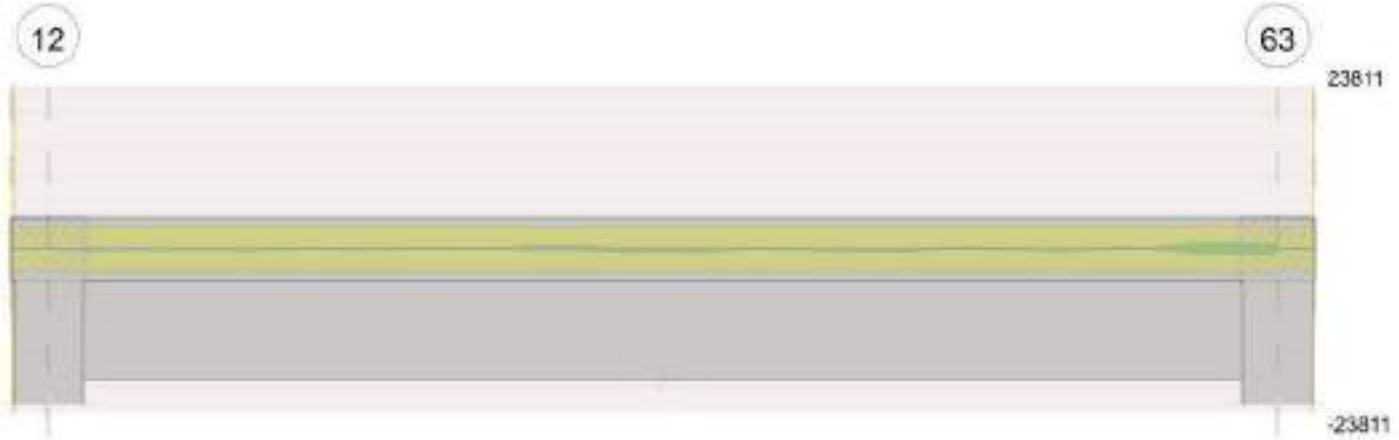
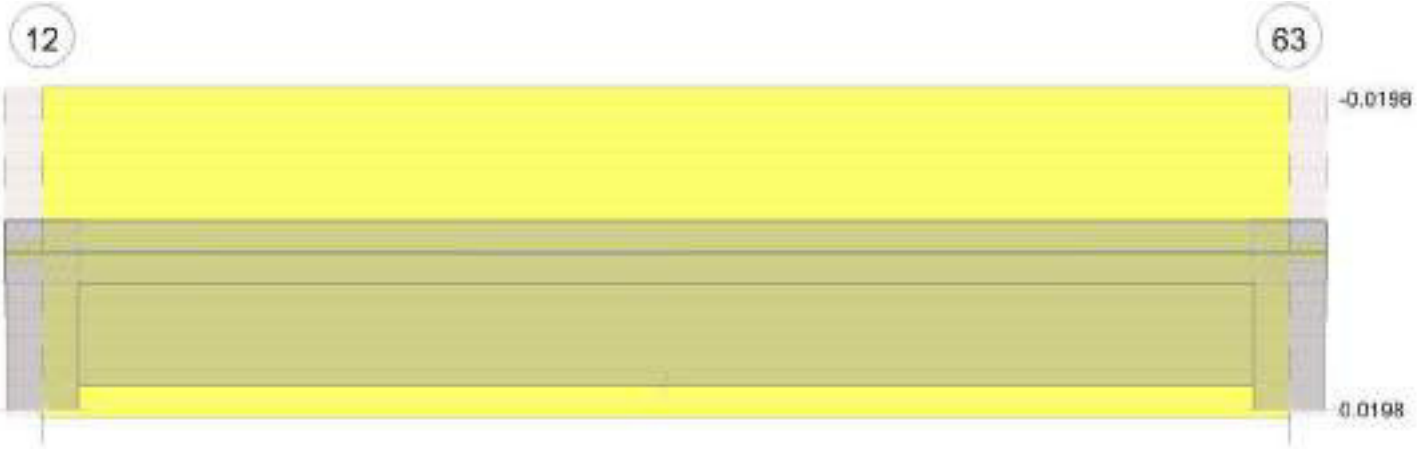


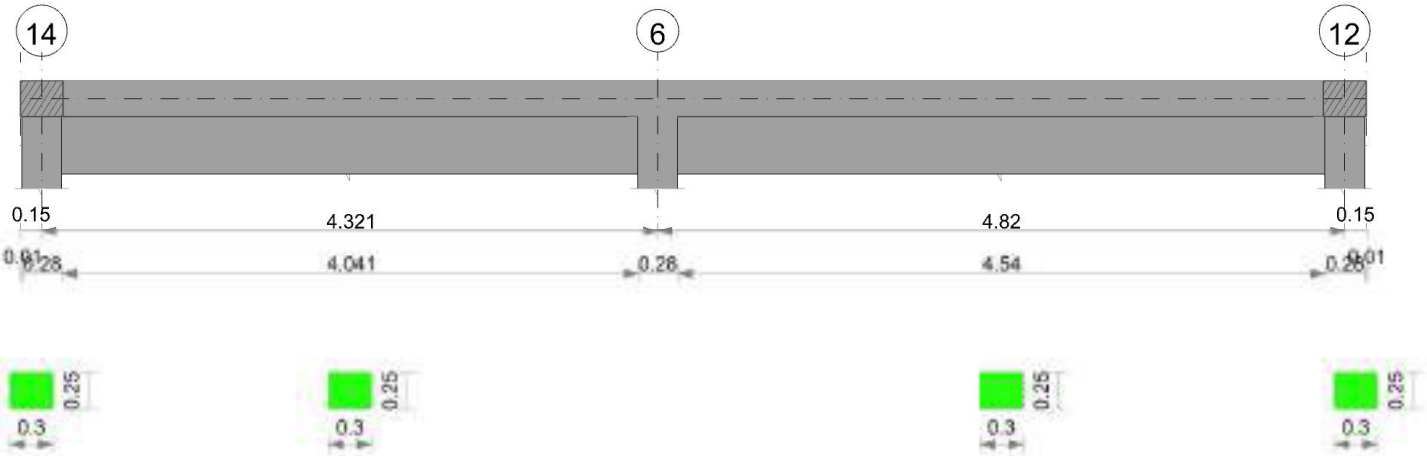
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

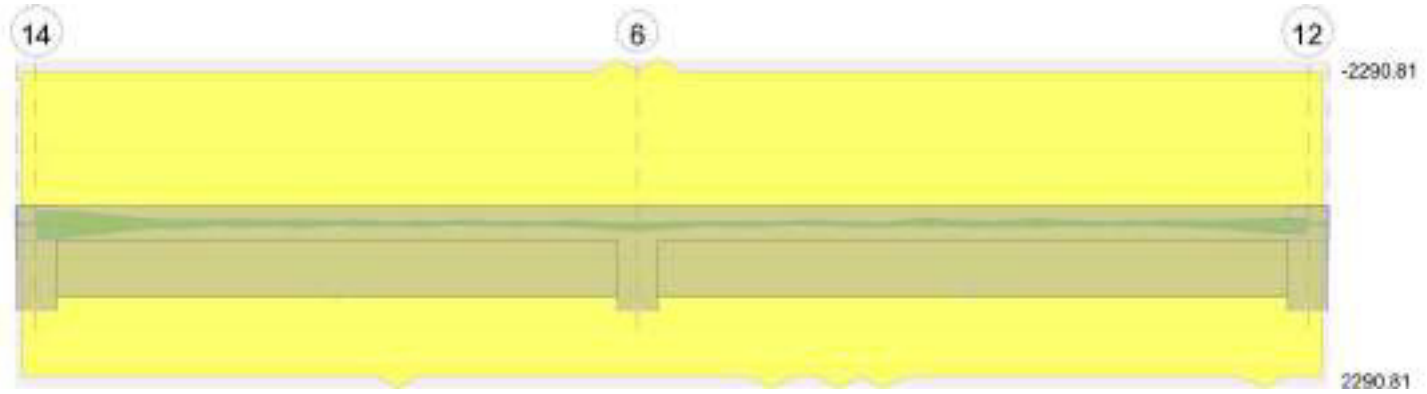


Diagramma verifica stato limite ultimo taglio

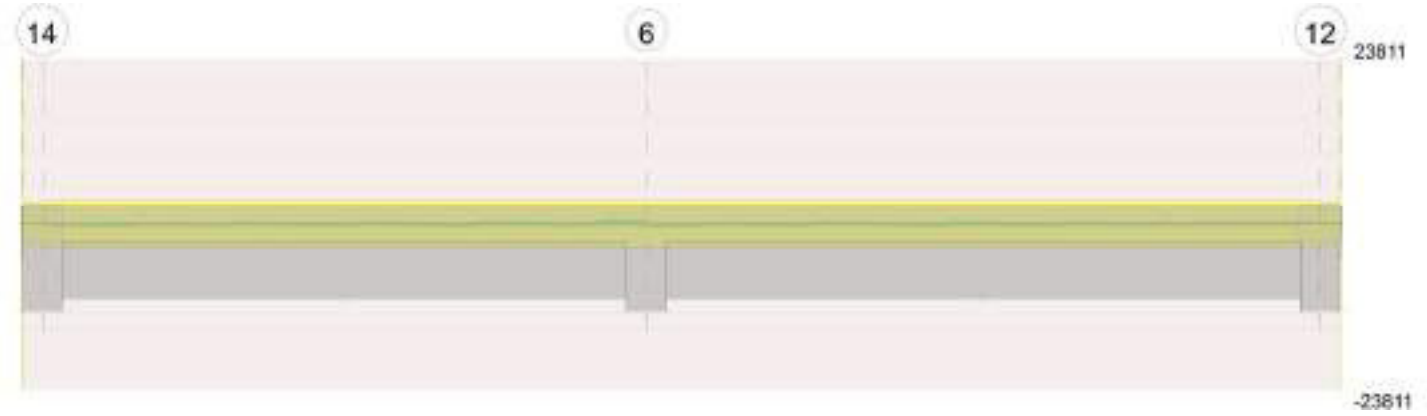
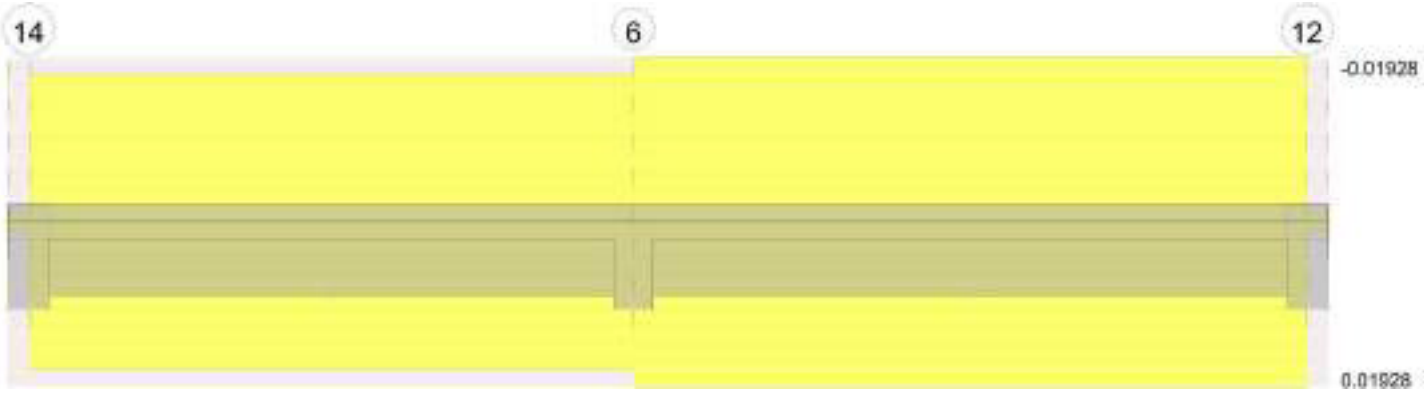


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 9

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

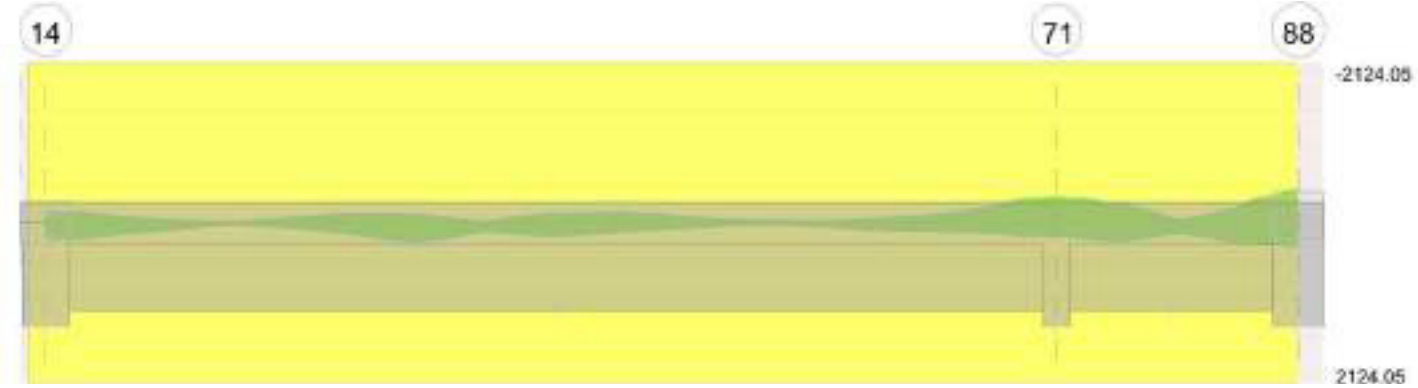


Diagramma verifica stato limite ultimo taglio

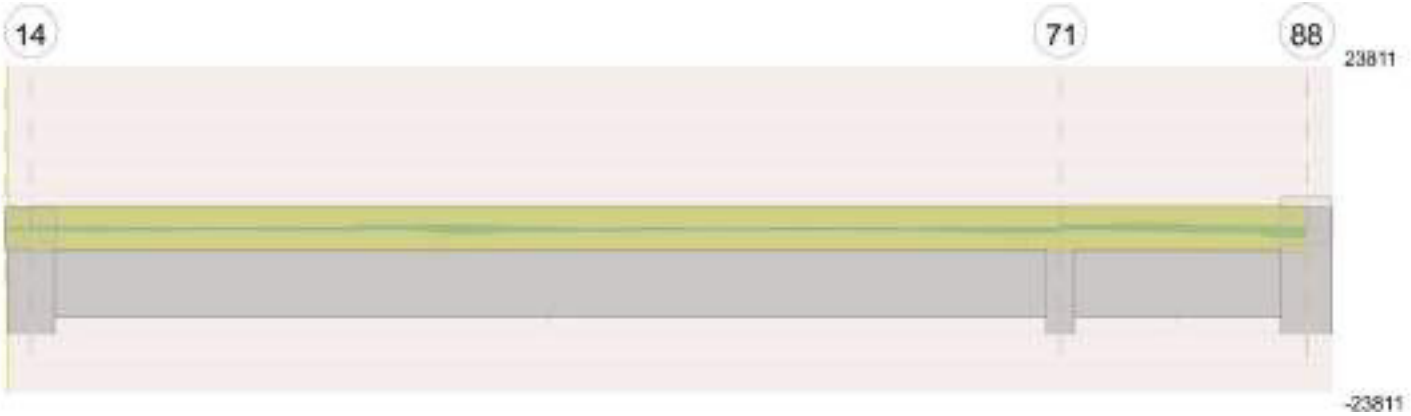
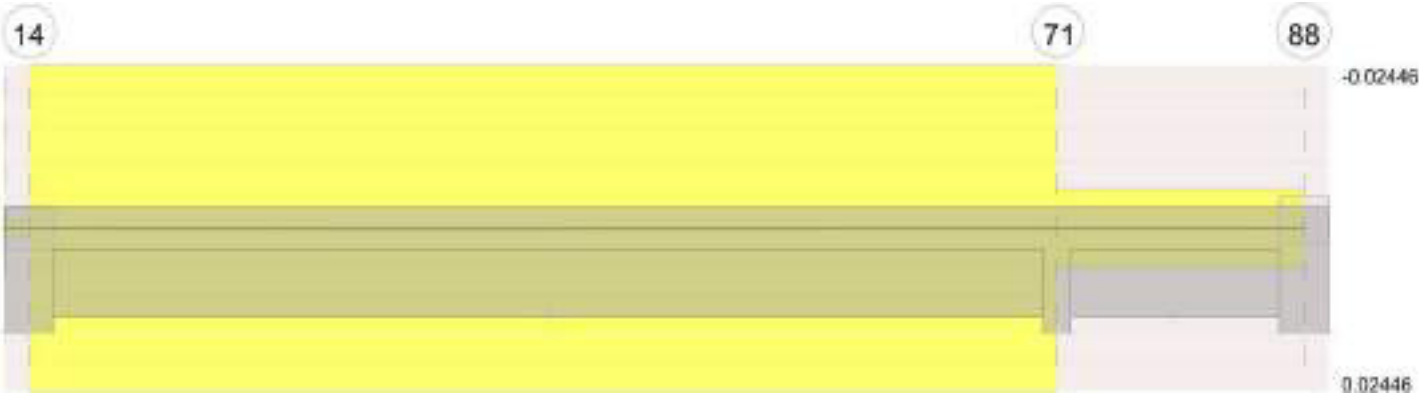


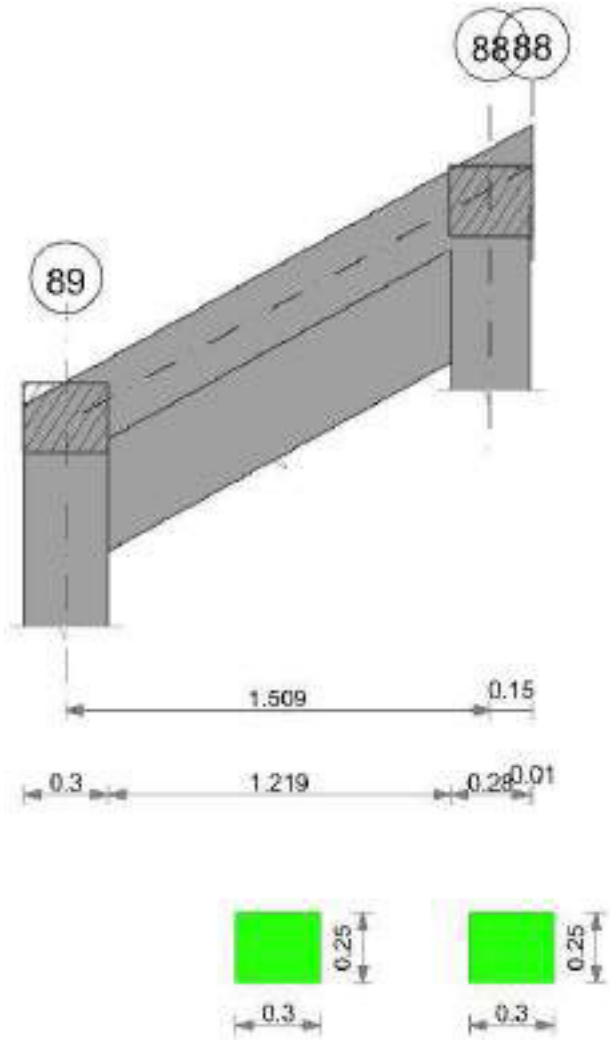
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 10

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

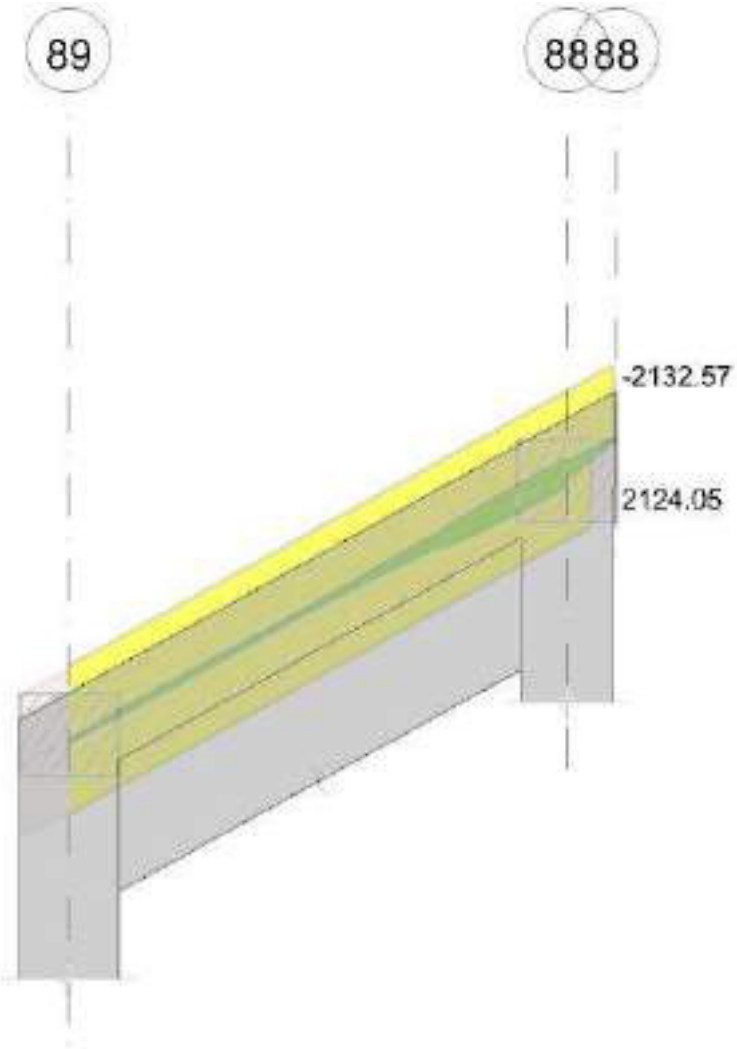


Diagramma verifica stato limite ultimo taglio

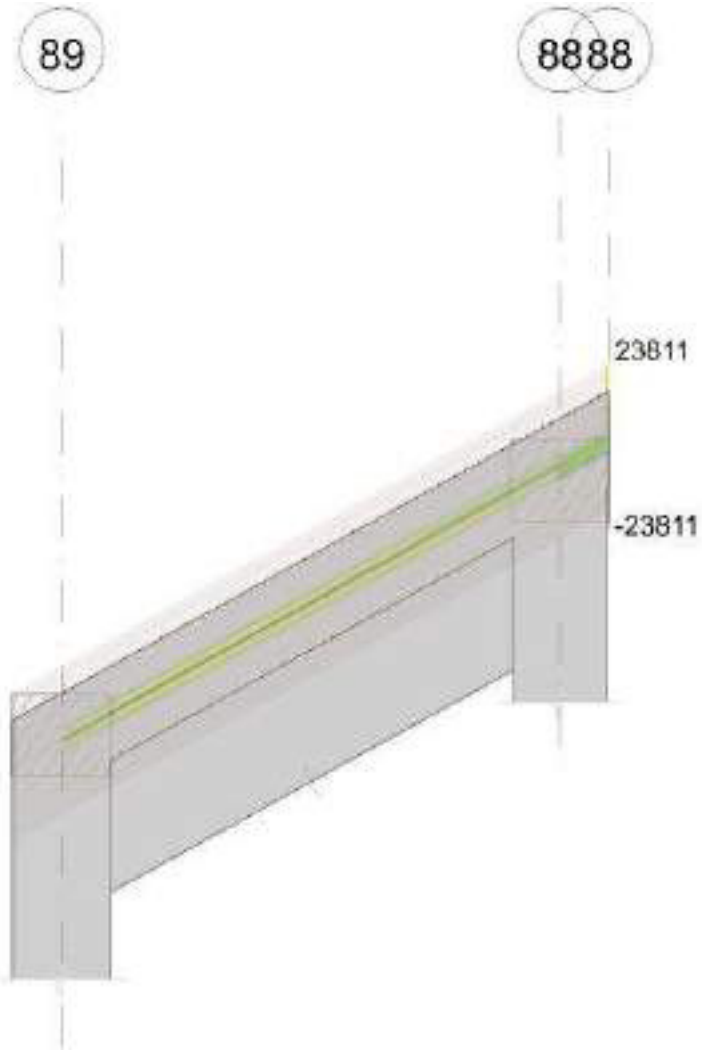
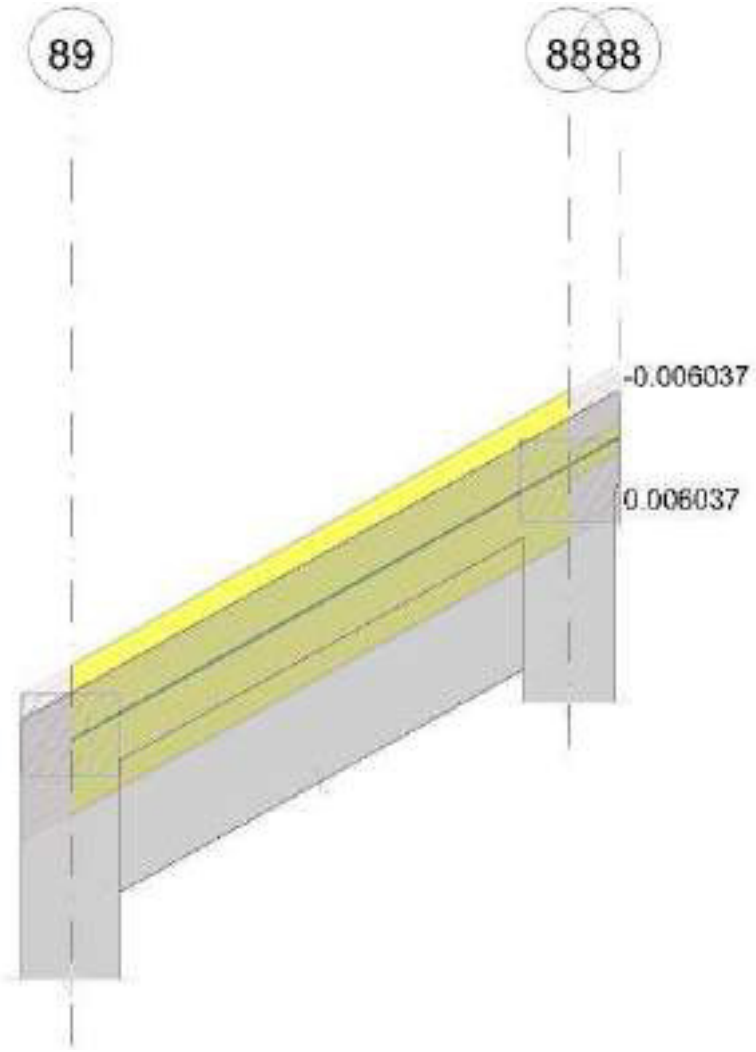


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 2 tra i fili 88 - 88, sezione R 30x25, asta 1003

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	599.66	SLU 36	286.75	2290.81	0.221	7.99							Si
0.08	0.000308	0.05	0	0	300.82	SLU 36	216	0	0	0							Si
0.14	0.000308	0.05	0	0	40.28	SLU 36	40.28	0	0	0	10.65	SLU 43	0	-2238.04	0.178	+∞	Si
0.15	0	0	0	0	0	SLU 62	40.28	0	0	0	0	SLU 25	0	0	0	+∞	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	703.42	SLV 6	335.62	2124.05	0.281	6.33	-226.33	SLV 11	-106.43	-2124.05	0.281	19.96	Si
0.08	0.000308	0.05	0	0	352.41	SLV 6	252.81	0	0	0	-112.46	SLV 11	-80.17	-2132.57	0.287	26.6	Si
0.14	0.000308	0.05	0	0	47.14	SLV 6	47.14	0	0	0	-14.93	SLV 11	-14.93	-2132.57	0.287	142.8	Si
0.15	0	0	0	0	0.01	SLV 13	47.14	0	0	0	-0.01	SLV 4	-14.93	0	0	0	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	442.75	SLD 6	211.68	2124.05	0.281	10.03							Si
0.08	0.000308	0.05	0	0	222.08	SLD 6	159.45	0	0	0							Si
0.14	0.000308	0.05	0	0	29.74	SLD 6	29.74	0	0	0	2.47	SLD 11	0	-2132.57	0.287	+∞	Si
0.15	0	0	0	0	0	SLD 2	29.74	0	0	0	0	SLD 15	0	0	0	+∞	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-3478	SLU 36	-3478	-2964	-19049	0	-2964	1	0.85	Si
0.07	0	0	0	-3500	SLU 36	-3500	-2964	-19049	0	-2964	1	0.85	Si
0.08	0	0	0	-3501	SLU 36	-3501	-3415	-23811	0	-3415	1	0.98	Si
0.14	0.0002007	0	0	-3521	SLU 36	-3521	-3415	-23811	-176746	-23811	1	6.76	Si
0.15	0.0002007	0	0	-3524	SLU 36	-3524	-3415	-23811	-176746	-23811	1	6.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	1338	SLV 11	1338	2964	19049	0	2964	1	2.22	Si
0	0	0	0	-4090	SLV 6	-4090	-2964	-19049	0	-2964	1	0.72	Si
0.07	0	0	0	1323	SLV 11	1323	2964	19049	0	2964	1	2.24	Si
0.07	0	0	0	-4106	SLV 6	-4106	-2964	-19049	0	-2964	1	0.72	Si
0.08	0	0	0	1321	SLV 11	1321	2964	19049	0	2964	1	2.24	Si
0.08	0	0	0	-4107	SLV 6	-4107	-3415	-23811	0	-3415	1	0.83	Si
0.14	0.0002007	0	0	1307	SLV 11	1307	2964	19049	141397	19049	1	14.57	Si
0.14	0.0002007	0	0	-4121	SLV 6	-4121	-3415	-23811	-176746	-23811	1	5.78	Si
0.15	0.0002007	0	0	1305	SLV 11	1305	3415	23811	176746	23811	1	18.25	Si
0.15	0.0002007	0	0	-4123	SLV 6	-4123	-3415	-23811	-176746	-23811	1	5.77	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-2569	SLD 6	-2569	-2964	-19049	0	-2964	1	1.15	Si
0.07	0	0	0	-2584	SLD 6	-2584	-2964	-19049	0	-2964	1	1.15	Si
0.08	0	0	0	-2585	SLD 6	-2585	-3415	-23811	0	-3415	1	1.32	Si
0.14	0.0002007	0	0	-2599	SLD 6	-2599	-3415	-23811	-176746	-23811	1	9.16	Si
0.15	0.0002007	0	0	-2601	SLD 6	-2601	-3415	-23811	-176746	-23811	1	9.15	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	392.77	15	188.17	53145	1494000	797181	36000000	238.55	2	114.59	32365	1120500			Si
0.08	197.24	15	141.74	41198	1494000	0	36000000	119.98	2	86.32	25089	1120500			Si
0.14	26.44	15	26.44	7684	1494000	0	36000000	16.1	2	16.1	4680	1120500			Si
0.15	0	20	26.44	8459	1494000	0	36000000	0	2	16.1	5153	1120500			Si
0.15	0	4	0	0	1494000	0	36000000	0	1	0	0	1120500			Si

Verifica di apertura delle fessure

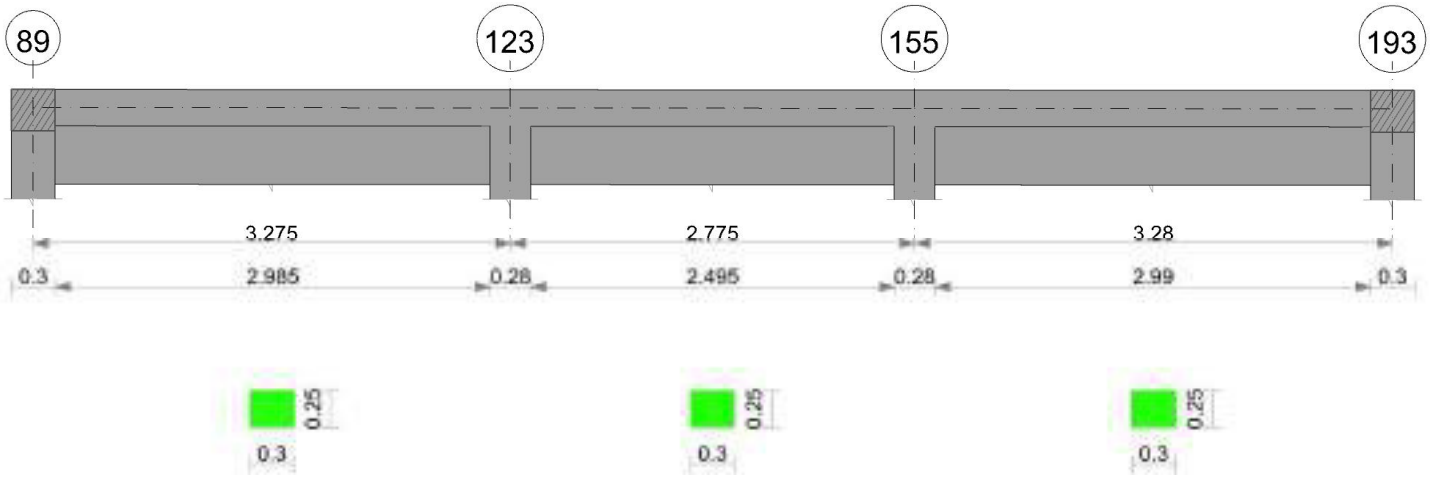
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.08	0	0	0	-0.00001	0	0	0	-0.00001	0	0	-0.00001	2	-0.00001	2	9999	Si
0.14	0	0	-0.00001	-0.00002	0	0	-0.00001	-0.00001	0	0	-0.00002	2	-0.00003	2	9999	Si
0.15	0	0	-0.00001	-0.00002	0	0	-0.00001	-0.00001	0	0	-0.00003	2	-0.00003	2	9999	Si

CORDOLO SOTTOTETTO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

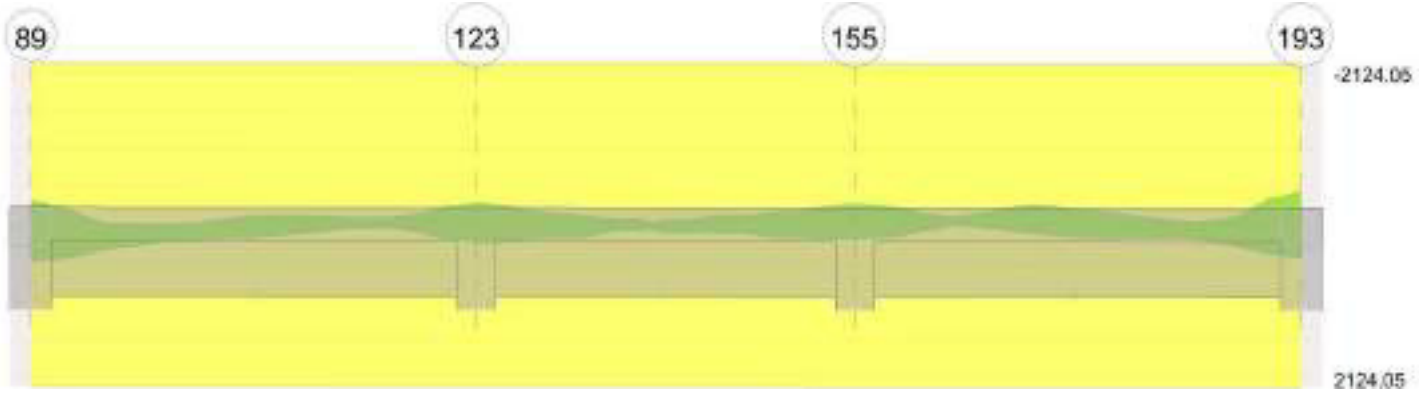
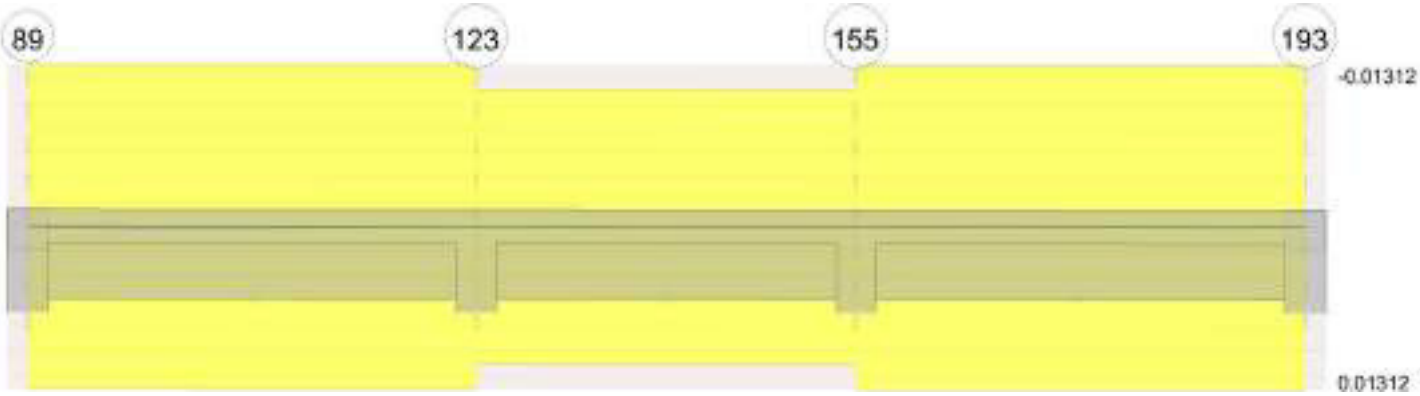


Diagramma verifica stato limite ultimo taglio

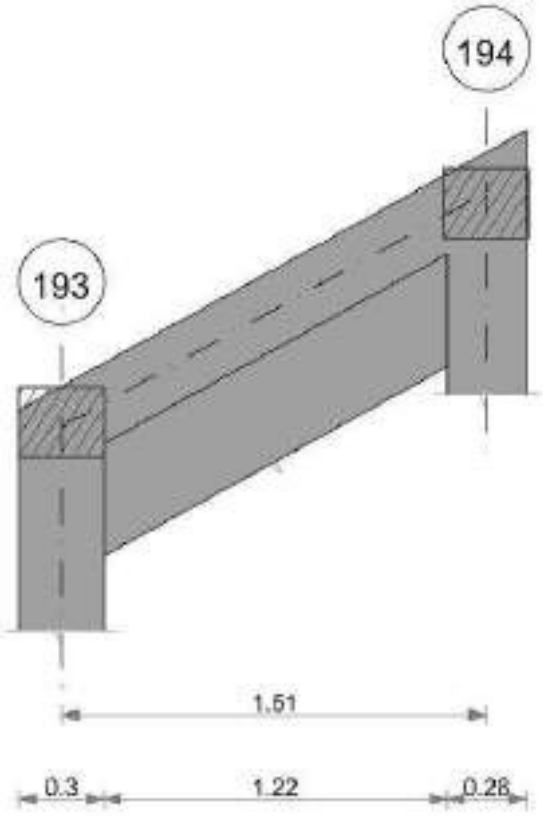
Diagramma verifica stato limite esercizio quasi permanente freccia

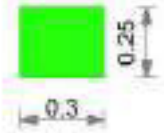


Output campate

CORDOLO SOTTOTETTO 12

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

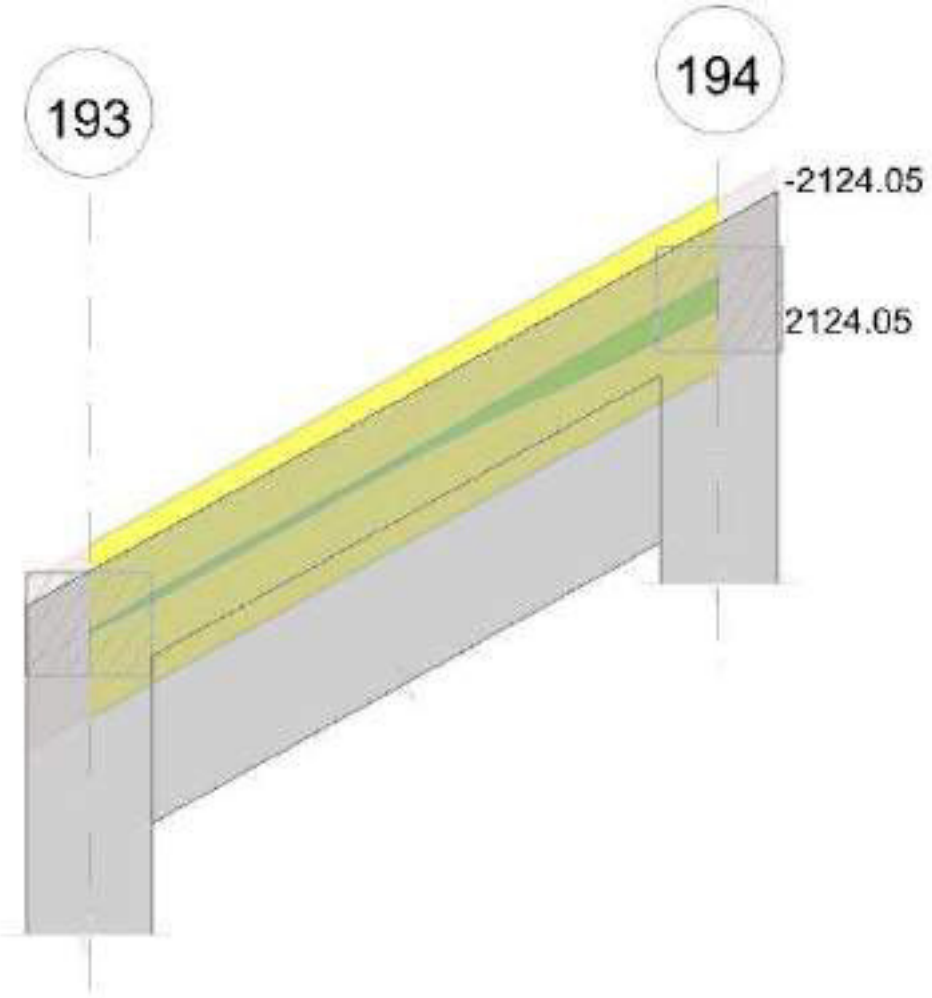


Diagramma verifica stato limite ultimo taglio

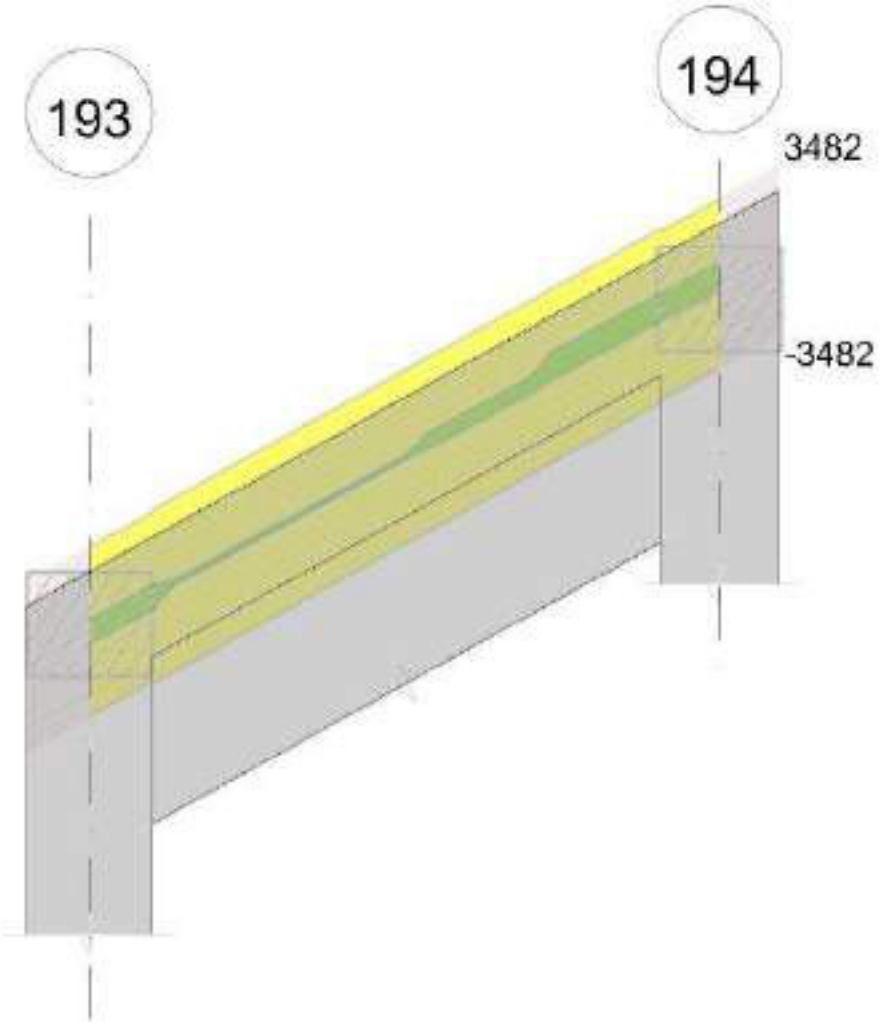
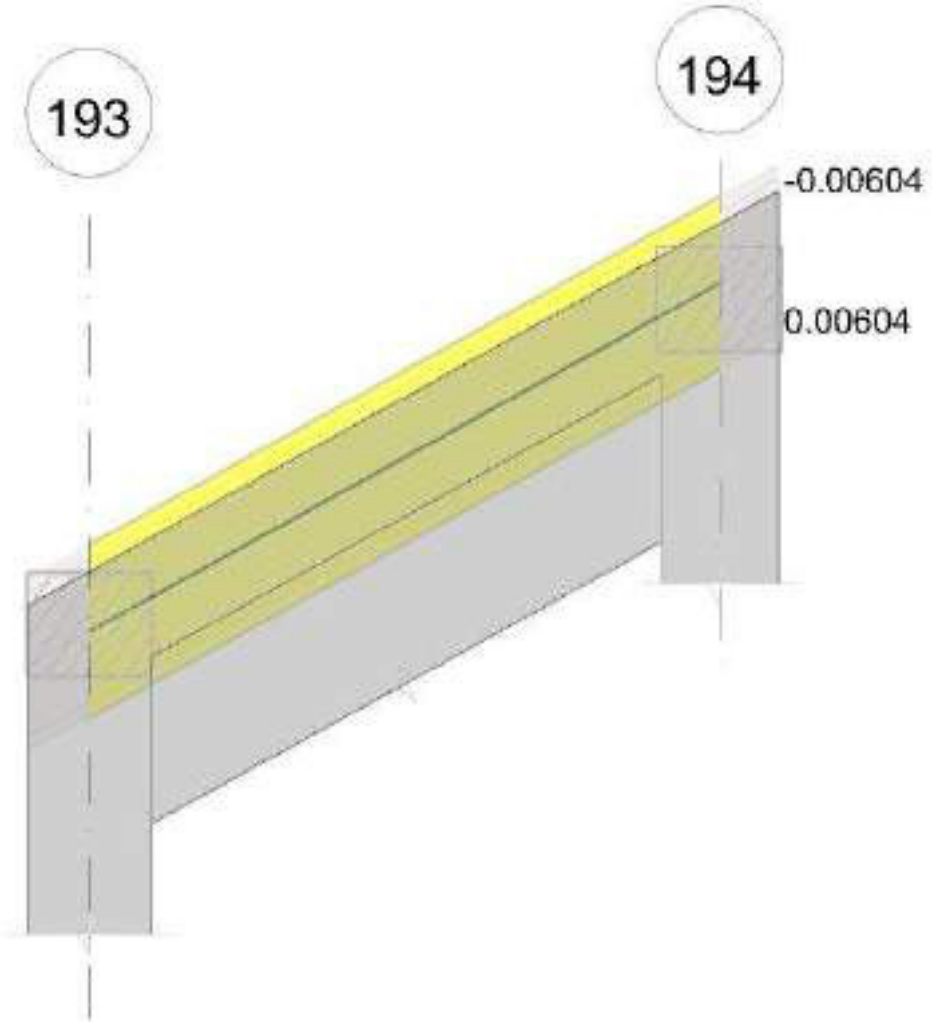


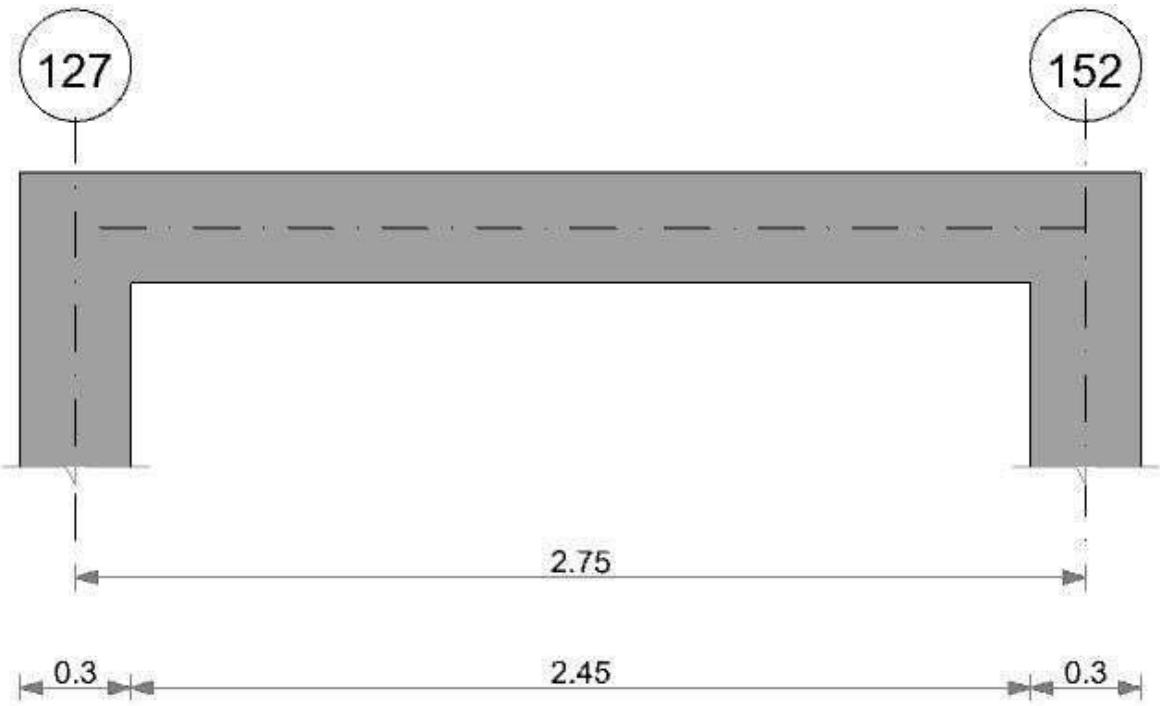
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

PIANEROTTOLO

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 195x30	Rettangolare	1.95	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

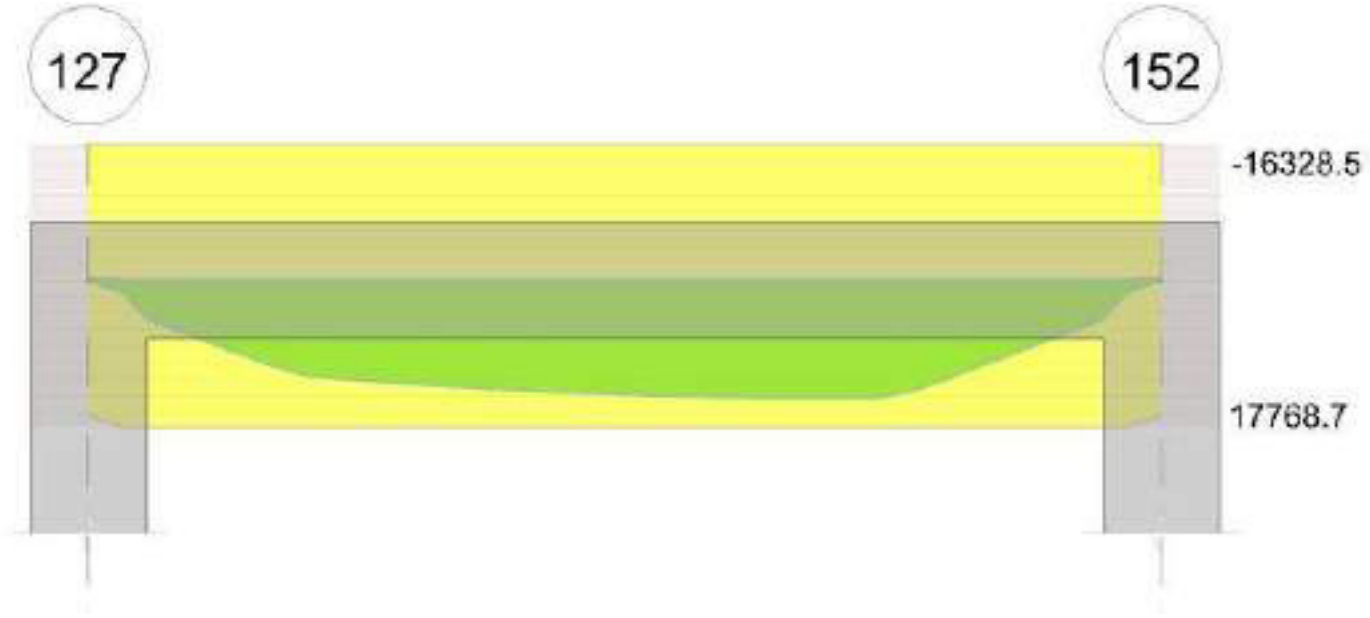


Diagramma verifica stato limite ultimo taglio

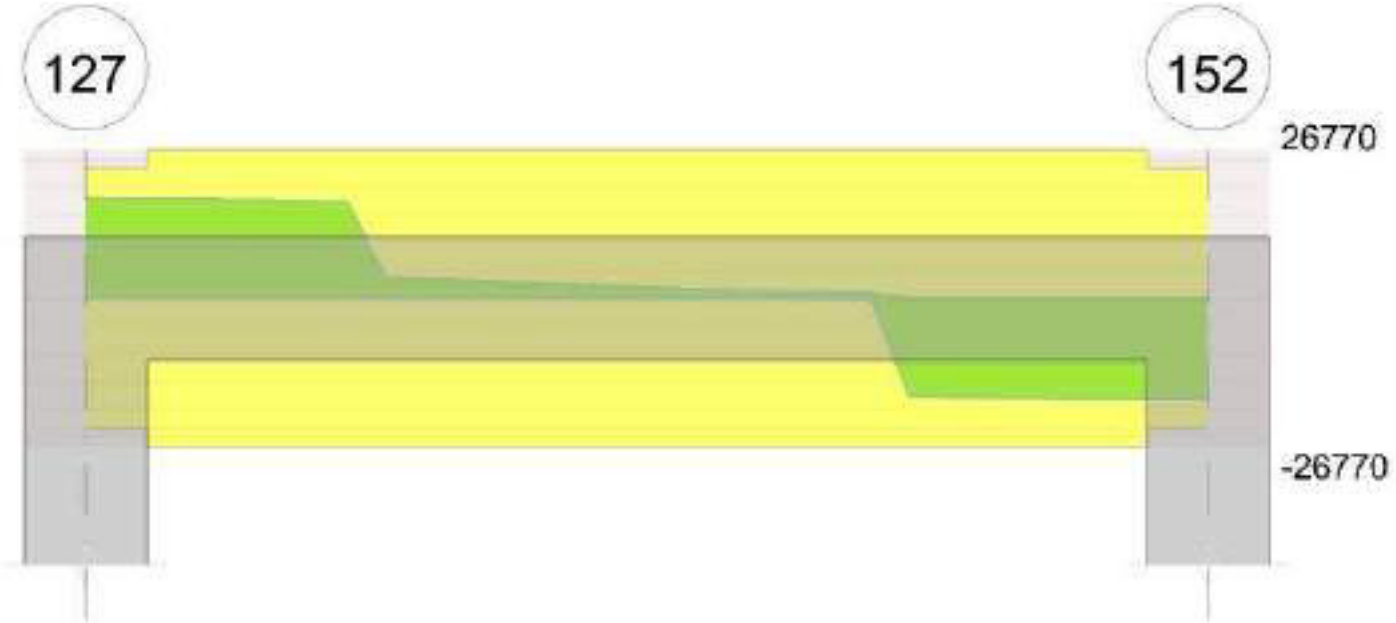
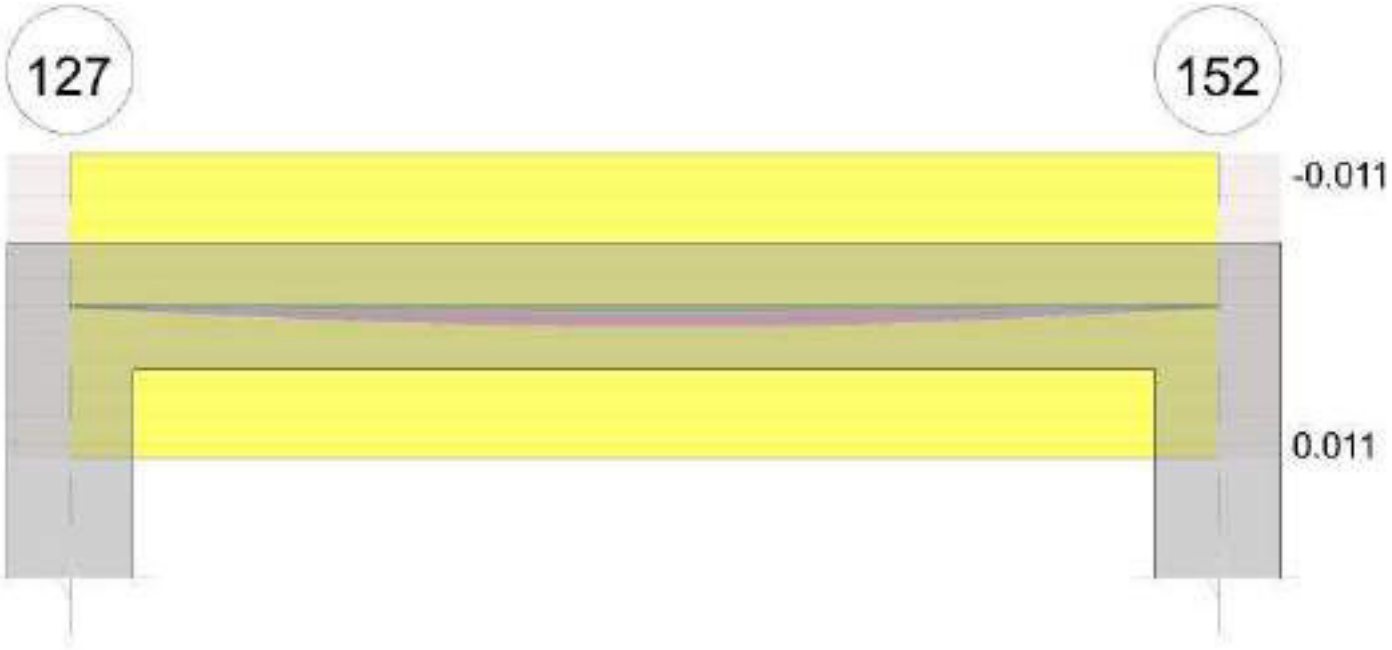


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 127 - 152, sezione R 195x30, aste 843, 844, 845

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053							-38.21	SLU 83	-38.21	-17768.7	0.181	464.99	Si
0.15	0.001885	0.053	0.001885	0.053	2658.22	SLU 81	4666.13	17768.7	0.181	3.81							Si
1.38	0.001885	0.053	0.001885	0.053	13618.49	SLU 81	13809.03	17768.7	0.181	1.29							Si
1.83	0.001885	0.053	0.001885	0.053	14195.28	SLU 81	14252.13	17768.7	0.181	1.25							Si
2.6	0.001885	0.053	0.001885	0.053	2698.67	SLU 81	4732.78	17768.7	0.181	3.75							Si
2.75	0.001885	0.053	0.001885	0.053							-30.84	SLU 83	-30.84	-17768.7	0.181	576.18	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053							-45.48	SLV 2	-45.48	-16328.5	0.247	359.05	Si
0.15	0.001885	0.053	0.001885	0.053	1731.93	SLV 4	3043.87	16328.5	0.247	5.36							Si
1.38	0.001885	0.053	0.001885	0.053	8775.87	SLV 3	8892.19	16328.5	0.247	1.84							Si
1.93	0.001885	0.053	0.001885	0.053	9324.16	SLV 15	9324.16	16328.5	0.247	1.75							Si
2.6	0.001885	0.053	0.001885	0.053	1762.59	SLV 15	3092.18	16328.5	0.247	5.28							Si
2.75	0.001885	0.053	0.001885	0.053							-29.21	SLV 14	-29.21	-16328.5	0.247	559.07	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053							-33.11	SLD 2	-33.11	-16328.5	0.247	493.14	Si
0.15	0.001885	0.053	0.001885	0.053	1642.04	SLD 4	2884.6	16328.5	0.247	5.66							Si
1.38	0.001885	0.053	0.001885	0.053	8372.29	SLD 3	8477.46	16328.5	0.247	1.93							Si
1.93	0.001885	0.053	0.001885	0.053	8832.22	SLD 15	8832.22	16328.5	0.247	1.85							Si
2.6	0.001885	0.053	0.001885	0.053	1670.47	SLD 15	2930.41	16328.5	0.247	5.57							Si
2.75	0.001885	0.053	0.001885	0.053							-23.39	SLD 14	-23.39	-16328.5	0.247	698.18	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	17986	SLU 81	17986	23454	152912	0	23454	1	1.3	Si
0.15	0.0000308	0.001885	0	17954	SLU 81	17954	23454	152912	26770	26770	1	1.49	Si
1.38	0.0000308	0.001885	0	1884	SLU 82	1884	23454	152912	26770	26770	1	14.21	Si
2.6	0.0000308	0.001885	0	-18179	SLU 81	-18179	-23454	-152912	-26770	-26770	1	1.47	Si
2.75	0	0.001885	0	-18205	SLU 81	-18205	-23454	-152912	0	-23454	1	1.29	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	11752	SLV 4	11752	23454	152912	0	23454	1	2	Si
0.15	0.0000308	0.001885	0	11733	SLV 4	11733	23454	152912	26770	26770	1	2.28	Si
1.38	0.0000308	0.001885	0	1687	SLV 15	1687	23454	152912	26770	26770	1	15.87	Si
2.6	0.0000308	0.001885	0	-11882	SLV 15	-11882	-23454	-152912	-26770	-26770	1	2.25	Si
2.75	0	0.001885	0	-11897	SLV 15	-11897	-23454	-152912	0	-23454	1	1.97	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	11130	SLD 4	11130	23454	152912	0	23454	1	2.11	Si
0.15	0.0000308	0.001885	0	11111	SLD 4	11111	23454	152912	26770	26770	1	2.41	Si
1.38	0.0000308	0.001885	0	1370	SLD 15	1370	23454	152912	26770	26770	1	19.54	Si
2.6	0.0000308	0.001885	0	-11260	SLD 15	-11260	-23454	-152912	-26770	-26770	1	2.38	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
2.75	0	0.001885	0	-11274	SLD 15	-11274	-23454	-152912	0	-23454	1	2.08	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-27.92	20	-27.92	851	1494000	12770	36000000	-23.87	2	-23.87	728	1120500			Si
0.15	1931.43	18	3390.52	103379	1494000	1550678	36000000	1574.45	2	2764.84	84301	1120500			Si
1.38	9892.94	18	10031.8	617019	1494000	24031532	36000000	8067.37	2	8182.46	503273	1120500			Si
2.6	1960.94	18	3439.09	104860	1494000	1572894	36000000	1600.81	2	2808.1	85620	1120500			Si
2.75	-22.5	20	-22.5	686	1494000	10290	36000000	-19.03	2	-19.03	580	1120500			Si

Verifica di apertura delle fessure

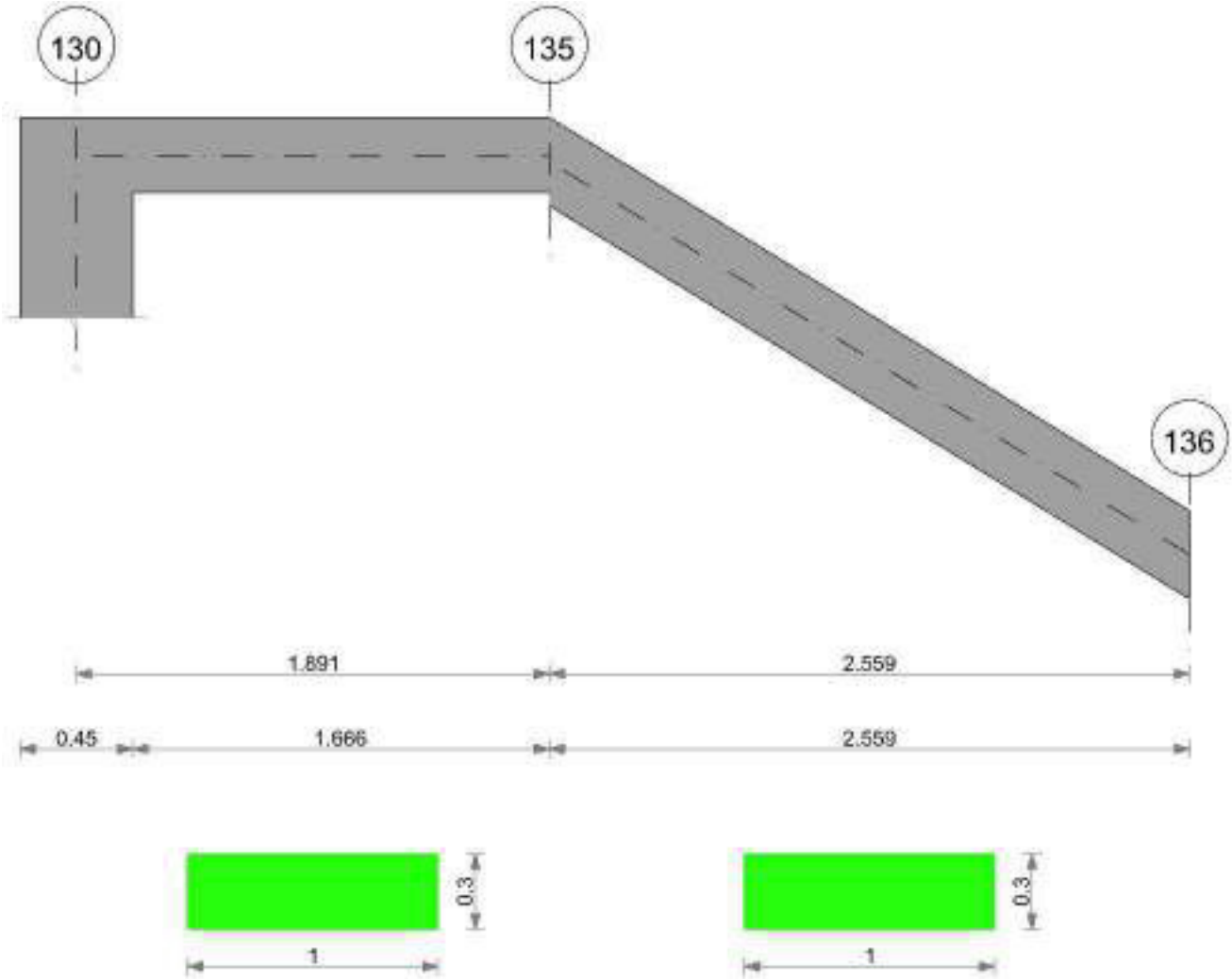
x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.38	inferiore	0.387	0.0007	0.000271	18	0.387	0.00061	0.000235	6	0.387	0.00057	0.000221	2	Si
1.83	inferiore	0.387	0.00072	0.000279	18	0.387	0.00063	0.000243	6	0.387	0.00059	0.000228	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.00011	0.00008	0.00012	0.00007	0.00009	0.00008	0.00009	0.00007	0.00009	0.00008	0.00023	2	0.0002	2	9999	Si
1.38	0.00061	0.00045	0.00071	0.00042	0.00053	0.00045	0.00051	0.00042	0.0005	0.00045	0.00134	2	0.00115	2	2049	Si
1.47	0.00061	0.00045	0.00071	0.00042	0.00053	0.00045	0.00051	0.00042	0.0005	0.00045	0.00134	2	0.00114	2	2047	Si
2.6	0.00011	0.00008	0.00012	0.00007	0.00009	0.00008	0.00009	0.00007	0.00009	0.00008	0.00024	2	0.0002	2	9999	Si

RAMPA 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 100x30	Rettangolare	1	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

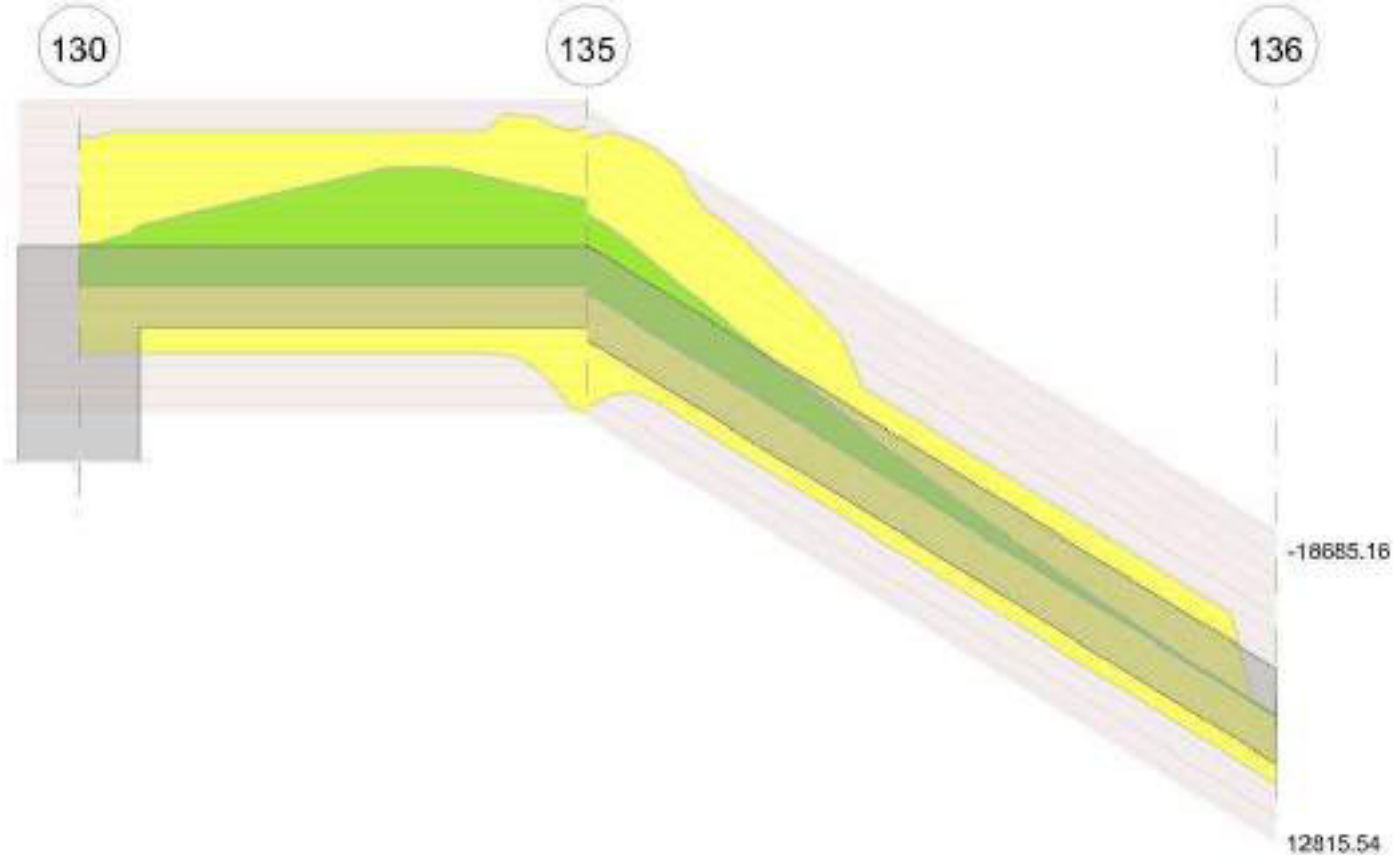


Diagramma verifica stato limite ultimo taglio

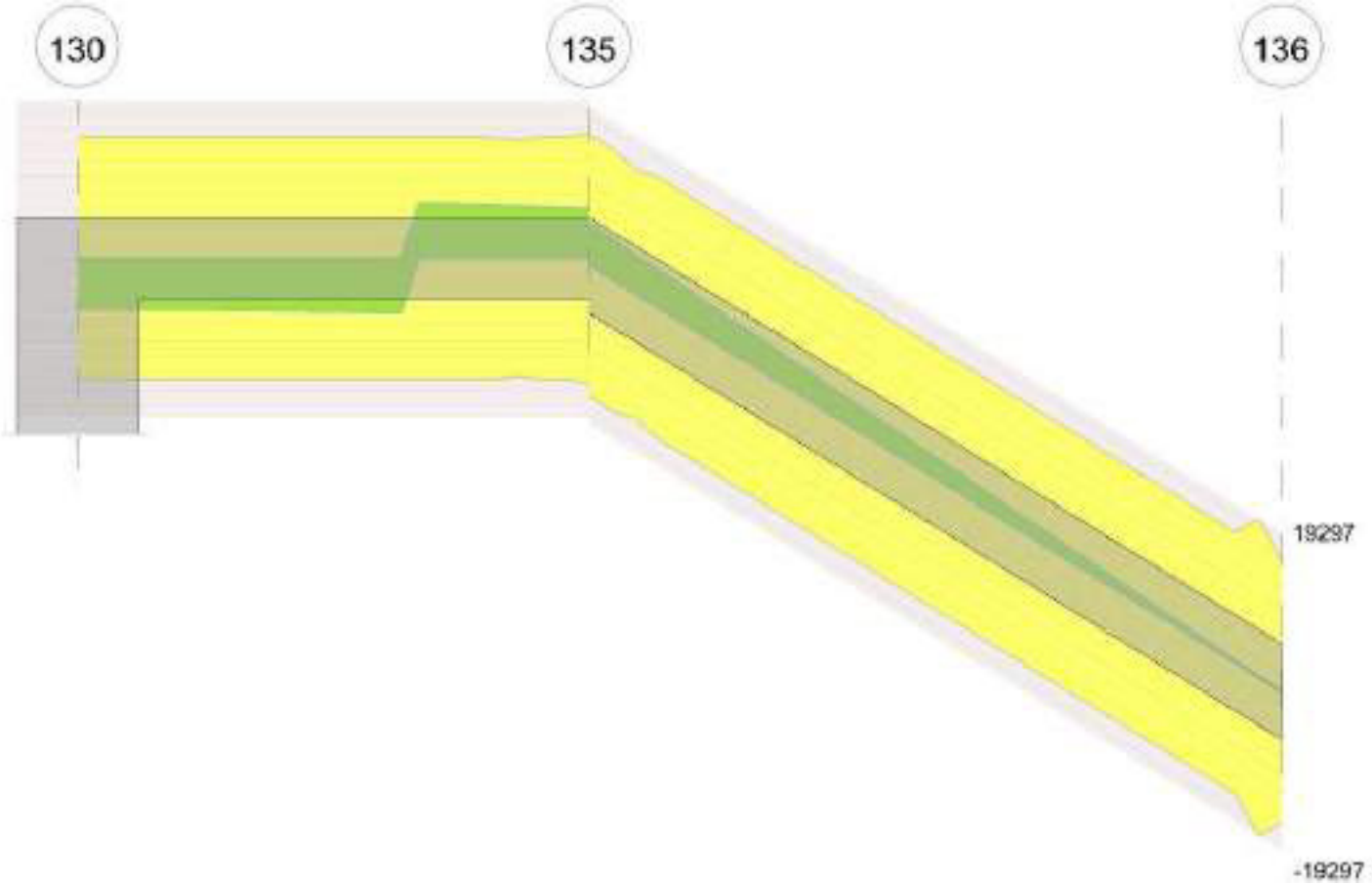
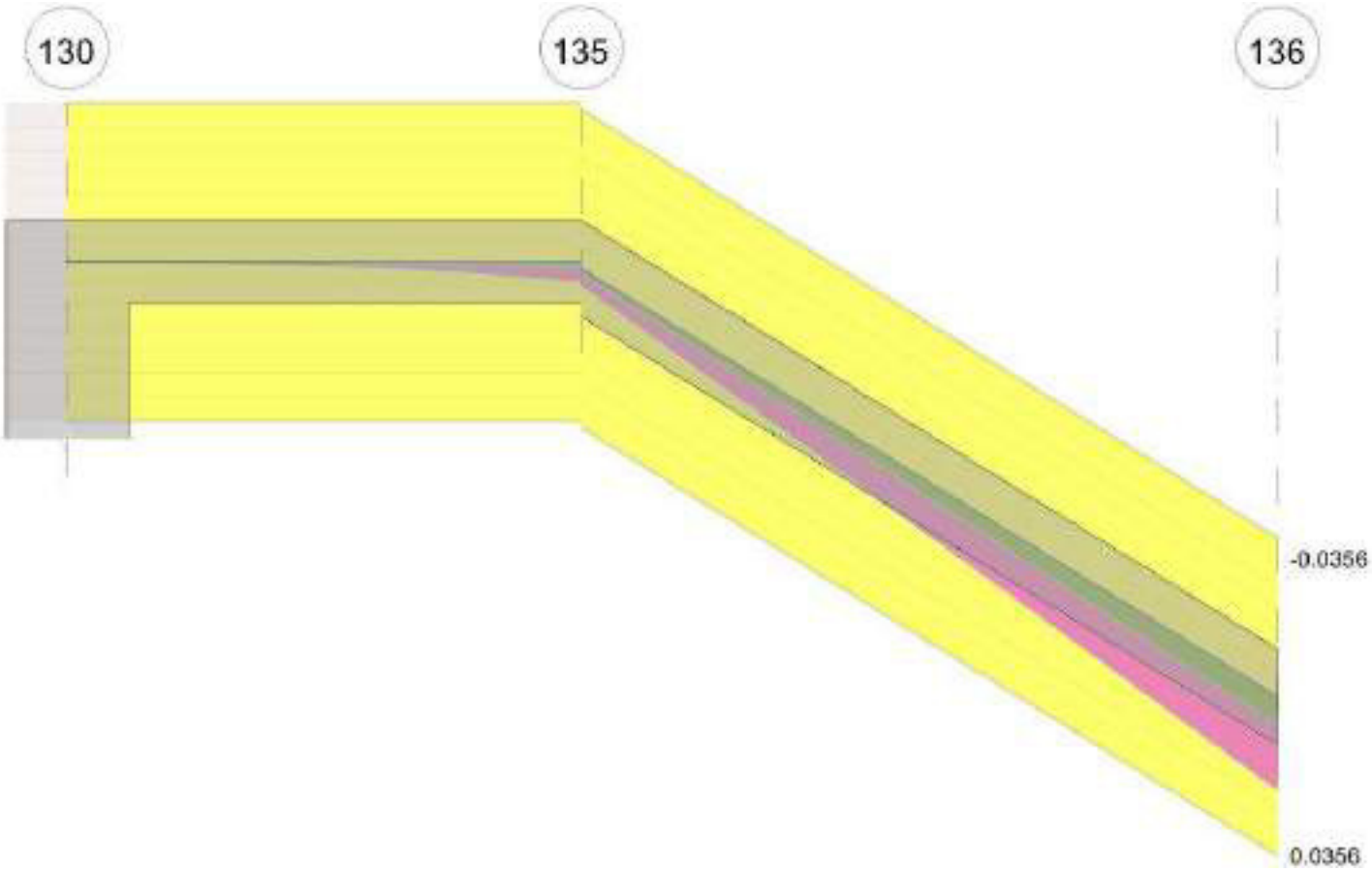


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 130 - 135, sezione R 100x30, aste 842, 841

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.000763	0.052							-4060.61	SLU 84	-4060.61	-15542.6	0.231	3.83	Si
0.23	0.001781	0.052	0.000763	0.052							-5407.59	SLU 84	-6080.94	-15542.6	0.231	2.56	Si
0.95	0.001781	0.052	0.000763	0.052							-9811.75	SLU 84	-10521.14	-15542.6	0.231	1.48	Si
1.32	0.001781	0.052	0.000763	0.052							-11406.04	SLU 81	-11820.08	-15542.6	0.231	1.31	Si
1.89	0.001781	0.061	0.001527	0.03							-7864.36	SLU 84	-8535.1	-16028.5	0.184	1.88	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.000763	0.052							-4127.7	SLV 13	-4127.7	-14931.55	0.326	3.62	Si
0.23	0.001781	0.052	0.000763	0.052							-4640.14	SLV 13	-4896.79	-14931.55	0.326	3.05	Si
0.95	0.001781	0.052	0.000763	0.052							-6333.18	SLV 13	-6610.49	-14931.55	0.326	2.26	Si
1.32	0.001781	0.052	0.000763	0.052							-6939.01	SLV 1	-7189.59	-14931.55	0.326	2.08	Si
1.89	0.001781	0.061	0.001527	0.03							-4789.43	SLV 13	-5197.57	-14769.65	0.305	2.84	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.000763	0.052							-3255.26	SLD 13	-3255.26	-14931.55	0.326	4.59	Si
0.23	0.001781	0.052	0.000763	0.052							-3930.18	SLD 13	-4267.74	-14931.55	0.326	3.5	Si
0.95	0.001781	0.052	0.000763	0.052							-6143.35	SLD 13	-6501.53	-14931.55	0.326	2.3	Si
1.32	0.001781	0.052	0.000763	0.052							-6939.01	SLD 13	-7189.57	-14931.55	0.326	2.08	Si
1.89	0.001781	0.061	0.001527	0.03							-4789.41	SLD 13	-5197.56	-14769.65	0.305	2.84	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001781	0	-6148	SLU 81	-6148	-14772	-78734	0	-14772	1	2.4	Si
0.23	0.0000154	0.001781	0	-6166	SLU 81	-6166	-14772	-78734	-13442	-14772	1	2.4	Si
0.95	0.0000154	0.001781	0	-6465	SLU 81	-6465	-14772	-78734	-13442	-14772	1	2.28	Si
1.26	0.0000154	0.001781	0	6749	SLU 81	6749	14772	78734	13442	14772	1	2.19	Si
1.89	0.0000183	0.001781	0	6045	SLU 81	6045	14539	75867	15372	15372	1	2.54	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001781	0	-4909	SLV 4	-4909	-14772	-78734	0	-14772	1	3.01	Si
0.23	0.0000154	0.001781	0	-4919	SLV 4	-4919	-14772	-78734	-13442	-14772	1	3	Si
0.95	0.0000154	0.001781	0	-5089	SLV 4	-5089	-14772	-78734	-13442	-14772	1	2.9	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.2	0.0000154	0.001781	0	-5199	SLV 4	-5199	-14772	-78734	-13442	-14772	1	2.84	Si
1.89	0.0000183	0.001781	0	3682	SLV 1	3682	14539	75867	15372	15372	1	4.18	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001781	0	-4170	SLD 4	-4170	-14772	-78734	0	-14772	1	3.54	Si
0.23	0.0000154	0.001781	0	-4180	SLD 4	-4180	-14772	-78734	-13442	-14772	1	3.53	Si
0.95	0.0000154	0.001781	0	-4351	SLD 4	-4351	-14772	-78734	-13442	-14772	1	3.4	Si
1.2	0.0000154	0.001781	0	-4460	SLD 4	-4460	-14772	-78734	-13442	-14772	1	3.31	Si
1.89	0.0000183	0.001781	0	3682	SLD 1	3682	14539	75867	15372	15372	1	4.18	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-2973.59	21	-2973.59	175939	1494000	2487858	36000000	-2602.76	2	-2602.76	153998	1120500			Si
0.23	-3954.14	21	-4444.29	262957	1494000	3718321	36000000	-3399.21	2	-3797.3	224676	1120500			Si
0.95	-7159.47	21	-7675.57	728818	1494000	19902297	36000000	-6001.43	2	-6420.08	609606	1120500			Si
1.89	-5737.09	20	-6226.31	541197	1494000	16336673	36000000	-4789.4	2	-5197.55	451776	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.95	superiore	0.268	0.00058	0.000155	21	0.268	0.00058	0.000156	6	0.268	0.00054	0.000144	2	Si
1.32	superiore	0.268	0.00068	0.000181	18	0.268	0.00068	0.000183	6	0.268	0.00063	0.00017	2	Si
1.89	superiore	0.273	0.00048	0.00013	20	0.273	0.00042	0.000114	6	0.273	0.0004	0.000108	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.23	0.00004	0.00002	0.00001	0.00001	0.00003	0.00002	0.00001	0.00001	0.00002	0.00002	0.00003	2	0.00002	2	9999	Si
0.95	0.00035	0.00024	0.0003	0.00021	0.00029	0.00024	0.00024	0.00021	0.00027	0.00024	0.00066	2	0.00058	2	9999	Si
1.89	0.00152	0.00111	0.00205	0.00122	0.00132	0.00112	0.0016	0.00122	0.00124	0.00112	0.00421	2	0.00363	2	2116	Si

Campata 2 tra i fili 135 - 136, sezione R 100x30, asta 840

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.001457	0.059							-7864.36	SLU 83	-7864.36	-15625.84	0.243	1.99	Si
1.28	0.000763	0.052	0.000763	0.052							-1966.09	SLU 84	-2327.35	-7490.06	0.163	3.22	Si
2.47	0	0	0.000763	0.052							-8.74	SLU 84	-48.65	0	0	0	Si
2.56	0	0	0.000763	0.052							0	SLU 82	-16.95	0	0	0	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.001457	0.059							-4789.4	SLV 13	-4789.4	-14889.93	0.321	3.11	Si
1.28	0.000763	0.052	0.000763	0.052							-1197.35	SLV 13	-1417.36	-6732.7	0.223	4.75	Si
2.47	0	0	0.000763	0.052	-5.32	SLV 4	0	6742.45	0.225	+∞	-5.32	SLV 13	-29.63	0	0	0	Si
2.56	0	0	0.000763	0.052	0	SLV 3	0	6742.45	0.225	+∞	0	SLV 14	-10.33	0	0	0	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001781	0.052	0.001457	0.059							-4789.4	SLD 13	-4789.4	-14889.93	0.321	3.11	Si
1.28	0.000763	0.052	0.000763	0.052							-1197.35	SLD 13	-1417.35	-6732.7	0.223	4.75	Si
2.47	0	0	0.000763	0.052	-5.32	SLD 4	0	6742.45	0.225	+∞	-5.32	SLD 13	-29.63	0	0	0	Si
2.56	0	0	0.000763	0.052	0	SLD 13	0	6742.45	0.225	+∞	0	SLD 4	-10.33	0	0	0	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000183	0.001781	0	5151	SLU 83	5151	14772	78734	15952	15952	1	3.1	Si
1.28	0.0000183	0.000763	0	2575	SLU 83	2575	11326	78734	15952	15952	1	6.19	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000183	0.001781	0	3137	SLV 13	3137	14772	78734	15952	15952	1	5.09	Si
1.28	0.0000183	0.000763	0	1568	SLV 13	1568	11326	78734	15952	15952	1	10.17	Si
2.56	0.0000183	0	0	0	Ger.	0	11326	78734	15952	15952	1	66589300.79	Si
2.56	0.0000183	0	0	0	Ger.	0	-11326	-78734	-15952	-15952	1	66589427.99	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000183	0.001781	0	3137	SLD 13	3137	14772	78734	15952	15952	1	5.09	Si
1.28	0.0000183	0.000763	0	1568	SLD 13	1568	11326	78734	15952	15952	1	10.17	Si
2.56	0.0000183	0	0	0	Ger.	0	11326	78734	15952	15952	1	156813095.44	Si
2.56	0.0000183	0	0	0	Ger.	0	-11326	-78734	-15952	-15952	1	156813800.88	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5737.09	20	-5737.09	532465	1494000	14960505	36000000	-4789.4	2	-4789.4	444509	1120500			Si
1.28	-1434.27	21	-1697.81	103108	1494000	1546618	36000000	-1197.35	2	-1417.35	86076	1120500			Si
2.56	0	19	-12.37	-769	1494000	0	36000000	0	2	-10.32	-642	1120500			Si

Verifica di apertura delle fessure

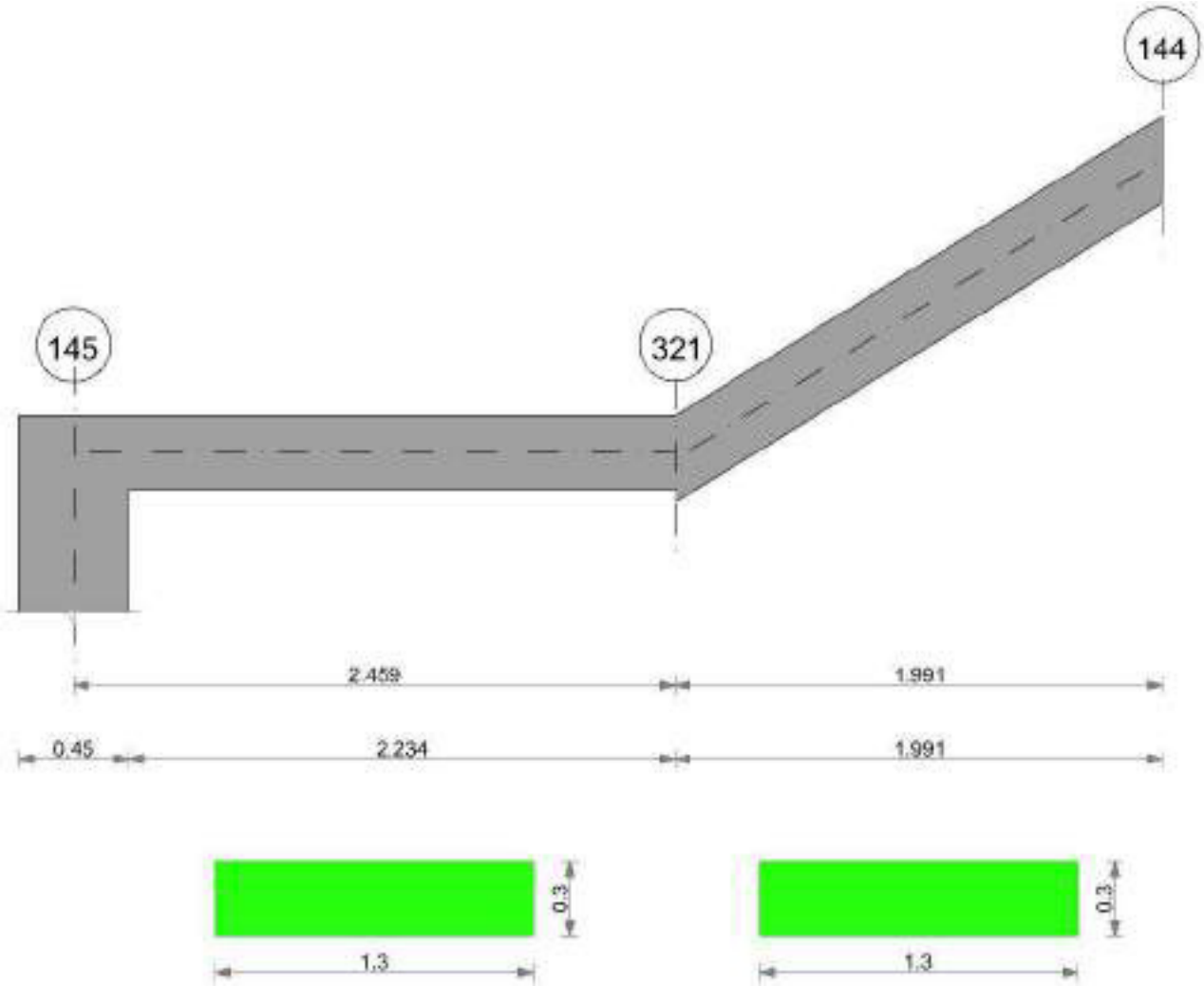
x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	superiore	0.269	0.00044	0.000117	20	0.269	0.00038	0.000103	6	0.269	0.00036	0.000098	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0	0.00152	0.00111	0.00174	0.00104	0.00132	0.00112	0.00136	0.00104	0.00124	0.00112	0.00358	2	0.0031	2	2483	Si
1.28	0.00435	0.00325	0.00573	0.00337	0.0038	0.00325	0.00444	0.00337	0.00358	0.00325	0.01164	2	0.01	2	765	Si
2.56	0.00764	0.00573	0.01014	0.00603	0.00669	0.00574	0.0079	0.00603	0.00631	0.00574	0.02068	2	0.0178	2	430	Si

RAMPA 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 130x30	Rettangolare	1.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

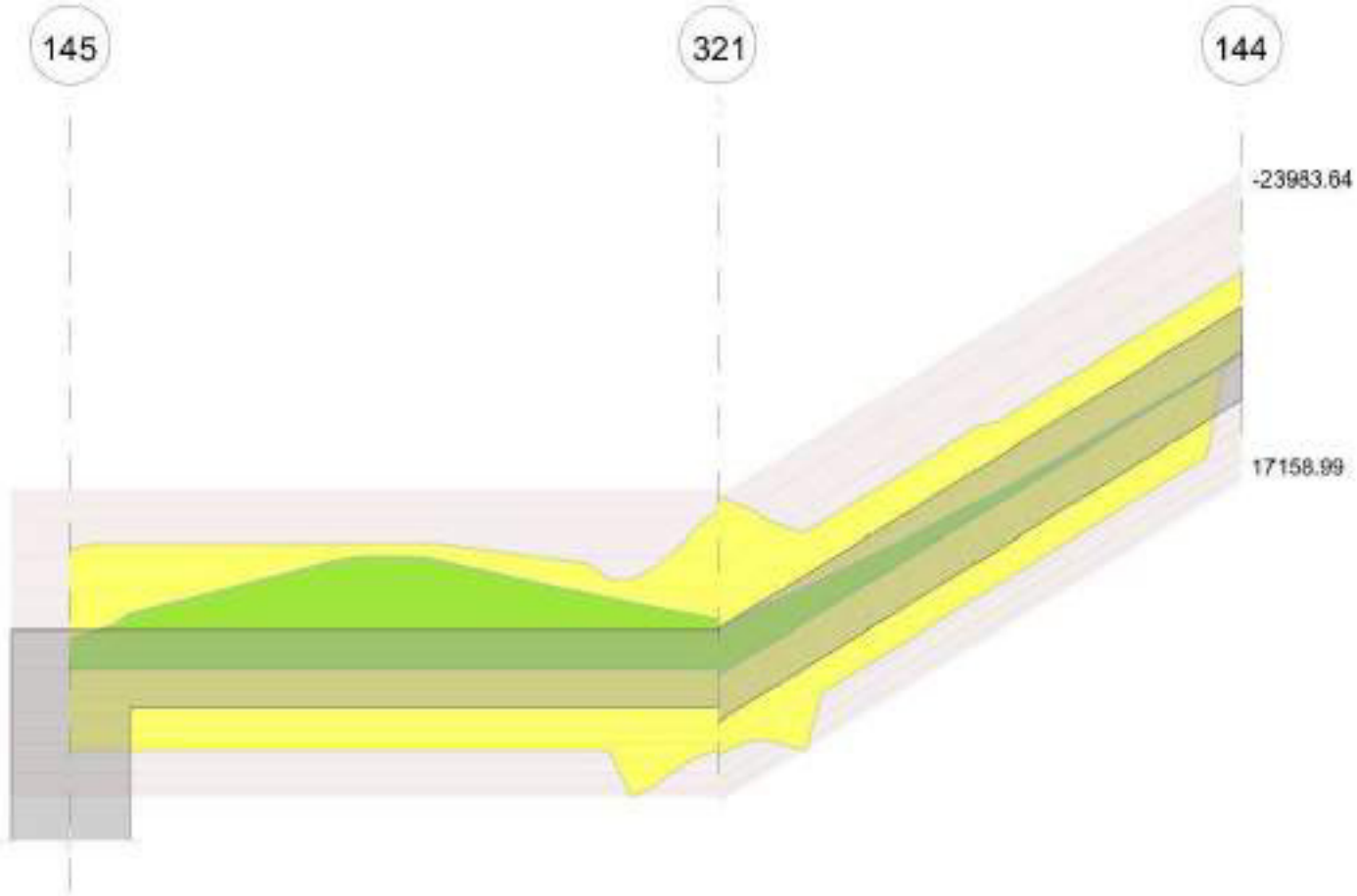


Diagramma verifica stato limite ultimo taglio

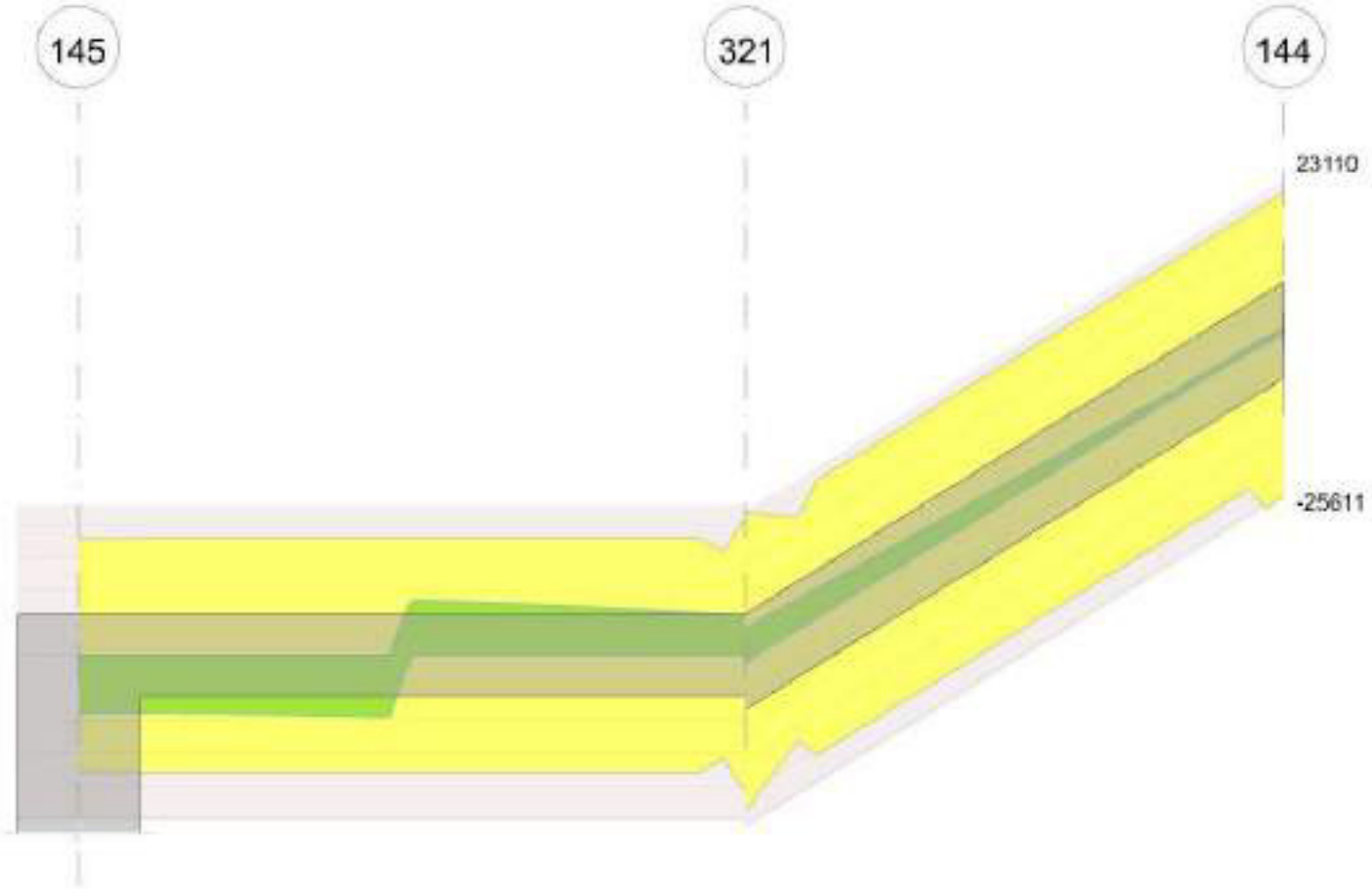
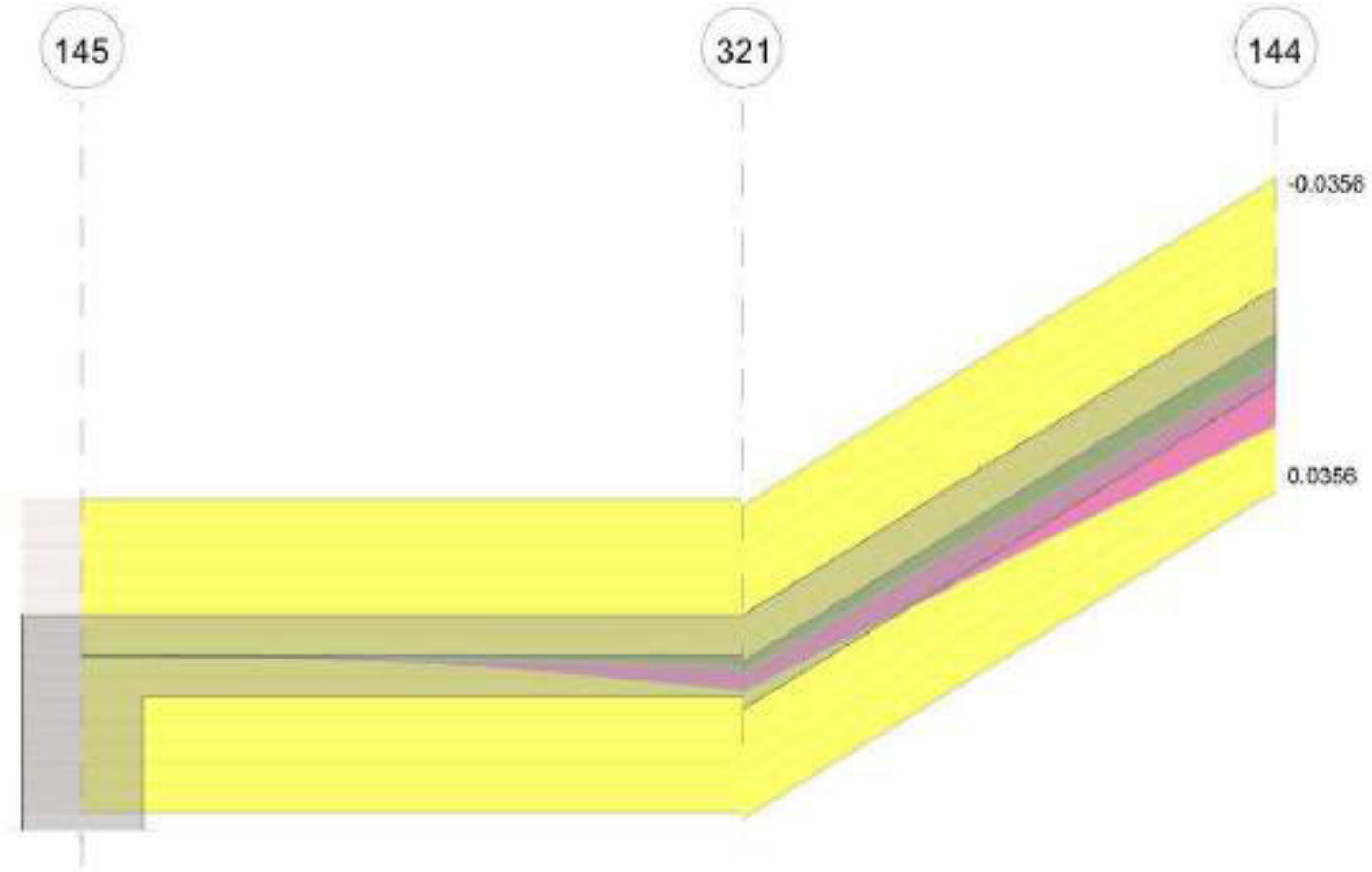


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 145 - 321, sezione R 130x30, aste 846, 847

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001257	0.053							-4229.7	SLU 84	-4229.7	-16762.03	0.209	3.96	Si
0.23	0.001885	0.053	0.001257	0.053							-6237.6	SLU 84	-7241.52	-16762.03	0.209	2.31	Si
1.23	0.001885	0.053	0.001257	0.053							-15001.58	SLU 81	-15001.58	-16762.03	0.209	1.12	Si
2.46	0.002513	0.058	0.001257	0.053							-5861.46	SLU 81	-6563.71	-21179.13	0.247	3.23	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001257	0.053							-4057.59	SLV 2	-4057.59	-15934.22	0.295	3.93	Si
0.23	0.001885	0.053	0.001257	0.053							-4953.03	SLV 2	-5429.33	-15934.22	0.295	2.93	Si
1.23	0.001885	0.053	0.001257	0.053							-10075.37	SLV 7	-10075.37	-15934.22	0.295	1.58	Si
1.31	0.001885	0.053	0.001257	0.053							-9658.14	SLV 7	-10075.37	-15934.22	0.295	1.58	Si
2.46	0.002513	0.058	0.001257	0.053							-4544.36	SLV 7	-4973.81	-19873.29	0.339	4	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001257	0.053							-3278.97	SLD 2	-3278.97	-15934.22	0.295	4.86	Si
0.23	0.001885	0.053	0.001257	0.053							-4347.31	SLD 2	-4894.07	-15934.22	0.295	3.26	Si
1.23	0.001885	0.053	0.001257	0.053							-9542.4	SLD 7	-9542.4	-15934.22	0.295	1.67	Si
1.31	0.001885	0.053	0.001257	0.053							-9125.17	SLD 7	-9542.4	-15934.22	0.295	1.67	Si
2.46	0.002513	0.058	0.001257	0.053							-4011.39	SLD 7	-4440.85	-19873.29	0.339	4.48	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-8788	SLU 81	-8788	-17899	-101941	0	-17899	1	2.04	Si
0.23	0.0000207	0.001885	0	-8815	SLU 81	-8815	-17899	-101941	-18003	-18003	1	2.04	Si
1.15	0.0000207	0.001885	0	-9493	SLU 81	-9493	-17899	-101941	-18003	-18003	1	1.9	Si
1.23	0.0000207	0.001835	0	8380	SLU 81	8380	17741	101941	18003	18003	1	2.15	Si
2.46	0.0000242	0.001257	0	6017	SLU 81	6017	15510	100042	20694	20694	1	3.44	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-6606	SLV 15	-6606	-17899	-101941	0	-17899	1	2.71	Si
0.23	0.0000207	0.001885	0	-6621	SLV 15	-6621	-17899	-101941	-18003	-18003	1	2.72	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000207	0.001885	0	-7008	SLV 15	-7008	-17899	-101941	-18003	-18003	1	2.57	Si
1.23	0.0000207	0.001835	0	5034	SLV 3	5034	17741	101941	18003	18003	1	3.58	Si
2.46	0.0000242	0.001257	0	3686	SLV 4	3686	15510	100042	20694	20694	1	5.61	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-5825	SLD 15	-5825	-17899	-101941	0	-17899	1	3.07	Si
0.23	0.0000207	0.001885	0	-5841	SLD 15	-5841	-17899	-101941	-18003	-18003	1	3.08	Si
1.15	0.0000207	0.001885	0	-6228	SLD 15	-6228	-17899	-101941	-18003	-18003	1	2.89	Si
1.23	0.0000207	0.001835	0	5034	SLD 3	5034	17741	101941	18003	18003	1	3.58	Si
2.46	0.0000242	0.001257	0	3686	SLD 3	3686	15510	100042	20694	20694	1	5.61	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3094.53	21	-3094.53	139805	1494000	2039408	36000000	-2695.47	2	-2695.47	121776	1120500			Si
0.23	-4557.4	21	-5288.78	238938	1494000	3485494	36000000	-3894.76	2	-4494.28	203044	1120500			Si
1.23	-10940.08	18	-10940.08	858315	1494000	26703149	36000000	-9121.29	2	-9121.29	715620	1120500			Si
2.46	-4281.08	18	-4793.82	215521	1494000	3076915	36000000	-3590.28	2	-4019.74	180720	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.23	superiore	0.318	0.00081	0.000257	18	0.318	0.00082	0.00026	6	0.318	0.00076	0.00024	2	Si
2.05	superiore	0.417	0.00072	0.000299	18	0.417	0.00063	0.000264	6	0.417	0.0006	0.00025	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.23	0.00006	0.00004	0.00001	0.00001	0.00005	0.00004	0.00001	0.00001	0.00005	0.00004	0.00002	2	0.00002	2	9999	Si
1.23	0.00076	0.00054	0.0006	0.00038	0.00065	0.00055	0.00048	0.00038	0.00061	0.00055	0.00128	2	0.00111	2	6934	Si
2.46	0.00299	0.00222	0.00372	0.00212	0.00261	0.00222	0.00285	0.00212	0.00246	0.00222	0.00767	2	0.00658	2	1160	Si

Campata 2 tra i fili 321 - 144, sezione R 130x30, asta 848

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.029	0.001257	0.067							-5861.46	SLU 81	-5861.46	-23983.64	0.247	4.09	Si
0.33	0.001257	0.053	0.002055	0.054							-4070.46	SLU 81	-4640.32	-11927.07	0.192	2.57	Si
1	0.001257	0.053	0.001257	0.053							-1465.36	SLU 81	-1815.27	-11845.8	0.181	6.53	Si
1.99	0.001257	0.053	0	0							0	SLU 81	-19.97	-11486.6	0.136	575.25	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.029	0.001257	0.067							-4544.36	SLV 7	-4544.36	-20641.97	0.323	4.54	Si
1	0.001257	0.053	0.001257	0.053							-1374.61	SLV 7	-1642.64	-10885.66	0.247	6.63	Si
1.92	0.001257	0.053	0	0	27.81	SLV 10	55.81	0	0	0	-35.79	SLV 7	-115.2	-10920.51	0.252	94.8	Si
1.99	0.001257	0.053	0	0	0.03	SLV 14	41.47	0	0	0	-0.03	SLV 3	-65.93	-10920.51	0.252	165.63	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.029	0.001257	0.067							-4011.39	SLD 7	-4011.39	-20641.97	0.323	5.15	Si
1	0.001257	0.053	0.001257	0.053							-1108.13	SLD 7	-1346.15	-10885.66	0.247	8.09	Si
1.92	0.001257	0.053	0	0	10.05	SLD 10	12.12	0	0	0	-18.02	SLD 7	-67.43	-10920.51	0.252	161.95	Si
1.99	0.001257	0.053	0	0	0.01	SLD 13	11.47	0	0	0	-0.01	SLD 4	-35.93	-10920.51	0.252	303.91	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000242	0.001257	0	5127	SLU 81	5127	16269	111725	23110	23110	1	4.51	Si
0.2	0.0000242	0.001257	0	4614	SLU 81	4614	14355	83304	17231	17231	1	3.73	Si
1	0.0000242	0.001257	0	2563	SLU 81	2563	15636	101941	21087	21087	1	8.23	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000242	0.001257	0	3558	SLV 7	3558	16269	111725	23110	23110	1	6.5	Si
0.2	0.0000242	0.001257	0	3244	SLV 7	3244	14355	83304	17231	17231	1	5.31	Si
1	0.0000242	0.001257	0	1987	SLV 7	1987	15636	101941	21087	21087	1	10.61	Si
1.99	0.0000242	0.001257	0	417	SLV 7	417	15636	101941	21087	21087	1	50.53	Si
1.99	0.0000242	0	0	-417	SLV 9	-417	-16676	-123815	-25611	-25611	1	61.38	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000242	0.001257	0	3325	SLD 7	3325	16269	111725	23110	23110	1	6.95	Si
0.2	0.0000242	0.001257	0	3011	SLD 7	3011	14355	83304	17231	17231	1	5.72	Si
1	0.0000242	0.001257	0	1754	SLD 7	1754	15636	101941	21087	21087	1	12.02	Si
1.99	0.0000242	0	0	184	SLD 7	184	14685	101941	21087	21087	1	114.49	Si
1.99	0.0000242	0	0	-184	SLD 9	-184	-14685	-101941	-21087	-21087	1	114.49	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4281.08	18	-4281.08	185992	1494000	2552156	36000000	-3590.28	2	-3590.28	155980	1120500			Si
1	-1070.27	18	-1325.83	60638	1494000	909568	36000000	-897.57	2	-1111.89	50853	1120500			Si
1.99	0	18	-14.58	728	1494000	10289	36000000	0	2	-12.23	611	1120500			Si

Verifica di apertura delle fessure

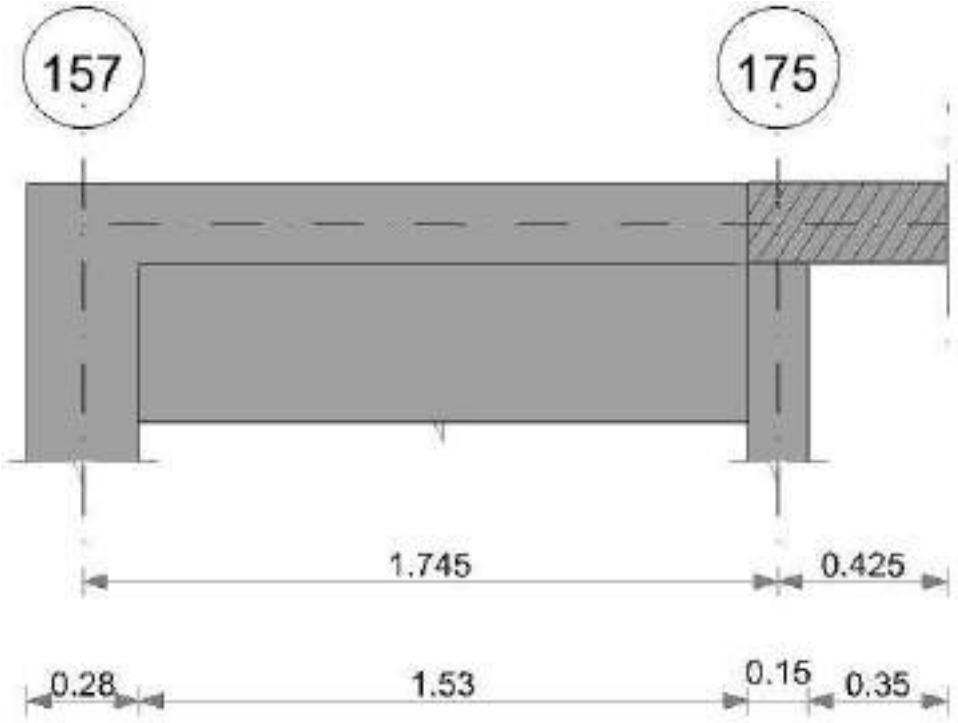
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0	0.00299	0.00222	0.00317	0.00181	0.00261	0.00222	0.00242	0.00181	0.00246	0.00222	0.00654	2	0.00561	2	1361	Si
1	0.00533	0.00398	0.00642	0.00368	0.00466	0.00399	0.00492	0.00368	0.00439	0.00399	0.01328	2	0.0114	2	670	Si
1.99	0.00782	0.00586	0.00982	0.00568	0.00684	0.00587	0.00755	0.00568	0.00645	0.00587	0.02037	2	0.01751	2	437	Si

Trave a "Primo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

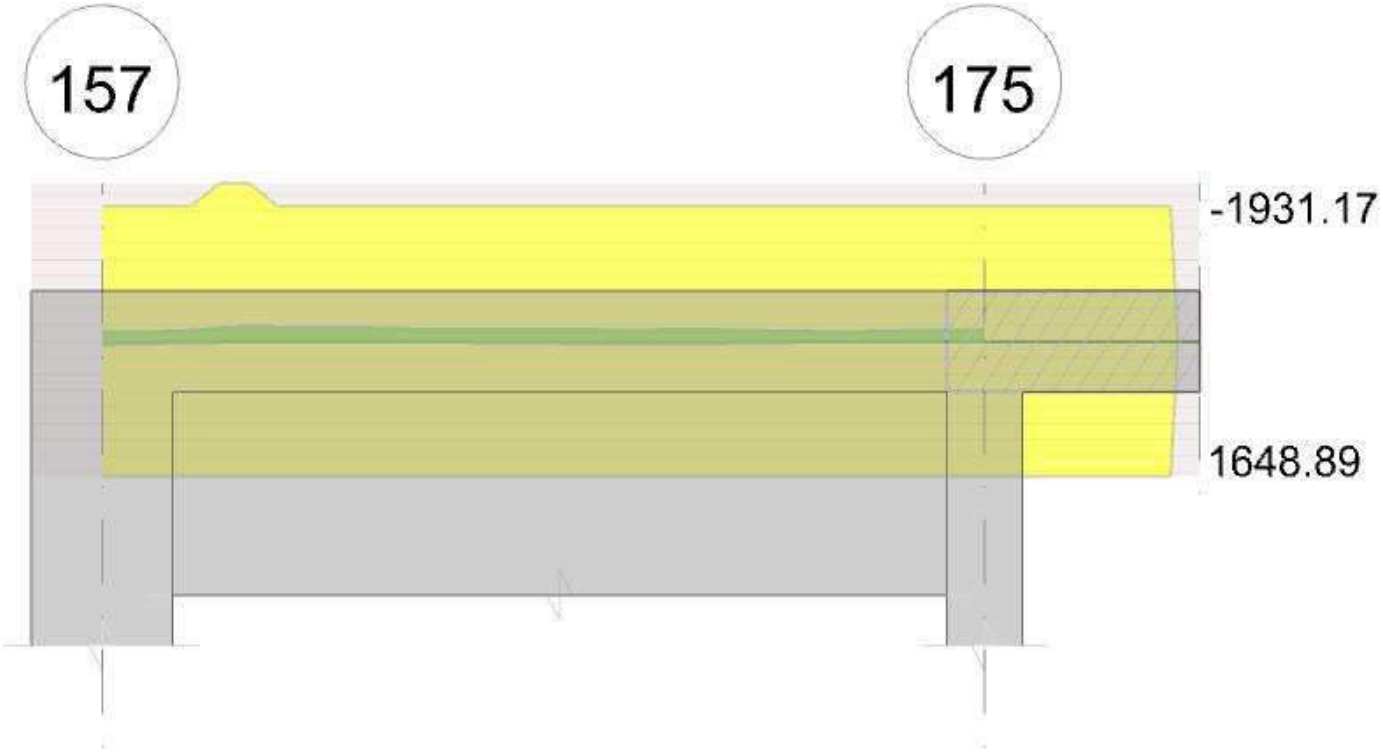


Diagramma verifica stato limite ultimo taglio

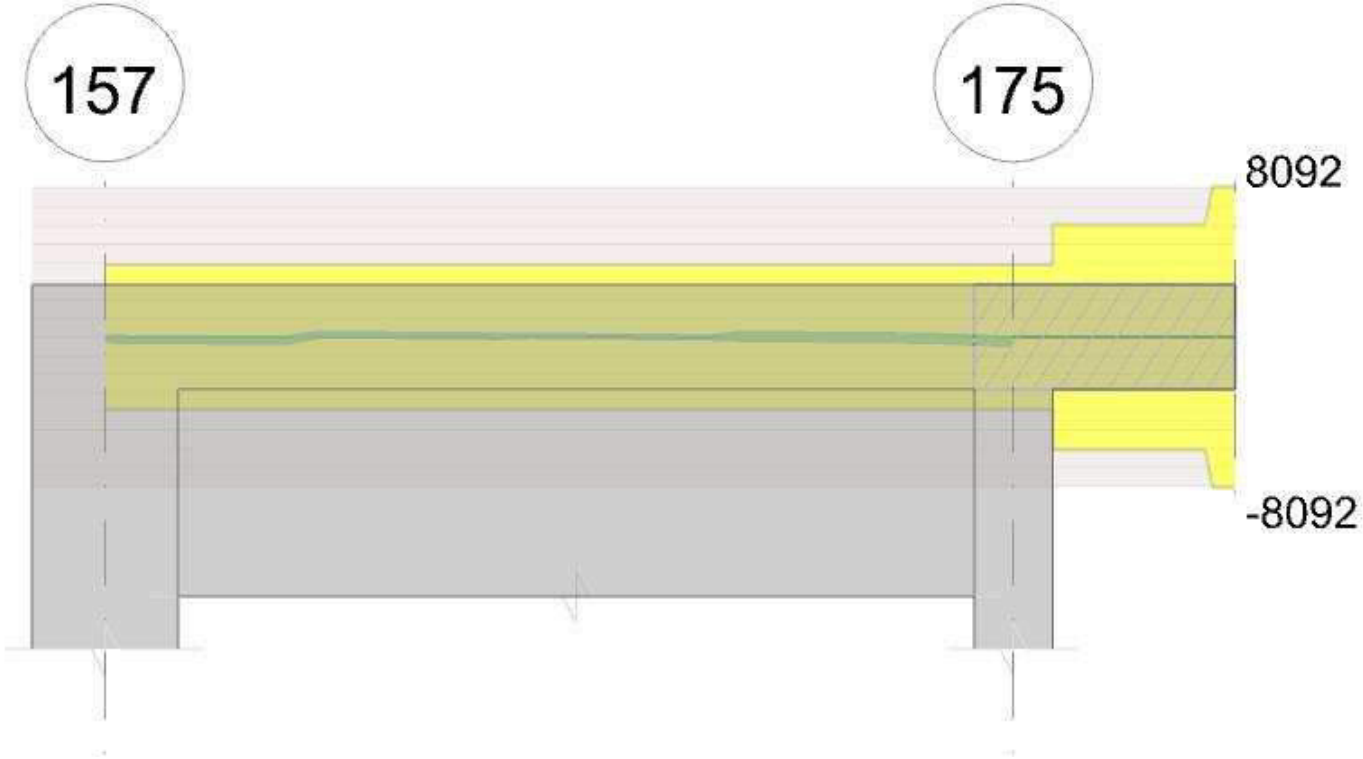
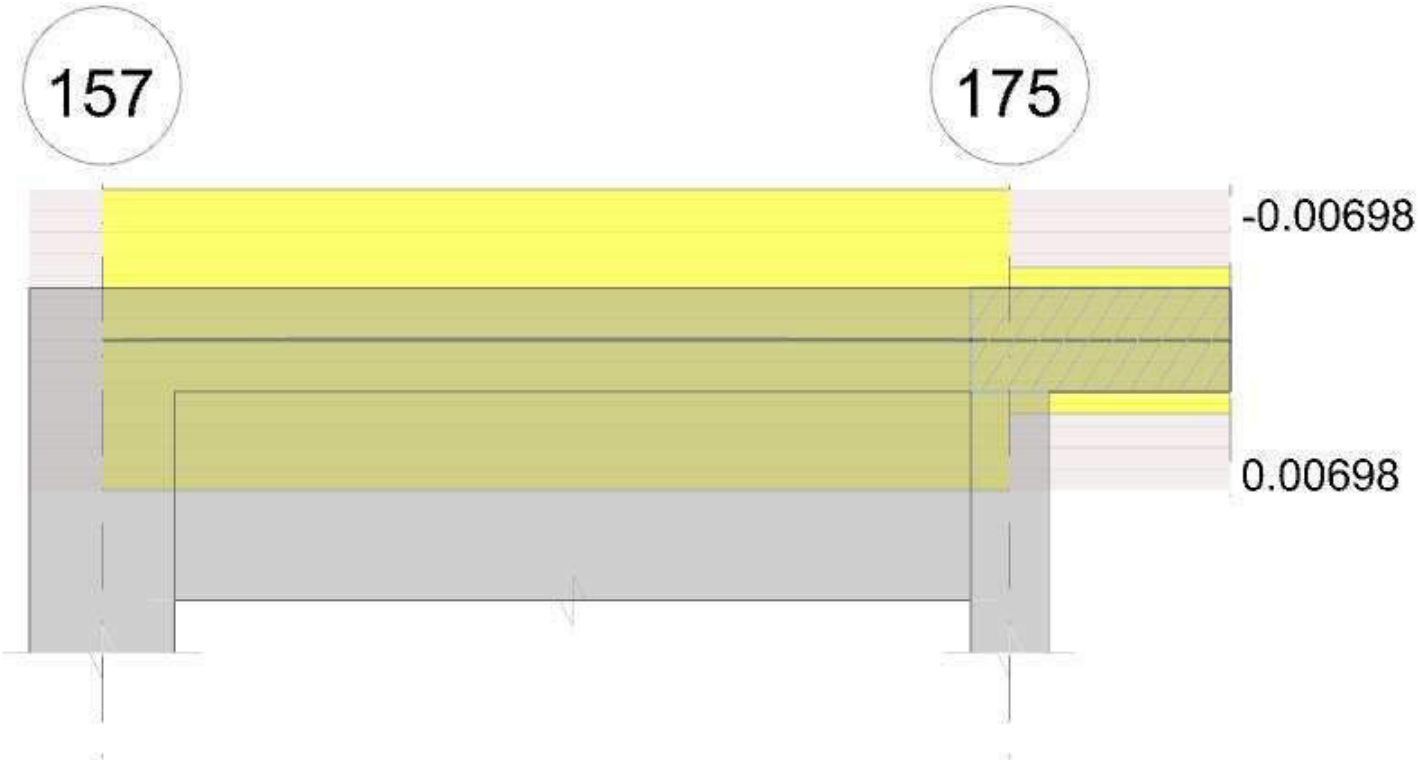


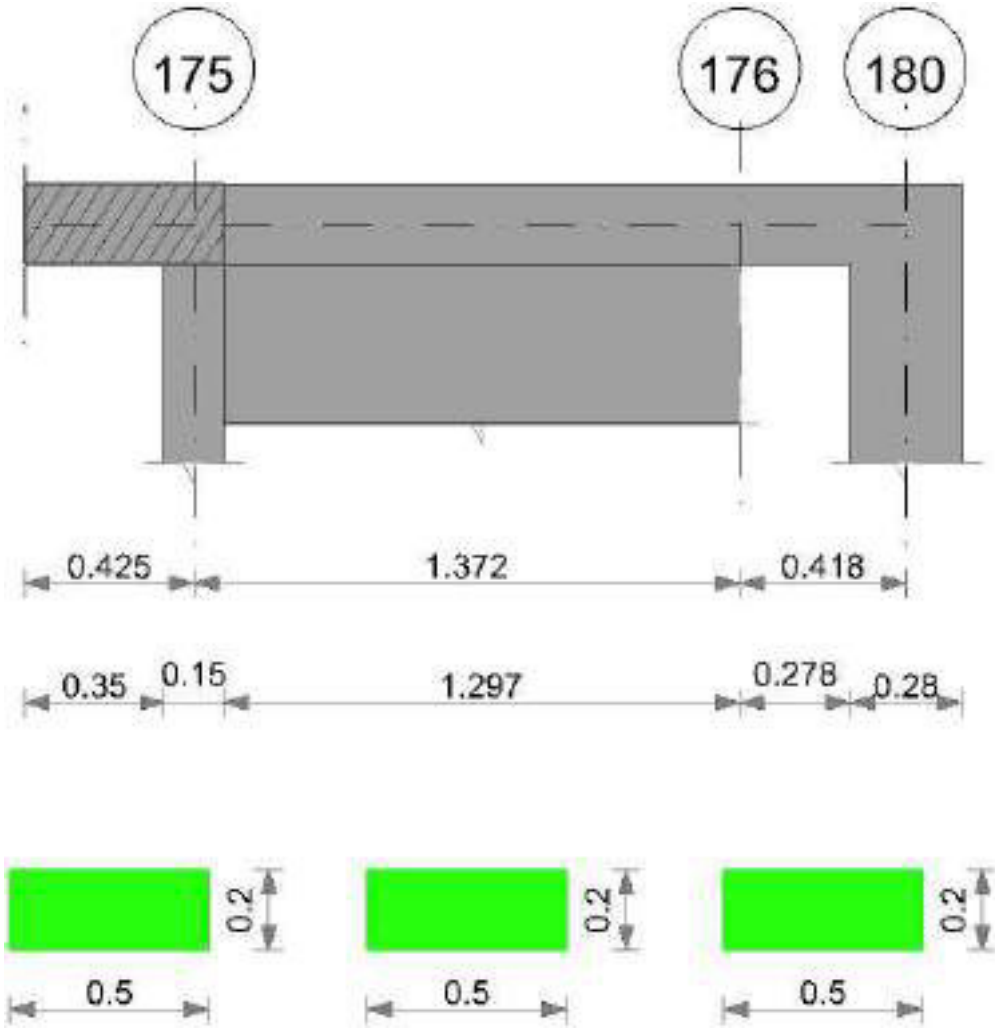
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Primo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

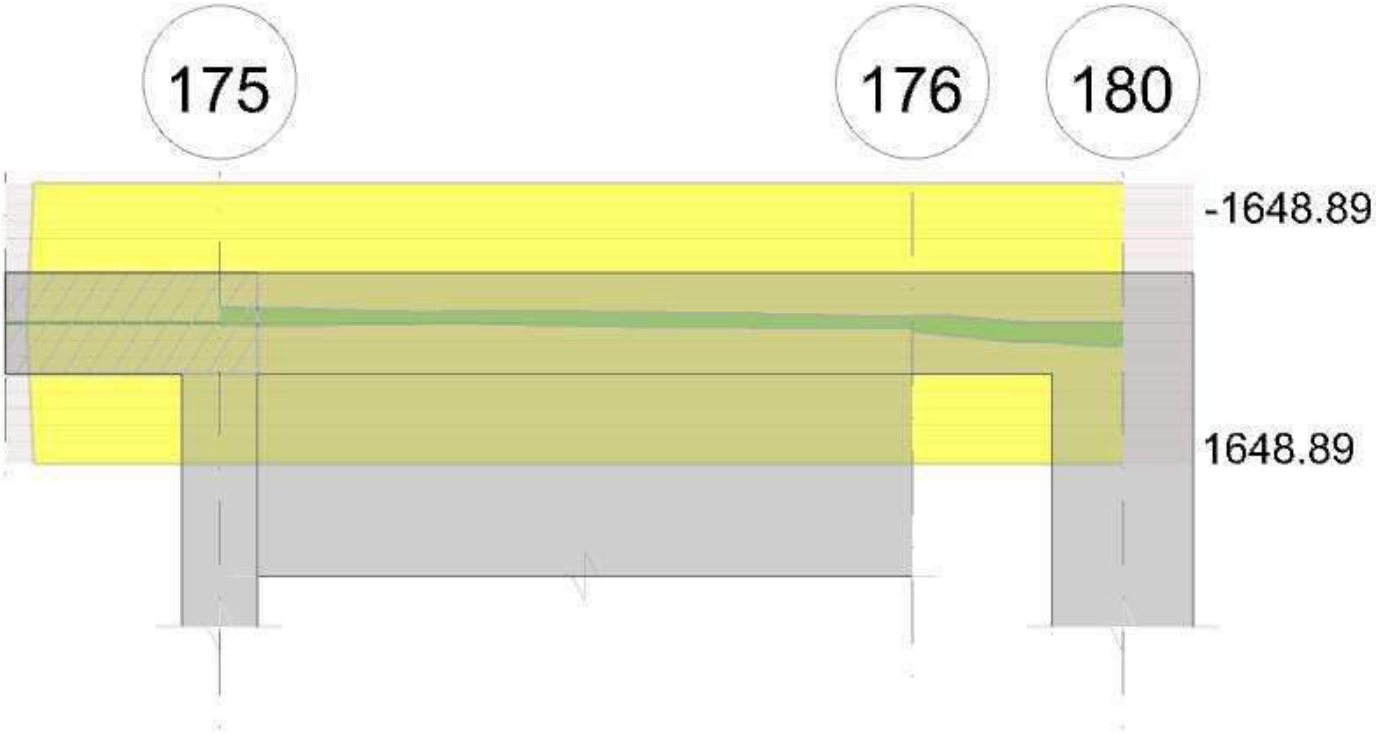


Diagramma verifica stato limite ultimo taglio

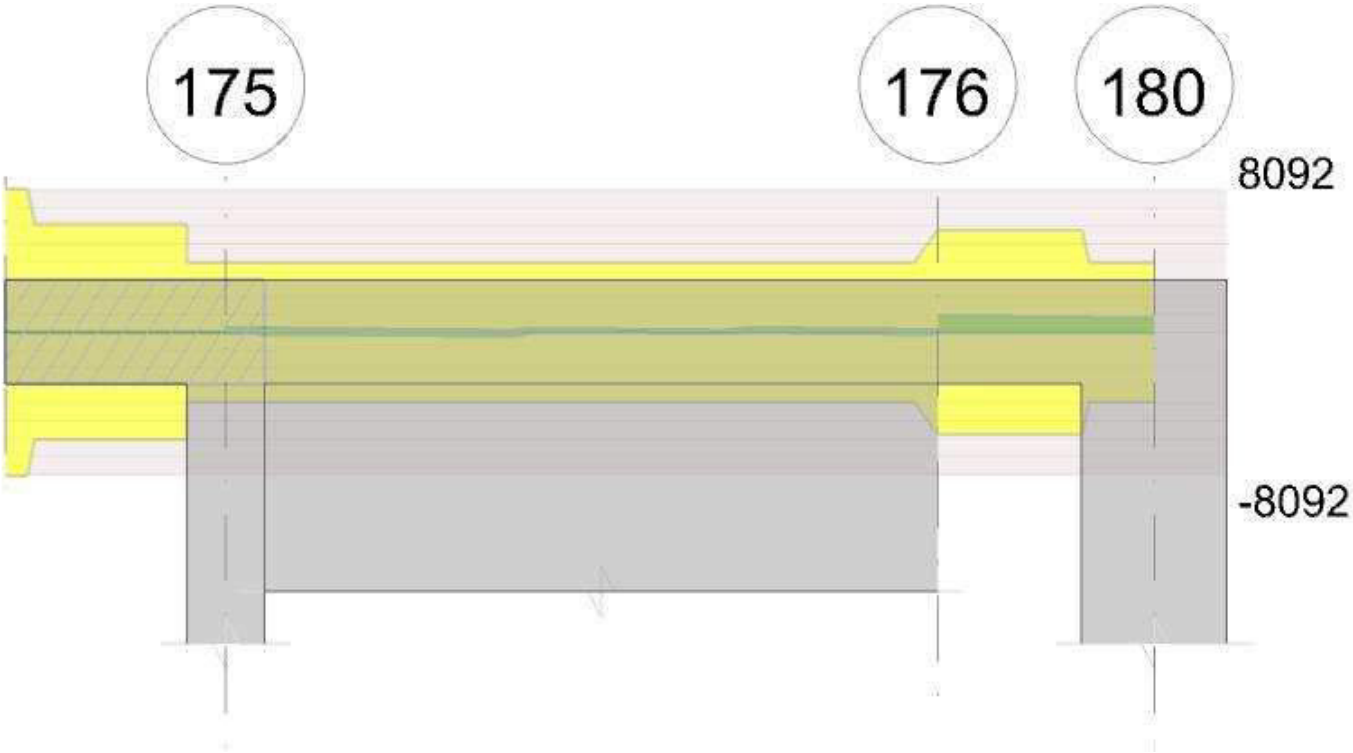
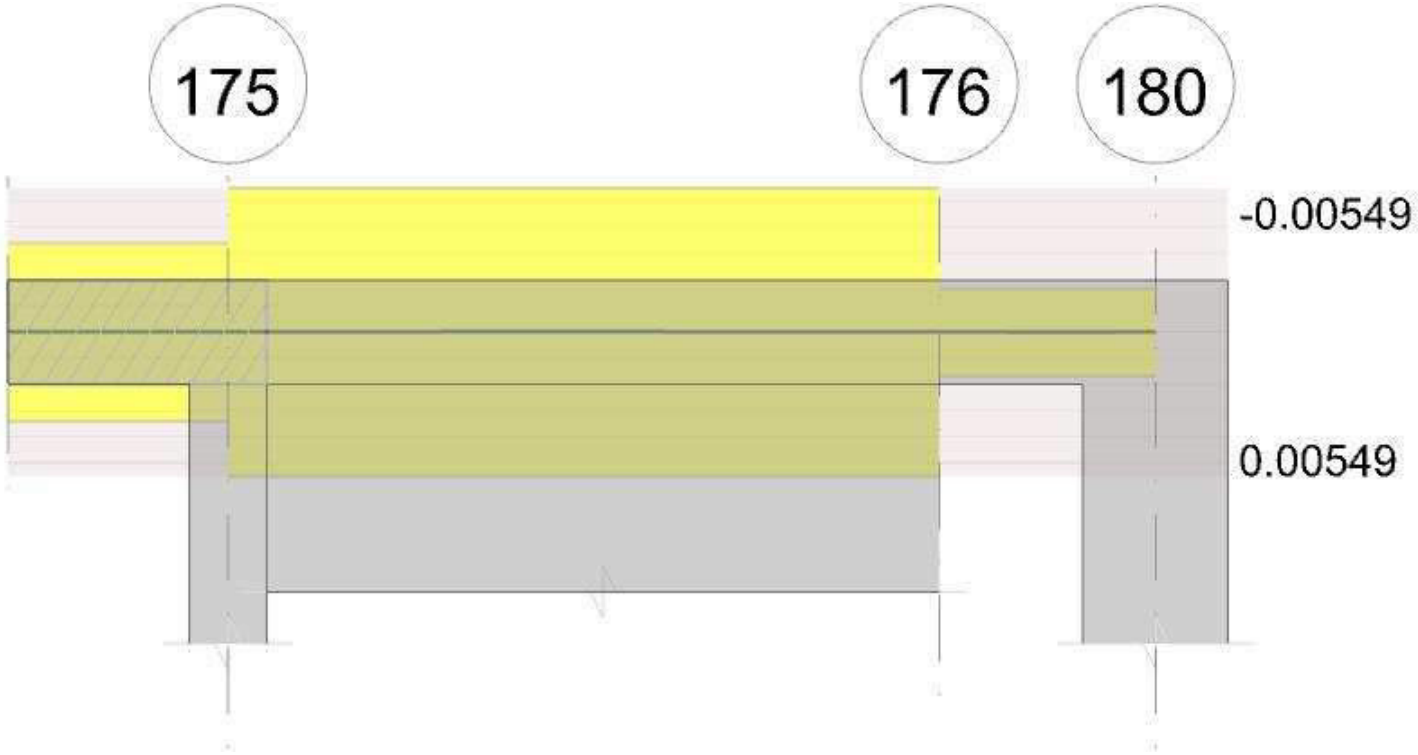


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, aste 462, 461

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	9.34	SLU 49	52.48	1931.17	0.242	36.8	-69.47	SLU 39	-69.47	-1931.17	0.242	27.8	Si
0.21	0.000308	0.05	0.000308	0.05	138.87	SLU 49	188.88	1931.17	0.242	10.22							Si
0.28	0.000308	0.05	0.000308	0.05	190.25	SLU 78	190.25	1931.17	0.242	10.15							Si
0.42	0.000308	0.05	0.000308	0.05	299.25	SLU 78	246.34	1931.17	0.242	7.84							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	52.23	SLV 6	92.16	1648.89	0.269	17.89	-88.27	SLV 11	-88.27	-1648.89	0.269	18.68	Si
0.21	0.000308	0.05	0.000308	0.05	176.44	SLV 6	216.42	1648.89	0.269	7.62	19.69	SLV 11	-12.64	-1648.89	0.269	130.48	Si
0.28	0.000308	0.05	0.000308	0.05	217.44	SLV 6	217.44	1648.89	0.269	7.58							Si
0.42	0.000308	0.05	0.000308	0.05	300.99	SLV 6	264.18	1648.89	0.269	6.24							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	12.37	SLD 6	51.48	1648.89	0.269	32.03	-48.4	SLD 11	-48.4	-1648.89	0.269	34.07	Si
0.21	0.000308	0.05	0.000308	0.05	131.98	SLD 6	169.11	1648.89	0.269	9.75							Si
0.28	0.000308	0.05	0.000308	0.05	170.04	SLD 6	170.04	1648.89	0.269	9.7							Si
0.42	0.000308	0.05	0.000308	0.05	245.48	SLD 6	210.59	1648.89	0.269	7.83							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	929	SLU 84	929	3906	23811	5741	5741	1	6.18	Si
0.21	0.0000109	0.000308	0	861	SLU 84	861	3906	23811	5741	5741	1	6.67	Si
0.28	0.0000109	0.000308	0	839	SLU 84	839	3906	23811	5741	5741	1	6.85	Si
0.29	0	0.000308	0	834	SLU 84	834	3906	23811	0	3906	1	4.69	Si
0.42	0	0.000308	0	793	SLU 84	793	3906	23811	0	3906	1	4.93	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	743	SLV 2	743	3906	23811	5741	5741	1	7.73	Si
0.21	0.0000109	0.000308	0	691	SLV 2	691	3906	23811	5741	5741	1	8.31	Si
0.28	0.0000109	0.000308	0	673	SLV 2	673	3906	23811	5741	5741	1	8.53	Si
0.29	0	0.000308	0	670	SLV 2	670	3906	23811	0	3906	1	5.83	Si
0.42	0	0.000308	0	638	SLV 2	638	3906	23811	0	3906	1	6.12	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	651	SLD 2	651	3906	23811	5741	5741	1	8.82	Si
0.21	0.0000109	0.000308	0	599	SLD 2	599	3906	23811	5741	5741	1	9.59	Si
0.28	0.0000109	0.000308	0	582	SLD 2	582	3906	23811	5741	5741	1	9.87	Si
0.29	0	0.000308	0	578	SLD 2	578	3906	23811	0	3906	1	6.76	Si
0.42	0	0.000308	0	547	SLD 2	547	3906	23811	0	3906	1	7.15	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-38.07	18	-38.07	10681	1494000	160221	36000000	-18.02	2	-18.02	5056	1120500			Si
0.21	105.75	7	142.09	39864	1494000	597963	36000000	99.3	1	133.04	37325	1120500			Si
0.28	143.07	15	143.07	40140	1494000	602098	36000000	133.91	2	133.91	37571	1120500			Si
0.42	221.29	15	183.41	51457	1494000	771858	36000000	203.25	2	169.81	47642	1120500			Si

Verifica di apertura delle fessure

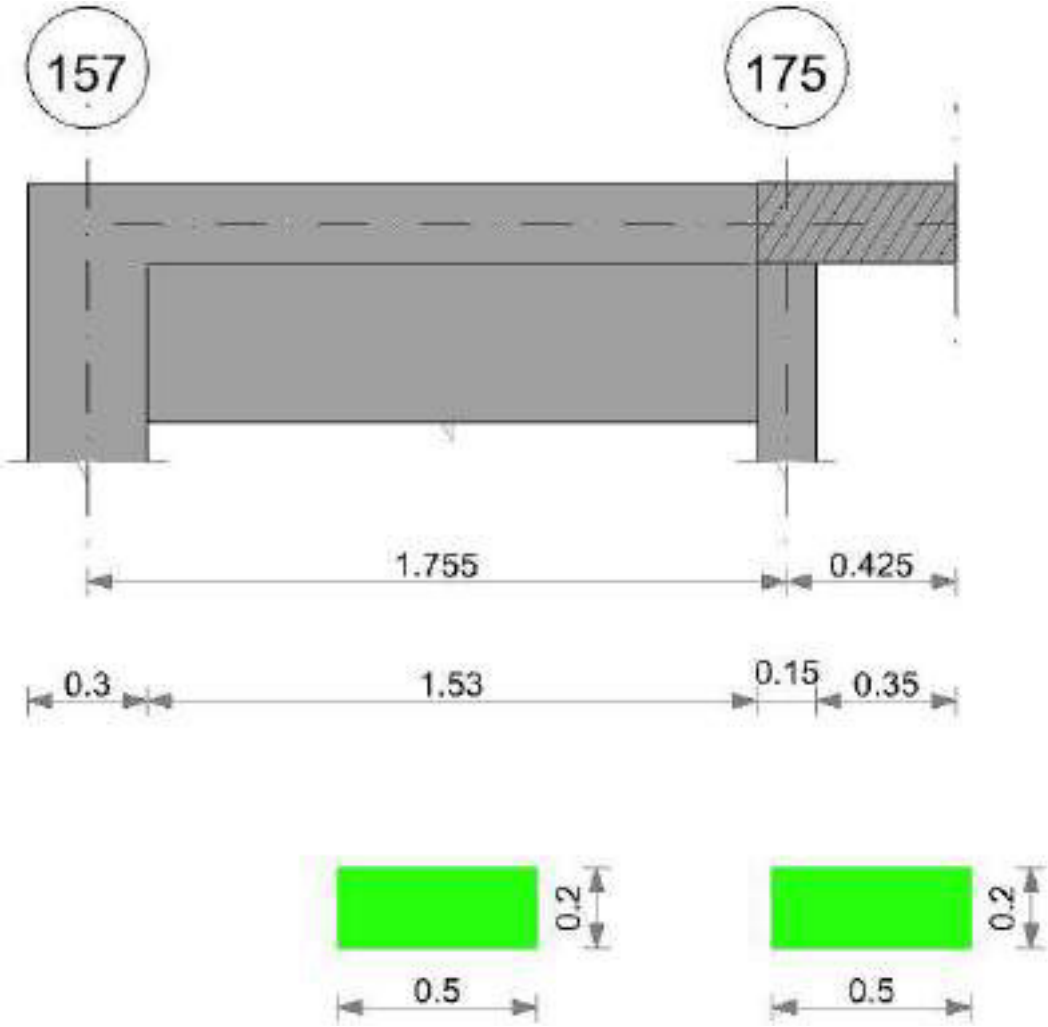
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.21	0	0	0	0	0	0	0	0	0	0	0.00001	1	0.00001	1	9999	Si
0.24	0	0	0	0	0	0	0	0	0	0	0.00001	1	0.00001	1	9999	Si
0.28	0	0	0	0	0	0	0	0	0	0	0.00001	1	0.00001	1	9999	Si

Trave a "Rialzato" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

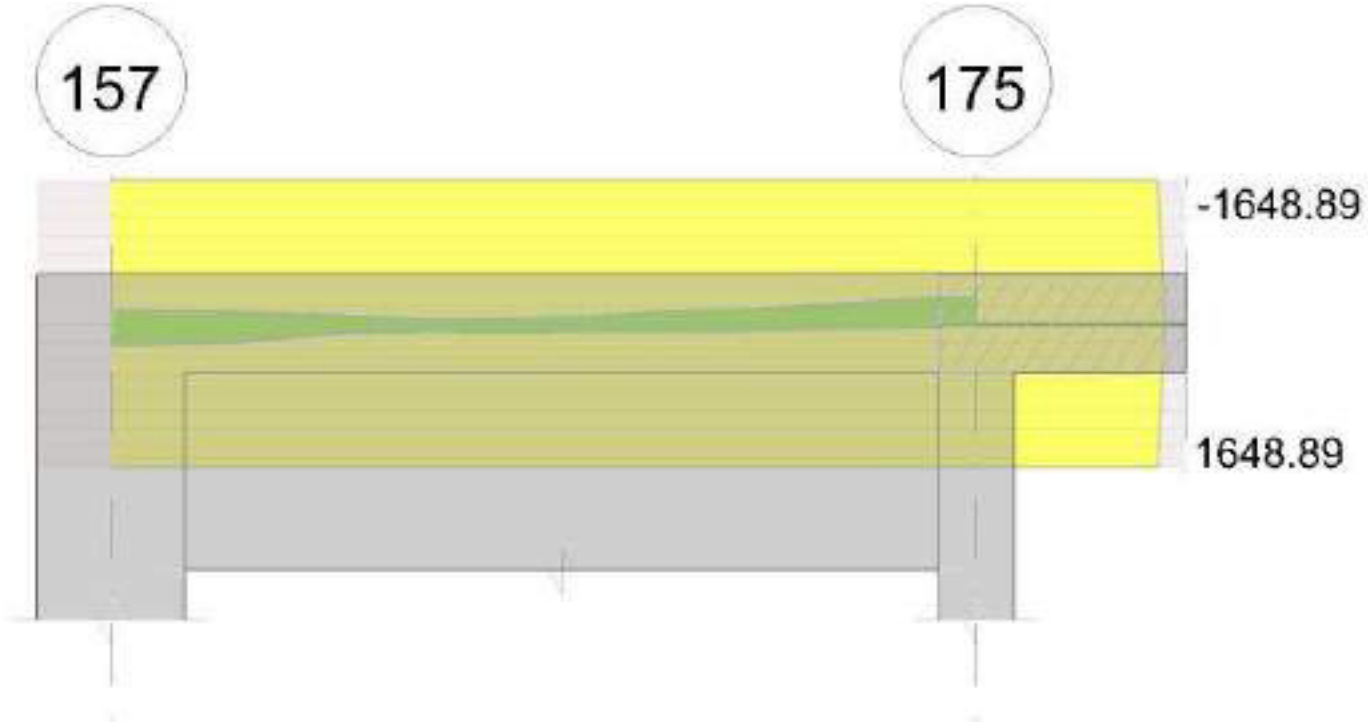
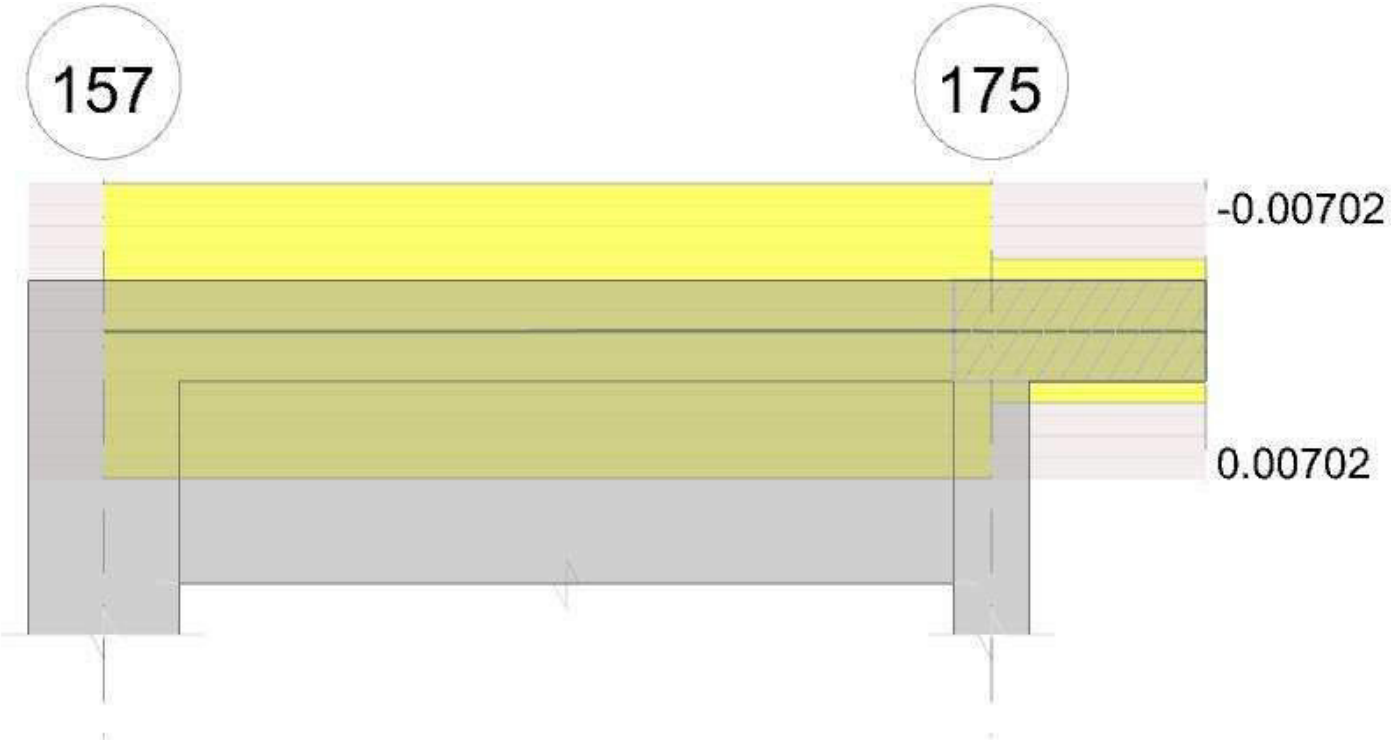


Diagramma verifica stato limite ultimo taglio

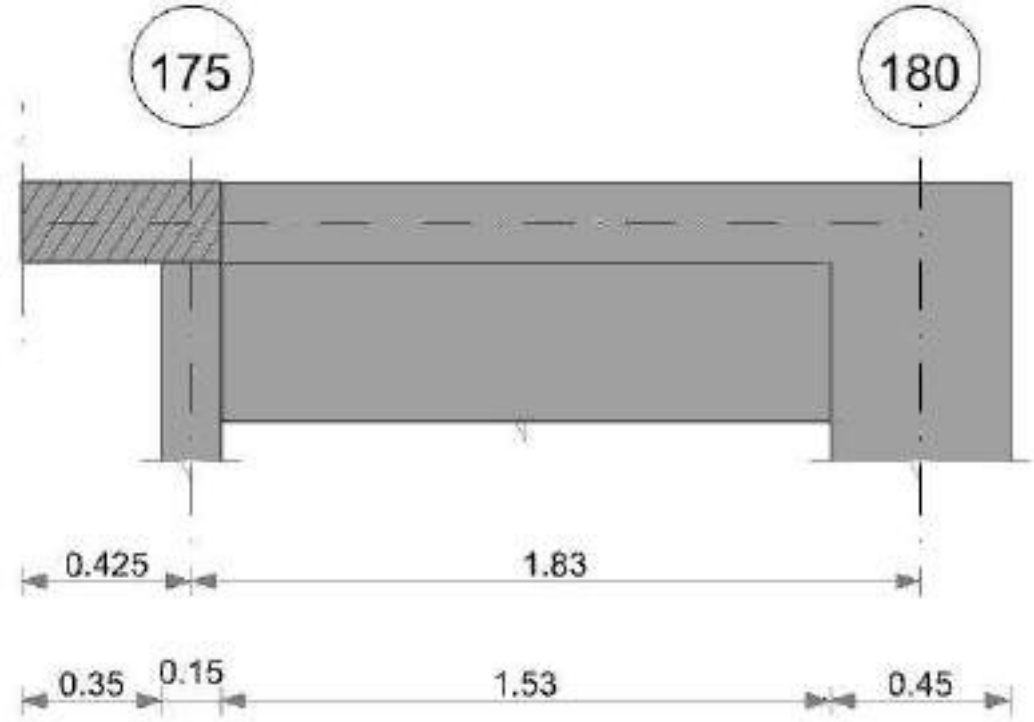
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Rialzato" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

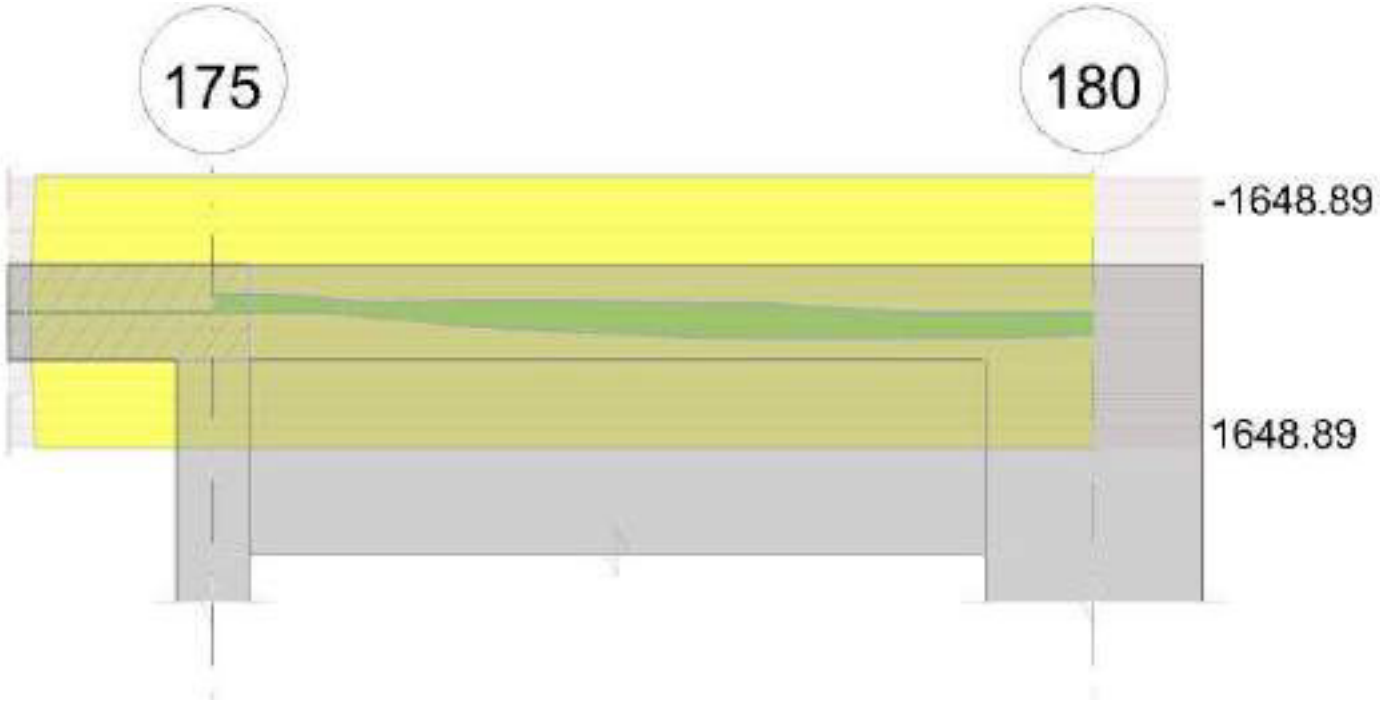


Diagramma verifica stato limite ultimo taglio

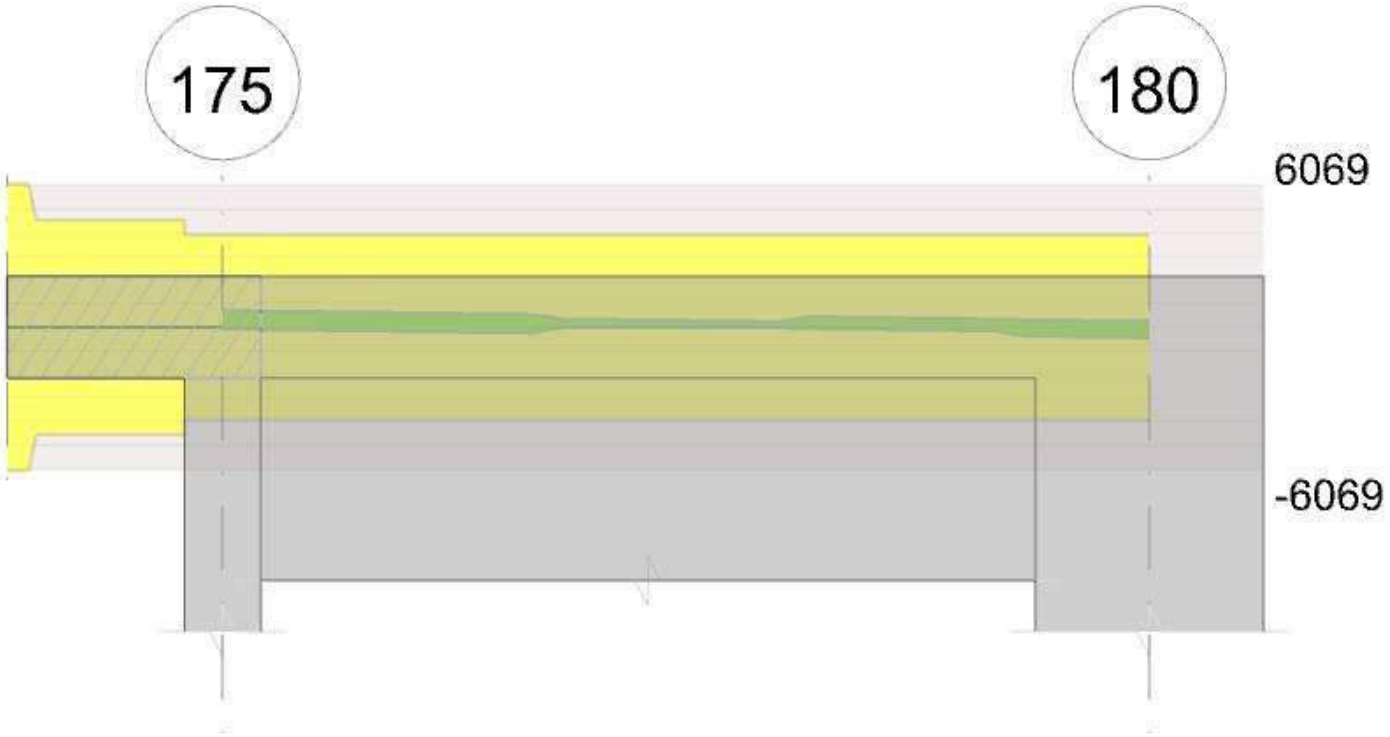
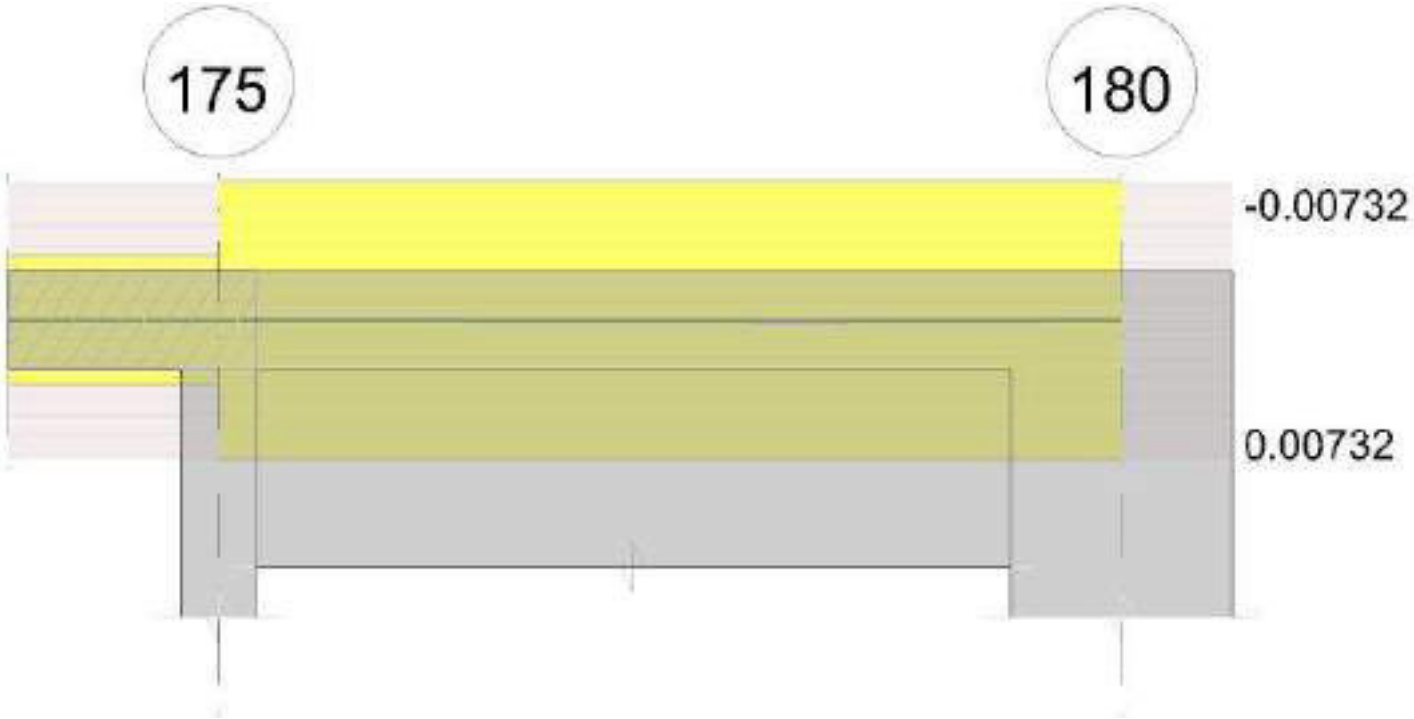


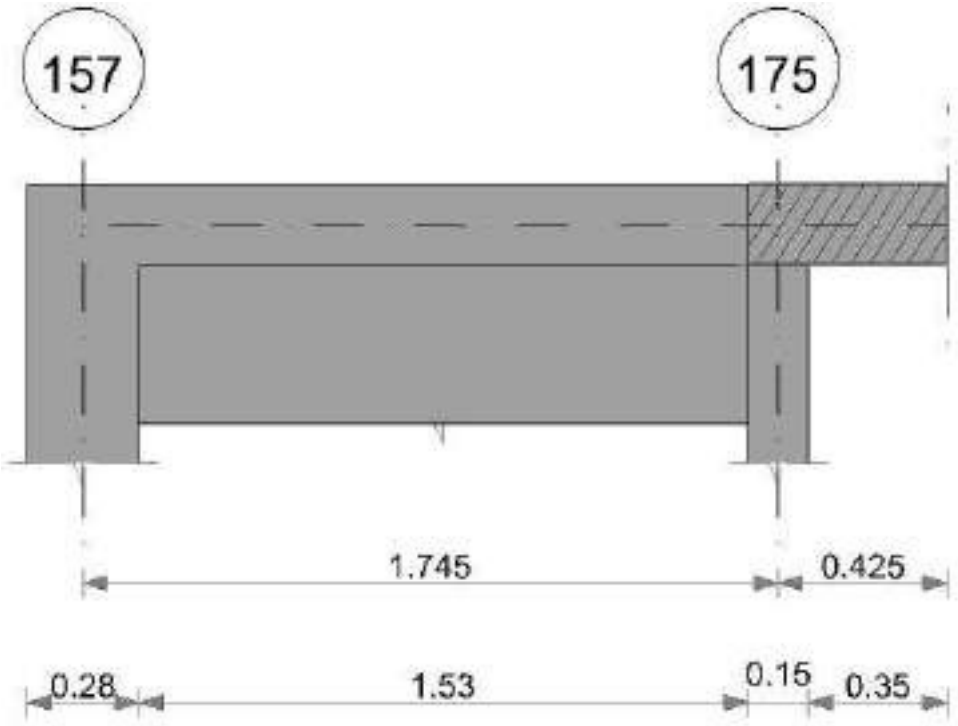
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Secondo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

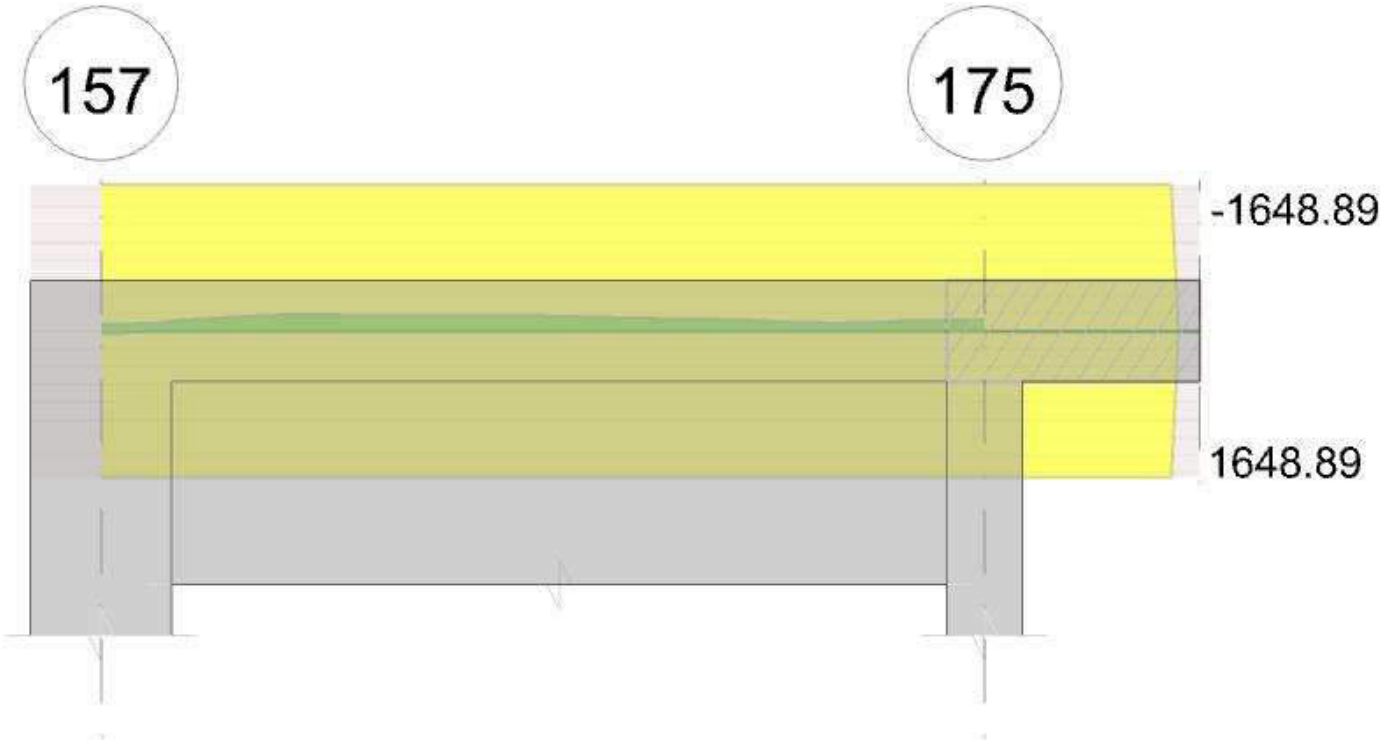


Diagramma verifica stato limite ultimo taglio

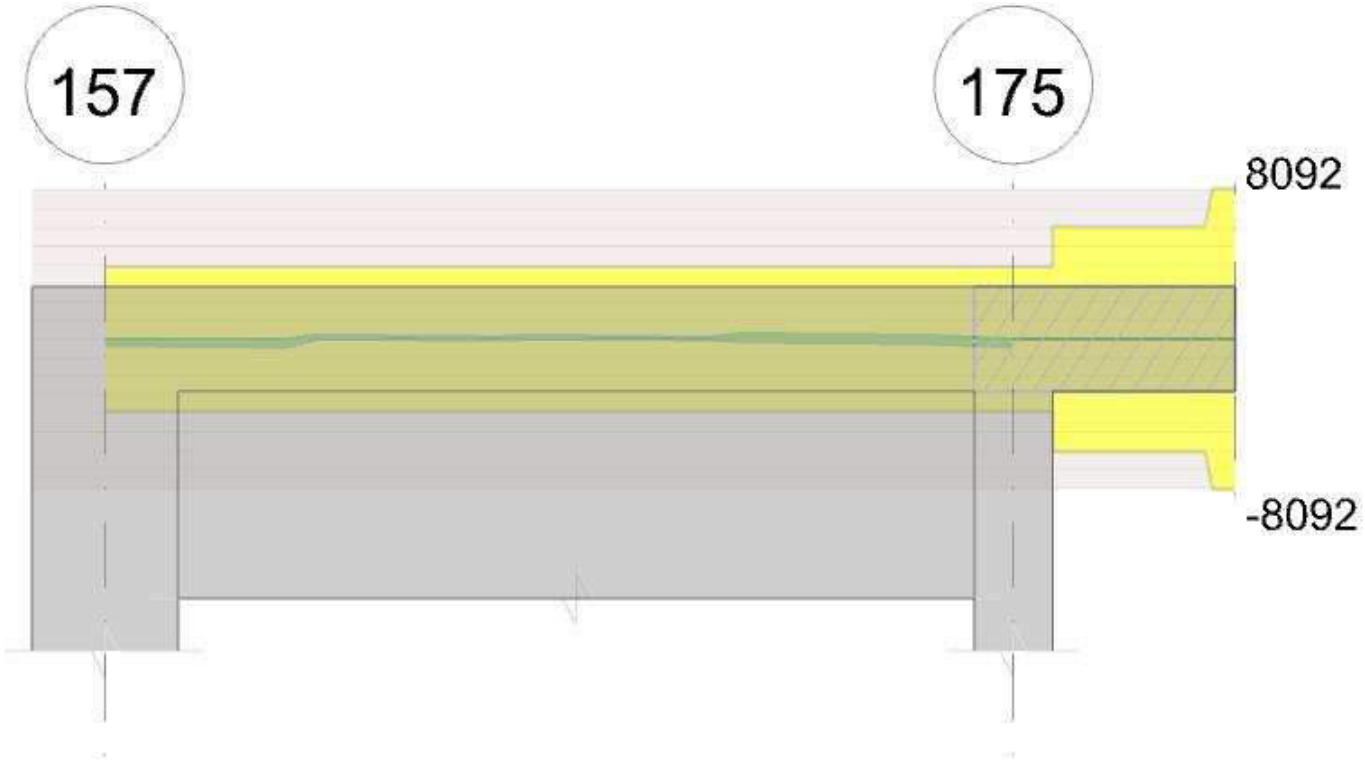
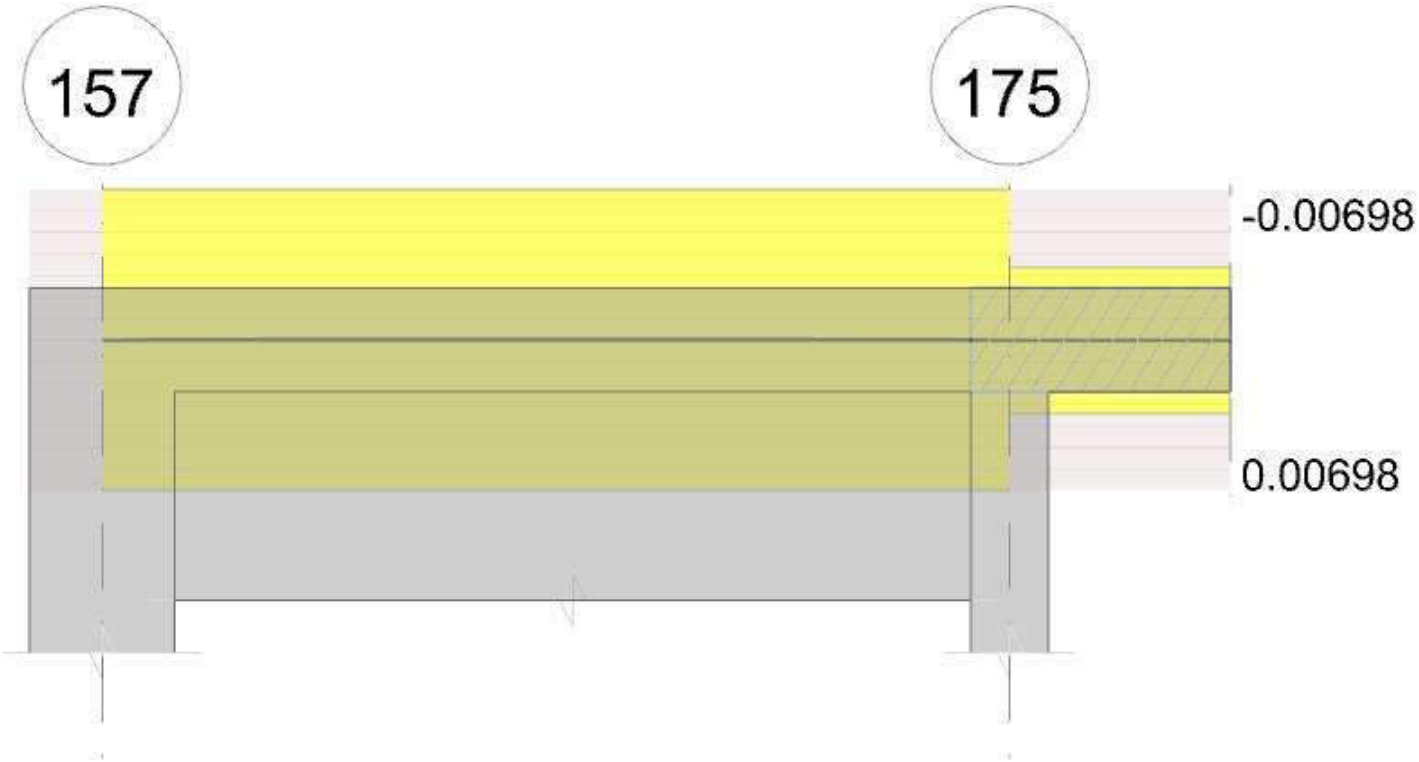


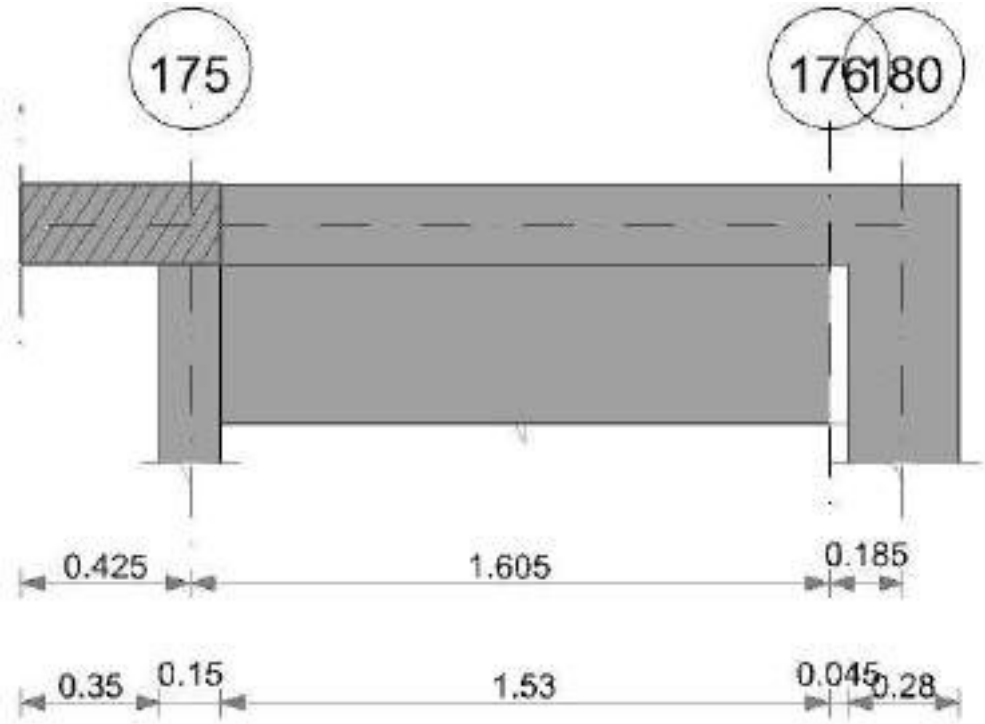
Diagramma verifica stato limite esercizio quasi permanente freccia

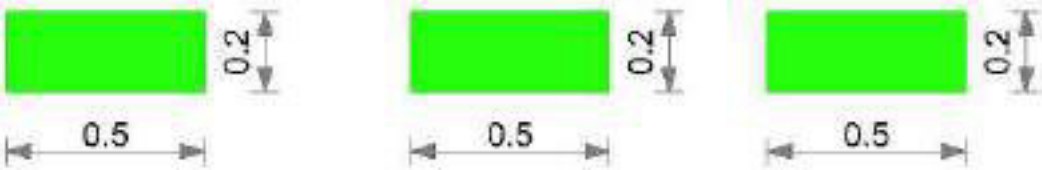


Output campate

Trave a "Secondo" 179-176

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

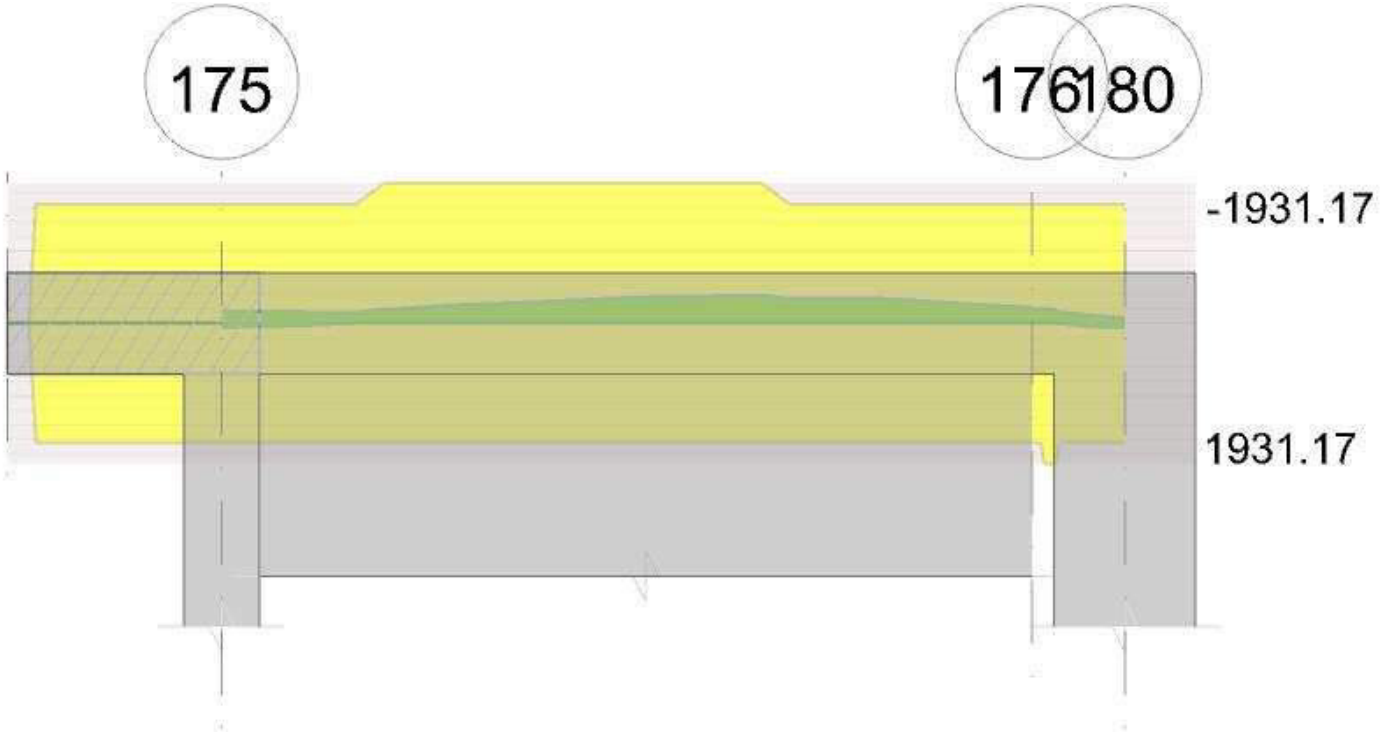


Diagramma verifica stato limite ultimo taglio

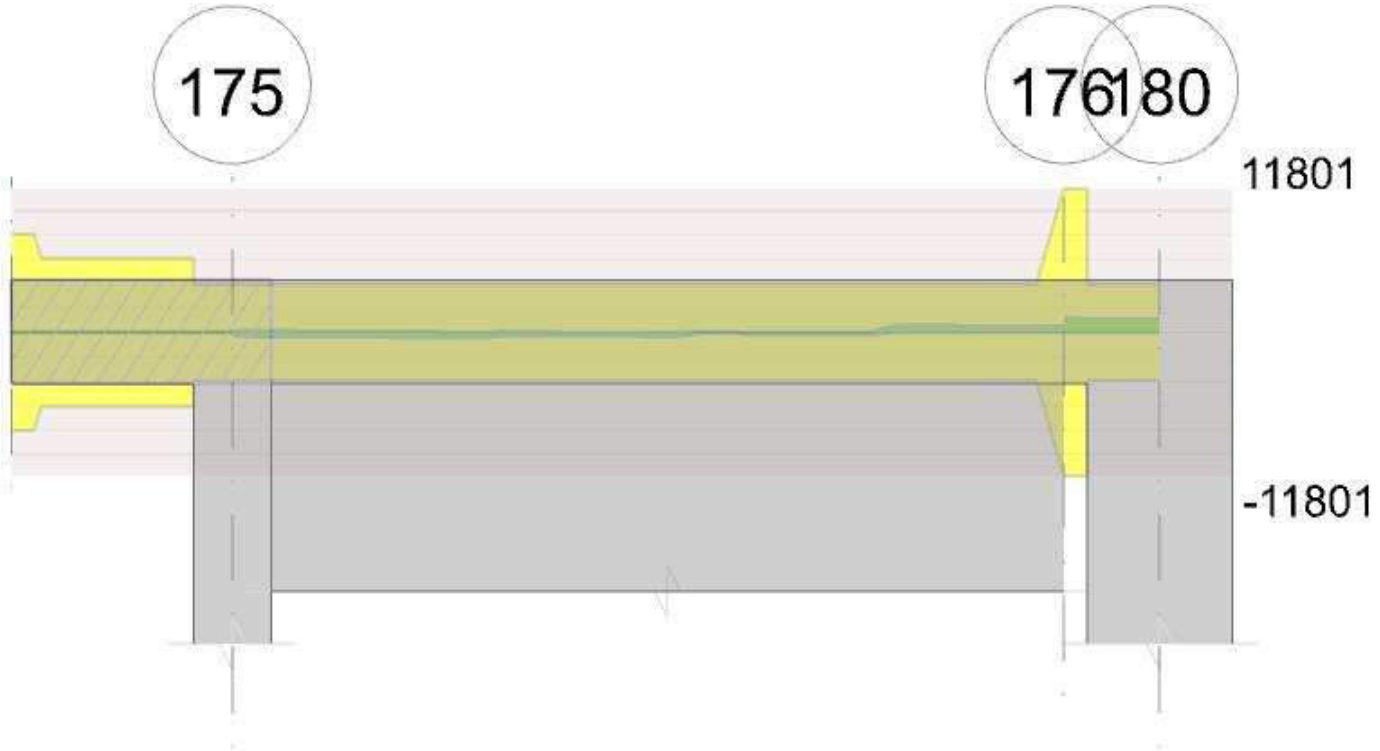
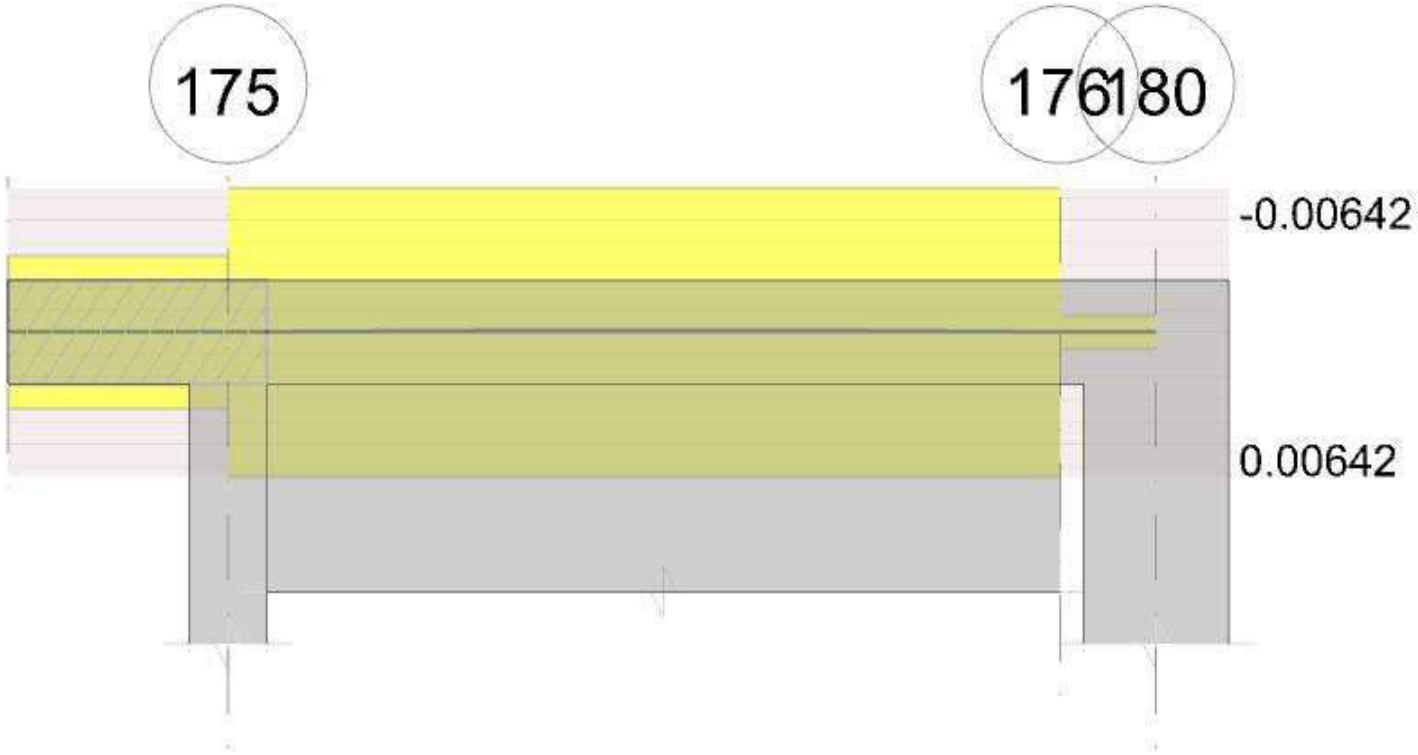


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 466

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-188.01	SLU 84	-188.01	-1931.17	0.242	10.27	Si
0.01	0.000308	0.05	0.000308	0.05							-173.88	SLU 84	-188.01	-1931.17	0.242	10.27	Si
0.05	0.000308	0.05	0.000308	0.05	-70.54	SLU 1	0.23	1931.17	0.242	8376.15	-136.7	SLU 84	-188.01	-1931.17	0.242	10.27	Si
0.09	0.000308	0.05	0.000308	0.05							-83.26	SLU 84	-83.26	-1931.17	0.242	23.2	Si
0.19	0.000308	0.05	0.000308	0.05	18.71	SLU 84	18.71	1931.17	0.242	103.2							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-195.16	SLV 8	-195.16	-1648.89	0.269	8.45	Si
0.01	0.000308	0.05	0.000308	0.05							-185.79	SLV 8	-195.16	-1648.89	0.269	8.45	Si
0.05	0.000308	0.05	0.000308	0.05							-161.72	SLV 8	-195.16	-1648.89	0.269	8.45	Si
0.09	0.000308	0.05	0.000308	0.05	28.76	SLV 9	28.76	1648.89	0.269	57.33	-128.83	SLV 8	-128.83	-1648.89	0.269	12.8	Si
0.19	0.000308	0.05	0.000308	0.05	95.61	SLV 10	57.03	1648.89	0.269	28.92	-72.67	SLV 7	-72.67	-1648.89	0.269	22.69	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-148.58	SLD 8	-148.58	-1648.89	0.269	11.1	Si
0.01	0.000308	0.05	0.000308	0.05							-139.64	SLD 8	-148.58	-1648.89	0.269	11.1	Si
0.05	0.000308	0.05	0.000308	0.05							-116.41	SLD 8	-148.58	-1648.89	0.269	11.1	Si
0.09	0.000308	0.05	0.000308	0.05							-83.8	SLD 8	-83.8	-1648.89	0.269	19.68	Si
0.19	0.000308	0.05	0.000308	0.05	47.54	SLD 10	18.91	1648.89	0.269	87.18	-24.59	SLD 7	-24.59	-1648.89	0.269	67.04	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1147	SLU 84	1147	3906	23811	11801	11801	1	10.28	Si
0.05	0.0000223	0.000308	0	1133	SLU 84	1133	3906	23811	11801	11801	1	10.42	Si
0.05	0	0.000308	0	1131	SLU 84	1131	3906	23811	0	3906	1	3.45	Si
0.09	0	0.000308	0	1117	SLU 84	1117	3906	23811	0	3906	1	3.5	Si
0.19	0	0.000308	0	1087	SLU 84	1087	3906	23811	0	3906	1	3.59	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	960	SLV 6	960	3906	23811	11801	11801	1	12.3	Si
0.05	0.0000223	0.000308	0	949	SLV 6	949	3906	23811	11801	11801	1	12.44	Si
0.05	0	0.000308	0	947	SLV 6	947	3906	23811	0	3906	1	4.12	Si
0.09	0	0.000308	0	937	SLV 6	937	3906	23811	0	3906	1	4.17	Si
0.19	0	0.000308	0	914	SLV 6	914	3906	23811	0	3906	1	4.28	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	811	SLD 6	811	3906	23811	11801	11801	1	14.55	Si
0.05	0.0000223	0.000308	0	800	SLD 6	800	3906	23811	11801	11801	1	14.76	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.05	0	0.000308	0	799	SLD 6	799	3906	23811	0	3906	1	4.89	Si
0.09	0	0.000308	0	788	SLD 6	788	3906	23811	0	3906	1	4.96	Si
0.19	0	0.000308	0	765	SLD 6	765	3906	23811	0	3906	1	5.11	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-134.15	21	-134.15	37638	1494000	564575	36000000	-113.67	2	-113.67	31893	1120500			Si
0.05	-97.46	21	-134.15	37638	1494000	564575	36000000	-82.45	2	-113.67	31893	1120500			Si
0.09	-59.27	21	-59.27	16629	1494000	249430	36000000	-50.03	2	-50.03	14037	1120500			Si
0.19	13.48	21	13.48	3781	1494000	56713	36000000	11.47	2	11.47	3218	1120500			Si

Verifica di apertura delle fessure

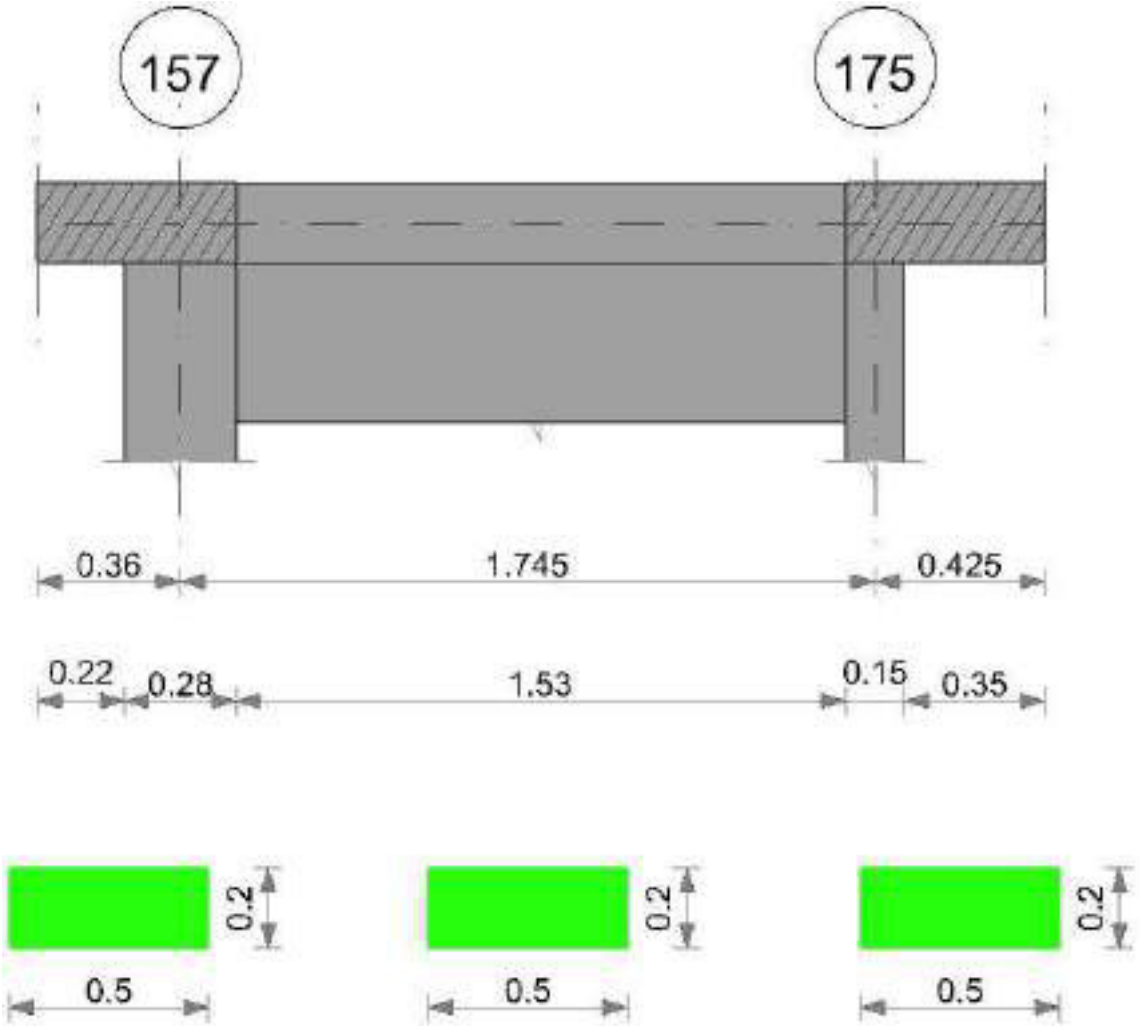
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si

Trave a "Sottotetto" 146-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

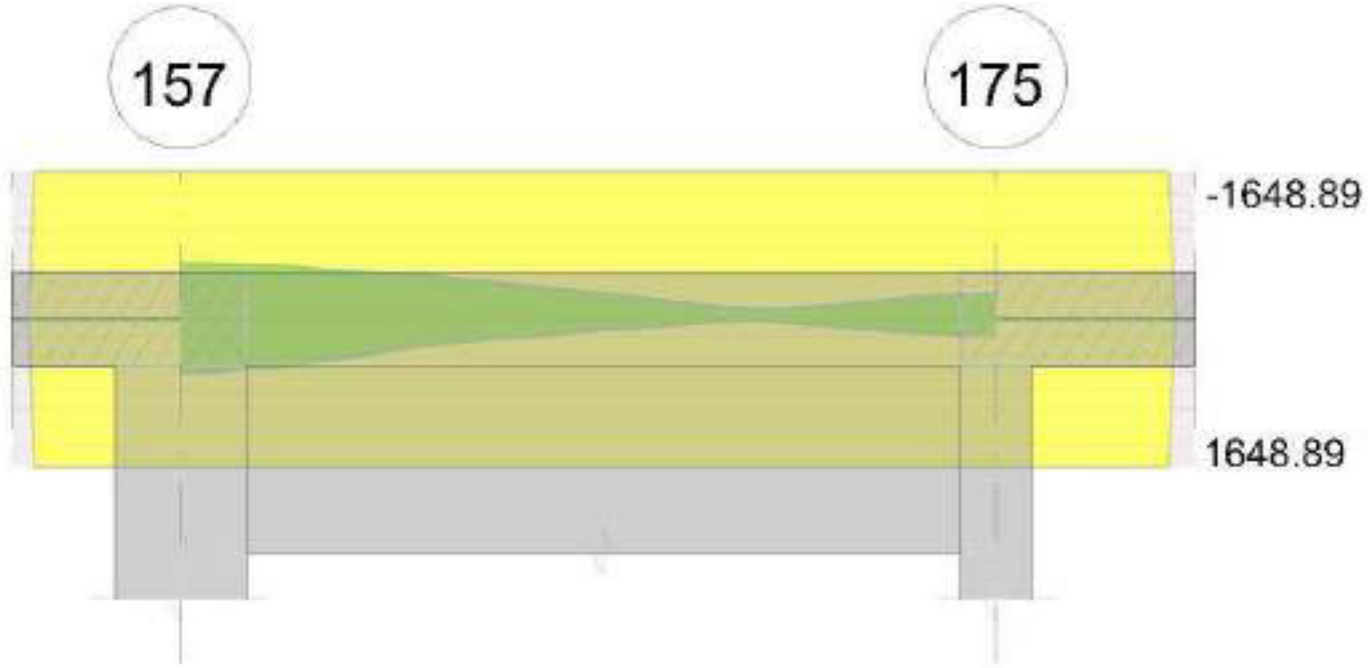


Diagramma verifica stato limite ultimo taglio

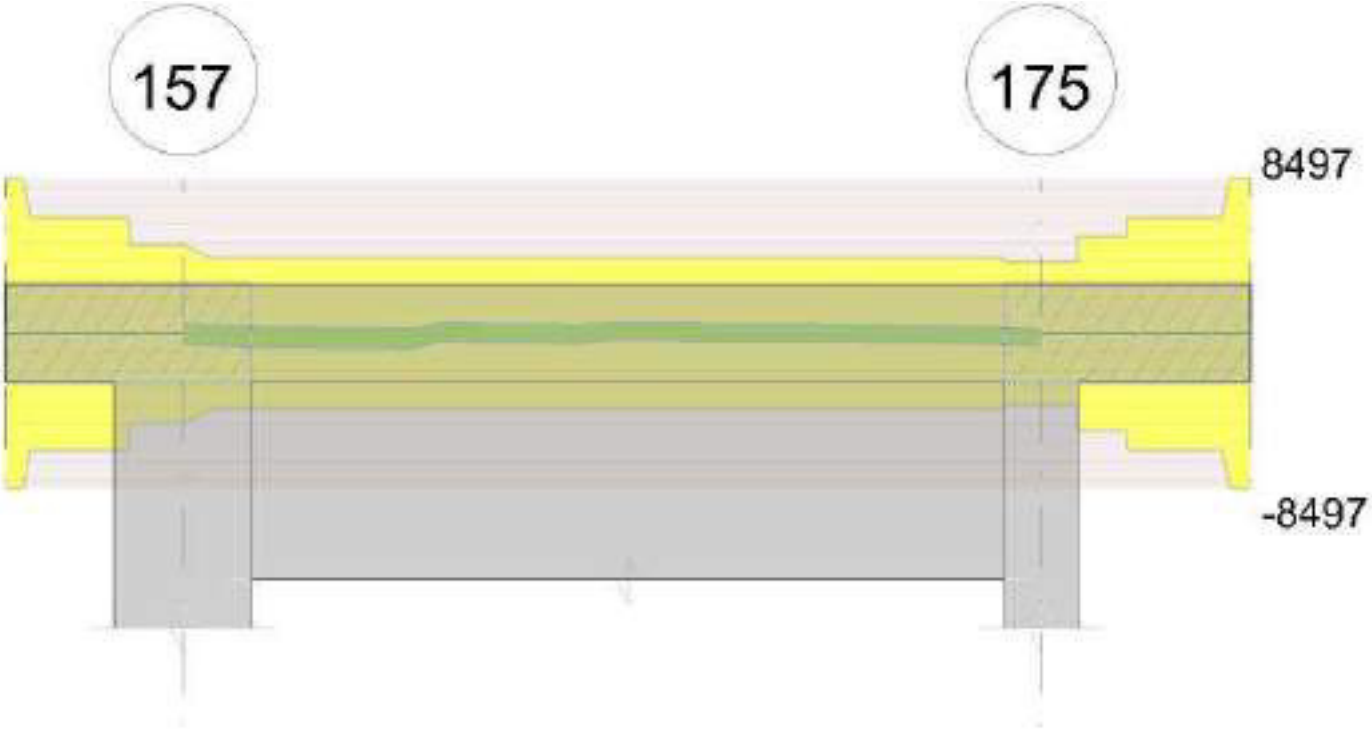
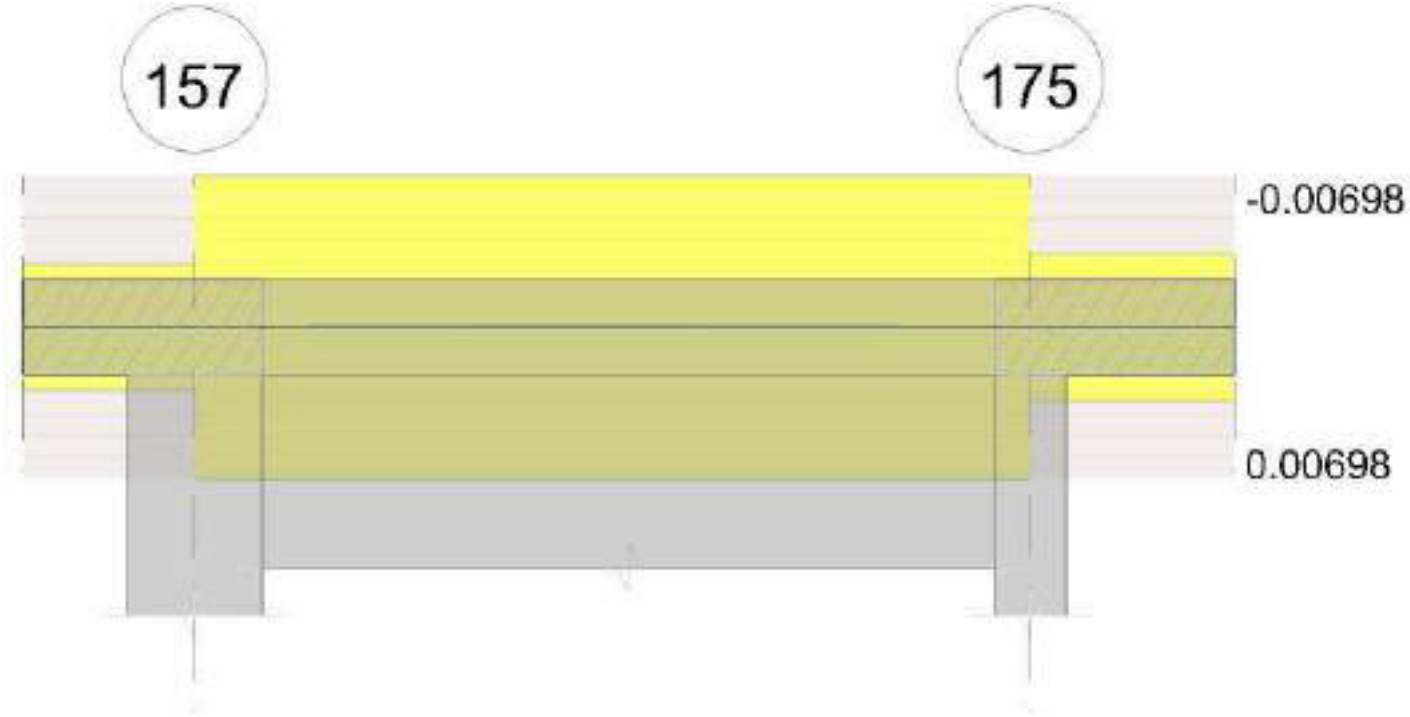


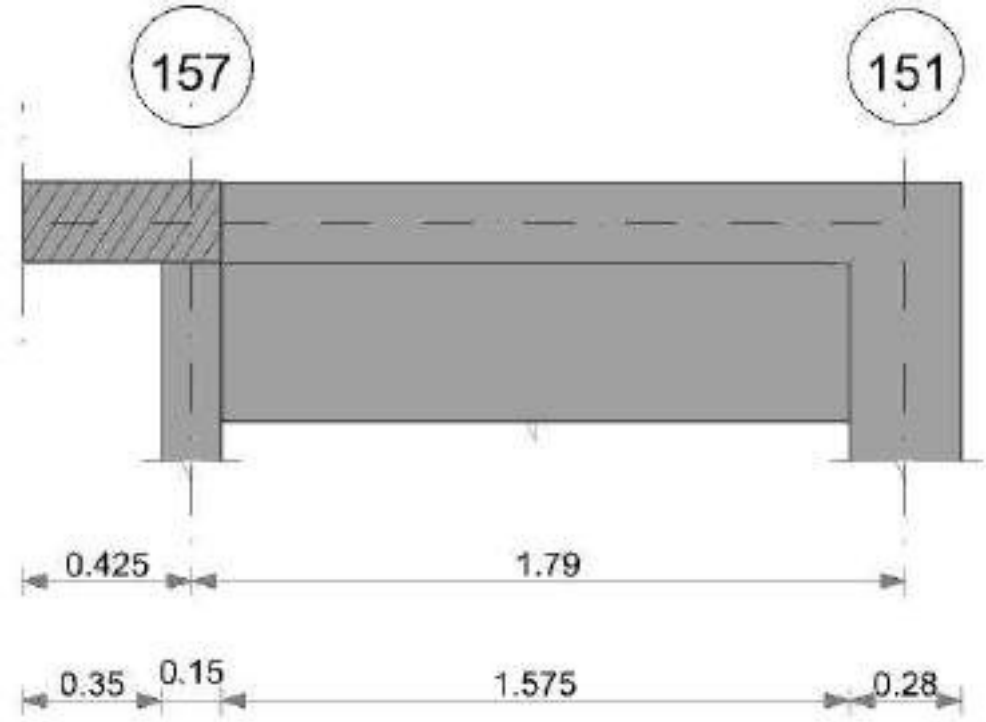
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 154-151

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

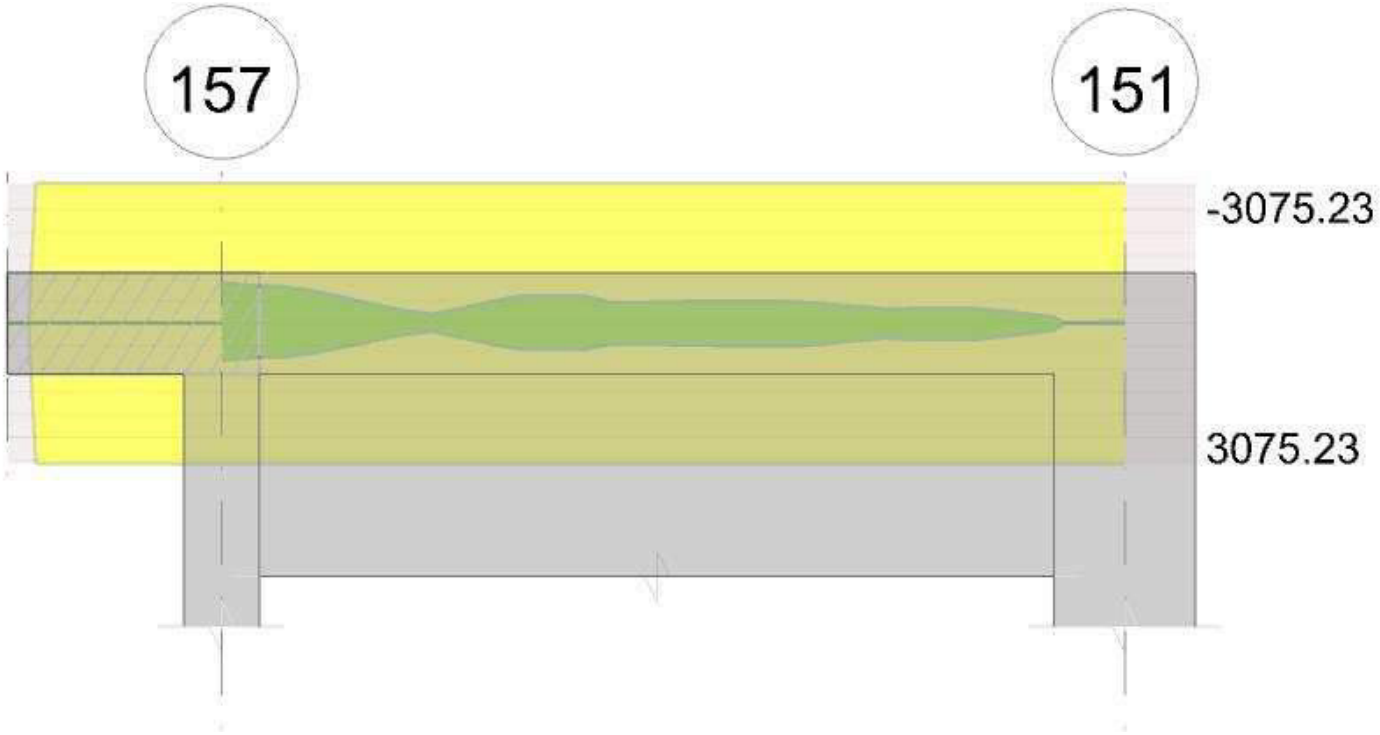


Diagramma verifica stato limite ultimo taglio

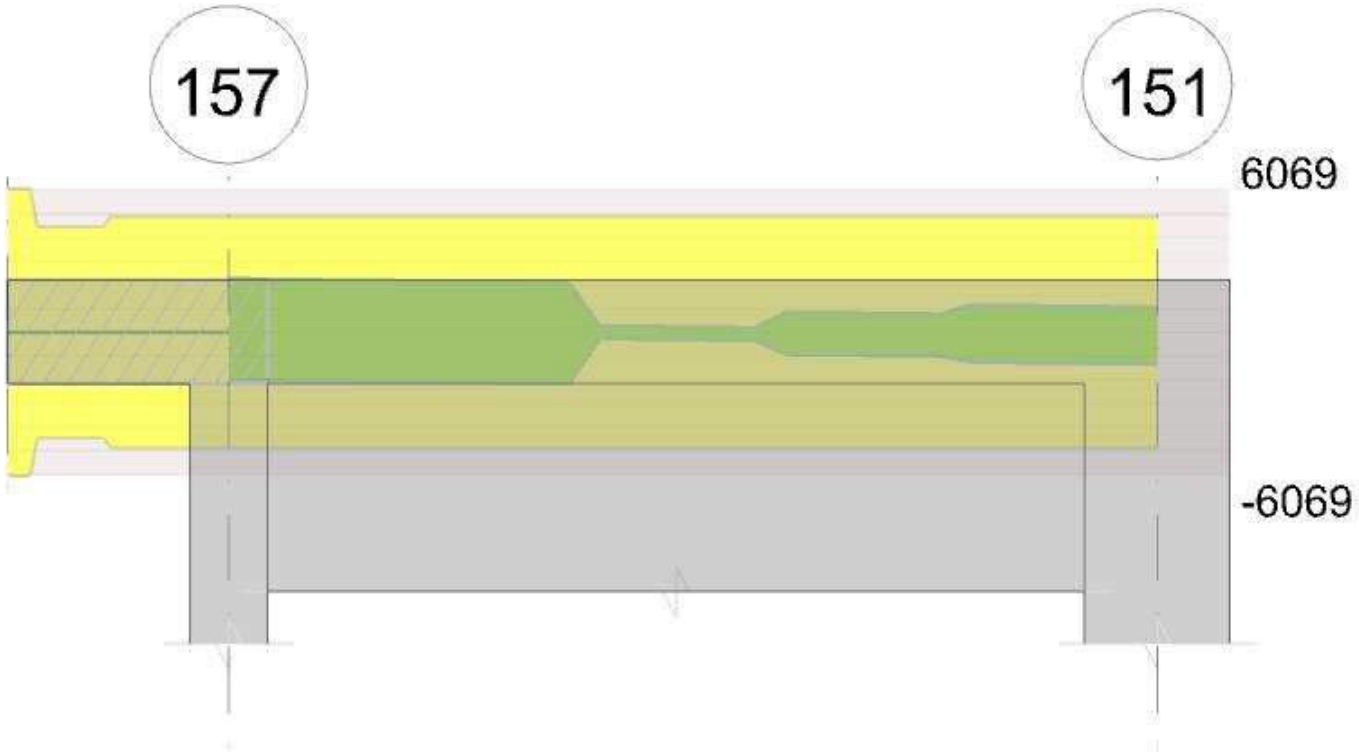
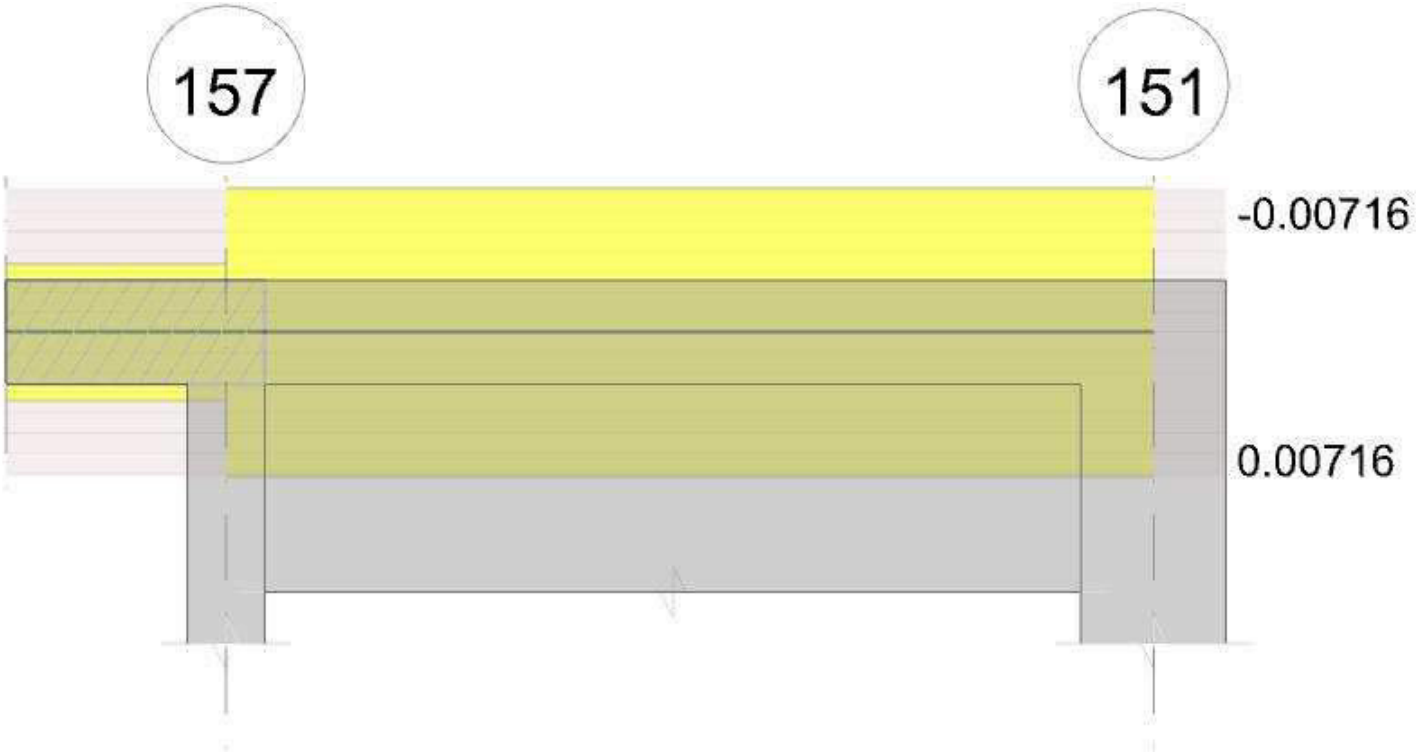


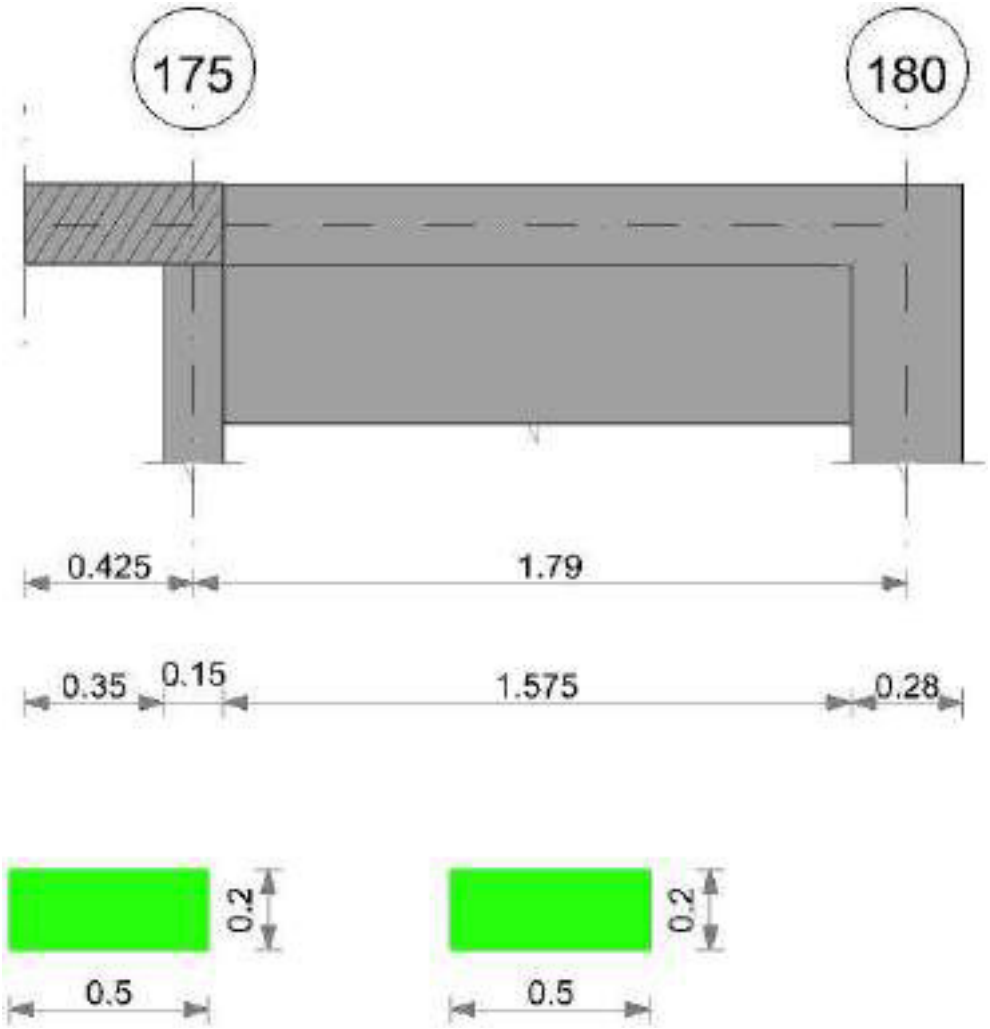
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

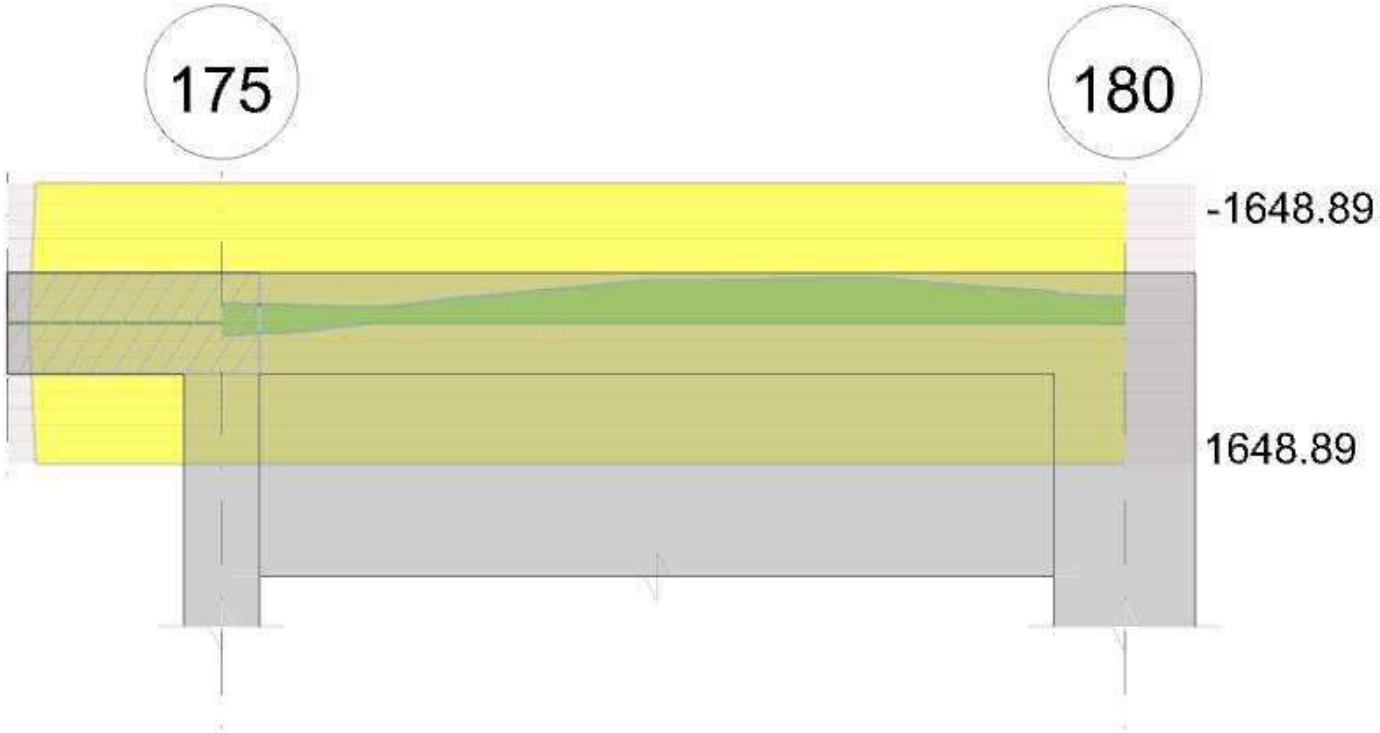


Diagramma verifica stato limite ultimo taglio

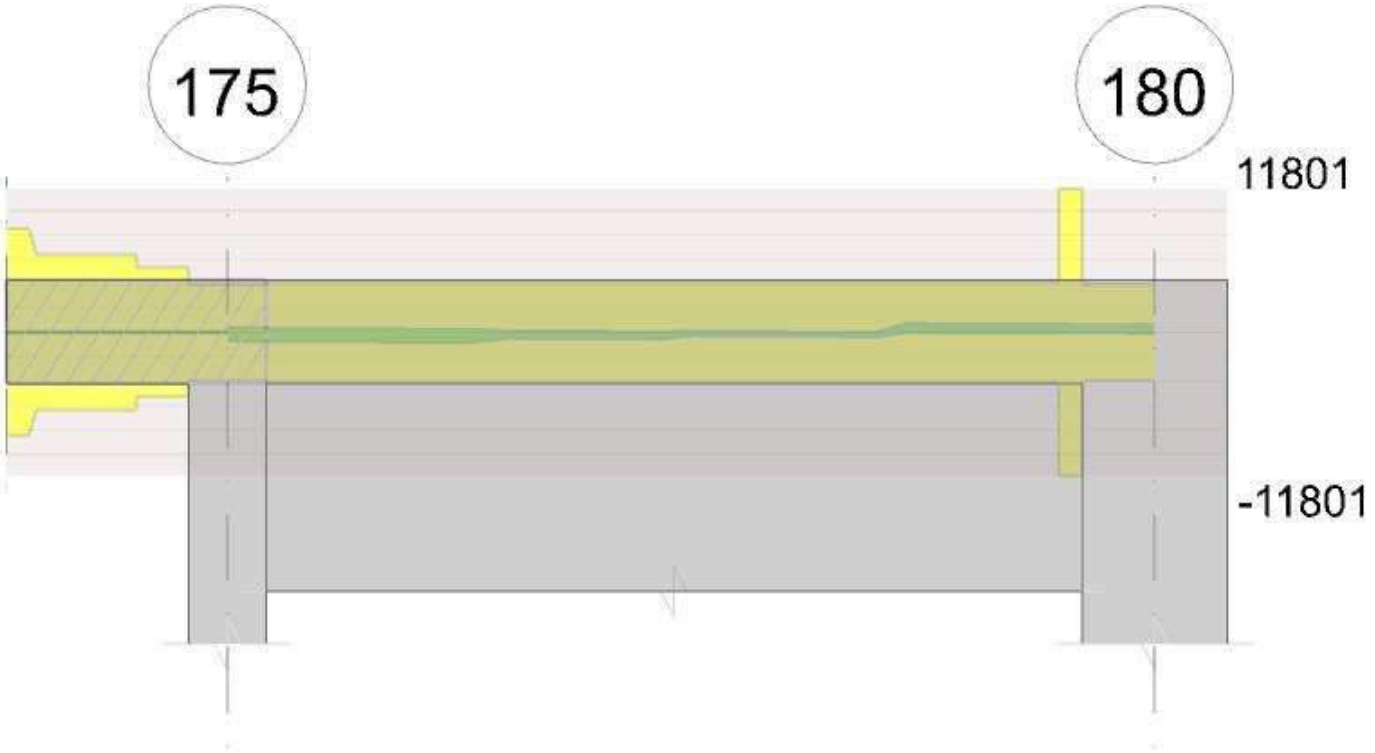
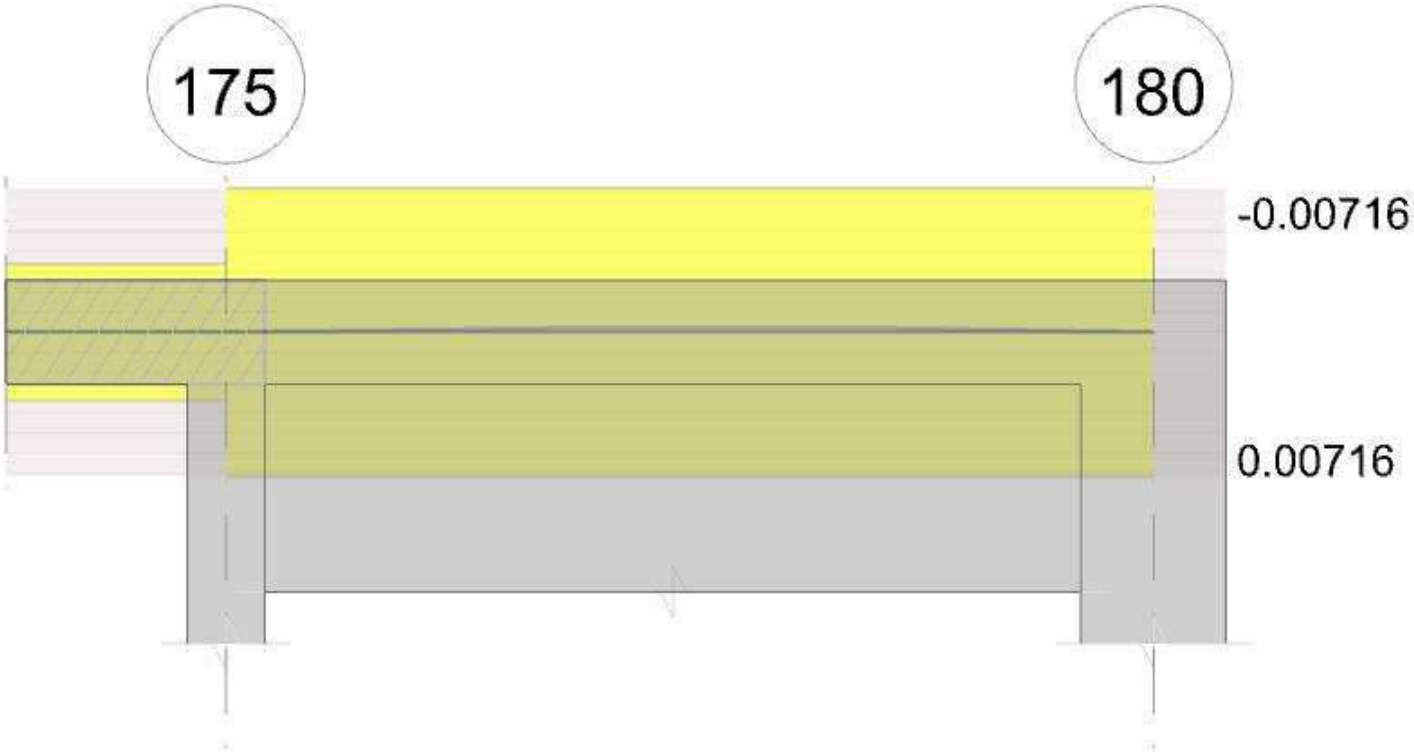


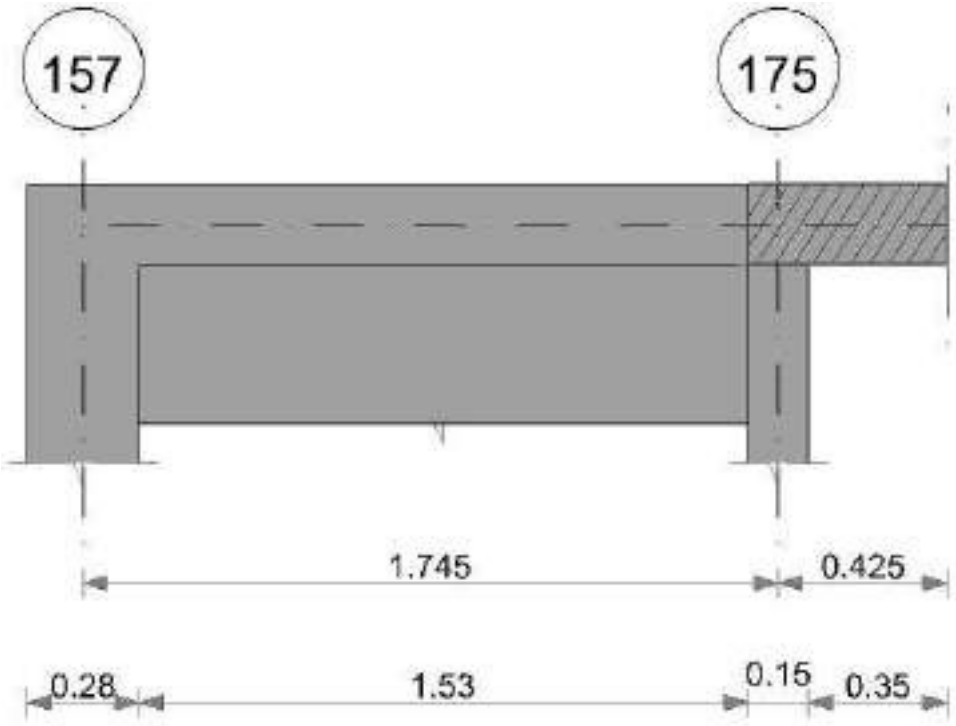
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Terzo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

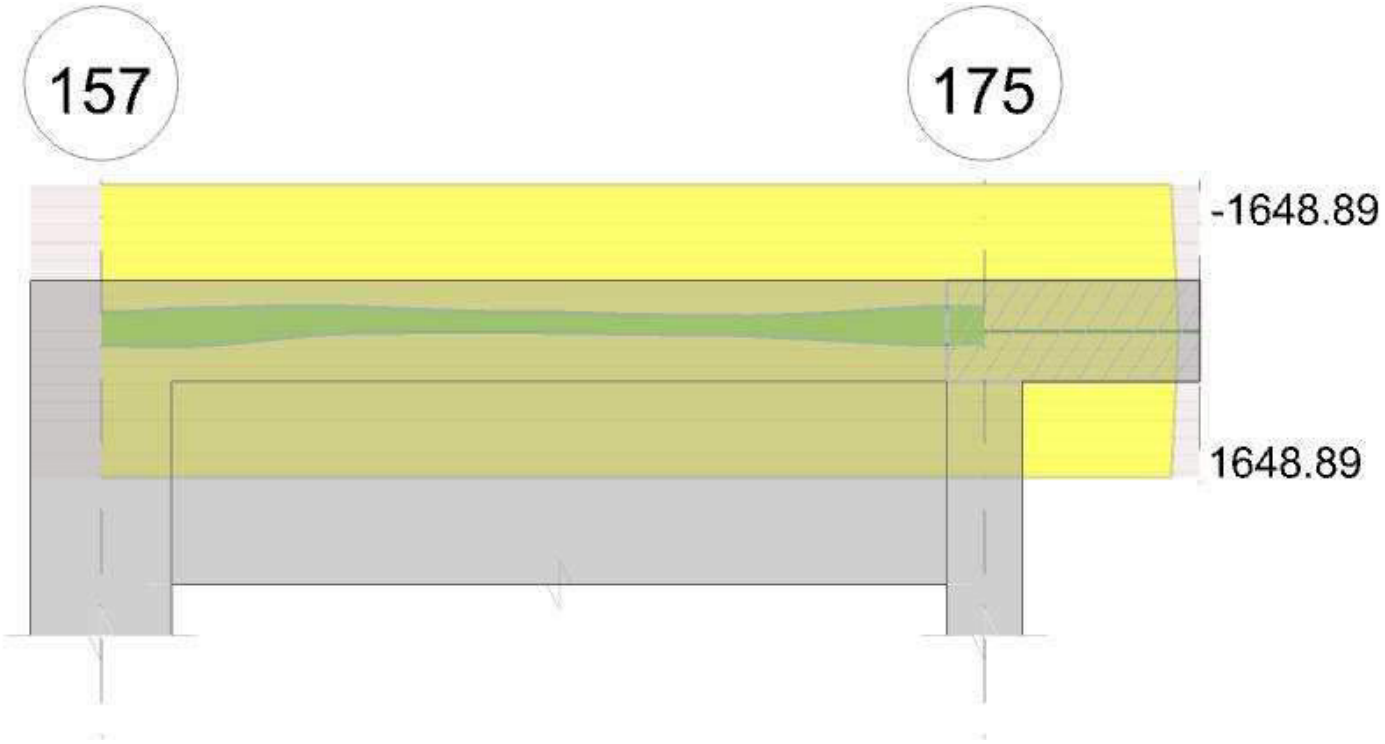


Diagramma verifica stato limite ultimo taglio

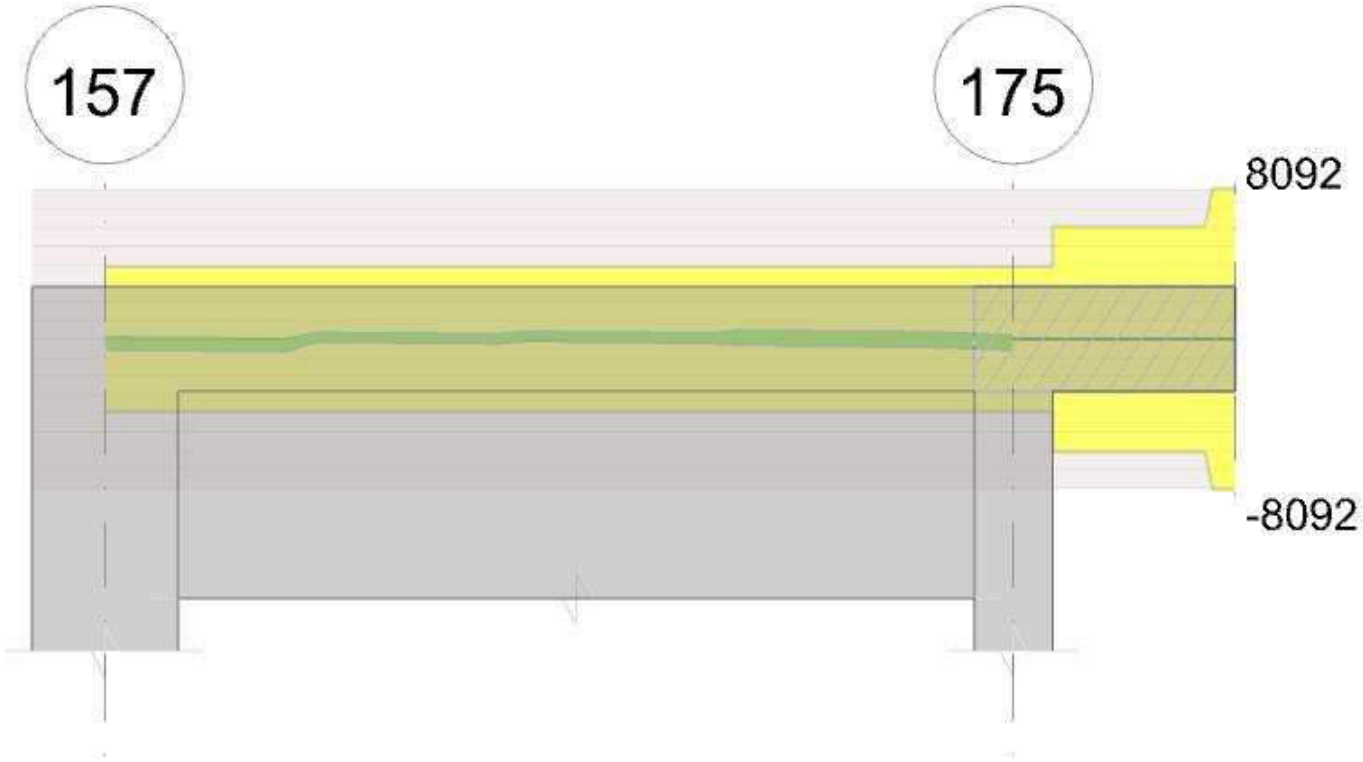
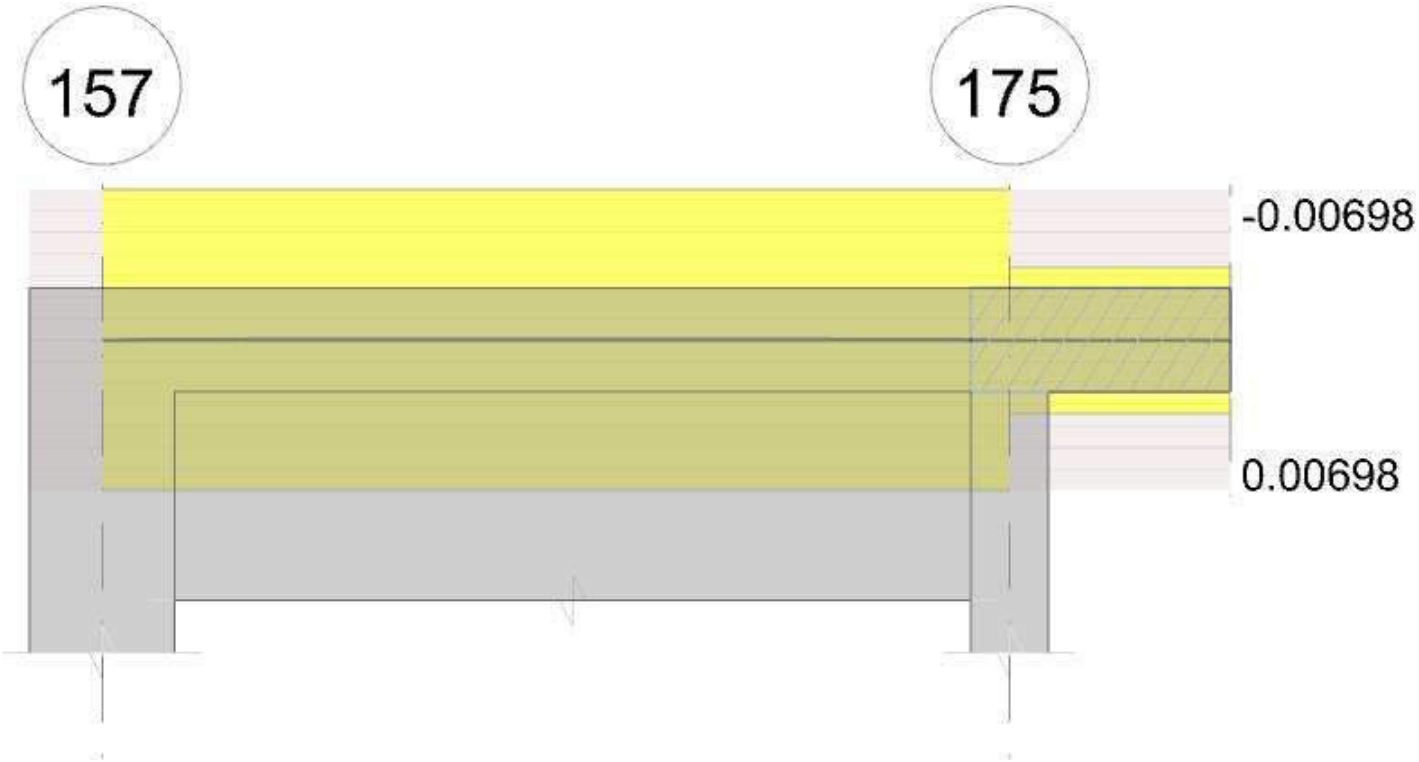


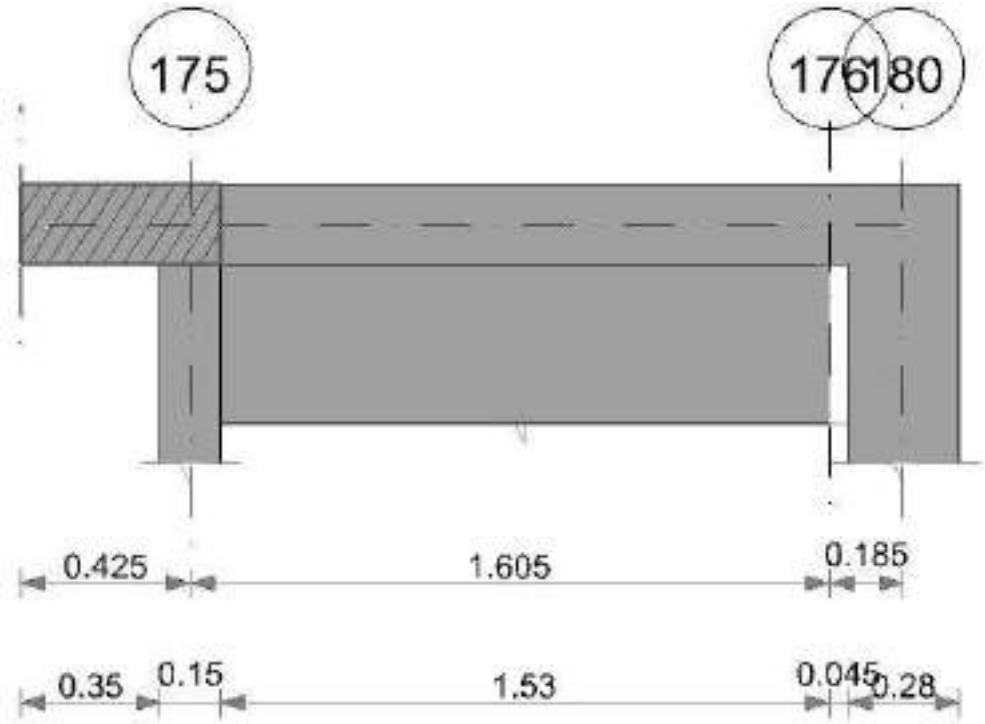
Diagramma verifica stato limite esercizio quasi permanente freccia

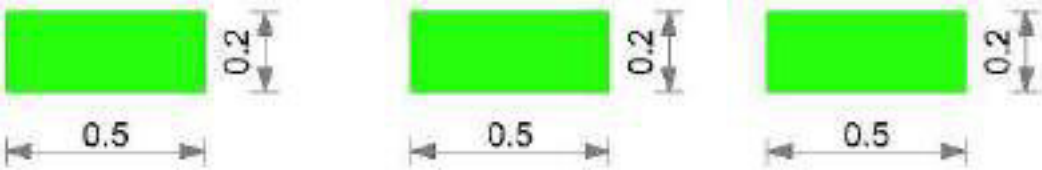


Output campate

Trave a "Terzo" 179-176

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

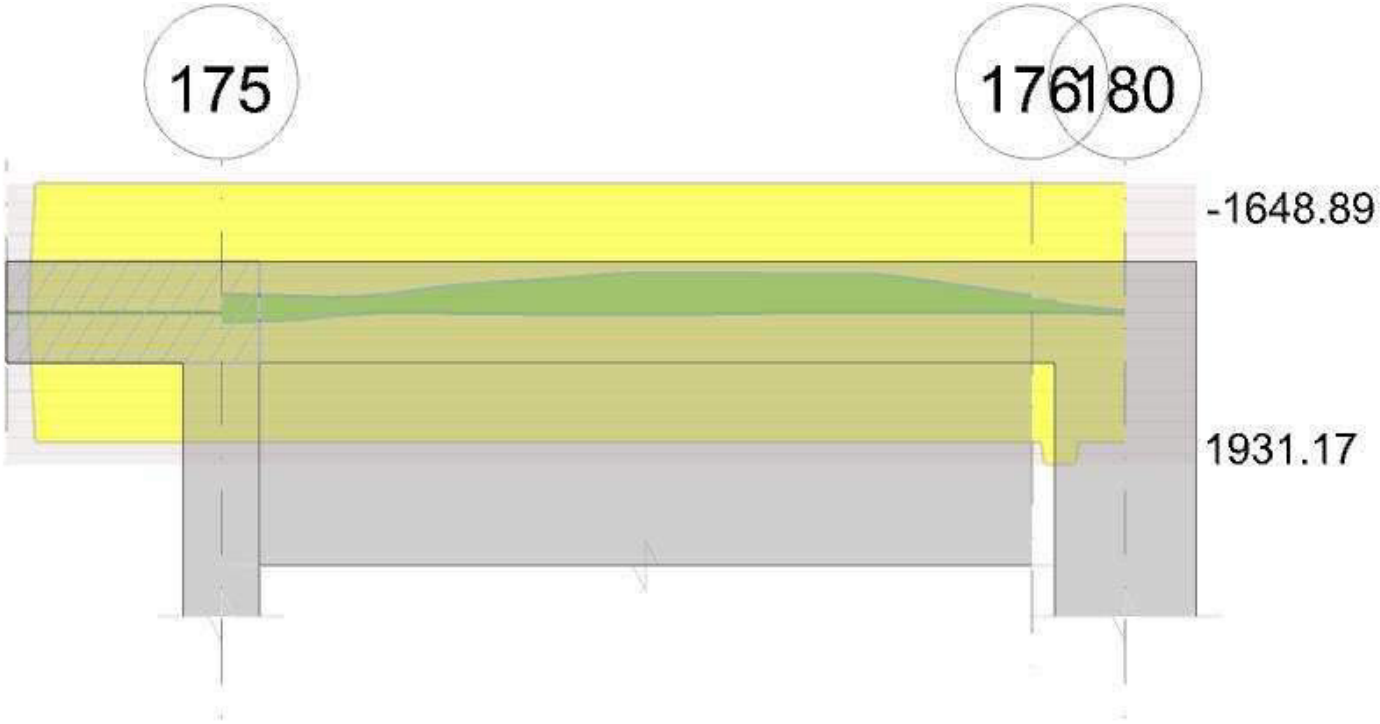


Diagramma verifica stato limite ultimo taglio

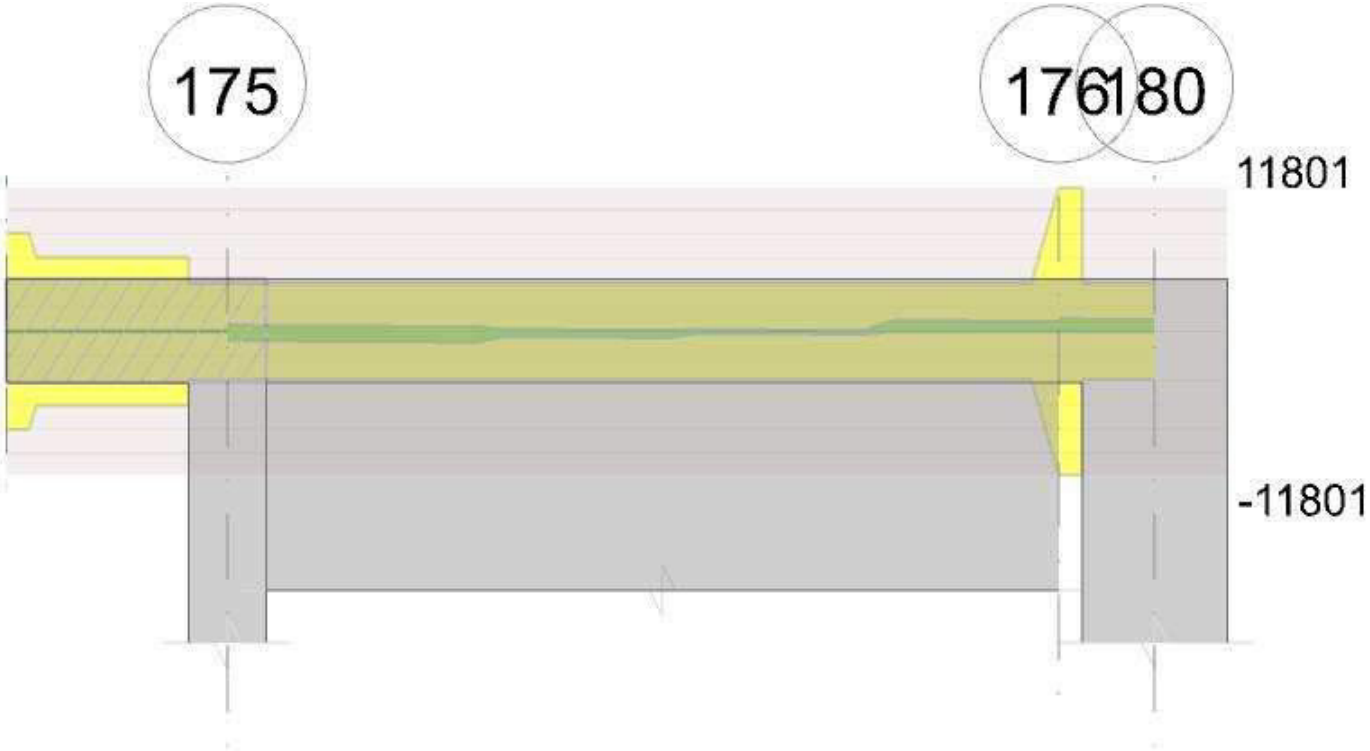
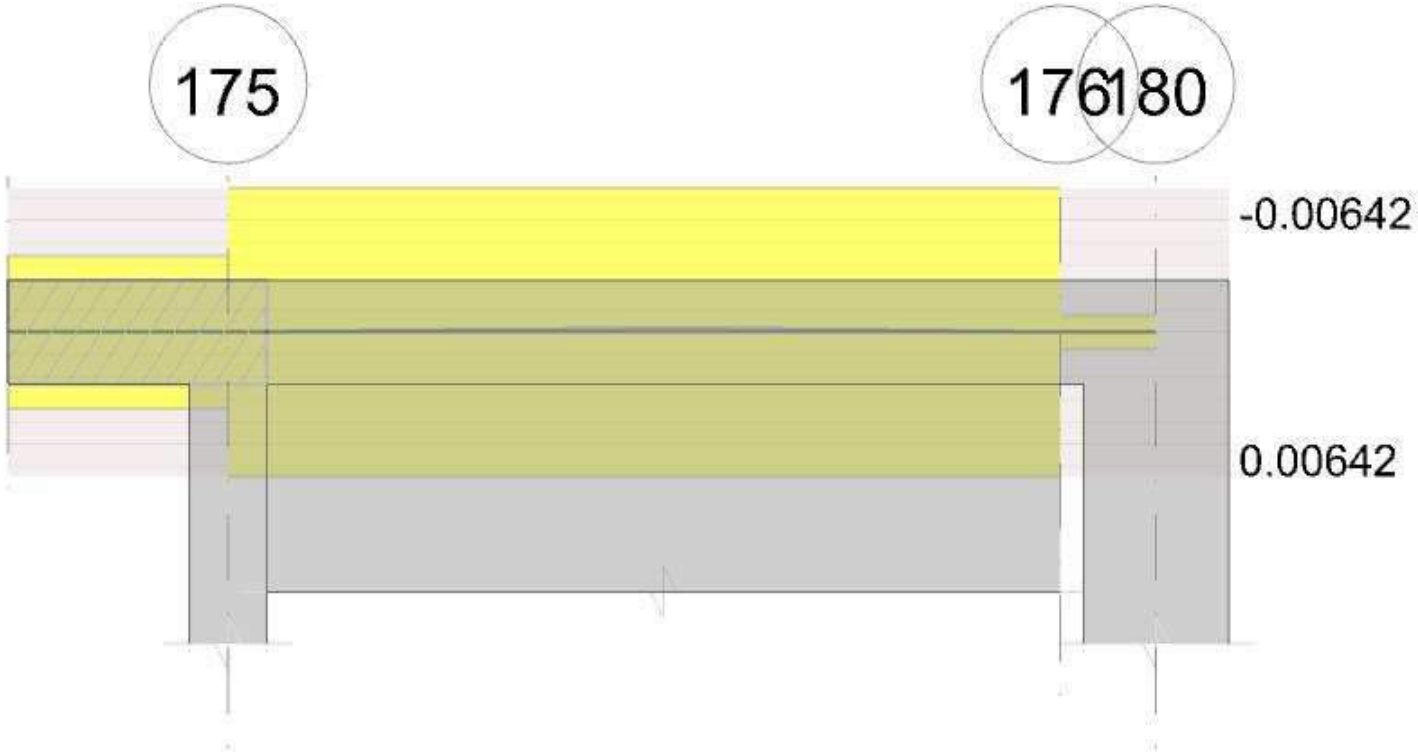


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 471

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-147.06	SLU 84	-147.06	-1931.17	0.242	13.13	Si
0.05	0.000308	0.05	0.000308	0.05	-53.86	SLU 1	0.23	1931.17	0.242	8376.15	-106.62	SLU 84	-147.06	-1931.17	0.242	13.13	Si
0.09	0.000308	0.05	0.000308	0.05							-64.65	SLU 84	-64.65	-1931.17	0.242	29.87	Si
0.19	0.000308	0.05	0.000308	0.05	14.99	SLU 83	14.99	1931.17	0.242	128.81							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-160.82	SLV 4	-160.82	-1648.89	0.269	10.25	Si
0.05	0.000308	0.05	0.000308	0.05							-118.24	SLV 4	-160.82	-1648.89	0.269	10.25	Si
0.09	0.000308	0.05	0.000308	0.05							-75.97	SLV 8	-75.97	-1648.89	0.269	21.71	Si
0.19	0.000308	0.05	0.000308	0.05	47.18	SLV 10	20.7	1648.89	0.269	79.66	-28.76	SLV 7	-28.76	-1648.89	0.269	57.33	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-119.25	SLD 4	-119.25	-1648.89	0.269	13.83	Si
0.05	0.000308	0.05	0.000308	0.05							-87.03	SLD 4	-119.25	-1648.89	0.269	13.83	Si
0.09	0.000308	0.05	0.000308	0.05							-54.49	SLD 8	-54.49	-1648.89	0.269	30.26	Si
0.19	0.000308	0.05	0.000308	0.05	25.48	SLD 10	16.36	1648.89	0.269	100.76	-7.06	SLD 7	-7.06	-1648.89	0.269	233.51	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	906	SLU 84	906	3906	23811	11801	11801	1	13.03	Si
0.05	0.0000223	0.000308	0	891	SLU 84	891	3906	23811	11801	11801	1	13.24	Si
0.05	0	0.000308	0	890	SLU 84	890	3906	23811	0	3906	1	4.39	Si
0.09	0	0.000308	0	876	SLU 84	876	3906	23811	0	3906	1	4.46	Si
0.19	0	0.000308	0	846	SLU 84	846	3906	23811	0	3906	1	4.62	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1001	SLV 2	1001	3906	23811	11801	11801	1	11.79	Si
0.05	0.0000223	0.000308	0	990	SLV 2	990	3906	23811	11801	11801	1	11.92	Si
0.05	0	0.000308	0	989	SLV 2	989	3906	23811	0	3906	1	3.95	Si
0.09	0	0.000308	0	978	SLV 2	978	3906	23811	0	3906	1	3.99	Si
0.19	0	0.000308	0	955	SLV 2	955	3906	23811	0	3906	1	4.09	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	743	SLD 2	743	3906	23811	11801	11801	1	15.89	Si
0.05	0.0000223	0.000308	0	731	SLD 2	731	3906	23811	11801	11801	1	16.14	Si
0.05	0	0.000308	0	730	SLD 2	730	3906	23811	0	3906	1	5.35	Si
0.09	0	0.000308	0	720	SLD 2	720	3906	23811	0	3906	1	5.43	Si
0.19	0	0.000308	0	696	SLD 2	696	3906	23811	0	3906	1	5.61	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-104.53	21	-104.53	29329	1494000	439932	36000000	-88.19	2	-88.19	24743	1120500			Si
0.05	-75.7	21	-104.53	29329	1494000	439932	36000000	-63.71	2	-88.19	24743	1120500			Si
0.09	-45.81	21	-45.81	12852	1494000	192781	36000000	-38.42	2	-38.42	10779	1120500			Si
0.19	10.78	20	10.78	3025	1494000	45377	36000000	9.21	2	9.21	2584	1120500			Si

Verifica di apertura delle fessure

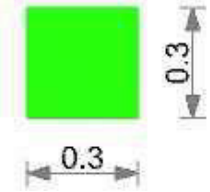
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

TRAVE PIANO RIALZATO

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x30	Rettangolare	0.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

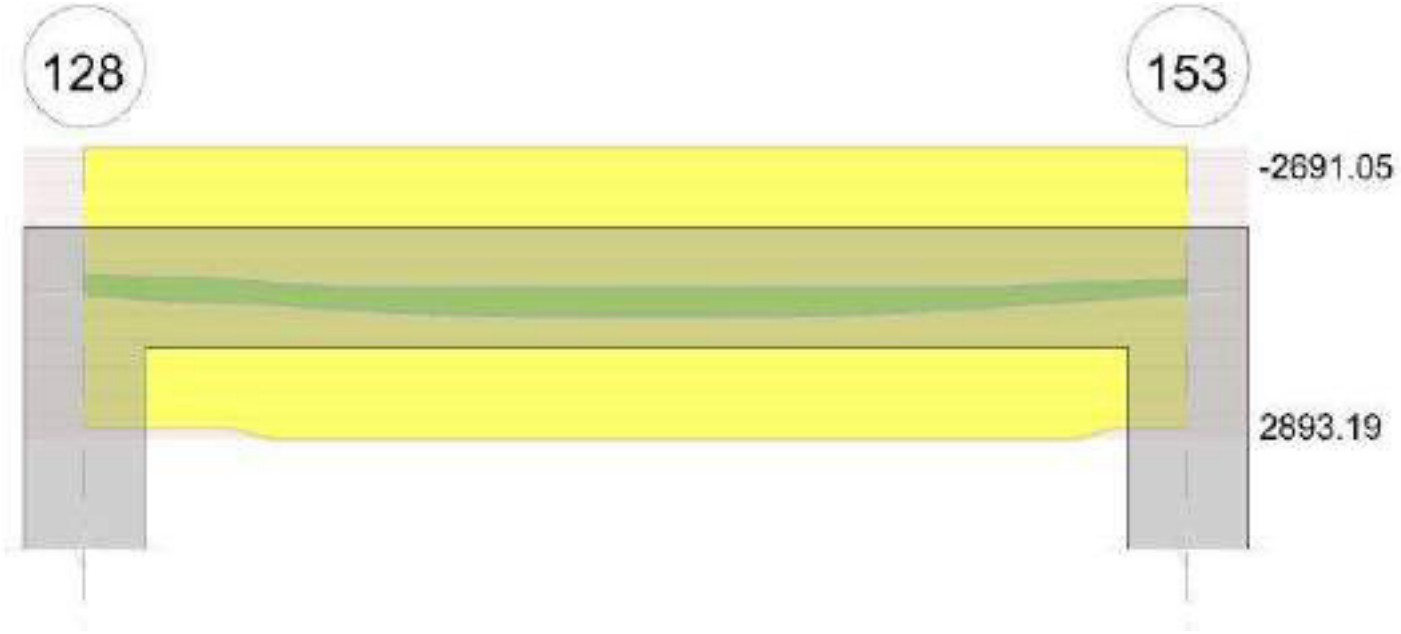


Diagramma verifica stato limite ultimo taglio

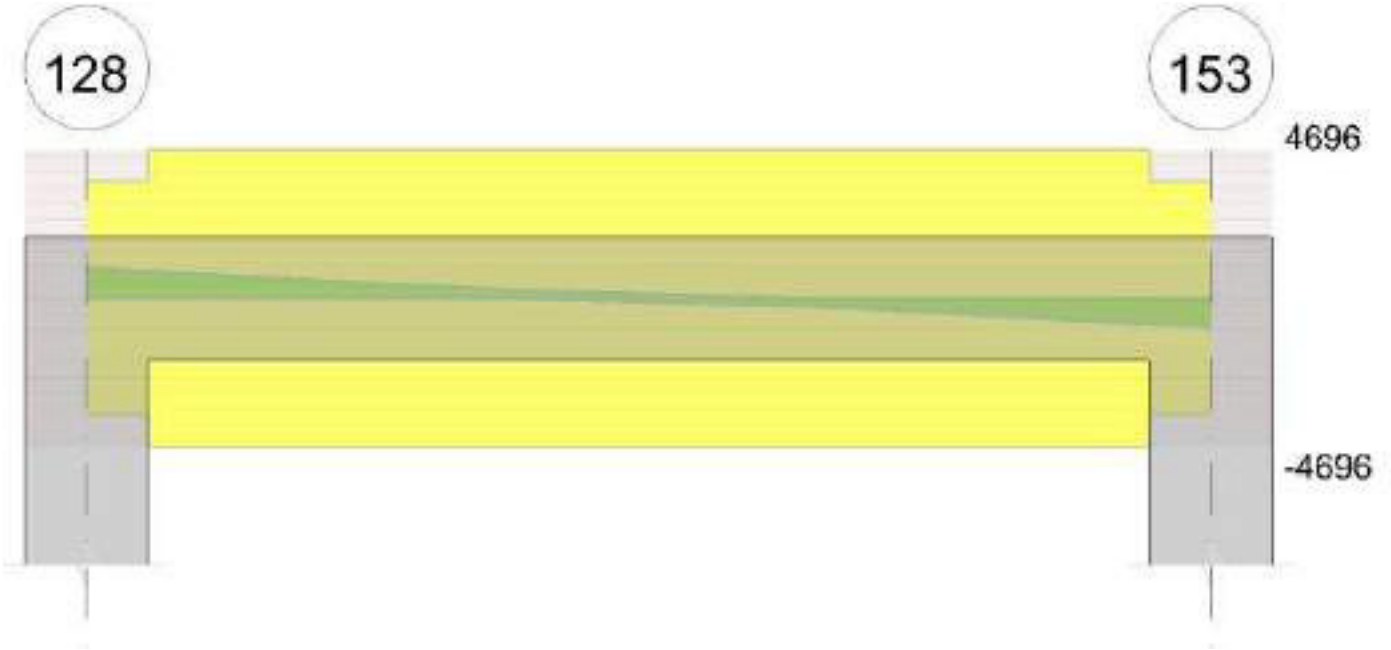
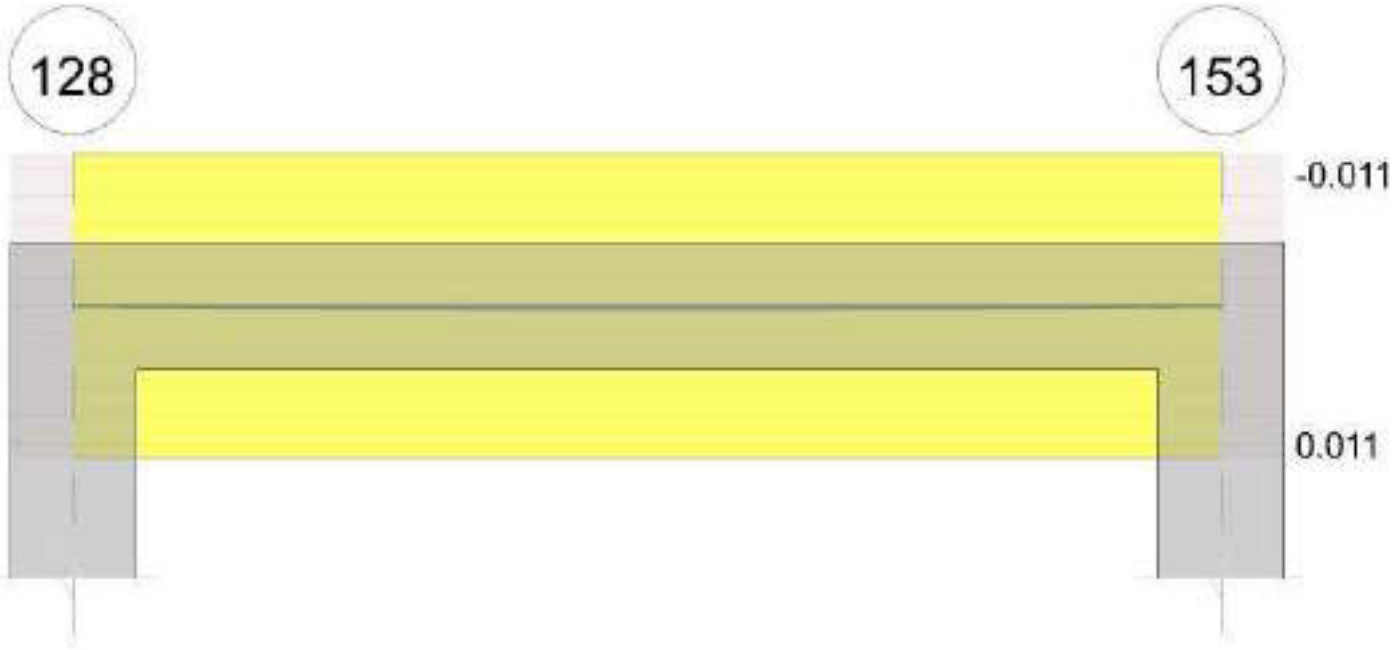


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 128 - 153, sezione R 30x30, asta 776

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-121.09	SLU 83	-59.15	-2893.19	0.177	48.92	Si
0.15	0.000308	0.05	0.000308	0.05	22.21	SLU 19	108.84	2893.19	0.177	26.58	-20.76	SLU 69	-20.76	-2893.19	0.177	139.37	Si
1.28	0.000308	0.05	0.000308	0.05	550.43	SLU 82	555.32	2893.19	0.177	5.21							Si
1.38	0.000308	0.05	0.000308	0.05	555.32	SLU 82	555.32	2893.19	0.177	5.21							Si
2.6	0.000308	0.05	0.000308	0.05	70.88	SLU 61	157.47	2893.19	0.177	18.37							Si
2.75	0.000308	0.05	0.000308	0.05							-59.27	SLU 83	-12.93	-2893.19	0.177	223.71	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	133.11	SLV 14	133.11	2691.05	0.25	20.22	-288.6	SLV 3	-241.54	-2691.05	0.25	11.14	Si
0.15	0.000308	0.05	0.000308	0.05	186.35	SLV 14	221.3	2691.05	0.25	12.16	-197.91	SLV 3	-197.91	-2691.05	0.25	13.6	Si
1.01	0.000308	0.05	0.000308	0.05	339.88	SLV 14	341.2	2691.05	0.25	7.89							Si
1.38	0.000308	0.05	0.000308	0.05	330.05	SLV 2	336.02	2691.05	0.25	8.01							Si
2.6	0.000308	0.05	0.000308	0.05	155.49	SLV 2	187.64	2691.05	0.25	14.34	-97.03	SLV 15	-97.03	-2691.05	0.25	27.73	Si
2.75	0.000308	0.05	0.000308	0.05	106.12	SLV 2	106.12	2691.05	0.25	25.36	-183.02	SLV 15	-137.9	-2691.05	0.25	19.51	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	12.41	SLD 14	12.41	2691.05	0.25	216.81	-167.9	SLD 3	-126.13	-2691.05	0.25	21.34	Si
0.15	0.000308	0.05	0.000308	0.05	76.37	SLD 14	119.31	2691.05	0.25	22.56	-87.93	SLD 3	-87.93	-2691.05	0.25	30.6	Si
1.28	0.000308	0.05	0.000308	0.05	303.53	SLD 2	303.53	2691.05	0.25	8.87							Si
1.38	0.000308	0.05	0.000308	0.05	302.59	SLD 2	303.53	2691.05	0.25	8.87							Si
2.6	0.000308	0.05	0.000308	0.05	83.22	SLD 2	123.13	2691.05	0.25	21.86	-24.76	SLD 15	-24.76	-2691.05	0.25	108.68	Si
2.75	0.000308	0.05	0.000308	0.05	23.37	SLD 2	23.37	2691.05	0.25	115.17	-100.27	SLD 15	-60.55	-2691.05	0.25	44.44	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	960	SLU 83	960	3700	23811	0	3700	1	3.86	Si
0.15	0.0000053	0.000308	0	858	SLU 83	858	3700	23811	4696	4696	1	5.48	Si
1.38	0.0000053	0.000308	0	22	SLU 83	22	3700	23811	4696	4696	1	208.92	Si
2.6	0.0000053	0.000308	0	-813	SLU 82	-813	-3700	-23811	-4696	-4696	1	5.78	Si
2.75	0	0.000308	0	-915	SLU 82	-915	-3700	-23811	0	-3700	1	4.04	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	636	SLV 3	636	3700	23811	0	3700	1	5.82	Si
0.15	0.0000053	0.000308	0	582	SLV 3	582	3700	23811	4696	4696	1	8.07	Si
1.38	0.0000053	0.000308	0	141	SLV 3	141	3700	23811	4696	4696	1	33.32	Si
1.38	0.0000053	0.000308	0	-112	SLV 14	-112	-3700	-23811	-4696	-4696	1	41.79	Si
2.6	0.0000053	0.000308	0	-553	SLV 14	-553	-3700	-23811	-4696	-4696	1	8.49	Si
2.75	0	0.000308	0	-607	SLV 14	-607	-3700	-23811	0	-3700	1	6.09	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	563	SLD 3	563	3700	23811	0	3700	1	6.57	Si
0.15	0.0000053	0.000308	0	509	SLD 3	509	3700	23811	4696	4696	1	9.22	Si
1.38	0.0000053	0.000308	0	68	SLD 3	68	3700	23811	4696	4696	1	68.61	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.38	0.0000053	0.000308	0	-40	SLD 14	-40	-3700	-23811	-4696	-4696	1	117.79	Si
2.6	0.0000053	0.000308	0	-481	SLD 14	-481	-3700	-23811	-4696	-4696	1	9.77	Si
2.75	0	0.000308	0	-535	SLD 14	-535	-3700	-23811	0	-3700	1	6.92	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-88.69	20	-43.64	8531	1494000	127964	36000000	-77.74	2	-41.4	8093	1120500			Si
0.15	9.82	19	76.06	14868	1494000	223024	36000000								Si
0.15	-14.67	6	-14.67	2868	1494000	43014	36000000	-12.46	1	-12.46	2436	1120500			Si
1.38	397.94	19	397.94	77788	1494000	1166823	36000000	282.08	2	282.08	55139	1120500			Si
2.6	49.73	19	112.32	21955	1494000	329330	36000000	29.23	2	74.93	14646	1120500			Si
2.75	-43.37	20	-7.67	1500	1494000	22498	36000000	-38.45	2	-6.49	1268	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00004	2	0.00003	2	9999	Si
1.38	0.00015	0.00008	0.00013	0.00008	0.00012	0.00008	0.00011	0.00008	0.0001	0.00008	0.00026	2	0.00021	2	9999	Si
2.6	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00004	2	0.00004	2	9999	Si

1.3 Verifiche pareti C.A.

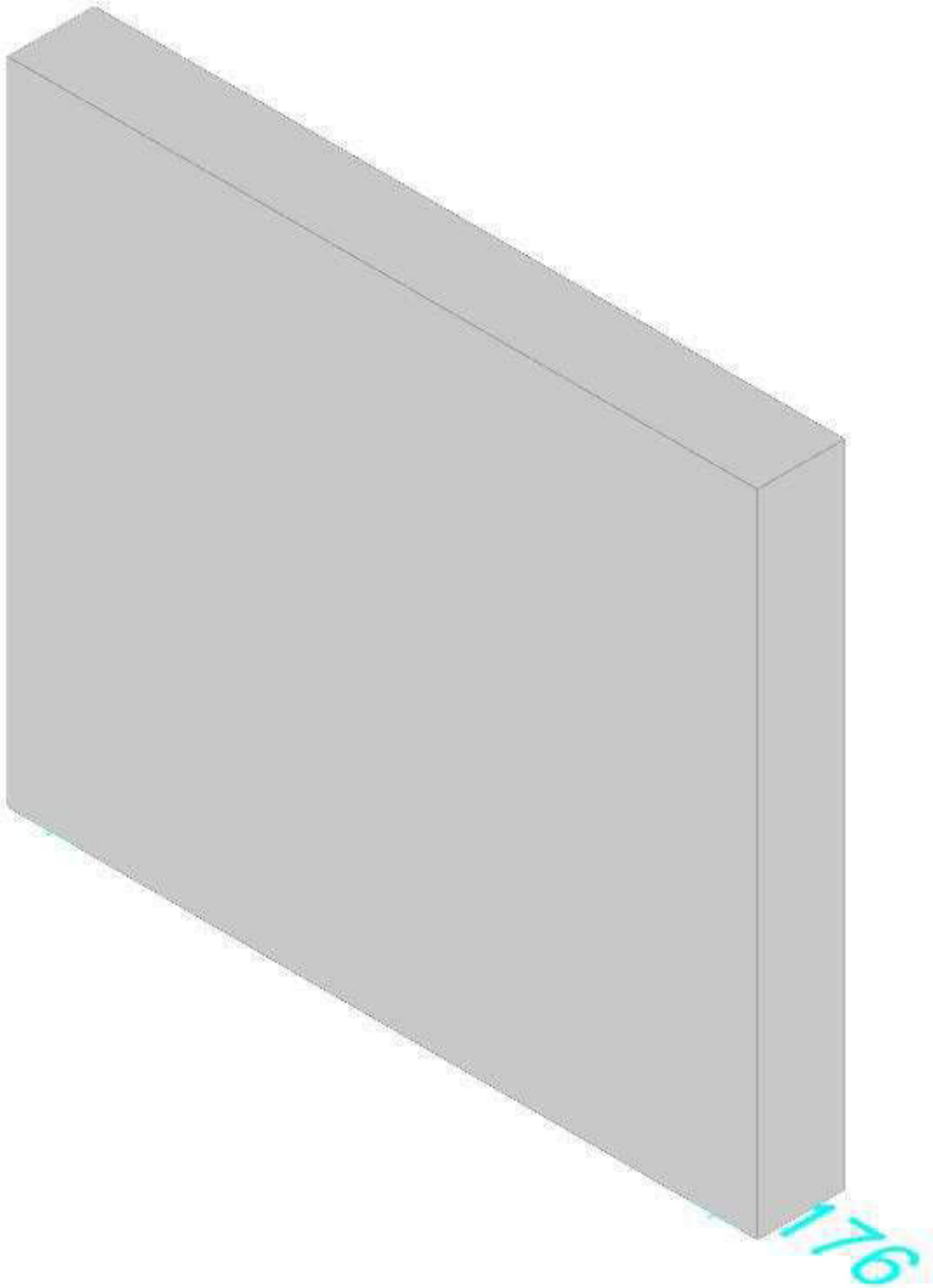
Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Descrizione breve: *nome sintetico assegnato al livello.*
Descrizione: *nome assegnato al livello.*
Quota: *quota superiore espressa nel sistema di riferimento assoluto. [m]*
Spessore: *spessore del livello. [m]*
Descrizione: *descrizione della sezione di verifica.*
Dir.: *direzione della sezione di verifica.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
As,sup: *area di acciaio efficace superiore. [m²]*
As,inf: *area di acciaio efficace inferiore. [m²]*
c,sup: *copriferro medio superiore. [m]*
c,inf: *copriferro medio inferiore. [m]*
Comb.: *combinazione di verifica.*
MEd: *momento agente. [daN*m]*
NEd: *sforzo normale agente, positivo se di trazione. [daN]*
MRd: *momento resistente. [daN*m]*
NRd: *sforzo normale resistente, positivo se di trazione. [daN]*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
d: *altezza utile. [m]*
bw: *minima larghezza anima. [m]*
Armatura a taglio: *necessità di armatura a taglio.*
Asw/s: *rapporto tra l'area dell'armatura trasversale e l'interasse tra due armature consecutive.*
VEd: *taglio agente. [daN]*
Vrd,c: *resistenza di calcolo a taglio per elementi privi di armature trasversali. [daN]*
Vrcd: *valore resistente di calcolo a taglio compressione del calcestruzzo d'anima. [daN]*
Vrsd: *valore resistente di calcolo a taglio trazione dell'armatura trasversale. [daN]*
VRd: *resistenza a taglio. [daN]*
cotg(ϑ): *cotangente dell'angolo dei puntoni rispetto all'asse.*
Asl: *area armatura longitudinale. [m²]*
Sezione fessurata: *sezione fessurata.*
σc: *tensione del calcestruzzo. [daN/m²]*
σc limite: *tensione limite del calcestruzzo. [daN/m²]*
Es/Ec: *coefficiente di omogenizzazione.*
σf: *tensione dell'armatura. [daN/m²]*
σf limite: *tensione limite dell'armatura. [daN/m²]*

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.48	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
619 Prosp.A	Verticale	0.5	0.2	0.000159	0.00025	0.036	0.036
149 Prosp.A	Verticale	0.875	0.2	0.000254	0.000401	0.036	0.036
618 Prosp.A	Verticale	0.5	0.2	0.000462	0.000462	0.036	0.036
613 Prosp.A	Verticale	0.5	0.2	0.00019	0.00029	0.036	0.036
143 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489
144 Prosp.A	Orizzontale	0.8731	0.2	0.001018	0.001018	0.0486	0.0486
145 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
617 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
614 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
616 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in

campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
619 Prosp.A	Verticale	SLV 16	170.05	8815	183.9	9533	1.0814	Si
149 Prosp.A	Verticale	SLV 16	170.05	8815	294.24	15254	1.7303	Si
618 Prosp.A	Verticale	SLV 16	-307.91	9114	-800.03	23681	2.5983	Si
149 Prosp.A	Verticale	SLV 7	-558.84	580	-2159.43	2240	3.8641	Si
613 Prosp.A	Verticale	SLV 3	324.98	-758	1358.36	-3170	4.1798	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
619 Prosp.A	Verticale	SLD 16	134.36	5988	206.12	9186	1.5341	Si
149 Prosp.A	Verticale	SLD 16	134.36	5988	329.79	14698	2.4545	Si
618 Prosp.A	Verticale	SLD 16	-188.92	6126	-753	24416	3.9859	Si
149 Prosp.A	Verticale	SLD 7	-428.74	379	-2183.56	1931	5.093	Si
613 Prosp.A	Verticale	SLD 3	330.48	-1683	1792.65	-9127	5.4244	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
619 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	3710	9786	136.74	4051	17954	0	4051	2.5	0.0001585	1.0919	Si
618 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	4030	9100	-306.99	4748	17954	0	4748	2.5	0.0004623	1.178	Si
148 Prosp.A	Orizzontale	0.151	0.816	Non necessaria	0	SLV 7	5978	-795	-88.51	8082	27143	0	8082	2.5	0.0009715	1.3519	Si
143 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 7	3718	-1352	434.85	5923	20011	0	5923	2.5	0.0006786	1.5931	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
149 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	4189	-247	-62.92	5797	19882	0	5797	2.5	0.0006786	1.3841	Si
619 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	2729	6844	104.53	4051	17954	0	4051	2.5	0.0001585	1.4843	Si
618 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	3033	6275	-183.29	4748	17954	0	4748	2.5	0.0004623	1.565	Si
148 Prosp.A	Orizzontale	0.151	0.816	Non necessaria	0	SLD 7	4193	-262	-56.46	8021	27081	0	8021	2.5	0.0009715	1.9129	Si
143 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	2805	-2674	361.66	6072	20166	0	6072	2.5	0.0006786	2.1651	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
613 Prosp.A	Verticale	SLE QP 2	333.83	-2363	No	-112686	1120500	15	9.9435	Si
143 Prosp.A	Orizzontale	SLE QP 2	346.95	-3788	No	-103528	1120500	15	10.8231	Si
144 Prosp.A	Orizzontale	SLE QP 2	505.4	-3544	No	-93521	1120500	15	11.9813	Si
613 Prosp.A	Verticale	SLE RA 20	356.59	-2533	No	-120447	1494000	15	12.4038	Si
145 Prosp.A	Orizzontale	SLE QP 2	568.61	-2949	No	-87579	1120500	15	12.7941	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

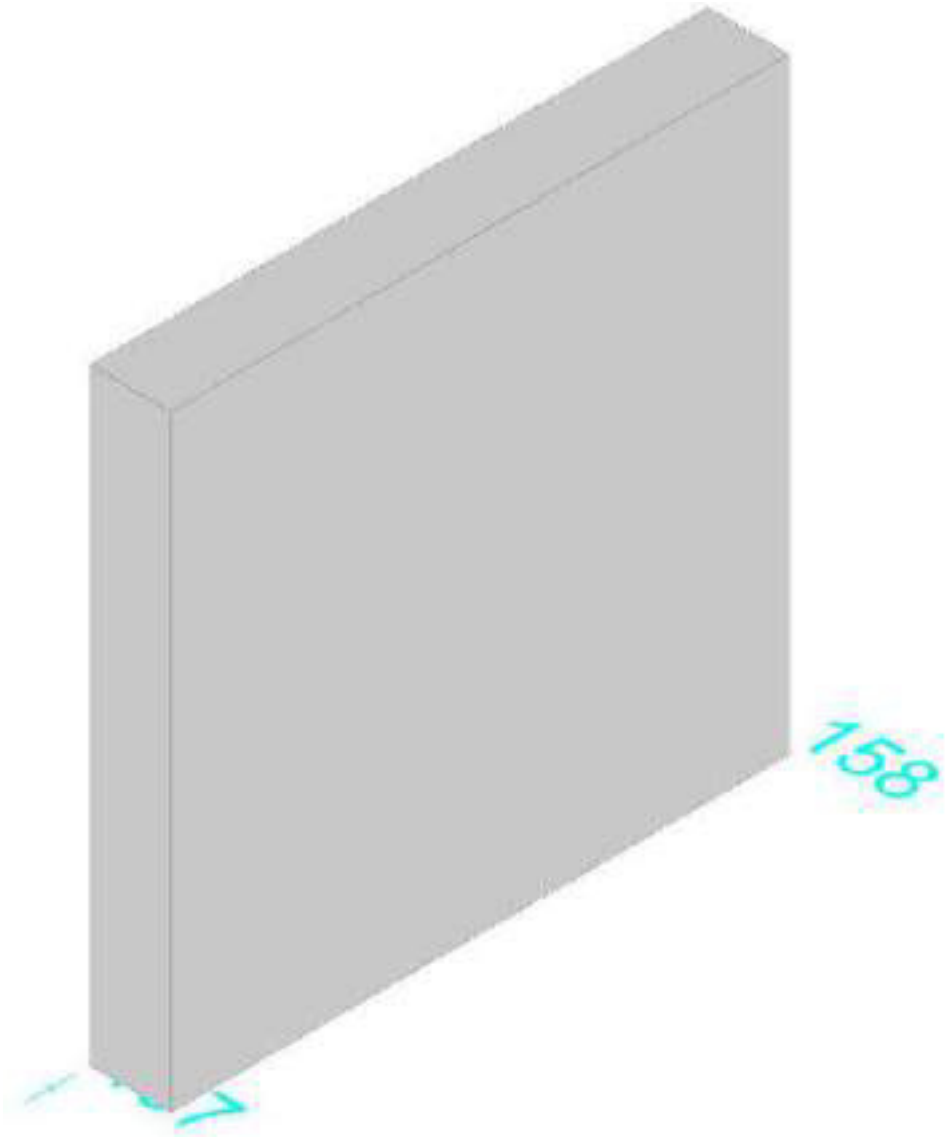
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
619 Prosp.A	Verticale	SLE RA 20	121.52	4217	No	935188	36000000	15	38.4949	Si
617 Prosp.A	Verticale	SLE RA 20	168.51	3343	No	830353	36000000	15	43.355	Si
618 Prosp.A	Verticale	SLE RA 14	-109.46	3925	No	786439	36000000	15	45.776	Si
614 Prosp.A	Verticale	SLE RA 20	-143.82	2801	No	701981	36000000	15	51.2834	Si
616 Prosp.A	Verticale	SLE RA 20	-61.39	3729	No	624484	36000000	15	57.6476	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.48	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
548 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
137 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
515 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
532 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
139 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
100 Prosp.A	Orizzontale	0.8325	0.2	0.001527	0.001527	0.0486	0.0486
49 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
39 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
122 Prosp.A	Verticale	1	0.2	0.001099	0.001099	0.036	0.036

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
548 Prosp.A	Verticale	SLV 11	202.46	-9720	2686.57	-128985	13.2697	Si
137 Prosp.A	Orizzontale	SLV 2	381.15	-115	5114.06	-1542	13.4174	Si
515 Prosp.A	Verticale	SLV 11	-229.44	-8791	-3127.51	-119828	13.6311	Si
532 Prosp.A	Verticale	SLV 2	37.56	2553	529.34	35984	14.0937	Si
139 Prosp.A	Orizzontale	SLV 2	360.58	-135	5815.34	-2174	16.1277	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
548 Prosp.A	Verticale	SLD 11	171.78	-7891	2770.08	-127249	16.1257	Si
137 Prosp.A	Orizzontale	SLD 2	294.81	-641	5790.54	-12593	19.6418	Si
139 Prosp.A	Orizzontale	SLD 4	250.46	444	5084.92	9009	20.3019	Si
515 Prosp.A	Verticale	SLD 7	114.43	-6289	2440.41	-134111	21.3264	Si
515 Prosp.A	Verticale	SLD 11	-120	-5504	-2773.01	-127191	23.1093	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
137 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	1801	-5486	-134.09	8849	28243	0	8849	2.5	0.0010179	4.9131	Si
139 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLV 2	-1580	82	352.95	9653	33280	0	9653	2.5	0.001131	6.1097	Si
515 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 2	-785	-3563	81.07	5466	18407	0	5466	2.5	0.0005493	6.9665	Si
118 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	948	-3978	-90.26	8678	28066	0	8678	2.5	0.0010179	9.1505	Si
137 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 2	-907	-3231	56.24	9280	31830	0	9280	2.5	0.0009887	10.2353	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
137 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	1274	-4797	-92.72	8771	28162	0	8771	2.5	0.0010179	6.8868	Si
139 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 2	-1140	44	249.65	9653	33280	0	9653	2.5	0.001131	8.4684	Si
515 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 2	-535	-4313	45.87	5559	18502	0	5559	2.5	0.0005493	10.3852	Si
118 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	718	-3535	-69.07	8628	28014	0	8628	2.5	0.0010179	12.0173	Si
548 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 3	461	-7049	81.1	5895	18851	0	5895	2.5	0.0005493	12.7942	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
548 Prosp.A	Verticale	SLE QP 2	144.16	-6471	No	-91523	1120500	15	12.2429	Si
548 Prosp.A	Verticale	SLE RA 20	154.06	-7051	No	-98974	1494000	15	15.0949	Si
515 Prosp.A	Verticale	SLE QP 2	99.67	-5435	No	-71527	1120500	15	15.6655	Si
137 Prosp.A	Orizzontale	SLE QP 2	262.12	-5264	No	-67944	1120500	15	16.4915	Si
515 Prosp.A	Verticale	SLE QP 1	-97.9	-4234	No	-60773	1120500	15	18.4374	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

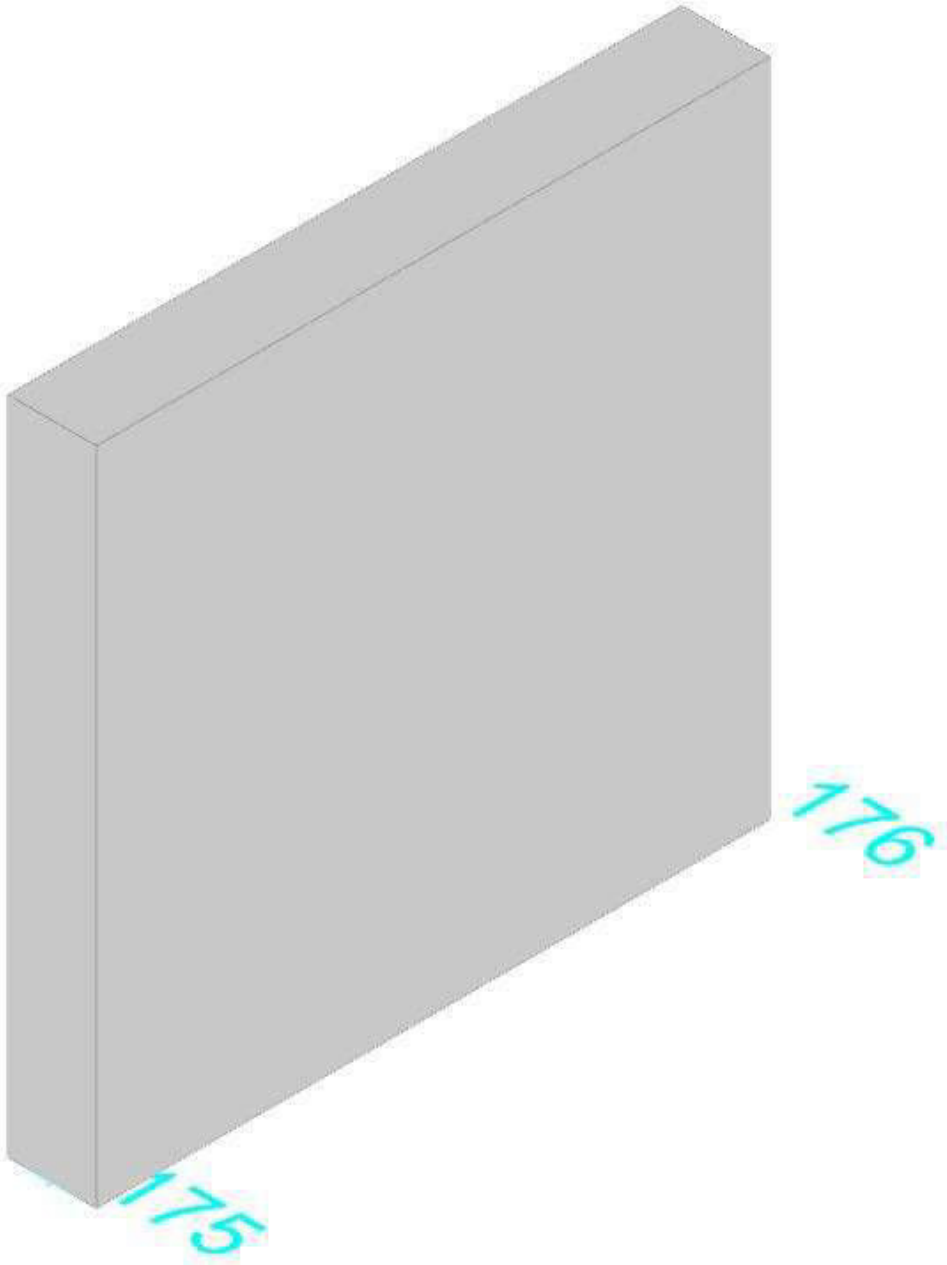
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
100 Prosp.A	Orizzontale	SLE RA 2	-34.67	-4458	No	-274984	36000000	15	130.9167	Si
49 Prosp.A	Orizzontale	SLE RA 2	46.11	-4683	No	-252877	36000000	15	142.3618	Si
39 Prosp.A	Orizzontale	SLE RA 1	44.87	-4021	No	-251069	36000000	15	143.3867	Si
139 Prosp.A	Orizzontale	SLE RA 21	223.2	197	No	242170	36000000	15	148.6559	Si
122 Prosp.A	Verticale	SLE RA 20	156.99	786	No	238633	36000000	15	150.8594	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.48	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
123 Prosp.A	Verticale	1	0.2	0.001099	0.001099	0.036	0.036
549 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
142 Prosp.A	Verticale	0.875	0.2	0.000989	0.000989	0.036	0.036
101 Prosp.A	Verticale	0.875	0.2	0.000989	0.000989	0.036	0.036
142 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
123 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
64 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
99 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
140 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
101 Prosp.A	Orizzontale	0.8325	0.2	0.001527	0.001527	0.0486	0.0486

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
123 Prosp.A	Verticale	SLV 7	98.57	4941	1307.41	65542	13.2638	Si
549 Prosp.A	Verticale	SLV 12	-9.06	2707	-136.73	40849	15.088	Si
549 Prosp.A	Verticale	SLV 8	50.55	-7021	1122.05	-155865	22.1985	Si
142 Prosp.A	Verticale	SLU 83	-16.74	3065	-400.35	73299	23.9133	Si
101 Prosp.A	Verticale	SLV 11	104.18	1538	2603.73	38446	24.9931	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
549 Prosp.A	Verticale	SLD 8	-5.4	2241	-99.75	41427	18.489	Si
549 Prosp.A	Verticale	SLD 7	38.23	-5841	1020.18	-155865	26.6827	Si
142 Prosp.A	Verticale	SLD 12	-9.35	2467	-277	73045	29.6104	Si
142 Prosp.A	Orizzontale	SLD 12	150.6	-6677	4661.24	-206654	30.9504	Si
101 Prosp.A	Verticale	SLD 11	77.3	1193	2541.95	39229	32.884	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
549 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 15	404	596	-0.52	5028	17954	0	5028	2.5	0.0005493	12.4569	Si
142 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 11	669	2223	57.64	8882	31419	0	8882	2.5	0.0009887	13.2725	Si
142 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 12	-665	-5962	185.99	8903	28299	0	8903	2.5	0.0010179	13.3827	Si
123 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLV 11	714	4476	87.68	10056	35908	0	10056	2.5	0.0010985	14.0842	Si
101 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 3	382	451	16.8	8882	31419	0	8882	2.5	0.0009887	23.2266	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
142 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 11	533	1599	36.28	8882	31419	0	8882	2.5	0.0009887	16.6533	Si
549 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 15	298	500	-2.08	5028	17954	0	5028	2.5	0.0005493	16.8551	Si
142 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 12	-525	-5928	141.03	8900	28295	0	8900	2.5	0.0010179	16.9587	Si
123 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 11	583	3419	59.25	10056	35908	0	10056	2.5	0.0010985	17.2465	Si
101 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 3	290	415	31.13	8882	31419	0	8882	2.5	0.0009887	30.604	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
142 Prosp.A	Orizzontale	SLE QP 2	116.32	-6468	No	-51123	1120500	15	21.9177	Si
549 Prosp.A	Verticale	SLE QP 2	28.1	-4226	No	-43297	1120500	15	25.8793	Si
123 Prosp.A	Orizzontale	SLE QP 2	80.15	-5863	No	-42360	1120500	15	26.4519	Si
142 Prosp.A	Orizzontale	SLE RA 20	124.34	-7183	No	-56009	1494000	15	26.6741	Si
64 Prosp.A	Orizzontale	SLE QP 2	-90.56	-4953	No	-39380	1120500	15	28.4533	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

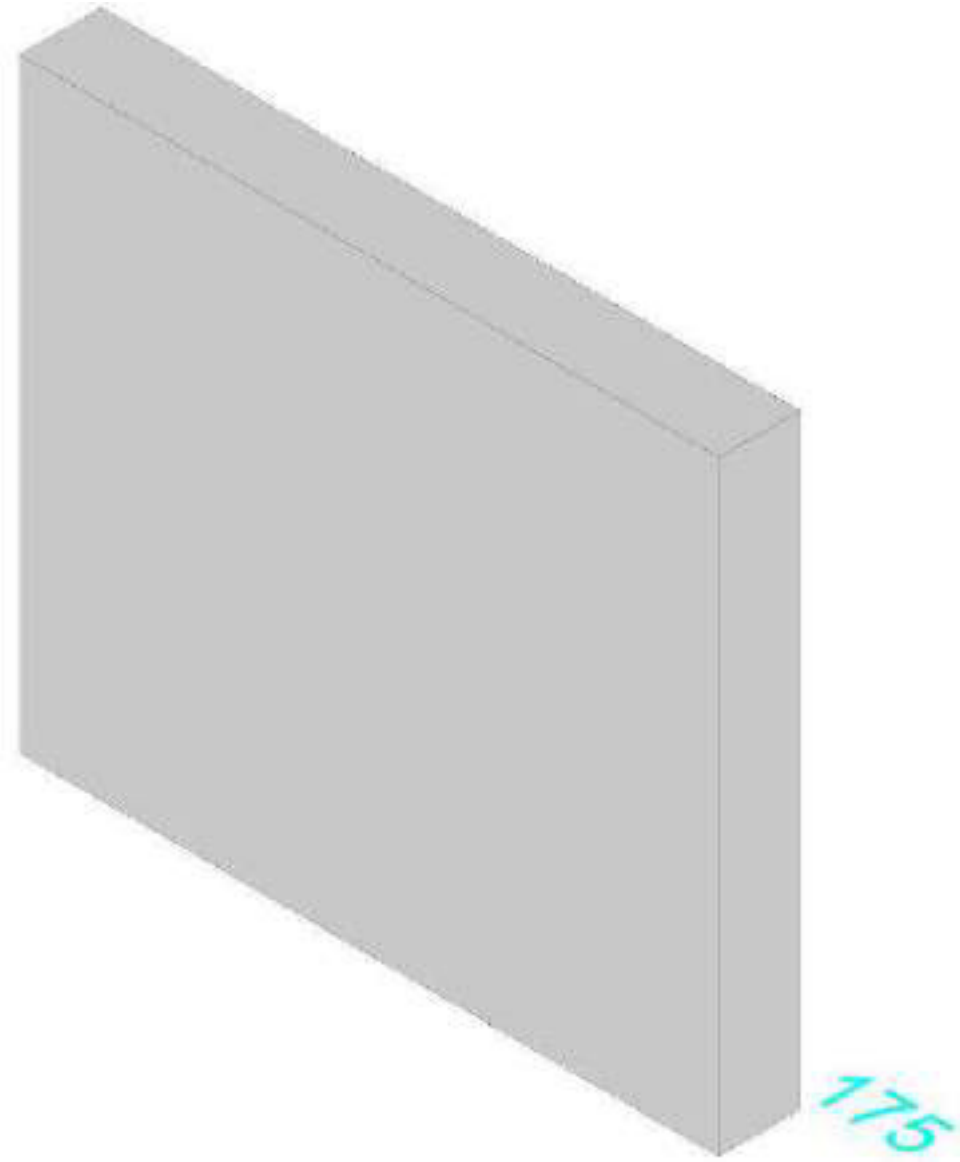
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
142 Prosp.A	Orizzontale	SLE RA 1	102.78	-5665	No	-305196	36000000	15	117.957	Si
99 Prosp.A	Orizzontale	SLE RA 1	70.27	-5968	No	-288645	36000000	15	124.7205	Si
140 Prosp.A	Orizzontale	SLE RA 2	33.89	-4992	No	-285231	36000000	15	126.2134	Si
101 Prosp.A	Orizzontale	SLE RA 1	51.91	-4600	No	-265094	36000000	15	135.8007	Si
549 Prosp.A	Verticale	SLE RA 20	-10.99	1748	No	251386	36000000	15	143.206	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.48	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
25 Prosp.A	Verticale	0.5	0.2	0.000032	0.000048	0.036	0.036
496 Prosp.A	Verticale	0.5	0.2	0.000159	0.000253	0.036	0.036
136 Prosp.A	Verticale	0.875	0.2	0.000254	0.000404	0.036	0.036
493 Prosp.A	Verticale	0.5	0.2	0.000501	0.000501	0.036	0.036
91 Prosp.A	Verticale	0.8239	0.2	0.00055	0.000589	0.036	0.036
112 Prosp.A	Verticale	1	0.2	0.00103	0.00103	0.036	0.036
133 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
36 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489
34 Prosp.A	Orizzontale	0.906	0.2	0.001018	0.001018	0.0486	0.0486
110 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
132 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
114 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
111 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
25 Prosp.A	Verticale	SLV 11	51.43	50	186.63	180	3.6286	Si

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
496 Prosp.A	Verticale	SLV 15	-168.85	-275	-1666.73	-2714	9.8708	Si
136 Prosp.A	Verticale	SLV 11	-256.84	-443	-2706.87	-4672	10.5391	Si
493 Prosp.A	Verticale	SLV 2	-20.3	2206	-315.23	34263	15.5304	Si
91 Prosp.A	Verticale	SLU 83	85.86	1698	1424.57	28180	16.5918	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
25 Prosp.A	Verticale	SLD 11	38.73	28	190.3	139	4.9134	Si
496 Prosp.A	Verticale	SLD 11	-126.12	-227	-1690.5	-3036	13.4035	Si
136 Prosp.A	Verticale	SLD 11	-191.89	-296	-2664.81	-4110	13.8873	Si
112 Prosp.A	Verticale	SLD 3	93.81	2548	1884.33	51175	20.0873	Si
91 Prosp.A	Verticale	SLD 3	58.71	1236	1182.72	24900	20.1461	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
493 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 15	-473	-3696	123.39	5330	18424	0	5330	2.5	0.0005007	11.2574	Si
131 Prosp.A	Verticale	0.164	0.896	Non necessaria	0	SLV 11	-532	-2716	212.88	9080	32526	0	9080	2.5	0.0008996	17.0792	Si
36 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLU 83	-373	-5627	143.55	6407	20512	0	6407	2.5	0.0006786	17.1651	Si
34 Prosp.A	Orizzontale	0.151	0.906	Non necessaria	0	SLU 83	-400	-7907	169.74	9602	30965	0	9602	2.5	0.0010179	23.9916	Si
92 Prosp.A	Orizzontale	0.151	0.947	Non necessaria	0	SLU 83	-447	-9946	67.97	11764	32588	0	11764	2.5	0.0016967	26.3323	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
493 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 15	-252	-3031	103.47	5248	18339	0	5248	2.5	0.0005007	20.8134	Si
36 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 11	-274	-3828	102.62	6203	20302	0	6203	2.5	0.0006786	22.6486	Si
131 Prosp.A	Verticale	0.164	0.896	Non necessaria	0	SLD 2	-378	1058	59.03	8746	32181	0	8746	2.5	0.0008996	23.1219	Si
34 Prosp.A	Orizzontale	0.151	0.906	Non necessaria	0	SLD 11	-296	-5342	122.32	9310	30663	0	9310	2.5	0.0010179	31.4179	Si
92 Prosp.A	Orizzontale	0.151	0.947	Non necessaria	0	SLD 7	-328	-6641	48.34	11389	32200	0	11389	2.5	0.0016967	34.709	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
133 Prosp.A	Orizzontale	SLE QP 2	-98.4	-9205	No	-52325	1120500	15	21.4144	Si
36 Prosp.A	Orizzontale	SLE QP 2	99.26	-3785	No	-48862	1120500	15	22.932	Si
34 Prosp.A	Orizzontale	SLE QP 2	120.55	-5989	No	-45888	1120500	15	24.4179	Si
493 Prosp.A	Verticale	SLE QP 2	94.47	-2324	No	-44128	1120500	15	25.3923	Si
133 Prosp.A	Orizzontale	SLE RA 20	-102.07	-10377	No	-57817	1494000	15	25.8401	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
133 Prosp.A	Orizzontale	SLE RA 1	-96.84	-8733	No	-460362	36000000	15	78.1994	Si
110 Prosp.A	Orizzontale	SLE RA 1	51.83	-6898	No	-389036	36000000	15	92.5364	Si
132 Prosp.A	Orizzontale	SLE RA 1	-69.39	-6632	No	-353900	36000000	15	101.7238	Si
114 Prosp.A	Orizzontale	SLE RA 1	-39.4	-5964	No	-341927	36000000	15	105.2855	Si
111 Prosp.A	Orizzontale	SLE RA 1	61.05	-6106	No	-328734	36000000	15	109.5109	Si

Verifiche generali

1.4 Verifiche piastre C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

Nodo: indice del nodo di verifica.
Dir.: direzione della sezione di verifica.
B: base della sezione rettangolare di verifica. [m]
H: altezza della sezione rettangolare di verifica. [m]
A. sup.: area barre armatura superiori. [m²]
C. sup.: distanza media delle barre superiori dal bordo superiore della sezione. [m]
A. inf.: area barre armatura inferiori. [m²]
C. inf.: distanza media delle barre inferiori dal bordo inferiore della sezione. [m]
Comb.: combinazione di verifica.
*M: momento flettente. [daN*m]*
N: sforzo normale. [daN]
*Mu: momento flettente ultimo. [daN*m]*
Nu: sforzo normale ultimo. [daN]
c.s.: coefficiente di sicurezza.
Verifica: stato di verifica.
σc: tensione nel calcestruzzo. [daN/m²]

σlim: *tensione limite. [daN/m²]*
Es/Ec: *coefficiente di omogenizzazione.*
σf: *tensione nell'acciaio d'armatura. [daN/m²]*
Comb.: *combinazione.*
Fh: *componente orizzontale del carico. [daN]*
Fv: *componente verticale del carico. [daN]*
Cnd: *resistenza valutata a breve o lungo termine (BT - LT).*
Ad: *adesione di progetto. [daN/m²]*
Phi: *angolo di attrito di progetto. [deg]*
RPl: *resistenza passiva laterale unitaria di progetto. [daN/m²]*
γR: *coefficiente parziale sulla resistenza di progetto.*
Rd: *resistenza alla traslazione di progetto. [daN]*
Ed: *azione di progetto. [daN]*
Rd/Ed: *coefficiente di sicurezza allo scorrimento.*
ID: *indice della verifica di capacità portante.*
Fx: *componente lungo x del carico. [daN]*
Fy: *componente lungo y del carico. [daN]*
Fz: *componente verticale del carico. [daN]*
Mx: *componente lungo x del momento. [daN*m]*
My: *componente lungo y del momento. [daN*m]*
ix: *inclinazione del carico in x. [deg]*
iy: *inclinazione del carico in y. [deg]*
ex: *eccentricità del carico in x. [m]*
ey: *eccentricità del carico in y. [m]*
B': *larghezza efficace. [m]*
L': *lunghezza efficace. [m]*
C: *coesione di progetto. [daN/m²]*
Qs: *sovraccarico laterale da piano di posa. [daN/m²]*
Rd: *resistenza alla rottura del complesso di progetto. [daN]*
Ed: *azione di progetto (sforzo normale al piano di posa). [daN]*
Rd/Ed: *coefficiente di sicurezza alla capacità portante.*
N:
Nq: *fattore di capacità portante per il termine di sovraccarico.*
Nc: *fattore di capacità portante per il termine coesivo.*
Ng: *fattore di capacità portante per il termine attritivo.*
S:
Sq: *fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.*
Sc: *fattore correttivo di capacità portante per forma (shape), per il termine coesivo.*
Sg: *fattore correttivo di capacità portante per forma (shape), per il termine attritivo.*
D:
Dq: *fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.*
Dc: *fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.*
Dg: *fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.*
I:
Iq: *fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.*
Ic: *fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.*
Ig: *fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.*
B:
Bq: *fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.*
Bc: *fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.*
Bg: *fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.*
G:
Gq: *fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.*
Gc: *fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.*
Gg: *fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.*
P:
Pq: *fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.*
Pc: *fattore correttivo di capacità portante per punzonamento, per il termine coesivo.*
Pg: *fattore correttivo di capacità portante per punzonamento, per il termine attritivo.*
E:
Eq: *fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.*
Ec: *fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.*
Eg: *fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.*
εsm: *deformazione unitaria media delle barre di armatura.*
Δmax: *distanza massima tra le fessure. [m]*
Wd: *valore di calcolo di apertura delle fessure. [m]*

platea 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-17.053; -4.784; -0.98), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLU 83	8963.65	0	10179.58	0	1.1357	Si
247	Y	1	0.45	0.000655	0.036	0.001074	0.047	SLV 5	-7861.08	0	-9577.87	0	1.2184	Si
225	X	0.5	0.45	0.000487	0.048	0.000799	0.048	SLU 84	-5651.6	0	-7361.25	0	1.3025	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
314	Y	0.5	0.45	0.000283	0.036	0.001025	0.048	SLD 9	-4048.2	0	-4127.35	0	1.0196	Si
247	Y	1	0.45	0.000655	0.036	0.001074	0.047	SLD 5	-7626.64	0	-9577.87	0	1.2558	Si
156	X	0.5	0.45	0.000283	0.048	0.000283	0.048	SLD 13	-3030.66	0	-3969.23	0	1.3097	Si
225	Y	0.875	0.45	0.000495	0.036	0.000891	0.047	SLD 5	-4940.22	0	-7218.46	0	1.4612	Si
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLD 8	6282.26	0	9730.04	0	1.5488	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE QP 2	6032.86	0	-543065	1120500	15	Si
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE RA 20	6614.24	0	-595399	1494000	15	Si
316	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE QP 2	4691.17	0	-422289	1120500	15	Si
316	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE RA 21	5233.62	0	-471120	1494000	15	Si
270	X	0.5	0.45	0.000935	0.048	0.000822	0.048	SLE QP 2	4275.9	0	-207031	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE RA 20	6614.24	0	26350755	36000000	15	Si
316	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE RA 21	5233.62	0	20850467	36000000	15	Si
268	Y	0.875	0.45	0.00106	0.049	0.001286	0.051	SLE RA 21	-7698.88	0	2843713	36000000	15	Si
314	Y	0.5	0.45	0.000283	0.036	0.001025	0.048	SLE RA 21	-4192.71	0	2801808	36000000	15	Si
270	X	0.5	0.45	0.000935	0.048	0.000822	0.048	SLE RA 21	4763.21	0	2754370	36000000	15	Si

Verifiche SLE fessurazione nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	εsm	Δmax	Wd	Es/Ec	Verifica
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE QP 2	6032.86	0	0.0007	0.294	0.000206	15	Si
316	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE QP 2	4691.17	0	0.00054	0.294	0.00016	15	Si
307	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE FR 6	6182.7	0	0.00072	0.294	0.000211	15	Si
316	X	0.5	0.45	0.000622	0.048	0.000686	0.048	SLE FR 6	4833.06	0	0.00056	0.294	0.000165	15	Si

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -15.5; -4; -1.4
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.26

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 43	896	-50930	LT	0	19	0	1.1	15492	896	17.28	Si
SLV 15	9564	-39634	LT	0	19	0	1.1	12056	9564	1.26	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 1.68

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	631	755	-63959	1347.22	452.85	1	1	0.01	0.02	1.46	3.13	LT	0	37	0	2.3	154014	63959	2.41	Si
2	SLV 13	9663	-1398	-42160	1668.11	6410.08	13	-2	0.15	0.04	1.42	2.84	LT	0	37	0	2.3	70668	42160	1.68	Si
3	SLD 13	4386	-284	-42837	1229.46	2895.08	6	0	0.07	0.03	1.44	3	LT	0	37	0	2.3	114756	42837	2.68	Si

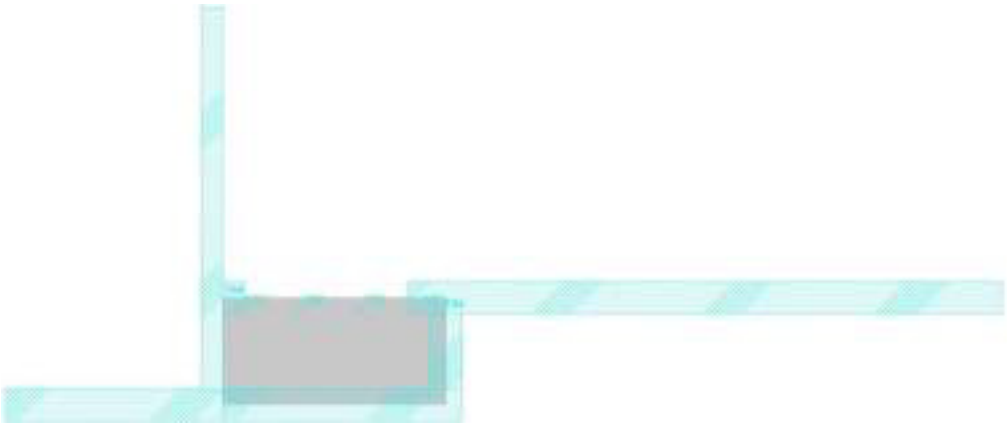
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	43	56	66	1.35	1.36	0.81	1	1	1	0.98	0.98	0.96	1	1	1	1	1	1	1	1	1	1	1	1
2	43	56	66	1.38	1.39	0.8	1	1	1	0.7	0.7	0.54	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	43	56	66	1.36	1.37	0.81	1	1	1	0.87	0.86	0.78	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Platea 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-10.863; -4.784; -0.98), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
320	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLU 84	3208.05	0	4455.82	0	1.389	Si
275	Y	0.8	0.45	0.000452	0.036	0.000452	0.036	SLU 84	4986.95	0	7215.15	0	1.4468	Si
253	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLU 84	5815.4	0	9018.93	0	1.5509	Si
329	X	0.5	0.45	0.000622	0.048	0.000746	0.048	SLU 83	6613.05	0	11025.08	0	1.6672	Si
230	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLV 2	4461.12	0	8566.94	0	1.9204	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
320	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 4	2432.47	0	4108.61	0	1.6891	Si
275	Y	0.8	0.45	0.000452	0.036	0.000452	0.036	SLD 2	3784.74	0	6853.56	0	1.8108	Si
253	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLD 2	4476.42	0	8566.94	0	1.9138	Si
329	X	0.5	0.45	0.000622	0.048	0.000746	0.048	SLD 7	4726.37	0	10439.51	0	2.2088	Si
323	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLD 14	-3372.71	0	-8351.05	0	2.4761	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
329	X	0.5	0.45	0.000622	0.048	0.000746	0.048	SLE QP 2	4460.88	0	-227434	1120500	15	Si
328	X	0.765	0.45	0.000885	0.048	0.001202	0.048	SLE QP 2	5599.63	0	-187458	1120500	15	Si
329	X	0.5	0.45	0.000622	0.048	0.000746	0.048	SLE RA 20	4880.59	0	-248832	1494000	15	Si
328	X	0.765	0.45	0.000885	0.048	0.001202	0.048	SLE RA 20	6126.82	0	-205107	1494000	15	Si
327	X	1	0.45	0.001131	0.048	0.001527	0.048	SLE QP 2	5573.68	0	-143209	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
329	X	0.5	0.45	0.000622	0.048	0.000746	0.048	SLE RA 20	4880.59	0	2896588	36000000	15	Si
328	X	0.765	0.45	0.000885	0.048	0.001202	0.048	SLE RA 20	6126.82	0	2366109	36000000	15	Si
323	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-3002.36	0	1944643	36000000	15	Si
324	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-2927.97	0	1896464	36000000	15	Si
321	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE RA 21	2956.38	0	1821086	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -9.3; -4; -1.4
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.22

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 50	714	-51320	LT	0	19	0	1.1	15610	714	21.87	Si
SLV 4	9413	-37670	LT	0	19	0	1.1	11458	9413	1.22	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 1.72

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 83	90	729	-62883	1006.75	729.78	0	1	0.01	0.02	1.47	3.12	LT	0	37	0	2.3	156599	62883	2.49	Si
2	SLV 13	9479	255	-47617	1217.98	6346.32	11	0	0.13	0.03	1.45	2.87	LT	0	37	0	2.3	81994	47617	1.72	Si
3	SLD 13	4083	405	-44786	910.87	3010.17	5	1	0.07	0.02	1.46	3.01	LT	0	37	0	2.3	120481	44786	2.69	Si

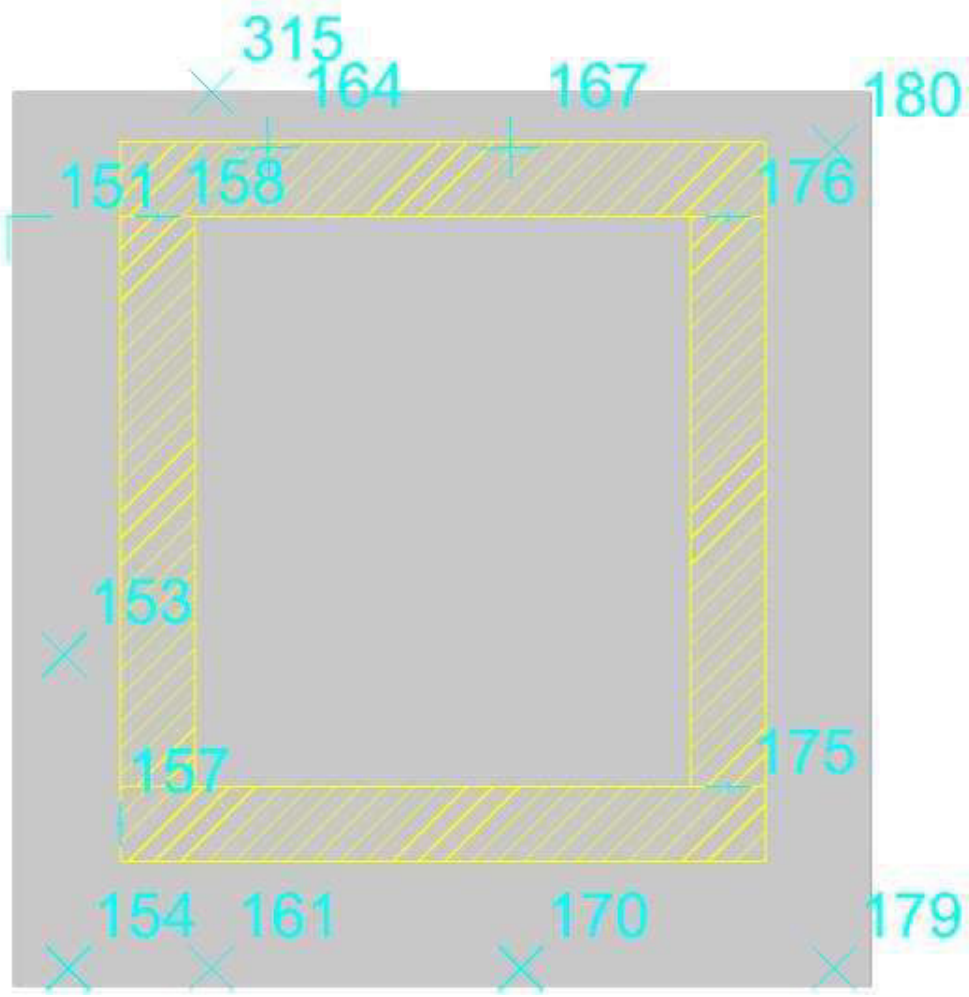
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	43	56	66	1.35	1.36	0.81	1	1	1	0.98	0.98	0.97	1	1	1	1	1	1	1	1	1	1	1	1
2	43	56	66	1.38	1.39	0.8	1	1	1	0.74	0.74	0.6	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	43	56	66	1.37	1.37	0.81	1	1	1	0.88	0.88	0.8	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Platea a "Fondazione ascensore"

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-11.148; -1.244; -2.48), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
33	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1518.63	0	10417.41	0	6.8597	Si
31	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1438.88	0	10405.21	0	7.2314	Si
35	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1413.05	0	10465.11	0	7.4061	Si
29	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1377.22	0	10456.43	0	7.5924	Si
27	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1248.5	0	10426.34	0	8.3511	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
33	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	1076.65	0	9561.81	0	8.8811	Si
31	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	1009.91	0	9495.27	0	9.4021	Si
35	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	1010.11	0	9815.56	0	9.7173	Si
49	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 11	878.7	0	8838.16	0	10.0582	Si
29	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	939.96	0	9770.21	0	10.3942	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
33	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	1027.13	0	-60129	1120500	15	Si
31	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	970.09	0	-56790	1120500	15	Si
35	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	957.54	0	-56055	1120500	15	Si
29	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	923.59	0	-54068	1120500	15	Si

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
36	X	0.885	0.3	0.000894	0.048	0.001063	0.048	SLE QP 2	780.4	0	-51270	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
33	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1121.71	0	661236	36000000	15	Si
31	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1061.99	0	626031	36000000	15	Si
35	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1044.21	0	615552	36000000	15	Si
29	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1015.17	0	598435	36000000	15	Si
49	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 20	882.67	0	583416	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -10; 0; -2.8
Lato minore B dell'impronta: 2.3
Lato maggiore L dell'impronta: 2.4
Area dell'impronta rettangolare di calcolo: 5.5

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.9

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 43	1405	-50315	LT	0	19	0	1.1	15305	1405	10.9	Si
SLV 4	6707	-41985	LT	0	19	0	1.1	12771	6707	1.9	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 2.31 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 1.15 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 3.08

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	105	1517	-63500	787.72	-371.41	0	1	-0.01	0.01	2.29	2.38	BT	14430	0	0	2.3	208123	63500	3.28	Si
2	SLV 15	6609	1841	-44279	-37.16	2454.49	8	2	0.06	0	2.19	2.4	LT	0	37	0	2.3	136556	44279	3.08	Si
3	SLD 15	2844	1437	-43517	284.2	914.79	4	2	0.02	0.01	2.26	2.39	LT	0	37	0	2.3	182653	43517	4.2	Si

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.19	0	0	0	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.69	1.7	0.63	1	1	1	0.77	0.77	0.65	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	43	56	66	1.71	1.73	0.62	1	1	1	0.89	0.89	0.83	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

1.5 Verifiche aste in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: descrizione della sezione.
Tipo: tipo di sezione.
Base: base della sezione. [m]
Altezza: altezza della sezione. [m]
Area: area inerziale nel sistema geometrico centrato nel baricentro. [m²]
Jx: momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]
Jy: momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]
Wx: modulo di resistenza elastico minimo relativo all'asse x. [m³]
Wy: modulo di resistenza elastico minimo relativo all'asse y. [m³]

Asta 19: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.301

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(10405^2+18645^2) = 21352 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -253.7; Ty = 454.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14522/1324138)^2+72272/1410046+0.7*53853/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 197.352; My = 73.527; N = -743.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -281.2; Ty = 124.2; Mt = -47.817

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
23757 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -47.817

Asta 20: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.312

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.312
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1657^2+8887^2) = 9040 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -40.4; Ty = -216.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.312
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17454/1324138)^2+88892/1410046+0.7*2915/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 242.736; My = -3.98; N = -893.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.312
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo

Tx = -47.4; Ty = -136.6; Mt = 14.04

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.312
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6975 <= 345172 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = 14.04

Asta 21: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.312

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
123974/1551051+24611/1938814+0.7*9364/1938814=0.1 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -67.204; My = -12.785; N = 6347.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1567^2+17342^2) = 17412 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -38.2; Ty = 422.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -39; Ty = 411.5; Mt = -7.112

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.312
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3534 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -7.112

Asta 22: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.216

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1584^2+42089^2) = 42119 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -38.6; Ty = 1026.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21214/1324138)^2+40080/1410046+0.7*19958/1410046=0.04 <= 1 [4.4.7a] Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mx = -109.445; My = -27.25; N = -1086.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.05 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -39.3; Ty = 1006.4; Mt = -9.744

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8503 <= 345172 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 17.115

Asta 23: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1394^2+8028^2) = 8148 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -34; Ty = 195.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20480/1324138)^2+89473/1410046+0.7*28478/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -244.322; My = -38.882; N = -1048.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -36.2; Ty = 191.6; Mt = 18.751

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9316 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 18.751

Asta 24: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.604

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4168^2+25137^2) = 25480 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 101.6; Ty = -612.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21592/1324138)^2+87399/1410046+0.7*37133/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -238.659; My = -50.698; N = -1105.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 111.9; Ty = -598.6; Mt = 38.638

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19196 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 38.638

Asta 25: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.236

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4144^2+7321^2) = 8412 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 101; Ty = -178.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21551/1324138)^2+60211/1410046+0.7*30251/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 164.417; My = 41.303; N = -1103.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 101; Ty = -178.5; Mt = 40.532

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20138 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 40.532

Asta 26: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.564

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(64^2+3947^2) = 3947 <= 193103 Comb: SLU, 77; Durata minima del carico nella combinazione: media
Tx = -1.6; Ty = 96.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15948/1324138)^2+57035/1410046+0.7*8634/1410046=0.04 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 155.742; My = 11.788; N = -816.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2; Ty = 95.5; Mt = 28.855

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.564
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14336 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 28.855

Asta 27: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.276

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(199^2+28973^2) = 28974 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 4.9; Ty = 706.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19882/1324138)^2+40544/1410046+0.7*9390/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 110.712; My = 12.82; N = -1017.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.8; Ty = 681.8; Mt = 36.794

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.276
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18699 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 37.636

Asta 28: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(412^2+3036^2) = 3063 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 10; Ty = -74

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20156/1324138)^2+36290/1410046+0.7*10491/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -99.096; My = -14.323; N = -1032

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -36.2; Ty = 34.5; Mt = 8.756

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4350 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.756

Asta 29: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(874^2+21719^2) = 21737 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -21.3; Ty = -529.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20422/1324138)^2+30744/1410046+0.7*8354/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 83.952; My = -11.406; N = -1045.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -21.3; Ty = -529.5; Mt = -19.789

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9836 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -19.798

Asta 30: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.194

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(859^2+13703^2) = 13730 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -20.9; Ty = -334.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18444/1324138)^2+54690/1410046+0.7*11509/1410046=0.04 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 149.341; My = -15.713; N = -944.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -18; Ty = -327.4; Mt = -16.358

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8127 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = -16.358

Asta 31: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.322

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.322
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5068^2+9434^2) = 10709 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -123.6; Ty = -230

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.322
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14490/1820690)^2+68372/1938814+0.7*23972/1938814=0.04 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 186.702; My = 32.729; N = -741.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.322
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -16.8; Ty = -67.1; Mt = -29.268

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.322
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14541 <= 188276 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -29.268

Asta 32: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71

τ,d <= fv,d
Sqrt(12214^2+5738^2) = 13495 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -297.8; Ty = -139.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16518/1820690)^2+82571/1938814+0.7*35376/1938814=0.06 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 225.473; My = -48.3; N = -845.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -10.5; Ty = -18.5; Mt = -59.794

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29707 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -59.794

Asta 33: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.268

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*50497/1938814+102586/1938814=0.07 <= 1 (formula 4.4.5b) Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 137.892; My = -140.064

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(8110^2+20524^2) = 22068 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 197.7; Ty = -500.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -8.2; Ty = 222.7; Mt = -57.21

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.268

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28423 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -57.21

Asta 34: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.287

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1487^2+16631^2) = 16697 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 36.2; Ty = -405.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.01
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13912/1820690)^2+46004/1938814+0.7*19966/1938814=0.03 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -125.623; My = 27.261; N = -712.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.35+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -3.2; Ty = -81.2; Mt = -132.306

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
65733 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -132.306

Asta 35: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3942^2+1022^2) = 4072 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 96.1; Ty = -24.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23695/1324138)^2+0.7*25277/1410046+29282/1410046=0.03 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -69.024; My = -39.98; N = -1213.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 96.1; Ty = -24.9; Mt = -45.119

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22416 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -45.119

Asta 36: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1182^2+842^2) = 1451 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 28.8; Ty = 20.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22098/1324138)^2+0.7*25034/1410046+31460/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -68.361; My = 42.954; N = -1131.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 29; Ty = 16.9; Mt = -8.801

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4373 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -8.801

Asta 37: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2331^2+1665^2) = 2864 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -56.8; Ty = -40.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22030/1324138)^2+0.7*25612/1410046+35422/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -69.939; My = 48.363; N = -1128

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -57; Ty = -37.1; Mt = 15.041

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7473 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 15.041

Asta 38: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(938^2+4919^2) = 5007 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -22.9; Ty = 119.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8299/993103)^2+44126/1057535+0.7*2506/1057535=0.04 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -120.494; My = -3.421; N = -424.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -67.7; Ty = 95.6; Mt = 70.795

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
35173 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 70.795

Asta 39: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2413^2+20695^2) = 20835 <= 265517 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Tx = 58.8; Ty = 504.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7141/993103)^2+55473/1057535+0.7*18297/1057535=0.06 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 151.479; My = -24.981; N = -365.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -29.5; Ty = 37.3; Mt = 82.925

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
41200 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 82.925

Asta 40: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.366

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(333^2+12435^2) = 12440 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 8.1; Ty = 303.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13636/1324138)^2+68097/1410046+0.7*12644/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 185.95; My = -17.263; N = -698.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -24.5; Ty = 206.3; Mt = 87.92

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.366
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
43681 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 87.92

Asta 41: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1036^2+6607^2) = 6687 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 25.3; Ty = 161.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16126/1324138)^2+62796/1410046+0.7*23054/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 171.476; My = -31.476; N = -825.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 12.6; Ty = 37.8; Mt = 7.933

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3941 <= 251034 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 7.933

Asta 42: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.435

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(243^2+18643^2) = 18645 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = 454.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21503/1324138)^2+62209/1410046+0.7*17428/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 169.871; My = -23.796; N = -1100.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 12.8; Ty = 414.4; Mt = 18.088

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.435
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9144 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 18.405

Asta 43: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3141^2+5093^2) = 5984 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 76.6; Ty = -124.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8425/993103)^2+38964/1057535+0.7*33579/1057535=0.06 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 106.398; My = 45.846; N = -431.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 134.1; Ty = -108.5; Mt = -9.431

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4685 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.431

Asta 44: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6142^2+11721^2) = 13233 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -149.8; Ty = 285.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21372/1324138)^2+70474/1410046+0.7*32790/1410046=0.07 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -192.441; My = -44.769; N = -1094.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -149.8; Ty = 285.8; Mt = -48.886

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24289 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -48.889

Asta 45: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1771^2+2427^2) = 3004 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -43.2; Ty = 59.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21652/1324138)^2+61079/1410046+0.7*35025/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -166.787; My = -47.821; N = -1108.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -52.9; Ty = -17.7; Mt = -44.395

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22057 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -44.395

Asta 46: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.865

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.865
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2369^2+16668^2) = 16835 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 57.8; Ty = -406.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21052/1324138)^2+69405/1410046+0.7*31960/1410046=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -189.521; My = -43.636; N = -1077.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.865
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 51.3; Ty = -362.8; Mt = -11.978

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.865
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4801 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = -9.663

Asta 47: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.4

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.4
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5211^2+13713^2) = 14670 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 127.1; Ty = -334.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.4
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14950/1324138)^2+100766/1410046+0.7*19601/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 275.158; My = 26.762; N = -765.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.4
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 131.8; Ty = -317.2; Mt = 18.959

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.4
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9419 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 18.959

Asta 48: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.415

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(5519^2+4561^2) = 7160 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 134.6; Ty = 111.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.415
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14839/1324138)^2+84105/1410046+0.7*62042/1410046=0.09 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 229.664; My = 84.708; N = -759.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 133.1; Ty = 112.4; Mt = 14.618

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.415
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7263 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 14.618

Asta 49: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.339

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
129606/1088400+0.7*18641/1088400=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -199.075; My = 19.088

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.339
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(958^2+9607^2) = 9654 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -17.5; Ty = -175.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.339
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -17.5; Ty = -175.7; Mt = 5.832

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.339

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5556 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 7.884

Asta 50: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
268662/1088400+0.7*52573/1088400=0.28 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 412.665; My = -53.835

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1908^2+18503^2) = 18602 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -34.9; Ty = -338.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.3; Ty = -378.4; Mt = 10.266

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7235 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 10.266

Asta 51: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.523

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(38405^2+49118^2) = 62350 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 702.3; Ty = -898.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23400/1324138)^2+686722/1451200+0.7*235076/1451200=0.59 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1054.805; My = 240.718; N = -898.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.23+0.01+0.06 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 309.7; Ty = -644.4; Mt = -58.93

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
41531 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -58.93

Asta 52: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
21877/870720+335636/1088400+0.7*20462/1088400=0.35 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 515.537; My = -20.953; N = 840.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10856^2+43746^2) = 45073 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -198.5; Ty = 799.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Tx = -63; Ty = 493.6; Mt = 63.858

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
45004 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 63.858

Asta 53: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17276/870720+160779/1088400+0.7*68551/1088400=0.21 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 246.956; My = -70.197; N = 663.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5804^2+18907^2) = 19778 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 106.1; Ty = 345.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 45; Ty = 260.4; Mt = -8.728

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6151 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.728

Asta 54: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18676/870720+174987/1088400+0.7*28908/1088400=0.2 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -268.78; My = 29.601; N = 717.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1111^2+11384^2) = 11438 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 20.3; Ty = 208.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 20.3; Ty = 208.2; Mt = -11.942

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8416 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -11.942

Asta 55: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.764

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
14287/870720+190319/1088400+0.7*84879/1088400=0.25 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -292.331; My = 86.917; N = 548.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7297^2+31453^2) = 32288 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 133.4; Ty = -575.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.764

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.2+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 146.1; Ty = -536.9; Mt = -68.451

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
48697 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -69.098

Asta 56: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.838

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
155971/1088400+0.7*28950/1088400=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -239.571; My = -29.645

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2139^2+13346^2) = 13517 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -39.1; Ty = 244

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.26+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 5.6; Ty = -127.1; Mt = 65.572

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
46212 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 65.572

Asta 57: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
247924/1451200+0.7*66741/1451200=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -380.811; My = -68.343

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4576^2+31193^2) = 31526 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 83.7; Ty = -570.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 63.5; Ty = -393.5; Mt = 14.279

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10063 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 14.279

Asta 58: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6764^2+56576^2) = 56979 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 123.7; Ty = -1034.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6140/1324138)^2+800420/1451200+0.7*173697/1451200=0.64 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1229.446; My = 177.866; N = -235.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.09 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 123.7; Ty = -1034.5; Mt = -21.247

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11242 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -15.952

Asta 59: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.353

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(27820^2+90980^2) = 95138 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -508.7; Ty = -1663.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26716/1324138)^2+1050989/1451200+0.7*9165/1451200=0.73 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1614.319; My = -9.385; N = -1025.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.54+0.02+0.22 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -508.7; Ty = -1663.6; Mt = -181.031

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
127596 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -181.05

Asta 60: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.154

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
37766/870720+169125/1088400+0.7*86611/1088400=0.25 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 259.776; My = -88.69; N = 1450.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(21422^2+37824^2) = 43469 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 391.7; Ty = 691.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.19+0.02+0.07 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 391.7; Ty = 691.6; Mt = 46.929

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
33073 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 46.929

Asta 61: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.767

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
39749/1160960+159939/1451200+0.7*17459/1451200=0.15 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 245.667; My = -17.878; N = 1526.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3870^2+36375^2) = 36580 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 70.8; Ty = 665.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 70.8; Ty = 665.1; Mt = 40.047

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.767
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28223 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 40.047

Asta 62: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.233

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
26786/1160960+149605/1451200+0.7*21772/1451200=0.14 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -229.793; My = -22.295; N = 1028.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(31090^2+7939^2) = 32088 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -568.5; Ty = -145.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -209.9; Ty = 74.5; Mt = 42.147

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
29703 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 42.147

Asta 63: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.041

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20994/1160960+246957/1451200+0.7*37542/1451200=0.21 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -379.326; My = -38.443; N = 806.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(768^2+17506^2) = 17523 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -14; Ty = 320.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2.8; Ty = 194.5; Mt = -26.007

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
18329 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -26.007

Asta 64: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20092/1160960+220837/1451200+0.7*32719/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -339.206; My = -33.504; N = 771.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(68^2+16500^2) = 16501 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -301.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -8.1; Ty = -70.2; Mt = -4.166

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5400 <= 325259 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -7.663

Asta 65: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.016

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
14940/1160960+183136/1451200+0.7*55128/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 281.297; My = 56.451; N = 573.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4620^2+47737^2) = 47960 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 84.5; Ty = -872.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 84.5; Ty = -872.9; Mt = 8.963

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6317 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 8.963

Asta 66: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.82

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11672^2+11392^2) = 16310 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 213.4; Ty = 208.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25258/1324138)^2+120420/1451200+0.7*118212/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 184.964; My = -121.049; N = -969.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 215.5; Ty = 206; Mt = -28.208

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.82
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19879 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -28.208

Asta 67: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.468

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12369^2+2758^2) = 12672 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -226.2; Ty = 50.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15751/1324138)^2+0.7*7824/1451200+72732/1451200=0.05 <= 1 [4.4.7b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -12.017; My = 74.477; N = -604.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -226.2; Ty = 50.4; Mt = 23.151

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.468
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16316 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 23.151

Asta 68: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.785

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10474^2+3705^2) = 11110 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 191.5; Ty = -67.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5209/1324138)^2+0.7*26811/1451200+80832/1451200=0.07 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -41.182; My = 82.772; N = -200

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = 191.5; Ty = -67.7; Mt = -14.32

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10092 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.32

Asta 69: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.503

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7790/1160960+0.7*50296/1451200+102172/1451200=0.1 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -77.254; My = 104.624; N = 299.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17282^2+5968^2) = 18283 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -316; Ty = -109.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -316; Ty = -109.1; Mt = 24.697

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17406 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 24.697

Asta 70: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.816

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19845/1160960+0.7*44229/1451200+57168/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -67.936; My = -58.54; N = 762.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6113^2+3785^2) = 7190 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 111.8; Ty = 69.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 111.8; Ty = 69.2; Mt = -6.635

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4676 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.635

Asta 71: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.472

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45768/1596320+0.7*14684/1995400+159415/1995400=0.11 <= 1 [4.4.6b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = -22.555; My = -163.241; N = 1757.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(25852^2+2927^2) = 26017 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -472.7; Ty = -53.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -51.9; Ty = 234; Mt = 34.702

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24456 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 34.702

Asta 72: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.715

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
46299/1596320+0.7*53103/1995400+56688/1995400=0.08 <= 1 [4.4.6b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = -81.567; My = 58.048; N = 1777.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11217^2+2666^2) = 11530 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 205.1; Ty = 48.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 247.4; Ty = 137.1; Mt = -15.306

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.715
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
10787 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -15.306

Asta 73: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.573

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
59552/1596320+0.7*18642/1995400+79694/1995400=0.08 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -28.634; My = 81.607; N = 2286.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11746^2+2761^2) = 12066 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -214.8; Ty = -50.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -231.9; Ty = 77.5; Mt = 5.365

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4067 <= 325259 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 5.77

Asta 74: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
66856/1596320+28009/1995400+0.7*20477/1995400=0.06 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 43.022; My = 20.969; N = 2567.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(6097^2+4123^2) = 7360 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 111.5; Ty = -75.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -21.7; Ty = 102.5; Mt = 9.9

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6977 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 9.9

Asta 75: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
68490/1596320+31802/1995400+0.7*19363/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 48.848; My = -19.828; N = 2630

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2540^2+8898^2) = 9253 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -46.4; Ty = -162.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -46.4; Ty = -162.7; Mt = -0.59

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
766 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.087

Asta 76: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.05

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19258/870720+171622/1088400+0.7*71351/1088400=0.23 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -263.612; My = 73.064; N = 739.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6425^2+29055^2) = 29757 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -117.5; Ty = 531.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -136.7; Ty = 466.3; Mt = 55.741

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.05
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39283 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 55.741

Asta 77: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
32380/1160960+185035/1451200+0.7*28256/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -284.213; My = 28.934; N = 1243.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2504^2+12349^2) = 12600 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -45.8; Ty = -225.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -45.8; Ty = -225.8; Mt = 9.681

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6822 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.681

Asta 78: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.279

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
24837/870720+244178/1088400+0.7*105187/1088400=0.32 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 375.057; My = -107.712; N = 953.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5150^2+23086^2) = 23653 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -94.2; Ty = -422.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -94.1; Ty = -422; Mt = -2.613

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1877 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = -2.663

Asta 79: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2382^2+15240^2) = 15425 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -43.6; Ty = 278.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6202/993103)^2+301969/1088400+0.7*28356/1088400=0.3 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 463.825; My = 29.037; N = -238.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -67.2; Ty = 318.8; Mt = -23.602

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16634 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -23.602

Asta 80: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
115884/1451200+0.7*32896/1451200=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 177.997; My = -33.686

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1217^2+7353^2) = 7453 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 22.2; Ty = 134.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 22.2; Ty = 134.5; Mt = -6.912

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4871 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.912

Asta 81: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.817

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
52437/1451200+0.7*20970/1451200=0.05 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 80.544; My = -21.474

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2332^2+5110^2) = 5617 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 42.6; Ty = 93.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 41.4; Ty = 93.5; Mt = -6.227

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.817
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4389 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -6.228

Asta 82: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.165

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
33563/1165241+90824/1456552+0.7*21031/1456552=0.1 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 68.663; My = 12.366; N = 845.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(533^2+18989^2) = 18996 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.4; Ty = -227.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.4; Ty = -227.8; Mt = 0.274

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3009 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -2.364

Asta 83: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
21390/1165241+50647/1456552+0.7*4184/1456552=0.06 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 38.289; My = -2.46; N = 539

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(617^2+4359^2) = 4403 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.4; Ty = 52.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -24.6; Ty = 20.1; Mt = -2.466

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3139 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.466

Asta 84: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16265/1165241+0.7*4822/1456552+10843/1456552=0.02 <= 1 [4.4.6b] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -3.645; My = -6.376; N = 409.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(645^2+2763^2) = 2837 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -7.7; Ty = 33.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo

Tx = -25.5; Ty = 12.7; Mt = -16.518

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
21028 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -16.518

Asta 85: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.117

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23374/1165241+82905/1456552+0.7*22268/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 62.676; My = -13.093; N = 589

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.117
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(635^2+18870^2) = 18881 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -226.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.117
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -226.4; Mt = -0.187

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.117
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2989 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.348

Asta 86: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15055/1165241+49943/1456552+0.7*4875/1456552=0.05 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 37.757; My = 2.866; N = 379.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(607^2+4337^2) = 4379 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.3; Ty = 52

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = -21.3; Ty = 21.1; Mt = -2.245

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2858 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -2.245

Asta 87: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12017/1165241+0.7*5943/1456552+11197/1456552=0.02 <= 1 [4.4.6b] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -4.493; My = 6.584; N = 302.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(648^2+2737^2) = 2813 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.8; Ty = 32.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 25.2; Ty = 9.3; Mt = 15.661

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
19938 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 15.661

Asta 88: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.386

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6732^2+72680^2) = 72991 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -123.1; Ty = 1329

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31420/1324138)^2+552769/1451200+0.7*129110/1451200=0.44 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 849.053; My = 132.209; N = -1206.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.14 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -123.1; Ty = 1329; Mt = -4.13

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.386
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4386 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -6.224

Asta 89: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.829

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14260^2+41081^2) = 43485 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -260.7; Ty = 751.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31961/1324138)^2+219622/1451200+0.7*106729/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 337.339; My = 109.29; N = -1227.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -260.7; Ty = 751.2; Mt = -10.043

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.829
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7078 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -10.043

Asta 90: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2701^2+17817^2) = 18021 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -49.4; Ty = 325.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32522/1324138)^2+350035/1451200+0.7*133103/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -537.654; My = -136.297; N = -1248.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -47; Ty = 324.2; Mt = -1.612

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1204 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -1.709

Asta 91: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3678^2+3076^2) = 4795 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 67.3; Ty = -56.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32612/1324138)^2+341916/1451200+0.7*148875/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -525.183; My = -152.448; N = -1252.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 35.9; Ty = -36.7; Mt = 1.244

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1613 <= 325259 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = 2.288

Asta 92: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6136^2+26304^2) = 27010 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 112.2; Ty = -481

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32579/1324138)^2+314911/1451200+0.7*112258/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -483.703; My = -114.952; N = -1251

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 112.2; Ty = -481; Mt = 3.187

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2246 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.187

Asta 93: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15041^2+50155^2) = 52362 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 275; Ty = -917.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33195/1324138)^2+530025/1451200+0.7*233713/1451200=0.48 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 814.118; My = 239.322; N = -1274.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.07 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 275; Ty = -917.1; Mt = 5.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3612 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.126

Asta 94: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15718^2+56442^2) = 58590 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -287.4; Ty = 1032.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33482/1324138)^2+574580/1451200+0.7*218305/1451200=0.5 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 882.555; My = 223.544; N = -1285.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.09 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -287.4; Ty = 1032.1; Mt = 7.212

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5400 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media

Mt = 7.662

Asta 95: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5458^2+30124^2) = 30615 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -99.8; Ty = 550.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33632/1324138)^2+171597/1451200+0.7*54229/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -263.573; My = -55.531; N = -1291.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -99.8; Ty = 550.8; Mt = 0.865

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2018 <= 325259 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 2.864

Asta 96: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(1689^2+3264^2) = 3676 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -30.9; Ty = 59.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34051/1324138)^2+194290/1451200+0.7*84871/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -298.43; My = -86.907; N = -1307.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -30.9; Ty = 59.7; Mt = 4.359

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3072 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.359

Asta 97: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4597^2+16304^2) = 16939 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 84.1; Ty = -298.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34523/1324138)^2+191060/1451200+0.7*94047/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -293.468; My = -96.304; N = -1325.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 84.3; Ty = -298; Mt = 3.542

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2496 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.542

Asta 98: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21275^2+17579^2) = 27598 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 389; Ty = -321.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33269/1324138)^2+0.7*105425/1451200+173682/1451200=0.17 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 161.933; My = 177.85; N = -1277.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 387.8; Ty = -322.7; Mt = -12.216

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8610 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -12.216

Asta 99: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.641

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4437^2+60560^2) = 60723 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -81.1; Ty = 1107.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30771/1324138)^2+491698/1451200+0.7*105849/1451200=0.39 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 755.248; My = 108.389; N = -1181.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0.1 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -81.1; Ty = 1107.4; Mt = 45.783

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.641
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
32286 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 45.812

Asta 100: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3442^2+15783^2) = 16154 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -62.9; Ty = 288.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29586/1324138)^2+117977/1451200+0.7*21483/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -181.213; My = -21.998; N = -1136.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Tx = -62.9; Ty = 288.6; Mt = 6.443

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4541 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 6.443

Asta 101: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6558^2+27167^2) = 27947 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 119.9; Ty = -496.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30876/1324138)^2+153973/1451200+0.7*85372/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 236.502; My = 87.421; N = -1185.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 119.9; Ty = -496.8; Mt = -10.535

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7425 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -10.535

Asta 102: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.454

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(228^2+74294^2) = 74294 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.2; Ty = -1358.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31050/1324138)^2+540556/1451200+0.7*120998/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 830.294; My = 123.902; N = -1192.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.15 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.2; Ty = -1358.5; Mt = -56.604

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39892 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -56.604

Asta 103: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14540^2+22931^2) = 27152 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -265.9; Ty = 419.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32479/1324138)^2+0.7*139080/1451200+144046/1451200=0.17 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 213.627; My = 147.503; N = -1247.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -264.8; Ty = 419.9; Mt = 7.651

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5392 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 7.651

Asta 104: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3208^2+13260^2) = 13642 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -58.7; Ty = 242.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32632/1324138)^2+232379/1451200+0.7*103079/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -356.934; My = -105.553; N = -1253.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -59; Ty = 241.7; Mt = -5.913

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4167 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.913

Asta 105: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2857^2+11098^2) = 11460 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 52.2; Ty = -202.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32354/1324138)^2+235719/1451200+0.7*98887/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -362.065; My = -101.26; N = -1242.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 42.4; Ty = -92.4; Mt = -3.369

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2374 <= 325259 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = -3.369

Asta 106: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9287^2+34913^2) = 36127 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 169.8; Ty = -638.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32599/1324138)^2+211027/1451200+0.7*82530/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 324.137; My = 84.511; N = -1251.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 169.8; Ty = -638.4; Mt = -2.721

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3342 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -4.743

Asta 107: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.499

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18035^2+61023^2) = 63632 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 329.8; Ty = -1115.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32479/1324138)^2+570690/1451200+0.7*236620/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 876.579; My = 242.299; N = -1247.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.1 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 329.8; Ty = -1115.9; Mt = -9.947

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7393 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -10.491

Asta 108: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.341

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19619^2+69958^2) = 72657 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -358.7; Ty = 1279.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32585/1324138)^2+575335/1451200+0.7*239645/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 883.714; My = 245.396; N = -1251.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.13 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -358.7; Ty = 1279.2; Mt = 5.905

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.341
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5238 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 7.432

Asta 109: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14079^2+41652^2) = 43967 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -257.4; Ty = 761.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32502/1324138)^2+293541/1451200+0.7*133860/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 450.879; My = 137.073; N = -1248.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -257.4; Ty = 761.6; Mt = -2.804

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1982 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.812

Asta 110: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2323^2+20455^2) = 20586 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -42.5; Ty = 374

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32209/1324138)^2+313864/1451200+0.7*101766/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -482.094; My = -104.209; N = -1236.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -42.5; Ty = 374; Mt = -5.74

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4067 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Mt = -5.771

Asta 111: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2004^2+2254^2) = 3016 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -36.6; Ty = -41.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32347/1324138)^2+307506/1451200+0.7*119792/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -472.33; My = -122.667; N = -1242.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -23.9; Ty = -14.8; Mt = -1.818

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1281 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.818

Asta 112: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(3781^2+20477^2) = 20824 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 69.1; Ty = -374.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32379/1324138)^2+312026/1451200+0.7*117627/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -479.272; My = -120.45; N = -1243.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 69.1; Ty = -374.4; Mt = 1.177

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
791 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.122

Asta 113: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.039

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15131^2+45704^2) = 48143 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 276.7; Ty = -835.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32138/1324138)^2+442947/1451200+0.7*203614/1451200=0.4 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 680.367; My = 208.501; N = -1234.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 276.7; Ty = -835.7; Mt = 6.824

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.039

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4810 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.824

Asta 114: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.145

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
229982/1088400+0.7*34414/1088400=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -353.252; My = 35.24

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(179^2+10851^2) = 10852 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -3.3; Ty = -198.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -3.3; Ty = -198.4; Mt = -40.26

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
28373 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -40.26

Asta 115: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.29

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4629^2+33956^2) = 34270 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -84.7; Ty = -620.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8537/1324138)^2+245873/1451200+0.7*67246/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -377.661; My = 68.86; N = -327.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -63.8; Ty = -417; Mt = -9.873

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6958 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -9.873

Asta 116: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8218^2+54812^2) = 55425 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -150.3; Ty = -1002.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12233/1324138)^2+871011/1451200+0.7*201092/1451200=0.7 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1337.873; My = -205.918; N = -469.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -150.3; Ty = -1002.3; Mt = 30.383

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21413 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 30.383

Asta 117: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7560^2+83584^2) = 83925 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -138.2; Ty = -1528.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16256/1324138)^2+881681/1451200+0.7*173850/1451200=0.69 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1354.261; My = -178.022; N = -624.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.68+0+0.19 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -139.7; Ty = -1528; Mt = 227.998

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
160682 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 227.998

Asta 118: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.194

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34478/1160960+197746/1451200+0.7*16784/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 303.738; My = 17.187; N = 1324

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(26887^2+89968^2) = 93899 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = -491.6; Ty = 1645.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.01+0.09 <= 1 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Tx = 557.7; Ty = -1451.4; Mt = -75.158

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
52968 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -75.158

Asta 119: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.929

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23368/870720+93682/1088400+0.7*38333/1088400=0.14 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 143.896; My = 39.253; N = 897.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1708^2+28179^2) = 28230 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 31.2; Ty = 515.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 31.2; Ty = 515.3; Mt = -31.068

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.929
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21895 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -31.068

Asta 120: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.282

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20123/1160960+213362/1451200+0.7*35872/1451200=0.18 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -327.724; My = 36.733; N = 772.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(633^2+16771^2) = 16783 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 11.6; Ty = 306.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 14.9; Ty = 215.5; Mt = 19.576

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13796 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 19.576

Asta 121: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19560/1160960+192653/1451200+0.7*32840/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -295.915; My = 33.628; N = 751.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(777^2+17546^2) = 17563 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -14.2; Ty = -320.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Tx = 7.1; Ty = -113.9; Mt = 6.474

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4563 <= 325259 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = 6.474

Asta 122: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.562

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4924^2+17825^2) = 18492 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -90; Ty = -325.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32323/1820690)^2+210349/1995400+0.7*111085/1995400=0.14 <= 1 [4.4.7a] Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = -323.095; My = 113.751; N = -1241.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Tx = -157.9; Ty = -324.2; Mt = -10.002

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7049 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -10.002

Asta 123: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.614

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
62320/1596320+44484/1995400+0.7*6732/1995400=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 68.327; My = 6.894; N = 2393.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2002^2+9419^2) = 9630 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 36.6; Ty = 172.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 36.6; Ty = 172.2; Mt = 1.418

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.614
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1446 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 2.052

Asta 124: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.001

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
64223/1596320+37639/1995400+0.7*3169/1995400=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 57.814; My = -3.245; N = 2466.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2984^2+6256^2) = 6931 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -54.6; Ty = 114.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 5.4; Ty = 108; Mt = -7.487

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5276 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -7.487

Asta 125: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
56714/1596320+0.7*10220/1995400+25411/1995400=0.05 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 15.698; My = -26.021; N = 2177.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21811^2+3529^2) = 22095 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 398.8; Ty = 64.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 398.8; Ty = 64.5; Mt = -7.845

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5532 <= 236552 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Mt = -7.85

Asta 126: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
49298/1596320+54562/1995400+0.7*30981/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -83.807; My = 31.724; N = 1893

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3541^2+4435^2) = 5675 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -64.7; Ty = 81.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 23.1; Ty = 89.5; Mt = -6.275

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4423 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -6.275

Asta 127: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.406

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(57590^2+13703^2) = 59198 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1053.1; Ty = 250.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45761/1324138)^2+0.7*95243/1451200+160471/1451200=0.16 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 146.293; My = -164.323; N = -1757.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.05+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1053.1; Ty = 250.6; Mt = 14.068

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
13834 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -19.63

Asta 128: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.868

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18745/1160960+69952/1451200+0.7*42256/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -107.447; My = -43.271; N = 719.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6606^2+2954^2) = 7236 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 120.8; Ty = 54

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.868
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 42.1; Ty = -47.3; Mt = -2.641

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.868
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1861 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.641

Asta 129: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9705/1596320+0.7*22828/1995400+65512/1995400=0.05 <= 1 [4.4.6b] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -35.064; My = 67.085; N = 372.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2540^2+8813^2) = 9172 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -46.4; Ty = 161.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 29.6; Ty = 75.7; Mt = -2.343

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1656 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 2.349

Asta 130: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.266

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5117^2+10976^2) = 12110 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -93.6; Ty = -200.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26696/1324138)^2+133074/1451200+0.7*71514/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 204.402; My = -73.23; N = -1025.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -93.2; Ty = -200.6; Mt = 13.494

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9510 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 13.494

Asta 131: Trave in legno a falda Falda 5 fili 267-272

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
47765/1602207+0.7*10989/2002759+15184/2002759=0.04 <= 1 [4.4.6b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 8.308; My = 8.928; N = 1203.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2683^2+4433^2) = 5182 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -32.2; Ty = -53.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -32.2; Ty = -53.2; Mt = 1.737

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2212 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 1.737

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.12
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.24/0=388665.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.12
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.24/0=790689.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.12
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.24/0=297582.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 132: Trave in legno a falda Falda 5 fili 261-273

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.234

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
343355/2002759+0.7*17850/2002759=0.18 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 259.577; My = 10.496

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(794^2+21685^2) = 21699 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 9.5; Ty = -260.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = -10.5; Ty = 247.7; Mt = 1.928

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2454 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 1.928

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.617
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.234/0=28549.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.617
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.234/0=50057.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.617
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.234/0.0001=22698.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 133: Trave in legno a falda Falda 5 fili 255-274

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.335

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5617/1602207+503009/2002759+0.7*24673/2002759=0.26 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 380.275; My = 14.508; N = 141.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(420^2+20502^2) = 20506 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5; Ty = 246

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5; Ty = 246; Mt = -0.828

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2144 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -1.684

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.323
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.335/0.0003=7442.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.323
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.335/0.0002=12978.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.323
Kdef = 0.6
Ufin in x = 0

Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.335/0.0004=5925.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 134: Trave in legno a falda Falda 5 fili 244-246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.686

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7026^2+5000^2) = 8623 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 84.3; Ty = -60

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36226/1324138)^2+133552/1456552+0.7*65287/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 100.965; My = 38.389; N = -912.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 83.8; Ty = -57.8; Mt = -6.116

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7787 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.116

Asta 135: Trave in legno a falda Falda 5 fili 238-247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3279^2+15989^2) = 16322 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 39.3; Ty = -191.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23904/1324138)^2+131335/1456552+0.7*46354/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 99.289; My = 27.256; N = -602.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 39.4; Ty = -191.5; Mt = -2.402

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3058 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.402

Asta 136: Trave in legno a falda Falda 5 fili 233-249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4407^2+14204^2) = 14872 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -52.9; Ty = -170.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33961/1324138)^2+144022/1456552+0.7*87107/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 108.88; My = 51.219; N = -855.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -52.3; Ty = 167.9; Mt = 3.133

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3989 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 3.133

Asta 137: Trave in legno a falda Falda 5 fili 239-250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.827

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13644^2+6427^2) = 15082 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -163.7; Ty = 77.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(57365/1324138)^2+0.7*121267/1456552+130996/1456552=0.15 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 91.678; My = 77.025; N = -1445.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -163.7; Ty = 77.1; Mt = 4.85

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6174 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 4.85

Asta 138: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.166

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
216737/1456552+0.7*105357/1456552=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 163.853; My = -61.95

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4774^2+3768^2) = 6082 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 57.3; Ty = -45.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 57.3; Ty = -45.2; Mt = 11.951

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15215 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 11.951

Asta 139: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.441

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
11430/1602207+583756/2002759+0.7*17564/2002759=0.3 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 441.32; My = -10.327; N = 288

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1017^2+25712^2) = 25732 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.2; Ty = 308.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -12.2; Ty = 308.4; Mt = 0.25

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1818 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = 1.428

Asta 140: Trave in legno a falda Falda 5 fili 256-281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
504926/2002759+0.7*15361/2002759=0.26 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 381.724; My = -9.032

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1337^2+24804^2) = 24840 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -16; Ty = -297.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 5.6; Ty = 283.2; Mt = -3.436

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4375 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -3.436

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.821
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite

1.642/0.0002=10348.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.821
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=18222.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.821
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=8218.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 141: Trave in legno a falda Falda 5 fili 262-282

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.746

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
238891/2002759+0.7*15860/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 180.601; My = -9.326

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1311^2+21463^2) = 21502 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -15.7; Ty = -257.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 1.6; Ty = 236.8; Mt = -1.932

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1912 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Mt = -1.502

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.348
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.746/0=60199.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.348
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.746/0=107110.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.348
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.746/0=47672.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 142: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15638^2+29610^2) = 33486 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 285.9; Ty = 541.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42422/1324138)^2+278014/1451200+0.7*191186/1451200=0.28 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 427.029; My = -195.774; N = -1629

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.03+0.01+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 285.9; Ty = 541.4; Mt = -11.736

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8271 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -11.736

Asta 143: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10205^2+24699^2) = 26725 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 186.6; Ty = 451.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44460/1324138)^2+280794/1451200+0.7*153837/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -431.299; My = 157.529; N = -1707.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 187; Ty = 451.2; Mt = 9.637

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6792 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.637

Asta 144: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(862^2+10474^2) = 10510 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -15.8; Ty = 191.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44273/1324138)^2+382691/1451200+0.7*129784/1451200=0.33 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -587.814; My = 132.899; N = -1700.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -15.4; Ty = 191.1; Mt = 15.687

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11055 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 15.687

Asta 145: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4821^2+524^2) = 4849 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = -88.1; Ty = -9.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(43810/1324138)^2+377299/1451200+0.7*153569/1451200=0.34 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -579.531; My = 157.255; N = -1682.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -86.8; Ty = -17.1; Mt = 6.015

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4239 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.015

Asta 146: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9724^2+19707^2) = 21976 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -177.8; Ty = -360.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44293/1324138)^2+360752/1451200+0.7*129706/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -554.115; My = 132.819; N = -1700.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -177.3; Ty = -360.4; Mt = 17.632

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12426 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 17.632

Asta 147: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.833

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11756^2+36312^2) = 38167 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -215; Ty = -664

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(46206/1324138)^2+191161/1451200+0.7*161662/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 293.623; My = -165.542; N = -1774.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -215; Ty = -664; Mt = 12.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8096 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 11.488

Asta 148: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.513

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(53577^2+126071^2) = 136983 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 979.7; Ty = -2305.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22328/1324138)^2+853828/1451200+0.7*179541/1451200=0.68 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1311.48; My = 183.85; N = -857.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.3+0.08+0.43 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 979.7; Ty = -2305.3; Mt = -101.016

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
56870 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -80.695

Asta 149: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.774

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15533^2+19808^2) = 25172 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -284; Ty = 362.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69839/1324138)^2+0.7*160587/1451200+184146/1451200=0.21 <= 1 [4.4.7b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 246.662; My = 188.565; N = -2681.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -284; Ty = 362.2; Mt = 22.828

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16088 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 22.828

Asta 150: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3350^2+3188^2) = 4624 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -61.3; Ty = 58.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(71085/1324138)^2+55584/1451200+0.7*38777/1451200=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -85.378; My = -39.708; N = -2729.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -91.6; Ty = -46.1; Mt = 6.809

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4799 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 6.809

Asta 151: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3595^2+23857^2) = 24126 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 65.7; Ty = -436.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(71368/1324138)^2+170975/1451200+0.7*42904/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 262.617; My = 43.934; N = -2740.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 65.2; Ty = -435.3; Mt = -4.993

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5625 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -7.982

Asta 152: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4423^2+22135^2) = 22573 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -80.9; Ty = 404.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(71375/1324138)^2+165092/1451200+0.7*51949/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 253.581; My = 53.196; N = -2740.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -80.9; Ty = 404.8; Mt = 6.488

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4604 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 6.533

Asta 153: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3164^2+6134^2) = 6902 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 57.9; Ty = -112.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(70300/1324138)^2+47628/1451200+0.7*29871/1451200=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -73.157; My = -30.588; N = -2699.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 93.1; Ty = 22.2; Mt = -5.6

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3947 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -5.6

Asta 154: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.522

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(16735^2+25220^2) = 30267 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 306; Ty = -461.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(70058/1324138)^2+170690/1451200+0.7*150622/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 262.179; My = 154.237; N = -2690.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 306; Ty = -461.2; Mt = -24.524

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17292 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -24.537

Asta 155: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.44

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2177^2+54720^2) = 54764 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -39.8; Ty = 1000.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36797/1324138)^2+720627/1451200+0.7*39611/1451200=0.52 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1106.883; My = -40.562; N = -1413

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -39.8; Ty = 1000.6; Mt = 27.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.44

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14910 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 21.157

Asta 156: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17028^2+19464^2) = 25861 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 311.4; Ty = 355.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36714/1324138)^2+386173/1451200+0.7*163801/1451200=0.35 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -593.162; My = 167.732; N = -1409.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 311.3; Ty = 355.6; Mt = -16.466

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11605 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -16.466

Asta 157: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6366^2+1399^2) = 6518 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = 116.4; Ty = -25.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37052/1324138)^2+396028/1451200+0.7*200629/1451200=0.37 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -608.298; My = 205.444; N = -1422.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 113; Ty = -16.9; Mt = -12.313

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8678 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -12.313

Asta 158: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7487^2+16602^2) = 18212 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -136.9; Ty = -303.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37703/1324138)^2+396357/1451200+0.7*195605/1451200=0.37 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -608.804; My = 200.3; N = -1447.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -137.3; Ty = -303.4; Mt = -10.405

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7333 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -10.405

Asta 159: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11360^2+29742^2) = 31837 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -207.7; Ty = -543.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37984/1324138)^2+227403/1451200+0.7*121278/1451200=0.22 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -349.291; My = 124.188; N = -1458.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -207.8; Ty = -543.8; Mt = -1.153

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2205 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -3.129

Asta 160: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(26264^2+22851^2) = 34814 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -480.3; Ty = -417.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36039/1324138)^2+0.7*243686/1451200+276625/1451200=0.31 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 374.301; My = -283.264; N = -1383.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.02+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -480.3; Ty = -417.8; Mt = 17.961

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12658 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.961

Asta 161: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10766^2+18842^2) = 21701 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 196.9; Ty = 344.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(63922/1324138)^2+107010/1451200+0.7*98910/1451200=0.12 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 164.367; My = -101.283; N = -2454.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 194.6; Ty = 344.5; Mt = -23.906

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16848 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -23.906

Asta 162: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3885^2+5895^2) = 7060 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 71; Ty = 107.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68359/1324138)^2+60005/1451200+0.7*43530/1451200=0.07 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -92.168; My = 44.575; N = -2625

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 62.8; Ty = 79.9; Mt = -6.98

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4919 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -6.98

Asta 163: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.841

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3787^2+29792^2) = 30032 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -69.3; Ty = -544.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69432/1324138)^2+221553/1451200+0.7*53984/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 340.305; My = -55.28; N = -2666.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -69.1; Ty = -544.7; Mt = 8.914

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6338 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.993

Asta 164: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4873^2+26773^2) = 27213 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 89.1; Ty = 489.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69263/1324138)^2+213212/1451200+0.7*63228/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 327.494; My = -64.746; N = -2659.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 89.1; Ty = 489.6; Mt = -9.205

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6519 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.25

Asta 165: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4138^2+2642^2) = 4909 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -75.7; Ty = -48.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28870/1820690)^2+70986/1995400+0.7*46487/1995400=0.05 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -109.035; My = -47.603; N = -1108.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -72.8; Ty = 72.3; Mt = 5.698

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4016 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 5.698

Asta 166: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.525

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6509^2+25574^2) = 26390 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -119; Ty = -467.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(65986/1324138)^2+141589/1451200+0.7*65319/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 217.481; My = -66.886; N = -2533.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -119; Ty = -467.6; Mt = 25.356

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17870 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 25.356

Asta 167: Trave in legno a falda Falda 1 fili 230-229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(82^2+27818^2) = 27819 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1; Ty = 333.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24059/1324138)^2+334712/1456552+0.7*1343/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 253.043; My = 0.79; N = -606.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1; Ty = 333.8; Mt = -1.803

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2314 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.818

Asta 168: Trave in legno a falda Falda 1 fili 216-215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6405/1165241+334466/1456552+0.7*2547/1456552=0.24 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 252.856; My = -1.498; N = 161.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(245^2+29413^2) = 29414 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = 353

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = 353; Mt = -3.144

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4002 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media

Mt = -3.144

Asta 169: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1784^2+21317^2) = 21391 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 21.4; Ty = 255.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11734/1324138)^2+173118/1456552+0.7*30878/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 130.877; My = -18.156; N = -295.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 21.5; Ty = 241.2; Mt = 3.437

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4376 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.437

Asta 170: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(1732^2+9849^2) = 10000 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.8; Ty = -118.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13792/1324138)^2+55389/1456552+0.7*360/1456552=0.04 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 41.874; My = -0.212; N = -347.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.8; Ty = -118.2; Mt = -5.377

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6845 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.377

Asta 171: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7381^2+15590^2) = 17249 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -88.6; Ty = -187.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6421/1820690)^2+40657/2002759+0.7*20544/2002759=0.03 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -30.737; My = 12.08; N = -161.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -88.6; Ty = -187.1; Mt = -6.42

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8174 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -6.42

Asta 172: Trave in legno a falda Falda 1 fili 200-199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(339^2+28273^2) = 28275 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 4.1; Ty = 339.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16616/1324138)^2+189395/1456552+0.7*12341/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 143.183; My = -7.257; N = -418.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4; Ty = 333.5; Mt = 6.454

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8216 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.454

Asta 173: Trave in legno a falda Falda 1 fili 189-188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(241^2+28683^2) = 28684 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 344.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.51
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36659/1324138)^2+263543/1456552+0.7*930/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -199.238; My = -0.547; N = -923.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -3.3; Ty = 340.1; Mt = 3.666

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4692 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.685

Asta 174: Trave in legno a falda Falda 1 fili 180-179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.426
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
284385/1456552+0.7*1142/1456552=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -214.995; My = 0.671

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(566^2+28854^2) = 28860 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = 346.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Tx = -7.3; Ty = 341.7; Mt = -1.382

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1421 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1.116

Asta 175: Trave in legno a falda Falda 1 fili 167-170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.174
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6862/1165241+247548/1456552+0.7*2281/1456552=0.18 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -187.146; My = -1.341; N = 172.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(693^2+25028^2) = 25038 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 8.3; Ty = 300.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 8.4; Ty = 292.9; Mt = -5.633

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7323 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.752

Asta 176: Trave in legno a falda Falda 1 fili 315-161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1473^2+28336^2) = 28374 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 17.7; Ty = 340

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36368/1324138)^2+275220/1456552+0.7*43229/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 208.067; My = -25.418; N = -916.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 19.2; Ty = 335.5; Mt = -5.777

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7496 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.888

Asta 177: Trave in legno a falda Falda 1 fili 147-146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1819^2+27594^2) = 27653 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 21.8; Ty = 331.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44170/1324138)^2+454322/1456552+0.7*46184/1456552=0.34 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 343.468; My = -27.156; N = -1113.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 21.6; Ty = 330.4; Mt = -0.365

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
597 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.469

Asta 178: Trave in legno a falda Falda 1 fili 141-140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(329^2+28693^2) = 28695 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 3.9; Ty = 344.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38740/1324138)^2+530165/1456552+0.7*9256/1456552=0.37 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 400.805; My = -5.442; N = -976.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.9; Ty = 344.3; Mt = 0.219

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
632 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 0.496

Asta 179: Trave in legno a falda Falda 1 fili 132-131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1074^2+28131^2) = 28152 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 337.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39761/1324138)^2+486002/1456552+0.7*29035/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 367.417; My = 17.073; N = -1002

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 337.6; Mt = -0.162

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
753 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 0.591

Asta 180: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(458^2+30588^2) = 30591 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 367.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42398/1324138)^2+372578/1456552+0.7*22120/1456552=0.27 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 281.669; My = 13.006; N = -1068.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.9; Ty = 366.9; Mt = 3.987

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5183 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.071

Asta 181: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5538^2+6249^2) = 8350 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -66.5; Ty = -75

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28539/1820690)^2+0.7*24800/2002759+26611/2002759=0.02 <= 1 [4.4.7b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = -18.749; My = -15.647; N = -719.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -66.5; Ty = -75; Mt = -2.477

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3339 <= 316724 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = -2.623

Asta 182: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6526^2+23787^2) = 24666 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -78.3; Ty = -285.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5744/1820690)^2+59398/2002759+0.7*24188/2002759=0.04 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 44.905; My = -14.223; N = -144.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -78.3; Ty = -285.4; Mt = -7.423

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
9451 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -7.423

Asta 183: Trave in legno a falda Falda 1 fili 113-112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.342
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
201439/1456552+0.7*532/1456552=0.14 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -152.288; My = -0.313

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(485^2+25767^2) = 25771 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 309.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 304.9; Mt = 5.9

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7512 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.9

Asta 184: Trave in legno a falda Falda 1 fili 101-100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.593
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
245280/1456552+0.7*980/1456552=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -185.432; My = 0.576

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(184^2+30499^2) = 30500 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 2.2; Ty = 366

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.6; Ty = 364.1; Mt = 2.328

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3017 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 2.37

Asta 185: Trave in legno a falda Falda 1 fili 93-92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
235130/1456552+0.7*726/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -177.758; My = -0.427

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(197^2+32208^2) = 32209 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.4; Ty = 386.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2; Ty = 385; Mt = -1.994

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2582 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.028

Asta 186: Trave in legno a falda Falda 1 fili 85-84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7894/1165241+257306/1456552+0.7*918/1456552=0.18 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 194.523; My = 0.54; N = 198.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(24^2+30516^2) = 30516 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 366.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 364.4; Mt = -5.616

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7249 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.694

Asta 187: Trave in legno a falda Falda 1 fili 77-76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
254531/1456552+0.7*4484/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 192.425; My = -2.637

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(241^2+26775^2) = 26776 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = 321.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.2; Ty = 319; Mt = -4.33

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5613 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.409

Asta 188: Trave in legno a falda Falda 1 fili 66-65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
339125/1456552+0.7*4276/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 256.379; My = 2.514

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(298^2+29162^2) = 29163 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.6; Ty = 349.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.6; Ty = 349.9; Mt = 2.661

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3387 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.661

Asta 189: Trave in legno a falda Falda 1 fili 57-56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(302^2+32511^2) = 32512 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.6; Ty = 390.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13191/1324138)^2+428290/1456552+0.7*15357/1456552=0.3 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 323.788; My = -9.03; N = -332.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.6; Ty = 390.1; Mt = 2.804

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3589 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.819

Asta 190: Trave in legno a falda Falda 1 fili 264-263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
67472/2002759+0.7*51683/2002759=0.05 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 51.009; My = -30.389

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7859^2+10048^2) = 12756 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -94.3; Ty = -120.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo

Tx = -94.3; Ty = -120.6; Mt = -1.463

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1863 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -1.463

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.197
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.37/0=170821.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.197
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.37/0=320833.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.197
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.37/0=133330.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 191: Trave in legno a falda Falda 1 fili 258-257

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6213/1602207+164244/2002759+0.7*30996/2002759=0.1 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = -124.169; My = -18.226; N = 156.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(1310^2+10524^2) = 10605 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -15.7; Ty = -126.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -16.1; Ty = 123.2; Mt = -1.205

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2364 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.857

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.685
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.284/0.0001=12807.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.685
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.284/0.0001=20931.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.685
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.284/0.0001=10388.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 192: Trave in legno a falda Falda 1 fili 255-252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.197

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.318
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68620/1324138)^2+135347/1456552+0.7*4539/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -102.323; My = -2.669; N = -1729.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(612^2+20315^2) = 20325 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.3; Ty = 243.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.3; Ty = 243.8; Mt = -0.937

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.197
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2832 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -2.224

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.172
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
2.197/0.0005=4787.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.172
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.197/0.0003=8002.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.172
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
2.197/0.0006=3857.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 193: Trave in legno a falda Falda 1 fili 244-241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5391^2+17009^2) = 17843 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -64.7; Ty = 204.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36106/1324138)^2+116033/1456552+0.7*52989/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 87.721; My = 31.158; N = -909.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -64.7; Ty = 204.1; Mt = 3.376

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4297 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 3.376

Asta 194: Trave in legno a falda Falda 1 fili 238-235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.569

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(404^2+17302^2) = 17307 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 4.9; Ty = 207.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19584/1324138)^2+104568/1456552+0.7*2837/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 79.054; My = -1.668; N = -493.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 4.6; Ty = 207.2; Mt = -0.594

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.569
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
756 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -0.594

Asta 195: Trave in legno a falda Falda 1 fili 229-228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(823^2+24691^2) = 24705 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -9.9; Ty = -296.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.129
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34425/1324138)^2+166920/1456552+0.7*717/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -126.191; My = 0.421; N = -867.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -9.9; Ty = -296.3; Mt = 2.097

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2714 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.132

Asta 196: Trave in legno a falda Falda 1 fili 215-214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(635^2+24048^2) = 24056 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.6; Ty = 288.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10357/1324138)^2+141021/1456552+0.7*2954/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -106.612; My = -1.737; N = -261

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.6; Ty = 288.6; Mt = 2.544

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3259 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.56

Asta 197: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
82072/1456552+0.7*2910/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 62.047; My = 1.711

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(386^2+14440^2) = 14445 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 4.6; Ty = 173.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 4.6; Ty = 173.3; Mt = 7.428

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9457 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 7.428

Asta 198: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.127

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
122547/1456552+0.7*7001/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 92.646; My = 4.117

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(462^2+22999^2) = 23004 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 276

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 276; Mt = -3.036

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.127
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3906 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -3.068

Asta 199: Trave in legno a falda Falda 1 fili 199-198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(851^2+29690^2) = 29702 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.2; Ty = -356.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38611/1324138)^2+284901/1456552+0.7*19830/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 215.385; My = -11.66; N = -973

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.2; Ty = -356.3; Mt = -6.371

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8111 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.371

Asta 200: Trave in legno a falda Falda 1 fili 84-83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(333^2+26789^2) = 26792 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4; Ty = -321.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21136/1324138)^2+170040/1456552+0.7*7392/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 128.55; My = 4.347; N = -532.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4; Ty = -321.5; Mt = 5.595

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7123 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.595

Asta 201: Trave in legno a falda Falda 1 fili 76-75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
127235/1456552+0.7*13487/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 96.189; My = -7.93

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(449^2+23229^2) = 23233 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.4; Ty = 278.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = 278.6; Mt = 4.23

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5385 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 4.23

Asta 202: Trave in legno a falda Falda 1 fili 65-64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(148^2+24032^2) = 24033 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 288.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10549/1324138)^2+142894/1456552+0.7*2965/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -108.027; My = 1.743; N = -265.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.7; Ty = 287.7; Mt = -2.288

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2913 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.288

Asta 203: Trave in legno a falda Falda 1 fili 56-55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(262^2+24403^2) = 24405 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 3.1; Ty = -292.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.129
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26999/1324138)^2+181976/1456552+0.7*1864/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -137.573; My = 1.096; N = -680.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 3.1; Ty = -292.8; Mt = -2.807

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3638 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.857

Asta 204: Trave in legno a falda Falda 1 fili 46-45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(655^2+25797^2) = 25805 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -309.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5901/1820690)^2+302207/2002759+0.7*20028/2002759=0.16 <= 1 [4.4.7a] Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mx = 228.469; My = 11.776; N = -148.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -309.6; Mt = 0.134

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
408 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -0.32

Asta 205: Trave in legno a falda Falda 1 fili 38-37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1239^2+26708^2) = 26737 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 14.9; Ty = -320.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10985/1820690)^2+277583/2002759+0.7*28607/2002759=0.15 <= 1 [4.4.7a] Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mx = 209.853; My = 16.821; N = -276.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 14.9; Ty = -320.5; Mt = 2.917

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3795 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.981

Asta 206: Trave in legno a falda Falda 1 fili 241-240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1722^2+25106^2) = 25165 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -20.7; Ty = -301.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53945/1324138)^2+189482/1456552+0.7*11150/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -143.248; My = 6.556; N = -1359.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -20.7; Ty = -301.3; Mt = -2.698

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3499 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.748

Asta 207: Trave in legno a falda Falda 1 fili 235-234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1093^2+26653^2) = 26675 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -13.1; Ty = -319.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.967
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29024/1324138)^2+191814/1456552+0.7*6101/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -145.011; My = 3.587; N = -731.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Tx = -13.1; Ty = -319.8; Mt = -0.782

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1022 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -0.803

Asta 208: Trave in legno a falda Falda 1 fili 26-33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35849/1820690)^2+240364/2002759+0.7*23650/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mx = 181.715; My = 13.906; N = -903.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(511^2+24337^2) = 24342 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -292

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -292; Mt = 2.234

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2922 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.296

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.21
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
2.419/0.0005=5331.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.21
Kdef = 0
Uinst var in x = 0

Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.419/0.0003=8799.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.21
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
2.419/0.0006=4311.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 209: Trave in legno a falda Falda 1 fili 47-46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.911

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(268^2+18070^2) = 18072 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.2; Ty = 216.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23123/1324138)^2+95866/1456552+0.7*4631/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 72.475; My = 2.723; N = -582.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.1; Ty = 216.5; Mt = 2.575

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3278 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.575

Asta 210: Trave in legno a falda Falda 1 fili 39-38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.981

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1722^2+13905^2) = 14011 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20.7; Ty = 166.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30901/1324138)^2+58581/1456552+0.7*20333/1456552=0.05 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -44.287; My = 11.956; N = -778.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20.7; Ty = 166.9; Mt = -0.735

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
940 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -0.738

Asta 211: Trave in legno a falda Falda 1 fili 23-22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.54

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29020/1820690)^2+237110/2002759+0.7*22946/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 179.255; My = -13.492; N = -731.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.54

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(157^2+15917^2) = 15918 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -1.9; Ty = -191

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -2; Ty = -191; Mt = 0.661

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2552 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 2.005

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.77
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.54/0.0001=13373.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.77
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.54/0.0001=21439.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.77
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.54/0.0001=10910.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 212: Trave in legno a falda Falda 1 fili 17-16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.609

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.609

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7428/1820690)^2+127596/2002759+0.7*36072/2002759=0.08 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 96.463; My = -21.21; N = -187.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3628^2+13493^2) = 13972 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -43.5; Ty = -161.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = -96; Mt = 0.589

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1148 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 0.902

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.284
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.609/0=101831.5 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.284
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.609/0=157505.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.264
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.609/0=83934 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 213: Trave in legno a falda Falda 2 fili 19-11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.652

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
225692/2002759+0.7*29063/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 170.623; My = 17.089

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3682^2+22112^2) = 22416 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 44.2; Ty = -265.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -22.1; Ty = 239.7; Mt = 1.516

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1405 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.104

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.435
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.652/0=155288 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.435
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.652/0=242426 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.435
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.652/0=127739.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 214: Trave in legno a falda Falda 2 fili 21-10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.591

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5060/1602207+468498/2002759+0.7*22988/2002759=0.25 <= 1 [4.4.6a] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 354.185; My = 13.517; N = 127.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1212^2+24423^2) = 24453 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 14.5; Ty = -293.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 14.1; Ty = -292.9; Mt = -2.218

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2824 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.218

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.796
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.591/0=32681.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.796
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.591/0=53445.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.796
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite

1.591/0.0001=26503.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 215: Trave in legno a falda Falda 2 fili 32-9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22364/1602207+517417/2002759+0.7*1394/2002759=0.27 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 391.167; My = 0.819; N = 563.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(597^2+24442^2) = 24449 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.2; Ty = 293.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.2; Ty = 293.3; Mt = -1.817

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2318 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.821

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.417
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
2.504/0.0001=23187.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.669
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite

2.504/0.0001=39970.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.417
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0001
Ufin = 0.0001
Luce/Ufin > limite
2.504/0.0001=17737 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 216: Trave in legno a falda Falda 2 fili 36-31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.814

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4484^2+6069^2) = 7545 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 53.8; Ty = 72.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53052/1324138)^2+94771/1456552+0.7*62103/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 71.647; My = 36.516; N = -1336.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 53.8; Ty = 72.8; Mt = -6.189

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7879 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.189

Asta 217: Trave in legno a falda Falda 2 fili 44-30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.696

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2279^2+15083^2) = 15255 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 27.4; Ty = -181

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34418/1324138)^2+113846/1456552+0.7*41549/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 86.068; My = -24.431; N = -867.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 27.4; Ty = -181; Mt = -2.904

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3697 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.904

Asta 218: Trave in legno a falda Falda 2 fili 31-8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(630^2+25186^2) = 25194 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -302.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10378/1820690)^2+472157/2002759+0.7*4265/2002759=0.24 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 356.951; My = 2.508; N = -261.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -301.8; Mt = -0.421

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
551 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -0.433

Asta 219: Trave in legno a falda Falda 2 fili 30-7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(509^2+24487^2) = 24492 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -293.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7392/1820690)^2+245050/2002759+0.7*16907/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 185.258; My = 9.942; N = -186.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 6.5; Ty = -293.3; Mt = -1.04

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1325 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.04

Asta 220: Trave in legno a falda Falda 2 fili 43-28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.592

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2296^2+15940^2) = 16105 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -27.6; Ty = -191.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29125/1324138)^2+113439/1456552+0.7*32669/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 85.76; My = -19.21; N = -734

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -27.7; Ty = -190.6; Mt = 1.769

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2252 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.769

Asta 221: Trave in legno a falda Falda 2 fili 35-27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.616

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2744^2+10362^2) = 10720 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -32.9; Ty = -124.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28399/1324138)^2+117668/1456552+0.7*43689/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 88.957; My = -25.689; N = -715.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -31.9; Ty = -122.9; Mt = 3.559

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4531 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.559

Asta 222: Trave in legno a falda Falda 2 fili 28-5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
243905/2002759+0.7*319/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 184.392; My = 0.188

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(146^2+24521^2) = 24521 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 294.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 294.2; Mt = 0.573

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1088 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo

Mt = 0.855

Asta 223: Trave in legno a falda Falda 2 fili 27-4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7684/1602207+437367/2002759+0.7*12017/2002759=0.23 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 330.649; My = 7.066; N = 193.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(30^2+24376^2) = 24376 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 0.4; Ty = 292.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 0.1; Ty = 292.4; Mt = 0.294

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
743 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 0.584

Asta 224: Trave in legno a falda Falda 2 fili 25-3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.144

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20980/1602207+463290/2002759+0.7*26084/2002759=0.25 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 350.247; My = -15.337; N = 528.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(266^2+18962^2) = 18964 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.2; Ty = -227.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 16.9; Ty = 232; Mt = -2.552

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3249 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.552

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.143
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.144/0.0003=7336.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.143
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.144/0.0002=12427.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.143
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.144/0.0004=5889.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 225: Trave in legno a falda Falda 2 fili 20-2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.167

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
340619/2002759+0.7*29773/2002759=0.18 <= 1 (formula 4.4.5a) Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 257.508; My = -17.507

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1766^2+22249^2) = 22319 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -21.2; Ty = -267

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -21.2; Ty = -267; Mt = 2.025

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2687 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.111

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.545
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.167/0=47905 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.545
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.167/0=79770.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.545
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
1.167/0=38643 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 226: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.452

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13538/1165241+43911/1456552+0.7*7356/1456552=0.05 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 33.197; My = 4.325; N = 341.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(8032^2+711^2) = 8063 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = -96.4; Ty = -8.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -79.6; Ty = -14; Mt = 22.786

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
29008 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 22.786

Asta 227: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18405/1165241+139594/1456552+0.7*7128/1456552=0.12 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 105.533; My = 4.191; N = 463.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(405^2+23268^2) = 23271 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 279.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = -15.7; Ty = 84.6; Mt = 5.158

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6567 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = 5.158

Asta 228: Trave in legno a falda Falda 5 fili 246-275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
461092/2002759+0.7*9431/2002759=0.23 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 348.585; My = -5.545

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(450^2+27055^2) = 27059 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.4; Ty = 324.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.4; Ty = 324.7; Mt = -0.355

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
834 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -0.655

Asta 229: Trave in legno a falda Falda 5 fili 247-276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
234093/2002759+0.7*2505/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 176.974; My = -1.473

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(254^2+27207^2) = 27208 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.1; Ty = 326.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.1; Ty = 326.5; Mt = -0.723

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
921 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -0.723

Asta 230: Trave in legno a falda Falda 5 fili 249-278

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(563^2+26403^2) = 26409 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = 316.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5715/1820690)^2+233046/2002759+0.7*10291/2002759=0.12 <= 1 [4.4.7a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 176.183; My = -6.051; N = -144

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = 316.8; Mt = 1.506

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1918 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.506

Asta 231: Trave in legno a falda Falda 5 fili 250-279

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(487^2+26338^2) = 26342 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 316.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17798/1820690)^2+484595/2002759+0.7*5647/2002759=0.24 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 366.354; My = -3.32; N = -448.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6; Ty = 316; Mt = 0.568

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
737 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = 0.579

Asta 232: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.452

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9280/1165241+39625/1456552+0.7*5230/1456552=0.04 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 29.956; My = -3.075; N = 233.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7383^2+577^2) = 7405 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = 88.6; Ty = -6.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 77; Ty = -12.1; Mt = -21.491

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
27359 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -21.491

Asta 233: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.051

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9533/1165241+125534/1456552+0.7*5195/1456552=0.1 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 94.904; My = -3.055; N = 240.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(291^2+21997^2) = 21999 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.5; Ty = 264

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -13.3; Ty = 81.2; Mt = 5.222

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.051
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6654 <= 316724 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = -5.227

Asta 234: Trave in legno a falda Falda 6 fili 230-231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(999^2+36560^2) = 36574 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12; Ty = 438.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14388/1324138)^2+504866/1456552+0.7*25254/1456552=0.36 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 381.679; My = 14.849; N = -362.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11.7; Ty = 434.4; Mt = 0.911

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2092 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.643

Asta 235: Trave in legno a falda Falda 6 fili 265-266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.416

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8190/1820690)^2+119055/2002759+0.7*47250/2002759=0.08 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 90.006; My = 27.783; N = -206.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(919^2+16827^2) = 16852 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -11; Ty = -201.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -9.1; Ty = -201.7; Mt = 1.71

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1812 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.423

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.25
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.416/0=112741.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.25
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.416/0=195857.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.25
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.416/0=89861.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 236: Trave in legno a falda Falda 6 fili 259-260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.409

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26129/1820690)^2+235497/2002759+0.7*26220/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 178.036; My = 15.417; N = -658.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(601^2+15481^2) = 15492 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.2; Ty = -185.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 13.7; Ty = -166.7; Mt = -2.285

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3076 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 2.416

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.611
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.409/0=34230.4 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.657
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.409/0=57729.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.611
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.409/0.0001=27495.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 237: Trave in legno a falda Falda 6 fili 253-254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.528

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(83333/1324138)^2+184154/1456552+0.7*13894/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 139.22; My = 8.17; N = -2100

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(107^2+26365^2) = 26365 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = -316.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = -316.4; Mt = 1.626

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2920 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 2.293

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.18
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.528/0.0004=6387.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.18
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.528/0.0002=11128.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.18
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.528/0.0005=5087.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 238: Trave in legno a falda Falda 6 fili 216-217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10796/1165241+373205/1456552+0.7*72433/1456552=0.3 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 282.143; My = 42.59; N = 272.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2626^2+36240^2) = 36335 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -31.5; Ty = 434.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -28.4; Ty = 424.8; Mt = 6.96

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8863 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.962

Asta 239: Trave in legno a falda Falda 6 fili 206-207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.72

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(827^2+30611^2) = 30622 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -9.9; Ty = 367.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5554/1324138)^2+220580/1456552+0.7*32358/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 166.758; My = 19.027; N = -140

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 348.6; Mt = 10.538

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.72
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13416 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 10.538

Asta 240: Trave in legno a falda Falda 6 fili 200-201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.973

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.973
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9339/993103)^2+159997/1092414+0.7*51990/1092414=0.18 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 120.957; My = 30.57; N = -235.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1294^2+28850^2) = 28879 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 15.5; Ty = 346.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.6; Ty = 331.1; Mt = 11.619

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.973
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14792 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 11.619

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.486
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
2.973/0.0008=3881 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.685
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
2.973/0.0005=5817.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.387
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
2.973/0.0009=3190.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 241: Trave in legno a falda Falda 6 fili 189-190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.987

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24908/993103)^2+138056/1092414+0.7*8645/1092414=0.13 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 104.37; My = 5.083; N = -627.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(340^2+18190^2) = 18193 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -4.1; Ty = 218.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.2; Ty = -216; Mt = 6.355

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8090 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.355

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.596
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.987/0.0001=14650.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.331
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.987/0=52528.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.596
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.987/0.0002=9495 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 242: Trave in legno a falda Falda 6 fili 180-181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.002

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
120190/1092414+0.7*4842/1092414=0.11 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -90.864; My = 2.847

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(489^2+9309^2) = 9322 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -5.9; Ty = -111.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -12; Ty = 137.2; Mt = 1.52

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1936 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 1.52

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.434
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.002/0.0001=13013.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.401
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.002/0=28748.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.434
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.002/0.0001=8484.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 243: Trave in legno a falda Falda 6 fili 231-232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1117^2+33060^2) = 33079 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 13.4; Ty = -396.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33798/1324138)^2+249292/1456552+0.7*5490/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -188.464; My = -3.228; N = -851.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 13.3; Ty = -394.2; Mt = -0.92

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2034 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.598

Asta 244: Trave in legno a falda Falda 6 fili 236-237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1893^2+33578^2) = 33631 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 22.7; Ty = -402.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(49398/1324138)^2+276628/1456552+0.7*25020/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -209.131; My = -14.711; N = -1244.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 22.5; Ty = -399; Mt = 3.855

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4908 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 3.855

Asta 245: Trave in legno a falda Falda 6 fili 242-243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2189^2+32919^2) = 32991 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 26.3; Ty = -395

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(88570/1324138)^2+220169/1456552+0.7*52023/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 166.448; My = 30.59; N = -2232

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 26.3; Ty = -395; Mt = 4.833

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6153 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 4.833

Asta 246: Trave in legno a falda Falda 6 fili 217-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1813^2+23569^2) = 23638 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -21.8; Ty = -282.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.667
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6060/1324138)^2+180065/1456552+0.7*16371/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -136.129; My = 9.626; N = -152.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -21.8; Ty = -282.8; Mt = 1.406

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1790 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 1.406

Asta 247: Trave in legno a falda Falda 6 fili 207-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.239

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
86132/1092414+0.7*61140/1092414=0.12 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 65.116; My = -35.951

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2171^2+11322^2) = 11528 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -26.1; Ty = -135.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 41.3; Ty = 91.4; Mt = 3.352

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4267 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.352

Asta 248: Trave in legno a falda Falda 4 fili 219-220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.424

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
11838/1602207+147914/2002759+0.7*70528/2002759=0.11 <= 1 [4.4.6a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 111.823; My = 41.47; N = 298.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6205^2+21641^2) = 22512 <= 265517 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 74.5; Ty = -259.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 27.5; Ty = -15.9; Mt = -4.22

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5373 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -4.22

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.212
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.424/0=138479.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.24
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.424/0=200607 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.212
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.424/0=89697.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 249: Trave in legno a falda Falda 4 fili 209-210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.39

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
241277/2002759+0.7*3297/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = -182.405; My = -1.938

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(711^2+14948^2) = 14964 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.5; Ty = -179.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 8.5; Ty = -179.4; Mt = -4.164

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4023 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.16

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.695
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.39/0.0002=8972.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.695
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.39/0.0001=23033.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.695
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.39/0.0002=6531.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 250: Trave in legno a falda Falda 4 fili 202-203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8904/1165241+243070/1456552+0.7*309/1456552=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -183.761; My = 0.182; N = 224.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(158^2+24565^2) = 24566 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.9; Ty = -294.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -0.5; Ty = -288.4; Mt = -0.986

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1551 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.218

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.179
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
2.358/0.0011=2243.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.179
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.358/0.0004=6090.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.179
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0015
Ufin = 0.0015
Luce/Ufin > limite
2.358/0.0015=1617.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880

Neve = 0,500 + 0,500 = 1,000

Asta 251: Trave in legno a falda Falda 4 fili 191-319

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.964

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
24200/873931+274909/1092414+0.7*47698/1092414=0.31 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 207.831; My = 28.046; N = 609.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1344^2+41371^2) = 41393 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -16.1; Ty = 496.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -16.1; Ty = 496.5; Mt = -0.553

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.964
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2087 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -1.639

Asta 252: Trave in legno a falda Falda 3 fili 101-102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.617

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
130735/1456552+0.7*14413/1456552=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 98.835; My = -8.475

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1496^2+16256^2) = 16325 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 18; Ty = 195.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 18; Ty = 195.1; Mt = -3.313

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4218 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -3.313

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.288
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.617/0=40128.9 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.268
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.617/0=29326.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.288
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.617/0=26828.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 253: Trave in legno a falda Falda 3 fili 93-94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
186234/1456552+0.7*13764/1456552=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 140.793; My = -8.093

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(943^2+22462^2) = 22482 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 11.3; Ty = 269.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 10.8; Ty = 261.6; Mt = -4.777

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6210 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.878

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.766
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.642/0.0001=11312.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.493
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=22746.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.766
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=7380.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 254: Trave in legno a falda Falda 3 fili 85-82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.732

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
238161/1456552+0.7*35632/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 180.05; My = 20.952

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1722^2+29749^2) = 29799 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -20.7; Ty = 357

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -25.3; Ty = 342.8; Mt = -9.413

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.732
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11984 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.413

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.457
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
2.732/0.0007=3854.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.639
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.732/0.0004=7169.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.366
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite

2.732/0.0009=2987.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 255: Trave in legno a falda Falda 3 fili 77-78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8586/1165241+272732/1456552+0.7*4684/1456552=0.2 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 206.185; My = 2.754; N = 216.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(162^2+33348^2) = 33348 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -1.9; Ty = 400.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.8; Ty = 388.5; Mt = -10.137

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12906 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -10.137

Asta 256: Trave in legno a falda Falda 3 fili 66-67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.726

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5377/1165241+368901/1456552+0.7*38619/1456552=0.28 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 278.889; My = -22.708; N = 135.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1370^2+37187^2) = 37212 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 16.4; Ty = 446.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 15.7; Ty = 440; Mt = -7.122

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.726
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9068 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.123

Asta 257: Trave in legno a falda Falda 3 fili 57-58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
501186/1456552+0.7*36885/1456552=0.36 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 378.897; My = -21.688

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1341^2+40813^2) = 40835 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 16.1; Ty = 489.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 16.1; Ty = 486.5; Mt = -1.587

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2252 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1.769

Asta 258: Trave in legno a falda Falda 4 fili 95-308

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.133

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
40508/873931+241936/1092414+0.7*74664/1092414=0.32 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 182.904; My = -43.903; N = 1020.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5524^2+34322^2) = 34763 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 66.3; Ty = 411.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 66.3; Ty = 411.9; Mt = -7.189

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.133
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9152 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.189

Asta 259: Trave in legno a falda Falda 4 fili 86-87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.535

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.267
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18429/1165241+259125/1456552+0.7*4118/1456552=0.2 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -195.898; My = 2.421; N = 464.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(499^2+24096^2) = 24101 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6; Ty = -289.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -4.2; Ty = -286.6; Mt = 2.124

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2704 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 2.124

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.267
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
2.535/0.0013=2010.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.267
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
2.535/0.0005=4769.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.267
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
2.535/0.0017=1486 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 260: Trave in legno a falda Falda 4 fili 80-81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.577

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
244365/2002759+0.7*10918/2002759=0.13 <= 1 (formula 4.4.5a) Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mx = -184.74; My = 6.42

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(616^2+17300^2) = 17311 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.4; Ty = -207.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.4; Ty = -207.6; Mt = 4.385

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5582 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.385

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.789
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
1.577/0.0003=6280.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.789
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.577/0.0001=14971.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite

1.577/0.0003=4636.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 261: Trave in legno a falda Falda 4 fili 69-70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.619

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
237748/2002759+0.7*71628/2002759=0.14 <= 1 (formula 4.4.5a) Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = 179.738; My = -42.117

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7149^2+24193^2) = 25227 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -85.8; Ty = -290.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -21.4; Ty = -43.7; Mt = 3.394

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4320 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.394

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.268
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.619/0=92987.3 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.372
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite

0.619/0=157480.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.289
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.619/0=60152.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Asta 262: Trave in legno a falda Falda 3 fili 48-49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.076

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(253^2+27016^2) = 27018 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -3; Ty = 324.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30737/1324138)^2+199046/1456552+0.7*13830/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 150.479; My = 8.132; N = -774.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.2; Ty = 323.1; Mt = -0.901

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.076
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1161 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.912

Asta 263: Trave in legno a falda Falda 3 fili 40-41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.063

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4718^2+24668^2) = 25115 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -56.6; Ty = 296

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(57706/1324138)^2+157276/1456552+0.7*49808/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -118.901; My = -29.287; N = -1454.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -56.3; Ty = 295.9; Mt = 4.41

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5654 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 4.441

Asta 264: Trave in legno a falda Falda 3 fili 32-34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(89468/1324138)^2+197831/1456552+0.7*25241/1456552=0.15 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 149.56; My = -14.842; N = -2254.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(912^2+28531^2) = 28545 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.9; Ty = -342.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -10.9; Ty = -342.2; Mt = -3.41

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4341 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -3.41

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.233
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
2.642/0.0006=4334.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.233
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.642/0.0003=7800.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.233
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
2.642/0.0008=3422 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 265: Trave in legno a falda Falda 3 fili 21-24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.639

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29607/1820690)^2+229902/2002759+0.7*40530/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 173.806; My = -23.832; N = -746.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1173^2+17821^2) = 17860 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -14.1; Ty = -213.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -14.1; Ty = -213.9; Mt = -0.961

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3643 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -2.861

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.765
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.639/0.0001=17376.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.765
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.639/0.0001=32166.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.765
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.639/0.0001=13618.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 266: Trave in legno a falda Falda 3 fili 19-18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13031/1820690)^2+148550/2002759+0.7*47312/2002759=0.09 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 112.304; My = -27.819; N = -328.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4327^2+15355^2) = 15953 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -51.9; Ty = -184.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -38.8; Ty = -96.9; Mt = -1.268

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1615 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.268

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.438
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.692/0=126618.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.438
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.692/0=215057.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.438
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.692/0=101561.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 267: Trave in legno a falda Falda 3 fili 49-50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(890^2+34238^2) = 34249 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -10.7; Ty = -410.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45700/1324138)^2+265936/1456552+0.7*9327/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -201.048; My = 5.484; N = -1151.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.6; Ty = -410.9; Mt = -3.168

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4179 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.283

Asta 268: Trave in legno a falda Falda 3 fili 78-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.965

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
76169/1456552+0.7*52621/1456552=0.08 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -57.583; My = -30.941

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.965

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5171^2+12443^2) = 13474 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 62; Ty = -149.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 42.1; Ty = 49.8; Mt = -3.564

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4538 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.564

Asta 269: Trave in legno a falda Falda 3 fili 67-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.989

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2641^2+22159^2) = 22316 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 31.7; Ty = -265.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.464
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6271/1324138)^2+172957/1456552+0.7*23191/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -130.755; My = -13.637; N = -158

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 34.3; Ty = -260.9; Mt = -1.955

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2489 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.955

Asta 270: Trave in legno a falda Falda 3 fili 58-52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(155^2+43915^2) = 43915 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -1.9; Ty = -527

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20427/1324138)^2+606603/1456552+0.7*10892/1456552=0.42 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 458.592; My = -6.405; N = -514.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.6; Ty = -524; Mt = 1.815

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2324 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.825

Asta 271: Trave in legno a falda Falda 3 fili 41-42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1627^2+33501^2) = 33540 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -19.5; Ty = -402

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.881
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(64031/1324138)^2+257029/1456552+0.7*20168/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -194.314; My = 11.859; N = -1613.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -19.5; Ty = -402; Mt = -5.579

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7103 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -5.58

Asta 272: Trave in legno a falda Falda 1 fili 92-91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(91^2+34660^2) = 34660 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.1; Ty = -415.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14188/1324138)^2+336734/1456552+0.7*2756/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 254.571; My = 1.62; N = -357.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.1; Ty = -415.9; Mt = 2.162

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2763 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Mt = 2.17

Asta 273: Trave in legno a falda Falda 1 fili 100-99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(142^2+34833^2) = 34833 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.7; Ty = -418

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17368/1324138)^2+340254/1456552+0.7*2951/1456552=0.24 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 257.232; My = 1.735; N = -437.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.7; Ty = -418; Mt = -2.661

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3387 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.661

Asta 274: Trave in legno a falda Falda 1 fili 112-111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(302^2+29512^2) = 29513 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.6; Ty = -354.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17549/1324138)^2+256976/1456552+0.7*5446/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 194.274; My = -3.202; N = -442.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.6; Ty = -354.1; Mt = -6.151

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7830 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.151

Asta 275: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6906/1602207+76008/2002759+0.7*46253/2002759=0.06 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 57.462; My = 27.197; N = 174

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(13535^2+27242^2) = 30420 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -162.4; Ty = 326.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -162.4; Ty = 326.9; Mt = 8.476

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
10791 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 8.476

Asta 276: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.128

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(604^2+22213^2) = 22221 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.2; Ty = -266.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36356/1324138)^2+135313/1456552+0.7*22770/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 102.297; My = 13.389; N = -916.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 7.2; Ty = -266.5; Mt = -3.132

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3987 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -3.132

Asta 277: Trave in legno a falda Falda 1 fili 131-130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(379^2+41294^2) = 41296 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.6; Ty = 495.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47903/1324138)^2+375131/1456552+0.7*1539/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -283.599; My = -0.905; N = -1207.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = 495.5; Mt = 0.254

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
375 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.295

Asta 278: Trave in legno a falda Falda 1 fili 140-139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(117^2+42995^2) = 42996 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = 515.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53749/1324138)^2+415482/1456552+0.7*1000/1456552=0.29 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -314.105; My = 0.588; N = -1354.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Tx = 1.3; Ty = 515.9; Mt = -0.113

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
249 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -0.195

Asta 279: Trave in legno a falda Falda 1 fili 146-145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(636^2+39637^2) = 39643 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = 475.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36126/1324138)^2+352371/1456552+0.7*27422/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 266.392; My = -16.124; N = -910.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = 475.6; Mt = 0.127

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
334 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.263

Asta 280: Trave in legno a falda Falda 1 fili 161-160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(66^2+24957^2) = 24957 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = -299.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45562/1324138)^2+163799/1456552+0.7*7053/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 123.832; My = -4.147; N = -1148.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = -298.9; Mt = 5.675

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7225 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.675

Asta 281: Trave in legno a falda Falda 1 fili 170-169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(326^2+30761^2) = 30762 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -369.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11284/1324138)^2+281176/1456552+0.7*11697/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 212.569; My = -6.878; N = -284.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4; Ty = -369.1; Mt = 5.902

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7514 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.902

Asta 282: Trave in legno a falda Falda 1 fili 188-187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(870^2+33182^2) = 33193 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.4; Ty = -398.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47242/1324138)^2+322538/1456552+0.7*19808/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 243.838; My = -11.647; N = -1190.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.4; Ty = -398.2; Mt = -3.48

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4434 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -3.483

Asta 283: Trave in legno a falda Falda 1 fili 179-178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(844^2+35459^2) = 35469 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.1; Ty = -425.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19749/1324138)^2+355113/1456552+0.7*19575/1456552=0.25 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 268.465; My = -11.51; N = -497.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.1; Ty = -425.5; Mt = 1.646

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2105 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.654

Asta 327: Trave in legno a falda Falda 6 fili 236-233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(963^2+27859^2) = 27876 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 11.6; Ty = -334.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40338/1324138)^2+256140/1456552+0.7*20890/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 193.642; My = 12.284; N = -1016.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 10.6; Ty = -332.5; Mt = -3.396

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4323 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.396

Asta 328: Trave in legno a falda Falda 6 fili 242-239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.832

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4646^2+28841^2) = 29213 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 55.7; Ty = -346.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(61484/1324138)^2+211086/1456552+0.7*24665/1456552=0.16 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 159.581; My = 14.503; N = -1549.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 55.8; Ty = -346; Mt = -10.968

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13963 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -10.968

Asta 329: Trave in legno a falda Falda 4 fili 147-314

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(454^2+48189^2) = 48191 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = 578.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40339/1324138)^2+567036/1456552+0.7*16954/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 428.679; My = -9.969; N = -1016.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = 578.3; Mt = -5.993

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7629 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.993

Asta 330: Trave in legno a falda Falda 4 fili 315-316

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(521^2+44176^2) = 44179 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.2; Ty = 530.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21694/1324138)^2+631839/1456552+0.7*16930/1456552=0.44 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 477.67; My = -9.955; N = -546.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.3; Ty = 530.1; Mt = -8.895

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11324 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.895

Asta 331: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(40^2+50169^2) = 50169 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 602

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37481/1324138)^2+598879/1456552+0.7*1627/1456552=0.41 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 452.752; My = -0.956; N = -944.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.07 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 602; Mt = -0.572

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
728 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Mt = -0.572

Asta 332: Trave in legno a falda Falda 4 fili 132-312

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(459^2+48682^2) = 48684 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 584.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38242/1324138)^2+571317/1456552+0.7*17285/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 431.916; My = 10.164; N = -963.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 584.2; Mt = 5.018

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6389 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.019

Asta 333: Trave in legno a falda Falda 4 fili 120-311

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(513^2+43926^2) = 43929 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 527.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30839/1324138)^2+553114/1456552+0.7*17055/1456552=0.39 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 418.154; My = 10.028; N = -777.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 527.1; Mt = 8.619

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10974 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 8.62

Asta 484: Trave in legno a falda Falda 1 fili 91-90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13047/1165241+324186/1456552+0.7*13638/1456552=0.24 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 245.085; My = -8.019; N = 328.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(788^2+25968^2) = 25979 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.5; Ty = 311.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.5; Ty = 311.6; Mt = -0.444

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1287 <= 316724 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = -1.011

Asta 485: Trave in legno a falda Falda 1 fili 99-98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6242/1165241+331309/1456552+0.7*19043/1456552=0.24 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 250.469; My = -11.197; N = 157.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1269^2+28534^2) = 28562 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 15.2; Ty = 342.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 13.7; Ty = 341.6; Mt = 0.08

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1031 <= 316724 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = 0.81

Asta 486: Trave in legno a falda Falda 1 fili 111-110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1042^2+26726^2) = 26746 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.5; Ty = 320.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9412/1324138)^2+251948/1456552+0.7*15646/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 190.473; My = -9.2; N = -237.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 10.6; Ty = 320.2; Mt = 0.268

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
970 <= 316724 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = 0.762

Asta 487: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.551

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(18715^2+7503^2) = 20163 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 224.6; Ty = 90

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(56895/1820690)^2+0.7*42452/2002759+112191/2002759=0.07 <= 1 [4.4.7b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 32.094; My = -65.968; N = -1433.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo

Tx = 187.5; Ty = 127.4; Mt = 3.814

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5043 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -3.961

Asta 488: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
35937/1602207+0.7*29473/2002759+50240/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 22.281; My = -29.541; N = 905.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(15647^2+2786^2) = 15893 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 187.8; Ty = 33.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 187.8; Ty = 33.4; Mt = 2.146

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2861 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -2.248

Asta 489: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
26680/1602207+0.7*26521/2002759+66357/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 20.05; My = -39.018; N = 672.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(20400^2+4031^2) = 20795 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 244.8; Ty = 48.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 221.6; Ty = 71.4; Mt = 2.526

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3369 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -2.646

Asta 490: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9855/1602207+0.7*26933/2002759+119676/2002759=0.08 <= 1 [4.4.6b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = -20.361; My = 70.369; N = 248.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(27255^2+13636^2) = 30476 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 327.1; Ty = -163.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.391

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 280.5; Ty = -108.6; Mt = 4.6

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6666 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -5.236

Asta 491: Trave in legno a falda Falda 1 fili 160-159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6628/1165241+159745/1456552+0.7*11657/1456552=0.12 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 120.767; My = -6.854; N = 167

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1022^2+17856^2) = 17885 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.3; Ty = 214.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.3; Ty = 214.3; Mt = 0.201

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1113 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 0.875

Asta 492: Trave in legno a falda Falda 1 fili 169-168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(57^2+26150^2) = 26150 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 313.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9156/1324138)^2+274769/1456552+0.7*1496/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 207.726; My = -0.88; N = -230.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 313.8; Mt = 0.25

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1042 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 0.818

Asta 493: Trave in legno a falda Falda 1 fili 187-186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
309975/1456552+0.7*6912/1456552=0.22 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 234.341; My = -4.064

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(368^2+23978^2) = 23981 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.4; Ty = 287.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.4; Ty = 287.7; Mt = 0.375

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1344 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = 1.055

Asta 494: Trave in legno a falda Falda 1 fili 178-177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
345302/1456552+0.7*2013/1456552=0.24 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 261.048; My = -1.184

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(23^2+29036^2) = 29036 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 348.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 348.4; Mt = 0.197

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
965 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = 0.758

Asta 495: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.922

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
48042/1160960+39332/1451200+0.7*1748/1451200=0.07 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 60.414; My = 1.79; N = 1844.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(46^2+5242^2) = 5243 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = 95.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 16.1; Ty = -25.3; Mt = -1.79

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1261 <= 325259 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -1.79

Asta 496: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.265

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
48354/1596320+25219/1995400+0.7*16319/1995400=0.05 <= 1 [4.4.6a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 38.736; My = 16.71; N = 1856.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(42^2+5201^2) = 5201 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = 95.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 19.5; Ty = -25.5; Mt = -8.408

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5926 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -8.408

Asta 497: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.308

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16236/1160960+63798/1451200+0.7*54963/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 97.994; My = -56.282; N = 623.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3645^2+5902^2) = 6937 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -66.6; Ty = -107.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -65.9; Ty = -107.4; Mt = -13.377

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9428 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -13.377

Asta 498: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.095

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
36952/1160960+97938/1451200+0.7*51109/1451200=0.12 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -150.433; My = 52.336; N = 1419

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6396^2+4663^2) = 7915 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -117; Ty = -85.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -116.5; Ty = -84.9; Mt = 3.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2542 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.607

Asta 499: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.26

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15458/1160960+0.7*66388/1451200+145471/1451200=0.15 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -101.972; My = 148.963; N = 593.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(41740^2+9110^2) = 42723 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 763.2; Ty = 166.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.05+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 762.8; Ty = 166.4; Mt = -55.739

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39282 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -55.739

Asta 500: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.958

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10723^2+7296^2) = 12970 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -196.1; Ty = 133.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9828/1324138)^2+0.7*68273/1451200+89754/1451200=0.09 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -104.867; My = -91.908; N = -377.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -195.5; Ty = 133.1; Mt = 15.05

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10606 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 15.05

Asta 501: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(24219^2+4834^2) = 24697 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 442.9; Ty = 88.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25362/1324138)^2+0.7*48102/1451200+109364/1451200=0.1 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -73.885; My = 111.989; N = -973.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.02+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 442.9; Ty = 88.4; Mt = -54.084

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
38158 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -54.143

Asta 502: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7277^2+10832^2) = 13049 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -133.1; Ty = -198.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40041/1324138)^2+113013/1451200+0.7*43989/1451200=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 173.589; My = -45.045; N = -1537.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -131.3; Ty = -198.4; Mt = 41.403

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29179 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 41.403

Asta 503: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63315/1160960+56488/1451200+0.7*3206/1451200=0.1 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 86.766; My = 3.283; N = 2431.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1220^2+7309^2) = 7410 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.3; Ty = 133.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Tx = -22.3; Ty = 133.6; Mt = -0.996

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1001 <= 325259 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -1.421

Asta 504: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.36

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63261/1160960+0.7*15328/1451200+26753/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 23.543; My = 27.395; N = 2429.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6043^2+12088^2) = 13514 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 110.5; Ty = 221

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -40.3; Ty = -179.7; Mt = 5.896

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4155 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 5.896

Asta 505: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.94

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
60253/1160960+0.7*3207/1451200+49047/1451200=0.09 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -4.925; My = -50.224; N = 2313.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4370^2+4574^2) = 6326 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -79.9; Ty = 83.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -71.8; Ty = 36.7; Mt = -10.168

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7166 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -10.168

Asta 506: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.288

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
47442/1160960+0.7*2963/1451200+52422/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -4.55; My = 53.68; N = 1821.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19797^2+2109^2) = 19909 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 362; Ty = 38.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 355.9; Ty = 162.3; Mt = -20.899

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
14729 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -20.899

Asta 507: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.109

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
37880/1160960+0.7*43537/1451200+45699/1451200=0.09 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 66.873; My = -46.796; N = 1454.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3822^2+5447^2) = 6654 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -69.9; Ty = -99.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -70.1; Ty = -99.2; Mt = 10.338

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7286 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 10.338

Asta 508: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.17

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17487^2+617^2) = 17498 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 319.8; Ty = 11.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16499/1324138)^2+0.7*64979/1451200+126590/1451200=0.12 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 99.808; My = 129.628; N = -633.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0.01+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 319.8; Ty = 11.3; Mt = 36.91

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
26012 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 36.91

Asta 509: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.178

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45965/1160960+111065/1451200+0.7*58051/1451200=0.14 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -170.596; My = 59.444; N = 1765.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(5310^2+4170^2) = 6752 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -97.1; Ty = -76.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -49.3; Ty = 39.9; Mt = -2.563

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1806 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.563

Asta 510: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.195

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3466^2+11734^2) = 12235 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -63.4; Ty = 214.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6560/1324138)^2+101856/1451200+0.7*36309/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -156.451; My = -37.18; N = -251.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -61.4; Ty = 211.3; Mt = 5.135

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3619 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 5.135

Asta 511: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.262

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1238^2+5738^2) = 5870 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 22.6; Ty = -104.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(41182/1324138)^2+81580/1451200+0.7*9912/1451200=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 125.308; My = 10.15; N = -1581.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 22.6; Ty = -104.9; Mt = -14.432

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10171 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -14.432

Asta 777: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.994

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(590^2+9601^2) = 9619 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.8; Ty = -175.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7504/1324138)^2+172760/1451200+0.7*30776/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 265.36; My = -31.514; N = -288.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 1.1; Ty = -79.5; Mt = 4.055

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2858 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 4.055

Asta 778: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7206^2+13899^2) = 15656 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -131.8; Ty = -254.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5108/1324138)^2+282052/1451200+0.7*116268/1451200=0.25 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 433.231; My = -119.059; N = -196.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -139.5; Ty = -193; Mt = 35.076

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24720 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 35.076

Asta 779: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.624

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
638152/1451200+0.7*167217/1451200=0.52 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 980.201; My = -171.23

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5435^2+48209^2) = 48514 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -99.4; Ty = -881.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -47.1; Ty = -830.7; Mt = 30.742

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
17858 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 25.339

Asta 780: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.056

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(16724^2+64761^2) = 66886 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 305.8; Ty = 1184.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7473/1324138)^2+609619/1451200+0.7*239171/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 936.375; My = -244.911; N = -287

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.11 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 305.8; Ty = 1184.2; Mt = 16.95

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.056
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12066 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.12

Asta 781: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9336^2+34097^2) = 35352 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 170.7; Ty = 623.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9552/1324138)^2+542805/1451200+0.7*186951/1451200=0.46 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -833.748; My = 191.438; N = -366.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 170.7; Ty = 623.5; Mt = 10.588

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7555 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 10.721

Asta 782: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2822^2+9511^2) = 9920 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 51.6; Ty = 173.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9564/1324138)^2+628822/1451200+0.7*207295/1451200=0.53 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -965.87; My = 212.27; N = -367.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 51.6; Ty = 173.9; Mt = 2.578

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1822 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 2.585

Asta 783: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4173^2+13549^2) = 14177 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -76.3; Ty = -247.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9566/1324138)^2+629209/1451200+0.7*209590/1451200=0.53 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -966.466; My = 214.62; N = -367.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -76.3; Ty = -247.7; Mt = -4.132

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2912 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.132

Asta 784: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9661^2+39303^2) = 40473 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -176.7; Ty = -718.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9588/1324138)^2+502549/1451200+0.7*171512/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -771.916; My = 175.628; N = -368.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -177.6; Ty = -716.5; Mt = -14.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10042 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -14.249

Asta 785: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.909

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19532^2+68580^2) = 71307 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -357.1; Ty = -1254

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7585/1324138)^2+630755/1451200+0.7*256486/1451200=0.56 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 968.84; My = -262.642; N = -291.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.13 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -357.1; Ty = -1254; Mt = -16.857

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12114 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -17.189

Asta 786: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.771

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
598549/1451200+0.7*175484/1451200=0.5 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 919.37; My = -179.695

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7595^2+40062^2) = 40775 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 138.9; Ty = 732.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 101.2; Ty = 685.6; Mt = -25.804

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.771
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14556 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -20.654

Asta 787: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1522^2+9617^2) = 9737 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 27.8; Ty = 175.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6116/1324138)^2+240500/1451200+0.7*75016/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 369.407; My = -76.816; N = -234.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 33.2; Ty = 120.8; Mt = -31.486

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22190 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -31.486

Asta 788: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2020^2+10728^2) = 10916 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 36.9; Ty = 196.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6540/1324138)^2+177576/1451200+0.7*48890/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 272.757; My = -50.064; N = -251.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 29.6; Ty = 177.3; Mt = 4.12

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2904 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 4.12

Asta 789: Trave in legno a falda Falda 4 fili 182-318

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.93

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(660^2+19906^2) = 19917 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -238.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7948/1324138)^2+138299/1456552+0.7*8865/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 104.554; My = 5.213; N = -200.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.1; Ty = -227.6; Mt = 11.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11024 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.659

Asta 790: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.467

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(99^2+25617^2) = 25617 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = -307.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11878/1324138)^2+135486/1456552+0.7*7781/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 38; Durata minima del carico nella combinazione: media
Mx = 102.427; My = -4.575; N = -299.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -1.3; Ty = 84.5; Mt = 3.529

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4493 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 3.529

Asta 791: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
87593/1456552+0.7*6815/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 66.221; My = 4.007

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2839^2+4264^2) = 5123 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -34.1; Ty = -51.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Tx = -31.5; Ty = -44.1; Mt = 10.417

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13261 <= 230345 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Mt = 10.417

Asta 792: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10526/1602207+31665/2002759+0.7*25525/2002759=0.03 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -23.939; My = -15.008; N = 265.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6864^2+14280^2) = 15844 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -82.4; Ty = 171.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -79.1; Ty = 162.7; Mt = -9.989

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
12717 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -9.989

Asta 793: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.612

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(66^2+25169^2) = 25169 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = -302

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.393
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6942/1324138)^2+152990/1456552+0.7*4233/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -115.66; My = 2.489; N = -174.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 0.9; Ty = 106; Mt = -3.411

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4342 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -3.411

Asta 794: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2344^2+21249^2) = 21377 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 28.1; Ty = -255

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10265/1324138)^2+106483/1456552+0.7*3103/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 80.501; My = -1.825; N = -258.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 28.1; Ty = -255; Mt = -8.162

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10391 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = -8.162

Asta 795: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(666^2+17390^2) = 17402 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 8; Ty = -208.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10633/1324138)^2+36976/1456552+0.7*3729/1456552=0.03 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 27.954; My = -2.193; N = -268

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 8; Ty = -208.7; Mt = -5.829

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7421 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -5.829

Asta 796: Trave in legno a falda Falda 4 fili 103-309

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.091

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(112^2+21091^2) = 21091 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = -253.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6795/1324138)^2+138710/1456552+0.7*45/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 104.865; My = 0.026; N = -171.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -240.1; Mt = -11.229

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11454 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.997

Asta 797: Trave in legno a falda Falda 4 fili 319-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.022
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
258917/1456552+0.7*1501/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -195.741; My = 0.882

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(112^2+26532^2) = 26532 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = -318.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = -318.4; Mt = 1.523

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3274 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 2.572

Asta 798: Trave in legno a falda Falda 4 fili 308-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
30954/1165241+289775/1456552+0.7*1112/1456552=0.23 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -219.07; My = -0.654; N = 780

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(20^2+25273^2) = 25273 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.2; Ty = -303.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2.4; Ty = -141.3; Mt = -2.824

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3659 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -2.874

Asta 799: Trave in legno a falda Falda 4 fili 314-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(526^2+33105^2) = 33109 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.3; Ty = -397.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.629
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(54395/1324138)^2+238508/1456552+0.7*11120/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -180.312; My = -6.538; N = -1370.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.3; Ty = -397.3; Mt = 9.669

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12310 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.669

Asta 800: Trave in legno a falda Falda 4 fili 316-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(839^2+27684^2) = 27697 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 10.1; Ty = -332.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5320/1820690)^2+299462/2002759+0.7*16113/2002759=0.16 <= 1 [4.4.7a] Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 226.393; My = 9.474; N = -134.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 10.1; Ty = -332.2; Mt = 14.495

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18454 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 14.495

Asta 801: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(47^2+35383^2) = 35383 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = -424.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53290/1324138)^2+295533/1456552+0.7*1400/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -223.423; My = -0.823; N = -1342.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = -424.6; Mt = 0.913

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1163 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 0.913

Asta 802: Trave in legno a falda Falda 4 fili 312-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(419^2+33676^2) = 33678 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5; Ty = -404.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.629
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53350/1324138)^2+255162/1456552+0.7*9439/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -192.902; My = 5.55; N = -1344.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.1; Ty = -404; Mt = -8.087

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10295 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -8.087

Asta 803: Trave in legno a falda Falda 4 fili 311-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(692^2+28121^2) = 28129 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.3; Ty = -337.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11823/1820690)^2+296849/2002759+0.7*7261/2002759=0.15 <= 1 [4.4.7a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 224.418; My = -4.269; N = -297.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.3; Ty = -337.4; Mt = -13.933

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17737 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -13.933

Asta 804: Trave in legno a falda Falda 4 fili 318-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
230616/2002759+0.7*15814/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 174.346; My = 9.299

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(70^2+25395^2) = 25395 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = 304.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = 302.7; Mt = 4.731

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5433 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.268

Asta 805: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20717/873931+47544/1092414+0.7*30917/1092414=0.09 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -35.943; My = -18.179; N = 522.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4589^2+28910^2) = 29272 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -55.1; Ty = -346.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -55.1; Ty = -346.9; Mt = 20.141

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
25641 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 20.141

Asta 806: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38982/1165241+0.7*27507/1456552+33822/1456552=0.07 <= 1 [4.4.6b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 20.796; My = -19.887; N = 982.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71

τ,d <= fv,d
Sqrt(9934^2+14085^2) = 17235 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = -119.2; Ty = -169

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -30.3; Ty = -95.3; Mt = 8.515

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10840 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.515

Asta 807: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45829/873931+261968/1092414+0.7*18880/1092414=0.3 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 198.048; My = -11.101; N = 1154.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1400^2+30191^2) = 30223 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -16.8; Ty = -362.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -16.8; Ty = -362.3; Mt = 9.154

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11660 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 9.159

Asta 808: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
37628/1602207+58079/2002759+0.7*30142/2002759=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = -43.908; My = -17.723; N = 948.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(14218^2+22450^2) = 26574 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 170.6; Ty = -269.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 170.3; Ty = -269.4; Mt = -5.713

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7274 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -5.713

Asta 809: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38584/1602207+0.7*34883/2002759+35409/2002759=0.05 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 26.372; My = 20.82; N = 972.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11289^2+11819^2) = 16344 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 135.5; Ty = -141.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 135.2; Ty = -141.9; Mt = -3.366

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4285 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -3.366

Asta 810: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(739^2+20786^2) = 20799 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = -249.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27466/1820690)^2+192207/2002759+0.7*32545/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 145.309; My = -19.136; N = -692.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = -249.4; Mt = -12.423

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15816 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -12.424

Asta 811: Trave in legno a falda Falda 4 fili 309-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13773/1602207+207021/2002759+0.7*11782/2002759=0.12 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 156.508; My = 6.928; N = 347.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(244^2+25020^2) = 25021 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = 300.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.2; Ty = 295.9; Mt = -5.214

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5695 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.474

1.6 Verifiche superelementi in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Superelemento in legno a "Falda 1" 26-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 19.977 composto da:
asta 103: Trave in legno a falda Falda 1 fili 26-126 (L = 0.882)
asta 104: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 105: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 106: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 107: Trave in legno a falda Falda 1 fili 26-126 (L = 0.499)
asta 108: Trave in legno a falda Falda 1 fili 26-126 (L = 0.341)
asta 109: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 110: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 111: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 112: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 113: Trave in legno a falda Falda 1 fili 26-126 (L = 1.039)
asta 99: Trave in legno a falda Falda 1 fili 126-154 (L = 0.641)
asta 100: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 101: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 102: Trave in legno a falda Falda 1 fili 126-154 (L = 0.454)
asta 88: Trave in legno a falda Falda 1 fili 154-245 (L = 0.386)
asta 89: Trave in legno a falda Falda 1 fili 154-245 (L = 0.829)
asta 90: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 91: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 92: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 93: Trave in legno a falda Falda 1 fili 154-245 (L = 1)
asta 94: Trave in legno a falda Falda 1 fili 154-245 (L = 0.68)
asta 95: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 96: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 97: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 98: Trave in legno a falda Falda 1 fili 154-245 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 13.751
Kdef = 0
Uinst tot in x = -0.0018
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
19.977/0.0028=7106.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 13.751
Kdef = 0
Uinst var in x = -0.0008
Uinst var in y = -0.0014
Uinst var = 0.0014
Luce/Uinst,var > limite
19.977/0.0014=14431.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 14.2
Kdef = 0.6
Ufin in x = -0.0023
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
19.977/0.0037=5421.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 39-(-2154; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.4 composto da:
asta 210: Trave in legno a falda Falda 1 fili 39-38 (L = 0.981)
asta 205: Trave in legno a falda Falda 1 fili 38-37 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.868
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
3.4/0.0014=2480.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.868
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
3.4/0.0008=4190.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.9
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
3.4/0.0017=1987.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 47-(-2070; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.33 composto da:
asta 209: Trave in legno a falda Falda 1 fili 47-46 (L = 1.911)
asta 204: Trave in legno a falda Falda 1 fili 46-45 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556

Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0018
Uinst tot = 0.0018
Luce/Uinst,tot > limite
4.33/0.0018=2396.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.637
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
4.33/0.0011=4057.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.62
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0023
Ufin = 0.0023
Luce/Ufin > limite
4.33/0.0023=1921.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 15.41 composto da:
asta 19: Trave in legno a falda Falda 1 fili 51-230 (L = 0.301)
asta 20: Trave in legno a falda Falda 1 fili 51-230 (L = 0.312)
asta 21: Trave in legno a falda Falda 1 fili 51-230 (L = 0.312)
asta 22: Trave in legno a falda Falda 1 fili 51-230 (L = 0.216)
asta 23: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 24: Trave in legno a falda Falda 1 fili 51-230 (L = 0.604)
asta 25: Trave in legno a falda Falda 1 fili 51-230 (L = 0.236)
asta 26: Trave in legno a falda Falda 1 fili 51-230 (L = 0.564)
asta 27: Trave in legno a falda Falda 1 fili 51-230 (L = 0.276)
asta 28: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 29: Trave in legno a falda Falda 1 fili 51-230 (L = 0.324)
asta 30: Trave in legno a falda Falda 1 fili 51-230 (L = 0.194)
asta 31: Trave in legno a falda Falda 1 fili 51-230 (L = 0.322)
asta 32: Trave in legno a falda Falda 1 fili 51-230 (L = 0.284)
asta 33: Trave in legno a falda Falda 1 fili 51-230 (L = 0.268)
asta 34: Trave in legno a falda Falda 1 fili 51-230 (L = 0.287)
asta 35: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 36: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 37: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 38: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 39: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 40: Trave in legno a falda Falda 1 fili 51-230 (L = 0.366)
asta 41: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 42: Trave in legno a falda Falda 1 fili 51-230 (L = 0.435)
asta 43: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 44: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 45: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 46: Trave in legno a falda Falda 1 fili 51-230 (L = 0.865)
asta 47: Trave in legno a falda Falda 1 fili 51-230 (L = 0.4)
asta 48: Trave in legno a falda Falda 1 fili 51-230 (L = 0.415)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 13.254
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
15.41/0.0003=57400.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 12.89
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
15.41/0.0004=41217.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 12.424
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0004
Ufin = 0.0004
Luce/Ufin > limite
15.41/0.0004=40738.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 57-(-1986; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 189: Trave in legno a falda Falda 1 fili 57-56 (L = 2.516)
asta 203: Trave in legno a falda Falda 1 fili 56-55 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.322
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
4.935/0.0015=3271 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.322
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0009
Uinst var = 0.0009

Luce/Uinst,var > limite
4.935/0.0009=5440.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.406
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
4.935/0.0019=2641.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 66-(-1902; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 188: Trave in legno a falda Falda 1 fili 66-65 (L = 2.516)
asta 202: Trave in legno a falda Falda 1 fili 65-64 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7050.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=11134.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.935/0.0009=5763 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 77-(-1818; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 187: Trave in legno a falda Falda 1 fili 77-76 (L = 2.516)
asta 201: Trave in legno a falda Falda 1 fili 76-75 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7117.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=12355.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.647
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.935/0.0009=5650.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 85-(-1734; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 186: Trave in legno a falda Falda 1 fili 85-84 (L = 2.516)
asta 200: Trave in legno a falda Falda 1 fili 84-83 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.264
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0021
Uinst tot = 0.0021
Luce/Uinst,tot > limite

4.935/0.0021=2331.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.919
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
4.935/0.0011=4683.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0028
Ufin = 0.0028
Luce/Ufin > limite
4.935/0.0028=1760.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 93-(-1650; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 185: Trave in legno a falda Falda 1 fili 93-92 (L = 2.516)
asta 272: Trave in legno a falda Falda 1 fili 92-91 (L = 2.419)
asta 484: Trave in legno a falda Falda 1 fili 91-90 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.18
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=1990.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.348
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4182.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1506.4 > 200
Coefficienti combinatori impiegati:

Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 101-(-1566; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 184: Trave in legno a falda Falda 1 fili 101-100 (L = 2.516)
asta 273: Trave in legno a falda Falda 1 fili 100-99 (L = 2.419)
asta 485: Trave in legno a falda Falda 1 fili 99-98 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.096
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=2007.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.264
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4240.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.096
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1517.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 113-(-1482; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 183: Trave in legno a falda Falda 1 fili 113-112 (L = 2.516)
asta 274: Trave in legno a falda Falda 1 fili 112-111 (L = 2.419)
asta 486: Trave in legno a falda Falda 1 fili 111-110 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
6.659/0.0022=3044.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.929
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
6.659/0.001=6448.4 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0029
Ufin = 0.0029
Luce/Ufin > limite
6.659/0.0029=2303.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 119-(-1398; -357)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.419 composto da:
asta 275: Trave in legno a falda Falda 1 fili 119-124 (L = 0.292)
asta 276: Trave in legno a falda Falda 1 fili 119-124 (L = 2.128)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.214
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
2.419/0.0002=9752.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.214
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001

Uinst var = 0.0001
Luce/Uinst,var > limite
2.419/0.0001=17079.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.223
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
2.419/0.0003=7736.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.516 composto da:
asta 180: Trave in legno a falda Falda 1 fili 120-119 (L = 1.894)
asta 181: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)
asta 182: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.568
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
2.516/0.0002=13445.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.568
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.516/0.0002=16301.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.505
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0002
Ufin = 0.0002
Luce/Ufin > limite
2.516/0.0002=12160.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 132-(-1314; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 179: Trave in legno a falda Falda 1 fili 132-131 (L = 2.516)
asta 277: Trave in legno a falda Falda 1 fili 131-130 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0039
Uinst tot = 0.0039
Luce/Uinst,tot > limite
6.659/0.0039=1691.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
6.659/0.0023=2856.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0049
Ufin = 0.0049
Luce/Ufin > limite
6.659/0.0049=1357.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 141-(-1230; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 178: Trave in legno a falda Falda 1 fili 141-140 (L = 2.516)
asta 278: Trave in legno a falda Falda 1 fili 140-139 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0

Uinst tot in x = 0
Uinst tot in y = -0.0045
Uinst tot = 0.0045
Luce/Uinst,tot > limite
6.659/0.0045=1475.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.659/0.0027=2472.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0056
Ufin = 0.0056
Luce/Ufin > limite
6.659/0.0056=1187.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 147-(-1146; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 177: Trave in legno a falda Falda 1 fili 147-146 (L = 2.516)
asta 279: Trave in legno a falda Falda 1 fili 146-145 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
6.659/0.0035=1885.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.588
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
6.659/0.0021=3168.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.81
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite

6.659/0.0044=1514.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 167-(-979; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 175: Trave in legno a falda Falda 1 fili 167-170 (L = 2.516)
asta 281: Trave in legno a falda Falda 1 fili 170-169 (L = 2.419)
asta 492: Trave in legno a falda Falda 1 fili 169-168 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
6.659/0.0028=2410.5 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.096
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0012
Uinst var = 0.0012
Luce/Uinst,var > limite
6.659/0.0012=5474.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
6.659/0.0037=1790.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 180-(-895; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 174: Trave in legno a falda Falda 1 fili 180-179 (L = 2.516)
asta 283: Trave in legno a falda Falda 1 fili 179-178 (L = 2.419)
asta 494: Trave in legno a falda Falda 1 fili 178-177 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.013
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
6.659/0.0038=1767.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.181
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0017
Uinst var = 0.0017
Luce/Uinst,var > limite
6.659/0.0017=3986.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0051
Ufin = 0.0051
Luce/Ufin > limite
6.659/0.0051=1316.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 189-(-811; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 173: Trave in legno a falda Falda 1 fili 189-188 (L = 2.516)
asta 282: Trave in legno a falda Falda 1 fili 188-187 (L = 2.419)
asta 493: Trave in legno a falda Falda 1 fili 187-186 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.097
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
6.659/0.0035=1903.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.181
Kdef = 0

Uinst var in x = 0
Uinst var in y = -0.0015
Uinst var = 0.0015
Luce/Uinst,var > limite
6.659/0.0015=4448.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0047
Ufin = 0.0047
Luce/Ufin > limite
6.659/0.0047=1407.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 200-(-727; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 172: Trave in legno a falda Falda 1 fili 200-199 (L = 2.516)
asta 199: Trave in legno a falda Falda 1 fili 199-198 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.929
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
4.935/0.0019=2636.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.097
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
4.935/0.0008=6576.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0026
Ufin = 0.0026
Luce/Ufin > limite
4.935/0.0026=1925.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 206-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 169: Trave in legno a falda Falda 1 fili 206-211 (L = 1.894)
asta 170: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 171: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 197: Trave in legno a falda Falda 1 fili 211-205 (L = 0.292)
asta 198: Trave in legno a falda Falda 1 fili 211-205 (L = 2.127)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.943
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
4.935/0.0003=15245 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.013
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.935/0.0002=30449.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.036
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
4.935/0.0004=11521.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 216-(-559; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.934 composto da:
asta 168: Trave in legno a falda Falda 1 fili 216-215 (L = 2.516)
asta 196: Trave in legno a falda Falda 1 fili 215-214 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.564
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.934/0.0008=6395.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.564
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.934/0.0005=10143.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.728
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.934/0.0009=5217.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 230-(-475; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 167: Trave in legno a falda Falda 1 fili 230-229 (L = 2.517)
asta 195: Trave in legno a falda Falda 1 fili 229-228 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
4.935/0.0015=3380.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.242
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
4.935/0.0009=5611 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.326
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
4.935/0.0018=2728.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 238-(-391; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.988 composto da:
asta 194: Trave in legno a falda Falda 1 fili 238-235 (L = 1.569)
asta 207: Trave in legno a falda Falda 1 fili 235-234 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.295
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0016
Uinst tot = 0.0016
Luce/Uinst,tot > limite
3.988/0.0016=2528.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.295
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
3.988/0.0009=4262.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.347
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.002
Ufin = 0.002
Luce/Ufin > limite
3.988/0.002=2026.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 244-(-307; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.111 composto da:
asta 193: Trave in legno a falda Falda 1 fili 244-241 (L = 0.692)
asta 206: Trave in legno a falda Falda 1 fili 241-240 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.66
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
3.111/0.0011=2788.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.74
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
3.111/0.0007=4715.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.683
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.111/0.0014=2233.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 315-(-1062; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.66 composto da:
asta 176: Trave in legno a falda Falda 1 fili 315-161 (L = 2.517)
asta 280: Trave in legno a falda Falda 1 fili 161-160 (L = 2.419)
asta 491: Trave in legno a falda Falda 1 fili 160-159 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0008

Uinst tot = 0.0008
Luce/Uinst,tot > limite
6.66/0.0008=8662.5 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.403
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
6.66/0.0004=15529.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.677
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
6.66/0.001=6454.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" (-1398; -318)-(-1398; -585)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 1.724 composto da:
asta 487: Trave in legno a falda Falda 1 fili 124-123 (L = 0.551)
asta 488: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 489: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 490: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.994
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.724/0=40621.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.981
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.724/0=67115 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.026
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0

Ufin = 0.0001
Luce/Ufin > limite
1.724/0.0001=32086.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.656 composto da:
asta 149: Trave in legno a falda Falda 2 fili 32-26 (L = 0.774)
asta 150: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 151: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 152: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 153: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 154: Trave in legno a falda Falda 2 fili 32-26 (L = 0.522)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.454
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = 0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
4.656/0.0004=11748.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.454
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.656/0.0003=18599.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.507
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0005
Ufin = 0.0005
Luce/Ufin > limite
4.656/0.0005=9702.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 35-(-2463; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.12 composto da:
asta 221: Trave in legno a falda Falda 2 fili 35-27 (L = 0.616)
asta 223: Trave in legno a falda Falda 2 fili 27-4 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.868
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
3.12/0.0005=6873.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.951
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.12/0.0003=11759.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.888
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
3.12/0.0006=5466.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 36-(-2463; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.317 composto da:
asta 216: Trave in legno a falda Falda 2 fili 36-31 (L = 0.814)
asta 218: Trave in legno a falda Falda 2 fili 31-8 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.982
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
3.317/0.0004=9127.4 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.066
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
3.317/0.0002=15139.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.009
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
3.317/0.0005=7239.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 43-(-2463; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.096 composto da:
asta 220: Trave in legno a falda Falda 2 fili 43-28 (L = 1.592)
asta 222: Trave in legno a falda Falda 2 fili 28-5 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.844
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
4.096/0.0006=7267.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.844
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.096/0.0003=12733.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.897
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0007
Ufin = 0.0007
Luce/Ufin > limite
4.096/0.0007=5734.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 44-(-2463; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.199 composto da:
asta 217: Trave in legno a falda Falda 2 fili 44-30 (L = 1.696)
asta 219: Trave in legno a falda Falda 2 fili 30-7 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.864
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.199/0.0005=8063.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.864
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.199/0.0003=14103.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.921
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0007
Ufin = 0.0007
Luce/Ufin > limite
4.199/0.0007=6324.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2503; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.073 composto da:
asta 85: Trave in legno a falda Falda 2 fili 51-29 (L = 2.117)
asta 86: Trave in legno a falda Falda 2 fili 51-29 (L = 0.226)
asta 87: Trave in legno a falda Falda 2 fili 51-29 (L = 0.226)
asta 232: Trave in legno a falda Falda 2 fili 29-6 (L = 0.452)
asta 233: Trave in legno a falda Falda 2 fili 29-6 (L = 2.051)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.199
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
5.073/0.0003=19630.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.129
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
5.073/0.0001=40036.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.199
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
5.073/0.0003=14982.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 51-(-2854; -716)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.692 composto da:
asta 66: Trave in legno a falda Falda 2 fili 51-14 (L = 0.82)
asta 67: Trave in legno a falda Falda 2 fili 51-14 (L = 0.468)
asta 68: Trave in legno a falda Falda 2 fili 51-14 (L = 0.785)
asta 69: Trave in legno a falda Falda 2 fili 51-14 (L = 0.503)
asta 70: Trave in legno a falda Falda 2 fili 51-14 (L = 0.816)
asta 71: Trave in legno a falda Falda 2 fili 51-14 (L = 0.472)
asta 72: Trave in legno a falda Falda 2 fili 51-14 (L = 0.715)
asta 73: Trave in legno a falda Falda 2 fili 51-14 (L = 0.573)
asta 74: Trave in legno a falda Falda 2 fili 51-14 (L = 0.68)
asta 75: Trave in legno a falda Falda 2 fili 51-14 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.375
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004

Luce/Uinst,tot > limite
6.692/0.0004=15825.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.409
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
6.692/0.0002=31575 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.444
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
6.692/0.0005=12171.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 32-(-1176; 346)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.588 composto da:
asta 142: Trave in legno a falda Falda 3 fili 32-307 (L = 0.882)
asta 143: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 144: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 145: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 146: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 147: Trave in legno a falda Falda 3 fili 32-307 (L = 0.833)
asta 148: Trave in legno a falda Falda 3 fili 32-307 (L = 0.513)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.786
Kdef = 0
Uinst tot in x = 0.0024
Uinst tot in y = -0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
5.588/0.0054=1039.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.842
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
5.588/0.0023=2448.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.871
Kdef = 0.6
Ufin in x = 0.0032

Ufin in y = -0.0074
Ufin = 0.0074
Luce/Ufin > limite
5.588/0.0074=755.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 40-(-2154; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.705 composto da:
asta 263: Trave in legno a falda Falda 3 fili 40-41 (L = 1.063)
asta 271: Trave in legno a falda Falda 3 fili 41-42 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.856
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
3.705/0.0022=1705.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.944
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.705/0.0013=2943.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.891
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
3.705/0.0027=1357.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 48-(-2070; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.718 composto da:
asta 262: Trave in legno a falda Falda 3 fili 48-49 (L = 2.076)
asta 267: Trave in legno a falda Falda 3 fili 49-50 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.517
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
4.718/0.0035=1359.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.517
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.718/0.0021=2255.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.586
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0043
Ufin = 0.0043
Luce/Ufin > limite
4.718/0.0043=1096 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 57-(-1986; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 257: Trave in legno a falda Falda 3 fili 57-58 (L = 2.738)
asta 270: Trave in legno a falda Falda 3 fili 58-52 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
5.38/0.0038=1409.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.647
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0025

Uinst var = 0.0025
Luce/Uinst,var > limite
5.38/0.0025=2115.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.556
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0046
Ufin = 0.0046
Luce/Ufin > limite
5.38/0.0046=1174.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 66-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.715 composto da:
asta 256: Trave in legno a falda Falda 3 fili 66-67 (L = 2.726)
asta 269: Trave in legno a falda Falda 3 fili 67-68 (L = 1.989)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.271
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0027
Uinst tot = 0.0027
Luce/Uinst,tot > limite
4.715/0.0027=1741.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.715/0.0021=2283.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0031
Ufin = 0.0031
Luce/Ufin > limite
4.715/0.0031=1521.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 77-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.691 composto da:
asta 255: Trave in legno a falda Falda 3 fili 77-78 (L = 2.725)
asta 268: Trave in legno a falda Falda 3 fili 78-79 (L = 0.965)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.817
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
3.691/0.0015=2446.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.998
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
3.691/0.0011=3276.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.726
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
3.691/0.0018=2105 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" (-1961; 589)-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.165 composto da:
asta 76: Trave in legno a falda Falda 3 fili 52-109 (L = 1.05)
asta 77: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 78: Trave in legno a falda Falda 3 fili 52-109 (L = 1.279)
asta 79: Trave in legno a falda Falda 3 fili 52-109 (L = 1.37)
asta 80: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 81: Trave in legno a falda Falda 3 fili 52-109 (L = 0.817)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.745
Kdef = 0

Uinst tot in x = -0.0012
Uinst tot in y = 0.004
Uinst tot = 0.004
Luce/Uinst,tot > limite
7.165/0.004=1800.4 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.374
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
7.165/0.0009=8025.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.867
Kdef = 0.6
Ufin in x = -0.0019
Ufin in y = 0.0062
Ufin = 0.0062
Luce/Ufin > limite
7.165/0.0062=1164.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" (-2458; 579)-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.026 composto da:
asta 495: Trave in legno a falda Falda 3 fili 12-51 (L = 0.922)
asta 496: Trave in legno a falda Falda 3 fili 12-51 (L = 1.265)
asta 497: Trave in legno a falda Falda 3 fili 12-51 (L = 1.308)
asta 498: Trave in legno a falda Falda 3 fili 12-51 (L = 1.095)
asta 499: Trave in legno a falda Falda 3 fili 12-51 (L = 0.26)
asta 500: Trave in legno a falda Falda 3 fili 12-51 (L = 0.958)
asta 501: Trave in legno a falda Falda 3 fili 12-51 (L = 0.358)
asta 502: Trave in legno a falda Falda 3 fili 12-51 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.262
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
7.026/0.0008=8671.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.225
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
7.026/0.0005=14501.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.415
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
7.026/0.001=6988.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 95-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.492 composto da:
asta 258: Trave in legno a falda Falda 4 fili 95-308 (L = 1.133)
asta 798: Trave in legno a falda Falda 4 fili 308-96 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.919
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
3.492/0.0022=1580.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.155
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.492/0.0006=5553.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.957
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0031
Ufin = 0.0031
Luce/Ufin > limite
3.492/0.0031=1128.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 103-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.45 composto da:

asta 796: Trave in legno a falda Falda 4 fili 103-309 (L = 2.091)
asta 811: Trave in legno a falda Falda 4 fili 309-105 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.641
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.001
Uinst tot = 0.001
Luce/Uinst,tot > limite
4.45/0.001=4629.4 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.091
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.45/0.0002=18884.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
4.45/0.0014=3195.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.048 composto da:
asta 793: Trave in legno a falda Falda 4 fili 114-310 (L = 2.612)
asta 794: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 795: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.48
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite

3.048/0.0008=3657.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.306
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.048/0.0004=6823.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.48
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
3.048/0.0011=2838.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 118-(-2445; 1167)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.223 composto da:
asta 56: Trave in legno a falda Falda 4 fili 118-60 (L = 0.838)
asta 57: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 58: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 59: Trave in legno a falda Falda 4 fili 118-60 (L = 0.353)
asta 60: Trave in legno a falda Falda 4 fili 118-60 (L = 0.154)
asta 61: Trave in legno a falda Falda 4 fili 118-60 (L = 0.767)
asta 62: Trave in legno a falda Falda 4 fili 118-60 (L = 0.233)
asta 63: Trave in legno a falda Falda 4 fili 118-60 (L = 1.041)
asta 64: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 65: Trave in legno a falda Falda 4 fili 118-60 (L = 1.016)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.301
Kdef = 0
Uinst tot in x = 0.0016
Uinst tot in y = 0.0057
Uinst tot = 0.0057
Luce/Uinst,tot > limite
8.223/0.0057=1447.1 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.864
Kdef = 0
Uinst var in x = -0.0003
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
8.223/0.0008=9944.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.371
Kdef = 0.6
Ufin in x = 0.0024
Ufin in y = 0.0088
Ufin = 0.0088
Luce/Ufin > limite
8.223/0.0088=939 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 4" 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.904 composto da:
asta 790: Trave in legno a falda Falda 4 fili 171-317 (L = 2.467)
asta 791: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 792: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.234
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
2.904/0.0006=4901.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.151
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.904/0.0003=9062 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.316
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
2.904/0.0008=3819.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 182-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.29 composto da:
asta 789: Trave in legno a falda Falda 4 fili 182-318 (L = 1.93)
asta 804: Trave in legno a falda Falda 4 fili 318-184 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.031
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.29/0.0008=5588.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.93
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.29/0.0002=22652.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.017
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.29/0.0011=4068.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 191-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.323 composto da:
asta 251: Trave in legno a falda Falda 4 fili 191-319 (L = 0.964)
asta 797: Trave in legno a falda Falda 4 fili 319-192 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.829
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0018
Uinst tot = 0.0018

Luce/Uinst,tot > limite
3.323/0.0018=1810.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.908
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.323/0.0006=5851.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.861
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0025
Ufin = 0.0025
Luce/Ufin > limite
3.323/0.0025=1312.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 287-(214; 439)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 10.233 composto da:
asta 777: Trave in legno a falda Falda 4 fili 287-202 (L = 0.994)
asta 778: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 779: Trave in legno a falda Falda 4 fili 287-202 (L = 0.624)
asta 780: Trave in legno a falda Falda 4 fili 287-202 (L = 1.056)
asta 781: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 782: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 783: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 784: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 785: Trave in legno a falda Falda 4 fili 287-202 (L = 0.909)
asta 786: Trave in legno a falda Falda 4 fili 287-202 (L = 0.771)
asta 787: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 788: Trave in legno a falda Falda 4 fili 287-202 (L = 0.839)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 5.138
Kdef = 0
Uinst tot in x = 0.0046
Uinst tot in y = -0.0101
Uinst tot = 0.0101
Luce/Uinst,tot > limite
10.233/0.0101=1014.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.166
Kdef = 0
Uinst var in x = 0.0018
Uinst var in y = -0.0038
Uinst var = 0.0038
Luce/Uinst,var > limite
10.233/0.0038=2664.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 5.283
Kdef = 0.6
Ufin in x = 0.0063
Ufin in y = -0.0139
Ufin = 0.0139
Luce/Ufin > limite
10.233/0.0139=735.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 310-(-1482; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.359 composto da:
asta 808: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 809: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 810: Trave in legno a falda Falda 4 fili 310-117 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.27
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.359/0.0003=8328.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.398
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.359/0.0002=13435 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.284
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.359/0.0004=6685.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 317-(-978; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.359 composto da:
asta 805: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 806: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 807: Trave in legno a falda Falda 4 fili 317-166 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.718
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.359/0.0003=8519 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.462
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.359/0.0001=19281 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.733
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.359/0.0004=5670.8 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 4" (-1060; 86)-(-32; 1171)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.118 composto da:
asta 114: Trave in legno a falda Falda 4 fili 164-221 (L = 1.145)
asta 115: Trave in legno a falda Falda 4 fili 164-221 (L = 1.29)
asta 116: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 117: Trave in legno a falda Falda 4 fili 164-221 (L = 0.156)
asta 118: Trave in legno a falda Falda 4 fili 164-221 (L = 0.194)
asta 119: Trave in legno a falda Falda 4 fili 164-221 (L = 0.929)
asta 120: Trave in legno a falda Falda 4 fili 164-221 (L = 1.282)
asta 121: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 122: Trave in legno a falda Falda 4 fili 164-221 (L = 0.562)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.501
Kdef = 0
Uinst tot in x = -0.0016
Uinst tot in y = 0.0055
Uinst tot = 0.0055
Luce/Uinst,tot > limite
8.118/0.0055=1474.6 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.501
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
8.118/0.0007=11111.2 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.583
Kdef = 0.6
Ufin in x = -0.0024
Ufin in y = 0.0085
Ufin = 0.0085
Luce/Ufin > limite
8.118/0.0085=957.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1062; 88)-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 330: Trave in legno a falda Falda 4 fili 315-316 (L = 3.677)
asta 800: Trave in legno a falda Falda 4 fili 316-163 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0042
Uinst tot = 0.0042
Luce/Uinst,tot > limite
6.036/0.0042=1452.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.574
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0024
Uinst var = 0.0024
Luce/Uinst,var > limite

6.036/0.0024=2507.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.819
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0052
Ufin = 0.0052
Luce/Ufin > limite
6.036/0.0052=1156 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" (-1146; 88)-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 329: Trave in legno a falda Falda 4 fili 147-314 (L = 3.677)
asta 799: Trave in legno a falda Falda 4 fili 314-149 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0076
Uinst tot = 0.0076
Luce/Uinst,tot > limite
6.036/0.0076=795.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.819
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0041
Uinst var = 0.0041
Luce/Uinst,var > limite
6.036/0.0041=1487.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0097
Ufin = 0.0097
Luce/Ufin > limite
6.036/0.0097=621.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" (-1230; 88)-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 331: Trave in legno a falda Falda 4 fili 141-313 (L = 3.677)
asta 801: Trave in legno a falda Falda 4 fili 313-143 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.009
Uinst tot = 0.009
Luce/Uinst,tot > limite
6.037/0.009=672.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.942
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0048
Uinst var = 0.0048
Luce/Uinst,var > limite
6.037/0.0048=1268.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0115
Ufin = 0.0115
Luce/Ufin > limite
6.037/0.0115=524.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" (-1314; 88)-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 332: Trave in legno a falda Falda 4 fili 132-312 (L = 3.678)
asta 802: Trave in legno a falda Falda 4 fili 312-134 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.008
Uinst tot = 0.008

Luce/Uinst,tot > limite
6.037/0.008=750.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.82
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0043
Uinst var = 0.0043
Luce/Uinst,var > limite
6.037/0.0043=1418.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0103
Ufin = 0.0103
Luce/Ufin > limite
6.037/0.0103=584.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" (-1398; 88)-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.038 composto da:
asta 333: Trave in legno a falda Falda 4 fili 120-311 (L = 3.678)
asta 803: Trave in legno a falda Falda 4 fili 311-122 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.697
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
6.038/0.0051=1194.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.575
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.038/0.0027=2218.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.82
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0065
Ufin = 0.0065
Luce/Ufin > limite
6.038/0.0065=933.9 > 200
Coefficienti combinatori impiegati:

Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 230-(27; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.224 composto da:
asta 82: Trave in legno a falda Falda 5 fili 230-248 (L = 2.165)
asta 83: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 84: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 226: Trave in legno a falda Falda 5 fili 248-277 (L = 0.452)
asta 227: Trave in legno a falda Falda 5 fili 248-277 (L = 2.156)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.218
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
5.224/0.0003=18423.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.218
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
5.224/0.0002=34126.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.227
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
5.224/0.0004=14180.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 233-(-13; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.285 composto da:
asta 136: Trave in legno a falda Falda 5 fili 233-249 (L = 1.678)
asta 230: Trave in legno a falda Falda 5 fili 249-278 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.894
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
4.285/0.0009=4890.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.981
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.285/0.0005=8757.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.95
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.285/0.0011=3829.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 238-(-13; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.25 composto da:
asta 135: Trave in legno a falda Falda 5 fili 238-247 (L = 1.643)
asta 229: Trave in legno a falda Falda 5 fili 247-276 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.947
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.25/0.0008=5325.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.947
Kdef = 0

Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.25/0.0005=9354.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.002
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
4.25/0.001=4204.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 239-(-13; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.434 composto da:
asta 137: Trave in legno a falda Falda 5 fili 239-250 (L = 0.827)
asta 231: Trave in legno a falda Falda 5 fili 250-279 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.131
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
3.434/0.0008=4281.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.131
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.434/0.0004=7643.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.158
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
3.434/0.001=3353.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 251-(-244; -533)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.657 composto da:
asta 161: Trave in legno a falda Falda 5 fili 251-245 (L = 0.772)
asta 162: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 163: Trave in legno a falda Falda 5 fili 251-245 (L = 0.841)
asta 164: Trave in legno a falda Falda 5 fili 251-245 (L = 0.839)
asta 165: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 166: Trave in legno a falda Falda 5 fili 251-245 (L = 0.525)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.453
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = 0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.657/0.0005=8976.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.657/0.0003=14355.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.507
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = 0.0006
Ufin = 0.0006
Luce/Ufin > limite
4.657/0.0006=7402.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" (-252; 353)-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.607 composto da:
asta 138: Trave in legno a falda Falda 5 fili 251-280 (L = 0.166)
asta 139: Trave in legno a falda Falda 5 fili 251-280 (L = 2.441)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.631
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.607/0.0003=9305.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.631
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.607/0.0002=16665.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.636
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.607/0.0004=7302.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" (-311; -67)-(-13; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.293 composto da:
asta 134: Trave in legno a falda Falda 5 fili 244-246 (L = 0.686)
asta 228: Trave in legno a falda Falda 5 fili 246-275 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.076
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
3.293/0.0007=4587.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.076
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.293/0.0004=8024.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.099
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
3.293/0.0009=3629.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5"-"Falda 1" 267-(-865; 473)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.818 composto da:
asta 123: Trave in legno a falda Falda 5 fili 269-230 (L = 0.614)
asta 124: Trave in legno a falda Falda 5 fili 269-230 (L = 1.001)
asta 125: Trave in legno a falda Falda 5 fili 269-230 (L = 0.24)
asta 126: Trave in legno a falda Falda 5 fili 269-230 (L = 1.143)
asta 127: Trave in legno a falda Falda 5 fili 269-230 (L = 0.406)
asta 128: Trave in legno a falda Falda 5 fili 269-230 (L = 0.868)
asta 129: Trave in legno a falda Falda 5 fili 269-230 (L = 1.28)
asta 130: Trave in legno a falda Falda 5 fili 269-230 (L = 1.266)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.983
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
6.818/0.0005=14455.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.954
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
6.818/0.0003=26839.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.096
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
6.818/0.0006=11362.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 167-(-86; 1042)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.283 composto da:
asta 49: Trave in legno a falda Falda 6 fili 167-225 (L = 1.339)
asta 50: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 51: Trave in legno a falda Falda 6 fili 167-225 (L = 0.523)
asta 52: Trave in legno a falda Falda 6 fili 167-225 (L = 0.772)
asta 53: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 54: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 55: Trave in legno a falda Falda 6 fili 167-225 (L = 0.764)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.157
Kdef = 0
Uinst tot in x = -0.0013
Uinst tot in y = 0.0056
Uinst tot = 0.0056
Luce/Uinst,tot > limite
7.283/0.0056=1310.9 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.052
Kdef = 0
Uinst var in x = -0.0003
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
7.283/0.0008=9528.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.245
Kdef = 0.6
Ufin in x = -0.0021
Ufin in y = 0.0086
Ufin = 0.0086
Luce/Ufin > limite
7.283/0.0086=845.4 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 6" 206-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.958 composto da:
asta 239: Trave in legno a falda Falda 6 fili 206-207 (L = 2.72)
asta 247: Trave in legno a falda Falda 6 fili 207-208 (L = 1.239)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.722
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.958/0.0013=3021.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.994
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.958/0.0013=3053.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.541
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.958/0.0014=2909.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 216-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.963 composto da:
asta 238: Trave in legno a falda Falda 6 fili 216-217 (L = 2.738)
asta 246: Trave in legno a falda Falda 6 fili 217-218 (L = 2.224)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.373
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0026
Uinst tot = 0.0026
Luce/Uinst,tot > limite
4.963/0.0026=1943.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.556
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
4.963/0.0022=2207.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.282
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
4.963/0.0027=1805.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 230-(-475; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 234: Trave in legno a falda Falda 6 fili 230-231 (L = 2.738)
asta 243: Trave in legno a falda Falda 6 fili 231-232 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.09
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0036
Uinst tot = 0.0036
Luce/Uinst,tot > limite
5.38/0.0036=1504.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.002
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0025
Uinst var = 0.0025
Luce/Uinst,var > limite
5.38/0.0025=2130.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.182
Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = -0.0042
Ufin = 0.0042
Luce/Ufin > limite
5.38/0.0042=1279.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 233-236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.42 composto da:
asta 327: Trave in legno a falda Falda 6 fili 236-233 (L = 1.778)

asta 244: Trave in legno a falda Falda 6 fili 236-237 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.395
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0031
Uinst tot = 0.0031
Luce/Uinst,tot > limite
4.42/0.0031=1446.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.395
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0019
Uinst var = 0.0019
Luce/Uinst,var > limite
4.42/0.0019=2299.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.454
Kdef = 0.6
Ufin in x = -0.0006
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
4.42/0.0037=1180.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 239-242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.474 composto da:
asta 328: Trave in legno a falda Falda 6 fili 242-239 (L = 0.832)
asta 245: Trave in legno a falda Falda 6 fili 242-243 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.712
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0016
Uinst tot = 0.0016
Luce/Uinst,tot > limite
3.474/0.0016=2134.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.712
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
3.474/0.001=3571.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.74
Kdef = 0.6
Ufin in x = -0.0008
Ufin in y = -0.002
Ufin = 0.002
Luce/Ufin > limite
3.474/0.002=1713.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-17; 585)-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.145 composto da:
asta 503: Trave in legno a falda Falda 6 fili 271-230 (L = 0.643)
asta 504: Trave in legno a falda Falda 6 fili 271-230 (L = 0.36)
asta 505: Trave in legno a falda Falda 6 fili 271-230 (L = 0.94)
asta 506: Trave in legno a falda Falda 6 fili 271-230 (L = 0.288)
asta 507: Trave in legno a falda Falda 6 fili 271-230 (L = 1.109)
asta 508: Trave in legno a falda Falda 6 fili 271-230 (L = 0.17)
asta 509: Trave in legno a falda Falda 6 fili 271-230 (L = 1.178)
asta 510: Trave in legno a falda Falda 6 fili 271-230 (L = 1.195)
asta 511: Trave in legno a falda Falda 6 fili 271-230 (L = 1.262)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.177
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.001
Uinst tot = 0.001
Luce/Uinst,tot > limite
7.145/0.001=7284 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.177
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
7.145/0.0006=12245.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.294
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0012

Ufin = 0.0012
Luce/Ufin > limite
7.145/0.0012=5866.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-772; 346)-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.425 composto da:
asta 155: Trave in legno a falda Falda 6 fili 191-251 (L = 1.44)
asta 156: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 157: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 158: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 159: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 160: Trave in legno a falda Falda 6 fili 191-251 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.784
Kdef = 0
Uinst tot in x = 0.0023
Uinst tot in y = -0.0049
Uinst tot = 0.0049
Luce/Uinst,tot > limite
5.425/0.0049=1112.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.644
Kdef = 0
Uinst var in x = 0.0012
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
5.425/0.0022=2469.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.888
Kdef = 0.6
Ufin in x = 0.003
Ufin in y = -0.0064
Ufin = 0.0064
Luce/Ufin > limite
5.425/0.0064=849.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

1.7 Verifica sismica globale

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Desc.: *descrizione.*
Stato limite: *(muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Molt.: *moltiplicatore minimo della azione sismica che produce lo stato limite.*

Comb.: combinazione.
PGA: accelerazione al suolo.
iPGA (ζE): indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).
TR: tempo di ritorno.
(TR/TRrif)^.41: indicatore di rischio sismico in termini di periodo di ritorno.
fa: fattore di accelerazione.
Stato limite: (muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.
Coeff.s.: coefficiente minimo prodotto dallo stato limite.
Verifica: stato di verifica.
Trave: titolo della trave.
Pressoflessione: dati della verifica a pressoflessione.
Coeff.s.: coefficiente di sicurezza a flessione.
iTR: indicatore di rischio sismico in termini di tempo di ritorno.
campata: campata di riferimento.
dist.: ascissa relativa all'inizio della campata. [m]
Taglio: dati della verifica a taglio.
Coeff.s.: coefficiente di sicurezza a taglio.
Maschio: maschio.
Stato limite: (maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.
Trave: trave di collegamento in muratura.
Stato limite: (trave muratura) V=Taglio; F=Flessione.
S. L.: stato limite di riferimento.
TR,C: periodo di ritorno di capacità.
PGA,C: accelerazione di aggancio di capacità.
TR,Rif: periodo di ritorno di riferimento.
PGA,Rif: accelerazione di aggancio di riferimento.
Tipo rottura: tipo di rottura che fornisce il valore minimo degli elementi considerati.
PAM: perdita media annua attesa.
Classe PAM: classe di rischio PAM.
IS-V: indice di sicurezza.
Classe IS-V: classe di rischio IS-V.
λ,SLR: frequenza media annua di superamento in Stato Limite di Ricostruzione.
λ,SLC: frequenza media annua di superamento in Stato Limite di Collasso.
λ,SLV: frequenza media annua di superamento in Stato Limite di salvaguardia della Vita.
λ,SLD: frequenza media annua di superamento in Stato Limite di Danno.
λ,SLO: frequenza media annua di superamento in Stato Limite di Operatività.
λ,SLID: frequenza media annua di superamento in Stato Limite di Inizio Danno.

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO (ag/g_SLO*S*ST) PGA,SLOrif = 0.081
Accelerazione di aggancio SLD (ag/g_SLD*S*ST) PGA,SLDrif = 0.101
Accelerazione di aggancio SLV (ag/g_SLV*S*ST) PGA,SLVrif = 0.244
Tr,SLOrif = 30 anni
Tr,SLDrif = 50 anni
Tr,SLVrif = 475 anni

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	fa
Maschio 218	PF	0.208	SLV 3	0.049	0.2007	9	0.1967	0.1953
Maschio 15	V	0.689	SLV 4	0.1648	0.6744	171	0.6578	0.6736
Maschio 274	PFFP	0.249	SLV 9	0.0534	0.2184	11	0.2136	0.2124
Maschio 75	R	0.589	SLV 10	0.1368	0.56	111	0.551	0.5581
Trave di accoppiamento 19	PF	0.245	SLV 1	0.0572	0.2342	13	0.2287	0.2279
Trave di accoppiamento 27	V	0.154	SLV 13	0.0349	0.1428	4	0.1411	0.139

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	4.553	SLU 83	Si
Maschio 1	V SLU	4.234	SLU 83	Si
Maschio 1	PF	2.867	SLV 13	Si
Maschio 1	V	2.749	SLV 8	Si
Maschio 1	PFFP	8.763	SLV 16	Si
Maschio 1	R	1.777	SLV 5	Si
Maschio 2	PF SLU	3.794	SLU 49	Si
Maschio 2	V SLU	7.523	SLU 84	Si
Maschio 2	PF	0.717	SLV 13	No
Maschio 2	V	3.012	SLV 9	Si
Maschio 2	PFFP	2.951	SLV 13	Si
Maschio 2	R	2.251	SLV 8	Si
Maschio 3	PF SLU	7.769	SLU 48	Si
Maschio 3	V SLU	5.156	SLU 77	Si
Maschio 3	PF	3.346	SLV 11	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 3	V	4.267	SLV 16	Si
Maschio 3	PFFP	8.949	SLV 15	Si
Maschio 3	R	1.953	SLV 6	Si
Maschio 4	PF SLU	3.611	SLU 77	Si
Maschio 4	V SLU	3.512	SLU 84	Si
Maschio 4	PF	1.897	SLV 16	Si
Maschio 4	V	2.666	SLV 16	Si
Maschio 4	PFFP	16.744	SLV 13	Si
Maschio 4	R	1.976	SLV 8	Si
Maschio 7	PF SLU	5.902	SLU 84	Si
Maschio 7	V SLU	5.888	SLU 84	Si
Maschio 7	PF	2.431	SLV 9	Si
Maschio 7	V	2.983	SLV 5	Si
Maschio 7	PFFP	30.809	SLV 13	Si
Maschio 7	R	1.063	SLV 8	Si
Maschio 9	PF SLU	8.153	SLU 83	Si
Maschio 9	V SLU	4.946	SLU 76	Si
Maschio 9	PF	4.889	SLV 15	Si
Maschio 9	V	3.692	SLV 13	Si
Maschio 9	PFFP	11.207	SLV 14	Si
Maschio 9	R	1.835	SLV 7	Si
Maschio 10	PF SLU	3.17	SLU 76	Si
Maschio 10	V SLU	2.217	SLU 83	Si
Maschio 10	PF	2.029	SLV 13	Si
Maschio 10	V	1.612	SLV 13	Si
Maschio 10	PFFP	17.534	SLV 14	Si
Maschio 10	R	1.719	SLV 7	Si
Maschio 11	PF SLU	2.616	SLU 84	Si
Maschio 11	V SLU	1.381	SLU 84	Si
Maschio 11	PF	2.141	SLV 13	Si
Maschio 11	V	1.047	SLV 4	Si
Maschio 11	PFFP	39.774	SLV 15	Si
Maschio 11	R	1.541	SLV 5	Si
Maschio 13	PF SLU	6.219	SLU 84	Si
Maschio 13	V SLU	4.367	SLU 83	Si
Maschio 13	PF	3.766	SLV 9	Si
Maschio 13	V	1.746	SLV 12	Si
Maschio 13	PFFP	22.782	SLV 16	Si
Maschio 13	R	1.498	SLV 5	Si
Maschio 14	PF SLU	6.077	SLU 84	Si
Maschio 14	V SLU	3.363	SLU 84	Si
Maschio 14	PF	2.303	SLV 16	Si
Maschio 14	V	2.144	SLV 16	Si
Maschio 14	PFFP	12.395	SLV 9	Si
Maschio 14	R	2.132	SLV 6	Si
Maschio 15	PF SLU	1.602	SLU 83	Si
Maschio 15	V SLU	1.364	SLU 84	Si
Maschio 15	PF	1.983	SLV 4	Si
Maschio 15	V	0.82	SLV 4	No
Maschio 15	PFFP	15.484	SLV 13	Si
Maschio 15	R	3.896	SLV 7	Si
Maschio 16	PF SLU	3.58	SLU 77	Si
Maschio 16	V SLU	5.699	SLU 84	Si
Maschio 16	PF	2.06	SLV 2	Si
Maschio 16	V	1.849	SLV 4	Si
Maschio 16	PFFP	10.072	SLV 15	Si
Maschio 16	R	2.967	SLV 8	Si
Maschio 17	PF SLU	21.109	SLU 83	Si
Maschio 17	V SLU	1.846	SLU 84	Si
Maschio 17	PF	4.587	SLV 12	Si
Maschio 17	V	1.591	SLV 5	Si
Maschio 17	PFFP	32.699	SLV 16	Si
Maschio 17	R	1.152	SLV 5	Si
Maschio 18	PF SLU	2.823	SLU 83	Si
Maschio 18	V SLU	3.523	SLU 83	Si
Maschio 18	PF	2.675	SLV 8	Si
Maschio 18	V	1.973	SLV 8	Si
Maschio 18	PFFP	20.73	SLV 4	Si
Maschio 18	R	1.34	SLV 9	Si
Maschio 19	PF SLU	30.042	SLU 83	Si
Maschio 19	V SLU	1.908	SLU 84	Si
Maschio 19	PF	2.554	SLV 14	Si
Maschio 19	V	1.48	SLV 14	Si
Maschio 19	PFFP	26.294	SLV 14	Si
Maschio 19	R	1.326	SLV 7	Si
Maschio 20	PF SLU	10.14	SLU 84	Si
Maschio 20	V SLU	24.938	SLU 84	Si
Maschio 20	PF	2.251	SLV 13	Si
Maschio 20	V	1.654	SLV 1	Si
Maschio 20	PFFP	42.266	SLV 14	Si
Maschio 20	R	1.159	SLV 5	Si
Maschio 23	PF SLU	4.588	SLU 83	Si
Maschio 23	V SLU	6.918	SLU 83	Si
Maschio 23	PF	1.153	SLV 13	Si
Maschio 23	V	2.469	SLV 15	Si
Maschio 23	PFFP	51.982	SLV 13	Si
Maschio 23	R	1.346	SLV 6	Si
Maschio 24	PF SLU	6.751	SLU 84	Si
Maschio 24	V SLU	7.045	SLU 84	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 24	PF	1.39	SLV 14	Si
Maschio 24	V	1.507	SLV 16	Si
Maschio 24	PFFP	39.812	SLV 5	Si
Maschio 24	R	1.383	SLV 12	Si
Maschio 25	PF SLU	1.831	SLU 83	Si
Maschio 25	V SLU	14.725	SLU 83	Si
Maschio 25	PF	1.148	SLV 15	Si
Maschio 25	V	5.641	SLV 15	Si
Maschio 25	PFFP	34.618	SLV 3	Si
Maschio 25	R	1.128	SLV 6	Si
Maschio 26	PF SLU	15.55	SLU 81	Si
Maschio 26	V SLU	1.896	SLU 84	Si
Maschio 26	PF	2.988	SLV 2	Si
Maschio 26	V	1.487	SLV 1	Si
Maschio 26	PFFP	25.793	SLV 2	Si
Maschio 26	R	1.387	SLV 12	Si
Maschio 28	PF SLU	3.918	SLU 84	Si
Maschio 28	V SLU	2.43	SLU 84	Si
Maschio 28	PF	1.022	SLV 16	Si
Maschio 28	V	1.58	SLV 1	Si
Maschio 28	PFFP	9.864	SLV 16	Si
Maschio 28	R	8	SLV 6	Si
Maschio 29	PF SLU	17.423	SLU 84	Si
Maschio 29	V SLU	3.88	SLU 84	Si
Maschio 29	PF	3.833	SLV 14	Si
Maschio 29	V	1.391	SLV 14	Si
Maschio 29	PFFP	21.02	SLV 10	Si
Maschio 29	R	1.664	SLV 5	Si
Maschio 30	PF SLU	10.405	SLU 82	Si
Maschio 30	V SLU	3.028	SLU 83	Si
Maschio 30	PF	7.423	SLV 6	Si
Maschio 30	V	1.748	SLV 11	Si
Maschio 30	PFFP	24.908	SLV 15	Si
Maschio 30	R	1.228	SLV 10	Si
Maschio 32	PF SLU	14.484	SLU 84	Si
Maschio 32	V SLU	12.334	SLU 84	Si
Maschio 32	PF	4.111	SLV 14	Si
Maschio 32	V	1.695	SLV 1	Si
Maschio 32	PFFP	20.051	SLV 6	Si
Maschio 32	R	1.821	SLV 9	Si
Maschio 33	PF SLU	10.007	SLU 82	Si
Maschio 33	V SLU	2.888	SLU 83	Si
Maschio 33	PF	3.169	SLV 3	Si
Maschio 33	V	2.439	SLV 3	Si
Maschio 33	PFFP	12.42	SLV 2	Si
Maschio 33	R	2.598	SLV 11	Si
Maschio 34	PF SLU	5.835	SLU 83	Si
Maschio 34	V SLU	1.162	SLU 84	Si
Maschio 34	PF	2.433	SLV 7	Si
Maschio 34	V	1.311	SLV 10	Si
Maschio 34	PFFP	26.78	SLV 3	Si
Maschio 34	R	1.182	SLV 10	Si
Maschio 36	PF SLU	3.152	SLU 77	Si
Maschio 36	V SLU	13.195	SLU 84	Si
Maschio 36	PF	1.534	SLV 4	Si
Maschio 36	V	1.613	SLV 13	Si
Maschio 36	PFFP	10.724	SLV 4	Si
Maschio 36	R	2.544	SLV 11	Si
Maschio 37	PF SLU	1.024	SLU 83	Si
Maschio 37	V SLU	2.577	SLU 84	Si
Maschio 37	PF	0.95	SLV 7	No
Maschio 37	V	1.935	SLV 15	Si
Maschio 37	PFFP	13.965	SLV 2	Si
Maschio 37	R	3.994	SLV 12	Si
Maschio 38	PF SLU	13.798	SLU 51	Si
Maschio 38	V SLU	3.147	SLU 83	Si
Maschio 38	PF	5.714	SLV 11	Si
Maschio 38	V	1.691	SLV 11	Si
Maschio 38	PFFP	27.693	SLV 1	Si
Maschio 38	R	1.341	SLV 10	Si
Maschio 40	PF SLU	2.886	SLU 84	Si
Maschio 40	V SLU	3.455	SLU 84	Si
Maschio 40	PF	2.056	SLV 2	Si
Maschio 40	V	2.038	SLV 15	Si
Maschio 40	PFFP	35.626	SLV 4	Si
Maschio 40	R	1.808	SLV 8	Si
Maschio 41	PF SLU	3.84	SLU 76	Si
Maschio 41	V SLU	2.908	SLU 83	Si
Maschio 41	PF	2.102	SLV 2	Si
Maschio 41	V	1.788	SLV 4	Si
Maschio 41	PFFP	16.457	SLV 1	Si
Maschio 41	R	1.714	SLV 12	Si
Maschio 42	PF SLU	12.26	SLU 81	Si
Maschio 42	V SLU	7.799	SLU 76	Si
Maschio 42	PF	3.376	SLV 4	Si
Maschio 42	V	4.477	SLV 2	Si
Maschio 42	PFFP	11.83	SLV 1	Si
Maschio 42	R	1.965	SLV 12	Si
Maschio 44	PF SLU	2.601	SLU 84	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 44	V SLU	3.197	SLU 84	Si
Maschio 44	PF	2.063	SLV 10	Si
Maschio 44	V	1.975	SLV 10	Si
Maschio 44	PFFP	26.128	SLV 2	Si
Maschio 44	R	0.995	SLV 9	No
Maschio 46	PF SLU	11.532	SLU 82	Si
Maschio 46	V SLU	3.77	SLU 84	Si
Maschio 46	PF	2.17	SLV 1	Si
Maschio 46	V	3.333	SLV 1	Si
Maschio 46	PFFP	12.538	SLV 2	Si
Maschio 46	R	1.866	SLV 12	Si
Maschio 47	PF SLU	5.346	SLU 81	Si
Maschio 47	V SLU	3.737	SLU 83	Si
Maschio 47	PF	2.925	SLV 3	Si
Maschio 47	V	3.997	SLV 7	Si
Maschio 47	PFFP	7.331	SLV 2	Si
Maschio 47	R	2.192	SLV 9	Si
Maschio 48	PF SLU	26.667	SLU 55	Si
Maschio 48	V SLU	14.512	SLU 84	Si
Maschio 48	PF	7.516	SLV 3	Si
Maschio 48	V	3.088	SLV 10	Si
Maschio 48	PFFP	7.802	SLV 4	Si
Maschio 48	R	1.883	SLV 9	Si
Maschio 49	PF SLU	30.081	SLU 81	Si
Maschio 49	V SLU	29.175	SLU 76	Si
Maschio 49	PF	3.828	SLV 12	Si
Maschio 49	V	3.453	SLV 9	Si
Maschio 49	PFFP	5.95	SLV 15	Si
Maschio 49	R	0.937	SLV 5	No
Maschio 50	PF SLU	21.279	SLU 40	Si
Maschio 50	V SLU	13.625	SLU 84	Si
Maschio 50	PF	0.823	SLV 16	No
Maschio 50	V	3.266	SLV 1	Si
Maschio 50	PFFP	5.683	SLV 11	Si
Maschio 50	R	0.706	SLV 5	No
Maschio 51	PF SLU	3.985	SLU 43	Si
Maschio 51	V SLU	3.458	SLU 84	Si
Maschio 51	PF	1.001	SLV 16	Si
Maschio 51	V	1.854	SLV 14	Si
Maschio 51	PFFP	6.142	SLV 11	Si
Maschio 51	R	0.939	SLV 10	No
Maschio 52	PF SLU	12.676	SLU 66	Si
Maschio 52	V SLU	31.37	SLU 34	Si
Maschio 52	PF	0.082	SLV 13	No
Maschio 52	V	2.398	SLV 13	Si
Maschio 52	PFFP	4.068	SLV 9	Si
Maschio 52	R	0.677	SLV 8	No
Maschio 53	PF SLU	3.686	SLU 84	Si
Maschio 53	V SLU	2.622	SLU 84	Si
Maschio 53	PF	2.553	SLV 13	Si
Maschio 53	V	1.848	SLV 13	Si
Maschio 53	PFFP	7.556	SLV 10	Si
Maschio 53	R	0.697	SLV 7	No
Maschio 54	PF SLU	5.188	SLU 76	Si
Maschio 54	V SLU	12.818	SLU 65	Si
Maschio 54	PF	0.816	SLV 13	No
Maschio 54	V	2.102	SLV 15	Si
Maschio 54	PFFP	12.664	SLV 9	Si
Maschio 54	R	0.675	SLV 8	No
Maschio 56	PF SLU	9.35	SLU 47	Si
Maschio 56	V SLU	12.958	SLU 70	Si
Maschio 56	PF	4.114	SLV 9	Si
Maschio 56	V	4.718	SLV 9	Si
Maschio 56	PFFP	10.788	SLV 15	Si
Maschio 56	R	0.578	SLV 5	No
Maschio 57	PF SLU	2.212	SLU 84	Si
Maschio 57	V SLU	4.263	SLU 83	Si
Maschio 57	PF	1.35	SLV 2	Si
Maschio 57	V	2.057	SLV 4	Si
Maschio 57	PFFP	7.961	SLV 13	Si
Maschio 57	R	0.758	SLV 11	No
Maschio 58	PF SLU	9.939	SLU 43	Si
Maschio 58	V SLU	7.205	SLU 84	Si
Maschio 58	PF	5.477	SLV 16	Si
Maschio 58	V	5.109	SLV 12	Si
Maschio 58	PFFP	8.025	SLV 16	Si
Maschio 58	R	0.862	SLV 7	No
Maschio 61	PF SLU	3.966	SLU 83	Si
Maschio 61	V SLU	4.315	SLU 84	Si
Maschio 61	PF	0.609	SLV 13	No
Maschio 61	V	1.705	SLV 15	Si
Maschio 61	PFFP	7.981	SLV 2	Si
Maschio 61	R	0.936	SLV 8	No
Maschio 65	PF SLU	8.445	SLU 81	Si
Maschio 65	V SLU	9.829	SLU 78	Si
Maschio 65	PF	5.981	SLV 12	Si
Maschio 65	V	4.629	SLV 5	Si
Maschio 65	PFFP	11.053	SLV 9	Si
Maschio 65	R	0.952	SLV 10	No

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 66	PF SLU	6.795	SLU 83	Si
Maschio 66	V SLU	8.86	SLU 50	Si
Maschio 66	PF	3.751	SLV 9	Si
Maschio 66	V	3.116	SLV 8	Si
Maschio 66	PFFP	11.018	SLV 4	Si
Maschio 66	R	0.924	SLV 9	No
Maschio 68	PF SLU	23.768	SLU 77	Si
Maschio 68	V SLU	22.4	SLU 81	Si
Maschio 68	PF	0	SLV 16	No
Maschio 68	V	1.666	SLV 16	Si
Maschio 68	PFFP	7.564	SLV 16	Si
Maschio 68	R	0.632	SLV 5	No
Maschio 69	PF SLU	14.462	SLU 82	Si
Maschio 69	V SLU	13.479	SLU 82	Si
Maschio 69	PF	2.256	SLV 14	Si
Maschio 69	V	2.066	SLV 14	Si
Maschio 69	PFFP	12.106	SLV 12	Si
Maschio 69	R	0.628	SLV 5	No
Maschio 70	PF SLU	32.015	SLU 51	Si
Maschio 70	V SLU	39.867	SLU 84	Si
Maschio 70	PF	2.301	SLV 3	Si
Maschio 70	V	2.112	SLV 14	Si
Maschio 70	PFFP	12.471	SLV 7	Si
Maschio 70	R	0.621	SLV 10	No
Maschio 71	PF SLU	20.76	SLU 81	Si
Maschio 71	V SLU	14.284	SLU 84	Si
Maschio 71	PF	1.159	SLV 3	Si
Maschio 71	V	2.157	SLV 14	Si
Maschio 71	PFFP	8.531	SLV 7	Si
Maschio 71	R	0.76	SLV 9	No
Maschio 72	PF SLU	13.987	SLU 44	Si
Maschio 72	V SLU	8.893	SLU 48	Si
Maschio 72	PF	1.479	SLV 13	Si
Maschio 72	V	3.96	SLV 15	Si
Maschio 72	PFFP	5.549	SLV 13	Si
Maschio 72	R	0.647	SLV 8	No
Maschio 73	PF SLU	8.414	SLU 78	Si
Maschio 73	V SLU	16.366	SLU 83	Si
Maschio 73	PF	3.036	SLV 3	Si
Maschio 73	V	2.384	SLV 13	Si
Maschio 73	PFFP	18.371	SLV 16	Si
Maschio 73	R	0.611	SLV 5	No
Maschio 74	PF SLU	10.546	SLU 84	Si
Maschio 74	V SLU	23.802	SLU 82	Si
Maschio 74	PF	1.972	SLV 15	Si
Maschio 74	V	2.096	SLV 2	Si
Maschio 74	PFFP	16.948	SLV 11	Si
Maschio 74	R	0.738	SLV 6	No
Maschio 75	PF SLU	10.096	SLU 84	Si
Maschio 75	V SLU	8.2	SLU 78	Si
Maschio 75	PF	0.94	SLV 3	No
Maschio 75	V	2.262	SLV 4	Si
Maschio 75	PFFP	20.051	SLV 3	Si
Maschio 75	R	0.569	SLV 10	No
Maschio 76	PF SLU	18.185	SLU 43	Si
Maschio 76	V SLU	11.706	SLU 50	Si
Maschio 76	PF	2.346	SLV 1	Si
Maschio 76	V	4.374	SLV 4	Si
Maschio 76	PFFP	5.549	SLV 2	Si
Maschio 76	R	0.663	SLV 11	No
Maschio 77	PF SLU	30.981	SLU 44	Si
Maschio 77	V SLU	3.351	SLU 83	Si
Maschio 77	PF	3.841	SLV 6	Si
Maschio 77	V	2.371	SLV 15	Si
Maschio 77	PFFP	9.89	SLV 9	Si
Maschio 77	R	0.737	SLV 11	No
Maschio 78	PF SLU	19.242	SLU 82	Si
Maschio 78	V SLU	2.578	SLU 79	Si
Maschio 78	PF	6.727	SLV 9	Si
Maschio 78	V	1.787	SLV 11	Si
Maschio 78	PFFP	131.374	SLV 1	Si
Maschio 78	R	2.934	SLV 16	Si
Maschio 79	PF SLU	13.212	SLU 83	Si
Maschio 79	V SLU	4.167	SLU 79	Si
Maschio 79	PF	7.836	SLV 15	Si
Maschio 79	V	2.796	SLV 7	Si
Maschio 79	PFFP	24.498	SLV 3	Si
Maschio 79	R	1.381	SLV 10	Si
Maschio 82	PF SLU	24.951	SLU 81	Si
Maschio 82	V SLU	2.871	SLU 84	Si
Maschio 82	PF	7.163	SLV 7	Si
Maschio 82	V	3.637	SLV 10	Si
Maschio 82	PFFP	9.772	SLV 3	Si
Maschio 82	R	0.935	SLV 11	No
Maschio 86	PF SLU	3.684	SLU 83	Si
Maschio 86	V SLU	4.773	SLU 84	Si
Maschio 86	PF	0.47	SLV 2	No
Maschio 86	V	1.486	SLV 4	Si
Maschio 86	PFFP	9.021	SLV 13	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 86	R	0.855	SLV 11	No
Maschio 88	PF SLU	5.537	SLU 83	Si
Maschio 88	V SLU	5.497	SLU 84	Si
Maschio 88	PF	4.122	SLV 11	Si
Maschio 88	V	4.416	SLV 11	Si
Maschio 88	PFFP	13.127	SLV 3	Si
Maschio 88	R	0.773	SLV 10	No
Maschio 90	PF SLU	3.066	SLU 83	Si
Maschio 90	V SLU	5.576	SLU 83	Si
Maschio 90	PF	0.772	SLV 2	No
Maschio 90	V	1.416	SLV 15	Si
Maschio 90	PFFP	7.32	SLV 2	Si
Maschio 90	R	0.799	SLV 8	No
Maschio 91	PF SLU	8.957	SLU 84	Si
Maschio 91	V SLU	8.061	SLU 78	Si
Maschio 91	PF	5.13	SLV 2	Si
Maschio 91	V	3.98	SLV 10	Si
Maschio 91	PFFP	9.377	SLV 4	Si
Maschio 91	R	0.793	SLV 9	No
Maschio 94	PF SLU	4.839	SLU 68	Si
Maschio 94	V SLU	7.445	SLU 68	Si
Maschio 94	PF	0.538	SLV 2	No
Maschio 94	V	1.5	SLV 2	Si
Maschio 94	PFFP	12.085	SLV 5	Si
Maschio 94	R	0.787	SLV 12	No
Maschio 95	PF SLU	3.916	SLU 84	Si
Maschio 95	V SLU	2.799	SLU 84	Si
Maschio 95	PF	2.277	SLV 2	Si
Maschio 95	V	1.729	SLV 2	Si
Maschio 95	PFFP	7.102	SLV 5	Si
Maschio 95	R	0.722	SLV 12	No
Maschio 96	PF SLU	10.595	SLU 45	Si
Maschio 96	V SLU	20.395	SLU 84	Si
Maschio 96	PF	0.725	SLV 2	No
Maschio 96	V	2.383	SLV 2	Si
Maschio 96	PFFP	3.759	SLV 2	Si
Maschio 96	R	0.69	SLV 11	No
Maschio 97	PF SLU	2.868	SLU 43	Si
Maschio 97	V SLU	2.392	SLU 84	Si
Maschio 97	PF	0.394	SLV 3	No
Maschio 97	V	1.648	SLV 1	Si
Maschio 97	PFFP	7.318	SLV 3	Si
Maschio 97	R	0.695	SLV 9	No
Maschio 98	PF SLU	21.466	SLU 43	Si
Maschio 98	V SLU	13.252	SLU 84	Si
Maschio 98	PF	0.37	SLV 3	No
Maschio 98	V	3.013	SLV 14	Si
Maschio 98	PFFP	5.097	SLV 3	Si
Maschio 98	R	0.701	SLV 10	No
Maschio 99	PF SLU	92.357	SLU 44	Si
Maschio 99	V SLU	33.659	SLU 76	Si
Maschio 99	PF	3.826	SLV 6	Si
Maschio 99	V	3.653	SLV 6	Si
Maschio 99	PFFP	7.036	SLV 4	Si
Maschio 99	R	0.92	SLV 10	No
Maschio 100	PF SLU	9.728	SLU 47	Si
Maschio 100	V SLU	56.674	SLU 50	Si
Maschio 100	PF	1.841	SLV 9	Si
Maschio 100	V	6.774	SLV 8	Si
Maschio 100	PFFP	4.163	SLV 13	Si
Maschio 100	R	0.787	SLV 8	No
Maschio 101	PF SLU	10.146	SLU 81	Si
Maschio 101	V SLU	41.006	SLU 76	Si
Maschio 101	PF	1.907	SLV 12	Si
Maschio 101	V	8.194	SLV 5	Si
Maschio 101	PFFP	3.629	SLV 12	Si
Maschio 101	R	0.809	SLV 5	No
Maschio 102	PF SLU	8.582	SLU 43	Si
Maschio 102	V SLU	36.003	SLU 43	Si
Maschio 102	PF	0	SLV 11	No
Maschio 102	V	4.037	SLV 16	Si
Maschio 102	PFFP	0	SLV 8	No
Maschio 102	R	0.665	SLV 5	No
Maschio 103	PF SLU	8.882	SLU 43	Si
Maschio 103	V SLU	5.046	SLU 84	Si
Maschio 103	PF	2.767	SLV 16	Si
Maschio 103	V	3.377	SLV 14	Si
Maschio 103	PFFP	3.69	SLV 7	Si
Maschio 103	R	0.721	SLV 10	No
Maschio 104	PF SLU	12.094	SLU 45	Si
Maschio 104	V SLU	27.392	SLU 42	Si
Maschio 104	PF	0	SLV 9	No
Maschio 104	V	3.476	SLV 13	Si
Maschio 104	PFFP	0	SLV 9	No
Maschio 104	R	0.622	SLV 8	No
Maschio 105	PF SLU	8.48	SLU 83	Si
Maschio 105	V SLU	7.586	SLU 78	Si
Maschio 105	PF	3.171	SLV 2	Si
Maschio 105	V	2.592	SLV 15	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 105	PFFP	4.848	SLV 9	Si
Maschio 105	R	0.725	SLV 8	No
Maschio 106	PF SLU	3.982	SLU 70	Si
Maschio 106	V SLU	12.287	SLU 83	Si
Maschio 106	PF	0.567	SLV 13	No
Maschio 106	V	2.47	SLV 15	Si
Maschio 106	PFFP	4.443	SLV 13	Si
Maschio 106	R	0.788	SLV 8	No
Maschio 108	PF SLU	21.839	SLU 47	Si
Maschio 108	V SLU	16.77	SLU 51	Si
Maschio 108	PF	6.785	SLV 9	Si
Maschio 108	V	7.569	SLV 9	Si
Maschio 108	PFFP	6.594	SLV 15	Si
Maschio 108	R	0.954	SLV 6	No
Maschio 109	PF SLU	5.162	SLU 70	Si
Maschio 109	V SLU	13.615	SLU 62	Si
Maschio 109	PF	0.646	SLV 13	No
Maschio 109	V	2.153	SLV 15	Si
Maschio 109	PFFP	4.169	SLV 13	Si
Maschio 109	R	0.817	SLV 11	No
Maschio 110	PF SLU	10.039	SLU 47	Si
Maschio 110	V SLU	13.203	SLU 84	Si
Maschio 110	PF	5.675	SLV 9	Si
Maschio 110	V	10.358	SLV 12	Si
Maschio 110	PFFP	5.35	SLV 16	Si
Maschio 110	R	1.096	SLV 5	Si
Maschio 113	PF SLU	5.563	SLU 40	Si
Maschio 113	V SLU	7.529	SLU 84	Si
Maschio 113	PF	1.169	SLV 13	Si
Maschio 113	V	1.98	SLV 15	Si
Maschio 113	PFFP	4.76	SLV 2	Si
Maschio 113	R	0.936	SLV 8	No
Maschio 116	PF SLU	7.289	SLU 39	Si
Maschio 116	V SLU	58.899	SLU 39	Si
Maschio 116	PF	2.382	SLV 8	Si
Maschio 116	V	11.474	SLV 16	Si
Maschio 116	PFFP	4.428	SLV 3	Si
Maschio 116	R	1.086	SLV 10	Si
Maschio 117	PF SLU	23.314	SLU 83	Si
Maschio 117	V SLU	4.868	SLU 83	Si
Maschio 117	PF	1.977	SLV 9	Si
Maschio 117	V	2.659	SLV 13	Si
Maschio 117	PFFP	3.639	SLV 6	Si
Maschio 117	R	0.748	SLV 8	No
Maschio 119	PF SLU	7.617	SLU 19	Si
Maschio 119	V SLU	15.966	SLU 84	Si
Maschio 119	PF	2.885	SLV 12	Si
Maschio 119	V	10.376	SLV 8	Si
Maschio 119	PFFP	7.716	SLV 12	Si
Maschio 119	R	1.362	SLV 5	Si
Maschio 121	PF SLU	5.194	SLU 51	Si
Maschio 121	V SLU	16.853	SLU 78	Si
Maschio 121	PF	0	SLV 16	No
Maschio 121	V	3.531	SLV 14	Si
Maschio 121	PFFP	0	SLV 16	No
Maschio 121	R	0.774	SLV 5	No
Maschio 122	PF SLU	27.577	SLU 82	Si
Maschio 122	V SLU	17.747	SLU 82	Si
Maschio 122	PF	2.209	SLV 16	Si
Maschio 122	V	2.319	SLV 16	Si
Maschio 122	PFFP	7.514	SLV 16	Si
Maschio 122	R	0.744	SLV 5	No
Maschio 123	PF SLU	71.669	SLU 44	Si
Maschio 123	V SLU	69.806	SLU 44	Si
Maschio 123	PF	2.473	SLV 3	Si
Maschio 123	V	2.362	SLV 3	Si
Maschio 123	PFFP	8.787	SLV 7	Si
Maschio 123	R	0.714	SLV 10	No
Maschio 124	PF SLU	5.493	SLU 81	Si
Maschio 124	V SLU	19.822	SLU 44	Si
Maschio 124	PF	0.425	SLV 3	No
Maschio 124	V	2.306	SLV 1	Si
Maschio 124	PFFP	3.341	SLV 3	Si
Maschio 124	R	0.711	SLV 10	No
Maschio 125	PF SLU	13.603	SLU 43	Si
Maschio 125	V SLU	19.067	SLU 51	Si
Maschio 125	PF	2.34	SLV 13	Si
Maschio 125	V	5.383	SLV 15	Si
Maschio 125	PFFP	5.108	SLV 14	Si
Maschio 125	R	0.811	SLV 7	No
Maschio 126	PF SLU	29.704	SLU 50	Si
Maschio 126	V SLU	40.469	SLU 72	Si
Maschio 126	PF	3.9	SLV 4	Si
Maschio 126	V	3.03	SLV 13	Si
Maschio 126	PFFP	11.4	SLV 15	Si
Maschio 126	R	0.711	SLV 8	No
Maschio 128	PF SLU	7.561	SLU 84	Si
Maschio 128	V SLU	13.142	SLU 78	Si
Maschio 128	PF	1.737	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 128	V	3.547	SLV 2	Si
Maschio 128	PFFP	11.119	SLV 15	Si
Maschio 128	R	0.647	SLV 6	No
Maschio 129	PF SLU	8.438	SLU 47	Si
Maschio 129	V SLU	15.13	SLU 70	Si
Maschio 129	PF	1.231	SLV 2	Si
Maschio 129	V	2.992	SLV 2	Si
Maschio 129	PFFP	11.836	SLV 2	Si
Maschio 129	R	0.697	SLV 11	No
Maschio 130	PF SLU	10.451	SLU 43	Si
Maschio 130	V SLU	20.259	SLU 51	Si
Maschio 130	PF	2.876	SLV 2	Si
Maschio 130	V	5.836	SLV 3	Si
Maschio 130	PFFP	5.161	SLV 1	Si
Maschio 130	R	0.816	SLV 12	No
Maschio 131	PF SLU	5.465	SLU 79	Si
Maschio 131	V SLU	6.714	SLU 77	Si
Maschio 131	PF	2.818	SLV 6	Si
Maschio 131	V	3.022	SLV 2	Si
Maschio 131	PFFP	2.407	SLV 9	Si
Maschio 131	R	0.754	SLV 11	No
Maschio 132	PF SLU	8.952	SLU 84	Si
Maschio 132	V SLU	8.873	SLU 50	Si
Maschio 132	PF	5.236	SLV 6	Si
Maschio 132	V	5.674	SLV 8	Si
Maschio 132	PFFP	16.133	SLV 3	Si
Maschio 132	R	1.739	SLV 9	Si
Maschio 133	PF SLU	32.111	SLU 39	Si
Maschio 133	V SLU	5.525	SLU 50	Si
Maschio 133	PF	4.597	SLV 11	Si
Maschio 133	V	5.194	SLV 7	Si
Maschio 133	PFFP	72.09	SLV 7	Si
Maschio 133	R	3.511	SLV 10	Si
Maschio 135	PF SLU	3.437	SLU 81	Si
Maschio 135	V SLU	14.612	SLU 82	Si
Maschio 135	PF	2.748	SLV 6	Si
Maschio 135	V	13.624	SLV 6	Si
Maschio 135	PFFP	4.37	SLV 6	Si
Maschio 135	R	1.219	SLV 11	Si
Maschio 138	PF SLU	5.391	SLU 84	Si
Maschio 138	V SLU	6.604	SLU 84	Si
Maschio 138	PF	0.691	SLV 2	No
Maschio 138	V	1.715	SLV 4	Si
Maschio 138	PFFP	4.937	SLV 13	Si
Maschio 138	R	0.845	SLV 11	No
Maschio 140	PF SLU	9.132	SLU 51	Si
Maschio 140	V SLU	14.343	SLU 84	Si
Maschio 140	PF	4.301	SLV 6	Si
Maschio 140	V	9.907	SLV 11	Si
Maschio 140	PFFP	6.703	SLV 3	Si
Maschio 140	R	1.012	SLV 10	Si
Maschio 142	PF SLU	4.407	SLU 70	Si
Maschio 142	V SLU	22.064	SLU 62	Si
Maschio 142	PF	0.38	SLV 2	No
Maschio 142	V	1.689	SLV 15	Si
Maschio 142	PFFP	3.131	SLV 2	Si
Maschio 142	R	0.778	SLV 8	No
Maschio 143	PF SLU	25.471	SLU 39	Si
Maschio 143	V SLU	17.516	SLU 49	Si
Maschio 143	PF	5.406	SLV 7	Si
Maschio 143	V	9.474	SLV 10	Si
Maschio 143	PFFP	5.226	SLV 3	Si
Maschio 143	R	1.025	SLV 10	Si
Maschio 146	PF SLU	3.264	SLU 70	Si
Maschio 146	V SLU	8.703	SLU 84	Si
Maschio 146	PF	0.375	SLV 2	No
Maschio 146	V	2.072	SLV 2	Si
Maschio 146	PFFP	4.736	SLV 2	Si
Maschio 146	R	0.743	SLV 11	No
Maschio 147	PF SLU	8.096	SLU 76	Si
Maschio 147	V SLU	5.493	SLU 78	Si
Maschio 147	PF	2.863	SLV 13	Si
Maschio 147	V	2.333	SLV 4	Si
Maschio 147	PFFP	4.834	SLV 6	Si
Maschio 147	R	0.765	SLV 11	No
Maschio 148	PF SLU	9.578	SLU 45	Si
Maschio 148	V SLU	54.377	SLU 42	Si
Maschio 148	PF	0	SLV 5	No
Maschio 148	V	3.275	SLV 2	Si
Maschio 148	PFFP	0	SLV 5	No
Maschio 148	R	0.625	SLV 11	No
Maschio 149	PF SLU	10.187	SLU 81	Si
Maschio 149	V SLU	5.772	SLU 84	Si
Maschio 149	PF	2.228	SLV 3	Si
Maschio 149	V	2.632	SLV 1	Si
Maschio 149	PFFP	5.723	SLV 8	Si
Maschio 149	R	0.695	SLV 5	No
Maschio 150	PF SLU	6.26	SLU 43	Si
Maschio 150	V SLU	31.145	SLU 43	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 150	PF	0	SLV 7	No
Maschio 150	V	4.1	SLV 3	Si
Maschio 150	PFFP	0	SLV 7	No
Maschio 150	R	0.636	SLV 10	No
Maschio 151	PF SLU	9.666	SLU 82	Si
Maschio 151	V SLU	199.481	SLU 32	Si
Maschio 151	PF	1.924	SLV 6	Si
Maschio 151	V	5.843	SLV 6	Si
Maschio 151	PFFP	4.363	SLV 2	Si
Maschio 151	R	0.805	SLV 11	No
Maschio 152	PF SLU	9.077	SLU 83	Si
Maschio 152	V SLU	44.337	SLU 72	Si
Maschio 152	PF	1.756	SLV 7	Si
Maschio 152	V	7.923	SLV 10	Si
Maschio 152	PFFP	3.587	SLV 7	Si
Maschio 152	R	0.779	SLV 10	No
Maschio 153	PF SLU	37.369	SLU 81	Si
Maschio 153	V SLU	46.489	SLU 39	Si
Maschio 153	PF	2.175	SLV 9	Si
Maschio 153	V	2.543	SLV 7	Si
Maschio 153	PFFP	3.181	SLV 13	Si
Maschio 153	R	1.689	SLV 8	Si
Maschio 154	PF SLU	7.609	SLU 43	Si
Maschio 154	V SLU	35.836	SLU 41	Si
Maschio 154	PF	0	SLV 7	No
Maschio 154	V	6.405	SLV 14	Si
Maschio 154	PFFP	0	SLV 12	No
Maschio 154	R	0.867	SLV 5	No
Maschio 155	PF SLU	8.667	SLU 44	Si
Maschio 155	V SLU	9.628	SLU 84	Si
Maschio 155	PF	2.434	SLV 16	Si
Maschio 155	V	5.78	SLV 14	Si
Maschio 155	PFFP	1.602	SLV 12	Si
Maschio 155	R	0.945	SLV 5	No
Maschio 156	PF SLU	9.219	SLU 42	Si
Maschio 156	V SLU	20.362	SLU 84	Si
Maschio 156	PF	0	SLV 5	No
Maschio 156	V	5.316	SLV 2	Si
Maschio 156	PFFP	0	SLV 10	No
Maschio 156	R	0.825	SLV 8	No
Maschio 157	PF SLU	13.785	SLU 77	Si
Maschio 157	V SLU	16.683	SLU 67	Si
Maschio 157	PF	2.83	SLV 2	Si
Maschio 157	V	3.854	SLV 15	Si
Maschio 157	PFFP	2.27	SLV 9	Si
Maschio 157	R	1.01	SLV 8	Si
Maschio 158	PF SLU	5.048	SLU 67	Si
Maschio 158	V SLU	15.381	SLU 83	Si
Maschio 158	PF	0.257	SLV 13	No
Maschio 158	V	3.333	SLV 13	Si
Maschio 158	PFFP	1.841	SLV 9	Si
Maschio 158	R	1.099	SLV 8	Si
Maschio 160	PF SLU	30.104	SLU 81	Si
Maschio 160	V SLU	37.496	SLU 50	Si
Maschio 160	PF	5.249	SLV 8	Si
Maschio 160	V	7.263	SLV 12	Si
Maschio 160	PFFP	3.281	SLV 16	Si
Maschio 160	R	1.483	SLV 5	Si
Maschio 161	PF SLU	5.01	SLU 25	Si
Maschio 161	V SLU	32.33	SLU 62	Si
Maschio 161	PF	0.479	SLV 13	No
Maschio 161	V	2.57	SLV 15	Si
Maschio 161	PFFP	1.657	SLV 13	Si
Maschio 161	R	1.095	SLV 11	Si
Maschio 162	PF SLU	9.604	SLU 47	Si
Maschio 162	V SLU	21.207	SLU 47	Si
Maschio 162	PF	2.633	SLV 9	Si
Maschio 162	V	6.914	SLV 9	Si
Maschio 162	PFFP	2.885	SLV 13	Si
Maschio 162	R	1.608	SLV 5	Si
Maschio 165	PF SLU	4.174	SLU 40	Si
Maschio 165	V SLU	6.919	SLU 78	Si
Maschio 165	PF	0.896	SLV 13	No
Maschio 165	V	2.488	SLV 15	Si
Maschio 165	PFFP	2.227	SLV 2	Si
Maschio 165	R	1.426	SLV 7	Si
Maschio 168	PF SLU	10.851	SLU 39	Si
Maschio 168	V SLU	19.338	SLU 82	Si
Maschio 168	PF	2.608	SLV 8	Si
Maschio 168	V	11.077	SLV 10	Si
Maschio 168	PFFP	2.844	SLV 8	Si
Maschio 168	R	1.736	SLV 5	Si
Maschio 169	PF SLU	21.812	SLU 39	Si
Maschio 169	V SLU	6.111	SLU 83	Si
Maschio 169	PF	2.148	SLV 13	Si
Maschio 169	V	3.601	SLV 15	Si
Maschio 169	PFFP	1.458	SLV 6	Si
Maschio 169	R	1.054	SLV 8	Si
Maschio 173	PF SLU	12.014	SLU 44	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 173	V SLU	66.557	SLU 44	Si
Maschio 173	PF	1.767	SLV 16	Si
Maschio 173	V	6.965	SLV 16	Si
Maschio 173	PFFP	3.059	SLV 16	Si
Maschio 173	R	1.061	SLV 10	Si
Maschio 174	PF SLU	22.842	SLU 61	Si
Maschio 174	V SLU	25.896	SLU 82	Si
Maschio 174	PF	2.081	SLV 16	Si
Maschio 174	V	2.885	SLV 14	Si
Maschio 174	PFFP	4.349	SLV 16	Si
Maschio 174	R	1.066	SLV 5	Si
Maschio 175	PF SLU	50.743	SLU 44	Si
Maschio 175	V SLU	71.271	SLU 44	Si
Maschio 175	PF	1.976	SLV 3	Si
Maschio 175	V	2.743	SLV 3	Si
Maschio 175	PFFP	4.564	SLV 7	Si
Maschio 175	R	1.055	SLV 10	Si
Maschio 176	PF SLU	7.908	SLU 44	Si
Maschio 176	V SLU	38.414	SLU 44	Si
Maschio 176	PF	0.586	SLV 3	No
Maschio 176	V	3.092	SLV 1	Si
Maschio 176	PFFP	2.323	SLV 3	Si
Maschio 176	R	0.987	SLV 5	No
Maschio 177	PF SLU	11.148	SLU 43	Si
Maschio 177	V SLU	33.405	SLU 39	Si
Maschio 177	PF	2.149	SLV 13	Si
Maschio 177	V	7.64	SLV 13	Si
Maschio 177	PFFP	3.223	SLV 14	Si
Maschio 177	R	1.103	SLV 8	Si
Maschio 178	PF SLU	58.181	SLU 54	Si
Maschio 178	V SLU	43.149	SLU 71	Si
Maschio 178	PF	3.684	SLV 15	Si
Maschio 178	V	3.916	SLV 15	Si
Maschio 178	PFFP	6.379	SLV 13	Si
Maschio 178	R	0.929	SLV 8	No
Maschio 180	PF SLU	11.872	SLU 22	Si
Maschio 180	V SLU	21.119	SLU 69	Si
Maschio 180	PF	1.377	SLV 4	Si
Maschio 180	V	4.385	SLV 4	Si
Maschio 180	PFFP	6.692	SLV 11	Si
Maschio 180	R	0.966	SLV 6	No
Maschio 181	PF SLU	8.111	SLU 44	Si
Maschio 181	V SLU	24.4	SLU 50	Si
Maschio 181	PF	1.045	SLV 2	Si
Maschio 181	V	4.207	SLV 4	Si
Maschio 181	PFFP	6.563	SLV 2	Si
Maschio 181	R	0.916	SLV 11	No
Maschio 182	PF SLU	8.952	SLU 43	Si
Maschio 182	V SLU	32.11	SLU 39	Si
Maschio 182	PF	2.825	SLV 2	Si
Maschio 182	V	7.91	SLV 2	Si
Maschio 182	PFFP	2.871	SLV 1	Si
Maschio 182	R	1.107	SLV 11	Si
Maschio 183	PF SLU	20.497	SLU 50	Si
Maschio 183	V SLU	7.731	SLU 83	Si
Maschio 183	PF	2.078	SLV 9	Si
Maschio 183	V	3.705	SLV 9	Si
Maschio 183	PFFP	0	SLV 5	No
Maschio 183	R	1.008	SLV 12	Si
Maschio 184	PF SLU	19.87	SLU 47	Si
Maschio 184	V SLU	11.862	SLU 72	Si
Maschio 184	PF	4.249	SLV 10	Si
Maschio 184	V	6.157	SLV 6	Si
Maschio 184	PFFP	8.868	SLV 3	Si
Maschio 184	R	2.226	SLV 11	Si
Maschio 187	PF SLU	27.157	SLU 10	Si
Maschio 187	V SLU	199.883	SLU 81	Si
Maschio 187	PF	2.218	SLV 6	Si
Maschio 187	V	34.597	SLV 12	Si
Maschio 187	PFFP	2.744	SLV 6	Si
Maschio 187	R	1.428	SLV 11	Si
Maschio 190	PF SLU	4.431	SLU 78	Si
Maschio 190	V SLU	6.149	SLU 78	Si
Maschio 190	PF	0.418	SLV 2	No
Maschio 190	V	2.077	SLV 4	Si
Maschio 190	PFFP	2.218	SLV 13	Si
Maschio 190	R	1.21	SLV 11	Si
Maschio 192	PF SLU	10.299	SLU 40	Si
Maschio 192	V SLU	36.973	SLU 47	Si
Maschio 192	PF	3.219	SLV 6	Si
Maschio 192	V	8.604	SLV 10	Si
Maschio 192	PFFP	3.391	SLV 2	Si
Maschio 192	R	1.494	SLV 10	Si
Maschio 194	PF SLU	4.949	SLU 67	Si
Maschio 194	V SLU	18.22	SLU 70	Si
Maschio 194	PF	0.193	SLV 2	No
Maschio 194	V	2.072	SLV 4	Si
Maschio 194	PFFP	0	SLV 2	No
Maschio 194	R	1.013	SLV 8	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 195	PF SLU	16.628	SLU 77	Si
Maschio 195	V SLU	34.472	SLU 40	Si
Maschio 195	PF	2.804	SLV 15	Si
Maschio 195	V	6.818	SLV 5	Si
Maschio 195	PFFP	1.84	SLV 3	Si
Maschio 195	R	1.64	SLV 6	Si
Maschio 198	PF SLU	3.831	SLU 65	Si
Maschio 198	V SLU	19.095	SLU 82	Si
Maschio 198	PF	0	SLV 2	No
Maschio 198	V	2.621	SLV 2	Si
Maschio 198	PFFP	1.701	SLV 2	Si
Maschio 198	R	1.057	SLV 11	Si
Maschio 199	PF SLU	12.566	SLU 70	Si
Maschio 199	V SLU	9.876	SLU 67	Si
Maschio 199	PF	2.522	SLV 13	Si
Maschio 199	V	3.269	SLV 4	Si
Maschio 199	PFFP	2.398	SLV 6	Si
Maschio 199	R	1.025	SLV 11	Si
Maschio 200	PF SLU	9.362	SLU 43	Si
Maschio 200	V SLU	48.771	SLU 42	Si
Maschio 200	PF	0	SLV 5	No
Maschio 200	V	4.66	SLV 4	Si
Maschio 200	PFFP	0	SLV 6	No
Maschio 200	R	0.834	SLV 11	No
Maschio 201	PF SLU	8.464	SLU 44	Si
Maschio 201	V SLU	18.748	SLU 82	Si
Maschio 201	PF	2.559	SLV 3	Si
Maschio 201	V	6.515	SLV 1	Si
Maschio 201	PFFP	3.21	SLV 12	Si
Maschio 201	R	0.987	SLV 10	No
Maschio 202	PF SLU	7.929	SLU 43	Si
Maschio 202	V SLU	28.852	SLU 41	Si
Maschio 202	PF	0	SLV 7	No
Maschio 202	V	5.877	SLV 16	Si
Maschio 202	PFFP	0	SLV 11	No
Maschio 202	R	0.823	SLV 10	No
Maschio 203	PF SLU	84.742	SLU 31	Si
Maschio 203	V SLU	34.18	SLU 77	Si
Maschio 203	PF	2.252	SLV 6	Si
Maschio 203	V	2.564	SLV 8	Si
Maschio 203	PFFP	3.256	SLV 3	Si
Maschio 203	R	1.674	SLV 10	Si
Maschio 204	PF SLU	122.402	SLU 60	Si
Maschio 204	V SLU	31.566	SLU 55	Si
Maschio 204	PF	1.955	SLV 9	Si
Maschio 204	V	1.392	SLV 9	Si
Maschio 204	PFFP	1.828	SLV 1	Si
Maschio 204	R	5.54	SLV 6	Si
Maschio 205	PF SLU	2.748	SLU 37	Si
Maschio 205	V SLU	15.467	SLU 35	Si
Maschio 205	PF	0	SLV 7	No
Maschio 205	V	5.21	SLV 8	Si
Maschio 205	PFFP	0	SLV 12	No
Maschio 205	R	3.377	SLV 5	Si
Maschio 206	PF SLU	2.616	SLU 60	Si
Maschio 206	V SLU	10.736	SLU 70	Si
Maschio 206	PF	2.382	SLV 8	Si
Maschio 206	V	8.768	SLV 14	Si
Maschio 206	PFFP	1.287	SLV 16	Si
Maschio 206	R	2.557	SLV 10	Si
Maschio 207	PF SLU	3.117	SLU 38	Si
Maschio 207	V SLU	11.875	SLU 78	Si
Maschio 207	PF	0	SLV 5	No
Maschio 207	V	4.63	SLV 5	Si
Maschio 207	PFFP	0	SLV 10	No
Maschio 207	R	3.398	SLV 8	Si
Maschio 208	PF SLU	19.444	SLU 51	Si
Maschio 208	V SLU	18.19	SLU 70	Si
Maschio 208	PF	4.969	SLV 13	Si
Maschio 208	V	8.732	SLV 15	Si
Maschio 208	PFFP	1.633	SLV 9	Si
Maschio 208	R	2.825	SLV 12	Si
Maschio 209	PF SLU	6.568	SLU 23	Si
Maschio 209	V SLU	26.4	SLU 58	Si
Maschio 209	PF	0.606	SLV 15	No
Maschio 209	V	6.482	SLV 15	Si
Maschio 209	PFFP	0	SLV 1	No
Maschio 209	R	2.095	SLV 6	Si
Maschio 212	PF SLU	8.898	SLU 61	Si
Maschio 212	V SLU	24.135	SLU 82	Si
Maschio 212	PF	2.612	SLV 12	Si
Maschio 212	V	3.627	SLV 5	Si
Maschio 212	PFFP	1.053	SLV 16	Si
Maschio 212	R	6.367	SLV 10	Si
Maschio 213	PF SLU	7.712	SLU 41	Si
Maschio 213	V SLU	23.053	SLU 52	Si
Maschio 213	PF	1.628	SLV 9	Si
Maschio 213	V	3.747	SLV 9	Si
Maschio 213	PFFP	1.085	SLV 9	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 213	R	4.273	SLV 8	Si
Maschio 216	PF SLU	7.074	SLU 40	Si
Maschio 216	V SLU	24.496	SLU 82	Si
Maschio 216	PF	1.529	SLV 8	Si
Maschio 216	V	4.858	SLV 9	Si
Maschio 216	PFFP	2.018	SLV 16	Si
Maschio 216	R	2.602	SLV 7	Si
Maschio 217	PF SLU	8.434	SLU 30	Si
Maschio 217	V SLU	34.67	SLU 65	Si
Maschio 217	PF	0.781	SLV 12	No
Maschio 217	V	5.838	SLV 5	Si
Maschio 217	PFFP	0	SLV 7	No
Maschio 217	R	5.461	SLV 6	Si
Maschio 218	PF SLU	2.286	SLU 37	Si
Maschio 218	V SLU	37.341	SLU 35	Si
Maschio 218	PF	0	SLV 1	No
Maschio 218	V	6.402	SLV 3	Si
Maschio 218	PFFP	0	SLV 8	No
Maschio 218	R	1.61	SLV 10	Si
Maschio 219	PF SLU	9.038	SLU 37	Si
Maschio 219	V SLU	49.292	SLU 61	Si
Maschio 219	PF	1.296	SLV 3	Si
Maschio 219	V	5.023	SLV 14	Si
Maschio 219	PFFP	1.596	SLV 8	Si
Maschio 219	R	2.503	SLV 9	Si
Maschio 220	PF SLU	7.605	SLU 41	Si
Maschio 220	V SLU	65.383	SLU 35	Si
Maschio 220	PF	1.429	SLV 16	Si
Maschio 220	V	3.724	SLV 3	Si
Maschio 220	PFFP	1.58	SLV 11	Si
Maschio 220	R	3.166	SLV 6	Si
Maschio 221	PF SLU	6.304	SLU 35	Si
Maschio 221	V SLU	80.577	SLU 35	Si
Maschio 221	PF	0.434	SLV 16	No
Maschio 221	V	5.996	SLV 1	Si
Maschio 221	PFFP	1.09	SLV 12	Si
Maschio 221	R	1.995	SLV 5	Si
Maschio 222	PF SLU	10.65	SLU 44	Si
Maschio 222	V SLU	24.038	SLU 41	Si
Maschio 222	PF	2.348	SLV 13	Si
Maschio 222	V	14.166	SLV 4	Si
Maschio 222	PFFP	1.825	SLV 13	Si
Maschio 222	R	2.935	SLV 8	Si
Maschio 223	PF SLU	23.052	SLU 44	Si
Maschio 223	V SLU	58.901	SLU 71	Si
Maschio 223	PF	2.848	SLV 15	Si
Maschio 223	V	5.967	SLV 16	Si
Maschio 223	PFFP	3.571	SLV 15	Si
Maschio 223	R	2.502	SLV 5	Si
Maschio 225	PF SLU	4.506	SLU 39	Si
Maschio 225	V SLU	20.203	SLU 66	Si
Maschio 225	PF	0.698	SLV 3	No
Maschio 225	V	6.173	SLV 4	Si
Maschio 225	PFFP	3.032	SLV 11	Si
Maschio 225	R	3.401	SLV 10	Si
Maschio 226	PF SLU	6.259	SLU 44	Si
Maschio 226	V SLU	43.031	SLU 50	Si
Maschio 226	PF	0.832	SLV 2	No
Maschio 226	V	6.078	SLV 3	Si
Maschio 226	PFFP	3.49	SLV 4	Si
Maschio 226	R	2.521	SLV 10	Si
Maschio 227	PF SLU	8.86	SLU 44	Si
Maschio 227	V SLU	20.743	SLU 41	Si
Maschio 227	PF	4.52	SLV 15	Si
Maschio 227	V	16.068	SLV 16	Si
Maschio 227	PFFP	1.843	SLV 2	Si
Maschio 227	R	2.907	SLV 11	Si
Maschio 228	PF SLU	3.118	SLU 60	Si
Maschio 228	V SLU	11.226	SLU 39	Si
Maschio 228	PF	0.859	SLV 8	No
Maschio 228	V	1.416	SLV 11	Si
Maschio 228	PFFP	1.505	SLV 4	Si
Maschio 228	R	5.119	SLV 11	Si
Maschio 230	PF SLU	1.26	SLU 60	Si
Maschio 230	V SLU	17.48	SLU 81	Si
Maschio 230	PF	1.163	SLV 11	Si
Maschio 230	V	10.797	SLV 11	Si
Maschio 230	PFFP	1.68	SLV 6	Si
Maschio 230	R	1.942	SLV 11	Si
Maschio 232	PF SLU	5.404	SLU 39	Si
Maschio 232	V SLU	46.945	SLU 44	Si
Maschio 232	PF	1.955	SLV 6	Si
Maschio 232	V	4.275	SLV 10	Si
Maschio 232	PFFP	1.887	SLV 6	Si
Maschio 232	R	4.034	SLV 11	Si
Maschio 234	PF SLU	6.982	SLU 29	Si
Maschio 234	V SLU	15.835	SLU 82	Si
Maschio 234	PF	1.324	SLV 14	Si
Maschio 234	V	3.207	SLV 6	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 234	PFFP	0.214	SLV 3	No
Maschio 234	R	4.665	SLV 7	Si
Maschio 237	PF SLU	1.892	SLU 43	Si
Maschio 237	V SLU	13.783	SLU 47	Si
Maschio 237	PF	0.237	SLV 3	No
Maschio 237	V	10.22	SLV 1	Si
Maschio 237	PFFP	0	SLV 3	No
Maschio 237	R	2.535	SLV 10	Si
Maschio 238	PF SLU	1.924	SLU 37	Si
Maschio 238	V SLU	11.569	SLU 77	Si
Maschio 238	PF	0	SLV 7	No
Maschio 238	V	4.675	SLV 11	Si
Maschio 238	PFFP	0	SLV 11	No
Maschio 238	R	3.419	SLV 10	Si
Maschio 239	PF SLU	40.17	SLU 30	Si
Maschio 239	V SLU	41.29	SLU 55	Si
Maschio 239	PF	2.008	SLV 6	Si
Maschio 239	V	1.323	SLV 6	Si
Maschio 239	PFFP	1.602	SLV 15	Si
Maschio 239	R	5.61	SLV 7	Si
Maschio 241	PF SLU	2.889	SLU 40	Si
Maschio 241	V SLU	13.075	SLU 78	Si
Maschio 241	PF	0	SLV 13	No
Maschio 241	V	3.541	SLV 15	Si
Maschio 241	PFFP	0	SLV 16	No
Maschio 241	R	3.145	SLV 6	Si
Maschio 242	PF SLU	2.443	SLU 40	Si
Maschio 242	V SLU	6.249	SLU 78	Si
Maschio 242	PF	0.633	SLV 13	No
Maschio 242	V	3.199	SLV 15	Si
Maschio 242	PFFP	0	SLV 1	No
Maschio 242	R	3.506	SLV 9	Si
Maschio 244	PF SLU	2.08	SLU 29	Si
Maschio 244	V SLU	8.946	SLU 77	Si
Maschio 244	PF	0	SLV 1	No
Maschio 244	V	4.268	SLV 15	Si
Maschio 244	PFFP	0	SLV 5	No
Maschio 244	R	5.089	SLV 11	Si
Maschio 245	PF SLU	1.657	SLU 29	Si
Maschio 245	V SLU	11.418	SLU 77	Si
Maschio 245	PF	0	SLD 5	No
Maschio 245	V	3.556	SLV 8	Si
Maschio 245	PFFP	0	SLV 10	No
Maschio 245	R	3.75	SLV 8	Si
Maschio 247	PF SLU	2.424	SLU 40	Si
Maschio 247	V SLU	5.882	SLU 78	Si
Maschio 247	PF	0	SLV 13	No
Maschio 247	V	2.529	SLV 2	Si
Maschio 247	PFFP	0	SLV 13	No
Maschio 247	R	3.334	SLV 6	Si
Maschio 249	PF SLU	3.899	SLU 65	Si
Maschio 249	V SLU	14.775	SLU 67	Si
Maschio 249	PF	0	SLV 4	No
Maschio 249	V	2.849	SLV 4	Si
Maschio 249	PFFP	0	SLV 4	No
Maschio 249	R	3.491	SLV 6	Si
Maschio 250	PF SLU	3.767	SLU 65	Si
Maschio 250	V SLU	33.816	SLU 75	Si
Maschio 250	PF	0	SLV 1	No
Maschio 250	V	4.431	SLV 2	Si
Maschio 250	PFFP	0	SLV 9	No
Maschio 250	R	2	SLV 9	Si
Maschio 251	PF SLU	18.723	SLU 51	Si
Maschio 251	V SLU	12.868	SLU 70	Si
Maschio 251	PF	4.706	SLV 13	Si
Maschio 251	V	7.108	SLV 4	Si
Maschio 251	PFFP	1.448	SLV 6	Si
Maschio 251	R	2.648	SLV 8	Si
Maschio 252	PF SLU	3.116	SLU 38	Si
Maschio 252	V SLU	17.207	SLU 78	Si
Maschio 252	PF	0	SLV 5	No
Maschio 252	V	4.783	SLV 10	Si
Maschio 252	PFFP	0	SLV 6	No
Maschio 252	R	3.171	SLV 11	Si
Maschio 274	PF SLU	1.239	SLU 83	Si
Maschio 274	V SLU	3.375	SLU 83	Si
Maschio 274	PF	0	SLV 13	No
Maschio 274	V	1.439	SLV 13	Si
Maschio 274	PFFP	0	SLV 14	No
Maschio 274	R	7.248	SLV 4	Si
Maschio 275	PF SLU	2.846	SLU 84	Si
Maschio 275	V SLU	3.032	SLU 83	Si
Maschio 275	PF	0	SLV 1	No
Maschio 275	V	0.931	SLV 15	No
Maschio 275	PFFP	0	SLV 1	No
Maschio 275	R	7.205	SLV 15	Si

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	1.464	SLV 13	0.349	1.429	1430	1.571	Si
	V	2.52	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	1.379	SLV 16	0.33	1.351	1188	1.456	Si
	R	1.613	SLV 1	0.362	1.483	1618	1.653	Si
2	PF	0.921	SLV 13	0.224	0.918	378	0.911	No
	V	3.261	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.105	SLV 13	0.268	1.097	627	1.121	Si
	R	1.8	SLV 4	0.362	1.483	1618	1.653	Si
3	PF	1.937	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.742	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.628	SLV 6	0.362	1.483	1618	1.653	Si
4	PF	1.663	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.836	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.083	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.65	SLV 8	0.362	1.483	1618	1.653	Si
7	PF	2.491	SLV 9	0.362	1.483	1618	1.653	Si
	V	2.584	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	3.075	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.057	SLV 8	0.258	1.055	556	1.067	Si
9	PF	1.686	SLV 14	0.362	1.483	1618	1.653	Si
	V	3.68	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.799	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.575	SLV 7	0.362	1.483	1618	1.653	Si
10	PF	2.356	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.293	SLV 13	0.311	1.271	973	1.342	Si
	PFFP	3.474	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.531	SLV 7	0.362	1.483	1618	1.653	Si
11	PF	1.981	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.071	SLV 4	0.261	1.066	575	1.081	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.458	SLV 5	0.352	1.442	1475	1.591	Si
13	PF	3.105	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.991	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	3.262	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.457	SLV 5	0.352	1.441	1472	1.59	Si
14	PF	1.996	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.992	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	3.653	SLV 9	0.362	1.483	1618	1.653	Si
	R	1.802	SLV 6	0.362	1.483	1618	1.653	Si
15	PF	3.631	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.689	SLV 4	0.165	0.674	171	0.658	No
	PFFP	3.501	SLV 13	0.362	1.483	1618	1.653	Si
	R	3.026	SLV 7	0.362	1.483	1618	1.653	Si
16	PF	2.249	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.302	SLV 2	0.313	1.28	994	1.354	Si
	PFFP	4.086	SLV 15	0.362	1.483	1618	1.653	Si
	R	2.394	SLV 8	0.362	1.483	1618	1.653	Si
17	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.032	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.144	SLV 5	0.278	1.138	698	1.171	Si
18	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.22	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.311	SLV 9	0.317	1.299	1044	1.381	Si
19	PF	1.595	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.257	SLV 14	0.302	1.238	899	1.299	Si
	PFFP	2.046	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.258	SLV 7	0.305	1.247	918	1.31	Si
20	PF	2.245	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.478	SLV 13	0.352	1.441	1473	1.59	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.139	SLV 5	0.277	1.133	689	1.165	Si
23	PF	1.17	SLV 13	0.283	1.158	736	1.197	Si
	V	2.854	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.302	SLV 6	0.315	1.29	1021	1.369	Si
24	PF	1.337	SLV 1	0.321	1.312	1080	1.4	Si
	V	1.597	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.299	SLV 11	0.314	1.287	1013	1.364	Si
25	PF	1.131	SLV 3	0.274	1.122	669	1.151	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.202	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.104	SLV 6	0.269	1.1	631	1.123	Si
26	PF	1.68	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.392	SLV 2	0.333	1.363	1224	1.474	Si
	PFFP	2.147	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.296	SLV 11	0.314	1.284	1006	1.36	Si
28	PF	1.016	SLV 16	0.248	1.015	496	1.018	Si
	V	1.725	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.071	SLV 16	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
29	PF	2.734	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.445	SLV 14	0.345	1.411	1373	1.545	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	1.542	SLV 5	0.362	1.483	1618	1.653	Si
30	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.131	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.221	SLV 10	0.296	1.211	841	1.264	Si
32	PF	3.155	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.699	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.7	SLV 9	0.362	1.483	1618	1.653	Si
33	PF	3.166	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.306	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.63	SLV 2	0.362	1.483	1618	1.653	Si
	R	2.142	SLV 11	0.362	1.483	1618	1.653	Si
34	PF	2.411	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.73	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.168	SLV 10	0.283	1.16	740	1.199	Si
36	PF	1.659	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.548	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	3.415	SLV 4	0.362	1.483	1618	1.653	Si
	R	2.085	SLV 11	0.362	1.483	1618	1.653	Si
37	PF	0.709	SLV 7	0.167	0.685	177	0.667	No
	V	2.49	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.194	SLV 2	0.362	1.483	1618	1.653	Si
	R	3.083	SLV 12	0.362	1.483	1618	1.653	Si
38	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.029	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.319	SLV 10	0.319	1.306	1065	1.392	Si
40	PF	1.812	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.427	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	4.055	SLV 4	0.362	1.483	1618	1.653	Si
	R	1.66	SLV 8	0.362	1.483	1618	1.653	Si
41	PF	2.242	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.389	SLV 2	0.332	1.36	1215	1.47	Si
	PFFP	3.495	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.511	SLV 12	0.362	1.483	1618	1.653	Si
42	PF	1.941	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.841	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.679	SLV 12	0.362	1.483	1618	1.653	Si
44	PF	2.844	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.916	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	3.173	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.995	SLV 9	0.243	0.994	467	0.993	No
46	PF	1.28	SLV 1	0.308	1.259	946	1.326	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.909	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.537	SLV 12	0.362	1.483	1618	1.653	Si
47	PF	1.505	SLV 4	0.358	1.466	1557	1.627	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.568	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.749	SLV 9	0.362	1.483	1618	1.653	Si
48	PF	1.412	SLV 3	0.337	1.381	1279	1.501	Si
	V	2.281	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.399	SLV 4	0.334	1.369	1243	1.484	Si
	R	1.692	SLV 13	0.362	1.483	1618	1.653	Si
49	PF	1.458	SLV 15	0.348	1.423	1412	1.563	Si
	V	3.053	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.456	SLV 15	0.347	1.421	1406	1.56	Si
	R	0.945	SLV 5	0.229	0.938	401	0.933	No
50	PF	0.962	SLV 16	0.235	0.96	426	0.956	No
	V	2.759	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.813	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.78	SLV 5	0.186	0.761	230	0.743	No
51	PF	1	SLV 16	0.244	1	475	1	Si
	V	2.28	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.977	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.951	SLV 10	0.231	0.946	409	0.941	No
52	PF	0.788	SLV 13	0.191	0.78	246	0.764	No
	V	2.385	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.369	SLV 9	0.331	1.355	1202	1.463	Si
	R	0.753	SLV 8	0.179	0.731	207	0.711	No
53	PF	1.948	SLV 10	0.362	1.483	1618	1.653	Si
	V	1.854	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.931	SLV 10	0.362	1.483	1618	1.653	Si
	R	0.75	SLV 7	0.178	0.728	205	0.709	No
54	PF	0.858	SLV 13	0.208	0.853	311	0.841	No
	V	2.208	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.337	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.721	SLV 8	0.17	0.698	185	0.679	No
56	PF	2.339	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.795	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.623	SLV 5	0.145	0.593	127	0.582	No
57	PF	1.169	SLV 13	0.283	1.157	733	1.195	Si
	V	2.359	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.594	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.8	SLV 11	0.191	0.78	246	0.764	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
58	PF	2.161	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.05	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.871	SLV 7	0.209	0.857	316	0.846	No
61	PF	0.687	SLV 13	0.164	0.673	170	0.656	No
	V	1.868	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.738	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.944	SLV 8	0.229	0.937	400	0.932	No
65	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.957	SLV 10	0.233	0.953	417	0.948	No
66	PF	3.901	SLV 4	0.362	1.483	1618	1.653	Si
	V	2.63	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.928	SLV 9	0.225	0.92	380	0.913	No
68	PF	0.794	SLV 16	0.192	0.787	251	0.77	No
	V	1.644	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.795	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.701	SLV 5	0.165	0.676	172	0.659	No
69	PF	2.006	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.568	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	3.711	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.673	SLV 5	0.158	0.646	155	0.632	No
70	PF	2.08	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.496	SLV 3	0.356	1.458	1529	1.615	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.662	SLV 9	0.155	0.635	149	0.622	No
71	PF	1.104	SLV 3	0.268	1.097	625	1.119	Si
	V	1.905	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.123	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.796	SLV 9	0.19	0.776	243	0.76	No
72	PF	1.113	SLV 13	0.27	1.105	640	1.13	Si
	V	3.845	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.322	SLV 13	0.317	1.298	1042	1.38	Si
	R	0.698	SLV 8	0.164	0.673	170	0.656	No
73	PF	3.322	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.25	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.633	SLV 5	0.148	0.606	134	0.595	No
74	PF	1.851	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.142	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.768	SLV 6	0.183	0.747	219	0.728	No
75	PF	0.959	SLV 3	0.234	0.957	422	0.953	No
	V	2.109	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	2.749	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.589	SLV 10	0.137	0.56	111	0.551	No
76	PF	1.303	SLV 2	0.313	1.281	997	1.355	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.348	SLV 2	0.323	1.322	1107	1.415	Si
	R	0.712	SLV 11	0.168	0.687	178	0.669	No
77	PF	2.048	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.135	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.777	SLV 11	0.185	0.757	226	0.737	No
78	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.366	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.384	SLV 16	0.362	1.483	1618	1.653	Si
79	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.604	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.366	SLV 10	0.33	1.352	1193	1.459	Si
82	PF	3.911	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.822	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.942	SLV 11	0.228	0.935	397	0.929	No
86	PF	0.561	SLV 2	0.133	0.544	104	0.536	No
	V	1.582	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	3.388	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.878	SLV 11	0.212	0.866	324	0.855	No
88	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.783	SLV 10	0.186	0.763	232	0.745	No
90	PF	0.898	SLV 2	0.218	0.894	352	0.884	No
	V	1.485	SLV 15	0.354	1.448	1494	1.6	Si
	PFFP	1.537	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.835	SLV 8	0.2	0.819	279	0.804	No
91	PF	2.408	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.48	SLV 4	0.362	1.483	1618	1.653	Si
	R	0.811	SLV 9	0.194	0.793	257	0.777	No
94	PF	0.614	SLV 2	0.146	0.596	128	0.584	No
	V	1.564	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.458	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.818	SLV 11	0.196	0.801	263	0.785	No
95	PF	1.84	SLV 5	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1.547	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.898	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.773	SLV 12	0.184	0.753	223	0.733	No
96	PF	0.928	SLV 2	0.226	0.925	386	0.918	No
	V	2.334	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.326	SLV 2	0.318	1.302	1052	1.385	Si
	R	0.76	SLV 11	0.18	0.738	212	0.718	No
97	PF	0.682	SLV 3	0.163	0.667	167	0.651	No
	V	2.131	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.893	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.744	SLV 9	0.176	0.722	200	0.701	No
98	PF	0.853	SLV 3	0.207	0.848	306	0.835	No
	V	2.529	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.683	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.777	SLV 10	0.185	0.757	226	0.737	No
99	PF	1.648	SLV 4	0.362	1.483	1618	1.653	Si
	V	3.158	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	1.576	SLV 4	0.362	1.483	1618	1.653	Si
	R	0.929	SLV 10	0.225	0.921	382	0.915	No
100	PF	1.39	SLV 9	0.336	1.376	1263	1.493	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.633	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.832	SLV 8	0.199	0.815	276	0.8	No
101	PF	1.358	SLV 12	0.329	1.345	1171	1.448	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.53	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.854	SLV 5	0.205	0.84	299	0.827	No
102	PF	0.841	SLV 12	0.202	0.826	286	0.812	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.89	SLV 12	0.215	0.879	337	0.869	No
	R	0.757	SLV 5	0.18	0.735	210	0.716	No
103	PF	1.649	SLV 7	0.362	1.483	1618	1.653	Si
	V	3.553	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.49	SLV 7	0.36	1.473	1583	1.638	Si
	R	0.782	SLV 10	0.186	0.762	231	0.744	No
104	PF	0.851	SLV 13	0.207	0.845	304	0.833	No
	V	3.397	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.907	SLV 9	0.219	0.896	355	0.887	No
	R	0.723	SLV 8	0.171	0.699	186	0.681	No
105	PF	1.835	SLV 9	0.362	1.483	1618	1.653	Si
	V	2.931	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.772	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.78	SLV 8	0.186	0.761	230	0.743	No
106	PF	0.789	SLV 13	0.191	0.782	247	0.765	No
	V	2.335	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.606	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.833	SLV 8	0.199	0.816	277	0.802	No
108	PF	3.418	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.165	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.958	SLV 6	0.233	0.953	418	0.949	No
109	PF	0.803	SLV 13	0.194	0.796	259	0.78	No
	V	2.068	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.464	SLV 13	0.349	1.429	1430	1.571	Si
	R	0.855	SLV 11	0.205	0.841	300	0.828	No
110	PF	3.14	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.251	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.084	SLV 5	0.264	1.08	598	1.099	Si
113	PF	1.11	SLV 13	0.269	1.102	635	1.126	Si
	V	2.145	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.801	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.946	SLV 8	0.23	0.94	402	0.934	No
116	PF	2.09	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.985	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.068	SLV 9	0.26	1.065	573	1.08	Si
117	PF	1.22	SLV 9	0.296	1.21	839	1.263	Si
	V	3.162	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.556	SLV 6	0.362	1.483	1618	1.653	Si
	R	0.804	SLV 8	0.192	0.785	250	0.769	No
119	PF	1.551	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.153	SLV 12	0.362	1.483	1618	1.653	Si
	R	1.259	SLV 5	0.305	1.248	921	1.312	Si
121	PF	0.675	SLV 16	0.161	0.66	162	0.643	No
	V	3.743	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	0.937	SLV 16	0.228	0.934	396	0.928	No
	R	0.817	SLV 5	0.195	0.799	262	0.784	No
122	PF	1.747	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.787	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.757	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.776	SLV 5	0.185	0.755	225	0.736	No
123	PF	2.139	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.66	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	3.991	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.747	SLV 10	0.177	0.725	202	0.704	No
124	PF	0.762	SLV 3	0.184	0.754	224	0.735	No
	V	1.896	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1.342	SLV 3	0.322	1.317	1092	1.407	Si
	R	0.774	SLV 10	0.184	0.754	224	0.735	No
125	PF	1.36	SLV 13	0.326	1.333	1138	1.431	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.531	SLV 14	0.362	1.483	1618	1.653	Si
	R	0.832	SLV 7	0.199	0.815	276	0.8	No
126	PF	3.564	SLV 15	0.362	1.483	1618	1.653	Si
	V	2.384	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.725	SLV 8	0.171	0.701	187	0.682	No
128	PF	1.534	SLV 15	0.362	1.483	1618	1.653	Si
	V	3.458	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.999	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.686	SLV 6	0.161	0.66	162	0.643	No
129	PF	1.2	SLV 2	0.29	1.185	789	1.231	Si
	V	3.119	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.196	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.719	SLV 11	0.17	0.694	183	0.676	No
130	PF	1.559	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.557	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.837	SLV 12	0.2	0.82	280	0.805	No
131	PF	1.181	SLV 6	0.287	1.173	765	1.216	Si
	V	3.48	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.262	SLV 9	0.306	1.251	927	1.315	Si
	R	0.813	SLV 11	0.194	0.796	259	0.78	No
132	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.664	SLV 9	0.362	1.483	1618	1.653	Si
133	PF	3.388	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.901	SLV 10	0.362	1.483	1618	1.653	Si
135	PF	1.925	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.306	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.18	SLV 11	0.286	1.172	763	1.214	Si
138	PF	0.81	SLV 2	0.196	0.803	265	0.787	No
	V	1.84	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.8	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.876	SLV 11	0.211	0.862	320	0.85	No
140	PF	3.617	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.086	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.01	SLV 10	0.247	1.01	488	1.011	Si
142	PF	0.638	SLV 2	0.152	0.621	141	0.608	No
	V	1.711	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.26	SLV 2	0.303	1.241	905	1.303	Si
	R	0.823	SLV 8	0.197	0.805	267	0.79	No
143	PF	3.004	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.284	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.019	SLV 10	0.249	1.018	501	1.022	Si
146	PF	0.754	SLV 2	0.182	0.746	218	0.727	No
	V	2.059	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.584	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.795	SLV 11	0.189	0.775	242	0.758	No
147	PF	1.92	SLV 6	0.362	1.483	1618	1.653	Si
	V	2.699	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.782	SLV 6	0.362	1.483	1618	1.653	Si
	R	0.812	SLV 11	0.194	0.794	258	0.779	No
148	PF	0.898	SLV 2	0.218	0.894	352	0.884	No
	V	3.007	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.917	SLV 6	0.222	0.908	368	0.901	No
	R	0.724	SLV 11	0.171	0.699	186	0.681	No
149	PF	1.453	SLV 3	0.347	1.419	1397	1.556	Si
	V	2.478	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.042	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.747	SLV 5	0.177	0.725	202	0.704	No
150	PF	0.91	SLV 7	0.22	0.9	359	0.892	No
	V	3.816	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	0.919	SLV 7	0.223	0.911	370	0.903	No
	R	0.734	SLV 10	0.173	0.71	192	0.69	No
151	PF	1.444	SLV 6	0.349	1.428	1429	1.571	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.731	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.846	SLV 11	0.203	0.83	290	0.817	No
152	PF	1.313	SLV 7	0.318	1.301	1049	1.384	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.488	SLV 7	0.359	1.471	1576	1.635	Si
	R	0.831	SLV 10	0.199	0.814	275	0.799	No
153	PF	2.064	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.517	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	2.245	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.637	SLV 8	0.362	1.483	1618	1.653	Si
154	PF	0.724	SLV 12	0.171	0.699	186	0.681	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.692	SLV 12	0.163	0.665	166	0.65	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	0.909	SLV 5	0.22	0.899	358	0.891	No
155	PF	1.281	SLV 12	0.31	1.269	969	1.34	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.139	SLV 12	0.277	1.133	689	1.165	Si
	R	0.959	SLV 5	0.233	0.954	419	0.95	No
156	PF	0.805	SLV 9	0.192	0.785	250	0.769	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.715	SLV 9	0.169	0.691	181	0.673	No
	R	0.878	SLV 8	0.212	0.866	324	0.855	No
157	PF	1.585	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.575	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.339	SLV 9	0.324	1.326	1119	1.421	Si
	R	1.007	SLV 8	0.246	1.007	484	1.008	Si
158	PF	0.716	SLV 13	0.172	0.705	189	0.685	No
	V	3.11	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.202	SLV 9	0.291	1.193	804	1.241	Si
	R	1.072	SLV 8	0.261	1.069	579	1.085	Si
160	PF	3.233	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.943	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.385	SLV 5	0.335	1.371	1248	1.486	Si
161	PF	0.701	SLV 13	0.168	0.689	180	0.672	No
	V	2.493	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.136	SLV 13	0.275	1.126	678	1.157	Si
	R	1.072	SLV 11	0.261	1.069	579	1.085	Si
162	PF	2.924	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.615	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.49	SLV 5	0.36	1.473	1583	1.638	Si
165	PF	0.928	SLV 13	0.226	0.925	386	0.918	No
	V	2.696	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.327	SLV 2	0.318	1.303	1055	1.387	Si
	R	1.348	SLV 7	0.326	1.335	1143	1.433	Si
168	PF	1.945	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.641	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.604	SLV 5	0.362	1.483	1618	1.653	Si
169	PF	1.203	SLV 9	0.292	1.193	806	1.242	Si
	V	3.714	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.126	SLV 6	0.274	1.12	667	1.149	Si
	R	1.038	SLV 8	0.253	1.036	528	1.044	Si
173	PF	1.373	SLV 16	0.329	1.345	1173	1.449	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.765	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.046	SLV 10	0.255	1.044	540	1.054	Si
174	PF	1.715	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.238	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.514	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.053	SLV 5	0.257	1.051	550	1.062	Si
175	PF	1.754	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.064	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.673	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.045	SLV 10	0.255	1.043	538	1.052	Si
176	PF	0.78	SLV 3	0.189	0.773	239	0.755	No
	V	3.186	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.366	SLV 3	0.327	1.339	1154	1.439	Si
	R	0.99	SLV 5	0.242	0.989	461	0.988	No
177	PF	1.36	SLV 13	0.326	1.333	1138	1.431	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.463	SLV 14	0.349	1.428	1427	1.57	Si
	R	1.088	SLV 7	0.265	1.084	604	1.104	Si
178	PF	2.273	SLV 15	0.362	1.483	1618	1.653	Si
	V	3.125	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.457	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.936	SLV 8	0.227	0.929	390	0.922	No
180	PF	1.244	SLV 3	0.299	1.226	873	1.283	Si
	V	4.051	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	3.112	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.971	SLV 6	0.236	0.967	435	0.965	No
181	PF	1.035	SLV 2	0.252	1.033	522	1.039	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.786	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.928	SLV 11	0.225	0.92	380	0.913	No
182	PF	1.535	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.332	SLV 1	0.319	1.307	1067	1.393	Si
	R	1.091	SLV 11	0.266	1.087	610	1.108	Si
183	PF	1.22	SLV 6	0.296	1.21	839	1.263	Si
	V	3.69	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.923	SLV 6	0.224	0.915	375	0.908	No
	R	1.005	SLV 11	0.245	1.005	481	1.005	Si
184	PF	3.051	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	4.049	SLV 3	0.362	1.483	1618	1.653	Si
	R	2.068	SLV 11	0.362	1.483	1618	1.653	Si
187	PF	1.686	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.648	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.331	SLV 11	0.322	1.318	1097	1.409	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
190	PF	0.657	SLV 2	0.156	0.64	152	0.627	No
	V	2.236	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.293	SLV 13	0.311	1.271	973	1.342	Si
	R	1.153	SLV 11	0.28	1.146	714	1.182	Si
192	PF	3	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.901	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.397	SLV 10	0.338	1.383	1283	1.503	Si
194	PF	0.498	SLV 2	0.117	0.479	77	0.474	No
	V	2.119	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	0.976	SLV 2	0.238	0.975	443	0.972	No
	R	1.009	SLV 8	0.246	1.009	487	1.01	Si
195	PF	2.321	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.125	SLV 3	0.273	1.116	660	1.144	Si
	R	1.481	SLV 6	0.358	1.465	1552	1.625	Si
198	PF	0.594	SLV 2	0.141	0.576	119	0.567	No
	V	2.615	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.143	SLV 2	0.277	1.133	689	1.165	Si
	R	1.041	SLV 11	0.254	1.039	533	1.048	Si
199	PF	1.742	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.393	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.378	SLV 6	0.333	1.364	1228	1.476	Si
	R	1.018	SLV 7	0.249	1.018	500	1.021	Si
200	PF	0.751	SLV 6	0.178	0.728	205	0.709	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.713	SLV 6	0.168	0.689	180	0.672	No
	R	0.884	SLV 11	0.213	0.872	330	0.861	No
201	PF	1.683	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.674	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.989	SLV 10	0.241	0.988	459	0.986	No
202	PF	0.744	SLV 7	0.176	0.722	200	0.701	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.727	SLV 7	0.172	0.703	188	0.684	No
	R	0.877	SLV 10	0.211	0.865	323	0.854	No
203	PF	2.103	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.535	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	2.316	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.63	SLV 10	0.362	1.483	1618	1.653	Si
204	PF	1.913	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.09	SLV 8	0.265	1.086	607	1.106	Si
	PFFP	1.77	SLV 1	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
205	PF	0.683	SLV 8	0.16	0.656	160	0.64	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.657	SLV 8	0.154	0.629	145	0.615	No
	R	2.687	SLV 5	0.362	1.483	1618	1.653	Si
206	PF	1.431	SLV 16	0.342	1.398	1333	1.527	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.126	SLV 16	0.273	1.117	661	1.145	Si
	R	1.97	SLV 10	0.362	1.483	1618	1.653	Si
207	PF	0.67	SLV 9	0.157	0.642	153	0.628	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.631	SLV 9	0.148	0.604	133	0.593	No
	R	2.689	SLV 8	0.362	1.483	1618	1.653	Si
208	PF	2.34	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.329	SLV 9	0.322	1.316	1092	1.407	Si
	R	2.179	SLV 12	0.362	1.483	1618	1.653	Si
209	PF	0.673	SLV 15	0.161	0.658	161	0.642	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.679	SLV 5	0.159	0.652	158	0.637	No
	R	1.699	SLV 6	0.362	1.483	1618	1.653	Si
212	PF	1.556	SLV 8	0.362	1.483	1618	1.653	Si
	V	3.754	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1.042	SLV 16	0.254	1.039	532	1.048	Si
	R	4.085	SLV 10	0.362	1.483	1618	1.653	Si
213	PF	1.323	SLV 9	0.32	1.31	1076	1.398	Si
	V	4.046	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.061	SLV 9	0.259	1.059	563	1.072	Si
	R	3.39	SLV 8	0.362	1.483	1618	1.653	Si
216	PF	1.484	SLV 8	0.359	1.468	1562	1.629	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.329	SLV 16	0.319	1.304	1060	1.39	Si
	R	1.882	SLV 7	0.362	1.483	1618	1.653	Si
217	PF	0.906	SLV 12	0.219	0.896	354	0.886	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.835	SLV 12	0.2	0.819	279	0.804	No
	R	3.882	SLV 6	0.362	1.483	1618	1.653	Si
218	PF	0.208	SLV 3	0.049	0.201	9	0.197	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.577	SLV 3	0.137	0.56	111	0.551	No
	R	1.321	SLV 10	0.32	1.309	1070	1.395	Si
219	PF	1.228	SLV 3	0.296	1.211	841	1.264	Si
	V	4.006	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.306	SLV 8	0.316	1.294	1031	1.374	Si
	R	1.868	SLV 9	0.362	1.483	1618	1.653	Si
220	PF	1.403	SLV 16	0.335	1.373	1253	1.488	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	3.479	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.321	SLV 11	0.32	1.309	1070	1.395	Si
	R	2.209	SLV 6	0.362	1.483	1618	1.653	Si
221	PF	0.548	SLV 16	0.129	0.53	98	0.524	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.037	SLV 12	0.253	1.035	526	1.043	Si
	R	1.555	SLV 5	0.362	1.483	1618	1.653	Si
222	PF	1.427	SLV 13	0.341	1.395	1321	1.521	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.132	SLV 13	0.274	1.122	670	1.151	Si
	R	2.65	SLV 8	0.362	1.483	1618	1.653	Si
223	PF	1.894	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.379	SLV 15	0.362	1.483	1618	1.653	Si
	R	2.309	SLV 5	0.362	1.483	1618	1.653	Si
225	PF	0.752	SLV 3	0.182	0.744	217	0.725	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.825	SLV 11	0.362	1.483	1618	1.653	Si
	R	2.932	SLV 10	0.362	1.483	1618	1.653	Si
226	PF	0.863	SLV 2	0.209	0.857	316	0.846	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.061	SLV 4	0.362	1.483	1618	1.653	Si
	R	2.218	SLV 10	0.362	1.483	1618	1.653	Si
227	PF	2.239	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.139	SLV 2	0.276	1.129	682	1.16	Si
	R	2.614	SLV 11	0.362	1.483	1618	1.653	Si
228	PF	0.838	SLV 7	0.201	0.821	281	0.806	No
	V	1.448	SLV 11	0.35	1.432	1443	1.577	Si
	PFFP	1.258	SLV 4	0.303	1.239	901	1.3	Si
	R	3.799	SLV 15	0.362	1.483	1618	1.653	Si
230	PF	1.684	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.113	SLV 6	0.271	1.108	645	1.134	Si
	R	1.625	SLV 11	0.362	1.483	1618	1.653	Si
232	PF	1.798	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.223	SLV 6	0.296	1.213	845	1.266	Si
	R	3.308	SLV 11	0.362	1.483	1618	1.653	Si
234	PF	1.167	SLV 14	0.282	1.155	730	1.193	Si
	V	3.492	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	0.65	SLV 3	0.155	0.633	148	0.62	No
	R	2.705	SLV 7	0.362	1.483	1618	1.653	Si
237	PF	0.371	SLV 3	0.087	0.355	37	0.351	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.876	SLV 3	0.213	0.871	329	0.86	No
	R	1.836	SLV 10	0.362	1.483	1618	1.653	Si
238	PF	0.7	SLV 11	0.165	0.674	171	0.658	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.684	SLV 7	0.161	0.658	161	0.642	No
	R	2.782	SLV 10	0.362	1.483	1618	1.653	Si
239	PF	2.017	SLV 6	0.362	1.483	1618	1.653	Si
	V	1.106	SLV 7	0.269	1.101	634	1.126	Si
	PFFP	1.522	SLV 15	0.362	1.482	1615	1.652	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
241	PF	0.246	SLV 15	0.057	0.234	13	0.229	No
	V	3.726	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	0.616	SLV 15	0.146	0.598	129	0.586	No
	R	2.406	SLV 6	0.362	1.483	1618	1.653	Si
242	PF	0.679	SLV 13	0.162	0.663	165	0.648	No
	V	4.047	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	0.951	SLV 2	0.232	0.949	413	0.944	No
	R	2.846	SLV 5	0.362	1.483	1618	1.653	Si
244	PF	0.473	SLV 6	0.108	0.442	63	0.437	No
	V	3.913	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	0.707	SLV 6	0.167	0.682	175	0.664	No
	R	2.738	SLV 11	0.362	1.483	1618	1.653	Si
245	PF	0.225	SLV 9	0.049	0.201	9	0.197	No
	V	3.322	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	0.451	SLV 9	0.103	0.42	55	0.413	No
	R	2.165	SLV 8	0.362	1.483	1618	1.653	Si
247	PF	0.377	SLV 2	0.089	0.364	39	0.359	No
	V	2.994	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.807	SLV 13	0.196	0.801	263	0.785	No
	R	2.435	SLV 6	0.362	1.483	1618	1.653	Si
249	PF	0.319	SLV 4	0.075	0.308	26	0.304	No
	V	3.101	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	0.619	SLV 2	0.147	0.602	132	0.592	No
	R	2.718	SLV 6	0.362	1.483	1618	1.653	Si
250	PF	0.525	SLV 2	0.124	0.508	88	0.501	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.888	SLV 10	0.214	0.876	334	0.866	No
	R	1.613	SLV 9	0.362	1.483	1618	1.653	Si
251	PF	2.112	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.226	SLV 6	0.297	1.216	851	1.27	Si
	R	2.063	SLV 8	0.362	1.483	1618	1.653	Si
252	PF	0.681	SLV 6	0.16	0.654	159	0.638	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	0.635	SLV 6	0.148	0.606	134	0.595	No
	R	2.446	SLV 11	0.362	1.483	1618	1.653	Si
274	PF	0.296	SLV 13	0.07	0.286	22	0.284	No
	V	1.292	SLV 4	0.31	1.27	971	1.341	Si
	PFFP	0.249	SLV 9	0.053	0.218	11	0.214	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
275	PF	0.55	SLV 2	0.13	0.532	99	0.526	No
	V	0.956	SLV 13	0.233	0.954	419	0.95	No
	PFFP	0.315	SLV 6	0.07	0.286	22	0.284	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
11	F	2.542	SLV 14	0.362	1.483	1618	1.653	Si
	V	0.25	SLV 16	0.059	0.242	14	0.236	No
12	F	0.434	SLV 14	0.102	0.417	54	0.41	No
	V	0.24	SLV 16	0.055	0.226	12	0.221	No
16	F	3.666	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.167	SLV 13	0.038	0.157	5	0.155	No
17	F	0.495	SLV 13	0.116	0.477	75	0.469	No
	V	0.63	SLV 13	0.15	0.612	137	0.601	No
19	F	0.245	SLV 1	0.057	0.234	13	0.229	No
	V	0.355	SLV 3	0.083	0.342	34	0.339	No
21	F	2.916	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.879	SLV 14	0.362	1.483	1618	1.653	Si
22	F	3.006	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.418	SLV 16	0.098	0.403	50	0.397	No
23	F	0.641	SLV 14	0.153	0.625	143	0.611	No
	V	0.495	SLV 16	0.116	0.477	75	0.469	No
24	F	2.909	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.295	SLV 3	0.069	0.281	21	0.278	No
25	F	0.46	SLV 3	0.108	0.442	63	0.437	No
	V	0.272	SLV 3	0.064	0.262	18	0.261	No
27	F	0.749	SLV 13	0.181	0.741	214	0.721	No
	V	0.154	SLV 13	0.035	0.143	4	0.141	No
41	F	1.158	SLV 4	0.28	1.146	714	1.182	Si
	V	0.542	SLV 13	0.128	0.523	95	0.517	No
42	F	1.388	SLV 4	0.332	1.359	1212	1.468	Si
	V	0.393	SLV 4	0.093	0.38	43	0.373	No
43	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.877	SLV 12	0.362	1.483	1618	1.653	Si
45	F	1.406	SLV 15	0.336	1.375	1262	1.493	Si
	V	0.435	SLV 4	0.103	0.42	55	0.413	No
47	F	2.983	SLV 12	0.362	1.483	1618	1.653	Si
	V	1.149	SLV 16	0.278	1.138	699	1.172	Si
48	F	1.924	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.181	SLV 3	0.285	1.168	755	1.209	Si
49	F	0.814	SLV 14	0.197	0.808	269	0.792	No
	V	0.592	SLV 14	0.14	0.574	118	0.565	No
50	F	0.582	SLV 14	0.138	0.565	113	0.555	No
	V	0.466	SLV 14	0.11	0.448	65	0.442	No
51	F	0.844	SLV 14	0.205	0.838	297	0.825	No
	V	0.601	SLV 14	0.142	0.583	122	0.573	No
52	F	0.535	SLV 14	0.127	0.518	93	0.512	No
	V	0.433	SLV 14	0.102	0.417	54	0.41	No
53	F	0.831	SLV 1	0.201	0.825	285	0.811	No
	V	0.576	SLV 3	0.136	0.558	110	0.549	No
54	F	0.513	SLV 1	0.121	0.495	83	0.489	No
	V	0.4	SLV 1	0.094	0.384	44	0.377	No
56	F	0.439	SLV 13	0.104	0.424	56	0.416	No
	V	0.329	SLV 13	0.078	0.318	28	0.313	No
57	F	1.132	SLV 15	0.274	1.122	670	1.151	Si
	V	0.382	SLV 15	0.09	0.368	40	0.363	No
60	F	1.189	SLV 4	0.287	1.175	769	1.218	Si
	V	0.483	SLV 4	0.114	0.466	71	0.459	No
62	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.146	SLV 6	0.362	1.483	1618	1.653	Si
73	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.06	SLV 9	0.362	1.483	1618	1.653	Si
80	F	1.505	SLV 4	0.358	1.466	1557	1.627	Si
	V	0.716	SLV 4	0.172	0.705	189	0.685	No
81	F	2.139	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.747	SLV 4	0.18	0.738	212	0.718	No
82	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	4.076	SLV 3	0.362	1.483	1618	1.653	Si
84	F	1.648	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.56	SLV 15	0.132	0.542	103	0.534	No
86	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.597	SLV 16	0.362	1.483	1618	1.653	Si
87	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
88	F	1.358	SLV 14	0.325	1.331	1133	1.428	Si
	V	0.842	SLV 14	0.204	0.836	295	0.823	No
89	F	1.158	SLV 14	0.28	1.146	714	1.182	Si
	V	0.796	SLV 14	0.193	0.788	252	0.771	No
90	F	0.931	SLV 14	0.227	0.928	389	0.921	No
	V	0.596	SLV 14	0.141	0.578	120	0.569	No
91	F	0.866	SLV 14	0.21	0.86	318	0.848	No
	V	0.579	SLV 14	0.137	0.56	111	0.551	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
92	F	1.04	SLV 1	0.253	1.037	530	1.046	Si
	V	0.633	SLV 1	0.151	0.617	139	0.604	No
93	F	1.142	SLV 1	0.276	1.132	687	1.163	Si
	V	0.489	SLV 1	0.115	0.471	73	0.464	No
95	F	0.614	SLV 2	0.146	0.596	128	0.584	No
	V	0.535	SLV 15	0.127	0.518	93	0.512	No
96	F	1.067	SLV 13	0.26	1.062	569	1.077	Si
	V	1.179	SLV 4	0.285	1.166	751	1.207	Si
97	F	1.874	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.665	SLV 2	0.159	0.65	157	0.635	No
100	F	1.344	SLV 4	0.322	1.318	1097	1.409	Si
	V	0.438	SLV 4	0.103	0.42	55	0.413	No
102	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
105	F	1.34	SLV 15	0.321	1.315	1087	1.404	Si
	V	0.638	SLV 15	0.152	0.621	141	0.608	No
106	F	1.868	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.688	SLV 15	0.165	0.674	171	0.658	No
113	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.869	SLV 15	0.362	1.483	1618	1.653	Si
120	F	1.909	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.013	SLV 2	0.247	1.012	492	1.015	Si
121	F	2.832	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.313	SLV 2	0.315	1.29	1021	1.369	Si
122	F	3.562	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.264	SLV 8	0.306	1.253	931	1.318	Si
124	F	2.188	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.701	SLV 15	0.168	0.689	180	0.672	No
127	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
128	F	1.918	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.349	SLV 14	0.323	1.323	1110	1.416	Si
129	F	2.517	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.326	SLV 14	0.318	1.302	1052	1.385	Si
130	F	1.354	SLV 3	0.324	1.328	1123	1.423	Si
	V	0.759	SLV 14	0.184	0.751	222	0.732	No
131	F	1.123	SLV 14	0.272	1.114	656	1.142	Si
	V	0.86	SLV 1	0.209	0.855	313	0.843	No
132	F	1.488	SLV 1	0.354	1.451	1504	1.604	Si
	V	0.936	SLV 1	0.228	0.933	395	0.927	No
133	F	1.305	SLV 1	0.313	1.282	1002	1.358	Si
	V	0.982	SLV 1	0.24	0.982	452	0.98	No
134	F	2.697	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.515	SLV 13	0.121	0.495	83	0.489	No
135	F	0.714	SLV 2	0.172	0.703	188	0.684	No
	V	0.635	SLV 15	0.151	0.619	140	0.606	No
136	F	1.069	SLV 4	0.26	1.064	572	1.079	Si
	V	1.023	SLV 4	0.25	1.021	506	1.026	Si
137	F	2.676	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.058	SLV 4	0.258	1.054	556	1.067	Si
138	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.807	SLV 1	0.362	1.483	1618	1.653	Si
140	F	1.73	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.52	SLV 4	0.122	0.501	85	0.494	No
142	F	3.97	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.606	SLV 7	0.362	1.483	1618	1.653	Si
143	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.835	SLV 1	0.202	0.828	288	0.815	No
144	F	3.495	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.521	SLV 16	0.362	1.482	1612	1.65	Si
145	F	1.779	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.867	SLV 4	0.21	0.861	319	0.849	No
146	F	2.448	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.179	SLV 13	0.285	1.166	751	1.207	Si
153	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.998	SLV 10	0.362	1.483	1618	1.653	Si
154	F	2.99	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
155	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.033	SLV 15	0.362	1.483	1618	1.653	Si
156	F	2.575	SLV 15	0.362	1.483	1618	1.653	Si
	V	2.924	SLV 6	0.362	1.483	1618	1.653	Si
158	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
159	F	3.194	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.671	SLV 2	0.362	1.483	1618	1.653	Si
160	F	1.918	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.913	SLV 2	0.362	1.483	1618	1.653	Si
161	F	2.756	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.515	SLV 9	0.362	1.483	1618	1.653	Si
162	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.551	SLV 9	0.362	1.483	1618	1.653	Si
163	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
164	F	3.269	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.168	SLV 14	0.362	1.483	1618	1.653	Si
165	F	2.904	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.841	SLV 14	0.362	1.483	1618	1.653	Si
166	F	1.912	SLV 14	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1.308	SLV 14	0.314	1.285	1009	1.362	Si
167	F	1.373	SLV 14	0.329	1.345	1173	1.449	Si
	V	1.553	SLV 14	0.362	1.483	1618	1.653	Si
168	F	2.386	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.568	SLV 1	0.362	1.483	1618	1.653	Si
169	F	2.049	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.51	SLV 1	0.359	1.471	1573	1.634	Si
170	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.586	SLV 13	0.362	1.483	1618	1.653	Si
171	F	0.688	SLV 15	0.165	0.674	171	0.658	No
	V	0.605	SLV 15	0.143	0.587	124	0.577	No
172	F	1.246	SLV 13	0.3	1.228	877	1.286	Si
	V	1.448	SLV 7	0.35	1.432	1443	1.577	Si
173	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.662	SLV 4	0.362	1.483	1618	1.653	Si
174	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.009	SLV 1	0.362	1.483	1618	1.653	Si
175	F	2.677	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.865	SLV 7	0.362	1.483	1618	1.653	Si
176	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.152	SLV 5	0.28	1.145	712	1.181	Si
177	F	1.718	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.526	SLV 16	0.362	1.483	1618	1.653	Si
178	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.706	SLV 5	0.362	1.483	1618	1.653	Si
179	F	3.576	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.289	SLV 12	0.362	1.483	1618	1.653	Si
181	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.636	SLV 15	0.362	1.483	1618	1.653	Si
184	F	2.61	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.168	SLV 2	0.282	1.156	732	1.194	Si
186	F	2.548	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.381	SLV 4	0.33	1.353	1194	1.459	Si
187	F	1.823	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.947	SLV 4	0.362	1.483	1618	1.653	Si
189	F	3.35	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
190	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.77	SLV 4	0.362	1.483	1618	1.653	Si
191	F	3.538	SLV 8	0.362	1.483	1618	1.653	Si
	V	2.565	SLV 4	0.362	1.483	1618	1.653	Si
192	F	2.778	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.446	SLV 13	0.345	1.412	1376	1.547	Si
194	F	1.058	SLV 13	0.258	1.054	556	1.067	Si
	V	0.476	SLV 13	0.112	0.457	68	0.451	No
195	F	1.057	SLV 13	0.257	1.053	554	1.065	Si
	V	0.58	SLV 13	0.137	0.562	112	0.553	No
196	F	1.48	SLV 13	0.353	1.443	1479	1.593	Si
	V	0.742	SLV 13	0.179	0.733	208	0.713	No

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	4	0.035	475	0.244	taglio trave connessione in muratura

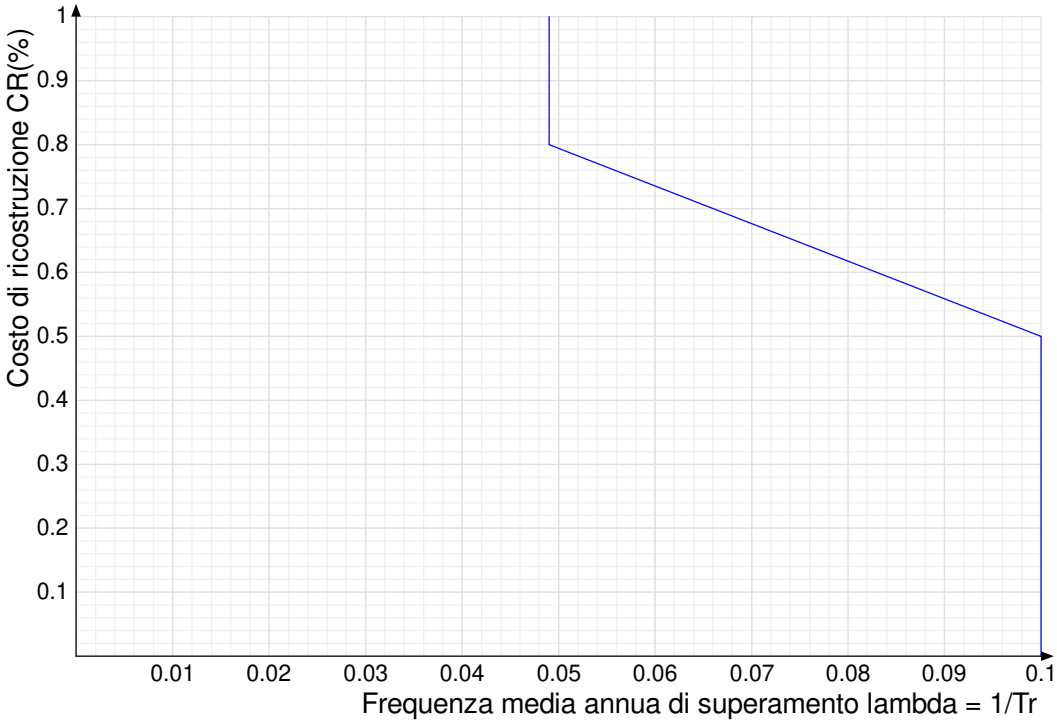
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
4	475	8.215	G	14.284	F	taglio trave connessione in muratura

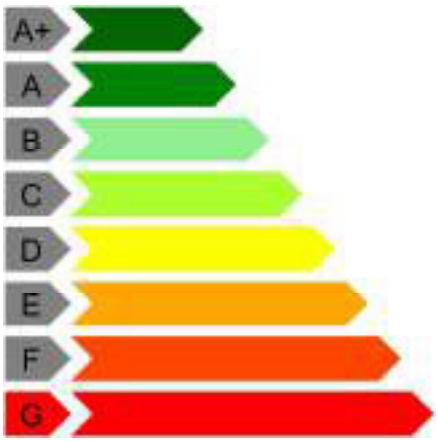
Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

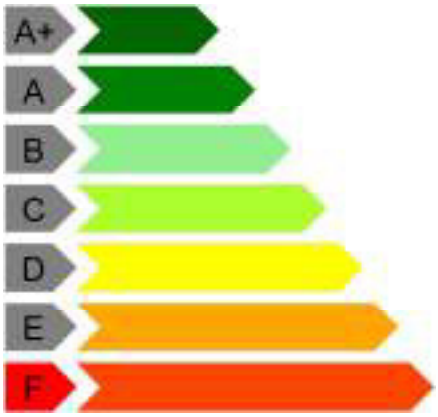
Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)



Classe PAM



Classe IS-V



1.8 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: *coordinate del punto iniziale del maschio. [m]*
Y ini.: *coordinate del punto iniziale del maschio. [m]*
X fin.: *coordinate del punto finale del maschio. [m]*
Y fin.: *coordinate del punto finale del maschio. [m]*
Quota i.: *livello o falda inferiore.*
Quota.s: *livello o falda superiore.*
l: *lunghezza del maschio. [m]*
Sp.: *spessore. [m]*
h netta: *altezza netta (a filo solai). [m]*
h ini.: *altezza nel modello al punto iniziale. [m]*
h fin.: *altezza nel modello al punto finale. [m]*
a: *distanza tra irrigidimenti laterali. [m]*
a.s.,sx: *lunghezza di appoggio del solaio di sinistra. [m]*
a.s.,dx: *lunghezza di appoggio del solaio di destra. [m]*
fb: *resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]*
fk: *resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fmedio: *resistenza media a compressione della muratura utilizzata. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fv,lim: *valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Quota: *quota della sezione di verifica. [m]*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
c.s.: *coefficiente di sicurezza.*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
Verifica: *stato di verifica.*
Nmur: *aliquota di sforzo normale recepito dalla sola muratura. [daN]*

V: taglio nel piano. [daN]
df: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]
l': lunghezza della parte compressa della parete. [m]
σN: tensione media nella zona compressa. [daN/m²]
fvd: resistenza a taglio di calcolo. [daN/m²]
Vt: resistenza a taglio della muratura non rinforzata. [daN]
Vt,f: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]
Vt,c: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]
Vt,c int.: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]
Vt,R: resistenza a taglio della sezione rinforzata. [daN]
res. > 50%: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.
fd: resistenza a compressione di calcolo. [daN/m²]
Sa: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.
σ0: tensione media di compressione. [daN/m²]
*M: momento flettente fuori piano. [daN*m]*
*Mc: momento di collasso per azioni perpendicolari al piano. [daN*m]*
Coeff.s.: coefficiente di sicurezza.
N top: sforzo normale in sommità. [daN]
N base: sforzo normale al piede. [daN]
V orto: taglio fuori piano. [daN]
α0: moltiplicatore secondo [C8.7.1.1].
M: massa partecipante al cinematismo. [daN/(m/s²)]*
e: frazione di massa partecipante della muratura [C8.7.1.5].*
a0: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]*
aLim: accelerazione limite [C7.2.11]. [m/s²]
Stato limite: pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.
Sa: accelerazione massima adimensionalizzata rispetto a quella di gravità.

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	1.271	-24.653	-3.284	L2	L4	4.555	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-0.98	-9720.99	-57705	-0.000055	0.0004492	0.0035	4.555	101142.71	114265.54	114265.54	11.75	No	Si
SLU 74	1.22	-28253.93	-68421	-0.0000846	0.0004492	0.0035	4.555	113258.43	129461.68	129461.68	4.58	No	Si
SLU 79	-0.98	-9755.37	-57962	-0.0000553	0.0004492	0.0035	4.555	101457.76	114639.67	114639.67	11.75	No	Si
SLU 79	1.22	-28362.83	-68788	-0.000085	0.0004492	0.0035	4.555	113636.27	129967.32	129967.32	4.58	No	Si
SLU 78	-0.98	-9760.72	-58304	-0.0000556	0.0004492	0.0035	4.555	101874.73	115137.68	115137.68	11.8	No	Si
SLU 78	1.22	-28414.68	-69491	-0.0000857	0.0004492	0.0035	4.555	114353.62	130938.67	130938.67	4.61	No	Si
SLU 75	-0.98	-9662.85	-57709	-0.000055	0.0004492	0.0035	4.555	101148.27	114272.12	114272.12	11.83	No	Si
SLU 75	1.22	-28120.03	-68635	-0.0000846	0.0004492	0.0035	4.555	113479.1	129756.49	129756.49	4.61	No	Si
SLU 84	-0.98	-9943.3	-59482	-0.0000568	0.0004492	0.0035	4.555	103296.03	116860.24	116860.24	11.75	No	Si
SLU 84	1.22	-28946.55	-70803	-0.0000875	0.0004492	0.0035	4.555	115667.11	132684.91	132684.91	4.58	No	Si
SLU 81	-0.98	-9903.57	-58883	-0.0000562	0.0004492	0.0035	4.555	102576.84	115983.71	115983.71	11.71	No	Si
SLU 81	1.22	-28785.81	-69732	-0.0000864	0.0004492	0.0035	4.555	114597.44	131272.3	131272.3	4.56	No	Si
SLU 82	-0.98	-9845.43	-58887	-0.0000562	0.0004492	0.0035	4.555	102582.29	115990.32	115990.32	11.78	No	Si
SLU 82	1.22	-28651.9	-69946	-0.0000864	0.0004492	0.0035	4.555	114813.01	131558.67	131558.67	4.59	No	Si
SLU 80	-0.98	-9697.23	-57966	-0.0000552	0.0004492	0.0035	4.555	101463.29	114646.26	114646.26	11.82	No	Si
SLU 80	1.22	-28228.92	-69002	-0.0000851	0.0004492	0.0035	4.555	113855.51	130262.6	130262.6	4.61	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	-10001.45	-59477	-0.0000568	0.0004492	0.0035	4.555	103290.62	116853.62	116853.62	11.68	No	Si
SLU 83	1.22	-29080.46	-70589	-0.0000875	0.0004492	0.0035	4.555	115454.88	132404.73	132404.73	4.55	No	Si
SLU 77	-0.98	-9818.86	-58299	-0.0000556	0.0004492	0.0035	4.555	101869.23	115131.09	115131.09	11.73	No	Si
SLU 77	1.22	-28548.59	-69277	-0.0000857	0.0004492	0.0035	4.555	114136.28	130642.79	130642.79	4.58	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-0.98	-3503.82	-13716	-0.0000136	0.0006738	0.0035	4.555		36137.09	36137.09	10.31		Si
SLV 15	1.22	-11274.45	-16080	-0.0000229	0.0006738	0.0035	4.555		41149.52	41149.52	3.65		Si
SLD 13	-0.98	-3404.39	-28946	-0.000025	0.0006738	0.0035	4.555		67572.78	67572.78	19.85		Si
SLD 13	1.22	-17873.22	-34481	-0.0000437	0.0006738	0.0035	4.555		78409.79	78409.79	4.39		Si
SLV 14	-0.98	-1140.89	-13705	-0.0000112	0.0006738	0.0035	4.555		36113.01	36113.01	31.65		Si
SLV 14	1.22	-13937.47	-16950	-0.0000263	0.0006738	0.0035	4.555		42986.32	42986.32	3.08		Si
SLV 13	-0.98	1041.65	-13840	-0.0000112	0.0006738	0.0035	4.555		31554.35	31554.35	30.29		Si
SLV 13	1.22	-15346.3	-17432	-0.0000282	0.0006738	0.0035	4.555		44002.96	44002.96	2.87		Si
SLV 9	-0.98	2837	-32513	-0.0000271	0.0006738	0.0035	4.555		69936.32	69936.32	24.65		Si
SLV 9	1.22	-24808.9	-40403	-0.0000554	0.0006738	0.0035	4.555		89825.05	89825.05	3.62		Si
SLD 9	-0.98	-2564.9	-36928	-0.0000302	0.0006738	0.0035	4.555		83200.39	83200.39	32.44		Si
SLD 9	1.22	-21994.36	-44309	-0.0000557	0.0006738	0.0035	4.555		97110.5	97110.5	4.42		Si
SLV 16	-0.98	-5686.36	-13581	-0.0000156	0.0006738	0.0035	4.555		35849.34	35849.34	6.3		Si
SLV 16	1.22	-9865.62	-15598	-0.0000212	0.0006738	0.0035	4.555		40132.02	40132.02	4.07		Si
SLV 6	-0.98	-1243.5	-48329	-0.0000377	0.0006738	0.0035	4.555		104591.76	104591.76	84.11		Si
SLV 6	1.22	-28154.65	-58503	-0.0000735	0.0006738	0.0035	4.555		122592.7	122592.7	4.35		Si
SLV 5	-0.98	163	-48416	-0.0000367	0.0006738	0.0035	4.555		98317.56	98317.56	603.19		Si
SLV 5	1.22	-29062.54	-58813	-0.0000747	0.0006738	0.0035	4.555		123116.37	123116.37	4.24		Si
SLV 10	-0.98	1430.51	-32426	-0.0000257	0.0006738	0.0035	4.555		69765.9	69765.9	48.77		Si
SLV 10	1.22	-23901.01	-40092	-0.0000542	0.0006738	0.0035	4.555		89248.48	89248.48	3.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-0.98	-9903.57	-58883	-52340	-7398	4.555	4.555	-25535	10833	22206	33304	73663	11615	55510	No	7.5	Si
SLU 81	1.22	-28785.81	-69732	-61984	-12970	4.555	4.555	-30240	10833	22206	33304	73663	11615	55510	No	4.28	Si
SLU 74	-0.98	-9720.99	-57705	-51293	-7282	4.555	4.555	-25024	10833	22206	33304	73663	11615	55510	No	7.62	Si
SLU 74	1.22	-28253.93	-68421	-60819	-12789	4.555	4.555	-29671	10833	22206	33304	73663	11615	55510	No	4.34	Si
SLU 82	-0.98	-9845.43	-58887	-52344	-7167	4.555	4.555	-25537	10833	22206	33304	73663	11615	55510	No	7.74	Si
SLU 82	1.22	-28651.9	-69946	-62175	-12740	4.555	4.555	-30333	10833	22206	33304	73663	11615	55510	No	4.36	Si
SLU 80	-0.98	-9697.23	-57966	-51526	-7102	4.555	4.555	-25138	10833	22206	33304	73663	11615	55510	No	7.82	Si
SLU 80	1.22	-28228.92	-69002	-61335	-12641	4.555	4.555	-29923	10833	22206	33304	73663	11615	55510	No	4.39	Si
SLU 77	-0.98	-9818.86	-58299	-51821	-7356	4.555	4.555	-25282	10833	22206	33304	73663	11615	55510	No	7.55	Si
SLU 77	1.22	-28548.59	-69277	-61580	-12928	4.555	4.555	-30043	10833	22206	33304	73663	11615	55510	No	4.29	Si
SLU 79	-0.98	-9755.37	-57962	-51522	-7332	4.555	4.555	-25136	10833	22206	33304	73663	11615	55510	No	7.57	Si
SLU 79	1.22	-28362.83	-68788	-61145	-12870	4.555	4.555	-29830	10833	22206	33304	73663	11615	55510	No	4.31	Si
SLU 75	-0.98	-9662.85	-57709	-51297	-7051	4.555	4.555	-25026	10833	22206	33304	73663	11615	55510	No	7.87	Si
SLU 75	1.22	-28120.03	-68635	-61009	-12559	4.555	4.555	-29764	10833	22206	33304	73663	11615	55510	No	4.42	Si
SLU 83	-0.98	-10001.45	-59477	-52869	-7472	4.555	4.555	-25793	10833	22206	33304	73663	11615	55510	No	7.43	Si
SLU 83	1.22	-29080.46	-70589	-62745	-13109	4.555	4.555	-30611	10833	22206	33304	73663	11615	55510	No	4.23	Si
SLU 84	-0.98	-9943.3	-59482	-52873	-7241	4.555	4.555	-25795	10833	22206	33304	73663	11615	55510	No	7.67	Si
SLU 84	1.22	-28946.55	-70803	-62936	-12880	4.555	4.555	-30704	10833	22206	33304	73663	11615	55510	No	4.31	Si
SLU 78	-0.98	-9760.72	-58304	-51825	-7125	4.555	4.555	-25284	10833	22206	33304	73663	11615	55510	No	7.79	Si
SLU 78	1.22	-28414.68	-69491	-61770	-12699	4.555	4.555	-30135	10833	22206	33304	73663	11615	55510	No	4.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	-10993.16	-43502	-38669	-12945	4.555	4.555	-18865	16250	33308	33304	110494	11615	66613		5.15	Si
SLD 8	1.22	-17396.35	-50090	-44525	-15722	4.555	4.555	-21722	16250	33308	33304	110494	11615	66613		4.24	Si
SLD 4	-0.98	-10153.66	-51484	-45763	-9380	4.555	4.555	-22326	16250	33308	33304	110494	11615	66613		7.1	Si
SLD 4	1.22	-21517.49	-59919	-53261	-13699	4.555	4.555	-25984	16250	33308	33304	110494	11615	66613		4.86	Si
SLV 3	-0.98	-12417.17	-66725	-59311	-11077	4.555	4.555	-28936	16250	33308	33304	110494	11615	66613		6.01	Si
SLV 3	1.22	-25453.25	-77449	-68844	-16494	4.555	4.555	-33586	16250	33308	33304	110494	11615	66613		4.04	Si
SLV 8	-0.98	-16395.06	-47917	-42593	-22873	4.555	4.555	-20779	16250	33308	33304	110494	11615	66613		2.91	Si
SLV 8	1.22	-14581.82	-53997	-47997	-24234	4.555	4.555	-23416	16250	33308	33304	110494	11615	66613		2.75	Si
SLD 12	-0.98	-9849.87	-36707	-32628	-12140	4.555	4.555	-15918	15684	32148	33304	110494	11615	65452		5.39	Si
SLD 12	1.22	-15579.99	-42221	-37530	-14355	4.555	4.555	-18309	16162	33128	33304	110494	11615	66432		4.63	Si
SLV 12	-0.98	-13721.05	-32014	-28457	-20991	4.555	4.555	-13883	15277	31313	33304	110494	11615	64618		3.08	Si
SLV 12	1.22	-10328.18	-35586	-31632	-21038	4.555	4.555	-15432	15586	31948	33304	110494	11615	65253		3.1	Si
SLV 7	-0.98	-14988.56	-48004	-42670	-20431	4.555	4.555	-20817	16250	33308	33304	110494	11615	66613		3.26	Si
SLV 7	1.22	-15489.71	-54307	-48273	-22112	4.555	4.555	-23551	16250	33308	33304	110494	11615	66613		3.01	Si
SLV 11	-0.98	-12314.56	-32101	-28534	-18549	4.555	4.555	-13921	15284	31329	33304	110494	11615	64633		3.48	Si
SLV 11	1.22	-11236.07	-35897	-31908	-18915	4.555	4.555	-15567	15613	32003	33304	110494	11615	65308		3.45	Si
SLD 7	-0.98	-10378.84	-43540	-38702	-11879	4.555	4.555	-18881	16250	33308	33304	110494	11615	66613		5.61	Si
SLD 7	1.22	-17792.9	-50226	-44645	-14795	4.555	4.555	-21781	16250	33308	33304	110494	11615	66613		4.5	Si
SLV 4	-0.98	-14599.71	-66590	-59191	-14867	4.555	4.555	-28877	16250	33308	33304	110494	11615	66613		4.48	Si
SLV 4	1.22	-24044.42	-76968	-68416	-19788	4.555	4.555	-33378	16250	33308	33304	110494	11615	66613		3.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	215625	0.25	6812	-13962	345.16	3024.75	8.76	Si
SLV 15	215625	0.25	7055	-14461	345.16	3128.55	9.06	Si
SLV 14	215625	0.25	7484	-15340	345.16	3310.5	9.59	Si
SLV 13	215625	0.25	7727	-15839	345.16	3413.48	9.89	Si
SLV 12	215625	0.25	16410	-33637	345.16	6890.76	19.96	Si
SLV 11	215625	0.25	16567	-33959	345.16	6950.1	20.14	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	215625	0.25	18650	-38229	345.16	7726.21	22.38	Si
SLV 9	215625	0.25	18807	-38550	345.16	7783.79	22.55	Si
SLV 8	215625	0.25	25273	-51803	345.16	10048.49	29.11	Si
SLV 7	215625	0.25	25430	-52125	345.16	10100.84	29.26	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-54789	-48416	-129	0.505	6436.1	0.96	7.64302	4.30116	Si
SLV 6	-54651	-48329	-130	0.506	6422	0.96	7.65836	4.30116	Si
SLV 7	-53482	-48004	-463	0.509	6303.1	0.96	7.70734	4.30116	Si
SLV 8	-53343	-47917	-465	0.51	6289	0.959	7.72319	4.30116	Si
SLV 1	-76143	-66849	-211	0.392	8609.3	0.97	5.87116	3.0673	Si
SLV 3	-75751	-66725	-312	0.392	8569.4	0.97	5.87632	3.0673	Si
SLV 2	-75928	-66714	-213	0.393	8587.4	0.97	5.88381	3.0673	Si
SLV 4	-75536	-66590	-313	0.393	8547.4	0.969	5.88904	3.0673	Si
SLV 9	-36126	-32513	-159	0.697	4540.1	0.946	10.70694	4.30116	Si
SLV 10	-35988	-32426	-160	0.699	4526	0.946	10.7401	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.553	SLU 83	Si
V_SLU	4.234	SLU 83	Si
PF_SLV	2.867	SLV 13	Si
V_SLV	2.749	SLV 8	Si
PFFP_SLV	8.763	SLV 16	Si
R_SLV	1.777	SLV 5	Si

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	5.876	-24.653	2.271	L2	L4	3.605	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	-7265.37	-45682	-0.000057	0.0004492	0.0035	3.605	63364.81	71474.9	71474.9	9.84	No	Si
SLU 78	1.22	-15992.97	-37133	-0.0000628	0.0004492	0.0035	3.605	54393.12	60923.39	60923.39	3.81	No	Si
SLU 45	-0.98	-5740	-37520	-0.0000459	0.0004492	0.0035	3.605	54828.64	61433.25	61433.25	10.7	No	Si
SLU 45	1.22	-13354.19	-29607	-0.0000504	0.0004492	0.0035	3.605	45394.93	50783.75	50783.75	3.8	No	Si
SLU 70	-0.98	-6527.67	-41852	-0.0000517	0.0004492	0.0035	3.605	59510.52	66859.28	66859.28	10.24	No	Si
SLU 70	1.22	-14797.59	-33667	-0.000057	0.0004492	0.0035	3.605	50377.34	56364.97	56364.97	3.81	No	Si
SLU 51	-0.98	-5747.28	-37710	-0.0000461	0.0004492	0.0035	3.605	55040.79	61679.7	61679.7	10.73	No	Si
SLU 51	1.22	-13460.85	-29820	-0.0000508	0.0004492	0.0035	3.605	45663.73	51078.36	51078.36	3.79	No	Si
SLU 44	-0.98	-5603.71	-36782	-0.0000449	0.0004492	0.0035	3.605	53996.93	60458.09	60458.09	10.79	No	Si
SLU 44	1.22	-13060.12	-28839	-0.0000491	0.0004492	0.0035	3.605	44418.71	49724.12	49724.12	3.81	No	Si
SLU 48	-0.98	-5807.67	-37984	-0.0000465	0.0004492	0.0035	3.605	55346.44	62034.57	62034.57	10.68	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	1.22	-13557.26	-30098	-0.0000512	0.0004492	0.0035	3.605	46014.48	51464.65	51464.65	3.8	No	Si
SLU 49	-0.98	-5795.33	-37985	-0.0000465	0.0004492	0.0035	3.605	55346.84	62035.05	62035.05	10.7	No	Si
SLU 49	1.22	-13565.35	-30103	-0.0000512	0.0004492	0.0035	3.605	46019.61	51470.32	51470.32	3.79	No	Si
SLU 50	-0.98	-5759.62	-37710	-0.0000461	0.0004492	0.0035	3.605	55040.38	61679.23	61679.23	10.71	No	Si
SLU 50	1.22	-13452.76	-29815	-0.0000507	0.0004492	0.0035	3.605	45658.58	51072.7	51072.7	3.8	No	Si
SLU 47	-0.98	-5671.38	-37246	-0.0000455	0.0004492	0.0035	3.605	54520.95	61074.26	61074.26	10.77	No	Si
SLU 47	1.22	-13263.19	-29330	-0.0000499	0.0004492	0.0035	3.605	45045.14	50402.23	50402.23	3.8	No	Si
SLU 46	-0.98	-5727.66	-37521	-0.0000459	0.0004492	0.0035	3.605	54829.05	61433.73	61433.73	10.73	No	Si
SLU 46	1.22	-13362.29	-29611	-0.0000504	0.0004492	0.0035	3.605	45400.09	50789.4	50789.4	3.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	-0.98	-2517.59	-28500	-0.000031	0.0006738	0.0035	3.605		50893.23	50893.23	20.22		Si
SLD 9	1.22	-13162.72	-20954	-0.0000406	0.0006738	0.0035	3.605		39073.91	39073.91	2.97		Si
SLV 13	-0.98	1322.76	-10328	-0.0000117	0.0006738	0.0035	3.605		18701.63	18701.63	14.14		Si
SLV 13	1.22	-11010.3	-2334	-0.0007379	0.0006738	0.0035	2.884		7892.43	7892.43	0.72		No
SLD 13	-0.98	-2248.44	-22457	-0.0000247	0.0006738	0.0035	3.605		41508.81	41508.81	18.46		Si
SLD 13	1.22	-11066.69	-15379	-0.0000321	0.0006738	0.0035	3.605		30065.34	30065.34	2.72		Si
SLV 5	-0.98	-2111.74	-36943	-0.0000386	0.0006738	0.0035	3.605		63507.29	63507.29	30.07		Si
SLV 5	1.22	-17044.91	-28199	-0.000054	0.0006738	0.0035	3.605		50424.98	50424.98	2.96		Si
SLV 14	-0.98	167.37	-10760	-0.0000103	0.0006738	0.0035	3.605		19437.96	19437.96	116.13		Si
SLV 14	1.22	-9732.36	-3506	-0.0004045	0.0006738	0.0035	2.884		9937.57	9937.57	1.02		Si
SLV 15	-0.98	-967.63	-10725	-0.0000115	0.0006738	0.0035	3.605		22303.69	22303.69	23.05		Si
SLV 15	1.22	-8052.28	-4103	-0.0001627	0.0006738	0.0035	2.884		10973.55	10973.55	1.36		Si
SLD 14	-0.98	-2744.52	-22643	-0.0000257	0.0006738	0.0035	3.605		41810.16	41810.16	15.23		Si
SLD 14	1.22	-10517.99	-15882	-0.0000315	0.0006738	0.0035	3.605		30890.22	30890.22	2.94		Si
SLV 10	-0.98	-132.67	-24760	-0.0000236	0.0006738	0.0035	3.605		45103.1	45103.1	339.98		Si
SLV 10	1.22	-14924.08	-16160	-0.0000419	0.0006738	0.0035	3.605		31346.14	31346.14	2.1		Si
SLV 16	-0.98	-2123.02	-11157	-0.0000137	0.0006738	0.0035	3.605		23035.22	23035.22	10.85		Si
SLV 16	1.22	-6774.34	-5274	-0.0000228	0.0006738	0.0035	2.884		13002.74	13002.74	1.92		Si
SLV 9	-0.98	611.9	-24481	-0.0000241	0.0006738	0.0035	3.605		41846.88	41846.88	68.39		Si
SLV 9	1.22	-15747.62	-15405	-0.000045	0.0006738	0.0035	2.884		30108.88	30108.88	1.91		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-0.98	-7465.81	-46584	-41408	6763	3.605	3.605	-25525	10833	17574	33304	58300	9193	50879	No	7.52	Si
SLU 84	1.22	-16197.7	-37843	-33638	4995	3.605	3.605	-20736	10833	17574	33304	58300	9193	50879	No	10.19	Si
SLU 78	-0.98	-7265.37	-45682	-40606	6624	3.605	3.605	-25031	10833	17574	33304	58300	9193	50879	No	7.68	Si
SLU 78	1.22	-15992.97	-37133	-33007	4852	3.605	3.605	-20346	10833	17574	33304	58300	9193	50879	No	10.49	Si
SLU 76	-0.98	-7141.42	-44943	-39950	6547	3.605	3.605	-24626	10833	17574	33304	58300	9193	50879	No	7.77	Si
SLU 76	1.22	-15690.8	-36360	-32320	4799	3.605	3.605	-19923	10833	17574	33304	58300	9193	50879	No	10.6	Si
SLU 75	-0.98	-7197.7	-45218	-40194	6562	3.605	3.605	-24776	10833	17574	33304	58300	9193	50879	No	7.75	Si
SLU 75	1.22	-15789.9	-36641	-32570	4810	3.605	3.605	-20077	10833	17574	33304	58300	9193	50879	No	10.58	Si
SLU 79	-0.98	-7229.66	-45407	-40361	6580	3.605	3.605	-24880	10833	17574	33304	58300	9193	50879	No	7.73	Si
SLU 79	1.22	-15880.37	-36846	-32752	4825	3.605	3.605	-20189	10833	17574	33304	58300	9193	50879	No	10.54	Si
SLU 80	-0.98	-7217.32	-45407	-40362	6597	3.605	3.605	-24880	10833	17574	33304	58300	9193	50879	No	7.71	Si
SLU 80	1.22	-15888.46	-36850	-32755	4834	3.605	3.605	-20191	10833	17574	33304	58300	9193	50879	No	10.52	Si
SLU 77	-0.98	-7277.71	-45681	-40606	6606	3.605	3.605	-25030	10833	17574	33304	58300	9193	50879	No	7.7	Si
SLU 77	1.22	-15984.87	-37129	-33003	4843	3.605	3.605	-20344	10833	17574	33304	58300	9193	50879	No	10.51	Si
SLU 83	-0.98	-7478.15	-46584	-41408	6746	3.605	3.605	-25525	10833	17574	33304	58300	9193	50879	No	7.54	Si
SLU 83	1.22	-16189.61	-37839	-33635	4986	3.605	3.605	-20733	10833	17574	33304	58300	9193	50879	No	10.21	Si
SLU 81	-0.98	-7410.48	-46120	-40995	6684	3.605	3.605	-25271	10833	17574	33304	58300	9193	50879	No	7.61	Si
SLU 81	1.22	-15986.55	-37347	-33197	4944	3.605	3.605	-20464	10833	17574	33304	58300	9193	50879	No	10.29	Si
SLU 82	-0.98	-7398.13	-46120	-40996	6701	3.605	3.605	-25271	10833	17574	33304	58300	9193	50879	No	7.59	Si
SLU 82	1.22	-15994.64	-37351	-33201	4953	3.605	3.605	-20466	10833	17574	33304	58300	9193	50879	No	10.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	-0.98	-132.67	-24760	-22009	13511	3.605	3.605	-13567	15213	24680	33304	87449	9193	57984		4.29	Si
SLV 10	1.22	-14924.08	-16160	-14365	9694	3.605	2.637	-12163	14933	17720	33304	87449	9193	51024		5.26	Si
SLV 6	-0.98	-2856.31	-37222	-33086	14412	3.605	3.605	-20395	16250	26362	33304	87449	9193	59666		4.14	Si
SLV 6	1.22	-16221.37	-28954	-25737	10667	3.605	3.605	-15865	15673	25425	33304	87449	9193	58730		5.51	Si
SLD 9	-0.98	-2517.59	-28500	-25333	9253	3.605	3.605	-15616	15623	25345	33304	87449	9193	58649		6.34	Si
SLD 9	1.22	-13162.72	-20954	-18626	6726	3.605	3.523	-11804	14861	23559	33304	87449	9193	56864		8.45	Si
SLV 5	-0.98	-2111.74	-36943	-32838	16095	3.605	3.605	-20242	16250	26362	33304	87449	9193	59666		3.71	Si
SLV 5	1.22	-17044.91	-28199	-25066	12031	3.605	3.5941	-15451	15590	25215	33304	87449	9193	58519		4.86	Si
SLD 6	-0.98	-4006.7	-33947	-30175	8902	3.605	3.605	-18601	16220	26313	33304	87449	9193	59617		6.7	Si
SLD 6	1.22	-13357.28	-26753	-23780	6546	3.605	3.605	-14659	15432	25034	33304	87449	9193	58338		8.91	Si
SLD 5	-0.98	-3681.49	-33825	-30067	9637	3.605	3.605	-18534	16207	26292	33304	87449	9193	59596		6.18	Si
SLD 5	1.22	-13716.99	-26423	-23487	7142	3.605	3.605	-14478	15396	24976	33304	87449	9193	58280		8.16	Si
SLV 13	-0.98	1322.76	-10328	-9180	7463	3.605	3.605	-5659	13632	22114	33304	87449	9193	55419		7.43	Si
SLV 13	1.22	-11010.3	-2334	-2075	5020	2.884	0	0	0	0	33304	69960	7354	33304		6.63	Si
SLD 10	-0.98	-2842.8	-28622	-25442	8518	3.605	3.605	-15683	15637	25366	33304	87449	9193	58671		6.89	Si
SLD 10	1.22	-12803.01	-21284	-18919	6130	3.605	3.6029	-11662	14832	24048	33304	87449	9193	57352		9.36	Si
SLV 9	-0.98	611.9	-24481	-21761	15194	3.605	3.605	-13414	15183	24630	33304	87449	9193	57935		3.81	Si
SLV 9	1.22	-15747.62	-15405	-13693	11058	2.884	2.3408	0	0	0	33304	69960	7354	33304		3.01	Si
SLV 1	-0.98	-7756.04	-51868	-46105	10465	3.605	3.605	-28420	16250	26362	33304	87449	9193	59666		5.7	Si
SLV 1	1.22	-15334.58	-44980	-39982	8265	3.605	3.605	-24646	16250	26362	33304	87449	9193	59666		7.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	215625	0.25	2236	-3628	273.17	806.23	2.95	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	215625	0.25	2946	-4779	273.17	1057.94	3.87	Si
SLV 15	215625	0.25	3315	-5378	273.17	1188.16	4.35	Si
SLV 16	215625	0.25	4025	-6529	273.17	1436.82	5.26	Si
SLV 9	215625	0.25	9760	-15833	273.17	3372.64	12.35	Si
SLV 10	215625	0.25	10217	-16575	273.17	3521.38	12.89	Si
SLV 11	215625	0.25	13356	-21668	273.17	4519.92	16.55	Si
SLV 12	215625	0.25	13814	-22409	273.17	4662.1	17.07	Si
SLV 5	215625	0.25	17179	-27869	273.17	5682.81	20.8	Si
SLV 6	215625	0.25	17637	-28611	273.17	5818.03	21.3	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-32406	-38544	-99	0.633	3980.2	0.951	9.68031	4.30116	Si
SLV 7	-31826	-38266	-96	0.642	3921.4	0.95	9.82507	4.30116	Si
SLV 4	-47364	-52697	-123	0.471	5500.9	0.963	7.11433	3.0673	Si
SLV 2	-46773	-52301	-187	0.475	5440.7	0.963	7.16726	3.0673	Si
SLV 6	-30436	-37222	-312	0.659	3780.2	0.948	10.09355	4.30116	Si
SLV 3	-46465	-52265	-117	0.479	5409.3	0.962	7.22591	3.0673	Si
SLV 1	-45874	-51868	-181	0.482	5349.2	0.962	7.28116	3.0673	Si
SLV 5	-29856	-36943	-309	0.669	3721.4	0.948	10.25419	4.30116	Si
SLV 12	-19130	-26082	-144	0.947	2635.6	0.93	14.79249	4.30116	Si
SLV 11	-18550	-25804	-140	0.969	2577.1	0.929	15.16008	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.794	SLU 49	Si
V_SLU	7.523	SLU 84	Si
PF_SLV	0.717	SLV 13	No
V_SLV	3.012	SLV 9	Si
PFFP_SLV	2.951	SLV 13	Si
R_SLV	2.251	SLV 8	Si

Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.876	-24.653	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	1.02	-79	-17817	-0.0000335	0.0003743	0.0035	1.89	13372.81	15102.93	15102.93	191.17	No	Si
SLU 48	1.42	1724.21	-16622	-0.0000412	0.0003743	0.0035	1.89	12692.36	13395.83	13395.83	7.77	No	Si
SLU 49	1.02	-78.82	-17816	-0.0000335	0.0003743	0.0035	1.89	13371.94	15101.9	15101.9	191.61	No	Si
SLU 49	1.42	1723.07	-16621	-0.0000412	0.0003743	0.0035	1.89	12692.02	13395.41	13395.41	7.77	No	Si
SLU 50	1.02	-85.79	-17675	-0.0000333	0.0003743	0.0035	1.89	13293.6	15009.64	15009.64	174.95	No	Si
SLU 50	1.42	1705.24	-16485	-0.0000408	0.0003743	0.0035	1.89	12612.66	13296.88	13296.88	7.8	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	1.02	-99.86	-17154	-0.0000324	0.0003743	0.0035	1.89	12999.31	14659.83	14659.83	146.81	No	Si
SLU 43	1.42	1634.63	-15987	-0.0000394	0.0003743	0.0035	1.89	12318.68	12937.36	12937.36	7.91	No	Si
SLU 46	1.02	-85.85	-17555	-0.0000331	0.0003743	0.0035	1.89	13226.33	14930.55	14930.55	173.91	No	Si
SLU 46	1.42	1687.77	-16372	-0.0000405	0.0003743	0.0035	1.89	12546.45	13215.17	13215.17	7.83	No	Si
SLU 51	1.02	-85.61	-17674	-0.0000333	0.0003743	0.0035	1.89	13292.72	15008.6	15008.6	175.32	No	Si
SLU 51	1.42	1704.1	-16485	-0.0000408	0.0003743	0.0035	1.89	12612.32	13296.46	13296.46	7.8	No	Si
SLU 44	1.02	-99.55	-17152	-0.0000324	0.0003743	0.0035	1.89	12997.82	14658.05	14658.05	147.24	No	Si
SLU 44	1.42	1632.73	-15986	-0.0000394	0.0003743	0.0035	1.89	12318.11	12936.66	12936.66	7.92	No	Si
SLU 47	1.02	-92.52	-17412	-0.0000328	0.0003743	0.0035	1.89	13145.72	14834.92	14834.92	160.35	No	Si
SLU 47	1.42	1668.04	-16235	-0.0000401	0.0003743	0.0035	1.89	12465.77	13116.19	13116.19	7.86	No	Si
SLU 45	1.02	-86.04	-17557	-0.0000331	0.0003743	0.0035	1.89	13227.22	14931.59	14931.59	173.55	No	Si
SLU 45	1.42	1688.91	-16373	-0.0000405	0.0003743	0.0035	1.89	12546.79	13215.59	13215.59	7.82	No	Si
SLU 6	1.02	-78.43	-14467	-0.000027	0.0003743	0.0035	1.89	11387.08	12807.11	12807.11	163.3	No	Si
SLU 6	1.42	1361.56	-13542	-0.0000329	0.0003743	0.0035	1.89	10795.52	11196.8	11196.8	8.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.02	-1605.71	-8482	-0.0000244	0.0005615	0.0035	1.89		8446.8	8446.8	5.26		Si
SLV 15	1.42	950.41	-7506	-0.0000189	0.0005615	0.0035	1.89		6955.53	6955.53	7.32		Si
SLV 7	1.02	-391.96	-16802	-0.0000329	0.0005615	0.0035	1.89		15118.44	15118.44	38.57		Si
SLV 7	1.42	3146.81	-13314	-0.0000425	0.0005615	0.0035	1.89		11760.95	11760.95	3.74		Si
SLD 11	1.02	-616.09	-14222	-0.0000294	0.0005615	0.0035	1.89		13131.52	13131.52	21.31		Si
SLD 11	1.42	1870.7	-12357	-0.0000332	0.0005615	0.0035	1.89		10993.32	10993.32	5.88		Si
SLV 8	1.02	-575.58	-17195	-0.0000347	0.0005615	0.0035	1.89		15418.82	15418.82	26.79		Si
SLV 8	1.42	3181.27	-13531	-0.0000431	0.0005615	0.0035	1.89		11933.27	11933.27	3.75		Si
SLD 8	1.02	-344.93	-16023	-0.0000311	0.0005615	0.0035	1.89		14523.38	14523.38	42.11		Si
SLD 8	1.42	2091.96	-13943	-0.0000375	0.0005615	0.0035	1.89		12244.77	12244.77	5.85		Si
SLD 7	1.02	-264.73	-15851	-0.0000304	0.0005615	0.0035	1.89		14393.08	14393.08	54.37		Si
SLD 7	1.42	2076.91	-13848	-0.0000372	0.0005615	0.0035	1.89		12175.33	12175.33	5.86		Si
SLV 12	1.02	-1396.6	-13388	-0.0000324	0.0005615	0.0035	1.89		12469.57	12469.57	8.93		Si
SLV 12	1.42	2700.1	-10044	-0.0000337	0.0005615	0.0035	1.89		9100.25	9100.25	3.37		Si
SLV 16	1.02	-1890.66	-9090	-0.0000272	0.0005615	0.0035	1.89		8959.43	8959.43	4.74		Si
SLV 16	1.42	1003.87	-7842	-0.0000198	0.0005615	0.0035	1.89		7242.12	7242.12	7.21		Si
SLD 12	1.02	-696.3	-14393	-0.0000301	0.0005615	0.0035	1.89		13265.62	13265.62	19.05		Si
SLD 12	1.42	1885.75	-12452	-0.0000334	0.0005615	0.0035	1.89		11069.32	11069.32	5.87		Si
SLV 11	1.02	-1212.97	-12995	-0.0000305	0.0005615	0.0035	1.89		12156.96	12156.96	10.02		Si
SLV 11	1.42	2665.64	-9827	-0.0000331	0.0005615	0.0035	1.89		8919.22	8919.22	3.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	1.02	-296.28	-22255	-19782	-5688	1.89	1.89	-23260	10046	8544	33304	25468	4820	30287	No	5.33	Si
SLU 74	1.42	1747.25	-21109	-18763	-5775	1.89	1.89	-22062	9886	8408	33304	25468	4820	30287	No	5.24	Si
SLU 83	1.02	-356.66	-23138	-20567	-5746	1.89	1.89	-24183	10169	8649	33304	25468	4820	30287	No	5.27	Si
SLU 83	1.42	1729.6	-22012	-19566	-5836	1.89	1.89	-23006	10012	8515	33304	25468	4820	30287	No	5.19	Si
SLU 75	1.02	-296.09	-22254	-19781	-5682	1.89	1.89	-23258	10046	8544	33304	25468	4820	30287	No	5.33	Si
SLU 75	1.42	1746.11	-21108	-18763	-5770	1.89	1.89	-22061	9886	8408	33304	25468	4820	30287	No	5.25	Si
SLU 79	1.02	-296.03	-22374	-19888	-5742	1.89	1.89	-23383	10062	8558	33304	25468	4820	30287	No	5.27	Si
SLU 79	1.42	1763.58	-21221	-18863	-5830	1.89	1.89	-22179	9902	8421	33304	25468	4820	30287	No	5.19	Si
SLU 80	1.02	-295.85	-22372	-19886	-5736	1.89	1.89	-23382	10062	8558	33304	25468	4820	30287	No	5.28	Si
SLU 80	1.42	1762.44	-21221	-18863	-5825	1.89	1.89	-22178	9902	8421	33304	25468	4820	30287	No	5.2	Si
SLU 84	1.02	-356.47	-23137	-20566	-5740	1.89	1.89	-24181	10169	8648	33304	25468	4820	30287	No	5.28	Si
SLU 84	1.42	1728.46	-22012	-19566	-5830	1.89	1.89	-23005	10012	8515	33304	25468	4820	30287	No	5.19	Si
SLU 81	1.02	-363.69	-22878	-20336	-5648	1.89	1.89	-23910	10133	8618	33304	25468	4820	30287	No	5.36	Si
SLU 81	1.42	1694.3	-21763	-19345	-5737	1.89	1.89	-22746	9977	8486	33304	25468	4820	30287	No	5.28	Si
SLU 77	1.02	-289.24	-22516	-20014	-5785	1.89	1.89	-23532	10082	8575	33304	25468	4820	30287	No	5.24	Si
SLU 77	1.42	1782.55	-21358	-18985	-5874	1.89	1.89	-22322	9921	8438	33304	25468	4820	30287	No	5.16	Si
SLU 82	1.02	-363.51	-22876	-20334	-5643	1.89	1.89	-23909	10132	8618	33304	25468	4820	30287	No	5.37	Si
SLU 82	1.42	1693.16	-21763	-19345	-5732	1.89	1.89	-22745	9977	8486	33304	25468	4820	30287	No	5.28	Si
SLU 78	1.02	-289.06	-22514	-20012	-5779	1.89	1.89	-23530	10082	8575	33304	25468	4820	30287	No	5.24	Si
SLU 78	1.42	1781.41	-21357	-18984	-5868	1.89	1.89	-22321	9921	8437	33304	25468	4820	30287	No	5.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	1.02	-616.09	-14222	-12642	-6153	1.89	1.89	-14864	13389	11388	33304	38202	4820	43021		6.99	Si
SLD 11	1.42	1870.7	-12357	-10984	-6058	1.89	1.89	-12915	13000	11056	33304	38202	4820	43021		7.1	Si
SLV 15	1.02	-1605.71	-8482	-7539	-8596	1.89	1.89	-8864	12190	10367	33304	38202	4820	43021		5	Si
SLV 15	1.42	950.41	-7506	-6672	-7540	1.89	1.89	-7845	11986	10194	33304	38202	4820	43021		5.71	Si
SLV 11	1.02	-1212.97	-12995	-11552	-8897	1.89	1.89	-13582	13133	11170	33304	38202	4820	43021		4.84	Si
SLV 11	1.42	2665.64	-9827	-8735	-8598	1.89	1.89	-10270	12471	10606	33304	38202	4820	43021		5	Si
SLV 12	1.02	-1396.6	-13388	-11900	-9856	1.89	1.89	-13992	13215	11239	33304	38202	4820	43021		4.37	Si
SLV 12	1.42	2700.1	-10044	-8928	-9558	1.89	1.89	-10497	12516	10645	33304	38202	4820	43021		4.5	Si
SLV 14	1.02	-1449.7	-9121	-8107	-7634	1.89	1.89	-9532	12323	10481	33304	38202	4820	43021		5.64	Si
SLV 14	1.42	22.98	-9391	-8348	-6595	1.89	1.89	-9815	12380	10529	33304	38202	4820	43021		6.52	Si
SLD 16	1.02	-902.48	-12554	-11159	-6661	1.89	1.89	-13121	13041	11091	33304	38202	4820	43021		6.46	Si
SLD 16	1.42	1164.25	-11514	-10235	-6238	1.89	1.89	-12034	12823	10906	33304	38202	4820	43021		6.9	Si
SLV 7	1.02	-391.96	-16802	-14936	-6480	1.89	1.89	-17561	13929	11846	33304	38202	4820	43021		6.64	Si
SLV 7	1.42	3146.81	-13314	-11835	-6846	1.89	1.89	-13915	13200	11226	33304	38202	4820	43021		6.28	Si
SLV 16	1.02	-1890.66	-9090	-8080	-10083	1.89	1.89	-9500	12317	10475	33304	38202	4820	43021		4.27	Si
SLV 16	1.42	1003.87	-7842	-6971	-9028	1.89	1.89	-8196	12056	10254	33304	38202	4820	43021		4.77	Si
SLV 8	1.02	-575.58	-17195	-15284	-7439	1.89	1.89	-17971	14011	11916	33304	38202	4820	43021		5.78	Si
SLV 8	1.42	3181.27	-13531	-12027	-7805	1.89	1.89	-14141	13245	11265	33304	38202	4820	43021		5.51	Si
SLD 12	1.02	-696.3	-14393	-12794	-6572	1.89	1.89	-15043	13425	11418	33304	38202	4820	43021		6.55	Si
SLD 12	1.42	1885.75	-12452	-11068	-6477	1.89	1.89	-13014	13019	11073	33304	38202	4820	43021		6.64	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.25	7294	-6203	148.52	1329.09	8.95	Si
SLV 16	179667	0.25	7753	-6594	148.52	1408.31	9.48	Si
SLV 13	179667	0.25	7806	-6639	148.52	1417.4	9.54	Si
SLV 14	179667	0.25	8265	-7029	148.52	1496.03	10.07	Si
SLV 11	179667	0.25	12028	-10230	148.52	2120.44	14.28	Si
SLV 12	179667	0.25	12324	-10482	148.52	2168.04	14.6	Si
SLV 9	179667	0.25	13735	-11682	148.52	2391.98	16.11	Si
SLV 10	179667	0.25	14031	-11933	148.52	2438.32	16.42	Si
SLV 7	179667	0.25	16528	-14057	148.52	2820.57	18.99	Si
SLV 8	179667	0.25	16824	-14309	148.52	2864.83	19.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-17658	-13602	-1330	0.55	2154.6	0.952	8.40172	4.30116	Si
SLV 5	-17467	-13379	-1322	0.555	2135.3	0.952	8.48174	4.30116	Si
SLV 10	-14233	-9191	-1308	0.65	1807	0.944	10.00987	4.30116	Si
SLV 9	-14042	-8969	-1299	0.657	1787.7	0.943	10.1268	4.30116	Si
SLV 2	-19611	-19481	-694	0.537	2353.1	0.956	8.16785	3.0673	Si
SLV 1	-19316	-19136	-680	0.544	2323.1	0.955	8.2778	3.0673	Si
SLV 8	-11672	-15525	571	0.808	1547.7	0.936	12.55062	4.30116	Si
SLV 7	-11482	-15302	580	0.818	1528.5	0.935	12.70701	4.30116	Si
SLV 4	-17816	-20058	-124	0.607	2170.6	0.952	9.25874	3.0673	Si
SLV 3	-17521	-19713	-110	0.615	2140.7	0.952	9.3959	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.769	SLU 48	Si
V_SLU	5.156	SLU 77	Si
PF_SLV	3.346	SLV 11	Si
V_SLV	4.267	SLV 16	Si
PFFP_SLV	8.949	SLV 15	Si
R_SLV	1.953	SLV 6	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.876	-21.763	5.876	L2	L4	2.145	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.02	-7604.94	-33039	-0.0000951	0.0003743	0.0035	2.145	23521.41	27560.19	27560.19	3.62	No	Si
SLU 80	1.42	-3755.6	-32003	-0.000073	0.0003743	0.0035	2.145	23145.73	27082.64	27082.64	7.21	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	1.02	-7689.44	-33899	-0.0000974	0.0003743	0.0035	2.145	23815.63	27962.47	27962.47	3.64	No	Si
SLU 82	1.42	-3782.51	-32863	-0.0000748	0.0003743	0.0035	2.145	23459.4	27478.81	27478.81	7.26	No	Si
SLU 77	1.02	-7660.23	-33263	-0.0000959	0.0003743	0.0035	2.145	23599.75	27664.65	27664.65	3.61	No	Si
SLU 77	1.42	-3807.4	-32227	-0.0000737	0.0003743	0.0035	2.145	23229.15	27185.57	27185.57	7.14	No	Si
SLU 78	1.02	-7659.44	-33265	-0.0000959	0.0003743	0.0035	2.145	23600.35	27665.45	27665.45	3.61	No	Si
SLU 78	1.42	-3802.14	-32229	-0.0000737	0.0003743	0.0035	2.145	23229.78	27186.36	27186.36	7.15	No	Si
SLU 81	1.02	-7690.23	-33897	-0.0000974	0.0003743	0.0035	2.145	23815.06	27961.66	27961.66	3.64	No	Si
SLU 81	1.42	-3787.77	-32862	-0.0000748	0.0003743	0.0035	2.145	23458.79	27478.01	27478.01	7.25	No	Si
SLU 84	1.02	-7777.38	-34262	-0.0000986	0.0003743	0.0035	2.145	23934.89	28133.8	28133.8	3.62	No	Si
SLU 84	1.42	-3840.65	-33226	-0.0000758	0.0003743	0.0035	2.145	23586.87	27647.34	27647.34	7.2	No	Si
SLU 75	1.02	-7571.5	-32902	-0.0000947	0.0003743	0.0035	2.145	23473.19	27496.81	27496.81	3.63	No	Si
SLU 75	1.42	-3743.99	-31866	-0.0000727	0.0003743	0.0035	2.145	23094.42	27020.19	27020.19	7.22	No	Si
SLU 79	1.02	-7605.72	-33037	-0.0000951	0.0003743	0.0035	2.145	23520.8	27559.39	27559.39	3.62	No	Si
SLU 79	1.42	-3760.86	-32001	-0.000073	0.0003743	0.0035	2.145	23145.08	27081.85	27081.85	7.2	No	Si
SLU 74	1.02	-7572.29	-32900	-0.0000947	0.0003743	0.0035	2.145	23472.58	27496.02	27496.02	3.63	No	Si
SLU 74	1.42	-3749.26	-31865	-0.0000727	0.0003743	0.0035	2.145	23093.78	27019.4	27019.4	7.21	No	Si
SLU 83	1.02	-7778.17	-34260	-0.0000986	0.0003743	0.0035	2.145	23934.33	28132.99	28132.99	3.62	No	Si
SLU 83	1.42	-3845.91	-33225	-0.0000759	0.0003743	0.0035	2.145	23586.27	27646.54	27646.54	7.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.02	-7596.78	-14001	-0.0000614	0.0005615	0.0035	2.145		15132.68	15132.68	1.99		Si
SLV 15	1.42	-1508.95	-14449	-0.0000298	0.0005615	0.0035	2.145		15535.39	15535.39	10.3		Si
SLD 16	1.02	-6487.24	-18849	-0.0000601	0.0005615	0.0035	2.145		19416.19	19416.19	2.99		Si
SLD 16	1.42	-2111.95	-18593	-0.0000394	0.0005615	0.0035	2.145		19197.38	19197.38	9.09		Si
SLV 13	1.02	-6257.3	-12391	-0.0000503	0.0005615	0.0035	2.145		13631.3	13631.3	2.18		Si
SLV 13	1.42	-1488.38	-11667	-0.0000252	0.0005615	0.0035	2.145		12955.44	12955.44	8.7		Si
SLD 15	1.02	-6270.73	-18736	-0.0000589	0.0005615	0.0035	2.145		19319.67	19319.67	3.08		Si
SLD 15	1.42	-2112.18	-18479	-0.0000393	0.0005615	0.0035	2.145		19100.31	19100.31	9.04		Si
SLV 14	1.02	-6761.56	-12655	-0.0000544	0.0005615	0.0035	2.145		13878.4	13878.4	2.05		Si
SLV 14	1.42	-1487.85	-11931	-0.0000256	0.0005615	0.0035	2.145		13201.48	13201.48	8.87		Si
SLD 13	1.02	-5696.79	-18046	-0.000055	0.0005615	0.0035	2.145		18728.09	18728.09	3.29		Si
SLD 13	1.42	-2102.68	-17288	-0.0000372	0.0005615	0.0035	2.145		18072.66	18072.66	8.6		Si
SLD 14	1.02	-5913.3	-18159	-0.0000562	0.0005615	0.0035	2.145		18825.62	18825.62	3.18		Si
SLD 14	1.42	-2102.46	-17402	-0.0000374	0.0005615	0.0035	2.145		18170.99	18170.99	8.64		Si
SLV 12	1.02	-8243.43	-22361	-0.0000746	0.0005615	0.0035	2.145		22374.57	22374.57	2.71		Si
SLV 12	1.42	-2275.31	-23719	-0.0000489	0.0005615	0.0035	2.145		23480.07	23480.07	10.32		Si
SLV 16	1.02	-8101.03	-14265	-0.0000659	0.0005615	0.0035	2.145		15371.31	15371.31	1.9		Si
SLV 16	1.42	-1508.42	-14713	-0.0000302	0.0005615	0.0035	2.145		15770.27	15770.27	10.45		Si
SLV 11	1.02	-7918.47	-22191	-0.0000727	0.0005615	0.0035	2.145		22236.68	22236.68	2.81		Si
SLV 11	1.42	-2275.65	-23549	-0.0000486	0.0005615	0.0035	2.145		23341.1	23341.1	10.26		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.02	-7660.23	-33263	-29567	-9578	2.145	2.145	-30632	10833	10457	33304	28904	5470	34374	No	3.59	Si
SLU 77	1.42	-3807.4	-32227	-28647	-9578	2.145	2.145	-29678	10833	10457	33304	28904	5470	34374	No	3.59	Si
SLU 74	1.02	-7572.29	-32900	-29245	-9503	2.145	2.145	-30298	10833	10457	33304	28904	5470	34374	No	3.62	Si
SLU 74	1.42	-3749.26	-31865	-28324	-9503	2.145	2.145	-29344	10833	10457	33304	28904	5470	34374	No	3.62	Si
SLU 80	1.02	-7604.94	-33039	-29368	-9569	2.145	2.145	-30425	10833	10457	33304	28904	5470	34374	No	3.59	Si
SLU 80	1.42	-3755.6	-32003	-28447	-9569	2.145	2.145	-29471	10833	10457	33304	28904	5470	34374	No	3.59	Si
SLU 78	1.02	-7659.44	-33265	-29569	-9589	2.145	2.145	-30633	10833	10457	33304	28904	5470	34374	No	3.58	Si
SLU 78	1.42	-3802.14	-32229	-28648	-9589	2.145	2.145	-29680	10833	10457	33304	28904	5470	34374	No	3.58	Si
SLU 84	1.02	-7777.38	-34262	-30455	-9788	2.145	2.145	-31552	10833	10457	33304	28904	5470	34374	No	3.51	Si
SLU 84	1.42	-3840.65	-33226	-29534	-9788	2.145	2.145	-30598	10833	10457	33304	28904	5470	34374	No	3.51	Si
SLU 79	1.02	-7605.72	-33037	-29366	-9558	2.145	2.145	-30424	10833	10457	33304	28904	5470	34374	No	3.6	Si
SLU 79	1.42	-3760.86	-32001	-28446	-9558	2.145	2.145	-29470	10833	10457	33304	28904	5470	34374	No	3.6	Si
SLU 81	1.02	-7690.23	-33897	-30131	-9702	2.145	2.145	-31216	10833	10457	33304	28904	5470	34374	No	3.54	Si
SLU 81	1.42	-3787.77	-32862	-29210	-9702	2.145	2.145	-30262	10833	10457	33304	28904	5470	34374	No	3.54	Si
SLU 75	1.02	-7571.5	-32902	-29246	-9515	2.145	2.145	-30299	10833	10457	33304	28904	5470	34374	No	3.61	Si
SLU 75	1.42	-3743.99	-31866	-28326	-9515	2.145	2.145	-29345	10833	10457	33304	28904	5470	34374	No	3.61	Si
SLU 82	1.02	-7689.44	-33899	-30133	-9713	2.145	2.145	-31217	10833	10457	33304	28904	5470	34374	No	3.54	Si
SLU 82	1.42	-3782.51	-32863	-29212	-9713	2.145	2.145	-30263	10833	10457	33304	28904	5470	34374	No	3.54	Si
SLU 83	1.02	-7778.17	-34260	-30454	-9776	2.145	2.145	-31550	10833	10457	33304	28904	5470	34374	No	3.52	Si
SLU 83	1.42	-3845.91	-33225	-29533	-9776	2.145	2.145	-30596	10833	10457	33304	28904	5470	34374	No	3.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	1.02	-6270.73	-18736	-16654	-10216	2.145	2.145	-17254	13867	13386	33304	43356	5470	46690		4.57	Si
SLD 15	1.42	-2112.18	-18479	-16426	-10089	2.145	2.145	-17017	13820	13340	33304	43356	5470	46644		4.62	Si
SLV 13	1.02	-6257.3	-12391	-11014	-14169	2.145	1.7026	-14475	13312	10199	33304	43356	5470	43503		3.07	Si
SLV 13	1.42	-1488.38	-11667	-10371	-14083	2.145	2.145	-10744	12566	12129	33304	43356	5470	45433		3.23	Si
SLD 14	1.02	-5913.3	-18159	-16142	-10465	2.145	2.145	-16723	13761	13283	33304	43356	5470	46587		4.45	Si
SLD 14	1.42	-2102.46	-17402	-15468	-10427	2.145	2.145	-16025	13622	13148	33304	43356	5470	46453		4.45	Si
SLV 15	1.02	-7596.78	-14001	-12445	-14852	2.145	1.5897	-17548	13927	9963	33304	43356	5470	43267		2.91	Si
SLV 15	1.42	-1508.95	-14449	-12844	-14557	2.145	2.145	-13306	13078	12623	33304	43356	5470	45928		3.15	Si
SLV 14	1.02	-6761.56	-12655	-11249	-15431	2.145	1.6146	-15601	13537	9836	33304	43356	5470	43140		2.8	Si
SLV 14	1.42	-1487.85	-11931	-10606	-15345	2.145	2.145	-10987	12614	12176	33304	43356	5470	45480		2.96	Si
SLD 13	1.02	-5696.79	-18046	-16041	-9923	2.145	2.145	-16618	13740	13263	33304	43356	5470	46567		4.69	Si
SLD 13	1.42	-2102.68	-17288	-15367	-9885	2.145	2.145	-15921	13601	13128	33304	43356	5470	46432		4.7	Si
SLV 16	1.02	-8101.03	-14265	-12680	-16114	2.145	1.5138	-18787	14174	9656	33304	43356	5470	42960		2.67	Si
SLV 16	1.42	-1508.42	-14713	-13078	-15819	2.145	2.145	-13549	13127	12670	33304	43356	5470	45975		2.91	Si
SLV 12	1.02	-8243.43	-22361	-19877	-10816	2.145	2.1116	-20592	14535	13811	33304	43356	5470	47116		4.36	Si
SLV 12	1.42	-2275.31	-23719	-21083	-10410	2.145	2.145	-21842	14785	14271	33304	43356	5470	47576		4.57	Si
SLV 11	1.02	-7918.47	-22191	-19726	-10003	2.145	2.145	-20436	14504	14000	33304	43356	5470	47304		4.73	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.42	-2275.65	-23549	-20932	-9597	2.145	2.145	-21686	14754	14241	33304	43356	5470	47545		4.95	Si
SLD 16	1.02	-6487.24	-18849	-16755	-10758	2.145	2.145	-17358	13888	13406	33304	43356	5470	46710		4.34	Si
SLD 16	1.42	-2111.95	-18593	-16527	-10631	2.145	2.145	-17122	13841	13360	33304	43356	5470	46664		4.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	14342	-13844	168.56	2822.3	16.74	Si
SLV 14	179667	0.25	14391	-13891	168.56	2831	16.8	Si
SLV 15	179667	0.25	15400	-14864	168.56	3007.26	17.84	Si
SLV 16	179667	0.25	15449	-14912	168.56	3015.8	17.89	Si
SLV 9	179667	0.25	20946	-20218	168.56	3925.19	23.29	Si
SLV 10	179667	0.25	20978	-20249	168.56	3930.19	23.32	Si
SLV 11	179667	0.25	24472	-23621	168.56	4463.11	26.48	Si
SLV 12	179667	0.25	24503	-23652	168.56	4467.8	26.51	Si
SLV 5	179667	0.25	27657	-26696	168.56	4918.8	29.18	Si
SLV 6	179667	0.25	27689	-26727	168.56	4923.2	29.21	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21397	-26154	678	0.558	2583.1	0.954	8.50092	4.30116	Si
SLV 7	-21295	-26180	680	0.56	2572.8	0.954	8.5325	4.30116	Si
SLV 12	-18249	-20547	684	0.631	2263.5	0.949	9.66434	4.30116	Si
SLV 11	-18148	-20573	686	0.633	2253.1	0.948	9.70678	4.30116	Si
SLV 6	-13341	-29571	-1479	0.752	1766	0.936	11.66969	4.30116	Si
SLV 5	-13239	-29597	-1477	0.756	1755.7	0.936	11.74274	4.30116	Si
SLV 4	-22277	-33885	-84	0.565	2672.6	0.956	8.59241	3.0673	Si
SLV 3	-22120	-33926	-81	0.568	2656.6	0.955	8.64381	3.0673	Si
SLV 2	-19861	-34911	-731	0.589	2427.1	0.952	8.99244	3.0673	Si
SLV 1	-19703	-34951	-728	0.593	2411	0.951	9.05251	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.611	SLU 77	Si
V_SLU	3.512	SLU 84	Si
PF_SLV	1.897	SLV 16	Si
V_SLV	2.666	SLV 16	Si
PFFP_SLV	16.744	SLV 13	Si
R_SLV	1.976	SLV 8	Si

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	2.271	-19.618	4.851	L2	L4	2.58	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-0.98	-6901.33	-78411	-0.0002461	0.0004492	0.0035	2.58	17286.01	42422.55	42422.55	6.15	No	Si
SLU 79	1.02	3209.58	-73663	-0.0002007	0.0004492	0.0035	2.58	21010.27	42814	42814	13.34	No	Si
SLU 82	-0.98	-6993.32	-79979	-0.0002534	0.0004492	0.0035	2.58	15921.26	41982.4	41982.4	6	No	Si
SLU 82	1.02	3209.76	-75207	-0.0002062	0.0004492	0.0035	2.58	19866.3	42754.23	42754.23	13.32	No	Si
SLU 83	-0.98	-6977.23	-80769	-0.0002568	0.0004492	0.0035	2.58	15208.48	41761.3	41761.3	5.99	No	Si
SLU 83	1.02	3219.19	-75985	-0.0002091	0.0004492	0.0035	2.58	19265.54	42724.66	42724.66	13.27	No	Si
SLU 78	-0.98	-7031.37	-78900	-0.0002492	0.0004492	0.0035	2.58	16867.47	42285.08	42285.08	6.01	No	Si
SLU 78	1.02	3255.49	-74143	-0.0002027	0.0004492	0.0035	2.58	20661.5	42795.26	42795.26	13.15	No	Si
SLU 75	-0.98	-6949.28	-78113	-0.0002453	0.0004492	0.0035	2.58	17537.63	42506.33	42506.33	6.12	No	Si
SLU 75	1.02	3214.57	-73369	-0.0001997	0.0004492	0.0035	2.58	21220.42	42825.52	42825.52	13.32	No	Si
SLU 81	-0.98	-6895.14	-79982	-0.0002527	0.0004492	0.0035	2.58	15918.75	41981.61	41981.61	6.09	No	Si
SLU 81	1.02	3178.27	-75211	-0.000206	0.0004492	0.0035	2.58	19863.35	42754.08	42754.08	13.45	No	Si
SLU 84	-0.98	-7075.41	-80766	-0.0002576	0.0004492	0.0035	2.58	15211.05	41762.08	41762.08	5.9	No	Si
SLU 84	1.02	3250.68	-75981	-0.0002093	0.0004492	0.0035	2.58	19268.57	42724.81	42724.81	13.14	No	Si
SLU 76	-0.98	-6982.89	-77620	-0.0002435	0.0004492	0.0035	2.58	17949.56	42645.37	42645.37	6.11	No	Si
SLU 76	1.02	3221.15	-72882	-0.000198	0.0004492	0.0035	2.58	21563.55	42844.73	42844.73	13.3	No	Si
SLU 77	-0.98	-6933.18	-78903	-0.0002484	0.0004492	0.0035	2.58	16865.04	42284.29	42284.29	6.1	No	Si
SLU 77	1.02	3223.99	-74147	-0.0002025	0.0004492	0.0035	2.58	20658.67	42795.11	42795.11	13.27	No	Si
SLU 80	-0.98	-6999.52	-78408	-0.0002469	0.0004492	0.0035	2.58	17288.4	42423.35	42423.35	6.06	No	Si
SLU 80	1.02	3241.07	-73659	-0.0002009	0.0004492	0.0035	2.58	21013.06	42814.15	42814.15	13.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	-0.98	-10730.22	-51477	-0.0001636	0.0006738	0.0035	2.58		49626.86	49626.86	4.62		Si
SLD 10	1.02	4653.99	-47823	-0.0001228	0.0006738	0.0035	2.58		46521.02	46521.02	10		Si
SLV 6	-0.98	-19503.08	-57372	-0.0002278	0.0006738	0.0035	2.58		53097.05	53097.05	2.72		Si
SLV 6	1.02	7749.95	-53320	-0.0001523	0.0006738	0.0035	2.58		49458.24	49458.24	6.38		Si
SLV 10	-0.98	-18105.33	-48167	-0.0001949	0.0006738	0.0035	2.58		47693.35	47693.35	2.63		Si
SLV 10	1.02	7623.6	-44385	-0.00013	0.0006738	0.0035	2.58		43886.67	43886.67	5.76		Si
SLV 9	-0.98	-19515.84	-47743	-0.0002015	0.0006738	0.0035	2.58		47449.2	47449.2	2.43		Si
SLV 9	1.02	8076.62	-43950	-0.0001313	0.0006738	0.0035	2.58		43547.68	43547.68	5.39		Si
SLD 9	-0.98	-11346.3	-51291	-0.0001664	0.0006738	0.0035	2.58		49517.39	49517.39	4.36		Si
SLD 9	1.02	4851.86	-47633	-0.0001233	0.0006738	0.0035	2.58		46398.22	46398.22	9.56		Si
SLV 5	-0.98	-20913.59	-56948	-0.0002347	0.0006738	0.0035	2.58		52890.77	52890.77	2.53		Si
SLV 5	1.02	8202.97	-52885	-0.0001536	0.0006738	0.0035	2.58		49226.44	49226.44	6		Si
SLD 5	-0.98	-11940.51	-55217	-0.0001797	0.0006738	0.0035	2.58		51872.72	51872.72	4.34		Si
SLD 5	1.02	4904.24	-51438	-0.0001326	0.0006738	0.0035	2.58		48457.76	48457.76	9.88		Si
SLV 12	-0.98	11085.05	-50994	-0.0001643	0.0006738	0.0035	2.58		48222.3	48222.3	4.35		Si
SLV 12	1.02	-3578.72	-47948	-0.0001175	0.0006738	0.0035	2.58		47567.19	47567.19	13.29		Si
SLD 6	-0.98	-11324.43	-55402	-0.0001768	0.0006738	0.0035	2.58		51985.42	51985.42	4.59		Si
SLD 6	1.02	4706.37	-51628	-0.0001321	0.0006738	0.0035	2.58		48558.4	48558.4	10.32		Si
SLV 1	-0.98	-12716.8	-68560	-0.0002201	0.0006738	0.0035	2.58		57726.2	57726.2	4.54		Si
SLV 1	1.02	4554.55	-64436	-0.0001628	0.0006738	0.0035	2.58		55498.74	55498.74	12.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	-6933.18	-78903	-66445	-5742	2.58	2.58	-85846	10833	8385	33304	27816	6579	34395	No	5.99	Si
SLU 77	1.02	3223.99	-74147	-62440	-4960	2.58	2.58	-80671	10833	8385	33304	27816	6579	34395	No	6.94	Si
SLU 83	-0.98	-6977.23	-80769	-68016	-5776	2.58	2.58	-87876	10833	8385	33304	27816	6579	34395	No	5.95	Si
SLU 83	1.02	3219.19	-75985	-63988	-4978	2.58	2.58	-82671	10833	8385	33304	27816	6579	34395	No	6.91	Si
SLU 79	-0.98	-6901.33	-78411	-66030	-5714	2.58	2.58	-85311	10833	8385	33304	27816	6579	34395	No	6.02	Si
SLU 79	1.02	3209.58	-73663	-62032	-4937	2.58	2.58	-80144	10833	8385	33304	27816	6579	34395	No	6.97	Si
SLU 82	-0.98	-6993.32	-79979	-67351	-5773	2.58	2.58	-87016	10833	8385	33304	27816	6579	34395	No	5.96	Si
SLU 82	1.02	3209.76	-75207	-63333	-4982	2.58	2.58	-81825	10833	8385	33304	27816	6579	34395	No	6.9	Si
SLU 80	-0.98	-6999.52	-78408	-66028	-5780	2.58	2.58	-85308	10833	8385	33304	27816	6579	34395	No	5.95	Si
SLU 80	1.02	3241.07	-73659	-62029	-5001	2.58	2.58	-80140	10833	8385	33304	27816	6579	34395	No	6.88	Si
SLU 76	-0.98	-6982.89	-77620	-65364	-5755	2.58	2.58	-84449	10833	8385	33304	27816	6579	34395	No	5.98	Si
SLU 76	1.02	3221.15	-72882	-61375	-4984	2.58	2.58	-79295	10833	8385	33304	27816	6579	34395	No	6.9	Si
SLU 81	-0.98	-6895.14	-79982	-67353	-5707	2.58	2.58	-87019	10833	8385	33304	27816	6579	34395	No	6.03	Si
SLU 81	1.02	3178.27	-75211	-63336	-4918	2.58	2.58	-81829	10833	8385	33304	27816	6579	34395	No	6.99	Si
SLU 84	-0.98	-7075.41	-80766	-68013	-5841	2.58	2.58	-87872	10833	8385	33304	27816	6579	34395	No	5.89	Si
SLU 84	1.02	3250.68	-75981	-63984	-5042	2.58	2.58	-82667	10833	8385	33304	27816	6579	34395	No	6.82	Si
SLU 75	-0.98	-6949.28	-78113	-65780	-5739	2.58	2.58	-84987	10833	8385	33304	27816	6579	34395	No	5.99	Si
SLU 75	1.02	3214.57	-73369	-61784	-4964	2.58	2.58	-79825	10833	8385	33304	27816	6579	34395	No	6.93	Si
SLU 78	-0.98	-7031.37	-78900	-66442	-5807	2.58	2.58	-85843	10833	8385	33304	27816	6579	34395	No	5.92	Si
SLU 78	1.02	3255.49	-74143	-62436	-5024	2.58	2.58	-80667	10833	8385	33304	27816	6579	34395	No	6.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	-0.98	-20913.59	-56948	-47956	-15380	2.58	2.58	-61959	16250	12577	33304	41723	6579	45882		2.98	Si
SLV 5	1.02	8202.97	-52885	-44535	-14433	2.58	2.58	-57538	16250	12577	33304	41723	6579	45882		3.18	Si
SLV 1	-0.98	-12716.8	-68560	-57735	-9613	2.58	2.58	-74593	16250	12577	33304	41723	6579	45882		4.77	Si
SLV 1	1.02	4554.55	-64436	-54262	-8389	2.58	2.58	-70106	16250	12577	33304	41723	6579	45882		5.47	Si
SLV 10	-0.98	-18105.33	-48167	-40561	-13411	2.58	2.58	-52405	16250	12577	33304	41723	6579	45882		3.42	Si
SLV 10	1.02	7623.6	-44385	-37377	-12845	2.58	2.58	-48290	16250	12577	33304	41723	6579	45882		3.57	Si
SLD 5	-0.98	-11940.51	-55217	-46499	-9036	2.58	2.58	-60076	16250	12577	33304	41723	6579	45882		5.08	Si
SLD 5	1.02	4904.24	-51438	-43316	-8324	2.58	2.58	-55964	16250	12577	33304	41723	6579	45882		5.51	Si
SLD 6	-0.98	-11324.43	-55402	-46654	-8626	2.58	2.58	-60277	16250	12577	33304	41723	6579	45882		5.32	Si
SLD 6	1.02	4706.37	-51628	-43476	-7922	2.58	2.58	-56170	16250	12577	33304	41723	6579	45882		5.79	Si
SLD 9	-0.98	-11346.3	-51291	-43193	-8596	2.58	2.58	-55805	16250	12577	33304	41723	6579	45882		5.34	Si
SLD 9	1.02	4851.86	-47633	-40112	-8039	2.58	2.58	-51824	16250	12577	33304	41723	6579	45882		5.71	Si
SLD 10	-0.98	-10730.22	-51477	-43349	-8187	2.58	2.58	-56006	16250	12577	33304	41723	6579	45882		5.6	Si
SLD 10	1.02	4653.99	-47823	-40272	-7637	2.58	2.58	-52031	16250	12577	33304	41723	6579	45882		6.01	Si
SLV 9	-0.98	-19515.84	-47743	-40204	-14349	2.58	2.58	-51944	16250	12577	33304	41723	6579	45882		3.2	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	1.02	8076.62	-43950	-37011	-13765	2.58	2.58	-47817	16250	12577	33304	41723	6579	45882		3.33	Si
SLV 6	-0.98	-19503.08	-57372	-48313	-14442	2.58	2.58	-62420	16250	12577	33304	41723	6579	45882		3.18	Si
SLV 6	1.02	7749.95	-53320	-44901	-13513	2.58	2.58	-58011	16250	12577	33304	41723	6579	45882		3.4	Si
SLV 2	-0.98	-10528.02	-69218	-58289	-8157	2.58	2.58	-75309	16250	12577	33304	41723	6579	45882		5.62	Si
SLV 2	1.02	3851.56	-65111	-54830	-6962	2.58	2.58	-70840	16250	12577	33304	41723	6579	45882		6.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	215625	0.25	46265	-35809	130.33	4015.51	30.81	Si
SLV 14	215625	0.25	47115	-36467	130.33	4063.9	31.18	Si
SLV 15	215625	0.25	47644	-36877	130.33	4093.58	31.41	Si
SLV 16	215625	0.25	48494	-37534	130.33	4140.49	31.77	Si
SLV 9	215625	0.25	58447	-45238	130.33	4621.78	35.46	Si
SLV 10	215625	0.25	58994	-45662	130.33	4644.62	35.64	Si
SLV 11	215625	0.25	63044	-48796	130.33	4801.7	36.84	Si
SLV 12	215625	0.25	63591	-49220	130.33	4821.35	36.99	Si
SLV 5	215625	0.25	70137	-54286	130.33	5026.84	38.57	Si
SLV 6	215625	0.25	70685	-54710	130.33	5041.57	38.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-37159	-60199	-139	0.419	4107	0.976	6.24257	5.87132	Si
SLV 7	-36901	-59775	-139	0.421	4080.8	0.975	6.27957	5.87132	Si
SLV 6	-35996	-57372	-162	0.43	3988.6	0.975	6.40549	5.87132	Si
SLV 5	-35738	-56948	-163	0.432	3962.4	0.975	6.44479	5.87132	Si
SLV 12	-31366	-50994	307	0.478	3517.1	0.972	7.14666	5.87132	Si
SLV 11	-31109	-50570	307	0.481	3490.9	0.972	7.19802	5.87132	Si
SLV 10	-30204	-48167	284	0.494	3398.7	0.971	7.39484	5.87132	Si
SLV 9	-29946	-47743	283	0.498	3372.5	0.971	7.45016	5.87132	Si
SLV 4	-43580	-70066	-667	0.356	4761.2	0.979	5.28059	3.44478	Si
SLV 2	-43231	-69218	-674	0.358	4725.7	0.979	5.31397	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.902	SLU 84	Si
V_SLU	5.888	SLU 84	Si
PF_SLV	2.431	SLV 9	Si
V_SLV	2.983	SLV 5	Si
PFFP_SLV	30.809	SLV 13	Si
R_SLV	1.063	SLV 8	Si

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.284	-24.653	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	1.02	-2736.29	-26134	-0.000058	0.0003743	0.0035	2.11	20117.81	23241.86	23241.86	8.49	No	Si
SLU 41	1.42	-750.37	-25278	-0.0000464	0.0003743	0.0035	2.11	19695.01	22688.66	22688.66	30.24	No	Si
SLU 74	1.02	-3033.14	-29482	-0.0000659	0.0003743	0.0035	2.11	21617.59	25278.18	25278.18	8.33	No	Si
SLU 74	1.42	-721.77	-28345	-0.0000519	0.0003743	0.0035	2.11	21135.55	24601.03	24601.03	34.08	No	Si
SLU 77	1.02	-3056.58	-29832	-0.0000667	0.0003743	0.0035	2.11	21760.42	25471.96	25471.96	8.33	No	Si
SLU 77	1.42	-712.82	-28688	-0.0000525	0.0003743	0.0035	2.11	21284.25	24806.44	24806.44	34.8	No	Si
SLU 32	1.02	-2597.01	-25015	-0.0000552	0.0003743	0.0035	2.11	19561.87	22519.89	22519.89	8.67	No	Si
SLU 32	1.42	-664.3	-24144	-0.0000439	0.0003743	0.0035	2.11	19110.2	21965.14	21965.14	33.07	No	Si
SLU 60	1.02	-2803.66	-27211	-0.0000604	0.0003743	0.0035	2.11	20626.76	23922.39	23922.39	8.53	No	Si
SLU 60	1.42	-679.14	-26093	-0.0000475	0.0003743	0.0035	2.11	20097.57	23214.75	23214.75	34.18	No	Si
SLU 39	1.02	-2712.85	-25784	-0.0000572	0.0003743	0.0035	2.11	19946.71	23014.72	23014.72	8.48	No	Si
SLU 39	1.42	-759.33	-24935	-0.0000458	0.0003743	0.0035	2.11	19520.72	22468.23	22468.23	29.59	No	Si
SLU 81	1.02	-3148.98	-30251	-0.000068	0.0003743	0.0035	2.11	21927.49	25694.43	25694.43	8.16	No	Si
SLU 81	1.42	-816.8	-29135	-0.0000538	0.0003743	0.0035	2.11	21473.61	25074.71	25074.71	30.7	No	Si
SLU 62	1.02	-2827.1	-27561	-0.0000612	0.0003743	0.0035	2.11	20786.96	24134.44	24134.44	8.54	No	Si
SLU 62	1.42	-670.19	-26436	-0.0000481	0.0003743	0.0035	2.11	20263.17	23438.5	23438.5	34.97	No	Si
SLU 83	1.02	-3172.42	-30601	-0.0000688	0.0003743	0.0035	2.11	22064.44	25865.58	25865.58	8.15	No	Si
SLU 83	1.42	-807.85	-29479	-0.0000544	0.0003743	0.0035	2.11	21616.38	25276.51	25276.51	31.29	No	Si
SLU 79	1.02	-3040.13	-29637	-0.0000663	0.0003743	0.0035	2.11	21681.1	25364.72	25364.72	8.34	No	Si
SLU 79	1.42	-717.06	-28499	-0.0000521	0.0003743	0.0035	2.11	21202.48	24692.92	24692.92	34.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.02	-2201.24	-10813	-0.0000276	0.0005615	0.0035	2.11		11950.55	11950.55	5.43		Si
SLV 16	1.42	-310.8	-9956	-0.0000174	0.0005615	0.0035	2.11		11153.3	11153.3	35.89		Si
SLV 10	1.02	-1923.74	-17314	-0.0000372	0.0005615	0.0035	2.11		17776.01	17776.01	9.24		Si
SLV 10	1.42	2140.07	-14488	-0.0000335	0.0005615	0.0035	2.11		14276.57	14276.57	6.67		Si
SLV 9	1.02	-2150.21	-17684	-0.0000389	0.0005615	0.0035	2.11		18090.14	18090.14	8.41		Si
SLV 9	1.42	2098.22	-14683	-0.0000336	0.0005615	0.0035	2.11		14436.93	14436.93	6.88		Si
SLV 13	1.02	-2491.15	-11438	-0.00003	0.0005615	0.0035	2.11		12526.74	12526.74	5.03		Si
SLV 13	1.42	1018.07	-9208	-0.0000195	0.0005615	0.0035	2.11		9450.48	9450.48	9.28		Si
SLV 15	1.02	-2552.67	-11386	-0.0000302	0.0005615	0.0035	2.11		12479.36	12479.36	4.89		Si
SLV 15	1.42	-375.74	-10259	-0.0000182	0.0005615	0.0035	2.11		11435.73	11435.73	30.44		Si
SLD 15	1.02	-2264.16	-16380	-0.0000372	0.0005615	0.0035	2.11		16963.62	16963.62	7.49		Si
SLD 15	1.42	-415.46	-15401	-0.0000269	0.0005615	0.0035	2.11		16099.97	16099.97	38.75		Si
SLD 13	1.02	-2240.63	-16393	-0.0000371	0.0005615	0.0035	2.11		16974.64	16974.64	7.58		Si
SLD 13	1.42	181.73	-14935	-0.000025	0.0005615	0.0035	2.11		14641.8	14641.8	80.57		Si
SLV 14	1.02	-2139.72	-10865	-0.0000274	0.0005615	0.0035	2.11		11998.56	11998.56	5.61		Si
SLV 14	1.42	1083	-8906	-0.0000193	0.0005615	0.0035	2.11		9163.18	9163.18	8.46		Si
SLV 11	1.02	-2355.25	-17511	-0.0000396	0.0005615	0.0035	2.11		17943.49	17943.49	7.62		Si
SLV 11	1.42	-2547.8	-18185	-0.0000417	0.0005615	0.0035	2.11		18513.88	18513.88	7.27		Si
SLV 12	1.02	-2128.78	-17142	-0.0000379	0.0005615	0.0035	2.11		17628.77	17628.77	8.28		Si
SLV 12	1.42	-2505.95	-17990	-0.0000411	0.0005615	0.0035	2.11		18349.14	18349.14	7.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	1.02	-2682.03	-29070	-25840	-6778	2.11	2.11	-27214	10573	10039	33304	28432	5380	33813	No	4.99	Si
SLU 76	1.42	-229.3	-27868	-24772	-6836	2.11	2.11	-26089	10423	9897	33304	28432	5380	33813	No	4.95	Si
SLU 73	1.02	-2658.59	-28720	-25529	-6680	2.11	2.11	-26886	10529	9998	33304	28432	5380	33813	No	5.06	Si
SLU 73	1.42	-238.26	-27524	-24466	-6737	2.11	2.11	-25767	10380	9856	33304	28432	5380	33813	No	5.02	Si
SLU 77	1.02	-3056.58	-29832	-26517	-6351	2.11	2.11	-27928	10668	10129	33304	28432	5380	33813	No	5.32	Si
SLU 77	1.42	-712.82	-28688	-25501	-6411	2.11	2.11	-26857	10525	9994	33304	28432	5380	33813	No	5.27	Si
SLU 75	1.02	-2832.35	-29352	-26091	-6608	2.11	2.11	-27478	10608	10073	33304	28432	5380	33813	No	5.12	Si
SLU 75	1.42	-423.74	-28173	-25042	-6666	2.11	2.11	-26374	10461	9933	33304	28432	5380	33813	No	5.07	Si
SLU 83	1.02	-3172.42	-30601	-27201	-6346	2.11	2.11	-28648	10764	10221	33304	28432	5380	33813	No	5.33	Si
SLU 83	1.42	-807.85	-29479	-26203	-6406	2.11	2.11	-27597	10624	10088	33304	28432	5380	33813	No	5.28	Si
SLU 84	1.02	-2971.62	-30471	-27085	-6700	2.11	2.11	-28526	10748	10205	33304	28432	5380	33813	No	5.05	Si
SLU 84	1.42	-509.82	-29307	-26050	-6760	2.11	2.11	-27436	10603	10067	33304	28432	5380	33813	No	5	Si
SLU 68	1.02	-2318.65	-26003	-23114	-6408	2.11	2.11	-24343	10190	9676	33304	28432	5380	33813	No	5.28	Si
SLU 68	1.42	-38.37	-24779	-22026	-6461	2.11	2.11	-23197	10037	9531	33304	28432	5380	33813	No	5.23	Si
SLU 80	1.02	-2839.33	-29507	-26228	-6639	2.11	2.11	-27623	10628	10091	33304	28432	5380	33813	No	5.09	Si
SLU 80	1.42	-419.03	-28327	-25179	-6698	2.11	2.11	-26518	10480	9951	33304	28432	5380	33813	No	5.05	Si
SLU 78	1.02	-2855.79	-29702	-26402	-6706	2.11	2.11	-27806	10652	10114	33304	28432	5380	33813	No	5.04	Si
SLU 78	1.42	-414.79	-28516	-25348	-6765	2.11	2.11	-26696	10504	9973	33304	28432	5380	33813	No	5	Si
SLU 82	1.02	-2948.18	-30121	-26774	-6602	2.11	2.11	-28198	10704	10164	33304	28432	5380	33813	No	5.12	Si
SLU 82	1.42	-518.77	-28963	-25745	-6662	2.11	2.11	-27114	10560	10026	33304	28432	5380	33813	No	5.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.02	-2139.72	-10865	-9657	-10821	2.11	2.11	-10171	12451	11822	33304	42648	5380	45126		4.17	Si
SLV 14	1.42	1083	-8906	-7916	-10220	2.11	2.11	-8337	12084	11474	33304	42648	5380	44778		4.38	Si
SLD 9	1.02	-2098.96	-19056	-16938	-7677	2.11	2.11	-17839	13985	13278	33304	42648	5380	46583		6.07	Si
SLD 9	1.42	645.36	-17258	-15341	-7639	2.11	2.11	-16156	13648	12959	33304	42648	5380	46263		6.06	Si
SLV 13	1.02	-2491.15	-11438	-10167	-12251	2.11	2.11	-10708	12558	11924	33304	42648	5380	45228		3.69	Si
SLV 13	1.42	1018.07	-9208	-8185	-11649	2.11	2.11	-8620	12141	11528	33304	42648	5380	44832		3.85	Si
SLV 10	1.02	-1923.74	-17314	-15391	-11050	2.11	2.11	-16209	13658	12969	33304	42648	5380	46273		4.19	Si
SLV 10	1.42	2140.07	-14488	-12878	-10909	2.11	2.11	-13563	13129	12466	33304	42648	5380	45771		4.2	Si
SLD 13	1.02	-2240.63	-16393	-14571	-7770	2.11	2.11	-15346	13486	12805	33304	42648	5380	46109		5.93	Si
SLD 13	1.42	181.73	-14935	-13275	-7534	2.11	2.11	-13981	13213	12546	33304	42648	5380	45850		6.09	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.02	-2552.67	-11386	-10121	-8971	2.11	2.11	-10659	12549	11915	33304	42648	5380	45219		5.04	Si
SLV 15	1.42	-375.74	-10259	-9119	-8362	2.11	2.11	-9604	12337	11714	33304	42648	5380	45019		5.38	Si
SLV 5	1.02	-1973.03	-23073	-20509	-8670	2.11	2.11	-21600	14737	13993	33304	42648	5380	47297		5.46	Si
SLV 5	1.42	1620.37	-20472	-18197	-8917	2.11	2.11	-19165	14250	13530	33304	42648	5380	46834		5.25	Si
SLV 9	1.02	-2150.21	-17684	-15719	-11971	2.11	2.11	-16555	13728	13034	33304	42648	5380	46339		3.87	Si
SLV 9	1.42	2098.22	-14683	-13051	-11831	2.11	2.11	-13746	13166	12501	33304	42648	5380	45805		3.87	Si
SLV 16	1.02	-2201.24	-10813	-9611	-7541	2.11	2.11	-10123	12441	11813	33304	42648	5380	45117		5.98	Si
SLV 16	1.42	-310.8	-9956	-8850	-6933	2.11	2.11	-9321	12281	11661	33304	42648	5380	44965		6.49	Si
SLV 6	1.02	-1746.56	-22704	-20181	-7749	2.11	2.11	-21254	14668	13927	33304	42648	5380	47231		6.1	Si
SLV 6	1.42	1662.21	-20277	-18024	-7996	2.11	2.11	-18983	14213	13495	33304	42648	5380	46800		5.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.25	8907	-8457	159.89	1791.92	11.21	Si
SLV 16	179667	0.25	9269	-8801	159.89	1860.02	11.63	Si
SLV 13	179667	0.25	9330	-8859	159.89	1871.55	11.71	Si
SLV 15	179667	0.25	9692	-9203	159.89	1939.21	12.13	Si
SLV 10	179667	0.25	14899	-14146	159.89	2872.37	17.96	Si
SLV 9	179667	0.25	15171	-14405	159.89	2919.17	18.26	Si
SLV 12	179667	0.25	16105	-15291	159.89	3077.72	19.25	Si
SLV 11	179667	0.25	16377	-15550	159.89	3123.59	19.54	Si
SLV 6	179667	0.25	20331	-19305	159.89	3765.27	23.55	Si
SLV 5	179667	0.25	20604	-19564	159.89	3807.92	23.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-21738	-17953	1286	0.519	2611.1	0.955	7.8947	4.30116	Si
SLV 8	-21596	-17646	1292	0.521	2596.6	0.955	7.93244	4.30116	Si
SLV 5	-18154	-24651	-1788	0.571	2247.1	0.949	8.7511	4.30116	Si
SLV 6	-18012	-24344	-1782	0.575	2232.7	0.949	8.81076	4.30116	Si
SLV 11	-17080	-11781	1407	0.618	2138.1	0.947	9.4868	4.30116	Si
SLV 12	-16938	-11474	1413	0.622	2123.7	0.946	9.54592	4.30116	Si
SLV 1	-24881	-29593	-855	0.484	2930.6	0.96	7.32694	3.0673	Si
SLV 2	-24661	-29116	-846	0.487	2908.2	0.959	7.38442	3.0673	Si
SLV 3	-25956	-27583	67	0.496	3040	0.961	7.50237	3.0673	Si
SLV 4	-25736	-27107	76	0.499	3017.6	0.961	7.549	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.153	SLU 83	Si
V_SLU	4.946	SLU 76	Si
PF_SLV	4.889	SLV 15	Si
V_SLV	3.692	SLV 13	Si
PFFP_SLV	11.207	SLV 14	Si
R_SLV	1.835	SLV 7	Si

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.284	-21.543	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.02	-20490.62	-54464	-0.0001095	0.0003743	0.0035	3.23	55586.61	65850.77	65850.77	3.21	No	Si
SLU 75	1.42	-12083.59	-52980	-0.0000875	0.0003743	0.0035	3.23	54930.04	64766.63	64766.63	5.36	No	Si
SLU 80	1.02	-20594.33	-54774	-0.0001102	0.0003743	0.0035	3.23	55717.7	66079.33	66079.33	3.21	No	Si
SLU 80	1.42	-12157.61	-53290	-0.0000881	0.0003743	0.0035	3.23	55071.17	64991.76	64991.76	5.35	No	Si
SLU 84	1.02	-21103.99	-56626	-0.0001141	0.0003743	0.0035	3.23	56457.1	67459.53	67459.53	3.2	No	Si
SLU 84	1.42	-12441.08	-55142	-0.0000913	0.0003743	0.0035	3.23	55870.57	66351.54	66351.54	5.33	No	Si
SLU 68	1.02	-18863.36	-47965	-0.0000964	0.0003743	0.0035	3.23	52355.43	61218.45	61218.45	3.25	No	Si
SLU 68	1.42	-11367.3	-46481	-0.0000772	0.0003743	0.0035	3.23	51488.32	60204.05	60204.05	5.3	No	Si
SLU 73	1.02	-20381.57	-53167	-0.0001073	0.0003743	0.0035	3.23	55015.26	64902.08	64902.08	3.18	No	Si
SLU 73	1.42	-12239.5	-51683	-0.0000861	0.0003743	0.0035	3.23	54316.66	63832.04	63832.04	5.22	No	Si
SLU 82	1.02	-20857.25	-55966	-0.0001125	0.0003743	0.0035	3.23	56202.03	66964.44	66964.44	3.21	No	Si
SLU 82	1.42	-12282.99	-54482	-0.00009	0.0003743	0.0035	3.23	55594.1	65863.73	65863.73	5.36	No	Si
SLU 76	1.02	-20628.31	-53827	-0.0001089	0.0003743	0.0035	3.23	55310.68	65383.43	65383.43	3.17	No	Si
SLU 76	1.42	-12397.59	-52343	-0.0000874	0.0003743	0.0035	3.23	54633.48	64306.32	64306.32	5.19	No	Si
SLU 55	1.02	-18757.45	-48102	-0.0000964	0.0003743	0.0035	3.23	52433.07	61312.96	61312.96	3.27	No	Si
SLU 55	1.42	-11338.83	-46618	-0.0000773	0.0003743	0.0035	3.23	51570.41	60297.04	60297.04	5.32	No	Si
SLU 65	1.02	-18616.62	-47304	-0.0000949	0.0003743	0.0035	3.23	51975.49	60765	60765	3.26	No	Si
SLU 65	1.42	-11209.21	-45820	-0.000076	0.0003743	0.0035	3.23	51086.99	59757.94	59757.94	5.33	No	Si
SLU 78	1.02	-20737.37	-55125	-0.000111	0.0003743	0.0035	3.23	55863.33	66338.49	66338.49	3.2	No	Si
SLU 78	1.42	-12241.67	-53641	-0.0000888	0.0003743	0.0035	3.23	55228.15	65247.06	65247.06	5.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	1.02	-17288.63	-34888	-0.0000731	0.0005615	0.0035	3.23		52196.88	52196.88	3.02		Si
SLD 9	1.42	-11121.37	-33669	-0.0000588	0.0005615	0.0035	3.23		50703.49	50703.49	4.56		Si
SLV 10	1.02	-21232.67	-31261	-0.0000787	0.0005615	0.0035	3.23		47713.11	47713.11	2.25		Si
SLV 10	1.42	-15218.32	-29936	-0.0000629	0.0005615	0.0035	3.23		46002.56	46002.56	3.02		Si
SLV 9	1.02	-21818.32	-31620	-0.0000807	0.0005615	0.0035	3.23		48170.12	48170.12	2.21		Si
SLV 9	1.42	-15344.68	-30295	-0.0000636	0.0005615	0.0035	3.23		46468	46468	3.03		Si
SLD 14	1.02	-17570.13	-34448	-0.0000731	0.0005615	0.0035	3.23		51657.73	51657.73	2.94		Si
SLD 14	1.42	-8949.47	-33387	-0.000054	0.0005615	0.0035	3.23		50359.7	50359.7	5.63		Si
SLV 15	1.02	-20166.22	-33715	-0.000078	0.0005615	0.0035	3.23		50759.53	50759.53	2.52		Si
SLV 15	1.42	-6125.13	-32910	-0.0000477	0.0005615	0.0035	3.23		49777.36	49777.36	8.13		Si
SLV 13	1.02	-23414.12	-31106	-0.0000854	0.0005615	0.0035	3.23		47515.24	47515.24	2.03		Si
SLV 13	1.42	-10490.44	-30145	-0.0000535	0.0005615	0.0035	3.23		46273.16	46273.16	4.41		Si
SLV 5	1.02	-17341.07	-34755	-0.000073	0.0005615	0.0035	3.23		52034.09	52034.09	3		Si
SLV 5	1.42	-15170.02	-33274	-0.0000667	0.0005615	0.0035	3.23		50221.64	50221.64	3.31		Si
SLV 14	1.02	-22505.33	-30548	-0.0000822	0.0005615	0.0035	3.23		46796.6	46796.6	2.08		Si
SLV 14	1.42	-10294.36	-29587	-0.0000524	0.0005615	0.0035	3.23		45551.59	45551.59	4.42		Si
SLD 13	1.02	-17960.34	-34688	-0.0000742	0.0005615	0.0035	3.23		51951.43	51951.43	2.89		Si
SLD 13	1.42	-9033.66	-33627	-0.0000545	0.0005615	0.0035	3.23		50652.21	50652.21	5.61		Si
SLV 16	1.02	-19257.44	-33157	-0.0000753	0.0005615	0.0035	3.23		50078.46	50078.46	2.6		Si
SLV 16	1.42	-5929.05	-32353	-0.0000467	0.0005615	0.0035	3.23		49094.86	49094.86	8.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.02	-20594.33	-54774	-48688	-21124	3.23	3.23	-33497	10833	15746	33304	43524	8236	49051	No	2.32	Si
SLU 80	1.42	-12157.61	-53290	-47369	-21124	3.23	3.23	-32590	10833	15746	33304	43524	8236	49051	No	2.32	Si
SLU 77	1.02	-20316.27	-55555	-49382	-21711	3.23	3.23	-33974	10833	15746	33304	43524	8236	49051	No	2.26	Si
SLU 77	1.42	-11644.58	-54071	-48063	-21711	3.23	3.23	-33067	10833	15746	33304	43524	8236	49051	No	2.26	Si
SLU 83	1.02	-20682.9	-57056	-50717	-22129	3.23	3.23	-34893	10833	15746	33304	43524	8236	49051	No	2.22	Si
SLU 83	1.42	-11843.99	-55572	-49398	-22129	3.23	3.23	-33985	10833	15746	33304	43524	8236	49051	No	2.22	Si
SLU 78	1.02	-20737.37	-55125	-49000	-21271	3.23	3.23	-33712	10833	15746	33304	43524	8236	49051	No	2.31	Si
SLU 78	1.42	-12241.67	-53641	-47681	-21271	3.23	3.23	-32804	10833	15746	33304	43524	8236	49051	No	2.31	Si
SLU 84	1.02	-21103.99	-56626	-50335	-21689	3.23	3.23	-34630	10833	15746	33304	43524	8236	49051	No	2.26	Si
SLU 84	1.42	-12441.08	-55142	-49015	-21689	3.23	3.23	-33722	10833	15746	33304	43524	8236	49051	No	2.26	Si
SLU 82	1.02	-20857.25	-55966	-49748	-21468	3.23	3.23	-34226	10833	15746	33304	43524	8236	49051	No	2.28	Si
SLU 82	1.42	-12282.99	-54482	-48428	-21468	3.23	3.23	-33318	10833	15746	33304	43524	8236	49051	No	2.28	Si
SLU 75	1.02	-20490.62	-54464	-48413	-21050	3.23	3.23	-33308	10833	15746	33304	43524	8236	49051	No	2.33	Si
SLU 75	1.42	-12083.59	-52980	-47094	-21050	3.23	3.23	-32400	10833	15746	33304	43524	8236	49051	No	2.33	Si
SLU 79	1.02	-20173.23	-55204	-49070	-21564	3.23	3.23	-33760	10833	15746	33304	43524	8236	49051	No	2.27	Si
SLU 79	1.42	-11560.52	-53720	-47751	-21564	3.23	3.23	-32853	10833	15746	33304	43524	8236	49051	No	2.27	Si
SLU 74	1.02	-20069.53	-54894	-48795	-21490	3.23	3.23	-33571	10833	15746	33304	43524	8236	49051	No	2.28	Si
SLU 74	1.42	-11486.49	-53410	-47476	-21490	3.23	3.23	-32663	10833	15746	33304	43524	8236	49051	No	2.28	Si
SLU 81	1.02	-20436.15	-56396	-50130	-21908	3.23	3.23	-34489	10833	15746	33304	43524	8236	49051	No	2.24	Si
SLU 81	1.42	-11685.9	-54912	-48810	-21908	3.23	3.23	-33581	10833	15746	33304	43524	8236	49051	No	2.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.02	-23414.12	-31106	-27650	-31660	3.23	2.5868	-24043	15225	17724	33304	65286	8236	51028		1.61	Si
SLV 13	1.42	-10490.44	-30145	-26795	-31066	3.23	3.23	-18435	14104	20500	33304	65286	8236	53804		1.73	Si
SLV 12	1.02	-10406.34	-39957	-35517	-20864	3.23	3.23	-24435	15304	22244	33304	65286	8236	55548		2.66	Si
SLV 12	1.42	-667.27	-39154	-34804	-22711	3.23	3.23	-23945	15206	22101	33304	65286	8236	55406		2.44	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	1.02	-17960.34	-34688	-30833	-22072	3.23	3.23	-21213	14659	21307	33304	65286	8236	54612		2.47	Si
SLD 13	1.42	-9033.66	-33627	-29891	-21815	3.23	3.23	-20565	14530	21119	33304	65286	8236	54423		2.49	Si
SLD 15	1.02	-16562.82	-35815	-31836	-22497	3.23	3.23	-21903	14797	21508	33304	65286	8236	54812		2.44	Si
SLD 15	1.42	-7152.39	-34821	-30952	-22721	3.23	3.23	-21295	14676	21331	33304	65286	8236	54635		2.4	Si
SLD 16	1.02	-16172.61	-35576	-31623	-21732	3.23	3.23	-21756	14768	21465	33304	65286	8236	54770		2.52	Si
SLD 16	1.42	-7068.2	-34582	-30740	-21956	3.23	3.23	-21149	14646	21289	33304	65286	8236	54593		2.49	Si
SLD 14	1.02	-17570.13	-34448	-30621	-21307	3.23	3.23	-21067	14630	21265	33304	65286	8236	54569		2.56	Si
SLD 14	1.42	-8949.47	-33387	-29678	-21050	3.23	3.23	-20418	14500	21076	33304	65286	8236	54380		2.58	Si
SLV 14	1.02	-22505.33	-30548	-27154	-29878	3.23	2.6349	-23173	15051	17846	33304	65286	8236	51151		1.71	Si
SLV 14	1.42	-10294.36	-29587	-26300	-29284	3.23	3.23	-18094	14035	20401	33304	65286	8236	53705		1.83	Si
SLV 15	1.02	-20166.22	-33715	-29969	-32633	3.23	3.0506	-22066	14830	20358	33304	65286	8236	53662		1.64	Si
SLV 15	1.42	-6125.13	-32910	-29253	-33154	3.23	3.23	-20126	14442	20991	33304	65286	8236	54296		1.64	Si
SLV 11	1.02	-10991.99	-40316	-35836	-22012	3.23	3.23	-24655	15348	22308	33304	65286	8236	55612		2.53	Si
SLV 11	1.42	-793.63	-39513	-35123	-23859	3.23	3.23	-24164	15250	22165	33304	65286	8236	55470		2.32	Si
SLV 16	1.02	-19257.44	-33157	-29473	-30852	3.23	3.1026	-21332	14683	20500	33304	65286	8236	53805		1.74	Si
SLV 16	1.42	-5929.05	-32353	-28758	-31372	3.23	3.23	-19785	14374	20892	33304	65286	8236	54197		1.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.25	14499	-21074	244.76	4291.54	17.53	Si
SLV 13	179667	0.25	14864	-21605	244.76	4387.99	17.93	Si
SLV 16	179667	0.25	14986	-21781	244.76	4419.93	18.06	Si
SLV 15	179667	0.25	15351	-22312	244.76	4515.63	18.45	Si
SLV 10	179667	0.25	17051	-24783	244.76	4953.63	20.24	Si
SLV 9	179667	0.25	17286	-25125	244.76	5013.29	20.48	Si
SLV 12	179667	0.25	18673	-27140	244.76	5359.96	21.9	Si
SLV 11	179667	0.25	18908	-27483	244.76	5417.98	22.14	Si
SLV 6	179667	0.25	19669	-28589	244.76	5603.97	22.9	Si
SLV 5	179667	0.25	19904	-28931	244.76	5660.99	23.13	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-37602	-26730	1337	0.488	4436.8	0.959	7.39222	4.30116	Si
SLV 8	-37382	-26400	1336	0.49	4414.5	0.959	7.42724	4.30116	Si
SLV 11	-34595	-21897	1492	0.516	4131.1	0.957	7.84155	4.30116	Si
SLV 12	-34375	-21567	1491	0.519	4108.7	0.956	7.88208	4.30116	Si
SLV 5	-27818	-29206	-2230	0.587	3442.7	0.949	8.98945	4.30116	Si
SLV 6	-27598	-28876	-2231	0.591	3420.4	0.949	9.04638	4.30116	Si
SLV 9	-24811	-24373	-2076	0.646	3137.6	0.945	9.93693	4.30116	Si
SLV 10	-24591	-24043	-2077	0.65	3115.3	0.944	10.00767	4.30116	Si
SLV 3	-37746	-33326	-91	0.516	4451.5	0.959	7.8232	3.0673	Si
SLV 4	-37405	-32814	-92	0.52	4416.8	0.959	7.88013	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.17	SLU 76	Si
V_SLU	2.217	SLU 83	Si
PF_SLV	2.029	SLV 13	Si
V_SLV	1.612	SLV 13	Si
PFFP_SLV	17.534	SLV 14	Si
R_SLV	1.719	SLV 7	Si

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.523	-3.284	-17.313	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.02	-1614.54	-31528	-0.0002809	0.0003743	0.0035	0.79	1605.29	4587.54	4587.54	2.84	No	Si
SLU 74	1.42	576.63	-24288	-0.000152	0.0003743	0.0035	0.79	3155.85	4901.46	4901.46	8.5	No	Si
SLU 78	1.02	-1634.32	-31939	-0.0002879	0.0003743	0.0035	0.79	1483.12	4553.87	4553.87	2.79	No	Si
SLU 78	1.42	589.18	-24611	-0.0001549	0.0003743	0.0035	0.79	3111	4897.1	4897.1	8.31	No	Si
SLU 82	1.02	-1685.98	-32622	-0.0003018	0.0003743	0.0035	0.79	1271.56	4497.84	4497.84	2.67	No	Si
SLU 82	1.42	573.22	-25118	-0.0001578	0.0003743	0.0035	0.79	3036.22	4888.92	4888.92	8.53	No	Si
SLU 83	1.02	-1702.97	-32913	-0.0003077	0.0003743	0.0035	0.79	1178.42	4467.61	4467.61	2.62	No	Si
SLU 83	1.42	581.24	-25347	-0.0001599	0.0003743	0.0035	0.79	3000.48	4884.9	4884.9	8.4	No	Si
SLU 77	1.02	-1632.92	-31879	-0.000287	0.0003743	0.0035	0.79	1501.15	4558.77	4558.77	2.79	No	Si
SLU 77	1.42	586.92	-24564	-0.0001545	0.0003743	0.0035	0.79	3117.66	4897.74	4897.74	8.34	No	Si
SLU 81	1.02	-1684.59	-32562	-0.0003008	0.0003743	0.0035	0.79	1290.48	4502.75	4502.75	2.67	No	Si
SLU 81	1.42	570.95	-25071	-0.0001574	0.0003743	0.0035	0.79	3043.4	4889.75	4889.75	8.56	No	Si
SLU 84	1.02	-1704.37	-32973	-0.0003088	0.0003743	0.0035	0.79	1159.04	4457.83	4457.83	2.62	No	Si
SLU 84	1.42	583.51	-25394	-0.0001604	0.0003743	0.0035	0.79	2993.01	4884.08	4884.08	8.37	No	Si
SLU 75	1.02	-1615.93	-31588	-0.0002818	0.0003743	0.0035	0.79	1587.72	4582.63	4582.63	2.84	No	Si
SLU 75	1.42	578.9	-24335	-0.0001524	0.0003743	0.0035	0.79	3149.47	4900.82	4900.82	8.47	No	Si
SLU 80	1.02	-1627.88	-31782	-0.0002853	0.0003743	0.0035	0.79	1530.13	4566.7	4566.7	2.81	No	Si
SLU 80	1.42	579.21	-24483	-0.0001535	0.0003743	0.0035	0.79	3129.13	4898.84	4898.84	8.46	No	Si
SLU 79	1.02	-1626.49	-31723	-0.0002844	0.0003743	0.0035	0.79	1547.96	4571.61	4571.61	2.81	No	Si
SLU 79	1.42	576.94	-24436	-0.000153	0.0003743	0.0035	0.79	3135.66	4899.47	4899.47	8.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.02	-1804.87	-24964	-0.0001933	0.0005615	0.0035	0.79		6480.95	6480.95	3.59		Si
SLV 5	1.42	247.1	-16785	-0.0000856	0.0005615	0.0035	0.79		5047.88	5047.88	20.43		Si
SLV 3	1.02	-2041.87	-26916	-0.0002163	0.0005615	0.0035	0.79		6689.08	6689.08	3.28		Si
SLV 3	1.42	-1090.35	-19394	-0.0001312	0.0005615	0.0035	0.79		5656.17	5656.17	5.19		Si
SLV 14	1.02	-123.63	-15964	-0.000077	0.0005615	0.0035	0.79		4990.34	4990.34	40.36		Si
SLV 14	1.42	1875.98	-13583	-0.0001298	0.0005615	0.0035	0.79		4324.55	4324.55	2.31		Si
SLV 1	1.02	-2282.89	-27957	-0.0002343	0.0005615	0.0035	0.79		6769.35	6769.35	2.97		Si
SLV 1	1.42	-940.32	-19068	-0.0001236	0.0005615	0.0035	0.79		5591.11	5591.11	5.95		Si
SLV 16	1.02	117.39	-14923	-0.0000716	0.0005615	0.0035	0.79		4624.54	4624.54	39.4		Si
SLV 16	1.42	1725.95	-13910	-0.0001256	0.0005615	0.0035	0.79		4397.44	4397.44	2.55		Si
SLV 2	1.02	-2303.07	-28014	-0.0002357	0.0005615	0.0035	0.79		6773.82	6773.82	2.94		Si
SLV 2	1.42	-1095.27	-18966	-0.0001291	0.0005615	0.0035	0.79		5570.91	5570.91	5.09		Si
SLV 6	1.02	-1817.87	-25001	-0.000194	0.0005615	0.0035	0.79		6486.25	6486.25	3.57		Si
SLV 6	1.42	147.25	-16719	-0.0000816	0.0005615	0.0035	0.79		5032.84	5032.84	34.18		Si
SLV 15	1.02	137.56	-14866	-0.0000721	0.0005615	0.0035	0.79		4611.63	4611.63	33.52		Si
SLV 15	1.42	1880.9	-14012	-0.0001321	0.0005615	0.0035	0.79		4420.15	4420.15	2.35		Si
SLV 4	1.02	-2062.05	-26974	-0.0002176	0.0005615	0.0035	0.79		6693.46	6693.46	3.25		Si
SLV 4	1.42	-1245.3	-19292	-0.0001367	0.0005615	0.0035	0.79		5635.86	5635.86	4.53		Si
SLV 13	1.02	-103.46	-15907	-0.0000759	0.0005615	0.0035	0.79		4979.54	4979.54	48.13		Si
SLV 13	1.42	2030.93	-13685	-0.000137	0.0005615	0.0035	0.79		4347.32	4347.32	2.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.02	-1632.92	-31879	-28337	8793	0.79	0.79	-79710	10833	3851	33304	10645	2015	12660	No	1.44	Si
SLU 77	1.42	586.92	-24564	-21835	3195	0.79	0.79	-61420	10833	3851	33304	10645	2015	12660	No	3.96	Si
SLU 83	1.02	-1702.97	-32913	-29256	9149	0.79	0.79	-82296	10833	3851	33304	10645	2015	12660	No	1.38	Si
SLU 83	1.42	581.24	-25347	-22531	3352	0.79	0.79	-63378	10833	3851	33304	10645	2015	12660	No	3.78	Si
SLU 82	1.02	-1685.98	-32622	-28998	9080	0.79	0.79	-81568	10833	3851	33304	10645	2015	12660	No	1.39	Si
SLU 82	1.42	573.22	-25118	-22327	3337	0.79	0.79	-62804	10833	3851	33304	10645	2015	12660	No	3.79	Si
SLU 76	1.02	-1610.43	-31472	-27975	8722	0.79	0.79	-78691	10833	3851	33304	10645	2015	12660	No	1.45	Si
SLU 76	1.42	570.43	-24237	-21544	3192	0.79	0.79	-60603	10833	3851	33304	10645	2015	12660	No	3.97	Si
SLU 80	1.02	-1627.88	-31782	-28251	8797	0.79	0.79	-79468	10833	3851	33304	10645	2015	12660	No	1.44	Si
SLU 80	1.42	579.21	-24483	-21762	3209	0.79	0.79	-61216	10833	3851	33304	10645	2015	12660	No	3.94	Si
SLU 81	1.02	-1684.59	-32562	-28944	9060	0.79	0.79	-81419	10833	3851	33304	10645	2015	12660	No	1.4	Si
SLU 81	1.42	570.95	-25071	-22285	3329	0.79	0.79	-62686	10833	3851	33304	10645	2015	12660	No	3.8	Si
SLU 78	1.02	-1634.32	-31939	-28390	8813	0.79	0.79	-79860	10833	3851	33304	10645	2015	12660	No	1.44	Si
SLU 78	1.42	589.18	-24611	-21877	3202	0.79	0.79	-61538	10833	3851	33304	10645	2015	12660	No	3.95	Si
SLU 84	1.02	-1704.37	-32973	-29309	9170	0.79	0.79	-82445	10833	3851	33304	10645	2015	12660	No	1.38	Si
SLU 84	1.42	583.51	-25394	-22573	3359	0.79	0.79	-63495	10833	3851	33304	10645	2015	12660	No	3.77	Si
SLU 75	1.02	-1615.93	-31588	-28078	8724	0.79	0.79	-78983	10833	3851	33304	10645	2015	12660	No	1.45	Si
SLU 75	1.42	578.9	-24335	-21631	3180	0.79	0.79	-60847	10833	3851	33304	10645	2015	12660	No	3.98	Si
SLU 79	1.02	-1626.49	-31723	-28198	8777	0.79	0.79	-79319	10833	3851	33304	10645	2015	12660	No	1.44	Si
SLU 79	1.42	576.94	-24436	-21721	3202	0.79	0.79	-61098	10833	3851	33304	10645	2015	12660	No	3.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.02	-1596.98	-24222	-21531	10151	0.79	0.79	-60566	16250	5777	33304	15968	2015	17982		1.77	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.42	-175.95	-17590	-15635	4333	0.79	0.79	-43982	16250	5777	33304	15968	2015	17982		4.15	Si
SLV 2	1.02	-2303.07	-28014	-24902	16622	0.79	0.79	-70047	16250	5777	33304	15968	2015	17982		1.08	Si
SLV 2	1.42	-1095.27	-18966	-16859	7801	0.79	0.79	-47422	16250	5777	33304	15968	2015	17982		2.31	Si
SLV 4	1.02	-2062.05	-26974	-23977	17179	0.79	0.79	-67445	16250	5777	33304	15968	2015	17982		1.05	Si
SLV 4	1.42	-1245.3	-19292	-17149	8659	0.79	0.79	-48239	16250	5777	33304	15968	2015	17982		2.08	Si
SLD 2	1.02	-1605.65	-24247	-21553	10508	0.79	0.79	-60627	16250	5777	33304	15968	2015	17982		1.71	Si
SLD 2	1.42	-242.47	-17546	-15597	4584	0.79	0.79	-43872	16250	5777	33304	15968	2015	17982		3.92	Si
SLD 3	1.02	-1491.84	-23774	-21132	10391	0.79	0.79	-59444	16250	5777	33304	15968	2015	17982		1.73	Si
SLD 3	1.42	-241.46	-17727	-15757	4706	0.79	0.79	-44325	16250	5777	33304	15968	2015	17982		3.82	Si
SLD 4	1.02	-1500.5	-23798	-21154	10747	0.79	0.79	-59506	16250	5777	33304	15968	2015	17982		1.67	Si
SLD 4	1.42	-307.99	-17683	-15719	4957	0.79	0.79	-44216	16250	5777	33304	15968	2015	17982		3.63	Si
SLV 1	1.02	-2282.89	-27957	-24851	15792	0.79	0.79	-69904	16250	5777	33304	15968	2015	17982		1.14	Si
SLV 1	1.42	-940.32	-19068	-16949	7216	0.79	0.79	-47677	16250	5777	33304	15968	2015	17982		2.49	Si
SLV 8	1.02	-1014.47	-21531	-19139	10304	0.79	0.79	-53837	16250	5777	33304	15968	2015	17982		1.75	Si
SLV 8	1.42	-352.85	-17808	-15829	5532	0.79	0.79	-44526	16250	5777	33304	15968	2015	17982		3.25	Si
SLV 7	1.02	-1001.47	-21494	-19106	9769	0.79	0.79	-53745	16250	5777	33304	15968	2015	17982		1.84	Si
SLV 7	1.42	-253	-17873	-15887	5156	0.79	0.79	-44690	16250	5777	33304	15968	2015	17982		3.49	Si
SLV 3	1.02	-2041.87	-26916	-23926	16349	0.79	0.79	-67301	16250	5777	33304	15968	2015	17982		1.1	Si
SLV 3	1.42	-1090.35	-19394	-17239	8074	0.79	0.79	-48493	16250	5777	33304	15968	2015	17982		2.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.25	40517	-14404	59.86	2381.03	39.77	Si
SLV 16	179667	0.25	40668	-14458	59.86	2386.7	39.87	Si
SLV 13	179667	0.25	41880	-14888	59.86	2431.22	40.61	Si
SLV 14	179667	0.25	42031	-14942	59.86	2436.68	40.7	Si
SLV 11	179667	0.25	44479	-15812	59.86	2521.55	42.12	Si
SLV 12	179667	0.25	44576	-15847	59.86	2524.8	42.18	Si
SLV 9	179667	0.25	49022	-17427	59.86	2662.45	44.48	Si
SLV 10	179667	0.25	49119	-17462	59.86	2665.24	44.52	Si
SLV 7	179667	0.25	49214	-17496	59.86	2667.95	44.57	Si
SLV 8	179667	0.25	49312	-17530	59.86	2670.72	44.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-10177	-23746	-468	0.439	1184.9	0.962	6.62834	4.30116	Si
SLV 6	-10039	-23645	-467	0.444	1170.8	0.962	6.70212	4.30116	Si
SLV 9	-9775	-25022	-409	0.458	1144	0.961	6.92641	4.30116	Si
SLV 10	-9637	-24921	-407	0.463	1129.9	0.961	7.00708	4.30116	Si
SLV 7	-9007	-24010	10	0.528	1065.9	0.959	7.99878	4.30116	Si
SLV 8	-8869	-23909	12	0.534	1051.8	0.958	8.09728	4.30116	Si
SLV 11	-8605	-25286	70	0.54	1025	0.957	8.20494	4.30116	Si
SLV 12	-8467	-25185	71	0.547	1011	0.957	8.31089	4.30116	Si
SLV 1	-10274	-22378	-371	0.444	1194.8	0.963	6.71008	3.0673	Si
SLV 2	-10060	-22222	-368	0.452	1173	0.962	6.826	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.616	SLU 84	Si
V_SLU	1.381	SLU 84	Si
PF_SLV	2.141	SLV 13	Si
V_SLV	1.047	SLV 4	Si
PFFP_SLV	39.774	SLV 15	Si
R_SLV	1.541	SLV 5	Si

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.498	1.046	-18.498	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	19372.84	-108778	-0.0001955	0.0004492	0.0035	4.33	74103.89	121292.01	121292.01	6.26	No	Si
SLU 83	1.99	3574.31	-58059	-0.0000788	0.0004492	0.0035	4.33	79718.55	93020.25	93020.25	26.02	No	Si
SLU 81	-0.98	19183.11	-107699	-0.0001929	0.0004492	0.0035	4.33	74953.81	121342.07	121342.07	6.33	No	Si
SLU 81	1.99	3489.96	-57365	-0.0000777	0.0004492	0.0035	4.33	79308.93	92420.77	92420.77	26.48	No	Si
SLU 78	-0.98	18966.24	-106372	-0.0001897	0.0004492	0.0035	4.33	75955.8	121404.59	121404.59	6.4	No	Si
SLU 78	1.99	3663.3	-56951	-0.0000774	0.0004492	0.0035	4.33	79058.12	92064.01	92064.01	25.13	No	Si
SLU 82	-0.98	19314.48	-107671	-0.0001931	0.0004492	0.0035	4.33	74976.2	121343.42	121343.42	6.28	No	Si
SLU 82	1.99	3529.07	-57494	-0.0000779	0.0004492	0.0035	4.33	79385.72	92531.52	92531.52	26.22	No	Si
SLU 75	-0.98	18776.51	-105294	-0.0001872	0.0004492	0.0035	4.33	76734.9	121456.18	121456.18	6.47	No	Si
SLU 75	1.99	3578.95	-56258	-0.0000763	0.0004492	0.0035	4.33	78627.54	91468.35	91468.35	25.56	No	Si
SLU 80	-0.98	18850.81	-105793	-0.0001883	0.0004492	0.0035	4.33	76377.89	121432.2	121432.2	6.44	No	Si
SLU 80	1.99	3671.01	-56566	-0.0000769	0.0004492	0.0035	4.33	78820.39	91732.59	91732.59	24.99	No	Si
SLU 79	-0.98	18719.44	-105822	-0.0001881	0.0004492	0.0035	4.33	76356.98	121430.81	121430.81	6.49	No	Si
SLU 79	1.99	3631.9	-56437	-0.0000766	0.0004492	0.0035	4.33	78740.35	91622.43	91622.43	25.23	No	Si
SLU 84	-0.98	19504.21	-108749	-0.0001957	0.0004492	0.0035	4.33	74127.14	121293.34	121293.34	6.22	No	Si
SLU 84	1.99	3613.42	-58187	-0.000079	0.0004492	0.0035	4.33	79792.91	93131.44	93131.44	25.77	No	Si
SLU 76	-0.98	18748.67	-104695	-0.0001859	0.0004492	0.0035	4.33	77153.32	121485.09	121485.09	6.48	No	Si
SLU 76	1.99	3612.74	-55958	-0.0000759	0.0004492	0.0035	4.33	78437.24	91159.17	91159.17	25.23	No	Si
SLU 77	-0.98	18834.87	-106401	-0.0001895	0.0004492	0.0035	4.33	75934.43	121403.22	121403.22	6.45	No	Si
SLU 77	1.99	3624.19	-56823	-0.0000771	0.0004492	0.0035	4.33	78979.43	91953.6	91953.6	25.37	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 5	-0.98	20776.35	-75814	-0.0001306	0.0006738	0.0035	4.33		125406.26	125406.26	6.04		Si
SLD 5	1.99	-2083.22	-39717	-0.0000503	0.0006738	0.0035	4.33		80276.56	80276.56	38.53		Si
SLV 6	-0.98	29465.96	-78991	-0.0001512	0.0006738	0.0035	4.33		129616.38	129616.38	4.4		Si
SLV 6	1.99	-7616.95	-40971	-0.0000612	0.0006738	0.0035	4.33		82327.53	82327.53	10.81		Si
SLV 12	-0.98	-5459.31	-67114	-0.0000911	0.0006738	0.0035	4.33		119880.45	119880.45	21.96		Si
SLV 12	1.99	13272.98	-35759	-0.0000641	0.0006738	0.0035	4.33		67988.92	67988.92	5.12		Si
SLV 5	-0.98	30983.39	-79310	-0.0001545	0.0006738	0.0035	4.33		129968.8	129968.8	4.19		Si
SLV 5	1.99	-8064.7	-41333	-0.0000624	0.0006738	0.0035	4.33		82920.22	82920.22	10.28		Si
SLV 9	-0.98	30481.04	-67707	-0.0001368	0.0006738	0.0035	4.33		114784.84	114784.84	3.77		Si
SLV 9	1.99	-5785.85	-37604	-0.0000539	0.0006738	0.0035	4.33		76846.01	76846.01	13.28		Si
SLV 11	-0.98	-3941.88	-67433	-0.0000889	0.0006738	0.0035	4.33		120295.33	120295.33	30.52		Si
SLV 11	1.99	12825.23	-36120	-0.0000638	0.0006738	0.0035	4.33		68575.34	68575.34	5.35		Si
SLD 9	-0.98	20554.3	-70868	-0.0001232	0.0006738	0.0035	4.33		118906.39	118906.39	5.78		Si
SLD 9	1.99	-1123.56	-38162	-0.0000468	0.0006738	0.0035	4.33		77748.94	77748.94	69.2		Si
SLD 10	-0.98	19891.52	-70728	-0.0001218	0.0006738	0.0035	4.33		118724.06	118724.06	5.97		Si
SLD 10	1.99	-927.99	-38004	-0.0000463	0.0006738	0.0035	4.33		77493.1	77493.1	83.51		Si
SLV 13	-0.98	18265.57	-54162	-0.0000964	0.0006738	0.0035	4.33		97458.24	97458.24	5.34		Si
SLV 13	1.99	3263.17	-32835	-0.0000438	0.0006738	0.0035	4.33		63265.58	63265.58	19.39		Si
SLV 10	-0.98	28963.61	-67388	-0.0001336	0.0006738	0.0035	4.33		114370.65	114370.65	3.95		Si
SLV 10	1.99	-5338.09	-37243	-0.0000527	0.0006738	0.0035	4.33		76261.78	76261.78	14.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-0.98	19504.21	-108749	-91578	-10586	4.33	4.33	-70499	10833	14073	33304	46683	11042	47377	No	4.48	Si
SLU 84	1.99	3613.42	-58187	-49000	-9787	4.33	4.33	-37721	10833	14073	33304	46683	11042	47377	No	4.84	Si
SLU 77	-0.98	18834.87	-106401	-89601	-10738	4.33	4.33	-68977	10833	14073	33304	46683	11042	47377	No	4.41	Si
SLU 77	1.99	3624.19	-56823	-47851	-9977	4.33	4.33	-36837	10833	14073	33304	46683	11042	47377	No	4.75	Si
SLU 82	-0.98	19314.48	-107671	-90670	-10459	4.33	4.33	-69800	10833	14073	33304	46683	11042	47377	No	4.53	Si
SLU 82	1.99	3529.07	-57494	-48416	-9671	4.33	4.33	-37272	10833	14073	33304	46683	11042	47377	No	4.9	Si
SLU 74	-0.98	18645.14	-105322	-88693	-10611	4.33	4.33	-68278	10833	14073	33304	46683	11042	47377	No	4.46	Si
SLU 74	1.99	3539.84	-56129	-47267	-9861	4.33	4.33	-36387	10833	14073	33304	46683	11042	47377	No	4.8	Si
SLU 62	-0.98	17578.2	-99780	-84025	-10381	4.33	4.33	-64685	10833	14073	33304	46683	11042	47377	No	4.56	Si
SLU 62	1.99	3439.24	-52651	-44338	-9688	4.33	4.33	-34132	10833	14073	33304	46683	11042	47377	No	4.89	Si
SLU 79	-0.98	18719.44	-105822	-89114	-10743	4.33	4.33	-68602	10833	14073	33304	46683	11042	47377	No	4.41	Si
SLU 79	1.99	3631.9	-56437	-47526	-9990	4.33	4.33	-36587	10833	14073	33304	46683	11042	47377	No	4.74	Si
SLU 78	-0.98	18966.24	-106372	-89577	-10476	4.33	4.33	-68958	10833	14073	33304	46683	11042	47377	No	4.52	Si
SLU 78	1.99	3663.3	-56951	-47959	-9692	4.33	4.33	-36920	10833	14073	33304	46683	11042	47377	No	4.89	Si
SLU 80	-0.98	18850.81	-105793	-89089	-10481	4.33	4.33	-68583	10833	14073	33304	46683	11042	47377	No	4.52	Si
SLU 80	1.99	3671.01	-56566	-47634	-9705	4.33	4.33	-36670	10833	14073	33304	46683	11042	47377	No	4.88	Si
SLU 81	-0.98	19183.11	-107699	-90694	-10721	4.33	4.33	-69819	10833	14073	33304	46683	11042	47377	No	4.42	Si
SLU 81	1.99	3489.96	-57365	-48308	-9956	4.33	4.33	-37188	10833	14073	33304	46683	11042	47377	No	4.76	Si
SLU 83	-0.98	19372.84	-108778	-91603	-10848	4.33	4.33	-70518	10833	14073	33304	46683	11042	47377	No	4.37	Si
SLU 83	1.99	3574.31	-58059	-48892	-10072	4.33	4.33	-37638	10833	14073	33304	46683	11042	47377	No	4.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	-0.98	-3941.88	-67433	-56786	-29482	4.33	4.33	-43715	16250	21109	33304	70024	11042	54413		1.85	Si
SLV 11	1.99	12825.23	-36120	-30417	-28630	4.33	4.33	-23416	16250	21109	33304	70024	11042	54413		1.9	Si
SLV 8	-0.98	-4956.95	-78718	-66288	-30927	4.33	4.33	-51030	16250	21109	33304	70024	11042	54413		1.76	Si
SLV 8	1.99	10994.13	-39487	-33252	-29521	4.33	4.33	-25598	16250	21109	33304	70024	11042	54413		1.84	Si
SLD 12	-0.98	4747.73	-70611	-59462	-18029	4.33	4.33	-45775	16250	21109	33304	70024	11042	54413		3.02	Si
SLD 12	1.99	7291.51	-37375	-31474	-17379	4.33	4.33	-24229	16250	21109	33304	70024	11042	54413		3.13	Si
SLD 7	-0.98	5632.56	-75696	-63744	-17178	4.33	4.33	-49072	16250	21109	33304	70024	11042	54413		3.17	Si
SLD 7	1.99	6136.27	-39088	-32916	-16300	4.33	4.33	-25339	16250	21109	33304	70024	11042	54413		3.34	Si
SLV 5	-0.98	30983.39	-79310	-66787	15759	4.33	4.33	-51415	16250	21109	33304	70024	11042	54413		3.45	Si
SLV 5	1.99	-8064.7	-41333	-34807	15929	4.33	4.33	-26795	16250	21109	33304	70024	11042	54413		3.42	Si
SLD 11	-0.98	5410.51	-70750	-59579	-17293	4.33	4.33	-45865	16250	21109	33304	70024	11042	54413		3.15	Si
SLD 11	1.99	7095.93	-37533	-31607	-16639	4.33	4.33	-24332	16250	21109	33304	70024	11042	54413		3.27	Si
SLV 16	-0.98	5584.01	-53585	-45124	-16162	4.33	4.33	-34738	16250	21109	33304	70024	11042	54413		3.37	Si
SLV 16	1.99	9541.3	-31829	-26803	-16414	4.33	4.33	-20634	16250	21109	33304	70024	11042	54413		3.32	Si
SLD 8	-0.98	4969.78	-75557	-63627	-17914	4.33	4.33	-48981	16250	21109	33304	70024	11042	54413		3.04	Si
SLD 8	1.99	6331.84	-38930	-32783	-17040	4.33	4.33	-25237	16250	21109	33304	70024	11042	54413		3.19	Si
SLV 12	-0.98	-5459.31	-67114	-56517	-31167	4.33	4.33	-43508	16250	21109	33304	70024	11042	54413		1.75	Si
SLV 12	1.99	13272.98	-35759	-30113	-30324	4.33	4.33	-23182	16250	21109	33304	70024	11042	54413		1.79	Si
SLV 7	-0.98	-3439.53	-79036	-66557	-29242	4.33	4.33	-51237	16250	21109	33304	70024	11042	54413		1.86	Si
SLV 7	1.99	10546.37	-39849	-33557	-27827	4.33	4.33	-25833	16250	21109	33304	70024	11042	54413		1.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	215625	0.25	30726	-39913	218.74	4983.31	22.78	Si
SLV 14	215625	0.25	31086	-40381	218.74	5029.83	22.99	Si
SLV 15	215625	0.25	31199	-40527	218.74	5044.25	23.06	Si
SLV 13	215625	0.25	31559	-40995	218.74	5090.41	23.27	Si
SLV 12	215625	0.25	38445	-49940	218.74	5919.73	27.06	Si
SLV 11	215625	0.25	38750	-50336	218.74	5954.06	27.22	Si
SLV 10	215625	0.25	39646	-51500	218.74	6054	27.68	Si
SLV 9	215625	0.25	39950	-51896	218.74	6087.56	27.83	Si
SLV 8	215625	0.25	45350	-58909	218.74	6649.99	30.4	Si
SLV 7	215625	0.25	45654	-59305	218.74	6679.85	30.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-41333	-79310	582	0.584	4751.4	0.965	8.79487	5.87132	Si
SLV 6	-40971	-78991	578	0.589	4714.6	0.965	8.86383	5.87132	Si
SLV 7	-39849	-79036	687	0.6	4600.4	0.964	9.04338	5.87132	Si
SLV 8	-39487	-78718	683	0.605	4563.6	0.964	9.11695	5.87132	Si
SLV 9	-37604	-67707	378	0.638	4372	0.963	9.62603	5.87132	Si
SLV 10	-37243	-67388	374	0.643	4335.2	0.962	9.70909	5.87132	Si
SLV 11	-36120	-67433	483	0.657	4221	0.962	9.93076	5.87132	Si
SLV 12	-35759	-67114	479	0.663	4184.3	0.961	10.01995	5.87132	Si
SLV 1	-45263	-92839	857	0.536	5151.4	0.968	8.04122	3.44478	Si
SLV 3	-44818	-92757	889	0.539	5106.1	0.968	8.10078	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.219	SLU 84	Si
V_SLU	4.367	SLU 83	Si
PF_SLV	3.766	SLV 9	Si
V_SLV	1.746	SLV 12	Si
PFFP_SLV	22.782	SLV 16	Si
R_SLV	1.498	SLV 5	Si

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.576	-17.768	6.576	L2	L4	1.925	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.02	550.65	-23278	-0.0000464	0.0003743	0.0035	1.925	16491.4	17891.98	17891.98	32.49	No	Si
SLU 78	1.42	-3006.15	-22376	-0.0000595	0.0003743	0.0035	1.925	16072.65	18462.32	18462.32	6.14	No	Si
SLU 80	1.02	547.08	-23093	-0.000046	0.0003743	0.0035	1.925	16407.15	17788.98	17788.98	32.52	No	Si
SLU 80	1.42	-2989.22	-22191	-0.000059	0.0003743	0.0035	1.925	15984.77	18351.76	18351.76	6.14	No	Si
SLU 77	1.02	552.87	-23272	-0.0000464	0.0003743	0.0035	1.925	16488.74	17888.71	17888.71	32.36	No	Si
SLU 77	1.42	-3002.77	-22370	-0.0000594	0.0003743	0.0035	1.925	16069.88	18458.9	18458.9	6.15	No	Si
SLU 82	1.02	555.7	-23538	-0.0000469	0.0003743	0.0035	1.925	16608.89	18037.45	18037.45	32.46	No	Si
SLU 82	1.42	-3056.04	-22636	-0.0000603	0.0003743	0.0035	1.925	16195.26	18614.54	18614.54	6.09	No	Si
SLU 79	1.02	549.29	-23087	-0.000046	0.0003743	0.0035	1.925	16404.47	17785.72	17785.72	32.38	No	Si
SLU 79	1.42	-2985.84	-22185	-0.0000589	0.0003743	0.0035	1.925	15981.97	18348.22	18348.22	6.15	No	Si
SLU 84	1.02	561.1	-23807	-0.0000475	0.0003743	0.0035	1.925	16728.8	18188.2	18188.2	32.42	No	Si
SLU 84	1.42	-3088.95	-22905	-0.0000611	0.0003743	0.0035	1.925	16320.47	18772.5	18772.5	6.08	No	Si
SLU 81	1.02	557.92	-23532	-0.0000469	0.0003743	0.0035	1.925	16606.26	18034.17	18034.17	32.32	No	Si
SLU 81	1.42	-3052.66	-22630	-0.0000603	0.0003743	0.0035	1.925	16192.52	18611.11	18611.11	6.1	No	Si
SLU 76	1.02	540.2	-22828	-0.0000454	0.0003743	0.0035	1.925	16284.87	17641.38	17641.38	32.66	No	Si
SLU 76	1.42	-2958.57	-21926	-0.0000582	0.0003743	0.0035	1.925	15857.27	18190.92	18190.92	6.15	No	Si
SLU 75	1.02	545.25	-23009	-0.0000458	0.0003743	0.0035	1.925	16368.38	17741.95	17741.95	32.54	No	Si
SLU 75	1.42	-2973.25	-22107	-0.0000587	0.0003743	0.0035	1.925	15944.34	18300.68	18300.68	6.16	No	Si
SLU 83	1.02	563.31	-23801	-0.0000475	0.0003743	0.0035	1.925	16726.21	18184.92	18184.92	32.28	No	Si
SLU 83	1.42	-3085.56	-22899	-0.000061	0.0003743	0.0035	1.925	16317.76	18769.06	18769.06	6.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	1.02	4019.48	-15959	-0.0000513	0.0005615	0.0035	1.925		13957.36	13957.36	3.47		Si
SLV 11	1.42	-87.65	-14481	-0.0000263	0.0005615	0.0035	1.925		13727.44	13727.44	156.61		Si
SLV 12	1.02	4320.64	-16046	-0.0000532	0.0005615	0.0035	1.925		14018.17	14018.17	3.24		Si
SLV 12	1.42	-194.97	-14568	-0.000027	0.0005615	0.0035	1.925		13797.21	13797.21	70.77		Si
SLV 1	1.02	-4445.76	-18135	-0.000058	0.0005615	0.0035	1.925		16575.41	16575.41	3.73		Si
SLV 1	1.42	-1297.36	-17709	-0.0000391	0.0005615	0.0035	1.925		16247.08	16247.08	12.52		Si
SLV 9	1.02	-1282.5	-13728	-0.0000316	0.0005615	0.0035	1.925		13121.63	13121.63	10.23		Si
SLV 9	1.42	-4668.21	-13797	-0.000051	0.0005615	0.0035	1.925		13177.18	13177.18	2.82		Si
SLV 14	1.02	3615.21	-12654	-0.0000428	0.0005615	0.0035	1.925		11443.54	11443.54	3.17		Si
SLV 14	1.42	-4137.81	-12157	-0.0000448	0.0005615	0.0035	1.925		11852.52	11852.52	2.86		Si
SLV 6	1.02	-3259.44	-15499	-0.0000461	0.0005615	0.0035	1.925		14538.84	14538.84	4.46		Si
SLV 6	1.42	-3973.35	-15590	-0.0000503	0.0005615	0.0035	1.925		14609.74	14609.74	3.68		Si
SLV 15	1.02	4738.49	-13189	-0.0000504	0.0005615	0.0035	1.925		11880.09	11880.09	2.51		Si
SLV 15	1.42	-2597.11	-12228	-0.0000362	0.0005615	0.0035	1.925		11911.99	11911.99	4.59		Si
SLV 10	1.02	-981.34	-13815	-0.0000301	0.0005615	0.0035	1.925		13191.07	13191.07	13.44		Si
SLV 10	1.42	-4775.53	-13884	-0.0000518	0.0005615	0.0035	1.925		13246.65	13246.65	2.77		Si
SLV 13	1.02	3147.89	-12520	-0.0000399	0.0005615	0.0035	1.925		11333.68	11333.68	3.6		Si
SLV 13	1.42	-3971.28	-12023	-0.0000436	0.0005615	0.0035	1.925		11739.87	11739.87	2.96		Si
SLV 16	1.02	5205.81	-13323	-0.0000539	0.0005615	0.0035	1.925		11989.58	11989.58	2.3		Si
SLV 16	1.42	-2763.64	-12362	-0.0000374	0.0005615	0.0035	1.925		12024.44	12024.44	4.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	1.02	550.65	-23278	-20691	8939	1.925	1.925	-23886	10129	8774	33304	25939	4909	30848	No	3.45	Si
SLU 78	1.42	-3006.15	-22376	-19890	8939	1.925	1.925	-22961	10006	8668	33304	25939	4909	30848	No	3.45	Si
SLU 81	1.02	557.92	-23532	-20918	9074	1.925	1.925	-24147	10164	8805	33304	25939	4909	30848	No	3.4	Si
SLU 81	1.42	-3052.66	-22630	-20116	9074	1.925	1.925	-23222	10041	8698	33304	25939	4909	30848	No	3.4	Si
SLU 77	1.02	552.87	-23272	-20686	8936	1.925	1.925	-23880	10128	8774	33304	25939	4909	30848	No	3.45	Si
SLU 77	1.42	-3002.77	-22370	-19885	8936	1.925	1.925	-22955	10005	8667	33304	25939	4909	30848	No	3.45	Si
SLU 75	1.02	545.25	-23009	-20452	8843	1.925	1.925	-23610	10092	8743	33304	25939	4909	30848	No	3.49	Si
SLU 75	1.42	-2973.25	-22107	-19651	8843	1.925	1.925	-22685	9969	8636	33304	25939	4909	30848	No	3.49	Si
SLU 83	1.02	563.31	-23801	-21157	9169	1.925	1.925	-24423	10201	8837	33304	25939	4909	30848	No	3.36	Si
SLU 83	1.42	-3085.56	-22899	-20355	9169	1.925	1.925	-23498	10077	8730	33304	25939	4909	30848	No	3.36	Si
SLU 74	1.02	547.47	-23003	-20447	8840	1.925	1.925	-23604	10092	8742	33304	25939	4909	30848	No	3.49	Si
SLU 74	1.42	-2969.86	-22101	-19645	8840	1.925	1.925	-22679	9968	8635	33304	25939	4909	30848	No	3.49	Si
SLU 82	1.02	555.7	-23538	-20923	9076	1.925	1.925	-24153	10165	8805	33304	25939	4909	30848	No	3.4	Si
SLU 82	1.42	-3056.04	-22636	-20121	9076	1.925	1.925	-23228	10041	8698	33304	25939	4909	30848	No	3.4	Si
SLU 80	1.02	547.08	-23093	-20527	8888	1.925	1.925	-23697	10104	8753	33304	25939	4909	30848	No	3.47	Si
SLU 80	1.42	-2989.22	-22191	-19726	8888	1.925	1.925	-22771	9981	8646	33304	25939	4909	30848	No	3.47	Si
SLU 84	1.02	561.1	-23807	-21162	9172	1.925	1.925	-24429	10202	8837	33304	25939	4909	30848	No	3.36	Si
SLU 84	1.42	-3088.95	-22905	-20360	9172	1.925	1.925	-23504	10078	8730	33304	25939	4909	30848	No	3.36	Si
SLU 79	1.02	549.29	-23087	-20522	8885	1.925	1.925	-23691	10103	8752	33304	25939	4909	30848	No	3.47	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	1.42	-2985.84	-22185	-19720	8885	1.925	1.925	-22765	9980	8645	33304	25939	4909	30848	No	3.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.02	4019.48	-15959	-14186	11864	1.925	1.925	-16377	13692	11861	33304	38909	4909	43818		3.69	Si
SLV 11	1.42	-87.65	-14481	-12872	11701	1.925	1.925	-14860	13389	11598	33304	38909	4909	43818		3.74	Si
SLV 14	1.02	3615.21	-12654	-11248	18764	1.925	1.925	-12985	13014	11273	33304	38909	4909	43818		2.34	Si
SLV 14	1.42	-4137.81	-12157	-10806	18691	1.925	1.8664	-12946	13006	10924	33304	38909	4909	43818		2.34	Si
SLV 12	1.02	4320.64	-16046	-14263	12885	1.925	1.925	-16465	13710	11876	33304	38909	4909	43818		3.4	Si
SLV 12	1.42	-194.97	-14568	-12949	12722	1.925	1.925	-14949	13406	11613	33304	38909	4909	43818		3.44	Si
SLV 16	1.02	5205.81	-13323	-11843	20272	1.925	1.7153	-13672	13151	10151	33304	38909	4909	43456		2.14	Si
SLV 16	1.42	-2763.64	-12362	-10989	20122	1.925	1.925	-12685	12954	11221	33304	38909	4909	43818		2.18	Si
SLD 15	1.02	2244.14	-14641	-13014	11458	1.925	1.925	-15023	13421	11626	33304	38909	4909	43818		3.82	Si
SLD 15	1.42	-2272.09	-13833	-12296	11393	1.925	1.925	-14195	13256	11483	33304	38909	4909	43818		3.85	Si
SLV 13	1.02	3147.89	-12520	-11129	17179	1.925	1.925	-12847	12986	11249	33304	38909	4909	43818		2.55	Si
SLV 13	1.42	-3971.28	-12023	-10687	17107	1.925	1.8966	-12337	12884	10996	33304	38909	4909	43818		2.56	Si
SLV 15	1.02	4738.49	-13189	-11724	18687	1.925	1.8097	-13534	13123	10687	33304	38909	4909	43818		2.34	Si
SLV 15	1.42	-2597.11	-12228	-10869	18537	1.925	1.925	-12548	12926	11197	33304	38909	4909	43818		2.36	Si
SLD 16	1.02	2444.79	-14698	-13065	12139	1.925	1.925	-15082	13433	11636	33304	38909	4909	43818		3.61	Si
SLD 16	1.42	-2343.59	-13891	-12347	12074	1.925	1.925	-14254	13267	11493	33304	38909	4909	43818		3.63	Si
SLD 13	1.02	1558.67	-14361	-12765	10810	1.925	1.925	-14736	13364	11577	33304	38909	4909	43818		4.05	Si
SLD 13	1.42	-2862.59	-13751	-12223	10779	1.925	1.925	-14110	13239	11468	33304	38909	4909	43818		4.06	Si
SLD 14	1.02	1759.32	-14419	-12817	11490	1.925	1.925	-14796	13376	11587	33304	38909	4909	43818		3.81	Si
SLD 14	1.42	-2934.1	-13808	-12274	11460	1.925	1.925	-14169	13251	11478	33304	38909	4909	43818		3.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.25	9921	-8594	145.87	1808.1	12.4	Si
SLV 10	179667	0.25	10146	-8789	145.87	1846.14	12.66	Si
SLV 13	179667	0.25	10261	-8888	145.87	1865.48	12.79	Si
SLV 14	179667	0.25	10609	-9190	145.87	1924.15	13.19	Si
SLV 5	179667	0.25	10846	-9396	145.87	1963.9	13.46	Si
SLV 6	179667	0.25	11071	-9590	145.87	2001.4	13.72	Si
SLV 15	179667	0.25	11530	-9987	145.87	2077.53	14.24	Si
SLV 16	179667	0.25	11878	-10290	145.87	2135.07	14.64	Si
SLV 1	179667	0.25	13344	-11560	145.87	2373.64	16.27	Si
SLV 2	179667	0.25	13693	-11862	145.87	2429.57	16.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-15503	-5661	1695	0.597	1942.6	0.946	9.17133	4.30116	Si
SLV 5	-15451	-5454	1692	0.599	1937.3	0.946	9.19884	4.30116	Si
SLV 10	-13883	-4666	1699	0.649	1778.3	0.942	10.01348	4.30116	Si
SLV 9	-13831	-4458	1695	0.651	1773.1	0.942	10.04668	4.30116	Si
SLV 8	-13347	-9826	-681	0.734	1724	0.941	11.33653	4.30116	Si
SLV 7	-13295	-9618	-685	0.736	1718.8	0.941	11.36901	4.30116	Si
SLV 12	-11727	-8830	-678	0.81	1560.1	0.936	12.58209	4.30116	Si
SLV 11	-11675	-8623	-681	0.812	1554.8	0.935	12.62327	4.30116	Si
SLV 2	-16653	-8338	860	0.61	2059.2	0.949	9.33572	3.0673	Si
SLV 1	-16572	-8015	855	0.612	2051	0.949	9.37655	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.077	SLU 84	Si
V_SLU	3.363	SLU 84	Si
PF_SLV	2.303	SLV 16	Si
V_SLV	2.144	SLV 16	Si
PFFP_SLV	12.395	SLV 9	Si
R_SLV	2.132	SLV 6	Si

Maschio 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.784	-17.053	-3.284	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-0.98	10780.73	-14245	-0.000566	0.0003743	0.0035	1.5	0	17397.94	17397.94	1.61	No	Si
SLU 81	1.99	-1887.94	-8267	-0.0000366	0.0003743	0.0035	1.5	5454.35	15149.99	15149.99	8.02	No	Si
SLU 77	-0.98	10640.69	-14011	-0.0005548	0.0003743	0.0035	1.5	0	17319.38	17319.38	1.63	No	Si
SLU 77	1.99	-1921.94	-8170	-0.0000367	0.0003743	0.0035	1.5	5399.09	15108.89	15108.89	7.86	No	Si
SLU 75	-0.98	10537.52	-13889	-0.0005424	0.0003743	0.0035	1.5	0	17278.13	17278.13	1.64	No	Si
SLU 75	1.99	-1906.31	-8082	-0.0000363	0.0003743	0.0035	1.5	5348.87	15071.52	15071.52	7.91	No	Si
SLU 84	-0.98	10890.08	-14401	-0.0005774	0.0003743	0.0035	1.5	0	17450.15	17450.15	1.6	No	Si
SLU 84	1.99	-1899.89	-8358	-0.000037	0.0003743	0.0035	1.5	5506.09	15188.48	15188.48	7.99	No	Si
SLU 82	-0.98	10783.82	-14262	-0.0005653	0.0003743	0.0035	1.5	0	17403.66	17403.66	1.61	No	Si
SLU 82	1.99	-1886.1	-8269	-0.0000366	0.0003743	0.0035	1.5	5455.28	15150.69	15150.69	8.03	No	Si
SLU 79	-0.98	10600.82	-13952	-0.000551	0.0003743	0.0035	1.5	0	17299.47	17299.47	1.63	No	Si
SLU 79	1.99	-1928.13	-8136	-0.0000367	0.0003743	0.0035	1.5	5379.71	15094.46	15094.46	7.83	No	Si
SLU 80	-0.98	10603.91	-13969	-0.0005502	0.0003743	0.0035	1.5	0	17305.24	17305.24	1.63	No	Si
SLU 80	1.99	-1926.29	-8138	-0.0000367	0.0003743	0.0035	1.5	5380.65	15095.17	15095.17	7.84	No	Si
SLU 78	-0.98	10643.78	-14028	-0.000554	0.0003743	0.0035	1.5	0	17325.15	17325.15	1.63	No	Si
SLU 78	1.99	-1920.11	-8172	-0.0000367	0.0003743	0.0035	1.5	5400.03	15109.59	15109.59	7.87	No	Si
SLU 83	-0.98	10887	-14384	-0.0005782	0.0003743	0.0035	1.5	0	17444.45	17444.45	1.6	No	Si
SLU 83	1.99	-1901.73	-8356	-0.000037	0.0003743	0.0035	1.5	5505.15	15187.79	15187.79	7.99	No	Si
SLU 74	-0.98	10534.43	-13872	-0.0005432	0.0003743	0.0035	1.5	0	17272.35	17272.35	1.64	No	Si
SLU 74	1.99	-1908.15	-8081	-0.0000364	0.0003743	0.0035	1.5	5347.92	15070.81	15070.81	7.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	9140	-12143	-0.0003477	0.0005615	0.0035	1.5		18644.9	18644.9	2.04		Si
SLV 3	1.99	-3190.5	-6590	-0.0000562	0.0005615	0.0035	1.5		15931.34	15931.34	4.99		Si
SLV 12	-0.98	7929.8	-8569	-0.0004024	0.0005615	0.0035	1.5		16974.38	16974.38	2.14		Si
SLV 12	1.99	-2382.15	-6351	-0.0000386	0.0005615	0.0035	1.5		15786.5	15786.5	6.63		Si
SLV 8	-0.98	8899.82	-10149	-0.0004312	0.0005615	0.0035	1.5		17745.27	17745.27	1.99		Si
SLV 8	1.99	-3265.33	-6760	-0.0000574	0.0005615	0.0035	1.5		16028.69	16028.69	4.91		Si
SLV 4	-0.98	9413.65	-12202	-0.0003768	0.0005615	0.0035	1.5		18670.75	18670.75	1.98		Si
SLV 4	1.99	-3476.02	-6583	-0.0000664	0.0005615	0.0035	1.5		15927.06	15927.06	4.58		Si
SLD 8	-0.98	8035.87	-9840	-0.0003405	0.0005615	0.0035	1.5		17599.87	17599.87	2.19		Si
SLD 8	1.99	-2254.13	-6111	-0.0000364	0.0005615	0.0035	1.5		15639.85	15639.85	6.94		Si
SLD 4	-0.98	8248.5	-10722	-0.0003184	0.0005615	0.0035	1.5		18010.21	18010.21	2.18		Si
SLD 4	1.99	-2339.67	-6034	-0.0000378	0.0005615	0.0035	1.5		15592.28	15592.28	6.66		Si
SLV 1	-0.98	8568.69	-12313	-0.0002786	0.0005615	0.0035	1.5		18719.07	18719.07	2.18		Si
SLV 1	1.99	-2444.41	-6031	-0.0000397	0.0005615	0.0035	1.5		15590.02	15590.02	6.38		Si
SLV 7	-0.98	8723.47	-10111	-0.0004103	0.0005615	0.0035	1.5		17727.41	17727.41	2.03		Si
SLV 7	1.99	-3081.34	-6764	-0.0000522	0.0005615	0.0035	1.5		16031.23	16031.23	5.2		Si
SLV 2	-0.98	8842.35	-12372	-0.000304	0.0005615	0.0035	1.5		18744.79	18744.79	2.12		Si
SLV 2	1.99	-2729.92	-6024	-0.0000459	0.0005615	0.0035	1.5		15585.61	15585.61	5.71		Si
SLV 11	-0.98	7753.44	-8531	-0.0003819	0.0005615	0.0035	1.5		16954.97	16954.97	2.19		Si
SLV 11	1.99	-2198.16	-6355	-0.0000358	0.0005615	0.0035	1.5		15789.29	15789.29	7.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-0.98	10499.71	-13841	-12303	8485	1.5	0	-73622	10833	0	11894	20212	3825	11894	No	1.4	Si
SLU 76	1.99	-1911.27	-8050	-7155	8029	1.5	1.5	-10600	8358	5642	11894	20212	3825	17536	No	2.18	Si
SLU 81	-0.98	10780.73	-14245	-12662	8632	1.5	0	-75122	10833	0	11894	20212	3825	11894	No	1.38	Si
SLU 81	1.99	-1887.94	-8267	-7348	8164	1.5	1.5	-10886	8396	5667	11894	20212	3825	17562	No	2.15	Si
SLU 79	-0.98	10600.82	-13952	-12402	8547	1.5	0	-74202	10833	0	11894	20212	3825	11894	No	1.39	Si
SLU 79	1.99	-1928.13	-8136	-7232	8085	1.5	1.5	-10714	8373	5652	11894	20212	3825	17546	No	2.17	Si
SLU 75	-0.98	10537.52	-13889	-12346	8482	1.5	0	-73834	10833	0	11894	20212	3825	11894	No	1.4	Si
SLU 75	1.99	-1906.31	-8082	-7184	8024	1.5	1.5	-10643	8364	5645	11894	20212	3825	17540	No	2.19	Si
SLU 82	-0.98	10783.82	-14262	-12677	8642	1.5	0	-75126	10833	0	11894	20212	3825	11894	No	1.38	Si
SLU 82	1.99	-1886.1	-8269	-7350	8173	1.5	1.5	-10889	8396	5667	11894	20212	3825	17562	No	2.15	Si
SLU 84	-0.98	10890.08	-14401	-12801	8720	1.5	0	-75694	10833	0	11894	20212	3825	11894	No	1.36	Si
SLU 84	1.99	-1899.89	-8358	-7429	8244	1.5	1.5	-11006	8412	5678	11894	20212	3825	17572	No	2.13	Si
SLU 78	-0.98	10643.78	-14028	-12469	8560	1.5	0	-74417	10833	0	11894	20212	3825	11894	No	1.39	Si
SLU 78	1.99	-1920.11	-8172	-7264	8095	1.5	1.5	-10761	8379	5656	11894	20212	3825	17550	No	2.17	Si
SLU 83	-0.98	10887	-14384	-12786	8710	1.5	0	-75689	10833	0	11894	20212	3825	11894	No	1.37	Si
SLU 83	1.99	-1901.73	-8356	-7428	8235	1.5	1.5	-11004	8412	5678	11894	20212	3825	17572	No	2.13	Si
SLU 80	-0.98	10603.91	-13969	-12417	8557	1.5	0	-74206	10833	0	11894	20212	3825	11894	No	1.39	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.99	-1926.29	-8138	-7234	8094	1.5	1.5	-10717	8373	5652	11894	20212	3825	17546	No	2.17	Si
SLU 77	-0.98	10640.69	-14011	-12454	8550	1.5	0	-74413	10833	0	11894	20212	3825	11894	No	1.39	Si
SLU 77	1.99	-1921.94	-8170	-7262	8086	1.5	1.5	-10759	8379	5656	11894	20212	3825	17550	No	2.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	-0.98	8248.5	-10722	-9531	9704	1.5	0	-61596	16250	0	11894	30319	3825	11894		1.23	Si
SLD 4	1.99	-2339.67	-6034	-5364	9295	1.5	1.0868	-10979	12616	6170	11894	30319	3825	18065		1.94	Si
SLV 7	-0.98	8723.47	-10111	-8988	10683	1.5	0	-67557	16250	0	11894	30319	3825	11894		1.11	Si
SLV 7	1.99	-3081.34	-6764	-6013	9936	1.5	0.8834	-14983	13428	5338	11894	30319	3825	17233		1.73	Si
SLD 2	-0.98	7999.06	-10800	-9600	8953	1.5	0.028	-58548	16250	205	11894	30319	3825	12099		1.35	Si
SLD 2	1.99	-2017.48	-5795	-5151	8650	1.5	1.2055	-9521	12322	6684	11894	30319	3825	18579		2.15	Si
SLD 3	-0.98	8131	-10697	-9508	9208	1.5	0	-60378	16250	0	11894	30319	3825	11894		1.29	Si
SLD 3	1.99	-2217.08	-6038	-5367	8795	1.5	1.1484	-10405	12500	6459	11894	30319	3825	18354		2.09	Si
SLV 2	-0.98	8842.35	-12372	-10998	12783	1.5	0.1059	-63019	16250	775	11894	30319	3825	12669		0.99	No
SLV 2	1.99	-2729.92	-6024	-5354	12485	1.5	0.8904	-13237	13077	5240	11894	30319	3825	17134		1.37	Si
SLV 3	-0.98	9140	-12143	-10793	13344	1.5	0	-67180	16250	0	11894	30319	3825	11894		0.89	No
SLV 3	1.99	-3190.5	-6590	-5858	12797	1.5	0.7976	-16000	13641	4896	11894	30319	3825	16790		1.31	Si
SLD 8	-0.98	8035.87	-9840	-8747	8414	1.5	0	-61619	16250	0	11894	30319	3825	11894		1.41	Si
SLD 8	1.99	-2254.13	-6111	-5432	7914	1.5	1.1435	-10577	12534	6450	11894	30319	3825	18344		2.32	Si
SLV 1	-0.98	8568.69	-12313	-10945	11627	1.5	0.1623	-59926	16250	1187	11894	30319	3825	13081		1.13	Si
SLV 1	1.99	-2444.41	-6031	-5361	11320	1.5	1.034	-11514	12724	5921	11894	30319	3825	17815		1.57	Si
SLV 8	-0.98	8899.82	-10149	-9021	11428	1.5	0	-69024	16250	0	11894	30319	3825	11894		1.04	Si
SLV 8	1.99	-3265.33	-6760	-6009	10687	1.5	0.8008	-16357	13713	4942	11894	30319	3825	16836		1.58	Si
SLV 4	-0.98	9413.65	-12202	-10846	14500	1.5	0	-69948	16250	0	11894	30319	3825	11894		0.82	No
SLV 4	1.99	-3476.02	-6583	-5852	13961	1.5	0.6659	-18560	14181	4249	11894	30319	3825	16144		1.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	12634	-8528	113.66	1760	15.48	Si
SLV 15	179667	0.25	12718	-8585	113.66	1770.67	15.58	Si
SLV 14	179667	0.25	12739	-8599	113.66	1773.3	15.6	Si
SLV 16	179667	0.25	12823	-8655	113.66	1783.95	15.69	Si
SLV 9	179667	0.25	15277	-10312	113.66	2088.08	18.37	Si
SLV 10	179667	0.25	15345	-10358	113.66	2096.3	18.44	Si
SLV 11	179667	0.25	15558	-10501	113.66	2122.11	18.67	Si
SLV 12	179667	0.25	15625	-10547	113.66	2130.29	18.74	Si
SLV 5	179667	0.25	17611	-11887	113.66	2366.21	20.82	Si
SLV 6	179667	0.25	17678	-11933	113.66	2374.11	20.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-6764	-10111	-90	1.064	976.2	0.923	16.75628	4.30116	Si
SLV 8	-6760	-10149	-89	1.065	975.8	0.923	16.76677	4.30116	Si
SLV 11	-6355	-8531	36	1.121	935.2	0.921	17.68999	4.30116	Si
SLV 12	-6351	-8569	37	1.121	934.7	0.921	17.69808	4.30116	Si
SLV 5	-4900	-10679	-33	1.348	789.7	0.91	21.51656	4.30116	Si
SLV 6	-4895	-10717	-32	1.349	789.2	0.91	21.53344	4.30116	Si
SLV 9	-4491	-9099	93	1.421	749.1	0.907	22.76435	4.30116	Si
SLV 10	-4486	-9137	94	1.422	748.6	0.907	22.77868	4.30116	Si
SLV 3	-6590	-12143	-218	1.07	958.7	0.922	16.8596	3.0673	Si
SLV 4	-6583	-12202	-216	1.071	958	0.922	16.87632	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.602	SLU 83	Si
V_SLU	1.364	SLU 84	Si
PF_SLV	1.983	SLV 4	Si
V_SLV	0.82	SLV 4	No
PFFP_SLV	15.484	SLV 13	Si
R_SLV	3.896	SLV 7	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-17.053	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-0.98	-1860.1	-18890	-0.0000233	0.0003743	0.0035	3.29	27179.82	30964.66	30964.66	16.65	No	Si
SLU 74	1.99	-10722.42	-25077	-0.0000478	0.0003743	0.0035	3.29	34388.82	38916.22	38916.22	3.63	No	Si
SLU 75	-0.98	-1839.51	-18897	-0.0000233	0.0003743	0.0035	3.29	27188.48	30974.23	30974.23	16.84	No	Si
SLU 75	1.99	-10702.19	-25028	-0.0000477	0.0003743	0.0035	3.29	34335.4	38857.35	38857.35	3.63	No	Si
SLU 81	-0.98	-1801.26	-19330	-0.0000237	0.0003743	0.0035	3.29	27719.93	31561.18	31561.18	17.52	No	Si
SLU 81	1.99	-10931.21	-25797	-0.0000491	0.0003743	0.0035	3.29	35172.96	39789.85	39789.85	3.64	No	Si
SLU 80	-0.98	-1845.06	-19018	-0.0000235	0.0003743	0.0035	3.29	27337.65	31139.34	31139.34	16.88	No	Si
SLU 80	1.99	-10883.77	-25281	-0.0000484	0.0003743	0.0035	3.29	34611.75	39162.79	39162.79	3.6	No	Si
SLU 77	-0.98	-1881.01	-19097	-0.0000236	0.0003743	0.0035	3.29	27434.48	31246.78	31246.78	16.61	No	Si
SLU 77	1.99	-10986.72	-25418	-0.0000488	0.0003743	0.0035	3.29	34761.65	39329.38	39329.38	3.58	No	Si
SLU 83	-0.98	-1822.17	-19537	-0.000024	0.0003743	0.0035	3.29	27972.61	31838.46	31838.46	17.47	No	Si
SLU 83	1.99	-11195.51	-26137	-0.00005	0.0003743	0.0035	3.29	35540.44	40206.14	40206.14	3.59	No	Si
SLU 78	-0.98	-1860.42	-19104	-0.0000236	0.0003743	0.0035	3.29	27443.11	31256.37	31256.37	16.8	No	Si
SLU 78	1.99	-10966.5	-25369	-0.0000487	0.0003743	0.0035	3.29	34708.59	39270.35	39270.35	3.58	No	Si
SLU 79	-0.98	-1865.66	-19011	-0.0000235	0.0003743	0.0035	3.29	27329.01	31129.76	31129.76	16.69	No	Si
SLU 79	1.99	-10903.99	-25329	-0.0000485	0.0003743	0.0035	3.29	34664.9	39221.79	39221.79	3.6	No	Si
SLU 84	-0.98	-1801.57	-19544	-0.0000239	0.0003743	0.0035	3.29	27981.17	31847.85	31847.85	17.68	No	Si
SLU 84	1.99	-11175.29	-26089	-0.0000499	0.0003743	0.0035	3.29	35488.15	40146.61	40146.61	3.59	No	Si
SLU 82	-0.98	-1780.66	-19337	-0.0000237	0.0003743	0.0035	3.29	27728.53	31570.62	31570.62	17.73	No	Si
SLU 82	1.99	-10910.98	-25748	-0.000049	0.0003743	0.0035	3.29	35120.31	39730.63	39730.63	3.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	5026.93	-13235	-0.0000231	0.0005615	0.0035	3.29		21273.97	21273.97	4.23		Si
SLV 3	1.99	-15328.65	-20703	-0.0000528	0.0005615	0.0035	3.29		34429.27	34429.27	2.25		Si
SLV 2	-0.98	5772.14	-14382	-0.0000257	0.0005615	0.0035	3.29		22984.77	22984.77	3.98		Si
SLV 2	1.99	-15677.63	-19229	-0.0000535	0.0005615	0.0035	3.29		32301.61	32301.61	2.06		Si
SLV 16	-0.98	-8016.94	-11642	-0.0000276	0.0005615	0.0035	3.29		21178.71	21178.71	2.64		Si
SLV 16	1.99	400.96	-15384	-0.0000166	0.0005615	0.0035	3.29		24460.99	24460.99	61.01		Si
SLV 13	-0.98	-8299.44	-13294	-0.0000295	0.0005615	0.0035	3.29		23644.46	23644.46	2.85		Si
SLV 13	1.99	2179.58	-13211	-0.0000177	0.0005615	0.0035	3.29		21238.09	21238.09	9.74		Si
SLD 1	-0.98	1458.22	-13785	-0.0000169	0.0005615	0.0035	3.29		22095.09	22095.09	15.15		Si
SLD 1	1.99	-10304.54	-17866	-0.0000382	0.0005615	0.0035	3.29		30341.39	30341.39	2.94		Si
SLD 2	-0.98	1678.85	-13677	-0.0000172	0.0005615	0.0035	3.29		21933.5	21933.5	13.06		Si
SLD 2	1.99	-10761.3	-18016	-0.0000393	0.0005615	0.0035	3.29		30556.49	30556.49	2.84		Si
SLV 1	-0.98	5258.28	-14635	-0.000025	0.0005615	0.0035	3.29		23356.32	23356.32	4.44		Si
SLV 1	1.99	-14613.82	-18880	-0.0000499	0.0005615	0.0035	3.29		31798.55	31798.55	2.18		Si
SLV 4	-0.98	5540.78	-12982	-0.0000238	0.0005615	0.0035	3.29		20897.06	20897.06	3.77		Si
SLV 4	1.99	-16392.45	-21053	-0.0000563	0.0005615	0.0035	3.29		34914.96	34914.96	2.13		Si
SLD 4	-0.98	1577.3	-13062	-0.0000164	0.0005615	0.0035	3.29		21016.49	21016.49	13.32		Si
SLD 4	1.99	-11085.54	-18820	-0.0000408	0.0005615	0.0035	3.29		31712.92	31712.92	2.86		Si
SLV 15	-0.98	-8530.79	-11894	-0.0000291	0.0005615	0.0035	3.29		21554.31	21554.31	2.53		Si
SLV 15	1.99	1464.76	-15035	-0.0000183	0.0005615	0.0035	3.29		23945.8	23945.8	16.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	-1881.01	-19097	-16975	7742	3.29	3.29	-11466	8473	12545	33304	44333	8390	45849	No	5.92	Si
SLU 77	1.99	-10986.72	-25418	-22594	909	3.29	3.29	-15261	8979	13294	33304	44333	8390	46598	No	51.29	Si
SLU 82	-0.98	-1780.66	-19337	-17188	7903	3.29	3.29	-11610	8492	12573	33304	44333	8390	45877	No	5.81	Si
SLU 82	1.99	-10910.98	-25748	-22887	1024	3.29	3.29	-15459	9006	13333	33304	44333	8390	46637	No	45.54	Si
SLU 84	-0.98	-1801.57	-19544	-17372	8055	3.29	3.29	-11734	8509	12598	33304	44333	8390	45902	No	5.7	Si
SLU 84	1.99	-11175.29	-26089	-23190	1111	3.29	3.29	-15664	9033	13373	33304	44333	8390	46678	No	42.03	Si
SLU 78	-0.98	-1860.42	-19104	-16981	7789	3.29	3.29	-11470	8474	12545	33304	44333	8390	45850	No	5.89	Si
SLU 78	1.99	-10966.5	-25369	-22550	977	3.29	3.29	-15232	8975	13288	33304	44333	8390	46592	No	47.71	Si
SLU 75	-0.98	-1839.51	-18897	-16797	7637	3.29	3.29	-11346	8457	12521	33304	44333	8390	45825	No	6	Si
SLU 75	1.99	-10702.19	-25028	-22248	890	3.29	3.29	-15027	8948	13248	33304	44333	8390	46552	No	52.29	Si
SLU 81	-0.98	-1801.26	-19330	-17182	7856	3.29	3.29	-11606	8492	12572	33304	44333	8390	45877	No	5.84	Si
SLU 81	1.99	-10931.21	-25797	-22930	956	3.29	3.29	-15488	9010	13339	33304	44333	8390	46643	No	48.78	Si
SLU 76	-0.98	-1810.42	-18816	-16725	7637	3.29	3.29	-11297	8451	12511	33304	44333	8390	45816	No	6	Si
SLU 76	1.99	-10605.98	-24907	-22140	925	3.29	3.29	-14954	8938	13233	33304	44333	8390	46538	No	50.34	Si
SLU 83	-0.98	-1822.17	-19537	-17366	8008	3.29	3.29	-11730	8508	12597	33304	44333	8390	45901	No	5.73	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.99	-11195.51	-26137	-23233	1043	3.29	3.29	-15693	9037	13379	33304	44333	8390	46683	No	44.78	Si
SLU 80	-0.98	-1845.06	-19018	-16905	7758	3.29	3.29	-11418	8467	12535	33304	44333	8390	45840	No	5.91	Si
SLU 80	1.99	-10883.77	-25281	-22472	966	3.29	3.29	-15178	8968	13277	33304	44333	8390	46582	No	48.24	Si
SLU 79	-0.98	-1865.66	-19011	-16899	7712	3.29	3.29	-11414	8466	12534	33304	44333	8390	45839	No	5.94	Si
SLU 79	1.99	-10903.99	-25329	-22515	898	3.29	3.29	-15208	8972	13283	33304	44333	8390	46588	No	51.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-0.98	-8299.44	-13294	-11817	-7060	3.29	3.0621	-8608	12138	16726	33304	66499	8390	50030		7.09	Si
SLV 13	1.99	2179.58	-13211	-11743	-26050	3.29	3.29	-7932	12003	17770	33304	66499	8390	51075		1.96	Si
SLV 3	-0.98	5026.93	-13235	-11764	15575	3.29	3.29	-7946	12006	17775	33304	66499	8390	51079		3.28	Si
SLV 3	1.99	-15328.65	-20703	-18403	23589	3.29	2.7138	-15182	13453	16429	33304	66499	8390	49733		2.11	Si
SLV 4	-0.98	5540.78	-12982	-11540	17184	3.29	3.29	-7795	11976	17730	33304	66499	8390	51034		2.97	Si
SLV 4	1.99	-16392.45	-21053	-18713	26641	3.29	2.5991	-16124	13642	15955	33304	66499	8390	49259		1.85	Si
SLV 1	-0.98	5258.28	-14635	-13009	15261	3.29	3.29	-8787	12174	18024	33304	66499	8390	51328		3.36	Si
SLV 1	1.99	-14613.82	-18880	-16782	22778	3.29	2.6128	-14371	13291	15627	33304	66499	8390	48931		2.15	Si
SLD 2	-0.98	1678.85	-13677	-12157	10110	3.29	3.29	-8211	12059	17853	33304	66499	8390	51158		5.06	Si
SLD 2	1.99	-10761.3	-18016	-16014	11203	3.29	3.143	-11383	12693	17953	33304	66499	8390	51257		4.58	Si
SLV 16	-0.98	-8016.94	-11642	-10348	-5138	3.29	2.869	-8045	12026	15526	33304	66499	8390	48830		9.5	Si
SLV 16	1.99	400.96	-15384	-13674	-22186	3.29	3.29	-9236	12264	18157	33304	66499	8390	51461		2.32	Si
SLD 4	-0.98	1577.3	-13062	-11611	10250	3.29	3.29	-7843	11985	17744	33304	66499	8390	51048		4.98	Si
SLD 4	1.99	-11085.54	-18820	-16729	11563	3.29	3.1679	-11801	12777	18214	33304	66499	8390	51519		4.46	Si
SLV 14	-0.98	-7785.58	-13041	-11592	-5452	3.29	3.144	-8225	12062	17065	33304	66499	8390	50369		9.24	Si
SLV 14	1.99	1115.78	-13560	-12053	-22997	3.29	3.29	-8141	12045	17833	33304	66499	8390	51137		2.22	Si
SLV 2	-0.98	5772.14	-14382	-12784	16869	3.29	3.29	-8635	12144	17979	33304	66499	8390	51283		3.04	Si
SLV 2	1.99	-15677.63	-19229	-17092	25830	3.29	2.489	-15375	13492	15112	33304	66499	8390	48416		1.87	Si
SLV 15	-0.98	-8530.79	-11894	-10572	-6746	3.29	2.7833	-8475	12112	15169	33304	66499	8390	48474		7.19	Si
SLV 15	1.99	1464.76	-15035	-13364	-25239	3.29	3.29	-9027	12222	18095	33304	66499	8390	51399		2.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.25	7952	-11773	249.3	2510.92	10.07	Si
SLV 16	179667	0.25	8023	-11879	249.3	2532.29	10.16	Si
SLV 13	179667	0.25	8139	-12050	249.3	2566.84	10.3	Si
SLV 14	179667	0.25	8211	-12156	249.3	2588.15	10.38	Si
SLV 11	179667	0.25	8750	-12955	249.3	2747.78	11.02	Si
SLV 12	179667	0.25	8796	-13023	249.3	2761.39	11.08	Si
SLV 9	179667	0.25	9376	-13881	249.3	2931.41	11.76	Si
SLV 10	179667	0.25	9422	-13949	249.3	2944.89	11.81	Si
SLV 7	179667	0.25	9611	-14229	249.3	3000.12	12.03	Si
SLV 8	179667	0.25	9657	-14298	249.3	3013.56	12.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21134	-10925	-21	0.823	2776.7	0.938	12.76141	4.30116	Si
SLV 7	-20909	-11087	-18	0.83	2754	0.937	12.87359	4.30116	Si
SLV 12	-19433	-10522	-68	0.876	2604.7	0.934	13.62122	4.30116	Si
SLV 11	-19209	-10685	-66	0.884	2582	0.934	13.7506	4.30116	Si
SLV 6	-15055	-15591	-762	1.023	2163.2	0.924	16.10005	4.30116	Si
SLV 5	-14830	-15754	-760	1.035	2140.5	0.923	16.29144	4.30116	Si
SLV 10	-13354	-15189	-810	1.114	1992.4	0.919	17.61427	4.30116	Si
SLV 4	-21053	-12982	-225	0.818	2768.5	0.938	12.67478	3.0673	Si
SLV 9	-13129	-15351	-808	1.128	1969.9	0.918	17.84591	4.30116	Si
SLV 3	-20703	-13235	-221	0.828	2733.1	0.937	12.84907	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.58	SLU 77	Si
V_SLU	5.699	SLU 84	Si
PF_SLV	2.06	SLV 2	Si
V_SLV	1.849	SLV 4	Si
PFFP_SLV	10.072	SLV 15	Si
R_SLV	2.967	SLV 8	Si

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.201	-15.058	6.351	L2	L4	4.15	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-0.98	5147.69	-115838	-0.0001865	0.0004492	0.0035	4.15	57333.59	110874.11	110874.11	21.54	No	Si
SLU 77	1.22	1543.21	-82580	-0.0001167	0.0004492	0.0035	4.15	78334.54	105063.56	105063.56	68.08	No	Si
SLU 83	-0.98	5246.91	-118863	-0.0001932	0.0004492	0.0035	4.15	53926.16	110758.13	110758.13	21.11	No	Si
SLU 83	1.22	1414.69	-85225	-0.0001207	0.0004492	0.0035	4.15	77768.7	106240.96	106240.96	75.1	No	Si
SLU 74	-0.98	5092.85	-114721	-0.0001841	0.0004492	0.0035	4.15	58527.66	110918.27	110918.27	21.78	No	Si
SLU 74	1.22	1491.84	-81759	-0.0001152	0.0004492	0.0035	4.15	78471.22	104702.42	104702.42	70.18	No	Si
SLU 79	-0.98	5066.04	-115150	-0.0001849	0.0004492	0.0035	4.15	58073.08	110901.22	110901.22	21.89	No	Si
SLU 79	1.22	1490.96	-82079	-0.0001157	0.0004492	0.0035	4.15	78420.16	104842.87	104842.87	70.32	No	Si
SLU 81	-0.98	5192.07	-117747	-0.0001907	0.0004492	0.0035	4.15	55212.34	110800.29	110800.29	21.34	No	Si
SLU 81	1.22	1363.33	-84405	-0.0001193	0.0004492	0.0035	4.15	77964.58	105873.81	105873.81	77.66	No	Si
SLU 82	-0.98	5029.01	-117777	-0.0001903	0.0004492	0.0035	4.15	55178.08	110799.14	110799.14	22.03	No	Si
SLU 82	1.22	1367.06	-84412	-0.0001193	0.0004492	0.0035	4.15	77962.97	105876.96	105876.96	77.45	No	Si
SLU 84	-0.98	5083.85	-118893	-0.0001928	0.0004492	0.0035	4.15	53890.98	110757	110757	21.79	No	Si
SLU 84	1.22	1418.43	-85232	-0.0001208	0.0004492	0.0035	4.15	77766.94	106244.13	106244.13	74.9	No	Si
SLU 75	-0.98	4929.79	-114752	-0.0001837	0.0004492	0.0035	4.15	58495.88	110917.07	110917.07	22.5	No	Si
SLU 75	1.22	1495.58	-81766	-0.0001152	0.0004492	0.0035	4.15	78470.12	104705.52	104705.52	70.01	No	Si
SLU 78	-0.98	4984.62	-115868	-0.0001862	0.0004492	0.0035	4.15	57300.89	110872.93	110872.93	22.24	No	Si
SLU 78	1.22	1546.95	-82587	-0.0001167	0.0004492	0.0035	4.15	78333.29	105066.68	105066.68	67.92	No	Si
SLU 80	-0.98	4902.98	-115180	-0.0001845	0.0004492	0.0035	4.15	58040.95	110900.03	110900.03	22.62	No	Si
SLU 80	1.22	1494.69	-82086	-0.0001158	0.0004492	0.0035	4.15	78419	104845.98	104845.98	70.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	-0.98	13348.4	-78363	-0.0001275	0.0006738	0.0035	4.15		121486.79	121486.79	9.1		Si
SLD 8	1.22	1061.37	-56508	-0.0000729	0.0006738	0.0035	4.15		95056.71	95056.71	89.56		Si
SLV 7	-0.98	25185.59	-77695	-0.0001504	0.0006738	0.0035	4.15		120912.9	120912.9	4.8		Si
SLV 7	1.22	1164.17	-58077	-0.0000752	0.0006738	0.0035	4.15		96987.32	96987.32	83.31		Si
SLV 9	-0.98	-19129.44	-80425	-0.0001422	0.0006738	0.0035	4.15		126410.43	126410.43	6.61		Si
SLV 9	1.22	1070.53	-52861	-0.0000681	0.0006738	0.0035	4.15		90599.29	90599.29	84.63		Si
SLV 5	-0.98	-18958.16	-82862	-0.0001456	0.0006738	0.0035	4.15		128659.96	128659.96	6.79		Si
SLV 5	1.22	3245.01	-57720	-0.0000787	0.0006738	0.0035	4.15		96546.76	96546.76	29.75		Si
SLV 11	-0.98	25014.3	-75258	-0.0001464	0.0006738	0.0035	4.15		118538.94	118538.94	4.74		Si
SLV 11	1.22	-1010.31	-53219	-0.0000685	0.0006738	0.0035	4.15		95825.71	95825.71	94.85		Si
SLV 10	-0.98	-18321.8	-80343	-0.0001405	0.0006738	0.0035	4.15		126335.79	126335.79	6.9		Si
SLV 10	1.22	986.08	-52864	-0.0000679	0.0006738	0.0035	4.15		90602.56	90602.56	91.88		Si
SLV 12	-0.98	25821.94	-75176	-0.0001479	0.0006738	0.0035	4.15		118444.14	118444.14	4.59		Si
SLV 12	1.22	-1094.76	-53221	-0.0000686	0.0006738	0.0035	4.15		95829.26	95829.26	87.53		Si
SLV 8	-0.98	25993.23	-77613	-0.0001519	0.0006738	0.0035	4.15		120843.11	120843.11	4.65		Si
SLV 8	1.22	1079.72	-58080	-0.0000751	0.0006738	0.0035	4.15		96990.63	96990.63	89.83		Si
SLV 6	-0.98	-18150.52	-82780	-0.0001438	0.0006738	0.0035	4.15		128584.4	128584.4	7.08		Si
SLV 6	1.22	3160.56	-57722	-0.0000785	0.0006738	0.0035	4.15		96550.07	96550.07	30.55		Si
SLD 12	-0.98	13284.64	-77353	-0.0001259	0.0006738	0.0035	4.15		120620.17	120620.17	9.08		Si
SLD 12	1.22	114.64	-54568	-0.0000686	0.0006738	0.0035	4.15		92679.79	92679.79	808.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-0.98	4984.62	-115868	-97573	-20510	4.15	4.15	-78372	10833	13487	33304	44742	10582	46792	No	2.28	Si
SLU 78	1.22	1546.95	-82587	-69547	-25137	4.15	4.15	-55861	10833	13487	33304	44742	10582	46792	No	1.86	Si
SLU 75	-0.98	4929.79	-114752	-96633	-20266	4.15	4.15	-77617	10833	13487	33304	44742	10582	46792	No	2.31	Si
SLU 75	1.22	1495.58	-81766	-68856	-24842	4.15	4.15	-55306	10833	13487	33304	44742	10582	46792	No	1.88	Si
SLU 82	-0.98	5029.01	-117777	-99180	-20368	4.15	4.15	-79663	10833	13487	33304	44742	10582	46792	No	2.3	Si
SLU 82	1.22	1367.06	-84412	-71084	-25053	4.15	4.15	-57095	10833	13487	33304	44742	10582	46792	No	1.87	Si
SLU 84	-0.98	5083.85	-118893	-100120	-20612	4.15	4.15	-80418	10833	13487	33304	44742	10582	46792	No	2.27	Si
SLU 84	1.22	1418.43	-85232	-71774	-25348	4.15	4.15	-57650	10833	13487	33304	44742	10582	46792	No	1.85	Si
SLU 74	-0.98	5092.85	-114721	-96608	-20145	4.15	4.15	-77596	10833	13487	33304	44742	10582	46792	No	2.32	Si
SLU 74	1.22	1491.84	-81759	-68850	-24738	4.15	4.15	-55301	10833	13487	33304	44742	10582	46792	No	1.89	Si
SLU 81	-0.98	5192.07	-117747	-99155	-20246	4.15	4.15	-79643	10833	13487	33304	44742	10582	46792	No	2.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	1.22	1363.33	-84405	-71078	-24949	4.15	4.15	-57091	10833	13487	33304	44742	10582	46792	No	1.88	Si
SLU 83	-0.98	5246.91	-118863	-100095	-20490	4.15	4.15	-80398	10833	13487	33304	44742	10582	46792	No	2.28	Si
SLU 83	1.22	1414.69	-85225	-71768	-25244	4.15	4.15	-57645	10833	13487	33304	44742	10582	46792	No	1.85	Si
SLU 77	-0.98	5147.69	-115838	-97547	-20389	4.15	4.15	-78351	10833	13487	33304	44742	10582	46792	No	2.29	Si
SLU 77	1.22	1543.21	-82580	-69541	-25033	4.15	4.15	-55856	10833	13487	33304	44742	10582	46792	No	1.87	Si
SLU 79	-0.98	5066.04	-115150	-96969	-20252	4.15	4.15	-77886	10833	13487	33304	44742	10582	46792	No	2.31	Si
SLU 79	1.22	1490.96	-82079	-69119	-24859	4.15	4.15	-55517	10833	13487	33304	44742	10582	46792	No	1.88	Si
SLU 80	-0.98	4902.98	-115180	-96994	-20374	4.15	4.15	-77907	10833	13487	33304	44742	10582	46792	No	2.3	Si
SLU 80	1.22	1494.69	-82086	-69125	-24963	4.15	4.15	-55522	10833	13487	33304	44742	10582	46792	No	1.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	-0.98	-18321.8	-80343	-67657	-28795	4.15	4.15	-54343	16250	20231	33304	67113	10582	53536		1.86	Si
SLV 10	1.22	986.08	-52864	-44517	-29229	4.15	4.15	-35757	16250	20231	33304	67113	10582	53536		1.83	Si
SLV 6	-0.98	-18150.52	-82780	-69710	-33026	4.15	4.15	-55992	16250	20231	33304	67113	10582	53536		1.62	Si
SLV 6	1.22	3160.56	-57722	-48608	-32767	4.15	4.15	-39043	16250	20231	33304	67113	10582	53536		1.63	Si
SLD 5	-0.98	-6420.85	-80685	-67945	-22785	4.15	4.15	-54574	16250	20231	33304	67113	10582	53536		2.35	Si
SLD 5	1.22	2035.6	-56374	-47472	-24421	4.15	4.15	-38130	16250	20231	33304	67113	10582	53536		2.19	Si
SLD 10	-0.98	-6131.86	-79639	-67064	-20749	4.15	4.15	-53867	16250	20231	33304	67113	10582	53536		2.58	Si
SLD 10	1.22	1051.99	-54434	-45839	-22715	4.15	4.15	-36819	16250	20231	33304	67113	10582	53536		2.36	Si
SLV 1	-0.98	-3530.82	-83919	-70668	-26946	4.15	4.15	-56762	16250	20231	33304	67113	10582	53536		1.99	Si
SLV 1	1.22	5076.9	-63513	-53484	-27945	4.15	4.15	-42959	16250	20231	33304	67113	10582	53536		1.92	Si
SLV 5	-0.98	-18958.16	-82862	-69778	-33642	4.15	4.15	-56047	16250	20231	33304	67113	10582	53536		1.59	Si
SLV 5	1.22	3245.01	-57720	-48606	-33301	4.15	4.15	-39041	16250	20231	33304	67113	10582	53536		1.61	Si
SLD 9	-0.98	-6484.62	-79675	-67094	-21018	4.15	4.15	-53891	16250	20231	33304	67113	10582	53536		2.55	Si
SLD 9	1.22	1088.88	-54433	-45838	-22948	4.15	4.15	-36818	16250	20231	33304	67113	10582	53536		2.33	Si
SLV 2	-0.98	-2277.56	-83792	-70562	-25990	4.15	4.15	-56676	16250	20231	33304	67113	10582	53536		2.06	Si
SLV 2	1.22	4945.85	-63517	-53488	-27117	4.15	4.15	-42962	16250	20231	33304	67113	10582	53536		1.97	Si
SLD 6	-0.98	-6068.09	-80649	-67915	-22516	4.15	4.15	-54550	16250	20231	33304	67113	10582	53536		2.38	Si
SLD 6	1.22	1998.72	-56375	-47473	-24188	4.15	4.15	-38131	16250	20231	33304	67113	10582	53536		2.21	Si
SLV 9	-0.98	-19129.44	-80425	-67726	-29411	4.15	4.15	-54398	16250	20231	33304	67113	10582	53536		1.82	Si
SLV 9	1.22	1070.53	-52861	-44515	-29763	4.15	4.15	-35755	16250	20231	33304	67113	10582	53536		1.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	215625	0.25	50773	-63213	209.65	6855.21	32.7	Si
SLV 15	215625	0.25	50774	-63214	209.65	6855.3	32.7	Si
SLV 14	215625	0.25	50936	-63415	209.65	6868.7	32.76	Si
SLV 13	215625	0.25	50937	-63416	209.65	6868.79	32.76	Si
SLV 12	215625	0.25	52420	-65262	209.65	6989.54	33.34	Si
SLV 11	215625	0.25	52420	-65263	209.65	6989.6	33.34	Si
SLV 10	215625	0.25	52961	-65936	209.65	7032.51	33.54	Si
SLV 9	215625	0.25	52962	-65937	209.65	7032.56	33.54	Si
SLV 8	215625	0.25	53993	-67221	209.65	7112.77	33.93	Si
SLV 7	215625	0.25	53994	-67222	209.65	7112.82	33.93	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-53006	-82862	806	0.453	5917.3	0.973	6.76613	5.87132	Si
SLV 6	-52987	-82780	808	0.453	5915.4	0.973	6.76781	5.87132	Si
SLV 7	-51651	-77695	825	0.463	5779.3	0.972	6.91359	5.87132	Si
SLV 8	-51632	-77613	826	0.463	5777.3	0.972	6.91536	5.87132	Si
SLV 9	-48276	-80425	1056	0.485	5435.6	0.971	7.26172	5.87132	Si
SLV 10	-48257	-80343	1057	0.485	5433.7	0.971	7.26375	5.87132	Si
SLV 11	-46921	-75258	1074	0.496	5297.6	0.97	7.4371	5.87132	Si
SLV 12	-46902	-75176	1076	0.497	5295.7	0.97	7.43925	5.87132	Si
SLV 1	-58056	-83919	521	0.425	6431.6	0.975	6.32765	3.44478	Si
SLV 2	-58027	-83792	523	0.425	6428.6	0.975	6.32982	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.109	SLU 83	Si
V_SLU	1.846	SLU 84	Si
PF_SLV	4.587	SLV 12	Si
V_SLV	1.591	SLV 5	Si
PFFP_SLV	32.699	SLV 16	Si
R_SLV	1.152	SLV 5	Si

Maschio 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	1.046	L2	L4	5.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-0.98	59998.89	-93674	-0.0001608	0.0003743	0.0035	5.83	129414.25	173052.98	173052.98	2.88	No	Si
SLU 75	1.99	195.68	-88121	-0.0000849	0.0003743	0.0035	5.83	129753.13	169121.33	169121.33	864.26	No	Si
SLU 80	-0.98	60315.22	-94189	-0.0001619	0.0003743	0.0035	5.83	129331.78	173359.39	173359.39	2.87	No	Si
SLU 80	1.99	-106.04	-88805	-0.0000856	0.0003743	0.0035	5.83	129765.93	173002.32	173002.32	1631.47	No	Si
SLU 81	-0.98	61378.66	-96182	-0.0001661	0.0003743	0.0035	5.83	128930.27	174557.84	174557.84	2.84	No	Si
SLU 81	1.99	652.36	-90262	-0.0000878	0.0003743	0.0035	5.83	129742.08	170792.67	170792.67	261.81	No	Si
SLU 74	-0.98	60093.27	-93654	-0.0001608	0.0003743	0.0035	5.83	129417.32	173040.97	173040.97	2.88	No	Si
SLU 74	1.99	89.44	-88081	-0.0000848	0.0003743	0.0035	5.83	129751.94	169089.36	169089.36	1890.54	No	Si
SLU 78	-0.98	60664.14	-94666	-0.000163	0.0003743	0.0035	5.83	129247.47	173644.87	173644.87	2.86	No	Si
SLU 78	1.99	-72.83	-89347	-0.0000862	0.0003743	0.0035	5.83	129765.19	173520.58	173520.58	2382.7	No	Si
SLU 82	-0.98	61284.28	-96202	-0.000166	0.0003743	0.0035	5.83	128925.53	174570.07	174570.07	2.85	No	Si
SLU 82	1.99	758.6	-90302	-0.000088	0.0003743	0.0035	5.83	129740.48	170821.87	170821.87	225.18	No	Si
SLU 84	-0.98	61949.53	-97194	-0.0001683	0.0003743	0.0035	5.83	128676.66	175172.75	175172.75	2.83	No	Si
SLU 84	1.99	490.09	-91528	-0.0000891	0.0003743	0.0035	5.83	129664.98	171710.27	171710.27	350.36	No	Si
SLU 77	-0.98	60758.52	-94646	-0.0001631	0.0003743	0.0035	5.83	129251.19	173632.77	173632.77	2.86	No	Si
SLU 77	1.99	-179.07	-89307	-0.0000862	0.0003743	0.0035	5.83	129765.56	173482.94	173482.94	968.81	No	Si
SLU 79	-0.98	60409.6	-94169	-0.000162	0.0003743	0.0035	5.83	129335.19	173347.33	173347.33	2.87	No	Si
SLU 79	1.99	-212.28	-88766	-0.0000857	0.0003743	0.0035	5.83	129765.61	172964.92	172964.92	814.78	No	Si
SLU 83	-0.98	62043.91	-97174	-0.0001683	0.0003743	0.0035	5.83	128682.05	175160.43	175160.43	2.82	No	Si
SLU 83	1.99	383.85	-91488	-0.0000889	0.0003743	0.0035	5.83	129668.16	171682.62	171682.62	447.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	-0.98	55524.37	-67285	-0.0001143	0.0005615	0.0035	5.83		158932.24	158932.24	2.86		Si
SLV 12	1.99	-5832.09	-60789	-0.0000596	0.0005615	0.0035	5.83		156816.89	156816.89	26.89		Si
SLD 12	-0.98	47818.9	-65767	-0.0001051	0.0005615	0.0035	5.83		156321.06	156321.06	3.27		Si
SLD 12	1.99	-2709.65	-60386	-0.0000563	0.0005615	0.0035	5.83		156037.65	156037.65	57.59		Si
SLV 8	-0.98	55871.4	-61747	-0.0001089	0.0005615	0.0035	5.83		149454.99	149454.99	2.67		Si
SLV 8	1.99	-12388.2	-55389	-0.0000607	0.0005615	0.0035	5.83		145977.84	145977.84	11.78		Si
SLV 7	-0.98	55414.01	-62056	-0.0001088	0.0005615	0.0035	5.83		149980.82	149980.82	2.71		Si
SLV 7	1.99	-11800.96	-55580	-0.0000603	0.0005615	0.0035	5.83		146360.21	146360.21	12.4		Si
SLV 11	-0.98	55066.98	-67594	-0.0001142	0.0005615	0.0035	5.83		159465.2	159465.2	2.9		Si
SLV 11	1.99	-5244.84	-60981	-0.0000592	0.0005615	0.0035	5.83		157179.52	157179.52	29.97		Si
SLD 7	-0.98	47771.22	-63537	-0.0001028	0.0005615	0.0035	5.83		152502.62	152502.62	3.19		Si
SLD 7	1.99	-5254.21	-58161	-0.0000566	0.0005615	0.0035	5.83		151533.19	151533.19	28.84		Si
SLD 8	-0.98	47971	-63402	-0.0001028	0.0005615	0.0035	5.83		152272.3	152272.3	3.17		Si
SLD 8	1.99	-5510.71	-58077	-0.0000567	0.0005615	0.0035	5.83		151364.35	151364.35	27.47		Si
SLV 3	-0.98	46087.67	-55661	-0.0000931	0.0005615	0.0035	5.83		137823.52	137823.52	2.99		Si
SLV 3	1.99	-13216.21	-50678	-0.000057	0.0005615	0.0035	5.83		136238.06	136238.06	10.31		Si
SLV 4	-0.98	46797.43	-55181	-0.0000933	0.0005615	0.0035	5.83		136723.39	136723.39	2.92		Si
SLV 4	1.99	-14127.47	-50380	-0.0000575	0.0005615	0.0035	5.83		135605.22	135605.22	9.6		Si
SLD 11	-0.98	47619.12	-65902	-0.0001051	0.0005615	0.0035	5.83		156552.84	156552.84	3.29		Si
SLD 11	1.99	-2453.16	-60470	-0.0000561	0.0005615	0.0035	5.83		156208.1	156208.1	63.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-0.98	60664.14	-94666	-79719	13443	5.83	5.83	-45580	10833	18948	33304	52373	14867	52252	No	3.89	Si
SLU 78	1.99	-72.83	-89347	-75239	14581	5.83	5.83	-43018	10833	18948	33304	52373	14867	52252	No	3.58	Si
SLU 81	-0.98	61378.66	-96182	-80996	13516	5.83	5.83	-46310	10833	18948	33304	52373	14867	52252	No	3.87	Si
SLU 81	1.99	652.36	-90262	-76010	14646	5.83	5.83	-43459	10833	18948	33304	52373	14867	52252	No	3.57	Si
SLU 84	-0.98	61949.53	-97194	-81848	13537	5.83	5.83	-46797	10833	18948	33304	52373	14867	52252	No	3.86	Si
SLU 84	1.99	490.09	-91528	-77076	14663	5.83	5.83	-44069	10833	18948	33304	52373	14867	52252	No	3.56	Si
SLU 75	-0.98	59998.89	-93674	-78884	13274	5.83	5.83	-45102	10833	18948	33304	52373	14867	52252	No	3.94	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.99	195.68	-88121	-74207	14396	5.83	5.83	-42428	10833	18948	33304	52373	14867	52252	No	3.63	Si
SLU 82	-0.98	61284.28	-96202	-81013	13368	5.83	5.83	-46319	10833	18948	33304	52373	14867	52252	No	3.91	Si
SLU 82	1.99	758.6	-90302	-76043	14478	5.83	5.83	-43478	10833	18948	33304	52373	14867	52252	No	3.61	Si
SLU 83	-0.98	62043.91	-97174	-81831	13685	5.83	5.83	-46787	10833	18948	33304	52373	14867	52252	No	3.82	Si
SLU 83	1.99	383.85	-91488	-77043	14831	5.83	5.83	-44050	10833	18948	33304	52373	14867	52252	No	3.52	Si
SLU 77	-0.98	60758.52	-94646	-79702	13591	5.83	5.83	-45570	10833	18948	33304	52373	14867	52252	No	3.84	Si
SLU 77	1.99	-179.07	-89307	-75206	14749	5.83	5.83	-43000	10833	18948	33304	52373	14867	52252	No	3.54	Si
SLU 80	-0.98	60315.22	-94189	-79317	13437	5.83	5.83	-45350	10833	18948	33304	52373	14867	52252	No	3.89	Si
SLU 80	1.99	-106.04	-88805	-74783	14572	5.83	5.83	-42758	10833	18948	33304	52373	14867	52252	No	3.59	Si
SLU 74	-0.98	60093.27	-93654	-78867	13422	5.83	5.83	-45092	10833	18948	33304	52373	14867	52252	No	3.89	Si
SLU 74	1.99	89.44	-88081	-74174	14565	5.83	5.83	-42409	10833	18948	33304	52373	14867	52252	No	3.59	Si
SLU 79	-0.98	60409.6	-94169	-79300	13584	5.83	5.83	-45340	10833	18948	33304	52373	14867	52252	No	3.85	Si
SLU 79	1.99	-212.28	-88766	-74750	14740	5.83	5.83	-42739	10833	18948	33304	52373	14867	52252	No	3.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	47971	-63402	-53391	19107	5.83	5.83	-30526	16250	28421	33304	78559	14867	61726		3.23	Si
SLD 8	1.99	-5510.71	-58077	-48907	19468	5.83	5.83	-27963	16009	28000	33304	78559	14867	61305		3.15	Si
SLD 4	-0.98	43967.8	-60601	-51032	16221	5.83	5.83	-29178	16250	28421	33304	78559	14867	61726		3.81	Si
SLD 4	1.99	-6158.66	-55945	-47111	17449	5.83	5.83	-26936	15804	27641	33304	78559	14867	60945		3.49	Si
SLD 7	-0.98	47771.22	-63537	-53504	18905	5.83	5.83	-30591	16250	28421	33304	78559	14867	61726		3.27	Si
SLD 7	1.99	-5254.21	-58161	-48978	19316	5.83	5.83	-28003	16017	28014	33304	78559	14867	61319		3.17	Si
SLV 4	-0.98	46797.43	-55181	-46469	24745	5.83	5.83	-26569	15730	27512	33304	78559	14867	60817		2.46	Si
SLV 4	1.99	-14127.47	-50380	-42425	26480	5.83	5.83	-24257	15268	26704	33304	78559	14867	60008		2.27	Si
SLD 3	-0.98	43663.05	-60806	-51205	15913	5.83	5.83	-29277	16250	28421	33304	78559	14867	61726		3.88	Si
SLD 3	1.99	-5767.39	-56073	-47219	17217	5.83	5.83	-26998	15816	27663	33304	78559	14867	60967		3.54	Si
SLV 3	-0.98	46087.67	-55661	-46872	24027	5.83	5.83	-26800	15777	27593	33304	78559	14867	60898		2.53	Si
SLV 3	1.99	-13216.21	-50678	-42676	25941	5.83	5.83	-24400	15297	26754	33304	78559	14867	60058		2.32	Si
SLV 8	-0.98	55871.4	-61747	-51997	31120	5.83	5.83	-29730	16250	28421	33304	78559	14867	61726		1.98	Si
SLV 8	1.99	-12388.2	-55389	-46643	30844	5.83	5.83	-26668	15750	27547	33304	78559	14867	60852		1.97	Si
SLV 11	-0.98	55066.98	-67594	-56922	25186	5.83	5.83	-32545	16250	28421	33304	78559	14867	61726		2.45	Si
SLV 11	1.99	-5244.84	-60981	-51352	24167	5.83	5.83	-29361	16250	28421	33304	78559	14867	61726		2.55	Si
SLV 7	-0.98	55414.01	-62056	-52258	30657	5.83	5.83	-29879	16250	28421	33304	78559	14867	61726		2.01	Si
SLV 7	1.99	-11800.96	-55580	-46805	30496	5.83	5.83	-26761	15769	27580	33304	78559	14867	60884		2	Si
SLV 12	-0.98	55524.37	-67285	-56661	25649	5.83	5.83	-32396	16250	28421	33304	78559	14867	61726		2.41	Si
SLV 12	1.99	-5832.09	-60789	-51191	24515	5.83	5.83	-29269	16250	28421	33304	78559	14867	61726		2.52	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.25	28645	-50100	294.52	6105.46	20.73	Si
SLV 3	179667	0.25	29062	-50829	294.52	6173.47	20.96	Si
SLV 2	179667	0.25	29426	-51466	294.52	6232.38	21.16	Si
SLV 1	179667	0.25	29842	-52194	294.52	6299.27	21.39	Si
SLV 8	179667	0.25	31822	-55656	294.52	6608.83	22.44	Si
SLV 7	179667	0.25	32090	-56126	294.52	6649.8	22.58	Si
SLV 6	179667	0.25	34423	-60207	294.52	6995.34	23.75	Si
SLV 5	179667	0.25	34692	-60676	294.52	7033.91	23.88	Si
SLV 12	179667	0.25	35261	-61672	294.52	7114.84	24.16	Si
SLV 11	179667	0.25	35530	-62141	294.52	7152.63	24.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-64824	-67542	-11	0.525	7331.1	0.97	7.86842	5.87132	Si
SLV 10	-64632	-67233	-12	0.526	7311.6	0.97	7.88849	5.87132	Si
SLV 11	-60981	-67594	165	0.55	6939.9	0.968	8.26297	5.87132	Si
SLV 12	-60789	-67285	164	0.552	6920.3	0.968	8.28592	5.87132	Si
SLV 5	-59424	-62003	-762	0.553	6781.3	0.967	8.31141	5.87132	Si
SLV 6	-59232	-61694	-763	0.555	6761.8	0.967	8.33459	5.87132	Si
SLV 7	-55580	-62056	-587	0.588	6390.2	0.965	8.8538	5.87132	Si
SLV 8	-55389	-61747	-588	0.59	6370.6	0.965	8.88029	5.87132	Si
SLV 13	-69833	-74107	928	0.481	7841.1	0.971	7.19205	3.44478	Si
SLV 14	-69535	-73628	926	0.482	7810.8	0.971	7.21897	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.823	SLU 83	Si
V_SLU	3.523	SLU 83	Si
PF_SLV	2.675	SLV 8	Si
V_SLV	1.973	SLV 8	Si
PFFP_SLV	20.73	SLV 4	Si
R_SLV	1.34	SLV 9	Si

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.638	1.046	-24.653	1.046	L2	L4	5.015	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-0.98	-4073.65	-167230	-0.0001363	0.0004492	0.0035	5.015	165021.85	233158.12	233158.12	57.24	No	Si
SLU 82	1.12	-7052.87	-128305	-0.0001035	0.0004492	0.0035	5.015	172026.22	213088.79	213088.79	30.21	No	Si
SLU 77	-0.98	-3767.58	-164785	-0.0001336	0.0004492	0.0035	5.015	166272.88	232177.67	232177.67	61.63	No	Si
SLU 77	1.12	-6629.03	-125875	-0.0001009	0.0004492	0.0035	5.015	171549.48	211220.78	211220.78	31.86	No	Si
SLU 74	-0.98	-3766.32	-163211	-0.0001321	0.0004492	0.0035	5.015	167020.65	231554.1	231554.1	61.48	No	Si
SLU 74	1.12	-6585.17	-124623	-0.0000998	0.0004492	0.0035	5.015	171262.01	210267.26	210267.26	31.93	No	Si
SLU 81	-0.98	-4060.61	-167189	-0.0001363	0.0004492	0.0035	5.015	165043.61	233141.65	233141.65	57.42	No	Si
SLU 81	1.12	-7080.1	-128253	-0.0001034	0.0004492	0.0035	5.015	172017.03	213048.09	213048.09	30.09	No	Si
SLU 40	-0.98	-3645.36	-140938	-0.0001112	0.0004492	0.0035	5.015	172773.29	223069.32	223069.32	61.19	No	Si
SLU 40	1.12	-6415.08	-109310	-0.0000866	0.0004492	0.0035	5.015	165439.38	197634.07	197634.07	30.81	No	Si
SLU 42	-0.98	-3646.63	-142511	-0.0001127	0.0004492	0.0035	5.015	172663.05	223903.94	223903.94	61.4	No	Si
SLU 42	1.12	-6458.94	-110562	-0.0000877	0.0004492	0.0035	5.015	166075.54	199089.47	199089.47	30.82	No	Si
SLU 41	-0.98	-3633.59	-142471	-0.0001126	0.0004492	0.0035	5.015	172666.48	223889.88	223889.88	61.62	No	Si
SLU 41	1.12	-6486.16	-110509	-0.0000877	0.0004492	0.0035	5.015	166049.36	199028.09	199028.09	30.69	No	Si
SLU 84	-0.98	-4074.92	-168804	-0.0001379	0.0004492	0.0035	5.015	164159.05	233796.79	233796.79	57.37	No	Si
SLU 84	1.12	-7096.73	-129557	-0.0001046	0.0004492	0.0035	5.015	172229.83	214059.51	214059.51	30.16	No	Si
SLU 39	-0.98	-3632.32	-140897	-0.0001112	0.0004492	0.0035	5.015	172775.54	223038.84	223038.84	61.4	No	Si
SLU 39	1.12	-6442.3	-109257	-0.0000866	0.0004492	0.0035	5.015	165412	197573.04	197573.04	30.67	No	Si
SLU 83	-0.98	-4061.88	-168763	-0.0001378	0.0004492	0.0035	5.015	164181.98	233780.16	233780.16	57.55	No	Si
SLU 83	1.12	-7123.96	-129505	-0.0001046	0.0004492	0.0035	5.015	172221.84	214018.57	214018.57	30.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-0.98	-57771.11	-65819	-0.0000952	0.0006738	0.0035	5.015		151131.71	151131.71	2.62		Si
SLV 15	1.12	3887.14	-46320	-0.0000349	0.0006738	0.0035	5.015		106569.1	106569.1	27.42		Si
SLV 13	-0.98	-58504.7	-65120	-0.0000954	0.0006738	0.0035	5.015		149828.62	149828.62	2.56		Si
SLV 13	1.12	8739.17	-43634	-0.000037	0.0006738	0.0035	5.015		101459.66	101459.66	11.61		Si
SLV 2	-0.98	52925.13	-160251	-0.0001686	0.0006738	0.0035	5.015		280348.36	280348.36	5.3		Si
SLV 2	1.12	-12021.69	-123983	-0.0000997	0.0006738	0.0035	5.015		245395.94	245395.94	20.41		Si
SLV 1	-0.98	53185.06	-160111	-0.0001688	0.0006738	0.0035	5.015		280202.61	280202.61	5.27		Si
SLV 1	1.12	-11418.34	-124239	-0.0000993	0.0006738	0.0035	5.015		245750.72	245750.72	21.52		Si
SLV 3	-0.98	53918.65	-160810	-0.0001701	0.0006738	0.0035	5.015		280929.27	280929.27	5.21		Si
SLV 3	1.12	-16270.36	-126926	-0.0001059	0.0006738	0.0035	5.015		249353.66	249353.66	15.33		Si
SLD 13	-0.98	-26393.62	-92552	-0.0000881	0.0006738	0.0035	5.015		198381.93	198381.93	7.52		Si
SLD 13	1.12	1405.92	-67406	-0.0000478	0.0006738	0.0035	5.015		145812.44	145812.44	103.71		Si
SLV 14	-0.98	-58764.64	-65260	-0.0000957	0.0006738	0.0035	5.015		150089.92	150089.92	2.55		Si
SLV 14	1.12	8135.82	-43377	-0.0000363	0.0006738	0.0035	5.015		100917.73	100917.73	12.4		Si
SLV 4	-0.98	53658.71	-160951	-0.00017	0.0006738	0.0035	5.015		281075.1	281075.1	5.24		Si
SLV 4	1.12	-16873.71	-126669	-0.0001062	0.0006738	0.0035	5.015		249023.99	249023.99	14.76		Si
SLD 14	-0.98	-26505.23	-92612	-0.0000883	0.0006738	0.0035	5.015		198483.63	198483.63	7.49		Si
SLD 14	1.12	1146.86	-67296	-0.0000475	0.0006738	0.0035	5.015		145604.86	145604.86	126.96		Si
SLV 16	-0.98	-58031.05	-65959	-0.0000955	0.0006738	0.0035	5.015		151393.32	151393.32	2.61		Si
SLV 16	1.12	3283.79	-46063	-0.0000342	0.0006738	0.0035	5.015		106097.52	106097.52	32.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-0.98	-3758.16	-163838	-145633	-29144	5.015	5.015	-64532	10833	24448	33304	81102	12788	57752	No	1.98	Si
SLU 79	1.12	-6565.94	-125104	-111204	-29817	5.015	5.015	-49276	10833	24448	33304	81102	12788	57752	No	1.94	Si
SLU 77	-0.98	-3767.58	-164785	-146475	-29312	5.015	5.015	-64905	10833	24448	33304	81102	12788	57752	No	1.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.12	-6629.03	-125875	-111889	-29990	5.015	5.015	-49579	10833	24448	33304	81102	12788	57752	No	1.93	Si
SLU 75	-0.98	-3779.35	-163252	-145113	-28979	5.015	5.015	-64302	10833	24448	33304	81102	12788	57752	No	1.99	Si
SLU 75	1.12	-6557.95	-124675	-110822	-29650	5.015	5.015	-49107	10833	24448	33304	81102	12788	57752	No	1.95	Si
SLU 82	-0.98	-4073.65	-167230	-148649	-29236	5.015	5.015	-65869	10833	24448	33304	81102	12788	57752	No	1.98	Si
SLU 82	1.12	-7052.87	-128305	-114049	-29919	5.015	5.015	-50537	10833	24448	33304	81102	12788	57752	No	1.93	Si
SLU 78	-0.98	-3780.62	-164826	-146512	-29316	5.015	5.015	-64922	10833	24448	33304	81102	12788	57752	No	1.97	Si
SLU 78	1.12	-6601.81	-125927	-111935	-29995	5.015	5.015	-49600	10833	24448	33304	81102	12788	57752	No	1.93	Si
SLU 81	-0.98	-4060.61	-167189	-148613	-29231	5.015	5.015	-65852	10833	24448	33304	81102	12788	57752	No	1.98	Si
SLU 81	1.12	-7080.1	-128253	-114002	-29914	5.015	5.015	-50516	10833	24448	33304	81102	12788	57752	No	1.93	Si
SLU 74	-0.98	-3766.32	-163211	-145076	-28975	5.015	5.015	-64286	10833	24448	33304	81102	12788	57752	No	1.99	Si
SLU 74	1.12	-6585.17	-124623	-110776	-29645	5.015	5.015	-49086	10833	24448	33304	81102	12788	57752	No	1.95	Si
SLU 83	-0.98	-4061.88	-168763	-150011	-29568	5.015	5.015	-66472	10833	24448	33304	81102	12788	57752	No	1.95	Si
SLU 83	1.12	-7123.96	-129505	-115115	-30259	5.015	5.015	-51009	10833	24448	33304	81102	12788	57752	No	1.91	Si
SLU 80	-0.98	-3771.19	-163878	-145670	-29148	5.015	5.015	-64548	10833	24448	33304	81102	12788	57752	No	1.98	Si
SLU 80	1.12	-6538.71	-125157	-111250	-29822	5.015	5.015	-49297	10833	24448	33304	81102	12788	57752	No	1.94	Si
SLU 84	-0.98	-4074.92	-168804	-150048	-29573	5.015	5.015	-66488	10833	24448	33304	81102	12788	57752	No	1.95	Si
SLU 84	1.12	-7096.73	-129557	-115162	-30264	5.015	5.015	-51030	10833	24448	33304	81102	12788	57752	No	1.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	-0.98	-57771.11	-65819	-58506	-45530	5.015	4.8893	-26891	16250	35753	33304	121653	12788	69057		1.52	Si
SLV 15	1.12	3887.14	-46320	-41173	-44492	5.015	5.015	-18244	16149	36444	33304	121653	12788	69748		1.57	Si
SLV 10	-0.98	-20482.86	-97666	-86814	-29107	5.015	5.015	-38469	16250	36672	33304	121653	12788	69977		2.4	Si
SLV 10	1.12	6848.65	-68501	-60890	-30179	5.015	5.015	-26981	16250	36672	33304	121653	12788	69977		2.32	Si
SLD 16	-0.98	-26197.61	-92916	-82592	-31390	5.015	5.015	-36598	16250	36672	33304	121653	12788	69977		2.23	Si
SLD 16	1.12	-941.63	-68440	-60835	-31209	5.015	5.015	-26957	16250	36672	33304	121653	12788	69977		2.24	Si
SLD 15	-0.98	-26086	-92855	-82538	-31259	5.015	5.015	-36574	16250	36672	33304	121653	12788	69977		2.24	Si
SLD 15	1.12	-682.57	-68550	-60933	-31077	5.015	5.015	-27000	16250	36672	33304	121653	12788	69977		2.25	Si
SLD 13	-0.98	-26393.62	-92552	-82268	-31468	5.015	5.015	-36454	16250	36672	33304	121653	12788	69977		2.22	Si
SLD 13	1.12	1405.92	-67406	-59916	-31534	5.015	5.015	-26550	16250	36672	33304	121653	12788	69977		2.22	Si
SLV 13	-0.98	-58504.7	-65120	-57884	-46018	5.015	4.8272	-26946	16250	35299	33304	121653	12788	68604		1.49	Si
SLV 13	1.12	8739.17	-43634	-38786	-45563	5.015	5.015	-17186	15937	35966	33304	121653	12788	69271		1.52	Si
SLV 14	-0.98	-58764.64	-65260	-58009	-46321	5.015	4.8211	-27039	16250	35254	33304	121653	12788	68559		1.48	Si
SLV 14	1.12	8135.82	-43377	-38558	-45869	5.015	5.015	-17085	15917	35921	33304	121653	12788	69225		1.51	Si
SLV 16	-0.98	-58031.05	-65959	-58630	-45833	5.015	4.8831	-26983	16250	35708	33304	121653	12788	69012		1.51	Si
SLV 16	1.12	3283.79	-46063	-40945	-44798	5.015	5.015	-18143	16129	36398	33304	121653	12788	69703		1.56	Si
SLV 9	-0.98	-20315.35	-97576	-86734	-28911	5.015	5.015	-38433	16250	36672	33304	121653	12788	69977		2.42	Si
SLV 9	1.12	7237.47	-68666	-61037	-29982	5.015	5.015	-27046	16250	36672	33304	121653	12788	69977		2.33	Si
SLD 14	-0.98	-26505.23	-92612	-82322	-31599	5.015	5.015	-36478	16250	36672	33304	121653	12788	69977		2.21	Si
SLD 14	1.12	1146.86	-67296	-59818	-31665	5.015	5.015	-26506	16250	36672	33304	121653	12788	69977		2.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	215625	0.25	22422	-50601	380.02	9992.35	26.29	Si
SLV 13	215625	0.25	22501	-50778	380.02	10022.52	26.37	Si
SLV 16	215625	0.25	23108	-52149	380.02	10254.09	26.98	Si
SLV 15	215625	0.25	23187	-52326	380.02	10283.96	27.06	Si
SLV 10	215625	0.25	35335	-79743	380.02	14483	38.11	Si
SLV 9	215625	0.25	35386	-79857	380.02	14498.81	38.15	Si
SLV 12	215625	0.25	37621	-84902	380.02	15181.73	39.95	Si
SLV 11	215625	0.25	37672	-85016	380.02	15196.91	39.99	Si
SLV 6	215625	0.25	47077	-106242	380.02	17764.37	46.75	Si
SLV 5	215625	0.25	47128	-106356	380.02	17776.89	46.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-82982	-128404	1504	0.38	9392.1	0.969	5.70393	4.30116	Si
SLV 8	-82751	-128494	1507	0.381	9368.6	0.969	5.71565	4.30116	Si
SLV 5	-69239	-126073	-3412	0.411	7993.2	0.964	6.18944	4.30116	Si
SLV 6	-69009	-126164	-3408	0.412	7969.8	0.964	6.20627	4.30116	Si
SLV 11	-67774	-99906	1564	0.442	7844.1	0.964	6.67123	4.30116	Si
SLV 12	-67543	-99997	1567	0.444	7820.6	0.964	6.68856	4.30116	Si
SLV 1	-91856	-160111	-1762	0.35	10295.7	0.972	5.23662	3.0673	Si
SLV 2	-91498	-160251	-1757	0.351	10259.2	0.972	5.25301	3.0673	Si
SLV 3	-95979	-160810	-288	0.354	10715.5	0.973	5.2813	3.0673	Si
SLV 4	-95621	-160951	-282	0.355	10679.1	0.973	5.29717	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.042	SLU 83	Si
V_SLU	1.908	SLU 84	Si
PF_SLV	2.554	SLV 14	Si
V_SLV	1.48	SLV 14	Si
PFFP_SLV	26.294	SLV 14	Si
R_SLV	1.326	SLV 7	Si

Maschio 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.046	-18.838	1.046	L2	L4	3.875	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-0.98	-13192.76	-121708	-0.0001465	0.0004492	0.0035	3.875	101108.8	136863.96	136863.96	10.37	No	Si
SLU 80	1.12	-10535.37	-117230	-0.000136	0.0004492	0.0035	3.875	102162.38	135521.37	135521.37	12.86	No	Si
SLU 74	-0.98	-13154.76	-121287	-0.0001459	0.0004492	0.0035	3.875	101223.38	136735.71	136735.71	10.39	No	Si
SLU 74	1.12	-10515.8	-116764	-0.0001354	0.0004492	0.0035	3.875	102251.12	135384.33	135384.33	12.87	No	Si
SLU 81	-0.98	-13480.04	-124397	-0.0001505	0.0004492	0.0035	3.875	100300.95	137693.1	137693.1	10.21	No	Si
SLU 81	1.12	-10901.3	-120039	-0.0001402	0.0004492	0.0035	3.875	101544.03	136358.07	136358.07	12.51	No	Si
SLU 84	-0.98	-13615.94	-125587	-0.0001523	0.0004492	0.0035	3.875	99901.56	138065.46	138065.46	10.14	No	Si
SLU 84	1.12	-10984.45	-121308	-0.0001419	0.0004492	0.0035	3.875	101217.85	136741.97	136741.97	12.45	No	Si
SLU 77	-0.98	-13273.15	-122479	-0.0001476	0.0004492	0.0035	3.875	100890.49	137100.06	137100.06	10.33	No	Si
SLU 77	1.12	-10630.26	-117990	-0.0001371	0.0004492	0.0035	3.875	102009.31	135745.79	135745.79	12.77	No	Si
SLU 78	-0.98	-13290.66	-122477	-0.0001477	0.0004492	0.0035	3.875	100891.27	137099.24	137099.24	10.32	No	Si
SLU 78	1.12	-10598.95	-118032	-0.0001371	0.0004492	0.0035	3.875	102000.49	135758.32	135758.32	12.81	No	Si
SLU 75	-0.98	-13172.27	-121284	-0.0001459	0.0004492	0.0035	3.875	101224.09	136734.89	136734.89	10.38	No	Si
SLU 75	1.12	-10484.5	-116806	-0.0001354	0.0004492	0.0035	3.875	102243.24	135396.73	135396.73	12.91	No	Si
SLU 82	-0.98	-13497.55	-124394	-0.0001506	0.0004492	0.0035	3.875	100301.82	137692.27	137692.27	10.2	No	Si
SLU 82	1.12	-10869.99	-120082	-0.0001402	0.0004492	0.0035	3.875	101533.63	136370.8	136370.8	12.55	No	Si
SLU 79	-0.98	-13175.25	-121711	-0.0001465	0.0004492	0.0035	3.875	101108.06	136864.77	136864.77	10.39	No	Si
SLU 79	1.12	-10566.68	-117188	-0.000136	0.0004492	0.0035	3.875	102170.59	135508.93	135508.93	12.82	No	Si
SLU 83	-0.98	-13598.43	-125589	-0.0001523	0.0004492	0.0035	3.875	99900.63	138066.3	138066.3	10.15	No	Si
SLU 83	1.12	-11015.76	-121265	-0.000142	0.0004492	0.0035	3.875	101229.19	136729.12	136729.12	12.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	36992.11	-90698	-0.0001403	0.0006738	0.0035	3.875		136218.41	136218.41	3.68		Si
SLV 3	1.12	-32803.68	-88978	-0.0001319	0.0006738	0.0035	3.875		139082.56	139082.56	4.24		Si
SLV 1	-0.98	35413.59	-88734	-0.0001357	0.0006738	0.0035	3.875		133976.82	133976.82	3.78		Si
SLV 1	1.12	-29748.56	-89619	-0.0001279	0.0006738	0.0035	3.875		139767.82	139767.82	4.7		Si
SLD 14	-0.98	-28681.72	-80569	-0.0001167	0.0006738	0.0035	3.875		129436.33	129436.33	4.51		Si
SLD 14	1.12	3820.48	-75762	-0.0000747	0.0006738	0.0035	3.875		119304.06	119304.06	31.23		Si
SLD 13	-0.98	-28754.07	-80477	-0.0001167	0.0006738	0.0035	3.875		129330.51	129330.51	4.5		Si
SLD 13	1.12	3841.17	-75917	-0.0000748	0.0006738	0.0035	3.875		119478.59	119478.59	31.1		Si
SLV 2	-0.98	35582.09	-88949	-0.0001362	0.0006738	0.0035	3.875		134222.31	134222.31	3.77		Si
SLV 2	1.12	-29796.74	-89257	-0.0001276	0.0006738	0.0035	3.875		139380.74	139380.74	4.68		Si
SLV 14	-0.98	-55028.77	-76534	-0.000154	0.0006738	0.0035	3.875		124511.46	124511.46	2.26		Si
SLV 14	1.12	18484.12	-70451	-0.0000911	0.0006738	0.0035	3.875		113362.21	113362.21	6.13		Si
SLV 15	-0.98	-53618.75	-78283	-0.0001531	0.0006738	0.0035	3.875		126672.14	126672.14	2.36		Si
SLV 15	1.12	15477.18	-70172	-0.0000864	0.0006738	0.0035	3.875		113051.15	113051.15	7.3		Si
SLV 13	-0.98	-55197.27	-76319	-0.0001541	0.0006738	0.0035	3.875		124246.19	124246.19	2.25		Si
SLV 13	1.12	18532.31	-70813	-0.0000915	0.0006738	0.0035	3.875		113765.91	113765.91	6.14		Si
SLV 16	-0.98	-53450.25	-78499	-0.000153	0.0006738	0.0035	3.875		126938.54	126938.54	2.37		Si
SLV 16	1.12	15429	-69810	-0.0000859	0.0006738	0.0035	3.875		112647.8	112647.8	7.3		Si
SLV 4	-0.98	37160.61	-90913	-0.0001408	0.0006738	0.0035	3.875		136464.2	136464.2	3.67		Si
SLV 4	1.12	-32851.86	-88616	-0.0001316	0.0006738	0.0035	3.875		138696.03	138696.03	4.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	-0.98	-12008.86	-113239	-100657	1988	3.875	3.875	-57725	10833	18891	33304	62666	9881	52195	No	26.26	Si
SLU 60	1.12	-10188.91	-108390	-96347	2039	3.875	3.875	-55253	10833	18891	33304	62666	9881	52195	No	25.6	Si
SLU 84	-0.98	-13615.94	-125587	-111632	2036	3.875	3.875	-64019	10833	18891	33304	62666	9881	52195	No	25.64	Si
SLU 84	1.12	-10984.45	-121308	-107829	2093	3.875	3.875	-61837	10833	18891	33304	62666	9881	52195	No	24.94	Si
SLU 78	-0.98	-13290.66	-122477	-108868	1881	3.875	3.875	-62433	10833	18891	33304	62666	9881	52195	No	27.75	Si
SLU 78	1.12	-10598.95	-118032	-104917	1937	3.875	3.875	-60168	10833	18891	33304	62666	9881	52195	No	26.95	Si
SLU 83	-0.98	-13598.43	-125589	-111635	2025	3.875	3.875	-64020	10833	18891	33304	62666	9881	52195	No	25.78	Si
SLU 83	1.12	-11015.76	-121265	-107792	2082	3.875	3.875	-61816	10833	18891	33304	62666	9881	52195	No	25.07	Si
SLU 80	-0.98	-13192.76	-121708	-108185	1872	3.875	3.875	-62042	10833	18891	33304	62666	9881	52195	No	27.89	Si
SLU 80	1.12	-10535.37	-117230	-104205	1928	3.875	3.875	-59759	10833	18891	33304	62666	9881	52195	No	27.08	Si
SLU 62	-0.98	-12127.25	-114432	-101717	2011	3.875	3.875	-58332	10833	18891	33304	62666	9881	52195	No	25.95	Si
SLU 62	1.12	-10303.36	-109616	-97436	2064	3.875	3.875	-55877	10833	18891	33304	62666	9881	52195	No	25.29	Si
SLU 81	-0.98	-13480.04	-124397	-110575	2001	3.875	3.875	-63412	10833	18891	33304	62666	9881	52195	No	26.09	Si
SLU 81	1.12	-10901.3	-120039	-106702	2058	3.875	3.875	-61191	10833	18891	33304	62666	9881	52195	No	25.37	Si
SLU 63	-0.98	-12144.76	-114429	-101715	2022	3.875	3.875	-58331	10833	18891	33304	62666	9881	52195	No	25.81	Si
SLU 63	1.12	-10272.05	-109658	-97474	2075	3.875	3.875	-55899	10833	18891	33304	62666	9881	52195	No	25.16	Si
SLU 82	-0.98	-13497.55	-124394	-110573	2012	3.875	3.875	-63411	10833	18891	33304	62666	9881	52195	No	25.94	Si
SLU 82	1.12	-10869.99	-120082	-106739	2069	3.875	3.875	-61213	10833	18891	33304	62666	9881	52195	No	25.23	Si
SLU 61	-0.98	-12026.37	-113237	-100655	1999	3.875	3.875	-57723	10833	18891	33304	62666	9881	52195	No	26.12	Si
SLU 61	1.12	-10157.6	-108432	-96384	2050	3.875	3.875	-55274	10833	18891	33304	62666	9881	52195	No	25.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-0.98	35413.59	-88734	-78875	37260	3.875	3.875	-45233	16250	28336	33304	93999	9881	61640		1.65	Si
SLV 1	1.12	-29748.56	-89619	-79661	36790	3.875	3.875	-45684	16250	28336	33304	93999	9881	61640		1.68	Si
SLV 15	-0.98	-53618.75	-78283	-69585	-34563	3.875	3.7577	-41948	16250	27478	33304	93999	9881	60783		1.76	Si
SLV 15	1.12	15477.18	-70172	-62375	-34016	3.875	3.875	-35771	16250	28336	33304	93999	9881	61640		1.81	Si
SLV 2	-0.98	35582.09	-88949	-79066	36924	3.875	3.875	-45342	16250	28336	33304	93999	9881	61640		1.67	Si
SLV 2	1.12	-29796.74	-89257	-79340	36453	3.875	3.875	-45499	16250	28336	33304	93999	9881	61640		1.69	Si
SLV 3	-0.98	36992.11	-90698	-80621	36345	3.875	3.875	-46234	16250	28336	33304	93999	9881	61640		1.7	Si
SLV 3	1.12	-32803.68	-88978	-79092	35255	3.875	3.875	-45357	16250	28336	33304	93999	9881	61640		1.75	Si
SLD 2	-0.98	10026.31	-85887	-76344	16459	3.875	3.875	-43781	16250	28336	33304	93999	9881	61640		3.75	Si
SLD 2	1.12	-16836.63	-83794	-74484	16276	3.875	3.875	-42715	16250	28336	33304	93999	9881	61640		3.79	Si
SLD 1	-0.98	9953.96	-85794	-76261	16603	3.875	3.875	-43734	16250	28336	33304	93999	9881	61640		3.71	Si
SLD 1	1.12	-16815.94	-83950	-74622	16420	3.875	3.875	-42794	16250	28336	33304	93999	9881	61640		3.75	Si
SLV 14	-0.98	-55028.77	-76534	-68031	-33985	3.875	3.6555	-42162	16250	26731	33304	93999	9881	60035		1.77	Si
SLV 14	1.12	18484.12	-70451	-62623	-32818	3.875	3.875	-35913	16250	28336	33304	93999	9881	61640		1.88	Si
SLV 16	-0.98	-53450.25	-78499	-69777	-34900	3.875	3.7698	-41928	16250	27567	33304	93999	9881	60871		1.74	Si
SLV 16	1.12	15429	-69810	-62053	-34353	3.875	3.875	-35586	16250	28336	33304	93999	9881	61640		1.79	Si
SLV 4	-0.98	37160.61	-90913	-80812	36009	3.875	3.875	-46344	16250	28336	33304	93999	9881	61640		1.71	Si
SLV 4	1.12	-32851.86	-88616	-78770	34917	3.875	3.875	-45173	16250	28336	33304	93999	9881	61640		1.77	Si
SLV 13	-0.98	-55197.27	-76319	-67839	-33648	3.875	3.6428	-42191	16250	26638	33304	93999	9881	59942		1.78	Si
SLV 13	1.12	18532.31	-70813	-62945	-32480	3.875	3.875	-36097	16250	28336	33304	93999	9881	61640		1.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	215625	0.25	40647	-70878	293.63	12410.81	42.27	Si
SLV 13	215625	0.25	40756	-71069	293.63	12434.7	42.35	Si
SLV 16	215625	0.25	40949	-71405	293.63	12476.55	42.49	Si
SLV 15	215625	0.25	41058	-71596	293.63	12500.3	42.57	Si
SLV 10	215625	0.25	43821	-76414	293.63	13082.3	44.55	Si
SLV 9	215625	0.25	43892	-76537	293.63	13096.74	44.6	Si
SLV 12	215625	0.25	44828	-78169	293.63	13286.24	45.25	Si
SLV 11	215625	0.25	44899	-78292	293.63	13300.37	45.3	Si
SLV 6	215625	0.25	46828	-81656	293.63	13678.44	46.58	Si
SLV 5	215625	0.25	46898	-81779	293.63	13691.97	46.63	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-72341	-82136	-2270	0.334	8094.4	0.972	4.98515	4.30116	Si
SLV 6	-72056	-82274	-2271	0.334	8065.3	0.972	4.99971	4.30116	Si
SLV 9	-66854	-78411	-2196	0.354	7535.6	0.97	5.30655	4.30116	Si
SLV 10	-66569	-78550	-2198	0.355	7506.6	0.97	5.32359	4.30116	Si
SLV 7	-64736	-88683	463	0.388	7319.9	0.97	5.81283	4.30116	Si
SLV 8	-64450	-88822	462	0.389	7290.8	0.97	5.8331	4.30116	Si
SLV 11	-59249	-84958	537	0.413	6761.3	0.967	6.21205	4.30116	Si
SLV 12	-58963	-85097	535	0.415	6732.3	0.967	6.23596	4.30116	Si
SLV 1	-76159	-88734	-1399	0.332	8483.2	0.974	4.95816	3.0673	Si
SLV 2	-75716	-88949	-1401	0.334	8438.1	0.973	4.97956	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.14	SLU 84	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	24.938	SLU 84	Si
PF_SLV	2.251	SLV 13	Si
V_SLV	1.654	SLV 1	Si
PFFP_SLV	42.266	SLV 14	Si
R_SLV	1.159	SLV 5	Si

Maschio 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.046	-11.238	1.046	L2	L4	0.76	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-0.98	-907.71	-39362	-0.0003065	0.0004492	0.0035	0.7597	862.59	4554.35	4554.35	5.02	No	Si
SLU 75	1.18	200.12	-18748	-0.0001012	0.0004492	0.0035	0.7597	3925.25	4738.41	4738.41	23.68	No	Si
SLU 78	-0.98	-924.73	-39742	-0.0003127	0.0004492	0.0035	0.7597	733.74	4497.25	4497.25	4.86	No	Si
SLU 78	1.18	204.73	-18936	-0.0001024	0.0004492	0.0035	0.7597	3932.26	4767.15	4767.15	23.28	No	Si
SLU 83	-0.98	-944.15	-40829	-0.0003293	0.0004492	0.0035	0.7597	350.31	4331.64	4331.64	4.59	No	Si
SLU 83	1.18	206.82	-19492	-0.0001057	0.0004492	0.0035	0.7597	3949.16	4852.28	4852.28	23.46	No	Si
SLU 81	-0.98	-927.13	-40449	-0.0003225	0.0004492	0.0035	0.7597	486.66	4390.34	4390.34	4.74	No	Si
SLU 81	1.18	202.21	-19303	-0.0001045	0.0004492	0.0035	0.7597	3944.05	4823.3	4823.3	23.85	No	Si
SLU 84	-0.98	-941.57	-40808	-0.0003288	0.0004492	0.0035	0.7597	357.89	4334.89	4334.89	4.6	No	Si
SLU 84	1.18	206.9	-19499	-0.0001058	0.0004492	0.0035	0.7597	3949.33	4853.35	4853.35	23.46	No	Si
SLU 79	-0.98	-918.75	-39511	-0.0003093	0.0004492	0.0035	0.7597	812.24	4531.92	4531.92	4.93	No	Si
SLU 79	1.18	202.87	-18801	-0.0001016	0.0004492	0.0035	0.7597	3927.3	4746.53	4746.53	23.4	No	Si
SLU 80	-0.98	-916.16	-39491	-0.0003088	0.0004492	0.0035	0.7597	819.32	4535.06	4535.06	4.95	No	Si
SLU 80	1.18	202.95	-18808	-0.0001016	0.0004492	0.0035	0.7597	3927.56	4747.59	4747.59	23.39	No	Si
SLU 77	-0.98	-927.31	-39763	-0.0003132	0.0004492	0.0035	0.7597	726.56	4494.09	4494.09	4.85	No	Si
SLU 77	1.18	204.65	-18929	-0.0001024	0.0004492	0.0035	0.7597	3932.02	4766.09	4766.09	23.29	No	Si
SLU 82	-0.98	-924.55	-40428	-0.000322	0.0004492	0.0035	0.7597	494.1	4393.51	4393.51	4.75	No	Si
SLU 82	1.18	202.29	-19310	-0.0001045	0.0004492	0.0035	0.7597	3944.25	4824.36	4824.36	23.85	No	Si
SLU 74	-0.98	-910.29	-39383	-0.000307	0.0004492	0.0035	0.7597	855.56	4551.2	4551.2	5	No	Si
SLU 74	1.18	200.04	-18741	-0.0001011	0.0004492	0.0035	0.7597	3924.98	4737.35	4737.35	23.68	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	4752.92	-27105	-0.0003835	0.0006738	0.0035	0.7597		6870.06	6870.06	1.45		Si
SLV 3	1.18	-1603.32	-14574	-0.00013	0.0006738	0.0035	0.7597		4658.18	4658.18	2.91		Si
SLD 16	-0.98	-2998.11	-28033	-0.0002734	0.0006738	0.0035	0.7597		7029.23	7029.23	2.34		Si
SLD 16	1.18	847.89	-11846	-0.0000864	0.0006738	0.0035	0.7597		3812.54	3812.54	4.5		Si
SLV 13	-0.98	-5997.77	-27182	-0.0005812	0.0006738	0.0035	0.6078		6915.4	6915.4	1.15		Si
SLV 13	1.18	1879.12	-10929	-0.0001265	0.0006738	0.0035	0.7597		3554.64	3554.64	1.89		Si
SLV 14	-0.98	-5991.44	-27162	-0.0005798	0.0006738	0.0035	0.6078		6912.75	6912.75	1.15		Si
SLV 14	1.18	1875.97	-10972	-0.0001264	0.0006738	0.0035	0.7597		3566.7	3566.7	1.9		Si
SLV 15	-0.98	-6190.85	-29234	-0.0006045	0.0006738	0.0035	0.6078		7191.69	7191.69	1.16		Si
SLV 15	1.18	1804.96	-10568	-0.0001212	0.0006738	0.0035	0.7597		3453.63	3453.63	1.91		Si
SLV 16	-0.98	-6184.52	-29214	-0.000603	0.0006738	0.0035	0.6078		7188.97	7188.97	1.16		Si
SLV 16	1.18	1801.8	-10611	-0.0001211	0.0006738	0.0035	0.7597		3465.66	3465.66	1.92		Si
SLD 15	-0.98	-3000.83	-28042	-0.0002736	0.0006738	0.0035	0.7597		7030.38	7030.38	2.34		Si
SLD 15	1.18	849.25	-11828	-0.0000863	0.0006738	0.0035	0.7597		3807.33	3807.33	4.48		Si
SLV 2	-0.98	4952.33	-25033	-0.0004045	0.0006738	0.0035	0.7597		6550	6550	1.32		Si
SLV 2	1.18	-1532.31	-14979	-0.0001294	0.0006738	0.0035	0.7597		4757.22	4757.22	3.1		Si
SLV 4	-0.98	4759.25	-27085	-0.000384	0.0006738	0.0035	0.7597		6866.97	6866.97	1.44		Si
SLV 4	1.18	-1606.48	-14618	-0.0001304	0.0006738	0.0035	0.7597		4668.83	4668.83	2.91		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-0.98	4946	-25053	-0.0004036	0.0006738	0.0035	0.7597		6553.05	6553.05	1.32		Si
SLV 1	1.18	-1529.16	-14936	-0.000129	0.0006738	0.0035	0.7597		4747.03	4747.03	3.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-0.98	-910.29	-39383	-35007	-1987	0.7597	0.7597	-102400	10833	3704	33304	12286	1937	14223	No	7.16	Si
SLU 74	1.18	200.04	-18741	-16658	-188	0.7597	0.7597	-48728	10833	3704	33304	12286	1937	14223	No	75.47	Si
SLU 81	-0.98	-927.13	-40449	-35955	-2028	0.7597	0.7597	-105171	10833	3704	33304	12286	1937	14223	No	7.01	Si
SLU 81	1.18	202.21	-19303	-17158	-184	0.7597	0.7597	-50190	10833	3704	33304	12286	1937	14223	No	77.36	Si
SLU 82	-0.98	-924.55	-40428	-35936	-2023	0.7597	0.7597	-105117	10833	3704	33304	12286	1937	14223	No	7.03	Si
SLU 82	1.18	202.29	-19310	-17165	-177	0.7597	0.7597	-50208	10833	3704	33304	12286	1937	14223	No	80.57	Si
SLU 80	-0.98	-916.16	-39491	-35103	-1996	0.7597	0.7597	-102679	10833	3704	33304	12286	1937	14223	No	7.13	Si
SLU 80	1.18	202.95	-18808	-16718	-185	0.7597	0.7597	-48902	10833	3704	33304	12286	1937	14223	No	77.03	Si
SLU 77	-0.98	-927.31	-39763	-35345	-2015	0.7597	0.7597	-103386	10833	3704	33304	12286	1937	14223	No	7.06	Si
SLU 77	1.18	204.65	-18929	-16826	-191	0.7597	0.7597	-49218	10833	3704	33304	12286	1937	14223	No	74.5	Si
SLU 83	-0.98	-944.15	-40829	-36292	-2056	0.7597	0.7597	-106158	10833	3704	33304	12286	1937	14223	No	6.92	Si
SLU 83	1.18	206.82	-19492	-17326	-186	0.7597	0.7597	-50681	10833	3704	33304	12286	1937	14223	No	76.33	Si
SLU 84	-0.98	-941.57	-40808	-36273	-2051	0.7597	0.7597	-106103	10833	3704	33304	12286	1937	14223	No	6.93	Si
SLU 84	1.18	206.9	-19499	-17332	-179	0.7597	0.7597	-50699	10833	3704	33304	12286	1937	14223	No	79.45	Si
SLU 79	-0.98	-918.75	-39511	-35121	-2001	0.7597	0.7597	-102733	10833	3704	33304	12286	1937	14223	No	7.11	Si
SLU 79	1.18	202.87	-18801	-16712	-192	0.7597	0.7597	-48884	10833	3704	33304	12286	1937	14223	No	74.09	Si
SLU 78	-0.98	-924.73	-39742	-35326	-2010	0.7597	0.7597	-103332	10833	3704	33304	12286	1937	14223	No	7.08	Si
SLU 78	1.18	204.73	-18936	-16832	-184	0.7597	0.7597	-49236	10833	3704	33304	12286	1937	14223	No	77.47	Si
SLU 75	-0.98	-907.71	-39362	-34989	-1982	0.7597	0.7597	-102345	10833	3704	33304	12286	1937	14223	No	7.18	Si
SLU 75	1.18	200.12	-18748	-16665	-181	0.7597	0.7597	-48746	10833	3704	33304	12286	1937	14223	No	78.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	-6184.52	-29214	-25968	-6584	0.6078	0.5045	0	0	0	33304	14743	1550	16293		2.47	Si
SLV 16	1.18	1801.8	-10611	-9432	636	0.7597	0.6301	-27588	16250	4608	33304	18429	1937	20366		32	Si
SLV 13	-0.98	-5997.77	-27182	-24161	-6216	0.6078	0.4776	0	0	0	33304	14743	1550	16293		2.62	Si
SLV 13	1.18	1879.12	-10929	-9714	1081	0.7597	0.6237	-28415	16250	4561	33304	18429	1937	20366		18.83	Si
SLV 15	-0.98	-6190.85	-29234	-25986	-6598	0.6078	0.5043	0	0	0	33304	14743	1550	16293		2.47	Si
SLV 15	1.18	1804.96	-10568	-9393	623	0.7597	0.6272	-27476	16250	4586	33304	18429	1937	20366		32.71	Si
SLV 1	-0.98	4946	-25053	-22269	3840	0.7597	0.5473	-65140	16250	4002	33304	18429	1937	20366		5.3	Si
SLV 1	1.18	-1529.16	-14936	-13276	-951	0.7597	0.7597	-38834	16250	5555	33304	18429	1937	20366		21.41	Si
SLV 14	-0.98	-5991.44	-27162	-24144	-6201	0.6078	0.4778	0	0	0	33304	14743	1550	16293		2.63	Si
SLV 14	1.18	1875.97	-10972	-9753	1095	0.7597	0.6266	-28527	16250	4582	33304	18429	1937	20366		18.6	Si
SLV 11	-0.98	-2584.66	-30879	-27448	-3523	0.7597	0.7597	-80289	16250	5555	33304	18429	1937	20366		5.78	Si
SLV 11	1.18	524.97	-11556	-10272	-622	0.7597	0.7597	-30047	16250	5555	33304	18429	1937	20366		32.75	Si
SLV 2	-0.98	4952.33	-25033	-22252	3855	0.7597	0.5461	-65088	16250	3993	33304	18429	1937	20366		5.28	Si
SLV 2	1.18	-1532.31	-14979	-13314	-938	0.7597	0.7597	-38946	16250	5555	33304	18429	1937	20366		21.72	Si
SLV 12	-0.98	-2580.58	-30866	-27437	-3513	0.7597	0.7597	-80255	16250	5555	33304	18429	1937	20366		5.8	Si
SLV 12	1.18	522.94	-11584	-10297	-613	0.7597	0.7597	-30119	16250	5555	33304	18429	1937	20366		33.23	Si
SLD 15	-0.98	-3000.83	-28042	-24926	-3607	0.7597	0.7597	-72911	16250	5555	33304	18429	1937	20366		5.65	Si
SLD 15	1.18	849.25	-11828	-10513	172	0.7597	0.7597	-30753	16250	5555	33304	18429	1937	20366		118.48	Si
SLD 16	-0.98	-2998.11	-28033	-24918	-3601	0.7597	0.7597	-72888	16250	5555	33304	18429	1937	20366		5.66	Si
SLD 16	1.18	847.89	-11846	-10530	178	0.7597	0.7597	-30801	16250	5555	33304	18429	1937	20366		114.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	215625	0.25	56037	-19157	57.57	2992.52	51.98	Si
SLV 14	215625	0.25	56096	-19178	57.57	2994.3	52.01	Si
SLV 9	215625	0.25	56385	-19276	57.57	3002.86	52.16	Si
SLV 15	215625	0.25	56391	-19278	57.57	3003.04	52.17	Si
SLV 10	215625	0.25	56423	-19289	57.57	3004	52.18	Si
SLV 16	215625	0.25	56451	-19299	57.57	3004.81	52.2	Si
SLV 5	215625	0.25	57028	-19496	57.57	3021.72	52.49	Si
SLV 6	215625	0.25	57066	-19509	57.57	3022.84	52.51	Si
SLV 11	215625	0.25	57565	-19680	57.57	3037.2	52.76	Si
SLV 12	215625	0.25	57603	-19693	57.57	3038.3	52.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-12458	-23387	-188	0.386	1411.3	0.969	5.78902	4.30116	Si
SLV 5	-12417	-23400	-187	0.387	1407.2	0.969	5.80387	4.30116	Si
SLV 8	-11744	-30228	-181	0.404	1338.6	0.968	6.06845	4.30116	Si
SLV 7	-11704	-30241	-181	0.405	1334.5	0.968	6.08507	4.30116	Si
SLV 2	-15202	-25033	-265	0.328	1690.8	0.974	4.90042	3.0673	Si
SLV 1	-15140	-25053	-265	0.329	1684.4	0.974	4.91593	3.0673	Si
SLV 4	-14988	-27085	-263	0.332	1669	0.974	4.95456	3.0673	Si
SLV 3	-14926	-27105	-263	0.333	1662.6	0.974	4.9705	3.0673	Si
SLV 10	-9901	-24026	-119	0.466	1151	0.963	7.02986	4.30116	Si
SLV 9	-9860	-24039	-119	0.467	1146.9	0.963	7.05313	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.588	SLU 83	Si
V_SLU	6.918	SLU 83	Si
PF_SLV	1.153	SLV 13	Si
V_SLV	2.469	SLV 15	Si
PFFP_SLV	51.982	SLV 13	Si
R_SLV	1.346	SLV 6	Si

Maschio 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.428	1.046	-9.398	1.046	L2	L4	1.97	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-0.98	-5149.66	-63045	-0.000162	0.0004492	0.0035	1.9703	25964.89	35565.31	35565.31	6.91	No	Si
SLU 82	1.12	5023.46	-57977	-0.0001479	0.0004492	0.0035	1.9703	26549.56	34263.22	34263.22	6.82	No	Si
SLU 83	-0.98	-5171.11	-63647	-0.0001638	0.0004492	0.0035	1.9703	25864.28	35663.52	35663.52	6.9	No	Si
SLU 83	1.12	5091.03	-58573	-0.0001499	0.0004492	0.0035	1.9703	26505.05	34382.2	34382.2	6.75	No	Si
SLU 84	-0.98	-5171.55	-63649	-0.0001638	0.0004492	0.0035	1.9703	25863.97	35663.81	35663.81	6.9	No	Si
SLU 84	1.12	5092.87	-58574	-0.0001499	0.0004492	0.0035	1.9703	26504.93	34382.49	34382.49	6.75	No	Si
SLU 78	-0.98	-5024.25	-61901	-0.0001581	0.0004492	0.0035	1.9703	26137.61	35381.37	35381.37	7.04	No	Si
SLU 78	1.12	4944.69	-56850	-0.0001445	0.0004492	0.0035	1.9703	26616.07	34039.27	34039.27	6.88	No	Si
SLU 79	-0.98	-4991.93	-61545	-0.0001569	0.0004492	0.0035	1.9703	26186.57	35324.69	35324.69	7.08	No	Si
SLU 79	1.12	4914.58	-56498	-0.0001435	0.0004492	0.0035	1.9703	26632.11	33969.64	33969.64	6.91	No	Si
SLU 62	-0.98	-5008.21	-57920	-0.0001477	0.0004492	0.0035	1.9703	26553.44	34765.28	34765.28	6.94	No	Si
SLU 62	1.12	4788.1	-52901	-0.0001337	0.0004492	0.0035	1.9703	26666.9	33252.35	33252.35	6.94	No	Si
SLU 80	-0.98	-4992.36	-61547	-0.0001569	0.0004492	0.0035	1.9703	26186.33	35324.97	35324.97	7.08	No	Si
SLU 80	1.12	4916.43	-56499	-0.0001435	0.0004492	0.0035	1.9703	26632.05	33969.92	33969.92	6.91	No	Si
SLU 63	-0.98	-5008.65	-57922	-0.0001477	0.0004492	0.0035	1.9703	26553.31	34765.55	34765.55	6.94	No	Si
SLU 63	1.12	4789.95	-52902	-0.0001338	0.0004492	0.0035	1.9703	26666.93	33252.63	33252.63	6.94	No	Si
SLU 77	-0.98	-5023.81	-61899	-0.0001581	0.0004492	0.0035	1.9703	26137.87	35381.08	35381.08	7.04	No	Si
SLU 77	1.12	4942.84	-56848	-0.0001445	0.0004492	0.0035	1.9703	26616.14	34038.99	34038.99	6.89	No	Si
SLU 81	-0.98	-5149.22	-63043	-0.000162	0.0004492	0.0035	1.9703	25965.18	35565.02	35565.02	6.91	No	Si
SLU 81	1.12	5021.61	-57975	-0.0001479	0.0004492	0.0035	1.9703	26549.65	34262.94	34262.94	6.82	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	-0.98	-13315.58	-44046	-0.0001586	0.0006738	0.0035	1.9703		35258.13	35258.13	2.65		Si
SLD 14	1.12	9536.86	-39457	-0.0001261	0.0006738	0.0035	1.9703		31386.01	31386.01	3.29		Si
SLV 13	-0.98	-26294.35	-46615	-0.0003007	0.0006738	0.0035	1.5762		36687.68	36687.68	1.4		Si
SLV 13	1.12	17714.01	-41000	-0.0001857	0.0006738	0.0035	1.9703		32267.98	32267.98	1.82		Si
SLD 16	-0.98	-13469.35	-44944	-0.0001615	0.0006738	0.0035	1.9703		35766.47	35766.47	2.66		Si
SLD 16	1.12	9510.33	-40840	-0.0001288	0.0006738	0.0035	1.9703		32176.46	32176.46	3.38		Si
SLV 1	-0.98	19678.19	-35449	-0.00021	0.0006738	0.0035	1.9703		29109.04	29109.04	1.48		Si
SLV 1	1.12	-11136.24	-32296	-0.0001209	0.0006738	0.0035	1.9703		27863.04	27863.04	2.5		Si
SLV 4	-0.98	19207.13	-37584	-0.0002006	0.0006738	0.0035	1.9703		30318.93	30318.93	1.58		Si
SLV 4	1.12	-11054.6	-35560	-0.0001269	0.0006738	0.0035	1.9703		30047.59	30047.59	2.72		Si
SLV 2	-0.98	19566.49	-35501	-0.0002081	0.0006738	0.0035	1.9703		29138.42	29138.42	1.49		Si
SLV 2	1.12	-11000.18	-32337	-0.0001201	0.0006738	0.0035	1.9703		27891.19	27891.19	2.54		Si
SLV 16	-0.98	-26765.41	-48750	-0.0003045	0.0006738	0.0035	1.5762		37843.44	37843.44	1.41		Si
SLV 16	1.12	17795.64	-44264	-0.0001908	0.0006738	0.0035	1.9703		34143.56	34143.56	1.92		Si
SLV 14	-0.98	-26406.04	-46667	-0.0003027	0.0006738	0.0035	1.5762		36716.32	36716.32	1.39		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.12	17850.07	-41041	-0.000187	0.0006738	0.0035	1.9703		32291.67	32291.67	1.81		Si
SLV 3	-0.98	19318.82	-37532	-0.0002021	0.0006738	0.0035	1.9703		30289.4	30289.4	1.57		Si
SLV 3	1.12	-11190.66	-35519	-0.0001277	0.0006738	0.0035	1.9703		30019.83	30019.83	2.68		Si
SLV 15	-0.98	-26653.71	-48698	-0.0003026	0.0006738	0.0035	1.5762		37816.43	37816.43	1.42		Si
SLV 15	1.12	17659.58	-44223	-0.0001896	0.0006738	0.0035	1.9703		34119.68	34119.68	1.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-0.98	-4991.93	-61545	-54707	-4819	1.9703	1.9703	-61702	10833	9605	33304	31863	5024	36888	No	7.65	Si
SLU 79	1.12	4914.58	-56498	-50220	-5053	1.9703	1.9703	-56642	10833	9605	33304	31863	5024	36888	No	7.3	Si
SLU 78	-0.98	-5024.25	-61901	-55023	-4850	1.9703	1.9703	-62059	10833	9605	33304	31863	5024	36888	No	7.61	Si
SLU 78	1.12	4944.69	-56850	-50533	-5085	1.9703	1.9703	-56995	10833	9605	33304	31863	5024	36888	No	7.25	Si
SLU 77	-0.98	-5023.81	-61899	-55022	-4848	1.9703	1.9703	-62057	10833	9605	33304	31863	5024	36888	No	7.61	Si
SLU 77	1.12	4942.84	-56848	-50532	-5083	1.9703	1.9703	-56993	10833	9605	33304	31863	5024	36888	No	7.26	Si
SLU 81	-0.98	-5149.22	-63043	-56038	-4950	1.9703	1.9703	-63203	10833	9605	33304	31863	5024	36888	No	7.45	Si
SLU 81	1.12	5021.61	-57975	-51534	-5188	1.9703	1.9703	-58123	10833	9605	33304	31863	5024	36888	No	7.11	Si
SLU 82	-0.98	-5149.66	-63045	-56040	-4951	1.9703	1.9703	-63205	10833	9605	33304	31863	5024	36888	No	7.45	Si
SLU 82	1.12	5023.46	-57977	-51535	-5189	1.9703	1.9703	-58124	10833	9605	33304	31863	5024	36888	No	7.11	Si
SLU 83	-0.98	-5171.11	-63647	-56576	-4995	1.9703	1.9703	-63810	10833	9605	33304	31863	5024	36888	No	7.39	Si
SLU 83	1.12	5091.03	-58573	-52064	-5235	1.9703	1.9703	-58722	10833	9605	33304	31863	5024	36888	No	7.05	Si
SLU 80	-0.98	-4992.36	-61547	-54708	-4820	1.9703	1.9703	-61704	10833	9605	33304	31863	5024	36888	No	7.65	Si
SLU 80	1.12	4916.43	-56499	-50222	-5054	1.9703	1.9703	-56643	10833	9605	33304	31863	5024	36888	No	7.3	Si
SLU 75	-0.98	-5002.36	-61297	-54486	-4805	1.9703	1.9703	-61453	10833	9605	33304	31863	5024	36888	No	7.68	Si
SLU 75	1.12	4875.27	-56252	-50002	-5038	1.9703	1.9703	-56396	10833	9605	33304	31863	5024	36888	No	7.32	Si
SLU 84	-0.98	-5171.55	-63649	-56577	-4996	1.9703	1.9703	-63811	10833	9605	33304	31863	5024	36888	No	7.38	Si
SLU 84	1.12	5092.87	-58574	-52066	-5236	1.9703	1.9703	-58723	10833	9605	33304	31863	5024	36888	No	7.04	Si
SLU 74	-0.98	-5001.93	-61295	-54484	-4804	1.9703	1.9703	-61451	10833	9605	33304	31863	5024	36888	No	7.68	Si
SLU 74	1.12	4873.42	-56251	-50001	-5036	1.9703	1.9703	-56394	10833	9605	33304	31863	5024	36888	No	7.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-0.98	-26294.35	-46615	-41436	-21923	1.5762	1.2632	0	0	0	33304	38236	4019	33304		1.52	Si
SLV 13	1.12	17714.01	-41000	-36444	-21456	1.9703	1.6593	-41104	16250	12134	33304	47795	5024	45438		2.12	Si
SLV 15	-0.98	-26653.71	-48698	-43287	-21972	1.5762	1.3135	0	0	0	33304	38236	4019	33304		1.52	Si
SLV 15	1.12	17659.58	-44223	-39309	-21865	1.9703	1.7574	-44335	16250	12851	33304	47795	5024	46156		2.11	Si
SLV 2	-0.98	19566.49	-35501	-31556	15292	1.9703	1.302	-35591	16250	9521	33304	47795	5024	42825		2.8	Si
SLV 2	1.12	-11000.18	-32337	-28744	14863	1.9703	1.9349	-32420	16250	14149	33304	47795	5024	47454		3.19	Si
SLV 14	-0.98	-26406.04	-46667	-41482	-22045	1.5762	1.2579	0	0	0	33304	38236	4019	33304		1.51	Si
SLV 14	1.12	17850.07	-41041	-36481	-21579	1.9703	1.6507	-41146	16250	12070	33304	47795	5024	45375		2.1	Si
SLV 1	-0.98	19678.19	-35449	-31510	15413	1.9703	1.2901	-35539	16250	9434	33304	47795	5024	42738		2.77	Si
SLV 1	1.12	-11136.24	-32296	-28708	14985	1.9703	1.921	-33708	16250	14047	33304	47795	5024	47352		3.16	Si
SLD 15	-0.98	-13421.39	-44921	-39930	-11304	1.9703	1.9703	-45036	16250	14408	33304	47795	5024	47712		4.22	Si
SLD 15	1.12	9451.91	-40822	-36286	-11348	1.9703	1.9703	-40926	16250	14408	33304	47795	5024	47712		4.2	Si
SLV 3	-0.98	19318.82	-37532	-33362	15365	1.9703	1.4112	-37628	16250	10320	33304	47795	5024	43624		2.84	Si
SLV 3	1.12	-11190.66	-35519	-31572	14577	1.9703	1.9703	-35609	16250	14408	33304	47795	5024	47712		3.27	Si
SLV 4	-0.98	19207.13	-37584	-33408	15243	1.9703	1.4223	-37680	16250	10401	33304	47795	5024	43705		2.87	Si
SLV 4	1.12	-11054.6	-35560	-31609	14455	1.9703	1.9703	-35651	16250	14408	33304	47795	5024	47712		3.3	Si
SLV 16	-0.98	-26765.41	-48750	-43333	-22094	1.5762	1.3083	0	0	0	33304	38236	4019	33304		1.51	Si
SLV 16	1.12	17795.64	-44264	-39346	-21987	1.9703	1.7493	-44377	16250	12792	33304	47795	5024	46096		2.1	Si
SLD 16	-0.98	-13469.35	-44944	-39950	-11356	1.9703	1.9703	-45058	16250	14408	33304	47795	5024	47712		4.2	Si
SLD 16	1.12	9510.33	-40840	-36302	-11401	1.9703	1.9703	-40944	16250	14408	33304	47795	5024	47712		4.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	215625	0.25	37446	-33201	149.3	5943.95	39.81	Si
SLV 6	215625	0.25	37477	-33229	149.3	5947.64	39.84	Si
SLV 1	215625	0.25	37560	-33302	149.3	5957.42	39.9	Si
SLV 2	215625	0.25	37609	-33345	149.3	5963.14	39.94	Si
SLV 9	215625	0.25	40300	-35731	149.3	6271.76	42.01	Si
SLV 10	215625	0.25	40331	-35759	149.3	6275.26	42.03	Si
SLV 3	215625	0.25	40519	-35926	149.3	6296.26	42.17	Si
SLV 4	215625	0.25	40568	-35969	149.3	6301.66	42.21	Si
SLV 13	215625	0.25	47073	-41736	149.3	6978.81	46.74	Si
SLV 14	215625	0.25	47121	-41779	149.3	6983.52	46.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-31584	-47263	361	0.396	3586.3	0.969	5.94758	4.30116	Si
SLV 11	-31575	-47230	362	0.396	3585.4	0.969	5.94849	4.30116	Si
SLV 10	-24919	-40319	-1583	0.43	2908	0.962	6.49541	4.30116	Si
SLV 9	-24910	-40286	-1582	0.43	2907.1	0.962	6.49788	4.30116	Si
SLV 8	-26805	-43913	427	0.447	3099.9	0.964	6.733	4.30116	Si
SLV 7	-26796	-43880	428	0.447	3099	0.964	6.73432	4.30116	Si
SLV 16	-34830	-48750	-397	0.367	3916.8	0.971	5.49894	3.0673	Si
SLV 15	-34815	-48698	-396	0.368	3915.3	0.971	5.50133	3.0673	Si
SLV 14	-32830	-46667	-980	0.367	3713.2	0.97	5.5074	3.0673	Si
SLV 13	-32816	-46615	-979	0.368	3711.7	0.97	5.50993	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.751	SLU 84	Si
V_SLU	7.045	SLU 84	Si
PF_SLV	1.39	SLV 14	Si
V_SLV	1.507	SLV 16	Si
PFFP_SLV	39.812	SLV 5	Si
R_SLV	1.383	SLV 12	Si

Maschio 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.988	1.046	-6.528	1.046	L2	L4	0.54	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-0.98	-1293.29	-12947	-0.0002088	0.0004492	0.0035	0.54	1971.39	2381.76	2381.76	1.84	No	Si
SLU 82	1.12	113.19	-17231	-0.0001355	0.0004492	0.0035	0.54	1952.43	2651.07	2651.07	23.42	No	Si
SLU 79	-0.98	-1270.29	-12696	-0.0002038	0.0004492	0.0035	0.54	1962.15	2357.57	2357.57	1.86	No	Si
SLU 79	1.12	110.52	-16758	-0.0001311	0.0004492	0.0035	0.54	1970.93	2622.91	2622.91	23.73	No	Si
SLU 84	-0.98	-1306.06	-13069	-0.0002114	0.0004492	0.0035	0.54	1975.48	2393.67	2393.67	1.83	No	Si
SLU 84	1.12	113.33	-17394	-0.000137	0.0004492	0.0035	0.54	1945.14	2660.79	2660.79	23.48	No	Si
SLU 75	-0.98	-1263.18	-12639	-0.0002024	0.0004492	0.0035	0.54	1959.89	2352.1	2352.1	1.86	No	Si
SLU 75	1.12	108.83	-16725	-0.0001306	0.0004492	0.0035	0.54	1972.05	2620.98	2620.98	24.08	No	Si
SLU 83	-0.98	-1307.43	-13078	-0.0002116	0.0004492	0.0035	0.54	1975.76	2394.51	2394.51	1.83	No	Si
SLU 83	1.12	115.02	-17373	-0.000137	0.0004492	0.0035	0.54	1946.11	2659.54	2659.54	23.12	No	Si
SLU 80	-0.98	-1268.92	-12687	-0.0002035	0.0004492	0.0035	0.54	1961.81	2356.74	2356.74	1.86	No	Si
SLU 80	1.12	108.83	-16779	-0.0001311	0.0004492	0.0035	0.54	1970.2	2624.15	2624.15	24.11	No	Si
SLU 74	-0.98	-1264.55	-12648	-0.0002027	0.0004492	0.0035	0.54	1960.24	2352.92	2352.92	1.86	No	Si
SLU 74	1.12	110.52	-16704	-0.0001306	0.0004492	0.0035	0.54	1972.77	2619.75	2619.75	23.7	No	Si
SLU 78	-0.98	-1275.94	-12761	-0.000205	0.0004492	0.0035	0.54	1964.68	2363.87	2363.87	1.85	No	Si
SLU 78	1.12	108.97	-16888	-0.0001321	0.0004492	0.0035	0.54	1966.26	2630.61	2630.61	24.14	No	Si
SLU 77	-0.98	-1277.31	-12770	-0.0002053	0.0004492	0.0035	0.54	1965	2364.7	2364.7	1.85	No	Si
SLU 77	1.12	110.66	-16867	-0.000132	0.0004492	0.0035	0.54	1967.04	2629.37	2629.37	23.76	No	Si
SLU 81	-0.98	-1294.66	-12955	-0.000209	0.0004492	0.0035	0.54	1971.68	2382.6	2382.6	1.84	No	Si
SLU 81	1.12	114.88	-17210	-0.0001355	0.0004492	0.0035	0.54	1953.33	2649.82	2649.82	23.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	-0.98	-1507.67	-10376	-0.0002122	0.0006738	0.0035	0.432		2356.89	2356.89	1.56		Si
SLD 16	1.12	825.65	-12390	-0.000147	0.0006738	0.0035	0.54		2606.79	2606.79	3.16		Si
SLV 13	-0.98	-2270.99	-11923	-0.0004593	0.0006738	0.0035	0.432		2612.94	2612.94	1.15		Si
SLV 13	1.12	1735.99	-14799	-0.0002548	0.0006738	0.0035	0.54		2970.12	2970.12	1.71		Si
SLV 16	-0.98	-2349.1	-12528	-0.0004692	0.0006738	0.0035	0.432		2701.1	2701.1	1.15		Si
SLV 16	1.12	1821.19	-13753	-0.0002647	0.0006738	0.0035	0.54		2829.66	2829.66	1.55		Si
SLV 15	-0.98	-2368.02	-12660	-0.000473	0.0006738	0.0035	0.432		2718.31	2718.31	1.15		Si
SLV 15	1.12	1840.58	-13504	-0.0002681	0.0006738	0.0035	0.54		2788.84	2788.84	1.52		Si
SLV 3	-0.98	495.02	-5735	-0.0000725	0.0006738	0.0035	0.54		1380.51	1380.51	2.79		Si
SLV 3	1.12	-1553.82	-7727	-0.0003041	0.0006738	0.0035	0.432		1864.69	1864.69	1.2		Si
SLD 15	-0.98	-1515.79	-10433	-0.0002136	0.0006738	0.0035	0.432		2366.73	2366.73	1.56		Si
SLD 15	1.12	833.97	-12283	-0.0001468	0.0006738	0.0035	0.54		2589.47	2589.47	3.1		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-0.98	610.97	-4865	-0.0000786	0.0006738	0.0035	0.54		1204.82	1204.82	1.97		Si
SLV 2	1.12	-1677.8	-9269	-0.000278	0.0006738	0.0035	0.432		2158.71	2158.71	1.29		Si
SLV 4	-0.98	513.94	-5603	-0.000073	0.0006738	0.0035	0.54		1353.65	1353.65	2.63		Si
SLV 4	1.12	-1573.21	-7975	-0.0002959	0.0006738	0.0035	0.432		1913.27	1913.27	1.22		Si
SLV 1	-0.98	592.05	-4997	-0.0000768	0.0006738	0.0035	0.54		1231.46	1231.46	2.08		Si
SLV 1	1.12	-1658.42	-9021	-0.0002797	0.0006738	0.0035	0.432		2113.17	2113.17	1.27		Si
SLV 14	-0.98	-2252.07	-11790	-0.000456	0.0006738	0.0035	0.432		2592.05	2592.05	1.15		Si
SLV 14	1.12	1716.6	-15047	-0.0002535	0.0006738	0.0035	0.54		2998.15	2998.15	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-0.98	-1307.43	-13078	-11625	-687	0.54	0.5101	-47839	10833	2487	33304	8733	1377	10110	No	14.73	Si
SLU 83	1.12	115.02	-17373	-15443	-656	0.54	0.54	-63549	10833	2632	33304	8733	1377	10110	No	15.42	Si
SLU 80	-0.98	-1268.92	-12687	-11278	-665	0.54	0.51	-46410	10833	2486	33304	8733	1377	10110	No	15.2	Si
SLU 80	1.12	108.83	-16779	-14915	-635	0.54	0.54	-61377	10833	2632	33304	8733	1377	10110	No	15.92	Si
SLU 74	-0.98	-1264.55	-12648	-11242	-664	0.54	0.51	-46264	10833	2486	33304	8733	1377	10110	No	15.23	Si
SLU 74	1.12	110.52	-16704	-14848	-634	0.54	0.54	-61105	10833	2632	33304	8733	1377	10110	No	15.95	Si
SLU 81	-0.98	-1294.66	-12955	-11516	-680	0.54	0.5102	-47390	10833	2487	33304	8733	1377	10110	No	14.86	Si
SLU 81	1.12	114.88	-17210	-15298	-650	0.54	0.54	-62955	10833	2632	33304	8733	1377	10110	No	15.56	Si
SLU 82	-0.98	-1293.29	-12947	-11508	-679	0.54	0.5103	-47359	10833	2488	33304	8733	1377	10110	No	14.9	Si
SLU 82	1.12	113.19	-17231	-15317	-648	0.54	0.54	-63032	10833	2632	33304	8733	1377	10110	No	15.6	Si
SLU 78	-0.98	-1275.94	-12761	-11344	-669	0.54	0.51	-46681	10833	2486	33304	8733	1377	10110	No	15.12	Si
SLU 78	1.12	108.97	-16888	-15011	-638	0.54	0.54	-61775	10833	2632	33304	8733	1377	10110	No	15.84	Si
SLU 77	-0.98	-1277.31	-12770	-11351	-670	0.54	0.5099	-46713	10833	2486	33304	8733	1377	10110	No	15.08	Si
SLU 77	1.12	110.66	-16867	-14993	-640	0.54	0.54	-61699	10833	2632	33304	8733	1377	10110	No	15.8	Si
SLU 79	-0.98	-1270.29	-12696	-11285	-667	0.54	0.5098	-46441	10833	2485	33304	8733	1377	10110	No	15.16	Si
SLU 79	1.12	110.52	-16758	-14896	-637	0.54	0.54	-61300	10833	2632	33304	8733	1377	10110	No	15.88	Si
SLU 84	-0.98	-1306.06	-13069	-11617	-685	0.54	0.5102	-47807	10833	2487	33304	8733	1377	10110	No	14.76	Si
SLU 84	1.12	113.33	-17394	-15461	-654	0.54	0.54	-63626	10833	2632	33304	8733	1377	10110	No	15.45	Si
SLU 75	-0.98	-1263.18	-12639	-11235	-662	0.54	0.5102	-46233	10833	2487	33304	8733	1377	10110	No	15.26	Si
SLU 75	1.12	108.83	-16725	-14867	-632	0.54	0.54	-61181	10833	2632	33304	8733	1377	10110	No	15.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-0.98	592.05	-4997	-4442	1106	0.54	0.4546	-18280	16156	3305	33304	13099	1377	14476		13.09	Si
SLV 1	1.12	-1658.42	-9021	-8019	945	0.432	0.2585	0	0	0	33304	10479	1102	11581		12.25	Si
SLD 15	-0.98	-1515.79	-10433	-9274	-1144	0.432	0.3741	0	0	0	33304	10479	1102	11581		10.12	Si
SLD 15	1.12	833.97	-12283	-10918	-1045	0.54	0.54	-44932	16250	3949	33304	13099	1377	14476		13.86	Si
SLV 15	-0.98	-2368.02	-12660	-11254	-2053	0.432	0.2489	0	0	0	33304	10479	1102	11581		5.64	Si
SLV 15	1.12	1840.58	-13504	-12004	-1850	0.54	0.4011	-49398	16250	2933	33304	13099	1377	14476		7.82	Si
SLV 14	-0.98	-2252.07	-11790	-10480	-1933	0.432	0.237	0	0	0	33304	10479	1102	11581		5.99	Si
SLV 14	1.12	1716.6	-15047	-13375	-1750	0.54	0.4677	-55041	16250	3420	33304	13099	1377	14476		8.27	Si
SLV 16	-0.98	-2349.1	-12528	-11136	-2034	0.432	0.2475	0	0	0	33304	10479	1102	11581		5.69	Si
SLV 16	1.12	1821.19	-13753	-12225	-1831	0.54	0.4127	-50307	16250	3018	33304	13099	1377	14476		7.91	Si
SLD 16	-0.98	-1507.67	-10376	-9223	-1136	0.432	0.3741	0	0	0	33304	10479	1102	11581		10.2	Si
SLD 16	1.12	825.65	-12390	-11013	-1036	0.54	0.54	-45322	16250	3949	33304	13099	1377	14476		13.97	Si
SLD 14	-0.98	-1465.08	-10051	-8935	-1091	0.432	0.3727	0	0	0	33304	10479	1102	11581		10.61	Si
SLD 14	1.12	779.62	-12959	-11519	-1001	0.54	0.54	-47402	16250	3949	33304	13099	1377	14476		14.47	Si
SLV 13	-0.98	-2270.99	-11923	-10598	-1952	0.432	0.2386	0	0	0	33304	10479	1102	11581		5.93	Si
SLV 13	1.12	1735.99	-14799	-13154	-1769	0.54	0.4581	-54133	16250	3350	33304	13099	1377	14476		8.18	Si
SLD 13	-0.98	-1473.21	-10108	-8985	-1099	0.432	0.3728	0	0	0	33304	10479	1102	11581		10.53	Si
SLD 13	1.12	787.94	-12852	-11424	-1009	0.54	0.54	-47012	16250	3949	33304	13099	1377	14476		14.35	Si
SLV 2	-0.98	610.97	-4865	-4324	1125	0.54	0.4332	-17796	16059	3131	33304	13099	1377	14476		12.86	Si
SLV 2	1.12	-1677.8	-9269	-8239	964	0.432	0.267	0	0	0	33304	10479	1102	11581		12.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	215625	0.25	31230	-7589	40.92	1416.54	34.62	Si
SLV 4	215625	0.25	31797	-7727	40.92	1436.9	35.12	Si
SLV 1	215625	0.25	34515	-8387	40.92	1531.75	37.43	Si
SLV 2	215625	0.25	35083	-8525	40.92	1551	37.9	Si
SLV 7	215625	0.25	35305	-8579	40.92	1558.49	38.09	Si
SLV 8	215625	0.25	35671	-8668	40.92	1570.74	38.39	Si
SLV 11	215625	0.25	41998	-10206	40.92	1770.07	43.26	Si
SLV 12	215625	0.25	42364	-10294	40.92	1780.87	43.52	Si
SLV 5	215625	0.25	46258	-11241	40.92	1890.82	46.21	Si
SLV 6	215625	0.25	46624	-11330	40.92	1900.69	46.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-11512	-6452	44	0.326	1273.7	0.975	4.8512	4.30116	Si
SLV 5	-11371	-6537	44	0.329	1259.4	0.975	4.89697	4.30116	Si
SLV 10	-10541	-8529	30	0.349	1174.8	0.973	5.20428	4.30116	Si
SLV 9	-10400	-8615	29	0.352	1160.5	0.973	5.25875	4.30116	Si
SLV 8	-7205	-8910	-97	0.456	835.2	0.963	6.87604	4.30116	Si
SLV 7	-7065	-8996	-98	0.463	820.9	0.963	6.98323	4.30116	Si
SLV 2	-11176	-4865	12	0.335	1239.5	0.975	5.00051	3.0673	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-10958	-4997	11	0.34	1217.3	0.974	5.07699	3.0673	Si
SLV 4	-9884	-5603	-30	0.366	1107.9	0.972	5.46616	3.0673	Si
SLV 12	-6234	-10988	-112	0.507	736.5	0.959	7.68751	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.831	SLU 83	Si
V_SLU	14.725	SLU 83	Si
PF_SLV	1.148	SLV 15	Si
V_SLV	5.641	SLV 15	Si
PFFP_SLV	34.618	SLV 3	Si
R_SLV	1.128	SLV 6	Si

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-5.088	1.046	L2	L4	4.965	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-0.98	-12974.61	-170078	-0.0001511	0.0004492	0.0035	4.965	159175.38	230319.41	230319.41	17.75	No	Si
SLU 81	1.12	13088.22	-123339	-0.0001065	0.0004492	0.0035	4.965	167854.33	203519.06	203519.06	15.55	No	Si
SLU 74	-0.98	-12914.49	-166046	-0.0001469	0.0004492	0.0035	4.965	161489.76	228708.64	228708.64	17.71	No	Si
SLU 74	1.12	12332.86	-119754	-0.0001025	0.0004492	0.0035	4.965	166879.47	199821.92	199821.92	16.2	No	Si
SLU 83	-0.98	-13167.92	-171654	-0.0001529	0.0004492	0.0035	4.965	158190.35	230907.83	230907.83	17.54	No	Si
SLU 83	1.12	13155.35	-124511	-0.0001076	0.0004492	0.0035	4.965	168122.15	204733.24	204733.24	15.56	No	Si
SLU 41	-0.98	-10883.7	-144826	-0.0001239	0.0004492	0.0035	4.965	168798.51	220870.97	220870.97	20.29	No	Si
SLU 41	1.12	11654.67	-106324	-0.0000902	0.0004492	0.0035	4.965	161149.17	186200.34	186200.34	15.98	No	Si
SLU 39	-0.98	-10690.4	-143250	-0.0001222	0.0004492	0.0035	4.965	169014.59	220331.92	220331.92	20.61	No	Si
SLU 39	1.12	11587.55	-105153	-0.0000892	0.0004492	0.0035	4.965	160493.96	185022.76	185022.76	15.97	No	Si
SLU 82	-0.98	-12952.85	-170111	-0.0001511	0.0004492	0.0035	4.965	159155.2	230332.76	230332.76	17.78	No	Si
SLU 82	1.12	13074.07	-123374	-0.0001065	0.0004492	0.0035	4.965	167862.65	203555.09	203555.09	15.57	No	Si
SLU 42	-0.98	-10861.94	-144859	-0.0001239	0.0004492	0.0035	4.965	168793.5	220882.33	220882.33	20.34	No	Si
SLU 42	1.12	11640.52	-106359	-0.0000903	0.0004492	0.0035	4.965	161168.25	186235.37	186235.37	16	No	Si
SLU 84	-0.98	-13146.15	-171687	-0.0001529	0.0004492	0.0035	4.965	158169.23	230907.95	230907.95	17.56	No	Si
SLU 84	1.12	13141.2	-124545	-0.0001076	0.0004492	0.0035	4.965	168129.73	204769.36	204769.36	15.58	No	Si
SLU 77	-0.98	-13107.79	-167622	-0.0001487	0.0004492	0.0035	4.965	160620.29	229333.65	229333.65	17.5	No	Si
SLU 77	1.12	12399.98	-120926	-0.0001036	0.0004492	0.0035	4.965	167223.66	201026.51	201026.51	16.21	No	Si
SLU 40	-0.98	-10668.63	-143283	-0.0001222	0.0004492	0.0035	4.965	169010.52	220343.16	220343.16	20.65	No	Si
SLU 40	1.12	11573.4	-105187	-0.0000892	0.0004492	0.0035	4.965	160513.79	185057.7	185057.7	15.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-0.98	-67804.09	-160656	-0.0001866	0.0006738	0.0035	4.965		282878.91	282878.91	4.17		Si
SLV 15	1.12	20549.6	-120494	-0.000106	0.0006738	0.0035	4.965		229974.03	229974.03	11.19		Si
SLD 16	-0.98	-34164.55	-134533	-0.0001304	0.0006738	0.0035	4.965		254193.47	254193.47	7.44		Si
SLD 16	1.12	13395.52	-98300	-0.000082	0.0006738	0.0035	4.965		197513.18	197513.18	14.74		Si
SLV 14	-0.98	-66230.2	-159897	-0.0001843	0.0006738	0.0035	4.965		282024.28	282024.28	4.26		Si
SLV 14	1.12	18552.7	-116599	-0.0001011	0.0006738	0.0035	4.965		224225.96	224225.96	12.09		Si
SLV 1	-0.98	49479.42	-69584	-0.0000921	0.0006738	0.0035	4.965		148243.6	148243.6	3		Si
SLV 1	1.12	-4629.35	-43088	-0.0000336	0.0006738	0.0035	4.965		104801.74	104801.74	22.64		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-0.98	-67714.41	-160583	-0.0001864	0.0006738	0.0035	4.965		282796.1	282796.1	4.18		Si
SLV 16	1.12	20637.09	-120438	-0.0001061	0.0006738	0.0035	4.965		229890.63	229890.63	11.14		Si
SLV 2	-0.98	49569.1	-69510	-0.0000921	0.0006738	0.0035	4.965		148105.87	148105.87	2.99		Si
SLV 2	1.12	-4541.86	-43032	-0.0000335	0.0006738	0.0035	4.965		104687.72	104687.72	23.05		Si
SLD 15	-0.98	-34203.05	-134565	-0.0001304	0.0006738	0.0035	4.965		254227.23	254227.23	7.43		Si
SLD 15	1.12	13357.95	-98325	-0.000082	0.0006738	0.0035	4.965		197548.23	197548.23	14.79		Si
SLV 4	-0.98	48084.89	-70196	-0.0000914	0.0006738	0.0035	4.965		149390.98	149390.98	3.11		Si
SLV 4	1.12	-2457.47	-46871	-0.0000344	0.0006738	0.0035	4.965		112472.87	112472.87	45.77		Si
SLV 13	-0.98	-66319.88	-159970	-0.0001844	0.0006738	0.0035	4.965		282106.97	282106.97	4.25		Si
SLV 13	1.12	18465.2	-116655	-0.000101	0.0006738	0.0035	4.965		224309.03	224309.03	12.15		Si
SLV 3	-0.98	47995.21	-70269	-0.0000913	0.0006738	0.0035	4.965		149528.81	149528.81	3.12		Si
SLV 3	1.12	-2544.96	-46927	-0.0000346	0.0006738	0.0035	4.965		112587.64	112587.64	44.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-0.98	-12987.52	-166689	-148168	29483	4.965	4.965	-66317	10833	24204	33304	80293	12661	57509	No	1.95	Si
SLU 80	1.12	12315.66	-120223	-106865	30002	4.965	4.965	-47830	10833	24204	33304	80293	12661	57509	No	1.92	Si
SLU 74	-0.98	-12914.49	-166046	-147597	29305	4.965	4.965	-66061	10833	24204	33304	80293	12661	57509	No	1.96	Si
SLU 74	1.12	12332.86	-119754	-106448	29821	4.965	4.965	-47644	10833	24204	33304	80293	12661	57509	No	1.93	Si
SLU 75	-0.98	-12892.72	-166080	-147626	29320	4.965	4.965	-66074	10833	24204	33304	80293	12661	57509	No	1.96	Si
SLU 75	1.12	12318.71	-119789	-106479	29836	4.965	4.965	-47658	10833	24204	33304	80293	12661	57509	No	1.93	Si
SLU 81	-0.98	-12974.61	-170078	-151181	29439	4.965	4.965	-67665	10833	24204	33304	80293	12661	57509	No	1.95	Si
SLU 81	1.12	13088.22	-123339	-109635	29964	4.965	4.965	-49070	10833	24204	33304	80293	12661	57509	No	1.92	Si
SLU 77	-0.98	-13107.79	-167622	-148998	29656	4.965	4.965	-66688	10833	24204	33304	80293	12661	57509	No	1.94	Si
SLU 77	1.12	12399.98	-120926	-107489	30177	4.965	4.965	-48110	10833	24204	33304	80293	12661	57509	No	1.91	Si
SLU 83	-0.98	-13167.92	-171654	-152581	29790	4.965	4.965	-68292	10833	24204	33304	80293	12661	57509	No	1.93	Si
SLU 83	1.12	13155.35	-124511	-110676	30321	4.965	4.965	-49536	10833	24204	33304	80293	12661	57509	No	1.9	Si
SLU 79	-0.98	-13009.29	-166656	-148139	29468	4.965	4.965	-66304	10833	24204	33304	80293	12661	57509	No	1.95	Si
SLU 79	1.12	12329.81	-120188	-106834	29986	4.965	4.965	-47816	10833	24204	33304	80293	12661	57509	No	1.92	Si
SLU 78	-0.98	-13086.03	-167655	-149027	29671	4.965	4.965	-66701	10833	24204	33304	80293	12661	57509	No	1.94	Si
SLU 78	1.12	12385.84	-120960	-107520	30193	4.965	4.965	-48124	10833	24204	33304	80293	12661	57509	No	1.9	Si
SLU 84	-0.98	-13146.15	-171687	-152611	29804	4.965	4.965	-68305	10833	24204	33304	80293	12661	57509	No	1.93	Si
SLU 84	1.12	13141.2	-124545	-110707	30336	4.965	4.965	-49550	10833	24204	33304	80293	12661	57509	No	1.9	Si
SLU 82	-0.98	-12952.85	-170111	-151210	29454	4.965	4.965	-67678	10833	24204	33304	80293	12661	57509	No	1.95	Si
SLU 82	1.12	13074.07	-123374	-109666	29980	4.965	4.965	-49084	10833	24204	33304	80293	12661	57509	No	1.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	-0.98	15292.36	-95931	-85272	30736	4.965	4.965	-38166	16250	36307	33304	120440	12661	69611		2.26	Si
SLD 3	1.12	3506.3	-66870	-59440	29959	4.965	4.965	-26604	16250	36307	33304	120440	12661	69611		2.32	Si
SLV 1	-0.98	49479.42	-69584	-61852	46801	4.965	4.965	-27684	16250	36307	33304	120440	12661	69611		1.49	Si
SLV 1	1.12	-4629.35	-43088	-38301	45100	4.965	4.965	-17143	15929	35588	33304	120440	12661	68893		1.53	Si
SLV 2	-0.98	49569.1	-69510	-61787	46782	4.965	4.965	-27654	16250	36307	33304	120440	12661	69611		1.49	Si
SLV 2	1.12	-4541.86	-43032	-38251	45081	4.965	4.965	-17120	15924	35578	33304	120440	12661	68883		1.53	Si
SLD 4	-0.98	15330.87	-95899	-85244	30727	4.965	4.965	-38153	16250	36307	33304	120440	12661	69611		2.27	Si
SLD 4	1.12	3543.87	-66846	-59419	29950	4.965	4.965	-26595	16250	36307	33304	120440	12661	69611		2.32	Si
SLV 3	-0.98	47995.21	-70269	-62462	43826	4.965	4.965	-27956	16250	36307	33304	120440	12661	69611		1.59	Si
SLV 3	1.12	-2544.96	-46927	-41713	41552	4.965	4.965	-18670	16234	36271	33304	120440	12661	69575		1.67	Si
SLD 2	-0.98	15968.06	-95602	-84979	32005	4.965	4.965	-38035	16250	36307	33304	120440	12661	69611		2.17	Si
SLD 2	1.12	2649.79	-65202	-57957	31474	4.965	4.965	-25940	16250	36307	33304	120440	12661	69611		2.21	Si
SLV 4	-0.98	48084.89	-70196	-62396	43807	4.965	4.965	-27927	16250	36307	33304	120440	12661	69611		1.59	Si
SLV 4	1.12	-2457.47	-46871	-41663	41533	4.965	4.965	-18647	16229	36261	33304	120440	12661	69565		1.67	Si
SLD 1	-0.98	15929.55	-95633	-85007	32013	4.965	4.965	-38047	16250	36307	33304	120440	12661	69611		2.17	Si
SLD 1	1.12	2612.22	-65226	-57978	31482	4.965	4.965	-25950	16250	36307	33304	120440	12661	69611		2.21	Si
SLV 6	-0.98	10754.99	-100359	-89208	33211	4.965	4.965	-39927	16250	36307	33304	120440	12661	69611		2.1	Si
SLV 6	1.12	1093.89	-64312	-57166	33822	4.965	4.965	-25586	16250	36307	33304	120440	12661	69611		2.06	Si
SLV 5	-0.98	10697.19	-100406	-89250	33224	4.965	4.965	-39946	16250	36307	33304	120440	12661	69611		2.1	Si
SLV 5	1.12	1037.51	-64348	-57198	33834	4.965	4.965	-25601	16250	36307	33304	120440	12661	69611		2.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	215625	0.25	21927	-48991	376.23	9704.16	25.79	Si
SLV 1	215625	0.25	21954	-49050	376.23	9714.36	25.82	Si
SLV 4	215625	0.25	23146	-51714	376.23	10166.25	27.02	Si
SLV 3	215625	0.25	23173	-51774	376.23	10176.27	27.05	Si
SLV 6	215625	0.25	32451	-72503	376.23	13424.79	35.68	Si
SLV 5	215625	0.25	32468	-72541	376.23	13430.37	35.7	Si
SLV 8	215625	0.25	36514	-81581	376.23	14698.83	39.07	Si
SLV 7	215625	0.25	36531	-81619	376.23	14704.03	39.08	Si
SLV 10	215625	0.25	42685	-95370	376.23	16460.71	43.75	Si
SLV 9	215625	0.25	42703	-95408	376.23	16465.33	43.76	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-77082	-129760	1637	0.397	8782	0.968	5.96644	4.30116	Si
SLV 11	-77068	-129808	1636	0.397	8780.6	0.968	5.96747	4.30116	Si
SLV 10	-60217	-127475	-3445	0.452	7065.9	0.961	6.83708	4.30116	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-60204	-127522	-3446	0.452	7064.5	0.961	6.83801	4.30116	Si
SLV 8	-62718	-102644	1733	0.463	7320.3	0.962	6.99771	4.30116	Si
SLV 7	-62705	-102692	1732	0.463	7318.9	0.962	6.99917	4.30116	Si
SLV 16	-87941	-160583	-253	0.375	9887.6	0.971	5.60985	3.0673	Si
SLV 15	-87920	-160656	-255	0.375	9885.4	0.971	5.61058	3.0673	Si
SLV 14	-82881	-159897	-1778	0.375	9372.4	0.97	5.6165	3.0673	Si
SLV 13	-82860	-159970	-1780	0.375	9370.3	0.97	5.61727	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.55	SLU 81	Si
V_SLU	1.896	SLU 84	Si
PF_SLV	2.988	SLV 2	Si
V_SLV	1.487	SLV 1	Si
PFFP_SLV	25.793	SLV 2	Si
R_SLV	1.387	SLV 12	Si

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	3.431	-13.808	3.431	L2	L4	4.08	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-0.98	-13527.52	-44621	-0.0000851	0.0004492	0.0035	4.08	63868.33	75872.58	75872.58	5.61	No	Si
SLU 81	1.22	-8331	-15007	-0.0000338	0.0004492	0.0035	4.08	27542.32	32830.12	32830.12	3.94	No	Si
SLU 84	-0.98	-13661.86	-45012	-0.000086	0.0004492	0.0035	4.08	64188.17	76338.02	76338.02	5.59	No	Si
SLU 84	1.22	-8446.5	-15160	-0.0000342	0.0004492	0.0035	4.08	27790.97	33096.3	33096.3	3.92	No	Si
SLU 82	-0.98	-13526.97	-44634	-0.0000851	0.0004492	0.0035	4.08	63879.56	75888.79	75888.79	5.61	No	Si
SLU 82	1.22	-8339.65	-15016	-0.0000338	0.0004492	0.0035	4.08	27557.59	32846.44	32846.44	3.94	No	Si
SLU 41	-0.98	-11765.97	-37729	-0.0000715	0.0004492	0.0035	4.08	57550.18	67368.92	67368.92	5.73	No	Si
SLU 41	1.22	-7300.65	-12797	-0.000029	0.0004492	0.0035	4.08	23872.23	28995.46	28995.46	3.97	No	Si
SLU 79	-0.98	-13138.25	-43769	-0.000083	0.0004492	0.0035	4.08	63158.01	74865.66	74865.66	5.7	No	Si
SLU 79	1.22	-8137.41	-14709	-0.000033	0.0004492	0.0035	4.08	27055.38	32311.85	32311.85	3.97	No	Si
SLU 42	-0.98	-11765.42	-37742	-0.0000715	0.0004492	0.0035	4.08	57563.98	67386.55	67386.55	5.73	No	Si
SLU 42	1.22	-7309.3	-12806	-0.0000291	0.0004492	0.0035	4.08	23888.07	29012.29	29012.29	3.97	No	Si
SLU 83	-0.98	-13662.41	-44998	-0.0000859	0.0004492	0.0035	4.08	64177.08	76321.75	76321.75	5.59	No	Si
SLU 83	1.22	-8437.85	-15150	-0.0000342	0.0004492	0.0035	4.08	27775.73	33079.96	33079.96	3.92	No	Si
SLU 80	-0.98	-13137.7	-43783	-0.0000831	0.0004492	0.0035	4.08	63169.56	74881.75	74881.75	5.7	No	Si
SLU 80	1.22	-8146.06	-14718	-0.0000331	0.0004492	0.0035	4.08	27070.73	32328.13	32328.13	3.97	No	Si
SLU 78	-0.98	-13237.91	-43991	-0.0000836	0.0004492	0.0035	4.08	63344.85	75127.06	75127.06	5.68	No	Si
SLU 78	1.22	-8189.64	-14789	-0.0000332	0.0004492	0.0035	4.08	27185.91	32450.39	32450.39	3.96	No	Si
SLU 77	-0.98	-13238.46	-43977	-0.0000836	0.0004492	0.0035	4.08	63333.38	75110.95	75110.95	5.67	No	Si
SLU 77	1.22	-8180.99	-14779	-0.0000332	0.0004492	0.0035	4.08	27170.58	32434.11	32434.11	3.96	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	-0.98	-22147.74	-26156	-0.0000749	0.0006738	0.0035	4.08		52973.93	52973.93	2.39		Si
SLD 14	1.22	-8013.4	-9652	-0.0000264	0.0006738	0.0035	4.08		23525.01	23525.01	2.94		Si
SLV 11	-0.98	-19185.28	-25970	-0.0000679	0.0006738	0.0035	4.08		52659.76	52659.76	2.74		Si
SLV 11	1.22	-6214.28	-8635	-0.0000216	0.0006738	0.0035	4.08		21597.36	21597.36	3.48		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-0.98	-40325.4	-19645	-0.0007889	0.0006738	0.0035	3.264		41755.44	41755.44	1.04		Si
SLV 15	1.22	-10777.39	-8319	-0.0000372	0.0006738	0.0035	3.264		20994.82	20994.82	1.95		Si
SLV 12	-0.98	-19361.68	-25868	-0.0000682	0.0006738	0.0035	4.08		52486.96	52486.96	2.71		Si
SLV 12	1.22	-6296.67	-8640	-0.0000218	0.0006738	0.0035	4.08		21606.91	21606.91	3.43		Si
SLD 16	-0.98	-22418.73	-25783	-0.0000753	0.0006738	0.0035	4.08		52342.47	52342.47	2.33		Si
SLD 16	1.22	-7782.24	-9374	-0.0000257	0.0006738	0.0035	4.08		22998.73	22998.73	2.96		Si
SLV 14	-0.98	-39973.02	-20334	-0.0005903	0.0006738	0.0035	3.264		42968.2	42968.2	1.07		Si
SLV 14	1.22	-11429.44	-8959	-0.0000391	0.0006738	0.0035	3.264		22212.03	22212.03	1.94		Si
SLV 13	-0.98	-39699.3	-20493	-0.0005303	0.0006738	0.0035	3.264		43247.48	43247.48	1.09		Si
SLV 13	1.22	-11301.58	-8951	-0.0000384	0.0006738	0.0035	3.264		22197.23	22197.23	1.96		Si
SLD 13	-0.98	-22030.21	-26224	-0.0000747	0.0006738	0.0035	4.08		53089.18	53089.18	2.41		Si
SLD 13	1.22	-7958.5	-9649	-0.0000263	0.0006738	0.0035	4.08		23518.67	23518.67	2.96		Si
SLD 15	-0.98	-22301.2	-25851	-0.0000751	0.0006738	0.0035	4.08		52457.56	52457.56	2.35		Si
SLD 15	1.22	-7727.34	-9371	-0.0000255	0.0006738	0.0035	4.08		22992.39	22992.39	2.98		Si
SLV 16	-0.98	-40599.12	-19487	-0.0008706	0.0006738	0.0035	3.264		41477.44	41477.44	1.02		Si
SLV 16	1.22	-10905.25	-8327	-0.000038	0.0006738	0.0035	3.264		21009.72	21009.72	1.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	-13238.46	-43977	-37033	17385	4.08	4.08	-30256	10833	13260	33304	43988	10404	46564	No	2.68	Si
SLU 77	1.22	-8180.99	-14779	-12446	18076	4.08	4.08	-10168	9689	11859	33304	43988	10404	45164	No	2.5	Si
SLU 81	-0.98	-13527.52	-44621	-37575	17685	4.08	4.08	-30699	10833	13260	33304	43988	10404	46564	No	2.63	Si
SLU 81	1.22	-8331	-15007	-12637	18397	4.08	4.08	-10325	9710	11885	33304	43988	10404	45189	No	2.46	Si
SLU 74	-0.98	-13103.57	-43600	-36715	17189	4.08	4.08	-29996	10833	13260	33304	43988	10404	46564	No	2.71	Si
SLU 74	1.22	-8074.13	-14636	-12325	17876	4.08	4.08	-10070	9676	11843	33304	43988	10404	45148	No	2.53	Si
SLU 79	-0.98	-13138.25	-43769	-36858	17290	4.08	4.08	-30113	10833	13260	33304	43988	10404	46564	No	2.69	Si
SLU 79	1.22	-8137.41	-14709	-12387	17977	4.08	4.08	-10120	9683	11852	33304	43988	10404	45156	No	2.51	Si
SLU 83	-0.98	-13662.41	-44998	-37893	17881	4.08	4.08	-30959	10833	13260	33304	43988	10404	46564	No	2.6	Si
SLU 83	1.22	-8437.85	-15150	-12758	18597	4.08	4.08	-10423	9723	11901	33304	43988	10404	45205	No	2.43	Si
SLU 78	-0.98	-13237.91	-43991	-37045	17392	4.08	4.08	-30265	10833	13260	33304	43988	10404	46564	No	2.68	Si
SLU 78	1.22	-8189.64	-14789	-12454	18084	4.08	4.08	-10175	9690	11860	33304	43988	10404	45165	No	2.5	Si
SLU 82	-0.98	-13526.97	-44634	-37587	17692	4.08	4.08	-30708	10833	13260	33304	43988	10404	46564	No	2.63	Si
SLU 82	1.22	-8339.65	-15016	-12645	18405	4.08	4.08	-10331	9711	11886	33304	43988	10404	45190	No	2.46	Si
SLU 75	-0.98	-13103.02	-43613	-36727	17196	4.08	4.08	-30006	10833	13260	33304	43988	10404	46564	No	2.71	Si
SLU 75	1.22	-8082.78	-14645	-12333	17884	4.08	4.08	-10076	9677	11844	33304	43988	10404	45149	No	2.52	Si
SLU 80	-0.98	-13137.7	-43783	-36870	17296	4.08	4.08	-30122	10833	13260	33304	43988	10404	46564	No	2.69	Si
SLU 80	1.22	-8146.06	-14718	-12394	17984	4.08	4.08	-10126	9683	11853	33304	43988	10404	45157	No	2.51	Si
SLU 84	-0.98	-13661.86	-45012	-37905	17888	4.08	4.08	-30968	10833	13260	33304	43988	10404	46564	No	2.6	Si
SLU 84	1.22	-8446.5	-15160	-12766	18605	4.08	4.08	-10430	9724	11902	33304	43988	10404	45206	No	2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-0.98	22927.07	-41471	-34923	33640	4.08	4.08	-28532	16250	19890	33304	65981	10404	53194		1.58	Si
SLV 1	1.22	53.54	-11955	-10068	32047	4.08	4.08	-8225	14145	17314	33304	65981	10404	50618		1.58	Si
SLV 5	-0.98	1689.63	-35089	-29549	18986	4.08	4.08	-24141	16250	19890	33304	65981	10404	53194		2.8	Si
SLV 5	1.22	-4555.04	-11642	-9804	18709	4.08	4.08	-8010	14102	17261	33304	65981	10404	50565		2.7	Si
SLV 2	-0.98	22653.35	-41313	-34790	33410	4.08	4.08	-28423	16250	19890	33304	65981	10404	53194		1.59	Si
SLV 2	1.22	-74.32	-11963	-10074	31827	4.08	4.08	-8231	14146	17315	33304	65981	10404	50619		1.59	Si
SLD 3	-0.98	4475.69	-34802	-29307	20898	4.08	4.08	-23943	16250	19890	33304	65981	10404	53194		2.55	Si
SLD 3	1.22	-2838.31	-10631	-8952	20517	4.08	4.08	-7314	13963	17090	33304	65981	10404	50395		2.46	Si
SLV 3	-0.98	22300.97	-40623	-34209	33208	4.08	4.08	-27949	16250	19890	33304	65981	10404	53194		1.6	Si
SLV 3	1.22	577.73	-11324	-9536	31699	4.08	4.08	-7791	14058	17207	33304	65981	10404	50511		1.59	Si
SLD 1	-0.98	4746.68	-35175	-29621	21088	4.08	4.08	-24200	16250	19890	33304	65981	10404	53194		2.52	Si
SLD 1	1.22	-3069.47	-10909	-9186	20672	4.08	4.08	-7505	14001	17137	33304	65981	10404	50442		2.44	Si
SLD 4	-0.98	4358.16	-34734	-29250	20799	4.08	4.08	-23897	16250	19890	33304	65981	10404	53194		2.56	Si
SLD 4	1.22	-2893.21	-10634	-8955	20423	4.08	4.08	-7316	13963	17091	33304	65981	10404	50395		2.47	Si
SLD 2	-0.98	4629.15	-35107	-29563	20989	4.08	4.08	-24153	16250	19890	33304	65981	10404	53194		2.53	Si
SLD 2	1.22	-3124.37	-10912	-9189	20578	4.08	4.08	-7507	14001	17138	33304	65981	10404	50442		2.45	Si
SLV 6	-0.98	1513.23	-34987	-29463	18838	4.08	4.08	-24071	16250	19890	33304	65981	10404	53194		2.82	Si
SLV 6	1.22	-4637.44	-11647	-9808	18567	4.08	4.08	-8013	14103	17262	33304	65981	10404	50566		2.72	Si
SLV 4	-0.98	22027.25	-40465	-34076	32978	4.08	4.08	-27840	16250	19890	33304	65981	10404	53194		1.61	Si
SLV 4	1.22	449.87	-11331	-9542	31479	4.08	4.08	-7796	14059	17208	33304	65981	10404	50513		1.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	215625	0.25	11838	-14489	206.11	2033.05	9.86	Si
SLV 15	215625	0.25	11872	-14531	206.11	2038.45	9.89	Si
SLV 14	215625	0.25	12551	-15363	206.11	2146.61	10.41	Si
SLV 13	215625	0.25	12585	-15404	206.11	2151.97	10.44	Si
SLV 12	215625	0.25	13562	-16599	206.11	2305.68	11.19	Si
SLV 11	215625	0.25	13583	-16626	206.11	2309.09	11.2	Si
SLV 8	215625	0.25	15748	-19275	206.11	2642.84	12.82	Si
SLV 7	215625	0.25	15769	-19302	206.11	2646.15	12.84	Si
SLV 10	215625	0.25	15940	-19511	206.11	2672.06	12.96	Si
SLV 9	215625	0.25	15962	-19537	206.11	2675.36	12.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-4619	-34987	-738	2.882	1014.7	0.892	46.97277	5.87132	Si
SLV 5	-4615	-35089	-738	2.884	1014.3	0.892	46.99846	5.87132	Si
SLV 10	-4109	-28694	-739	3.078	966.6	0.89	50.2496	5.87132	Si
SLV 9	-4105	-28796	-739	3.08	966.2	0.89	50.27874	5.87132	Si
SLV 8	-3688	-32162	715	3.264	927.5	0.889	53.35016	5.87132	Si
SLV 7	-3684	-32264	715	3.266	927.1	0.889	53.38265	5.87132	Si
SLV 12	-3178	-25868	713	3.519	880.9	0.889	57.52712	5.87132	Si
SLV 11	-3174	-25970	713	3.521	880.5	0.889	57.56437	5.87132	Si
SLV 2	-4889	-41313	-228	2.851	1040.5	0.893	46.40936	3.44478	Si
SLV 1	-4883	-41471	-228	2.853	1039.8	0.893	46.44758	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.918	SLU 84	Si
V_SLU	2.43	SLU 84	Si
PF_SLV	1.022	SLV 16	Si
V_SLV	1.58	SLV 1	Si
PFFP_SLV	9.864	SLV 16	Si
R_SLV	8	SLV 6	Si

Maschio 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.576	-12.888	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	1.02	981.26	-61488	-0.0000592	0.0003743	0.0035	3.88	78025.68	89383.07	89383.07	91.09	No	Si
SLU 82	1.42	-5372.95	-64181	-0.0000689	0.0003743	0.0035	3.88	79556.29	93920.26	93920.26	17.48	No	Si
SLU 74	1.02	939.44	-60087	-0.0000577	0.0003743	0.0035	3.88	77166.03	87889.38	87889.38	93.56	No	Si
SLU 74	1.42	-5257.9	-62730	-0.0000672	0.0003743	0.0035	3.88	78751.35	92657.8	92657.8	17.62	No	Si
SLU 75	1.02	944.2	-60086	-0.0000577	0.0003743	0.0035	3.88	77165.46	87888.3	87888.3	93.08	No	Si
SLU 75	1.42	-5258.48	-62737	-0.0000672	0.0003743	0.0035	3.88	78755.1	92663.49	92663.49	17.62	No	Si
SLU 84	1.02	974.95	-62207	-0.0000599	0.0003743	0.0035	3.88	78449.86	90037.59	90037.59	92.35	No	Si
SLU 84	1.42	-5429.49	-64949	-0.0000698	0.0003743	0.0035	3.88	79964.29	94595.71	94595.71	17.42	No	Si
SLU 77	1.02	933.13	-60805	-0.0000584	0.0003743	0.0035	3.88	77612.21	88715.11	88715.11	95.07	No	Si
SLU 77	1.42	-5314.44	-63499	-0.0000681	0.0003743	0.0035	3.88	79183.68	93324.95	93324.95	17.56	No	Si
SLU 80	1.02	933.19	-60306	-0.0000579	0.0003743	0.0035	3.88	77303.66	88149.79	88149.79	94.46	No	Si
SLU 80	1.42	-5273.89	-62977	-0.0000674	0.0003743	0.0035	3.88	78891.34	92871.18	92871.18	17.61	No	Si
SLU 78	1.02	937.9	-60805	-0.0000584	0.0003743	0.0035	3.88	77611.66	88714.19	88714.19	94.59	No	Si
SLU 78	1.42	-5315.03	-63506	-0.0000681	0.0003743	0.0035	3.88	79187.33	93330.67	93330.67	17.56	No	Si
SLU 81	1.02	976.49	-61489	-0.0000592	0.0003743	0.0035	3.88	78026.23	89383.94	89383.94	91.54	No	Si
SLU 81	1.42	-5372.36	-64174	-0.0000689	0.0003743	0.0035	3.88	79552.75	93914.51	93914.51	17.48	No	Si
SLU 79	1.02	928.42	-60307	-0.0000579	0.0003743	0.0035	3.88	77304.23	88150.87	88150.87	94.95	No	Si
SLU 79	1.42	-5273.3	-62970	-0.0000674	0.0003743	0.0035	3.88	78887.62	92865.48	92865.48	17.61	No	Si
SLU 83	1.02	970.18	-62208	-0.0000599	0.0003743	0.0035	3.88	78450.4	90038.28	90038.28	92.81	No	Si
SLU 83	1.42	-5428.91	-64943	-0.0000698	0.0003743	0.0035	3.88	79960.85	94589.91	94589.91	17.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	1.02	-14198.45	-47751	-0.0000632	0.0005615	0.0035	3.88		83730.79	83730.79	5.9		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	1.42	-5344.68	-49739	-0.0000524	0.0005615	0.0035	3.88		86515.54	86515.54	16.19		Si
SLD 16	1.02	7495.87	-39787	-0.000046	0.0005615	0.0035	3.88		67583.42	67583.42	9.02		Si
SLD 16	1.42	-2241.88	-41303	-0.00004	0.0005615	0.0035	3.88		74420.53	74420.53	33.2		Si
SLV 16	1.02	16633.75	-38221	-0.0000575	0.0005615	0.0035	3.88		65334.18	65334.18	3.93		Si
SLV 16	1.42	-401.4	-39408	-0.0000357	0.0005615	0.0035	3.88		71637.59	71637.59	178.47		Si
SLV 13	1.02	14296.92	-34291	-0.0000505	0.0005615	0.0035	3.88		59722.32	59722.32	4.18		Si
SLV 13	1.42	-2087.39	-35886	-0.0000348	0.0005615	0.0035	3.88		66261.24	66261.24	31.74		Si
SLV 2	1.02	-14044.24	-43624	-0.000059	0.0005615	0.0035	3.88		77852.5	77852.5	5.54		Si
SLV 2	1.42	-6646.85	-45917	-0.0000506	0.0005615	0.0035	3.88		81176.31	81176.31	12.21		Si
SLV 14	1.02	15542.44	-34192	-0.0000521	0.0005615	0.0035	3.88		59581.73	59581.73	3.83		Si
SLV 14	1.42	-1895.48	-35737	-0.0000344	0.0005615	0.0035	3.88		66028.6	66028.6	34.83		Si
SLV 1	1.02	-15289.76	-43723	-0.0000609	0.0005615	0.0035	3.88		77999.34	77999.34	5.1		Si
SLV 1	1.42	-6838.76	-46067	-0.000051	0.0005615	0.0035	3.88		81384.36	81384.36	11.9		Si
SLV 15	1.02	15388.22	-38320	-0.0000558	0.0005615	0.0035	3.88		65476.09	65476.09	4.25		Si
SLV 15	1.42	-593.31	-39558	-0.0000361	0.0005615	0.0035	3.88		71857.03	71857.03	121.11		Si
SLD 14	1.02	7028.36	-38068	-0.0000437	0.0005615	0.0035	3.88		65114.8	65114.8	9.26		Si
SLD 14	1.42	-2882.72	-39740	-0.0000395	0.0005615	0.0035	3.88		72122.72	72122.72	25.02		Si
SLV 4	1.02	-12952.93	-47652	-0.0000613	0.0005615	0.0035	3.88		83592.66	83592.66	6.45		Si
SLV 4	1.42	-5152.77	-49589	-0.000052	0.0005615	0.0035	3.88		86305.05	86305.05	16.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	944.2	-60086	-53409	12922	3.88	3.88	-30590	10833	18915	33304	52283	9894	52219	No	4.04	Si
SLU 75	1.42	-5258.48	-62737	-55766	13006	3.88	3.88	-31939	10833	18915	33304	52283	9894	52219	No	4.02	Si
SLU 78	1.02	937.9	-60805	-54048	13018	3.88	3.88	-30956	10833	18915	33304	52283	9894	52219	No	4.01	Si
SLU 78	1.42	-5315.03	-63506	-56449	13103	3.88	3.88	-32331	10833	18915	33304	52283	9894	52219	No	3.99	Si
SLU 77	1.02	933.13	-60805	-54049	13009	3.88	3.88	-30956	10833	18915	33304	52283	9894	52219	No	4.01	Si
SLU 77	1.42	-5314.44	-63499	-56444	13094	3.88	3.88	-32327	10833	18915	33304	52283	9894	52219	No	3.99	Si
SLU 80	1.02	933.19	-60306	-53606	12922	3.88	3.88	-30702	10833	18915	33304	52283	9894	52219	No	4.04	Si
SLU 80	1.42	-5273.89	-62977	-55979	13006	3.88	3.88	-32061	10833	18915	33304	52283	9894	52219	No	4.01	Si
SLU 81	1.02	976.49	-61489	-54657	13268	3.88	3.88	-31304	10833	18915	33304	52283	9894	52219	No	3.94	Si
SLU 81	1.42	-5372.36	-64174	-57044	13353	3.88	3.88	-32671	10833	18915	33304	52283	9894	52219	No	3.91	Si
SLU 82	1.02	981.26	-61488	-54656	13277	3.88	3.88	-31304	10833	18915	33304	52283	9894	52219	No	3.93	Si
SLU 82	1.42	-5372.95	-64181	-57050	13362	3.88	3.88	-32674	10833	18915	33304	52283	9894	52219	No	3.91	Si
SLU 84	1.02	974.95	-62207	-55295	13373	3.88	3.88	-31670	10833	18915	33304	52283	9894	52219	No	3.9	Si
SLU 84	1.42	-5429.49	-64949	-57733	13459	3.88	3.88	-33066	10833	18915	33304	52283	9894	52219	No	3.88	Si
SLU 83	1.02	970.18	-62208	-55296	13364	3.88	3.88	-31670	10833	18915	33304	52283	9894	52219	No	3.91	Si
SLU 83	1.42	-5428.91	-64943	-57727	13450	3.88	3.88	-33062	10833	18915	33304	52283	9894	52219	No	3.88	Si
SLU 74	1.02	939.44	-60087	-53410	12913	3.88	3.88	-30590	10833	18915	33304	52283	9894	52219	No	4.04	Si
SLU 74	1.42	-5257.9	-62730	-55760	12997	3.88	3.88	-31936	10833	18915	33304	52283	9894	52219	No	4.02	Si
SLU 79	1.02	928.42	-60307	-53606	12913	3.88	3.88	-30702	10833	18915	33304	52283	9894	52219	No	4.04	Si
SLU 79	1.42	-5273.3	-62970	-55973	12997	3.88	3.88	-32058	10833	18915	33304	52283	9894	52219	No	4.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.02	14296.92	-34291	-30481	38727	3.88	3.88	-17458	13908	24284	33304	78424	9894	57588		1.49	Si
SLV 13	1.42	-2087.39	-35886	-31899	38892	3.88	3.88	-18270	14071	24567	33304	78424	9894	57872		1.49	Si
SLD 15	1.02	6961.08	-39829	-35404	21490	3.88	3.88	-20277	14472	25268	33304	78424	9894	58573		2.73	Si
SLD 15	1.42	-2324.28	-41367	-36771	21297	3.88	3.88	-21060	14629	25542	33304	78424	9894	58846		2.76	Si
SLV 3	1.02	-14198.45	-47751	-42446	-23583	3.88	3.88	-24310	15279	26677	33304	78424	9894	59981		2.54	Si
SLV 3	1.42	-5344.68	-49739	-44212	-23632	3.88	3.88	-25322	15481	27030	33304	78424	9894	60334		2.55	Si
SLV 14	1.02	15542.44	-34192	-30393	41390	3.88	3.88	-17407	13898	24266	33304	78424	9894	57570		1.39	Si
SLV 14	1.42	-1895.48	-35737	-31766	41555	3.88	3.88	-18193	14055	24541	33304	78424	9894	57845		1.39	Si
SLD 16	1.02	7495.87	-39787	-35366	22633	3.88	3.88	-20255	14468	25261	33304	78424	9894	58565		2.59	Si
SLD 16	1.42	-2241.88	-41303	-36714	22440	3.88	3.88	-21027	14622	25530	33304	78424	9894	58835		2.62	Si
SLD 13	1.02	6493.57	-38111	-33876	21649	3.88	3.88	-19402	14297	24963	33304	78424	9894	58267		2.69	Si
SLD 13	1.42	-2965.12	-39804	-35381	21752	3.88	3.88	-20264	14469	25264	33304	78424	9894	58568		2.69	Si
SLD 14	1.02	7028.36	-38068	-33838	22793	3.88	3.88	-19381	14293	24955	33304	78424	9894	58260		2.56	Si
SLD 14	1.42	-2882.72	-39740	-35324	22896	3.88	3.88	-20231	14463	25252	33304	78424	9894	58557		2.56	Si
SLV 16	1.02	16633.75	-38221	-33974	41025	3.88	3.88	-19458	14308	24982	33304	78424	9894	58287		1.42	Si
SLV 16	1.42	-401.4	-39408	-35030	40496	3.88	3.88	-20063	14429	25193	33304	78424	9894	58498		1.44	Si
SLV 15	1.02	15388.22	-38320	-34062	38362	3.88	3.88	-19509	14318	25000	33304	78424	9894	58304		1.52	Si
SLV 15	1.42	-593.31	-39558	-35163	37833	3.88	3.88	-20139	14444	25220	33304	78424	9894	58524		1.55	Si
SLV 1	1.02	-15289.76	-43723	-38864	-23218	3.88	3.88	-22259	14868	25960	33304	78424	9894	59265		2.55	Si
SLV 1	1.42	-6838.76	-46067	-40948	-22573	3.88	3.88	-23453	15107	26377	33304	78424	9894	59681		2.64	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.25	17808	-31093	294.01	6180.14	21.02	Si
SLV 9	179667	0.25	17813	-31101	294.01	6181.45	21.02	Si
SLV 14	179667	0.25	17970	-31376	294.01	6228.97	21.19	Si
SLV 13	179667	0.25	17977	-31388	294.01	6231	21.19	Si
SLV 6	179667	0.25	19408	-33887	294.01	6655.62	22.64	Si
SLV 5	179667	0.25	19413	-33895	294.01	6656.89	22.64	Si
SLV 16	179667	0.25	19711	-34415	294.01	6744.01	22.94	Si
SLV 15	179667	0.25	19718	-34427	294.01	6745.98	22.94	Si
SLV 2	179667	0.25	23305	-40690	294.01	7758.19	26.39	Si
SLV 1	179667	0.25	23312	-40702	294.01	7760.04	26.39	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-43798	-33192	2948	0.472	5190.2	0.958	7.15703	4.30116	Si
SLV 6	-43660	-33289	2944	0.473	5176.3	0.958	7.17606	4.30116	Si
SLV 9	-41105	-30345	2944	0.495	4916.6	0.956	7.528	4.30116	Si
SLV 10	-40968	-30441	2940	0.497	4902.6	0.956	7.54935	4.30116	Si
SLV 7	-39806	-37142	-612	0.56	4784.5	0.955	8.52082	4.30116	Si
SLV 8	-39669	-37239	-616	0.561	4770.6	0.955	8.54333	4.30116	Si
SLV 11	-37114	-34295	-616	0.591	4511	0.953	9.01695	4.30116	Si
SLV 12	-36977	-34391	-619	0.593	4497.1	0.953	9.04266	4.30116	Si
SLV 1	-45579	-37870	1707	0.483	5371.4	0.96	7.30862	3.0673	Si
SLV 2	-45366	-38020	1701	0.484	5349.8	0.959	7.33779	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.423	SLU 84	Si
V_SLU	3.88	SLU 84	Si
PF_SLV	3.833	SLV 14	Si
V_SLV	1.391	SLV 14	Si
PFFP_SLV	21.02	SLV 10	Si
R_SLV	1.664	SLV 5	Si

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	1.046	L2	L4	5.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-0.98	-531.69	-100274	-0.0000992	0.0003743	0.0035	5.83	127698.69	181729.74	181729.74	341.8	No	Si
SLU 75	1.99	16047.46	-102058	-0.0001193	0.0003743	0.0035	5.83	126989.9	177573.6	177573.6	11.07	No	Si
SLU 74	-0.98	-404.56	-100251	-0.0000991	0.0003743	0.0035	5.83	127707.09	181722.29	181722.29	449.18	No	Si
SLU 74	1.99	15968.08	-102029	-0.0001191	0.0003743	0.0035	5.83	127002.48	177558.85	177558.85	11.12	No	Si
SLU 81	-0.98	-684.58	-102932	-0.0001026	0.0003743	0.0035	5.83	126604.7	182622.71	182622.71	266.77	No	Si
SLU 81	1.99	17108.58	-104546	-0.0001237	0.0003743	0.0035	5.83	125827.79	178828.67	178828.67	10.45	No	Si
SLU 60	-0.98	-861.79	-94308	-0.0000927	0.0003743	0.0035	5.83	129311.37	178420.25	178420.25	207.03	No	Si
SLU 60	1.99	15608.73	-94725	-0.0001097	0.0003743	0.0035	5.83	129236.48	173680.39	173680.39	11.13	No	Si
SLU 73	-0.98	-765.66	-98648	-0.0000976	0.0003743	0.0035	5.83	128253.53	180960.64	180960.64	236.35	No	Si
SLU 73	1.99	16053.29	-99987	-0.0001167	0.0003743	0.0035	5.83	127802.95	176547.64	176547.64	11	No	Si
SLU 76	-0.98	-633.89	-99766	-0.0000988	0.0003743	0.0035	5.83	127881.18	181498.12	181498.12	286.33	No	Si
SLU 76	1.99	16014.86	-101379	-0.0001184	0.0003743	0.0035	5.83	127272.06	177235.18	177235.18	11.07	No	Si
SLU 84	-0.98	-679.93	-104073	-0.0001039	0.0003743	0.0035	5.83	126064.34	183021.85	183021.85	269.18	No	Si
SLU 84	1.99	17149.53	-105967	-0.0001255	0.0003743	0.0035	5.83	125072.76	179557.04	179557.04	10.47	No	Si
SLU 61	-0.98	-988.92	-94331	-0.0000928	0.0003743	0.0035	5.83	129307.42	178443.45	178443.45	180.44	No	Si
SLU 61	1.99	15688.11	-94755	-0.0001098	0.0003743	0.0035	5.83	129230.96	173698.09	173698.09	11.07	No	Si
SLU 82	-0.98	-811.71	-102955	-0.0001027	0.0003743	0.0035	5.83	126594.29	182630.61	182630.61	225	No	Si
SLU 82	1.99	17187.96	-104575	-0.0001238	0.0003743	0.0035	5.83	125812.77	178843.72	178843.72	10.41	No	Si
SLU 83	-0.98	-552.8	-104050	-0.0001038	0.0003743	0.0035	5.83	126075.58	183013.76	183013.76	331.06	No	Si
SLU 83	1.99	17070.16	-105938	-0.0001254	0.0003743	0.0035	5.83	125089.12	179541.82	179541.82	10.52	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-0.98	-14150.5	-75082	-0.0000815	0.0005615	0.0035	5.83		182929.49	182929.49	12.93		Si
SLV 1	1.99	20110.41	-70746	-0.000083	0.0005615	0.0035	5.83		164925.01	164925.01	8.2		Si
SLV 5	-0.98	-18214.19	-70596	-0.000081	0.0005615	0.0035	5.83		175014.3	175014.3	9.61		Si
SLV 5	1.99	21973.99	-70862	-0.0000849	0.0005615	0.0035	5.83		165126.53	165126.53	7.51		Si
SLV 9	-0.98	-12289.17	-66779	-0.0000715	0.0005615	0.0035	5.83		168114.82	168114.82	13.68		Si
SLV 9	1.99	17813.89	-70246	-0.0000802	0.0005615	0.0035	5.83		164056.76	164056.76	9.21		Si
SLV 15	-0.98	14810.45	-62478	-0.0000697	0.0005615	0.0035	5.83		150698.99	150698.99	10.18		Si
SLV 15	1.99	559.85	-68021	-0.0000615	0.0005615	0.0035	5.83		160202.42	160202.42	286.15		Si
SLV 10	-0.98	-13123.52	-67170	-0.0000727	0.0005615	0.0035	5.83		168860.49	168860.49	12.87		Si
SLV 10	1.99	18126.2	-70419	-0.0000807	0.0005615	0.0035	5.83		164356.54	164356.54	9.07		Si
SLV 2	-0.98	-15445.2	-75688	-0.0000834	0.0005615	0.0035	5.83		183979.32	183979.32	11.91		Si
SLV 2	1.99	20595.03	-71013	-0.0000837	0.0005615	0.0035	5.83		165390.88	165390.88	8.03		Si
SLV 11	-0.98	18413.79	-67179	-0.0000778	0.0005615	0.0035	5.83		158749.23	158749.23	8.62		Si
SLV 11	1.99	-1131.41	-68001	-0.000062	0.0005615	0.0035	5.83		170388.92	170388.92	150.6		Si
SLV 12	-0.98	17579.45	-67569	-0.0000774	0.0005615	0.0035	5.83		159422.23	159422.23	9.07		Si
SLV 12	1.99	-819.1	-68173	-0.0000619	0.0005615	0.0035	5.83		170700.86	170700.86	208.4		Si
SLD 6	-0.98	-8533.03	-69901	-0.0000709	0.0005615	0.0035	5.83		173791.72	173791.72	20.37		Si
SLD 6	1.99	15708.2	-70163	-0.0000781	0.0005615	0.0035	5.83		163912.38	163912.38	10.43		Si
SLV 6	-0.98	-19048.53	-70987	-0.0000822	0.0005615	0.0035	5.83		175701.66	175701.66	9.22		Si
SLV 6	1.99	22286.29	-71034	-0.0000854	0.0005615	0.0035	5.83		165426.8	165426.8	7.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-0.98	-679.93	-104073	-87640	17097	5.83	5.83	-50109	10833	18948	33304	52373	14867	52252	No	3.06	Si
SLU 84	1.99	17149.53	-105967	-89236	15941	5.83	5.83	-51021	10833	18948	33304	52373	14867	52252	No	3.28	Si
SLU 74	-0.98	-404.56	-100251	-84422	16850	5.83	5.83	-48269	10833	18948	33304	52373	14867	52252	No	3.1	Si
SLU 74	1.99	15968.08	-102029	-85919	15801	5.83	5.83	-49124	10833	18948	33304	52373	14867	52252	No	3.31	Si
SLU 82	-0.98	-811.71	-102955	-86699	16852	5.83	5.83	-49571	10833	18948	33304	52373	14867	52252	No	3.1	Si
SLU 82	1.99	17187.96	-104575	-88063	15705	5.83	5.83	-50351	10833	18948	33304	52373	14867	52252	No	3.33	Si
SLU 77	-0.98	-272.78	-101369	-85363	17096	5.83	5.83	-48807	10833	18948	33304	52373	14867	52252	No	3.06	Si
SLU 77	1.99	15929.65	-103421	-87091	16037	5.83	5.83	-49795	10833	18948	33304	52373	14867	52252	No	3.26	Si
SLU 81	-0.98	-684.58	-102932	-86680	17010	5.83	5.83	-49560	10833	18948	33304	52373	14867	52252	No	3.07	Si
SLU 81	1.99	17108.58	-104546	-88039	15886	5.83	5.83	-50336	10833	18948	33304	52373	14867	52252	No	3.29	Si
SLU 78	-0.98	-399.91	-101391	-85382	16937	5.83	5.83	-48818	10833	18948	33304	52373	14867	52252	No	3.09	Si
SLU 78	1.99	16009.03	-103450	-87116	15856	5.83	5.83	-49809	10833	18948	33304	52373	14867	52252	No	3.3	Si
SLU 83	-0.98	-552.8	-104050	-87621	17256	5.83	5.83	-50098	10833	18948	33304	52373	14867	52252	No	3.03	Si
SLU 83	1.99	17070.16	-105938	-89211	16121	5.83	5.83	-51007	10833	18948	33304	52373	14867	52252	No	3.24	Si
SLU 80	-0.98	-417.36	-100869	-84942	16896	5.83	5.83	-48566	10833	18948	33304	52373	14867	52252	No	3.09	Si
SLU 80	1.99	15923.52	-102751	-86527	15819	5.83	5.83	-49472	10833	18948	33304	52373	14867	52252	No	3.3	Si
SLU 75	-0.98	-531.69	-100274	-84441	16691	5.83	5.83	-48280	10833	18948	33304	52373	14867	52252	No	3.13	Si
SLU 75	1.99	16047.46	-102058	-85944	15620	5.83	5.83	-49139	10833	18948	33304	52373	14867	52252	No	3.35	Si
SLU 79	-0.98	-290.23	-100846	-84923	17055	5.83	5.83	-48555	10833	18948	33304	52373	14867	52252	No	3.06	Si
SLU 79	1.99	15844.14	-102721	-86502	16000	5.83	5.83	-49458	10833	18948	33304	52373	14867	52252	No	3.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	-0.98	12488.77	-70996	-59786	33218	5.83	5.83	-34183	16250	28421	33304	78559	14867	61726		1.86	Si
SLV 7	1.99	3028.68	-68616	-57782	29921	5.83	5.83	-33037	16250	28421	33304	78559	14867	61726		2.06	Si
SLD 7	-0.98	5366.11	-69896	-58860	21342	5.83	5.83	-33653	16250	28421	33304	78559	14867	61726		2.89	Si
SLD 7	1.99	7222.9	-69135	-58219	19547	5.83	5.83	-33287	16250	28421	33304	78559	14867	61726		3.16	Si
SLV 12	-0.98	17579.45	-67569	-56901	35007	5.83	5.83	-32533	16250	28421	33304	78559	14867	61726		1.76	Si
SLV 12	1.99	-819.1	-68173	-57409	33489	5.83	5.83	-32824	16250	28421	33304	78559	14867	61726		1.84	Si
SLD 11	-0.98	7898.28	-68265	-57486	22239	5.83	5.83	-32868	16250	28421	33304	78559	14867	61726		2.78	Si
SLD 11	1.99	5446.68	-68872	-57997	21176	5.83	5.83	-33160	16250	28421	33304	78559	14867	61726		2.91	Si
SLD 12	-0.98	7533.86	-68435	-57630	22101	5.83	5.83	-32950	16250	28421	33304	78559	14867	61726		2.79	Si
SLD 12	1.99	5583.09	-68947	-58061	21069	5.83	5.83	-33196	16250	28421	33304	78559	14867	61726		2.93	Si
SLD 8	-0.98	5001.68	-70066	-59003	21205	5.83	5.83	-33735	16250	28421	33304	78559	14867	61726		2.91	Si
SLD 8	1.99	7359.31	-69211	-58283	19439	5.83	5.83	-33323	16250	28421	33304	78559	14867	61726		3.18	Si
SLV 15	-0.98	14810.45	-62478	-52613	22382	5.83	5.83	-30082	16250	28421	33304	78559	14867	61726		2.76	Si
SLV 15	1.99	559.85	-68021	-57281	23987	5.83	5.83	-32751	16250	28421	33304	78559	14867	61726		2.57	Si
SLV 16	-0.98	13515.75	-63084	-53123	21894	5.83	5.83	-30373	16250	28421	33304	78559	14867	61726		2.82	Si
SLV 16	1.99	1044.47	-68289	-57507	23606	5.83	5.83	-32880	16250	28421	33304	78559	14867	61726		2.61	Si
SLV 11	-0.98	18413.79	-67179	-56572	35322	5.83	5.83	-32345	16250	28421	33304	78559	14867	61726		1.75	Si
SLV 11	1.99	-1131.41	-68001	-57264	33734	5.83	5.83	-32741	16250	28421	33304	78559	14867	61726		1.83	Si
SLV 8	-0.98	11654.43	-71387	-60115	32904	5.83	5.83	-34371	16250	28421	33304	78559	14867	61726		1.88	Si
SLV 8	1.99	3340.99	-68789	-57927	29676	5.83	5.83	-33120	16250	28421	33304	78559	14867	61726		2.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.25	36857	-64463	294.52	7335.82	24.91	Si
SLV 13	179667	0.25	37215	-65089	294.52	7384.14	25.07	Si
SLV 16	179667	0.25	37225	-65107	294.52	7385.56	25.08	Si
SLV 11	179667	0.25	37558	-65690	294.52	7430.14	25.23	Si
SLV 14	179667	0.25	37583	-65733	294.52	7433.42	25.24	Si
SLV 12	179667	0.25	37796	-66105	294.52	7461.67	25.34	Si
SLV 7	179667	0.25	38461	-67268	294.52	7549.04	25.63	Si
SLV 8	179667	0.25	38698	-67683	294.52	7579.84	25.74	Si
SLV 9	179667	0.25	38750	-67774	294.52	7586.6	25.76	Si
SLV 10	179667	0.25	38988	-68189	294.52	7617.16	25.86	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-70419	-67170	593	0.482	7900.8	0.972	7.20716	5.87132	Si
SLV 9	-70246	-66779	594	0.483	7883.2	0.972	7.22225	5.87132	Si
SLV 6	-71034	-70987	-89	0.485	7963.4	0.972	7.25264	5.87132	Si
SLV 5	-70862	-70596	-88	0.486	7945.9	0.972	7.26812	5.87132	Si
SLV 12	-68173	-67569	595	0.495	7672.1	0.971	7.41163	5.87132	Si
SLV 11	-68001	-67179	596	0.496	7654.5	0.971	7.4277	5.87132	Si
SLV 8	-68789	-71387	-87	0.498	7734.8	0.971	7.45766	5.87132	Si
SLV 7	-68616	-70996	-86	0.499	7717.2	0.971	7.47412	5.87132	Si
SLV 2	-71013	-75688	-884	0.475	7961.3	0.972	7.09745	3.44478	Si
SLV 1	-70746	-75082	-882	0.476	7934.1	0.972	7.12094	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.405	SLU 82	Si
V_SLU	3.028	SLU 83	Si
PF_SLV	7.423	SLV 6	Si
V_SLV	1.748	SLV 11	Si
PFFP_SLV	24.908	SLV 15	Si
R_SLV	1.228	SLV 10	Si

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.576	-8.008	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.02	3337.58	-57531	-0.0000587	0.0003743	0.0035	3.88	75488.49	84880.49	84880.49	25.43	No	Si
SLU 80	1.42	6094.19	-60835	-0.0000665	0.0003743	0.0035	3.88	77630.59	88745.15	88745.15	14.56	No	Si
SLU 75	1.02	3303.96	-57202	-0.0000583	0.0003743	0.0035	3.88	75261.99	84494.79	84494.79	25.57	No	Si
SLU 75	1.42	6045.39	-60493	-0.000066	0.0003743	0.0035	3.88	77419.43	88370.59	88370.59	14.62	No	Si
SLU 83	1.02	3428.24	-59195	-0.0000606	0.0003743	0.0035	3.88	76597.08	86835.87	86835.87	25.33	No	Si
SLU 83	1.42	6235.68	-62600	-0.0000686	0.0003743	0.0035	3.88	78677.03	90333.65	90333.65	14.49	No	Si
SLU 79	1.02	3338.82	-57532	-0.0000587	0.0003743	0.0035	3.88	75489.5	84881.78	84881.78	25.42	No	Si
SLU 79	1.42	6092.7	-60830	-0.0000665	0.0003743	0.0035	3.88	77626.97	88739.23	88739.23	14.56	No	Si
SLU 77	1.02	3368.81	-57972	-0.0000592	0.0003743	0.0035	3.88	75787.95	85396.6	85396.6	25.35	No	Si
SLU 77	1.42	6133.17	-61307	-0.000067	0.0003743	0.0035	3.88	77916.9	89209.01	89209.01	14.55	No	Si
SLU 84	1.02	3427	-59194	-0.0000606	0.0003743	0.0035	3.88	76596.37	86834.58	86834.58	25.34	No	Si
SLU 84	1.42	6237.17	-62606	-0.0000686	0.0003743	0.0035	3.88	78680.42	90338.11	90338.11	14.48	No	Si
SLU 81	1.02	3364.63	-58426	-0.0000597	0.0003743	0.0035	3.88	76092.42	85930.49	85930.49	25.54	No	Si
SLU 81	1.42	6146.4	-61780	-0.0000675	0.0003743	0.0035	3.88	78199.06	89657.95	89657.95	14.59	No	Si
SLU 82	1.02	3363.39	-58425	-0.0000597	0.0003743	0.0035	3.88	76091.69	85929.2	85929.2	25.55	No	Si
SLU 82	1.42	6147.89	-61786	-0.0000675	0.0003743	0.0035	3.88	78202.56	89663.46	89663.46	14.58	No	Si
SLU 78	1.02	3367.57	-57970	-0.0000592	0.0003743	0.0035	3.88	75787.21	85395.31	85395.31	25.36	No	Si
SLU 78	1.42	6134.67	-61313	-0.000067	0.0003743	0.0035	3.88	77920.46	89214.72	89214.72	14.54	No	Si
SLU 74	1.02	3305.2	-57203	-0.0000584	0.0003743	0.0035	3.88	75262.75	84496.07	84496.07	25.56	No	Si
SLU 74	1.42	6043.9	-60487	-0.000066	0.0003743	0.0035	3.88	77415.77	88363.58	88363.58	14.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	1.02	-12168.25	-37838	-0.0000508	0.0005615	0.0035	3.88		69302.7	69302.7	5.7		Si
SLV 3	1.42	2366.03	-39836	-0.0000388	0.0005615	0.0035	3.88		67653.89	67653.89	28.59		Si
SLV 16	1.02	16029.61	-44906	-0.0000631	0.0005615	0.0035	3.88		74993.33	74993.33	4.68		Si
SLV 16	1.42	5719.14	-47229	-0.0000505	0.0005615	0.0035	3.88		78382.78	78382.78	13.71		Si
SLV 1	1.02	-11599.73	-33171	-0.0000456	0.0005615	0.0035	3.88		62061.16	62061.16	5.35		Si
SLV 1	1.42	2601.09	-35232	-0.0000349	0.0005615	0.0035	3.88		61060.65	61060.65	23.48		Si
SLV 4	1.02	-11023.07	-37694	-0.000049	0.0005615	0.0035	3.88		69076.83	69076.83	6.27		Si
SLV 4	1.42	2527.49	-39729	-0.0000389	0.0005615	0.0035	3.88		67500.99	67500.99	26.71		Si
SLV 10	1.02	7589.38	-32295	-0.0000392	0.0005615	0.0035	3.88		56891.12	56891.12	7.5		Si
SLV 10	1.42	5082.65	-34648	-0.0000378	0.0005615	0.0035	3.88		60229.52	60229.52	11.85		Si
SLD 14	1.02	8361.12	-39544	-0.000047	0.0005615	0.0035	3.88		67234.96	67234.96	8.04		Si
SLD 14	1.42	4926.89	-41821	-0.0000443	0.0005615	0.0035	3.88		70517.15	70517.15	14.31		Si
SLV 14	1.02	16598.14	-40239	-0.0000594	0.0005615	0.0035	3.88		68234.75	68234.75	4.11		Si
SLV 14	1.42	5954.2	-42625	-0.0000465	0.0005615	0.0035	3.88		71680.89	71680.89	12.04		Si
SLV 2	1.02	-10454.54	-33026	-0.0000439	0.0005615	0.0035	3.88		61838.61	61838.61	5.91		Si
SLV 2	1.42	2762.55	-35125	-0.000035	0.0005615	0.0035	3.88		60909.28	60909.28	22.05		Si
SLV 15	1.02	14884.43	-45051	-0.0000616	0.0005615	0.0035	3.88		75203.79	75203.79	5.05		Si
SLV 15	1.42	5557.68	-47335	-0.0000504	0.0005615	0.0035	3.88		78538.23	78538.23	14.13		Si
SLV 13	1.02	15452.95	-40384	-0.0000579	0.0005615	0.0035	3.88		68442.98	68442.98	4.43		Si
SLV 13	1.42	5792.74	-42731	-0.0000464	0.0005615	0.0035	3.88		71834.8	71834.8	12.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.02	3427	-59194	-52617	-4234	3.88	3.88	-30136	10833	18915	33304	52283	9894	52219	No	12.33	Si
SLU 84	1.42	6237.17	-62606	-55650	-4159	3.88	3.88	-31873	10833	18915	33304	52283	9894	52219	No	12.56	Si
SLU 80	1.02	3337.58	-57531	-51139	-4158	3.88	3.88	-29289	10833	18915	33304	52283	9894	52219	No	12.56	Si
SLU 80	1.42	6094.19	-60835	-54076	-4085	3.88	3.88	-30971	10833	18915	33304	52283	9894	52219	No	12.78	Si
SLU 76	1.02	3273.13	-56762	-50455	-4124	3.88	3.88	-28897	10797	18852	33304	52283	9894	52157	No	12.65	Si
SLU 76	1.42	6005.91	-60019	-53350	-4051	3.88	3.88	-30556	10833	18915	33304	52283	9894	52219	No	12.89	Si
SLU 81	1.02	3364.63	-58426	-51934	-4194	3.88	3.88	-29745	10833	18915	33304	52283	9894	52219	No	12.45	Si
SLU 81	1.42	6146.4	-61780	-54916	-4120	3.88	3.88	-31452	10833	18915	33304	52283	9894	52219	No	12.67	Si
SLU 82	1.02	3363.39	-58425	-51933	-4197	3.88	3.88	-29744	10833	18915	33304	52283	9894	52219	No	12.44	Si
SLU 82	1.42	6147.89	-61786	-54921	-4123	3.88	3.88	-31455	10833	18915	33304	52283	9894	52219	No	12.66	Si
SLU 78	1.02	3367.57	-57970	-51529	-4164	3.88	3.88	-29513	10833	18915	33304	52283	9894	52219	No	12.54	Si
SLU 78	1.42	6134.67	-61313	-54500	-4090	3.88	3.88	-31214	10833	18915	33304	52283	9894	52219	No	12.77	Si
SLU 75	1.02	3303.96	-57202	-50846	-4127	3.88	3.88	-29121	10827	18904	33304	52283	9894	52209	No	12.65	Si
SLU 75	1.42	6045.39	-60493	-53771	-4054	3.88	3.88	-30797	10833	18915	33304	52283	9894	52219	No	12.88	Si
SLU 79	1.02	3338.82	-57532	-51140	-4155	3.88	3.88	-29290	10833	18915	33304	52283	9894	52219	No	12.57	Si
SLU 79	1.42	6092.7	-60830	-54071	-4082	3.88	3.88	-30968	10833	18915	33304	52283	9894	52219	No	12.79	Si
SLU 83	1.02	3428.24	-59195	-52618	-4231	3.88	3.88	-30136	10833	18915	33304	52283	9894	52219	No	12.34	Si
SLU 83	1.42	6235.68	-62600	-55645	-4156	3.88	3.88	-31870	10833	18915	33304	52283	9894	52219	No	12.57	Si
SLU 77	1.02	3368.81	-57972	-51530	-4161	3.88	3.88	-29513	10833	18915	33304	52283	9894	52219	No	12.55	Si
SLU 77	1.42	6133.17	-61307	-54495	-4087	3.88	3.88	-31211	10833	18915	33304	52283	9894	52219	No	12.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.02	15452.95	-40384	-35897	25594	3.88	3.88	-20559	14529	25367	33304	78425	9894	58671		2.29	Si
SLV 13	1.42	5792.74	-42731	-37984	25861	3.88	3.88	-21755	14768	25784	33304	78425	9894	59089		2.28	Si
SLV 1	1.02	-11599.73	-33171	-29485	-33859	3.88	3.88	-16887	13794	24085	33304	78425	9894	57389		1.69	Si
SLV 1	1.42	2601.09	-35232	-31317	-33094	3.88	3.88	-17936	14004	24451	33304	78425	9894	57755		1.75	Si
SLV 16	1.02	16029.61	-44906	-39917	27961	3.88	3.88	-22862	14989	26171	33304	78425	9894	59475		2.13	Si
SLV 16	1.42	5719.14	-47229	-41981	27297	3.88	3.88	-24044	15226	26584	33304	78425	9894	59888		2.19	Si
SLV 2	1.02	-10454.54	-33026	-29357	-31379	3.88	3.88	-16814	13779	24059	33304	78425	9894	57363		1.83	Si
SLV 2	1.42	2762.55	-35125	-31223	-30614	3.88	3.88	-17882	13993	24432	33304	78425	9894	57736		1.89	Si
SLD 3	1.02	-3931.23	-38533	-34251	-16210	3.88	3.88	-19617	14340	25038	33304	78425	9894	58342		3.6	Si
SLD 3	1.42	3393.34	-40640	-36124	-16252	3.88	3.88	-20690	14555	25412	33304	78425	9894	58717		3.61	Si
SLV 3	1.02	-12168.25	-37838	-33634	-33972	3.88	3.88	-19263	14269	24914	33304	78425	9894	58219		1.71	Si
SLV 3	1.42	2366.03	-39836	-35409	-34138	3.88	3.88	-20280	14473	25269	33304	78425	9894	58574		1.72	Si
SLV 14	1.02	16598.14	-40239	-35768	28074	3.88	3.88	-20486	14514	25341	33304	78425	9894	58645		2.09	Si
SLV 14	1.42	5954.2	-42625	-37889	28341	3.88	3.88	-21700	14757	25765	33304	78425	9894	59070		2.08	Si
SLV 15	1.02	14884.43	-45051	-40045	25481	3.88	3.88	-22935	15004	26197	33304	78425	9894	59501		2.34	Si
SLV 15	1.42	5557.68	-47335	-42076	24817	3.88	3.88	-24098	15236	26603	33304	78425	9894	59907		2.41	Si
SLD 1	1.02	-3688.26	-36539	-32479	-16162	3.88	3.88	-18602	14137	24683	33304	78425	9894	57988		3.59	Si
SLD 1	1.42	3494.71	-38677	-34379	-15805	3.88	3.88	-19690	14355	25063	33304	78425	9894	58368		3.69	Si
SLV 4	1.02	-11023.07	-37694	-33505	-31493	3.88	3.88	-19190	14255	24889	33304	78425	9894	58193		1.85	Si
SLV 4	1.42	2527.49	-39729	-35315	-31657	3.88	3.88	-20226	14462	25251	33304	78425	9894	58555		1.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.25	16869	-29454	294.01	5895.11	20.05	Si
SLV 5	179667	0.25	16926	-29552	294.01	5912.34	20.11	Si
SLV 2	179667	0.25	17557	-30655	294.01	6104.42	20.76	Si
SLV 1	179667	0.25	17645	-30808	294.01	6130.83	20.85	Si
SLV 10	179667	0.25	18257	-31876	294.01	6314.69	21.48	Si
SLV 9	179667	0.25	18313	-31974	294.01	6331.51	21.53	Si
SLV 4	179667	0.25	19547	-34130	294.01	6696.23	22.78	Si
SLV 3	179667	0.25	19635	-34282	294.01	6721.75	22.86	Si
SLV 14	179667	0.25	22181	-38728	294.01	7448.14	25.33	Si
SLV 13	179667	0.25	22268	-38880	294.01	7472.48	25.42	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-39211	-32885	2895	0.515	4724.1	0.955	7.83319	4.30116	Si
SLV 10	-39169	-32772	2892	0.515	4719.8	0.955	7.8408	4.30116	Si
SLV 5	-37420	-29853	2786	0.536	4542.1	0.953	8.17085	4.30116	Si
SLV 6	-37378	-29740	2783	0.536	4537.8	0.953	8.17915	4.30116	Si
SLV 11	-39654	-37502	-680	0.56	4769.1	0.955	8.5237	4.30116	Si
SLV 12	-39612	-37389	-683	0.561	4764.8	0.955	8.53018	4.30116	Si
SLV 7	-37863	-34471	-790	0.578	4587.1	0.953	8.80964	4.30116	Si
SLV 8	-37821	-34358	-792	0.578	4582.8	0.953	8.8167	4.30116	Si
SLV 13	-41468	-38069	1772	0.517	4953.4	0.957	7.86158	3.0673	Si
SLV 14	-41402	-37894	1768	0.518	4946.7	0.956	7.87285	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.484	SLU 84	Si
V_SLU	12.334	SLU 84	Si
PF_SLV	4.111	SLV 14	Si
V_SLV	1.695	SLV 1	Si
PFFP_SLV	20.051	SLV 6	Si
R_SLV	1.821	SLV 9	Si

Maschio 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.576	-4.858	6.576	L2	L4	2.15	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	1.02	-1937.35	-23950	-0.0000487	0.0003743	0.0035	2.15	19486.37	22324.92	22324.92	11.52	No	Si
SLU 73	1.42	1933.03	-22192	-0.0000456	0.0003743	0.0035	2.15	18481.93	19882.11	19882.11	10.29	No	Si
SLU 41	1.02	-1644.78	-21644	-0.0000432	0.0003743	0.0035	2.15	18154.72	20693.23	20693.23	12.58	No	Si
SLU 41	1.42	1804.62	-20182	-0.0000414	0.0003743	0.0035	2.15	17250.64	18455.99	18455.99	10.23	No	Si
SLU 42	1.02	-1644.34	-21648	-0.0000432	0.0003743	0.0035	2.15	18156.98	20695.98	20695.98	12.59	No	Si
SLU 42	1.42	1805.39	-20187	-0.0000414	0.0003743	0.0035	2.15	17253.42	18459.72	18459.72	10.22	No	Si
SLU 84	1.02	-2003.81	-25324	-0.0000515	0.0003743	0.0035	2.15	20224.21	23242.62	23242.62	11.6	No	Si
SLU 84	1.42	2063.75	-23520	-0.0000486	0.0003743	0.0035	2.15	19246.75	20713.64	20713.64	10.04	No	Si
SLU 81	1.02	-1985.91	-25037	-0.0000509	0.0003743	0.0035	2.15	20073.71	23054.74	23054.74	11.61	No	Si
SLU 81	1.42	2051.79	-23240	-0.000048	0.0003743	0.0035	2.15	19088.58	20537.45	20537.45	10.01	No	Si
SLU 75	1.02	-1970.08	-24425	-0.0000498	0.0003743	0.0035	2.15	19746.38	22655.92	22655.92	11.5	No	Si
SLU 75	1.42	1956.74	-22655	-0.0000465	0.0003743	0.0035	2.15	18752.54	20170.56	20170.56	10.31	No	Si
SLU 83	1.02	-2004.25	-25320	-0.0000515	0.0003743	0.0035	2.15	20222.25	23240.15	23240.15	11.6	No	Si
SLU 83	1.42	2062.97	-23516	-0.0000486	0.0003743	0.0035	2.15	19244.3	20710.89	20710.89	10.04	No	Si
SLU 82	1.02	-1985.47	-25041	-0.0000509	0.0003743	0.0035	2.15	20075.69	23057.2	23057.2	11.61	No	Si
SLU 82	1.42	2052.56	-23244	-0.000048	0.0003743	0.0035	2.15	19091.06	20540.19	20540.19	10.01	No	Si
SLU 40	1.02	-1626	-21365	-0.0000426	0.0003743	0.0035	2.15	17985.78	20488.12	20488.12	12.6	No	Si
SLU 40	1.42	1794.21	-19911	-0.0000409	0.0003743	0.0035	2.15	17077.67	18224.75	18224.75	10.16	No	Si
SLU 39	1.02	-1626.44	-21361	-0.0000426	0.0003743	0.0035	2.15	17983.49	20485.35	20485.35	12.6	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	1.42	1793.43	-19907	-0.0000409	0.0003743	0.0035	2.15	17074.87	18221.02	18221.02	10.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	1.02	-4938.31	-15163	-0.0000464	0.0005615	0.0035	2.15		16211.82	16211.82	3.28		Si
SLV 4	1.42	1747.87	-13732	-0.0000296	0.0005615	0.0035	2.15		13922.06	13922.06	7.97		Si
SLV 8	1.02	-4235.09	-18371	-0.0000487	0.0005615	0.0035	2.15		19055.28	19055.28	4.5		Si
SLV 8	1.42	344.95	-16704	-0.0000282	0.0005615	0.0035	2.15		16407.4	16407.4	47.56		Si
SLV 6	1.02	-247.15	-13439	-0.0000224	0.0005615	0.0035	2.15		14646.49	14646.49	59.26		Si
SLV 6	1.42	2690.37	-12541	-0.0000319	0.0005615	0.0035	2.15		12818.44	12818.44	4.76		Si
SLV 7	1.02	-4412.59	-18593	-0.0000499	0.0005615	0.0035	2.15		19246.53	19246.53	4.36		Si
SLV 7	1.42	417.53	-16867	-0.0000288	0.0005615	0.0035	2.15		16537.55	16537.55	39.61		Si
SLD 3	1.02	-3036.23	-16150	-0.0000394	0.0005615	0.0035	2.15		17097.5	17097.5	5.63		Si
SLD 3	1.42	1538.19	-14760	-0.0000304	0.0005615	0.0035	2.15		14837.6	14837.6	9.65		Si
SLV 1	1.02	-4017.36	-14029	-0.0000403	0.0005615	0.0035	2.15		15195.54	15195.54	3.78		Si
SLV 1	1.42	2564.13	-12736	-0.0000316	0.0005615	0.0035	2.15		13000.21	13000.21	5.07		Si
SLD 4	1.02	-2917.96	-16001	-0.0000387	0.0005615	0.0035	2.15		16964.09	16964.09	5.81		Si
SLD 4	1.42	1489.83	-14652	-0.00003	0.0005615	0.0035	2.15		14746.2	14746.2	9.9		Si
SLV 3	1.02	-5213.74	-15508	-0.0000483	0.0005615	0.0035	2.15		16521.22	16521.22	3.17		Si
SLV 3	1.42	1860.5	-13985	-0.0000305	0.0005615	0.0035	2.15		14155.22	14155.22	7.61		Si
SLV 2	1.02	-3741.93	-13684	-0.0000385	0.0005615	0.0035	2.15		14874.63	14874.63	3.98		Si
SLV 2	1.42	2451.5	-12483	-0.0000307	0.0005615	0.0035	2.15		12764.58	12764.58	5.21		Si
SLV 5	1.02	-424.65	-13662	-0.0000236	0.0005615	0.0035	2.15		14853.92	14853.92	34.98		Si
SLV 5	1.42	2762.95	-12704	-0.0000325	0.0005615	0.0035	2.15		12970.29	12970.29	4.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	-1970.08	-24425	-21712	-11509	2.15	2.15	-22441	9937	9614	33304	28971	5483	34454	No	2.99	Si
SLU 75	1.42	1956.74	-22655	-20137	-11506	2.15	2.15	-20814	9720	9404	33304	28971	5483	34454	No	2.99	Si
SLU 78	1.02	-1988.42	-24708	-21963	-11598	2.15	2.15	-22701	9971	9647	33304	28971	5483	34454	No	2.97	Si
SLU 78	1.42	1967.93	-22930	-20382	-11595	2.15	2.15	-21067	9753	9436	33304	28971	5483	34454	No	2.97	Si
SLU 74	1.02	-1970.52	-24422	-21708	-11509	2.15	2.15	-22437	9936	9613	33304	28971	5483	34454	No	2.99	Si
SLU 74	1.42	1955.96	-22650	-20133	-11507	2.15	2.15	-20810	9719	9403	33304	28971	5483	34454	No	2.99	Si
SLU 77	1.02	-1988.86	-24704	-21960	-11598	2.15	2.15	-22697	9971	9647	33304	28971	5483	34454	No	2.97	Si
SLU 77	1.42	1967.15	-22926	-20379	-11595	2.15	2.15	-21063	9753	9436	33304	28971	5483	34454	No	2.97	Si
SLU 80	1.02	-1974.33	-24513	-21789	-11518	2.15	2.15	-22521	9947	9624	33304	28971	5483	34454	No	2.99	Si
SLU 80	1.42	1954.87	-22741	-20214	-11515	2.15	2.15	-20893	9730	9414	33304	28971	5483	34454	No	2.99	Si
SLU 84	1.02	-2003.81	-25324	-22510	-11929	2.15	2.15	-23266	10047	9720	33304	28971	5483	34454	No	2.89	Si
SLU 84	1.42	2063.75	-23520	-20907	-11927	2.15	2.15	-21609	9826	9506	33304	28971	5483	34454	No	2.89	Si
SLU 82	1.02	-1985.47	-25041	-22259	-11841	2.15	2.15	-23006	10012	9687	33304	28971	5483	34454	No	2.91	Si
SLU 82	1.42	2052.56	-23244	-20662	-11838	2.15	2.15	-21356	9792	9474	33304	28971	5483	34454	No	2.91	Si
SLU 79	1.02	-1974.77	-24509	-21786	-11518	2.15	2.15	-22518	9947	9624	33304	28971	5483	34454	No	2.99	Si
SLU 79	1.42	1954.1	-22737	-20210	-11515	2.15	2.15	-20889	9730	9413	33304	28971	5483	34454	No	2.99	Si
SLU 81	1.02	-1985.91	-25037	-22255	-11841	2.15	2.15	-23003	10011	9686	33304	28971	5483	34454	No	2.91	Si
SLU 81	1.42	2051.79	-23240	-20658	-11839	2.15	2.15	-21352	9791	9473	33304	28971	5483	34454	No	2.91	Si
SLU 83	1.02	-2004.25	-25320	-22506	-11929	2.15	2.15	-23263	10046	9720	33304	28971	5483	34454	No	2.89	Si
SLU 83	1.42	2062.97	-23516	-20903	-11927	2.15	2.15	-21605	9825	9506	33304	28971	5483	34454	No	2.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	1.02	-3036.23	-16150	-14355	-12621	2.15	2.15	-14837	13384	12949	33304	43457	5483	46253		3.66	Si
SLD 3	1.42	1538.19	-14760	-13120	-12559	2.15	2.15	-13561	13129	12702	33304	43457	5483	46007		3.66	Si
SLV 4	1.02	-4938.31	-15163	-13478	-17760	2.15	2.15	-13931	13203	12774	33304	43457	5483	46078		2.59	Si
SLV 4	1.42	1747.87	-13732	-12206	-17614	2.15	2.15	-12616	12940	12519	33304	43457	5483	45824		2.6	Si
SLV 1	1.02	-4017.36	-14029	-12470	-17699	2.15	2.15	-12889	12994	12572	33304	43457	5483	45876		2.59	Si
SLV 1	1.42	2564.13	-12736	-11321	-17580	2.15	2.15	-11701	12757	12342	33304	43457	5483	45647		2.6	Si
SLD 2	1.02	-2406.41	-15369	-13662	-11599	2.15	2.15	-14121	13241	12810	33304	43457	5483	46115		3.98	Si
SLD 2	1.42	1789.95	-14118	-12549	-11546	2.15	2.15	-12971	13011	12588	33304	43457	5483	45892		3.97	Si
SLV 2	1.02	-3741.93	-13684	-12163	-16538	2.15	2.15	-12572	12931	12511	33304	43457	5483	45815		2.77	Si
SLV 2	1.42	2451.5	-12483	-11096	-16415	2.15	2.15	-11469	12710	12297	33304	43457	5483	45602		2.78	Si
SLV 3	1.02	-5213.74	-15508	-13785	-18921	2.15	2.15	-14248	13266	12835	33304	43457	5483	46140		2.44	Si
SLV 3	1.42	1860.5	-13985	-12431	-18779	2.15	2.15	-12849	12986	12564	33304	43457	5483	45869		2.44	Si
SLD 1	1.02	-2524.67	-15518	-13793	-12098	2.15	2.15	-14257	13268	12837	33304	43457	5483	46141		3.81	Si
SLD 1	1.42	1838.31	-14226	-12646	-12046	2.15	2.15	-13070	13031	12607	33304	43457	5483	45912		3.81	Si
SLD 4	1.02	-2917.96	-16001	-14223	-12123	2.15	2.15	-14701	13357	12923	33304	43457	5483	46227		3.81	Si
SLD 4	1.42	1489.83	-14652	-13024	-12058	2.15	2.15	-13461	13109	12683	33304	43457	5483	45987		3.81	Si
SLV 8	1.02	-4235.09	-18371	-16329	-12522	2.15	2.15	-16878	13792	13344	33304	43457	5483	46648		3.73	Si
SLV 8	1.42	344.95	-16704	-14848	-12440	2.15	2.15	-15347	13486	13048	33304	43457	5483	46352		3.73	Si
SLV 7	1.02	-4412.59	-18593	-16527	-13271	2.15	2.15	-17082	13833	13384	33304	43457	5483	46688		3.52	Si
SLV 7	1.42	417.53	-16867	-14993	-13191	2.15	2.15	-15497	13516	13077	33304	43457	5483	46381		3.52	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	9942	-9619	162.92	2023.43	12.42	Si
SLV 1	179667	0.25	9971	-9647	162.92	2028.87	12.45	Si
SLV 4	179667	0.25	10347	-10011	162.92	2099.88	12.89	Si
SLV 3	179667	0.25	10376	-10039	162.92	2105.29	12.92	Si
SLV 6	179667	0.25	12736	-12322	162.92	2541.21	15.6	Si
SLV 5	179667	0.25	12754	-12340	162.92	2544.57	15.62	Si
SLV 8	179667	0.25	14086	-13628	162.92	2783.47	17.09	Si
SLV 7	179667	0.25	14104	-13646	162.92	2786.76	17.11	Si
SLV 10	179667	0.25	15531	-15026	162.92	3037.02	18.64	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.25	15549	-15044	162.92	3040.24	18.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-15288	-20010	-685	0.724	1964.1	0.942	11.17346	4.30116	Si
SLV 12	-15053	-20330	-698	0.732	1940.3	0.941	11.3033	4.30116	Si
SLV 7	-15030	-13656	-641	0.736	1938	0.941	11.36736	4.30116	Si
SLV 8	-14795	-13976	-653	0.744	1914.2	0.94	11.50191	4.30116	Si
SLV 9	-12460	-19210	1418	0.797	1678	0.934	12.40975	4.30116	Si
SLV 5	-12202	-12855	1463	0.807	1651.9	0.933	12.57043	4.30116	Si
SLV 10	-12225	-19530	1406	0.809	1654.2	0.933	12.61147	4.30116	Si
SLV 6	-11967	-13175	1450	0.819	1628.1	0.932	12.77854	4.30116	Si
SLV 15	-14665	-27055	2	0.787	1901	0.94	12.16717	3.0673	Si
SLV 13	-13816	-26815	633	0.785	1815.1	0.938	12.17184	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.007	SLU 82	Si
V_SLU	2.888	SLU 83	Si
PF_SLV	3.169	SLV 3	Si
V_SLV	2.439	SLV 3	Si
PFFP_SLV	12.42	SLV 2	Si
R_SLV	2.598	SLV 11	Si

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.201	-9.728	6.351	L2	L4	4.15	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-0.98	18629.26	-94984	-0.0001788	0.0004492	0.0035	4.15	74029.87	110387.09	110387.09	5.93	No	Si
SLU 82	1.22	16121.37	-76168	-0.0001383	0.0004492	0.0035	4.15	78913.88	102290.3	102290.3	6.35	No	Si
SLU 78	-0.98	18375.45	-93605	-0.0001754	0.0004492	0.0035	4.15	74716.1	109792.71	109792.71	5.97	No	Si
SLU 78	1.22	16324.52	-74742	-0.0001363	0.0004492	0.0035	4.15	78890.27	101585.32	101585.32	6.22	No	Si
SLU 77	-0.98	18557.21	-93576	-0.0001758	0.0004492	0.0035	4.15	74729.75	109780.47	109780.47	5.92	No	Si
SLU 77	1.22	16334.01	-74723	-0.0001363	0.0004492	0.0035	4.15	78889.61	101573.29	101573.29	6.22	No	Si
SLU 74	-0.98	18380.82	-92626	-0.0001736	0.0004492	0.0035	4.15	75171.49	109374.2	109374.2	5.95	No	Si
SLU 74	1.22	16048.21	-73880	-0.0001343	0.0004492	0.0035	4.15	78849.09	101009.58	101009.58	6.29	No	Si
SLU 80	-0.98	18210.83	-93096	-0.0001741	0.0004492	0.0035	4.15	74955.94	109574.96	109574.96	6.02	No	Si
SLU 80	1.22	16179.78	-74342	-0.0001353	0.0004492	0.0035	4.15	78873.7	101321.6	101321.6	6.26	No	Si
SLU 83	-0.98	18987.4	-95906	-0.0001815	0.0004492	0.0035	4.15	73542.45	110787.15	110787.15	5.83	No	Si
SLU 83	1.22	16416.65	-76994	-0.0001404	0.0004492	0.0035	4.15	78902.19	102640.92	102640.92	6.25	No	Si
SLU 79	-0.98	18392.59	-93068	-0.0001744	0.0004492	0.0035	4.15	74969.19	109562.76	109562.76	5.96	No	Si
SLU 79	1.22	16189.27	-74324	-0.0001353	0.0004492	0.0035	4.15	78872.83	101309.31	101309.31	6.26	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-0.98	18805.65	-95935	-0.0001811	0.0004492	0.0035	4.15	73526.99	110799.57	110799.57	5.89	No	Si
SLU 84	1.22	16407.17	-77012	-0.0001404	0.0004492	0.0035	4.15	78901.72	102648.77	102648.77	6.26	No	Si
SLU 75	-0.98	18199.06	-92655	-0.0001732	0.0004492	0.0035	4.15	75158.58	109386.36	109386.36	6.01	No	Si
SLU 75	1.22	16038.73	-73898	-0.0001343	0.0004492	0.0035	4.15	78850.18	101022.16	101022.16	6.3	No	Si
SLU 81	-0.98	18811.01	-94956	-0.0001792	0.0004492	0.0035	4.15	74044.59	110374.74	110374.74	5.87	No	Si
SLU 81	1.22	16130.86	-76150	-0.0001383	0.0004492	0.0035	4.15	78913.93	102282.49	102282.49	6.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-0.98	25540.2	-47836	-0.0001074	0.0006738	0.0035	4.15		84036.11	84036.11	3.29		Si
SLV 4	1.22	7730.71	-43151	-0.0000676	0.0006738	0.0035	4.15		76479.82	76479.82	9.89		Si
SLV 3	-0.98	26985.7	-47550	-0.0001097	0.0006738	0.0035	4.15		83572.26	83572.26	3.1		Si
SLV 3	1.22	7816.61	-43070	-0.0000677	0.0006738	0.0035	4.15		76350.96	76350.96	9.77		Si
SLV 8	-0.98	38310.21	-57044	-0.0001454	0.0006738	0.0035	4.15		95715.6	95715.6	2.5		Si
SLV 8	1.22	11314	-47290	-0.0000798	0.0006738	0.0035	4.15		83151.41	83151.41	7.35		Si
SLD 12	-0.98	22284.21	-64946	-0.0001256	0.0006738	0.0035	4.15		105518.31	105518.31	4.74		Si
SLD 12	1.22	12146.36	-50629	-0.0000859	0.0006738	0.0035	4.15		87888.42	87888.42	7.24		Si
SLV 12	-0.98	34499.89	-66379	-0.000152	0.0006738	0.0035	4.15		107316.39	107316.39	3.11		Si
SLV 12	1.22	13559.65	-51364	-0.0000895	0.0006738	0.0035	4.15		88779.35	88779.35	6.55		Si
SLV 11	-0.98	35431.41	-66195	-0.0001536	0.0006738	0.0035	4.15		107085.01	107085.01	3.02		Si
SLV 11	1.22	13615.01	-51312	-0.0000896	0.0006738	0.0035	4.15		88716.44	88716.44	6.52		Si
SLD 7	-0.98	24323.37	-60883	-0.0001237	0.0006738	0.0035	4.15		100458.05	100458.05	4.13		Si
SLD 7	1.22	11245.01	-48896	-0.0000818	0.0006738	0.0035	4.15		85682.26	85682.26	7.62		Si
SLD 8	-0.98	23916.5	-60963	-0.000123	0.0006738	0.0035	4.15		100557.75	100557.75	4.2		Si
SLD 8	1.22	11220.83	-48918	-0.0000818	0.0006738	0.0035	4.15		85714.21	85714.21	7.64		Si
SLD 11	-0.98	22691.08	-64865	-0.0001263	0.0006738	0.0035	4.15		105417.6	105417.6	4.65		Si
SLD 11	1.22	12170.54	-50606	-0.0000859	0.0006738	0.0035	4.15		87861	87861	7.22		Si
SLV 7	-0.98	39241.73	-56860	-0.0001472	0.0006738	0.0035	4.15		95489.16	95489.16	2.43		Si
SLV 7	1.22	11369.36	-47238	-0.0000798	0.0006738	0.0035	4.15		83067.41	83067.41	7.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-0.98	18380.82	-92626	-78001	-29466	4.15	4.15	-62651	10833	13487	33304	44742	10582	46792	No	1.59	Si
SLU 74	1.22	16048.21	-73880	-62215	-39177	4.15	4.15	-49971	10833	13487	33304	44742	10582	46792	No	1.19	Si
SLU 81	-0.98	18811.01	-94956	-79963	-29744	4.15	4.15	-64227	10833	13487	33304	44742	10582	46792	No	1.57	Si
SLU 81	1.22	16130.86	-76150	-64126	-39703	4.15	4.15	-51507	10833	13487	33304	44742	10582	46792	No	1.18	Si
SLU 83	-0.98	18987.4	-95906	-80763	-30133	4.15	4.15	-64870	10833	13487	33304	44742	10582	46792	No	1.55	Si
SLU 83	1.22	16416.65	-76994	-64837	-40186	4.15	4.15	-52078	10833	13487	33304	44742	10582	46792	No	1.16	Si
SLU 84	-0.98	18805.65	-95935	-80787	-30264	4.15	4.15	-64889	10833	13487	33304	44742	10582	46792	No	1.55	Si
SLU 84	1.22	16407.17	-77012	-64852	-40285	4.15	4.15	-52090	10833	13487	33304	44742	10582	46792	No	1.16	Si
SLU 82	-0.98	18629.26	-94984	-79987	-29875	4.15	4.15	-64247	10833	13487	33304	44742	10582	46792	No	1.57	Si
SLU 82	1.22	16121.37	-76168	-64142	-39802	4.15	4.15	-51519	10833	13487	33304	44742	10582	46792	No	1.18	Si
SLU 77	-0.98	18557.21	-93576	-78801	-29855	4.15	4.15	-63294	10833	13487	33304	44742	10582	46792	No	1.57	Si
SLU 77	1.22	16334.01	-74723	-62925	-39660	4.15	4.15	-50542	10833	13487	33304	44742	10582	46792	No	1.18	Si
SLU 75	-0.98	18199.06	-92655	-78025	-29597	4.15	4.15	-62671	10833	13487	33304	44742	10582	46792	No	1.58	Si
SLU 75	1.22	16038.73	-73898	-62230	-39276	4.15	4.15	-49984	10833	13487	33304	44742	10582	46792	No	1.19	Si
SLU 79	-0.98	18392.59	-93068	-78373	-29640	4.15	4.15	-62950	10833	13487	33304	44742	10582	46792	No	1.58	Si
SLU 79	1.22	16189.27	-74324	-62588	-39371	4.15	4.15	-50272	10833	13487	33304	44742	10582	46792	No	1.19	Si
SLU 80	-0.98	18210.83	-93096	-78397	-29770	4.15	4.15	-62969	10833	13487	33304	44742	10582	46792	No	1.57	Si
SLU 80	1.22	16179.78	-74342	-62604	-39470	4.15	4.15	-50284	10833	13487	33304	44742	10582	46792	No	1.19	Si
SLU 78	-0.98	18375.45	-93605	-78825	-29986	4.15	4.15	-63313	10833	13487	33304	44742	10582	46792	No	1.56	Si
SLU 78	1.22	16324.52	-74742	-62941	-39759	4.15	4.15	-50555	10833	13487	33304	44742	10582	46792	No	1.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-0.98	-251.13	-80065	-67423	-28776	4.15	4.15	-54155	16250	20231	33304	67113	10582	53536		1.86	Si
SLV 13	1.22	14489.47	-57161	-48136	-32517	4.15	4.15	-38663	16250	20231	33304	67113	10582	53536		1.65	Si
SLD 6	-0.98	2597.99	-63036	-53083	-28194	4.15	4.15	-42637	16250	20231	33304	67113	10582	53536		1.9	Si
SLD 6	1.22	10049.64	-49706	-41857	-32872	4.15	4.15	-33620	16250	20231	33304	67113	10582	53536		1.63	Si
SLD 5	-0.98	3004.86	-62955	-53015	-27951	4.15	4.15	-42582	16250	20231	33304	67113	10582	53536		1.92	Si
SLD 5	1.22	10073.82	-49683	-41838	-32697	4.15	4.15	-33605	16250	20231	33304	67113	10582	53536		1.64	Si
SLD 10	-0.98	965.7	-67018	-56436	-29001	4.15	4.15	-45330	16250	20231	33304	67113	10582	53536		1.85	Si
SLD 10	1.22	10975.17	-51416	-43298	-33272	4.15	4.15	-34777	16250	20231	33304	67113	10582	53536		1.61	Si
SLV 10	-0.98	-13952.67	-71041	-59824	-39665	4.15	4.15	-48051	16250	20231	33304	67113	10582	53536		1.35	Si
SLV 10	1.22	10850.82	-53074	-44694	-40823	4.15	4.15	-35898	16250	20231	33304	67113	10582	53536		1.31	Si
SLV 14	-0.98	-1696.63	-80351	-67664	-29640	4.15	4.15	-54349	16250	20231	33304	67113	10582	53536		1.81	Si
SLV 14	1.22	14403.57	-57242	-48204	-33139	4.15	4.15	-38718	16250	20231	33304	67113	10582	53536		1.62	Si
SLD 9	-0.98	1372.56	-66938	-56369	-28758	4.15	4.15	-45276	16250	20231	33304	67113	10582	53536		1.86	Si
SLD 9	1.22	10999.35	-51394	-43279	-33097	4.15	4.15	-34762	16250	20231	33304	67113	10582	53536		1.62	Si
SLV 6	-0.98	-10142.35	-61706	-51963	-37740	4.15	4.15	-41737	16250	20231	33304	67113	10582	53536		1.42	Si
SLV 6	1.22	8605.16	-49000	-41263	-39839	4.15	4.15	-33143	16250	20231	33304	67113	10582	53536		1.34	Si
SLV 9	-0.98	-13021.15	-70857	-59669	-39108	4.15	4.15	-47927	16250	20231	33304	67113	10582	53536		1.37	Si
SLV 9	1.22	10906.18	-53022	-44650	-40422	4.15	4.15	-35863	16250	20231	33304	67113	10582	53536		1.32	Si
SLV 5	-0.98	-9210.83	-61521	-51808	-37183	4.15	4.15	-41613	16250	20231	33304	67113	10582	53536		1.44	Si
SLV 5	1.22	8660.52	-48948	-41220	-39439	4.15	4.15	-33108	16250	20231	33304	67113	10582	53536		1.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	215625	0.25	37901	-47186	209.65	5614.3	26.78	Si
SLV 1	215625	0.25	37940	-47235	209.65	5618.62	26.8	Si
SLV 4	215625	0.25	37960	-47261	209.65	5620.85	26.81	Si
SLV 2	215625	0.25	38000	-47310	209.65	5625.16	26.83	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	215625	0.25	43051	-53598	209.65	6151.28	29.34	Si
SLV 8	215625	0.25	43089	-53646	209.65	6155.1	29.36	Si
SLV 5	215625	0.25	43182	-53762	209.65	6164.29	29.4	Si
SLV 6	215625	0.25	43221	-53810	209.65	6168.09	29.42	Si
SLV 11	215625	0.25	47495	-59132	209.65	6571.26	31.34	Si
SLV 12	215625	0.25	47534	-59180	209.65	6574.73	31.36	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-51266	-71041	896	0.464	5740	0.972	6.93891	5.87132	Si
SLV 9	-51209	-70857	894	0.465	5734.3	0.972	6.94599	5.87132	Si
SLV 12	-48250	-66379	766	0.491	5432.9	0.971	7.34906	5.87132	Si
SLV 11	-48194	-66195	764	0.491	5427.2	0.971	7.35702	5.87132	Si
SLV 6	-47471	-61706	484	0.503	5353.6	0.97	7.53667	5.87132	Si
SLV 5	-47414	-61521	482	0.504	5347.9	0.97	7.54497	5.87132	Si
SLV 8	-44455	-57044	354	0.534	5046.6	0.969	8.01899	5.87132	Si
SLV 7	-44399	-56860	353	0.535	5040.8	0.969	8.02841	5.87132	Si
SLV 14	-54653	-80351	1331	0.432	6085	0.974	6.45537	3.44478	Si
SLV 13	-54566	-80065	1329	0.433	6076.1	0.974	6.46495	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.835	SLU 83	Si
V_SLU	1.162	SLU 84	Si
PF_SLV	2.433	SLV 7	Si
V_SLV	1.311	SLV 10	Si
PFFP_SLV	26.78	SLV 3	Si
R_SLV	1.182	SLV 10	Si

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-11.013	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-0.98	7969.27	-21501	-0.0000382	0.0003743	0.0035	3.29	30324.21	31403.4	31403.4	3.94	No	Si
SLU 79	1.99	12141.04	-27257	-0.0000533	0.0003743	0.0035	3.29	36730.05	38450.99	38450.99	3.17	No	Si
SLU 84	-0.98	8086.06	-22113	-0.0000391	0.0003743	0.0035	3.29	31039.54	32141.52	32141.52	3.97	No	Si
SLU 84	1.99	12481.93	-28114	-0.000055	0.0003743	0.0035	3.29	37621.81	39520.07	39520.07	3.17	No	Si
SLU 83	-0.98	8099.75	-22101	-0.0000392	0.0003743	0.0035	3.29	31025.82	32127.26	32127.26	3.97	No	Si
SLU 83	1.99	12513.33	-28169	-0.0000551	0.0003743	0.0035	3.29	37678.01	39588.28	39588.28	3.16	No	Si
SLU 75	-0.98	7916.57	-21399	-0.000038	0.0003743	0.0035	3.29	30203.7	31280.15	31280.15	3.95	No	Si
SLU 75	1.99	11952.11	-26968	-0.0000525	0.0003743	0.0035	3.29	36425.7	38091.69	38091.69	3.19	No	Si
SLU 80	-0.98	7955.58	-21513	-0.0000382	0.0003743	0.0035	3.29	30338.09	31417.61	31417.61	3.95	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.99	12109.64	-27203	-0.0000531	0.0003743	0.0035	3.29	36672.76	38383.15	38383.15	3.17	No	Si
SLU 74	-0.98	7930.26	-21387	-0.000038	0.0003743	0.0035	3.29	30189.8	31265.95	31265.95	3.94	No	Si
SLU 74	1.99	11983.5	-27023	-0.0000527	0.0003743	0.0035	3.29	36483.27	38159.43	38159.43	3.18	No	Si
SLU 35	-0.98	6679.82	-18059	-0.0000318	0.0003743	0.0035	3.29	26147.28	27300.54	27300.54	4.09	No	Si
SLU 35	1.99	10532.95	-23231	-0.0000453	0.0003743	0.0035	3.29	32325.61	33497.16	33497.16	3.18	No	Si
SLU 77	-0.98	8014.38	-21608	-0.0000384	0.0003743	0.0035	3.29	30449.88	31532.27	31532.27	3.93	No	Si
SLU 77	1.99	12243.62	-27372	-0.0000536	0.0003743	0.0035	3.29	36850.08	38593.47	38593.47	3.15	No	Si
SLU 78	-0.98	8000.69	-21620	-0.0000384	0.0003743	0.0035	3.29	30463.73	31546.49	31546.49	3.94	No	Si
SLU 78	1.99	12212.23	-27317	-0.0000535	0.0003743	0.0035	3.29	36792.93	38525.58	38525.58	3.15	No	Si
SLU 36	-0.98	6666.13	-18070	-0.0000318	0.0003743	0.0035	3.29	26162.05	27314.46	27314.46	4.1	No	Si
SLU 36	1.99	10501.56	-23177	-0.0000452	0.0003743	0.0035	3.29	32263.54	33430.89	33430.89	3.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	12912.79	-12540	-0.0000469	0.0005615	0.0035	3.29		20235.16	20235.16	1.57		Si
SLV 3	1.99	-510.67	-16189	-0.0000177	0.0005615	0.0035	3.29		27943.17	27943.17	54.72		Si
SLV 15	-0.98	-2378.75	-15059	-0.00002	0.0005615	0.0035	3.29		26295.2	26295.2	11.05		Si
SLV 15	1.99	17942.03	-23886	-0.0000622	0.0005615	0.0035	3.29		36570.69	36570.69	2.04		Si
SLV 14	-0.98	-1706.67	-17234	-0.000021	0.0005615	0.0035	3.29		29435.54	29435.54	17.25		Si
SLV 14	1.99	16401.36	-20664	-0.0000562	0.0005615	0.0035	3.29		32076.39	32076.39	1.96		Si
SLV 16	-0.98	-1768.96	-15396	-0.0000192	0.0005615	0.0035	3.29		26803.91	26803.91	15.15		Si
SLV 16	1.99	16961.04	-23527	-0.0000591	0.0005615	0.0035	3.29		36074.56	36074.56	2.13		Si
SLV 2	-0.98	13584.88	-14715	-0.0000469	0.0005615	0.0035	3.29		23474.68	23474.68	1.73		Si
SLV 2	1.99	-2051.33	-12966	-0.0000172	0.0005615	0.0035	3.29		23154.7	23154.7	11.29		Si
SLV 1	-0.98	12975.09	-14377	-0.0000444	0.0005615	0.0035	3.29		22977.76	22977.76	1.77		Si
SLV 1	1.99	-1070.34	-13326	-0.0000157	0.0005615	0.0035	3.29		23692.79	23692.79	22.14		Si
SLV 13	-0.98	-2316.45	-16896	-0.0000218	0.0005615	0.0035	3.29		28952.94	28952.94	12.5		Si
SLV 13	1.99	17382.35	-21024	-0.0000597	0.0005615	0.0035	3.29		32582.05	32582.05	1.87		Si
SLV 8	-0.98	7989.45	-11555	-0.0000274	0.0005615	0.0035	3.29		18754.69	18754.69	2.35		Si
SLV 8	1.99	5794.15	-21927	-0.0000339	0.0005615	0.0035	3.29		33850.44	33850.44	5.84		Si
SLV 4	-0.98	13522.58	-12878	-0.0000499	0.0005615	0.0035	3.29		20740.25	20740.25	1.53		Si
SLV 4	1.99	-1491.66	-15829	-0.0000191	0.0005615	0.0035	3.29		27430.86	27430.86	18.39		Si
SLV 9	-0.98	3216.68	-18218	-0.000025	0.0005615	0.0035	3.29		28590.67	28590.67	8.89		Si
SLV 9	1.99	10096.55	-14926	-0.0000351	0.0005615	0.0035	3.29		23785.35	23785.35	2.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 62	-0.98	7391.73	-20346	-18086	1186	3.29	3.29	-12216	8573	12693	33304	44333	8390	45997	No	38.78	Si
SLU 62	1.99	11238.28	-25520	-22684	-3276	3.29	3.29	-15322	8987	13306	33304	44333	8390	46610	No	14.23	Si
SLU 84	-0.98	8086.06	-22113	-19656	1257	3.29	3.29	-13277	8715	12902	33304	44333	8390	46206	No	36.77	Si
SLU 84	1.99	12481.93	-28114	-24990	-3556	3.29	3.29	-16880	9195	13613	33304	44333	8390	46918	No	13.19	Si
SLU 83	-0.98	8099.75	-22101	-19646	1302	3.29	3.29	-13270	8714	12901	33304	44333	8390	46205	No	35.5	Si
SLU 83	1.99	12513.33	-28169	-25039	-3488	3.29	3.29	-16912	9199	13620	33304	44333	8390	46924	No	13.45	Si
SLU 81	-0.98	8015.64	-21880	-19449	1337	3.29	3.29	-13137	8696	12874	33304	44333	8390	46179	No	34.54	Si
SLU 81	1.99	12253.2	-27820	-24729	-3383	3.29	3.29	-16703	9172	13578	33304	44333	8390	46883	No	13.86	Si
SLU 82	-0.98	8001.94	-21892	-19460	1292	3.29	3.29	-13144	8697	12876	33304	44333	8390	46180	No	35.75	Si
SLU 82	1.99	12221.81	-27765	-24680	-3451	3.29	3.29	-16670	9167	13572	33304	44333	8390	46876	No	13.58	Si
SLU 78	-0.98	8000.69	-21620	-19218	1275	3.29	3.29	-12981	8675	12844	33304	44333	8390	46148	No	36.19	Si
SLU 78	1.99	12212.23	-27317	-24282	-3342	3.29	3.29	-16401	9131	13519	33304	44333	8390	46823	No	14.01	Si
SLU 76	-0.98	7862.33	-21300	-18933	1298	3.29	3.29	-12788	8650	12806	33304	44333	8390	46110	No	35.53	Si
SLU 76	1.99	11828.59	-26818	-23838	-3266	3.29	3.29	-16101	9091	13460	33304	44333	8390	46764	No	14.32	Si
SLU 63	-0.98	7378.04	-20358	-18096	1141	3.29	3.29	-12223	8574	12694	33304	44333	8390	45998	No	40.31	Si
SLU 63	1.99	11206.89	-25465	-22636	-3344	3.29	3.29	-15289	8983	13299	33304	44333	8390	46604	No	13.93	Si
SLU 77	-0.98	8014.38	-21608	-19207	1320	3.29	3.29	-12974	8674	12842	33304	44333	8390	46147	No	34.95	Si
SLU 77	1.99	12243.62	-27372	-24330	-3274	3.29	3.29	-16434	9136	13525	33304	44333	8390	46830	No	14.3	Si
SLU 80	-0.98	7955.58	-21513	-19123	1293	3.29	3.29	-12916	8667	12831	33304	44333	8390	46135	No	35.69	Si
SLU 80	1.99	12109.64	-27203	-24180	-3325	3.29	3.29	-16333	9122	13505	33304	44333	8390	46810	No	14.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	-0.98	2218.22	-15753	-14003	-3893	3.29	3.29	-9458	12308	18222	33304	66499	8390	51527		13.24	Si
SLD 13	1.99	11970.58	-19521	-17352	-13710	3.29	3.0953	-11720	12761	17774	33304	66499	8390	51079		3.73	Si
SLV 3	-0.98	12912.79	-12540	-11147	11449	3.29	1.8458	-7529	11922	9903	33304	66499	8390	43207		3.77	Si
SLV 3	1.99	-510.67	-16189	-14390	22671	3.29	3.29	-9720	12361	18300	33304	66499	8390	51604		2.28	Si
SLV 15	-0.98	-2378.75	-15059	-13386	-11038	3.29	3.29	-9041	12225	18099	33304	66499	8390	51403		4.66	Si
SLV 15	1.99	17942.03	-23886	-21232	-29983	3.29	2.6816	-14341	13285	16031	33304	66499	8390	49335		1.65	Si
SLV 4	-0.98	13522.58	-12878	-11447	12910	3.29	1.7847	-7732	11963	9608	33304	66499	8390	42912		3.32	Si
SLV 4	1.99	-1491.66	-15829	-14070	25665	3.29	3.29	-9504	12317	18236	33304	66499	8390	51540		2.01	Si
SLV 1	-0.98	12975.09	-14377	-12780	11853	3.29	2.2276	-8632	12143	12173	33304	66499	8390	45477		3.84	Si
SLV 1	1.99	-1070.34	-13326	-11845	23151	3.29	3.29	-8001	12017	17791	33304	66499	8390	51095		2.21	Si
SLV 13	-0.98	-2316.45	-16896	-15019	-10633	3.29	3.29	-10144	12446	18426	33304	66499	8390	51730		4.86	Si
SLV 13	1.99	17382.35	-21024	-18688	-29504	3.29	2.4546	-12623	12941	14294	33304	66499	8390	47599		1.61	Si
SLV 14	-0.98	-1706.67	-17234	-15319	-9172	3.29	3.29	-10347	12486	18486	33304	66499	8390	51790		5.65	Si
SLV 14	1.99	16401.36	-20664	-18368	-26511	3.29	2.5538	-12407	12898	14823	33304	66499	8390	48127		1.82	Si
SLV 2	-0.98	13584.88	-14715	-13080	13315	3.29	2.1654	-8835	12184	11872	33304	66499	8390	45176		3.39	Si
SLV 2	1.99	-2051.33	-12966	-11526	26144	3.29	3.29	-7785	11974	17727	33304	66499	8390	51031		1.95	Si
SLV 16	-0.98	-1768.96	-15396	-13685	-9577	3.29	3.29	-9244	12265	18159	33304	66499	8390	51463		5.37	Si
SLV 16	1.99	16961.04	-23527	-20913	-26990	3.29	2.7722	-14125	13242	16519	33304	66499	8390	49823		1.85	Si
SLD 15	-0.98	2189.32	-14948	-13287	-4074	3.29	3.29	-8975	12212	18079	33304	66499	8390	51384		12.61	Si
SLD 15	1.99	12226.4	-20774	-18466	-13916	3.29	3.1694	-12473	12911	18414	33304	66499	8390	51719		3.72	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.25	8499	-12583	249.3	2673.65	10.72	Si
SLV 3	179667	0.25	8575	-12695	249.3	2695.99	10.81	Si
SLV 2	179667	0.25	8729	-12923	249.3	2741.58	11	Si
SLV 1	179667	0.25	8805	-13035	249.3	2763.84	11.09	Si
SLV 8	179667	0.25	9847	-14579	249.3	3068.73	12.31	Si
SLV 7	179667	0.25	9896	-14651	249.3	3082.84	12.37	Si
SLV 6	179667	0.25	10613	-15713	249.3	3289.77	13.2	Si
SLV 5	179667	0.25	10662	-15785	249.3	3303.72	13.25	Si
SLV 12	179667	0.25	11221	-16613	249.3	3463.22	13.89	Si
SLV 11	179667	0.25	11270	-16685	249.3	3477.04	13.95	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-24468	-12094	-742	0.71	3114.4	0.943	10.94213	4.30116	Si
SLV 12	-24236	-12311	-733	0.716	3090.9	0.943	11.03163	4.30116	Si
SLV 7	-22159	-11338	-657	0.77	2880.4	0.94	11.90514	4.30116	Si
SLV 8	-21927	-11555	-648	0.776	2857	0.939	12.01187	4.30116	Si
SLV 15	-23886	-15059	-792	0.722	3055.4	0.943	11.12939	3.0673	Si
SLV 16	-23527	-15396	-778	0.731	3019	0.942	11.27452	3.0673	Si
SLV 9	-14926	-18218	-597	1.039	2150.2	0.924	16.34537	4.30116	Si
SLV 10	-14694	-18436	-588	1.051	2126.9	0.923	16.55265	4.30116	Si
SLV 13	-21024	-16896	-749	0.798	2765.5	0.938	12.36364	3.0673	Si
SLV 14	-20664	-17234	-735	0.809	2729.1	0.937	12.54501	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.152	SLU 77	Si
V_SLU	13.195	SLU 84	Si
PF_SLV	1.534	SLV 4	Si
V_SLV	1.613	SLV 13	Si
PFFP_SLV	10.724	SLV 4	Si
R_SLV	2.544	SLV 11	Si

Maschio 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-3.284	-7.723	-4.784	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-0.98	-9403.1	-14246	-0.0015603	0.0003743	0.0035	1.2	8469.87	9634.38	9634.38	1.02	No	Si
SLU 84	1.99	1206	-8019	-0.0000296	0.0003743	0.0035	1.5001	5312.96	5492.79	5492.79	4.55	No	Si
SLU 75	-0.98	-9109.56	-13750	-0.0014004	0.0003743	0.0035	1.2	8249.71	9374.55	9374.55	1.03	No	Si
SLU 75	1.99	1236.78	-7764	-0.0000293	0.0003743	0.0035	1.5001	5165.35	5350.67	5350.67	4.33	No	Si
SLU 83	-0.98	-9401.67	-14229	-0.0015797	0.0003743	0.0035	1.2	8462.55	9625.6	9625.6	1.02	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.99	1210.15	-8018	-0.0000296	0.0003743	0.0035	1.5001	5312.06	5491.92	5491.92	4.54	No	Si
SLU 80	-0.98	-9165.29	-13824	-0.0014569	0.0003743	0.0035	1.2	8282.88	9413.16	9413.16	1.03	No	Si
SLU 80	1.99	1249.79	-7818	-0.0000295	0.0003743	0.0035	1.5001	5196.55	5380.58	5380.58	4.31	No	Si
SLU 77	-0.98	-9199.68	-13870	-0.0014924	0.0003743	0.0035	1.2	8303.31	9437.03	9437.03	1.03	No	Si
SLU 77	1.99	1246.05	-7851	-0.0000296	0.0003743	0.0035	1.5001	5215.76	5399.04	5399.04	4.33	No	Si
SLU 74	-0.98	-9108.13	-13734	-0.0014192	0.0003743	0.0035	1.2	8242.21	9365.85	9365.85	1.03	No	Si
SLU 74	1.99	1240.93	-7762	-0.0000293	0.0003743	0.0035	1.5001	5164.44	5349.81	5349.81	4.31	No	Si
SLU 81	-0.98	-9310.12	-14093	-0.0015016	0.0003743	0.0035	1.2	8402.51	9553.97	9553.97	1.03	No	Si
SLU 81	1.99	1205.04	-7929	-0.0000294	0.0003743	0.0035	1.5001	5261.07	5442.64	5442.64	4.52	No	Si
SLU 78	-0.98	-9201.11	-13886	-0.0014734	0.0003743	0.0035	1.2	8310.76	9445.75	9445.75	1.03	No	Si
SLU 78	1.99	1241.89	-7853	-0.0000295	0.0003743	0.0035	1.5001	5216.66	5399.91	5399.91	4.35	No	Si
SLU 82	-0.98	-9311.55	-14109	-0.0014825	0.0003743	0.0035	1.2	8409.88	9562.72	9562.72	1.03	No	Si
SLU 82	1.99	1200.88	-7931	-0.0000293	0.0003743	0.0035	1.5001	5261.97	5443.51	5443.51	4.53	No	Si
SLU 79	-0.98	-9163.86	-13808	-0.0014759	0.0003743	0.0035	1.2	8275.41	9404.45	9404.45	1.03	No	Si
SLU 79	1.99	1253.94	-7816	-0.0000295	0.0003743	0.0035	1.5001	5195.64	5379.71	5379.71	4.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	-0.98	-6640.05	-9112	-0.0006235	0.0005615	0.0035	1.2		6964.73	6964.73	1.05		Si
SLD 7	1.99	1481.95	-5748	-0.0000264	0.0005615	0.0035	1.5001		4239.07	4239.07	2.86		Si
SLV 3	-0.98	-5059.24	-6666	-0.0005378	0.0005615	0.0035	1.2		5347.71	5347.71	1.06		Si
SLV 3	1.99	-104.03	-5200	-0.0000126	0.0005615	0.0035	1.5001		4354.44	4354.44	41.86		Si
SLD 12	-0.98	-7013.22	-9825	-0.0005739	0.0005615	0.0035	1.2		7421.64	7421.64	1.06		Si
SLD 12	1.99	1839.71	-5881	-0.0000305	0.0005615	0.0035	1.5001		4329.28	4329.28	2.35		Si
SLV 15	-0.98	-8608.6	-12402	-0.0006755	0.0005615	0.0035	1.2		9032.91	9032.91	1.05		Si
SLV 15	1.99	3340.87	-6146	-0.0000696	0.0005615	0.0035	1.5001		4510.3	4510.3	1.35		Si
SLV 11	-0.98	-8018.44	-10282	-0.0015233	0.0005615	0.0035	1.2		7709.57	7709.57	0.96		No
SLV 11	1.99	3117.75	-6487	-0.0000557	0.0005615	0.0035	1.5001		4741.06	4741.06	1.52		Si
SLV 12	-0.98	-7831.19	-10230	-0.0012903	0.0005615	0.0035	1.2		7676.89	7676.89	0.98		No
SLV 12	1.99	2925.47	-6513	-0.0000499	0.0005615	0.0035	1.5001		4758.19	4758.19	1.63		Si
SLV 7	-0.98	-6953.64	-8561	-0.001404	0.0005615	0.0035	1.2		6603.76	6603.76	0.95		No
SLV 7	1.99	2084.28	-6203	-0.0000341	0.0005615	0.0035	1.5001		4548.92	4548.92	2.18		Si
SLD 8	-0.98	-6558.26	-9089	-0.0005599	0.0005615	0.0035	1.2		6949.8	6949.8	1.06		Si
SLD 8	1.99	1397.97	-5759	-0.0000257	0.0005615	0.0035	1.5001		4246.61	4246.61	3.04		Si
SLD 11	-0.98	-7095.01	-9847	-0.0006398	0.0005615	0.0035	1.2		7435.96	7435.96	1.05		Si
SLD 11	1.99	1923.69	-5870	-0.0000316	0.0005615	0.0035	1.5001		4321.74	4321.74	2.25		Si
SLV 8	-0.98	-6766.38	-8509	-0.0011946	0.0005615	0.0035	1.2		6569.74	6569.74	0.97		No
SLV 8	1.99	1892	-6229	-0.0000317	0.0005615	0.0035	1.5001		4566.04	4566.04	2.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-0.98	-9109.56	-13750	-12222	-7272	1.2	0.2626	0	0	0	33304	16171	3060	19231	No	2.64	Si
SLU 75	1.99	1236.78	-7764	-6901	-6265	1.5001	1.5001	-10224	8308	5608	33304	20213	3825	24038	No	3.84	Si
SLU 77	-0.98	-9199.68	-13870	-12329	-7326	1.2	0.2602	0	0	0	33304	16171	3060	19231	No	2.62	Si
SLU 77	1.99	1246.05	-7851	-6979	-6308	1.5001	1.5001	-10338	8323	5618	33304	20213	3825	24038	No	3.81	Si
SLU 84	-0.98	-9403.1	-14246	-12663	-7463	1.2	0.2699	0	0	0	33304	16171	3060	19231	No	2.58	Si
SLU 84	1.99	1206	-8019	-7128	-6413	1.5001	1.5001	-10560	8352	5638	33304	20213	3825	24038	No	3.75	Si
SLU 76	-0.98	-9074.69	-13699	-12177	-7273	1.2	0.2628	0	0	0	33304	16171	3060	19231	No	2.64	Si
SLU 76	1.99	1241.9	-7730	-6871	-6269	1.5001	1.5001	-10179	8302	5604	33304	20213	3825	24038	No	3.83	Si
SLU 83	-0.98	-9401.67	-14229	-12648	-7455	1.2	0.2679	0	0	0	33304	16171	3060	19231	No	2.58	Si
SLU 83	1.99	1210.15	-8018	-7127	-6408	1.5001	1.5001	-10558	8352	5638	33304	20213	3825	24038	No	3.75	Si
SLU 82	-0.98	-9311.55	-14109	-12542	-7401	1.2	0.2702	0	0	0	33304	16171	3060	19231	No	2.6	Si
SLU 82	1.99	1200.88	-7931	-7050	-6364	1.5001	1.5001	-10444	8337	5628	33304	20213	3825	24038	No	3.78	Si
SLU 80	-0.98	-9165.29	-13824	-12288	-7329	1.2	0.2611	0	0	0	33304	16171	3060	19231	No	2.62	Si
SLU 80	1.99	1249.79	-7818	-6949	-6314	1.5001	1.5001	-10295	8317	5614	33304	20213	3825	24038	No	3.81	Si
SLU 79	-0.98	-9163.86	-13808	-12273	-7322	1.2	0.259	0	0	0	33304	16171	3060	19231	No	2.63	Si
SLU 79	1.99	1253.94	-7816	-6948	-6309	1.5001	1.5001	-10293	8317	5614	33304	20213	3825	24038	No	3.81	Si
SLU 81	-0.98	-9310.12	-14093	-12527	-7394	1.2	0.2682	0	0	0	33304	16171	3060	19231	No	2.6	Si
SLU 81	1.99	1205.04	-7929	-7048	-6359	1.5001	1.5001	-10442	8337	5627	33304	20213	3825	24038	No	3.78	Si
SLU 78	-0.98	-9201.11	-13886	-12344	-7334	1.2	0.2623	0	0	0	33304	16171	3060	19231	No	2.62	Si
SLU 78	1.99	1241.89	-7853	-6980	-6314	1.5001	1.5001	-10340	8323	5618	33304	20213	3825	24038	No	3.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	-0.98	-8608.6	-12402	-11024	-14118	1.2	0.1677	0	0	0	33304	24256	3060	27316		1.93	Si
SLV 15	1.99	3340.87	-6146	-5463	-13304	1.5001	0.6194	-8094	12035	3355	33304	30320	3825	34145		2.57	Si
SLV 14	-0.98	-7714.79	-12406	-11027	-11360	1.2	0.3844	0	0	0	33304	24256	3060	27316		2.4	Si
SLV 14	1.99	2154.81	-5615	-4992	-10391	1.5001	1.0989	-7395	11896	5882	33304	30320	3825	34145		3.29	Si
SLD 16	-0.98	-7214.8	-10724	-9532	-8564	1.2	0.2317	0	0	0	33304	24256	3060	27316		3.19	Si
SLD 16	1.99	1888.2	-5740	-5102	-7825	1.5001	1.2633	-7559	11928	6781	33304	30320	3825	34145		4.36	Si
SLV 11	-0.98	-8018.44	-10282	-9140	-10563	1.2	0	0	0	0	33304	24256	3060	27316		2.59	Si
SLV 11	1.99	3117.75	-6487	-5767	-10082	1.5001	0.8083	-8543	12125	4410	33304	30320	3825	34145		3.39	Si
SLV 12	-0.98	-7831.19	-10230	-9094	-9826	1.2	0	0	0	0	33304	24256	3060	27316		2.78	Si
SLV 12	1.99	2925.47	-6513	-5789	-9348	1.5001	0.9025	-8576	12132	4927	33304	30320	3825	34145		3.65	Si
SLD 14	-0.98	-6951.03	-10764	-9568	-7859	1.2	0.3128	0	0	0	33304	24256	3060	27316		3.48	Si
SLD 14	1.99	1506.94	-5496	-4885	-7054	1.5001	1.4275	-7237	11864	7621	33304	30320	3825	34145		4.84	Si
SLV 13	-0.98	-8005.36	-12486	-11099	-12505	1.2	0.3267	0	0	0	33304	24256	3060	27316		2.18	Si
SLV 13	1.99	2453.18	-5576	-4957	-11529	1.5001	0.9303	-7343	11885	4975	33304	30320	3825	34145		2.96	Si
SLD 15	-0.98	-7339.56	-10758	-9563	-9056	1.2	0.2034	0	0	0	33304	24256	3060	27316		3.02	Si
SLD 15	1.99	2016.31	-5723	-5087	-8314	1.5001	1.1932	-7537	11924	6402	33304	30320	3825	34145		4.11	Si
SLD 13	-0.98	-7075.79	-10799	-9599	-8351	1.2	0.2844	0	0	0	33304	24256	3060	27316		3.27	Si
SLD 13	1.99	1635.05	-5479	-4870	-7543	1.5001	1.3549	-7215	11860	7231	33304	30320	3825	34145		4.53	Si
SLV 16	-0.98	-8318.03	-12322	-10952	-12974	1.2	0.2248	0	0	0	33304	24256	3060	27316		2.11	Si
SLV 16	1.99	3042.5	-6186	-5498	-12165	1.5001	0.7745	-8145	12046	4198	33304	30320	3825	34145		2.81	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	11286	-7618	113.67	1587.41	13.97	Si
SLV 1	179667	0.25	11401	-7696	113.67	1602.34	14.1	Si
SLV 4	179667	0.25	11580	-7817	113.67	1625.38	14.3	Si
SLV 3	179667	0.25	11695	-7895	113.67	1640.24	14.43	Si
SLV 6	179667	0.25	13645	-9211	113.67	1887.23	16.6	Si
SLV 5	179667	0.25	13719	-9261	113.67	1896.51	16.68	Si
SLV 8	179667	0.25	14625	-9872	113.67	2008.55	17.67	Si
SLV 7	179667	0.25	14699	-9923	113.67	2017.68	17.75	Si
SLV 10	179667	0.25	15944	-10762	113.67	2168.71	19.08	Si
SLV 9	179667	0.25	16018	-10813	113.67	2177.65	19.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6513	-10230	-131	1.089	951	0.922	17.17863	4.30116	Si
SLV 11	-6487	-10282	-131	1.093	948.4	0.922	17.23068	4.30116	Si
SLV 8	-6229	-8509	8	1.141	922.5	0.92	18.02042	4.30116	Si
SLV 7	-6203	-8561	9	1.144	919.9	0.92	18.07651	4.30116	Si
SLV 10	-4612	-10510	-94	1.396	761.1	0.908	22.33301	4.30116	Si
SLV 9	-4587	-10562	-94	1.401	758.6	0.908	22.42198	4.30116	Si
SLV 6	-4328	-8790	46	1.464	733	0.906	23.49354	4.30116	Si
SLV 5	-4303	-8842	46	1.47	730.5	0.906	23.59077	4.30116	Si
SLV 16	-6186	-12322	-282	1.112	918.1	0.92	17.57668	3.0673	Si
SLV 15	-6146	-12402	-281	1.117	914.2	0.919	17.66302	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.024	SLU 83	Si
V_SLU	2.577	SLU 84	Si
PF_SLV	0.95	SLV 7	No
V_SLV	1.935	SLV 15	Si
PFFP_SLV	13.965	SLV 2	Si
R_SLV	3.994	SLV 12	Si

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	1.046	-6.268	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	-0.98	1548.85	-102647	-0.0001435	0.0004492	0.0035	4.3299	78508.52	121402.15	121402.15	78.38	No	Si
SLU 68	1.99	6754.55	-59439	-0.0000866	0.0004492	0.0035	4.3299	80492.85	94218.33	94218.33	13.95	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	-0.98	1291.58	-92853	-0.0001266	0.0004492	0.0035	4.3299	83422.34	117304.25	117304.25	90.82	No	Si
SLU 47	1.99	6311.72	-53060	-0.0000768	0.0004492	0.0035	4.3299	76471.15	87617.54	87617.54	13.88	No	Si
SLU 78	-0.98	1989.44	-114578	-0.0001658	0.0004492	0.0035	4.3299	68987.1	121031.32	121031.32	60.84	No	Si
SLU 78	1.99	7249.76	-66884	-0.0000983	0.0004492	0.0035	4.3299	83782.85	100802.61	100802.61	13.9	No	Si
SLU 80	-0.98	1967.42	-113945	-0.0001646	0.0004492	0.0035	4.3299	69590.14	121058.46	121058.46	61.53	No	Si
SLU 80	1.99	7221	-66436	-0.0000976	0.0004492	0.0035	4.3299	83627.67	100404.09	100404.09	13.9	No	Si
SLU 70	-0.98	1468.52	-104471	-0.0001465	0.0004492	0.0035	4.3299	77304.52	121492.64	121492.64	82.73	No	Si
SLU 70	1.99	6891.78	-60604	-0.0000885	0.0004492	0.0035	4.3299	81107.68	95239.01	95239.01	13.82	No	Si
SLU 72	-0.98	1446.5	-103838	-0.0001453	0.0004492	0.0035	4.3299	77732.92	121523.56	121523.56	84.01	No	Si
SLU 72	1.99	6863.02	-60157	-0.0000878	0.0004492	0.0035	4.3299	80875.77	94845.95	94845.95	13.82	No	Si
SLU 50	-0.98	1055.19	-94069	-0.000128	0.0004492	0.0035	4.3299	82954.64	117834.59	117834.59	111.67	No	Si
SLU 50	1.99	6345.65	-53612	-0.0000777	0.0004492	0.0035	4.3299	76862.79	88360.03	88360.03	13.92	No	Si
SLU 49	-0.98	1211.25	-94677	-0.0001294	0.0004492	0.0035	4.3299	82705.64	118101.34	118101.34	97.5	No	Si
SLU 49	1.99	6448.96	-54225	-0.0000787	0.0004492	0.0035	4.3299	77288.8	89135.23	89135.23	13.82	No	Si
SLU 69	-0.98	1334.47	-104496	-0.0001462	0.0004492	0.0035	4.3299	77287.14	121491.41	121491.41	91.04	No	Si
SLU 69	1.99	6817.24	-60439	-0.0000882	0.0004492	0.0035	4.3299	81022.42	95093.31	95093.31	13.95	No	Si
SLU 51	-0.98	1189.23	-94043	-0.0001283	0.0004492	0.0035	4.3299	82964.81	117823.49	117823.49	99.08	No	Si
SLU 51	1.99	6420.19	-53778	-0.000078	0.0004492	0.0035	4.3299	76978.94	88583.7	88583.7	13.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-0.98	16214.98	-73428	-0.0001189	0.0006738	0.0035	4.3299		122260.98	122260.98	7.54		Si
SLV 6	1.99	-4749.62	-44974	-0.0000613	0.0006738	0.0035	4.3299		88631.69	88631.69	18.66		Si
SLD 11	-0.98	-5549.31	-81154	-0.0001102	0.0006738	0.0035	4.3299		135049.63	135049.63	24.34		Si
SLD 11	1.99	9276.45	-45388	-0.0000695	0.0006738	0.0035	4.3299		83812.79	83812.79	9.04		Si
SLV 12	-0.98	-12495.16	-84464	-0.0001275	0.0006738	0.0035	4.3299		138187.09	138187.09	11.06		Si
SLV 12	1.99	14315.49	-45988	-0.0000789	0.0006738	0.0035	4.3299		84812.51	84812.51	5.92		Si
SLV 7	-0.98	-18741.09	-76432	-0.0001277	0.0006738	0.0035	4.3299		130656.97	130656.97	6.97		Si
SLV 7	1.99	13726.28	-43025	-0.0000741	0.0006738	0.0035	4.3299		79890.72	79890.72	5.82		Si
SLV 9	-0.98	19508.63	-80974	-0.0001356	0.0006738	0.0035	4.3299		131638.4	131638.4	6.75		Si
SLV 9	1.99	-3358.06	-47072	-0.0000616	0.0006738	0.0035	4.3299		91885.87	91885.87	27.36		Si
SLV 11	-0.98	-13971.3	-84221	-0.0001299	0.0006738	0.0035	4.3299		137955	137955	9.87		Si
SLV 11	1.99	14716.66	-45556	-0.000079	0.0006738	0.0035	4.3299		84091.99	84091.99	5.71		Si
SLV 3	-0.98	-12995.11	-66142	-0.0001032	0.0006738	0.0035	4.3299		118607.68	118607.68	9.13		Si
SLV 3	1.99	6355.36	-40485	-0.0000584	0.0006738	0.0035	4.3299		75701.93	75701.93	11.91		Si
SLV 10	-0.98	20984.77	-81216	-0.0001386	0.0006738	0.0035	4.3299		131854.57	131854.57	6.28		Si
SLV 10	1.99	-3759.23	-47504	-0.0000628	0.0006738	0.0035	4.3299		92559.51	92559.51	24.62		Si
SLV 8	-0.98	-17264.95	-76675	-0.0001254	0.0006738	0.0035	4.3299		130880.51	130880.51	7.58		Si
SLV 8	1.99	13325.1	-43458	-0.000074	0.0006738	0.0035	4.3299		80606.27	80606.27	6.05		Si
SLV 5	-0.98	14738.84	-73185	-0.0001159	0.0006738	0.0035	4.3299		121941.81	121941.81	8.27		Si
SLV 5	1.99	-4348.44	-44541	-0.0000601	0.0006738	0.0035	4.3299		87964.58	87964.58	20.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-0.98	1989.44	-114578	-96487	-14690	4.3299	4.3299	-74279	10833	14072	33304	46682	11041	47377	No	3.23	Si
SLU 78	1.99	7249.76	-66884	-56324	-14402	4.3299	4.3299	-43360	10833	14072	33304	46682	11041	47377	No	3.29	Si
SLU 74	-0.98	1868.37	-113430	-95520	-14734	4.3299	4.3299	-73535	10833	14072	33304	46682	11041	47377	No	3.22	Si
SLU 74	1.99	7017.05	-65890	-55487	-14473	4.3299	4.3299	-42715	10833	14072	33304	46682	11041	47377	No	3.27	Si
SLU 84	-0.98	2203.65	-117103	-98613	-14812	4.3299	4.3299	-75916	10833	14072	33304	46682	11041	47377	No	3.2	Si
SLU 84	1.99	7216.25	-68300	-57515	-14519	4.3299	4.3299	-44277	10833	14072	33304	46682	11041	47377	No	3.26	Si
SLU 83	-0.98	2069.6	-117128	-98635	-15055	4.3299	4.3299	-75932	10833	14072	33304	46682	11041	47377	No	3.15	Si
SLU 83	1.99	7141.7	-68134	-57376	-14784	4.3299	4.3299	-44170	10833	14072	33304	46682	11041	47377	No	3.2	Si
SLU 82	-0.98	2216.63	-115930	-97625	-14613	4.3299	4.3299	-75155	10833	14072	33304	46682	11041	47377	No	3.24	Si
SLU 82	1.99	7058.08	-67471	-56818	-14325	4.3299	4.3299	-43740	10833	14072	33304	46682	11041	47377	No	3.31	Si
SLU 79	-0.98	1833.37	-113970	-95975	-14895	4.3299	4.3299	-73885	10833	14072	33304	46682	11041	47377	No	3.18	Si
SLU 79	1.99	7146.45	-66271	-55807	-14632	4.3299	4.3299	-42962	10833	14072	33304	46682	11041	47377	No	3.24	Si
SLU 75	-0.98	2002.42	-113405	-95499	-14491	4.3299	4.3299	-73518	10833	14072	33304	46682	11041	47377	No	3.27	Si
SLU 75	1.99	7091.59	-66056	-55626	-14208	4.3299	4.3299	-42823	10833	14072	33304	46682	11041	47377	No	3.33	Si
SLU 81	-0.98	2082.58	-115955	-97646	-14856	4.3299	4.3299	-75171	10833	14072	33304	46682	11041	47377	No	3.19	Si
SLU 81	1.99	6983.53	-67306	-56678	-14590	4.3299	4.3299	-43633	10833	14072	33304	46682	11041	47377	No	3.25	Si
SLU 80	-0.98	1967.42	-113945	-95954	-14652	4.3299	4.3299	-73868	10833	14072	33304	46682	11041	47377	No	3.23	Si
SLU 80	1.99	7221	-66436	-55946	-14367	4.3299	4.3299	-43069	10833	14072	33304	46682	11041	47377	No	3.3	Si
SLU 77	-0.98	1855.39	-114604	-96508	-14933	4.3299	4.3299	-74295	10833	14072	33304	46682	11041	47377	No	3.17	Si
SLU 77	1.99	7175.22	-66718	-56184	-14667	4.3299	4.3299	-43252	10833	14072	33304	46682	11041	47377	No	3.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	-6943.45	-77933	-65627	-18785	4.3299	4.3299	-50522	16250	21108	33304	70023	11041	54413		2.9	Si
SLD 8	1.99	8678.92	-44496	-37470	-18355	4.3299	4.3299	-28846	16250	21108	33304	70023	11041	54413		2.96	Si
SLV 8	-0.98	-17264.95	-76675	-64569	-29213	4.3299	4.3299	-49707	16250	21108	33304	70023	11041	54413		1.86	Si
SLV 8	1.99	13325.1	-43458	-36596	-28416	4.3299	4.3299	-28173	16250	21108	33304	70023	11041	54413		1.91	Si
SLV 11	-0.98	-13971.3	-84221	-70923	-32170	4.3299	4.3299	-54599	16250	21108	33304	70023	11041	54413		1.69	Si
SLV 11	1.99	14716.66	-45556	-38363	-31487	4.3299	4.3299	-29533	16250	21108	33304	70023	11041	54413		1.73	Si
SLV 7	-0.98	-18741.09	-76432	-64364	-30706	4.3299	4.3299	-49550	16250	21108	33304	70023	11041	54413		1.77	Si
SLV 7	1.99	13726.28	-43025	-36232	-29915	4.3299	4.3299	-27893	16250	21108	33304	70023	11041	54413		1.82	Si
SLV 15	-0.98	2904.2	-92104	-77561	-20201	4.3299	4.3299	-59709	16250	21108	33304	70023	11041	54413		2.69	Si
SLV 15	1.99	9656.63	-48920	-41196	-20042	4.3299	4.3299	-31714	16250	21108	33304	70023	11041	54413		2.71	Si
SLD 11	-0.98	-5549.31	-81154	-68340	-20062	4.3299	4.3299	-52611	16250	21108	33304	70023	11041	54413		2.71	Si
SLD 11	1.99	9276.45	-45388	-38222	-19681	4.3299	4.3299	-29424	16250	21108	33304	70023	11041	54413		2.76	Si
SLV 16	-0.98	5194.81	-92481	-77879	-17883	4.3299	4.3299	-59954	16250	21108	33304	70023	11041	54413		3.04	Si
SLV 16	1.99	9034.1	-49590	-41760	-17717	4.3299	4.3299	-32149	16250	21108	33304	70023	11041	54413		3.07	Si
SLV 12	-0.98	-12495.16	-84464	-71127	-30677	4.3299	4.3299	-54756	16250	21108	33304	70023	11041	54413		1.77	Si
SLV 12	1.99	14315.49	-45988	-38727	-29988	4.3299	4.3299	-29813	16250	21108	33304	70023	11041	54413		1.81	Si
SLD 7	-0.98	-7588.19	-77826	-65538	-19437	4.3299	4.3299	-50453	16250	21108	33304	70023	11041	54413		2.8	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	1.99	8854.15	-44307	-37311	-19009	4.3299	4.3299	-28724	16250	21108	33304	70023	11041	54413		2.86	Si
SLD 12	-0.98	-4904.56	-81260	-68430	-19410	4.3299	4.3299	-52680	16250	21108	33304	70023	11041	54413		2.8	Si
SLD 12	1.99	9101.23	-45577	-38381	-19027	4.3299	4.3299	-29547	16250	21108	33304	70023	11041	54413		2.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	215625	0.25	39679	-51542	218.74	6057.52	27.69	Si
SLV 3	215625	0.25	39711	-51584	218.74	6061.09	27.71	Si
SLV 2	215625	0.25	40137	-52137	218.74	6107.92	27.92	Si
SLV 4	215625	0.25	40169	-52179	218.74	6111.45	27.94	Si
SLV 5	215625	0.25	44665	-58020	218.74	6582.04	30.09	Si
SLV 7	215625	0.25	44773	-58159	218.74	6592.77	30.14	Si
SLV 6	215625	0.25	44961	-58403	218.74	6611.43	30.23	Si
SLV 8	215625	0.25	45068	-58543	218.74	6622.1	30.27	Si
SLV 9	215625	0.25	48902	-63523	218.74	6986.13	31.94	Si
SLV 11	215625	0.25	49010	-63663	218.74	6995.89	31.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-47504	-81216	-302	0.525	5379.6	0.969	7.87396	5.87132	Si
SLV 9	-47072	-80974	-302	0.529	5335.6	0.969	7.93675	5.87132	Si
SLV 12	-45988	-84464	-168	0.542	5225.2	0.968	8.14003	5.87132	Si
SLV 11	-45556	-84221	-168	0.547	5181.2	0.968	8.20721	5.87132	Si
SLV 6	-44974	-73428	169	0.553	5122	0.968	8.29933	5.87132	Si
SLV 5	-44541	-73185	169	0.557	5078	0.968	8.36947	5.87132	Si
SLV 8	-43458	-76675	304	0.566	4967.7	0.967	8.50796	5.87132	Si
SLV 7	-43025	-76432	304	0.571	4923.7	0.967	8.58244	5.87132	Si
SLV 14	-50045	-91507	-805	0.493	5638.3	0.971	7.38519	3.44478	Si
SLV 16	-49590	-92481	-765	0.498	5592	0.97	7.45516	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.798	SLU 51	Si
V_SLU	3.147	SLU 83	Si
PF_SLV	5.714	SLV 11	Si
V_SLV	1.691	SLV 11	Si
PFFP_SLV	27.693	SLV 1	Si
R_SLV	1.341	SLV 10	Si

Maschio 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.253	-3.284	-7.463	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.02	1685.75	-22527	-0.0001936	0.0003743	0.0035	0.79	3359.94	4874.79	4874.79	2.89	No	Si
SLU 83	1.42	234.61	-22154	-0.0001216	0.0003743	0.0035	0.79	3394.53	4846.82	4846.82	20.66	No	Si
SLU 81	1.02	1668.63	-22278	-0.0001907	0.0003743	0.0035	0.79	3383.39	4856.08	4856.08	2.91	No	Si
SLU 81	1.42	229.09	-21904	-0.0001198	0.0003743	0.0035	0.79	3415.94	4828.26	4828.26	21.08	No	Si
SLU 77	1.02	1637.31	-21867	-0.0001858	0.0003743	0.0035	0.79	3419.01	4825.51	4825.51	2.95	No	Si
SLU 77	1.42	242.35	-21494	-0.0001178	0.0003743	0.0035	0.79	3448.22	4797.96	4797.96	19.8	No	Si
SLU 82	1.02	1673.46	-22324	-0.0001913	0.0003743	0.0035	0.79	3379.1	4859.57	4859.57	2.9	No	Si
SLU 82	1.42	229.85	-21951	-0.0001201	0.0003743	0.0035	0.79	3412.04	4831.73	4831.73	21.02	No	Si
SLU 79	1.02	1630.09	-21745	-0.0001845	0.0003743	0.0035	0.79	3428.9	4816.47	4816.47	2.95	No	Si
SLU 79	1.42	237.28	-21372	-0.0001168	0.0003743	0.0035	0.79	3457.12	4789	4789	20.18	No	Si
SLU 84	1.02	1690.58	-22574	-0.0001942	0.0003743	0.0035	0.79	3355.39	4878.31	4878.31	2.89	No	Si
SLU 84	1.42	235.37	-22201	-0.000122	0.0003743	0.0035	0.79	3390.37	4850.31	4850.31	20.61	No	Si
SLU 80	1.02	1634.92	-21792	-0.0001851	0.0003743	0.0035	0.79	3425.16	4819.93	4819.93	2.95	No	Si
SLU 80	1.42	238.04	-21418	-0.0001171	0.0003743	0.0035	0.79	3453.76	4792.43	4792.43	20.13	No	Si
SLU 75	1.02	1625.03	-21664	-0.0001836	0.0003743	0.0035	0.79	3435.26	4810.52	4810.52	2.96	No	Si
SLU 75	1.42	237.59	-21291	-0.0001163	0.0003743	0.0035	0.79	3462.81	4783.1	4783.1	20.13	No	Si
SLU 76	1.02	1621.02	-21573	-0.0001827	0.0003743	0.0035	0.79	3442.25	4803.81	4803.81	2.96	No	Si
SLU 76	1.42	233.03	-21200	-0.0001156	0.0003743	0.0035	0.79	3469.07	4776.45	4776.45	20.5	No	Si
SLU 78	1.02	1642.14	-21914	-0.0001864	0.0003743	0.0035	0.79	3415.15	4828.98	4828.98	2.94	No	Si
SLU 78	1.42	243.11	-21540	-0.0001181	0.0003743	0.0035	0.79	3444.74	4801.4	4801.4	19.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.02	1871.97	-17437	-0.0001507	0.0005615	0.0035	0.79		5197.94	5197.94	2.78		Si
SLV 16	1.42	-1449.49	-16998	-0.0001319	0.0005615	0.0035	0.79		5186.97	5186.97	3.58		Si
SLV 13	1.02	1734.37	-17231	-0.0001442	0.0005615	0.0035	0.79		5150.58	5150.58	2.97		Si
SLV 13	1.42	-1540.04	-16895	-0.0001348	0.0005615	0.0035	0.79		5167.28	5167.28	3.36		Si
SLV 14	1.02	1677.13	-17341	-0.0001426	0.0005615	0.0035	0.79		5175.96	5175.96	3.09		Si
SLV 14	1.42	-1393.25	-17005	-0.0001298	0.0005615	0.0035	0.79		5188.37	5188.37	3.72		Si
SLV 12	1.02	1626.19	-15682	-0.0001314	0.0005615	0.0035	0.79		4796.25	4796.25	2.95		Si
SLV 12	1.42	-383.71	-15194	-0.0000826	0.0005615	0.0035	0.79		4846.26	4846.26	12.63		Si
SLV 4	1.02	491.16	-12163	-0.0000715	0.0005615	0.0035	0.79		3997.72	3997.72	8.14		Si
SLV 4	1.42	1857.64	-11924	-0.0001215	0.0005615	0.0035	0.79		3932.35	3932.35	2.12		Si
SLV 2	1.02	296.32	-12067	-0.0000642	0.0005615	0.0035	0.79		3974.38	3974.38	13.41		Si
SLV 2	1.42	1913.88	-11932	-0.0001243	0.0005615	0.0035	0.79		3934.53	3934.53	2.06		Si
SLV 3	1.02	548.4	-12053	-0.000073	0.0005615	0.0035	0.79		3970.7	3970.7	7.24		Si
SLV 3	1.42	1710.85	-11814	-0.0001145	0.0005615	0.0035	0.79		3899.56	3899.56	2.28		Si
SLV 15	1.02	1929.21	-17327	-0.0001523	0.0005615	0.0035	0.79		5172.55	5172.55	2.68		Si
SLV 15	1.42	-1596.28	-16888	-0.0001369	0.0005615	0.0035	0.79		5165.88	5165.88	3.24		Si
SLV 1	1.02	353.55	-11957	-0.0000657	0.0005615	0.0035	0.79		3942.26	3942.26	11.15		Si
SLV 1	1.42	1767.09	-11821	-0.0001169	0.0005615	0.0035	0.79		3901.73	3901.73	2.21		Si
SLV 11	1.02	1663.07	-15611	-0.0001324	0.0005615	0.0035	0.79		4780.16	4780.16	2.87		Si
SLV 11	1.42	-478.3	-15123	-0.0000857	0.0005615	0.0035	0.79		4833.09	4833.09	10.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.02	1673.46	-22324	-19844	3635	0.79	0.79	-55820	10833	3851	33304	10645	2014	12660	No	3.48	Si
SLU 82	1.42	229.85	-21951	-19512	3635	0.79	0.79	-54886	10833	3851	33304	10645	2014	12660	No	3.48	Si
SLU 77	1.02	1637.31	-21867	-19437	3513	0.79	0.79	-54676	10833	3851	33304	10645	2014	12660	No	3.6	Si
SLU 77	1.42	242.35	-21494	-19106	3513	0.79	0.79	-53743	10833	3851	33304	10645	2014	12660	No	3.6	Si
SLU 80	1.02	1634.92	-21792	-19370	3518	0.79	0.79	-54488	10833	3851	33304	10645	2014	12660	No	3.6	Si
SLU 80	1.42	238.04	-21418	-19038	3518	0.79	0.79	-53554	10833	3851	33304	10645	2014	12660	No	3.6	Si
SLU 76	1.02	1621.02	-21573	-19176	3496	0.79	0.79	-53942	10833	3851	33304	10645	2014	12660	No	3.62	Si
SLU 76	1.42	233.03	-21200	-18844	3496	0.79	0.79	-53008	10833	3851	33304	10645	2014	12660	No	3.62	Si
SLU 83	1.02	1685.75	-22527	-20024	3654	0.79	0.79	-56327	10833	3851	33304	10645	2014	12660	No	3.46	Si
SLU 83	1.42	234.61	-22154	-19692	3654	0.79	0.79	-55393	10833	3851	33304	10645	2014	12660	No	3.46	Si
SLU 78	1.02	1642.14	-21914	-19479	3524	0.79	0.79	-54793	10833	3851	33304	10645	2014	12660	No	3.59	Si
SLU 78	1.42	243.11	-21540	-19147	3524	0.79	0.79	-53859	10833	3851	33304	10645	2014	12660	No	3.59	Si
SLU 75	1.02	1625.03	-21664	-19257	3495	0.79	0.79	-54169	10833	3851	33304	10645	2014	12660	No	3.62	Si
SLU 75	1.42	237.59	-21291	-18925	3495	0.79	0.79	-53235	10833	3851	33304	10645	2014	12660	No	3.62	Si
SLU 79	1.02	1630.09	-21745	-19329	3508	0.79	0.79	-54371	10833	3851	33304	10645	2014	12660	No	3.61	Si
SLU 79	1.42	237.28	-21372	-18997	3508	0.79	0.79	-53437	10833	3851	33304	10645	2014	12660	No	3.61	Si
SLU 84	1.02	1690.58	-22574	-20066	3664	0.79	0.79	-56444	10833	3851	33304	10645	2014	12660	No	3.46	Si
SLU 84	1.42	235.37	-22201	-19734	3664	0.79	0.79	-55510	10833	3851	33304	10645	2014	12660	No	3.46	Si
SLU 81	1.02	1668.63	-22278	-19802	3625	0.79	0.79	-55703	10833	3851	33304	10645	2014	12660	No	3.49	Si
SLU 81	1.42	229.09	-21904	-19470	3625	0.79	0.79	-54769	10833	3851	33304	10645	2014	12660	No	3.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	1.02	1626.19	-15682	-13940	4962	0.79	0.79	-39212	16250	5777	33304	15968	2014	17982		3.62	Si
SLV 12	1.42	-383.71	-15194	-13506	4613	0.79	0.79	-37991	16250	5777	33304	15968	2014	17982		3.9	Si
SLD 14	1.02	1353.25	-15827	-14068	4680	0.79	0.79	-39574	16250	5777	33304	15968	2014	17982		3.84	Si
SLD 14	1.42	-503.92	-15519	-13794	4735	0.79	0.79	-38803	16250	5777	33304	15968	2014	17982		3.8	Si
SLV 16	1.02	1871.97	-17437	-15499	8311	0.79	0.79	-43598	16250	5777	33304	15968	2014	17982		2.16	Si
SLV 16	1.42	-1449.49	-16998	-15109	8227	0.79	0.79	-42502	16250	5777	33304	15968	2014	17982		2.19	Si
SLD 16	1.02	1437.45	-15867	-14104	4931	0.79	0.79	-39673	16250	5777	33304	15968	2014	17982		3.65	Si
SLD 16	1.42	-528.97	-15515	-13791	4894	0.79	0.79	-38793	16250	5777	33304	15968	2014	17982		3.67	Si
SLV 14	1.02	1677.13	-17341	-15414	7736	0.79	0.79	-43360	16250	5777	33304	15968	2014	17982		2.32	Si
SLV 14	1.42	-1393.25	-17005	-15116	7864	0.79	0.79	-42520	16250	5777	33304	15968	2014	17982		2.29	Si
SLD 13	1.02	1377.83	-15780	-14026	4899	0.79	0.79	-39455	16250	5777	33304	15968	2014	17982		3.67	Si
SLD 13	1.42	-566.94	-15471	-13752	4954	0.79	0.79	-38685	16250	5777	33304	15968	2014	17982		3.63	Si
SLV 13	1.02	1734.37	-17231	-15317	8246	0.79	0.79	-43085	16250	5777	33304	15968	2014	17982		2.18	Si
SLV 13	1.42	-1540.04	-16895	-15018	8374	0.79	0.79	-42245	16250	5777	33304	15968	2014	17982		2.15	Si
SLV 11	1.02	1663.07	-15611	-13877	5290	0.79	0.79	-39034	16250	5777	33304	15968	2014	17982		3.4	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.42	-478.3	-15123	-13443	4942	0.79	0.79	-37814	16250	5777	33304	15968	2014	17982		3.64	Si
SLD 15	1.02	1462.03	-15819	-14062	5150	0.79	0.79	-39555	16250	5777	33304	15968	2014	17982		3.49	Si
SLD 15	1.42	-591.99	-15468	-13749	5113	0.79	0.79	-38675	16250	5777	33304	15968	2014	17982		3.52	Si
SLV 15	1.02	1929.21	-17327	-15401	8821	0.79	0.79	-43323	16250	5777	33304	15968	2014	17982		2.04	Si
SLV 15	1.42	-1596.28	-16888	-15011	8737	0.79	0.79	-42226	16250	5777	33304	15968	2014	17982		2.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.25	34421	-12237	59.86	2132.7	35.63	Si
SLV 3	179667	0.25	34651	-12318	59.86	2142.75	35.79	Si
SLV 2	179667	0.25	34820	-12378	59.86	2150.12	35.92	Si
SLV 1	179667	0.25	35049	-12460	59.86	2160.08	36.08	Si
SLV 8	179667	0.25	40953	-14559	59.86	2397.3	40.05	Si
SLV 7	179667	0.25	41101	-14611	59.86	2402.77	40.14	Si
SLV 6	179667	0.25	42282	-15031	59.86	2445.65	40.85	Si
SLV 5	179667	0.25	42430	-15084	59.86	2450.92	40.94	Si
SLV 12	179667	0.25	46915	-16678	59.86	2599.81	43.43	Si
SLV 11	179667	0.25	47063	-16731	59.86	2604.36	43.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-9185	-21316	-74	0.513	1084	0.959	7.77739	4.30116	Si
SLV 12	-9221	-20098	18	0.517	1087.6	0.959	7.8377	4.30116	Si
SLV 7	-9037	-21253	-75	0.52	1069	0.959	7.87934	4.30116	Si
SLV 11	-9073	-20035	17	0.524	1072.6	0.959	7.94132	4.30116	Si
SLV 10	-7664	-20666	522	0.539	929.3	0.953	8.21316	4.30116	Si
SLV 9	-7516	-20604	521	0.547	914.3	0.953	8.3432	4.30116	Si
SLV 6	-7628	-21885	430	0.551	925.7	0.953	8.40724	4.30116	Si
SLV 5	-7480	-21822	430	0.56	910.7	0.952	8.54139	4.30116	Si
SLV 16	-8758	-18892	301	0.509	1040.6	0.958	7.72703	3.0673	Si
SLV 14	-8291	-19063	453	0.515	993.1	0.956	7.82597	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.886	SLU 84	Si
V_SLU	3.455	SLU 84	Si
PF_SLV	2.056	SLV 2	Si
V_SLV	2.038	SLV 15	Si
PFFP_SLV	35.626	SLV 4	Si
R_SLV	1.808	SLV 8	Si

Maschio 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.463	-3.284	-3.233	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.02	-16536.75	-52307	-0.000097	0.0003743	0.0035	3.23	54616.42	64280.34	64280.34	3.89	No	Si
SLU 84	1.42	-9971.85	-50843	-0.0000798	0.0003743	0.0035	3.23	53900.03	63232.65	63232.65	6.34	No	Si
SLU 65	1.02	-14730.05	-43608	-0.0000811	0.0003743	0.0035	3.23	49673.15	57772.8	57772.8	3.92	No	Si
SLU 65	1.42	-9121.1	-42144	-0.0000666	0.0003743	0.0035	3.23	48678.73	56427.59	56427.59	6.19	No	Si
SLU 68	1.02	-14928.72	-44228	-0.0000823	0.0003743	0.0035	3.23	50080.11	58347.44	58347.44	3.91	No	Si
SLU 68	1.42	-9253.13	-42764	-0.0000677	0.0003743	0.0035	3.23	49105.51	56995.15	56995.15	6.16	No	Si
SLU 73	1.02	-16054.57	-49058	-0.0000914	0.0003743	0.0035	3.23	52963.14	61975.87	61975.87	3.86	No	Si
SLU 73	1.42	-9905.96	-47593	-0.0000754	0.0003743	0.0035	3.23	52142.89	60962.99	60962.99	6.15	No	Si
SLU 82	1.02	-16338.07	-51687	-0.0000957	0.0003743	0.0035	3.23	54318.79	63835.17	63835.17	3.91	No	Si
SLU 82	1.42	-9839.82	-50223	-0.0000787	0.0003743	0.0035	3.23	53582.59	62793.54	62793.54	6.38	No	Si
SLU 78	1.02	-16279.32	-50910	-0.0000945	0.0003743	0.0035	3.23	53934.05	63280.58	63280.58	3.89	No	Si
SLU 78	1.42	-9832.6	-49446	-0.0000776	0.0003743	0.0035	3.23	53173.02	62247.43	62247.43	6.33	No	Si
SLU 80	1.02	-16167.77	-50592	-0.0000938	0.0003743	0.0035	3.23	53772.31	63054.23	63054.23	3.9	No	Si
SLU 80	1.42	-9767.52	-49127	-0.0000771	0.0003743	0.0035	3.23	53001.09	62024.58	62024.58	6.35	No	Si
SLU 55	1.02	-14787.3	-44340	-0.0000822	0.0003743	0.0035	3.23	50152.56	58451.33	58451.33	3.95	No	Si
SLU 55	1.42	-9204.44	-42875	-0.0000678	0.0003743	0.0035	3.23	49181.54	57097.76	57097.76	6.2	No	Si
SLU 75	1.02	-16080.65	-50290	-0.0000931	0.0003743	0.0035	3.23	53617.52	62841.16	62841.16	3.91	No	Si
SLU 75	1.42	-9700.57	-48826	-0.0000765	0.0003743	0.0035	3.23	52836.67	61814.8	61814.8	6.37	No	Si
SLU 76	1.02	-16253.25	-49678	-0.0000927	0.0003743	0.0035	3.23	53296.35	62409.58	62409.58	3.84	No	Si
SLU 76	1.42	-10037.99	-48213	-0.0000765	0.0003743	0.0035	3.23	52495.92	61389.92	61389.92	6.12	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.02	-19902.12	-27566	-0.0000724	0.0005615	0.0035	3.23		42952.4	42952.4	2.16		Si
SLV 1	1.42	-10715.16	-25732	-0.0000489	0.0005615	0.0035	3.23		40559.21	40559.21	3.79		Si
SLD 6	1.02	-14239.66	-32050	-0.0000634	0.0005615	0.0035	3.23		48713.66	48713.66	3.42		Si
SLD 6	1.42	-9748.33	-30686	-0.0000526	0.0005615	0.0035	3.23		46975.32	46975.32	4.82		Si
SLV 6	1.02	-18750.12	-28813	-0.0000698	0.0005615	0.0035	3.23		44552.93	44552.93	2.38		Si
SLV 6	1.42	-14319.99	-27133	-0.0000579	0.0005615	0.0035	3.23		42397.6	42397.6	2.96		Si
SLV 2	1.02	-20786.8	-28147	-0.0000755	0.0005615	0.0035	3.23		43697.18	43697.18	2.1		Si
SLV 2	1.42	-10954.97	-26313	-0.0000501	0.0005615	0.0035	3.23		41325.07	41325.07	3.77		Si
SLD 1	1.02	-14716.66	-31529	-0.0000638	0.0005615	0.0035	3.23		48054.05	48054.05	3.27		Si
SLD 1	1.42	-8187.38	-30098	-0.0000487	0.0005615	0.0035	3.23		46212.84	46212.84	5.64		Si
SLV 5	1.02	-18180	-28438	-0.000068	0.0005615	0.0035	3.23		44071.55	44071.55	2.42		Si
SLV 5	1.42	-14165.46	-26759	-0.0000571	0.0005615	0.0035	3.23		41909.64	41909.64	2.96		Si
SLD 5	1.02	-13990.65	-31886	-0.0000627	0.0005615	0.0035	3.23		48507.08	48507.08	3.47		Si
SLD 5	1.42	-9680.83	-30523	-0.0000522	0.0005615	0.0035	3.23		46763.16	46763.16	4.83		Si
SLV 4	1.02	-17639.58	-30703	-0.000069	0.0005615	0.0035	3.23		46997.52	46997.52	2.66		Si
SLV 4	1.42	-6607.31	-29094	-0.0000444	0.0005615	0.0035	3.23		44914.8	44914.8	6.8		Si
SLV 3	1.02	-16754.89	-30122	-0.0000664	0.0005615	0.0035	3.23		46244.29	46244.29	2.76		Si
SLV 3	1.42	-6367.5	-28513	-0.0000432	0.0005615	0.0035	3.23		44167.32	44167.32	6.94		Si
SLD 2	1.02	-15096.52	-31778	-0.0000648	0.0005615	0.0035	3.23		48370.41	48370.41	3.2		Si
SLD 2	1.42	-8290.34	-30347	-0.0000492	0.0005615	0.0035	3.23		46536.02	46536.02	5.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.02	-16536.75	-52307	-46495	-16425	3.23	3.23	-31988	10833	15746	33304	43524	8236	49051	No	2.99	Si
SLU 84	1.42	-9971.85	-50843	-45194	-16425	3.23	3.23	-31093	10833	15746	33304	43524	8236	49051	No	2.99	Si
SLU 83	1.02	-16110.52	-52748	-46887	-16869	3.23	3.23	-32258	10833	15746	33304	43524	8236	49051	No	2.91	Si
SLU 83	1.42	-9368.09	-51284	-45586	-16869	3.23	3.23	-31363	10833	15746	33304	43524	8236	49051	No	2.91	Si
SLU 77	1.02	-15853.09	-51351	-45646	-16574	3.23	3.23	-31404	10833	15746	33304	43524	8236	49051	No	2.96	Si
SLU 77	1.42	-9228.84	-49887	-44344	-16574	3.23	3.23	-30509	10833	15746	33304	43524	8236	49051	No	2.96	Si
SLU 75	1.02	-16080.65	-50290	-44703	-15963	3.23	3.23	-30755	10833	15746	33304	43524	8236	49051	No	3.07	Si
SLU 75	1.42	-9700.57	-48826	-43401	-15963	3.23	3.23	-29860	10833	15746	33304	43524	8236	49051	No	3.07	Si
SLU 82	1.02	-16338.07	-51687	-45944	-16259	3.23	3.23	-31609	10833	15746	33304	43524	8236	49051	No	3.02	Si
SLU 82	1.42	-9839.82	-50223	-44643	-16259	3.23	3.23	-30714	10833	15746	33304	43524	8236	49051	No	3.02	Si
SLU 80	1.02	-16167.77	-50592	-44970	-16014	3.23	3.23	-30939	10833	15746	33304	43524	8236	49051	No	3.06	Si
SLU 80	1.42	-9767.52	-49127	-43669	-16014	3.23	3.23	-30044	10833	15746	33304	43524	8236	49051	No	3.06	Si
SLU 79	1.02	-15741.54	-51033	-45362	-16458	3.23	3.23	-31209	10833	15746	33304	43524	8236	49051	No	2.98	Si
SLU 79	1.42	-9163.76	-49568	-44061	-16458	3.23	3.23	-30314	10833	15746	33304	43524	8236	49051	No	2.98	Si
SLU 81	1.02	-15911.84	-52128	-46336	-16703	3.23	3.23	-31879	10833	15746	33304	43524	8236	49051	No	2.94	Si
SLU 81	1.42	-9236.05	-50664	-45035	-16703	3.23	3.23	-30984	10833	15746	33304	43524	8236	49051	No	2.94	Si
SLU 78	1.02	-16279.32	-50910	-45254	-16130	3.23	3.23	-31134	10833	15746	33304	43524	8236	49051	No	3.04	Si
SLU 78	1.42	-9832.6	-49446	-43952	-16130	3.23	3.23	-30239	10833	15746	33304	43524	8236	49051	No	3.04	Si
SLU 74	1.02	-15654.41	-50732	-45095	-16407	3.23	3.23	-31025	10833	15746	33304	43524	8236	49051	No	2.99	Si
SLU 74	1.42	-9096.81	-49267	-43793	-16407	3.23	3.23	-30129	10833	15746	33304	43524	8236	49051	No	2.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.02	-14716.66	-31529	-28026	-17445	3.23	3.23	-19282	14273	20746	33304	65286	8236	54050		3.1	Si
SLD 1	1.42	-8187.38	-30098	-26754	-17460	3.23	3.23	-18406	14098	20491	33304	65286	8236	53796		3.08	Si
SLD 2	1.02	-15096.52	-31778	-28248	-18138	3.23	3.23	-19434	14303	20790	33304	65286	8236	54094		2.98	Si
SLD 2	1.42	-8290.34	-30347	-26976	-18153	3.23	3.23	-18559	14128	20536	33304	65286	8236	53840		2.97	Si
SLV 1	1.02	-19902.12	-27566	-24503	-25559	3.23	2.6791	-20536	14524	17510	33304	65286	8236	50814		1.99	Si
SLV 1	1.42	-10715.16	-25732	-22873	-25594	3.23	3.23	-15736	13564	19715	33304	65286	8236	53020		2.07	Si
SLV 8	1.02	-8259.35	-37334	-33186	-21365	3.23	3.23	-22831	14983	21778	33304	65286	8236	55082		2.58	Si
SLV 8	1.42	172.21	-36403	-32358	-21052	3.23	3.23	-22262	14869	21612	33304	65286	8236	54917		2.61	Si
SLD 3	1.02	-13361.88	-32633	-29007	-18628	3.23	3.23	-19956	14408	20942	33304	65286	8236	54246		2.91	Si
SLD 3	1.42	-6311.77	-31298	-27820	-18566	3.23	3.23	-19140	14245	20705	33304	65286	8236	54009		2.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	1.02	-13741.73	-32882	-29228	-19320	3.23	3.23	-20109	14438	20986	33304	65286	8236	54291		2.81	Si
SLD 4	1.42	-6414.73	-31547	-28042	-19259	3.23	3.23	-19293	14275	20749	33304	65286	8236	54053		2.81	Si
SLV 2	1.02	-20786.8	-28147	-25019	-27171	3.23	2.6295	-21373	14691	17384	33304	65286	8236	50688		1.87	Si
SLV 2	1.42	-10954.97	-26313	-23389	-27207	3.23	3.23	-16092	13635	19818	33304	65286	8236	53123		1.95	Si
SLV 3	1.02	-16754.89	-30122	-26775	-28285	3.23	3.1763	-18421	14101	20155	33304	65286	8236	53459		1.89	Si
SLV 3	1.42	-6367.5	-28513	-25345	-28143	3.23	3.23	-17437	13904	20210	33304	65286	8236	53514		1.9	Si
SLV 4	1.02	-17639.58	-30703	-27292	-29898	3.23	3.1214	-19618	14340	20143	33304	65286	8236	53447		1.79	Si
SLV 4	1.42	-6607.31	-29094	-25861	-29755	3.23	3.23	-17792	13975	20313	33304	65286	8236	53617		1.8	Si
SLV 7	1.02	-7689.24	-36959	-32853	-20326	3.23	3.23	-22603	14937	21711	33304	65286	8236	55016		2.71	Si
SLV 7	1.42	326.75	-36029	-32026	-20013	3.23	3.23	-22034	14823	21546	33304	65286	8236	54850		2.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.25	13512	-19639	244.76	4027.87	16.46	Si
SLV 3	179667	0.25	13797	-20053	244.76	4104.41	16.77	Si
SLV 2	179667	0.25	13899	-20202	244.76	4131.75	16.88	Si
SLV 4	179667	0.25	14184	-20616	244.76	4207.82	17.19	Si
SLV 5	179667	0.25	16057	-23338	244.76	4699	19.2	Si
SLV 6	179667	0.25	16306	-23701	244.76	4763.3	19.46	Si
SLV 7	179667	0.25	17007	-24719	244.76	4942.42	20.19	Si
SLV 8	179667	0.25	17256	-25082	244.76	5005.7	20.45	Si
SLV 9	179667	0.25	18464	-26837	244.76	5308.33	21.69	Si
SLV 10	179667	0.25	18713	-27200	244.76	5370.06	21.94	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-37293	-24975	-1528	0.486	4405.4	0.959	7.37082	4.30116	Si
SLV 11	-37026	-24640	-1528	0.489	4378.3	0.959	7.4133	4.30116	Si
SLV 8	-34197	-20024	-1671	0.516	4090.6	0.956	7.84316	4.30116	Si
SLV 7	-33930	-19689	-1670	0.519	4063.5	0.956	7.89267	4.30116	Si
SLV 10	-25481	-28162	2288	0.626	3205.6	0.946	9.61492	4.30116	Si
SLV 9	-25215	-27828	2289	0.631	3178.6	0.945	9.69601	4.30116	Si
SLV 6	-22385	-23211	2146	0.696	2891.8	0.941	10.75091	4.30116	Si
SLV 5	-22119	-22877	2147	0.702	2864.8	0.94	10.85409	4.30116	Si
SLV 16	-36844	-31959	-27	0.528	4359.8	0.959	8.0014	3.0673	Si
SLV 15	-36431	-31439	-26	0.532	4317.7	0.958	8.07503	3.0673	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.84	SLU 76	Si
V_SLU	2.908	SLU 83	Si
PF_SLV	2.102	SLV 2	Si
V_SLV	1.788	SLV 4	Si
PFFP_SLV	16.457	SLV 1	Si
R_SLV	1.714	SLV 12	Si

Maschio 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.233	-3.284	-0.123	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.02	-2010.43	-29737	-0.0000611	0.0003743	0.0035	2.11	21721.92	25420.03	25420.03	12.64	No	Si
SLU 79	1.42	-502.5	-28766	-0.0000515	0.0003743	0.0035	2.11	21317.57	24853.09	24853.09	49.46	No	Si
SLU 81	1.02	-2099.32	-30334	-0.0000627	0.0003743	0.0035	2.11	21960.18	25737.39	25737.39	12.26	No	Si
SLU 81	1.42	-594.04	-29382	-0.0000531	0.0003743	0.0035	2.11	21576.44	25221.78	25221.78	42.46	No	Si
SLU 35	1.02	-1751.73	-25431	-0.0000517	0.0003743	0.0035	2.11	19771.74	22787.07	22787.07	13.01	No	Si
SLU 35	1.42	-477.04	-24689	-0.0000439	0.0003743	0.0035	2.11	19394.77	22311.54	22311.54	46.77	No	Si
SLU 41	1.02	-1844.12	-26188	-0.0000536	0.0003743	0.0035	2.11	20143.59	23276.48	23276.48	12.62	No	Si
SLU 41	1.42	-566.84	-25468	-0.0000458	0.0003743	0.0035	2.11	19789.82	22810.39	22810.39	40.24	No	Si
SLU 77	1.02	-2020.36	-29932	-0.0000615	0.0003743	0.0035	2.11	21800.69	25526.01	25526.01	12.63	No	Si
SLU 77	1.42	-495.83	-28956	-0.0000518	0.0003743	0.0035	2.11	21398.01	24966.68	24966.68	50.35	No	Si
SLU 32	1.02	-1738.29	-25076	-0.000051	0.0003743	0.0035	2.11	19592.94	22559.06	22559.06	12.98	No	Si
SLU 32	1.42	-485.46	-24338	-0.0000433	0.0003743	0.0035	2.11	19211.9	22087.74	22087.74	45.5	No	Si
SLU 39	1.02	-1830.68	-25833	-0.0000529	0.0003743	0.0035	2.11	19970.65	23046.23	23046.23	12.59	No	Si
SLU 39	1.42	-575.25	-25116	-0.0000452	0.0003743	0.0035	2.11	19612.92	22584.31	22584.31	39.26	No	Si
SLU 37	1.02	-1741.79	-25236	-0.0000513	0.0003743	0.0035	2.11	19673.8	22661.61	22661.61	13.01	No	Si
SLU 37	1.42	-483.72	-24500	-0.0000436	0.0003743	0.0035	2.11	19296.71	22190.99	22190.99	45.88	No	Si
SLU 74	1.02	-2006.93	-29577	-0.0000608	0.0003743	0.0035	2.11	21656.77	25331.63	25331.63	12.62	No	Si
SLU 74	1.42	-504.24	-28604	-0.0000512	0.0003743	0.0035	2.11	21247.89	24755.79	24755.79	49.1	No	Si
SLU 83	1.02	-2112.75	-30688	-0.0000635	0.0003743	0.0035	2.11	22098.24	25903.9	25903.9	12.26	No	Si
SLU 83	1.42	-585.62	-29734	-0.0000537	0.0003743	0.0035	2.11	21720.59	25418.23	25418.23	43.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.02	-1077.54	-17551	-0.0000336	0.0005615	0.0035	2.11		17976.92	17976.92	16.68		Si
SLV 5	1.42	2058.9	-15501	-0.0000348	0.0005615	0.0035	2.11		15084.7	15084.7	7.33		Si
SLV 7	1.02	-2817.22	-17818	-0.0000423	0.0005615	0.0035	2.11		18204.19	18204.19	6.46		Si
SLV 7	1.42	-2992.74	-18256	-0.0000439	0.0005615	0.0035	2.11		18573.91	18573.91	6.21		Si
SLV 6	1.02	-1268.01	-17947	-0.0000352	0.0005615	0.0035	2.11		18313.38	18313.38	14.44		Si
SLV 6	1.42	2035.96	-15739	-0.0000351	0.0005615	0.0035	2.11		15271.47	15271.47	7.5		Si
SLV 8	1.02	-3007.69	-18215	-0.0000439	0.0005615	0.0035	2.11		18539.66	18539.66	6.16		Si
SLV 8	1.42	-3015.68	-18494	-0.0000444	0.0005615	0.0035	2.11		18774.26	18774.26	6.23		Si
SLV 2	1.02	-3571.51	-12766	-0.0000372	0.0005615	0.0035	2.11		13745.92	13745.92	3.85		Si
SLV 2	1.42	-182.3	-11088	-0.0000187	0.0005615	0.0035	2.11		12205.46	12205.46	66.95		Si
SLD 3	1.02	-2391.17	-16790	-0.0000385	0.0005615	0.0035	2.11		17325.85	17325.85	7.25		Si
SLD 3	1.42	-877.79	-16066	-0.0000302	0.0005615	0.0035	2.11		16685.97	16685.97	19.01		Si
SLD 4	1.02	-2518.08	-17054	-0.0000396	0.0005615	0.0035	2.11		17553.95	17553.95	6.97		Si
SLD 4	1.42	-893.08	-16225	-0.0000305	0.0005615	0.0035	2.11		16826.14	16826.14	18.84		Si
SLV 1	1.02	-3275.95	-12150	-0.0000348	0.0005615	0.0035	2.11		13179.33	13179.33	4.02		Si
SLV 1	1.42	-146.69	-10718	-0.0000179	0.0005615	0.0035	2.11		11862.95	11862.95	80.87		Si
SLV 4	1.02	-4093.42	-12846	-0.0000398	0.0005615	0.0035	2.11		13819.85	13819.85	3.38		Si
SLV 4	1.42	-1697.79	-11915	-0.0000271	0.0005615	0.0035	2.11		12963.38	12963.38	7.64		Si
SLV 3	1.02	-3797.85	-12230	-0.0000374	0.0005615	0.0035	2.11		13253.16	13253.16	3.49		Si
SLV 3	1.42	-1662.19	-11545	-0.0000263	0.0005615	0.0035	2.11		12624.58	12624.58	7.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.02	-1816.92	-29606	-26317	-4136	2.11	2.11	-27717	10640	10103	33304	28432	5381	33813	No	8.17	Si
SLU 80	1.42	-215.63	-28591	-25415	-4165	2.11	2.11	-26766	10513	9982	33304	28432	5381	33813	No	8.12	Si
SLU 75	1.02	-1813.42	-29447	-26175	-4130	2.11	2.11	-27567	10620	10084	33304	28432	5381	33813	No	8.19	Si
SLU 75	1.42	-217.36	-28429	-25270	-4159	2.11	2.11	-26614	10493	9963	33304	28432	5381	33813	No	8.13	Si
SLU 70	1.02	-1556.75	-26754	-23781	-4035	2.11	2.11	-25046	10284	9765	33304	28432	5381	33813	No	8.38	Si
SLU 70	1.42	-34.64	-25703	-22847	-4061	2.11	2.11	-24062	10153	9640	33304	28432	5381	33813	No	8.33	Si
SLU 82	1.02	-1905.81	-30203	-26847	-4079	2.11	2.11	-28275	10714	10173	33304	28432	5381	33813	No	8.29	Si
SLU 82	1.42	-307.16	-29207	-25962	-4108	2.11	2.11	-27343	10590	10055	33304	28432	5381	33813	No	8.23	Si
SLU 73	1.02	-1661.05	-28810	-25608	-4244	2.11	2.11	-26971	10541	10008	33304	28432	5381	33813	No	7.97	Si
SLU 73	1.42	-41.21	-27771	-24686	-4272	2.11	2.11	-25999	10411	9885	33304	28432	5381	33813	No	7.91	Si
SLU 65	1.02	-1390.94	-25762	-22899	-4086	2.11	2.11	-24117	10160	9647	33304	28432	5381	33813	No	8.28	Si
SLU 65	1.42	133.1	-24693	-21950	-4111	2.11	2.11	-23117	10027	9520	33304	28432	5381	33813	No	8.22	Si
SLU 68	1.02	-1404.38	-26116	-23215	-4149	2.11	2.11	-24449	10204	9689	33304	28432	5381	33813	No	8.15	Si
SLU 68	1.42	141.52	-25045	-22262	-4174	2.11	2.11	-23446	10071	9562	33304	28432	5381	33813	No	8.1	Si
SLU 78	1.02	-1826.86	-29802	-26490	-4193	2.11	2.11	-27899	10664	10126	33304	28432	5381	33813	No	8.06	Si
SLU 78	1.42	-208.95	-28781	-25583	-4222	2.11	2.11	-26944	10537	10005	33304	28432	5381	33813	No	8.01	Si
SLU 84	1.02	-1919.25	-30558	-27163	-4141	2.11	2.11	-28607	10759	10215	33304	28432	5381	33813	No	8.16	Si
SLU 84	1.42	-298.74	-29559	-26275	-4171	2.11	2.11	-27672	10634	10097	33304	28432	5381	33813	No	8.11	Si
SLU 76	1.02	-1674.48	-29164	-25924	-4307	2.11	2.11	-27303	10585	10050	33304	28432	5381	33813	No	7.85	Si
SLU 76	1.42	-32.79	-28123	-24998	-4335	2.11	2.11	-26328	10455	9927	33304	28432	5381	33813	No	7.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	1.02	-2295.09	-17011	-15121	-5886	2.11	2.11	-15926	13602	12915	33304	42648	5381	46219		7.85	Si
SLD 2	1.42	-242.74	-15858	-14096	-5531	2.11	2.11	-14846	13386	12710	33304	42648	5381	46014		8.32	Si
SLV 4	1.02	-4093.42	-12846	-11419	-7098	2.11	2.11	-12026	12822	12174	33304	42648	5381	45479		6.41	Si
SLV 4	1.42	-1697.79	-11915	-10591	-6226	2.11	2.11	-11154	12648	12009	33304	42648	5381	45313		7.28	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	1.02	139.48	-22563	-20056	-6596	2.11	2.11	-21123	14641	13902	33304	42648	5381	47206		7.16	Si
SLV 10	1.42	2416.4	-20608	-18318	-6916	2.11	2.11	-19293	14275	13554	33304	42648	5381	46859		6.78	Si
SLV 9	1.02	329.95	-22166	-19703	-5759	2.11	2.11	-20751	14567	13831	33304	42648	5381	47136		8.18	Si
SLV 9	1.42	2439.35	-20370	-18107	-6079	2.11	2.11	-19070	14231	13512	33304	42648	5381	46816		7.7	Si
SLV 6	1.02	-1268.01	-17947	-15953	-9778	2.11	2.11	-16802	13777	13081	33304	42648	5381	46386		4.74	Si
SLV 6	1.42	2035.96	-15739	-13990	-9571	2.11	2.11	-14734	13364	12689	33304	42648	5381	45993		4.81	Si
SLV 1	1.02	-3275.95	-12150	-10800	-8856	2.11	2.11	-11374	12692	12051	33304	42648	5381	45355		5.12	Si
SLV 1	1.42	-146.69	-10718	-9527	-8008	2.11	2.11	-10034	12423	11796	33304	42648	5381	45100		5.63	Si
SLV 2	1.02	-3571.51	-12766	-11347	-10155	2.11	2.11	-11951	12807	12160	33304	42648	5381	45464		4.48	Si
SLV 2	1.42	-182.3	-11088	-9856	-9306	2.11	2.11	-10380	12493	11862	33304	42648	5381	45166		4.85	Si
SLD 6	1.02	-1310.09	-19219	-17084	-5745	2.11	2.11	-17992	14015	13307	33304	42648	5381	46612		8.11	Si
SLD 6	1.42	709.08	-17832	-15850	-5666	2.11	2.11	-16693	13755	13061	33304	42648	5381	46365		8.18	Si
SLV 5	1.02	-1077.54	-17551	-15601	-8941	2.11	2.11	-16430	13703	13011	33304	42648	5381	46315		5.18	Si
SLV 5	1.42	2058.9	-15501	-13778	-8734	2.11	2.11	-14511	13319	12646	33304	42648	5381	45951		5.26	Si
SLV 3	1.02	-3797.85	-12230	-10871	-5799	2.11	2.11	-11450	12707	12065	33304	42648	5381	45369		7.82	Si
SLV 3	1.42	-1662.19	-11545	-10262	-4929	2.11	2.11	-10808	12578	11943	33304	42648	5381	45247		9.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.25	9437	-8960	159.89	1891.48	11.83	Si
SLV 3	179667	0.25	9576	-9093	159.89	1917.59	11.99	Si
SLV 2	179667	0.25	9918	-9417	159.89	1981.31	12.39	Si
SLV 4	179667	0.25	10058	-9550	159.89	2007.23	12.55	Si
SLV 5	179667	0.25	15838	-15038	159.89	3032.64	18.97	Si
SLV 6	179667	0.25	16148	-15333	159.89	3085.04	19.3	Si
SLV 7	179667	0.25	16303	-15480	159.89	3111.12	19.46	Si
SLV 8	179667	0.25	16613	-15774	159.89	3163.12	19.78	Si
SLV 9	179667	0.25	21390	-20310	159.89	3929.73	24.58	Si
SLV 10	179667	0.25	21701	-20605	159.89	3977.31	24.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-20087	-19131	-1226	0.554	2443.4	0.953	8.45115	4.30116	Si
SLV 11	-19883	-18800	-1230	0.558	2422.6	0.952	8.51767	4.30116	Si
SLV 10	-18514	-25723	1713	0.567	2283.7	0.95	8.66983	4.30116	Si
SLV 9	-18310	-25392	1708	0.572	2262.9	0.949	8.7504	4.30116	Si
SLV 8	-15801	-12686	-1342	0.659	2008.4	0.944	10.15302	4.30116	Si
SLV 7	-15597	-12355	-1347	0.666	1987.7	0.943	10.25574	4.30116	Si
SLV 14	-24121	-31026	822	0.497	2853.4	0.959	7.52994	3.0673	Si
SLV 13	-23804	-30513	815	0.502	2821.2	0.958	7.6141	3.0673	Si
SLV 6	-14228	-19278	1596	0.699	1849.1	0.94	10.81011	4.30116	Si
SLV 5	-14024	-18947	1591	0.707	1828.4	0.939	10.9398	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.26	SLU 81	Si
V_SLU	7.799	SLU 76	Si
PF_SLV	3.376	SLV 4	Si
V_SLV	4.477	SLV 2	Si
PFFP_SLV	11.83	SLV 1	Si
R_SLV	1.965	SLV 12	Si

Maschio 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	2.271	-5.158	6.101	L2	L4	3.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-0.98	-37009.5	-93646	-0.000259	0.0004492	0.0035	3.83	59712.74	96270.85	96270.85	2.6	No	Si
SLU 84	1.12	-7004.78	-88162	-0.0001545	0.0004492	0.0035	3.83	62811.12	95334.59	95334.59	13.61	No	Si
SLU 77	-0.98	-36194.11	-91459	-0.0002504	0.0004492	0.0035	3.83	61047.03	96263.66	96263.66	2.66	No	Si
SLU 77	1.12	-6708.97	-85974	-0.0001494	0.0004492	0.0035	3.83	63818.06	94592.21	94592.21	14.1	No	Si
SLU 83	-0.98	-36885.18	-93649	-0.0002586	0.0004492	0.0035	3.83	59710.89	96270.64	96270.64	2.61	No	Si
SLU 83	1.12	-7063.36	-88165	-0.0001547	0.0004492	0.0035	3.83	62809.7	95335.58	95335.58	13.5	No	Si
SLU 78	-0.98	-36318.43	-91456	-0.0002508	0.0004492	0.0035	3.83	61048.71	96262.92	96262.92	2.65	No	Si
SLU 78	1.12	-6650.39	-85971	-0.0001492	0.0004492	0.0035	3.83	63819.3	94591.24	94591.24	14.22	No	Si
SLU 76	-0.98	-35807.23	-90006	-0.0002454	0.0004492	0.0035	3.83	61860.58	95877.46	95877.46	2.68	No	Si
SLU 76	1.12	-6540.74	-84522	-0.0001461	0.0004492	0.0035	3.83	64414.32	94113.22	94113.22	14.39	No	Si
SLU 80	-0.98	-36103.23	-90888	-0.0002486	0.0004492	0.0035	3.83	61373.4	96115.39	96115.39	2.66	No	Si
SLU 80	1.12	-6612.89	-85404	-0.000148	0.0004492	0.0035	3.83	64059.09	94402.79	94402.79	14.28	No	Si
SLU 82	-0.98	-36630.63	-92767	-0.0002554	0.0004492	0.0035	3.83	60265.08	96333.43	96333.43	2.63	No	Si
SLU 82	1.12	-6971.68	-87282	-0.0001527	0.0004492	0.0035	3.83	63231.8	95033.01	95033.01	13.63	No	Si
SLU 79	-0.98	-35978.91	-90891	-0.0002482	0.0004492	0.0035	3.83	61371.76	96116.16	96116.16	2.67	No	Si
SLU 79	1.12	-6671.47	-85406	-0.0001481	0.0004492	0.0035	3.83	64057.89	94403.74	94403.74	14.15	No	Si
SLU 75	-0.98	-35939.56	-90576	-0.0002473	0.0004492	0.0035	3.83	61548.47	96032.28	96032.28	2.67	No	Si
SLU 75	1.12	-6617.29	-85091	-0.0001474	0.0004492	0.0035	3.83	64187.4	94299.71	94299.71	14.25	No	Si
SLU 81	-0.98	-36506.31	-92769	-0.0002549	0.0004492	0.0035	3.83	60263.3	96333.22	96333.22	2.64	No	Si
SLU 81	1.12	-7030.25	-87285	-0.0001528	0.0004492	0.0035	3.83	63230.45	95033.99	95033.99	13.52	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	-0.98	-43777.62	-78281	-0.0002169	0.0006738	0.0035	3.83		111044.59	111044.59	2.54		Si
SLV 13	1.12	-2000.94	-75072	-0.0001098	0.0006738	0.0035	3.83		108240.36	108240.36	54.09		Si
SLV 5	-0.98	-37907.63	-56475	-0.0001647	0.0006738	0.0035	3.83		90320.25	90320.25	2.38		Si
SLV 5	1.12	4934.24	-52183	-0.0000819	0.0006738	0.0035	3.83		81079.14	81079.14	16.43		Si
SLV 6	-0.98	-39697.83	-56015	-0.0001689	0.0006738	0.0035	3.83		89787.47	89787.47	2.26		Si
SLV 6	1.12	5597.29	-51723	-0.0000827	0.0006738	0.0035	3.83		80563.57	80563.57	14.39		Si
SLD 6	-0.98	-31502.28	-59791	-0.0001546	0.0006738	0.0035	3.83		94121.6	94121.6	2.99		Si
SLD 6	1.12	-6.93	-55546	-0.0000759	0.0006738	0.0035	3.83		89244.47	89244.47	12886.11		Si
SLV 10	-0.98	-48522.81	-65492	-0.0002085	0.0006738	0.0035	3.83		100122.95	100122.95	2.06		Si
SLV 10	1.12	5607.82	-61768	-0.0000978	0.0006738	0.0035	3.83		91961.02	91961.02	16.4		Si
SLV 9	-0.98	-46732.61	-65951	-0.0002036	0.0006738	0.0035	3.83		100528.67	100528.67	2.15		Si
SLV 9	1.12	4944.77	-62227	-0.0000969	0.0006738	0.0035	3.83		92489.22	92489.22	18.7		Si
SLD 9	-0.98	-34483.26	-64034	-0.0001688	0.0006738	0.0035	3.83		98714.89	98714.89	2.86		Si
SLD 9	1.12	-281.58	-60014	-0.0000831	0.0006738	0.0035	3.83		94361.13	94361.13	335.11		Si
SLD 14	-0.98	-34259.46	-68992	-0.0001767	0.0006738	0.0035	3.83		103057.93	103057.93	3.01		Si
SLD 14	1.12	-2882.83	-65176	-0.0000967	0.0006738	0.0035	3.83		99831.62	99831.62	34.63		Si
SLD 10	-0.98	-35265.18	-63833	-0.0001703	0.0006738	0.0035	3.83		98495.56	98495.56	2.79		Si
SLD 10	1.12	8.02	-59813	-0.0000822	0.0006738	0.0035	3.83		89721.09	89721.09	11182.27		Si
SLV 14	-0.98	-46555.59	-77568	-0.0002227	0.0006738	0.0035	3.83		110417.28	110417.28	2.37		Si
SLV 14	1.12	-972.04	-74359	-0.0001063	0.0006738	0.0035	3.83		107623.37	107623.37	110.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-0.98	-37009.5	-93646	-78860	-14311	3.83	3.83	-68634	10833	12447	33304	41292	9766	45752	No	3.2	Si
SLU 84	1.12	-7004.78	-88162	-74241	-14311	3.83	3.83	-64614	10833	12447	33304	41292	9766	45752	No	3.2	Si
SLU 79	-0.98	-35978.91	-90891	-76540	-13979	3.83	3.83	-66614	10833	12447	33304	41292	9766	45752	No	3.27	Si
SLU 79	1.12	-6671.47	-85406	-71921	-13979	3.83	3.83	-62595	10833	12447	33304	41292	9766	45752	No	3.27	Si
SLU 76	-0.98	-35807.23	-90006	-75795	-13959	3.83	3.83	-65966	10833	12447	33304	41292	9766	45752	No	3.28	Si
SLU 76	1.12	-6540.74	-84522	-71176	-13959	3.83	3.83	-61946	10833	12447	33304	41292	9766	45752	No	3.28	Si
SLU 82	-0.98	-36630.63	-92767	-78119	-14146	3.83	3.83	-67989	10833	12447	33304	41292	9766	45752	No	3.23	Si
SLU 82	1.12	-6971.68	-87282	-73500	-14146	3.83	3.83	-63969	10833	12447	33304	41292	9766	45752	No	3.23	Si
SLU 83	-0.98	-36885.18	-93649	-78863	-14224	3.83	3.83	-68636	10833	12447	33304	41292	9766	45752	No	3.22	Si
SLU 83	1.12	-7063.36	-88165	-74244	-14224	3.83	3.83	-64616	10833	12447	33304	41292	9766	45752	No	3.22	Si
SLU 80	-0.98	-36103.23	-90888	-76538	-14066	3.83	3.83	-66612	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 80	1.12	-6612.89	-85404	-71919	-14066	3.83	3.83	-62592	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 77	-0.98	-36194.11	-91459	-77018	-14063	3.83	3.83	-67030	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 77	1.12	-6708.97	-85974	-72399	-14063	3.83	3.83	-63010	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 75	-0.98	-35939.56	-90576	-76274	-13986	3.83	3.83	-66383	10833	12447	33304	41292	9766	45752	No	3.27	Si
SLU 75	1.12	-6617.29	-85091	-71656	-13986	3.83	3.83	-62363	10833	12447	33304	41292	9766	45752	No	3.27	Si
SLU 81	-0.98	-36506.31	-92769	-78122	-14059	3.83	3.83	-67991	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 81	1.12	-7030.25	-87285	-73503	-14059	3.83	3.83	-63971	10833	12447	33304	41292	9766	45752	No	3.25	Si
SLU 78	-0.98	-36318.43	-91456	-77015	-14150	3.83	3.83	-67028	10833	12447	33304	41292	9766	45752	No	3.23	Si
SLU 78	1.12	-6650.39	-85971	-72397	-14150	3.83	3.83	-63008	10833	12447	33304	41292	9766	45752	No	3.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	-0.98	-48522.81	-65492	-55151	-25562	3.83	3.5223	-53558	16250	17171	33304	61938	9766	50476		1.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	1.12	5607.82	-61768	-52015	-25632	3.83	3.83	-45270	16250	18671	33304	61938	9766	51976		2.03	Si
SLD 14	-0.98	-34259.46	-68992	-58099	-14894	3.83	3.83	-50565	16250	18671	33304	61938	9766	51976		3.49	Si
SLD 14	1.12	-2882.83	-65176	-54885	-15068	3.83	3.83	-47768	16250	18671	33304	61938	9766	51976		3.45	Si
SLV 13	-0.98	-43777.62	-78281	-65921	-19767	3.83	3.83	-57373	16250	18671	33304	61938	9766	51976		2.63	Si
SLV 13	1.12	-2000.94	-75072	-63219	-20180	3.83	3.83	-55021	16250	18671	33304	61938	9766	51976		2.58	Si
SLD 6	-0.98	-31502.28	-59791	-50351	-14938	3.83	3.83	-43821	16250	18671	33304	61938	9766	51976		3.48	Si
SLD 6	1.12	-6.93	-55546	-46775	-14865	3.83	3.83	-40710	16250	18671	33304	61938	9766	51976		3.5	Si
SLV 14	-0.98	-46555.59	-77568	-65320	-21579	3.83	3.83	-56850	16250	18671	33304	61938	9766	51976		2.41	Si
SLV 14	1.12	-972.04	-74359	-62618	-21993	3.83	3.83	-54498	16250	18671	33304	61938	9766	51976		2.36	Si
SLV 9	-0.98	-46732.61	-65951	-55538	-24394	3.83	3.6192	-52456	16250	17644	33304	61938	9766	50948		2.09	Si
SLV 9	1.12	4944.77	-62227	-52402	-24464	3.83	3.83	-45607	16250	18671	33304	61938	9766	51976		2.12	Si
SLD 10	-0.98	-35265.18	-63833	-53754	-16714	3.83	3.83	-46783	16250	18671	33304	61938	9766	51976		3.11	Si
SLD 10	1.12	8.02	-59813	-50369	-16749	3.83	3.83	-43837	16250	18671	33304	61938	9766	51976		3.1	Si
SLD 9	-0.98	-34483.26	-64034	-53923	-16204	3.83	3.83	-46930	16250	18671	33304	61938	9766	51976		3.21	Si
SLD 9	1.12	-281.58	-60014	-50538	-16239	3.83	3.83	-43985	16250	18671	33304	61938	9766	51976		3.2	Si
SLV 5	-0.98	-37907.63	-56475	-47558	-20236	3.83	3.7313	-43344	16250	18190	33304	61938	9766	51494		2.54	Si
SLV 5	1.12	4934.24	-52183	-43944	-20047	3.83	3.83	-38245	16250	18671	33304	61938	9766	51976		2.59	Si
SLV 6	-0.98	-39697.83	-56015	-47171	-21404	3.83	3.6189	-44350	16250	17642	33304	61938	9766	50947		2.38	Si
SLV 6	1.12	5597.29	-51723	-43556	-21215	3.83	3.83	-37908	16250	18671	33304	61938	9766	51976		2.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	215625	0.25	36668	-42131	193.48	5055.33	26.13	Si
SLV 1	215625	0.25	37288	-42844	193.48	5119.17	26.46	Si
SLV 4	215625	0.25	37446	-43025	193.48	5135.2	26.54	Si
SLV 3	215625	0.25	38066	-43738	193.48	5198.12	26.87	Si
SLV 6	215625	0.25	46022	-52879	193.48	5940.19	30.7	Si
SLV 5	215625	0.25	46422	-53339	193.48	5974.37	30.88	Si
SLV 8	215625	0.25	48615	-55859	193.48	6156.35	31.82	Si
SLV 7	215625	0.25	49015	-56319	193.48	6188.58	31.99	Si
SLV 10	215625	0.25	54723	-62877	193.48	6615.54	34.19	Si
SLV 9	215625	0.25	55124	-63337	193.48	6643.17	34.33	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-59432	-65951	267	0.393	6531.8	0.977	5.84377	5.87132	No
SLV 10	-59292	-65492	267	0.394	6517.6	0.977	5.8553	5.87132	No
SLV 11	-54761	-69230	232	0.421	6056	0.975	6.27493	5.87132	Si
SLV 12	-54621	-68770	233	0.422	6041.7	0.975	6.28847	5.87132	Si
SLV 5	-49648	-56475	-332	0.455	5535.3	0.973	6.79737	5.87132	Si
SLV 6	-49508	-56015	-331	0.456	5521	0.973	6.81414	5.87132	Si
SLV 7	-44977	-59753	-367	0.494	5059.6	0.971	7.39191	5.87132	Si
SLV 8	-44837	-59293	-366	0.495	5045.3	0.971	7.41213	5.87132	Si
SLV 13	-69249	-78281	952	0.337	7532.1	0.98	4.99654	3.44478	Si
SLV 14	-69032	-77568	954	0.338	7510	0.98	5.00937	3.44478	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.601	SLU 84	Si
V_SLU	3.197	SLU 84	Si
PF_SLV	2.063	SLV 10	Si
V_SLV	1.975	SLV 10	Si
PFFP_SLV	26.128	SLV 2	Si
R_SLV	0.995	SLV 9	No

Maschio 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	5.876	-3.013	5.876	L2	L4	2.08	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	1.02	-1590.8	-23797	-0.0000488	0.0003743	0.0035	2.08	18568.48	21197.88	21197.88	13.33	No	Si
SLU 60	1.42	1691.49	-22862	-0.0000475	0.0003743	0.0035	2.08	18071.98	19553.7	19553.7	11.56	No	Si
SLU 51	1.02	-1601.29	-20035	-0.0000419	0.0003743	0.0035	2.08	16455.63	18633.99	18633.99	11.64	No	Si
SLU 51	1.42	1385.8	-19100	-0.0000391	0.0003743	0.0035	2.08	15882.32	16843.45	16843.45	12.15	No	Si
SLU 48	1.02	-1620.68	-20217	-0.0000423	0.0003743	0.0035	2.08	16564.6	18758.38	18758.38	11.57	No	Si
SLU 48	1.42	1376.25	-19281	-0.0000394	0.0003743	0.0035	2.08	15994.99	16987.69	16987.69	12.34	No	Si
SLU 45	1.02	-1592.62	-19935	-0.0000417	0.0003743	0.0035	2.08	16395.22	18562.64	18562.64	11.66	No	Si
SLU 45	1.42	1379.93	-19000	-0.0000389	0.0003743	0.0035	2.08	15819.86	16763.99	16763.99	12.15	No	Si
SLU 84	1.02	-1697.25	-26999	-0.0000553	0.0003743	0.0035	2.08	20123.5	23220.96	23220.96	13.68	No	Si
SLU 84	1.42	1842.11	-26064	-0.0000543	0.0003743	0.0035	2.08	19692.38	21454.32	21454.32	11.65	No	Si
SLU 82	1.02	-1669.19	-26718	-0.0000546	0.0003743	0.0035	2.08	19995.79	23049.86	23049.86	13.81	No	Si
SLU 82	1.42	1845.79	-25782	-0.0000538	0.0003743	0.0035	2.08	19558.92	21285.66	21285.66	11.53	No	Si
SLU 81	1.02	-1669.36	-26717	-0.0000546	0.0003743	0.0035	2.08	19995.53	23049.51	23049.51	13.81	No	Si
SLU 81	1.42	1842.34	-25782	-0.0000538	0.0003743	0.0035	2.08	19558.64	21285.31	21285.31	11.55	No	Si
SLU 61	1.02	-1590.63	-23798	-0.0000488	0.0003743	0.0035	2.08	18568.78	21198.26	21198.26	13.33	No	Si
SLU 61	1.42	1694.94	-22862	-0.0000475	0.0003743	0.0035	2.08	18072.29	19554.04	19554.04	11.54	No	Si
SLU 49	1.02	-1620.51	-20217	-0.0000423	0.0003743	0.0035	2.08	16564.95	18758.78	18758.78	11.58	No	Si
SLU 49	1.42	1379.71	-19282	-0.0000394	0.0003743	0.0035	2.08	15995.35	16988.15	16988.15	12.31	No	Si
SLU 50	1.02	-1601.45	-20035	-0.0000419	0.0003743	0.0035	2.08	16455.28	18633.59	18633.59	11.64	No	Si
SLU 50	1.42	1382.35	-19099	-0.0000391	0.0003743	0.0035	2.08	15881.96	16842.98	16842.98	12.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.02	-3207.09	-5854	-0.0000269	0.0005615	0.0035	2.08		6958.49	6958.49	2.17		Si
SLV 1	1.42	1634.86	-6213	-0.0000177	0.0005615	0.0035	2.08		6453.17	6453.17	3.95		Si
SLD 1	1.02	-2082.26	-12490	-0.0000304	0.0005615	0.0035	2.08		13146.51	13146.51	6.31		Si
SLD 1	1.42	1391.79	-12232	-0.0000267	0.0005615	0.0035	2.08		12083.62	12083.62	8.68		Si
SLV 2	1.02	-3027.18	-5984	-0.0000253	0.0005615	0.0035	2.08		7083.75	7083.75	2.34		Si
SLV 2	1.42	1438.48	-6342	-0.000017	0.0005615	0.0035	2.08		6578.69	6578.69	4.57		Si
SLV 10	1.02	-2652.82	-15933	-0.0000391	0.0005615	0.0035	2.08		16174.32	16174.32	6.1		Si
SLV 10	1.42	315.68	-19890	-0.0000345	0.0005615	0.0035	2.08		18354.05	18354.05	58.14		Si
SLV 9	1.02	-2768.75	-15849	-0.0000395	0.0005615	0.0035	2.08		16102.83	16102.83	5.82		Si
SLV 9	1.42	442.23	-19806	-0.000035	0.0005615	0.0035	2.08		18290.48	18290.48	41.36		Si
SLV 4	1.02	-1908.28	-8744	-0.0000233	0.0005615	0.0035	2.08		9705.19	9705.19	5.09		Si
SLV 4	1.42	1843.59	-6351	-0.000019	0.0005615	0.0035	2.08		6587.01	6587.01	3.57		Si
SLV 6	1.02	-3442.84	-9844	-0.0000324	0.0005615	0.0035	2.08		10728.44	10728.44	3.12		Si
SLV 6	1.42	631.87	-13622	-0.0000254	0.0005615	0.0035	2.08		13326.5	13326.5	21.09		Si
SLV 5	1.02	-3558.78	-9760	-0.0000329	0.0005615	0.0035	2.08		10651.2	10651.2	2.99		Si
SLV 5	1.42	758.42	-13538	-0.0000258	0.0005615	0.0035	2.08		13251.92	13251.92	17.47		Si
SLV 7	1.02	170.87	-18963	-0.0000322	0.0005615	0.0035	2.08		17650.84	17650.84	103.3		Si
SLV 7	1.42	2108.8	-13567	-0.0000324	0.0005615	0.0035	2.08		13277.51	13277.51	6.3		Si
SLV 3	1.02	-2088.19	-8615	-0.0000239	0.0005615	0.0035	2.08		9581.62	9581.62	4.59		Si
SLV 3	1.42	2039.97	-6221	-0.0000197	0.0005615	0.0035	2.08		6461.5	6461.5	3.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	-1702.84	-25884	-23008	-8613	2.08	2.08	-24581	10222	9568	33304	28028	5304	33332	No	3.87	Si
SLU 75	1.42	1745.48	-24948	-22176	-8613	2.08	2.08	-23693	10103	9457	33304	28028	5304	33332	No	3.87	Si
SLU 84	1.02	-1697.25	-26999	-23999	-8840	2.08	2.08	-25641	10363	9700	33304	28028	5304	33332	No	3.77	Si
SLU 84	1.42	1842.11	-26064	-23168	-8840	2.08	2.08	-24752	10245	9589	33304	28028	5304	33332	No	3.77	Si
SLU 81	1.02	-1669.36	-26717	-23749	-8771	2.08	2.08	-25373	10327	9666	33304	28028	5304	33332	No	3.8	Si
SLU 81	1.42	1842.34	-25782	-22917	-8771	2.08	2.08	-24484	10209	9556	33304	28028	5304	33332	No	3.8	Si
SLU 82	1.02	-1669.19	-26718	-23749	-8779	2.08	2.08	-25373	10328	9666	33304	28028	5304	33332	No	3.8	Si
SLU 82	1.42	1845.79	-25782	-22918	-8779	2.08	2.08	-24485	10209	9556	33304	28028	5304	33332	No	3.8	Si
SLU 77	1.02	-1731.07	-26165	-23257	-8665	2.08	2.08	-24848	10257	9601	33304	28028	5304	33332	No	3.85	Si
SLU 77	1.42	1738.36	-25229	-22426	-8665	2.08	2.08	-23960	10139	9490	33304	28028	5304	33332	No	3.85	Si
SLU 79	1.02	-1711.84	-25983	-23096	-8633	2.08	2.08	-24675	10234	9579	33304	28028	5304	33332	No	3.86	Si
SLU 79	1.42	1744.45	-25047	-22264	-8633	2.08	2.08	-23787	10116	9468	33304	28028	5304	33332	No	3.86	Si
SLU 80	1.02	-1711.67	-25983	-23096	-8641	2.08	2.08	-24676	10235	9579	33304	28028	5304	33332	No	3.86	Si
SLU 80	1.42	1747.9	-25048	-22265	-8641	2.08	2.08	-23787	10116	9469	33304	28028	5304	33332	No	3.86	Si
SLU 83	1.02	-1697.42	-26999	-23999	-8832	2.08	2.08	-25640	10363	9700	33304	28028	5304	33332	No	3.77	Si
SLU 83	1.42	1838.66	-26063	-23167	-8832	2.08	2.08	-24752	10245	9589	33304	28028	5304	33332	No	3.77	Si
SLU 78	1.02	-1730.9	-26165	-23258	-8674	2.08	2.08	-24848	10258	9601	33304	28028	5304	33332	No	3.84	Si
SLU 78	1.42	1741.81	-25230	-22426	-8674	2.08	2.08	-23960	10139	9490	33304	28028	5304	33332	No	3.84	Si
SLU 74	1.02	-1703.01	-25883	-23007	-8604	2.08	2.08	-24581	10222	9568	33304	28028	5304	33332	No	3.87	Si
SLU 74	1.42	1742.03	-24948	-22176	-8604	2.08	2.08	-23692	10103	9457	33304	28028	5304	33332	No	3.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.02	-3027.18	-5984	-5319	-11440	2.08	1.6023	-7399	11897	8578	33304	42042	5304	41882		3.66	Si
SLV 2	1.42	1438.48	-6342	-5638	-11592	2.08	2.08	-6023	11621	10877	33304	42042	5304	44182		3.81	Si
SLV 4	1.02	-1908.28	-8744	-7773	-11296	2.08	2.08	-8304	12078	11304	33304	42042	5304	44609		3.95	Si
SLV 4	1.42	1843.59	-6351	-5645	-11008	2.08	2.08	-6031	11623	10879	33304	42042	5304	44183		4.01	Si
SLV 1	1.02	-3207.09	-5854	-5203	-12381	2.08	1.4764	-7860	11989	7965	33304	42042	5304	41269		3.33	Si
SLV 1	1.42	1634.86	-6213	-5522	-12532	2.08	2.08	-5900	11597	10854	33304	42042	5304	44159		3.52	Si
SLV 6	1.02	-3442.84	-9844	-8750	-7778	2.08	2.0707	-9349	12286	11449	33304	42042	5304	44753		5.75	Si
SLV 6	1.42	631.87	-13622	-12108	-8490	2.08	2.08	-12936	13004	12172	33304	42042	5304	45476		5.36	Si
SLD 2	1.02	-2005.01	-12546	-11152	-8397	2.08	2.08	-11914	12800	11980	33304	42042	5304	45285		5.39	Si
SLD 2	1.42	1307.47	-12287	-10922	-8461	2.08	2.08	-11669	12750	11934	33304	42042	5304	45239		5.35	Si
SLD 1	1.02	-2082.26	-12490	-11102	-8801	2.08	2.08	-11861	12789	11970	33304	42042	5304	45275		5.14	Si
SLD 1	1.42	1391.79	-12232	-10873	-8865	2.08	2.08	-11616	12740	11924	33304	42042	5304	45229		5.1	Si
SLD 4	1.02	-1526.32	-13727	-12202	-8335	2.08	2.08	-13037	13024	12190	33304	42042	5304	45495		5.46	Si
SLD 4	1.42	1481.55	-12291	-10925	-8212	2.08	2.08	-11673	12751	11935	33304	42042	5304	45239		5.51	Si
SLV 5	1.02	-3558.78	-9760	-8676	-8384	2.08	2.0261	-9269	12270	11188	33304	42042	5304	44492		5.31	Si
SLV 5	1.42	758.42	-13538	-12034	-9096	2.08	2.08	-12857	12988	12157	33304	42042	5304	45461		5	Si
SLD 3	1.02	-1603.57	-13672	-12153	-8739	2.08	2.08	-12984	13013	12180	33304	42042	5304	45485		5.2	Si
SLD 3	1.42	1565.87	-12235	-10876	-8615	2.08	2.08	-11620	12741	11925	33304	42042	5304	45229		5.25	Si
SLV 3	1.02	-2088.19	-8615	-7657	-12236	2.08	2.08	-8181	12053	11281	33304	42042	5304	44586		3.64	Si
SLV 3	1.42	2039.97	-6221	-5530	-11948	2.08	2.08	-5908	11598	10856	33304	42042	5304	44160		3.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	10044	-9401	157.61	1976.1	12.54	Si
SLV 1	179667	0.25	10258	-9601	157.61	2015.16	12.79	Si
SLV 6	179667	0.25	12347	-11556	157.61	2389.99	15.16	Si
SLV 5	179667	0.25	12485	-11686	157.61	2414.3	15.32	Si
SLV 4	179667	0.25	12864	-12041	157.61	2480.97	15.74	Si
SLV 3	179667	0.25	13078	-12241	157.61	2518.37	15.98	Si
SLV 10	179667	0.25	17109	-16013	157.61	3199.38	20.3	Si
SLV 9	179667	0.25	17246	-16142	157.61	3221.89	20.44	Si
SLV 8	179667	0.25	21748	-20356	157.61	3927.86	24.92	Si
SLV 7	179667	0.25	21886	-20485	157.61	3948.6	25.05	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-21766	-24997	-899	0.528	2608.3	0.956	8.02759	4.30116	Si
SLV 11	-21527	-25543	-904	0.532	2584	0.955	8.09613	4.30116	Si
SLV 16	-26893	-26820	-571	0.46	3129.6	0.963	6.94908	3.0673	Si
SLV 15	-26522	-27668	-579	0.465	3091.9	0.962	7.02249	3.0673	Si
SLV 14	-23971	-26018	-67	0.522	2832.5	0.959	7.90659	3.0673	Si
SLV 13	-23601	-26865	-74	0.528	2794.8	0.958	8.00252	3.0673	Si
SLV 8	-14507	-22503	-674	0.734	1871.4	0.941	11.33899	4.30116	Si
SLV 7	-14268	-23049	-679	0.743	1847.3	0.94	11.4875	4.30116	Si
SLV 10	-12028	-22322	782	0.839	1620.6	0.933	13.06375	4.30116	Si
SLV 9	-11789	-22868	777	0.852	1596.5	0.933	13.27911	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.532	SLU 82	Si
V_SLU	3.77	SLU 84	Si
PF_SLV	2.17	SLV 1	Si
V_SLV	3.333	SLV 1	Si
PFFP_SLV	12.538	SLV 2	Si
R_SLV	1.866	SLV 12	Si

Maschio 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.013	5.876	-0.123	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.02	-3084.95	-20439	-0.0000574	0.0003743	0.0035	1.89	14755.72	16775.97	16775.97	5.44	No	Si
SLU 80	1.42	-264.2	-19185	-0.0000373	0.0003743	0.0035	1.89	14113.15	15980.98	15980.98	60.49	No	Si
SLU 83	1.02	-3220.09	-21190	-0.0000599	0.0003743	0.0035	1.89	15124.1	17226.31	17226.31	5.35	No	Si
SLU 83	1.42	-347.93	-19958	-0.0000394	0.0003743	0.0035	1.89	14513.33	16473.18	16473.18	47.35	No	Si
SLU 74	1.02	-3076.12	-20358	-0.0000572	0.0003743	0.0035	1.89	14715.14	16725.09	16725.09	5.44	No	Si
SLU 74	1.42	-266.66	-19107	-0.0000372	0.0003743	0.0035	1.89	14071.99	15931.4	15931.4	59.75	No	Si
SLU 82	1.02	-3196.97	-20962	-0.0000592	0.0003743	0.0035	1.89	15013.43	17091.21	17091.21	5.35	No	Si
SLU 82	1.42	-359.2	-19744	-0.000039	0.0003743	0.0035	1.89	14403.62	16336.96	16336.96	45.48	No	Si
SLU 76	1.02	-3062.08	-20212	-0.0000568	0.0003743	0.0035	1.89	14642.08	16633.69	16633.69	5.43	No	Si
SLU 76	1.42	-275.06	-18972	-0.000037	0.0003743	0.0035	1.89	14000.32	15845.57	15845.57	57.61	No	Si
SLU 75	1.02	-3075.33	-20353	-0.0000572	0.0003743	0.0035	1.89	14712.87	16722.26	16722.26	5.44	No	Si
SLU 75	1.42	-267.9	-19104	-0.0000372	0.0003743	0.0035	1.89	14070.5	15929.62	15929.62	59.46	No	Si
SLU 84	1.02	-3219.31	-21185	-0.0000599	0.0003743	0.0035	1.89	15121.92	17223.63	17223.63	5.35	No	Si
SLU 84	1.42	-349.17	-19955	-0.0000394	0.0003743	0.0035	1.89	14511.9	16471.4	16471.4	47.17	No	Si
SLU 79	1.02	-3085.73	-20444	-0.0000574	0.0003743	0.0035	1.89	14757.98	16778.8	16778.8	5.44	No	Si
SLU 79	1.42	-262.96	-19188	-0.0000373	0.0003743	0.0035	1.89	14114.63	15982.77	15982.77	60.78	No	Si
SLU 73	1.02	-3039.74	-19989	-0.0000562	0.0003743	0.0035	1.89	14528.84	16492.48	16492.48	5.43	No	Si
SLU 73	1.42	-285.1	-18760	-0.0000366	0.0003743	0.0035	1.89	13887.5	15711.75	15711.75	55.11	No	Si
SLU 81	1.02	-3197.75	-20966	-0.0000593	0.0003743	0.0035	1.89	15015.63	17093.89	17093.89	5.35	No	Si
SLU 81	1.42	-357.96	-19747	-0.000039	0.0003743	0.0035	1.89	14405.07	16338.76	16338.76	45.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	1.02	-2362.73	-12808	-0.0000369	0.0005615	0.0035	1.89		12007.79	12007.79	5.08		Si
SLD 7	1.42	689.35	-10917	-0.0000236	0.0005615	0.0035	1.89		9820.94	9820.94	14.25		Si
SLD 4	1.02	-2186.26	-10785	-0.0000321	0.0005615	0.0035	1.89		10369.49	10369.49	4.74		Si
SLD 4	1.42	245.2	-9474	-0.0000184	0.0005615	0.0035	1.89		8623.67	8623.67	35.17		Si
SLV 1	1.02	-2253.92	-7648	-0.0000266	0.0005615	0.0035	1.89		7737.18	7737.18	3.43		Si
SLV 1	1.42	-239.27	-6773	-0.0000135	0.0005615	0.0035	1.89		6982.18	6982.18	29.18		Si
SLV 8	1.02	-2562.96	-11095	-0.0000348	0.0005615	0.0035	1.89		10628.02	10628.02	4.15		Si
SLV 8	1.42	1707.77	-8150	-0.0000244	0.0005615	0.0035	1.89		7504.59	7504.59	4.39		Si
SLV 7	1.02	-2714.9	-11466	-0.0000364	0.0005615	0.0035	1.89		10937.56	10937.56	4.03		Si
SLV 7	1.42	1763.87	-8344	-0.0000251	0.0005615	0.0035	1.89		7669.42	7669.42	4.35		Si
SLD 3	1.02	-2287.49	-11032	-0.0000331	0.0005615	0.0035	1.89		10575.23	10575.23	4.62		Si
SLD 3	1.42	282.57	-9603	-0.0000189	0.0005615	0.0035	1.89		8731.53	8731.53	30.9		Si
SLV 2	1.02	-2018.14	-7073	-0.0000242	0.0005615	0.0035	1.89		7240.45	7240.45	3.59		Si
SLV 2	1.42	-326.32	-6473	-0.0000134	0.0005615	0.0035	1.89		6724.17	6724.17	20.61		Si
SLD 1	1.02	-2158.58	-11171	-0.0000326	0.0005615	0.0035	1.89		10691.26	10691.26	4.95		Si
SLD 1	1.42	-160.43	-10249	-0.0000194	0.0005615	0.0035	1.89		9923.94	9923.94	61.86		Si
SLV 4	1.02	-2312.72	-6746	-0.0000253	0.0005615	0.0035	1.89		6959.33	6959.33	3.01		Si
SLV 4	1.42	716.59	-4968	-0.0000129	0.0005615	0.0035	1.89		4739.63	4739.63	6.61		Si
SLV 3	1.02	-2548.5	-7321	-0.0000278	0.0005615	0.0035	1.89		7455.07	7455.07	2.93		Si
SLV 3	1.42	803.64	-5268	-0.000014	0.0005615	0.0035	1.89		5004.25	5004.25	6.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.02	-3098.46	-20581	-18295	-8019	1.89	1.89	-21510	9813	8346	33304	25468	4820	30287	No	3.78	Si
SLU 77	1.42	-256.62	-19319	-17172	-8103	1.89	1.89	-20191	9637	8196	33304	25468	4820	30287	No	3.74	Si
SLU 82	1.02	-3196.97	-20962	-18632	-7903	1.89	1.89	-21908	9865	8391	33304	25468	4820	30287	No	3.83	Si
SLU 82	1.42	-359.2	-19744	-17550	-7987	1.89	1.89	-20635	9696	8246	33304	25468	4820	30287	No	3.79	Si
SLU 81	1.02	-3197.75	-20966	-18636	-7912	1.89	1.89	-21912	9866	8391	33304	25468	4820	30287	No	3.83	Si
SLU 81	1.42	-357.96	-19747	-17553	-7996	1.89	1.89	-20638	9696	8247	33304	25468	4820	30287	No	3.79	Si
SLU 83	1.02	-3220.09	-21190	-18835	-8020	1.89	1.89	-22146	9897	8418	33304	25468	4820	30287	No	3.78	Si
SLU 83	1.42	-347.93	-19958	-17741	-8106	1.89	1.89	-20859	9726	8272	33304	25468	4820	30287	No	3.74	Si
SLU 79	1.02	-3085.73	-20444	-18172	-7955	1.89	1.89	-21366	9793	8329	33304	25468	4820	30287	No	3.81	Si
SLU 79	1.42	-262.96	-19188	-17056	-8038	1.89	1.89	-20054	9618	8180	33304	25468	4820	30287	No	3.77	Si
SLU 75	1.02	-3075.33	-20353	-18092	-7901	1.89	1.89	-21272	9781	8318	33304	25468	4820	30287	No	3.83	Si
SLU 75	1.42	-267.9	-19104	-16982	-7984	1.89	1.89	-19967	9607	8170	33304	25468	4820	30287	No	3.79	Si
SLU 80	1.02	-3084.95	-20439	-18168	-7946	1.89	1.89	-21362	9793	8329	33304	25468	4820	30287	No	3.81	Si
SLU 80	1.42	-264.2	-19185	-17054	-8029	1.89	1.89	-20051	9618	8180	33304	25468	4820	30287	No	3.77	Si
SLU 84	1.02	-3219.31	-21185	-18831	-8011	1.89	1.89	-22141	9897	8417	33304	25468	4820	30287	No	3.78	Si
SLU 84	1.42	-349.17	-19955	-17738	-8097	1.89	1.89	-20856	9725	8271	33304	25468	4820	30287	No	3.74	Si
SLU 74	1.02	-3076.12	-20358	-18096	-7910	1.89	1.89	-21277	9781	8319	33304	25468	4820	30287	No	3.83	Si
SLU 74	1.42	-266.66	-19107	-16984	-7993	1.89	1.89	-19970	9607	8171	33304	25468	4820	30287	No	3.79	Si
SLU 78	1.02	-3097.68	-20577	-18291	-8010	1.89	1.89	-21506	9812	8345	33304	25468	4820	30287	No	3.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	1.42	-257.87	-19316	-17170	-8094	1.89	1.89	-20188	9636	8196	33304	25468	4820	30287	No	3.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.02	-2548.5	-7321	-6508	-9592	1.89	1.7907	-7652	11947	9627	33304	38202	4820	42932		4.48	Si
SLV 3	1.42	803.64	-5268	-4683	-8176	1.89	1.89	-5506	11518	9796	33304	38202	4820	43021		5.26	Si
SLV 4	1.02	-2312.72	-6746	-5997	-8136	1.89	1.8066	-7051	11827	9615	33304	38202	4820	42919		5.27	Si
SLV 4	1.42	716.59	-4968	-4416	-6720	1.89	1.89	-5192	11455	9743	33304	38202	4820	43021		6.4	Si
SLD 11	1.02	-2313.25	-14506	-12894	-7334	1.89	1.89	-15161	13449	11438	33304	38202	4820	43021		5.87	Si
SLD 11	1.42	600.53	-12709	-11297	-7587	1.89	1.89	-13282	13073	11119	33304	38202	4820	43021		5.67	Si
SLV 11	1.02	-2598.88	-15432	-13718	-9561	1.89	1.89	-16129	13642	11603	33304	38202	4820	43021		4.5	Si
SLV 11	1.42	1557.29	-12530	-11138	-10074	1.89	1.89	-13095	13036	11087	33304	38202	4820	43021		4.27	Si
SLD 7	1.02	-2362.73	-12808	-11385	-7850	1.89	1.89	-13386	13094	11136	33304	38202	4820	43021		5.48	Si
SLD 7	1.42	689.35	-10917	-9704	-7721	1.89	1.89	-11410	12699	10800	33304	38202	4820	43021		5.57	Si
SLD 3	1.02	-2287.49	-11032	-9806	-7340	1.89	1.89	-11530	12723	10821	33304	38202	4820	43021		5.86	Si
SLD 3	1.42	282.57	-9603	-8536	-6762	1.89	1.89	-10036	12424	10567	33304	38202	4820	43021		6.36	Si
SLD 8	1.02	-2296.36	-12646	-11241	-7440	1.89	1.89	-13217	13060	11108	33304	38202	4820	43021		5.78	Si
SLD 8	1.42	664.85	-10832	-9629	-7312	1.89	1.89	-11321	12681	10785	33304	38202	4820	43021		5.88	Si
SLV 12	1.02	-2446.94	-15062	-13388	-8623	1.89	1.89	-15742	13565	11537	33304	38202	4820	43021		4.99	Si
SLV 12	1.42	1501.19	-12336	-10966	-9136	1.89	1.89	-12893	12995	11053	33304	38202	4820	43021		4.71	Si
SLV 7	1.02	-2714.9	-11466	-10192	-10764	1.89	1.89	-11983	12813	10898	33304	38202	4820	43021		4	Si
SLV 7	1.42	1763.87	-8344	-7417	-10391	1.89	1.89	-8720	12161	10343	33304	38202	4820	43021		4.14	Si
SLV 8	1.02	-2562.96	-11095	-9862	-9826	1.89	1.89	-11596	12736	10832	33304	38202	4820	43021		4.38	Si
SLV 8	1.42	1707.77	-8150	-7245	-9453	1.89	1.89	-8518	12120	10308	33304	38202	4820	43021		4.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	5699	-4847	143.22	1049.91	7.33	Si
SLV 4	179667	0.25	5957	-5067	143.22	1095.51	7.65	Si
SLV 1	179667	0.25	6169	-5246	143.22	1132.77	7.91	Si
SLV 3	179667	0.25	6427	-5466	143.22	1178.06	8.23	Si
SLV 6	179667	0.25	10785	-9172	143.22	1918.02	13.39	Si
SLV 5	179667	0.25	11087	-9430	143.22	1967.62	13.74	Si
SLV 8	179667	0.25	11644	-9904	143.22	2058.39	14.37	Si
SLV 7	179667	0.25	11947	-10161	143.22	2107.34	14.71	Si
SLV 10	179667	0.25	15330	-13038	143.22	2639.08	18.43	Si
SLV 9	179667	0.25	15632	-13295	143.22	2685.23	18.75	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-15523	-11748	1199	0.615	1937.9	0.947	9.42951	4.30116	Si
SLV 10	-15359	-11508	1188	0.62	1921.2	0.947	9.52041	4.30116	Si
SLV 5	-11902	-7819	1211	0.751	1571	0.937	11.65547	4.30116	Si
SLV 6	-11737	-7579	1200	0.76	1554.3	0.936	11.79802	4.30116	Si
SLV 13	-17789	-17586	586	0.584	2167.9	0.952	8.91848	3.0673	Si
SLV 14	-17534	-17213	568	0.592	2142	0.952	9.03679	3.0673	Si
SLV 15	-16071	-18603	69	0.66	1993.5	0.949	10.11411	3.0673	Si
SLV 16	-15816	-18231	52	0.669	1967.6	0.948	10.26162	3.0673	Si
SLV 11	-9797	-15139	-523	0.926	1358.3	0.929	14.49015	4.30116	Si
SLV 12	-9632	-14899	-534	0.937	1341.7	0.928	14.67051	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.346	SLU 81	Si
V_SLU	3.737	SLU 83	Si
PF_SLV	2.925	SLV 3	Si
V_SLV	3.997	SLV 7	Si
PFFP_SLV	7.331	SLV 2	Si
R_SLV	2.192	SLV 9	Si

Maschio 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	6.101	-0.123	-3.284	L2	L4	9.385	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	-0.98	15103.66	-101456	-0.0000415	0.0004492	0.0035	9.3849	382477.62	404317.08	404317.08	26.77	No	Si
SLU 76	1.99	10570.71	-123864	-0.0000493	0.0004492	0.0035	9.3849	441712.95	474211.13	474211.13	44.86	No	Si
SLU 59	-0.98	14088.32	-93734	-0.0000382	0.0004492	0.0035	9.3849	359948.94	376356.27	376356.27	26.71	No	Si
SLU 59	1.99	9574.48	-113040	-0.0000447	0.0004492	0.0035	9.3849	414241.07	444903.54	444903.54	46.47	No	Si
SLU 73	-0.98	14904	-100416	-0.0000411	0.0004492	0.0035	9.3849	379506.67	400533.99	400533.99	26.87	No	Si
SLU 73	1.99	10456.13	-122160	-0.0000486	0.0004492	0.0035	9.3849	437529.68	469570.22	469570.22	44.91	No	Si
SLU 55	-0.98	13973.86	-92702	-0.0000378	0.0004492	0.0035	9.3849	356856.54	372641.71	372641.71	26.67	No	Si
SLU 55	1.99	9876.32	-111515	-0.0000442	0.0004492	0.0035	9.3849	410196.71	440729.21	440729.21	44.62	No	Si
SLU 63	-0.98	14431.5	-96475	-0.0000394	0.0004492	0.0035	9.3849	368070.18	386249.72	386249.72	26.76	No	Si
SLU 63	1.99	9762.38	-116451	-0.0000461	0.0004492	0.0035	9.3849	423127.08	454093.55	454093.55	46.51	No	Si
SLU 84	-0.98	15561.3	-105229	-0.0000431	0.0004492	0.0035	9.3849	393090.61	418088.92	418088.92	26.87	No	Si
SLU 84	1.99	10456.77	-128800	-0.0000513	0.0004492	0.0035	9.3849	453534.65	487714.57	487714.57	46.64	No	Si
SLU 57	-0.98	14137.98	-94352	-0.0000385	0.0004492	0.0035	9.3849	361792.5	378584.54	378584.54	26.78	No	Si
SLU 57	1.99	9542.25	-114057	-0.0000451	0.0004492	0.0035	9.3849	416910.75	447637.39	447637.39	46.91	No	Si
SLU 52	-0.98	13774.2	-91663	-0.0000374	0.0004492	0.0035	9.3849	353720.02	368903.29	368903.29	26.78	No	Si
SLU 52	1.99	9761.73	-109811	-0.0000435	0.0004492	0.0035	9.3849	405630.77	434913.24	434913.24	44.55	No	Si
SLU 47	-0.98	12707.22	-83880	-0.0000341	0.0004492	0.0035	9.3849	329624.16	341106.2	341106.2	26.84	No	Si
SLU 47	1.99	9170.53	-99582	-0.0000393	0.0004492	0.0035	9.3849	377107.93	397501.73	397501.73	43.35	No	Si
SLU 80	-0.98	15218.12	-102488	-0.000042	0.0004492	0.0035	9.3849	385405.76	408075.99	408075.99	26.82	No	Si
SLU 80	1.99	10268.88	-125390	-0.0000499	0.0004492	0.0035	9.3849	445414.6	478376.14	478376.14	46.59	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	-0.98	27157.94	-84598	-0.0000373	0.0006738	0.0035	9.3849		364840.67	364840.67	13.43		Si
SLV 9	1.99	-13902.58	-105353	-0.000042	0.0006738	0.0035	9.3849		465573.59	465573.59	33.49		Si
SLV 5	-0.98	22943.74	-57097	-0.000026	0.0006738	0.0035	9.3849		256121.64	256121.64	11.16		Si
SLV 5	1.99	-12289.74	-71193	-0.0000288	0.0006738	0.0035	9.3849		333891.8	333891.8	27.17		Si
SLV 2	-0.98	10939.47	-25069	-0.0000115	0.0006738	0.0035	9.3849		118519.52	118519.52	10.83		Si
SLV 2	1.99	1693.52	-28965	-0.0000108	0.0006738	0.0035	9.3849		135765.84	135765.84	80.17		Si
SLV 4	-0.98	1155.6	-25208	-0.0000093	0.0006738	0.0035	9.3849		119139	119139	103.1		Si
SLV 4	1.99	14180.18	-27146	-0.000013	0.0006738	0.0035	9.3849		127761.85	127761.85	9.01		Si
SLV 10	-0.98	30549.17	-84515	-0.0000381	0.0006738	0.0035	9.3849		364555.68	364555.68	11.93		Si
SLV 10	1.99	-15835.48	-105155	-0.0000424	0.0006738	0.0035	9.3849		464849.89	464849.89	29.35		Si
SLV 3	-0.98	-4106.79	-25336	-0.00001	0.0006738	0.0035	9.3849		141015.17	141015.17	34.34		Si
SLV 3	1.99	17179.58	-27453	-0.0000138	0.0006738	0.0035	9.3849		129117.45	129117.45	7.52		Si
SLV 7	-0.98	-9669.16	-57560	-0.0000231	0.0006738	0.0035	9.3849		278575.74	278575.74	28.81		Si
SLV 7	1.99	29332.46	-65131	-0.0000305	0.0006738	0.0035	9.3849		289193.11	289193.11	9.86		Si
SLV 6	-0.98	26334.97	-57014	-0.0000268	0.0006738	0.0035	9.3849		255779.34	255779.34	9.71		Si
SLV 6	1.99	-14222.64	-70995	-0.0000291	0.0006738	0.0035	9.3849		333096.15	333096.15	23.42		Si
SLV 11	-0.98	-5454.97	-85061	-0.0000323	0.0006738	0.0035	9.3849		388738.99	388738.99	71.26		Si
SLV 11	1.99	27719.62	-99292	-0.000043	0.0006738	0.0035	9.3849		415970.64	415970.64	15.01		Si
SLV 8	-0.98	-6277.93	-57478	-0.0000223	0.0006738	0.0035	9.3849		278229.41	278229.41	44.32		Si
SLV 8	1.99	27399.56	-64933	-0.00003	0.0006738	0.0035	9.3849		288380.63	288380.63	10.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-0.98	15233.83	-104177	-92602	3425	9.3849	9.3849	-21927	10833	45752	33304	151772	23932	79056	No	23.08	Si
SLU 81	1.99	9717.56	-126829	-112737	5141	9.3849	9.3849	-26695	10833	45752	33304	151772	23932	79056	No	15.38	Si
SLU 76	-0.98	15103.66	-101456	-90183	3681	9.3849	9.3849	-21354	10833	45752	33304	151772	23932	79056	No	21.47	Si
SLU 76	1.99	10570.71	-123864	-110101	5384	9.3849	9.3849	-26070	10833	45752	33304	151772	23932	79056	No	14.68	Si
SLU 73	-0.98	14904	-100416	-89259	3669	9.3849	9.3849	-21135	10833	45752	33304	151772	23932	79056	No	21.55	Si
SLU 73	1.99	10456.13	-122160	-108587	5350	9.3849	9.3849	-25712	10833	45752	33304	151772	23932	79056	No	14.78	Si
SLU 77	-0.98	15139.97	-103094	-91639	3315	9.3849	9.3849	-21699	10833	45752	33304	151772	23932	79056	No	23.85	Si
SLU 77	1.99	9612.01	-126139	-112124	5028	9.3849	9.3849	-26549	10833	45752	33304	151772	23932	79056	No	15.72	Si
SLU 78	-0.98	15267.78	-103106	-91650	3572	9.3849	9.3849	-21701	10833	45752	33304	151772	23932	79056	No	22.13	Si
SLU 78	1.99	10236.64	-126406	-112361	5300	9.3849	9.3849	-26605	10833	45752	33304	151772	23932	79056	No	14.92	Si
SLU 75	-0.98	15068.12	-102066	-90726	3559	9.3849	9.3849	-21483	10833	45752	33304	151772	23932	79056	No	22.21	Si
SLU 75	1.99	10122.06	-124702	-110846	5266	9.3849	9.3849	-26247	10833	45752	33304	151772	23932	79056	No	15.01	Si
SLU 82	-0.98	15361.64	-104189	-92613	3681	9.3849	9.3849	-21929	10833	45752	33304	151772	23932	79056	No	21.48	Si
SLU 82	1.99	10342.19	-127096	-112975	5413	9.3849	9.3849	-26751	10833	45752	33304	151772	23932	79056	No	14.6	Si
SLU 84	-0.98	15561.3	-105229	-93537	3694	9.3849	9.3849	-22148	10833	45752	33304	151772	23932	79056	No	21.4	Si
SLU 84	1.99	10456.77	-128800	-114489	5448	9.3849	9.3849	-27109	10833	45752	33304	151772	23932	79056	No	14.51	Si
SLU 80	-0.98	15218.12	-102488	-91100	3523	9.3849	9.3849	-21571	10833	45752	33304	151772	23932	79056	No	22.44	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.99	10268.88	-125390	-111458	5237	9.3849	9.3849	-26392	10833	45752	33304	151772	23932	79056	No	15.1	Si
SLU 83	-0.98	15433.49	-105217	-93526	3437	9.3849	9.3849	-22146	10833	45752	33304	151772	23932	79056	No	23	Si
SLU 83	1.99	9832.14	-128533	-114252	5176	9.3849	9.3849	-27053	10833	45752	33304	151772	23932	79056	No	15.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	-0.98	27157.94	-84598	-75198	28110	9.3849	9.3849	-17806	16061	67830	33304	227658	23932	101134		3.6	Si
SLV 9	1.99	-13902.58	-105353	-93647	27598	9.3849	9.3849	-22174	16250	68627	33304	227658	23932	101932		3.69	Si
SLV 11	-0.98	-5454.97	-85061	-75610	-26300	9.3849	9.3849	-17903	16081	67912	33304	227658	23932	101217		3.85	Si
SLV 11	1.99	27719.62	-99292	-88259	-22490	9.3849	9.3849	-20899	16250	68627	33304	227658	23932	101932		4.53	Si
SLV 5	-0.98	22943.74	-57097	-50753	26073	9.3849	9.3849	-12017	14903	62941	33304	227658	23932	96245		3.69	Si
SLV 5	1.99	-12289.74	-71193	-63283	24614	9.3849	9.3849	-14984	15497	65447	33304	227658	23932	98751		4.01	Si
SLV 14	-0.98	24986.79	-116740	-103769	17362	9.3849	9.3849	-24571	16250	68627	33304	227658	23932	101932		5.87	Si
SLV 14	1.99	-3682.6	-142833	-126963	19453	9.3849	9.3849	-30063	16250	68627	33304	227658	23932	101932		5.24	Si
SLV 6	-0.98	26334.97	-57014	-50679	30713	9.3849	9.3849	-12000	14900	62926	33304	227658	23932	96230		3.13	Si
SLV 6	1.99	-14222.64	-70995	-63107	29244	9.3849	9.3849	-14943	15489	65412	33304	227658	23932	98716		3.38	Si
SLV 8	-0.98	-6277.93	-57478	-51091	-23697	9.3849	9.3849	-12098	14920	63009	33304	227658	23932	96313		4.06	Si
SLV 8	1.99	27399.56	-64933	-57718	-20844	9.3849	9.3849	-13667	15233	64334	33304	227658	23932	97638		4.68	Si
SLV 10	-0.98	30549.17	-84515	-75125	32750	9.3849	9.3849	-17789	16058	67815	33304	227658	23932	101120		3.09	Si
SLV 10	1.99	-15835.48	-105155	-93471	32227	9.3849	9.3849	-22133	16250	68627	33304	227658	23932	101932		3.16	Si
SLV 12	-0.98	-2063.74	-84979	-75537	-21660	9.3849	9.3849	-17886	16077	67898	33304	227658	23932	101202		4.67	Si
SLV 12	1.99	25786.72	-99093	-88083	-17861	9.3849	9.3849	-20857	16250	68627	33304	227658	23932	101932		5.71	Si
SLD 10	-0.98	19253.51	-76799	-68266	15614	9.3849	9.3849	-16164	15733	66443	33304	227658	23932	99748		6.39	Si
SLD 10	1.99	-3283.37	-93730	-83316	16055	9.3849	9.3849	-19728	16250	68627	33304	227658	23932	101932		6.35	Si
SLV 7	-0.98	-9669.16	-57560	-51165	-28336	9.3849	9.3849	-12115	14923	63023	33304	227658	23932	96328		3.4	Si
SLV 7	1.99	29332.46	-65131	-57894	-25473	9.3849	9.3849	-13709	15242	64369	33304	227658	23932	97673		3.83	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.505 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	215625	0.25	6038	-25501	711.15	5548.73	7.8	Si
SLV 3	215625	0.25	6088	-25709	711.15	5592.4	7.86	Si
SLV 2	215625	0.25	6224	-26287	711.15	5713.63	8.03	Si
SLV 1	215625	0.25	6274	-26494	711.15	5757.21	8.1	Si
SLV 8	215625	0.25	14479	-61148	711.15	12671.41	17.82	Si
SLV 7	215625	0.25	14511	-61282	711.15	12696.78	17.85	Si
SLV 6	215625	0.25	15099	-63766	711.15	13165.43	18.51	Si
SLV 5	215625	0.25	15131	-63900	711.15	13190.59	18.55	Si
SLV 12	215625	0.25	21892	-92456	711.15	18317.83	25.76	Si
SLV 11	215625	0.25	21924	-92590	711.15	18340.76	25.79	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.505 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-105353	-84598	117	0.534	12494.7	0.958	8.10038	4.30116	Si
SLV 10	-105155	-84515	116	0.535	12474.6	0.958	8.11293	4.30116	Si
SLV 11	-99292	-85061	323	0.557	11878.5	0.956	8.47048	4.30116	Si
SLV 12	-99093	-84979	321	0.558	11858.4	0.956	8.48443	4.30116	Si
SLV 13	-143140	-116867	-215	0.421	16339.2	0.967	6.32966	3.0673	Si
SLV 14	-142833	-116740	-218	0.422	16307.9	0.967	6.34015	3.0673	Si
SLV 15	-141322	-117007	-154	0.426	16154.1	0.967	6.39989	3.0673	Si
SLV 16	-141014	-116879	-156	0.426	16122.8	0.967	6.41065	3.0673	Si
SLV 5	-71193	-57097	464	0.72	9025.5	0.944	11.07609	4.30116	Si
SLV 6	-70995	-57014	463	0.721	9005.5	0.944	11.1015	4.30116	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	26.667	SLU 55	Si
V_SLU	14.512	SLU 84	Si
PF_SLV	7.516	SLV 3	Si
V_SLV	3.088	SLV 10	Si
PFFP_SLV	7.802	SLV 4	Si
R_SLV	1.883	SLV 9	Si

Maschio 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.284	-24.633	5.876	L4	L5	9.16	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	1.99	-12579.17	-120074	-0.0000732	0.0004492	0.0035	9.16	339229.45	480303.57	480303.57	38.18	No	Si
SLU 81	5.46	-13480.83	-94099	-0.0000578	0.0004492	0.0035	9.16	301567.14	405519.73	405519.73	30.08	No	Si
SLU 32	1.99	-10301.86	-99491	-0.0000597	0.0004492	0.0035	9.16	311007.48	422209.5	422209.5	40.98	No	Si
SLU 32	5.46	-11254.81	-78679	-0.0000478	0.0004492	0.0035	9.16	269881.11	356383.87	356383.87	31.67	No	Si
SLU 84	1.99	-13334.87	-121986	-0.0000747	0.0004492	0.0035	9.16	341223.06	485401.02	485401.02	36.4	No	Si
SLU 84	5.46	-12857.08	-95804	-0.0000585	0.0004492	0.0035	9.16	304643.88	410796.74	410796.74	31.95	No	Si
SLU 77	1.99	-12353.85	-119635	-0.0000728	0.0004492	0.0035	9.16	338757.43	479135.15	479135.15	38.78	No	Si
SLU 77	5.46	-13025.72	-94571	-0.0000579	0.0004492	0.0035	9.16	302427.05	406980	406980	31.24	No	Si
SLU 74	1.99	-12266.55	-117991	-0.0000718	0.0004492	0.0035	9.16	336937.03	474752.96	474752.96	38.7	No	Si
SLU 74	5.46	-13003.43	-92944	-0.0000569	0.0004492	0.0035	9.16	299434.71	401945.11	401945.11	30.91	No	Si
SLU 39	1.99	-10614.49	-101574	-0.0000611	0.0004492	0.0035	9.16	314426	428264.32	428264.32	40.35	No	Si
SLU 39	5.46	-11732.21	-79834	-0.0000486	0.0004492	0.0035	9.16	272495.06	360206.7	360206.7	30.7	No	Si
SLU 79	1.99	-12303.92	-118697	-0.0000722	0.0004492	0.0035	9.16	337728.23	476634.28	476634.28	38.74	No	Si
SLU 79	5.46	-12859.64	-93656	-0.0000573	0.0004492	0.0035	9.16	300753.44	404147.98	404147.98	31.43	No	Si
SLU 41	1.99	-10701.79	-103218	-0.0000622	0.0004492	0.0035	9.16	317035.36	432999.91	432999.91	40.46	No	Si
SLU 41	5.46	-11754.49	-81461	-0.0000496	0.0004492	0.0035	9.16	276110.72	365591.2	365591.2	31.1	No	Si
SLU 82	1.99	-13247.57	-120342	-0.0000736	0.0004492	0.0035	9.16	339515.64	481018.83	481018.83	36.31	No	Si
SLU 82	5.46	-12834.79	-94177	-0.0000576	0.0004492	0.0035	9.16	301710.17	405761.86	405761.86	31.61	No	Si
SLU 83	1.99	-12666.47	-121718	-0.0000743	0.0004492	0.0035	9.16	340949.77	484685.75	484685.75	38.27	No	Si
SLU 83	5.46	-13503.11	-95726	-0.0000587	0.0004492	0.0035	9.16	304504.57	410554.61	410554.61	30.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.99	-12724.32	-96838	-0.0000579	0.0006738	0.0035	9.16		432064.72	432064.72	33.96		Si
SLV 8	5.46	-77576.06	-71280	-0.0000673	0.0006738	0.0035	9.16		341528.27	341528.27	4.4		Si
SLV 10	1.99	-3176.21	-65649	-0.0000367	0.0006738	0.0035	9.16		320926.28	320926.28	101.04		Si
SLV 10	5.46	57003.52	-55341	-0.0000506	0.0006738	0.0035	9.16		241157.84	241157.84	4.23		Si
SLV 11	1.99	-13072.42	-61916	-0.0000383	0.0006738	0.0035	9.16		306750.9	306750.9	23.47		Si
SLV 11	5.46	-66750.83	-51749	-0.0000521	0.0006738	0.0035	9.16		267564.62	267564.62	4.01		Si
SLV 5	1.99	-5265.24	-99656	-0.0000567	0.0006738	0.0035	9.16		441682.08	441682.08	83.89		Si
SLV 5	5.46	52408.33	-74919	-0.0000601	0.0006738	0.0035	9.16		312646.59	312646.59	5.97		Si
SLV 14	1.99	-4861.66	-24419	-0.0000147	0.0006738	0.0035	9.16		156972.92	156972.92	32.29		Si
SLV 14	5.46	20735.1	-31255	-0.0000241	0.0006738	0.0035	9.16		143972.29	143972.29	6.94		Si
SLV 7	1.99	-13942.88	-96381	-0.0000581	0.0006738	0.0035	9.16		430482.63	430482.63	30.87		Si
SLV 7	5.46	-74461.04	-71304	-0.0000661	0.0006738	0.0035	9.16		341613.41	341613.41	4.59		Si
SLV 9	1.99	-4394.77	-65192	-0.0000369	0.0006738	0.0035	9.16		319254.61	319254.61	72.64		Si
SLV 9	5.46	60118.54	-55364	-0.0000517	0.0006738	0.0035	9.16		241249.24	241249.24	4.01		Si
SLV 13	1.99	-6752.59	-23710	-0.000015	0.0006738	0.0035	9.16		153969.72	153969.72	22.8		Si
SLV 13	5.46	25568.88	-31291	-0.0000258	0.0006738	0.0035	9.16		144123.66	144123.66	5.64		Si
SLV 6	1.99	-4046.67	-100113	-0.0000565	0.0006738	0.0035	9.16		443174.59	443174.59	109.52		Si
SLV 6	5.46	49293.31	-74896	-0.0000589	0.0006738	0.0035	9.16		312568.74	312568.74	6.34		Si
SLV 12	1.99	-11853.85	-62373	-0.0000381	0.0006738	0.0035	9.16		308512.15	308512.15	26.03		Si
SLV 12	5.46	-69865.85	-51726	-0.0000532	0.0006738	0.0035	9.16		267474.92	267474.92	3.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.99	-12972.32	-118965	-84867	-4559	9.16	9.16	-33089	10833	27785	108749	92172	46716	136534	No	29.95	Si
SLU 80	5.46	-12213.61	-93734	-66868	-3493	9.16	9.16	-26071	10833	27785	108749	92172	46716	136534	No	39.09	Si
SLU 82	1.99	-13247.57	-120342	-85849	-4435	9.16	9.16	-33472	10833	27785	108749	92172	46716	136534	No	30.79	Si
SLU 82	5.46	-12834.79	-94177	-67184	-3363	9.16	9.16	-26195	10833	27785	108749	92172	46716	136534	No	40.6	Si
SLU 84	1.99	-13334.87	-121986	-87022	-4534	9.16	9.16	-33929	10833	27785	108749	92172	46716	136534	No	30.11	Si
SLU 84	5.46	-12857.08	-95804	-68344	-3448	9.16	9.16	-26647	10833	27785	108749	92172	46716	136534	No	39.59	Si
SLU 75	1.99	-12934.95	-118259	-84363	-4487	9.16	9.16	-32893	10833	27785	108749	92172	46716	136534	No	30.43	Si
SLU 75	5.46	-12357.4	-93022	-66360	-3427	9.16	9.16	-25873	10833	27785	108749	92172	46716	136534	No	39.85	Si
SLU 76	1.99	-13330.61	-117500	-83822	-4680	9.16	9.16	-32682	10833	27785	108749	92172	46716	136534	No	29.18	Si
SLU 76	5.46	-11760.63	-92160	-65744	-3584	9.16	9.16	-25633	10833	27785	108749	92172	46716	136534	No	38.1	Si
SLU 70	1.99	-11972.6	-109019	-77771	-4412	9.16	9.16	-30323	10833	27785	108749	92172	46716	136534	No	30.94	Si
SLU 70	5.46	-10826.25	-86024	-61367	-3416	9.16	9.16	-23927	10833	27785	108749	92172	46716	136534	No	39.97	Si
SLU 68	1.99	-12280.97	-106615	-76057	-4506	9.16	9.16	-29654	10833	27785	108749	92172	46716	136534	No	30.3	Si
SLU 68	5.46	-10207.2	-83534	-59591	-3488	9.16	9.16	-23234	10833	27785	108749	92172	46716	136534	No	39.14	Si
SLU 65	1.99	-12193.67	-104971	-74884	-4407	9.16	9.16	-29197	10833	27785	108749	92172	46716	136534	No	30.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	5.46	-10184.91	-81908	-58431	-3402	9.16	9.16	-22782	10833	27785	108749	92172	46716	136534	No	40.13	Si
SLU 78	1.99	-13022.24	-119904	-85536	-4586	9.16	9.16	-33350	10833	27785	108749	92172	46716	136534	No	29.77	Si
SLU 78	5.46	-12379.68	-94649	-67520	-3512	9.16	9.16	-26326	10833	27785	108749	92172	46716	136534	No	38.88	Si
SLU 73	1.99	-13243.32	-115856	-82649	-4580	9.16	9.16	-32224	10833	27785	108749	92172	46716	136534	No	29.81	Si
SLU 73	5.46	-11738.35	-90533	-64584	-3498	9.16	9.16	-25181	10833	27785	108749	92172	46716	136534	No	39.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.99	-12724.32	-96838	-69082	37596	9.16	9.16	-26935	16250	41678	108749	138259	46716	150427		4	Si
SLV 8	5.46	-77576.06	-71280	-50850	32642	9.16	9.16	-19826	16250	41678	108749	138259	46716	150427		4.61	Si
SLV 11	1.99	-13072.42	-61916	-44169	28581	9.16	9.16	-17221	15944	40894	108749	138259	46716	149643		5.24	Si
SLV 11	5.46	-66750.83	-51749	-36916	24043	9.16	9.16	-14393	15379	39443	108749	138259	46716	148192		6.16	Si
SLV 13	1.99	-6752.59	-23710	-16914	-24355	9.16	9.16	-6595	13819	35443	108749	138259	46716	144192		5.92	Si
SLV 13	5.46	25568.88	-31291	-22323	-21356	9.16	9.16	-8703	14241	36525	108749	138259	46716	145273		6.8	Si
SLV 10	1.99	-3176.21	-65649	-46832	-38512	9.16	9.16	-18260	16152	41426	108749	138259	46716	150175		3.9	Si
SLV 10	5.46	57003.52	-55341	-39479	-32196	9.16	9.16	-15393	15579	39956	108749	138259	46716	148705		4.62	Si
SLV 12	1.99	-11853.85	-62373	-44495	33536	9.16	9.16	-17348	15970	40959	108749	138259	46716	149708		4.46	Si
SLV 12	5.46	-69865.85	-51726	-36900	28979	9.16	9.16	-14387	15377	39440	108749	138259	46716	148189		5.11	Si
SLV 9	1.99	-4394.77	-65192	-46506	-43468	9.16	9.16	-18132	16126	41361	108749	138259	46716	150110		3.45	Si
SLV 9	5.46	60118.54	-55364	-39496	-37131	9.16	9.16	-15399	15580	39959	108749	138259	46716	148708		4	Si
SLV 6	1.99	-4046.67	-100113	-71418	-34452	9.16	9.16	-27846	16250	41678	108749	138259	46716	150427		4.37	Si
SLV 6	5.46	49293.31	-74896	-53429	-28532	9.16	9.16	-20832	16250	41678	108749	138259	46716	150427		5.27	Si
SLV 7	1.99	-13942.88	-96381	-68756	32641	9.16	9.16	-26807	16250	41678	108749	138259	46716	150427		4.61	Si
SLV 7	5.46	-74461.04	-71304	-50866	27707	9.16	9.16	-19832	16250	41678	108749	138259	46716	150427		5.43	Si
SLV 5	1.99	-5265.24	-99656	-71092	-39408	9.16	9.16	-27719	16250	41678	108749	138259	46716	150427		3.82	Si
SLV 5	5.46	52408.33	-74919	-53446	-33468	9.16	9.16	-20838	16250	41678	108749	138259	46716	150427		4.49	Si
SLD 9	1.99	-6613.95	-74257	-52973	-20776	9.16	9.16	-20654	16250	41678	108749	138259	46716	150427		7.24	Si
SLD 9	5.46	21591.43	-59928	-42751	-17588	9.16	9.16	-16668	15834	40610	108749	138259	46716	149359		8.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-27516	0.32	758.09	3626.76	5394.09	4510.43	5.95	Si
SLV 16	-27824	0.32	758.09	3664.83	5441.18	4553.01	6.01	Si
SLV 13	-29073	0.32	758.09	3818.51	5631.97	4725.24	6.23	Si
SLV 14	-29381	0.32	758.09	3856.3	5678.91	4767.61	6.29	Si
SLV 11	-56596	0.32	758.09	6969.52	9753.06	8361.29	11.03	Si
SLV 12	-56795	0.32	758.09	6990.61	9782.31	8386.46	11.06	Si
SLV 9	-61787	0.32	758.09	7513.17	10518.14	9015.66	11.89	Si
SLV 10	-61985	0.32	758.09	7533.66	10547.44	9040.55	11.93	Si
SLV 7	-83032	0.32	758.09	9571.23	13635.04	11603.14	15.31	Si
SLV 8	-83231	0.32	758.09	9589.21	13663.6	11626.4	15.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-74919	-99656	-1042	0.652	8882.5	0.958	9.89083	10.55427	No
SLV 6	-74896	-100113	-1040	0.652	8880.1	0.958	9.89383	10.55427	No
SLV 7	-71304	-96381	-941	0.681	8514.9	0.957	10.35064	10.55427	No
SLV 8	-71280	-96838	-939	0.681	8512.6	0.957	10.35393	10.55427	No
SLV 9	-55364	-65192	982	0.842	6896	0.948	12.90987	10.55427	Si
SLV 10	-55341	-65649	984	0.842	6893.6	0.948	12.91421	10.55427	Si
SLV 11	-51749	-61916	1083	0.889	6529.2	0.945	13.6641	10.55427	Si
SLV 12	-51726	-62373	1085	0.889	6526.8	0.945	13.66902	10.55427	Si
SLV 1	-96474	-138593	-3368	0.504	11075.3	0.966	7.57863	4.78007	Si
SLV 2	-96438	-139302	-3366	0.504	11071.6	0.966	7.58148	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.081	SLU 81	Si
V_SLU	29.175	SLU 76	Si
PF_SLV	3.828	SLV 12	Si
V_SLV	3.453	SLV 9	Si
PFFP_SLV	5.95	SLV 15	Si
R_SLV	0.937	SLV 5	No

Maschio 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.826	-24.633	5.826	L4	L5	1.87	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	2.89	507.8	-15706	-0.0000525	0.0003743	0.0035	1.87	10358.48	11571.55	11571.55	22.79	No	Si
SLU 34	4.79	-122.38	-15750	-0.0000487	0.0003743	0.0035	1.87	10375.37	12510.71	12510.71	102.22	No	Si
SLU 33	2.89	516.37	-15848	-0.000053	0.0003743	0.0035	1.87	10412.36	11650.97	11650.97	22.56	No	Si
SLU 33	4.79	-128.51	-15876	-0.0000492	0.0003743	0.0035	1.87	10423.18	12574.24	12574.24	97.84	No	Si
SLU 32	2.89	514.65	-15831	-0.000053	0.0003743	0.0035	1.87	10405.93	11641.43	11641.43	22.62	No	Si
SLU 32	4.79	-127.68	-15817	-0.000049	0.0003743	0.0035	1.87	10400.84	12544.67	12544.67	98.25	No	Si
SLU 42	2.89	560.55	-16409	-0.0000553	0.0003743	0.0035	1.87	10619.56	11968.91	11968.91	21.35	No	Si
SLU 42	4.79	-180.77	-16602	-0.0000521	0.0003743	0.0035	1.87	10688.23	12902.3	12902.3	71.38	No	Si
SLU 36	2.89	522.58	-16152	-0.0000541	0.0003743	0.0035	1.87	10526.06	11822.88	11822.88	22.62	No	Si
SLU 36	4.79	-135	-16210	-0.0000504	0.0003743	0.0035	1.87	10547.53	12734.82	12734.82	94.33	No	Si
SLU 39	2.89	552.63	-16088	-0.0000542	0.0003743	0.0035	1.87	10502.32	11786.48	11786.48	21.33	No	Si
SLU 39	4.79	-173.45	-16209	-0.0000507	0.0003743	0.0035	1.87	10546.94	12734.07	12734.07	73.42	No	Si
SLU 41	2.89	558.83	-16392	-0.0000553	0.0003743	0.0035	1.87	10613.47	11959.25	11959.25	21.4	No	Si
SLU 41	4.79	-179.93	-16543	-0.0000519	0.0003743	0.0035	1.87	10667.39	12878.51	12878.51	71.57	No	Si
SLU 31	2.89	501.59	-15402	-0.0000514	0.0003743	0.0035	1.87	10240.02	11400.56	11400.56	22.73	No	Si
SLU 31	4.79	-115.9	-15416	-0.0000476	0.0003743	0.0035	1.87	10245.64	12329.83	12329.83	106.38	No	Si
SLU 35	2.89	520.86	-16135	-0.000054	0.0003743	0.0035	1.87	10519.82	11813.28	11813.28	22.68	No	Si
SLU 35	4.79	-134.16	-16151	-0.0000502	0.0003743	0.0035	1.87	10525.88	12707.37	12707.37	94.72	No	Si
SLU 40	2.89	554.35	-16104	-0.0000543	0.0003743	0.0035	1.87	10508.6	11796.08	11796.08	21.28	No	Si
SLU 40	4.79	-174.28	-16268	-0.0000509	0.0003743	0.0035	1.87	10568.47	12761.15	12761.15	73.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	2.89	-5305.22	-11620	-0.0000905	0.0005615	0.0035	1.87		10535.2	10535.2	1.99		Si
SLV 16	4.79	2481.1	-2022	-0.0046437	0.0005615	0.0035	1.496		2042.68	2042.68	0.82		No
SLV 11	2.89	-3530.89	-12772	-0.0000711	0.0005615	0.0035	1.87		11376.07	11376.07	3.22		Si
SLV 11	4.79	648.96	-2136	-0.0000119	0.0005615	0.0035	1.87		2144.36	2144.36	3.3		Si
SLV 15	2.89	-4638.14	-10979	-0.0000791	0.0005615	0.0035	1.87		10068.07	10068.07	2.17		Si
SLV 15	4.79	1982.69	-2762	-0.0000458	0.0005615	0.0035	1.87		2698.93	2698.93	1.36		Si
SLV 14	2.89	-3668.35	-11268	-0.0000677	0.0005615	0.0035	1.87		10280.11	10280.11	2.8		Si
SLV 14	4.79	2422.18	-6936	-0.0000425	0.0005615	0.0035	1.87		6242.48	6242.48	2.58		Si
SLV 5	2.89	4612.94	-12686	-0.0000822	0.0005615	0.0035	1.87		10394.23	10394.23	2.25		Si
SLV 5	4.79	-825.54	-23003	-0.0000775	0.0005615	0.0035	1.87		17837.37	17837.37	21.61		Si
SLV 6	2.89	4183.05	-13099	-0.0000786	0.0005615	0.0035	1.87		10684.37	10684.37	2.55		Si
SLV 6	4.79	-504.34	-22527	-0.0000727	0.0005615	0.0035	1.87		17573.11	17573.11	34.84		Si
SLV 2	2.89	5290.29	-14892	-0.0000962	0.0005615	0.0035	1.87		11957.97	11957.97	2.26		Si
SLV 2	4.79	-1838.07	-21901	-0.0000841	0.0005615	0.0035	1.87		17228.73	17228.73	9.37		Si
SLV 12	2.89	-3960.78	-13185	-0.0000766	0.0005615	0.0035	1.87		11670	11670	2.95		Si
SLV 12	4.79	970.15	-1659	-0.0000167	0.0005615	0.0035	1.87		1715.31	1715.31	1.77		Si
SLV 3	2.89	4320.51	-14602	-0.0000848	0.0005615	0.0035	1.87		11750.9	11750.9	2.72		Si
SLV 3	4.79	-2277.56	-17727	-0.0000748	0.0005615	0.0035	1.87		14720.03	14720.03	6.46		Si
SLV 1	2.89	5957.38	-14250	-0.0001038	0.0005615	0.0035	1.87		11499.81	11499.81	1.93		Si
SLV 1	4.79	-2336.49	-22641	-0.0000916	0.0005615	0.0035	1.87		17635.94	17635.94	7.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.89	550.21	-18988	-15811	1299	1.87	1.87	-30198	10833	5672	38062	15679	4768	20447	No	15.73	Si
SLU 80	4.79	-41.68	-18665	-15543	1375	1.87	1.87	-29684	10833	5672	38062	15679	4768	20447	No	14.87	Si
SLU 81	2.89	589.98	-19076	-15885	1381	1.87	1.87	-30338	10833	5672	38062	15679	4768	20447	No	14.81	Si
SLU 81	4.79	-86.82	-18828	-15679	1457	1.87	1.87	-29944	10833	5672	38062	15679	4768	20447	No	14.03	Si
SLU 41	2.89	558.83	-16392	-13650	1347	1.87	1.87	-26069	10420	5456	38062	15679	4768	20447	No	15.18	Si
SLU 41	4.79	-179.93	-16543	-13775	1413	1.87	1.87	-26309	10452	5473	38062	15679	4768	20447	No	14.47	Si
SLU 39	2.89	552.63	-16088	-13396	1326	1.87	1.87	-25585	10356	5422	38062	15679	4768	20447	No	15.42	Si
SLU 39	4.79	-173.45	-16209	-13497	1391	1.87	1.87	-25778	10381	5436	38062	15679	4768	20447	No	14.7	Si
SLU 82	2.89	591.7	-19093	-15899	1403	1.87	1.87	-30365	10833	5672	38062	15679	4768	20447	No	14.58	Si
SLU 82	4.79	-87.65	-18887	-15728	1479	1.87	1.87	-30038	10833	5672	38062	15679	4768	20447	No	13.83	Si
SLU 83	2.89	596.19	-19380	-16138	1401	1.87	1.87	-30822	10833	5672	38062	15679	4768	20447	No	14.59	Si
SLU 83	4.79	-93.3	-19162	-15957	1479	1.87	1.87	-30476	10833	5672	38062	15679	4768	20447	No	13.83	Si
SLU 42	2.89	560.55	-16409	-13664	1369	1.87	1.87	-26096	10424	5458	38062	15679	4768	20447	No	14.94	Si
SLU 42	4.79	-180.77	-16602	-13824	1435	1.87	1.87	-26403	10465	5479	38062	15679	4768	20447	No	14.25	Si
SLU 40	2.89	554.35	-16104	-13410	1348	1.87	1.87	-25612	10359	5424	38062	15679	4768	20447	No	15.16	Si
SLU 40	4.79	-174.28	-16268	-13546	1413	1.87	1.87	-25872	10394	5442	38062	15679	4768	20447	No	14.47	Si
SLU 78	2.89	559.93	-19140	-15938	1314	1.87	1.87	-30440	10833	5672	38062	15679	4768	20447	No	15.56	Si
SLU 78	4.79	-48.37	-18830	-15680	1390	1.87	1.87	-29947	10833	5672	38062	15679	4768	20447	No	14.71	Si
SLU 84	2.89	597.91	-19397	-16152	1423	1.87	1.87	-30849	10833	5672	38062	15679	4768	20447	No	14.37	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.79	-94.14	-19221	-16006	1501	1.87	1.87	-30569	10833	5672	38062	15679	4768	20447	No	13.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.89	3653.42	-15243	-12693	5084	1.87	1.87	-24243	15265	7993	38062	23518	4768	28287		5.56	Si
SLV 4	4.79	-1779.15	-16988	-14146	4519	1.87	1.87	-27017	15820	8283	38062	23518	4768	28287		6.26	Si
SLV 16	2.89	-5305.22	-11620	-9676	-7220	1.87	1.4353	-24363	15290	6145	38062	23518	4768	28287		3.92	Si
SLV 16	4.79	2481.1	-2022	-1684	-6557	1.496	0	0	0	0	38062	18814	3815	22629		3.45	Si
SLV 15	2.89	-4638.14	-10979	-9143	-5927	1.87	1.5376	-21464	14710	6333	38062	23518	4768	28287		4.77	Si
SLV 15	4.79	1982.69	-2762	-2300	-5265	1.87	0.6512	-4392	11295	2059	38062	23518	4768	28287		5.37	Si
SLV 3	2.89	4320.51	-14602	-12160	6377	1.87	1.87	-23223	15061	7886	38062	23518	4768	28287		4.44	Si
SLV 3	4.79	-2277.56	-17727	-14762	5812	1.87	1.87	-28193	16055	8406	38062	23518	4768	28287		4.87	Si
SLV 5	2.89	4612.94	-12686	-10564	6786	1.87	1.7141	-20175	14452	6936	38062	23518	4768	28287		4.17	Si
SLV 5	4.79	-825.54	-23003	-19155	6664	1.87	1.87	-36584	16250	8508	38062	23518	4768	28287		4.24	Si
SLV 12	2.89	-3960.78	-13185	-10979	-5346	1.87	1.87	-20969	14610	7650	38062	23518	4768	28287		5.29	Si
SLV 12	4.79	970.15	-1659	-1382	-5121	1.87	1.051	-2639	10944	3221	38062	23518	4768	28287		5.52	Si
SLV 6	2.89	4183.05	-13099	-10908	5953	1.87	1.8469	-20832	14583	7542	38062	23518	4768	28287		4.75	Si
SLV 6	4.79	-504.34	-22527	-18758	5831	1.87	1.87	-35826	16250	8508	38062	23518	4768	28287		4.85	Si
SLV 1	2.89	5957.38	-14250	-11867	8660	1.87	1.5508	-22664	14949	6491	38062	23518	4768	28287		3.27	Si
SLV 1	4.79	-2336.49	-22641	-18853	8100	1.87	1.87	-36007	16250	8508	38062	23518	4768	28287		3.49	Si
SLV 2	2.89	5290.29	-14892	-12400	7367	1.87	1.7392	-23683	15153	7379	38062	23518	4768	28287		3.84	Si
SLV 2	4.79	-1838.07	-21901	-18237	6808	1.87	1.87	-34831	16250	8508	38062	23518	4768	28287		4.15	Si
SLV 14	2.89	-3668.35	-11268	-9383	-4937	1.87	1.8283	-17921	14001	7168	38062	23518	4768	28287		5.73	Si
SLV 14	4.79	2422.18	-6936	-5775	-4269	1.87	1.7573	-11030	12623	6211	38062	23518	4768	28287		6.63	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.32	13127	-6873	154.76	879.51	5.68	Si
SLV 12	179667	0.32	13238	-6931	154.76	886.24	5.73	Si
SLV 15	179667	0.32	15731	-8236	154.76	1034.33	6.68	Si
SLV 16	179667	0.32	15903	-8327	154.76	1044.34	6.75	Si
SLV 7	179667	0.32	16583	-8683	154.76	1083.6	7	Si
SLV 8	179667	0.32	16694	-8741	154.76	1089.96	7.04	Si
SLV 13	179667	0.32	21446	-11229	154.76	1351.28	8.73	Si
SLV 14	179667	0.32	21618	-11319	154.76	1360.35	8.79	Si
SLV 3	179667	0.32	27253	-14269	154.76	1641.21	10.6	Si
SLV 4	179667	0.32	27425	-14360	154.76	1649.32	10.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20502	-10178	-496	0.495	2343.1	0.967	7.44637	10.55427	No
SLV 6	-20240	-10372	-496	0.501	2316.4	0.967	7.53103	10.55427	No
SLV 9	-17699	-7708	-274	0.573	2057.9	0.963	8.6476	10.55427	No
SLV 10	-17437	-7902	-274	0.58	2031.3	0.962	8.76209	10.55427	No
SLV 1	-18501	-13875	-483	0.541	2139.5	0.964	8.15965	4.78007	Si
SLV 2	-18095	-14176	-483	0.552	2098.1	0.963	8.32087	4.78007	Si
SLV 3	-13922	-14621	-251	0.704	1673.8	0.955	10.70699	4.78007	Si
SLV 4	-13515	-14922	-251	0.721	1632.5	0.954	10.98947	4.78007	Si
SLV 7	-5238	-12663	279	1.538	795.2	0.917	24.37351	10.55427	Si
SLV 8	-4976	-12856	279	1.597	769	0.915	25.37041	10.55427	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.279	SLU 40	Si
V_SLU	13.625	SLU 84	Si
PF_SLV	0.823	SLV 16	No
V_SLV	3.266	SLV 1	Si
PFFP_SLV	5.683	SLV 11	Si
R_SLV	0.706	SLV 5	No

Maschio 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.763	5.826	L4	L5	2.08	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	2.89	-4201.06	-20411	-0.0000919	0.0003743	0.0035	2.08	13920.49	16883.09	16883.09	4.02	No	Si
SLU 79	4.79	3214.81	-22381	-0.0000898	0.0003743	0.0035	2.08	14490.81	17221.21	17221.21	5.36	No	Si
SLU 51	2.89	-3677.33	-16334	-0.0000742	0.0003743	0.0035	2.08	12307.9	14753.87	14753.87	4.01	No	Si
SLU 51	4.79	2647.47	-17804	-0.0000702	0.0003743	0.0035	2.08	12956.81	14524.66	14524.66	5.49	No	Si
SLU 47	2.89	-3632.12	-16010	-0.0000728	0.0003743	0.0035	2.08	12154.6	14544.17	14544.17	4	No	Si
SLU 47	4.79	2620.62	-17400	-0.0000687	0.0003743	0.0035	2.08	12786.1	14274.81	14274.81	5.45	No	Si
SLU 48	2.89	-3699.08	-16499	-0.0000749	0.0003743	0.0035	2.08	12384.51	14857.41	14857.41	4.02	No	Si
SLU 48	4.79	2656.79	-17964	-0.0000708	0.0003743	0.0035	2.08	13022.63	14623.84	14623.84	5.5	No	Si
SLU 45	2.89	-3653.55	-16157	-0.0000735	0.0003743	0.0035	2.08	12224.93	14640.16	14640.16	4.01	No	Si
SLU 45	4.79	2625.07	-17542	-0.0000692	0.0003743	0.0035	2.08	12846.59	14362.17	14362.17	5.47	No	Si
SLU 77	2.89	-4223.29	-20602	-0.0000927	0.0003743	0.0035	2.08	13981.71	16974.59	16974.59	4.02	No	Si
SLU 77	4.79	3231.45	-22568	-0.0000906	0.0003743	0.0035	2.08	14537.71	17295.75	17295.75	5.35	No	Si
SLU 44	2.89	-3586.59	-15668	-0.0000714	0.0003743	0.0035	2.08	11989.15	14319.76	14319.76	3.99	No	Si
SLU 44	4.79	2588.89	-16979	-0.0000672	0.0003743	0.0035	2.08	12601.72	14015.94	14015.94	5.41	No	Si
SLU 43	2.89	-3585.8	-15625	-0.0000713	0.0003743	0.0035	2.08	11967.97	14291.17	14291.17	3.99	No	Si
SLU 43	4.79	2576.71	-16934	-0.0000669	0.0003743	0.0035	2.08	12581.79	13988.59	13988.59	5.43	No	Si
SLU 50	2.89	-3676.85	-16308	-0.0000742	0.0003743	0.0035	2.08	12295.81	14737.26	14737.26	4.01	No	Si
SLU 50	4.79	2640.16	-17778	-0.0000701	0.0003743	0.0035	2.08	12945.63	14507.98	14507.98	5.5	No	Si
SLU 46	2.89	-3654.03	-16183	-0.0000736	0.0003743	0.0035	2.08	12237.16	14656.89	14656.89	4.01	No	Si
SLU 46	4.79	2632.38	-17569	-0.0000694	0.0003743	0.0035	2.08	12857.98	14378.76	14378.76	5.46	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	2.89	-4149.89	-10163	-0.0000585	0.0005615	0.0035	2.08		10727.92	10727.92	2.59		Si
SLD 12	4.79	2143.28	-13951	-0.000053	0.0005615	0.0035	2.08		12748.2	12748.2	5.95		Si
SLD 16	2.89	-4777.19	-10516	-0.0000656	0.0005615	0.0035	2.08		11030.69	11030.69	2.31		Si
SLD 16	4.79	2917.74	-16551	-0.0000664	0.0005615	0.0035	2.08		14771.46	14771.46	5.06		Si
SLV 12	2.89	-5719.7	-5412	-0.0004231	0.0005615	0.0035	1.664		6432.5	6432.5	1.12		Si
SLV 12	4.79	2049.05	-12655	-0.0000487	0.0005615	0.0035	2.08		11758.25	11758.25	5.74		Si
SLV 16	2.89	-7179.66	-6209	-0.0008771	0.0005615	0.0035	1.664		7184.83	7184.83	1		Si
SLV 16	4.79	3848.61	-18703	-0.00008	0.0005615	0.0035	2.08		16483.63	16483.63	4.28		Si
SLV 11	2.89	-5243.99	-5544	-0.000198	0.0005615	0.0035	1.664		6559.05	6559.05	1.25		Si
SLV 11	4.79	1822.01	-11796	-0.0000445	0.0005615	0.0035	2.08		11108.99	11108.99	6.1		Si
SLV 8	2.89	-3689.28	-8678	-0.000051	0.0005615	0.0035	2.08		9421.1	9421.1	2.55		Si
SLV 8	4.79	1036.33	-10085	-0.0000339	0.0005615	0.0035	2.08		9820.72	9820.72	9.48		Si
SLV 13	2.89	-5549.97	-10396	-0.0000757	0.0005615	0.0035	2.08		10929.69	10929.69	1.97		Si
SLV 13	4.79	3972.36	-19783	-0.0000842	0.0005615	0.0035	2.08		17352.17	17352.17	4.37		Si
SLD 15	2.89	-4460.24	-10605	-0.0000624	0.0005615	0.0035	2.08		11104.63	11104.63	2.49		Si
SLD 15	4.79	2766.47	-15979	-0.0000636	0.0005615	0.0035	2.08		14321.91	14321.91	5.18		Si
SLV 14	2.89	-6288.15	-10190	-0.0000897	0.0005615	0.0035	1.664		10751.3	10751.3	1.71		Si
SLV 14	4.79	4324.67	-21115	-0.0000911	0.0005615	0.0035	2.08		18205.98	18205.98	4.21		Si
SLV 15	2.89	-6441.48	-6415	-0.0003692	0.0005615	0.0035	1.664		7371.34	7371.34	1.14		Si
SLV 15	4.79	3496.3	-17371	-0.0000733	0.0005615	0.0035	2.08		15419.43	15419.43	4.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2.89	-4262.53	-20952	-17447	-6541	2.08	2.08	-29956	10833	6309	38062	17440	5304	22744	No	3.48	Si
SLU 84	4.79	3312.62	-22953	-19114	-6577	2.08	2.08	-32818	10833	6309	38062	17440	5304	22744	No	3.46	Si
SLU 75	2.89	-4178.24	-20286	-16893	-6378	2.08	2.08	-29005	10812	6297	38062	17440	5304	22744	No	3.57	Si
SLU 75	4.79	3207.03	-22172	-18463	-6413	2.08	2.08	-31702	10833	6309	38062	17440	5304	22744	No	3.55	Si
SLU 81	2.89	-4216.53	-20584	-17141	-6451	2.08	2.08	-29431	10833	6309	38062	17440	5304	22744	No	3.53	Si
SLU 81	4.79	3273.59	-22505	-18740	-6487	2.08	2.08	-32177	10833	6309	38062	17440	5304	22744	No	3.51	Si
SLU 74	2.89	-4177.76	-20260	-16871	-6374	2.08	2.08	-28968	10807	6294	38062	17440	5304	22744	No	3.57	Si
SLU 74	4.79	3199.72	-22146	-18441	-6408	2.08	2.08	-31663	10833	6309	38062	17440	5304	22744	No	3.55	Si
SLU 82	2.89	-4217	-20610	-17162	-6456	2.08	2.08	-29468	10833	6309	38062	17440	5304	22744	No	3.52	Si
SLU 82	4.79	3280.9	-22532	-18762	-6492	2.08	2.08	-32215	10833	6309	38062	17440	5304	22744	No	3.5	Si
SLU 78	2.89	-4223.77	-20628	-17177	-6463	2.08	2.08	-29493	10833	6309	38062	17440	5304	22744	No	3.52	Si
SLU 78	4.79	3238.75	-22594	-18815	-6498	2.08	2.08	-32305	10833	6309	38062	17440	5304	22744	No	3.5	Si
SLU 80	2.89	-4201.54	-20437	-17018	-6445	2.08	2.08	-29220	10833	6309	38062	17440	5304	22744	No	3.53	Si
SLU 80	4.79	3222.12	-22408	-18659	-6480	2.08	2.08	-32039	10833	6309	38062	17440	5304	22744	No	3.51	Si
SLU 83	2.89	-4262.05	-20926	-17425	-6536	2.08	2.08	-29919	10833	6309	38062	17440	5304	22744	No	3.48	Si
SLU 83	4.79	3305.31	-22927	-19091	-6572	2.08	2.08	-32780	10833	6309	38062	17440	5304	22744	No	3.46	Si
SLU 79	2.89	-4201.06	-20411	-16996	-6440	2.08	2.08	-29183	10833	6309	38062	17440	5304	22744	No	3.53	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	4.79	3214.81	-22381	-18637	-6475	2.08	2.08	-32000	10833	6309	38062	17440	5304	22744	No	3.51	Si
SLU 77	2.89	-4223.29	-20602	-17155	-6458	2.08	2.08	-29456	10833	6309	38062	17440	5304	22744	No	3.52	Si
SLU 77	4.79	3231.45	-22568	-18792	-6493	2.08	2.08	-32267	10833	6309	38062	17440	5304	22744	No	3.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.89	-7179.66	-6209	-5170	-13297	1.664	0	0	0	0	38062	20928	4243	25171		1.89	Si
SLV 16	4.79	3848.61	-18703	-15575	-13022	2.08	2.08	-26742	15765	9182	38062	26160	5304	31464		2.42	Si
SLD 16	2.89	-4777.19	-10516	-8757	-8276	2.08	1.7572	-17956	14008	6892	38062	26160	5304	31464		3.8	Si
SLD 16	4.79	2917.74	-16551	-13782	-8172	2.08	2.08	-23665	15150	8823	38062	26160	5304	31464		3.85	Si
SLV 14	2.89	-6288.15	-10190	-8485	-13576	1.664	1.2687	0	0	0	38062	20928	4243	25171		1.85	Si
SLV 14	4.79	4324.67	-21115	-17583	-13250	2.08	2.08	-30190	16250	9464	38062	26160	5304	31464		2.37	Si
SLV 15	2.89	-6441.48	-6415	-5342	-11882	1.664	0.1074	0	0	0	38062	20928	4243	25171		2.12	Si
SLV 15	4.79	3496.3	-17371	-14465	-11606	2.08	2.08	-24836	15384	8960	38062	26160	5304	31464		2.71	Si
SLD 15	2.89	-4460.24	-10605	-8831	-7669	2.08	1.8583	-17087	13834	7198	38062	26160	5304	31464		4.1	Si
SLD 15	4.79	2766.47	-15979	-13306	-7564	2.08	2.08	-22846	14986	8728	38062	26160	5304	31464		4.16	Si
SLV 13	2.89	-5549.97	-10396	-8657	-12161	2.08	1.5184	-20570	14531	6178	38062	26160	5304	31464		2.59	Si
SLV 13	4.79	3972.36	-19783	-16473	-11834	2.08	2.08	-28285	16074	9361	38062	26160	5304	31464		2.66	Si
SLV 12	2.89	-5719.7	-5412	-4506	-6976	1.664	0	0	0	0	38062	20928	4243	25171		3.61	Si
SLV 12	4.79	2049.05	-12655	-10538	-6988	2.08	2.08	-18094	14035	8174	38062	26160	5304	31464		4.5	Si
SLD 13	2.89	-4081.88	-12318	-10257	-7790	2.08	2.08	-17612	13939	8118	38062	26160	5304	31464		4.04	Si
SLD 13	4.79	2974	-17026	-14178	-7663	2.08	2.08	-24344	15285	8902	38062	26160	5304	31464		4.11	Si
SLD 14	2.89	-4398.83	-12230	-10184	-8397	2.08	2.041	-17486	13914	7951	38062	26160	5304	31464		3.75	Si
SLD 14	4.79	3125.27	-17598	-14654	-8271	2.08	2.08	-25162	15449	8998	38062	26160	5304	31464		3.8	Si
SLV 10	2.89	-2747.99	-18682	-15557	-7906	2.08	2.08	-26711	15759	9178	38062	26160	5304	31464		3.98	Si
SLV 10	4.79	3635.93	-20694	-17232	-7747	2.08	2.08	-29588	16250	9464	38062	26160	5304	31464		4.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.32	14307	-8333	172.14	1057.27	6.14	Si
SLV 12	179667	0.32	14792	-8615	172.14	1089.24	6.33	Si
SLV 7	179667	0.32	15918	-9271	172.14	1162.64	6.75	Si
SLV 8	179667	0.32	16403	-9553	172.14	1193.78	6.93	Si
SLV 15	179667	0.32	18735	-10911	172.14	1340.16	7.79	Si
SLV 16	179667	0.32	19486	-11349	172.14	1386.11	8.05	Si
SLV 3	179667	0.32	24105	-14039	172.14	1655.21	9.62	Si
SLV 13	179667	0.32	24255	-14126	172.14	1663.58	9.66	Si
SLV 4	179667	0.32	24857	-14477	172.14	1696.85	9.86	Si
SLV 14	179667	0.32	25007	-14564	172.14	1705.09	9.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-16624	-13147	-455	0.653	1977.5	0.957	9.91417	10.55427	No
SLV 9	-16003	-13177	-454	0.675	1914.3	0.956	10.25282	10.55427	No
SLV 6	-14754	-16207	-457	0.722	1787.4	0.953	11.00894	10.55427	Si
SLV 5	-14132	-16237	-456	0.749	1724.3	0.952	11.43282	10.55427	Si
SLV 12	-10399	-7853	441	0.967	1345.6	0.94	14.93688	10.55427	Si
SLV 11	-9778	-7883	442	1.016	1282.7	0.938	15.74285	10.55427	Si
SLV 8	-8529	-10913	440	1.134	1156.4	0.932	17.6753	10.55427	Si
SLV 7	-7908	-10943	441	1.204	1093.8	0.929	18.82459	10.55427	Si
SLV 14	-16798	-7716	-141	0.664	1995.2	0.958	10.08014	4.78007	Si
SLV 13	-15834	-7763	-139	0.698	1897.2	0.956	10.62026	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.985	SLU 43	Si
V_SLU	3.458	SLU 84	Si
PF_SLV	1.001	SLV 16	Si
V_SLV	1.854	SLV 14	Si
PFFP_SLV	6.142	SLV 11	Si
R_SLV	0.939	SLV 10	No

Maschio 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.314	-24.633	-3.314	L4	L5	2.09	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	2.89	-1224.45	-18396	-0.0000598	0.0003743	0.0035	2.09	13288.12	16056.28	16056.28	13.11	No	Si
SLU 50	4.79	683.95	-17549	-0.0000529	0.0003743	0.0035	2.09	12936.82	14452.51	14452.51	21.13	No	Si
SLU 77	2.89	-1396.02	-22865	-0.0000751	0.0003743	0.0035	2.09	14723.82	18217.42	18217.42	13.05	No	Si
SLU 77	4.79	574.18	-22733	-0.0000677	0.0003743	0.0035	2.09	14691.51	17485.99	17485.99	30.45	No	Si
SLU 74	2.89	-1384.32	-22520	-0.0000739	0.0003743	0.0035	2.09	14638.09	18039.26	18039.26	13.03	No	Si
SLU 74	4.79	577.74	-22358	-0.0000665	0.0003743	0.0035	2.09	14596.13	17335.33	17335.33	30.01	No	Si
SLU 71	2.89	-1335.49	-20633	-0.0000676	0.0003743	0.0035	2.09	14094.21	17096.9	17096.9	12.8	No	Si
SLU 71	4.79	661.61	-20076	-0.0000602	0.0003743	0.0035	2.09	13909.94	16049.98	16049.98	24.26	No	Si
SLU 64	2.89	-1312.1	-19944	-0.0000652	0.0003743	0.0035	2.09	13864.68	16767.63	16767.63	12.78	No	Si
SLU 64	4.79	668.73	-19325	-0.000058	0.0003743	0.0035	2.09	13644.28	15568.4	15568.4	23.28	No	Si
SLU 48	2.89	-1243.9	-18595	-0.0000606	0.0003743	0.0035	2.09	13366.92	16145.49	16145.49	12.98	No	Si
SLU 48	4.79	696.45	-17750	-0.0000536	0.0003743	0.0035	2.09	13022.4	14577.22	14577.22	20.93	No	Si
SLU 45	2.89	-1232.2	-18251	-0.0000594	0.0003743	0.0035	2.09	13229.63	15991.47	15991.47	12.98	No	Si
SLU 45	4.79	700	-17374	-0.0000525	0.0003743	0.0035	2.09	12861.42	14344.69	14344.69	20.49	No	Si
SLU 66	2.89	-1343.24	-20487	-0.0000672	0.0003743	0.0035	2.09	14047.13	17026.72	17026.72	12.68	No	Si
SLU 66	4.79	677.67	-19901	-0.0000598	0.0003743	0.0035	2.09	13849.99	15937.52	15937.52	23.52	No	Si
SLU 43	2.89	-1201.06	-17708	-0.0000575	0.0003743	0.0035	2.09	13004.56	15696.08	15696.08	13.07	No	Si
SLU 43	4.79	691.06	-16798	-0.0000507	0.0003743	0.0035	2.09	12604.62	13990.88	13990.88	20.25	No	Si
SLU 69	2.89	-1354.93	-20831	-0.0000683	0.0003743	0.0035	2.09	14157.41	17193.45	17193.45	12.69	No	Si
SLU 69	4.79	674.11	-20277	-0.000061	0.0003743	0.0035	2.09	13977.71	16180.03	16180.03	24	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.89	5650.26	-16188	-0.0000864	0.0005615	0.0035	2.09		14564.26	14564.26	2.58		Si
SLV 2	4.79	-3258.78	-24368	-0.0000916	0.0005615	0.0035	2.09		21454.05	21454.05	6.58		Si
SLV 13	2.89	-6744.62	-10804	-0.0000961	0.0005615	0.0035	1.672		11329.64	11329.64	1.68		Si
SLV 13	4.79	4348.84	-112	-0.0259736	0.0005615	0.0035	1.672		358.02	358.02	0.08		No
SLV 6	2.89	2503.93	-9719	-0.0000437	0.0005615	0.0035	2.09		9551.24	9551.24	3.81		Si
SLV 6	4.79	-576.34	-9591	-0.000029	0.0005615	0.0035	2.09		10275.51	10275.51	17.83		Si
SLV 15	2.89	-7643.54	-14673	-0.0001056	0.0005615	0.0035	2.09		14533.63	14533.63	1.9		Si
SLV 15	4.79	4240.31	-5656	-0.0000703	0.0005615	0.0035	2.09		5846.74	5846.74	1.38		Si
SLV 9	2.89	-1500.81	-8245	-0.0000323	0.0005615	0.0035	2.09		9086.34	9086.34	6.05		Si
SLV 9	4.79	1919.65	-1953	-0.000113	0.0005615	0.0035	2.09		2234.17	2234.17	1.16		Si
SLV 1	2.89	4819.09	-16597	-0.000081	0.0005615	0.0035	2.09		14886.83	14886.83	3.09		Si
SLV 1	4.79	-2638.31	-23320	-0.0000834	0.0005615	0.0035	2.09		20774.33	20774.33	7.87		Si
SLV 14	2.89	-5913.45	-10395	-0.0000807	0.0005615	0.0035	2.09		10984.57	10984.57	1.86		Si
SLV 14	4.79	3728.37	-1160	-0.0150849	0.0005615	0.0035	1.672		1432.05	1432.05	0.38		No
SLV 4	2.89	4751.34	-20058	-0.0000907	0.0005615	0.0035	2.09		17656.31	17656.31	3.72		Si
SLV 4	4.79	-3367.31	-29912	-0.0001095	0.0005615	0.0035	2.09		24412.63	24412.63	7.25		Si
SLV 10	2.89	-965.18	-7981	-0.0000276	0.0005615	0.0035	2.09		8847.09	8847.09	9.17		Si
SLV 10	4.79	1519.8	-2628	-0.0000199	0.0005615	0.0035	2.09		2910.73	2910.73	1.92		Si
SLV 16	2.89	-6812.37	-14265	-0.0000939	0.0005615	0.0035	2.09		14203.07	14203.07	2.08		Si
SLV 16	4.79	3619.84	-6704	-0.0000479	0.0005615	0.0035	2.09		6829	6829	1.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 34	2.89	-667.64	-18202	-15157	705	2.09	2.09	-25900	10398	6085	38062	17523	5329	22853	No	32.4	Si
SLU 34	4.79	574.78	-18627	-15511	728	2.09	2.09	-26505	10478	6132	38062	17523	5329	22853	No	31.37	Si
SLU 40	2.89	-853.3	-18978	-15803	677	2.09	2.09	-27005	10545	6171	38062	17523	5329	22853	No	33.76	Si
SLU 40	4.79	465.55	-19432	-16181	708	2.09	2.09	-27651	10631	6221	38062	17523	5329	22853	No	32.27	Si
SLU 42	2.89	-864.99	-19322	-16090	689	2.09	2.09	-27495	10610	6209	38062	17523	5329	22853	No	33.16	Si
SLU 42	4.79	461.99	-19807	-16494	721	2.09	2.09	-28185	10702	6263	38062	17523	5329	22853	No	31.7	Si
SLU 73	2.89	-903.83	-21354	-17782	645	2.09	2.09	-30386	10833	6340	38062	17523	5329	22853	No	35.41	Si
SLU 73	4.79	743.7	-21461	-17871	675	2.09	2.09	-30539	10833	6340	38062	17523	5329	22853	No	33.84	Si
SLU 82	2.89	-1101.18	-22475	-18715	629	2.09	2.09	-31981	10833	6340	38062	17523	5329	22853	No	36.31	Si
SLU 82	4.79	630.91	-22642	-18854	668	2.09	2.09	-32219	10833	6340	38062	17523	5329	22853	No	34.22	Si
SLU 76	2.89	-915.52	-21698	-18068	658	2.09	2.09	-30876	10833	6340	38062	17523	5329	22853	No	34.75	Si
SLU 76	4.79	740.14	-21837	-18184	688	2.09	2.09	-31073	10833	6340	38062	17523	5329	22853	No	33.2	Si
SLU 38	2.89	-859.08	-18795	-15651	590	2.09	2.09	-26745	10510	6151	38062	17523	5329	22853	No	38.73	Si
SLU 38	4.79	501.26	-19130	-15930	620	2.09	2.09	-27221	10574	6188	38062	17523	5329	22853	No	36.83	Si
SLU 31	2.89	-655.95	-17857	-14870	693	2.09	2.09	-25411	10333	6047	38062	17523	5329	22853	No	32.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 31	4.79	578.33	-18251	-15198	716	2.09	2.09	-25971	10407	6090	38062	17523	5329	22853	No	31.94	Si
SLU 36	2.89	-878.52	-18994	-15817	574	2.09	2.09	-27028	10548	6173	38062	17523	5329	22853	No	39.81	Si
SLU 36	4.79	513.76	-19331	-16097	605	2.09	2.09	-27507	10612	6210	38062	17523	5329	22853	No	37.78	Si
SLU 84	2.89	-1112.87	-22819	-19002	642	2.09	2.09	-32471	10833	6340	38062	17523	5329	22853	No	35.62	Si
SLU 84	4.79	627.35	-23017	-19167	681	2.09	2.09	-32753	10833	6340	38062	17523	5329	22853	No	33.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2.89	4819.09	-16597	-13821	6903	2.09	2.09	-23617	15140	8860	38062	26285	5329	31614		4.58	Si
SLV 1	4.79	-2638.31	-23320	-19419	7003	2.09	2.09	-33184	16250	9509	38062	26285	5329	31614		4.51	Si
SLV 4	2.89	4751.34	-20058	-16702	10741	2.09	2.09	-28541	16125	9436	38062	26285	5329	31614		2.94	Si
SLV 4	4.79	-3367.31	-29912	-24908	10347	2.09	2.09	-42564	16250	9509	38062	26285	5329	31614		3.06	Si
SLV 2	2.89	5650.26	-16188	-13480	8467	2.09	2.0879	-23035	15024	8783	38062	26285	5329	31614		3.73	Si
SLV 2	4.79	-3258.78	-24368	-20292	8569	2.09	2.09	-34675	16250	9509	38062	26285	5329	31614		3.69	Si
SLV 14	2.89	-5913.45	-10395	-8656	-8982	2.09	1.4284	-21878	14793	5916	38062	26285	5329	31614		3.52	Si
SLV 14	4.79	3728.37	-1160	-966	-8522	1.672	0	0	0	0	38062	21028	4264	25292		2.97	Si
SLV 15	2.89	-7643.54	-14673	-12219	-8272	2.09	1.5722	-28167	16050	7066	38062	26285	5329	31614		3.82	Si
SLV 15	4.79	4240.31	-5656	-4710	-8309	2.09	0.8857	-8048	12026	2983	38062	26285	5329	31614		3.8	Si
SLV 16	2.89	-6812.37	-14265	-11878	-6708	2.09	1.7023	-25244	15466	7371	38062	26285	5329	31614		4.71	Si
SLV 16	4.79	3619.84	-6704	-5582	-6744	2.09	1.515	-9539	12324	5228	38062	26285	5329	31614		4.69	Si
SLV 13	2.89	-6744.62	-10804	-8997	-10546	1.672	1.2622	0	0	0	38062	21028	4264	25292		2.4	Si
SLV 13	4.79	4348.84	-112	-93	-10087	1.672	0	0	0	0	38062	21028	4264	25292		2.51	Si
SLV 9	2.89	-1500.81	-8245	-6865	-6814	2.09	2.09	-11732	12763	7469	38062	26285	5329	31614		4.64	Si
SLV 9	4.79	1919.65	-1953	-1626	-5902	2.09	0.1858	-30071	16250	846	38062	26285	5329	31614		5.36	Si
SLV 3	2.89	3920.17	-20466	-17043	9177	2.09	2.09	-29123	16241	9504	38062	26285	5329	31614		3.44	Si
SLV 3	4.79	-2746.85	-28864	-24036	8782	2.09	2.09	-41073	16250	9509	38062	26285	5329	31614		3.6	Si
SLV 8	2.89	-492.47	-22617	-18834	7009	2.09	2.09	-32183	16250	9509	38062	26285	5329	31614		4.51	Si
SLV 8	4.79	-938.12	-28071	-23375	6162	2.09	2.09	-39944	16250	9509	38062	26285	5329	31614		5.13	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.32	9135	-5346	172.97	703.63	4.07	Si
SLV 10	179667	0.32	9336	-5463	172.97	718.12	4.15	Si
SLV 13	179667	0.32	12029	-7039	172.97	907.88	5.25	Si
SLV 14	179667	0.32	12341	-7222	172.97	929.39	5.37	Si
SLV 5	179667	0.32	14867	-8700	172.97	1099.44	6.36	Si
SLV 6	179667	0.32	15068	-8818	172.97	1112.7	6.43	Si
SLV 15	179667	0.32	20290	-11873	172.97	1441.43	8.33	Si
SLV 16	179667	0.32	20602	-12056	172.97	1460.17	8.44	Si
SLV 1	179667	0.32	31137	-18221	172.97	2030.83	11.74	Si
SLV 2	179667	0.32	31449	-18404	172.97	2045.94	11.83	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-25060	-18666	82	0.477	2837.3	0.969	7.14678	10.55427	No
SLV 7	-24641	-18833	93	0.483	2794.6	0.969	7.24719	10.55427	No
SLV 12	-20428	-15498	270	0.559	2365.8	0.964	8.43044	10.55427	No
SLV 11	-20008	-15665	282	0.568	2323.1	0.963	8.57817	10.55427	No
SLV 4	-24503	-20374	-334	0.476	2780.6	0.969	7.14576	4.78007	Si
SLV 3	-23853	-20633	-316	0.488	2714.3	0.968	7.32725	4.78007	Si
SLV 2	-19294	-18709	-500	0.576	2250.5	0.962	8.70153	4.78007	Si
SLV 6	-7697	-13118	-470	1.231	1074	0.928	19.28115	10.55427	Si
SLV 1	-18644	-18969	-482	0.594	2184.3	0.961	8.98167	4.78007	Si
SLV 5	-7278	-13285	-459	1.287	1031.7	0.926	20.20995	10.55427	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.676	SLU 66	Si
V_SLU	31.37	SLU 34	Si
PF_SLV	0.082	SLV 13	No
V_SLV	2.398	SLV 13	Si
PFFP_SLV	4.068	SLV 9	Si
R_SLV	0.677	SLV 8	No

Maschio 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.543	-3.314	L4	L5	2.23	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	3.99	-6514.17	-32881	-0.0001429	0.0003743	0.0035	2.23	17699.64	24208.52	24208.52	3.72	No	Si
SLU 73	4.79	723.43	-31738	-0.000091	0.0003743	0.0035	2.23	17720.65	23403.83	23403.83	32.35	No	Si
SLU 80	3.99	-6575.83	-34275	-0.0001487	0.0003743	0.0035	2.23	17611.99	24653.55	24653.55	3.75	No	Si
SLU 80	4.79	714.77	-33132	-0.0000954	0.0003743	0.0035	2.23	17688.88	23712.73	23712.73	33.18	No	Si
SLU 84	3.99	-6729.2	-35209	-0.0001537	0.0003743	0.0035	2.23	17515.11	24803.92	24803.92	3.69	No	Si
SLU 84	4.79	715.8	-34067	-0.0000984	0.0003743	0.0035	2.23	17629.44	23912.66	23912.66	33.41	No	Si
SLU 81	3.99	-6456.88	-35088	-0.0001508	0.0003743	0.0035	2.23	17529.47	24783.89	24783.89	3.84	No	Si
SLU 81	4.79	768.85	-33945	-0.0000985	0.0003743	0.0035	2.23	17638.93	23886.35	23886.35	31.07	No	Si
SLU 78	3.99	-6628.97	-34572	-0.0001503	0.0003743	0.0035	2.23	17584.49	24700.57	24700.57	3.73	No	Si
SLU 78	4.79	725.94	-33430	-0.0000964	0.0003743	0.0035	2.23	17673.29	23775.86	23775.86	32.75	No	Si
SLU 82	3.99	-6638	-34656	-0.0001507	0.0003743	0.0035	2.23	17576.18	24713.96	24713.96	3.72	No	Si
SLU 82	4.79	732.31	-33513	-0.0000968	0.0003743	0.0035	2.23	17668.34	23793.73	23793.73	32.49	No	Si
SLU 68	3.99	-6034.72	-29964	-0.0001282	0.0003743	0.0035	2.23	17662.48	23084.62	23084.62	3.83	No	Si
SLU 68	4.79	743.05	-28821	-0.000082	0.0003743	0.0035	2.23	17566.55	21965.64	21965.64	29.56	No	Si
SLU 75	3.99	-6537.77	-34019	-0.0001474	0.0003743	0.0035	2.23	17633.2	24606.64	24606.64	3.76	No	Si
SLU 75	4.79	742.45	-32876	-0.0000948	0.0003743	0.0035	2.23	17699.82	23658.69	23658.69	31.87	No	Si
SLU 83	3.99	-6548.08	-35641	-0.0001537	0.0003743	0.0035	2.23	17460.03	24875.91	24875.91	3.8	No	Si
SLU 83	4.79	752.34	-34498	-0.0001001	0.0003743	0.0035	2.23	17591.66	24006.47	24006.47	31.91	No	Si
SLU 76	3.99	-6605.37	-33434	-0.0001458	0.0003743	0.0035	2.23	17673.02	24408.45	24408.45	3.7	No	Si
SLU 76	4.79	706.92	-32292	-0.0000926	0.0003743	0.0035	2.23	17716.2	23536.48	23536.48	33.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	3.99	-7005.22	-19292	-0.0000961	0.0005615	0.0035	2.23		19569.3	19569.3	2.79		Si
SLV 14	4.79	6251.12	-18871	-0.0000895	0.0005615	0.0035	2.23		17996.72	17996.72	2.88		Si
SLV 9	3.99	-6093.31	-14567	-0.0000771	0.0005615	0.0035	2.23		15664.88	15664.88	2.57		Si
SLV 9	4.79	2306.49	-14539	-0.0000508	0.0005615	0.0035	2.23		14269.85	14269.85	6.19		Si
SLV 13	3.99	-7374.2	-19769	-0.0001001	0.0005615	0.0035	2.23		19941.04	19941.04	2.7		Si
SLV 13	4.79	7213.27	-19348	-0.0000977	0.0005615	0.0035	2.23		18415.85	18415.85	2.55		Si
SLV 6	3.99	-4310.67	-15015	-0.0000656	0.0005615	0.0035	2.23		16052.74	16052.74	3.72		Si
SLV 6	4.79	-2075.89	-14855	-0.0000501	0.0005615	0.0035	2.23		15914.4	15914.4	7.67		Si
SLD 13	3.99	-5652.44	-21809	-0.0000936	0.0005615	0.0035	2.23		21498.75	21498.75	3.8		Si
SLD 13	4.79	3430.05	-21127	-0.0000761	0.0005615	0.0035	2.23		19843	19843	5.79		Si
SLV 2	3.99	-1855.7	-21812	-0.000067	0.0005615	0.0035	2.23		21501.17	21501.17	11.59		Si
SLV 2	4.79	-6290.02	-20950	-0.0000957	0.0005615	0.0035	2.23		20861.18	20861.18	3.32		Si
SLV 5	3.99	-4548.46	-15323	-0.0000681	0.0005615	0.0035	2.23		16319.77	16319.77	3.59		Si
SLV 5	4.79	-1455.86	-15163	-0.0000467	0.0005615	0.0035	2.23		16180.92	16180.92	11.11		Si
SLV 16	3.99	-6502.04	-24434	-0.0001072	0.0005615	0.0035	2.23		23399.28	23399.28	3.6		Si
SLV 16	4.79	6547.98	-23544	-0.0001049	0.0005615	0.0035	2.23		21429.38	21429.38	3.27		Si
SLV 10	3.99	-5855.53	-14259	-0.0000745	0.0005615	0.0035	2.23		15400.63	15400.63	2.63		Si
SLV 10	4.79	1686.45	-14232	-0.0000459	0.0005615	0.0035	2.23		14010.63	14010.63	8.31		Si
SLV 15	3.99	-6871.02	-24911	-0.0001112	0.0005615	0.0035	2.23		23729.66	23729.66	3.45		Si
SLV 15	4.79	7510.12	-24022	-0.0001133	0.0005615	0.0035	2.23		21745.52	21745.52	2.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	3.99	-6514.17	-32881	-27381	-9041	2.23	2.23	-43851	10833	6764	38062	18697	5687	24384	No	2.7	Si
SLU 73	4.79	723.43	-31738	-26429	-9041	2.23	2.23	-42327	10833	6764	38062	18697	5687	24384	No	2.7	Si
SLU 78	3.99	-6628.97	-34572	-28789	-9187	2.23	2.23	-46106	10833	6764	38062	18697	5687	24384	No	2.65	Si
SLU 78	4.79	725.94	-33430	-27837	-9187	2.23	2.23	-44582	10833	6764	38062	18697	5687	24384	No	2.65	Si
SLU 81	3.99	-6456.88	-35088	-29218	-9026	2.23	2.23	-46793	10833	6764	38062	18697	5687	24384	No	2.7	Si
SLU 81	4.79	768.85	-33945	-28266	-9026	2.23	2.23	-45269	10833	6764	38062	18697	5687	24384	No	2.7	Si
SLU 82	3.99	-6638	-34656	-28859	-9207	2.23	2.23	-46218	10833	6764	38062	18697	5687	24384	No	2.65	Si
SLU 82	4.79	732.31	-33513	-27907	-9207	2.23	2.23	-44694	10833	6764	38062	18697	5687	24384	No	2.65	Si
SLU 80	3.99	-6575.83	-34275	-28541	-9107	2.23	2.23	-45710	10833	6764	38062	18697	5687	24384	No	2.68	Si
SLU 80	4.79	714.77	-33132	-27590	-9107	2.23	2.23	-44186	10833	6764	38062	18697	5687	24384	No	2.68	Si
SLU 84	3.99	-6729.2	-35209	-29319	-9300	2.23	2.23	-46956	10833	6764	38062	18697	5687	24384	No	2.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.79	715.8	-34067	-28368	-9300	2.23	2.23	-45432	10833	6764	38062	18697	5687	24384	No	2.62	Si
SLU 76	3.99	-6605.37	-33434	-27841	-9134	2.23	2.23	-44588	10833	6764	38062	18697	5687	24384	No	2.67	Si
SLU 76	4.79	706.92	-32292	-26890	-9134	2.23	2.23	-43064	10833	6764	38062	18697	5687	24384	No	2.67	Si
SLU 75	3.99	-6537.77	-34019	-28328	-9094	2.23	2.23	-45368	10833	6764	38062	18697	5687	24384	No	2.68	Si
SLU 75	4.79	742.45	-32876	-27377	-9094	2.23	2.23	-43844	10833	6764	38062	18697	5687	24384	No	2.68	Si
SLU 83	3.99	-6548.08	-35641	-29679	-9119	2.23	2.23	-47531	10833	6764	38062	18697	5687	24384	No	2.67	Si
SLU 83	4.79	752.34	-34498	-28727	-9119	2.23	2.23	-46007	10833	6764	38062	18697	5687	24384	No	2.67	Si
SLU 77	3.99	-6447.86	-35004	-29148	-9007	2.23	2.23	-46681	10833	6764	38062	18697	5687	24384	No	2.71	Si
SLU 77	4.79	762.48	-33861	-28197	-9007	2.23	2.23	-45157	10833	6764	38062	18697	5687	24384	No	2.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	3.99	-7005.22	-19292	-16064	-16455	2.23	2.23	-25727	15562	9717	38062	28046	5687	33733		2.05	Si
SLV 14	4.79	6251.12	-18871	-15714	-16589	2.23	2.23	-25167	15450	9647	38062	28046	5687	33733		2.03	Si
SLV 13	3.99	-7374.2	-19769	-16462	-18119	2.23	2.226	-26364	15689	9779	38062	28046	5687	33733		1.86	Si
SLV 13	4.79	7213.27	-19348	-16112	-18253	2.23	2.2266	-25803	15577	9712	38062	28046	5687	33733		1.85	Si
SLD 15	3.99	-5437.56	-24048	-20025	-11111	2.23	2.23	-32071	16250	10147	38062	28046	5687	33733		3.04	Si
SLD 15	4.79	3557.72	-23169	-19293	-10915	2.23	2.23	-30899	16250	10147	38062	28046	5687	33733		3.09	Si
SLV 9	3.99	-6093.31	-14567	-12130	-10748	2.23	2.0901	-20932	14603	8546	38062	28046	5687	33733		3.14	Si
SLV 9	4.79	2306.49	-14539	-12107	-11683	2.23	2.23	-19389	14295	8926	38062	28046	5687	33733		2.89	Si
SLD 16	3.99	-5279.13	-23843	-19854	-10396	2.23	2.23	-31797	16250	10147	38062	28046	5687	33733		3.24	Si
SLD 16	4.79	3144.61	-22964	-19123	-10201	2.23	2.23	-30626	16250	10147	38062	28046	5687	33733		3.31	Si
SLV 15	3.99	-6871.02	-24911	-20744	-17672	2.23	2.23	-33222	16250	10147	38062	28046	5687	33733		1.91	Si
SLV 15	4.79	7510.12	-24022	-20003	-17215	2.23	2.23	-32035	16250	10147	38062	28046	5687	33733		1.96	Si
SLV 16	3.99	-6502.04	-24434	-20346	-16008	2.23	2.23	-32585	16250	10147	38062	28046	5687	33733		2.11	Si
SLV 16	4.79	6547.98	-23544	-19606	-15551	2.23	2.23	-31399	16250	10147	38062	28046	5687	33733		2.17	Si
SLD 14	3.99	-5494.01	-21604	-17990	-10588	2.23	2.23	-28811	16179	10102	38062	28046	5687	33733		3.19	Si
SLD 14	4.79	3016.94	-20922	-17422	-10646	2.23	2.23	-27902	15997	9989	38062	28046	5687	33733		3.17	Si
SLV 10	3.99	-5855.53	-14259	-11874	-9676	2.23	2.1131	-20263	14469	8561	38062	28046	5687	33733		3.49	Si
SLV 10	4.79	1686.45	-14232	-11851	-10611	2.23	2.23	-18979	14213	8874	38062	28046	5687	33733		3.18	Si
SLD 13	3.99	-5652.44	-21809	-18160	-11303	2.23	2.23	-29084	16234	10136	38062	28046	5687	33733		2.98	Si
SLD 13	4.79	3430.05	-21127	-17593	-11361	2.23	2.23	-28175	16052	10023	38062	28046	5687	33733		2.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.32	18097	-11300	184.56	1394.53	7.56	Si
SLV 9	179667	0.32	18287	-11418	184.56	1407.14	7.62	Si
SLV 6	179667	0.32	21010	-13119	184.56	1583.98	8.58	Si
SLV 5	179667	0.32	21200	-13237	184.56	1595.95	8.65	Si
SLV 14	179667	0.32	24015	-14995	184.56	1769.19	9.59	Si
SLV 13	179667	0.32	24309	-15179	184.56	1786.75	9.68	Si
SLV 16	179667	0.32	32045	-20009	184.56	2213.48	11.99	Si
SLV 15	179667	0.32	32339	-20193	184.56	2228.34	12.07	Si
SLV 2	179667	0.32	33725	-21058	184.56	2297.1	12.45	Si
SLV 1	179667	0.32	34019	-21242	184.56	2311.39	12.52	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-24918	-24775	536	0.49	2841.9	0.967	7.35417	10.55427	No
SLV 8	-24824	-24839	536	0.491	2832.4	0.967	7.37862	10.55427	No
SLV 11	-23451	-21535	587	0.513	2692.7	0.966	7.72641	10.55427	No
SLV 12	-23357	-21600	587	0.515	2683.1	0.966	7.75374	10.55427	No
SLV 5	-12551	-10180	-650	0.865	1584.8	0.945	13.29896	10.55427	Si
SLV 6	-12458	-10245	-650	0.87	1575.3	0.945	13.38571	10.55427	Si
SLV 9	-11085	-6941	-598	0.961	1436.2	0.94	14.86192	10.55427	Si
SLV 10	-10991	-7006	-598	0.968	1426.7	0.94	14.97065	10.55427	Si
SLV 3	-22326	-23428	60	0.557	2578.2	0.964	8.39522	4.78007	Si
SLV 4	-22180	-23529	60	0.56	2563.4	0.964	8.44391	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.686	SLU 84	Si
V_SLU	2.622	SLU 84	Si
PF_SLV	2.553	SLV 13	Si
V_SLV	1.848	SLV 13	Si
PFFP_SLV	7.556	SLV 10	Si
R_SLV	0.697	SLV 7	No

Maschio 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.314	-18.813	-3.314	L4	L5	0.5	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	3.99	-19.12	-12177	-0.0001727	0.0003743	0.0035	0.5	443.4	1261.67	1261.67	65.98	No	Si
SLU 76	4.79	231.91	-13238	-0.0002472	0.0003743	0.0035	0.5	235.68	1203.25	1203.25	5.19	No	Si
SLU 65	3.99	-39.69	-10709	-0.0001486	0.0003743	0.0035	0.5	665.69	1310.96	1310.96	33.03	No	Si
SLU 65	4.79	237.69	-11617	-0.0002074	0.0003743	0.0035	0.5	537.14	1282	1282	5.39	No	Si
SLU 68	3.99	-36.76	-10906	-0.0001517	0.0003743	0.0035	0.5	640.22	1312.83	1312.83	35.72	No	Si
SLU 68	4.79	238.68	-11826	-0.0002124	0.0003743	0.0035	0.5	503.35	1279.75	1279.75	5.36	No	Si
SLU 75	3.99	-7.63	-12255	-0.0001718	0.0003743	0.0035	0.5	429.53	1258.47	1258.47	164.86	No	Si
SLU 75	4.79	224.88	-13313	-0.0002475	0.0003743	0.0035	0.5	219.55	1197.25	1197.25	5.32	No	Si
SLU 84	3.99	0.58	-12707	-0.0001798	0.0003743	0.0035	0.5	344.5	1243.57	1243.57	2148.05	No	Si
SLU 84	4.79	217.25	-13821	-0.0002606	0.0003743	0.0035	0.5	104.82	1156.43	1156.43	5.32	No	Si
SLU 70	3.99	-22.33	-11181	-0.0001539	0.0003743	0.0035	0.5	602.44	1303.17	1303.17	58.36	No	Si
SLU 70	4.79	232.64	-12111	-0.0002178	0.0003743	0.0035	0.5	455.03	1276.83	1276.83	5.49	No	Si
SLU 73	3.99	-22.06	-11980	-0.0001693	0.0003743	0.0035	0.5	477.66	1269.83	1269.83	57.56	No	Si
SLU 73	4.79	230.92	-13028	-0.0002411	0.0003743	0.0035	0.5	279.86	1219.58	1219.58	5.28	No	Si
SLU 82	3.99	-2.36	-12510	-0.000176	0.0003743	0.0035	0.5	382.44	1248.05	1248.05	529.09	No	Si
SLU 82	4.79	216.26	-13611	-0.0002539	0.0003743	0.0035	0.5	153.28	1173.29	1173.29	5.43	No	Si
SLU 80	3.99	-4.04	-12360	-0.0001732	0.0003743	0.0035	0.5	410.4	1254.16	1254.16	310.39	No	Si
SLU 80	4.79	221.14	-13425	-0.0002498	0.0003743	0.0035	0.5	194.91	1188.21	1188.21	5.37	No	Si
SLU 78	3.99	-4.7	-12452	-0.0001753	0.0003743	0.0035	0.5	393.36	1250.41	1250.41	266.29	No	Si
SLU 78	4.79	225.87	-13522	-0.0002539	0.0003743	0.0035	0.5	173.29	1180.41	1180.41	5.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	3.99	789.37	-12103	-0.0002874	0.0005615	0.0035	0.5		1793.67	1793.67	2.27		Si
SLV 4	4.79	-1028.45	-12613	-0.0003482	0.0005615	0.0035	0.5		1831.69	1831.69	1.78		Si
SLV 1	3.99	711.15	-10804	-0.0002486	0.0005615	0.0035	0.5		1718.68	1718.68	2.42		Si
SLV 1	4.79	-915.89	-11115	-0.0002932	0.0005615	0.0035	0.5		1746.47	1746.47	1.91		Si
SLV 14	3.99	-704.49	-4688	-0.0001899	0.0005615	0.0035	0.4		1015.87	1015.87	1.44		Si
SLV 14	4.79	1191.29	-5530	-0.0071052	0.0005615	0.0035	0.4		1113.6	1113.6	0.93		No
SLV 3	3.99	698.08	-11905	-0.0002664	0.0005615	0.0035	0.5		1782.07	1782.07	2.55		Si
SLV 3	4.79	-884.46	-12458	-0.0003134	0.0005615	0.0035	0.5		1828.17	1828.17	2.07		Si
SLV 2	3.99	802.44	-11001	-0.0002688	0.0005615	0.0035	0.5		1729.89	1729.89	2.16		Si
SLV 2	4.79	-1059.89	-11271	-0.0003306	0.0005615	0.0035	0.5		1757.36	1757.36	1.66		Si
SLV 15	3.99	-808.85	-5592	-0.00022	0.0005615	0.0035	0.4		1148.07	1148.07	1.42		Si
SLV 15	4.79	1366.71	-6717	-0.0064162	0.0005615	0.0035	0.4		1297.71	1297.71	0.95		No
SLD 15	3.99	-345.51	-7152	-0.0001322	0.0005615	0.0035	0.5		1376.16	1376.16	3.98		Si
SLD 15	4.79	671.86	-8032	-0.0001962	0.0005615	0.0035	0.5		1457.06	1457.06	2.17		Si
SLV 13	3.99	-795.77	-4491	-0.0002658	0.0005615	0.0035	0.4		982.04	982.04	1.23		Si
SLV 13	4.79	1335.28	-5374	-0.017835	0.0005615	0.0035	0.4		1089.94	1089.94	0.82		No
SLD 13	3.99	-340.15	-6670	-0.0001248	0.0005615	0.0035	0.5		1308.2	1308.2	3.85		Si
SLD 13	4.79	658.63	-7444	-0.0001856	0.0005615	0.0035	0.5		1394.53	1394.53	2.12		Si
SLV 16	3.99	-717.56	-5790	-0.0001848	0.0005615	0.0035	0.5		1176.8	1176.8	1.64		Si
SLV 16	4.79	1222.72	-6872	-0.0005348	0.0005615	0.0035	0.5		1322.31	1322.31	1.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	3.99	-41.59	-9649	-8035	-393	0.5	0.5	-57393	10833	1517	38062	4192	1275	5467	No	13.91	Si
SLU 47	4.79	216.5	-10450	-8702	-395	0.5	0.5	-62157	10833	1517	38062	4192	1275	5467	No	13.84	Si
SLU 67	3.99	-25.27	-10984	-9146	-399	0.5	0.5	-65333	10833	1517	38062	4192	1275	5467	No	13.69	Si
SLU 67	4.79	231.65	-11901	-9910	-402	0.5	0.5	-70790	10833	1517	38062	4192	1275	5467	No	13.6	Si
SLU 75	3.99	-7.63	-12255	-10205	-378	0.5	0.5	-72893	10833	1517	38062	4192	1275	5467	No	14.47	Si
SLU 75	4.79	224.88	-13313	-11086	-381	0.5	0.5	-79187	10833	1517	38062	4192	1275	5467	No	14.35	Si
SLU 68	3.99	-36.76	-10906	-9082	-423	0.5	0.5	-64871	10833	1517	38062	4192	1275	5467	No	12.93	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	4.79	238.68	-11826	-9848	-425	0.5	0.5	-70346	10833	1517	38062	4192	1275	5467	No	12.86	Si
SLU 70	3.99	-22.33	-11181	-9311	-398	0.5	0.5	-66507	10833	1517	38062	4192	1275	5467	No	13.75	Si
SLU 70	4.79	232.64	-12111	-10085	-400	0.5	0.5	-72037	10833	1517	38062	4192	1275	5467	No	13.66	Si
SLU 73	3.99	-22.06	-11980	-9976	-403	0.5	0.5	-71257	10833	1517	38062	4192	1275	5467	No	13.57	Si
SLU 73	4.79	230.92	-13028	-10849	-406	0.5	0.5	-77495	10833	1517	38062	4192	1275	5467	No	13.48	Si
SLU 76	3.99	-19.12	-12177	-10140	-401	0.5	0.5	-72431	10833	1517	38062	4192	1275	5467	No	13.62	Si
SLU 76	4.79	231.91	-13238	-11023	-404	0.5	0.5	-78742	10833	1517	38062	4192	1275	5467	No	13.53	Si
SLU 44	3.99	-44.53	-9452	-7870	-395	0.5	0.5	-56220	10833	1517	38062	4192	1275	5467	No	13.85	Si
SLU 44	4.79	215.51	-10240	-8527	-397	0.5	0.5	-60910	10833	1517	38062	4192	1275	5467	No	13.79	Si
SLU 72	3.99	-21.67	-11089	-9234	-391	0.5	0.5	-65960	10833	1517	38062	4192	1275	5467	No	14	Si
SLU 72	4.79	227.91	-12014	-10004	-393	0.5	0.5	-71460	10833	1517	38062	4192	1275	5467	No	13.9	Si
SLU 65	3.99	-39.69	-10709	-8917	-424	0.5	0.5	-63698	10833	1517	38062	4192	1275	5467	No	12.89	Si
SLU 65	4.79	237.69	-11617	-9673	-427	0.5	0.5	-69099	10833	1517	38062	4192	1275	5467	No	12.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	3.99	789.37	-12103	-10078	2146	0.5	0.5	-71990	16250	2275	38062	6288	1275	7563		3.52	Si
SLV 4	4.79	-1028.45	-12613	-10503	2261	0.5	0.5	-75026	16250	2275	38062	6288	1275	7563		3.35	Si
SLV 15	3.99	-808.85	-5592	-4657	-2879	0.4	0.3161	0	0	0	38062	5030	1020	6050		2.1	Si
SLV 15	4.79	1366.71	-6717	-5593	-2867	0.4	0.1395	0	0	0	38062	5030	1020	6050		2.11	Si
SLV 2	3.99	802.44	-11001	-9161	2369	0.5	0.5	-65438	16250	2275	38062	6288	1275	7563		3.19	Si
SLV 2	4.79	-1059.89	-11271	-9385	2352	0.5	0.4679	-67042	16250	2129	38062	6288	1275	7563		3.22	Si
SLV 1	3.99	711.15	-10804	-8997	2072	0.5	0.5	-64263	16250	2275	38062	6288	1275	7563		3.65	Si
SLV 1	4.79	-915.89	-11115	-9256	2055	0.5	0.5	-66116	16250	2275	38062	6288	1275	7563		3.68	Si
SLV 14	3.99	-704.49	-4688	-3904	-2360	0.4	0.2992	0	0	0	38062	5030	1020	6050		2.56	Si
SLV 14	4.79	1191.29	-5530	-4605	-2479	0.4	0.1037	0	0	0	38062	5030	1020	6050		2.44	Si
SLV 3	3.99	698.08	-11905	-9914	1850	0.5	0.5	-70815	16250	2275	38062	6288	1275	7563		4.09	Si
SLV 3	4.79	-884.46	-12458	-10374	1964	0.5	0.5	-74101	16250	2275	38062	6288	1275	7563		3.85	Si
SLV 13	3.99	-795.77	-4491	-3740	-2657	0.4	0.2184	0	0	0	38062	5030	1020	6050		2.28	Si
SLV 13	4.79	1335.28	-5374	-4475	-2776	0.4	0.0046	0	0	0	38062	5030	1020	6050		2.18	Si
SLV 11	3.99	-280.44	-9122	-7596	-1431	0.5	0.5	-54258	16250	2275	38062	6288	1275	7563		5.29	Si
SLV 11	4.79	589.88	-10320	-8593	-1230	0.5	0.5	-61384	16250	2275	38062	6288	1275	7563		6.15	Si
SLD 15	3.99	-345.51	-7152	-5955	-1375	0.5	0.5	-42540	16250	2275	38062	6288	1275	7563		5.5	Si
SLD 15	4.79	671.86	-8032	-6688	-1369	0.5	0.499	-47777	16250	2271	38062	6288	1275	7563		5.53	Si
SLV 16	3.99	-717.56	-5790	-4821	-2582	0.5	0.3782	-34439	16250	1721	38062	6288	1275	7563		2.93	Si
SLV 16	4.79	1222.72	-6872	-5723	-2570	0.5	0.2162	-40878	16250	984	38062	6288	1275	7563		2.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.32	34556	-4838	41.38	524.02	12.66	Si
SLV 10	179667	0.32	34576	-4840	41.38	524.24	12.67	Si
SLV 13	179667	0.32	36142	-5060	41.38	540.71	13.07	Si
SLV 14	179667	0.32	36174	-5064	41.38	541.05	13.08	Si
SLV 5	179667	0.32	38862	-5440	41.38	567.84	13.72	Si
SLV 6	179667	0.32	38883	-5443	41.38	568.04	13.73	Si
SLV 15	179667	0.32	41813	-5854	41.38	595.13	14.38	Si
SLV 16	179667	0.32	41845	-5858	41.38	595.41	14.39	Si
SLV 1	179667	0.32	50497	-7069	41.38	662.45	16.01	Si
SLV 2	179667	0.32	50529	-7074	41.38	662.66	16.01	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-5967	-6917	-41	0.475	675.9	0.969	7.12735	10.55427	No
SLV 7	-5945	-7044	-41	0.477	673.7	0.969	7.1501	10.55427	No
SLV 12	-5407	-7134	-39	0.517	618.9	0.967	7.77806	10.55427	No
SLV 11	-5385	-7261	-39	0.519	616.7	0.966	7.80552	10.55427	No
SLV 6	-3556	-6802	13	0.745	430.6	0.954	11.35375	10.55427	Si
SLV 5	-3534	-6928	13	0.749	428.4	0.953	11.4142	10.55427	Si
SLV 10	-2996	-7019	15	0.859	373.8	0.947	13.1813	10.55427	Si
SLV 9	-2975	-7145	15	0.864	371.6	0.947	13.26397	10.55427	Si
SLV 4	-5782	-6589	-24	0.491	657	0.968	7.36707	4.78007	Si
SLV 3	-5749	-6785	-24	0.493	653.7	0.968	7.40485	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.188	SLU 76	Si
V_SLU	12.818	SLU 65	Si
PF_SLV	0.816	SLV 13	No
V_SLV	2.102	SLV 15	Si
PFFP_SLV	12.664	SLV 9	Si
R_SLV	0.675	SLV 8	No

Maschio 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L4	L5	4.82	0.16	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	1.99	-5724.97	-54419	-0.0001096	0.0004492	0.0035	4.82	55410.04	111053.82	111053.82	19.4	No	Si
SLU 51	5.46	9498.93	-45819	-0.0001016	0.0004492	0.0035	4.82	56731.22	89027.73	89027.73	9.37	No	Si
SLU 44	1.99	-5586.05	-52706	-0.0001058	0.0004492	0.0035	4.82	55974.94	108822.83	108822.83	19.48	No	Si
SLU 44	5.46	9239.66	-44176	-0.0000977	0.0004492	0.0035	4.82	56553.2	86816.21	86816.21	9.4	No	Si
SLU 47	1.99	-5660.57	-53557	-0.0001077	0.0004492	0.0035	4.82	55712.89	109931.86	109931.86	19.42	No	Si
SLU 47	5.46	9406.83	-45021	-0.0000998	0.0004492	0.0035	4.82	56662.01	87953.68	87953.68	9.35	No	Si
SLU 68	1.99	-6328.01	-59526	-0.0001215	0.0004492	0.0035	4.82	52835.15	117147.02	117147.02	18.51	No	Si
SLU 68	5.46	10028.16	-50239	-0.0001117	0.0004492	0.0035	4.82	56524.66	94975.17	94975.17	9.47	No	Si
SLU 46	1.99	-5719.01	-54102	-0.0001089	0.0004492	0.0035	4.82	55525.66	110641.82	110641.82	19.35	No	Si
SLU 46	5.46	9353.25	-45485	-0.0001006	0.0004492	0.0035	4.82	56706.17	88577.39	88577.39	9.47	No	Si
SLU 48	1.99	-5778.35	-54969	-0.0001108	0.0004492	0.0035	4.82	55196.79	111720.87	111720.87	19.33	No	Si
SLU 48	5.46	9407.8	-46259	-0.0001022	0.0004492	0.0035	4.82	56755.43	89619.71	89619.71	9.53	No	Si
SLU 49	1.99	-5793.52	-54954	-0.0001108	0.0004492	0.0035	4.82	55202.77	111703.12	111703.12	19.28	No	Si
SLU 49	5.46	9520.42	-46330	-0.0001026	0.0004492	0.0035	4.82	56758.4	89714.87	89714.87	9.42	No	Si
SLU 65	1.99	-6253.5	-58674	-0.0001196	0.0004492	0.0035	4.82	53357.18	116133	116133	18.57	No	Si
SLU 65	5.46	9860.99	-49394	-0.0001096	0.0004492	0.0035	4.82	56641.44	93837.69	93837.69	9.52	No	Si
SLU 50	1.99	-5709.8	-54434	-0.0001096	0.0004492	0.0035	4.82	55404.46	111073.24	111073.24	19.45	No	Si
SLU 50	5.46	9386.31	-45749	-0.0001012	0.0004492	0.0035	4.82	56726.4	88932.57	88932.57	9.47	No	Si
SLU 72	1.99	-6392.41	-60387	-0.0001235	0.0004492	0.0035	4.82	52269.27	118085.45	118085.45	18.47	No	Si
SLU 72	5.46	10120.25	-51037	-0.0001135	0.0004492	0.0035	4.82	56380.86	96049.21	96049.21	9.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.99	3121.97	-29254	-0.000055	0.0006738	0.0035	4.82		63860.72	63860.72	20.46		Si
SLV 14	5.46	11494.5	-29929	-0.0000741	0.0006738	0.0035	4.82		65042.82	65042.82	5.66		Si
SLV 5	1.99	-4879.67	-47319	-0.0000907	0.0006738	0.0035	4.82		106437.74	106437.74	21.81		Si
SLV 5	5.46	20324.07	-47411	-0.0001256	0.0006738	0.0035	4.82		95694.6	95694.6	4.71		Si
SLD 6	1.99	-4878.03	-46480	-0.0000891	0.0006738	0.0035	4.82		105074.5	105074.5	21.54		Si
SLD 6	5.46	12899.33	-42171	-0.0000991	0.0006738	0.0035	4.82		86506.36	86506.36	6.71		Si
SLD 10	1.99	-2959.78	-42421	-0.0000776	0.0006738	0.0035	4.82		98482.65	98482.65	33.27		Si
SLD 10	5.46	13057.28	-39600	-0.0000948	0.0006738	0.0035	4.82		81999.28	81999.28	6.28		Si
SLV 9	1.99	-433.61	-37748	-0.0000639	0.0006738	0.0035	4.82		90514.75	90514.75	208.74		Si
SLV 9	5.46	20685.36	-41373	-0.000115	0.0006738	0.0035	4.82		85108	85108	4.11		Si
SLV 6	1.99	-5003.67	-47997	-0.0000922	0.0006738	0.0035	4.82		107514.44	107514.44	21.49		Si
SLV 6	5.46	19813.47	-47373	-0.0001243	0.0006738	0.0035	4.82		95626.61	95626.61	4.83		Si
SLD 5	1.99	-4823.87	-46184	-0.0000885	0.0006738	0.0035	4.82		104593.7	104593.7	21.68		Si
SLD 5	5.46	13122.36	-42188	-0.0000997	0.0006738	0.0035	4.82		86536.06	86536.06	6.59		Si
SLV 13	1.99	3314.38	-28202	-0.0000536	0.0006738	0.0035	4.82		62016.62	62016.62	18.71		Si
SLV 13	5.46	12286.83	-29989	-0.0000759	0.0006738	0.0035	4.82		65148.34	65148.34	5.3		Si
SLD 9	1.99	-2905.63	-42125	-0.000077	0.0006738	0.0035	4.82		98001.85	98001.85	33.73		Si
SLD 9	5.46	13280.3	-39617	-0.0000953	0.0006738	0.0035	4.82		82028.98	82028.98	6.18		Si
SLV 10	1.99	-557.61	-38426	-0.0000654	0.0006738	0.0035	4.82		91684.49	91684.49	164.42		Si
SLV 10	5.46	20174.75	-41334	-0.0001138	0.0006738	0.0035	4.82		85040.01	85040.01	4.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	1.99	-6392.41	-60387	-35457	-4017	4.82	4.82	-45976	10833	8355	108749	27715	24582	52297	No	13.02	Si
SLU 72	5.46	10120.25	-51037	-29967	-2831	4.82	4.82	-38857	10833	8355	108749	27715	24582	52297	No	18.47	Si
SLU 67	1.99	-6386.45	-60071	-35271	-3956	4.82	4.82	-45735	10833	8355	108749	27715	24582	52297	No	13.22	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	5.46	9974.58	-50702	-29770	-2776	4.82	4.82	-38602	10833	8355	108749	27715	24582	52297	No	18.84	Si
SLU 68	1.99	-6328.01	-59526	-34951	-4003	4.82	4.82	-45320	10833	8355	108749	27715	24582	52297	No	13.06	Si
SLU 68	5.46	10028.16	-50239	-29498	-2832	4.82	4.82	-38250	10833	8355	108749	27715	24582	52297	No	18.47	Si
SLU 70	1.99	-6460.96	-60923	-35771	-4036	4.82	4.82	-46384	10833	8355	108749	27715	24582	52297	No	12.96	Si
SLU 70	5.46	10141.75	-51548	-30267	-2839	4.82	4.82	-39246	10833	8355	108749	27715	24582	52297	No	18.42	Si
SLU 76	1.99	-6954.81	-65175	-38268	-3914	4.82	4.82	-49621	10833	8355	108749	27715	24582	52297	No	13.36	Si
SLU 76	5.46	10531.09	-55139	-32375	-2622	4.82	4.82	-41981	10833	8355	108749	27715	24582	52297	No	19.94	Si
SLU 65	1.99	-6253.5	-58674	-34451	-3923	4.82	4.82	-44672	10833	8355	108749	27715	24582	52297	No	13.33	Si
SLU 65	5.46	9860.99	-49394	-29002	-2769	4.82	4.82	-37606	10833	8355	108749	27715	24582	52297	No	18.89	Si
SLU 69	1.99	-6445.79	-60937	-35780	-3938	4.82	4.82	-46395	10833	8355	108749	27715	24582	52297	No	13.28	Si
SLU 69	5.46	10029.13	-51477	-30225	-2743	4.82	4.82	-39192	10833	8355	108749	27715	24582	52297	No	19.07	Si
SLU 80	1.99	-7019.21	-66037	-38774	-3928	4.82	4.82	-50277	10833	8355	108749	27715	24582	52297	No	13.31	Si
SLU 80	5.46	10623.18	-55938	-32844	-2622	4.82	4.82	-42588	10833	8355	108749	27715	24582	52297	No	19.95	Si
SLU 78	1.99	-7087.76	-66572	-39088	-3947	4.82	4.82	-50685	10833	8355	108749	27715	24582	52297	No	13.25	Si
SLU 78	5.46	10644.68	-56448	-33144	-2629	4.82	4.82	-42977	10833	8355	108749	27715	24582	52297	No	19.89	Si
SLU 71	1.99	-6377.24	-60402	-35466	-3919	4.82	4.82	-45987	10833	8355	108749	27715	24582	52297	No	13.34	Si
SLU 71	5.46	10007.64	-50966	-29925	-2735	4.82	4.82	-38803	10833	8355	108749	27715	24582	52297	No	19.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	1.99	-5003.67	-47997	-28182	-12567	4.82	4.82	-36543	16250	12532	108749	41573	24582	66155		5.26	Si
SLV 6	5.46	19813.47	-47373	-27815	-9322	4.82	4.82	-36067	16250	12532	108749	41573	24582	66155		7.1	Si
SLV 7	1.99	-9089.05	-52485	-30817	7726	4.82	4.82	-39960	16250	12532	108749	41573	24582	66155		8.56	Si
SLV 7	5.46	-5278.48	-34982	-20540	6516	4.82	4.82	-26633	16250	12532	108749	41573	24582	66155		10.15	Si
SLV 9	1.99	-433.61	-37748	-22164	-14022	4.82	4.82	-28740	16250	12532	108749	41573	24582	66155		4.72	Si
SLV 9	5.46	20685.36	-41373	-24292	-11014	4.82	4.82	-31500	16250	12532	108749	41573	24582	66155		6.01	Si
SLV 5	1.99	-4879.67	-47319	-27784	-13191	4.82	4.82	-36027	16250	12532	108749	41573	24582	66155		5.02	Si
SLV 5	5.46	20324.07	-47411	-27838	-9928	4.82	4.82	-36097	16250	12532	108749	41573	24582	66155		6.66	Si
SLV 12	1.99	-4766.99	-43592	-25595	7517	4.82	4.82	-33189	16250	12532	108749	41573	24582	66155		8.8	Si
SLV 12	5.46	-5427.79	-28904	-16971	6037	4.82	4.82	-22007	16250	12532	108749	41573	24582	66155		10.96	Si
SLV 10	1.99	-557.61	-38426	-22562	-13399	4.82	4.82	-29256	16250	12532	108749	41573	24582	66155		4.94	Si
SLV 10	5.46	20174.75	-41334	-24270	-10407	4.82	4.82	-31470	16250	12532	108749	41573	24582	66155		6.36	Si
SLV 8	1.99	-9213.05	-53163	-31215	8349	4.82	4.82	-40476	16250	12532	108749	41573	24582	66155		7.92	Si
SLV 8	5.46	-5789.08	-34943	-20517	7123	4.82	4.82	-26604	16250	12532	108749	41573	24582	66155		9.29	Si
SLD 10	1.99	-2959.78	-42421	-24908	-7488	4.82	4.82	-32297	16250	12532	108749	41573	24582	66155		8.83	Si
SLD 10	5.46	13057.28	-39600	-23251	-5667	4.82	4.82	-30150	16250	12532	108749	41573	24582	66155		11.67	Si
SLV 13	1.99	3314.38	-28202	-16559	-7844	4.82	4.82	-21472	16250	12532	108749	41573	24582	66155		8.43	Si
SLV 13	5.46	12286.83	-29989	-17608	-6692	4.82	4.82	-22832	16250	12532	108749	41573	24582	66155		9.89	Si
SLD 9	1.99	-2905.63	-42125	-24734	-7761	4.82	4.82	-32072	16250	12532	108749	41573	24582	66155		8.52	Si
SLD 9	5.46	13280.3	-39617	-23261	-5932	4.82	4.82	-30162	16250	12532	108749	41573	24582	66155		11.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-31232	0.32	241.2	1946.49	3257.44	2601.97	10.79	Si
SLV 16	-31565	0.32	241.2	1961.27	3287.1	2624.19	10.88	Si
SLV 13	-33097	0.32	241.2	2027.79	3423.85	2725.82	11.3	Si
SLV 14	-33430	0.32	241.2	2041.87	3453.53	2747.7	11.39	Si
SLV 11	-37236	0.32	241.2	2194.12	3791.18	2992.65	12.41	Si
SLV 12	-37450	0.32	241.2	2202.21	3810.11	3006.16	12.46	Si
SLV 9	-43453	0.32	241.2	2407.57	4321.26	3364.41	13.95	Si
SLV 10	-43667	0.32	241.2	2414.14	4339.47	3376.8	14	Si
SLV 7	-44196	0.32	241.2	2430.15	4384.41	3407.28	14.13	Si
SLV 8	-44410	0.32	241.2	2436.55	4402.62	3419.58	14.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1257

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-47411	-47319	-300	0.562	5204.3	0.978	8.34953	14.44837	No
SLV 6	-47373	-47997	-300	0.562	5200.3	0.977	8.35593	14.44837	No
SLV 9	-41373	-37748	246	0.637	4589.2	0.975	9.49969	14.44837	No
SLV 10	-41334	-38426	246	0.638	4585.2	0.975	9.50798	14.44837	No
SLV 7	-34982	-52485	-227	0.743	3938.3	0.971	11.11697	14.44837	No
SLV 8	-34943	-53163	-227	0.743	3934.3	0.971	11.1285	14.44837	No
SLV 11	-28943	-42914	318	0.878	3323.6	0.966	13.21611	14.44837	No
SLV 12	-28904	-43592	319	0.879	3319.6	0.966	13.23252	14.44837	No
SLV 1	-50116	-60107	-911	0.522	5479.8	0.979	7.75555	7.3053	Si
SLV 2	-50056	-61159	-911	0.523	5473.7	0.979	7.76427	7.3053	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.35	SLU 47	Si
V_SLU	12.958	SLU 70	Si
PF_SLV	4.114	SLV 9	Si
V_SLV	4.718	SLV 9	Si
PFFP_SLV	10.788	SLV 15	Si
R_SLV	0.578	SLV 5	No

Maschio 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.383	-3.314	-17.313	-3.314	L4	L5	0.93	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	2.89	1950.09	-18314	-0.0002381	0.0003743	0.0035	0.93	2633.18	4486.41	4486.41	2.3	No	Si
SLU 80	4.79	710.85	-13305	-0.0001188	0.0003743	0.0035	0.93	3081.93	4065.1	4065.1	5.72	No	Si
SLU 78	2.89	1954.32	-18430	-0.0002398	0.0003743	0.0035	0.93	2612.44	4484.52	4484.52	2.29	No	Si
SLU 78	4.79	721.25	-13420	-0.0001203	0.0003743	0.0035	0.93	3081.5	4075.99	4075.99	5.65	No	Si
SLU 77	2.89	1951.12	-18412	-0.0002394	0.0003743	0.0035	0.93	2615.74	4484.82	4484.82	2.3	No	Si
SLU 77	4.79	716.3	-13396	-0.0001199	0.0003743	0.0035	0.93	3081.63	4073.7	4073.7	5.69	No	Si
SLU 84	2.89	2024	-18875	-0.0002505	0.0003743	0.0035	0.93	2528.12	4477.45	4477.45	2.21	No	Si
SLU 84	4.79	719.3	-13689	-0.0001224	0.0003743	0.0035	0.93	3078.69	4101.58	4101.58	5.7	No	Si
SLU 83	2.89	2020.8	-18857	-0.00025	0.0003743	0.0035	0.93	2531.71	4477.74	4477.74	2.22	No	Si
SLU 83	4.79	714.35	-13664	-0.000122	0.0003743	0.0035	0.93	3079.05	4099.26	4099.26	5.74	No	Si
SLU 79	2.89	1946.89	-18296	-0.0002376	0.0003743	0.0035	0.93	2636.41	4486.71	4486.71	2.3	No	Si
SLU 79	4.79	705.9	-13280	-0.0001184	0.0003743	0.0035	0.93	3081.96	4062.82	4062.82	5.76	No	Si
SLU 81	2.89	1991.87	-18575	-0.0002442	0.0003743	0.0035	0.93	2585.63	4482.17	4482.17	2.25	No	Si
SLU 81	4.79	701.52	-13443	-0.0001195	0.0003743	0.0035	0.93	3081.36	4078.18	4078.18	5.81	No	Si
SLU 76	2.89	1923.3	-18045	-0.0002329	0.0003743	0.0035	0.93	2679.7	4490.58	4490.58	2.33	No	Si
SLU 76	4.79	701.32	-13099	-0.0001167	0.0003743	0.0035	0.93	3081.55	4044.91	4044.91	5.77	No	Si
SLU 75	2.89	1925.39	-18148	-0.0002343	0.0003743	0.0035	0.93	2662.14	4489.16	4489.16	2.33	No	Si
SLU 75	4.79	708.42	-13199	-0.0001178	0.0003743	0.0035	0.93	3081.92	4055.17	4055.17	5.72	No	Si
SLU 82	2.89	1995.07	-18594	-0.0002447	0.0003743	0.0035	0.93	2582.22	4481.88	4481.88	2.25	No	Si
SLU 82	4.79	706.47	-13467	-0.00012	0.0003743	0.0035	0.93	3081.19	4080.47	4080.47	5.78	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	2.89	2283.95	-11235	-0.0001707	0.0005615	0.0035	0.93		4125.86	4125.86	1.81		Si
SLV 6	4.79	-5.41	-6146	-0.0000361	0.0005615	0.0035	0.93		2743.95	2743.95	507.52		Si
SLV 15	2.89	-1530.5	-7011	-0.0001073	0.0005615	0.0035	0.93		3048.91	3048.91	1.99		Si
SLV 15	4.79	1403.6	-11736	-0.0001297	0.0005615	0.0035	0.93		4272.23	4272.23	3.04		Si
SLV 3	2.89	3790.18	-19063	-0.0003264	0.0005615	0.0035	0.93		5829.67	5829.67	1.54		Si
SLV 3	4.79	-183.47	-7636	-0.0000522	0.0005615	0.0035	0.93		3263.24	3263.24	17.79		Si
SLD 4	2.89	2489.47	-15313	-0.0002077	0.0005615	0.0035	0.93		5113.63	5113.63	2.05		Si
SLD 4	4.79	140.89	-8135	-0.0000537	0.0005615	0.0035	0.93		3238.72	3238.72	22.99		Si
SLV 4	2.89	4080.17	-19361	-0.0003571	0.0005615	0.0035	0.93		5861.74	5861.74	1.44		Si
SLV 4	4.79	-315.13	-7157	-0.0000543	0.0005615	0.0035	0.93		3099.44	3099.44	9.84		Si
SLD 2	2.89	2511.32	-14548	-0.0002034	0.0005615	0.0035	0.93		4959.16	4959.16	1.97		Si
SLD 2	4.79	88.36	-7632	-0.0000485	0.0005615	0.0035	0.93		3057.94	3057.94	34.61		Si
SLV 13	2.89	-1476.24	-5232	-0.000108	0.0005615	0.0035	0.744		2408.87	2408.87	1.63		Si
SLV 13	4.79	1279.37	-10568	-0.000116	0.0005615	0.0035	0.93		3932.44	3932.44	3.07		Si
SLV 2	2.89	4134.43	-17582	-0.0003596	0.0005615	0.0035	0.93		5581.21	5581.21	1.35		Si
SLV 2	4.79	-439.36	-5989	-0.0000519	0.0005615	0.0035	0.93		2687.11	2687.11	6.12		Si
SLV 1	2.89	3844.44	-17284	-0.000324	0.0005615	0.0035	0.93		5518.9	5518.9	1.44		Si
SLV 1	4.79	-307.7	-6468	-0.0000497	0.0005615	0.0035	0.93		2858.99	2858.99	9.29		Si
SLV 5	2.89	2097.07	-11043	-0.000158	0.0005615	0.0035	0.93		4070.07	4070.07	1.94		Si
SLV 5	4.79	79.44	-6454	-0.0000408	0.0005615	0.0035	0.93		2623.7	2623.7	33.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.89	1950.09	-18314	-15251	2286	0.93	0.93	-58566	10833	2821	38062	7798	2372	10169	No	4.45	Si
SLU 80	4.79	710.85	-13305	-11079	-878	0.93	0.93	-42546	10833	2821	38062	7798	2372	10169	No	11.58	Si
SLU 79	2.89	1946.89	-18296	-15235	2287	0.93	0.93	-58507	10833	2821	38062	7798	2372	10169	No	4.45	Si
SLU 79	4.79	705.9	-13280	-11059	-864	0.93	0.93	-42468	10833	2821	38062	7798	2372	10169	No	11.77	Si
SLU 74	2.89	1922.19	-18130	-15097	2250	0.93	0.93	-57977	10833	2821	38062	7798	2372	10169	No	4.52	Si
SLU 74	4.79	703.47	-13174	-10971	-865	0.93	0.93	-42130	10833	2821	38062	7798	2372	10169	No	11.75	Si
SLU 78	2.89	1954.32	-18430	-15347	2285	0.93	0.93	-58935	10833	2821	38062	7798	2372	10169	No	4.45	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.79	721.25	-13420	-11175	-900	0.93	0.93	-42915	10833	2821	38062	7798	2372	10169	No	11.3	Si
SLU 76	2.89	1923.3	-18045	-15026	2250	0.93	0.93	-57704	10833	2821	38062	7798	2372	10169	No	4.52	Si
SLU 76	4.79	701.32	-13099	-10908	-867	0.93	0.93	-41889	10833	2821	38062	7798	2372	10169	No	11.73	Si
SLU 77	2.89	1951.12	-18412	-15332	2286	0.93	0.93	-58877	10833	2821	38062	7798	2372	10169	No	4.45	Si
SLU 77	4.79	716.3	-13396	-11155	-886	0.93	0.93	-42837	10833	2821	38062	7798	2372	10169	No	11.48	Si
SLU 81	2.89	1991.87	-18575	-15468	2350	0.93	0.93	-59401	10833	2821	38062	7798	2372	10169	No	4.33	Si
SLU 81	4.79	701.52	-13443	-11194	-814	0.93	0.93	-42989	10833	2821	38062	7798	2372	10169	No	12.49	Si
SLU 83	2.89	2020.8	-18857	-15702	2385	0.93	0.93	-60301	10833	2821	38062	7798	2372	10169	No	4.26	Si
SLU 83	4.79	714.35	-13664	-11379	-834	0.93	0.93	-43696	10833	2821	38062	7798	2372	10169	No	12.19	Si
SLU 84	2.89	2024	-18875	-15718	2385	0.93	0.93	-60360	10833	2821	38062	7798	2372	10169	No	4.26	Si
SLU 84	4.79	719.3	-13689	-11399	-848	0.93	0.93	-43774	10833	2821	38062	7798	2372	10169	No	11.99	Si
SLU 82	2.89	1995.07	-18594	-15483	2349	0.93	0.93	-59459	10833	2821	38062	7798	2372	10169	No	4.33	Si
SLU 82	4.79	706.47	-13467	-11214	-828	0.93	0.93	-43066	10833	2821	38062	7798	2372	10169	No	12.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.89	-1186.25	-5530	-4605	-3274	0.93	0.7515	-22128	14842	3123	38062	11696	2372	14068		4.3	Si
SLV 14	4.79	1147.71	-10088	-8401	-3532	0.93	0.93	-32261	16250	4232	38062	11696	2372	14068		3.98	Si
SLV 4	2.89	4080.17	-19361	-16122	6839	0.93	0.7628	-61914	16250	3471	38062	11696	2372	14068		2.06	Si
SLV 4	4.79	-315.13	-7157	-5960	2691	0.93	0.93	-22887	14994	3904	38062	11696	2372	14068		5.23	Si
SLV 1	2.89	3844.44	-17284	-14393	6154	0.93	0.7277	-55271	16250	3311	38062	11696	2372	14068		2.29	Si
SLV 1	4.79	-307.7	-6468	-5386	2239	0.93	0.93	-20683	14553	3790	38062	11696	2372	14068		6.28	Si
SLV 15	2.89	-1530.5	-7011	-5838	-3638	0.93	0.7401	-28589	16135	3344	38062	11696	2372	14068		3.87	Si
SLV 15	4.79	1403.6	-11736	-9773	-3887	0.93	0.93	-37530	16250	4232	38062	11696	2372	14068		3.62	Si
SLV 3	2.89	3790.18	-19063	-15874	6314	0.93	0.7985	-60960	16250	3633	38062	11696	2372	14068		2.23	Si
SLV 3	4.79	-183.47	-7636	-6359	2287	0.93	0.93	-24420	15301	3984	38062	11696	2372	14068		6.15	Si
SLV 13	2.89	-1476.24	-5232	-4357	-3799	0.744	0.5485	0	0	0	38062	9357	1897	11254		2.96	Si
SLV 13	4.79	1279.37	-10568	-8800	-3935	0.93	0.93	-33794	16250	4232	38062	11696	2372	14068		3.57	Si
SLD 3	2.89	2364.96	-15185	-12644	3569	0.93	0.9278	-48558	16250	4221	38062	11696	2372	14068		3.94	Si
SLD 3	4.79	197.42	-8341	-6946	621	0.93	0.93	-26674	15751	4102	38062	11696	2372	14068		22.67	Si
SLD 2	2.89	2511.32	-14548	-12114	3724	0.93	0.8771	-46522	16250	3991	38062	11696	2372	14068		3.78	Si
SLD 2	4.79	88.36	-7632	-6355	773	0.93	0.93	-24406	15298	3984	38062	11696	2372	14068		18.19	Si
SLD 4	2.89	2489.47	-15313	-12751	3794	0.93	0.9073	-48967	16250	4128	38062	11696	2372	14068		3.71	Si
SLD 4	4.79	140.89	-8135	-6774	794	0.93	0.93	-26015	15620	4067	38062	11696	2372	14068		17.72	Si
SLV 2	2.89	4134.43	-17582	-14641	6678	0.93	0.6895	-56224	16250	3137	38062	11696	2372	14068		2.11	Si
SLV 2	4.79	-439.36	-5989	-4987	2642	0.93	0.93	-19150	14247	3710	38062	11696	2372	14068		5.32	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.32	19230	-5007	76.97	612.76	7.96	Si
SLV 14	179667	0.32	20375	-5306	76.97	643.68	8.36	Si
SLV 15	179667	0.32	25033	-6519	76.97	763.01	9.91	Si
SLV 16	179667	0.32	26178	-6817	76.97	790.76	10.27	Si
SLV 9	179667	0.32	28795	-7498	76.97	851.83	11.07	Si
SLV 10	179667	0.32	29533	-7691	76.97	868.46	11.28	Si
SLV 5	179667	0.32	42624	-11099	76.97	1120.19	14.55	Si
SLV 6	179667	0.32	43362	-11291	76.97	1131.95	14.71	Si
SLV 11	179667	0.32	48140	-12536	76.97	1201.78	15.61	Si
SLV 12	179667	0.32	48878	-12728	76.97	1211.59	15.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-9457	-9944	220	0.531	1090.1	0.965	7.99544	10.55427	No
SLV 12	-9232	-9748	220	0.542	1067.2	0.964	8.16634	10.55427	No
SLV 7	-8269	-9972	254	0.591	969.3	0.961	8.94184	10.55427	No
SLV 8	-8045	-9776	254	0.605	946.4	0.96	9.16113	10.55427	No
SLV 9	-5898	-8701	-220	0.791	728.2	0.949	12.10521	10.55427	Si
SLV 10	-5673	-8505	-220	0.817	705.4	0.948	12.52215	10.55427	Si
SLV 5	-4710	-8729	-186	0.958	607.8	0.941	14.80216	10.55427	Si
SLV 6	-4485	-8533	-186	0.997	585	0.939	15.43532	10.55427	Si
SLV 15	-9659	-9530	26	0.54	1110.6	0.965	8.12683	4.78007	Si
SLV 16	-9310	-9225	26	0.557	1075.1	0.964	8.39463	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.212	SLU 84	Si
V_SLU	4.263	SLU 83	Si
PF_SLV	1.35	SLV 2	Si
V_SLV	2.057	SLV 4	Si
PFFP_SLV	7.961	SLV 13	Si
R_SLV	0.758	SLV 11	No

Maschio 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L4	L5	3.221	0.16	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	1.99	4099.06	-31677	-0.000104	0.0004492	0.0035	3.2207	25347.71	40742.46	40742.46	9.94	No	Si
SLU 43	4.09	-606.06	-26947	-0.0000721	0.0004492	0.0035	3.2207	24822.56	40658.47	40658.47	67.09	No	Si
SLU 48	1.99	4189.06	-33002	-0.0001084	0.0004492	0.0035	3.2207	25289.63	41923.24	41923.24	10.01	No	Si
SLU 48	4.09	-660.22	-28278	-0.0000761	0.0004492	0.0035	3.2207	25086.01	42024.37	42024.37	63.65	No	Si
SLU 45	1.99	4143.76	-32476	-0.0001066	0.0004492	0.0035	3.2207	25323.41	41454.9	41454.9	10	No	Si
SLU 45	4.09	-625.34	-27755	-0.0000744	0.0004492	0.0035	3.2207	24993.4	41488.25	41488.25	66.35	No	Si
SLU 50	1.99	4189.67	-32728	-0.0001076	0.0004492	0.0035	3.2207	25309	41679.13	41679.13	9.95	No	Si
SLU 50	4.09	-675.84	-27991	-0.0000754	0.0004492	0.0035	3.2207	25037.01	41730.72	41730.72	61.75	No	Si
SLU 64	1.99	4289.64	-35380	-0.0001161	0.0004492	0.0035	3.2207	24960.04	44043.03	44043.03	10.27	No	Si
SLU 64	4.09	-540.09	-30416	-0.0000815	0.0004492	0.0035	3.2207	25319.6	44086.4	44086.4	81.63	No	Si
SLU 62	1.99	4515.39	-37364	-0.0001235	0.0004492	0.0035	3.2207	24463.88	45810.77	45810.77	10.15	No	Si
SLU 62	4.09	-528.14	-32295	-0.0000867	0.0004492	0.0035	3.2207	25331.8	45876.37	45876.37	86.86	No	Si
SLU 53	1.99	4403.47	-36089	-0.0001189	0.0004492	0.0035	3.2207	24805.81	44674.89	44674.89	10.15	No	Si
SLU 53	4.09	-546.37	-31133	-0.0000835	0.0004492	0.0035	3.2207	25345.56	44769.7	44769.7	81.94	No	Si
SLU 56	1.99	4448.78	-36615	-0.0001208	0.0004492	0.0035	3.2207	24674.89	45143.22	45143.22	10.15	No	Si
SLU 56	4.09	-581.25	-31655	-0.0000852	0.0004492	0.0035	3.2207	25347.91	45267.35	45267.35	77.88	No	Si
SLU 58	1.99	4449.39	-36341	-0.00012	0.0004492	0.0035	3.2207	24744.89	44899.11	44899.11	10.09	No	Si
SLU 58	4.09	-596.87	-31369	-0.0000845	0.0004492	0.0035	3.2207	25348.35	44994.77	44994.77	75.38	No	Si
SLU 60	1.99	4470.09	-36839	-0.0001216	0.0004492	0.0035	3.2207	24614.93	45342.44	45342.44	10.14	No	Si
SLU 60	4.09	-493.25	-31772	-0.0000851	0.0004492	0.0035	3.2207	25346.53	45378.72	45378.72	92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.99	5729.57	-26350	-0.000094	0.0006738	0.0035	3.2207		36496.82	36496.82	6.37		Si
SLV 12	4.09	-4996.11	-19602	-0.0000724	0.0006738	0.0035	3.2207		33490.65	33490.65	6.7		Si
SLV 8	1.99	7544.63	-31601	-0.0001176	0.0006738	0.0035	3.2207		42603.66	42603.66	5.65		Si
SLV 8	4.09	-3102.63	-25165	-0.0000779	0.0006738	0.0035	3.2207		40181.44	40181.44	12.95		Si
SLV 16	1.99	1430.35	-19029	-0.0000538	0.0006738	0.0035	3.2207		27983.43	27983.43	19.56		Si
SLV 16	4.09	-4749.52	-13852	-0.0000562	0.0006738	0.0035	3.2207		26014.23	26014.23	5.48		Si
SLV 11	1.99	5518.83	-26534	-0.0000935	0.0006738	0.0035	3.2207		36711.27	36711.27	6.65		Si
SLV 11	4.09	-4846.36	-19781	-0.0000721	0.0006738	0.0035	3.2207		33709.39	33709.39	6.96		Si
SLD 8	1.99	5151.84	-29176	-0.0000988	0.0006738	0.0035	3.2207		39783.21	39783.21	7.72		Si
SLD 8	4.09	-1634.98	-24198	-0.0000682	0.0006738	0.0035	3.2207		39061.35	39061.35	23.89		Si
SLV 4	1.99	7480.57	-36533	-0.0001313	0.0006738	0.0035	3.2207		47824.01	47824.01	6.39		Si
SLV 4	4.09	1562.08	-32394	-0.0000897	0.0006738	0.0035	3.2207		43526.45	43526.45	27.86		Si
SLD 7	1.99	5059.79	-29256	-0.0000986	0.0006738	0.0035	3.2207		39876.88	39876.88	7.88		Si
SLD 7	4.09	-1569.57	-24276	-0.0000681	0.0006738	0.0035	3.2207		39151.65	39151.65	24.94		Si
SLV 15	1.99	1103.34	-19315	-0.000053	0.0006738	0.0035	3.2207		28316.2	28316.2	25.66		Si
SLV 15	4.09	-4517.13	-14129	-0.0000558	0.0006738	0.0035	3.2207		26390.88	26390.88	5.84		Si
SLV 7	1.99	7333.9	-31785	-0.000117	0.0006738	0.0035	3.2207		42818.11	42818.11	5.84		Si
SLV 7	4.09	-2952.88	-25343	-0.0000777	0.0006738	0.0035	3.2207		40388.2	40388.2	13.68		Si
SLV 3	1.99	7153.55	-36819	-0.0001304	0.0006738	0.0035	3.2207		48083.42	48083.42	6.72		Si
SLV 3	4.09	1794.47	-32671	-0.0000916	0.0006738	0.0035	3.2207		43848.48	43848.48	24.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.99	4468.01	-39918	-23438	3342	3.2207	3.2207	-45484	10833	5583	108749	18519	16426	34945	No	10.46	Si
SLU 75	4.09	-458.67	-34678	-20362	4708	3.2207	3.2207	-39513	10833	5583	108749	18519	16426	34945	No	7.42	Si
SLU 82	1.99	4534.62	-40667	-23878	3418	3.2207	3.2207	-46337	10833	5583	108749	18519	16426	34945	No	10.22	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	4.09	-405.55	-35318	-20737	4804	3.2207	3.2207	-40242	10833	5583	108749	18519	16426	34945	No	7.27	Si
SLU 84	1.99	4579.93	-41193	-24187	3444	3.2207	3.2207	-46936	10833	5583	108749	18519	16426	34945	No	10.15	Si
SLU 84	4.09	-440.44	-35840	-21044	4850	3.2207	3.2207	-40837	10833	5583	108749	18519	16426	34945	No	7.2	Si
SLU 81	1.99	4660.67	-40542	-23805	3492	3.2207	3.2207	-46195	10833	5583	108749	18519	16426	34945	No	10.01	Si
SLU 81	4.09	-427.27	-35242	-20692	4793	3.2207	3.2207	-40155	10833	5583	108749	18519	16426	34945	No	7.29	Si
SLU 79	1.99	4639.97	-40045	-23513	3467	3.2207	3.2207	-45628	10833	5583	108749	18519	16426	34945	No	10.08	Si
SLU 79	4.09	-530.89	-34839	-20456	4757	3.2207	3.2207	-39696	10833	5583	108749	18519	16426	34945	No	7.35	Si
SLU 77	1.99	4639.36	-40319	-23673	3442	3.2207	3.2207	-45940	10833	5583	108749	18519	16426	34945	No	10.15	Si
SLU 77	4.09	-515.28	-35125	-20624	4743	3.2207	3.2207	-40022	10833	5583	108749	18519	16426	34945	No	7.37	Si
SLU 76	1.99	4384.59	-39728	-23326	3318	3.2207	3.2207	-45267	10833	5583	108749	18519	16426	34945	No	10.53	Si
SLU 76	4.09	-459.81	-34443	-20223	4730	3.2207	3.2207	-39245	10833	5583	108749	18519	16426	34945	No	7.39	Si
SLU 78	1.99	4513.31	-40444	-23747	3369	3.2207	3.2207	-46083	10833	5583	108749	18519	16426	34945	No	10.37	Si
SLU 78	4.09	-493.56	-35201	-20668	4754	3.2207	3.2207	-40108	10833	5583	108749	18519	16426	34945	No	7.35	Si
SLU 83	1.99	4705.97	-41068	-24113	3518	3.2207	3.2207	-46793	10833	5583	108749	18519	16426	34945	No	9.93	Si
SLU 83	4.09	-462.16	-35764	-20999	4839	3.2207	3.2207	-40750	10833	5583	108749	18519	16426	34945	No	7.22	Si
SLU 80	1.99	4513.92	-40170	-23586	3394	3.2207	3.2207	-45770	10833	5583	108749	18519	16426	34945	No	10.3	Si
SLU 80	4.09	-509.17	-34915	-20500	4768	3.2207	3.2207	-39782	10833	5583	108749	18519	16426	34945	No	7.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.99	5518.83	-26534	-15580	8469	3.2207	3.2207	-30233	16250	8374	108749	27778	16426	44204		5.22	Si
SLV 11	4.09	-4846.36	-19781	-11614	8116	3.2207	3.2207	-22538	16250	8374	108749	27778	16426	44204		5.45	Si
SLD 11	1.99	4319.38	-27150	-15942	5128	3.2207	3.2207	-30936	16250	8374	108749	27778	16426	44204		8.62	Si
SLD 11	4.09	-2330.43	-22022	-12930	5475	3.2207	3.2207	-25092	16250	8374	108749	27778	16426	44204		8.07	Si
SLV 7	1.99	7333.9	-31785	-18663	7780	3.2207	3.2207	-36217	16250	8374	108749	27778	16426	44204		5.68	Si
SLV 7	4.09	-2952.88	-25343	-14881	8299	3.2207	3.2207	-28877	16250	8374	108749	27778	16426	44204		5.33	Si
SLD 8	1.99	5151.84	-29176	-17131	4941	3.2207	3.2207	-33243	16250	8374	108749	27778	16426	44204		8.95	Si
SLD 8	4.09	-1634.98	-24198	-14208	5636	3.2207	3.2207	-27572	16250	8374	108749	27778	16426	44204		7.84	Si
SLV 4	1.99	7480.57	-36533	-21451	3225	3.2207	3.2207	-41626	16250	8374	108749	27778	16426	44204		13.71	Si
SLV 4	4.09	1562.08	-32394	-19020	5299	3.2207	3.2207	-36911	16250	8374	108749	27778	16426	44204		8.34	Si
SLV 8	1.99	7544.63	-31601	-18555	7963	3.2207	3.2207	-36007	16250	8374	108749	27778	16426	44204		5.55	Si
SLV 8	4.09	-3102.63	-25165	-14776	8462	3.2207	3.2207	-28673	16250	8374	108749	27778	16426	44204		5.22	Si
SLD 7	1.99	5059.79	-29256	-17178	4861	3.2207	3.2207	-33335	16250	8374	108749	27778	16426	44204		9.09	Si
SLD 7	4.09	-1569.57	-24276	-14254	5565	3.2207	3.2207	-27661	16250	8374	108749	27778	16426	44204		7.94	Si
SLV 16	1.99	1430.35	-19029	-11173	5523	3.2207	3.2207	-21682	16250	8374	108749	27778	16426	44204		8	Si
SLV 16	4.09	-4749.52	-13852	-8133	4689	3.2207	3.2207	-15783	15657	8068	108749	27778	16426	44204		9.43	Si
SLV 12	1.99	5729.57	-26350	-15471	8652	3.2207	3.2207	-30023	16250	8374	108749	27778	16426	44204		5.11	Si
SLV 12	4.09	-4996.11	-19602	-11510	8279	3.2207	3.2207	-22335	16250	8374	108749	27778	16426	44204		5.34	Si
SLD 12	1.99	4411.43	-27070	-15894	5208	3.2207	3.2207	-30844	16250	8374	108749	27778	16426	44204		8.49	Si
SLD 12	4.09	-2395.84	-21944	-12884	5546	3.2207	3.2207	-25003	16250	8374	108749	27778	16426	44204		7.97	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-14480	0.32	161.17	980.8	1606.1	1293.45	8.03	Si
SLV 15	-14797	0.32	161.17	998.31	1634.96	1316.64	8.17	Si
SLV 14	-14923	0.32	161.17	1005.23	1646.45	1325.84	8.23	Si
SLV 13	-15241	0.32	161.17	1022.51	1675.33	1348.92	8.37	Si
SLV 12	-20652	0.32	161.17	1290.9	2160.36	1725.63	10.71	Si
SLV 11	-20857	0.32	161.17	1300.07	2178.58	1739.32	10.79	Si
SLV 10	-22131	0.32	161.17	1355.6	2292.14	1823.87	11.32	Si
SLV 9	-22335	0.32	161.17	1364.26	2310.38	1837.32	11.4	Si
SLV 8	-26338	0.32	161.17	1519.45	2663.97	2091.71	12.98	Si
SLV 7	-26542	0.32	161.17	1526.65	2681.32	2103.98	13.05	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1257

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-20801	-31785	-65	0.829	2369.5	0.968	12.45001	14.44837	No
SLV 8	-20739	-31601	-65	0.831	2363.2	0.968	12.48495	14.44837	No
SLV 5	-20452	-28519	-279	0.832	2333.9	0.967	12.50223	14.44837	No
SLV 6	-20389	-28334	-279	0.834	2327.6	0.967	12.53789	14.44837	No
SLV 11	-17383	-26534	257	0.964	2021.7	0.963	14.55304	14.44837	Si
SLV 12	-17321	-26350	257	0.967	2015.3	0.963	14.60149	14.44837	Si
SLV 9	-17033	-23267	44	0.993	1986.1	0.962	15.00226	14.44837	Si
SLV 10	-16971	-23083	44	0.996	1979.7	0.962	15.0532	14.44837	Si
SLV 3	-24684	-36819	-517	0.693	2764.9	0.972	10.35845	7.3053	Si
SLV 1	-24579	-35839	-581	0.693	2754.2	0.972	10.36304	7.3053	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.939	SLU 43	Si
V_SLU	7.205	SLU 84	Si
PF_SLV	5.477	SLV 16	Si
V_SLV	5.109	SLV 12	Si
PFFP_SLV	8.025	SLV 16	Si
R_SLV	0.862	SLV 7	No

Maschio 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.483	-3.314	L4	L5	1.705	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.99	-2867.32	-16553	-0.0000918	0.0003743	0.0035	1.705	9305.62	11388.79	11388.79	3.97	No	Si
SLU 84	4.09	823.13	-20060	-0.0000792	0.0003743	0.0035	1.705	10043.34	12128.84	12128.84	14.74	No	Si
SLU 79	1.99	-2785.59	-16199	-0.0000893	0.0003743	0.0035	1.705	9207.23	11261.67	11261.67	4.04	No	Si
SLU 79	4.09	775.54	-19535	-0.0000766	0.0003743	0.0035	1.705	9960.38	11944.22	11944.22	15.4	No	Si
SLU 82	1.99	-2835.14	-16264	-0.0000902	0.0003743	0.0035	1.705	9225.65	11284.88	11284.88	3.98	No	Si
SLU 82	4.09	820.65	-19715	-0.0000778	0.0003743	0.0035	1.705	9989.9	12007.23	12007.23	14.63	No	Si
SLU 80	1.99	-2784.99	-16239	-0.0000894	0.0003743	0.0035	1.705	9218.73	11276.13	11276.13	4.05	No	Si
SLU 80	4.09	787.2	-19564	-0.0000768	0.0003743	0.0035	1.705	9965.28	11954.5	11954.5	15.19	No	Si
SLU 74	1.99	-2776.92	-16010	-0.0000884	0.0003743	0.0035	1.705	9153.05	11194.82	11194.82	4.03	No	Si
SLU 74	4.09	792.78	-19323	-0.0000759	0.0003743	0.0035	1.705	9924.2	11870.43	11870.43	14.97	No	Si
SLU 78	1.99	-2808.5	-16340	-0.0000901	0.0003743	0.0035	1.705	9246.95	11312.06	11312.06	4.03	No	Si
SLU 78	4.09	806.92	-19698	-0.0000776	0.0003743	0.0035	1.705	9987.14	12001.23	12001.23	14.87	No	Si
SLU 83	1.99	-2867.92	-16512	-0.0000916	0.0003743	0.0035	1.705	9294.57	11374.11	11374.11	3.97	No	Si
SLU 83	4.09	811.47	-20030	-0.000079	0.0003743	0.0035	1.705	10038.95	12118.45	12118.45	14.93	No	Si
SLU 77	1.99	-2809.09	-16299	-0.00009	0.0003743	0.0035	1.705	9235.6	11297.53	11297.53	4.02	No	Si
SLU 77	4.09	795.26	-19668	-0.0000773	0.0003743	0.0035	1.705	9982.38	11990.93	11990.93	15.08	No	Si
SLU 75	1.99	-2776.32	-16051	-0.0000886	0.0003743	0.0035	1.705	9164.82	11209.16	11209.16	4.04	No	Si
SLU 75	4.09	804.44	-19352	-0.0000762	0.0003743	0.0035	1.705	9929.32	11880.65	11880.65	14.77	No	Si
SLU 81	1.99	-2835.74	-16223	-0.00009	0.0003743	0.0035	1.705	9214.18	11270.39	11270.39	3.97	No	Si
SLU 81	4.09	808.99	-19685	-0.0000776	0.0003743	0.0035	1.705	9985.15	11996.92	11996.92	14.83	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.99	-4911.14	-7065	-0.0001736	0.0005615	0.0035	1.364		6381.22	6381.22	1.3		Si
SLV 9	4.09	1795.51	-12943	-0.0000623	0.0005615	0.0035	1.705		9526.57	9526.57	5.31		Si
SLV 14	1.99	-8102.27	-5831	-0.0046324	0.0005615	0.0035	1.364		5463.98	5463.98	0.67		No
SLV 14	4.09	5335.06	-16738	-0.0001196	0.0005615	0.0035	1.705		11894.36	11894.36	2.23		Si
SLV 10	1.99	-4563.47	-7241	-0.0001236	0.0005615	0.0035	1.364		6506.3	6506.3	1.43		Si
SLV 10	4.09	1444.38	-12575	-0.0000569	0.0005615	0.0035	1.705		9284.52	9284.52	6.43		Si
SLV 15	1.99	-8040.99	-7067	-0.0033216	0.0005615	0.0035	1.364		6382.37	6382.37	0.79		No
SLV 15	4.09	6149.39	-18306	-0.0001371	0.0005615	0.0035	1.705		12682.25	12682.25	2.06		Si
SLD 13	1.99	-4769.2	-8698	-0.0001078	0.0005615	0.0035	1.364		7547.89	7547.89	1.58		Si
SLD 13	4.09	2796.18	-14891	-0.000081	0.0005615	0.0035	1.705		10822.5	10822.5	3.87		Si
SLV 1	1.99	3745.75	-14755	-0.0000918	0.0005615	0.0035	1.705		10731.31	10731.31	2.86		Si
SLV 1	4.09	-4614.83	-8447	-0.0001037	0.0005615	0.0035	1.364		7371.24	7371.24	1.6		Si
SLV 16	1.99	-7501.49	-7340	-0.0021957	0.0005615	0.0035	1.364		6576.58	6576.58	0.88		No
SLV 16	4.09	5604.53	-17734	-0.0001268	0.0005615	0.0035	1.705		12393.47	12393.47	2.21		Si
SLV 4	1.99	4886.04	-16538	-0.0001126	0.0005615	0.0035	1.705		11794.79	11794.79	2.41		Si
SLV 4	4.09	-4890.22	-8871	-0.0001113	0.0005615	0.0035	1.364		7667.98	7667.98	1.57		Si
SLV 2	1.99	4285.25	-15029	-0.0000994	0.0005615	0.0035	1.705		10915.13	10915.13	2.55		Si
SLV 2	4.09	-5159.7	-7875	-0.0001545	0.0005615	0.0035	1.364		6958.83	6958.83	1.35		Si
SLV 13	1.99	-8641.77	-5558	-0.0056614	0.0005615	0.0035	1.364		5261.01	5261.01	0.61		No
SLV 13	4.09	5879.92	-17310	-0.0001298	0.0005615	0.0035	1.705		12180.17	12180.17	2.07		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.99	-2784.99	-16239	-13523	-3382	1.705	1.705	-28325	10721	5118	38062	14296	4348	18643	No	5.51	Si
SLU 80	4.09	787.2	-19564	-16291	-4203	1.705	1.705	-34125	10833	5172	38062	14296	4348	18643	No	4.44	Si
SLU 82	1.99	-2835.14	-16264	-13543	-3462	1.705	1.705	-28368	10727	5121	38062	14296	4348	18643	No	5.38	Si
SLU 82	4.09	820.65	-19715	-16417	-4278	1.705	1.705	-34387	10833	5172	38062	14296	4348	18643	No	4.36	Si
SLU 75	1.99	-2776.32	-16051	-13366	-3382	1.705	1.705	-27997	10677	5097	38062	14296	4348	18643	No	5.51	Si
SLU 75	4.09	804.44	-19352	-16115	-4196	1.705	1.705	-33756	10833	5172	38062	14296	4348	18643	No	4.44	Si
SLU 74	1.99	-2776.92	-16010	-13332	-3380	1.705	1.705	-27926	10668	5093	38062	14296	4348	18643	No	5.52	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.09	792.78	-19323	-16091	-4192	1.705	1.705	-33704	10833	5172	38062	14296	4348	18643	No	4.45	Si
SLU 79	1.99	-2785.59	-16199	-13489	-3380	1.705	1.705	-28255	10712	5114	38062	14296	4348	18643	No	5.52	Si
SLU 79	4.09	775.54	-19535	-16267	-4200	1.705	1.705	-34073	10833	5172	38062	14296	4348	18643	No	4.44	Si
SLU 83	1.99	-2867.92	-16512	-13750	-3490	1.705	1.705	-28801	10785	5149	38062	14296	4348	18643	No	5.34	Si
SLU 83	4.09	811.47	-20030	-16679	-4317	1.705	1.705	-34938	10833	5172	38062	14296	4348	18643	No	4.32	Si
SLU 81	1.99	-2835.74	-16223	-13509	-3461	1.705	1.705	-28297	10717	5117	38062	14296	4348	18643	No	5.39	Si
SLU 81	4.09	808.99	-19685	-16392	-4274	1.705	1.705	-34336	10833	5172	38062	14296	4348	18643	No	4.36	Si
SLU 77	1.99	-2809.09	-16299	-13572	-3410	1.705	1.705	-28430	10735	5125	38062	14296	4348	18643	No	5.47	Si
SLU 77	4.09	795.26	-19668	-16378	-4235	1.705	1.705	-34306	10833	5172	38062	14296	4348	18643	No	4.4	Si
SLU 84	1.99	-2867.32	-16553	-13784	-3492	1.705	1.705	-28872	10794	5153	38062	14296	4348	18643	No	5.34	Si
SLU 84	4.09	823.13	-20060	-16704	-4321	1.705	1.705	-34989	10833	5172	38062	14296	4348	18643	No	4.31	Si
SLU 78	1.99	-2808.5	-16340	-13606	-3411	1.705	1.705	-28500	10745	5129	38062	14296	4348	18643	No	5.47	Si
SLU 78	4.09	806.92	-19698	-16402	-4239	1.705	1.705	-34357	10833	5172	38062	14296	4348	18643	No	4.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.99	4285.25	-15029	-12515	7551	1.705	1.7021	-26214	15659	7463	38062	21443	4348	25791		3.42	Si
SLV 2	4.09	-5159.7	-7875	-6557	6638	1.364	0.5919	0	0	0	38062	17155	3478	20633		3.11	Si
SLV 16	1.99	-7501.49	-7340	-6112	-11254	1.364	0	0	0	0	38062	17155	3478	20633		1.83	Si
SLV 16	4.09	5604.53	-17734	-14768	-11459	1.705	1.6094	-30933	16250	7323	38062	21443	4348	25791		2.25	Si
SLV 14	1.99	-8102.27	-5831	-4856	-10873	1.364	0	0	0	0	38062	17155	3478	20633		1.9	Si
SLV 14	4.09	5335.06	-16738	-13938	-10744	1.705	1.6013	-29195	16250	7286	38062	21443	4348	25791		2.4	Si
SLV 4	1.99	4886.04	-16538	-13771	7170	1.705	1.6712	-28846	16186	7574	38062	21443	4348	25791		3.6	Si
SLV 4	4.09	-4890.22	-8871	-7387	5922	1.364	0.9038	0	0	0	38062	17155	3478	20633		3.48	Si
SLD 14	1.99	-4537.56	-8815	-7340	-5947	1.364	1.0133	0	0	0	38062	17155	3478	20633		3.47	Si
SLD 14	4.09	2562.23	-14646	-12196	-6215	1.705	1.705	-25545	15526	7412	38062	21443	4348	25791		4.15	Si
SLV 13	1.99	-8641.77	-5558	-4628	-11719	1.364	0	0	0	0	38062	17155	3478	20633		1.76	Si
SLV 13	4.09	5879.92	-17310	-14414	-11605	1.705	1.5385	-30192	16250	7000	38062	21443	4348	25791		2.22	Si
SLD 13	1.99	-4769.2	-8698	-7243	-6310	1.364	0.9125	0	0	0	38062	17155	3478	20633		3.27	Si
SLD 13	4.09	2796.18	-14891	-12400	-6585	1.705	1.705	-25974	15611	7453	38062	21443	4348	25791		3.92	Si
SLV 15	1.99	-8040.99	-7067	-5885	-12100	1.364	0	0	0	0	38062	17155	3478	20633		1.71	Si
SLV 15	4.09	6149.39	-18306	-15244	-12320	1.705	1.5498	-31931	16250	7051	38062	21443	4348	25791		2.09	Si
SLD 15	1.99	-4512.55	-9349	-7785	-6478	1.364	1.1094	0	0	0	38062	17155	3478	20633		3.18	Si
SLD 15	4.09	2913.24	-15324	-12761	-6896	1.705	1.705	-26729	15762	7525	38062	21443	4348	25791		3.74	Si
SLV 1	1.99	3745.75	-14755	-12287	6705	1.705	1.705	-25737	15564	7430	38062	21443	4348	25791		3.85	Si
SLV 1	4.09	-4614.83	-8447	-7034	5776	1.364	0.9185	0	0	0	38062	17155	3478	20633		3.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.32	19284	-9206	141.11	1126.12	7.98	Si
SLV 1	179667	0.32	20193	-9640	141.11	1171.18	8.3	Si
SLV 4	179667	0.32	21116	-10081	141.11	1216.18	8.62	Si
SLV 6	179667	0.32	21689	-10355	141.11	1243.75	8.81	Si
SLV 3	179667	0.32	22025	-10515	141.11	1259.78	8.93	Si
SLV 5	179667	0.32	22275	-10634	141.11	1271.64	9.01	Si
SLV 10	179667	0.32	25444	-12147	141.11	1417.28	10.04	Si
SLV 9	179667	0.32	26030	-12427	141.11	1443.24	10.23	Si
SLV 8	179667	0.32	27796	-13270	141.11	1519.66	10.77	Si
SLV 7	179667	0.32	28382	-13550	141.11	1544.42	10.94	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-13682	-15030	376	0.651	1626.6	0.958	9.87604	10.55427	No
SLV 7	-13599	-14854	376	0.654	1618.1	0.957	9.92918	10.55427	No
SLV 12	-12271	-12271	452	0.708	1483.2	0.954	10.78282	10.55427	Si
SLV 11	-12188	-12095	452	0.712	1474.7	0.954	10.84735	10.55427	Si
SLV 6	-11240	-10001	-467	0.761	1378.5	0.951	11.6256	10.55427	Si
SLV 5	-11157	-9824	-467	0.765	1370	0.951	11.70187	10.55427	Si
SLV 10	-9829	-7241	-391	0.857	1235.3	0.946	13.16899	10.55427	Si
SLV 9	-9746	-7065	-391	0.863	1226.8	0.946	13.2671	10.55427	Si
SLV 4	-14497	-16538	-8	0.643	1709.4	0.959	9.73438	4.78007	Si
SLV 3	-14367	-16264	-8	0.648	1696.3	0.959	9.8122	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.966	SLU 83	Si
V_SLU	4.315	SLU 84	Si
PF_SLV	0.609	SLV 13	No
V_SLV	1.705	SLV 15	Si
PFFP_SLV	7.981	SLV 2	Si
R_SLV	0.936	SLV 8	No

Maschio 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.526	L4	L5	4.36	0.16	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	1.99	9355.01	-47728	-0.0001203	0.0004492	0.0035	4.36	45787.21	80496.8	80496.8	8.6	No	Si
SLU 42	4.09	-1954.68	-36113	-0.0000737	0.0004492	0.0035	4.36	45372.09	74402.31	74402.31	38.06	No	Si
SLU 77	1.99	10422.79	-56092	-0.0001431	0.0004492	0.0035	4.36	41812.1	90634.91	90634.91	8.7	No	Si
SLU 77	4.09	-2414.91	-42267	-0.0000878	0.0004492	0.0035	4.36	46451.54	82573.86	82573.86	34.19	No	Si
SLU 83	1.99	10811.42	-56750	-0.0001459	0.0004492	0.0035	4.36	41347.74	91432.14	91432.14	8.46	No	Si
SLU 83	4.09	-2498.2	-42746	-0.0000891	0.0004492	0.0035	4.36	46454.3	83184.34	83184.34	33.3	No	Si
SLU 81	1.99	10714.41	-55970	-0.0001437	0.0004492	0.0035	4.36	41895.85	90486.95	90486.95	8.45	No	Si
SLU 81	4.09	-2497.92	-42050	-0.0000876	0.0004492	0.0035	4.36	46446.43	82297.22	82297.22	32.95	No	Si
SLU 82	1.99	10702.34	-55985	-0.0001437	0.0004492	0.0035	4.36	41885.99	90504.44	90504.44	8.46	No	Si
SLU 82	4.09	-2420.7	-42039	-0.0000874	0.0004492	0.0035	4.36	46446.12	82283.71	82283.71	33.99	No	Si
SLU 40	1.99	9258.01	-46948	-0.0001182	0.0004492	0.0035	4.36	45975.44	79551.61	79551.61	8.59	No	Si
SLU 40	4.09	-1954.4	-35417	-0.0000723	0.0004492	0.0035	4.36	45128.1	73444.65	73444.65	37.58	No	Si
SLU 41	1.99	9367.09	-47713	-0.0001203	0.0004492	0.0035	4.36	45790.98	80479.31	80479.31	8.59	No	Si
SLU 41	4.09	-2031.9	-36123	-0.000074	0.0004492	0.0035	4.36	45375.62	74416.9	74416.9	36.62	No	Si
SLU 84	1.99	10799.35	-56764	-0.0001459	0.0004492	0.0035	4.36	41337.31	91449.62	91449.62	8.47	No	Si
SLU 84	4.09	-2420.98	-42735	-0.0000889	0.0004492	0.0035	4.36	46454.36	83170.83	83170.83	34.35	No	Si
SLU 74	1.99	10325.78	-55312	-0.0001409	0.0004492	0.0035	4.36	42333.97	89689.73	89689.73	8.69	No	Si
SLU 74	4.09	-2414.63	-41571	-0.0000864	0.0004492	0.0035	4.36	46426.63	81686.74	81686.74	33.83	No	Si
SLU 39	1.99	9270.08	-46933	-0.0001182	0.0004492	0.0035	4.36	45978.63	79534.13	79534.13	8.58	No	Si
SLU 39	4.09	-2031.62	-35427	-0.0000725	0.0004492	0.0035	4.36	45132.01	73459.23	73459.23	36.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.99	9476.95	-34629	-0.0000892	0.0006738	0.0035	4.36		65201.39	65201.39	6.88		Si
SLV 13	4.09	-3830.56	-27926	-0.0000611	0.0006738	0.0035	4.36		64111.73	64111.73	16.74		Si
SLV 12	1.99	9670.84	-36011	-0.0000925	0.0006738	0.0035	4.36		67386.07	67386.07	6.97		Si
SLV 12	4.09	-11242.42	-29821	-0.0000843	0.0006738	0.0035	4.36		67239.31	67239.31	5.98		Si
SLD 15	1.99	8351.12	-36594	-0.0000901	0.0006738	0.0035	4.36		68308.01	68308.01	8.18		Si
SLD 15	4.09	-4614.09	-28699	-0.0000646	0.0006738	0.0035	4.36		65387.06	65387.06	14.17		Si
SLV 8	1.99	7817.38	-38466	-0.0000924	0.0006738	0.0035	4.36		71267.22	71267.22	9.12		Si
SLV 8	4.09	-8409.04	-29944	-0.0000771	0.0006738	0.0035	4.36		67442.98	67442.98	8.02		Si
SLV 6	1.99	4027.79	-40707	-0.0000866	0.0006738	0.0035	4.36		74811.48	74811.48	18.57		Si
SLV 6	4.09	7581.71	-27418	-0.0000699	0.0006738	0.0035	4.36		53800.55	53800.55	7.1		Si
SLV 16	1.99	10483.71	-33926	-0.0000905	0.0006738	0.0035	4.36		64090.01	64090.01	6.11		Si
SLV 16	4.09	-9021.2	-28816	-0.0000765	0.0006738	0.0035	4.36		65581.27	65581.27	7.27		Si
SLV 5	1.99	4111.63	-40727	-0.0000868	0.0006738	0.0035	4.36		74842.48	74842.48	18.2		Si
SLV 5	4.09	7835.24	-27333	-0.0000704	0.0006738	0.0035	4.36		53665.55	53665.55	6.85		Si
SLV 14	1.99	9346.84	-34599	-0.0000888	0.0006738	0.0035	4.36		65153.29	65153.29	6.97		Si
SLV 14	4.09	-4223.97	-28059	-0.0000624	0.0006738	0.0035	4.36		64330.43	64330.43	15.23		Si
SLV 15	1.99	10613.83	-33957	-0.0000909	0.0006738	0.0035	4.36		64138.11	64138.11	6.04		Si
SLV 15	4.09	-8627.78	-28684	-0.0000752	0.0006738	0.0035	4.36		65362.57	65362.57	7.58		Si
SLV 11	1.99	9754.69	-36030	-0.0000927	0.0006738	0.0035	4.36		67417.07	67417.07	6.91		Si
SLV 11	4.09	-10988.89	-29736	-0.0000835	0.0006738	0.0035	4.36		67098.37	67098.37	6.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.99	10321.88	-55641	-32670	-4762	4.36	4.36	-46832	10833	7557	108749	25070	22236	47306	No	9.93	Si
SLU 80	4.09	-2312.66	-41889	-24595	-4175	4.36	4.36	-35257	10833	7557	108749	25070	22236	47306	No	11.33	Si
SLU 73	1.99	10119.82	-54091	-31760	-4716	4.36	4.36	-45527	10833	7557	108749	25070	22236	47306	No	10.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	4.09	-2260.62	-40490	-23774	-4144	4.36	4.36	-34079	10833	7557	108749	25070	22236	47306	No	11.42	Si
SLU 75	1.99	10313.71	-55327	-32485	-4767	4.36	4.36	-46567	10833	7557	108749	25070	22236	47306	No	9.92	Si
SLU 75	4.09	-2337.42	-41561	-24403	-4183	4.36	4.36	-34981	10833	7557	108749	25070	22236	47306	No	11.31	Si
SLU 83	1.99	10811.42	-56750	-33321	-4714	4.36	4.36	-47765	10833	7557	108749	25070	22236	47306	No	10.03	Si
SLU 83	4.09	-2498.2	-42746	-25099	-4109	4.36	4.36	-35978	10833	7557	108749	25070	22236	47306	No	11.51	Si
SLU 82	1.99	10702.34	-55985	-32872	-4737	4.36	4.36	-47121	10833	7557	108749	25070	22236	47306	No	9.99	Si
SLU 82	4.09	-2420.7	-42039	-24684	-4139	4.36	4.36	-35384	10833	7557	108749	25070	22236	47306	No	11.43	Si
SLU 77	1.99	10422.79	-56092	-32935	-4744	4.36	4.36	-47212	10833	7557	108749	25070	22236	47306	No	9.97	Si
SLU 77	4.09	-2414.91	-42267	-24817	-4152	4.36	4.36	-35575	10833	7557	108749	25070	22236	47306	No	11.39	Si
SLU 84	1.99	10799.35	-56764	-33330	-4783	4.36	4.36	-47777	10833	7557	108749	25070	22236	47306	No	9.89	Si
SLU 84	4.09	-2420.98	-42735	-25092	-4177	4.36	4.36	-35969	10833	7557	108749	25070	22236	47306	No	11.32	Si
SLU 76	1.99	10216.82	-54871	-32218	-4762	4.36	4.36	-46183	10833	7557	108749	25070	22236	47306	No	9.93	Si
SLU 76	4.09	-2260.9	-41186	-24182	-4182	4.36	4.36	-34665	10833	7557	108749	25070	22236	47306	No	11.31	Si
SLU 78	1.99	10410.72	-56107	-32943	-4813	4.36	4.36	-47224	10833	7557	108749	25070	22236	47306	No	9.83	Si
SLU 78	4.09	-2337.69	-42256	-24811	-4221	4.36	4.36	-35566	10833	7557	108749	25070	22236	47306	No	11.21	Si
SLU 74	1.99	10325.78	-55312	-32477	-4699	4.36	4.36	-46555	10833	7557	108749	25070	22236	47306	No	10.07	Si
SLU 74	4.09	-2414.63	-41571	-24409	-4114	4.36	4.36	-34990	10833	7557	108749	25070	22236	47306	No	11.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	1.99	5704.35	-39342	-23100	-7449	4.36	4.36	-33113	16250	11336	108749	37605	22236	59841		8.03	Si
SLD 6	4.09	2359.59	-28039	-16463	-6817	4.36	4.36	-23600	16250	11336	108749	37605	22236	59841		8.78	Si
SLV 2	1.99	3168.65	-42781	-25119	-11943	4.36	4.36	-36008	16250	11336	108749	37605	22236	59841		5.01	Si
SLV 2	4.09	5220.61	-28470	-16716	-11787	4.36	4.36	-23963	16250	11336	108749	37605	22236	59841		5.08	Si
SLV 5	1.99	4111.63	-40727	-23913	-12927	4.36	4.36	-34279	16250	11336	108749	37605	22236	59841		4.63	Si
SLV 5	4.09	7835.24	-27333	-16049	-12044	4.36	4.36	-23006	16250	11336	108749	37605	22236	59841		4.97	Si
SLD 5	1.99	5740.97	-39351	-23105	-7533	4.36	4.36	-33121	16250	11336	108749	37605	22236	59841		7.94	Si
SLD 5	4.09	2470.33	-28002	-16442	-6899	4.36	4.36	-23569	16250	11336	108749	37605	22236	59841		8.67	Si
SLV 6	1.99	4027.79	-40707	-23902	-12736	4.36	4.36	-34262	16250	11336	108749	37605	22236	59841		4.7	Si
SLV 6	4.09	7581.71	-27418	-16099	-11855	4.36	4.36	-23077	16250	11336	108749	37605	22236	59841		5.05	Si
SLV 9	1.99	5965.09	-38272	-22472	-9052	4.36	4.36	-32213	16250	11336	108749	37605	22236	59841		6.61	Si
SLV 9	4.09	5001.87	-27210	-15976	-7914	4.36	4.36	-22902	16250	11336	108749	37605	22236	59841		7.56	Si
SLV 4	1.99	4305.53	-42109	-24724	-7433	4.36	4.36	-35442	16250	11336	108749	37605	22236	59841		8.05	Si
SLV 4	4.09	423.38	-29228	-17161	-7644	4.36	4.36	-24600	16250	11336	108749	37605	22236	59841		7.83	Si
SLV 3	1.99	4435.64	-42139	-24742	-7729	4.36	4.36	-35468	16250	11336	108749	37605	22236	59841		7.74	Si
SLV 3	4.09	816.79	-29095	-17083	-7937	4.36	4.36	-24489	16250	11336	108749	37605	22236	59841		7.54	Si
SLV 1	1.99	3298.76	-42812	-25137	-12239	4.36	4.36	-36034	16250	11336	108749	37605	22236	59841		4.89	Si
SLV 1	4.09	5614.02	-28337	-16639	-12080	4.36	4.36	-23851	16250	11336	108749	37605	22236	59841		4.95	Si
SLV 10	1.99	5881.24	-38253	-22460	-8861	4.36	4.36	-32196	16250	11336	108749	37605	22236	59841		6.75	Si
SLV 10	4.09	4748.34	-27295	-16026	-7725	4.36	4.36	-22974	16250	11336	108749	37605	22236	59841		7.75	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-29085	0.32	218.18	1797.48	3025.49	2411.48	11.05	Si
SLV 13	-29100	0.32	218.18	1798.17	3026.9	2412.54	11.06	Si
SLV 10	-29152	0.32	218.18	1800.41	3031.49	2415.95	11.07	Si
SLV 14	-29205	0.32	218.18	1802.72	3036.22	2419.47	11.09	Si
SLV 5	-29418	0.32	218.18	1811.96	3055.25	2433.6	11.15	Si
SLV 15	-29464	0.32	218.18	1813.92	3059.31	2436.61	11.17	Si
SLV 6	-29486	0.32	218.18	1814.86	3061.26	2438.06	11.17	Si
SLV 16	-29568	0.32	218.18	1818.42	3068.62	2443.52	11.2	Si
SLV 1	-30213	0.32	218.18	1845.88	3126.14	2486.01	11.39	Si
SLV 11	-30295	0.32	218.18	1849.36	3133.51	2491.43	11.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1257

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-25184	-38253	197	0.913	2904.9	0.965	13.75058	14.44837	No
SLV 9	-25129	-38272	197	0.915	2899.3	0.965	13.77886	14.44837	No
SLV 6	-22811	-40707	-349	0.991	2663.5	0.962	14.97745	14.44837	Si
SLV 5	-22755	-40727	-349	0.993	2657.8	0.962	15.01119	14.44837	Si
SLV 12	-20480	-36011	383	1.089	2426.3	0.958	16.51814	14.44837	Si
SLV 11	-20424	-36030	382	1.092	2420.7	0.958	16.55953	14.44837	Si
SLV 8	-18106	-38466	-163	1.225	2185.1	0.954	18.65349	14.44837	Si
SLV 7	-18051	-38485	-163	1.228	2179.5	0.954	18.70582	14.44837	Si
SLV 14	-26322	-34599	899	0.853	3020.7	0.966	12.82818	7.3053	Si
SLV 13	-26235	-34629	899	0.855	3011.9	0.966	12.86741	7.3053	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.445	SLU 81	Si
V_SLU	9.829	SLU 78	Si
PF_SLV	5.981	SLV 12	Si
V_SLV	4.629	SLV 5	Si
PFFP_SLV	11.053	SLV 9	Si
R_SLV	0.952	SLV 10	No

Maschio 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-0.194	L4	L5	4.63	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.99	15414.57	-77625	-0.0001341	0.0003743	0.0035	4.63	74015.42	106240.08	106240.08	6.89	No	Si
SLU 79	4.09	9138.95	-64858	-0.0001005	0.0003743	0.0035	4.63	76365.39	99352.29	99352.29	10.87	No	Si
SLU 60	1.99	15184.79	-71779	-0.0001234	0.0003743	0.0035	4.63	75801.05	103451.57	103451.57	6.81	No	Si
SLU 60	4.09	8684.75	-59625	-0.0000916	0.0003743	0.0035	4.63	75676.63	94382.31	94382.31	10.87	No	Si
SLU 62	1.99	15285.81	-72908	-0.0001256	0.0003743	0.0035	4.63	75549.54	103976.93	103976.93	6.8	No	Si
SLU 62	4.09	8697.13	-60700	-0.0000933	0.0003743	0.0035	4.63	75896.4	95432.69	95432.69	10.97	No	Si
SLU 84	1.99	15798	-79857	-0.0001389	0.0003743	0.0035	4.63	73017.37	107349.83	107349.83	6.8	No	Si
SLU 84	4.09	10131.77	-66855	-0.0001056	0.0003743	0.0035	4.63	76375.01	100893.71	100893.71	9.96	No	Si
SLU 83	1.99	15796.98	-79841	-0.0001388	0.0003743	0.0035	4.63	73025.07	107341.86	107341.86	6.8	No	Si
SLU 83	4.09	10028.32	-66780	-0.0001053	0.0003743	0.0035	4.63	76377.18	100837.79	100837.79	10.06	No	Si
SLU 80	1.99	15415.59	-77640	-0.0001341	0.0003743	0.0035	4.63	74008.95	106247.87	106247.87	6.89	No	Si
SLU 80	4.09	9242.4	-64934	-0.0001009	0.0003743	0.0035	4.63	76368.29	99412.57	99412.57	10.76	No	Si
SLU 61	1.99	15185.81	-71795	-0.0001235	0.0003743	0.0035	4.63	75797.82	103458.9	103458.9	6.81	No	Si
SLU 61	4.09	8788.2	-59701	-0.0000919	0.0003743	0.0035	4.63	75693.34	94455.57	94455.57	10.75	No	Si
SLU 82	1.99	15696.99	-78727	-0.0001366	0.0003743	0.0035	4.63	73544.12	106785.31	106785.31	6.8	No	Si
SLU 82	4.09	10119.39	-65781	-0.0001038	0.0003743	0.0035	4.63	76387.21	100079.21	100079.21	9.89	No	Si
SLU 81	1.99	15695.97	-78712	-0.0001366	0.0003743	0.0035	4.63	73551.19	106777.43	106777.43	6.8	No	Si
SLU 81	4.09	10015.95	-65705	-0.0001035	0.0003743	0.0035	4.63	76386.55	100020.85	100020.85	9.99	No	Si
SLU 63	1.99	15286.83	-72924	-0.0001256	0.0003743	0.0035	4.63	75545.69	103984.35	103984.35	6.8	No	Si
SLU 63	4.09	8800.58	-60775	-0.0000936	0.0003743	0.0035	4.63	75910.28	95506.63	95506.63	10.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.99	11045.47	-57074	-0.0000875	0.0005615	0.0035	4.63		103757.24	103757.24	9.39		Si
SLV 14	4.09	21872.72	-48084	-0.0000933	0.0005615	0.0035	4.63		91314.73	91314.73	4.17		Si
SLV 12	1.99	16645.48	-54809	-0.0000938	0.0005615	0.0035	4.63		100587.6	100587.6	6.04		Si
SLV 12	4.09	-5367.43	-42216	-0.0000588	0.0005615	0.0035	4.63		88218.82	88218.82	16.44		Si
SLV 9	1.99	6561.54	-53390	-0.0000752	0.0005615	0.0035	4.63		98616.07	98616.07	15.03		Si
SLV 9	4.09	24003.69	-47138	-0.0000955	0.0005615	0.0035	4.63		90028.34	90028.34	3.75		Si
SLV 13	1.99	11632.89	-57300	-0.0000888	0.0005615	0.0035	4.63		104075.89	104075.89	8.95		Si
SLV 13	4.09	22360.51	-48129	-0.0000941	0.0005615	0.0035	4.63		91376.02	91376.02	4.09		Si
SLV 7	1.99	15905.42	-52108	-0.0000889	0.0005615	0.0035	4.63		96842.02	96842.02	6.09		Si
SLV 7	4.09	-12287.35	-39935	-0.0000669	0.0005615	0.0035	4.63		84589.11	84589.11	6.88		Si
SLV 11	1.99	17024.03	-54955	-0.0000946	0.0005615	0.0035	4.63		100791.18	100791.18	5.92		Si
SLV 11	4.09	-5053.09	-42245	-0.0000583	0.0005615	0.0035	4.63		88265.24	88265.24	17.47		Si
SLV 10	1.99	6182.99	-53244	-0.0000744	0.0005615	0.0035	4.63		98413.68	98413.68	15.92		Si
SLV 10	4.09	23689.34	-47109	-0.0000949	0.0005615	0.0035	4.63		89988.99	89988.99	3.8		Si
SLV 6	1.99	5064.38	-50397	-0.0000688	0.0005615	0.0035	4.63		94482.11	94482.11	18.66		Si
SLV 6	4.09	16455.08	-44799	-0.00008	0.0005615	0.0035	4.63		86865.61	86865.61	5.28		Si
SLV 5	1.99	5442.92	-50543	-0.0000697	0.0005615	0.0035	4.63		94683.02	94683.02	17.4		Si
SLV 5	4.09	16769.43	-44828	-0.0000805	0.0005615	0.0035	4.63		86904.61	86904.61	5.18		Si
SLV 8	1.99	15526.87	-51962	-0.000088	0.0005615	0.0035	4.63		96640.09	96640.09	6.22		Si
SLV 8	4.09	-12601.69	-39906	-0.0000674	0.0005615	0.0035	4.63		84543.32	84543.32	6.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	1.99	13728.04	-63327	-52734	4781	4.63	4.63	-40677	10833	14044	38062	38820	11807	50626	No	10.59	Si
SLU 49	4.09	5947.59	-52259	-43517	5502	4.63	4.63	-33567	10833	14044	38062	38820	11807	50626	No	9.2	Si
SLU 71	1.99	14286.58	-69819	-58139	4664	4.63	4.63	-44846	10833	14044	38062	38820	11807	50626	No	10.85	Si
SLU 71	4.09	7034.88	-57868	-48188	5511	4.63	4.63	-37171	10833	14044	38062	38820	11807	50626	No	9.19	Si
SLU 50	1.99	13775.4	-62886	-52366	4946	4.63	4.63	-40393	10833	14044	38062	38820	11807	50626	No	10.24	Si
SLU 50	4.09	5703.68	-51789	-43125	5714	4.63	4.63	-33265	10833	14044	38062	38820	11807	50626	No	8.86	Si
SLU 43	1.99	13573.37	-60627	-50485	4841	4.63	4.63	-38943	10833	14044	38062	38820	11807	50626	No	10.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	4.09	5678.93	-49640	-41336	5575	4.63	4.63	-31885	10833	14044	38062	38820	11807	50626	No	9.08	Si
SLU 46	1.99	13627.02	-62198	-51793	4728	4.63	4.63	-39952	10833	14044	38062	38820	11807	50626	No	10.71	Si
SLU 46	4.09	5935.22	-51185	-42622	5432	4.63	4.63	-32877	10833	14044	38062	38820	11807	50626	No	9.32	Si
SLU 51	1.99	13776.42	-62902	-52379	4864	4.63	4.63	-40404	10833	14044	38062	38820	11807	50626	No	10.41	Si
SLU 51	4.09	5807.13	-51864	-43188	5579	4.63	4.63	-33314	10833	14044	38062	38820	11807	50626	No	9.07	Si
SLU 45	1.99	13626.01	-62182	-51780	4811	4.63	4.63	-39941	10833	14044	38062	38820	11807	50626	No	10.52	Si
SLU 45	4.09	5831.77	-51109	-42559	5567	4.63	4.63	-32829	10833	14044	38062	38820	11807	50626	No	9.09	Si
SLU 48	1.99	13727.02	-63312	-52720	4863	4.63	4.63	-40667	10833	14044	38062	38820	11807	50626	No	10.41	Si
SLU 48	4.09	5844.15	-52184	-43454	5637	4.63	4.63	-33519	10833	14044	38062	38820	11807	50626	No	8.98	Si
SLU 69	1.99	14238.2	-70244	-58493	4581	4.63	4.63	-45120	10833	14044	38062	38820	11807	50626	No	11.05	Si
SLU 69	4.09	7175.34	-58264	-48517	5433	4.63	4.63	-37424	10833	14044	38062	38820	11807	50626	No	9.32	Si
SLU 47	1.99	13676.08	-61783	-51448	4756	4.63	4.63	-39685	10833	14044	38062	38820	11807	50626	No	10.64	Si
SLU 47	4.09	5863.72	-50840	-42335	5420	4.63	4.63	-32656	10833	14044	38062	38820	11807	50626	No	9.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.99	11045.47	-57074	-47526	-10360	4.63	4.63	-36660	16250	21067	38062	58230	11807	59129		5.71	Si
SLV 14	4.09	21872.72	-48084	-40040	-8259	4.63	4.63	-30886	16250	21067	38062	58230	11807	59129		7.16	Si
SLV 13	1.99	11632.89	-57300	-47715	-10708	4.63	4.63	-36806	16250	21067	38062	58230	11807	59129		5.52	Si
SLV 13	4.09	22360.51	-48129	-40077	-8616	4.63	4.63	-30914	16250	21067	38062	58230	11807	59129		6.86	Si
SLV 7	1.99	15905.42	-52108	-43391	18752	4.63	4.63	-33470	16250	21067	38062	58230	11807	59129		3.15	Si
SLV 7	4.09	-12287.35	-39935	-33254	17759	4.63	4.63	-25651	15547	20155	38062	58230	11807	58217		3.28	Si
SLV 9	1.99	6561.54	-53390	-44459	-12113	4.63	4.63	-34294	16250	21067	38062	58230	11807	59129		4.88	Si
SLV 9	4.09	24003.69	-47138	-39253	-9860	4.63	4.63	-30278	16250	21067	38062	58230	11807	59129		6	Si
SLV 4	1.99	10455.52	-48052	-40013	17571	4.63	4.63	-30865	16250	21067	38062	58230	11807	59129		3.37	Si
SLV 4	4.09	-10958.52	-38916	-32406	16745	4.63	4.63	-24997	15416	19985	38062	58230	11807	58047		3.47	Si
SLV 8	1.99	15526.87	-51962	-43269	18977	4.63	4.63	-33376	16250	21067	38062	58230	11807	59129		3.12	Si
SLV 8	4.09	-12601.69	-39906	-33230	17989	4.63	4.63	-25633	15543	20150	38062	58230	11807	58212		3.24	Si
SLV 11	1.99	17024.03	-54955	-45762	12597	4.63	4.63	-35299	16250	21067	38062	58230	11807	59129		4.69	Si
SLV 11	4.09	-5053.09	-42245	-35178	12247	4.63	4.63	-27135	15844	20540	38062	58230	11807	58602		4.78	Si
SLV 12	1.99	16645.48	-54809	-45640	12821	4.63	4.63	-35205	16250	21067	38062	58230	11807	59129		4.61	Si
SLV 12	4.09	-5367.43	-42216	-35154	12477	4.63	4.63	-27117	15840	20535	38062	58230	11807	58597		4.7	Si
SLV 10	1.99	6182.99	-53244	-44337	-11889	4.63	4.63	-34200	16250	21067	38062	58230	11807	59129		4.97	Si
SLV 10	4.09	23689.34	-47109	-39229	-9630	4.63	4.63	-30260	16250	21067	38062	58230	11807	59129		6.14	Si
SLV 3	1.99	11042.93	-48278	-40202	17223	4.63	4.63	-31011	16250	21067	38062	58230	11807	59129		3.43	Si
SLV 3	4.09	-10470.73	-38961	-32443	16388	4.63	4.63	-25026	15422	19993	38062	58230	11807	58055		3.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.32	29503	-38248	392.09	4320.22	11.02	Si
SLV 3	179667	0.32	29648	-38436	392.09	4336.33	11.06	Si
SLV 2	179667	0.32	30757	-39874	392.09	4458.03	11.37	Si
SLV 1	179667	0.32	30902	-40062	392.09	4473.72	11.41	Si
SLV 8	179667	0.32	31311	-40592	392.09	4517.72	11.52	Si
SLV 7	179667	0.32	31405	-40713	392.09	4527.71	11.55	Si
SLV 12	179667	0.32	34093	-44199	392.09	4806.41	12.26	Si
SLV 11	179667	0.32	34187	-44320	392.09	4815.78	12.28	Si
SLV 6	179667	0.32	35492	-46012	392.09	4944.6	12.61	Si
SLV 5	179667	0.32	35586	-46133	392.09	4953.67	12.63	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-38873	-53390	279	0.644	4591.8	0.959	9.75275	10.55427	No
SLV 10	-38777	-53244	281	0.645	4582.1	0.959	9.77345	10.55427	No
SLV 5	-37421	-50543	-326	0.664	4444.2	0.958	10.06854	10.55427	No
SLV 6	-37325	-50397	-324	0.665	4434.4	0.958	10.09201	10.55427	No
SLV 11	-35367	-54955	401	0.694	4235.5	0.956	10.55289	10.55427	No
SLV 12	-35271	-54809	402	0.696	4225.7	0.956	10.57752	10.55427	Si
SLV 7	-33915	-52108	-204	0.724	4087.9	0.955	11.0281	10.55427	Si
SLV 8	-33819	-51962	-202	0.726	4078.1	0.954	11.05634	10.55427	Si
SLV 13	-39366	-57300	1026	0.619	4642	0.959	9.38391	4.78007	Si
SLV 14	-39217	-57074	1029	0.621	4626.9	0.959	9.41439	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.795	SLU 83	Si
V_SLU	8.86	SLU 50	Si
PF_SLV	3.751	SLV 9	Si
V_SLV	3.116	SLV 8	Si
PFFP_SLV	11.018	SLV 4	Si
R_SLV	0.924	SLV 9	No

Maschio 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.526	-17.768	6.526	L4	L5	1.925	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	2.89	-769.74	-29408	-0.000101	0.0003743	0.0035	1.925	13136.55	18340.24	18340.24	23.83	No	Si
SLU 78	4.79	-103.66	-27926	-0.0000883	0.0003743	0.0035	1.925	13200.41	17895.95	17895.95	172.64	No	Si
SLU 79	2.89	-761.3	-29112	-0.0000998	0.0003743	0.0035	1.925	13155.44	18266.05	18266.05	23.99	No	Si
SLU 79	4.79	-103.52	-27570	-0.000087	0.0003743	0.0035	1.925	13204.28	17780.65	17780.65	171.76	No	Si
SLU 70	2.89	-718.2	-26349	-0.000089	0.0003743	0.0035	1.925	13183.78	17393.48	17393.48	24.22	No	Si
SLU 70	4.79	-216.15	-24526	-0.0000773	0.0003743	0.0035	1.925	13055.82	16844.12	16844.12	77.93	No	Si
SLU 83	2.89	-760.61	-30062	-0.0001034	0.0003743	0.0035	1.925	13083.8	18488.64	18488.64	24.31	No	Si
SLU 83	4.79	-54.33	-28692	-0.0000906	0.0003743	0.0035	1.925	13177.02	18149.62	18149.62	334.06	No	Si
SLU 77	2.89	-771.47	-29391	-0.000101	0.0003743	0.0035	1.925	13137.66	18336.29	18336.29	23.77	No	Si
SLU 77	4.79	-98.78	-27908	-0.0000881	0.0003743	0.0035	1.925	13200.71	17890.07	17890.07	181.11	No	Si
SLU 80	2.89	-759.57	-29128	-0.0000998	0.0003743	0.0035	1.925	13154.48	18270.23	18270.23	24.05	No	Si
SLU 80	4.79	-108.4	-27588	-0.0000871	0.0003743	0.0035	1.925	13204.19	17786.45	17786.45	164.08	No	Si
SLU 84	2.89	-758.88	-30078	-0.0001035	0.0003743	0.0035	1.925	13082.3	18492.04	18492.04	24.37	No	Si
SLU 84	4.79	-59.21	-28710	-0.0000907	0.0003743	0.0035	1.925	13176.23	18155.68	18155.68	306.63	No	Si
SLU 69	2.89	-719.93	-26333	-0.000089	0.0003743	0.0035	1.925	13183.16	17388.42	17388.42	24.15	No	Si
SLU 69	4.79	-211.27	-24508	-0.0000772	0.0003743	0.0035	1.925	13053.98	16838.9	16838.9	79.7	No	Si
SLU 74	2.89	-748.69	-29031	-0.0000993	0.0003743	0.0035	1.925	13160.08	18244.93	18244.93	24.37	No	Si
SLU 74	4.79	-97.8	-27572	-0.0000869	0.0003743	0.0035	1.925	13204.27	17781.17	17781.17	181.82	No	Si
SLU 71	2.89	-709.76	-26053	-0.0000879	0.0003743	0.0035	1.925	13170.95	17301.62	17301.62	24.38	No	Si
SLU 71	4.79	-216.01	-24170	-0.000076	0.0003743	0.0035	1.925	13017.29	16741.79	16741.79	77.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.89	6530.93	-18957	-0.0001167	0.0005615	0.0035	1.925		15241.18	15241.18	2.33		Si
SLV 14	4.79	-5127.85	-1185	-0.0027207	0.0005615	0.0035	1.54		2172.16	2172.16	0.42		No
SLV 15	2.89	5474.67	-15283	-0.0000946	0.0005615	0.0035	1.925		12626.56	12626.56	2.31		Si
SLV 15	4.79	-4421.57	-951	-0.0021725	0.0005615	0.0035	1.54		1955.28	1955.28	0.44		No
SLV 3	2.89	-7551.72	-20400	-0.0001328	0.0005615	0.0035	1.925		17063.73	17063.73	2.26		Si
SLV 3	4.79	4819.96	-35416	-0.000158	0.0005615	0.0035	1.925		23444.92	23444.92	4.86		Si
SLV 13	2.89	5852.37	-18758	-0.000109	0.0005615	0.0035	1.925		15131.08	15131.08	2.59		Si
SLV 13	4.79	-4578.11	-2888	-0.0011543	0.0005615	0.0035	1.54		3731.99	3731.99	0.82		No
SLV 4	2.89	-6873.17	-20599	-0.0001256	0.0005615	0.0035	1.925		17186.35	17186.35	2.5		Si
SLV 4	4.79	4270.23	-33713	-0.0001458	0.0005615	0.0035	1.925		22756.62	22756.62	5.33		Si
SLD 16	2.89	2339.6	-17880	-0.0000729	0.0005615	0.0035	1.925		14563.39	14563.39	6.22		Si
SLD 16	4.79	-2212.63	-10145	-0.0000481	0.0005615	0.0035	1.925		9865.98	9865.98	4.46		Si
SLV 1	2.89	-7174.02	-23876	-0.0001398	0.0005615	0.0035	1.925		19103.68	19103.68	2.66		Si
SLV 1	4.79	4663.42	-37354	-0.0001637	0.0005615	0.0035	1.925		24234.06	24234.06	5.2		Si
SLV 2	2.89	-6495.47	-24075	-0.0001337	0.0005615	0.0035	1.925		19213.12	19213.12	2.96		Si
SLV 2	4.79	4113.69	-35650	-0.0001513	0.0005615	0.0035	1.925		23540.14	23540.14	5.72		Si
SLV 16	2.89	6153.23	-15482	-0.0001031	0.0005615	0.0035	1.925		12773.24	12773.24	2.08		Si
SLV 16	4.79	-4971.31	753	0.0585488	0.0005615	0.0035	1.54		0	0	0		No
SLV 7	2.89	-3312.5	-14590	-0.0000716	0.0005615	0.0035	1.925		13194.71	13194.71	3.98		Si
SLV 7	4.79	1670.32	-20790	-0.0000758	0.0005615	0.0035	1.925		16262.75	16262.75	9.74		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2.89	-758.88	-30078	-25047	-936	1.925	1.925	-46469	10833	5839	38062	16140	4909	21049	No	22.48	Si
SLU 84	4.79	-59.21	-28710	-23907	-935	1.925	1.925	-44354	10833	5839	38062	16140	4909	21049	No	22.51	Si
SLU 74	2.89	-748.69	-29031	-24174	-865	1.925	1.925	-44851	10833	5839	38062	16140	4909	21049	No	24.33	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.79	-97.8	-27572	-22960	-863	1.925	1.925	-42596	10833	5839	38062	16140	4909	21049	No	24.38	Si
SLU 83	2.89	-760.61	-30062	-25033	-939	1.925	1.925	-46444	10833	5839	38062	16140	4909	21049	No	22.42	Si
SLU 83	4.79	-54.33	-28692	-23892	-938	1.925	1.925	-44326	10833	5839	38062	16140	4909	21049	No	22.45	Si
SLU 40	2.89	-617.16	-25405	-21155	-931	1.925	1.925	-39249	10833	5839	38062	16140	4909	21049	No	22.61	Si
SLU 40	4.79	39.38	-24632	-20511	-931	1.925	1.925	-38054	10833	5839	38062	16140	4909	21049	No	22.61	Si
SLU 82	2.89	-736.11	-29718	-24747	-937	1.925	1.925	-45912	10833	5839	38062	16140	4909	21049	No	22.46	Si
SLU 82	4.79	-58.23	-28374	-23627	-936	1.925	1.925	-43835	10833	5839	38062	16140	4909	21049	No	22.48	Si
SLU 39	2.89	-618.88	-25389	-21142	-934	1.925	1.925	-39224	10833	5839	38062	16140	4909	21049	No	22.54	Si
SLU 39	4.79	44.26	-24614	-20496	-934	1.925	1.925	-38026	10833	5839	38062	16140	4909	21049	No	22.54	Si
SLU 77	2.89	-771.47	-29391	-24475	-864	1.925	1.925	-45407	10833	5839	38062	16140	4909	21049	No	24.36	Si
SLU 77	4.79	-98.78	-27908	-23239	-862	1.925	1.925	-43115	10833	5839	38062	16140	4909	21049	No	24.41	Si
SLU 42	2.89	-639.93	-25766	-21456	-930	1.925	1.925	-39806	10833	5839	38062	16140	4909	21049	No	22.63	Si
SLU 42	4.79	38.4	-24967	-20791	-930	1.925	1.925	-38573	10833	5839	38062	16140	4909	21049	No	22.63	Si
SLU 81	2.89	-737.83	-29702	-24733	-940	1.925	1.925	-45887	10833	5839	38062	16140	4909	21049	No	22.4	Si
SLU 81	4.79	-53.35	-28356	-23612	-939	1.925	1.925	-43807	10833	5839	38062	16140	4909	21049	No	22.42	Si
SLU 41	2.89	-641.66	-25750	-21442	-933	1.925	1.925	-39781	10833	5839	38062	16140	4909	21049	No	22.56	Si
SLU 41	4.79	43.28	-24949	-20776	-933	1.925	1.925	-38545	10833	5839	38062	16140	4909	21049	No	22.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.89	6530.93	-18957	-15786	13151	1.925	1.854	-29288	16250	8436	38062	24210	4909	29119		2.21	Si
SLV 14	4.79	-5127.85	-1185	-986	12696	1.54	0	0	0	0	38062	19368	3927	23295		1.83	Si
SLV 15	2.89	5474.67	-15283	-12726	12516	1.925	1.8128	-23611	15139	7684	38062	24210	4909	29119		2.33	Si
SLV 15	4.79	-4421.57	-951	-792	12372	1.54	0	0	0	0	38062	19368	3927	23295		1.88	Si
SLV 1	2.89	-7174.02	-23876	-19882	-15038	1.925	1.925	-36887	16250	8759	38062	24210	4909	29119		1.94	Si
SLV 1	4.79	4663.42	-37354	-31105	-14892	1.925	1.925	-57708	16250	8759	38062	24210	4909	29119		1.96	Si
SLV 3	2.89	-7551.72	-20400	-16988	-14063	1.925	1.777	-34797	16250	8085	38062	24210	4909	29119		2.07	Si
SLV 3	4.79	4819.96	-35416	-29492	-13605	1.925	1.925	-54715	16250	8759	38062	24210	4909	29119		2.14	Si
SLV 5	2.89	-2053.5	-26175	-21796	-6587	1.925	1.925	-40438	16250	8759	38062	24210	4909	29119		4.42	Si
SLV 5	4.79	1148.52	-27248	-22690	-7015	1.925	1.925	-42096	16250	8759	38062	24210	4909	29119		4.15	Si
SLV 2	2.89	-6495.47	-24075	-20048	-13428	1.925	1.925	-37194	16250	8759	38062	24210	4909	29119		2.17	Si
SLV 2	4.79	4113.69	-35650	-29686	-13281	1.925	1.925	-55076	16250	8759	38062	24210	4909	29119		2.19	Si
SLV 4	2.89	-6873.17	-20599	-17153	-12453	1.925	1.8865	-33060	16250	8584	38062	24210	4909	29119		2.34	Si
SLV 4	4.79	4270.23	-33713	-28073	-11994	1.925	1.925	-52083	16250	8759	38062	24210	4909	29119		2.43	Si
SLV 16	2.89	6153.23	-15482	-12892	14126	1.925	1.6952	-23918	15200	7215	38062	24210	4909	29119		2.06	Si
SLV 16	4.79	-4971.31	753	627	13983	1.54	0	0	0	0	38062	19368	3927	23295		1.67	Si
SLD 1	2.89	-3360.4	-21478	-17885	-6690	1.925	1.925	-33182	16250	8759	38062	24210	4909	29119		4.35	Si
SLD 1	4.79	1904.75	-26455	-22030	-6628	1.925	1.925	-40872	16250	8759	38062	24210	4909	29119		4.39	Si
SLV 13	2.89	5852.37	-18758	-15620	11541	1.925	1.925	-28980	16213	8739	38062	24210	4909	29119		2.52	Si
SLV 13	4.79	-4578.11	-2888	-2405	11085	1.54	0	0	0	0	38062	19368	3927	23295		2.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.32	18120	-9767	159.31	1205.11	7.56	Si
SLV 15	179667	0.32	19101	-10296	159.31	1261.11	7.92	Si
SLV 12	179667	0.32	22402	-12075	159.31	1442.48	9.05	Si
SLV 11	179667	0.32	23034	-12416	159.31	1476	9.26	Si
SLV 14	179667	0.32	23445	-12637	159.31	1497.54	9.4	Si
SLV 13	179667	0.32	24426	-13166	159.31	1548.37	9.72	Si
SLV 8	179667	0.32	31247	-16842	159.31	1875.45	11.77	Si
SLV 7	179667	0.32	31879	-17183	159.31	1903.45	11.95	Si
SLV 10	179667	0.32	40150	-21641	159.31	2233.19	14.02	Si
SLV 9	179667	0.32	40782	-21982	159.31	2255.62	14.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-22684	-15727	1023	0.445	2572.8	0.969	6.67339	10.55427	No
SLV 6	-21701	-15815	1024	0.462	2472.7	0.968	6.93655	10.55427	No
SLV 7	-20019	-16988	-987	0.496	2301.5	0.965	7.47013	10.55427	No
SLV 8	-19036	-17077	-986	0.518	2201.4	0.964	7.80791	10.55427	No
SLV 9	-13700	-14198	986	0.684	1658.9	0.954	10.41831	10.55427	No
SLV 10	-12717	-14287	987	0.727	1559	0.951	11.11765	10.55427	Si
SLV 1	-32504	-17927	363	0.348	3572.9	0.977	5.17578	4.78007	Si
SLV 3	-31704	-18306	-240	0.359	3491.4	0.977	5.34317	4.78007	Si
SLV 2	-30978	-18065	364	0.362	3417.5	0.976	5.39457	4.78007	Si
SLV 4	-30178	-18444	-239	0.374	3336	0.976	5.57661	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.768	SLU 77	Si
V_SLU	22.4	SLU 81	Si
PF_SLV	0	SLV 16	No
V_SLV	1.666	SLV 16	Si
PFFP_SLV	7.564	SLV 16	Si
R_SLV	0.632	SLV 5	No

Maschio 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.526	-12.888	6.526	L4	L5	3.88	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	2.89	1692.58	-67659	-0.0001134	0.0003743	0.0035	3.88	50967.12	75495.56	75495.56	44.6	No	Si
SLU 78	4.79	-5220.64	-69150	-0.0001265	0.0003743	0.0035	3.88	50281.85	77521.97	77521.97	14.85	No	Si
SLU 81	2.89	1778.04	-68338	-0.000115	0.0003743	0.0035	3.88	50664.83	75758.55	75758.55	42.61	No	Si
SLU 81	4.79	-5372.56	-69981	-0.0001287	0.0003743	0.0035	3.88	49866.46	77797.36	77797.36	14.48	No	Si
SLU 82	2.89	1783.42	-68364	-0.000115	0.0003743	0.0035	3.88	50652.93	75768.66	75768.66	42.49	No	Si
SLU 82	4.79	-5380.53	-70026	-0.0001288	0.0003743	0.0035	3.88	49842.94	77812.66	77812.66	14.46	No	Si
SLU 84	2.89	1766.97	-69226	-0.0001167	0.0003743	0.0035	3.88	50245.09	76105.97	76105.97	43.07	No	Si
SLU 84	4.79	-5389.5	-70904	-0.0001307	0.0003743	0.0035	3.88	49376.23	78110.52	78110.52	14.49	No	Si
SLU 73	2.89	1717.69	-65316	-0.0001088	0.0003743	0.0035	3.88	51886.58	74605.22	74605.22	43.43	No	Si
SLU 73	4.79	-5154.73	-66714	-0.0001213	0.0003743	0.0035	3.88	51361.15	76748.21	76748.21	14.89	No	Si
SLU 77	2.89	1687.2	-67633	-0.0001133	0.0003743	0.0035	3.88	50978.37	75485.53	75485.53	44.74	No	Si
SLU 77	4.79	-5212.67	-69105	-0.0001264	0.0003743	0.0035	3.88	50303.97	77507.01	77507.01	14.87	No	Si
SLU 75	2.89	1709.03	-66798	-0.0001117	0.0003743	0.0035	3.88	51327.6	75165	75165	43.98	No	Si
SLU 75	4.79	-5211.67	-68273	-0.0001246	0.0003743	0.0035	3.88	50694.59	77237.37	77237.37	14.82	No	Si
SLU 76	2.89	1701.24	-66177	-0.0001104	0.0003743	0.0035	3.88	51570.89	74929.4	74929.4	44.04	No	Si
SLU 76	4.79	-5163.7	-67592	-0.0001231	0.0003743	0.0035	3.88	50996.4	77021	77021	14.92	No	Si
SLU 83	2.89	1761.59	-69200	-0.0001167	0.0003743	0.0035	3.88	50257.78	76095.74	76095.74	43.2	No	Si
SLU 83	4.79	-5381.53	-70858	-0.0001306	0.0003743	0.0035	3.88	49401.15	78094.88	78094.88	14.51	No	Si
SLU 74	2.89	1703.65	-66772	-0.0001116	0.0003743	0.0035	3.88	51338.06	75155.08	75155.08	44.11	No	Si
SLU 74	4.79	-5203.7	-68227	-0.0001245	0.0003743	0.0035	3.88	50715.3	77222.76	77222.76	14.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.89	-24650.63	-46854	-0.0001265	0.0005615	0.0035	3.88		76142.11	76142.11	3.09		Si
SLV 4	4.79	12463.34	-51990	-0.0001057	0.0005615	0.0035	3.88		77726.66	77726.66	6.24		Si
SLV 16	2.89	26655.93	-38327	-0.0001173	0.0005615	0.0035	3.88		62055.74	62055.74	2.33		Si
SLV 16	4.79	-21391.04	-35396	-0.0000995	0.0005615	0.0035	3.88		61863.66	61863.66	2.89		Si
SLV 2	2.89	-21461.1	-51548	-0.0001269	0.0005615	0.0035	3.88		81277.92	81277.92	3.79		Si
SLV 2	4.79	12337.54	-55541	-0.0001113	0.0005615	0.0035	3.88		81938.9	81938.9	6.64		Si
SLV 3	2.89	-27416.87	-47293	-0.0001341	0.0005615	0.0035	3.88		76640.66	76640.66	2.8		Si
SLV 3	4.79	14350.27	-52578	-0.0001112	0.0005615	0.0035	3.88		78420.12	78420.12	5.46		Si
SLV 1	2.89	-24227.34	-51988	-0.0001345	0.0005615	0.0035	3.88		81692.12	81692.12	3.37		Si
SLV 1	4.79	14224.47	-56129	-0.000117	0.0005615	0.0035	3.88		82643.36	82643.36	5.81		Si
SLV 10	2.89	15117.48	-51560	-0.0001114	0.0005615	0.0035	3.88		77221.25	77221.25	5.11		Si
SLV 10	4.79	-9479.11	-49003	-0.0000935	0.0005615	0.0035	3.88		78544.67	78544.67	8.29		Si
SLV 14	2.89	29845.46	-43021	-0.0001331	0.0005615	0.0035	3.88		67340.9	67340.9	2.26		Si
SLV 14	4.79	-21516.84	-38948	-0.0001056	0.0005615	0.0035	3.88		66510.55	66510.55	3.09		Si
SLD 14	2.89	13455.25	-44224	-0.0000952	0.0005615	0.0035	3.88		68710.57	68710.57	5.11		Si
SLD 14	4.79	-11260.08	-42862	-0.0000878	0.0005615	0.0035	3.88		71409.38	71409.38	6.34		Si
SLV 15	2.89	23889.69	-38766	-0.0001109	0.0005615	0.0035	3.88		62545.64	62545.64	2.62		Si
SLV 15	4.79	-19504.11	-35985	-0.000096	0.0005615	0.0035	3.88		62662.03	62662.03	3.21		Si
SLV 13	2.89	27079.22	-43460	-0.0001266	0.0005615	0.0035	3.88		67841.12	67841.12	2.51		Si
SLV 13	4.79	-19629.91	-39536	-0.0001021	0.0005615	0.0035	3.88		67259.22	67259.22	3.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.89	1778.04	-68338	-56906	3143	3.88	3.88	-52380	10833	11769	38062	32532	9894	42426	No	13.5	Si
SLU 81	4.79	-5372.56	-69981	-58274	3042	3.88	3.88	-53639	10833	11769	38062	32532	9894	42426	No	13.95	Si
SLU 82	2.89	1783.42	-68364	-56928	3148	3.88	3.88	-52400	10833	11769	38062	32532	9894	42426	No	13.48	Si
SLU 82	4.79	-5380.53	-70026	-58312	3046	3.88	3.88	-53674	10833	11769	38062	32532	9894	42426	No	13.93	Si
SLU 76	2.89	1701.24	-66177	-55107	3016	3.88	3.88	-50724	10833	11769	38062	32532	9894	42426	No	14.07	Si
SLU 76	4.79	-5163.7	-67592	-56284	2918	3.88	3.88	-51808	10833	11769	38062	32532	9894	42426	No	14.54	Si
SLU 84	2.89	1766.97	-69226	-57645	3143	3.88	3.88	-53061	10833	11769	38062	32532	9894	42426	No	13.5	Si
SLU 84	4.79	-5389.5	-70904	-59043	3040	3.88	3.88	-54347	10833	11769	38062	32532	9894	42426	No	13.96	Si
SLU 74	2.89	1703.65	-66772	-55602	3034	3.88	3.88	-51180	10833	11769	38062	32532	9894	42426	No	13.98	Si
SLU 74	4.79	-5203.7	-68227	-56814	2935	3.88	3.88	-52295	10833	11769	38062	32532	9894	42426	No	14.45	Si
SLU 73	2.89	1717.69	-65316	-54389	3021	3.88	3.88	-50064	10833	11769	38062	32532	9894	42426	No	14.05	Si
SLU 73	4.79	-5154.73	-66714	-55554	2924	3.88	3.88	-51136	10833	11769	38062	32532	9894	42426	No	14.51	Si
SLU 83	2.89	1761.59	-69200	-57624	3138	3.88	3.88	-53041	10833	11769	38062	32532	9894	42426	No	13.52	Si
SLU 83	4.79	-5381.53	-70858	-59005	3035	3.88	3.88	-54312	10833	11769	38062	32532	9894	42426	No	13.98	Si
SLU 75	2.89	1709.03	-66798	-55623	3039	3.88	3.88	-51200	10833	11769	38062	32532	9894	42426	No	13.96	Si
SLU 75	4.79	-5211.67	-68273	-56852	2940	3.88	3.88	-52330	10833	11769	38062	32532	9894	42426	No	14.43	Si
SLU 78	2.89	1692.58	-67659	-56341	3034	3.88	3.88	-51860	10833	11769	38062	32532	9894	42426	No	13.98	Si
SLU 78	4.79	-5220.64	-69150	-57583	2934	3.88	3.88	-53003	10833	11769	38062	32532	9894	42426	No	14.46	Si
SLU 77	2.89	1687.2	-67633	-56319	3030	3.88	3.88	-51840	10833	11769	38062	32532	9894	42426	No	14	Si
SLU 77	4.79	-5212.67	-69105	-57545	2929	3.88	3.88	-52968	10833	11769	38062	32532	9894	42426	No	14.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	2.89	27079.22	-43460	-36190	24189	3.88	3.88	-33312	16250	17654	38062	48797	9894	55716		2.3	Si
SLV 13	4.79	-19629.91	-39536	-32922	23113	3.88	3.88	-30304	16250	17654	38062	48797	9894	55716		2.41	Si
SLV 14	2.89	29845.46	-43021	-35824	26655	3.88	3.7388	-32975	16250	17011	38062	48797	9894	55073		2.07	Si
SLV 14	4.79	-21516.84	-38948	-32432	25579	3.88	3.88	-29853	16250	17654	38062	48797	9894	55716		2.18	Si
SLV 1	2.89	-24227.34	-51988	-43291	-22206	3.88	3.88	-39848	16250	17654	38062	48797	9894	55716		2.51	Si
SLV 1	4.79	14224.47	-56129	-46740	-21825	3.88	3.88	-43023	16250	17654	38062	48797	9894	55716		2.55	Si
SLD 14	2.89	13455.25	-44224	-36826	12606	3.88	3.88	-33897	16250	17654	38062	48797	9894	55716		4.42	Si
SLD 14	4.79	-11260.08	-42862	-35692	12106	3.88	3.88	-32854	16250	17654	38062	48797	9894	55716		4.6	Si
SLV 15	2.89	23889.69	-38766	-32281	23972	3.88	3.88	-29714	16250	17654	38062	48797	9894	55716		2.32	Si
SLV 15	4.79	-19504.11	-35985	-29965	23457	3.88	3.88	-27582	15933	17310	38062	48797	9894	55372		2.36	Si
SLV 3	2.89	-27416.87	-47293	-39382	-22423	3.88	3.88	-36250	16250	17654	38062	48797	9894	55716		2.48	Si
SLV 3	4.79	14350.27	-52578	-43783	-21481	3.88	3.88	-40301	16250	17654	38062	48797	9894	55716		2.59	Si
SLV 2	2.89	-21461.1	-51548	-42925	-19740	3.88	3.88	-39511	16250	17654	38062	48797	9894	55716		2.82	Si
SLV 2	4.79	12337.54	-55541	-46250	-19360	3.88	3.88	-42572	16250	17654	38062	48797	9894	55716		2.88	Si
SLD 16	2.89	12094.54	-42201	-35142	12514	3.88	3.88	-32347	16250	17654	38062	48797	9894	55716		4.45	Si
SLD 16	4.79	-11196.12	-41308	-34398	12252	3.88	3.88	-31662	16250	17654	38062	48797	9894	55716		4.55	Si
SLV 4	2.89	-24650.63	-46854	-39016	-19957	3.88	3.88	-35913	16250	17654	38062	48797	9894	55716		2.79	Si
SLV 4	4.79	12463.34	-51990	-43293	-19016	3.88	3.88	-39850	16250	17654	38062	48797	9894	55716		2.93	Si
SLV 16	2.89	26655.93	-38327	-31915	26438	3.88	3.7335	-29377	16250	16988	38062	48797	9894	55050		2.08	Si
SLV 16	4.79	-21391.04	-35396	-29475	25923	3.88	3.88	-27131	15843	17212	38062	48797	9894	55274		2.13	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.32	32458	-35262	321.11	3887.46	12.11	Si
SLV 11	179667	0.32	32751	-35580	321.11	3912.99	12.19	Si
SLV 16	179667	0.32	33582	-36484	321.11	3984.52	12.41	Si
SLV 15	179667	0.32	34037	-36977	321.11	4023.06	12.53	Si
SLV 8	179667	0.32	35710	-38795	321.11	4161.31	12.96	Si
SLV 7	179667	0.32	36003	-39113	321.11	4184.95	13.03	Si
SLV 14	179667	0.32	37867	-41139	321.11	4331.35	13.49	Si
SLV 13	179667	0.32	38322	-41633	321.11	4366.01	13.6	Si
SLV 4	179667	0.32	44423	-48261	321.11	4791.15	14.92	Si
SLV 3	179667	0.32	44877	-48755	321.11	4819.86	15.01	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-47184	-41788	1623	0.442	5334.6	0.97	6.62296	10.55427	No
SLV 6	-46841	-41557	1623	0.445	5299.7	0.969	6.66523	10.55427	No
SLV 9	-42221	-38418	1620	0.486	4829.3	0.967	7.30072	10.55427	No
SLV 10	-41878	-38187	1620	0.489	4794.4	0.966	7.35302	10.55427	No
SLV 7	-37521	-41602	-1663	0.536	4351	0.963	8.08191	10.55427	No
SLV 8	-37178	-41371	-1663	0.54	4316.1	0.963	8.1474	10.55427	No
SLV 11	-32558	-38232	-1666	0.604	3846.2	0.959	9.15385	10.55427	No
SLV 12	-32215	-38001	-1666	0.609	3811.3	0.959	9.23941	10.55427	No
SLV 1	-49686	-45718	475	0.445	5589.4	0.971	6.65425	4.78007	Si
SLV 2	-49155	-45359	476	0.449	5535.2	0.971	6.71722	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.462	SLU 82	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	13.479	SLU 82	Si
PF_SLV	2.256	SLV 14	Si
V_SLV	2.066	SLV 14	Si
PFFP_SLV	12.106	SLV 12	Si
R_SLV	0.628	SLV 5	No

Maschio 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.526	-8.008	6.526	L4	L5	3.88	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	2.89	1318.77	-63355	-0.0001039	0.0003743	0.0035	3.88	52507.84	73881.33	73881.33	56.02	No	Si
SLU 80	4.79	2387.7	-70923	-0.000122	0.0003743	0.0035	3.88	49365.91	76780.98	76780.98	32.16	No	Si
SLU 70	2.89	1114.99	-57309	-0.000092	0.0003743	0.0035	3.88	53574.19	71770.17	71770.17	64.37	No	Si
SLU 70	4.79	2297.61	-63553	-0.000107	0.0003743	0.0035	3.88	52451.06	73953.77	73953.77	32.19	No	Si
SLU 51	2.89	860.38	-49888	-0.000078	0.0003743	0.0035	3.88	53130.31	66211.96	66211.96	76.96	No	Si
SLU 51	4.79	2194.93	-54743	-0.0000901	0.0003743	0.0035	3.88	53639.17	70270.85	70270.85	32.02	No	Si
SLU 44	2.89	752.84	-48035	-0.0000745	0.0003743	0.0035	3.88	52717.89	64713.77	64713.77	85.96	No	Si
SLU 44	4.79	2142.09	-52927	-0.0000867	0.0003743	0.0035	3.88	53545.58	68729.38	68729.38	32.09	No	Si
SLU 79	2.89	1316.69	-63331	-0.0001038	0.0003743	0.0035	3.88	52514.62	73872.58	73872.58	56.1	No	Si
SLU 79	4.79	2381.89	-70875	-0.0001219	0.0003743	0.0035	3.88	49391.97	76761.84	76761.84	32.23	No	Si
SLU 47	2.89	807.31	-48970	-0.0000763	0.0003743	0.0035	3.88	52940.95	65465.77	65465.77	81.09	No	Si
SLU 47	4.79	2170.45	-53851	-0.0000884	0.0003743	0.0035	3.88	53607.65	69510.16	69510.16	32.03	No	Si
SLU 72	2.89	1093.81	-56753	-0.0000909	0.0003743	0.0035	3.88	53607.85	71585.25	71585.25	65.45	No	Si
SLU 72	4.79	2300.62	-62830	-0.0001056	0.0003743	0.0035	3.88	52651.09	73691.05	73691.05	32.03	No	Si
SLU 43	2.89	749.38	-47995	-0.0000745	0.0003743	0.0035	3.88	52707.65	64681.72	64681.72	86.31	No	Si
SLU 43	4.79	2132.4	-52847	-0.0000865	0.0003743	0.0035	3.88	53538.85	68662.62	68662.62	32.2	No	Si
SLU 50	2.89	858.3	-49864	-0.000078	0.0003743	0.0035	3.88	53125.73	66192.36	66192.36	77.12	No	Si
SLU 50	4.79	2189.12	-54695	-0.00009	0.0003743	0.0035	3.88	53638.19	70230.07	70230.07	32.08	No	Si
SLU 71	2.89	1091.73	-56729	-0.0000908	0.0003743	0.0035	3.88	53609.06	71577.29	71577.29	65.56	No	Si
SLU 71	4.79	2294.81	-62783	-0.0001055	0.0003743	0.0035	3.88	52663.62	73673.83	73673.83	32.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.89	22059.55	-44131	-0.0001156	0.0005615	0.0035	3.88		68604.4	68604.4	3.11		Si
SLV 15	4.79	-16251.11	-49022	-0.0001098	0.0005615	0.0035	3.88		78566.24	78566.24	4.83		Si
SLV 13	2.89	27722.36	-46460	-0.0001334	0.0005615	0.0035	3.88		71274.32	71274.32	2.57		Si
SLV 13	4.79	-16071.87	-52896	-0.000116	0.0005615	0.0035	3.88		82446.17	82446.17	5.13		Si
SLV 1	2.89	-23103.44	-41024	-0.0001128	0.0005615	0.0035	3.88		69165.86	69165.86	2.99		Si
SLV 1	4.79	21769.63	-45722	-0.0001176	0.0005615	0.0035	3.88		70425.83	70425.83	3.24		Si
SLV 16	2.89	24641.39	-44130	-0.0001218	0.0005615	0.0035	3.88		68603.17	68603.17	2.78		Si
SLV 16	4.79	-18323.11	-49093	-0.000115	0.0005615	0.0035	3.88		78645.58	78645.58	4.29		Si
SLV 14	2.89	30304.2	-46458	-0.0001399	0.0005615	0.0035	3.88		71273.06	71273.06	2.35		Si
SLV 14	4.79	-18143.86	-52967	-0.0001212	0.0005615	0.0035	3.88		82505.3	82505.3	4.55		Si
SLV 7	2.89	-17124.82	-37880	-0.0000935	0.0005615	0.0035	3.88		65160.78	65160.78	3.81		Si
SLV 7	4.79	7768.37	-39853	-0.0000749	0.0005615	0.0035	3.88		63761.16	63761.16	8.21		Si
SLV 10	2.89	18662.77	-47273	-0.0001127	0.0005615	0.0035	3.88		72213.79	72213.79	3.87		Si
SLV 10	4.79	-4321.85	-54963	-0.0000909	0.0005615	0.0035	3.88		84186.03	84186.03	19.48		Si
SLV 2	2.89	-20521.6	-41023	-0.0001067	0.0005615	0.0035	3.88		69164.46	69164.46	3.37		Si
SLV 2	4.79	19697.64	-45793	-0.0001127	0.0005615	0.0035	3.88		70507.26	70507.26	3.58		Si
SLV 3	2.89	-28766.25	-38695	-0.0001238	0.0005615	0.0035	3.88		66190.42	66190.42	2.3		Si
SLV 3	4.79	21590.39	-41849	-0.0001106	0.0005615	0.0035	3.88		66010.13	66010.13	3.06		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.89	-26184.41	-38694	-0.0001166	0.0005615	0.0035	3.88		66189.04	66189.04	2.53		Si
SLV 4	4.79	19518.39	-41919	-0.0001058	0.0005615	0.0035	3.88		66090.39	66090.39	3.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	2.89	1192.81	-55025	-45820	1007	3.88	3.88	-42176	10833	11769	38062	32532	9894	42426	No	42.13	Si
SLU 39	4.79	1898.28	-62433	-51988	955	3.88	3.88	-47854	10833	11769	38062	32532	9894	42426	No	44.42	Si
SLU 41	2.89	1247.27	-55960	-46598	1021	3.88	3.88	-42893	10833	11769	38062	32532	9894	42426	No	41.57	Si
SLU 41	4.79	1926.64	-63357	-52758	967	3.88	3.88	-48562	10833	11769	38062	32532	9894	42426	No	43.88	Si
SLU 78	2.89	1339.96	-63910	-53219	1000	3.88	3.88	-48987	10833	11769	38062	32532	9894	42426	No	42.42	Si
SLU 78	4.79	2384.7	-71646	-59660	937	3.88	3.88	-54916	10833	11769	38062	32532	9894	42426	No	45.29	Si
SLU 40	2.89	1194.89	-55049	-45840	1008	3.88	3.88	-42194	10833	11769	38062	32532	9894	42426	No	42.09	Si
SLU 40	4.79	1904.09	-62480	-52028	956	3.88	3.88	-47890	10833	11769	38062	32532	9894	42426	No	44.37	Si
SLU 77	2.89	1337.88	-63886	-53199	999	3.88	3.88	-48968	10833	11769	38062	32532	9894	42426	No	42.46	Si
SLU 77	4.79	2378.88	-71598	-59621	936	3.88	3.88	-54879	10833	11769	38062	32532	9894	42426	No	45.34	Si
SLU 84	2.89	1360.73	-65249	-54334	1064	3.88	3.88	-50013	10833	11769	38062	32532	9894	42426	No	39.87	Si
SLU 84	4.79	2396.67	-73467	-61177	1001	3.88	3.88	-56312	10833	11769	38062	32532	9894	42426	No	42.39	Si
SLU 82	2.89	1306.26	-64314	-53555	1051	3.88	3.88	-49296	10833	11769	38062	32532	9894	42426	No	40.38	Si
SLU 82	4.79	2368.31	-72543	-60407	989	3.88	3.88	-55603	10833	11769	38062	32532	9894	42426	No	42.89	Si
SLU 83	2.89	1358.65	-65225	-54314	1063	3.88	3.88	-49994	10833	11769	38062	32532	9894	42426	No	39.9	Si
SLU 83	4.79	2390.85	-73419	-61137	1000	3.88	3.88	-56275	10833	11769	38062	32532	9894	42426	No	42.43	Si
SLU 81	2.89	1304.18	-64290	-53535	1050	3.88	3.88	-49278	10833	11769	38062	32532	9894	42426	No	40.41	Si
SLU 81	4.79	2362.5	-72495	-60368	988	3.88	3.88	-55567	10833	11769	38062	32532	9894	42426	No	42.93	Si
SLU 42	2.89	1249.35	-55984	-46618	1021	3.88	3.88	-42911	10833	11769	38062	32532	9894	42426	No	41.54	Si
SLU 42	4.79	1932.45	-63404	-52798	968	3.88	3.88	-48599	10833	11769	38062	32532	9894	42426	No	43.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2.89	-20521.6	-41023	-34160	-21073	3.88	3.88	-31444	16250	17654	38062	48797	9894	55716		2.64	Si
SLV 2	4.79	19697.64	-45793	-38132	-21084	3.88	3.88	-35100	16250	17654	38062	48797	9894	55716		2.64	Si
SLV 13	2.89	27722.36	-46460	-38688	23889	3.88	3.88	-35611	16250	17654	38062	48797	9894	55716		2.33	Si
SLV 13	4.79	-16071.87	-52896	-44047	22505	3.88	3.88	-40544	16250	17654	38062	48797	9894	55716		2.48	Si
SLV 14	2.89	30304.2	-46458	-38687	26347	3.88	3.8631	-35610	16250	17577	38062	48797	9894	55639		2.11	Si
SLV 14	4.79	-18143.86	-52967	-44106	24963	3.88	3.88	-40598	16250	17654	38062	48797	9894	55716		2.23	Si
SLV 3	2.89	-28766.25	-38695	-32222	-25255	3.88	3.5898	-32627	16250	16333	38062	48797	9894	54396		2.15	Si
SLV 3	4.79	21590.39	-41849	-34848	-23956	3.88	3.88	-32076	16250	17654	38062	48797	9894	55716		2.33	Si
SLV 16	2.89	24641.39	-44130	-36747	24623	3.88	3.88	-33825	16250	17654	38062	48797	9894	55716		2.26	Si
SLV 16	4.79	-18323.11	-49093	-40880	24550	3.88	3.88	-37629	16250	17654	38062	48797	9894	55716		2.27	Si
SLV 15	2.89	22059.55	-44131	-36748	22165	3.88	3.88	-33826	16250	17654	38062	48797	9894	55716		2.51	Si
SLV 15	4.79	-16251.11	-49022	-40821	22092	3.88	3.88	-37575	16250	17654	38062	48797	9894	55716		2.52	Si
SLV 4	2.89	-26184.41	-38694	-32221	-22797	3.88	3.7899	-30869	16250	17244	38062	48797	9894	55306		2.43	Si
SLV 4	4.79	19518.39	-41919	-34907	-21498	3.88	3.88	-32131	16250	17654	38062	48797	9894	55716		2.59	Si
SLV 10	2.89	18662.77	-47273	-39365	11326	3.88	3.88	-36234	16250	17654	38062	48797	9894	55716		4.92	Si
SLV 10	4.79	-4321.85	-54963	-45768	8892	3.88	3.88	-42128	16250	17654	38062	48797	9894	55716		6.27	Si
SLV 1	2.89	-23103.44	-41024	-34161	-23531	3.88	3.88	-31444	16250	17654	38062	48797	9894	55716		2.37	Si
SLV 1	4.79	21769.63	-45722	-38073	-23543	3.88	3.88	-35046	16250	17654	38062	48797	9894	55716		2.37	Si
SLD 14	2.89	13389.6	-44230	-36831	11575	3.88	3.88	-33902	16250	17654	38062	48797	9894	55716		4.81	Si
SLD 14	4.79	-6765.89	-49799	-41469	10956	3.88	3.88	-38171	16250	17654	38062	48797	9894	55716		5.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.32	33820	-36742	321.11	4004.71	12.47	Si
SLV 8	179667	0.32	33836	-36759	321.11	4006.09	12.48	Si
SLV 11	179667	0.32	35625	-38703	321.11	4154.47	12.94	Si
SLV 12	179667	0.32	35642	-38721	321.11	4155.8	12.94	Si
SLV 3	179667	0.32	35748	-38837	321.11	4164.43	12.97	Si
SLV 4	179667	0.32	35774	-38865	321.11	4166.49	12.98	Si
SLV 1	179667	0.32	39211	-42599	321.11	4432.61	13.8	Si
SLV 2	179667	0.32	39237	-42627	321.11	4434.49	13.81	Si
SLV 15	179667	0.32	41768	-45377	321.11	4615.26	14.37	Si
SLV 16	179667	0.32	41793	-45404	321.11	4617.01	14.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-47972	-38719	1532	0.437	5414.8	0.97	6.55426	10.55427	No
SLV 9	-47914	-38707	1532	0.438	5408.9	0.97	6.56112	10.55427	No
SLV 6	-46209	-36347	1532	0.452	5235.3	0.969	6.77245	10.55427	No
SLV 5	-46151	-36335	1532	0.452	5229.4	0.969	6.77983	10.55427	No
SLV 12	-36995	-39025	-1586	0.544	4297.5	0.963	8.21161	10.55427	No
SLV 11	-36937	-39013	-1586	0.545	4291.6	0.963	8.22294	10.55427	No
SLV 8	-35232	-36653	-1586	0.567	4118.1	0.961	8.57174	10.55427	No
SLV 7	-35174	-36641	-1586	0.568	4112.2	0.961	8.58416	10.55427	No
SLV 14	-46203	-41597	441	0.474	5234.7	0.969	7.10311	4.78007	Si
SLV 13	-46113	-41579	441	0.474	5225.6	0.969	7.11518	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	32.015	SLU 51	Si
V_SLU	39.867	SLU 84	Si
PF_SLV	2.301	SLV 3	Si
V_SLV	2.112	SLV 14	Si
PFFP_SLV	12.471	SLV 7	Si
R_SLV	0.621	SLV 10	No

Maschio 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.526	-5.093	6.526	L4	L5	1.915	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	2.89	-777.02	-22889	-0.0000778	0.0003743	0.0035	1.915	12727.52	16258.87	16258.87	20.92	No	Si
SLU 60	4.79	473.75	-24045	-0.0000787	0.0003743	0.0035	1.915	12882.79	15905.44	15905.44	33.57	No	Si
SLU 62	2.89	-764.55	-23215	-0.0000788	0.0003743	0.0035	1.915	12776.12	16347.08	16347.08	21.38	No	Si
SLU 62	4.79	463	-24441	-0.00008	0.0003743	0.0035	1.915	12925.19	16063.87	16063.87	34.69	No	Si
SLU 63	2.89	-764.17	-23235	-0.0000789	0.0003743	0.0035	1.915	12778.91	16352.41	16352.41	21.4	No	Si
SLU 63	4.79	463.13	-24472	-0.0000801	0.0003743	0.0035	1.915	12928.27	16076.29	16076.29	34.71	No	Si
SLU 73	2.89	-790.23	-24503	-0.0000837	0.0003743	0.0035	1.915	12931.29	16707.73	16707.73	21.14	No	Si
SLU 73	4.79	420.96	-25914	-0.0000849	0.0003743	0.0035	1.915	13034.67	16664.39	16664.39	39.59	No	Si
SLU 52	2.89	-746.45	-21762	-0.0000736	0.0003743	0.0035	1.915	12531.07	15737.68	15737.68	21.08	No	Si
SLU 52	4.79	513.99	-22757	-0.0000746	0.0003743	0.0035	1.915	12706.76	15398.84	15398.84	29.96	No	Si
SLU 84	2.89	-807.95	-25975	-0.0000892	0.0003743	0.0035	1.915	13037.56	17145.45	17145.45	21.22	No	Si
SLU 84	4.79	370.09	-27629	-0.0000906	0.0003743	0.0035	1.915	13066.21	17329.51	17329.51	46.82	No	Si
SLU 83	2.89	-808.33	-25956	-0.0000891	0.0003743	0.0035	1.915	13036.65	17139.46	17139.46	21.2	No	Si
SLU 83	4.79	369.97	-27598	-0.0000905	0.0003743	0.0035	1.915	13066.56	17319.28	17319.28	46.81	No	Si
SLU 81	2.89	-820.8	-25629	-0.0000881	0.0003743	0.0035	1.915	13019.44	17040.22	17040.22	20.76	No	Si
SLU 81	4.79	380.71	-27202	-0.0000891	0.0003743	0.0035	1.915	13068.01	17182.69	17182.69	45.13	No	Si
SLU 61	2.89	-776.64	-22909	-0.0000779	0.0003743	0.0035	1.915	12730.54	16264.12	16264.12	20.94	No	Si
SLU 61	4.79	473.87	-24076	-0.0000788	0.0003743	0.0035	1.915	12886.3	15917.76	15917.76	33.59	No	Si
SLU 82	2.89	-820.42	-25649	-0.0000881	0.0003743	0.0035	1.915	13020.57	17046.12	17046.12	20.78	No	Si
SLU 82	4.79	380.84	-27233	-0.0000893	0.0003743	0.0035	1.915	13068.09	17193.72	17193.72	45.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.89	-6386.28	-18827	-0.0001158	0.0005615	0.0035	1.915		15972.53	15972.53	2.5		Si
SLV 2	4.79	7394.85	-14211	-0.0001245	0.0005615	0.0035	1.915		11772.03	11772.03	1.59		Si
SLV 14	2.89	7314.85	-14651	-0.0001222	0.0005615	0.0035	1.915		12092.1	12092.1	1.65		Si
SLV 14	4.79	-7478.21	-24255	-0.0001455	0.0005615	0.0035	1.915		19187.84	19187.84	2.57		Si
SLV 7	2.89	-5096.54	-17344	-0.0000979	0.0005615	0.0035	1.915		15002.48	15002.48	2.94		Si
SLV 7	4.79	2872.53	-11374	-0.0000582	0.0005615	0.0035	1.915		9742.94	9742.94	3.39		Si
SLV 13	2.89	6604.94	-15227	-0.0001101	0.0005615	0.0035	1.915		12513.22	12513.22	1.89		Si
SLV 13	4.79	-6597.4	-24003	-0.0001356	0.0005615	0.0035	1.915		19049.68	19049.68	2.89		Si
SLV 1	2.89	-7096.19	-19403	-0.0001257	0.0005615	0.0035	1.915		16331.78	16331.78	2.3		Si
SLV 1	4.79	8275.65	-13958	-0.0001496	0.0005615	0.0035	1.915		11589.18	11589.18	1.4		Si
SLV 3	2.89	-8444.78	-19175	-0.0001443	0.0005615	0.0035	1.915		16189.22	16189.22	1.92		Si
SLV 3	4.79	8256.75	-11122	-0.000213	0.0005615	0.0035	1.915		9565.75	9565.75	1.16		Si
SLV 4	2.89	-7734.87	-18599	-0.0001323	0.0005615	0.0035	1.915		15828.56	15828.56	2.05		Si
SLV 4	4.79	7375.94	-11375	-0.0001431	0.0005615	0.0035	1.915		9743.34	9743.34	1.32		Si
SLV 15	2.89	5256.34	-14999	-0.0000922	0.0005615	0.0035	1.915		12346.01	12346.01	2.35		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.79	-6616.3	-21167	-0.0001258	0.0005615	0.0035	1.915		17420.99	17420.99	2.63		Si
SLV 8	2.89	-4639.06	-16973	-0.0000923	0.0005615	0.0035	1.915		14756.41	14756.41	3.18		Si
SLV 8	4.79	2304.92	-11537	-0.0000535	0.0005615	0.0035	1.915		9857.64	9857.64	4.28		Si
SLV 16	2.89	5966.25	-14422	-0.0000996	0.0005615	0.0035	1.915		11925.88	11925.88	2		Si
SLV 16	4.79	-7497.11	-21419	-0.0001363	0.0005615	0.0035	1.915		17568.01	17568.01	2.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.89	-765.54	-25142	-20936	1394	1.915	1.915	-39045	10833	5809	38062	16056	4883	20940	No	15.02	Si
SLU 80	4.79	399.39	-26685	-22221	1417	1.915	1.915	-41441	10833	5809	38062	16056	4883	20940	No	14.78	Si
SLU 84	2.89	-807.95	-25975	-21630	1443	1.915	1.915	-40339	10833	5809	38062	16056	4883	20940	No	14.51	Si
SLU 84	4.79	370.09	-27629	-23007	1466	1.915	1.915	-42907	10833	5809	38062	16056	4883	20940	No	14.28	Si
SLU 74	2.89	-779.78	-25037	-20848	1364	1.915	1.915	-38881	10833	5809	38062	16056	4883	20940	No	15.35	Si
SLU 74	4.79	407.04	-26542	-22102	1386	1.915	1.915	-41218	10833	5809	38062	16056	4883	20940	No	15.11	Si
SLU 83	2.89	-808.33	-25956	-21614	1437	1.915	1.915	-40308	10833	5809	38062	16056	4883	20940	No	14.57	Si
SLU 83	4.79	369.97	-27598	-22981	1460	1.915	1.915	-42859	10833	5809	38062	16056	4883	20940	No	14.34	Si
SLU 77	2.89	-767.31	-25363	-21120	1411	1.915	1.915	-39388	10833	5809	38062	16056	4883	20940	No	14.84	Si
SLU 77	4.79	396.3	-26938	-22431	1433	1.915	1.915	-41833	10833	5809	38062	16056	4883	20940	No	14.61	Si
SLU 79	2.89	-765.92	-25123	-20920	1388	1.915	1.915	-39015	10833	5809	38062	16056	4883	20940	No	15.08	Si
SLU 79	4.79	399.27	-26654	-22195	1411	1.915	1.915	-41393	10833	5809	38062	16056	4883	20940	No	14.84	Si
SLU 81	2.89	-820.8	-25629	-21342	1390	1.915	1.915	-39801	10833	5809	38062	16056	4883	20940	No	15.06	Si
SLU 81	4.79	380.71	-27202	-22652	1413	1.915	1.915	-42244	10833	5809	38062	16056	4883	20940	No	14.82	Si
SLU 78	2.89	-766.93	-25383	-21137	1416	1.915	1.915	-39418	10833	5809	38062	16056	4883	20940	No	14.79	Si
SLU 78	4.79	396.43	-26968	-22457	1439	1.915	1.915	-41881	10833	5809	38062	16056	4883	20940	No	14.55	Si
SLU 75	2.89	-779.4	-25056	-20865	1369	1.915	1.915	-38912	10833	5809	38062	16056	4883	20940	No	15.29	Si
SLU 75	4.79	407.17	-26573	-22127	1392	1.915	1.915	-41266	10833	5809	38062	16056	4883	20940	No	15.04	Si
SLU 82	2.89	-820.42	-25649	-21358	1396	1.915	1.915	-39832	10833	5809	38062	16056	4883	20940	No	15	Si
SLU 82	4.79	380.84	-27233	-22678	1419	1.915	1.915	-42292	10833	5809	38062	16056	4883	20940	No	14.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	2.89	3509.12	-16853	-14033	6521	1.915	1.915	-26171	15651	8392	38062	24085	4883	28968		4.44	Si
SLV 9	4.79	-1526.37	-23841	-19853	6075	1.915	1.915	-37024	16250	8713	38062	24085	4883	28968		4.77	Si
SLV 2	2.89	-6386.28	-18827	-15678	-8878	1.915	1.8549	-30684	16250	8440	38062	24085	4883	28968		3.26	Si
SLV 2	4.79	7394.85	-14211	-11833	-8828	1.915	1.3114	-22069	14830	5446	38062	24085	4883	28968		3.28	Si
SLV 10	2.89	3966.61	-16481	-13724	7322	1.915	1.915	-25595	15536	8330	38062	24085	4883	28968		3.96	Si
SLV 10	4.79	-2093.99	-24003	-19988	6889	1.915	1.915	-37277	16250	8713	38062	24085	4883	28968		4.21	Si
SLV 1	2.89	-7096.19	-19403	-16157	-10121	1.915	1.7754	-33090	16250	8078	38062	24085	4883	28968		2.86	Si
SLV 1	4.79	8275.65	-13958	-11623	-10091	1.915	1.0939	-21677	14752	4518	38062	24085	4883	28968		2.87	Si
SLV 4	2.89	-7734.87	-18599	-15487	-10523	1.915	1.6249	-34686	16250	7393	38062	24085	4883	28968		2.75	Si
SLV 4	4.79	7375.94	-11375	-9472	-10227	1.915	0.9272	-17664	13950	3621	38062	24085	4883	28968		2.83	Si
SLV 3	2.89	-8444.78	-19175	-15967	-11766	1.915	1.5513	-37516	16250	7058	38062	24085	4883	28968		2.46	Si
SLV 3	4.79	8256.75	-11122	-9262	-11490	1.915	0.6455	-52909	16250	2937	38062	24085	4883	28968		2.52	Si
SLV 15	2.89	5256.34	-14999	-12489	10545	1.915	1.8212	-23292	15075	7687	38062	24085	4883	28968		2.75	Si
SLV 15	4.79	-6616.3	-21167	-17626	10526	1.915	1.915	-32871	16250	8713	38062	24085	4883	28968		2.75	Si
SLV 13	2.89	6604.94	-15227	-12680	12190	1.915	1.5712	-23647	15146	6663	38062	24085	4883	28968		2.38	Si
SLV 13	4.79	-6597.4	-24003	-19988	11924	1.915	1.915	-37276	16250	8713	38062	24085	4883	28968		2.43	Si
SLV 14	2.89	7314.85	-14651	-12200	13432	1.915	1.3747	-22752	14967	5761	38062	24085	4883	28968		2.16	Si
SLV 14	4.79	-7478.21	-24255	-20198	13187	1.915	1.915	-37667	16250	8713	38062	24085	4883	28968		2.2	Si
SLV 16	2.89	5966.25	-14422	-12010	11787	1.915	1.6315	-22397	14896	6805	38062	24085	4883	28968		2.46	Si
SLV 16	4.79	-7497.11	-21419	-17836	11788	1.915	1.8225	-35642	16250	8292	38062	24085	4883	28968		2.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.32	20860	-11185	158.49	1352.02	8.53	Si
SLV 8	179667	0.32	21150	-11341	158.49	1367.84	8.63	Si
SLV 3	179667	0.32	22184	-11895	158.49	1423.41	8.98	Si
SLV 4	179667	0.32	22635	-12137	158.49	1447.33	9.13	Si
SLV 11	179667	0.32	26534	-14228	158.49	1645.78	10.38	Si
SLV 12	179667	0.32	26824	-14383	158.49	1659.98	10.47	Si
SLV 1	179667	0.32	29062	-15583	158.49	1766.48	11.15	Si
SLV 2	179667	0.32	29513	-15825	158.49	1787.35	11.28	Si
SLV 15	179667	0.32	41097	-22037	158.49	2254.91	14.23	Si
SLV 16	179667	0.32	41548	-22279	158.49	2270.44	14.33	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-19108	-10447	599	0.532	2207.4	0.964	8.02356	10.55427	No
SLV 10	-19064	-10136	600	0.533	2202.9	0.964	8.03948	10.55427	No
SLV 5	-17987	-11238	582	0.561	2093.3	0.963	8.4749	10.55427	No
SLV 6	-17942	-10927	583	0.562	2088.8	0.962	8.49281	10.55427	No
SLV 11	-12912	-12824	-566	0.744	1577.4	0.952	11.35627	10.55427	Si
SLV 12	-12867	-12513	-566	0.746	1572.9	0.952	11.39104	10.55427	Si
SLV 7	-11790	-13615	-583	0.801	1463.6	0.948	12.27418	10.55427	Si
SLV 8	-11746	-13304	-582	0.803	1459.1	0.948	12.31509	10.55427	Si
SLV 13	-18260	-10441	210	0.573	2121.1	0.963	8.64481	4.78007	Si
SLV 14	-18191	-9959	211	0.575	2114.2	0.963	8.67285	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.76	SLU 81	Si
V_SLU	14.284	SLU 84	Si
PF_SLV	1.159	SLV 3	Si
V_SLV	2.157	SLV 14	Si
PFFP_SLV	8.531	SLV 7	Si
R_SLV	0.76	SLV 9	No

Maschio 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L4	L5	4.02	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	1.99	1504.66	-54346	-0.0000736	0.0004492	0.0035	4.02	66071.42	86515.32	86515.32	57.5	No	Si
SLU 48	4.09	5259.34	-44367	-0.0000674	0.0004492	0.0035	4.02	60409.97	74374.37	74374.37	14.14	No	Si
SLU 47	1.99	1461.42	-53111	-0.0000718	0.0004492	0.0035	4.02	65528.83	85119.81	85119.81	58.24	No	Si
SLU 47	4.09	5185.59	-43199	-0.0000656	0.0004492	0.0035	4.02	59557.25	72668.6	72668.6	14.01	No	Si
SLU 49	1.99	1525.67	-54389	-0.0000737	0.0004492	0.0035	4.02	66089.69	86564.39	86564.39	56.74	No	Si
SLU 49	4.09	5264.36	-44405	-0.0000675	0.0004492	0.0035	4.02	60436.8	74429.37	74429.37	14.14	No	Si
SLU 46	1.99	1476.76	-53582	-0.0000725	0.0004492	0.0035	4.02	65740.91	85651.77	85651.77	58	No	Si
SLU 46	4.09	5196.86	-43664	-0.0000663	0.0004492	0.0035	4.02	59901.29	73347.27	73347.27	14.11	No	Si
SLU 2	1.99	1170.88	-41805	-0.0000556	0.0004492	0.0035	4.02	58486.91	70631.91	70631.91	60.32	No	Si
SLU 2	4.09	3989.85	-34266	-0.000051	0.0004492	0.0035	4.02	51714.46	59618.14	59618.14	14.94	No	Si
SLU 50	1.99	1475.31	-53846	-0.0000728	0.0004492	0.0035	4.02	65857.23	85950.64	85950.64	58.26	No	Si
SLU 50	4.09	5244.72	-43877	-0.0000667	0.0004492	0.0035	4.02	60057.23	73659.04	73659.04	14.04	No	Si
SLU 43	1.99	1377.49	-52232	-0.0000704	0.0004492	0.0035	4.02	65115.01	84125.39	84125.39	61.07	No	Si
SLU 43	4.09	5109.73	-42396	-0.0000643	0.0004492	0.0035	4.02	58947.34	71494.83	71494.83	13.99	No	Si
SLU 51	1.99	1496.32	-53890	-0.000073	0.0004492	0.0035	4.02	65876.13	85999.72	85999.72	57.47	No	Si
SLU 51	4.09	5249.74	-43915	-0.0000667	0.0004492	0.0035	4.02	60084.6	73714.04	73714.04	14.04	No	Si
SLU 45	1.99	1455.75	-53538	-0.0000724	0.0004492	0.0035	4.02	65721.62	85602.69	85602.69	58.8	No	Si
SLU 45	4.09	5191.85	-43626	-0.0000662	0.0004492	0.0035	4.02	59873.65	73292.27	73292.27	14.12	No	Si
SLU 44	1.99	1412.51	-52304	-0.0000705	0.0004492	0.0035	4.02	65149.9	84207.18	84207.18	59.62	No	Si
SLU 44	4.09	5118.09	-42459	-0.0000644	0.0004492	0.0035	4.02	58995.65	71586.49	71586.49	13.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.99	9563	-29664	-0.0000548	0.0006738	0.0035	4.02		55406.24	55406.24	5.79		Si
SLV 10	4.09	11296.69	-19029	-0.0000444	0.0006738	0.0035	4.02		37411.35	37411.35	3.31		Si
SLV 2	1.99	17921.5	-59704	-0.0001121	0.0006738	0.0035	4.02		99747.18	99747.18	5.57		Si
SLV 2	4.09	-3919.93	-57992	-0.0000814	0.0006738	0.0035	4.02		104508.21	104508.21	26.66		Si
SLV 15	1.99	-15297.12	-30315	-0.0000667	0.0006738	0.0035	4.02		63790.96	63790.96	4.17		Si
SLV 15	4.09	12017.72	-17286	-0.0000435	0.0006738	0.0035	4.02		34307.69	34307.69	2.85		Si
SLV 5	1.99	17455.07	-40490	-0.0000845	0.0006738	0.0035	4.02		71386.08	71386.08	4.09		Si
SLV 5	4.09	5608.12	-33219	-0.0000519	0.0006738	0.0035	4.02		60653.22	60653.22	10.82		Si
SLV 14	1.99	-8108.1	-24121	-0.0000449	0.0006738	0.0035	4.02		53484.78	53484.78	6.6		Si
SLV 14	4.09	14781.22	-10477	-0.0000584	0.0006738	0.0035	4.02		21872.42	21872.42	1.48		Si
SLV 16	1.99	-15426.2	-30080	-0.0000666	0.0006738	0.0035	4.02		63413.15	63413.15	4.11		Si
SLV 16	4.09	12139.11	-17386	-0.0000439	0.0006738	0.0035	4.02		34486.47	34486.47	2.84		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.99	9646.19	-29815	-0.0000552	0.0006738	0.0035	4.02		55629.01	55629.01	5.77		Si
SLV 9	4.09	11218.46	-18964	-0.0000442	0.0006738	0.0035	4.02		37297.95	37297.95	3.32		Si
SLV 1	1.99	18050.59	-59938	-0.0001127	0.0006738	0.0035	4.02		100016.37	100016.37	5.54		Si
SLV 1	4.09	-4041.32	-57892	-0.0000815	0.0006738	0.0035	4.02		104380.7	104380.7	25.83		Si
SLV 13	1.99	-7979.01	-24355	-0.000045	0.0006738	0.0035	4.02		53882.36	53882.36	6.75		Si
SLV 13	4.09	14659.83	-10377	-0.000058	0.0006738	0.0035	4.02		21685.21	21685.21	1.48		Si
SLV 6	1.99	17371.88	-40339	-0.0000841	0.0006738	0.0035	4.02		71163.31	71163.31	4.1		Si
SLV 6	4.09	5686.34	-33283	-0.0000521	0.0006738	0.0035	4.02		60748.31	60748.31	10.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	1.99	1412.51	-52304	-37312	-6677	4.02	4.02	-33149	10833	12194	108749	40451	20502	60953	No	9.13	Si
SLU 44	4.09	5118.09	-42459	-30289	-5737	4.02	4.02	-26909	10833	12194	108749	40451	20502	60953	No	10.62	Si
SLU 47	1.99	1461.42	-53111	-37888	-6761	4.02	4.02	-33660	10833	12194	108749	40451	20502	60953	No	9.02	Si
SLU 47	4.09	5185.59	-43199	-30817	-5805	4.02	4.02	-27379	10833	12194	108749	40451	20502	60953	No	10.5	Si
SLU 46	1.99	1476.76	-53582	-38224	-6770	4.02	4.02	-33959	10833	12194	108749	40451	20502	60953	No	9	Si
SLU 46	4.09	5196.86	-43664	-31149	-5806	4.02	4.02	-27673	10833	12194	108749	40451	20502	60953	No	10.5	Si
SLU 45	1.99	1455.75	-53538	-38193	-6771	4.02	4.02	-33931	10833	12194	108749	40451	20502	60953	No	9	Si
SLU 45	4.09	5191.85	-43626	-31122	-5809	4.02	4.02	-27649	10833	12194	108749	40451	20502	60953	No	10.49	Si
SLU 50	1.99	1475.31	-53846	-38413	-6845	4.02	4.02	-34126	10833	12194	108749	40451	20502	60953	No	8.9	Si
SLU 50	4.09	5244.72	-43877	-31301	-5877	4.02	4.02	-27808	10833	12194	108749	40451	20502	60953	No	10.37	Si
SLU 51	1.99	1496.32	-53890	-38443	-6844	4.02	4.02	-34154	10833	12194	108749	40451	20502	60953	No	8.91	Si
SLU 51	4.09	5249.74	-43915	-31328	-5875	4.02	4.02	-27832	10833	12194	108749	40451	20502	60953	No	10.38	Si
SLU 49	1.99	1525.67	-54389	-38800	-6853	4.02	4.02	-34470	10833	12194	108749	40451	20502	60953	No	8.89	Si
SLU 49	4.09	5264.36	-44405	-31677	-5874	4.02	4.02	-28143	10833	12194	108749	40451	20502	60953	No	10.38	Si
SLU 48	1.99	1504.66	-54346	-38769	-6854	4.02	4.02	-34443	10833	12194	108749	40451	20502	60953	No	8.89	Si
SLU 48	4.09	5259.34	-44367	-31650	-5877	4.02	4.02	-28119	10833	12194	108749	40451	20502	60953	No	10.37	Si
SLU 69	1.99	1793.76	-60240	-42974	-6636	4.02	4.02	-38179	10833	12194	108749	40451	20502	60953	No	9.19	Si
SLU 69	4.09	5452.43	-50398	-35953	-5541	4.02	4.02	-31941	10833	12194	108749	40451	20502	60953	No	11	Si
SLU 43	1.99	1377.49	-52232	-37261	-6678	4.02	4.02	-33103	10833	12194	108749	40451	20502	60953	No	9.13	Si
SLU 43	4.09	5109.73	-42396	-30244	-5742	4.02	4.02	-26869	10833	12194	108749	40451	20502	60953	No	10.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.99	-15297.12	-30315	-21626	-20502	4.02	4.02	-19213	16250	18291	108749	60677	20502	81179		3.96	Si
SLV 15	4.09	12017.72	-17286	-12331	-19700	4.02	3.9443	-10955	14691	16225	108749	60677	20502	81179		4.12	Si
SLV 13	1.99	-7979.01	-24355	-17375	-18518	4.02	4.02	-15436	15587	17545	108749	60677	20502	81179		4.38	Si
SLV 13	4.09	14659.83	-10377	-7402	-17026	4.02	1.7917	-6576	13815	6931	108749	60677	20502	81179		4.77	Si
SLV 2	1.99	17921.5	-59704	-42591	10729	4.02	4.02	-37839	16250	18291	108749	60677	20502	81179		7.57	Si
SLV 2	4.09	-3919.93	-57992	-41370	11563	4.02	4.02	-36754	16250	18291	108749	60677	20502	81179		7.02	Si
SLD 15	1.99	-5791.75	-38726	-27626	-11561	4.02	4.02	-24543	16250	18291	108749	60677	20502	81179		7.02	Si
SLD 15	4.09	7455.78	-28937	-20643	-10752	4.02	4.02	-18340	16168	18199	108749	60677	20502	81179		7.55	Si
SLD 16	1.99	-5847.18	-38625	-27554	-11473	4.02	4.02	-24480	16250	18291	108749	60677	20502	81179		7.08	Si
SLD 16	4.09	7507.9	-28980	-20674	-10666	4.02	4.02	-18367	16173	18205	108749	60677	20502	81179		7.61	Si
SLV 16	1.99	-15426.2	-30080	-21459	-20297	4.02	4.02	-19064	16250	18291	108749	60677	20502	81179		4	Si
SLV 16	4.09	12139.11	-17386	-12403	-19500	4.02	3.9353	-11019	14704	16202	108749	60677	20502	81179		4.16	Si
SLV 11	1.99	-14747.49	-49680	-35440	-12615	4.02	4.02	-31486	16250	18291	108749	60677	20502	81179		6.44	Si
SLV 11	4.09	2411.45	-41995	-29958	-12848	4.02	4.02	-26615	16250	18291	108749	60677	20502	81179		6.32	Si
SLV 1	1.99	18050.59	-59938	-42758	10524	4.02	4.02	-37987	16250	18291	108749	60677	20502	81179		7.71	Si
SLV 1	4.09	-4041.32	-57892	-41299	11363	4.02	4.02	-36691	16250	18291	108749	60677	20502	81179		7.14	Si
SLV 14	1.99	-8108.1	-24121	-17207	-18313	4.02	4.02	-15287	15557	17511	108749	60677	20502	81179		4.43	Si
SLV 14	4.09	14781.22	-10477	-7474	-16826	4.02	1.7974	-6640	13828	6959	108749	60677	20502	81179		4.82	Si
SLV 12	1.99	-14830.68	-49529	-35332	-12483	4.02	4.02	-31390	16250	18291	108749	60677	20502	81179		6.5	Si
SLV 12	4.09	2489.68	-42059	-30004	-12719	4.02	4.02	-26656	16250	18291	108749	60677	20502	81179		6.38	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-11414	0.32	340.44	1509.52	2268.4	1888.96	5.55	Si
SLV 14	-11442	0.32	340.44	1513.01	2272.7	1892.85	5.56	Si
SLV 15	-18575	0.32	340.44	2366.35	3358.26	2862.3	8.41	Si
SLV 16	-18603	0.32	340.44	2369.56	3362.5	2866.03	8.42	Si
SLV 9	-19666	0.32	340.44	2490.8	3523.03	3006.92	8.83	Si
SLV 10	-19684	0.32	340.44	2492.85	3525.74	3009.3	8.84	Si
SLV 5	-33897	0.32	340.44	3965.8	5629.59	4797.7	14.09	Si
SLV 6	-33915	0.32	340.44	3967.5	5632.23	4799.86	14.1	Si
SLV 11	-43537	0.32	340.44	4808.86	7021.07	5914.97	17.37	Si
SLV 12	-43555	0.32	340.44	4810.32	7023.67	5917	17.38	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-48909	-60203	966	0.455	5529.3	0.97	6.82474	10.55427	No
SLV 7	-48744	-60354	967	0.457	5512.5	0.97	6.8447	10.55427	No
SLV 12	-40318	-49529	1233	0.531	4654.9	0.964	7.99556	10.55427	No
SLV 11	-40153	-49680	1235	0.532	4638.1	0.964	8.02412	10.55427	No
SLV 6	-35080	-40339	-1380	0.593	4122	0.96	8.97979	10.55427	No
SLV 5	-34915	-40490	-1379	0.596	4105.2	0.96	9.01755	10.55427	No
SLV 10	-26489	-29664	-1113	0.761	3248.9	0.951	11.62515	10.55427	Si
SLV 9	-26324	-29815	-1111	0.765	3232.1	0.951	11.68935	10.55427	Si
SLV 4	-54137	-65663	-168	0.432	6061.7	0.972	6.45161	4.78007	Si
SLV 3	-53881	-65897	-166	0.433	6035.6	0.972	6.47889	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.987	SLU 44	Si
V_SLU	8.893	SLU 48	Si
PF_SLV	1.479	SLV 13	Si
V_SLV	3.96	SLV 15	Si
PFFP_SLV	5.549	SLV 13	Si
R_SLV	0.647	SLV 8	No

Maschio 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L4	L5	7.55	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.99	49465.64	-164423	-0.0001536	0.0004492	0.0035	7.55	225594.03	417055.26	417055.26	8.43	No	Si
SLU 77	4.49	26395.32	-145665	-0.0001215	0.0004492	0.0035	7.55	239789.75	389512.25	389512.25	14.76	No	Si
SLU 80	1.99	49203.27	-163186	-0.0001523	0.0004492	0.0035	7.55	226846.59	415239.41	415239.41	8.44	No	Si
SLU 80	4.49	26242.21	-144348	-0.0001203	0.0004492	0.0035	7.55	240399.98	387578.68	387578.68	14.77	No	Si
SLU 83	1.99	50045.67	-168069	-0.0001574	0.0004492	0.0035	7.55	221640.97	422408.87	422408.87	8.44	No	Si
SLU 83	4.49	26462.82	-149413	-0.0001247	0.0004492	0.0035	7.55	237775.08	395016.62	395016.62	14.93	No	Si
SLU 78	1.99	49588.64	-164538	-0.0001538	0.0004492	0.0035	7.55	225475.24	417224.17	417224.17	8.41	No	Si
SLU 78	4.49	26382.63	-145746	-0.0001216	0.0004492	0.0035	7.55	239750.61	389631.04	389631.04	14.77	No	Si
SLU 74	1.99	48782.11	-162470	-0.0001513	0.0004492	0.0035	7.55	227551.45	414187.94	414187.94	8.49	No	Si
SLU 74	4.49	26004.7	-143847	-0.0001197	0.0004492	0.0035	7.55	240618.63	386843.72	386843.72	14.88	No	Si
SLU 84	1.99	50168.67	-168184	-0.0001575	0.0004492	0.0035	7.55	221509.93	422577.77	422577.77	8.42	No	Si
SLU 84	4.49	26450.13	-149494	-0.0001248	0.0004492	0.0035	7.55	237727.07	395135.41	395135.41	14.94	No	Si
SLU 76	1.99	48601.74	-161310	-0.0001501	0.0004492	0.0035	7.55	228661.43	412484.69	412484.69	8.49	No	Si
SLU 76	4.49	25843.12	-142584	-0.0001185	0.0004492	0.0035	7.55	241137.77	384989.35	384989.35	14.9	No	Si
SLU 75	1.99	48905.11	-162585	-0.0001515	0.0004492	0.0035	7.55	227439.23	414356.85	414356.85	8.47	No	Si
SLU 75	4.49	25992.01	-143928	-0.0001198	0.0004492	0.0035	7.55	240583.79	386962.52	386962.52	14.89	No	Si
SLU 82	1.99	49485.14	-166231	-0.0001553	0.0004492	0.0035	7.55	223682.03	419710.45	419710.45	8.48	No	Si
SLU 82	4.49	26059.51	-147677	-0.000123	0.0004492	0.0035	7.55	238759.38	392466.88	392466.88	15.06	No	Si
SLU 79	1.99	49080.27	-163071	-0.0001521	0.0004492	0.0035	7.55	226960.83	415070.5	415070.5	8.46	No	Si
SLU 79	4.49	26254.9	-144267	-0.0001202	0.0004492	0.0035	7.55	240435.81	387459.89	387459.89	14.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	1.99	71233.2	-116794	-0.0001203	0.0006738	0.0035	7.55		361954.6	361954.6	5.08		Si
SLD 1	4.49	10631.08	-105885	-0.0000774	0.0006738	0.0035	7.55		334381.76	334381.76	31.45		Si
SLV 3	1.99	123038.23	-122185	-0.0001552	0.0006738	0.0035	7.55		373576.44	373576.44	3.04		Si
SLV 3	4.49	3903.32	-114284	-0.0000796	0.0006738	0.0035	7.55		356542.64	356542.64	91.34		Si
SLV 7	1.99	63616.2	-111199	-0.0001116	0.0006738	0.0035	7.55		349105.93	349105.93	5.49		Si
SLV 7	4.49	19415.68	-96523	-0.0000757	0.0006738	0.0035	7.55		308436.61	308436.61	15.89		Si
SLV 1	1.99	121213.06	-124413	-0.0001559	0.0006738	0.0035	7.55		378379.67	378379.67	3.12		Si
SLV 1	4.49	385.07	-117973	-0.0000803	0.0006738	0.0035	7.55		364495.2	364495.2	946.56		Si
SLD 3	1.99	71958.1	-115802	-0.00012	0.0006738	0.0035	7.55		359814.51	359814.51	5		Si
SLD 3	4.49	12197.95	-104283	-0.0000771	0.0006738	0.0035	7.55		329941.82	329941.82	27.05		Si
SLV 8	1.99	62927.83	-110561	-0.0001107	0.0006738	0.0035	7.55		347339.83	347339.83	5.52		Si
SLV 8	4.49	19217.67	-96366	-0.0000754	0.0006738	0.0035	7.55		308001.7	308001.7	16.03		Si
SLV 4	1.99	121970.03	-121196	-0.0001538	0.0006738	0.0035	7.55		371444.3	371444.3	3.05		Si
SLV 4	4.49	3596.06	-114041	-0.0000793	0.0006738	0.0035	7.55		356017.59	356017.59	99		Si
SLD 2	1.99	70774.55	-116370	-0.0001197	0.0006738	0.0035	7.55		361039.13	361039.13	5.1		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	4.49	10499.15	-105781	-0.0000773	0.0006738	0.0035	7.55		334091.99	334091.99	31.82		Si
SLV 2	1.99	120144.86	-123424	-0.0001545	0.0006738	0.0035	7.55		376247.53	376247.53	3.13		Si
SLV 2	4.49	77.81	-117729	-0.0000799	0.0006738	0.0035	7.55		363970.16	363970.16	4677.63		Si
SLD 4	1.99	71499.45	-115377	-0.0001194	0.0006738	0.0035	7.55		358899.03	358899.03	5.02		Si
SLD 4	4.49	12066.02	-104179	-0.000077	0.0006738	0.0035	7.55		329652.05	329652.05	27.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 61	1.99	45345.32	-150217	-107161	741	7.55	7.55	-50691	10833	22902	108749	75972	38505	114477	No	154.48	Si
SLU 61	4.49	23536.67	-131848	-94057	6647	7.55	7.55	-44492	10833	22902	108749	75972	38505	114477	No	17.22	Si
SLU 62	1.99	45905.85	-152055	-108472	789	7.55	7.55	-51311	10833	22902	108749	75972	38505	114477	No	145.05	Si
SLU 62	4.49	23939.98	-133584	-95296	6766	7.55	7.55	-45078	10833	22902	108749	75972	38505	114477	No	16.92	Si
SLU 77	1.99	49465.64	-164423	-117295	102	7.55	7.55	-55485	10833	22902	108749	75972	38505	114477	No	1121.58	Si
SLU 77	4.49	26395.32	-145665	-103914	6570	7.55	7.55	-49155	10833	22902	108749	75972	38505	114477	No	17.42	Si
SLU 63	1.99	46028.85	-152170	-108554	743	7.55	7.55	-51350	10833	22902	108749	75972	38505	114477	No	154.06	Si
SLU 63	4.49	23927.29	-133665	-95353	6721	7.55	7.55	-45106	10833	22902	108749	75972	38505	114477	No	17.03	Si
SLU 81	1.99	49362.13	-166116	-118503	395	7.55	7.55	-56056	10833	22902	108749	75972	38505	114477	No	289.73	Si
SLU 81	4.49	26072.2	-147596	-105291	6921	7.55	7.55	-49807	10833	22902	108749	75972	38505	114477	No	16.54	Si
SLU 79	1.99	49080.27	-163071	-116331	111	7.55	7.55	-55029	10833	22902	108749	75972	38505	114477	No	1034.22	Si
SLU 79	4.49	26254.9	-144267	-102917	6533	7.55	7.55	-48683	10833	22902	108749	75972	38505	114477	No	17.52	Si
SLU 83	1.99	50045.67	-168069	-119896	397	7.55	7.55	-56715	10833	22902	108749	75972	38505	114477	No	288.25	Si
SLU 83	4.49	26462.82	-149413	-106588	6995	7.55	7.55	-50420	10833	22902	108749	75972	38505	114477	No	16.37	Si
SLU 84	1.99	50168.67	-168184	-119978	351	7.55	7.55	-56754	10833	22902	108749	75972	38505	114477	No	326.15	Si
SLU 84	4.49	26450.13	-149494	-106646	6950	7.55	7.55	-50447	10833	22902	108749	75972	38505	114477	No	16.47	Si
SLU 60	1.99	45222.32	-150102	-107079	787	7.55	7.55	-50652	10833	22902	108749	75972	38505	114477	No	145.43	Si
SLU 60	4.49	23549.36	-131767	-93999	6691	7.55	7.55	-44465	10833	22902	108749	75972	38505	114477	No	17.11	Si
SLU 82	1.99	49485.14	-166231	-118585	349	7.55	7.55	-56095	10833	22902	108749	75972	38505	114477	No	328.05	Si
SLU 82	4.49	26059.51	-147677	-105349	6876	7.55	7.55	-49834	10833	22902	108749	75972	38505	114477	No	16.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	1.99	-53348.49	-97735	-69722	-54891	7.55	7.55	-32981	16250	34352	108749	113958	38505	143101		2.61	Si
SLV 16	4.49	36345.66	-75713	-54012	-46156	7.55	7.55	-25550	16250	34352	108749	113958	38505	143101		3.1	Si
SLV 4	1.99	121970.03	-121196	-86458	59701	7.55	7.55	-40898	16250	34352	108749	113958	38505	143101		2.4	Si
SLV 4	4.49	3596.06	-114041	-81354	58678	7.55	7.55	-38483	16250	34352	108749	113958	38505	143101		2.44	Si
SLD 3	1.99	71958.1	-115802	-82610	25086	7.55	7.55	-39078	16250	34352	108749	113958	38505	143101		5.7	Si
SLD 3	4.49	12197.95	-104283	-74393	27183	7.55	7.55	-35191	16250	34352	108749	113958	38505	143101		5.26	Si
SLV 13	1.99	-54105.47	-100952	-72017	-60016	7.55	7.55	-34066	16250	34352	108749	113958	38505	143101		2.38	Si
SLV 13	4.49	33134.67	-79645	-56817	-50168	7.55	7.55	-26877	16250	34352	108749	113958	38505	143101		2.85	Si
SLV 14	1.99	-55173.67	-99963	-71311	-59195	7.55	7.55	-33733	16250	34352	108749	113958	38505	143101		2.42	Si
SLV 14	4.49	32827.41	-79402	-56643	-49368	7.55	7.55	-26794	16250	34352	108749	113958	38505	143101		2.9	Si
SLV 15	1.99	-52280.3	-98724	-70427	-55712	7.55	7.55	-33315	16250	34352	108749	113958	38505	143101		2.57	Si
SLV 15	4.49	36652.92	-75957	-54186	-46956	7.55	7.55	-25632	16250	34352	108749	113958	38505	143101		3.05	Si
SLV 2	1.99	120144.86	-123424	-88048	55397	7.55	7.55	-41650	16250	34352	108749	113958	38505	143101		2.58	Si
SLV 2	4.49	77.81	-117729	-83985	55466	7.55	7.55	-39728	16250	34352	108749	113958	38505	143101		2.58	Si
SLV 1	1.99	121213.06	-124413	-88753	54576	7.55	7.55	-41983	16250	34352	108749	113958	38505	143101		2.62	Si
SLV 1	4.49	385.07	-117973	-84159	54665	7.55	7.55	-39810	16250	34352	108749	113958	38505	143101		2.62	Si
SLD 4	1.99	71499.45	-115377	-82307	25439	7.55	7.55	-38934	16250	34352	108749	113958	38505	143101		5.63	Si
SLD 4	4.49	12066.02	-104179	-74318	27526	7.55	7.55	-35155	16250	34352	108749	113958	38505	143101		5.2	Si
SLV 3	1.99	123038.23	-122185	-87164	58880	7.55	7.55	-41232	16250	34352	108749	113958	38505	143101		2.43	Si
SLV 3	4.49	3903.32	-114284	-81528	57877	7.55	7.55	-38566	16250	34352	108749	113958	38505	143101		2.47	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-87606	0.32	639.37	9491.68	13999.81	11745.75	18.37	Si
SLV 15	-88050	0.32	639.37	9525.66	14063.26	11794.46	18.45	Si
SLV 14	-90552	0.32	639.37	9714.46	14420.83	12067.65	18.87	Si
SLV 13	-90996	0.32	639.37	9747.5	14484.31	12115.9	18.95	Si
SLV 12	-94541	0.32	639.37	10006.16	14985.71	12495.94	19.54	Si
SLV 11	-94827	0.32	639.37	10026.64	15025.09	12525.86	19.59	Si
SLV 8	-103363	0.32	639.37	10610.42	16200.45	13405.44	20.97	Si
SLV 7	-103650	0.32	639.37	10629.08	16239.87	13434.48	21.01	Si
SLV 10	-104360	0.32	639.37	10675.16	16337.78	13506.47	21.12	Si
SLV 9	-104646	0.32	639.37	10693.61	16377.2	13535.4	21.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-98951	-118625	-1415	0.431	11107.1	0.972	6.45113	10.55427	No
SLV 6	-98809	-117987	-1415	0.432	11092.6	0.971	6.45912	10.55427	No
SLV 9	-93615	-111586	-1356	0.453	10563.8	0.97	6.78072	10.55427	No
SLV 10	-93473	-110949	-1357	0.453	10549.3	0.97	6.78962	10.55427	No
SLV 7	-89581	-111199	1320	0.47	10153	0.969	7.05352	10.55427	No
SLV 8	-89439	-110561	1319	0.471	10138.6	0.969	7.06348	10.55427	No
SLV 11	-84246	-104160	1379	0.495	9609.9	0.967	7.43503	10.55427	No
SLV 12	-84104	-103523	1378	0.496	9595.4	0.967	7.44621	10.55427	No
SLV 1	-101935	-124413	-525	0.429	11411	0.972	6.4082	4.78007	Si
SLV 2	-101715	-123424	-527	0.429	11388.5	0.972	6.42017	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.414	SLU 78	Si
V_SLU	16.366	SLU 83	Si
PF_SLV	3.036	SLV 3	Si
V_SLV	2.384	SLV 13	Si
PFFP_SLV	18.371	SLV 16	Si
R_SLV	0.611	SLV 5	No

Maschio 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-11.143	1.006	L4	L5	3.68	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.99	8456.98	-68029	-0.0001223	0.0004492	0.0035	3.68	57538.08	90472.4	90472.4	10.7	No	Si
SLU 79	4.49	4589.86	-56195	-0.0000922	0.0004492	0.0035	3.68	57247.98	79162.1	79162.1	17.25	No	Si
SLU 80	1.99	8460.72	-68041	-0.0001224	0.0004492	0.0035	3.68	57536.32	90480.8	90480.8	10.69	No	Si
SLU 80	4.49	4592.97	-56242	-0.0000923	0.0004492	0.0035	3.68	57257.24	79210.36	79210.36	17.25	No	Si
SLU 77	1.99	8510.61	-68537	-0.0001234	0.0004492	0.0035	3.68	57458.95	90832.31	90832.31	10.67	No	Si
SLU 77	4.49	4600.79	-56702	-0.0000931	0.0004492	0.0035	3.68	57344.3	79681.87	79681.87	17.32	No	Si
SLU 81	1.99	8656.29	-69627	-0.0001257	0.0004492	0.0035	3.68	57263.62	91604.99	91604.99	10.58	No	Si
SLU 81	4.49	4717.09	-57834	-0.0000952	0.0004492	0.0035	3.68	57532.25	80842.34	80842.34	17.14	No	Si
SLU 78	1.99	8514.34	-68549	-0.0001234	0.0004492	0.0035	3.68	57457.01	90840.71	90840.71	10.67	No	Si
SLU 78	4.49	4603.89	-56749	-0.0000932	0.0004492	0.0035	3.68	57352.86	79730.13	79730.13	17.32	No	Si
SLU 74	1.99	8431.82	-67764	-0.0001218	0.0004492	0.0035	3.68	57576.48	90284.07	90284.07	10.71	No	Si
SLU 74	4.49	4519.34	-56028	-0.0000918	0.0004492	0.0035	3.68	57214.5	78990.32	78990.32	17.48	No	Si
SLU 82	1.99	8660.03	-69639	-0.0001257	0.0004492	0.0035	3.68	57261.3	91613.39	91613.39	10.58	No	Si
SLU 82	4.49	4720.19	-57881	-0.0000953	0.0004492	0.0035	3.68	57539.26	80890.61	80890.61	17.14	No	Si
SLU 84	1.99	8738.82	-70412	-0.0001273	0.0004492	0.0035	3.68	57101.38	92161.63	92161.63	10.55	No	Si
SLU 84	4.49	4801.64	-58555	-0.0000966	0.0004492	0.0035	3.68	57632.54	81582.15	81582.15	16.99	No	Si
SLU 75	1.99	8435.56	-67776	-0.0001218	0.0004492	0.0035	3.68	57574.81	90292.47	90292.47	10.7	No	Si
SLU 75	4.49	4522.44	-56075	-0.0000919	0.0004492	0.0035	3.68	57223.99	79038.58	79038.58	17.48	No	Si
SLU 83	1.99	8735.08	-70401	-0.0001272	0.0004492	0.0035	3.68	57103.96	92153.23	92153.23	10.55	No	Si
SLU 83	4.49	4798.54	-58508	-0.0000965	0.0004492	0.0035	3.68	57626.47	81533.89	81533.89	16.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.99	-19303.2	-54032	-0.0001216	0.0006738	0.0035	3.68		88484.56	88484.56	4.58		Si
SLV 16	4.49	32288.92	-40543	-0.0001359	0.0006738	0.0035	3.68		64545.91	64545.91	2		Si
SLV 4	1.99	25433.42	-42897	-0.0001191	0.0006738	0.0035	3.68		67704.88	67704.88	2.66		Si
SLV 4	4.49	-27354.93	-32980	-0.0001125	0.0006738	0.0035	3.68		60913.53	60913.53	2.23		Si
SLV 14	1.99	-13693.18	-49409	-0.0001009	0.0006738	0.0035	3.68		82851.86	82851.86	6.05		Si
SLV 14	4.49	33111.45	-41911	-0.0001399	0.0006738	0.0035	3.68		66382.21	66382.21	2		Si
SLV 13	1.99	-13873.35	-49326	-0.0001012	0.0006738	0.0035	3.68		82748.58	82748.58	5.96		Si
SLV 13	4.49	33472.56	-41788	-0.0001411	0.0006738	0.0035	3.68		66216.8	66216.8	1.98		Si
SLV 6	1.99	21898.61	-36764	-0.0001012	0.0006738	0.0035	3.68		59476.66	59476.66	2.72		Si
SLV 6	4.49	-4633.25	-38571	-0.0000634	0.0006738	0.0035	3.68		68765.53	68765.53	14.84		Si
SLV 3	1.99	25253.25	-42815	-0.0001185	0.0006738	0.0035	3.68		67594.18	67594.18	2.68		Si
SLV 3	4.49	-26993.81	-32857	-0.0001111	0.0006738	0.0035	3.68		60740.35	60740.35	2.25		Si
SLV 15	1.99	-19483.37	-53949	-0.0001219	0.0006738	0.0035	3.68		88387.59	88387.59	4.54		Si
SLV 15	4.49	32650.04	-40419	-0.000137	0.0006738	0.0035	3.68		64380.5	64380.5	1.97		Si
SLV 2	1.99	31043.44	-38275	-0.0001296	0.0006738	0.0035	3.68		61503.44	61503.44	1.98		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.49	-26532.41	-34349	-0.0001106	0.0006738	0.0035	3.68		62835.97	62835.97	2.37		Si
SLV 1	1.99	30863.27	-38192	-0.0001289	0.0006738	0.0035	3.68		61392.74	61392.74	1.99		Si
SLV 1	4.49	-26171.29	-34225	-0.0001094	0.0006738	0.0035	3.68		62662.8	62662.8	2.39		Si
SLV 5	1.99	21782.51	-36711	-0.0001008	0.0006738	0.0035	3.68		59405.32	59405.32	2.73		Si
SLV 5	4.49	-4400.54	-38491	-0.0000627	0.0006738	0.0035	3.68		68653.93	68653.93	15.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.99	8660.03	-69639	-49679	2344	3.68	3.68	-48213	10833	11163	108749	37030	18768	55798	No	23.8	Si
SLU 82	4.49	4720.19	-57881	-41291	95	3.68	3.68	-40072	10833	11163	108749	37030	18768	55798	No	589.02	Si
SLU 76	1.99	8384.42	-67276	-47993	2278	3.68	3.68	-46577	10833	11163	108749	37030	18768	55798	No	24.5	Si
SLU 76	4.49	4513.59	-55599	-39663	7	3.68	3.68	-38493	10833	11163	108749	37030	18768	55798	No	8555.7	Si
SLU 84	1.99	8738.82	-70412	-50230	2332	3.68	3.68	-48748	10833	11163	108749	37030	18768	55798	No	23.92	Si
SLU 84	4.49	4801.64	-58555	-41772	46	3.68	3.68	-40539	10833	11163	108749	37030	18768	55798	No	1215.56	Si
SLU 83	1.99	8735.08	-70401	-50222	2300	3.68	3.68	-48740	10833	11163	108749	37030	18768	55798	No	24.26	Si
SLU 83	4.49	4798.54	-58508	-41738	17	3.68	3.68	-40507	10833	11163	108749	37030	18768	55798	No	3225.38	Si
SLU 73	1.99	8305.63	-66502	-47441	2289	3.68	3.68	-46042	10833	11163	108749	37030	18768	55798	No	24.37	Si
SLU 73	4.49	4432.14	-54925	-39182	55	3.68	3.68	-38026	10833	11163	108749	37030	18768	55798	No	1008.11	Si
SLU 75	1.99	8435.56	-67776	-48349	2304	3.68	3.68	-46923	10833	11163	108749	37030	18768	55798	No	24.22	Si
SLU 75	4.49	4522.44	-56075	-40002	18	3.68	3.68	-38822	10833	11163	108749	37030	18768	55798	No	3108.17	Si
SLU 81	1.99	8656.29	-69627	-49670	2311	3.68	3.68	-48205	10833	11163	108749	37030	18768	55798	No	24.14	Si
SLU 81	4.49	4717.09	-57834	-41257	66	3.68	3.68	-40040	10833	11163	108749	37030	18768	55798	No	843.8	Si
SLU 78	1.99	8514.34	-68549	-48901	2292	3.68	3.68	-47458	10833	11163	108749	37030	18768	55798	No	24.35	Si
SLU 78	4.49	4603.89	-56749	-40483	-31	3.68	3.68	-39289	10833	11163	108749	37030	18768	55798	No	1807.19	Si
SLU 40	1.99	7390.29	-59323	-42319	2301	3.68	3.68	-41071	10833	11163	108749	37030	18768	55798	No	24.25	Si
SLU 40	4.49	3898.04	-50063	-35714	446	3.68	3.68	-34660	10833	11163	108749	37030	18768	55798	No	124.99	Si
SLU 42	1.99	7469.08	-60096	-42871	2289	3.68	3.68	-41606	10833	11163	108749	37030	18768	55798	No	24.38	Si
SLU 42	4.49	3979.49	-50737	-36195	398	3.68	3.68	-35127	10833	11163	108749	37030	18768	55798	No	140.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.99	-13873.35	-49326	-35188	-28877	3.68	3.68	-34150	16250	16744	108749	55545	18768	74313		2.57	Si
SLV 13	4.49	33472.56	-41788	-29811	-23868	3.68	3.117	-28931	16250	14182	108749	55545	18768	74313		3.11	Si
SLV 4	1.99	25433.42	-42897	-30602	31758	3.68	3.68	-29699	16250	16744	108749	55545	18768	74313		2.34	Si
SLV 4	4.49	-27354.93	-32980	-23527	23461	3.68	3.0317	-28080	16250	13794	108749	55545	18768	74313		3.17	Si
SLV 14	1.99	-13693.18	-49409	-35247	-28478	3.68	3.68	-34207	16250	16744	108749	55545	18768	74313		2.61	Si
SLV 14	4.49	33111.45	-41911	-29899	-23544	3.68	3.1499	-29016	16250	14332	108749	55545	18768	74313		3.16	Si
SLV 2	1.99	31043.44	-38275	-27304	35452	3.68	3.0868	-26499	16250	14045	108749	55545	18768	74313		2.1	Si
SLV 2	4.49	-26532.41	-34349	-24504	26173	3.68	3.2027	-27585	16250	14572	108749	55545	18768	74313		2.84	Si
SLV 1	1.99	30863.27	-38192	-27245	35053	3.68	3.0957	-26442	16250	14085	108749	55545	18768	74313		2.12	Si
SLV 1	4.49	-26171.29	-34225	-24416	25849	3.68	3.226	-27295	16250	14678	108749	55545	18768	74313		2.87	Si
SLV 6	1.99	21898.61	-36764	-26226	17314	3.68	3.68	-25453	16250	16744	108749	55545	18768	74313		4.29	Si
SLV 6	4.49	-4633.25	-38571	-27515	11879	3.68	3.68	-26704	16250	16744	108749	55545	18768	74313		6.26	Si
SLV 16	1.99	-19303.2	-54032	-38545	-32172	3.68	3.68	-37408	16250	16744	108749	55545	18768	74313		2.31	Si
SLV 16	4.49	32288.92	-40543	-28922	-26255	3.68	3.1307	-28069	16250	14245	108749	55545	18768	74313		2.83	Si
SLV 15	1.99	-19483.37	-53949	-38486	-32570	3.68	3.68	-37350	16250	16744	108749	55545	18768	74313		2.28	Si
SLV 15	4.49	32650.04	-40419	-28834	-26580	3.68	3.0967	-27983	16250	14090	108749	55545	18768	74313		2.8	Si
SLV 3	1.99	25253.25	-42815	-30543	31360	3.68	3.68	-29642	16250	16744	108749	55545	18768	74313		2.37	Si
SLV 3	4.49	-26993.81	-32857	-23439	23137	3.68	3.0553	-27755	16250	13902	108749	55545	18768	74313		3.21	Si
SLV 5	1.99	21782.51	-36711	-26189	17058	3.68	3.68	-25416	16250	16744	108749	55545	18768	74313		4.36	Si
SLV 5	4.49	-4400.54	-38491	-27459	11670	3.68	3.68	-26649	16250	16744	108749	55545	18768	74313		6.37	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-38701	0.32	311.64	4307.8	6255.68	5281.74	16.95	Si
SLV 12	-38822	0.32	311.64	4317.8	6273.09	5295.44	16.99	Si
SLV 7	-38962	0.32	311.64	4329.33	6293.24	5311.29	17.04	Si
SLV 8	-39083	0.32	311.64	4339.28	6310.66	5324.97	17.09	Si
SLV 15	-40039	0.32	311.64	4417.08	6448.19	5432.63	17.43	Si
SLV 16	-40227	0.32	311.64	4432.21	6475.22	5453.72	17.5	Si
SLV 3	-40910	0.32	311.64	4486.74	6573.45	5530.1	17.75	Si
SLV 4	-41098	0.32	311.64	4501.63	6600.49	5551.06	17.81	Si
SLV 13	-41477	0.32	311.64	4531.46	6654.94	5593.2	17.95	Si
SLV 14	-41665	0.32	311.64	4546.19	6681.98	5614.09	18.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-38074	-36764	-1090	0.518	4379.8	0.965	7.79423	10.55427	No
SLV 5	-37967	-36711	-1090	0.519	4368.9	0.965	7.81356	10.55427	No
SLV 10	-37139	-40104	-1164	0.527	4284.6	0.965	7.93883	10.55427	No
SLV 9	-37032	-40051	-1164	0.528	4273.8	0.965	7.95902	10.55427	No
SLV 8	-28941	-52173	1069	0.654	3450.8	0.957	9.93133	10.55427	No
SLV 7	-28834	-52120	1069	0.656	3439.9	0.957	9.96373	10.55427	No
SLV 12	-28006	-55513	995	0.675	3355.8	0.956	10.25834	10.55427	No
SLV 11	-27899	-55460	995	0.677	3344.9	0.956	10.29292	10.55427	No
SLV 2	-35998	-38275	-247	0.564	4168.6	0.964	8.5123	4.78007	Si
SLV 1	-35832	-38192	-247	0.567	4151.7	0.964	8.54713	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.546	SLU 84	Si
V_SLU	23.802	SLU 82	Si
PF_SLV	1.972	SLV 15	Si
V_SLV	2.096	SLV 2	Si
PFFP_SLV	16.948	SLV 11	Si
R_SLV	0.738	SLV 6	No

Maschio 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L4	L5	1.55	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.99	1934.31	-43765	-0.0001989	0.0004492	0.0035	1.55	5925.31	19623.99	19623.99	10.15	No	Si
SLU 79	4.09	-1789.14	-43851	-0.0001967	0.0004492	0.0035	1.55	5882.25	19876.74	19876.74	11.11	No	Si
SLU 80	1.99	1940.69	-43823	-0.0001994	0.0004492	0.0035	1.55	5896.2	19633.92	19633.92	10.12	No	Si
SLU 80	4.09	-1791.53	-43880	-0.0001969	0.0004492	0.0035	1.55	5867.47	19879.52	19879.52	11.1	No	Si
SLU 81	1.99	1940.28	-44502	-0.0002029	0.0004492	0.0035	1.55	5545.98	19750.94	19750.94	10.18	No	Si
SLU 81	4.09	-1701.96	-44834	-0.0002001	0.0004492	0.0035	1.55	5369.84	19970.58	19970.58	11.73	No	Si
SLU 76	1.99	1925.22	-43332	-0.0001966	0.0004492	0.0035	1.55	6141.11	19549.29	19549.29	10.15	No	Si
SLU 76	4.09	-1763.89	-43379	-0.0001938	0.0004492	0.0035	1.55	6118.1	19831.71	19831.71	11.24	No	Si
SLU 78	1.99	1944.69	-44176	-0.0002013	0.0004492	0.0035	1.55	5716.1	19694.66	19694.66	10.13	No	Si
SLU 78	4.09	-1800.21	-44249	-0.0001989	0.0004492	0.0035	1.55	5678.15	19914.74	19914.74	11.06	No	Si
SLU 83	1.99	1960.01	-45032	-0.000206	0.0004492	0.0035	1.55	5263.5	19842.21	19842.21	10.12	No	Si
SLU 83	4.09	-1731.19	-45354	-0.0002034	0.0004492	0.0035	1.55	5087.21	20020.25	20020.25	11.56	No	Si
SLU 75	1.99	1924.96	-43646	-0.0001982	0.0004492	0.0035	1.55	5985.33	19603.4	19603.4	10.18	No	Si
SLU 75	4.09	-1770.98	-43728	-0.0001957	0.0004492	0.0035	1.55	5943.96	19865.08	19865.08	11.22	No	Si
SLU 82	1.99	1946.66	-44560	-0.0002033	0.0004492	0.0035	1.55	5515.63	19760.88	19760.88	10.15	No	Si
SLU 82	4.09	-1704.36	-44863	-0.0002003	0.0004492	0.0035	1.55	5354.22	19973.36	19973.36	11.72	No	Si
SLU 84	1.99	1966.39	-45089	-0.0002065	0.0004492	0.0035	1.55	5232.26	19852.14	19852.14	10.1	No	Si
SLU 84	4.09	-1733.59	-45384	-0.0002036	0.0004492	0.0035	1.55	5071.15	20023.03	20023.03	11.55	No	Si
SLU 77	1.99	1938.31	-44118	-0.0002008	0.0004492	0.0035	1.55	5745.81	19684.73	19684.73	10.16	No	Si
SLU 77	4.09	-1797.82	-44220	-0.0001987	0.0004492	0.0035	1.55	5693.25	19911.96	19911.96	11.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.99	-9603.38	-42031	-0.0002981	0.0006738	0.0035	1.55		22984.59	22984.59	2.39		Si
SLV 13	4.09	5854.57	-40138	-0.0002281	0.0006738	0.0035	1.55		21694.61	21694.61	3.71		Si
SLV 1	1.99	12287.91	-21140	-0.0004816	0.0006738	0.0035	1.55		13790.39	13790.39	1.12		Si
SLV 1	4.09	-8594.13	-21122	-0.00021	0.0006738	0.0035	1.55		14841.03	14841.03	1.73		Si
SLD 4	1.99	6042.08	-24674	-0.0001658	0.0006738	0.0035	1.55		15535.52	15535.52	2.57		Si
SLD 4	4.09	-4417.95	-25126	-0.0001445	0.0006738	0.0035	1.55		16832.65	16832.65	3.81		Si
SLV 15	1.99	-9702.05	-37977	-0.0002801	0.0006738	0.0035	1.55		21740.5	21740.5	2.24		Si
SLV 15	4.09	5987.94	-37920	-0.0002203	0.0006738	0.0035	1.55		20989.58	20989.58	3.51		Si
SLD 3	1.99	5985.15	-24398	-0.0001639	0.0006738	0.0035	1.55		15411.23	15411.23	2.57		Si
SLD 3	4.09	-4384.37	-25039	-0.0001437	0.0006738	0.0035	1.55		16791.82	16791.82	3.83		Si
SLV 16	1.99	-9569.47	-38620	-0.0002808	0.0006738	0.0035	1.55		21938.05	21938.05	2.29		Si
SLV 16	4.09	5909.73	-38124	-0.00022	0.0006738	0.0035	1.55		21054.42	21054.42	3.56		Si
SLV 3	1.99	12189.24	-17087	-0.006391	0.0006738	0.0035	1.55		11458.78	11458.78	0.94		No
SLV 3	4.09	-8460.76	-18904	-0.0002114	0.0006738	0.0035	1.24		13665.86	13665.86	1.62		Si
SLV 14	1.99	-9470.79	-42674	-0.0002991	0.0006738	0.0035	1.55		23164.8	23164.8	2.45		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	4.09	5776.36	-40342	-0.0002277	0.0006738	0.0035	1.55		21759.45	21759.45	3.77		Si
SLV 2	1.99	12420.5	-21784	-0.0004629	0.0006738	0.0035	1.55		14160.63	14160.63	1.14		Si
SLV 2	4.09	-8672.34	-21326	-0.0002122	0.0006738	0.0035	1.55		14949.11	14949.11	1.72		Si
SLV 4	1.99	12321.82	-17730	-0.0053527	0.0006738	0.0035	1.55		11829.02	11829.02	0.96		No
SLV 4	4.09	-8538.97	-19108	-0.0002135	0.0006738	0.0035	1.24		13773.94	13773.94	1.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	1.99	1925.22	-43332	-30912	2831	1.55	1.55	-71226	10833	4702	108749	15597	7905	23502	No	8.3	Si
SLU 76	4.09	-1763.89	-43379	-30945	2794	1.55	1.55	-71303	10833	4702	108749	15597	7905	23502	No	8.41	Si
SLU 78	1.99	1944.69	-44176	-31514	2866	1.55	1.55	-72612	10833	4702	108749	15597	7905	23502	No	8.2	Si
SLU 78	4.09	-1800.21	-44249	-31566	2828	1.55	1.55	-72733	10833	4702	108749	15597	7905	23502	No	8.31	Si
SLU 75	1.99	1924.96	-43646	-31136	2830	1.55	1.55	-71742	10833	4702	108749	15597	7905	23502	No	8.3	Si
SLU 75	4.09	-1770.98	-43728	-31195	2793	1.55	1.55	-71877	10833	4702	108749	15597	7905	23502	No	8.41	Si
SLU 84	1.99	1966.39	-45089	-32166	2857	1.55	1.55	-74114	10833	4702	108749	15597	7905	23502	No	8.23	Si
SLU 84	4.09	-1733.59	-45384	-32376	2818	1.55	1.55	-74598	10833	4702	108749	15597	7905	23502	No	8.34	Si
SLU 79	1.99	1934.31	-43765	-31221	2826	1.55	1.55	-71938	10833	4702	108749	15597	7905	23502	No	8.32	Si
SLU 79	4.09	-1789.14	-43851	-31282	2788	1.55	1.55	-72078	10833	4702	108749	15597	7905	23502	No	8.43	Si
SLU 74	1.99	1918.58	-43588	-31095	2806	1.55	1.55	-71647	10833	4702	108749	15597	7905	23502	No	8.38	Si
SLU 74	4.09	-1768.59	-43699	-31174	2769	1.55	1.55	-71830	10833	4702	108749	15597	7905	23502	No	8.49	Si
SLU 80	1.99	1940.69	-43823	-31262	2850	1.55	1.55	-72033	10833	4702	108749	15597	7905	23502	No	8.25	Si
SLU 80	4.09	-1791.53	-43880	-31303	2813	1.55	1.55	-72126	10833	4702	108749	15597	7905	23502	No	8.36	Si
SLU 82	1.99	1946.66	-44560	-31788	2821	1.55	1.55	-73244	10833	4702	108749	15597	7905	23502	No	8.33	Si
SLU 82	4.09	-1704.36	-44863	-32004	2783	1.55	1.55	-73743	10833	4702	108749	15597	7905	23502	No	8.45	Si
SLU 83	1.99	1960.01	-45032	-32124	2832	1.55	1.55	-74019	10833	4702	108749	15597	7905	23502	No	8.3	Si
SLU 83	4.09	-1731.19	-45354	-32355	2794	1.55	1.55	-74550	10833	4702	108749	15597	7905	23502	No	8.41	Si
SLU 77	1.99	1938.31	-44118	-31473	2842	1.55	1.55	-72518	10833	4702	108749	15597	7905	23502	No	8.27	Si
SLU 77	4.09	-1797.82	-44220	-31545	2804	1.55	1.55	-72685	10833	4702	108749	15597	7905	23502	No	8.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	1.99	12321.82	-17730	-12648	11419	1.55	0.2401	-222727	16250	1093	108749	23395	7905	31300		2.74	Si
SLV 4	4.09	-8538.97	-19108	-13631	11070	1.24	0.9844	0	0	0	108749	18716	6324	25040		2.26	Si
SLV 15	1.99	-9702.05	-37977	-27092	-8901	1.55	1.55	-62423	16250	7052	108749	23395	7905	31300		3.52	Si
SLV 15	4.09	5987.94	-37920	-27051	-8727	1.55	1.55	-62330	16250	7052	108749	23395	7905	31300		3.59	Si
SLV 2	1.99	12420.5	-21784	-15540	12924	1.55	0.6145	-35807	16250	2796	108749	23395	7905	31300		2.42	Si
SLV 2	4.09	-8672.34	-21326	-15213	12699	1.55	1.105	-50441	16250	5028	108749	23395	7905	31300		2.46	Si
SLV 14	1.99	-9470.79	-42674	-30443	-7034	1.55	1.55	-70145	16250	7052	108749	23395	7905	31300		4.45	Si
SLV 14	4.09	5776.36	-40342	-28779	-6734	1.55	1.55	-66311	16250	7052	108749	23395	7905	31300		4.65	Si
SLV 1	1.99	12287.91	-21140	-15081	12562	1.55	0.5812	-34749	16250	2645	108749	23395	7905	31300		2.49	Si
SLV 1	4.09	-8594.13	-21122	-15068	12334	1.55	1.1043	-49974	16250	5025	108749	23395	7905	31300		2.54	Si
SLV 13	1.99	-9603.38	-42031	-29984	-7396	1.55	1.55	-69087	16250	7052	108749	23395	7905	31300		4.23	Si
SLV 13	4.09	5854.57	-40138	-28633	-7099	1.55	1.55	-65976	16250	7052	108749	23395	7905	31300		4.41	Si
SLV 16	1.99	-9569.47	-38620	-27551	-8539	1.55	1.55	-63481	16250	7052	108749	23395	7905	31300		3.67	Si
SLV 16	4.09	5909.73	-38124	-27197	-8363	1.55	1.55	-62666	16250	7052	108749	23395	7905	31300		3.74	Si
SLV 5	1.99	4764.65	-33296	-23752	7397	1.55	1.55	-54729	16250	7052	108749	23395	7905	31300		4.23	Si
SLV 5	4.09	-3706.59	-30401	-21687	7498	1.55	1.55	-49971	16250	7052	108749	23395	7905	31300		4.17	Si
SLV 3	1.99	12189.24	-17087	-12189	11056	1.55	0.1849	-242306	16250	841	108749	23395	7905	31300		2.83	Si
SLV 3	4.09	-8460.76	-18904	-13486	10706	1.24	0.9823	0	0	0	108749	18716	6324	25040		2.34	Si
SLV 6	1.99	4850.09	-33711	-24048	7630	1.55	1.55	-55411	16250	7052	108749	23395	7905	31300		4.1	Si
SLV 6	4.09	-3756.98	-30532	-21781	7732	1.55	1.55	-50187	16250	7052	108749	23395	7905	31300		4.05	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-19994	0.32	131.26	2095.6	3168.3	2631.95	20.05	Si
SLV 4	-20198	0.32	131.26	2109.73	3196.41	2653.07	20.21	Si
SLV 1	-21687	0.32	131.26	2208.38	3401.52	2804.95	21.37	Si
SLV 2	-21891	0.32	131.26	2221.29	3429.62	2825.46	21.53	Si
SLV 7	-24361	0.32	131.26	2366.06	3756.15	3061.11	23.32	Si
SLV 8	-24493	0.32	131.26	2373.16	3773.23	3073.2	23.41	Si
SLV 11	-29766	0.32	131.26	2607.82	4404.72	3506.27	26.71	Si
SLV 12	-29897	0.32	131.26	2612.42	4419.27	3515.85	26.78	Si
SLV 5	-30003	0.32	131.26	2616.06	4430.92	3523.49	26.84	Si
SLV 6	-30134	0.32	131.26	2620.55	4445.47	3533.01	26.92	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-22655	-39978	62	0.403	2518.6	0.974	6.00798	10.55427	No
SLV 9	-22603	-39563	60	0.403	2513.3	0.974	6.02066	10.55427	No
SLV 12	-21593	-26465	-22	0.421	2410.4	0.973	6.29089	10.55427	No
SLV 11	-21541	-26050	-23	0.422	2405.2	0.973	6.3035	10.55427	No
SLV 6	-19771	-33711	41	0.453	2224.9	0.971	6.78269	10.55427	No
SLV 5	-19719	-33296	40	0.454	2219.6	0.971	6.79911	10.55427	No
SLV 8	-18709	-20198	-43	0.475	2116.8	0.969	7.11885	10.55427	No
SLV 7	-18657	-19783	-44	0.476	2111.5	0.969	7.13553	10.55427	No
SLV 14	-25662	-42674	56	0.363	2824.9	0.977	5.39432	4.78007	Si
SLV 13	-25581	-42031	55	0.364	2816.7	0.977	5.40991	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.096	SLU 84	Si
V_SLU	8.2	SLU 78	Si
PF_SLV	0.94	SLV 3	No
V_SLV	2.262	SLV 4	Si
PFFP_SLV	20.051	SLV 3	Si
R_SLV	0.569	SLV 10	No

Maschio 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L4	L5	3.98	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	1.99	4170.41	-46193	-0.0000685	0.0004492	0.0035	3.98	60739.82	76194.19	76194.19	18.27	No	Si
SLU 44	4.09	-3380.79	-39678	-0.0000578	0.0004492	0.0035	3.98	55950.81	74641.51	74641.51	22.08	No	Si
SLU 43	1.99	4185.99	-46143	-0.0000685	0.0004492	0.0035	3.98	60707.84	76121.9	76121.9	18.18	No	Si
SLU 43	4.09	-3381.8	-39627	-0.0000577	0.0004492	0.0035	3.98	55909.08	74573.51	74573.51	22.05	No	Si
SLU 50	1.99	4265.41	-47562	-0.0000707	0.0004492	0.0035	3.98	61588.57	77794.55	77794.55	18.24	No	Si
SLU 50	4.09	-3508.38	-40996	-0.0000599	0.0004492	0.0035	3.98	57019.64	76426.09	76426.09	21.78	No	Si
SLU 47	1.99	4210.12	-46903	-0.0000696	0.0004492	0.0035	3.98	61186.5	77055.04	77055.04	18.3	No	Si
SLU 47	4.09	-3444.08	-40362	-0.0000589	0.0004492	0.0035	3.98	56511.93	75567.8	75567.8	21.94	No	Si
SLU 49	1.99	4270.3	-48048	-0.0000714	0.0004492	0.0035	3.98	61876.28	78338.66	78338.66	18.34	No	Si
SLU 49	4.09	-3518.06	-41497	-0.0000606	0.0004492	0.0035	3.98	57413.1	77105.31	77105.31	21.92	No	Si
SLU 46	1.99	4230.59	-47338	-0.0000703	0.0004492	0.0035	3.98	61453.34	77543.2	77543.2	18.33	No	Si
SLU 46	4.09	-3454.77	-40813	-0.0000595	0.0004492	0.0035	3.98	56874.69	76179.02	76179.02	22.05	No	Si
SLU 51	1.99	4256.06	-47592	-0.0000707	0.0004492	0.0035	3.98	61606.52	77828.12	77828.12	18.29	No	Si
SLU 51	4.09	-3507.78	-41026	-0.0000599	0.0004492	0.0035	3.98	57043.48	76466.89	76466.89	21.8	No	Si
SLU 64	1.99	4363.79	-51461	-0.0000764	0.0004492	0.0035	3.98	63704.71	82164.33	82164.33	18.83	No	Si
SLU 64	4.09	-3343.25	-45450	-0.0000658	0.0004492	0.0035	3.98	60256.22	82210.18	82210.18	24.59	No	Si
SLU 45	1.99	4239.94	-47308	-0.0000702	0.0004492	0.0035	3.98	61435.17	77509.62	77509.62	18.28	No	Si
SLU 45	4.09	-3455.38	-40783	-0.0000595	0.0004492	0.0035	3.98	56850.66	76138.22	76138.22	22.03	No	Si
SLU 48	1.99	4279.65	-48018	-0.0000713	0.0004492	0.0035	3.98	61858.72	78305.09	78305.09	18.3	No	Si
SLU 48	4.09	-3518.67	-41467	-0.0000606	0.0004492	0.0035	3.98	57389.67	77064.51	77064.51	21.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	1.99	-4884.22	-24812	-0.0000402	0.0006738	0.0035	3.98		54099.42	54099.42	11.08		Si
SLV 6	4.09	-8616.29	-17759	-0.0000383	0.0006738	0.0035	3.98		42038.82	42038.82	4.88		Si
SLV 3	1.99	15736.43	-26614	-0.0000636	0.0006738	0.0035	3.98		49935.29	49935.29	3.17		Si
SLV 3	4.09	-10680.76	-17633	-0.0000421	0.0006738	0.0035	3.98		41816.8	41816.8	3.92		Si
SLV 7	1.99	17077.91	-45108	-0.0000914	0.0006738	0.0035	3.98		77301.96	77301.96	4.53		Si
SLV 7	4.09	-1875.23	-40214	-0.0000544	0.0006738	0.0035	3.98		78477.96	78477.96	41.85		Si
SLV 9	1.99	-10518.43	-34643	-0.0000641	0.0006738	0.0035	3.98		70024.04	70024.04	6.66		Si
SLV 9	4.09	-3328.48	-30616	-0.0000447	0.0006738	0.0035	3.98		63600.19	63600.19	19.11		Si
SLV 4	1.99	15933.79	-26545	-0.0000639	0.0006738	0.0035	3.98		49821.96	49821.96	3.13		Si
SLV 4	4.09	-10440.92	-17392	-0.0000413	0.0006738	0.0035	3.98		41391.93	41391.93	3.96		Si
SLV 5	1.99	-5011.41	-24856	-0.0000405	0.0006738	0.0035	3.98		54173.24	54173.24	10.81		Si
SLV 5	4.09	-8770.85	-17914	-0.0000388	0.0006738	0.0035	3.98		42312.62	42312.62	4.82		Si
SLV 1	1.99	9109.63	-20538	-0.0000428	0.0006738	0.0035	3.98		39620.77	39620.77	4.35		Si
SLV 1	4.09	-12749.44	-10943	-0.0000439	0.0006738	0.0035	3.184		29908.71	29908.71	2.35		Si
SLV 10	1.99	-10391.25	-34599	-0.0000638	0.0006738	0.0035	3.98		69953.91	69953.91	6.73		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	4.09	-3173.93	-30461	-0.0000442	0.0006738	0.0035	3.98		63352.47	63352.47	19.96		Si
SLV 2	1.99	9306.99	-20470	-0.0000431	0.0006738	0.0035	3.98		39501.77	39501.77	4.24		Si
SLV 2	4.09	-12509.61	-10702	-0.0000431	0.0006738	0.0035	3.184		29470.55	29470.55	2.36		Si
SLV 8	1.99	17205.1	-45064	-0.0000916	0.0006738	0.0035	3.98		77237.62	77237.62	4.49		Si
SLV 8	4.09	-1720.67	-40059	-0.0000539	0.0006738	0.0035	3.98		78243.29	78243.29	45.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	1.99	4256.06	-47592	-33951	5151	3.98	3.98	-30466	10833	12073	108749	40049	20298	60347	No	11.72	Si
SLU 51	4.09	-3507.78	-41026	-29267	4709	3.98	3.98	-26262	10833	12073	108749	40049	20298	60347	No	12.82	Si
SLU 48	1.99	4279.65	-48018	-34255	5155	3.98	3.98	-30738	10833	12073	108749	40049	20298	60347	No	11.71	Si
SLU 48	4.09	-3518.67	-41467	-29582	4709	3.98	3.98	-26545	10833	12073	108749	40049	20298	60347	No	12.82	Si
SLU 49	1.99	4270.3	-48048	-34276	5151	3.98	3.98	-30757	10833	12073	108749	40049	20298	60347	No	11.72	Si
SLU 49	4.09	-3518.06	-41497	-29603	4704	3.98	3.98	-26564	10833	12073	108749	40049	20298	60347	No	12.83	Si
SLU 43	1.99	4185.99	-46143	-32917	4999	3.98	3.98	-29538	10833	12073	108749	40049	20298	60347	No	12.07	Si
SLU 43	4.09	-3381.8	-39627	-28269	4572	3.98	3.98	-25367	10833	12073	108749	40049	20298	60347	No	13.2	Si
SLU 44	1.99	4170.41	-46193	-32953	4992	3.98	3.98	-29570	10833	12073	108749	40049	20298	60347	No	12.09	Si
SLU 44	4.09	-3380.79	-39678	-28305	4563	3.98	3.98	-25399	10833	12073	108749	40049	20298	60347	No	13.23	Si
SLU 47	1.99	4210.12	-46903	-33459	5070	3.98	3.98	-30024	10833	12073	108749	40049	20298	60347	No	11.9	Si
SLU 47	4.09	-3444.08	-40362	-28793	4634	3.98	3.98	-25837	10833	12073	108749	40049	20298	60347	No	13.02	Si
SLU 45	1.99	4239.94	-47308	-33748	5077	3.98	3.98	-30284	10833	12073	108749	40049	20298	60347	No	11.89	Si
SLU 45	4.09	-3455.38	-40783	-29094	4638	3.98	3.98	-26107	10833	12073	108749	40049	20298	60347	No	13.01	Si
SLU 50	1.99	4265.41	-47562	-33930	5155	3.98	3.98	-30447	10833	12073	108749	40049	20298	60347	No	11.71	Si
SLU 50	4.09	-3508.38	-40996	-29245	4714	3.98	3.98	-26243	10833	12073	108749	40049	20298	60347	No	12.8	Si
SLU 46	1.99	4230.59	-47338	-33770	5073	3.98	3.98	-30303	10833	12073	108749	40049	20298	60347	No	11.9	Si
SLU 46	4.09	-3454.77	-40813	-29115	4633	3.98	3.98	-26126	10833	12073	108749	40049	20298	60347	No	13.03	Si
SLU 71	1.99	4443.21	-52880	-37723	4660	3.98	3.98	-33851	10833	12073	108749	40049	20298	60347	No	12.95	Si
SLU 71	4.09	-3469.83	-46818	-33399	4162	3.98	3.98	-29970	10833	12073	108749	40049	20298	60347	No	14.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.99	17205.1	-45064	-32147	11449	3.98	3.98	-28847	16250	18109	108749	60073	20298	80371		7.02	Si
SLV 8	4.09	-1720.67	-40059	-28577	12116	3.98	3.98	-25643	16250	18109	108749	60073	20298	80371		6.63	Si
SLV 7	1.99	17077.91	-45108	-32179	11358	3.98	3.98	-28875	16250	18109	108749	60073	20298	80371		7.08	Si
SLV 7	4.09	-1875.23	-40214	-28688	12023	3.98	3.98	-25743	16250	18109	108749	60073	20298	80371		6.68	Si
SLV 3	1.99	15736.43	-26614	-18985	18233	3.98	3.98	-17036	15907	17727	108749	60073	20298	80371		4.41	Si
SLV 3	4.09	-10680.76	-17633	-12579	17104	3.98	3.98	-11287	14757	16446	108749	60073	20298	80371		4.7	Si
SLD 4	1.99	8728.99	-34165	-24372	9782	3.98	3.98	-21870	16250	18109	108749	60073	20298	80371		8.22	Si
SLD 4	4.09	-5908.6	-27666	-19736	9085	3.98	3.98	-17710	16042	17877	108749	60073	20298	80371		8.85	Si
SLV 14	1.99	-9049.76	-53093	-37875	-11508	3.98	3.98	-33987	16250	18109	108749	60073	20298	80371		6.98	Si
SLV 14	4.09	5631.6	-53042	-37839	-11129	3.98	3.98	-33955	16250	18109	108749	60073	20298	80371		7.22	Si
SLV 4	1.99	15933.79	-26545	-18937	18375	3.98	3.98	-16993	15899	17717	108749	60073	20298	80371		4.37	Si
SLV 4	4.09	-10440.92	-17392	-12407	17248	3.98	3.98	-11133	14727	16411	108749	60073	20298	80371		4.66	Si
SLD 3	1.99	8644.24	-34194	-24393	9721	3.98	3.98	-21889	16250	18109	108749	60073	20298	80371		8.27	Si
SLD 3	4.09	-6011.58	-27769	-19810	9023	3.98	3.98	-17776	16055	17892	108749	60073	20298	80371		8.91	Si
SLV 2	1.99	9306.99	-20470	-14603	16029	3.98	3.98	-13104	15121	16851	108749	60073	20298	80371		5.01	Si
SLV 2	4.09	-12509.61	-10702	-7634	14066	3.184	2.4632	0	0	0	108749	48059	16238	64297		4.57	Si
SLV 1	1.99	9109.63	-20538	-14651	15887	3.98	3.98	-13147	15129	16860	108749	60073	20298	80371		5.06	Si
SLV 1	4.09	-12749.44	-10943	-7806	13922	3.184	2.4747	0	0	0	108749	48059	16238	64297		4.62	Si
SLV 13	1.99	-9247.12	-53161	-37924	-11650	3.98	3.98	-34031	16250	18109	108749	60073	20298	80371		6.9	Si
SLV 13	4.09	5391.77	-53283	-38011	-11272	3.98	3.98	-34109	16250	18109	108749	60073	20298	80371		7.13	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-11284	0.32	337.05	1492.5	2247.97	1870.24	5.55	Si
SLV 1	-11483	0.32	337.05	1517.22	2278.41	1897.82	5.63	Si
SLV 6	-17985	0.32	337.05	2296.24	3268.08	2782.16	8.25	Si
SLV 5	-18113	0.32	337.05	2310.99	3287.49	2799.24	8.31	Si
SLV 4	-18253	0.32	337.05	2327.03	3308.62	2817.82	8.36	Si
SLV 3	-18452	0.32	337.05	2349.85	3338.71	2844.28	8.44	Si
SLV 10	-30668	0.32	337.05	3648.82	5155.65	4402.24	13.06	Si
SLV 9	-30796	0.32	337.05	3661.35	5174.33	4417.84	13.11	Si
SLV 8	-41214	0.32	337.05	4605.7	6683.55	5644.63	16.75	Si
SLV 7	-41342	0.32	337.05	4616.38	6701.96	5659.17	16.79	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-47144	-54895	933	0.466	5344.1	0.969	6.99367	10.55427	No
SLV 12	-46923	-54851	934	0.468	5321.7	0.969	7.02225	10.55427	No
SLV 7	-39065	-45108	1177	0.541	4521.9	0.964	8.16443	10.55427	No
SLV 8	-38845	-45064	1178	0.544	4499.5	0.964	8.2049	10.55427	No
SLV 9	-33673	-34643	-1323	0.61	3973.4	0.959	9.24497	10.55427	No
SLV 10	-33453	-34599	-1322	0.614	3951	0.959	9.29893	10.55427	No
SLV 5	-25595	-24856	-1080	0.777	3152.5	0.95	11.88626	10.55427	Si
SLV 6	-25375	-24812	-1079	0.783	3130.1	0.95	11.97684	10.55427	Si
SLV 15	-51915	-59237	-141	0.444	5829.9	0.971	6.64135	4.78007	Si
SLV 16	-51572	-59169	-140	0.446	5795.1	0.971	6.68038	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.185	SLU 43	Si
V_SLU	11.706	SLU 50	Si
PF_SLV	2.346	SLV 1	Si
V_SLV	4.374	SLV 4	Si
PFFP_SLV	5.549	SLV 2	Si
R_SLV	0.663	SLV 11	No

Maschio 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.314	L4	L5	1.51	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	1.99	320.04	-19862	-0.0000832	0.0003743	0.0035	1.51	8076.05	10195.37	10195.37	31.86	No	Si
SLU 48	5.46	-186.07	-14763	-0.0000588	0.0003743	0.0035	1.51	7323.05	8952.58	8952.58	48.11	No	Si
SLU 72	1.99	306.44	-22013	-0.000093	0.0003743	0.0035	1.51	8120.18	10793.75	10793.75	35.22	No	Si
SLU 72	5.46	-158.43	-16430	-0.0000654	0.0003743	0.0035	1.51	7669.57	9518.95	9518.95	60.08	No	Si
SLU 44	1.99	318.91	-18910	-0.0000789	0.0003743	0.0035	1.51	8004.69	9880.1	9880.1	30.98	No	Si
SLU 44	5.46	-155.7	-13927	-0.0000548	0.0003743	0.0035	1.51	7112.51	8685.78	8685.78	55.78	No	Si
SLU 46	1.99	317.39	-19473	-0.0000814	0.0003743	0.0035	1.51	8050.71	10065.53	10065.53	31.71	No	Si
SLU 46	5.46	-166.42	-14414	-0.000057	0.0003743	0.0035	1.51	7238.22	8839.88	8839.88	53.12	No	Si
SLU 43	1.99	317.55	-18928	-0.000079	0.0003743	0.0035	1.51	8006.4	9886.22	9886.22	31.13	No	Si
SLU 43	5.46	-184.21	-13937	-0.0000553	0.0003743	0.0035	1.51	7115.38	8689.14	8689.14	47.17	No	Si
SLU 50	1.99	324.46	-19685	-0.0000825	0.0003743	0.0035	1.51	8065.18	10136.14	10136.14	31.24	No	Si
SLU 50	5.46	-189.29	-14622	-0.0000583	0.0003743	0.0035	1.51	7289.32	8906.83	8906.83	47.05	No	Si
SLU 45	1.99	316.58	-19484	-0.0000815	0.0003743	0.0035	1.51	8051.52	10069.26	10069.26	31.81	No	Si
SLU 45	5.46	-183.53	-14421	-0.0000573	0.0003743	0.0035	1.51	7239.83	8841.95	8841.95	48.18	No	Si
SLU 47	1.99	322.36	-19288	-0.0000807	0.0003743	0.0035	1.51	8036.84	10004.41	10004.41	31.04	No	Si
SLU 47	5.46	-158.24	-14269	-0.0000563	0.0003743	0.0035	1.51	7201.66	8793.59	8793.59	55.57	No	Si
SLU 51	1.99	325.27	-19674	-0.0000825	0.0003743	0.0035	1.51	8064.46	10132.4	10132.4	31.15	No	Si
SLU 51	5.46	-172.19	-14616	-0.000058	0.0003743	0.0035	1.51	7287.75	8904.74	8904.74	51.72	No	Si
SLU 49	1.99	320.85	-19851	-0.0000832	0.0003743	0.0035	1.51	8075.4	10191.61	10191.61	31.76	No	Si
SLU 49	5.46	-168.97	-14756	-0.0000585	0.0003743	0.0035	1.51	7321.52	8950.48	8950.48	52.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.99	661.78	-17727	-0.0000759	0.0005615	0.0035	1.51		10630.3	10630.3	16.06		Si
SLV 12	5.46	-1650.9	-16160	-0.0000848	0.0005615	0.0035	1.51		10575.23	10575.23	6.41		Si
SLV 1	1.99	803.58	-14842	-0.0000665	0.0005615	0.0035	1.51		9310.48	9310.48	11.59		Si
SLV 1	5.46	1404.41	-10535	-0.0000586	0.0005615	0.0035	1.51		6938.53	6938.53	4.94		Si
SLV 11	1.99	598.2	-17803	-0.0000753	0.0005615	0.0035	1.51		10665.26	10665.26	17.83		Si
SLV 11	5.46	-1728.54	-16177	-0.0000861	0.0005615	0.0035	1.51		10583.22	10583.22	6.12		Si
SLV 4	1.99	1309.32	-15180	-0.0000756	0.0005615	0.0035	1.51		9463.16	9463.16	7.23		Si
SLV 4	5.46	808.73	-12746	-0.0000584	0.0005615	0.0035	1.51		8251.59	8251.59	10.2		Si
SLV 2	1.99	902.24	-14725	-0.0000676	0.0005615	0.0035	1.51		9257.9	9257.9	10.26		Si
SLV 2	5.46	1524.88	-10509	-0.0000603	0.0005615	0.0035	1.51		6923.75	6923.75	4.54		Si
SLV 6	1.99	-185.2	-15290	-0.000059	0.0005615	0.0035	1.51		10143.36	10143.36	54.77		Si
SLV 6	5.46	1476	-8336	-0.0000512	0.0005615	0.0035	1.51		5669.56	5669.56	3.84		Si
SLV 5	1.99	-248.77	-15365	-0.0000602	0.0005615	0.0035	1.51		10180.64	10180.64	40.92		Si
SLV 5	5.46	1398.36	-8352	-0.0000501	0.0005615	0.0035	1.51		5678.82	5678.82	4.06		Si
SLV 15	1.99	-489.23	-18367	-0.0000759	0.0005615	0.0035	1.51		11595.72	11595.72	23.7		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	5.46	-1777.42	-14004	-0.000078	0.0005615	0.0035	1.51		9494.79	9494.79	5.34		Si
SLV 13	1.99	-896.32	-17912	-0.0000803	0.0005615	0.0035	1.51		11394.71	11394.71	12.71		Si
SLV 13	5.46	-1061.27	-11767	-0.0000583	0.0005615	0.0035	1.51		8294.32	8294.32	7.82		Si
SLV 16	1.99	-390.58	-18250	-0.0000739	0.0005615	0.0035	1.51		11544.83	11544.83	29.56		Si
SLV 16	5.46	-1656.95	-13978	-0.000076	0.0005615	0.0035	1.51		9481.42	9481.42	5.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.99	205.22	-24653	-20529	-2418	1.51	1.51	-48556	10833	4580	38062	12660	3850	16511	No	6.83	Si
SLU 77	5.46	-144.77	-18462	-15373	4914	1.51	1.51	-36362	10833	4580	38062	12660	3850	16511	No	3.36	Si
SLU 78	1.99	206.03	-24642	-20520	-2437	1.51	1.51	-48534	10833	4580	38062	12660	3850	16511	No	6.77	Si
SLU 78	5.46	-127.66	-18455	-15368	4842	1.51	1.51	-36349	10833	4580	38062	12660	3850	16511	No	3.41	Si
SLU 83	1.99	165.05	-25149	-20942	-2636	1.51	1.51	-49532	10833	4580	38062	12660	3850	16511	No	6.26	Si
SLU 83	5.46	-133.64	-18786	-15644	4927	1.51	1.51	-37001	10833	4580	38062	12660	3850	16511	No	3.35	Si
SLU 81	1.99	161.6	-24770	-20627	-2616	1.51	1.51	-48787	10833	4580	38062	12660	3850	16511	No	6.31	Si
SLU 81	5.46	-131.1	-18444	-15359	4844	1.51	1.51	-36327	10833	4580	38062	12660	3850	16511	No	3.41	Si
SLU 75	1.99	202.58	-24264	-20205	-2417	1.51	1.51	-47789	10833	4580	38062	12660	3850	16511	No	6.83	Si
SLU 75	5.46	-125.12	-18113	-15083	4759	1.51	1.51	-35675	10833	4580	38062	12660	3850	16511	No	3.47	Si
SLU 84	1.99	165.86	-25137	-20932	-2655	1.51	1.51	-49510	10833	4580	38062	12660	3850	16511	No	6.22	Si
SLU 84	5.46	-116.54	-18780	-15638	4855	1.51	1.51	-36988	10833	4580	38062	12660	3850	16511	No	3.4	Si
SLU 80	1.99	210.45	-24465	-20372	-2396	1.51	1.51	-48185	10833	4580	38062	12660	3850	16511	No	6.89	Si
SLU 80	5.46	-130.88	-18314	-15251	4828	1.51	1.51	-36072	10833	4580	38062	12660	3850	16511	No	3.42	Si
SLU 74	1.99	201.77	-24275	-20214	-2398	1.51	1.51	-47812	10833	4580	38062	12660	3850	16511	No	6.88	Si
SLU 74	5.46	-142.22	-18119	-15088	4831	1.51	1.51	-35688	10833	4580	38062	12660	3850	16511	No	3.42	Si
SLU 79	1.99	209.64	-24476	-20382	-2377	1.51	1.51	-48207	10833	4580	38062	12660	3850	16511	No	6.95	Si
SLU 79	5.46	-147.99	-18321	-15256	4900	1.51	1.51	-36085	10833	4580	38062	12660	3850	16511	No	3.37	Si
SLU 82	1.99	162.41	-24759	-20617	-2635	1.51	1.51	-48765	10833	4580	38062	12660	3850	16511	No	6.27	Si
SLU 82	5.46	-113.99	-18438	-15353	4772	1.51	1.51	-36314	10833	4580	38062	12660	3850	16511	No	3.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.99	-896.32	-17912	-14916	2717	1.51	1.51	-35279	16250	6870	38062	18990	3850	22841		8.41	Si
SLV 13	5.46	-1061.27	-11767	-9799	7945	1.51	1.51	-23177	15052	6364	38062	18990	3850	22841		2.87	Si
SLV 11	1.99	598.2	-17803	-14825	3402	1.51	1.51	-35064	16250	6870	38062	18990	3850	22841		6.71	Si
SLV 11	5.46	-1728.54	-16177	-13471	7954	1.51	1.51	-31861	16250	6870	38062	18990	3850	22841		2.87	Si
SLD 15	1.99	-89.15	-17332	-14432	1194	1.51	1.51	-34136	16250	6870	38062	18990	3850	22841		19.13	Si
SLD 15	5.46	-836.34	-13020	-10842	6106	1.51	1.51	-25644	15546	6572	38062	18990	3850	22841		3.74	Si
SLV 15	1.99	-489.23	-18367	-15295	4632	1.51	1.51	-36175	16250	6870	38062	18990	3850	22841		4.93	Si
SLV 15	5.46	-1777.42	-14004	-11661	9635	1.51	1.51	-27581	15933	6736	38062	18990	3850	22841		2.37	Si
SLV 2	1.99	902.24	-14725	-12262	-7420	1.51	1.51	-29003	16217	6856	38062	18990	3850	22841		3.08	Si
SLV 2	5.46	1524.88	-10509	-8751	-2733	1.51	1.51	-20699	14556	6154	38062	18990	3850	22841		8.36	Si
SLV 6	1.99	-185.2	-15290	-12732	-6190	1.51	1.51	-30115	16250	6870	38062	18990	3850	22841		3.69	Si
SLV 6	5.46	1476	-8336	-6942	-1052	1.51	1.51	-16419	13700	5792	38062	18990	3850	22841		21.71	Si
SLV 12	1.99	661.78	-17727	-14762	3088	1.51	1.51	-34916	16250	6870	38062	18990	3850	22841		7.4	Si
SLV 12	5.46	-1650.9	-16160	-13457	7641	1.51	1.51	-31829	16250	6870	38062	18990	3850	22841		2.99	Si
SLV 14	1.99	-797.66	-17795	-14818	2231	1.51	1.51	-35049	16250	6870	38062	18990	3850	22841		10.24	Si
SLV 14	5.46	-940.79	-11742	-9778	7458	1.51	1.51	-23127	15042	6360	38062	18990	3850	22841		3.06	Si
SLV 16	1.99	-390.58	-18250	-15197	4146	1.51	1.51	-35945	16250	6870	38062	18990	3850	22841		5.51	Si
SLV 16	5.46	-1656.95	-13978	-11640	9149	1.51	1.51	-27531	15923	6732	38062	18990	3850	22841		2.5	Si
SLV 1	1.99	803.58	-14842	-12359	-6934	1.51	1.51	-29233	16250	6870	38062	18990	3850	22841		3.29	Si
SLV 1	5.46	1404.41	-10535	-8772	-2246	1.51	1.51	-20749	14566	6158	38062	18990	3850	22841		10.17	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.32	25688	-10860	127.87	1264.71	9.89	Si
SLV 10	179667	0.32	25760	-10891	127.87	1267.54	9.91	Si
SLV 5	179667	0.32	26002	-10993	127.87	1277.03	9.99	Si
SLV 6	179667	0.32	26074	-11024	127.87	1279.85	10.01	Si
SLV 13	179667	0.32	28556	-12073	127.87	1374.17	10.75	Si
SLV 14	179667	0.32	28668	-12120	127.87	1378.32	10.78	Si
SLV 1	179667	0.32	29604	-12516	127.87	1412.6	11.05	Si
SLV 2	179667	0.32	29716	-12564	127.87	1416.66	11.08	Si
SLV 15	179667	0.32	31346	-13253	127.87	1474.53	11.53	Si
SLV 16	179667	0.32	31458	-13300	127.87	1478.44	11.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-16177	-17803	186	0.517	1853.5	0.966	7.7832	10.55427	No
SLV 12	-16160	-17727	187	0.518	1851.9	0.966	7.78936	10.55427	No
SLV 7	-15807	-16882	87	0.534	1815.9	0.966	8.0306	10.55427	No
SLV 8	-15791	-16807	88	0.534	1814.2	0.966	8.03713	10.55427	No
SLV 9	-8722	-16286	-99	0.88	1095.7	0.946	13.5254	10.55427	Si
SLV 10	-8706	-16211	-98	0.882	1094.1	0.946	13.54869	10.55427	Si
SLV 5	-8352	-15365	-198	0.902	1058.2	0.944	13.88544	10.55427	Si
SLV 6	-8336	-15290	-197	0.904	1056.6	0.944	13.91028	10.55427	Si
SLV 15	-14004	-18367	202	0.584	1632.4	0.962	8.82344	4.78007	Si
SLV 16	-13978	-18250	203	0.585	1629.8	0.962	8.83617	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.981	SLU 44	Si
V_SLU	3.351	SLU 83	Si
PF_SLV	3.841	SLV 6	Si
V_SLV	2.371	SLV 15	Si
PFFP_SLV	9.89	SLV 9	Si
R_SLV	0.737	SLV 11	No

Maschio 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.714	F7	L5	2.6	0.28	0.953	0.207	0.207			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	5.25	1247.86	-35911	-0.0000896	0.0003743	0.0035	2.6	24065.35	31102.02	31102.02	24.92	No	Si
SLU 82	5.46	1608.85	-35653	-0.000091	0.0003743	0.0035	2.6	24053.81	30958.22	30958.22	19.24	No	Si
SLU 63	5.25	1178.28	-33177	-0.0000819	0.0003743	0.0035	2.6	23824.13	29603.92	29603.92	25.12	No	Si
SLU 63	5.46	1476.36	-32917	-0.0000829	0.0003743	0.0035	2.6	23787.55	29464.72	29464.72	19.96	No	Si
SLU 61	5.25	1178.65	-32575	-0.0000803	0.0003743	0.0035	2.6	23735.81	29282.46	29282.46	24.84	No	Si
SLU 61	5.46	1465.93	-32310	-0.0000812	0.0003743	0.0035	2.6	23692.94	29142.02	29142.02	19.88	No	Si
SLU 75	5.25	1197.02	-35232	-0.0000874	0.0003743	0.0035	2.6	24029.9	30724	30724	25.67	No	Si
SLU 75	5.46	1546.14	-34988	-0.0000888	0.0003743	0.0035	2.6	24013.22	30589.22	30589.22	19.78	No	Si
SLU 83	5.25	1241.7	-36481	-0.0000911	0.0003743	0.0035	2.6	24082.62	31422.46	31422.46	25.31	No	Si
SLU 83	5.46	1595	-36231	-0.0000924	0.0003743	0.0035	2.6	24076.45	31281.67	31281.67	19.61	No	Si
SLU 84	5.25	1247.49	-36513	-0.0000912	0.0003743	0.0035	2.6	24083.24	31440.18	31440.18	25.2	No	Si
SLU 84	5.46	1619.28	-36260	-0.0000927	0.0003743	0.0035	2.6	24077.27	31297.78	31297.78	19.33	No	Si
SLU 81	5.25	1242.07	-35880	-0.0000894	0.0003743	0.0035	2.6	24064.07	31084.46	31084.46	25.03	No	Si
SLU 81	5.46	1584.57	-35625	-0.0000907	0.0003743	0.0035	2.6	24052.38	30942.26	30942.26	19.53	No	Si
SLU 73	5.25	1189.48	-34368	-0.0000851	0.0003743	0.0035	2.6	23961.41	30248.69	30248.69	25.43	No	Si
SLU 73	5.46	1526	-34117	-0.0000863	0.0003743	0.0035	2.6	23936.59	30111.71	30111.71	19.73	No	Si
SLU 76	5.25	1189.11	-34970	-0.0000867	0.0003743	0.0035	2.6	24011.88	30579.12	30579.12	25.72	No	Si
SLU 76	5.46	1536.43	-34723	-0.000088	0.0003743	0.0035	2.6	23992.76	30443.51	30443.51	19.81	No	Si
SLU 78	5.25	1196.65	-35834	-0.000089	0.0003743	0.0035	2.6	24062.13	31058.76	31058.76	25.95	No	Si
SLU 78	5.46	1556.57	-35595	-0.0000905	0.0003743	0.0035	2.6	24050.84	30925.41	30925.41	19.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	5.25	1585.35	-24267	-0.0000595	0.0005615	0.0035	2.6		26679.64	26679.64	16.83		Si
SLD 10	5.46	2311.1	-24050	-0.0000627	0.0005615	0.0035	2.6		26458.34	26458.34	11.45		Si
SLV 5	5.25	1959.15	-23517	-0.0000597	0.0005615	0.0035	2.6		25917.06	25917.06	13.23		Si
SLV 5	5.46	3166.57	-23137	-0.000065	0.0005615	0.0035	2.6		25531.67	25531.67	8.06		Si
SLV 6	5.25	1935.75	-23594	-0.0000598	0.0005615	0.0035	2.6		25994.7	25994.7	13.43		Si
SLV 6	5.46	3155.99	-23208	-0.0000651	0.0005615	0.0035	2.6		25604.27	25604.27	8.11		Si
SLV 14	5.25	2266.2	-25982	-0.0000669	0.0005615	0.0035	2.6		28093.59	28093.59	12.4		Si
SLV 14	5.46	3137.02	-25965	-0.0000713	0.0005615	0.0035	2.6		28081.44	28081.44	8.95		Si
SLV 10	5.25	2554.81	-24764	-0.0000656	0.0005615	0.0035	2.6		27144.93	27144.93	10.63		Si
SLV 10	5.46	3980.11	-24505	-0.0000723	0.0005615	0.0035	2.6		26911.1	26911.1	6.76		Si
SLV 13	5.25	2302.51	-25863	-0.0000668	0.0005615	0.0035	2.6		28004.74	28004.74	12.16		Si
SLV 13	5.46	3153.44	-25854	-0.0000712	0.0005615	0.0035	2.6		27998.16	27998.16	8.88		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	5.25	1320.6	-23768	-0.0000571	0.0005615	0.0035	2.6		26171.34	26171.34	19.82		Si
SLD 6	5.46	1958.97	-23497	-0.0000597	0.0005615	0.0035	2.6		25896.15	25896.15	13.22		Si
SLD 9	5.25	1595.57	-24234	-0.0000595	0.0005615	0.0035	2.6		26645.56	26645.56	16.7		Si
SLD 9	5.46	2315.72	-24019	-0.0000627	0.0005615	0.0035	2.6		26426.44	26426.44	11.41		Si
SLV 9	5.25	2578.21	-24688	-0.0000655	0.0005615	0.0035	2.6		27076.71	27076.71	10.5		Si
SLV 9	5.46	3990.69	-24434	-0.0000722	0.0005615	0.0035	2.6		26844.77	26844.77	6.73		Si
SLD 5	5.25	1330.82	-23734	-0.000057	0.0005615	0.0035	2.6		26137.38	26137.38	19.64		Si
SLD 5	5.46	1963.59	-23465	-0.0000596	0.0005615	0.0035	2.6		25864.38	25864.38	13.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	5.25	1033.85	-31869	-26538	6516	2.6	2.6	-36453	10833	7887	9516	21800	6630	17402	No	2.67	Si
SLU 71	5.46	1275.29	-31651	-26357	6658	2.6	2.6	-36204	10833	7887	9516	21800	6630	17402	No	2.61	Si
SLU 74	5.25	1191.22	-35200	-29312	6489	2.6	2.6	-40263	10833	7887	9516	21800	6630	17402	No	2.68	Si
SLU 74	5.46	1521.86	-34959	-29111	6640	2.6	2.6	-39988	10833	7887	9516	21800	6630	17402	No	2.62	Si
SLU 84	5.25	1247.49	-36513	-30405	6438	2.6	2.6	-41765	10833	7887	9516	21800	6630	17402	No	2.7	Si
SLU 84	5.46	1619.28	-36260	-30194	6588	2.6	2.6	-41476	10833	7887	9516	21800	6630	17402	No	2.64	Si
SLU 83	5.25	1241.7	-36481	-30379	6544	2.6	2.6	-41729	10833	7887	9516	21800	6630	17402	No	2.66	Si
SLU 83	5.46	1595	-36231	-30170	6696	2.6	2.6	-41443	10833	7887	9516	21800	6630	17402	No	2.6	Si
SLU 81	5.25	1242.07	-35880	-29877	6450	2.6	2.6	-41040	10833	7887	9516	21800	6630	17402	No	2.7	Si
SLU 81	5.46	1584.57	-35625	-29665	6602	2.6	2.6	-40749	10833	7887	9516	21800	6630	17402	No	2.64	Si
SLU 78	5.25	1196.65	-35834	-29839	6477	2.6	2.6	-40988	10833	7887	9516	21800	6630	17402	No	2.69	Si
SLU 78	5.46	1556.57	-35595	-29640	6627	2.6	2.6	-40714	10833	7887	9516	21800	6630	17402	No	2.63	Si
SLU 79	5.25	1179.08	-35519	-29577	6600	2.6	2.6	-40628	10833	7887	9516	21800	6630	17402	No	2.64	Si
SLU 79	5.46	1506.39	-35282	-29380	6750	2.6	2.6	-40357	10833	7887	9516	21800	6630	17402	No	2.58	Si
SLU 69	5.25	1045.62	-32152	-26774	6498	2.6	2.6	-36777	10833	7887	9516	21800	6630	17402	No	2.68	Si
SLU 69	5.46	1301.19	-31935	-26593	6642	2.6	2.6	-36529	10833	7887	9516	21800	6630	17402	No	2.62	Si
SLU 80	5.25	1184.88	-35551	-29603	6494	2.6	2.6	-40664	10833	7887	9516	21800	6630	17402	No	2.68	Si
SLU 80	5.46	1530.67	-35311	-29404	6642	2.6	2.6	-40390	10833	7887	9516	21800	6630	17402	No	2.62	Si
SLU 77	5.25	1190.85	-35802	-29813	6582	2.6	2.6	-40952	10833	7887	9516	21800	6630	17402	No	2.64	Si
SLU 77	5.46	1532.29	-35566	-29616	6734	2.6	2.6	-40682	10833	7887	9516	21800	6630	17402	No	2.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	5.25	58.9	-23530	-19593	7649	2.6	2.6	-26914	15799	11502	9516	32699	6630	21018		2.75	Si
SLD 7	5.46	-311.98	-23383	-19471	7774	2.6	2.6	-26746	15766	11478	9516	32699	6630	20993		2.7	Si
SLV 12	5.25	-314.9	-24280	-20218	11514	2.6	2.6	-27772	15971	11627	9516	32699	6630	21142		1.84	Si
SLV 12	5.46	-1167.45	-24297	-20232	11770	2.6	2.6	-27791	15975	11630	9516	32699	6630	21145		1.8	Si
SLD 11	5.25	323.64	-24029	-20009	7799	2.6	2.6	-27485	15914	11585	9516	32699	6630	21101		2.71	Si
SLD 11	5.46	40.15	-23937	-19932	7972	2.6	2.6	-27380	15893	11570	9516	32699	6630	21085		2.64	Si
SLD 12	5.25	313.42	-24063	-20037	7774	2.6	2.6	-27524	15921	11591	9516	32699	6630	21106		2.71	Si
SLD 12	5.46	35.53	-23968	-19958	7947	2.6	2.6	-27415	15900	11575	9516	32699	6630	21091		2.65	Si
SLV 15	5.25	1441.59	-25717	-21415	7412	2.6	2.6	-29416	16250	11830	9516	32699	6630	21346		2.88	Si
SLV 15	5.46	1609.17	-25791	-21477	7737	2.6	2.6	-29501	16250	11830	9516	32699	6630	21346		2.76	Si
SLV 11	5.25	-291.51	-24203	-20154	11570	2.6	2.6	-27684	15954	11614	9516	32699	6630	21130		1.83	Si
SLV 11	5.46	-1156.87	-24225	-20172	11828	2.6	2.6	-27709	15959	11618	9516	32699	6630	21133		1.79	Si
SLV 8	5.25	-933.97	-23109	-19243	11167	2.6	2.6	-26433	15703	11432	9516	32699	6630	20948		1.88	Si
SLV 8	5.46	-1991.57	-23000	-19152	11310	2.6	2.6	-26308	15678	11414	9516	32699	6630	20929		1.85	Si
SLV 7	5.25	-910.57	-23033	-19180	11223	2.6	2.6	-26346	15686	11419	9516	32699	6630	20935		1.87	Si
SLV 7	5.46	-1980.99	-22928	-19092	11367	2.6	2.6	-26226	15662	11402	9516	32699	6630	20917		1.84	Si
SLD 8	5.25	48.68	-23563	-19621	7625	2.6	2.6	-26952	15807	11508	9516	32699	6630	21023		2.76	Si
SLD 8	5.46	-316.6	-23414	-19497	7749	2.6	2.6	-26782	15773	11483	9516	32699	6630	20998		2.71	Si
SLV 16	5.25	1405.28	-25836	-21514	7325	2.6	2.6	-29552	16250	11830	9516	32699	6630	21346		2.91	Si
SLV 16	5.46	1592.75	-25903	-21569	7647	2.6	2.6	-29628	16250	11830	9516	32699	6630	21346		2.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.357 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.35	29234	-21282	18.34	2409.17	131.37	Si
SLV 3	179667	0.35	29239	-21286	18.34	2409.49	131.39	Si
SLV 2	179667	0.35	29388	-21395	18.34	2418.86	131.9	Si
SLV 4	179667	0.35	29394	-21398	18.34	2419.18	131.92	Si
SLV 5	179667	0.35	31229	-22735	18.34	2532.01	138.07	Si
SLV 7	179667	0.35	31246	-22747	18.34	2533.04	138.13	Si
SLV 6	179667	0.35	31329	-22807	18.34	2538	138.4	Si
SLV 8	179667	0.35	31346	-22820	18.34	2539.02	138.45	Si
SLV 9	179667	0.35	32921	-23966	18.34	2632.01	143.53	Si
SLV 11	179667	0.35	32938	-23979	18.34	2632.99	143.58	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 5.357 Wa = 0.05 Ta = 0.0054

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-25903	-25836	1560	0.642	2736.3	0.989	9.43799	3.21661	Si
SLV 14	-25965	-25982	1502	0.643	2742.7	0.989	9.45282	3.21661	Si
SLV 15	-25791	-25717	1560	0.644	2725	0.989	9.46895	3.21661	Si
SLV 13	-25854	-25863	1502	0.645	2731.4	0.989	9.48377	3.21661	Si
SLV 12	-24297	-24280	617	0.712	2572.6	0.988	10.47117	3.38259	Si
SLV 11	-24225	-24203	617	0.713	2565.3	0.988	10.49541	3.38259	Si
SLV 10	-24505	-24764	422	0.715	2593.9	0.988	10.51481	3.38259	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-24434	-24688	423	0.716	2586.6	0.988	10.53897	3.38259	Si
SLV 6	-23208	-23594	-445	0.745	2461.7	0.987	10.9626	3.38259	Si
SLV 5	-23137	-23517	-445	0.747	2454.4	0.987	10.98971	3.38259	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.242	SLU 82	Si
V_SLU	2.578	SLU 79	Si
PF_SLV	6.727	SLV 9	Si
V_SLV	1.787	SLV 11	Si
PFFP_SLV	131.374	SLV 1	Si
R_SLV	2.934	SLV 16	Si

Maschio 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	L4	Z medio 461 cm	2.96	0.28	2.62	1.77	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.99	3190.15	-49537	-0.0001186	0.0003743	0.0035	2.96	30275.45	43400.16	43400.16	13.6	No	Si
SLU 79	3.76	2247.81	-48064	-0.0001102	0.0003743	0.0035	2.96	30616.8	42958.8	42958.8	19.11	No	Si
SLU 60	1.99	3100.8	-45704	-0.0001082	0.0003743	0.0035	2.96	31005.35	42273.86	42273.86	13.63	No	Si
SLU 60	3.76	2333.38	-44280	-0.0001011	0.0003743	0.0035	2.96	31145.23	41874.14	41874.14	17.95	No	Si
SLU 74	1.99	3171.48	-49185	-0.0001176	0.0003743	0.0035	2.96	30363.84	43293.82	43293.82	13.65	No	Si
SLU 74	3.76	2275.03	-47684	-0.0001094	0.0003743	0.0035	2.96	30692.53	42846.68	42846.68	18.83	No	Si
SLU 83	1.99	3319.43	-51026	-0.0001232	0.0003743	0.0035	2.96	29852.77	43857.64	43857.64	13.21	No	Si
SLU 83	3.76	2534.05	-49512	-0.0001153	0.0003743	0.0035	2.96	30281.73	43392.75	43392.75	17.12	No	Si
SLU 63	1.99	3105.05	-46418	-0.00011	0.0003743	0.0035	2.96	30908.39	42478.2	42478.2	13.68	No	Si
SLU 63	3.76	2337.95	-45026	-0.0001029	0.0003743	0.0035	2.96	31080.86	42082.17	42082.17	18	No	Si
SLU 82	1.99	3280.26	-50370	-0.0001212	0.0003743	0.0035	2.96	30048.39	43654.92	43654.92	13.31	No	Si
SLU 82	3.76	2551.77	-48802	-0.0001136	0.0003743	0.0035	2.96	30455.22	43178.66	43178.66	16.92	No	Si
SLU 81	1.99	3297.72	-50341	-0.0001212	0.0003743	0.0035	2.96	30056.79	43645.9	43645.9	13.24	No	Si
SLU 81	3.76	2540.63	-48784	-0.0001135	0.0003743	0.0035	2.96	30459.32	43173.35	43173.35	16.99	No	Si
SLU 77	1.99	3193.19	-49870	-0.0001195	0.0003743	0.0035	2.96	30187.59	43501.61	43501.61	13.62	No	Si
SLU 77	3.76	2268.45	-48412	-0.0001112	0.0003743	0.0035	2.96	30543.02	43062.09	43062.09	18.98	No	Si
SLU 62	1.99	3122.51	-46389	-0.0001101	0.0003743	0.0035	2.96	30912.72	42469.75	42469.75	13.6	No	Si
SLU 62	3.76	2326.8	-45008	-0.0001028	0.0003743	0.0035	2.96	31082.61	42077.2	42077.2	18.08	No	Si
SLU 84	1.99	3301.97	-51055	-0.0001232	0.0003743	0.0035	2.96	29843.66	43866.76	43866.76	13.29	No	Si
SLU 84	3.76	2545.2	-49530	-0.0001154	0.0003743	0.0035	2.96	30277.18	43398.12	43398.12	17.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.99	4894.22	-33704	-0.0000832	0.0005615	0.0035	2.96		39932.28	39932.28	8.16		Si
SLV 16	3.76	2139.95	-35110	-0.0000751	0.0005615	0.0035	2.96		41177.99	41177.99	19.24		Si
SLV 14	1.99	4281.37	-34007	-0.0000814	0.0005615	0.0035	2.96		40199.17	40199.17	9.39		Si
SLV 14	3.76	3354.33	-35215	-0.0000802	0.0005615	0.0035	2.96		41271.42	41271.42	12.3		Si
SLV 11	1.99	4022.82	-33024	-0.0000783	0.0005615	0.0035	2.96		39332.94	39332.94	9.78		Si
SLV 11	3.76	-245.18	-33006	-0.0000632	0.0005615	0.0035	2.96		41902.37	41902.37	170.9		Si
SLV 9	1.99	1979.99	-34031	-0.0000722	0.0005615	0.0035	2.96		40220.82	40220.82	20.31		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	3.76	3802.76	-33355	-0.0000781	0.0005615	0.0035	2.96		39624.63	39624.63	10.42		Si
SLV 15	1.99	5064.09	-33419	-0.0000833	0.0005615	0.0035	2.96		39680.82	39680.82	7.84		Si
SLV 15	3.76	2118.66	-34995	-0.0000747	0.0005615	0.0035	2.96		41075.77	41075.77	19.39		Si
SLV 12	1.99	3913.35	-33208	-0.0000782	0.0005615	0.0035	2.96		39494.56	39494.56	10.09		Si
SLV 12	3.76	-231.46	-33080	-0.0000633	0.0005615	0.0035	2.96		41968.99	41968.99	181.32		Si
SLD 15	1.99	3433.07	-33510	-0.0000769	0.0005615	0.0035	2.96		39761.2	39761.2	11.58		Si
SLD 15	3.76	1685.48	-33515	-0.00007	0.0005615	0.0035	2.96		39765.24	39765.24	23.59		Si
SLV 13	1.99	4451.24	-33721	-0.0000815	0.0005615	0.0035	2.96		39947.25	39947.25	8.97		Si
SLV 13	3.76	3333.04	-35100	-0.0000798	0.0005615	0.0035	2.96		41169.13	41169.13	12.35		Si
SLV 10	1.99	1870.52	-34215	-0.0000721	0.0005615	0.0035	2.96		40383.41	40383.41	21.59		Si
SLV 10	3.76	3816.48	-33429	-0.0000783	0.0005615	0.0035	2.96		39689.86	39689.86	10.4		Si
SLD 16	1.99	3360.13	-33633	-0.0000769	0.0005615	0.0035	2.96		39869.18	39869.18	11.87		Si
SLD 16	3.76	1694.62	-33564	-0.0000701	0.0005615	0.0035	2.96		39808.74	39808.74	23.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	1.99	3175.73	-49899	-41552	6077	2.96	2.96	-50134	10833	8979	28547	24818	7548	32366	No	5.33	Si
SLU 78	3.76	2279.6	-48430	-40328	7651	2.96	2.96	-48658	10833	8979	28547	24818	7548	32366	No	4.23	Si
SLU 71	1.99	2837.83	-44463	-37025	6066	2.96	2.96	-44673	10833	8979	28547	24818	7548	32366	No	5.34	Si
SLU 71	3.76	1595.27	-42988	-35797	7591	2.96	2.96	-43190	10833	8979	28547	24818	7548	32366	No	4.26	Si
SLU 79	1.99	3190.15	-49537	-41250	6181	2.96	2.96	-49770	10833	8979	28547	24818	7548	32366	No	5.24	Si
SLU 79	3.76	2247.81	-48064	-40024	7768	2.96	2.96	-48291	10833	8979	28547	24818	7548	32366	No	4.17	Si
SLU 83	1.99	3319.43	-51026	-42490	6128	2.96	2.96	-51266	10833	8979	28547	24818	7548	32366	No	5.28	Si
SLU 83	3.76	2534.05	-49512	-41229	7727	2.96	2.96	-49745	10833	8979	28547	24818	7548	32366	No	4.19	Si
SLU 69	1.99	2840.88	-44797	-37303	6029	2.96	2.96	-45008	10833	8979	28547	24818	7548	32366	No	5.37	Si
SLU 69	3.76	1615.91	-43336	-36086	7566	2.96	2.96	-43540	10833	8979	28547	24818	7548	32366	No	4.28	Si
SLU 81	1.99	3297.72	-50341	-41920	6026	2.96	2.96	-50578	10833	8979	28547	24818	7548	32366	No	5.37	Si
SLU 81	3.76	2540.63	-48784	-40623	7609	2.96	2.96	-49014	10833	8979	28547	24818	7548	32366	No	4.25	Si
SLU 74	1.99	3171.48	-49185	-40957	6042	2.96	2.96	-49417	10833	8979	28547	24818	7548	32366	No	5.36	Si
SLU 74	3.76	2275.03	-47684	-39707	7626	2.96	2.96	-47909	10833	8979	28547	24818	7548	32366	No	4.24	Si
SLU 84	1.99	3301.97	-51055	-42514	6061	2.96	2.96	-51296	10833	8979	28547	24818	7548	32366	No	5.34	Si
SLU 84	3.76	2545.2	-49530	-41244	7634	2.96	2.96	-49763	10833	8979	28547	24818	7548	32366	No	4.24	Si
SLU 80	1.99	3172.68	-49566	-41274	6114	2.96	2.96	-49799	10833	8979	28547	24818	7548	32366	No	5.29	Si
SLU 80	3.76	2258.96	-48082	-40038	7676	2.96	2.96	-48308	10833	8979	28547	24818	7548	32366	No	4.22	Si
SLU 77	1.99	3193.19	-49870	-41527	6145	2.96	2.96	-50105	10833	8979	28547	24818	7548	32366	No	5.27	Si
SLU 77	3.76	2268.45	-48412	-40313	7743	2.96	2.96	-48640	10833	8979	28547	24818	7548	32366	No	4.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.99	2543.34	-32944	-27433	14921	2.96	2.96	-33099	16250	13468	28547	37227	7548	42015		2.82	Si
SLV 7	3.76	-1060.2	-31388	-26137	15025	2.96	2.96	-31535	16250	13468	28547	37227	7548	42015		2.8	Si
SLV 12	1.99	3913.35	-33208	-27652	13723	2.96	2.96	-33364	16250	13468	28547	37227	7548	42015		3.06	Si
SLV 12	3.76	-231.46	-33080	-27546	14216	2.96	2.96	-33235	16250	13468	28547	37227	7548	42015		2.96	Si
SLV 3	1.99	132.48	-33152	-27606	9412	2.96	2.96	-33308	16250	13468	28547	37227	7548	42015		4.46	Si
SLV 3	3.76	-598.05	-29602	-24650	9642	2.96	2.96	-29741	16250	13468	28547	37227	7548	42015		4.36	Si
SLD 12	1.99	2950.79	-33421	-27830	8586	2.96	2.96	-33579	16250	13468	28547	37227	7548	42015		4.89	Si
SLD 12	3.76	659.25	-32701	-27230	9430	2.96	2.96	-32855	16250	13468	28547	37227	7548	42015		4.46	Si
SLV 8	1.99	2433.87	-33128	-27586	14873	2.96	2.96	-33284	16250	13468	28547	37227	7548	42015		2.82	Si
SLV 8	3.76	-1046.48	-31462	-26199	14978	2.96	2.96	-31610	16250	13468	28547	37227	7548	42015		2.81	Si
SLD 11	1.99	2998.61	-33341	-27763	8606	2.96	2.96	-33498	16250	13468	28547	37227	7548	42015		4.88	Si
SLD 11	3.76	653.26	-32668	-27203	9451	2.96	2.96	-32822	16250	13468	28547	37227	7548	42015		4.45	Si
SLV 4	1.99	-37.38	-33437	-27844	9337	2.96	2.96	-33595	16250	13468	28547	37227	7548	42015		4.5	Si
SLV 4	3.76	-576.76	-29717	-24746	9568	2.96	2.96	-29857	16250	13468	28547	37227	7548	42015		4.39	Si
SLD 8	1.99	2318.26	-33387	-27802	9076	2.96	2.96	-33544	16250	13468	28547	37227	7548	42015		4.63	Si
SLD 8	3.76	310.81	-32010	-26655	9754	2.96	2.96	-32160	16250	13468	28547	37227	7548	42015		4.31	Si
SLD 7	1.99	2366.07	-33307	-27735	9097	2.96	2.96	-33464	16250	13468	28547	37227	7548	42015		4.62	Si
SLD 7	3.76	304.82	-31977	-26628	9775	2.96	2.96	-32128	16250	13468	28547	37227	7548	42015		4.3	Si
SLV 11	1.99	4022.82	-33024	-27499	13771	2.96	2.96	-33179	16250	13468	28547	37227	7548	42015		3.05	Si
SLV 11	3.76	-245.18	-33006	-27484	14264	2.96	2.96	-33161	16250	13468	28547	37227	7548	42015		2.95	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.875 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.3	38007	-31501	135.22	3312.56	24.5	Si
SLV 4	179667	0.3	38248	-31701	135.22	3326.56	24.6	Si
SLV 1	179667	0.3	38384	-31813	135.22	3334.41	24.66	Si
SLV 7	179667	0.3	38510	-31917	135.22	3341.63	24.71	Si
SLV 2	179667	0.3	38625	-32013	135.22	3348.28	24.76	Si
SLV 8	179667	0.3	38665	-32046	135.22	3350.55	24.78	Si
SLV 11	179667	0.3	39280	-32556	135.22	3385.5	25.04	Si
SLV 12	179667	0.3	39435	-32684	135.22	3394.23	25.1	Si
SLV 5	179667	0.3	39766	-32958	135.22	3412.68	25.24	Si
SLV 6	179667	0.3	39921	-33087	135.22	3421.3	25.3	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.875 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-33429	-34215	83	0.524	3709.4	0.975	7.81303	5.65687	Si
SLV 9	-33355	-34031	83	0.525	3701.8	0.975	7.82823	5.65687	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-33080	-33208	25	0.53	3673.7	0.974	7.90983	5.65687	Si
SLV 11	-33006	-33024	25	0.531	3666.2	0.974	7.92539	5.65687	Si
SLV 6	-31812	-34135	7	0.549	3544.6	0.973	8.19212	5.65687	Si
SLV 5	-31737	-33951	7	0.55	3537	0.973	8.20891	5.65687	Si
SLV 8	-31462	-33128	-51	0.553	3508.9	0.973	8.25218	5.65687	Si
SLV 7	-31388	-32944	-51	0.554	3501.4	0.973	8.2691	5.65687	Si
SLV 14	-35215	-34007	151	0.499	3891.2	0.976	7.44002	3.66297	Si
SLV 13	-35100	-33721	151	0.501	3879.5	0.976	7.46129	3.66297	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.212	SLU 83	Si
V_SLU	4.167	SLU 79	Si
PF_SLV	7.836	SLV 15	Si
V_SLV	2.796	SLV 7	Si
PFFP_SLV	24.498	SLV 3	Si
R_SLV	1.381	SLV 10	Si

Maschio 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L4	L5	3.35	0.16	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	1.99	-2029.87	-50054	-0.0001425	0.0004492	0.0035	3.35	19763.59	61728.79	61728.79	30.41	No	Si
SLU 69	5.46	-1563.82	-23815	-0.0000652	0.0004492	0.0035	3.35	25385.1	39519.25	39519.25	25.27	No	Si
SLU 66	1.99	-1982.42	-49170	-0.0001395	0.0004492	0.0035	3.35	20526.41	61217.7	61217.7	30.88	No	Si
SLU 66	5.46	-1536.29	-22971	-0.0000629	0.0004492	0.0035	3.35	24980.86	38558.16	38558.16	25.1	No	Si
SLU 81	1.99	-1843.72	-53752	-0.0001532	0.0004492	0.0035	3.35	16139.81	63866.37	63866.37	34.64	No	Si
SLU 81	5.46	-1592.52	-24006	-0.0000659	0.0004492	0.0035	3.35	25471.08	39735.67	39735.67	24.95	No	Si
SLU 83	1.99	-1891.17	-54636	-0.0001564	0.0004492	0.0035	3.35	15169.73	64297.46	64297.46	34	No	Si
SLU 83	5.46	-1620.05	-24851	-0.0000682	0.0004492	0.0035	3.35	25830.58	40696.76	40696.76	25.12	No	Si
SLU 60	1.99	-1783.15	-48970	-0.0001378	0.0004492	0.0035	3.35	20693.51	61102.02	61102.02	34.27	No	Si
SLU 60	5.46	-1470.46	-21824	-0.0000596	0.0004492	0.0035	3.35	24374.13	37217.5	37217.5	25.31	No	Si
SLU 74	1.99	-1915.85	-53262	-0.0001521	0.0004492	0.0035	3.35	16660.76	63582.81	63582.81	33.19	No	Si
SLU 74	5.46	-1603.71	-24341	-0.0000668	0.0004492	0.0035	3.35	25618.02	40116.82	40116.82	25.01	No	Si
SLU 64	1.99	-1938.83	-47907	-0.0001353	0.0004492	0.0035	3.35	21546.68	60487.63	60487.63	31.2	No	Si
SLU 64	5.46	-1496.21	-22048	-0.0000603	0.0004492	0.0035	3.35	24497.91	37489.48	37489.48	25.06	No	Si
SLU 79	1.99	-1967.15	-53767	-0.000154	0.0004492	0.0035	3.35	16123.88	63874.94	63874.94	32.47	No	Si
SLU 79	5.46	-1618.68	-25108	-0.0000689	0.0004492	0.0035	3.35	25932.94	40989.85	40989.85	25.32	No	Si
SLU 77	1.99	-1963.3	-54146	-0.0001552	0.0004492	0.0035	3.35	15712.87	64093.91	64093.91	32.65	No	Si
SLU 77	5.46	-1631.24	-25186	-0.0000692	0.0004492	0.0035	3.35	25963.03	41077.91	41077.91	25.18	No	Si
SLU 43	1.99	-1878.26	-43124	-0.0001206	0.0004492	0.0035	3.35	24670.42	57723.28	57723.28	30.73	No	Si
SLU 43	5.46	-1374.15	-19867	-0.0000541	0.0004492	0.0035	3.35	23182.54	34839.01	34839.01	25.35	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.99	-3923.64	-41248	-0.0001203	0.0006738	0.0035	3.35		60033.02	60033.02	15.3		Si
SLV 9	5.46	2389.73	-15374	-0.0000466	0.0006738	0.0035	3.35		24574.96	24574.96	10.28		Si
SLV 11	1.99	2004.67	-36501	-0.0000985	0.0006738	0.0035	3.35		50175.59	50175.59	25.03		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	5.46	-4303.54	-19575	-0.0000654	0.0006738	0.0035	3.35		35366.25	35366.25	8.22		Si
SLV 10	1.99	-3952.1	-41310	-0.0001206	0.0006738	0.0035	3.35		60093.93	60093.93	15.21		Si
SLV 10	5.46	2429.65	-15351	-0.0000467	0.0006738	0.0035	3.35		24542.45	24542.45	10.1		Si
SLV 3	1.99	-2165.6	-29756	-0.0000817	0.0006738	0.0035	3.35		47892.53	47892.53	22.12		Si
SLV 3	5.46	-2866.41	-15550	-0.0000491	0.0006738	0.0035	3.35		29957.38	29957.38	10.45		Si
SLV 12	1.99	1976.21	-36563	-0.0000985	0.0006738	0.0035	3.35		50234.88	50234.88	25.42		Si
SLV 12	5.46	-4263.62	-19552	-0.0000652	0.0006738	0.0035	3.35		35335.09	35335.09	8.29		Si
SLV 8	1.99	1005.5	-32691	-0.0000839	0.0006738	0.0035	3.35		45968.75	45968.75	45.72		Si
SLV 8	5.46	-4676.47	-18370	-0.000064	0.0006738	0.0035	3.35		33750.33	33750.33	7.22		Si
SLV 4	1.99	-2209.76	-29852	-0.0000821	0.0006738	0.0035	3.35		48000.59	48000.59	21.72		Si
SLV 4	5.46	-2804.47	-15514	-0.0000488	0.0006738	0.0035	3.35		29906.49	29906.49	10.66		Si
SLV 5	1.99	-4894.36	-37376	-0.0001144	0.0006738	0.0035	3.35		56196.91	56196.91	11.48		Si
SLV 5	5.46	1976.88	-14192	-0.0000419	0.0006738	0.0035	3.35		22909.51	22909.51	11.59		Si
SLV 6	1.99	-4922.81	-37438	-0.0001147	0.0006738	0.0035	3.35		56262.19	56262.19	11.43		Si
SLV 6	5.46	2016.8	-14169	-0.0000421	0.0006738	0.0035	3.35		22876.46	22876.46	11.34		Si
SLV 7	1.99	1033.96	-32629	-0.0000839	0.0006738	0.0035	3.35		45892.98	45892.98	44.39		Si
SLV 7	5.46	-4716.39	-18393	-0.0000643	0.0006738	0.0035	3.35		33781.48	33781.48	7.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	1.99	-1843.72	-53752	-31561	-12597	3.35	3.35	-58882	10833	5807	108749	19262	17085	36347	No	2.89	Si
SLU 81	5.46	-1592.52	-24006	-14095	-11993	3.35	3.35	-26297	10833	5807	108749	19262	17085	36347	No	3.03	Si
SLU 74	1.99	-1915.85	-53262	-31273	-12207	3.35	3.35	-58345	10833	5807	108749	19262	17085	36347	No	2.98	Si
SLU 74	5.46	-1603.71	-24341	-14292	-11615	3.35	3.35	-26664	10833	5807	108749	19262	17085	36347	No	3.13	Si
SLU 83	1.99	-1891.17	-54636	-32080	-12628	3.35	3.35	-59851	10833	5807	108749	19262	17085	36347	No	2.88	Si
SLU 83	5.46	-1620.05	-24851	-14591	-12015	3.35	3.35	-27222	10833	5807	108749	19262	17085	36347	No	3.03	Si
SLU 75	1.99	-1929.68	-53287	-31288	-12239	3.35	3.35	-58373	10833	5807	108749	19262	17085	36347	No	2.97	Si
SLU 75	5.46	-1571.29	-24328	-14284	-11647	3.35	3.35	-26649	10833	5807	108749	19262	17085	36347	No	3.12	Si
SLU 80	1.99	-1980.99	-53792	-31584	-12126	3.35	3.35	-58926	10833	5807	108749	19262	17085	36347	No	3	Si
SLU 80	5.46	-1586.25	-25095	-14735	-11530	3.35	3.35	-27490	10833	5807	108749	19262	17085	36347	No	3.15	Si
SLU 77	1.99	-1963.3	-54146	-31792	-12239	3.35	3.35	-59314	10833	5807	108749	19262	17085	36347	No	2.97	Si
SLU 77	5.46	-1631.24	-25186	-14788	-11637	3.35	3.35	-27589	10833	5807	108749	19262	17085	36347	No	3.12	Si
SLU 84	1.99	-1905.01	-54662	-32095	-12660	3.35	3.35	-59879	10833	5807	108749	19262	17085	36347	No	2.87	Si
SLU 84	5.46	-1587.62	-24837	-14583	-12047	3.35	3.35	-27208	10833	5807	108749	19262	17085	36347	No	3.02	Si
SLU 82	1.99	-1857.56	-53778	-31576	-12629	3.35	3.35	-58910	10833	5807	108749	19262	17085	36347	No	2.88	Si
SLU 82	5.46	-1560.1	-23992	-14087	-12024	3.35	3.35	-26282	10833	5807	108749	19262	17085	36347	No	3.02	Si
SLU 76	1.99	-1942.76	-52925	-31075	-12116	3.35	3.35	-57976	10833	5807	108749	19262	17085	36347	No	3	Si
SLU 76	5.46	-1537.12	-24241	-14233	-11528	3.35	3.35	-26555	10833	5807	108749	19262	17085	36347	No	3.15	Si
SLU 78	1.99	-1977.13	-54171	-31807	-12271	3.35	3.35	-59341	10833	5807	108749	19262	17085	36347	No	2.96	Si
SLU 78	5.46	-1598.81	-25172	-14780	-11669	3.35	3.35	-27575	10833	5807	108749	19262	17085	36347	No	3.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	1.99	-2539.87	-38819	-22793	-10244	3.35	3.35	-42524	16250	8710	108749	28894	17085	45979		4.49	Si
SLD 10	5.46	424.74	-16186	-9504	-9681	3.35	3.35	-17731	16046	8601	108749	28894	17085	45979		4.75	Si
SLV 10	1.99	-3952.1	-41310	-24255	-12644	3.35	3.35	-45253	16250	8710	108749	28894	17085	45979		3.64	Si
SLV 10	5.46	2429.65	-15351	-9013	-12012	3.35	3.35	-16816	15863	8503	108749	28894	17085	45979		3.83	Si
SLV 6	1.99	-4922.81	-37438	-21982	-12470	3.35	3.35	-41011	16250	8710	108749	28894	17085	45979		3.69	Si
SLV 6	5.46	2016.8	-14169	-8319	-10000	3.35	3.35	-15521	15604	8364	108749	28894	17085	45979		4.6	Si
SLV 14	1.99	-752.55	-44183	-25942	-9941	3.35	3.35	-48400	16250	8710	108749	28894	17085	45979		4.62	Si
SLV 14	5.46	579.68	-18194	-10683	-12259	3.35	3.35	-19931	16250	8710	108749	28894	17085	45979		3.75	Si
SLV 9	1.99	-3923.64	-41248	-24219	-12583	3.35	3.35	-45185	16250	8710	108749	28894	17085	45979		3.65	Si
SLV 9	5.46	2389.73	-15374	-9027	-11951	3.35	3.35	-16842	15868	8505	108749	28894	17085	45979		3.85	Si
SLV 16	1.99	1025.95	-42759	-25106	-7438	3.35	3.35	-46839	16250	8710	108749	28894	17085	45979		6.18	Si
SLV 16	5.46	-1428.3	-19454	-11423	-10444	3.35	3.35	-21311	16250	8710	108749	28894	17085	45979		4.4	Si
SLV 5	1.99	-4894.36	-37376	-21946	-12410	3.35	3.35	-40943	16250	8710	108749	28894	17085	45979		3.71	Si
SLV 5	5.46	1976.88	-14192	-8333	-9939	3.35	3.35	-15547	15609	8367	108749	28894	17085	45979		4.63	Si
SLV 15	1.99	1070.11	-42663	-25050	-7343	3.35	3.35	-46735	16250	8710	108749	28894	17085	45979		6.26	Si
SLV 15	5.46	-1490.25	-19490	-11444	-10350	3.35	3.35	-21351	16250	8710	108749	28894	17085	45979		4.44	Si
SLD 9	1.99	-2527.44	-38792	-22777	-10218	3.35	3.35	-42494	16250	8710	108749	28894	17085	45979		4.5	Si
SLD 9	5.46	407.3	-16196	-9510	-9654	3.35	3.35	-17742	16048	8602	108749	28894	17085	45979		4.76	Si
SLV 13	1.99	-708.39	-44087	-25886	-9847	3.35	3.35	-48295	16250	8710	108749	28894	17085	45979		4.67	Si
SLV 13	5.46	517.73	-18230	-10704	-12165	3.35	3.35	-19970	16250	8710	108749	28894	17085	45979		3.78	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-19147	0.32	167.64	1233.22	2043.1	1638.16	9.77	Si
SLV 4	-19176	0.32	167.64	1234.64	2045.68	1640.16	9.78	Si
SLV 1	-19365	0.32	167.64	1243.8	2062.46	1653.13	9.86	Si
SLV 2	-19394	0.32	167.64	1245.21	2065.04	1655.12	9.87	Si
SLV 7	-23892	0.32	167.64	1446.51	2465.88	1956.2	11.67	Si
SLV 8	-23911	0.32	167.64	1447.28	2467.55	1957.42	11.68	Si
SLV 5	-24617	0.32	167.64	1475.88	2530.6	2003.24	11.95	Si
SLV 6	-24636	0.32	167.64	1476.63	2532.27	2004.45	11.96	Si
SLV 11	-28172	0.32	167.64	1607.45	2839.86	2223.66	13.26	Si
SLV 12	-28191	0.32	167.64	1608.09	2841.45	2224.77	13.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1257

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-19575	-36501	290	0.897	2254.9	0.965	13.50577	14.44837	No
SLV 12	-19552	-36563	290	0.898	2252.5	0.965	13.52068	14.44837	No
SLV 7	-18393	-32629	-227	0.951	2134.6	0.963	14.35473	14.44837	No
SLV 8	-18370	-32691	-227	0.952	2132.3	0.963	14.37149	14.44837	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-15374	-41248	251	1.114	1827.6	0.958	16.91253	14.44837	Si
SLV 10	-15351	-41310	251	1.116	1825.2	0.958	16.93606	14.44837	Si
SLV 5	-14192	-37376	-267	1.195	1707.4	0.955	18.18171	14.44837	Si
SLV 6	-14169	-37438	-267	1.196	1705.1	0.955	18.20887	14.44837	Si
SLV 15	-19490	-42663	880	0.872	2246.3	0.965	13.14067	7.3053	Si
SLV 16	-19454	-42759	879	0.874	2242.6	0.965	13.16328	7.3053	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.951	SLU 81	Si
V_SLU	2.871	SLU 84	Si
PF_SLV	7.163	SLV 7	Si
V_SLV	3.637	SLV 10	Si
PFFP_SLV	9.772	SLV 3	Si
R_SLV	0.935	SLV 11	No

Maschio 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L4	L5	1.67	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.99	2950.59	-17849	-0.0001014	0.0003743	0.0035	1.67	9316.19	11023.57	11023.57	3.74	No	Si
SLU 75	4.09	-988.23	-19876	-0.0000829	0.0003743	0.0035	1.67	9667.62	12196.86	12196.86	12.34	No	Si
SLU 77	1.99	2986.18	-18114	-0.000103	0.0003743	0.0035	1.67	9370.43	11113.54	11113.54	3.72	No	Si
SLU 77	4.09	-994.88	-20210	-0.0000843	0.0003743	0.0035	1.67	9711.69	12285.15	12285.15	12.35	No	Si
SLU 82	1.99	3005.55	-18119	-0.0001033	0.0003743	0.0035	1.67	9371.41	11115.21	11115.21	3.7	No	Si
SLU 82	4.09	-1000.59	-20210	-0.0000844	0.0003743	0.0035	1.67	9711.67	12285.12	12285.12	12.28	No	Si
SLU 74	1.99	2950.5	-17818	-0.0001013	0.0003743	0.0035	1.67	9309.79	11013.26	11013.26	3.73	No	Si
SLU 74	4.09	-979.23	-19858	-0.0000827	0.0003743	0.0035	1.67	9665.08	12192.03	12192.03	12.45	No	Si
SLU 79	1.99	2969.69	-17980	-0.0001022	0.0003743	0.0035	1.67	9343.4	11068.12	11068.12	3.73	No	Si
SLU 79	4.09	-986.78	-20056	-0.0000836	0.0003743	0.0035	1.67	9691.77	12244.09	12244.09	12.41	No	Si
SLU 84	1.99	3041.23	-18415	-0.0001051	0.0003743	0.0035	1.67	9428.92	11215.17	11215.17	3.69	No	Si
SLU 84	4.09	-1016.23	-20563	-0.0000861	0.0003743	0.0035	1.67	9753.92	12379.76	12379.76	12.18	No	Si
SLU 81	1.99	3005.47	-18089	-0.0001032	0.0003743	0.0035	1.67	9365.3	11104.83	11104.83	3.69	No	Si
SLU 81	4.09	-991.59	-20192	-0.0000842	0.0003743	0.0035	1.67	9709.34	12280.21	12280.21	12.38	No	Si
SLU 83	1.99	3041.15	-18385	-0.000105	0.0003743	0.0035	1.67	9423.13	11204.88	11204.88	3.68	No	Si
SLU 83	4.09	-1007.24	-20544	-0.0000859	0.0003743	0.0035	1.67	9751.82	12374.78	12374.78	12.29	No	Si
SLU 78	1.99	2986.27	-18145	-0.0001032	0.0003743	0.0035	1.67	9376.51	11123.93	11123.93	3.73	No	Si
SLU 78	4.09	-1003.87	-20229	-0.0000845	0.0003743	0.0035	1.67	9714	12290.06	12290.06	12.24	No	Si
SLU 80	1.99	2969.77	-18011	-0.0001024	0.0003743	0.0035	1.67	9349.63	11078.47	11078.47	3.73	No	Si
SLU 80	4.09	-995.78	-20074	-0.0000838	0.0003743	0.0035	1.67	9694.18	12248.97	12248.97	12.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.99	-6234.57	-18518	-0.0001446	0.0005615	0.0035	1.67		13188.94	13188.94	2.12		Si
SLV 15	4.09	5320.99	-10274	-0.000124	0.0005615	0.0035	1.67		7624.33	7624.33	1.43		Si
SLD 4	1.99	5688.96	-10009	-0.0001463	0.0005615	0.0035	1.67		7458.09	7458.09	1.31		Si
SLD 4	4.09	-3260.72	-15369	-0.0000911	0.0005615	0.0035	1.67		11464.08	11464.08	3.52		Si
SLV 2	1.99	10275.61	-5971	-0.0518118	0.0005615	0.0035	1.336		4829.95	4829.95	0.47		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.09	-6610.86	-16674	-0.0001484	0.0005615	0.0035	1.67		12198.33	12198.33	1.85		Si
SLD 3	1.99	5408.65	-10133	-0.0001293	0.0005615	0.0035	1.67		7535.76	7535.76	1.39		Si
SLD 3	4.09	-3027.34	-15156	-0.0000874	0.0005615	0.0035	1.67		11342.47	11342.47	3.75		Si
SLD 2	1.99	5546.86	-9562	-0.0001462	0.0005615	0.0035	1.67		7179.84	7179.84	1.29		Si
SLD 2	4.09	-3194.35	-14836	-0.0000883	0.0005615	0.0035	1.67		11154.66	11154.66	3.49		Si
SLV 4	1.99	10598.25	-7011	-0.0474917	0.0005615	0.0035	1.336		5580.19	5580.19	0.53		No
SLV 4	4.09	-6763.73	-17894	-0.0001535	0.0005615	0.0035	1.67		12857.68	12857.68	1.9		Si
SLV 13	1.99	-6557.2	-17479	-0.0001484	0.0005615	0.0035	1.67		12638.65	12638.65	1.93		Si
SLV 13	4.09	5473.86	-9054	-0.0001541	0.0005615	0.0035	1.67		6865.22	6865.22	1.25		Si
SLV 3	1.99	9945.42	-7301	-0.0396123	0.0005615	0.0035	1.336		5780.52	5780.52	0.58		No
SLV 3	4.09	-6220.19	-17397	-0.0001415	0.0005615	0.0035	1.67		12594.89	12594.89	2.02		Si
SLV 1	1.99	9622.79	-6261	-0.043836	0.0005615	0.0035	1.336		5039.95	5039.95	0.52		No
SLV 1	4.09	-6067.32	-16177	-0.0001359	0.0005615	0.0035	1.67		11917.38	11917.38	1.96		Si
SLD 1	1.99	5266.55	-9686	-0.0001277	0.0005615	0.0035	1.67		7257.13	7257.13	1.38		Si
SLD 1	4.09	-2960.97	-14623	-0.0000846	0.0005615	0.0035	1.67		11027.09	11027.09	3.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.99	3005.55	-18119	-15088	3340	1.67	1.67	-32267	10833	5066	38062	14002	4259	18261	No	5.47	Si
SLU 82	4.09	-1000.59	-20210	-16829	3776	1.67	1.67	-35990	10833	5066	38062	14002	4259	18261	No	4.84	Si
SLU 78	1.99	2986.27	-18145	-15110	3326	1.67	1.67	-32313	10833	5066	38062	14002	4259	18261	No	5.49	Si
SLU 78	4.09	-1003.87	-20229	-16845	3779	1.67	1.67	-36023	10833	5066	38062	14002	4259	18261	No	4.83	Si
SLU 79	1.99	2969.69	-17980	-14973	3308	1.67	1.67	-32020	10833	5066	38062	14002	4259	18261	No	5.52	Si
SLU 79	4.09	-986.78	-20056	-16701	3756	1.67	1.67	-35715	10833	5066	38062	14002	4259	18261	No	4.86	Si
SLU 75	1.99	2950.59	-17849	-14863	3285	1.67	1.67	-31785	10833	5066	38062	14002	4259	18261	No	5.56	Si
SLU 75	4.09	-988.23	-19876	-16551	3730	1.67	1.67	-35396	10833	5066	38062	14002	4259	18261	No	4.9	Si
SLU 81	1.99	3005.47	-18089	-15063	3340	1.67	1.67	-32212	10833	5066	38062	14002	4259	18261	No	5.47	Si
SLU 81	4.09	-991.59	-20192	-16814	3774	1.67	1.67	-35958	10833	5066	38062	14002	4259	18261	No	4.84	Si
SLU 74	1.99	2950.5	-17818	-14837	3285	1.67	1.67	-31731	10833	5066	38062	14002	4259	18261	No	5.56	Si
SLU 74	4.09	-979.23	-19858	-16536	3728	1.67	1.67	-35363	10833	5066	38062	14002	4259	18261	No	4.9	Si
SLU 77	1.99	2986.18	-18114	-15084	3326	1.67	1.67	-32258	10833	5066	38062	14002	4259	18261	No	5.49	Si
SLU 77	4.09	-994.88	-20210	-16829	3777	1.67	1.67	-35991	10833	5066	38062	14002	4259	18261	No	4.83	Si
SLU 84	1.99	3041.23	-18415	-15335	3381	1.67	1.67	-32794	10833	5066	38062	14002	4259	18261	No	5.4	Si
SLU 84	4.09	-1016.23	-20563	-17123	3826	1.67	1.67	-36618	10833	5066	38062	14002	4259	18261	No	4.77	Si
SLU 80	1.99	2969.77	-18011	-14998	3309	1.67	1.67	-32074	10833	5066	38062	14002	4259	18261	No	5.52	Si
SLU 80	4.09	-995.78	-20074	-16716	3758	1.67	1.67	-35748	10833	5066	38062	14002	4259	18261	No	4.86	Si
SLU 83	1.99	3041.15	-18385	-15309	3381	1.67	1.67	-32740	10833	5066	38062	14002	4259	18261	No	5.4	Si
SLU 83	4.09	-1007.24	-20544	-17107	3824	1.67	1.67	-36585	10833	5066	38062	14002	4259	18261	No	4.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	1.99	10598.25	-7011	-5838	13597	1.336	0	0	0	0	38062	16803	3407	20209		1.49	Si
SLV 4	4.09	-6763.73	-17894	-14901	13214	1.67	1.3711	-39676	16250	6238	38062	21003	4259	25262		1.91	Si
SLV 16	1.99	-5581.74	-18229	-15179	-7324	1.67	1.5864	-32462	16250	7218	38062	21003	4259	25262		3.45	Si
SLV 16	4.09	4777.44	-10772	-8970	-6540	1.67	1.1745	-19183	14253	4687	38062	21003	4259	25262		3.86	Si
SLV 14	1.99	-5904.38	-17189	-14314	-8228	1.67	1.4745	-35345	16250	6709	38062	21003	4259	25262		3.07	Si
SLV 14	4.09	4930.32	-9552	-7954	-7207	1.67	0.9565	-17010	13819	3701	38062	21003	4259	25262		3.51	Si
SLV 3	1.99	9945.42	-7301	-6079	12719	1.336	0	0	0	0	38062	16803	3407	20209		1.59	Si
SLV 3	4.09	-6220.19	-17397	-14487	12330	1.67	1.4324	-36860	16250	6517	38062	21003	4259	25262		2.05	Si
SLV 13	1.99	-6557.2	-17479	-14555	-9106	1.67	1.3796	-38487	16250	6277	38062	21003	4259	25262		2.77	Si
SLV 13	4.09	5473.86	-9054	-7539	-8091	1.67	0.6913	-16124	13641	2641	38062	21003	4259	25262		3.12	Si
SLV 15	1.99	-6234.57	-18518	-15420	-8203	1.67	1.495	-37613	16250	6802	38062	21003	4259	25262		3.08	Si
SLV 15	4.09	5320.99	-10274	-8556	-7424	1.67	0.9514	-18297	14076	3750	38062	21003	4259	25262		3.4	Si
SLV 1	1.99	9622.79	-6261	-5213	11815	1.336	0	0	0	0	38062	16803	3407	20209		1.71	Si
SLV 1	4.09	-6067.32	-16177	-13471	11664	1.67	1.3798	-35545	16250	6278	38062	21003	4259	25262		2.17	Si
SLV 2	1.99	10275.61	-5971	-4972	12694	1.336	0	0	0	0	38062	16803	3407	20209		1.59	Si
SLV 2	4.09	-6610.86	-16674	-13885	12548	1.67	1.3156	-38485	16250	5986	38062	21003	4259	25262		2.01	Si
SLD 4	1.99	5688.96	-10009	-8334	7101	1.67	0.7998	-17823	13981	3131	38062	21003	4259	25262		3.56	Si
SLD 4	4.09	-3260.72	-15369	-12798	7118	1.67	1.67	-27370	15891	7431	38062	21003	4259	25262		3.55	Si
SLV 8	1.99	5195.61	-12202	-10161	7173	1.67	1.2276	-21729	14762	5074	38062	21003	4259	25262		3.52	Si
SLV 8	4.09	-2806.04	-16737	-13937	6921	1.67	1.67	-29805	16250	7599	38062	21003	4259	25262		3.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.32	22303	-10429	138.21	1246.84	9.02	Si
SLV 9	179667	0.32	22571	-10554	138.21	1259.21	9.11	Si
SLV 10	179667	0.32	23084	-10794	138.21	1282.77	9.28	Si
SLV 14	179667	0.32	23100	-10802	138.21	1283.49	9.29	Si
SLV 15	179667	0.32	24891	-11639	138.21	1363.91	9.87	Si
SLV 5	179667	0.32	25267	-11815	138.21	1380.42	9.99	Si
SLV 16	179667	0.32	25688	-12012	138.21	1398.79	10.12	Si
SLV 6	179667	0.32	25780	-12055	138.21	1402.79	10.15	Si
SLV 11	179667	0.32	31198	-14588	138.21	1625.13	11.76	Si
SLV 1	179667	0.32	31290	-14631	138.21	1628.69	11.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-14823	-15754	387	0.596	1737.8	0.961	9.02014	10.55427	No
SLV 12	-14725	-15567	387	0.6	1727.8	0.961	9.07257	10.55427	No
SLV 7	-12928	-12388	479	0.663	1545.1	0.956	10.07653	10.55427	No
SLV 8	-12830	-12202	479	0.667	1535.2	0.956	10.14361	10.55427	No
SLV 9	-10592	-12288	-491	0.783	1307.8	0.949	11.98262	10.55427	Si
SLV 10	-10495	-12101	-490	0.789	1297.9	0.949	12.08026	10.55427	Si
SLV 5	-8698	-8923	-398	0.93	1115.7	0.942	14.35411	10.55427	Si
SLV 6	-8600	-8736	-398	0.939	1105.8	0.942	14.49481	10.55427	Si
SLV 15	-15580	-18518	-28	0.593	1814.8	0.962	8.95047	4.78007	Si
SLV 16	-15428	-18229	-28	0.598	1799.3	0.962	9.02861	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.684	SLU 83	Si
V_SLU	4.773	SLU 84	Si
PF_SLV	0.47	SLV 2	No
V_SLV	1.486	SLV 4	Si
PFFP_SLV	9.021	SLV 13	Si
R_SLV	0.855	SLV 11	No

Maschio 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L4	L5	3.12	0.16	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.99	9378.26	-50662	-0.0002078	0.0004492	0.0035	3.12	13390.18	53046.18	53046.18	5.66	No	Si
SLU 78	4.09	5301.72	-43003	-0.0001526	0.0004492	0.0035	3.12	19788.79	48457.27	48457.27	9.14	No	Si
SLU 77	1.99	9512.05	-50496	-0.0002081	0.0004492	0.0035	3.12	13560.03	52947.09	52947.09	5.57	No	Si
SLU 77	4.09	5284.61	-42874	-0.0001521	0.0004492	0.0035	3.12	19870.97	48379.89	48379.89	9.15	No	Si
SLU 60	1.99	8890.88	-46055	-0.0001867	0.0004492	0.0035	3.12	17598.85	50285.66	50285.66	5.66	No	Si
SLU 60	4.09	4850.01	-38801	-0.0001357	0.0004492	0.0035	3.12	22025.21	45251.2	45251.2	9.33	No	Si
SLU 83	1.99	9662.79	-51419	-0.0002128	0.0004492	0.0035	3.12	12594.19	53500.11	53500.11	5.54	No	Si
SLU 83	4.09	5478.17	-43655	-0.000156	0.0004492	0.0035	3.12	19361.17	48847.68	48847.68	8.92	No	Si
SLU 74	1.99	9399.68	-49823	-0.0002046	0.0004492	0.0035	3.12	14237.18	52543.64	52543.64	5.59	No	Si
SLU 74	4.09	5256.02	-42243	-0.0001497	0.0004492	0.0035	3.12	20260.17	48001.86	48001.86	9.13	No	Si
SLU 84	1.99	9529.01	-51585	-0.0002125	0.0004492	0.0035	3.12	12416.53	53599.19	53599.19	5.62	No	Si
SLU 84	4.09	5495.28	-43784	-0.0001565	0.0004492	0.0035	3.12	19273.84	48925.06	48925.06	8.9	No	Si
SLU 82	1.99	9416.64	-50911	-0.0002091	0.0004492	0.0035	3.12	13131.16	53195.74	53195.74	5.65	No	Si
SLU 82	4.09	5466.69	-43153	-0.0001542	0.0004492	0.0035	3.12	19692.4	48547.02	48547.02	8.88	No	Si
SLU 81	1.99	9550.42	-50746	-0.0002093	0.0004492	0.0035	3.12	13303.13	53096.65	53096.65	5.56	No	Si
SLU 81	4.09	5449.57	-43024	-0.0001536	0.0004492	0.0035	3.12	19775.56	48469.65	48469.65	8.89	No	Si
SLU 62	1.99	9003.26	-46728	-0.00019	0.0004492	0.0035	3.12	17051.48	50689.12	50689.12	5.63	No	Si
SLU 62	4.09	4878.6	-39432	-0.0001379	0.0004492	0.0035	3.12	21747.08	45798.21	45798.21	9.39	No	Si
SLU 79	1.99	9470.56	-50152	-0.0002064	0.0004492	0.0035	3.12	13908.78	52741.03	52741.03	5.57	No	Si
SLU 79	4.09	5239.4	-42541	-0.0001506	0.0004492	0.0035	3.12	20078.92	48180.37	48180.37	9.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.99	11201.55	-38590	-0.0001644	0.0006738	0.0035	3.12		47673.74	47673.74	4.26		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.09	2188.74	-32370	-0.0000963	0.0006738	0.0035	3.12		41975.97	41975.97	19.18		Si
SLV 12	1.99	10958.04	-37171	-0.0001586	0.0006738	0.0035	3.12		46422.46	46422.46	4.24		Si
SLV 12	4.09	196.7	-29109	-0.0000767	0.0006738	0.0035	3.12		38287.7	38287.7	194.65		Si
SLV 13	1.99	9127.52	-37671	-0.0001499	0.0006738	0.0035	3.12		46863.88	46863.88	5.13		Si
SLV 13	4.09	4227.48	-33015	-0.0001091	0.0006738	0.0035	3.12		42705.63	42705.63	10.1		Si
SLD 15	1.99	8592.33	-36155	-0.0001423	0.0006738	0.0035	3.12		45526.28	45526.28	5.3		Si
SLD 15	4.09	2954.41	-30354	-0.0000947	0.0006738	0.0035	3.12		39695.8	39695.8	13.44		Si
SLV 11	1.99	11209.88	-36932	-0.0001593	0.0006738	0.0035	3.12		46211.9	46211.9	4.12		Si
SLV 11	4.09	-1.36	-28868	-0.000075	0.0006738	0.0035	3.12		42791.63	42791.63	31493.53		Si
SLD 11	1.99	8622.62	-35468	-0.0001404	0.0006738	0.0035	3.12		44921.15	44921.15	5.21		Si
SLD 11	4.09	1983.4	-28852	-0.0000854	0.0006738	0.0035	3.12		37996.91	37996.91	19.16		Si
SLV 8	1.99	8950.69	-34775	-0.0001401	0.0006738	0.0035	3.12		44309.8	44309.8	4.95		Si
SLV 8	4.09	311.38	-26696	-0.0000707	0.0006738	0.0035	3.12		35558.4	35558.4	114.2		Si
SLV 16	1.99	10810.77	-38960	-0.0001633	0.0006738	0.0035	3.12		48000.48	48000.48	4.44		Si
SLV 16	4.09	2496.08	-32743	-0.000099	0.0006738	0.0035	3.12		42398.23	42398.23	16.99		Si
SLV 7	1.99	9202.52	-34536	-0.0001408	0.0006738	0.0035	3.12		44099.24	44099.24	4.79		Si
SLV 7	4.09	113.32	-26455	-0.000069	0.0006738	0.0035	3.12		35286.28	35286.28	311.38		Si
SLD 12	1.99	8512.62	-35573	-0.0001401	0.0006738	0.0035	3.12		45013.12	45013.12	5.29		Si
SLD 12	4.09	2069.91	-28957	-0.0000861	0.0006738	0.0035	3.12		38115.77	38115.77	18.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	1.99	9470.56	-50152	-29447	4923	3.12	3.12	-58989	10833	5408	108749	17940	15912	33852	No	6.88	Si
SLU 79	4.09	5239.4	-42541	-24978	6059	3.12	3.12	-50037	10833	5408	108749	17940	15912	33852	No	5.59	Si
SLU 75	1.99	9265.89	-49988	-29351	4777	3.12	3.12	-58796	10833	5408	108749	17940	15912	33852	No	7.09	Si
SLU 75	4.09	5273.13	-42373	-24879	5993	3.12	3.12	-49838	10833	5408	108749	17940	15912	33852	No	5.65	Si
SLU 80	1.99	9336.77	-50318	-29544	4836	3.12	3.12	-59183	10833	5408	108749	17940	15912	33852	No	7	Si
SLU 80	4.09	5256.51	-42670	-25054	6060	3.12	3.12	-50189	10833	5408	108749	17940	15912	33852	No	5.59	Si
SLU 74	1.99	9399.68	-49823	-29254	4865	3.12	3.12	-58601	10833	5408	108749	17940	15912	33852	No	6.96	Si
SLU 74	4.09	5256.02	-42243	-24803	5992	3.12	3.12	-49686	10833	5408	108749	17940	15912	33852	No	5.65	Si
SLU 77	1.99	9512.05	-50496	-29649	4923	3.12	3.12	-59393	10833	5408	108749	17940	15912	33852	No	6.88	Si
SLU 77	4.09	5284.61	-42874	-25174	6068	3.12	3.12	-50429	10833	5408	108749	17940	15912	33852	No	5.58	Si
SLU 78	1.99	9378.26	-50662	-29746	4835	3.12	3.12	-59588	10833	5408	108749	17940	15912	33852	No	7	Si
SLU 78	4.09	5301.72	-43003	-25250	6069	3.12	3.12	-50580	10833	5408	108749	17940	15912	33852	No	5.58	Si
SLU 81	1.99	9550.42	-50746	-29796	4938	3.12	3.12	-59687	10833	5408	108749	17940	15912	33852	No	6.86	Si
SLU 81	4.09	5449.57	-43024	-25262	6082	3.12	3.12	-50605	10833	5408	108749	17940	15912	33852	No	5.57	Si
SLU 83	1.99	9662.79	-51419	-30191	4996	3.12	3.12	-60479	10833	5408	108749	17940	15912	33852	No	6.78	Si
SLU 83	4.09	5478.17	-43655	-25632	6158	3.12	3.12	-51347	10833	5408	108749	17940	15912	33852	No	5.5	Si
SLU 82	1.99	9416.64	-50911	-29893	4850	3.12	3.12	-59881	10833	5408	108749	17940	15912	33852	No	6.98	Si
SLU 82	4.09	5466.69	-43153	-25338	6082	3.12	3.12	-50757	10833	5408	108749	17940	15912	33852	No	5.57	Si
SLU 84	1.99	9529.01	-51585	-30288	4909	3.12	3.12	-60673	10833	5408	108749	17940	15912	33852	No	6.9	Si
SLU 84	4.09	5495.28	-43784	-25708	6159	3.12	3.12	-51499	10833	5408	108749	17940	15912	33852	No	5.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	1.99	8622.62	-35468	-20826	6224	3.12	3.12	-41718	16250	8112	108749	26910	15912	42822		6.88	Si
SLD 11	4.09	1983.4	-28852	-16940	6656	3.12	3.12	-33935	16250	8112	108749	26910	15912	42822		6.43	Si
SLV 7	1.99	9202.52	-34536	-20278	8637	3.12	3.12	-40622	16250	8112	108749	26910	15912	42822		4.96	Si
SLV 7	4.09	113.32	-26455	-15533	8684	3.12	3.12	-31116	16250	8112	108749	26910	15912	42822		4.93	Si
SLV 11	1.99	11209.88	-36932	-21685	9690	3.12	3.12	-43439	16250	8112	108749	26910	15912	42822		4.42	Si
SLV 11	4.09	-1.36	-28868	-16950	9697	3.12	3.12	-33955	16250	8112	108749	26910	15912	42822		4.42	Si
SLD 7	1.99	7764.38	-34445	-20225	5774	3.12	3.12	-40514	16250	8112	108749	26910	15912	42822		7.42	Si
SLD 7	4.09	2032.61	-27821	-16336	6224	3.12	3.12	-32723	16250	8112	108749	26910	15912	42822		6.88	Si
SLV 15	1.99	11201.55	-38590	-22658	7100	3.12	3.12	-45389	16250	8112	108749	26910	15912	42822		6.03	Si
SLV 15	4.09	2188.74	-32370	-19006	7568	3.12	3.12	-38073	16250	8112	108749	26910	15912	42822		5.66	Si
SLV 16	1.99	10810.77	-38960	-22876	6741	3.12	3.12	-45825	16250	8112	108749	26910	15912	42822		6.35	Si
SLV 16	4.09	2496.08	-32743	-19225	7241	3.12	3.12	-38512	16250	8112	108749	26910	15912	42822		5.91	Si
SLV 12	1.99	10958.04	-37171	-21825	9459	3.12	3.12	-43720	16250	8112	108749	26910	15912	42822		4.53	Si
SLV 12	4.09	196.7	-29109	-17091	9486	3.12	3.12	-34238	16250	8112	108749	26910	15912	42822		4.51	Si
SLD 8	1.99	7654.38	-34550	-20286	5673	3.12	3.12	-40637	16250	8112	108749	26910	15912	42822		7.55	Si
SLD 8	4.09	2119.12	-27927	-16397	6132	3.12	3.12	-32847	16250	8112	108749	26910	15912	42822		6.98	Si
SLV 8	1.99	8950.69	-34775	-20418	8406	3.12	3.12	-40902	16250	8112	108749	26910	15912	42822		5.09	Si
SLV 8	4.09	311.38	-26696	-15675	8474	3.12	3.12	-31399	16250	8112	108749	26910	15912	42822		5.05	Si
SLD 12	1.99	8512.62	-35573	-20887	6123	3.12	3.12	-41840	16250	8112	108749	26910	15912	42822		6.99	Si
SLD 12	4.09	2069.91	-28957	-17002	6564	3.12	3.12	-34059	16250	8112	108749	26910	15912	42822		6.52	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-25855	0.32	156.13	1483.9	2615.19	2049.55	13.13	Si
SLV 4	-26272	0.32	156.13	1498.26	2650.58	2074.42	13.29	Si
SLV 1	-26296	0.32	156.13	1499.07	2652.59	2075.83	13.3	Si
SLV 2	-26713	0.32	156.13	1513.1	2687.99	2100.55	13.45	Si
SLV 7	-28042	0.32	156.13	1555.79	2800.81	2178.3	13.95	Si
SLV 8	-28311	0.32	156.13	1564.05	2823.65	2193.85	14.05	Si
SLV 5	-29511	0.32	156.13	1599.4	2925.66	2262.53	14.49	Si
SLV 6	-29780	0.32	156.13	1606.97	2948.51	2277.74	14.59	Si
SLV 11	-30294	0.32	156.13	1621.08	2992.17	2306.62	14.77	Si
SLV 12	-30563	0.32	156.13	1628.28	3015.03	2321.65	14.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1257

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-22438	-34110	216	0.746	2528.3	0.971	11.16935	14.44837	No
SLV 9	-22348	-33871	216	0.749	2519.1	0.97	11.21113	14.44837	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-22332	-37171	58	0.756	2517.5	0.97	11.31761	14.44837	No
SLV 11	-22242	-36932	58	0.758	2508.4	0.97	11.36015	14.44837	No
SLV 8	-20103	-34775	-211	0.824	2290.6	0.968	12.37538	14.44837	No
SLV 6	-20208	-31714	-53	0.827	2301.3	0.968	12.42443	14.44837	No
SLV 7	-20013	-34536	-211	0.827	2281.4	0.968	12.42697	14.44837	No
SLV 5	-20119	-31475	-53	0.831	2292.2	0.968	12.47597	14.44837	No
SLV 14	-25026	-38042	473	0.666	2791.9	0.973	9.94336	7.3053	Si
SLV 16	-24995	-38960	426	0.668	2788.7	0.973	9.98177	7.3053	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.537	SLU 83	Si
V_SLU	5.497	SLU 84	Si
PF_SLV	4.122	SLV 11	Si
V_SLV	4.416	SLV 11	Si
PFFP_SLV	13.127	SLV 3	Si
R_SLV	0.773	SLV 10	No

Maschio 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	-3.314	-8.433	-3.314	L4	L5	0.97	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	2.89	-1589.35	-18568	-0.0002016	0.0003743	0.0035	0.97	2958.52	4937.17	4937.17	3.11	No	Si
SLU 82	4.79	-876.05	-13874	-0.0001233	0.0003743	0.0035	0.97	3352.89	4502.18	4502.18	5.14	No	Si
SLU 83	2.89	-1609.35	-18833	-0.0002056	0.0003743	0.0035	0.97	2913.31	4933.94	4933.94	3.07	No	Si
SLU 83	4.79	-886.96	-14087	-0.0001255	0.0003743	0.0035	0.97	3351.74	4540.82	4540.82	5.12	No	Si
SLU 80	2.89	-1536.35	-18303	-0.0001959	0.0003743	0.0035	0.97	3001.4	4939.41	4939.41	3.22	No	Si
SLU 80	4.79	-886.95	-13740	-0.0001227	0.0003743	0.0035	0.97	3352.8	4478.27	4478.27	5.05	No	Si
SLU 84	2.89	-1608.63	-18856	-0.0002058	0.0003743	0.0035	0.97	2909.26	4933.68	4933.68	3.07	No	Si
SLU 84	4.79	-894.13	-14117	-0.0001261	0.0003743	0.0035	0.97	3351.45	4545.92	4545.92	5.08	No	Si
SLU 79	2.89	-1537.06	-18280	-0.0001957	0.0003743	0.0035	0.97	3005.01	4939.25	4939.25	3.21	No	Si
SLU 79	4.79	-879.79	-13710	-0.0001222	0.0003743	0.0035	0.97	3352.69	4472.98	4472.98	5.08	No	Si
SLU 78	2.89	-1541.96	-18435	-0.0001976	0.0003743	0.0035	0.97	2980.37	4938.93	4938.93	3.2	No	Si
SLU 78	4.79	-898.23	-13857	-0.0001242	0.0003743	0.0035	0.97	3352.91	4499.19	4499.19	5.01	No	Si
SLU 75	2.89	-1522.68	-18148	-0.0001936	0.0003743	0.0035	0.97	3025.39	4934.36	4934.36	3.24	No	Si
SLU 75	4.79	-880.15	-13614	-0.0001214	0.0003743	0.0035	0.97	3352.14	4455.89	4455.89	5.06	No	Si
SLU 77	2.89	-1542.67	-18412	-0.0001974	0.0003743	0.0035	0.97	2984.08	4939.24	4939.24	3.2	No	Si
SLU 77	4.79	-891.06	-13827	-0.0001236	0.0003743	0.0035	0.97	3352.93	4493.86	4493.86	5.04	No	Si
SLU 81	2.89	-1590.07	-18545	-0.0002014	0.0003743	0.0035	0.97	2962.33	4937.47	4937.47	3.11	No	Si
SLU 81	4.79	-868.88	-13844	-0.0001228	0.0003743	0.0035	0.97	3352.92	4496.84	4496.84	5.18	No	Si
SLU 74	2.89	-1523.4	-18125	-0.0001934	0.0003743	0.0035	0.97	3028.87	4931.98	4931.98	3.24	No	Si
SLU 74	4.79	-872.99	-13584	-0.0001209	0.0003743	0.0035	0.97	3351.9	4450.61	4450.61	5.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.89	2638.74	-6214	-0.000658	0.0005615	0.0035	0.97		2660.19	2660.19	1.01		Si
SLV 4	4.79	-1879.09	-12674	-0.0001467	0.0005615	0.0035	0.97		4973.78	4973.78	2.65		Si
SLV 14	2.89	-4315.75	-18040	-0.0003381	0.0005615	0.0035	0.776		6106.06	6106.06	1.41		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	4.79	507.1	-6134	-0.0000522	0.0005615	0.0035	0.97		2630.52	2630.52	5.19		Si
SLV 3	2.89	2270.49	-6499	-0.0001943	0.0005615	0.0035	0.97		2766.93	2766.93	1.22		Si
SLV 3	4.79	-1704.82	-12125	-0.0001359	0.0005615	0.0035	0.97		4851.4	4851.4	2.85		Si
SLV 16	2.89	-4619.68	-19091	-0.0003744	0.0005615	0.0035	0.776		6283.72	6283.72	1.36		Si
SLV 16	4.79	599.61	-6769	-0.0000593	0.0005615	0.0035	0.97		2868.43	2868.43	4.78		Si
SLV 1	2.89	2574.42	-5448	-0.0076333	0.0005615	0.0035	0.776		2376.66	2376.66	0.92		No
SLV 1	4.79	-1797.33	-11491	-0.0001351	0.0005615	0.0035	0.97		4667.11	4667.11	2.6		Si
SLV 2	2.89	2942.67	-5163	-0.0183512	0.0005615	0.0035	0.776		2272.29	2272.29	0.77		No
SLV 2	4.79	-1971.6	-12040	-0.0001461	0.0005615	0.0035	0.97		4827.52	4827.52	2.45		Si
SLV 13	2.89	-4684	-18325	-0.0003843	0.0005615	0.0035	0.776		6153.66	6153.66	1.31		Si
SLV 13	4.79	681.37	-5585	-0.0000551	0.0005615	0.0035	0.97		2427.15	2427.15	3.56		Si
SLV 11	2.89	-2736.61	-16045	-0.0002097	0.0005615	0.0035	0.97		5763.85	5763.85	2.11		Si
SLV 11	4.79	-16.71	-9124	-0.0000526	0.0005615	0.0035	0.97		3931.58	3931.58	235.29		Si
SLD 15	2.89	-2718.46	-15309	-0.0002036	0.0005615	0.0035	0.97		5584.19	5584.19	2.05		Si
SLD 15	4.79	-11.65	-7887	-0.000045	0.0005615	0.0035	0.97		3511.05	3511.05	301.29		Si
SLV 15	2.89	-4987.93	-19376	-0.0004269	0.0005615	0.0035	0.776		6332.96	6332.96	1.27		Si
SLV 15	4.79	773.89	-6220	-0.0000622	0.0005615	0.0035	0.97		2662.32	2662.32	3.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 62	2.89	-1487.56	-17002	-14158	-1789	0.97	0.97	-52127	10833	2942	38062	8133	2474	10607	No	5.93	Si
SLU 62	4.79	-788.68	-12520	-10425	781	0.97	0.97	-38385	10833	2942	38062	8133	2474	10607	No	13.58	Si
SLU 82	2.89	-1589.35	-18568	-15462	-1876	0.97	0.97	-56928	10833	2942	38062	8133	2474	10607	No	5.65	Si
SLU 82	4.79	-876.05	-13874	-11553	869	0.97	0.97	-42535	10833	2942	38062	8133	2474	10607	No	12.21	Si
SLU 78	2.89	-1541.96	-18435	-15351	-1803	0.97	0.97	-56520	10833	2942	38062	8133	2474	10607	No	5.88	Si
SLU 78	4.79	-898.23	-13857	-11539	952	0.97	0.97	-42484	10833	2942	38062	8133	2474	10607	No	11.15	Si
SLU 84	2.89	-1608.63	-18856	-15701	-1897	0.97	0.97	-57810	10833	2942	38062	8133	2474	10607	No	5.59	Si
SLU 84	4.79	-894.13	-14117	-11755	894	0.97	0.97	-43280	10833	2942	38062	8133	2474	10607	No	11.86	Si
SLU 81	2.89	-1590.07	-18545	-15443	-1880	0.97	0.97	-56858	10833	2942	38062	8133	2474	10607	No	5.64	Si
SLU 81	4.79	-868.88	-13844	-11528	853	0.97	0.97	-42444	10833	2942	38062	8133	2474	10607	No	12.43	Si
SLU 77	2.89	-1542.67	-18412	-15332	-1807	0.97	0.97	-56449	10833	2942	38062	8133	2474	10607	No	5.87	Si
SLU 77	4.79	-891.06	-13827	-11514	936	0.97	0.97	-42393	10833	2942	38062	8133	2474	10607	No	11.33	Si
SLU 80	2.89	-1536.35	-18303	-15241	-1798	0.97	0.97	-56115	10833	2942	38062	8133	2474	10607	No	5.9	Si
SLU 80	4.79	-886.95	-13740	-11442	934	0.97	0.97	-42126	10833	2942	38062	8133	2474	10607	No	11.36	Si
SLU 83	2.89	-1609.35	-18833	-15682	-1902	0.97	0.97	-57739	10833	2942	38062	8133	2474	10607	No	5.58	Si
SLU 83	4.79	-886.96	-14087	-11730	879	0.97	0.97	-43189	10833	2942	38062	8133	2474	10607	No	12.07	Si
SLU 79	2.89	-1537.06	-18280	-15222	-1802	0.97	0.97	-56045	10833	2942	38062	8133	2474	10607	No	5.88	Si
SLU 79	4.79	-879.79	-13710	-11417	918	0.97	0.97	-42035	10833	2942	38062	8133	2474	10607	No	11.55	Si
SLU 74	2.89	-1523.4	-18125	-15093	-1786	0.97	0.97	-55568	10833	2942	38062	8133	2474	10607	No	5.94	Si
SLU 74	4.79	-872.99	-13584	-11312	910	0.97	0.97	-41648	10833	2942	38062	8133	2474	10607	No	11.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.89	-4987.93	-19376	-16135	-8292	0.776	0.6827	0	0	0	38062	9760	1979	11739		1.42	Si
SLV 15	4.79	773.89	-6220	-5179	-3392	0.97	0.97	-19069	14230	3865	38062	12200	2474	14673		4.33	Si
SLV 4	2.89	2638.74	-6214	-5174	5156	0.97	0.1811	-114907	16250	824	38062	12200	2474	14673		2.85	Si
SLV 4	4.79	-1879.09	-12674	-10554	4571	0.97	0.97	-38858	16250	4414	38062	12200	2474	14673		3.21	Si
SLV 3	2.89	2270.49	-6499	-5412	4535	0.97	0.407	-19925	14402	1641	38062	12200	2474	14673		3.24	Si
SLV 3	4.79	-1704.82	-12125	-10097	4126	0.97	0.97	-37174	16250	4414	38062	12200	2474	14673		3.56	Si
SLV 14	2.89	-4315.75	-18040	-15022	-6918	0.776	0.7373	0	0	0	38062	9760	1979	11739		1.7	Si
SLV 14	4.79	507.1	-6134	-5108	-2806	0.97	0.97	-18807	14178	3851	38062	12200	2474	14673		5.23	Si
SLV 1	2.89	2574.42	-5448	-4537	5287	0.776	0.0374	0	0	0	38062	9760	1979	11739		2.22	Si
SLV 1	4.79	-1797.33	-11491	-9568	4269	0.97	0.97	-35229	16250	4414	38062	12200	2474	14673		3.44	Si
SLV 11	2.89	-2736.61	-16045	-13361	-4570	0.97	0.9433	-49191	16250	4292	38062	12200	2474	14673		3.21	Si
SLV 11	4.79	-16.71	-9124	-7598	-847	0.97	0.97	-27974	16011	4349	38062	12200	2474	14673		17.32	Si
SLV 16	2.89	-4619.68	-19091	-15897	-7671	0.776	0.7291	0	0	0	38062	9760	1979	11739		1.53	Si
SLV 16	4.79	599.61	-6769	-5636	-2948	0.97	0.97	-20752	14567	3957	38062	12200	2474	14673		4.98	Si
SLV 2	2.89	2942.67	-5163	-4299	5908	0.776	0	0	0	0	38062	9760	1979	11739		1.99	Si
SLV 2	4.79	-1971.6	-12040	-10026	4713	0.97	0.9638	-36912	16250	4385	38062	12200	2474	14673		3.11	Si
SLV 13	2.89	-4684	-18325	-15259	-7539	0.776	0.6882	0	0	0	38062	9760	1979	11739		1.56	Si
SLV 13	4.79	681.37	-5585	-4651	-3250	0.97	0.97	-17124	13841	3759	38062	12200	2474	14673		4.52	Si
SLD 15	2.89	-2718.46	-15309	-12748	-4227	0.97	0.9223	-50885	16250	4197	38062	12200	2474	14673		3.47	Si
SLD 15	4.79	-11.65	-7887	-6568	-1072	0.97	0.97	-24182	15253	4143	38062	12200	2474	14673		13.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.32	17448	-4739	80.28	587.67	7.32	Si
SLV 1	179667	0.32	18498	-5024	80.28	618.2	7.7	Si
SLV 4	179667	0.32	21773	-5914	80.28	709.88	8.84	Si
SLV 3	179667	0.32	22823	-6199	80.28	738.15	9.19	Si
SLV 6	179667	0.32	29086	-7900	80.28	895.35	11.15	Si
SLV 5	179667	0.32	29763	-8084	80.28	911.16	11.35	Si
SLV 10	179667	0.32	43226	-11740	80.28	1178.42	14.68	Si
SLV 8	179667	0.32	43502	-11815	80.28	1182.96	14.74	Si
SLV 9	179667	0.32	43903	-11924	80.28	1189.47	14.82	Si
SLV 7	179667	0.32	44179	-11999	80.28	1193.92	14.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-9242	-11127	250	0.559	1073.7	0.963	8.43526	10.55427	No
SLV 7	-9019	-10865	251	0.571	1051	0.962	8.61835	10.55427	No
SLV 12	-7852	-10353	274	0.639	932.3	0.958	9.69608	10.55427	No
SLV 11	-7629	-10092	274	0.655	909.6	0.957	9.94446	10.55427	No
SLV 6	-6291	-8015	-246	0.774	773.7	0.95	11.83614	10.55427	Si
SLV 5	-6068	-7753	-246	0.798	751	0.949	12.21517	10.55427	Si
SLV 10	-4900	-7241	-222	0.955	632.6	0.941	14.75966	10.55427	Si
SLV 9	-4677	-6980	-222	0.992	610.1	0.939	15.36075	10.55427	Si
SLV 4	-9893	-11012	49	0.546	1139.9	0.965	8.22736	4.78007	Si
SLV 3	-9547	-10607	49	0.563	1104.7	0.964	8.48956	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.066	SLU 83	Si
V_SLU	5.576	SLU 83	Si
PF_SLV	0.772	SLV 2	No
V_SLV	1.416	SLV 15	Si
PFFP_SLV	7.32	SLV 2	Si
R_SLV	0.799	SLV 8	No

Maschio 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L4	L5	4.68	0.14	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.99	12022.65	-67028	-0.0001792	0.0004492	0.0035	4.68	25526.92	108356.87	108356.87	9.01	No	Si
SLU 80	5.46	-1169.12	-42415	-0.0000873	0.0004492	0.0035	4.68	46667.02	89435	89435	76.5	No	Si
SLU 76	1.99	11901.49	-66210	-0.0001766	0.0004492	0.0035	4.68	26797.83	107613.72	107613.72	9.04	No	Si
SLU 76	5.46	-1163.41	-41818	-0.000086	0.0004492	0.0035	4.68	46739.86	88612.03	88612.03	76.17	No	Si
SLU 75	1.99	11957.91	-66751	-0.0001783	0.0004492	0.0035	4.68	25961.94	108105.05	108105.05	9.04	No	Si
SLU 75	5.46	-1205.12	-42229	-0.000087	0.0004492	0.0035	4.68	46692	89178.03	89178.03	74	No	Si
SLU 79	1.99	11990.91	-67035	-0.0001792	0.0004492	0.0035	4.68	25514.71	108363.9	108363.9	9.04	No	Si
SLU 79	5.46	-1204.54	-42391	-0.0000873	0.0004492	0.0035	4.68	46670.35	89401.94	89401.94	74.22	No	Si
SLU 81	1.99	12095.94	-67923	-0.0001819	0.0004492	0.0035	4.68	24090.85	109170.39	109170.39	9.03	No	Si
SLU 81	5.46	-1386.66	-42861	-0.0000889	0.0004492	0.0035	4.68	46599.08	90049.37	90049.37	64.94	No	Si
SLU 84	1.99	12270.01	-68727	-0.0001847	0.0004492	0.0035	4.68	22759.72	109901.83	109901.83	8.96	No	Si
SLU 84	5.46	-1333.32	-43497	-0.0000901	0.0004492	0.0035	4.68	46481.84	90927.44	90927.44	68.2	No	Si
SLU 78	1.99	12100.24	-67563	-0.0001809	0.0004492	0.0035	4.68	24673.5	108843.52	108843.52	9	No	Si
SLU 78	5.46	-1187.21	-42841	-0.0000883	0.0004492	0.0035	4.68	46602.23	90023.04	90023.04	75.83	No	Si
SLU 77	1.99	12068.5	-67571	-0.0001809	0.0004492	0.0035	4.68	24661.05	108850.55	108850.55	9.02	No	Si
SLU 77	5.46	-1222.64	-42817	-0.0000883	0.0004492	0.0035	4.68	46606.16	89989.98	89989.98	73.6	No	Si
SLU 82	1.99	12127.68	-67915	-0.000182	0.0004492	0.0035	4.68	24103.46	109163.36	109163.36	9	No	Si
SLU 82	5.46	-1351.23	-42884	-0.0000888	0.0004492	0.0035	4.68	46595.1	90082.43	90082.43	66.67	No	Si
SLU 83	1.99	12238.27	-68735	-0.0001846	0.0004492	0.0035	4.68	22746.74	109908.86	109908.86	8.98	No	Si
SLU 83	5.46	-1368.75	-43473	-0.0000901	0.0004492	0.0035	4.68	46486.69	90894.38	90894.38	66.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.99	13096.65	-39546	-0.0001102	0.0006738	0.0035	4.68		78413.96	78413.96	5.99		Si
SLV 5	5.46	4388.26	-27840	-0.0000637	0.0006738	0.0035	4.68		58463.43	58463.43	13.32		Si
SLV 10	1.99	12213.69	-48168	-0.0001263	0.0006738	0.0035	4.68		92166.41	92166.41	7.55		Si
SLV 10	5.46	3456.41	-32839	-0.0000713	0.0006738	0.0035	4.68		66983.77	66983.77	19.38		Si
SLV 4	1.99	9445.3	-31106	-0.0000832	0.0006738	0.0035	4.68		64030.73	64030.73	6.78		Si
SLV 4	5.46	-191.44	-19827	-0.0000376	0.0006738	0.0035	4.68		54201.85	54201.85	283.13		Si
SLD 2	1.99	9938.03	-39185	-0.0001011	0.0006738	0.0035	4.68		77799.68	77799.68	7.83		Si
SLD 2	5.46	709.6	-25394	-0.0000497	0.0006738	0.0035	4.68		54295.56	54295.56	76.52		Si
SLV 2	1.99	12028.41	-29742	-0.000087	0.0006738	0.0035	4.68		61705.83	61705.83	5.13		Si
SLV 2	5.46	2602.71	-20729	-0.0000453	0.0006738	0.0035	4.68		46166.99	46166.99	17.74		Si
SLV 9	1.99	11838.97	-48715	-0.0001265	0.0006738	0.0035	4.68		92895.62	92895.62	7.85		Si
SLV 9	5.46	3297.91	-32932	-0.0000711	0.0006738	0.0035	4.68		67141.74	67141.74	20.36		Si
SLV 6	1.99	13471.37	-38999	-0.00011	0.0006738	0.0035	4.68		77481.86	77481.86	5.75		Si
SLV 6	5.46	4546.76	-27747	-0.0000639	0.0006738	0.0035	4.68		58305.46	58305.46	12.82		Si
SLV 1	1.99	11446.94	-30591	-0.0000872	0.0006738	0.0035	4.68		63152.24	63152.24	5.52		Si
SLV 1	5.46	2356.75	-20872	-0.000045	0.0006738	0.0035	4.68		46446.65	46446.65	19.71		Si
SLV 3	1.99	8863.83	-31955	-0.0000834	0.0006738	0.0035	4.68		65477.13	65477.13	7.39		Si
SLV 3	5.46	-437.4	-19970	-0.0000385	0.0006738	0.0035	4.68		54485.78	54485.78	124.57		Si
SLD 6	1.99	10627.24	-43063	-0.0001111	0.0006738	0.0035	4.68		84408.44	84408.44	7.94		Si
SLD 6	5.46	1581.66	-28391	-0.0000577	0.0006738	0.0035	4.68		59402.12	59402.12	37.56		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.99	12270.01	-68727	-38106	-5781	4.68	4.68	-58160	10833	7098	108749	23546	23868	47414	No	8.2	Si
SLU 84	5.46	-1333.32	-43497	-24117	-4506	4.68	4.68	-36809	10833	7098	108749	23546	23868	47414	No	10.52	Si
SLU 80	1.99	12022.65	-67028	-37164	-5841	4.68	4.68	-56721	10833	7098	108749	23546	23868	47414	No	8.12	Si
SLU 80	5.46	-1169.12	-42415	-23517	-4623	4.68	4.68	-35893	10833	7098	108749	23546	23868	47414	No	10.26	Si
SLU 70	1.99	11190.98	-61701	-34211	-5768	4.68	4.68	-52214	10833	7098	108749	23546	23868	47414	No	8.22	Si
SLU 70	5.46	-845.87	-38887	-21561	-4692	4.68	4.68	-32908	10833	7098	108749	23546	23868	47414	No	10.11	Si
SLU 79	1.99	11990.91	-67035	-37168	-5745	4.68	4.68	-56728	10833	7098	108749	23546	23868	47414	No	8.25	Si
SLU 79	5.46	-1204.54	-42391	-23504	-4525	4.68	4.68	-35873	10833	7098	108749	23546	23868	47414	No	10.48	Si
SLU 72	1.99	11113.39	-61166	-33914	-5727	4.68	4.68	-51761	10833	7098	108749	23546	23868	47414	No	8.28	Si
SLU 72	5.46	-827.78	-38461	-21325	-4663	4.68	4.68	-32547	10833	7098	108749	23546	23868	47414	No	10.17	Si
SLU 78	1.99	12100.24	-67563	-37461	-5882	4.68	4.68	-57175	10833	7098	108749	23546	23868	47414	No	8.06	Si
SLU 78	5.46	-1187.21	-42841	-23754	-4651	4.68	4.68	-36254	10833	7098	108749	23546	23868	47414	No	10.19	Si
SLU 73	1.99	11759.16	-65398	-36260	-5687	4.68	4.68	-55342	10833	7098	108749	23546	23868	47414	No	8.34	Si
SLU 73	5.46	-1181.32	-41206	-22847	-4490	4.68	4.68	-34870	10833	7098	108749	23546	23868	47414	No	10.56	Si
SLU 76	1.99	11901.49	-66210	-36711	-5796	4.68	4.68	-56030	10833	7098	108749	23546	23868	47414	No	8.18	Si
SLU 76	5.46	-1163.41	-41818	-23186	-4589	4.68	4.68	-35388	10833	7098	108749	23546	23868	47414	No	10.33	Si
SLU 77	1.99	12068.5	-67571	-37465	-5785	4.68	4.68	-57181	10833	7098	108749	23546	23868	47414	No	8.2	Si
SLU 77	5.46	-1222.64	-42817	-23740	-4553	4.68	4.68	-36234	10833	7098	108749	23546	23868	47414	No	10.41	Si
SLU 75	1.99	11957.91	-66751	-37010	-5772	4.68	4.68	-56487	10833	7098	108749	23546	23868	47414	No	8.21	Si
SLU 75	5.46	-1205.12	-42229	-23414	-4552	4.68	4.68	-35736	10833	7098	108749	23546	23868	47414	No	10.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	1.99	13096.65	-39546	-21926	-13571	4.68	4.68	-33465	16250	10647	108749	35319	23868	59187		4.36	Si
SLV 5	5.46	4388.26	-27840	-15436	-11250	4.68	4.68	-23559	16250	10647	108749	35319	23868	59187		5.26	Si
SLV 10	1.99	12213.69	-48168	-26707	-14872	4.68	4.68	-40761	16250	10647	108749	35319	23868	59187		3.98	Si
SLV 10	5.46	3456.41	-32839	-18208	-13304	4.68	4.68	-27790	16250	10647	108749	35319	23868	59187		4.45	Si
SLV 13	1.99	7254.66	-61154	-33907	-8061	4.68	4.68	-51751	16250	10647	108749	35319	23868	59187		7.34	Si
SLV 13	5.46	-1277.73	-37846	-20984	-7730	4.68	4.68	-32026	16250	10647	108749	35319	23868	59187		7.66	Si
SLD 10	1.99	10096.74	-46939	-26025	-8856	4.68	4.68	-39721	16250	10647	108749	35319	23868	59187		6.68	Si
SLD 10	5.46	1115.58	-30555	-16942	-7697	4.68	4.68	-25857	16250	10647	108749	35319	23868	59187		7.69	Si
SLD 9	1.99	9933.08	-47178	-26158	-8630	4.68	4.68	-39923	16250	10647	108749	35319	23868	59187		6.86	Si
SLD 9	5.46	1046.35	-30596	-16964	-7394	4.68	4.68	-25891	16250	10647	108749	35319	23868	59187		8.01	Si
SLD 6	1.99	10627.24	-43063	-23876	-8531	4.68	4.68	-36441	16250	10647	108749	35319	23868	59187		6.94	Si
SLD 6	5.46	1581.66	-28391	-15741	-7116	4.68	4.68	-24025	16250	10647	108749	35319	23868	59187		8.32	Si
SLV 14	1.99	7836.14	-60305	-33437	-8864	4.68	4.68	-51033	16250	10647	108749	35319	23868	59187		6.68	Si
SLV 14	5.46	-1031.77	-37702	-20904	-8807	4.68	4.68	-31905	16250	10647	108749	35319	23868	59187		6.72	Si
SLD 5	1.99	10463.57	-43302	-24009	-8305	4.68	4.68	-36644	16250	10647	108749	35319	23868	59187		7.13	Si
SLD 5	5.46	1512.43	-28431	-15764	-6813	4.68	4.68	-24059	16250	10647	108749	35319	23868	59187		8.69	Si
SLV 9	1.99	11838.97	-48715	-27010	-14354	4.68	4.68	-41224	16250	10647	108749	35319	23868	59187		4.12	Si
SLV 9	5.46	3297.91	-32932	-18259	-12610	4.68	4.68	-27868	16250	10647	108749	35319	23868	59187		4.69	Si
SLV 6	1.99	13471.37	-38999	-21623	-14088	4.68	4.68	-33002	16250	10647	108749	35319	23868	59187		4.2	Si
SLV 6	5.46	4546.76	-27747	-15385	-11944	4.68	4.68	-23481	16250	10647	108749	35319	23868	59187		4.96	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.14 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-25856	0.32	207.17	1420.22	2465.04	1942.63	9.38	Si
SLV 3	-26064	0.32	207.17	1428.48	2481.72	1955.1	9.44	Si
SLV 2	-26303	0.32	207.17	1437.94	2500.97	1969.46	9.51	Si
SLV 1	-26511	0.32	207.17	1446.09	2517.66	1981.87	9.57	Si
SLV 8	-33897	0.32	207.17	1703.03	3104.42	2403.73	11.6	Si
SLV 7	-34031	0.32	207.17	1707.1	3114.64	2410.87	11.64	Si
SLV 6	-35389	0.32	207.17	1747.21	3218.31	2482.76	11.98	Si
SLV 5	-35523	0.32	207.17	1751.04	3228.54	2489.79	12.02	Si
SLV 12	-41206	0.32	207.17	1894.67	3663.32	2778.99	13.41	Si
SLV 11	-41340	0.32	207.17	1897.6	3673.58	2785.59	13.45	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.03 Ta = 0.1436

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-32932	-48715	197	0.767	3673	0.973	11.45803	14.44837	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-32839	-48168	196	0.769	3663.5	0.973	11.4887	14.44837	No
SLV 11	-29925	-53262	122	0.84	3366.8	0.971	12.572	14.44837	No
SLV 12	-29832	-52715	121	0.842	3357.3	0.971	12.60895	14.44837	No
SLV 5	-27840	-39546	-135	0.897	3154.5	0.969	13.4464	14.44837	No
SLV 6	-27747	-38999	-136	0.899	3145	0.969	13.48819	14.44837	No
SLV 7	-24833	-44093	-211	0.992	2848.4	0.966	14.9219	14.44837	Si
SLV 8	-24740	-43546	-211	0.995	2839	0.966	14.97375	14.44837	Si
SLV 13	-37846	-61154	559	0.666	4173.5	0.976	9.91737	8.43463	Si
SLV 14	-37702	-60305	558	0.669	4158.8	0.976	9.95333	8.43463	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.957	SLU 84	Si
V_SLU	8.061	SLU 78	Si
PF_SLV	5.13	SLV 2	Si
V_SLV	3.98	SLV 10	Si
PFFP_SLV	9.377	SLV 4	Si
R_SLV	0.793	SLV 9	No

Maschio 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.463	-3.314	L4	L5	0.5	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	3.99	212.08	-11541	-0.0002001	0.0003743	0.0035	0.5	549.13	1282.94	1282.94	6.05	No	Si
SLU 75	4.79	-239.96	-13051	-0.0002439	0.0003743	0.0035	0.5	275.3	1224.92	1224.92	5.1	No	Si
SLU 70	3.99	213.88	-10539	-0.0001794	0.0003743	0.0035	0.5	686.59	1291.71	1291.71	6.04	No	Si
SLU 70	4.79	-263.24	-11887	-0.0002195	0.0003743	0.0035	0.5	493.38	1291.03	1291.03	4.9	No	Si
SLU 68	3.99	228.98	-10265	-0.000177	0.0003743	0.0035	0.5	718.16	1294.03	1294.03	5.65	No	Si
SLU 68	4.79	-270.28	-11594	-0.0002141	0.0003743	0.0035	0.5	540.81	1307.91	1307.91	4.84	No	Si
SLU 67	3.99	213.5	-10347	-0.0001755	0.0003743	0.0035	0.5	708.94	1293.32	1293.32	6.06	No	Si
SLU 67	4.79	-260.03	-11675	-0.0002137	0.0003743	0.0035	0.5	528	1303.34	1303.34	5.01	No	Si
SLU 65	3.99	228.6	-10073	-0.0001731	0.0003743	0.0035	0.5	738.65	1295.72	1295.72	5.67	No	Si
SLU 65	4.79	-267.07	-11382	-0.0002085	0.0003743	0.0035	0.5	573.25	1309.13	1309.13	4.9	No	Si
SLU 78	3.99	212.46	-11733	-0.0002044	0.0003743	0.0035	0.5	518.74	1280.85	1280.85	6.03	No	Si
SLU 78	4.79	-243.17	-13263	-0.0002508	0.0003743	0.0035	0.5	230.46	1212.95	1212.95	4.99	No	Si
SLU 72	3.99	212.94	-10449	-0.0001774	0.0003743	0.0035	0.5	697.2	1292.45	1292.45	6.07	No	Si
SLU 72	4.79	-259.3	-11788	-0.0002161	0.0003743	0.0035	0.5	509.75	1296.77	1296.77	5	No	Si
SLU 73	3.99	227.18	-11266	-0.0001973	0.0003743	0.0035	0.5	590.34	1286.03	1286.03	5.66	No	Si
SLU 73	4.79	-246.99	-12758	-0.0002377	0.0003743	0.0035	0.5	334.7	1241.34	1241.34	5.03	No	Si
SLU 76	3.99	227.56	-11458	-0.0002016	0.0003743	0.0035	0.5	561.81	1283.85	1283.85	5.64	No	Si
SLU 76	4.79	-250.21	-12970	-0.0002443	0.0003743	0.0035	0.5	292.03	1229.44	1229.44	4.91	No	Si
SLU 80	3.99	211.52	-11643	-0.0002022	0.0003743	0.0035	0.5	533.11	1281.82	1281.82	6.06	No	Si
SLU 80	4.79	-239.22	-13164	-0.0002469	0.0003743	0.0035	0.5	251.61	1218.63	1218.63	5.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	3.99	1055.82	-5336	-0.0006584	0.0005615	0.0035	0.5		1084.13	1084.13	1.03		Si
SLV 4	4.79	-2043.67	-6377	-0.0139443	0.0005615	0.0035	0.4		1302.53	1302.53	0.64		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	3.99	954.11	-5529	-0.000325	0.0005615	0.0035	0.5		1113.44	1113.44	1.17		Si
SLV 3	4.79	-1838.47	-6549	-0.0111299	0.0005615	0.0035	0.4		1323.33	1323.33	0.72		No
SLV 13	3.99	-773.01	-10287	-0.0002504	0.0005615	0.0035	0.5		1711.34	1711.34	2.21		Si
SLV 13	4.79	1708.67	-11251	-0.0015112	0.0005615	0.0035	0.5		1744.28	1744.28	1.02		Si
SLV 1	3.99	948.87	-4164	-0.0076165	0.0005615	0.0035	0.5		894.06	894.06	0.94		No
SLV 1	4.79	-1825.87	-5148	-0.013872	0.0005615	0.0035	0.4		1121.17	1121.17	0.61		No
SLV 14	3.99	-671.3	-10094	-0.0002292	0.0005615	0.0035	0.5		1693.64	1693.64	2.52		Si
SLV 14	4.79	1503.46	-11079	-0.0005566	0.0005615	0.0035	0.5		1734.43	1734.43	1.15		Si
SLD 4	3.99	532.37	-6759	-0.0001549	0.0005615	0.0035	0.5		1304.42	1304.42	2.45		Si
SLD 4	4.79	-969.28	-7780	-0.0002681	0.0005615	0.0035	0.5		1471.83	1471.83	1.52		Si
SLD 2	3.99	530.29	-6164	-0.0001466	0.0005615	0.0035	0.5		1211.37	1211.37	2.28		Si
SLD 2	4.79	-964.71	-7166	-0.0002685	0.0005615	0.0035	0.4		1396.41	1396.41	1.45		Si
SLV 16	3.99	-666.05	-11459	-0.0002522	0.0005615	0.0035	0.5		1783.36	1783.36	2.68		Si
SLV 16	4.79	1490.87	-12480	-0.000538	0.0005615	0.0035	0.5		1816.15	1816.15	1.22		Si
SLV 15	3.99	-767.76	-11652	-0.0002746	0.0005615	0.0035	0.5		1792.55	1792.55	2.33		Si
SLV 15	4.79	1696.08	-12652	-0.0009234	0.0005615	0.0035	0.5		1826.45	1826.45	1.08		Si
SLV 2	3.99	1050.57	-3971	-0.0169469	0.0005615	0.0035	0.4		855.73	855.73	0.81		No
SLV 2	4.79	-2031.08	-4976	-0.0175108	0.0005615	0.0035	0.4		1093.03	1093.03	0.54		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	3.99	228.6	-10073	-8388	729	0.5	0.5	-59911	10833	1517	38062	4192	1275	5467	No	7.5	Si
SLU 65	4.79	-267.07	-11382	-9478	728	0.5	0.5	-67700	10833	1517	38062	4192	1275	5467	No	7.51	Si
SLU 68	3.99	228.98	-10265	-8547	734	0.5	0.5	-61053	10833	1517	38062	4192	1275	5467	No	7.44	Si
SLU 68	4.79	-270.28	-11594	-9655	734	0.5	0.5	-68961	10833	1517	38062	4192	1275	5467	No	7.45	Si
SLU 67	3.99	213.5	-10347	-8616	702	0.5	0.5	-61545	10833	1517	38062	4192	1275	5467	No	7.79	Si
SLU 67	4.79	-260.03	-11675	-9722	702	0.5	0.5	-69443	10833	1517	38062	4192	1275	5467	No	7.79	Si
SLU 76	3.99	227.56	-11458	-9541	720	0.5	0.5	-68152	10833	1517	38062	4192	1275	5467	No	7.59	Si
SLU 76	4.79	-250.21	-12970	-10800	719	0.5	0.5	-77144	10833	1517	38062	4192	1275	5467	No	7.6	Si
SLU 75	3.99	212.08	-11541	-9610	688	0.5	0.5	-68644	10833	1517	38062	4192	1275	5467	No	7.95	Si
SLU 75	4.79	-239.96	-13051	-10868	687	0.5	0.5	-77626	10833	1517	38062	4192	1275	5467	No	7.96	Si
SLU 73	3.99	227.18	-11266	-9381	714	0.5	0.5	-67010	10833	1517	38062	4192	1275	5467	No	7.66	Si
SLU 73	4.79	-246.99	-12758	-10624	714	0.5	0.5	-75883	10833	1517	38062	4192	1275	5467	No	7.66	Si
SLU 72	3.99	212.94	-10449	-8701	701	0.5	0.5	-62153	10833	1517	38062	4192	1275	5467	No	7.8	Si
SLU 72	4.79	-259.3	-11788	-9816	701	0.5	0.5	-70115	10833	1517	38062	4192	1275	5467	No	7.8	Si
SLU 70	3.99	213.88	-10539	-8776	708	0.5	0.5	-62687	10833	1517	38062	4192	1275	5467	No	7.72	Si
SLU 70	4.79	-263.24	-11887	-9899	707	0.5	0.5	-70704	10833	1517	38062	4192	1275	5467	No	7.73	Si
SLU 78	3.99	212.46	-11733	-9770	693	0.5	0.5	-69786	10833	1517	38062	4192	1275	5467	No	7.88	Si
SLU 78	4.79	-243.17	-13263	-11044	693	0.5	0.5	-78887	10833	1517	38062	4192	1275	5467	No	7.89	Si
SLU 80	3.99	211.52	-11643	-9695	687	0.5	0.5	-69252	10833	1517	38062	4192	1275	5467	No	7.96	Si
SLU 80	4.79	-239.22	-13164	-10962	686	0.5	0.5	-78298	10833	1517	38062	4192	1275	5467	No	7.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	3.99	-773.01	-10287	-8566	-2954	0.5	0.5	-61189	16250	2275	38062	6288	1275	7563		2.56	Si
SLV 13	4.79	1708.67	-11251	-9369	-2968	0.5	0.2944	-66923	16250	1340	38062	6288	1275	7563		2.55	Si
SLV 1	3.99	948.87	-4164	-3467	3650	0.5	0.0664	-204404	16250	302	38062	6288	1275	7563		2.07	Si
SLV 1	4.79	-1825.87	-5148	-4287	3545	0.4	0	0	0	0	38062	5031	1020	6051		1.71	Si
SLV 6	3.99	423.71	-4556	-3794	1821	0.5	0.471	-27101	15837	2089	38062	6288	1275	7563		4.15	Si
SLV 6	4.79	-742.82	-5508	-4587	1611	0.4	0.3454	0	0	0	38062	5031	1020	6051		3.76	Si
SLD 2	3.99	530.29	-6164	-5133	1994	0.5	0.4919	-36665	16250	2238	38062	6288	1275	7563		3.79	Si
SLD 2	4.79	-964.71	-7166	-5967	1950	0.4	0.3461	0	0	0	38062	5031	1020	6051		3.1	Si
SLV 14	3.99	-671.3	-10094	-8406	-2569	0.5	0.5	-60041	16250	2275	38062	6288	1275	7563		2.94	Si
SLV 14	4.79	1503.46	-11079	-9226	-2582	0.5	0.3429	-65898	16250	1560	38062	6288	1275	7563		2.93	Si
SLV 4	3.99	1055.82	-5336	-4443	3893	0.5	0.1563	-114960	16250	711	38062	6288	1275	7563		1.94	Si
SLV 4	4.79	-2043.67	-6377	-5310	3906	0.4	0	0	0	0	38062	5031	1020	6051		1.55	Si
SLV 2	3.99	1050.57	-3971	-3307	4035	0.4	0	0	0	0	38062	5031	1020	6051		1.5	Si
SLV 2	4.79	-2031.08	-4976	-4143	3930	0.4	0	0	0	0	38062	5031	1020	6051		1.54	Si
SLV 15	3.99	-767.76	-11652	-9703	-3096	0.5	0.5	-69306	16250	2275	38062	6288	1275	7563		2.44	Si
SLV 15	4.79	1696.08	-12652	-10536	-2992	0.5	0.3478	-75255	16250	1583	38062	6288	1275	7563		2.53	Si
SLV 16	3.99	-666.05	-11459	-9542	-2711	0.5	0.5	-68158	16250	2275	38062	6288	1275	7563		2.79	Si
SLV 16	4.79	1490.87	-12480	-10392	-2607	0.5	0.3916	-74231	16250	1782	38062	6288	1275	7563		2.9	Si
SLV 3	3.99	954.11	-5529	-4604	3508	0.5	0.2323	-32884	16250	1057	38062	6288	1275	7563		2.16	Si
SLV 3	4.79	-1838.47	-6549	-5453	3521	0.4	0	0	0	0	38062	5031	1020	6051		1.72	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.32	32381	-4533	41.38	500.1	12.09	Si
SLV 6	179667	0.32	32600	-4564	41.38	502.56	12.15	Si
SLV 1	179667	0.32	34775	-4868	41.38	526.38	12.72	Si
SLV 2	179667	0.32	35114	-4916	41.38	529.99	12.81	Si
SLV 9	179667	0.32	35349	-4949	41.38	532.47	12.87	Si
SLV 10	179667	0.32	35568	-4979	41.38	534.77	12.92	Si
SLV 3	179667	0.32	39846	-5578	41.38	577.21	13.95	Si
SLV 4	179667	0.32	40185	-5626	41.38	580.38	14.03	Si
SLV 13	179667	0.32	44667	-6253	41.38	619.41	14.97	Si
SLV 14	179667	0.32	45007	-6301	41.38	622.16	15.04	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-4986	-2951	57	0.551	576.1	0.964	8.30287	10.55427	No
SLV 11	-4985	-2891	57	0.551	576	0.964	8.30446	10.55427	No
SLV 8	-4630	-3028	59	0.586	539.8	0.962	8.85936	10.55427	No
SLV 7	-4629	-2968	59	0.587	539.7	0.962	8.86117	10.55427	No
SLV 10	-3173	-2993	-92	0.798	391.8	0.949	12.21081	10.55427	Si
SLV 9	-3172	-2933	-92	0.798	391.7	0.949	12.21365	10.55427	Si
SLV 6	-2817	-3071	-90	0.881	355.6	0.945	13.55104	10.55427	Si
SLV 5	-2816	-3011	-90	0.881	355.5	0.945	13.55461	10.55427	Si
SLV 16	-4768	-2891	3	0.583	553.8	0.963	8.7942	4.78007	Si
SLV 15	-4766	-2798	3	0.583	553.7	0.963	8.79693	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.839	SLU 68	Si
V_SLU	7.445	SLU 68	Si
PF_SLV	0.538	SLV 2	No
V_SLV	1.5	SLV 2	Si
PFFP_SLV	12.085	SLV 5	Si
R_SLV	0.787	SLV 12	No

Maschio 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.233	-3.314	-5.463	-3.314	L4	L5	2.23	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	3.99	5968.17	-31678	-0.0001338	0.0003743	0.0035	2.23	17719.86	23372.69	23372.69	3.92	No	Si
SLU 76	4.79	-941.43	-30499	-0.0000888	0.0003743	0.0035	2.23	17691.06	23282.75	23282.75	24.73	No	Si
SLU 84	3.99	6067.76	-33370	-0.0001409	0.0003743	0.0035	2.23	17676	23762.46	23762.46	3.92	No	Si
SLU 84	4.79	-944.21	-32192	-0.0000942	0.0003743	0.0035	2.23	17717.16	23934.03	23934.03	25.35	No	Si
SLU 75	3.99	5900.66	-32248	-0.0001353	0.0003743	0.0035	2.23	17716.3	23526.74	23526.74	3.99	No	Si
SLU 75	4.79	-971.74	-31070	-0.0000908	0.0003743	0.0035	2.23	17711.08	23498.33	23498.33	24.18	No	Si
SLU 80	3.99	5944.02	-32526	-0.0001367	0.0003743	0.0035	2.23	17710.44	23584.51	23584.51	3.97	No	Si
SLU 80	4.79	-956.78	-31347	-0.0000916	0.0003743	0.0035	2.23	17716.7	23604.75	23604.75	24.67	No	Si
SLU 55	3.99	5400.93	-28183	-0.0001169	0.0003743	0.0035	2.23	17492.48	21659.9	21659.9	4.01	No	Si
SLU 55	4.79	-886.55	-27020	-0.0000776	0.0003743	0.0035	2.23	17321.74	22051.34	22051.34	24.87	No	Si
SLU 82	3.99	5979.99	-32816	-0.0001381	0.0003743	0.0035	2.23	17701.44	23645.16	23645.16	3.95	No	Si
SLU 82	4.79	-949.61	-31637	-0.0000925	0.0003743	0.0035	2.23	17719.68	23716.73	23716.73	24.98	No	Si
SLU 68	3.99	5474.62	-28414	-0.0001182	0.0003743	0.0035	2.23	17520.74	21770	21770	3.98	No	Si
SLU 68	4.79	-983.38	-27236	-0.000079	0.0003743	0.0035	2.23	17357.01	22125.9	22125.9	22.5	No	Si
SLU 65	3.99	5386.85	-27859	-0.0001157	0.0003743	0.0035	2.23	17449.76	21506.49	21506.49	3.99	No	Si
SLU 65	4.79	-988.78	-26681	-0.0000774	0.0003743	0.0035	2.23	17263.1	21927.27	21927.27	22.18	No	Si
SLU 73	3.99	5880.4	-31123	-0.0001311	0.0003743	0.0035	2.23	17712.38	23094.11	23094.11	3.93	No	Si
SLU 73	4.79	-946.83	-29945	-0.0000871	0.0003743	0.0035	2.23	17660.65	23076.95	23076.95	24.37	No	Si
SLU 78	3.99	5988.43	-32803	-0.0001381	0.0003743	0.0035	2.23	17701.9	23642.48	23642.48	3.95	No	Si
SLU 78	4.79	-966.33	-31624	-0.0000926	0.0003743	0.0035	2.23	17719.61	23711.78	23711.78	24.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	3.99	1056.85	-20218	-0.0000572	0.0005615	0.0035	2.23		19177.75	19177.75	18.15		Si
SLV 13	4.79	7362.3	-19285	-0.0000987	0.0005615	0.0035	2.23		18359.62	18359.62	2.49		Si
SLV 5	3.99	5365.17	-13338	-0.0000686	0.0005615	0.0035	2.23		13261.5	13261.5	2.47		Si
SLV 5	4.79	-1871.15	-13696	-0.0000457	0.0005615	0.0035	2.23		14915.49	14915.49	7.97		Si
SLV 6	3.99	5611.28	-13640	-0.0000712	0.0005615	0.0035	2.23		13514.06	13514.06	2.41		Si
SLV 6	4.79	-2548.12	-13998	-0.0000511	0.0005615	0.0035	2.23		15177.08	15177.08	5.96		Si
SLV 14	3.99	1438.75	-20687	-0.0000611	0.0005615	0.0035	2.23		19556.77	19556.77	13.59		Si
SLV 14	4.79	6311.81	-19753	-0.0000924	0.0005615	0.0035	2.23		18772.8	18772.8	2.97		Si
SLV 15	3.99	652.67	-25272	-0.0000679	0.0005615	0.0035	2.23		22579.23	22579.23	34.6		Si
SLV 15	4.79	6893.91	-23650	-0.0001077	0.0005615	0.0035	2.23		21498.66	21498.66	3.12		Si
SLV 4	3.99	6832.84	-24101	-0.0001086	0.0005615	0.0035	2.23		21797.5	21797.5	3.19		Si
SLV 4	4.79	-8915.26	-23227	-0.0001213	0.0005615	0.0035	2.23		22545.71	22545.71	2.53		Si
SLV 3	3.99	6450.94	-23632	-0.0001045	0.0005615	0.0035	2.23		21486.76	21486.76	3.33		Si
SLV 3	4.79	-7864.77	-22758	-0.0001121	0.0005615	0.0035	2.23		22199.46	22199.46	2.82		Si
SLV 2	3.99	7237.02	-19046	-0.0000971	0.0005615	0.0035	2.23		18150.1	18150.1	2.51		Si
SLV 2	4.79	-8446.87	-18862	-0.0001067	0.0005615	0.0035	2.23		19236.38	19236.38	2.28		Si
SLV 1	3.99	6855.12	-18578	-0.000093	0.0005615	0.0035	2.23		17739.45	17739.45	2.59		Si
SLV 1	4.79	-7396.38	-18393	-0.0000966	0.0005615	0.0035	2.23		18864.67	18864.67	2.55		Si
SLV 10	3.99	3871.79	-14133	-0.0000603	0.0005615	0.0035	2.23		13927	13927	3.6		Si
SLV 10	4.79	1879.49	-14266	-0.0000473	0.0005615	0.0035	2.23		14038.94	14038.94	7.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	3.99	5812.11	-33256	-27693	8439	2.23	2.23	-44351	10833	6764	38062	18697	5686	24384	No	2.89	Si
SLU 81	4.79	-980.75	-32077	-26711	8439	2.23	2.23	-42779	10833	6764	38062	18697	5686	24384	No	2.89	Si
SLU 73	3.99	5880.4	-31123	-25917	8482	2.23	2.23	-41507	10833	6764	38062	18697	5686	24384	No	2.87	Si
SLU 73	4.79	-946.83	-29945	-24935	8482	2.23	2.23	-39935	10833	6764	38062	18697	5686	24384	No	2.87	Si
SLU 84	3.99	6067.76	-33370	-27788	8713	2.23	2.23	-44504	10833	6764	38062	18697	5686	24384	No	2.8	Si
SLU 84	4.79	-944.21	-32192	-26806	8713	2.23	2.23	-42932	10833	6764	38062	18697	5686	24384	No	2.8	Si
SLU 78	3.99	5988.43	-32803	-27315	8641	2.23	2.23	-43747	10833	6764	38062	18697	5686	24384	No	2.82	Si
SLU 78	4.79	-966.33	-31624	-26334	8641	2.23	2.23	-42175	10833	6764	38062	18697	5686	24384	No	2.82	Si
SLU 80	3.99	5944.02	-32526	-27085	8574	2.23	2.23	-43378	10833	6764	38062	18697	5686	24384	No	2.84	Si
SLU 80	4.79	-956.78	-31347	-26103	8574	2.23	2.23	-41806	10833	6764	38062	18697	5686	24384	No	2.84	Si
SLU 83	3.99	5899.88	-33810	-28154	8542	2.23	2.23	-45091	10833	6764	38062	18697	5686	24384	No	2.85	Si
SLU 83	4.79	-975.34	-32632	-27173	8542	2.23	2.23	-43519	10833	6764	38062	18697	5686	24384	No	2.85	Si
SLU 75	3.99	5900.66	-32248	-26854	8538	2.23	2.23	-43007	10833	6764	38062	18697	5686	24384	No	2.86	Si
SLU 75	4.79	-971.74	-31070	-25872	8538	2.23	2.23	-41436	10833	6764	38062	18697	5686	24384	No	2.86	Si
SLU 82	3.99	5979.99	-32816	-27326	8610	2.23	2.23	-43764	10833	6764	38062	18697	5686	24384	No	2.83	Si
SLU 82	4.79	-949.61	-31637	-26345	8610	2.23	2.23	-42192	10833	6764	38062	18697	5686	24384	No	2.83	Si
SLU 76	3.99	5968.17	-31678	-26379	8585	2.23	2.23	-42247	10833	6764	38062	18697	5686	24384	No	2.84	Si
SLU 76	4.79	-941.43	-30499	-25397	8585	2.23	2.23	-40675	10833	6764	38062	18697	5686	24384	No	2.84	Si
SLU 77	3.99	5820.55	-33243	-27682	8470	2.23	2.23	-44334	10833	6764	38062	18697	5686	24384	No	2.88	Si
SLU 77	4.79	-997.47	-32065	-26701	8470	2.23	2.23	-42762	10833	6764	38062	18697	5686	24384	No	2.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	3.99	5611.28	-13640	-11359	10584	2.23	2.1109	-18191	14055	8307	38062	28046	5686	33732		3.19	Si
SLV 6	4.79	-2548.12	-13998	-11656	11476	2.23	2.23	-18668	14150	8835	38062	28046	5686	33732		2.94	Si
SLV 2	3.99	7237.02	-19046	-15860	19386	2.23	2.2051	-25401	15497	9568	38062	28046	5686	33732		1.74	Si
SLV 2	4.79	-8446.87	-18862	-15707	19505	2.23	2.0015	-28450	16107	9027	38062	28046	5686	33732		1.73	Si
SLD 4	3.99	5179.33	-23007	-19159	11542	2.23	2.23	-30683	16250	10146	38062	28046	5686	33732		2.92	Si
SLD 4	4.79	-4255.9	-22120	-18420	11352	2.23	2.23	-29500	16250	10146	38062	28046	5686	33732		2.97	Si
SLD 3	3.99	5015.36	-22806	-18991	10773	2.23	2.23	-30415	16250	10146	38062	28046	5686	33732		3.13	Si
SLD 3	4.79	-3804.86	-21919	-18252	10584	2.23	2.23	-29231	16250	10146	38062	28046	5686	33732		3.19	Si
SLD 2	3.99	5353.46	-20808	-17327	11645	2.23	2.23	-27750	15967	9969	38062	28046	5686	33732		2.9	Si
SLD 2	4.79	-4056.45	-20210	-16829	11696	2.23	2.23	-26953	15807	9870	38062	28046	5686	33732		2.88	Si
SLD 1	3.99	5189.49	-20606	-17159	10876	2.23	2.23	-27481	15913	9936	38062	28046	5686	33732		3.1	Si
SLD 1	4.79	-3605.4	-20009	-16662	10927	2.23	2.23	-26685	15754	9836	38062	28046	5686	33732		3.09	Si
SLV 5	3.99	5365.17	-13338	-11107	9430	2.23	2.1383	-17789	13974	8367	38062	28046	5686	33732		3.58	Si
SLV 5	4.79	-1871.15	-13696	-11405	10322	2.23	2.23	-18266	14070	8785	38062	28046	5686	33732		3.27	Si
SLV 4	3.99	6832.84	-24101	-20069	19150	2.23	2.23	-32141	16250	10146	38062	28046	5686	33732		1.76	Si
SLV 4	4.79	-8915.26	-23227	-19342	18705	2.23	2.1935	-30977	16250	9980	38062	28046	5686	33732		1.8	Si
SLV 1	3.99	6855.12	-18578	-15470	17595	2.23	2.23	-24776	15372	9598	38062	28046	5686	33732		1.92	Si
SLV 1	4.79	-7396.38	-18393	-15316	17715	2.23	2.1386	-25926	15602	9343	38062	28046	5686	33732		1.9	Si
SLV 3	3.99	6450.94	-23632	-19679	17360	2.23	2.23	-31516	16250	10146	38062	28046	5686	33732		1.94	Si
SLV 3	4.79	-7864.77	-22758	-18951	16915	2.23	2.23	-30351	16250	10146	38062	28046	5686	33732		1.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.32	16853	-10523	184.55	1310.64	7.1	Si
SLV 6	179667	0.32	17007	-10619	184.55	1321.09	7.16	Si
SLV 9	179667	0.32	19668	-12280	184.55	1497.83	8.12	Si
SLV 10	179667	0.32	19821	-12376	184.55	1507.78	8.17	Si
SLV 1	179667	0.32	22408	-13992	184.55	1671.4	9.06	Si
SLV 2	179667	0.32	22647	-14140	184.55	1686.09	9.14	Si
SLV 3	179667	0.32	30021	-18745	184.55	2108.38	11.42	Si
SLV 4	179667	0.32	30259	-18893	184.55	2120.99	11.49	Si
SLV 13	179667	0.32	31790	-19849	184.55	2200.44	11.92	Si
SLV 14	179667	0.32	32028	-19998	184.55	2212.56	11.99	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-23985	-20845	517	0.506	2747	0.966	7.61548	10.55427	No
SLV 11	-23906	-20885	517	0.508	2739	0.966	7.63769	10.55427	No
SLV 8	-22636	-18110	580	0.529	2609.7	0.965	7.97497	10.55427	No
SLV 7	-22557	-18150	580	0.531	2601.6	0.965	7.99963	10.55427	No
SLV 10	-11298	-8233	-632	0.944	1457.8	0.941	14.58095	10.55427	Si
SLV 9	-11219	-8273	-632	0.949	1449.7	0.941	14.66938	10.55427	Si
SLV 6	-9949	-5498	-569	1.052	1321.2	0.936	16.33332	10.55427	Si
SLV 5	-9870	-5538	-569	1.059	1313.2	0.936	16.44446	10.55427	Si
SLV 16	-21141	-19611	41	0.584	2457.6	0.963	8.82184	4.78007	Si
SLV 15	-21018	-19673	41	0.587	2445.1	0.963	8.86743	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.916	SLU 84	Si
V_SLU	2.799	SLU 84	Si
PF_SLV	2.277	SLV 2	Si
V_SLV	1.729	SLV 2	Si
PFFP_SLV	7.102	SLV 5	Si
R_SLV	0.722	SLV 12	No

Maschio 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.233	-3.314	L4	L5	2.1	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	2.89	1392.54	-17886	-0.0000593	0.0003743	0.0035	2.1	13169.3	14754.32	14754.32	10.6	No	Si
SLU 45	4.79	-294.61	-17269	-0.0000486	0.0003743	0.0035	2.1	12901.97	15669.05	15669.05	53.19	No	Si
SLU 74	2.89	1537.51	-21975	-0.000073	0.0003743	0.0035	2.1	14604.07	17209.67	17209.67	11.19	No	Si
SLU 74	4.79	-27.17	-22178	-0.000061	0.0003743	0.0035	2.1	14660.15	18124.39	18124.39	667.03	No	Si
SLU 48	2.89	1411.23	-18235	-0.0000605	0.0003743	0.0035	2.1	13314.74	14983.65	14983.65	10.62	No	Si
SLU 48	4.79	-287.74	-17656	-0.0000497	0.0003743	0.0035	2.1	13071.42	15905.5	15905.5	55.28	No	Si
SLU 69	2.89	1527.77	-20389	-0.000068	0.0003743	0.0035	2.1	14117.39	16423.81	16423.81	10.75	No	Si
SLU 69	4.79	-193.49	-20153	-0.0000563	0.0003743	0.0035	2.1	14037.15	17206.6	17206.6	88.93	No	Si
SLU 50	2.89	1393.06	-18044	-0.0000598	0.0003743	0.0035	2.1	13235.72	14858.05	14858.05	10.67	No	Si
SLU 50	4.79	-281.79	-17459	-0.0000491	0.0003743	0.0035	2.1	12985.72	15785.41	15785.41	56.02	No	Si
SLU 77	2.89	1556.2	-22324	-0.0000743	0.0003743	0.0035	2.1	14699.42	17357.52	17357.52	11.15	No	Si
SLU 77	4.79	-20.3	-22566	-0.0000621	0.0003743	0.0035	2.1	14762.89	18307.6	18307.6	901.77	No	Si
SLU 66	2.89	1509.08	-20040	-0.0000668	0.0003743	0.0035	2.1	13998.34	16186.69	16186.69	10.73	No	Si
SLU 66	4.79	-200.36	-19765	-0.0000552	0.0003743	0.0035	2.1	13901.62	17038.86	17038.86	85.04	No	Si
SLU 43	2.89	1355.68	-17345	-0.0000574	0.0003743	0.0035	2.1	12935.88	14402.4	14402.4	10.62	No	Si
SLU 43	4.79	-295.53	-16684	-0.0000469	0.0003743	0.0035	2.1	12636.19	15303.13	15303.13	51.78	No	Si
SLU 64	2.89	1472.22	-19500	-0.0000648	0.0003743	0.0035	2.1	13805.75	15822.73	15822.73	10.75	No	Si
SLU 64	4.79	-201.29	-19180	-0.0000535	0.0003743	0.0035	2.1	13687.05	16776.84	16776.84	83.35	No	Si
SLU 71	2.89	1509.6	-20198	-0.0000673	0.0003743	0.0035	2.1	14052.81	16293.94	16293.94	10.79	No	Si
SLU 71	4.79	-187.55	-19955	-0.0000557	0.0003743	0.0035	2.1	13968.74	17120.79	17120.79	91.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	2.89	2189.01	-8133	-0.0000368	0.0005615	0.0035	2.1		8179.08	8179.08	3.74		Si
SLV 6	4.79	-1757.54	-2630	-0.0000244	0.0005615	0.0035	1.68		3959.38	3959.38	2.25		Si
SLV 1	2.89	6257.89	-9018	-0.0000947	0.0005615	0.0035	2.1		8965.6	8965.6	1.43		Si
SLV 1	4.79	-3848.11	-2970	-0.0004378	0.0005615	0.0035	1.68		4296.64	4296.64	1.12		Si
SLV 13	2.89	-5517.08	-17049	-0.0000872	0.0005615	0.0035	2.1		16601.33	16601.33	3.01		Si
SLV 13	4.79	4127.33	-22443	-0.0000922	0.0005615	0.0035	2.1		19154.22	19154.22	4.64		Si
SLD 1	2.89	3310.99	-12473	-0.0000571	0.0005615	0.0035	2.1		11667.2	11667.2	3.52		Si
SLD 1	4.79	-1715.38	-9764	-0.0000377	0.0005615	0.0035	2.1		10632.36	10632.36	6.2		Si
SLV 3	2.89	6847.2	-12568	-0.0000929	0.0005615	0.0035	2.1		11742.41	11742.41	1.71		Si
SLV 3	4.79	-3715.4	-8377	-0.0000499	0.0005615	0.0035	2.1		9406.56	9406.56	2.53		Si
SLV 4	2.89	7747.05	-13110	-0.0001079	0.0005615	0.0035	2.1		12173.94	12173.94	1.57		Si
SLV 4	4.79	-4379.46	-7347	-0.0000588	0.0005615	0.0035	1.68		8459.66	8459.66	1.93		Si
SLV 5	2.89	1609.12	-7784	-0.0000316	0.0005615	0.0035	2.1		7859.92	7859.92	4.88		Si
SLV 5	4.79	-1329.59	-3294	-0.000018	0.0005615	0.0035	2.1		4616.01	4616.01	3.47		Si
SLV 2	2.89	7157.75	-9560	-0.0001212	0.0005615	0.0035	2.1		9386.57	9386.57	1.31		Si
SLV 2	4.79	-4512.17	-1940	-0.0011252	0.0005615	0.0035	1.68		3270.59	3270.59	0.72		No
SLD 2	2.89	3697.36	-12706	-0.0000607	0.0005615	0.0035	2.1		11852.04	11852.04	3.21		Si
SLD 2	4.79	-2000.51	-9321	-0.0000386	0.0005615	0.0035	2.1		10243.54	10243.54	5.12		Si
SLD 4	2.89	3951.76	-14250	-0.0000669	0.0005615	0.0035	2.1		13089.49	13089.49	3.31		Si
SLD 4	4.79	-1942.67	-11700	-0.0000446	0.0005615	0.0035	2.1		12304.56	12304.56	6.33		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 31	2.89	783.64	-17359	-14455	-1088	2.1	2.1	-24583	10222	6011	38062	17607	5355	22963	No	21.11	Si
SLU 31	4.79	-96.26	-18071	-15048	-1083	2.1	2.1	-25592	10357	6090	38062	17607	5355	22963	No	21.21	Si
SLU 80	2.89	1277.09	-21748	-18110	-991	2.1	2.1	-30799	10833	6370	38062	17607	5355	22963	No	23.18	Si
SLU 80	4.79	-111.09	-22170	-18461	-995	2.1	2.1	-31396	10833	6370	38062	17607	5355	22963	No	23.08	Si
SLU 42	2.89	988.48	-18794	-15650	-1119	2.1	2.1	-26615	10493	6170	38062	17607	5355	22963	No	20.53	Si
SLU 42	4.79	49.32	-19625	-16342	-1121	2.1	2.1	-27792	10650	6262	38062	17607	5355	22963	No	20.48	Si
SLU 76	2.89	1084.45	-21143	-17606	-1105	2.1	2.1	-29941	10833	6370	38062	17607	5355	22963	No	20.77	Si
SLU 76	4.79	-182.44	-21650	-18028	-1102	2.1	2.1	-30660	10833	6370	38062	17607	5355	22963	No	20.83	Si
SLU 40	2.89	969.79	-18444	-15359	-1104	2.1	2.1	-26120	10427	6131	38062	17607	5355	22963	No	20.8	Si
SLU 40	4.79	42.45	-19237	-16019	-1106	2.1	2.1	-27243	10577	6219	38062	17607	5355	22963	No	20.76	Si
SLU 34	2.89	802.33	-17708	-14746	-1103	2.1	2.1	-25078	10288	6049	38062	17607	5355	22963	No	20.82	Si
SLU 34	4.79	-89.39	-18458	-15371	-1097	2.1	2.1	-26140	10430	6133	38062	17607	5355	22963	No	20.92	Si
SLU 82	2.89	1251.9	-21879	-18219	-1107	2.1	2.1	-30984	10833	6370	38062	17607	5355	22963	No	20.75	Si
SLU 82	4.79	-50.6	-22429	-18677	-1111	2.1	2.1	-31764	10833	6370	38062	17607	5355	22963	No	20.67	Si
SLU 73	2.89	1065.76	-20793	-17315	-1091	2.1	2.1	-29447	10833	6370	38062	17607	5355	22963	No	21.05	Si
SLU 73	4.79	-189.31	-21263	-17706	-1088	2.1	2.1	-30112	10833	6370	38062	17607	5355	22963	No	21.11	Si
SLU 38	2.89	994.98	-18314	-15250	-988	2.1	2.1	-25935	10402	6117	38062	17607	5355	22963	No	23.24	Si
SLU 38	4.79	-18.03	-18978	-15803	-990	2.1	2.1	-26876	10528	6190	38062	17607	5355	22963	No	23.2	Si
SLU 84	2.89	1270.59	-22228	-18510	-1121	2.1	2.1	-31479	10833	6370	38062	17607	5355	22963	No	20.48	Si
SLU 84	4.79	-43.73	-22817	-19000	-1126	2.1	2.1	-32312	10833	6370	38062	17607	5355	22963	No	20.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.89	-4027.92	-21140	-17604	-10246	2.1	2.1	-29938	16250	9555	38062	26411	5355	31766		3.1	Si
SLV 16	4.79	3595.98	-26820	-22333	-9758	2.1	2.1	-37981	16250	9555	38062	26411	5355	31766		3.26	Si
SLV 11	2.89	40.97	-22026	-18341	-7702	2.1	2.1	-31192	16250	9555	38062	26411	5355	31766		4.12	Si
SLV 11	4.79	1505.41	-27160	-22616	-6979	2.1	2.1	-38463	16250	9555	38062	26411	5355	31766		4.55	Si
SLV 1	2.89	6257.89	-9018	-7509	9480	2.1	1.0682	-12771	12971	3880	38062	26411	5355	31766		3.35	Si
SLV 1	4.79	-3848.11	-2970	-2473	8971	1.68	0	0	0	0	38062	21129	4284	25413		2.83	Si
SLV 3	2.89	6847.2	-12568	-10465	7131	2.1	1.5155	-17798	13976	5931	38062	26411	5355	31766		4.45	Si
SLV 3	4.79	-3715.4	-8377	-6976	7008	2.1	1.8195	-13783	13173	6711	38062	26411	5355	31766		4.53	Si
SLV 14	2.89	-4617.22	-17591	-14648	-7898	2.1	2.1	-24911	15399	9055	38062	26411	5355	31766		4.02	Si
SLV 14	4.79	3463.27	-21413	-17831	-7794	2.1	2.1	-30324	16250	9555	38062	26411	5355	31766		4.08	Si
SLV 6	2.89	2189.01	-8133	-6772	6936	2.1	2.1	-11517	12720	7480	38062	26411	5355	31766		4.58	Si
SLV 6	4.79	-1757.54	-2630	-2190	6192	1.68	1.1454	0	0	0	38062	21129	4284	25413		4.1	Si
SLV 13	2.89	-5517.08	-17049	-14197	-9589	2.1	2.1	-24144	15245	8964	38062	26411	5355	31766		3.31	Si
SLV 13	4.79	4127.33	-22443	-18689	-9486	2.1	2.1	-31783	16250	9555	38062	26411	5355	31766		3.35	Si
SLV 15	2.89	-4927.77	-20599	-17153	-11937	2.1	2.1	-29171	16250	9555	38062	26411	5355	31766		2.66	Si
SLV 15	4.79	4260.04	-27850	-23191	-11449	2.1	2.1	-39441	16250	9555	38062	26411	5355	31766		2.77	Si
SLV 4	2.89	7747.05	-13110	-10917	8822	2.1	1.3772	-18565	14130	5449	38062	26411	5355	31766		3.6	Si
SLV 4	4.79	-4379.46	-7347	-6118	8700	1.68	1.3617	0	0	0	38062	21129	4284	25413		2.92	Si
SLV 2	2.89	7157.75	-9560	-7961	11170	2.1	0.9038	-13538	13124	3321	38062	26411	5355	31766		2.84	Si
SLV 2	4.79	-4512.17	-1940	-1615	10663	1.68	0	0	0	0	38062	21129	4284	25413		2.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.32	8398	-4938	173.8	653.35	3.76	Si
SLV 1	179667	0.32	8570	-5039	173.8	665.9	3.83	Si
SLV 6	179667	0.32	8797	-5173	173.8	682.44	3.93	Si
SLV 5	179667	0.32	8907	-5237	173.8	690.48	3.97	Si
SLV 4	179667	0.32	15958	-9384	173.8	1176.43	6.77	Si
SLV 3	179667	0.32	16130	-9485	173.8	1187.58	6.83	Si
SLV 10	179667	0.32	16672	-9803	173.8	1222.61	7.03	Si
SLV 9	179667	0.32	16782	-9868	173.8	1229.72	7.08	Si
SLV 8	179667	0.32	33997	-19990	173.8	2175.62	12.52	Si
SLV 7	179667	0.32	34107	-20055	173.8	2180.66	12.55	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-24703	-16908	-64	0.485	2802.3	0.969	7.27842	10.55427	No
SLV 12	-24318	-17052	-54	0.492	2763.1	0.968	7.38551	10.55427	No
SLV 7	-20473	-13684	153	0.566	2371.7	0.964	8.52974	10.55427	No
SLV 8	-20088	-13828	163	0.574	2332.6	0.963	8.66701	10.55427	No
SLV 15	-23683	-19639	-471	0.487	2698.4	0.968	7.31429	4.78007	Si
SLV 16	-23085	-19863	-456	0.498	2637.6	0.967	7.48979	4.78007	Si
SLV 13	-18487	-18790	-601	0.595	2169.8	0.961	9.00026	4.78007	Si
SLV 9	-7385	-14079	-495	1.274	1043.9	0.926	19.99043	10.55427	Si
SLV 14	-17890	-19014	-585	0.612	2109	0.959	9.27619	4.78007	Si
SLV 10	-7000	-14224	-485	1.329	1005.2	0.924	20.9013	10.55427	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.595	SLU 45	Si
V_SLU	20.395	SLU 84	Si
PF_SLV	0.725	SLV 2	No
V_SLV	2.383	SLV 2	Si
PFFP_SLV	3.759	SLV 2	Si
R_SLV	0.69	SLV 11	No

Maschio 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.013	5.826	-5.093	5.826	L4	L5	2.08	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	2.89	5109.23	-18014	-0.0000918	0.0003743	0.0035	2.08	13042.77	14654.71	14654.71	2.87	No	Si
SLU 43	4.79	-1791.3	-22462	-0.0000777	0.0003743	0.0035	2.08	14510.96	17897.01	17897.01	9.99	No	Si
SLU 51	2.89	5225.62	-18757	-0.0000953	0.0003743	0.0035	2.08	13336.42	15120.03	15120.03	2.89	No	Si
SLU 51	4.79	-1833.96	-23410	-0.0000811	0.0003743	0.0035	2.08	14733.97	18384.65	18384.65	10.02	No	Si
SLU 49	2.89	5260.33	-18985	-0.0000964	0.0003743	0.0035	2.08	13422.58	15263.68	15263.68	2.9	No	Si
SLU 49	4.79	-1834.56	-23689	-0.000082	0.0003743	0.0035	2.08	14793.6	18520.14	18520.14	10.1	No	Si
SLU 50	2.89	5226.48	-18732	-0.0000952	0.0003743	0.0035	2.08	13326.84	15104.28	15104.28	2.89	No	Si
SLU 50	4.79	-1830.18	-23374	-0.000081	0.0003743	0.0035	2.08	14726.17	18366.97	18366.97	10.04	No	Si
SLU 48	2.89	5261.18	-18960	-0.0000963	0.0003743	0.0035	2.08	13413.2	15247.86	15247.86	2.9	No	Si
SLU 48	4.79	-1830.78	-23653	-0.0000819	0.0003743	0.0035	2.08	14786.15	18503.18	18503.18	10.11	No	Si
SLU 44	2.89	5107.8	-18056	-0.000092	0.0003743	0.0035	2.08	13059.78	14680.75	14680.75	2.87	No	Si
SLU 44	4.79	-1797.6	-22522	-0.0000779	0.0003743	0.0035	2.08	14525.82	17927.32	17927.32	9.97	No	Si
SLU 83	2.89	6132.69	-24178	-0.0001225	0.0003743	0.0035	2.08	14891.7	17951.32	17951.32	2.93	No	Si
SLU 83	4.79	-2121.48	-30383	-0.0001075	0.0003743	0.0035	2.08	15406.82	20940.33	20940.33	9.87	No	Si
SLU 47	2.89	5166.42	-18415	-0.0000937	0.0003743	0.0035	2.08	13203.55	14905.39	14905.39	2.89	No	Si
SLU 47	4.79	-1817.04	-22978	-0.0000796	0.0003743	0.0035	2.08	14636.13	18162.52	18162.52	10	No	Si
SLU 45	2.89	5202.56	-18601	-0.0000946	0.0003743	0.0035	2.08	13276.3	15021.92	15021.92	2.89	No	Si
SLU 45	4.79	-1811.34	-23197	-0.0000802	0.0003743	0.0035	2.08	14686.64	18277	18277	10.09	No	Si
SLU 46	2.89	5201.7	-18626	-0.0000947	0.0003743	0.0035	2.08	13286	15037.63	15037.63	2.89	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	4.79	-1815.12	-23233	-0.0000804	0.0003743	0.0035	2.08	14694.66	18295.61	18295.61	10.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.89	8612.2	-3138	-0.0330666	0.0005615	0.0035	1.664		3396.47	3396.47	0.39		No
SLV 3	4.79	-4978.94	-16054	-0.0000813	0.0005615	0.0035	2.08		15520.01	15520.01	3.12		Si
SLD 7	2.89	5391.79	-11405	-0.000074	0.0005615	0.0035	2.08		10815.1	10815.1	2.01		Si
SLD 7	4.79	-1799.01	-17379	-0.0000599	0.0005615	0.0035	2.08		16525.59	16525.59	9.19		Si
SLV 4	2.89	7827.3	-3824	-0.0244055	0.0005615	0.0035	1.664		4067.12	4067.12	0.52		No
SLV 4	4.79	-4386.35	-15660	-0.0000754	0.0005615	0.0035	2.08		15216.01	15216.01	3.47		Si
SLD 3	2.89	6124.62	-10427	-0.0000855	0.0005615	0.0035	2.08		10085.49	10085.49	1.65		Si
SLD 3	4.79	-2979.06	-18228	-0.0000717	0.0005615	0.0035	2.08		17146.14	17146.14	5.76		Si
SLV 8	2.89	6404.3	-5904	-0.0046449	0.0005615	0.0035	1.664		6047.83	6047.83	0.94		No
SLV 8	4.79	-1831.66	-13873	-0.0000504	0.0005615	0.0035	2.08		13809.8	13809.8	7.54		Si
SLD 1	2.89	5789.69	-12266	-0.0000798	0.0005615	0.0035	2.08		11463.05	11463.05	1.98		Si
SLD 1	4.79	-3096.69	-19565	-0.0000766	0.0005615	0.0035	2.08		18116.82	18116.82	5.85		Si
SLV 7	2.89	6910.11	-5462	-0.0100856	0.0005615	0.0035	1.664		5633.6	5633.6	0.82		No
SLV 7	4.79	-2213.54	-14126	-0.000054	0.0005615	0.0035	2.08		14016.12	14016.12	6.33		Si
SLV 2	2.89	7032.94	-8096	-0.0001911	0.0005615	0.0035	2.08		8061.4	8061.4	1.15		Si
SLV 2	4.79	-4663.7	-18737	-0.0000867	0.0005615	0.0035	2.08		17522.03	17522.03	3.76		Si
SLD 4	2.89	5787.61	-10722	-0.0000792	0.0005615	0.0035	2.08		10304.46	10304.46	1.78		Si
SLD 4	4.79	-2724.62	-18059	-0.0000692	0.0005615	0.0035	2.08		17022.07	17022.07	6.25		Si
SLV 1	2.89	7817.84	-7410	-0.0053597	0.0005615	0.0035	1.664		7439.41	7439.41	0.95		No
SLV 1	4.79	-5256.29	-19131	-0.0000927	0.0005615	0.0035	2.08		17813.88	17813.88	3.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2.89	6131.83	-24203	-20154	9499	2.08	2.08	-34606	10833	6309	38062	17439	5304	22743	No	2.39	Si
SLU 84	4.79	-2125.26	-30419	-25330	9508	2.08	2.08	-43493	10833	6309	38062	17439	5304	22743	No	2.39	Si
SLU 75	2.89	6000.11	-23431	-19511	9259	2.08	2.08	-33502	10833	6309	38062	17439	5304	22743	No	2.46	Si
SLU 75	4.79	-2069.94	-29401	-24483	9268	2.08	2.08	-42038	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 80	2.89	6024.03	-23562	-19620	9308	2.08	2.08	-33689	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 80	4.79	-2088.78	-29578	-24630	9317	2.08	2.08	-42291	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 82	2.89	6073.2	-23844	-19855	9402	2.08	2.08	-34092	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 82	4.79	-2105.81	-29963	-24951	9410	2.08	2.08	-42842	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 77	2.89	6059.59	-23765	-19789	9348	2.08	2.08	-33979	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 77	4.79	-2085.6	-29821	-24833	9357	2.08	2.08	-42639	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 79	2.89	6024.89	-23537	-19600	9300	2.08	2.08	-33654	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 79	4.79	-2085	-29543	-24600	9309	2.08	2.08	-42240	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 83	2.89	6132.69	-24178	-20133	9491	2.08	2.08	-34570	10833	6309	38062	17439	5304	22743	No	2.4	Si
SLU 83	4.79	-2121.48	-30383	-25301	9500	2.08	2.08	-43443	10833	6309	38062	17439	5304	22743	No	2.39	Si
SLU 78	2.89	6058.74	-23790	-19810	9356	2.08	2.08	-34015	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 78	4.79	-2089.38	-29857	-24862	9366	2.08	2.08	-42690	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 81	2.89	6074.06	-23819	-19834	9394	2.08	2.08	-34056	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 81	4.79	-2102.03	-29928	-24921	9402	2.08	2.08	-42791	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 74	2.89	6000.97	-23406	-19490	9251	2.08	2.08	-33466	10833	6309	38062	17439	5304	22743	No	2.46	Si
SLU 74	4.79	-2066.16	-29365	-24453	9259	2.08	2.08	-41987	10833	6309	38062	17439	5304	22743	No	2.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	2.89	6124.62	-10427	-8683	9795	2.08	1.3579	-14909	13399	5094	38062	26159	5304	31463		3.21	Si
SLD 3	4.79	-2979.06	-18228	-15178	9559	2.08	2.08	-26062	15629	9102	38062	26159	5304	31463		3.29	Si
SLV 4	2.89	7827.3	-3824	-3184	12852	1.664	0	0	0	0	38062	20927	4243	25171		1.96	Si
SLV 4	4.79	-4386.35	-15660	-13041	12308	2.08	2.08	-22391	14895	8675	38062	26159	5304	31463		2.56	Si
SLV 1	2.89	7817.84	-7410	-6171	15274	1.664	0	0	0	0	38062	20927	4243	25171		1.65	Si
SLV 1	4.79	-5256.29	-19131	-15930	14173	2.08	2.08	-27353	15887	9253	38062	26159	5304	31463		2.22	Si
SLD 1	2.89	5789.69	-12266	-10214	10271	2.08	1.7039	-17537	13924	6643	38062	26159	5304	31463		3.06	Si
SLD 1	4.79	-3096.69	-19565	-16292	9803	2.08	2.08	-27974	16012	9325	38062	26159	5304	31463		3.21	Si
SLV 3	2.89	8612.2	-3138	-2613	14169	1.664	0	0	0	0	38062	20927	4243	25171		1.78	Si
SLV 3	4.79	-4978.94	-16054	-13368	13605	2.08	2.08	-22954	15007	8740	38062	26159	5304	31463		2.31	Si
SLV 2	2.89	7032.94	-8096	-6742	13957	2.08	0.5138	-48171	16250	2338	38062	26159	5304	31463		2.25	Si
SLV 2	4.79	-4663.7	-18737	-15603	12876	2.08	2.08	-26791	15775	9187	38062	26159	5304	31463		2.44	Si
SLV 6	2.89	3756.45	-20143	-16773	10205	2.08	2.08	-28800	16177	9421	38062	26159	5304	31463		3.08	Si
SLV 6	4.79	-2756.17	-24129	-20093	9074	2.08	2.08	-34500	16250	9464	38062	26159	5304	31463		3.47	Si
SLV 5	2.89	4262.26	-19701	-16405	11053	2.08	2.08	-28168	16050	9348	38062	26159	5304	31463		2.85	Si
SLV 5	4.79	-3138.06	-24383	-20304	9910	2.08	2.08	-34863	16250	9464	38062	26159	5304	31463		3.17	Si
SLD 2	2.89	5452.68	-12560	-10459	9705	2.08	1.8176	-17958	14008	7129	38062	26159	5304	31463		3.24	Si
SLD 2	4.79	-2842.25	-19396	-16151	9246	2.08	2.08	-27733	15963	9297	38062	26159	5304	31463		3.4	Si
SLD 4	2.89	5787.61	-10722	-8928	9229	2.08	1.5006	-15330	13483	5665	38062	26159	5304	31463		3.41	Si
SLD 4	4.79	-2724.62	-18059	-15038	9002	2.08	2.08	-25821	15581	9074	38062	26159	5304	31463		3.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.32	17442	-10158	172.14	1259.71	7.32	Si
SLV 4	179667	0.32	17869	-10407	172.14	1286.47	7.47	Si
SLV 7	179667	0.32	18065	-10521	172.14	1298.72	7.54	Si
SLV 8	179667	0.32	18340	-10681	172.14	1315.8	7.64	Si
SLV 1	179667	0.32	23872	-13903	172.14	1642.17	9.54	Si
SLV 2	179667	0.32	24299	-14152	172.14	1665.99	9.68	Si
SLV 11	179667	0.32	24965	-14539	172.14	1702.77	9.89	Si
SLV 12	179667	0.32	25240	-14700	172.14	1717.82	9.98	Si
SLV 5	179667	0.32	39500	-23004	172.14	2387.61	13.87	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.32	39775	-23165	172.14	2398.4	13.93	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-23404	-21505	-464	0.488	2667.3	0.968	7.33045	10.55427	No
SLV 10	-23388	-21856	-466	0.488	2665.7	0.968	7.33368	10.55427	No
SLV 5	-20969	-15073	-430	0.537	2419.4	0.965	8.097	10.55427	No
SLV 6	-20953	-15423	-432	0.538	2417.8	0.965	8.10112	10.55427	No
SLV 11	-13523	-10186	396	0.781	1662.5	0.95	11.94074	10.55427	Si
SLV 12	-13508	-10537	394	0.782	1660.9	0.95	11.95503	10.55427	Si
SLV 7	-11088	-3754	430	0.918	1415.4	0.943	14.14758	10.55427	Si
SLV 8	-11072	-4105	428	0.919	1413.8	0.943	14.16753	10.55427	Si
SLV 13	-22791	-24951	-202	0.51	2604.9	0.967	7.6634	4.78007	Si
SLV 14	-22767	-25495	-205	0.51	2602.4	0.967	7.66888	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.868	SLU 43	Si
V_SLU	2.392	SLU 84	Si
PF_SLV	0.394	SLV 3	No
V_SLV	1.648	SLV 1	Si
PFFP_SLV	7.318	SLV 3	Si
R_SLV	0.695	SLV 9	No

Maschio 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.013	5.826	L4	L5	1.88	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	2.89	263.33	-14616	-0.0000462	0.0003743	0.0035	1.88	9992.32	11039	11039	41.92	No	Si
SLU 51	4.79	-526.21	-14405	-0.0000481	0.0003743	0.0035	1.88	9901.23	11832.61	11832.61	22.49	No	Si
SLU 1	2.89	187.2	-11262	-0.0000348	0.0003743	0.0035	1.88	8361.99	9051.92	9051.92	48.35	No	Si
SLU 1	4.79	-377.57	-11122	-0.0000362	0.0003743	0.0035	1.88	8284.93	9777.63	9777.63	25.9	No	Si
SLU 47	2.89	266.99	-14350	-0.0000453	0.0003743	0.0035	1.88	9877.27	10892.15	10892.15	40.8	No	Si
SLU 47	4.79	-529.23	-14123	-0.0000472	0.0003743	0.0035	1.88	9777.15	11666.46	11666.46	22.04	No	Si
SLU 46	2.89	261.74	-14502	-0.0000458	0.0003743	0.0035	1.88	9943.55	10976.26	10976.26	41.94	No	Si
SLU 46	4.79	-524.22	-14270	-0.0000476	0.0003743	0.0035	1.88	9842.4	11754.17	11754.17	22.42	No	Si
SLU 43	2.89	273.04	-14050	-0.0000444	0.0003743	0.0035	1.88	9744.97	10728.06	10728.06	39.29	No	Si
SLU 43	4.79	-531.52	-13705	-0.0000459	0.0003743	0.0035	1.88	9588.59	11409.78	11409.78	21.47	No	Si
SLU 45	2.89	262.76	-14488	-0.0000457	0.0003743	0.0035	1.88	9937.43	10968.44	10968.44	41.74	No	Si
SLU 45	4.79	-523.9	-14212	-0.0000474	0.0003743	0.0035	1.88	9816.91	11720.25	11720.25	22.37	No	Si
SLU 44	2.89	271.34	-14074	-0.0000445	0.0003743	0.0035	1.88	9755.52	10740.97	10740.97	39.58	No	Si
SLU 44	4.79	-532.05	-13802	-0.0000462	0.0003743	0.0035	1.88	9632.72	11468.84	11468.84	21.56	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	2.89	264.35	-14602	-0.0000461	0.0003743	0.0035	1.88	9986.26	11031.17	11031.17	41.73	No	Si
SLU 50	4.79	-525.89	-14347	-0.0000479	0.0003743	0.0035	1.88	9876.01	11798.95	11798.95	22.44	No	Si
SLU 48	2.89	258.41	-14764	-0.0000466	0.0003743	0.0035	1.88	10055.17	11120.97	11120.97	43.04	No	Si
SLU 48	4.79	-521.08	-14533	-0.0000484	0.0003743	0.0035	1.88	9956.72	11906.83	11906.83	22.85	No	Si
SLU 49	2.89	257.39	-14778	-0.0000466	0.0003743	0.0035	1.88	10061.15	11128.83	11128.83	43.24	No	Si
SLU 49	4.79	-521.4	-14591	-0.0000486	0.0003743	0.0035	1.88	9981.56	11940.13	11940.13	22.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.89	3761.26	-9267	-0.0000633	0.0005615	0.0035	1.88		8097.54	8097.54	2.15		Si
SLV 2	4.79	-2618.81	-6096	-0.0000429	0.0005615	0.0035	1.88		6253.35	6253.35	2.39		Si
SLV 7	2.89	4331.23	-11262	-0.0000746	0.0005615	0.0035	1.88		9465	9465	2.19		Si
SLV 7	4.79	-1373.95	-1209	-0.0001895	0.0005615	0.0035	1.504		2009.66	2009.66	1.46		Si
SLV 3	2.89	5966.77	-9633	-0.0001141	0.0005615	0.0035	1.88		8346.05	8346.05	1.4		Si
SLV 3	4.79	-3209.69	-308	-0.0020646	0.0005615	0.0035	1.504		1187.65	1187.65	0.37		No
SLV 13	2.89	-5028.56	-15349	-0.0000937	0.0005615	0.0035	1.88		13246.46	13246.46	2.63		Si
SLV 13	4.79	2072.97	-23497	-0.0000912	0.0005615	0.0035	1.88		17291.07	17291.07	8.34		Si
SLV 10	2.89	-4061.2	-13173	-0.0000769	0.0005615	0.0035	1.88		11731.65	11731.65	2.89		Si
SLV 10	4.79	758.33	-23518	-0.000078	0.0005615	0.0035	1.88		17303.37	17303.37	22.82		Si
SLV 16	2.89	-4159.41	-14621	-0.0000825	0.0005615	0.0035	1.88		12745.82	12745.82	3.06		Si
SLV 16	4.79	2524.29	-19554	-0.0000826	0.0005615	0.0035	1.88		15099.03	15099.03	5.98		Si
SLV 8	2.89	3900.64	-10910	-0.0000686	0.0005615	0.0035	1.88		9221.39	9221.39	2.36		Si
SLV 8	4.79	-1038.13	-1804	-0.0000174	0.0005615	0.0035	1.504		2545.79	2545.79	2.45		Si
SLV 14	2.89	-5696.74	-14802	-0.0000999	0.0005615	0.0035	1.88		12873.52	12873.52	2.26		Si
SLV 14	4.79	2594.07	-24419	-0.0000996	0.0005615	0.0035	1.88		17814.61	17814.61	6.87		Si
SLV 1	2.89	4429.44	-9814	-0.0000739	0.0005615	0.0035	1.88		8469.39	8469.39	1.91		Si
SLV 1	4.79	-3139.91	-5173	-0.0000563	0.0005615	0.0035	1.504		5485.02	5485.02	1.75		Si
SLV 4	2.89	5298.59	-9086	-0.0000953	0.0005615	0.0035	1.88		7974.95	7974.95	1.51		Si
SLV 4	4.79	-2688.59	-1231	-0.0008965	0.0005615	0.0035	1.504		2029.45	2029.45	0.75		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.89	80.68	-17959	-14955	-1366	1.88	1.88	-28410	10732	5650	38062	15763	4794	20557	No	15.05	Si
SLU 80	4.79	-282.04	-18752	-15615	-1414	1.88	1.88	-29664	10833	5703	38062	15763	4794	20557	No	14.53	Si
SLU 81	2.89	49.21	-18088	-15062	-1454	1.88	1.88	-28613	10760	5664	38062	15763	4794	20557	No	14.14	Si
SLU 81	4.79	-233.55	-18975	-15801	-1503	1.88	1.88	-30016	10833	5703	38062	15763	4794	20557	No	13.68	Si
SLU 39	2.89	-36.63	-15300	-12741	-1417	1.88	1.88	-24203	10172	5354	38062	15763	4794	20557	No	14.51	Si
SLU 39	4.79	-79.6	-16391	-13649	-1458	1.88	1.88	-25929	10402	5475	38062	15763	4794	20557	No	14.09	Si
SLU 78	2.89	74.74	-18122	-15090	-1383	1.88	1.88	-28666	10767	5668	38062	15763	4794	20557	No	14.87	Si
SLU 78	4.79	-277.23	-18938	-15770	-1432	1.88	1.88	-29958	10833	5703	38062	15763	4794	20557	No	14.36	Si
SLU 82	2.89	48.19	-18102	-15074	-1476	1.88	1.88	-28636	10763	5665	38062	15763	4794	20557	No	13.93	Si
SLU 82	4.79	-233.87	-19033	-15849	-1525	1.88	1.88	-30108	10833	5703	38062	15763	4794	20557	No	13.48	Si
SLU 84	2.89	43.84	-18378	-15304	-1501	1.88	1.88	-29072	10821	5696	38062	15763	4794	20557	No	13.69	Si
SLU 84	4.79	-231.06	-19354	-16116	-1551	1.88	1.88	-30615	10833	5703	38062	15763	4794	20557	No	13.25	Si
SLU 40	2.89	-37.65	-15314	-12752	-1439	1.88	1.88	-24226	10175	5356	38062	15763	4794	20557	No	14.29	Si
SLU 40	4.79	-79.92	-16449	-13697	-1480	1.88	1.88	-26021	10414	5482	38062	15763	4794	20557	No	13.89	Si
SLU 41	2.89	-40.98	-15576	-12970	-1442	1.88	1.88	-24639	10230	5385	38062	15763	4794	20557	No	14.25	Si
SLU 41	4.79	-76.79	-16712	-13916	-1485	1.88	1.88	-26437	10469	5511	38062	15763	4794	20557	No	13.85	Si
SLU 42	2.89	-42	-15590	-12982	-1464	1.88	1.88	-24662	10233	5387	38062	15763	4794	20557	No	14.04	Si
SLU 42	4.79	-77.11	-16770	-13965	-1507	1.88	1.88	-26528	10482	5518	38062	15763	4794	20557	No	13.64	Si
SLU 83	2.89	44.86	-18364	-15292	-1479	1.88	1.88	-29050	10818	5695	38062	15763	4794	20557	No	13.9	Si
SLU 83	4.79	-230.74	-19296	-16068	-1529	1.88	1.88	-30524	10833	5703	38062	15763	4794	20557	No	13.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.89	5298.59	-9086	-7566	6618	1.88	1.0706	-14374	13291	3984	38062	23644	4794	28438		4.3	Si
SLV 4	4.79	-2688.59	-1231	-1025	5924	1.504	0	0	0	0	38062	18916	3835	22751		3.84	Si
SLV 16	2.89	-4159.41	-14621	-12175	-7098	1.88	1.88	-23129	15042	7918	38062	23644	4794	28438		4.01	Si
SLV 16	4.79	2524.29	-19554	-16283	-6565	1.88	1.88	-30932	16250	8554	38062	23644	4794	28438		4.33	Si
SLV 13	2.89	-5028.56	-15349	-12781	-8088	1.88	1.8372	-24280	15273	7856	38062	23644	4794	28438		3.52	Si
SLV 13	4.79	2072.97	-23497	-19566	-7460	1.88	1.88	-37169	16250	8554	38062	23644	4794	28438		3.81	Si
SLV 10	2.89	-4061.2	-13173	-10969	-7130	1.88	1.88	-20838	14584	7677	38062	23644	4794	28438		3.99	Si
SLV 10	4.79	758.33	-23518	-19584	-6824	1.88	1.88	-37203	16250	8554	38062	23644	4794	28438		4.17	Si
SLV 7	2.89	4331.23	-11262	-9378	5661	1.88	1.6663	-17815	13980	6522	38062	23644	4794	28438		5.02	Si
SLV 7	4.79	-1373.95	-1209	-1007	5288	1.504	0	0	0	0	38062	18916	3835	22751		4.3	Si
SLV 1	2.89	4429.44	-9814	-8172	5629	1.88	1.466	-15525	13522	5550	38062	23644	4794	28438		5.05	Si
SLV 1	4.79	-3139.91	-5173	-4308	5029	1.504	0.9993	0	0	0	38062	18916	3835	22751		4.52	Si
SLV 9	2.89	-3630.61	-13525	-11263	-6259	1.88	1.88	-21396	14696	7736	38062	23644	4794	28438		4.54	Si
SLV 9	4.79	422.52	-22924	-19089	-5952	1.88	1.88	-36263	16250	8554	38062	23644	4794	28438		4.78	Si
SLV 3	2.89	5966.77	-9633	-8022	7970	1.88	0.9618	-15238	13464	3626	38062	23644	4794	28438		3.57	Si
SLV 3	4.79	-3209.69	-308	-257	7277	1.504	0	0	0	0	38062	18916	3835	22751		3.13	Si
SLV 15	2.89	-3491.23	-15168	-12630	-5746	1.88	1.88	-23994	15215	8009	38062	23644	4794	28438		4.95	Si
SLV 15	4.79	2003.19	-18631	-15514	-5212	1.88	1.88	-29472	16250	8554	38062	23644	4794	28438		5.46	Si
SLV 14	2.89	-5696.74	-14802	-12326	-9440	1.88	1.6654	-26728	15762	7350	38062	23644	4794	28438		3.01	Si
SLV 14	4.79	2594.07	-24419	-20334	-8813	1.88	1.88	-38628	16250	8554	38062	23644	4794	28438		3.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.725 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.32	11650	-6133	155.59	793.08	5.1	Si
SLV 4	179667	0.32	11733	-6177	155.59	798.28	5.13	Si
SLV 7	179667	0.32	12033	-6334	155.59	816.9	5.25	Si
SLV 8	179667	0.32	12086	-6362	155.59	820.23	5.27	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.32	16796	-8842	155.59	1101.68	7.08	Si
SLV 2	179667	0.32	16879	-8885	155.59	1106.46	7.11	Si
SLV 11	179667	0.32	17494	-9209	155.59	1141.55	7.34	Si
SLV 12	179667	0.32	17547	-9237	155.59	1144.6	7.36	Si
SLV 5	179667	0.32	29185	-15363	155.59	1739.82	11.18	Si
SLV 6	179667	0.32	29239	-15392	155.59	1742.27	11.2	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20839	-9755	-461	0.492	2378.8	0.967	7.39973	10.55427	No
SLV 9	-20471	-9976	-462	0.5	2341.4	0.967	7.51625	10.55427	No
SLV 6	-17256	-7098	-351	0.584	2014.3	0.962	8.82418	10.55427	No
SLV 5	-16889	-7318	-352	0.595	1976.8	0.961	8.9931	10.55427	No
SLV 14	-19856	-13637	-302	0.521	2278.8	0.966	7.83242	4.78007	Si
SLV 13	-19285	-13980	-303	0.534	2220.7	0.965	8.03592	4.78007	Si
SLV 16	-15344	-14360	-56	0.663	1819.7	0.958	10.05062	4.78007	Si
SLV 12	-5798	-12164	359	1.42	852.8	0.921	22.413	10.55427	Si
SLV 15	-14773	-14703	-56	0.684	1761.7	0.957	10.39175	4.78007	Si
SLV 11	-5430	-12385	359	1.492	815.9	0.918	23.61474	10.55427	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.466	SLU 43	Si
V_SLU	13.252	SLU 84	Si
PF_SLV	0.37	SLV 3	No
V_SLV	3.013	SLV 14	Si
PFFP_SLV	5.097	SLV 3	Si
R_SLV	0.701	SLV 10	No

Maschio 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.284	-0.133	5.826	L4	L5	9.11	0.28	3.47	3.47	3.47			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	1.99	-4704.22	-111889	-0.0000654	0.0004492	0.0035	9.1099	326689.73	455009.78	455009.78	96.72	No	Si
SLU 65	5.46	-2556.68	-82967	-0.0000472	0.0004492	0.0035	9.1099	277312.36	368326.76	368326.76	144.06	No	Si
SLU 2	1.99	-3869.55	-80026	-0.000046	0.0004492	0.0035	9.1099	270921.25	358654.29	358654.29	92.69	No	Si
SLU 2	5.46	-1426.68	-59075	-0.000033	0.0004492	0.0035	9.1099	218083.08	287308	287308	201.38	No	Si
SLU 81	1.99	-3503.24	-128051	-0.0000749	0.0004492	0.0035	9.1099	343633.32	498208.17	498208.17	142.21	No	Si
SLU 81	5.46	-4225.56	-95325	-0.0000552	0.0004492	0.0035	9.1099	301401.69	406749.89	406749.89	96.26	No	Si
SLU 52	1.99	-4707.47	-111377	-0.0000651	0.0004492	0.0035	9.1099	326028.55	453546.29	453546.29	96.35	No	Si
SLU 52	5.46	-2448.24	-82272	-0.0000468	0.0004492	0.0035	9.1099	275826.08	366042.87	366042.87	149.51	No	Si
SLU 41	1.99	-2851.69	-110123	-0.0000636	0.0004492	0.0035	9.1099	324375.04	449958.02	449958.02	157.79	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	5.46	-3791.12	-82547	-0.0000475	0.0004492	0.0035	9.1099	276416.57	366947.66	366947.66	96.79	No	Si
SLU 55	1.99	-4735.31	-113115	-0.0000662	0.0004492	0.0035	9.1099	328242.61	458515.92	458515.92	96.83	No	Si
SLU 55	5.46	-2466.32	-83919	-0.0000478	0.0004492	0.0035	9.1099	279327.93	371459.2	371459.2	150.61	No	Si
SLU 47	1.99	-4576.79	-101429	-0.000059	0.0004492	0.0035	9.1099	311654.9	425096.8	425096.8	92.88	No	Si
SLU 47	5.46	-1897.29	-75146	-0.0000424	0.0004492	0.0035	9.1099	259761.87	342609.33	342609.33	180.58	No	Si
SLU 39	1.99	-2823.84	-108385	-0.0000625	0.0004492	0.0035	9.1099	322008.99	444988.39	444988.39	157.58	No	Si
SLU 39	5.46	-3773.04	-80900	-0.0000465	0.0004492	0.0035	9.1099	272848.68	361531.32	361531.32	95.82	No	Si
SLU 44	1.99	-4548.95	-99692	-0.000058	0.0004492	0.0035	9.1099	308847.31	420127.17	420127.17	92.36	No	Si
SLU 44	5.46	-1879.2	-73499	-0.0000415	0.0004492	0.0035	9.1099	255837.68	337192.99	337192.99	179.43	No	Si
SLU 5	1.99	-3897.39	-81763	-0.0000471	0.0004492	0.0035	9.1099	274727.73	364368.86	364368.86	93.49	No	Si
SLU 5	5.46	-1444.77	-60722	-0.000034	0.0004492	0.0035	9.1099	222701.66	293077.34	293077.34	202.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.99	-11138.01	-99284	-0.0000591	0.0006738	0.0035	9.1099		437764.74	437764.74	39.3		Si
SLV 12	5.46	-65767.66	-71408	-0.0000635	0.0006738	0.0035	9.1099		340015.25	340015.25	5.17		Si
SLV 6	1.99	6446.48	-73176	-0.0000424	0.0006738	0.0035	9.1099		304708.59	304708.59	47.27		Si
SLV 6	5.46	64288.83	-56974	-0.0000546	0.0006738	0.0035	9.1099		245959.34	245959.34	3.83		Si
SLV 5	1.99	6074.47	-73351	-0.0000424	0.0006738	0.0035	9.1099		305292.55	305292.55	50.26		Si
SLV 5	5.46	60490.06	-56816	-0.0000531	0.0006738	0.0035	9.1099		245351.54	245351.54	4.06		Si
SLV 7	1.99	-15722.74	-66348	-0.000042	0.0006738	0.0035	9.1099		321619.41	321619.41	20.46		Si
SLV 7	5.46	-67228.73	-51928	-0.0000528	0.0006738	0.0035	9.1099		266759.56	266759.56	3.97		Si
SLV 11	1.99	-11510.02	-99459	-0.0000593	0.0006738	0.0035	9.1099		438333.9	438333.9	38.08		Si
SLV 11	5.46	-69566.42	-71249	-0.0000648	0.0006738	0.0035	9.1099		339440.05	339440.05	4.88		Si
SLV 1	1.99	-6572.02	-32318	-0.0000198	0.0006738	0.0035	9.1099		188715.54	188715.54	28.71		Si
SLV 1	5.46	17467.79	-32520	-0.0000238	0.0006738	0.0035	9.1099		148315.68	148315.68	8.49		Si
SLV 10	1.99	10659.2	-106288	-0.0000629	0.0006738	0.0035	9.1099		414935.4	414935.4	38.93		Si
SLV 10	5.46	61951.13	-76296	-0.0000649	0.0006738	0.0035	9.1099		315094.88	315094.88	5.09		Si
SLV 9	1.99	10287.18	-106463	-0.0000629	0.0006738	0.0035	9.1099		415519.36	415519.36	40.39		Si
SLV 9	5.46	58152.37	-76138	-0.0000634	0.0006738	0.0035	9.1099		314568.2	314568.2	5.41		Si
SLV 8	1.99	-15350.72	-66172	-0.0000417	0.0006738	0.0035	9.1099		320981.66	320981.66	20.91		Si
SLV 8	5.46	-63429.96	-52086	-0.0000515	0.0006738	0.0035	9.1099		267365.68	267365.68	4.22		Si
SLV 2	1.99	-5994.75	-32046	-0.0000194	0.0006738	0.0035	9.1099		187619.48	187619.48	31.3		Si
SLV 2	5.46	23362.57	-32765	-0.000026	0.0006738	0.0035	9.1099		149323.21	149323.21	6.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.99	-4359.7	-128370	-91576	-3837	9.1099	9.1099	-35901	10833	27633	108749	91669	46461	136382	No	35.54	Si
SLU 82	5.46	-3711.98	-95429	-68077	-3143	9.1099	9.1099	-26689	10833	27633	108749	91669	46461	136382	No	43.39	Si
SLU 80	1.99	-4347.45	-126837	-90483	-3898	9.1099	9.1099	-35473	10833	27633	108749	91669	46461	136382	No	34.99	Si
SLU 80	5.46	-3504.27	-94964	-67745	-3207	9.1099	9.1099	-26558	10833	27633	108749	91669	46461	136382	No	42.52	Si
SLU 73	1.99	-4862.74	-123575	-88155	-3987	9.1099	9.1099	-34560	10833	27633	108749	91669	46461	136382	No	34.21	Si
SLU 73	5.46	-3125.72	-91740	-65445	-3268	9.1099	9.1099	-25657	10833	27633	108749	91669	46461	136382	No	41.74	Si
SLU 68	1.99	-4732.06	-113627	-81059	-3889	9.1099	9.1099	-31778	10833	27633	108749	91669	46461	136382	No	35.07	Si
SLU 68	5.46	-2574.76	-84614	-60361	-3208	9.1099	9.1099	-23664	10833	27633	108749	91669	46461	136382	No	42.52	Si
SLU 78	1.99	-4278.07	-127873	-91221	-3935	9.1099	9.1099	-35762	10833	27633	108749	91669	46461	136382	No	34.66	Si
SLU 78	5.46	-3511.62	-95923	-68429	-3239	9.1099	9.1099	-26827	10833	27633	108749	91669	46461	136382	No	42.1	Si
SLU 70	1.99	-4119.56	-116187	-82885	-3772	9.1099	9.1099	-32494	10833	27633	108749	91669	46461	136382	No	36.16	Si
SLU 70	5.46	-2942.58	-87150	-62171	-3122	9.1099	9.1099	-24373	10833	27633	108749	91669	46461	136382	No	43.68	Si
SLU 65	1.99	-4704.22	-111889	-79819	-3824	9.1099	9.1099	-31292	10833	27633	108749	91669	46461	136382	No	35.67	Si
SLU 65	5.46	-2556.68	-82967	-59187	-3151	9.1099	9.1099	-23203	10833	27633	108749	91669	46461	136382	No	43.29	Si
SLU 76	1.99	-4890.58	-125312	-89395	-4052	9.1099	9.1099	-35046	10833	27633	108749	91669	46461	136382	No	33.66	Si
SLU 76	5.46	-3143.8	-93387	-66620	-3325	9.1099	9.1099	-26117	10833	27633	108749	91669	46461	136382	No	41.02	Si
SLU 84	1.99	-4387.54	-130108	-92816	-3902	9.1099	9.1099	-36387	10833	27633	108749	91669	46461	136382	No	34.95	Si
SLU 84	5.46	-3730.06	-97077	-69252	-3200	9.1099	9.1099	-27149	10833	27633	108749	91669	46461	136382	No	42.61	Si
SLU 75	1.99	-4250.23	-126135	-89982	-3870	9.1099	9.1099	-35276	10833	27633	108749	91669	46461	136382	No	35.24	Si
SLU 75	5.46	-3493.54	-94276	-67254	-3182	9.1099	9.1099	-26366	10833	27633	108749	91669	46461	136382	No	42.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.99	-15350.72	-66172	-47206	29174	9.1099	9.1099	-18506	16201	41326	108749	137503	46461	150075		5.14	Si
SLV 8	5.46	-63429.96	-52086	-37157	23959	9.1099	9.1099	-14567	15413	39316	108749	137503	46461	148065		6.18	Si
SLV 7	1.99	-15722.74	-66348	-47331	34141	9.1099	9.1099	-18555	16211	41351	108749	137503	46461	150100		4.4	Si
SLV 7	5.46	-67228.73	-51928	-37044	28903	9.1099	9.1099	-14523	15405	39294	108749	137503	46461	148042		5.12	Si
SLV 6	1.99	6446.48	-73176	-52202	-41117	9.1099	9.1099	-20465	16250	41450	108749	137503	46461	150199		3.65	Si
SLV 6	5.46	64288.83	-56974	-40644	-35842	9.1099	9.1099	-15934	15687	40014	108749	137503	46461	148762		4.15	Si
SLV 2	1.99	-5994.75	-32046	-22861	-20198	9.1099	9.1099	-8962	14292	36457	108749	137503	46461	145206		7.19	Si
SLV 2	5.46	23362.57	-32765	-23374	-19556	9.1099	9.1099	-9163	14333	36560	108749	137503	46461	145308		7.43	Si
SLV 10	1.99	10659.2	-106288	-75823	-39135	9.1099	9.1099	-29725	16250	41450	108749	137503	46461	150199		3.84	Si
SLV 10	5.46	61951.13	-76296	-54428	-33030	9.1099	9.1099	-21338	16250	41450	108749	137503	46461	150199		4.55	Si
SLV 12	1.99	-11138.01	-99284	-70827	31156	9.1099	9.1099	-27767	16250	41450	108749	137503	46461	150199		4.82	Si
SLV 12	5.46	-65767.66	-71408	-50940	26770	9.1099	9.1099	-19970	16250	41450	108749	137503	46461	150199		5.61	Si
SLV 9	1.99	10287.18	-106463	-75948	-34167	9.1099	9.1099	-29774	16250	41450	108749	137503	46461	150199		4.4	Si
SLV 9	5.46	58152.37	-76138	-54315	-28085	9.1099	9.1099	-21293	16250	41450	108749	137503	46461	150199		5.35	Si
SLD 6	1.99	1595.6	-80732	-57592	-19519	9.1099	9.1099	-22578	16250	41450	108749	137503	46461	150199		7.7	Si
SLD 6	5.46	26895.41	-61081	-43574	-16929	9.1099	9.1099	-17083	15917	40600	108749	137503	46461	149348		8.82	Si
SLV 11	1.99	-11510.02	-99459	-70952	36123	9.1099	9.1099	-27816	16250	41450	108749	137503	46461	150199		4.16	Si
SLV 11	5.46	-69566.42	-71249	-50828	31715	9.1099	9.1099	-19926	16250	41450	108749	137503	46461	150199		4.74	Si
SLV 5	1.99	6074.47	-73351	-52327	-36149	9.1099	9.1099	-20514	16250	41450	108749	137503	46461	150199		4.15	Si
SLV 5	5.46	60490.06	-56816	-40531	-30897	9.1099	9.1099	-15890	15678	39991	108749	137503	46461	148740		4.81	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.725 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-33322	0.32	753.95	4332.6	6277.26	5304.93	7.04	Si
SLV 3	-33340	0.32	753.95	4334.69	6279.89	5307.29	7.04	Si
SLV 2	-35384	0.32	753.95	4578.84	6588.74	5583.79	7.41	Si
SLV 1	-35401	0.32	753.95	4580.9	6591.36	5586.13	7.41	Si
SLV 8	-60814	0.32	753.95	7406.51	10372.01	8889.26	11.79	Si
SLV 7	-60826	0.32	753.95	7407.67	10373.67	8890.67	11.79	Si
SLV 6	-67687	0.32	753.95	8104.23	11386.63	9745.43	12.93	Si
SLV 5	-67698	0.32	753.95	8105.35	11388.29	9746.82	12.93	Si
SLV 12	-86438	0.32	753.95	9863.95	14120.33	11992.14	15.91	Si
SLV 11	-86450	0.32	753.95	9864.94	14121.95	11993.44	15.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.725 Wa = 0.05 Ta = 0.0718

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-76296	-106288	931	0.64	9015.6	0.959	9.7053	10.55427	No
SLV 9	-76138	-106463	931	0.642	8999.5	0.959	9.7231	10.55427	No
SLV 12	-71408	-99284	983	0.677	8518.6	0.957	10.27851	10.55427	No
SLV 11	-71249	-99459	983	0.678	8502.5	0.957	10.29862	10.55427	No
SLV 6	-56974	-73176	-1004	0.818	7052.4	0.949	12.52482	10.55427	Si
SLV 5	-56816	-73351	-1004	0.82	7036.3	0.949	12.55523	10.55427	Si
SLV 8	-52086	-66172	-952	0.882	6556.4	0.946	13.555	10.55427	Si
SLV 7	-51928	-66348	-952	0.884	6540.3	0.945	13.5908	10.55427	Si
SLV 14	-97171	-142418	3207	0.5	11139.3	0.966	7.51513	4.78007	Si
SLV 13	-96925	-142690	3207	0.501	11114.3	0.966	7.53187	4.78007	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	92.357	SLU 44	Si
V_SLU	33.659	SLU 76	Si
PF_SLV	3.826	SLV 6	Si
V_SLV	3.653	SLV 6	Si
PFFP_SLV	7.036	SLV 4	Si
R_SLV	0.92	SLV 10	No

Maschio 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	1.266	L5	L6	4.581	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	5.46	8907.76	-54130	-0.000085	0.0003743	0.0035	4.5807	72586.11	87779.75	87779.75	9.85	No	Si
SLU 84	7.56	7480.62	-44727	-0.0000687	0.0003743	0.0035	4.5807	67353.69	78246.58	78246.58	10.46	No	Si
SLU 47	5.46	6774.7	-41876	-0.0000635	0.0003743	0.0035	4.5807	65154.18	74228.85	74228.85	10.96	No	Si
SLU 47	7.56	6644.15	-35020	-0.0000539	0.0003743	0.0035	4.5807	58698.56	64634.97	64634.97	9.73	No	Si
SLU 44	5.46	6678.54	-40991	-0.0000621	0.0003743	0.0035	4.5807	64414.01	72968.92	72968.92	10.93	No	Si
SLU 44	7.56	6509.41	-34143	-0.0000525	0.0003743	0.0035	4.5807	57753.37	63445.66	63445.66	9.75	No	Si
SLU 51	5.46	6725.28	-42806	-0.0000647	0.0003743	0.0035	4.5807	65902.93	75563.24	75563.24	11.24	No	Si
SLU 51	7.56	6670.49	-35934	-0.0000551	0.0003743	0.0035	4.5807	59654.63	65883.71	65883.71	9.88	No	Si
SLU 65	5.46	7539.82	-46247	-0.000071	0.0003743	0.0035	4.5807	68409.33	80159.49	80159.49	10.63	No	Si
SLU 65	7.56	6991.08	-38424	-0.0000591	0.0003743	0.0035	4.5807	62110.03	69334.69	69334.69	9.92	No	Si
SLU 82	5.46	8811.6	-53246	-0.0000835	0.0003743	0.0035	4.5807	72226.11	86932.85	86932.85	9.87	No	Si
SLU 82	7.56	7345.88	-43850	-0.0000672	0.0003743	0.0035	4.5807	66707.25	77072.59	77072.59	10.49	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	5.46	6701.27	-42452	-0.0000642	0.0003743	0.0035	4.5807	65621.88	75054.86	75054.86	11.2	No	Si
SLU 46	7.56	6616.03	-35562	-0.0000545	0.0003743	0.0035	4.5807	59269.08	65374.33	65374.33	9.88	No	Si
SLU 49	5.46	6797.44	-43337	-0.0000656	0.0003743	0.0035	4.5807	66316.73	76329.28	76329.28	11.23	No	Si
SLU 49	7.56	6750.77	-36440	-0.000056	0.0003743	0.0035	4.5807	60170.59	66578.26	66578.26	9.86	No	Si
SLU 76	5.46	8628.14	-51998	-0.0000813	0.0003743	0.0035	4.5807	71671.78	85749.5	85749.5	9.94	No	Si
SLU 76	7.56	7450.06	-43074	-0.0000663	0.0003743	0.0035	4.5807	66113	75949.46	75949.46	10.19	No	Si
SLU 68	5.46	7635.98	-47131	-0.0000724	0.0003743	0.0035	4.5807	68986.47	81211.51	81211.51	10.64	No	Si
SLU 68	7.56	7125.82	-39302	-0.0000605	0.0003743	0.0035	4.5807	62923.46	70568.13	70568.13	9.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	5.46	7995.85	-29256	-0.0000473	0.0005615	0.0035	4.5807		59108.85	59108.85	7.39		Si
SLD 9	7.56	11464.41	-23844	-0.000046	0.0005615	0.0035	4.5807		49872.36	49872.36	4.35		Si
SLV 14	5.46	5722.64	-14954	-0.0000262	0.0005615	0.0035	4.5807		33267.39	33267.39	5.81		Si
SLV 14	7.56	9051.37	-14889	-0.0000312	0.0005615	0.0035	4.5807		33136.37	33136.37	3.66		Si
SLD 10	5.46	8259.38	-29544	-0.0000481	0.0005615	0.0035	4.5807		59606.48	59606.48	7.22		Si
SLD 10	7.56	10850.63	-23932	-0.0000452	0.0005615	0.0035	4.5807		50021.06	50021.06	4.61		Si
SLV 9	5.46	11023.31	-20692	-0.0000414	0.0005615	0.0035	4.5807		44593.67	44593.67	4.05		Si
SLV 9	7.56	19488.33	-16251	-0.000054	0.0005615	0.0035	4.5807		35882.89	35882.89	1.84		Si
SLV 5	5.46	12390.01	-31896	-0.0000577	0.0005615	0.0035	4.5807		63691.93	63691.93	5.14		Si
SLV 5	7.56	18897.1	-23509	-0.0000574	0.0005615	0.0035	4.5807		49308.68	49308.68	2.61		Si
SLD 5	5.46	8580.18	-34050	-0.0000543	0.0005615	0.0035	4.5807		67468.11	67468.11	7.86		Si
SLD 5	7.56	11211.7	-26951	-0.0000495	0.0005615	0.0035	4.5807		55148.96	55148.96	4.92		Si
SLV 13	5.46	4786.38	-13930	-0.0000235	0.0005615	0.0035	4.5807		31175.5	31175.5	6.51		Si
SLV 13	7.56	11231.96	-14576	-0.0000342	0.0005615	0.0035	4.5807		32497.58	32497.58	2.89		Si
SLV 10	5.46	11626.66	-21352	-0.0000432	0.0005615	0.0035	4.5807		45692.62	45692.62	3.93		Si
SLV 10	7.56	18083.09	-16453	-0.0000499	0.0005615	0.0035	4.5807		36290.02	36290.02	2.01		Si
SLD 6	5.46	8843.71	-34338	-0.0000551	0.0005615	0.0035	4.5807		67975.95	67975.95	7.69		Si
SLD 6	7.56	10597.92	-27039	-0.0000487	0.0005615	0.0035	4.5807		55299.67	55299.67	5.22		Si
SLV 6	5.46	12993.36	-32556	-0.0000595	0.0005615	0.0035	4.5807		64845.35	64845.35	4.99		Si
SLV 6	7.56	17491.86	-23711	-0.0000554	0.0005615	0.0035	4.5807		49648.7	49648.7	2.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 59	5.46	7717.44	-47673	-39698	823	4.5807	4.5807	-30951	10833	13895	40441	38407	11681	50088	No	60.86	Si
SLU 59	7.56	6994.73	-39706	-33064	797	4.5807	4.5807	-25779	10382	13316	40441	38407	11681	50088	No	62.86	Si
SLU 45	5.46	6482.89	-42521	-35408	818	4.5807	4.5807	-27606	10625	13628	40441	38407	11681	50088	No	61.24	Si
SLU 45	7.56	6453.43	-35617	-29659	761	4.5807	4.5807	-23124	10028	12862	40441	38407	11681	50088	No	65.82	Si
SLU 51	5.46	6725.28	-42806	-35645	880	4.5807	4.5807	-27791	10650	13660	40441	38407	11681	50088	No	56.92	Si
SLU 51	7.56	6670.49	-35934	-29923	861	4.5807	4.5807	-23330	10055	12897	40441	38407	11681	50088	No	58.14	Si
SLU 44	5.46	6678.54	-40991	-34134	850	4.5807	4.5807	-26613	10493	13458	40441	38407	11681	50088	No	58.95	Si
SLU 44	7.56	6509.41	-34143	-28431	859	4.5807	4.5807	-22167	9900	12698	40441	38407	11681	50088	No	58.3	Si
SLU 43	5.46	6314.58	-41105	-34229	856	4.5807	4.5807	-26687	10503	13471	40441	38407	11681	50088	No	58.51	Si
SLU 43	7.56	6238.41	-34235	-28508	801	4.5807	4.5807	-22226	9908	12708	40441	38407	11681	50088	No	62.55	Si
SLU 49	5.46	6797.44	-43337	-36087	828	4.5807	4.5807	-28136	10696	13719	40441	38407	11681	50088	No	60.51	Si
SLU 49	7.56	6750.77	-36440	-30344	809	4.5807	4.5807	-23658	10099	12953	40441	38407	11681	50088	No	61.93	Si
SLU 48	5.46	6579.06	-43405	-36144	832	4.5807	4.5807	-28180	10702	13726	40441	38407	11681	50088	No	60.22	Si
SLU 48	7.56	6588.17	-36495	-30390	774	4.5807	4.5807	-23694	10104	12959	40441	38407	11681	50088	No	64.73	Si
SLU 47	5.46	6774.7	-41876	-34871	864	4.5807	4.5807	-27187	10569	13556	40441	38407	11681	50088	No	58	Si
SLU 47	7.56	6644.15	-35020	-29162	872	4.5807	4.5807	-22736	9976	12795	40441	38407	11681	50088	No	57.44	Si
SLU 58	5.46	7499.06	-47742	-39755	827	4.5807	4.5807	-30995	10833	13895	40441	38407	11681	50088	No	60.57	Si
SLU 58	7.56	6832.13	-39762	-33110	762	4.5807	4.5807	-25815	10386	13322	40441	38407	11681	50088	No	65.75	Si
SLU 50	5.46	6506.9	-42874	-35702	884	4.5807	4.5807	-27835	10656	13667	40441	38407	11681	50088	No	56.67	Si
SLU 50	7.56	6507.89	-35989	-29969	827	4.5807	4.5807	-23366	10060	12903	40441	38407	11681	50088	No	60.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	5.46	11626.66	-21352	-17780	-6108	4.5807	4.5807	-13862	13189	16916	40441	57610	11681	57357		9.39	Si
SLV 10	7.56	18083.09	-16453	-13700	-3570	4.5807	3.5738	-10682	12553	12561	40441	57610	11681	53002		14.85	Si
SLV 3	5.46	5505.49	-56842	-47333	4465	4.5807	4.5807	-36903	16250	20842	40441	57610	11681	61283		13.72	Si
SLV 3	7.56	1260.77	-44640	-37172	3360	4.5807	4.5807	-28982	16213	20795	40441	57610	11681	61236		18.22	Si
SLV 5	5.46	12390.01	-31896	-26561	-5937	4.5807	4.5807	-20708	14558	18673	40441	57610	11681	59114		9.96	Si
SLV 5	7.56	18897.1	-23509	-19576	-3582	4.5807	4.4596	-15263	13469	16819	40441	57610	11681	57260		15.99	Si
SLV 13	5.46	4786.38	-13930	-11600	-6435	4.5807	4.5807	-9044	12225	15680	40441	57610	11681	56121		8.72	Si
SLV 13	7.56	11231.96	-14576	-12138	-5424	4.5807	4.5594	-9463	12309	15714	40441	57610	11681	56155		10.35	Si
SLV 4	5.46	6441.75	-57865	-48185	7450	4.5807	4.5807	-37568	16250	20842	40441	57610	11681	61283		8.23	Si
SLV 4	7.56	-919.82	-44953	-37433	6341	4.5807	4.5807	-29185	16250	20842	40441	57610	11681	61283		9.66	Si
SLV 11	5.46	-1765.22	-39239	-32675	5029	4.5807	4.5807	-25476	15512	19896	40441	57610	11681	60336		12	Si
SLV 11	7.56	-7179.72	-35818	-29826	2578	4.5807	4.5807	-23254	15068	19326	40441	57610	11681	59767		23.18	Si
SLV 7	5.46	-398.52	-50444	-42005	7123	4.5807	4.5807	-32750	16250	20842	40441	57610	11681	61283		8.6	Si
SLV 7	7.56	-7770.95	-43076	-35870	4487	4.5807	4.5807	-27967	16010	20535	40441	57610	11681	60976		13.59	Si
SLV 12	5.46	-1161.87	-39899	-33224	6952	4.5807	4.5807	-25904	15597	20005	40441	57610	11681	60446		8.69	Si
SLV 12	7.56	-8584.96	-36020	-29994	4499	4.5807	4.5807	-23385	15094	19359	40441	57610	11681	59800		13.29	Si
SLV 8	5.46	204.83	-51103	-42554	9047	4.5807	4.5807	-33178	16250	20842	40441	57610	11681	61283		6.77	Si
SLV 8	7.56	-9176.19	-43278	-36038	6408	4.5807	4.5807	-28098	16036	20568	40441	57610	11681	61009		9.52	Si
SLV 9	5.46	11023.31	-20692	-17231	-8031	4.5807	4.5807	-13434	13103	16807	40441	57610	11681	57248		7.13	Si
SLV 9	7.56	19488.33	-16251	-13532	-5491	4.5807	3.2735	-10551	12527	11482	40441	57610	11681	51923		9.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.39	11985	-15372	476.41	1983.21	4.16	Si
SLV 14	179667	0.39	12229	-15685	476.41	2020.11	4.24	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	13368	-17145	476.41	2190.24	4.6	Si
SLV 10	179667	0.39	13525	-17347	476.41	2213.52	4.65	Si
SLV 15	179667	0.39	16517	-21185	476.41	2645.11	5.55	Si
SLV 16	179667	0.39	16761	-21498	476.41	2679.4	5.62	Si
SLV 5	179667	0.39	19047	-24430	476.41	2993.65	6.28	Si
SLV 6	179667	0.39	19205	-24632	476.41	3014.83	6.33	Si
SLV 11	179667	0.39	28474	-36521	476.41	4159.64	8.73	Si
SLV 12	179667	0.39	28631	-36723	476.41	4177.33	8.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-37237	-51103	-367	0.658	4427.8	0.958	9.98408	12.68333	No
SLV 7	-36896	-50444	-367	0.663	4393.2	0.957	10.06517	12.68333	No
SLV 12	-32435	-39899	377	0.739	3939.9	0.953	11.26885	12.68333	No
SLV 11	-32095	-39239	377	0.745	3905.2	0.952	11.37382	12.68333	No
SLV 6	-16104	-32556	-397	1.304	2286.1	0.926	20.47529	12.68333	Si
SLV 5	-15763	-31896	-397	1.326	2251.8	0.925	20.83598	12.68333	Si
SLV 4	-35536	-57865	-1245	0.662	4254.9	0.956	10.06656	5.63352	Si
SLV 3	-35007	-56842	-1246	0.671	4201.2	0.955	10.1998	5.63352	Si
SLV 2	-29196	-52301	-1254	0.781	3610.9	0.949	11.9521	5.63352	Si
SLV 10	-11302	-21352	347	1.702	1805	0.911	27.14512	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.728	SLU 47	Si
V_SLU	56.674	SLU 50	Si
PF_SLV	1.841	SLV 9	Si
V_SLV	6.774	SLV 8	Si
PFFP_SLV	4.163	SLV 13	Si
R_SLV	0.787	SLV 8	No

Maschio 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	2.066	-24.633	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	5.46	-5139.83	-39329	-0.0000735	0.0003743	0.0035	3.7599	46808.15	57800.23	57800.23	11.25	No	Si
SLU 74	7.56	-5011.87	-33061	-0.0000624	0.0003743	0.0035	3.7599	42982.52	52592.89	52592.89	10.49	No	Si
SLU 82	5.46	-5107.96	-39756	-0.0000742	0.0003743	0.0035	3.7599	47018.35	58156.28	58156.28	11.39	No	Si
SLU 82	7.56	-5139.54	-33361	-0.0000632	0.0003743	0.0035	3.7599	43196.9	52910.71	52910.71	10.29	No	Si
SLU 81	5.46	-5103.85	-39633	-0.000074	0.0003743	0.0035	3.7599	46958.45	58053.4	58053.4	11.37	No	Si
SLU 81	7.56	-5204.39	-33252	-0.0000632	0.0003743	0.0035	3.7599	43119.71	52805.84	52805.84	10.15	No	Si
SLU 83	5.46	-5179.56	-40378	-0.0000755	0.0003743	0.0035	3.7599	47313.35	58680.67	58680.67	11.33	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	7.56	-5250.34	-33981	-0.0000646	0.0003743	0.0035	3.7599	43630.73	53479.22	53479.22	10.19	No	Si
SLU 77	5.46	-5215.55	-40074	-0.0000751	0.0003743	0.0035	3.7599	47170.98	58423.78	58423.78	11.2	No	Si
SLU 77	7.56	-5057.82	-33790	-0.0000638	0.0003743	0.0035	3.7599	43498.44	53307.24	53307.24	10.54	No	Si
SLU 39	5.46	-4169.86	-33410	-0.0000609	0.0003743	0.0035	3.7599	43231.76	52956.86	52956.86	12.7	No	Si
SLU 39	7.56	-4565.73	-28213	-0.0000532	0.0003743	0.0035	3.7599	39078.76	47098.24	47098.24	10.32	No	Si
SLU 40	5.46	-4173.97	-33533	-0.0000611	0.0003743	0.0035	3.7599	43318.49	53071.33	53071.33	12.71	No	Si
SLU 40	7.56	-4500.88	-28321	-0.0000532	0.0003743	0.0035	3.7599	39175.13	47224.93	47224.93	10.49	No	Si
SLU 84	5.46	-5183.67	-40500	-0.0000757	0.0003743	0.0035	3.7599	47370.04	58785.05	58785.05	11.34	No	Si
SLU 84	7.56	-5185.49	-34090	-0.0000646	0.0003743	0.0035	3.7599	43705.14	53575.4	53575.4	10.33	No	Si
SLU 42	5.46	-4249.69	-34277	-0.0000625	0.0003743	0.0035	3.7599	43832.72	53739.31	53739.31	12.65	No	Si
SLU 42	7.56	-4546.83	-29051	-0.0000546	0.0003743	0.0035	3.7599	39812.28	48082.19	48082.19	10.57	No	Si
SLU 41	5.46	-4245.58	-34154	-0.0000623	0.0003743	0.0035	3.7599	43749.21	53632.16	53632.16	12.63	No	Si
SLU 41	7.56	-4611.68	-28942	-0.0000545	0.0003743	0.0035	3.7599	39718.69	47954.07	47954.07	10.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	5.46	-4319.89	-20784	-0.0000399	0.0005615	0.0035	3.7599		39207.34	39207.34	9.08		Si
SLD 12	7.56	-6958.95	-17032	-0.0000404	0.0005615	0.0035	3.7599		33386.02	33386.02	4.8		Si
SLV 3	5.46	-5849.21	-35871	-0.0000669	0.0005615	0.0035	3.7599		60284.58	60284.58	10.31		Si
SLV 3	7.56	-8455.96	-28616	-0.0000617	0.0005615	0.0035	3.7599		50617.46	50617.46	5.99		Si
SLV 4	5.46	-4613.59	-34820	-0.0000622	0.0005615	0.0035	3.7599		58910.64	58910.64	12.77		Si
SLV 4	7.56	-10248.83	-28581	-0.000066	0.0005615	0.0035	3.7599		50569.79	50569.79	4.93		Si
SLD 11	5.46	-4667.69	-21079	-0.0000412	0.0005615	0.0035	3.7599		39651.98	39651.98	8.49		Si
SLD 11	7.56	-6454.31	-17042	-0.0000392	0.0005615	0.0035	3.7599		33401.58	33401.58	5.18		Si
SLV 7	5.46	-6463.05	-20416	-0.0000444	0.0005615	0.0035	3.7599		38656.25	38656.25	5.98		Si
SLV 7	7.56	-12524.57	-15623	-0.0000524	0.0005615	0.0035	3.7599		31181.82	31181.82	2.49		Si
SLV 8	5.46	-5666.78	-19740	-0.0000415	0.0005615	0.0035	3.7599		37643.62	37643.62	6.64		Si
SLV 8	7.56	-13679.94	-15600	-0.0000564	0.0005615	0.0035	3.7599		31146.56	31146.56	2.28		Si
SLV 12	5.46	-5117.08	-12851	-0.0000299	0.0005615	0.0035	3.7599		26631.39	26631.39	5.2		Si
SLV 12	7.56	-11615.79	-10167	-0.0000497	0.0005615	0.0035	3.008		22149.92	22149.92	1.91		Si
SLV 11	5.46	-5913.35	-13527	-0.0000327	0.0005615	0.0035	3.7599		27742.48	27742.48	4.69		Si
SLV 11	7.56	-10460.42	-10190	-0.0000429	0.0005615	0.0035	3.7599		22188.82	22188.82	2.12		Si
SLD 7	5.46	-4900.94	-24028	-0.0000462	0.0005615	0.0035	3.7599		44078.7	44078.7	8.99		Si
SLD 7	7.56	-7337.49	-19368	-0.0000448	0.0005615	0.0035	3.7599		37081.71	37081.71	5.05		Si
SLD 8	5.46	-4553.15	-23733	-0.0000449	0.0005615	0.0035	3.7599		43654.53	43654.53	9.59		Si
SLD 8	7.56	-7842.13	-19358	-0.000046	0.0005615	0.0035	3.7599		37066.61	37066.61	4.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	5.46	-5099.94	-39152	-32602	-1003	3.7599	3.7599	-30968	10833	11405	40441	31525	9588	41113	No	41.01	Si
SLU 76	7.56	-4833.39	-32867	-27369	-1001	3.7599	3.7599	-25997	10411	10960	40441	31525	9588	41113	No	41.06	Si
SLU 68	5.46	-4898.16	-35814	-29823	-967	3.7599	3.7599	-28328	10721	11287	40441	31525	9588	41113	No	42.54	Si
SLU 68	7.56	-4112.7	-29846	-24853	-965	3.7599	3.7599	-23607	10092	10625	40441	31525	9588	41113	No	42.59	Si
SLU 70	5.46	-5017.88	-36859	-30693	-960	3.7599	3.7599	-29154	10832	11403	40441	31525	9588	41113	No	42.84	Si
SLU 70	7.56	-4272.28	-30877	-25712	-959	3.7599	3.7599	-24423	10201	10739	40441	31525	9588	41113	No	42.89	Si
SLU 75	5.46	-5143.94	-39452	-32852	-968	3.7599	3.7599	-31205	10833	11405	40441	31525	9588	41113	No	42.48	Si
SLU 75	7.56	-4947.02	-33169	-27621	-967	3.7599	3.7599	-26236	10443	10994	40441	31525	9588	41113	No	42.54	Si
SLU 72	5.46	-4971.14	-36477	-30375	-964	3.7599	3.7599	-28852	10791	11361	40441	31525	9588	41113	No	42.65	Si
SLU 72	7.56	-4201.88	-30503	-25400	-963	3.7599	3.7599	-24126	10161	10698	40441	31525	9588	41113	No	42.7	Si
SLU 82	5.46	-5107.96	-39756	-33105	-960	3.7599	3.7599	-31445	10833	11405	40441	31525	9588	41113	No	42.84	Si
SLU 82	7.56	-5139.54	-33361	-27780	-958	3.7599	3.7599	-26387	10463	11015	40441	31525	9588	41113	No	42.91	Si
SLU 73	5.46	-5024.22	-38407	-31982	-975	3.7599	3.7599	-30379	10833	11405	40441	31525	9588	41113	No	42.18	Si
SLU 73	7.56	-4787.44	-32138	-26762	-973	3.7599	3.7599	-25420	10334	10879	40441	31525	9588	41113	No	42.24	Si
SLU 78	5.46	-5219.66	-40197	-33472	-996	3.7599	3.7599	-31794	10833	11405	40441	31525	9588	41113	No	41.28	Si
SLU 78	7.56	-4992.97	-33899	-28228	-994	3.7599	3.7599	-26812	10519	11075	40441	31525	9588	41113	No	41.34	Si
SLU 80	5.46	-5172.91	-39815	-33154	-1000	3.7599	3.7599	-31492	10833	11405	40441	31525	9588	41113	No	41.11	Si
SLU 80	7.56	-4922.57	-33524	-27916	-999	3.7599	3.7599	-26516	10480	11033	40441	31525	9588	41113	No	41.17	Si
SLU 84	5.46	-5183.67	-40500	-33725	-988	3.7599	3.7599	-32034	10833	11405	40441	31525	9588	41113	No	41.63	Si
SLU 84	7.56	-5185.49	-34090	-28387	-986	3.7599	3.7599	-26964	10540	11096	40441	31525	9588	41113	No	41.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	5.46	-5117.08	-12851	-10701	5656	3.7599	3.7599	-10164	12450	13107	40441	47288	9588	53548		9.47	Si
SLV 12	7.56	-11615.79	-10167	-8466	3992	3.008	2.2125	0	0	0	40441	37830	7670	40441		10.13	Si
SLV 10	5.46	-903.25	-33509	-27903	-4716	3.7599	3.7599	-26504	15718	16547	40441	47288	9588	56876		12.06	Si
SLV 10	7.56	5978.6	-29164	-24285	-2944	3.7599	3.7599	-23068	15030	15824	40441	47288	9588	56265		19.11	Si
SLV 6	5.46	-1452.96	-40398	-33640	-5426	3.7599	3.7599	-31953	16250	17108	40441	47288	9588	56876		10.48	Si
SLV 6	7.56	3914.45	-34597	-28809	-3760	3.7599	3.7599	-27365	15890	16728	40441	47288	9588	56876		15.12	Si
SLV 1	5.46	-4585.07	-42068	-35031	-4558	3.7599	3.7599	-33274	16250	17108	40441	47288	9588	56876		12.48	Si
SLV 1	7.56	-3177.64	-34315	-28575	-4218	3.7599	3.7599	-27142	15845	16681	40441	47288	9588	56876		13.48	Si
SLV 8	5.46	-5666.78	-19740	-16437	4946	3.7599	3.7599	-15613	13539	14254	40441	47288	9588	54695		11.06	Si
SLV 8	7.56	-13679.94	-15600	-12990	3176	3.7599	3.0092	-15530	13523	11394	40441	47288	9588	51835		16.32	Si
SLV 16	5.46	-2781.24	-11857	-9874	3273	3.7599	3.7599	-9379	12292	12941	40441	47288	9588	53382		16.31	Si
SLV 16	7.56	-3368.33	-10472	-8720	2935	3.7599	3.7599	-8283	12073	12711	40441	47288	9588	53151		18.11	Si
SLV 7	5.46	-6463.05	-20416	-17001	3431	3.7599	3.7599	-16149	13646	14367	40441	47288	9588	54808		15.98	Si
SLV 7	7.56	-12524.57	-15623	-13009	1661	3.7599	3.2349	-14463	13309	12055	40441	47288	9588	52496		31.6	Si
SLV 5	5.46	-2249.23	-41075	-34204	-6941	3.7599	3.7599	-32489	16250	17108	40441	47288	9588	56876		8.19	Si
SLV 5	7.56	5069.83	-34619	-28828	-5275	3.7599	3.7599	-27383	15893	16732	40441	47288	9588	56876		10.78	Si
SLV 9	5.46	-1699.52	-34186	-28467	-6230	3.7599	3.7599	-27040	15825	16660	40441	47288	9588	56876		9.13	Si
SLV 9	7.56	7133.98	-29187	-24304	-4459	3.7599	3.7599	-23086	15034	15827	40441	47288	9588	56268		12.62	Si
SLV 11	5.46	-5913.35	-13527	-11265	4141	3.7599	3.7599	-10700	12557	13219	40441	47288	9588	53660		12.96	Si
SLV 11	7.56	-10460.42	-10190	-8485	2477	3.7599	2.5603	-11897	12797	9174	40441	47288	9588	49615		20.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.39	10328	-10873	391.04	1419.25	3.63	Si
SLV 11	179667	0.39	10349	-10895	391.04	1422	3.64	Si
SLV 16	179667	0.39	10557	-11114	391.04	1448.43	3.7	Si
SLV 15	179667	0.39	10590	-11149	391.04	1452.67	3.71	Si
SLV 8	179667	0.39	15511	-16329	391.04	2053.91	5.25	Si
SLV 7	179667	0.39	15532	-16352	391.04	2056.44	5.26	Si
SLV 14	179667	0.39	15941	-16783	391.04	2104.35	5.38	Si
SLV 13	179667	0.39	15975	-16818	391.04	2108.24	5.39	Si
SLV 4	179667	0.39	27833	-29302	391.04	3354.67	8.58	Si
SLV 3	179667	0.39	27867	-29338	391.04	3357.79	8.59	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-29352	-41075	-498	0.675	3511.1	0.956	10.25489	12.68333	No
SLV 6	-29138	-40398	-499	0.679	3489.4	0.956	10.32087	12.68333	No
SLV 9	-26283	-34186	247	0.749	3199.3	0.952	11.42881	12.68333	No
SLV 10	-26069	-33509	247	0.754	3177.6	0.952	11.51093	12.68333	No
SLV 1	-25931	-42068	-1284	0.722	3163.5	0.952	11.02389	5.63352	Si
SLV 2	-25599	-41018	-1285	0.73	3129.9	0.951	11.14833	5.63352	Si
SLV 7	-9179	-20416	-258	1.717	1471.8	0.911	27.39954	12.68333	Si
SLV 8	-8966	-19740	-258	1.747	1450.6	0.91	27.89089	12.68333	Si
SLV 3	-19879	-35871	-1212	0.903	2549.5	0.942	13.9317	5.63352	Si
SLV 4	-19548	-34820	-1212	0.916	2516	0.941	14.13413	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.146	SLU 81	Si
V_SLU	41.006	SLU 76	Si
PF_SLV	1.907	SLV 12	Si
V_SLV	8.194	SLV 5	Si
PFFP_SLV	3.629	SLV 12	Si
R_SLV	0.809	SLV 5	No

Maschio 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L5	L6	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	6.36	-1354.37	-13549	-0.000052	0.0003743	0.0035	1.92	9786.87	11732.07	11732.07	8.66	No	Si
SLU 47	8.16	-19.72	-11509	-0.0000332	0.0003743	0.0035	1.92	8725.15	10398.59	10398.59	527.27	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	6.36	-1382.37	-13873	-0.0000533	0.0003743	0.0035	1.92	9942.45	11936.33	11936.33	8.63	No	Si
SLU 51	8.16	-42.81	-11839	-0.0000344	0.0003743	0.0035	1.92	8906.99	10624.31	10624.31	248.15	No	Si
SLU 49	6.36	-1387.71	-14040	-0.0000539	0.0003743	0.0035	1.92	10020.78	12035.34	12035.34	8.67	No	Si
SLU 49	8.16	-59.22	-12016	-0.0000351	0.0003743	0.0035	1.92	9002.72	10743.25	10743.25	181.4	No	Si
SLU 44	6.36	-1327.12	-13172	-0.0000506	0.0003743	0.0035	1.92	9601.72	11489.82	11489.82	8.66	No	Si
SLU 44	8.16	1.99	-11117	-0.0000319	0.0003743	0.0035	1.92	8504.51	9137.91	9137.91	4591.66	No	Si
SLU 50	6.36	-1383.5	-13795	-0.0000531	0.0003743	0.0035	1.92	9905.37	11887.91	11887.91	8.59	No	Si
SLU 50	8.16	-44.89	-11747	-0.0000337	0.0003743	0.0035	1.92	8856.61	10561.74	10561.74	235.3	No	Si
SLU 48	6.36	-1388.84	-13962	-0.0000537	0.0003743	0.0035	1.92	9984.16	11988.84	11988.84	8.63	No	Si
SLU 48	8.16	-61.29	-11924	-0.0000349	0.0003743	0.0035	1.92	8952.91	10681.36	10681.36	174.26	No	Si
SLU 46	6.36	-1360.46	-13663	-0.0000525	0.0003743	0.0035	1.92	9842.12	11804.64	11804.64	8.68	No	Si
SLU 46	8.16	-37.51	-11624	-0.0000337	0.0003743	0.0035	1.92	8789.05	10477.87	10477.87	279.33	No	Si
SLU 43	6.36	-1329.01	-13042	-0.0000502	0.0003743	0.0035	1.92	9536.6	11405.26	11405.26	8.58	No	Si
SLU 43	8.16	-1.46	-10963	-0.0000314	0.0003743	0.0035	1.92	8416.48	10025.58	10025.58	6853.27	No	Si
SLU 71	6.36	-1372.94	-15117	-0.0000573	0.0003743	0.0035	1.92	10504.11	12687.53	12687.53	9.24	No	Si
SLU 71	8.16	-231.01	-13372	-0.0000409	0.0003743	0.0035	1.92	9700.61	11619.01	11619.01	50.3	No	Si
SLU 45	6.36	-1361.59	-13585	-0.0000522	0.0003743	0.0035	1.92	9804.47	11755.16	11755.16	8.63	No	Si
SLU 45	8.16	-39.58	-11532	-0.0000335	0.0003743	0.0035	1.92	8737.97	10414.49	10414.49	263.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	6.36	-2161.73	-1839	-0.0002785	0.0005615	0.0035	1.536		2769.8	2769.8	1.28		Si
SLV 12	8.16	619.56	1453	0.1101114	0.0005615	0.0035	1.536		0	0	0		No
SLV 4	6.36	1490.7	-9352	-0.0000394	0.0005615	0.0035	1.92		8360.56	8360.56	5.61		Si
SLV 4	8.16	-2786.35	-9510	-0.0000515	0.0005615	0.0035	1.92		9338.44	9338.44	3.35		Si
SLV 7	6.36	-150.64	-2443	-0.000008	0.0005615	0.0035	1.92		3320.2	3320.2	22.04		Si
SLV 7	8.16	-1367.54	-1225	-0.0001517	0.0005615	0.0035	1.536		2204.7	2204.7	1.61		Si
SLV 8	6.36	-481.72	-2421	-0.0000108	0.0005615	0.0035	1.92		3299.74	3299.74	6.85		Si
SLV 8	8.16	-1062.05	-512	-0.0002437	0.0005615	0.0035	1.536		1542.77	1542.77	1.45		Si
SLV 11	6.36	-1830.66	-1862	-0.000137	0.0005615	0.0035	1.536		2790.42	2790.42	1.52		Si
SLV 11	8.16	314.07	740	0.0560529	0.0005615	0.0035	1.536		0	0	0		No
SLV 15	6.36	-3595.6	-7449	-0.0000566	0.0005615	0.0035	1.92		7665.84	7665.84	2.13		Si
SLV 15	8.16	2344.96	-4065	-0.000038	0.0005615	0.0035	1.92		3930.68	3930.68	1.68		Si
SLV 3	6.36	2004.45	-9387	-0.0000441	0.0005615	0.0035	1.92		8384.69	8384.69	4.18		Si
SLV 3	8.16	-3260.41	-10616	-0.0000591	0.0005615	0.0035	1.92		10199.59	10199.59	3.13		Si
SLV 13	6.36	-3506.68	-12815	-0.0000682	0.0005615	0.0035	1.92		11865.68	11865.68	3.38		Si
SLV 13	8.16	2476.35	-9981	-0.0000501	0.0005615	0.0035	1.92		8796.78	8796.78	3.55		Si
SLV 16	6.36	-4109.35	-7414	-0.0000668	0.0005615	0.0035	1.536		7636.33	7636.33	1.86		Si
SLV 16	8.16	2819.01	-2959	-0.0005634	0.0005615	0.0035	1.92		2939.52	2939.52	1.04		Si
SLV 14	6.36	-4020.43	-12780	-0.0000728	0.0005615	0.0035	1.92		11839.99	11839.99	2.94		Si
SLV 14	8.16	2950.41	-8875	-0.0000511	0.0005615	0.0035	1.92		8003.51	8003.51	2.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	6.36	-1388.84	-13962	-11626	-556	1.92	1.92	-21626	9828	5283	40441	16098	4896	20994	No	37.74	Si
SLU 48	8.16	-61.29	-11924	-9929	-562	1.92	1.92	-18469	9407	5057	40441	16098	4896	20994	No	37.37	Si
SLU 47	6.36	-1354.37	-13549	-11282	-561	1.92	1.92	-20986	9743	5238	40441	16098	4896	20994	No	37.41	Si
SLU 47	8.16	-19.72	-11509	-9583	-567	1.92	1.92	-17827	9321	5011	40441	16098	4896	20994	No	37.05	Si
SLU 43	6.36	-1329.01	-13042	-10860	-578	1.92	1.92	-20201	9638	5181	40441	16098	4896	20994	No	36.33	Si
SLU 43	8.16	-1.46	-10963	-9129	-583	1.92	1.92	-16982	9209	4951	40441	16098	4896	20994	No	36	Si
SLU 49	6.36	-1387.71	-14040	-11691	-549	1.92	1.92	-21747	9844	5292	40441	16098	4896	20994	No	38.22	Si
SLU 49	8.16	-59.22	-12016	-10006	-555	1.92	1.92	-18612	9426	5067	40441	16098	4896	20994	No	37.84	Si
SLU 44	6.36	-1327.12	-13172	-10968	-566	1.92	1.92	-20402	9665	5196	40441	16098	4896	20994	No	37.08	Si
SLU 44	8.16	1.99	-11117	-9257	-571	1.92	1.92	-17220	9240	4968	40441	16098	4896	20994	No	36.74	Si
SLU 46	6.36	-1360.46	-13663	-11377	-554	1.92	1.92	-21163	9766	5250	40441	16098	4896	20994	No	37.88	Si
SLU 46	8.16	-37.51	-11624	-9679	-560	1.92	1.92	-18005	9345	5024	40441	16098	4896	20994	No	37.51	Si
SLU 51	6.36	-1382.37	-13873	-11553	-561	1.92	1.92	-21489	9810	5274	40441	16098	4896	20994	No	37.43	Si
SLU 51	8.16	-42.81	-11839	-9859	-566	1.92	1.92	-18338	9390	5048	40441	16098	4896	20994	No	37.07	Si
SLU 50	6.36	-1383.5	-13795	-11487	-568	1.92	1.92	-21368	9794	5265	40441	16098	4896	20994	No	36.97	Si
SLU 50	8.16	-44.89	-11747	-9782	-573	1.92	1.92	-18195	9371	5038	40441	16098	4896	20994	No	36.61	Si
SLU 45	6.36	-1361.59	-13585	-11312	-561	1.92	1.92	-21043	9750	5242	40441	16098	4896	20994	No	37.41	Si
SLU 45	8.16	-39.58	-11532	-9603	-567	1.92	1.92	-17862	9326	5014	40441	16098	4896	20994	No	37.05	Si
SLU 1	6.36	-1019.53	-10381	-8644	-369	1.92	1.92	-16079	9088	4886	40441	16098	4896	20994	No	56.84	Si
SLU 1	8.16	-50.21	-8862	-7379	-374	1.92	1.92	-13727	8775	4717	40441	16098	4896	20994	No	56.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.36	2093.37	-14753	-12285	5347	1.92	1.92	-22851	14987	8057	40441	24147	4896	29043		5.43	Si
SLV 1	8.16	-3129.02	-16531	-13766	4807	1.92	1.92	-25606	15538	8353	40441	24147	4896	29043		6.04	Si
SLV 16	6.36	-4109.35	-7414	-6174	-5756	1.536	1.2173	0	0	0	40441	19318	3917	23234		4.04	Si
SLV 16	8.16	2819.01	-2959	-2464	-5224	1.92	0.0223	-103461	16250	102	40441	24147	4896	29043		5.56	Si
SLV 14	6.36	-4020.43	-12780	-10642	-5355	1.92	1.92	-19795	14376	7728	40441	24147	4896	29043		5.42	Si
SLV 14	8.16	2950.41	-8875	-7390	-4712	1.92	1.8826	-13747	13166	6940	40441	24147	4896	29043		6.16	Si
SLD 16	6.36	-2336.11	-9477	-7891	-2581	1.92	1.92	-14679	13352	7178	40441	24147	4896	29043		11.25	Si
SLD 16	8.16	1116.4	-6802	-5664	-2357	1.92	1.92	-10536	12524	6733	40441	24147	4896	29043		12.32	Si
SLV 12	6.36	-2161.73	-1839	-1532	-2671	1.536	0	0	0	0	40441	19318	3917	23234		8.7	Si
SLV 12	8.16	619.56	1453	1210	-2683	1.536	1.6005	0	0	0	40441	19318	3917	23234		8.66	Si
SLV 4	6.36	1490.7	-9352	-7788	3827	1.92	1.92	-14486	13314	7158	40441	24147	4896	29043		7.59	Si
SLV 4	8.16	-2786.35	-9510	-7919	3175	1.92	1.92	-14731	13363	7184	40441	24147	4896	29043		9.15	Si
SLV 2	6.36	1579.62	-14718	-12256	4228	1.92	1.92	-22797	14976	8051	40441	24147	4896	29043		6.87	Si
SLV 2	8.16	-2654.96	-15425	-12845	3687	1.92	1.92	-23893	15195	8169	40441	24147	4896	29043		7.88	Si
SLV 3	6.36	2004.45	-9387	-7817	4946	1.92	1.92	-14540	13325	7163	40441	24147	4896	29043		5.87	Si
SLV 3	8.16	-3260.41	-10616	-8840	4294	1.92	1.92	-16444	13705	7368	40441	24147	4896	29043		6.76	Si
SLV 13	6.36	-3506.68	-12815	-10671	-4235	1.92	1.92	-19849	14387	7734	40441	24147	4896	29043		6.86	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	8.16	2476.35	-9981	-8311	-3592	1.92	1.92	-15460	13509	7262	40441	24147	4896	29043		8.08	Si
SLV 15	6.36	-3595.6	-7449	-6203	-4636	1.92	1.4319	-15586	13534	5426	40441	24147	4896	29043		6.26	Si
SLV 15	8.16	2344.96	-4065	-3385	-4105	1.92	1.1495	-6297	11676	3758	40441	24147	4896	29043		7.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.39	0	-161	199.68	0	0	No, e>t/2
SLV 8	179667	0.39	0	-1334	199.68	0	0	No, e>t/2
SLV 11	179667	0.39	0	-603	199.68	0	0	No, e>t/2
SLV 7	179667	0.39	3305	-1777	199.68	243.39	1.22	Si
SLV 16	179667	0.39	9970	-5360	199.68	701.4	3.51	Si
SLV 15	179667	0.39	11248	-6047	199.68	784.21	3.93	Si
SLV 4	179667	0.39	17248	-9272	199.68	1151.5	5.77	Si
SLV 3	179667	0.39	18525	-9959	199.68	1225.15	6.14	Si
SLV 14	179667	0.39	20638	-11095	199.68	1343.38	6.73	Si
SLV 13	179667	0.39	21916	-11782	199.68	1412.75	7.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18473	-19088	-387	0.558	2147.3	0.963	8.43034	12.68333	No
SLV 6	-17927	-18841	-387	0.573	2091.8	0.962	8.65568	12.68333	No
SLV 9	-17530	-16898	-281	0.589	2051.4	0.961	8.91154	12.68333	No
SLV 10	-16984	-16652	-282	0.605	1995.9	0.96	9.16309	12.68333	No
SLV 1	-13336	-16240	-273	0.743	1625.1	0.952	11.34376	5.63352	Si
SLV 2	-12490	-15858	-274	0.785	1539.1	0.95	12.01296	5.63352	Si
SLV 13	-10193	-8940	78	0.945	1306.1	0.942	14.58369	5.63352	Si
SLV 14	-9346	-8558	77	1.015	1220.4	0.939	15.71217	5.63352	Si
SLV 3	-7861	-11550	-70	1.167	1070.3	0.932	18.20254	5.63352	Si
SLV 4	-7015	-11168	-71	1.276	984.9	0.927	20.00921	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.582	SLU 43	Si
V_SLU	36.003	SLU 43	Si
PF_SLV	0	SLV 11	No
V_SLV	4.037	SLV 16	Si
PFFP_SLV	0	SLV 8	No
R_SLV	0.665	SLV 5	No

Maschio 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.813	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	6.36	-1075.99	-17154	-0.0000536	0.0003743	0.0035	2.13	13108.15	15870.85	15870.85	14.75	No	Si
SLU 60	8.16	1741.93	-18775	-0.0000636	0.0003743	0.0035	2.13	13812.88	15599.59	15599.59	8.96	No	Si
SLU 43	6.36	-1009.08	-15069	-0.0000471	0.0003743	0.0035	2.13	12065.78	14479.27	14479.27	14.35	No	Si
SLU 43	8.16	1566.81	-16202	-0.0000546	0.0003743	0.0035	2.13	12651.29	13916.39	13916.39	8.88	No	Si
SLU 62	6.36	-1071.46	-17644	-0.000055	0.0003743	0.0035	2.13	13330.72	16176.9	16176.9	15.1	No	Si
SLU 62	8.16	1758.73	-19332	-0.0000654	0.0003743	0.0035	2.13	14033.82	15972.86	15972.86	9.08	No	Si
SLU 52	6.36	-1053.12	-16616	-0.0000519	0.0003743	0.0035	2.13	12853.47	15516.02	15516.02	14.73	No	Si
SLU 52	8.16	1694.16	-18121	-0.0000613	0.0003743	0.0035	2.13	13539.63	15165.33	15165.33	8.95	No	Si
SLU 55	6.36	-1048.59	-17105	-0.0000532	0.0003743	0.0035	2.13	13085.28	15839.57	15839.57	15.11	No	Si
SLU 55	8.16	1710.96	-18678	-0.0000631	0.0003743	0.0035	2.13	13773.35	15535.05	15535.05	9.08	No	Si
SLU 61	6.36	-1074.31	-17206	-0.0000537	0.0003743	0.0035	2.13	13132.24	15903.84	15903.84	14.8	No	Si
SLU 61	8.16	1744.79	-18846	-0.0000638	0.0003743	0.0035	2.13	13841.53	15646.78	15646.78	8.97	No	Si
SLU 44	6.36	-1006.29	-15156	-0.0000473	0.0003743	0.0035	2.13	12112.23	14539.22	14539.22	14.45	No	Si
SLU 44	8.16	1571.58	-16320	-0.000055	0.0003743	0.0035	2.13	12709.58	13991.87	13991.87	8.9	No	Si
SLU 45	6.36	-994.49	-15776	-0.000049	0.0003743	0.0035	2.13	12436.15	14950.89	14950.89	15.03	No	Si
SLU 45	8.16	1585.59	-16980	-0.0000571	0.0003743	0.0035	2.13	13026.83	14417.28	14417.28	9.09	No	Si
SLU 64	6.36	-1033.98	-16795	-0.0000522	0.0003743	0.0035	2.13	12939.4	15638.39	15638.39	15.12	No	Si
SLU 64	8.16	1679.38	-18243	-0.0000615	0.0003743	0.0035	2.13	13591.78	15246.27	15246.27	9.08	No	Si
SLU 47	6.36	-1001.76	-15645	-0.0000487	0.0003743	0.0035	2.13	12369.11	14864.26	14864.26	14.84	No	Si
SLU 47	8.16	1588.38	-16877	-0.0000568	0.0003743	0.0035	2.13	12978.49	14350.78	14350.78	9.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.36	2758.18	-14701	-0.0000579	0.0005615	0.0035	2.13		13670.44	13670.44	4.96		Si
SLV 1	8.16	-1654.76	-12989	-0.0000451	0.0005615	0.0035	2.13		13598.83	13598.83	8.22		Si
SLV 12	6.36	-2094.08	-6966	-0.0000323	0.0005615	0.0035	2.13		8229.58	8229.58	3.93		Si
SLV 12	8.16	2045.48	-7701	-0.0000339	0.0005615	0.0035	2.13		7908.07	7908.07	3.87		Si
SLV 13	6.36	-3694.82	-14672	-0.0000648	0.0005615	0.0035	2.13		14982.68	14982.68	4.06		Si
SLV 13	8.16	3899.81	-19140	-0.000079	0.0005615	0.0035	2.13		17377.4	17377.4	4.46		Si
SLV 16	6.36	-4364.75	-11213	-0.0000604	0.0005615	0.0035	2.13		12079	12079	2.77		Si
SLV 16	8.16	4258.98	-15209	-0.0000705	0.0005615	0.0035	2.13		14087.47	14087.47	3.31		Si
SLD 16	6.36	-2326.02	-12186	-0.0000479	0.0005615	0.0035	2.13		12908.41	12908.41	5.55		Si
SLD 16	8.16	2564.06	-14546	-0.000056	0.0005615	0.0035	2.13		13543.78	13543.78	5.28		Si
SLV 15	6.36	-3774.4	-11049	-0.0000554	0.0005615	0.0035	2.13		11936.54	11936.54	3.16		Si
SLV 15	8.16	3746.92	-14637	-0.0000651	0.0005615	0.0035	2.13		13618.4	13618.4	3.63		Si
SLV 14	6.36	-4285.17	-14837	-0.0000697	0.0005615	0.0035	2.13		15118.14	15118.14	3.53		Si
SLV 14	8.16	4411.87	-19713	-0.0000845	0.0005615	0.0035	2.13		17784.31	17784.31	4.03		Si
SLV 11	6.36	-1713.64	-6860	-0.0000293	0.0005615	0.0035	2.13		8131.63	8131.63	4.75		Si
SLV 11	8.16	1715.49	-7332	-0.0000306	0.0005615	0.0035	2.13		7563.44	7563.44	4.41		Si
SLV 3	6.36	2678.61	-11077	-0.0000475	0.0005615	0.0035	2.13		10753.78	10753.78	4.01		Si
SLV 3	8.16	-1807.65	-8486	-0.0000343	0.0005615	0.0035	2.13		9644.58	9644.58	5.34		Si
SLV 4	6.36	2088.26	-11241	-0.0000436	0.0005615	0.0035	2.13		10884.03	10884.03	5.21		Si
SLV 4	8.16	-1295.59	-9058	-0.0000321	0.0005615	0.0035	2.13		10162.69	10162.69	7.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	6.36	-1060.03	-19503	-16241	-4523	2.13	2.13	-27231	10575	6307	40441	17859	5432	23291	No	5.15	Si
SLU 78	8.16	1840.4	-21449	-17861	-4530	2.13	2.13	-29948	10833	6461	40441	17859	5432	23291	No	5.14	Si
SLU 83	6.36	-1096.37	-19370	-16130	-4596	2.13	2.13	-27045	10550	6292	40441	17859	5432	23291	No	5.07	Si
SLU 83	8.16	1871.29	-21373	-17797	-4603	2.13	2.13	-29841	10833	6461	40441	17859	5432	23291	No	5.06	Si
SLU 79	6.36	-1071.76	-19234	-16016	-4512	2.13	2.13	-26855	10525	6277	40441	17859	5432	23291	No	5.16	Si
SLU 79	8.16	1835.56	-21158	-17619	-4519	2.13	2.13	-29541	10833	6461	40441	17859	5432	23291	No	5.15	Si
SLU 82	6.36	-1099.22	-18932	-15765	-4560	2.13	2.13	-26434	10469	6244	40441	17859	5432	23291	No	5.11	Si
SLU 82	8.16	1857.35	-20886	-17392	-4567	2.13	2.13	-29162	10833	6461	40441	17859	5432	23291	No	5.1	Si
SLU 81	6.36	-1100.9	-18880	-15722	-4547	2.13	2.13	-26361	10459	6238	40441	17859	5432	23291	No	5.12	Si
SLU 81	8.16	1854.49	-20816	-17334	-4554	2.13	2.13	-29063	10820	6453	40441	17859	5432	23291	No	5.11	Si
SLU 80	6.36	-1070.09	-19286	-16060	-4525	2.13	2.13	-26927	10535	6283	40441	17859	5432	23291	No	5.15	Si
SLU 80	8.16	1838.42	-21229	-17678	-4532	2.13	2.13	-29640	10833	6461	40441	17859	5432	23291	No	5.14	Si
SLU 76	6.36	-1073.5	-18831	-15681	-4484	2.13	2.13	-26292	10450	6232	40441	17859	5432	23291	No	5.19	Si
SLU 76	8.16	1823.53	-20719	-17253	-4491	2.13	2.13	-28928	10802	6442	40441	17859	5432	23291	No	5.19	Si
SLU 84	6.36	-1094.69	-19422	-16173	-4609	2.13	2.13	-27117	10560	6298	40441	17859	5432	23291	No	5.05	Si
SLU 84	8.16	1874.16	-21444	-17856	-4616	2.13	2.13	-29940	10833	6461	40441	17859	5432	23291	No	5.05	Si
SLU 75	6.36	-1064.56	-19014	-15833	-4474	2.13	2.13	-26547	10484	6253	40441	17859	5432	23291	No	5.21	Si
SLU 75	8.16	1823.6	-20892	-17397	-4481	2.13	2.13	-29170	10833	6461	40441	17859	5432	23291	No	5.2	Si
SLU 77	6.36	-1061.71	-19451	-16197	-4510	2.13	2.13	-27158	10566	6301	40441	17859	5432	23291	No	5.16	Si
SLU 77	8.16	1837.54	-21379	-17802	-4517	2.13	2.13	-29849	10833	6461	40441	17859	5432	23291	No	5.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	6.36	-4364.75	-11213	-9337	-8928	2.13	2.0273	-16578	13732	7795	40441	26789	5432	32220		3.61	Si
SLV 16	8.16	4258.98	-15209	-12665	-8227	2.13	2.13	-21235	14664	8746	40441	26789	5432	32220		3.92	Si
SLD 14	6.36	-2290.9	-13783	-11477	-5905	2.13	2.13	-19244	14265	8508	40441	26789	5432	32220		5.46	Si
SLD 14	8.16	2631.12	-16533	-13767	-5644	2.13	2.13	-23084	15033	8966	40441	26789	5432	32220		5.71	Si
SLV 14	6.36	-4285.17	-14837	-12355	-9540	2.13	2.13	-20715	14560	8684	40441	26789	5432	32220		3.38	Si
SLV 14	8.16	4411.87	-19713	-16415	-8923	2.13	2.13	-27523	15921	9496	40441	26789	5432	32220		3.61	Si
SLD 13	6.36	-2037.43	-13712	-11418	-5542	2.13	2.13	-19145	14246	8496	40441	26789	5432	32220		5.81	Si
SLD 13	8.16	2411.26	-16287	-13563	-5281	2.13	2.13	-22741	14965	8925	40441	26789	5432	32220		6.1	Si
SLV 10	6.36	-1828.82	-19045	-15859	-6162	2.13	2.13	-26591	15735	9384	40441	26789	5432	32220		5.23	Si
SLV 10	8.16	2555.1	-22712	-18912	-6108	2.13	2.13	-31711	16250	9692	40441	26789	5432	32220		5.27	Si
SLD 15	6.36	-2072.55	-12115	-10088	-5271	2.13	2.13	-16915	13800	8230	40441	26789	5432	32220		6.11	Si
SLD 15	8.16	2344.2	-14300	-11908	-4975	2.13	2.13	-19966	14410	8594	40441	26789	5432	32220		6.48	Si
SLV 9	6.36	-1448.39	-18939	-15771	-5617	2.13	2.13	-26443	15705	9367	40441	26789	5432	32220		5.74	Si
SLV 9	8.16	2225.12	-22343	-18605	-5563	2.13	2.13	-31196	16250	9692	40441	26789	5432	32220		5.79	Si
SLD 16	6.36	-2326.02	-12186	-10147	-5634	2.13	2.13	-17014	13819	8242	40441	26789	5432	32220		5.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	8.16	2564.06	-14546	-12113	-5338	2.13	2.13	-20309	14479	8635	40441	26789	5432	32220		6.04	Si
SLV 15	6.36	-3774.4	-11049	-9200	-8082	2.13	2.13	-15426	13502	8053	40441	26789	5432	32220		3.99	Si
SLV 15	8.16	3746.92	-14637	-12189	-7382	2.13	2.13	-20437	14504	8650	40441	26789	5432	32220		4.36	Si
SLV 13	6.36	-3694.82	-14672	-12218	-8694	2.13	2.13	-20486	14514	8656	40441	26789	5432	32220		3.71	Si
SLV 13	8.16	3899.81	-19140	-15939	-8078	2.13	2.13	-26724	15762	9400	40441	26789	5432	32220		3.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	10512	-6270	221.53	817.33	3.69	Si
SLV 8	179667	0.39	10958	-6535	221.53	849.28	3.83	Si
SLV 11	179667	0.39	12408	-7400	221.53	951.87	4.3	Si
SLV 12	179667	0.39	12853	-7666	221.53	982.89	4.44	Si
SLV 3	179667	0.39	16565	-9879	221.53	1233.1	5.57	Si
SLV 4	179667	0.39	17256	-10292	221.53	1278.01	5.77	Si
SLV 15	179667	0.39	22884	-13648	221.53	1624.44	7.33	Si
SLV 16	179667	0.39	23575	-14060	221.53	1664.57	7.51	Si
SLV 1	179667	0.39	23754	-14167	221.53	1674.88	7.56	Si
SLV 2	179667	0.39	24445	-14579	221.53	1714.36	7.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18727	-17197	-411	0.604	2202.5	0.96	9.14035	12.68333	No
SLV 9	-18611	-16695	-411	0.607	2190.6	0.96	9.19135	12.68333	No
SLV 6	-18075	-15745	-361	0.625	2136.2	0.959	9.46867	12.68333	No
SLV 5	-17959	-15243	-360	0.628	2124.4	0.959	9.52338	12.68333	No
SLV 14	-14821	-15866	-203	0.748	1805.5	0.952	11.41704	5.63352	Si
SLV 13	-14641	-15086	-202	0.756	1787.2	0.952	11.54166	5.63352	Si
SLV 12	-5304	-8159	353	1.664	844.1	0.912	26.53007	12.68333	Si
SLV 11	-5188	-7657	354	1.691	832.5	0.911	26.97914	12.68333	Si
SLV 8	-4652	-6707	404	1.818	779.4	0.907	29.14162	12.68333	Si
SLV 7	-4536	-6205	405	1.85	767.9	0.906	29.68533	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.882	SLU 43	Si
V_SLU	5.046	SLU 84	Si
PF_SLV	2.767	SLV 16	Si
V_SLV	3.377	SLV 14	Si
PFFP_SLV	3.69	SLV 7	Si
R_SLV	0.721	SLV 10	No

Maschio 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L5	L6	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	6.36	-1196.97	-15799	-0.0000503	0.0003743	0.0035	2.14	12526.87	15049.95	15049.95	12.57	No	Si
SLU 46	8.16	-592.54	-13933	-0.0000405	0.0003743	0.0035	2.14	11503.35	13734.9	13734.9	23.18	No	Si
SLU 48	6.36	-1271.79	-16352	-0.0000525	0.0003743	0.0035	2.14	12806.67	15422.61	15422.61	12.13	No	Si
SLU 48	8.16	-625.4	-14482	-0.0000423	0.0003743	0.0035	2.14	11816.79	14128.88	14128.88	22.59	No	Si
SLU 66	6.36	-1299.38	-17788	-0.0000569	0.0003743	0.0035	2.14	13483.46	16359.82	16359.82	12.59	No	Si
SLU 66	8.16	-751.25	-16086	-0.0000477	0.0003743	0.0035	2.14	12673.15	15242.3	15242.3	20.29	No	Si
SLU 69	6.36	-1317.53	-18175	-0.0000581	0.0003743	0.0035	2.14	13653.36	16602.62	16602.62	12.6	No	Si
SLU 69	8.16	-791.81	-16494	-0.0000492	0.0003743	0.0035	2.14	12876.74	15519.13	15519.13	19.6	No	Si
SLU 43	6.36	-1213.88	-15349	-0.0000492	0.0003743	0.0035	2.14	12290.99	14750.42	14750.42	12.15	No	Si
SLU 43	8.16	-541.22	-13446	-0.0000388	0.0003743	0.0035	2.14	11216.08	13389.76	13389.76	24.74	No	Si
SLU 45	6.36	-1253.64	-15965	-0.0000512	0.0003743	0.0035	2.14	12612.04	15161.3	15161.3	12.09	No	Si
SLU 45	8.16	-584.84	-14073	-0.0000408	0.0003743	0.0035	2.14	11584.37	13834.94	13834.94	23.66	No	Si
SLU 49	6.36	-1215.12	-16186	-0.0000516	0.0003743	0.0035	2.14	12723.76	15310.1	15310.1	12.6	No	Si
SLU 49	8.16	-633.1	-14342	-0.0000419	0.0003743	0.0035	2.14	11737.78	14027.75	14027.75	22.16	No	Si
SLU 51	6.36	-1193.51	-15956	-0.0000507	0.0003743	0.0035	2.14	12607.49	15155.31	15155.31	12.7	No	Si
SLU 51	8.16	-630.05	-14123	-0.0000413	0.0003743	0.0035	2.14	11612.94	13870.5	13870.5	22.01	No	Si
SLU 50	6.36	-1250.18	-16122	-0.0000517	0.0003743	0.0035	2.14	12691.74	15267.13	15267.13	12.21	No	Si
SLU 50	8.16	-622.35	-14263	-0.0000416	0.0003743	0.0035	2.14	11693.03	13971.04	13971.04	22.45	No	Si
SLU 64	6.36	-1259.63	-17172	-0.0000548	0.0003743	0.0035	2.14	13201.85	15972.77	15972.77	12.68	No	Si
SLU 64	8.16	-707.64	-15459	-0.0000456	0.0003743	0.0035	2.14	12349.12	14823.06	14823.06	20.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	6.36	-4233.83	-7074	-0.0000543	0.0005615	0.0035	1.712		8369.1	8369.1	1.98		Si
SLV 14	8.16	3124.27	-2511	-0.0026201	0.0005615	0.0035	2.14		2869.53	2869.53	0.92		No
SLV 9	6.36	-2208.47	-1960	-0.0001486	0.0005615	0.0035	1.712		3346.94	3346.94	1.52		Si
SLV 9	8.16	297.91	1253	0.0874113	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	6.36	330.69	-4046	-0.0000123	0.0005615	0.0035	2.14		4418.15	4418.15	13.36		Si
SLV 6	8.16	-2633.7	-3781	-0.0000361	0.0005615	0.0035	1.712		5186.22	5186.22	1.97		Si
SLV 15	6.36	-4841.88	-12979	-0.0000682	0.0005615	0.0035	2.14		13658.69	13658.69	2.82		Si
SLV 15	8.16	4124.47	-7585	-0.0000521	0.0005615	0.0035	2.14		7840.5	7840.5	1.9		Si
SLV 13	6.36	-4834.54	-6833	-0.0000689	0.0005615	0.0035	1.712		8145.53	8145.53	1.68		Si
SLV 13	8.16	3766.71	-1155	-0.0159507	0.0005615	0.0035	2.14		1469.99	1469.99	0.39		No
SLV 2	6.36	2939.64	-13511	-0.0000556	0.0005615	0.0035	2.14		12770.86	12770.86	4.34		Si
SLV 2	8.16	-5267.76	-16377	-0.0000809	0.0005615	0.0035	2.14		16431.7	16431.7	3.12		Si
SLV 5	6.36	-56.43	-3891	-0.00001	0.0005615	0.0035	2.14		5294.94	5294.94	93.83		Si
SLV 5	8.16	-2219.7	-2907	-0.0000337	0.0005615	0.0035	1.712		4309.44	4309.44	1.94		Si
SLV 1	6.36	2338.93	-13270	-0.0000506	0.0005615	0.0035	2.14		12575.66	12575.66	5.38		Si
SLV 1	8.16	-4625.31	-15021	-0.0000722	0.0005615	0.0035	2.14		15348.52	15348.52	3.32		Si
SLV 16	6.36	-4241.16	-13219	-0.0000644	0.0005615	0.0035	2.14		13862.48	13862.48	3.27		Si
SLV 16	8.16	3482.02	-8941	-0.0000474	0.0005615	0.0035	2.14		9095.89	9095.89	2.61		Si
SLV 10	6.36	-1821.35	-2115	-0.0000354	0.0005615	0.0035	1.712		3505.43	3505.43	1.92		Si
SLV 10	8.16	-116.09	379	0.0274044	0.0005615	0.0035	1.712		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	6.36	-970.84	-16678	-13888	797	2.14	2.14	-23178	10035	6013	40441	17943	5457	23399	No	29.35	Si
SLU 41	8.16	-986.61	-15955	-13286	795	2.14	2.14	-22173	9901	5933	40441	17943	5457	23399	No	29.43	Si
SLU 42	6.36	-914.17	-16512	-13750	854	2.14	2.14	-22948	10004	5994	40441	17943	5457	23399	No	27.39	Si
SLU 42	8.16	-994.32	-15815	-13169	841	2.14	2.14	-21978	9875	5917	40441	17943	5457	23399	No	27.82	Si
SLU 39	6.36	-952.7	-16292	-13566	772	2.14	2.14	-22641	9963	5970	40441	17943	5457	23399	No	30.31	Si
SLU 39	8.16	-946.05	-15546	-12946	770	2.14	2.14	-21605	9825	5887	40441	17943	5457	23399	No	30.4	Si
SLU 83	6.36	-1238.91	-19740	-16437	757	2.14	2.14	-27433	10602	6353	40441	17943	5457	23399	No	30.92	Si
SLU 83	8.16	-1067.62	-18527	-15428	754	2.14	2.14	-25747	10377	6218	40441	17943	5457	23399	No	31.02	Si
SLU 84	6.36	-1182.24	-19574	-16299	814	2.14	2.14	-27202	10571	6334	40441	17943	5457	23399	No	28.75	Si
SLU 84	8.16	-1075.33	-18387	-15311	800	2.14	2.14	-25553	10351	6203	40441	17943	5457	23399	No	29.24	Si
SLU 34	6.36	-888.05	-15747	-13113	747	2.14	2.14	-21885	9862	5909	40441	17943	5457	23399	No	31.32	Si
SLU 34	8.16	-903.63	-14923	-12427	727	2.14	2.14	-20739	9710	5818	40441	17943	5457	23399	No	32.2	Si
SLU 40	6.36	-896.03	-16126	-13428	829	2.14	2.14	-22410	9932	5951	40441	17943	5457	23399	No	28.23	Si
SLU 40	8.16	-953.76	-15406	-12829	816	2.14	2.14	-21411	9799	5872	40441	17943	5457	23399	No	28.68	Si
SLU 38	6.36	-943.98	-16245	-13527	734	2.14	2.14	-22576	9955	5965	40441	17943	5457	23399	No	31.86	Si
SLU 38	8.16	-939.06	-15425	-12845	721	2.14	2.14	-21437	9803	5874	40441	17943	5457	23399	No	32.44	Si
SLU 82	6.36	-1164.09	-19187	-15977	789	2.14	2.14	-26664	10500	6291	40441	17943	5457	23399	No	29.67	Si
SLU 82	8.16	-1034.76	-17979	-14971	775	2.14	2.14	-24985	10276	6157	40441	17943	5457	23399	No	30.19	Si
SLU 81	6.36	-1220.76	-19353	-16115	732	2.14	2.14	-26895	10530	6310	40441	17943	5457	23399	No	31.99	Si
SLU 81	8.16	-1027.06	-18119	-15088	729	2.14	2.14	-25180	10302	6173	40441	17943	5457	23399	No	32.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	6.36	-4233.83	-7074	-5891	-6097	1.712	1.4145	0	0	0	40441	21531	4366	25897		4.25	Si
SLV 14	8.16	3124.27	-2511	-2091	-5385	2.14	0	-124547	16250	0	40441	26914	5457	32371		6.01	Si
SLV 15	6.36	-4841.88	-12979	-10808	-7282	2.14	2.0908	-18629	14142	8279	40441	26914	5457	32371		4.45	Si
SLV 15	8.16	4124.47	-7585	-6316	-6497	2.14	1.5786	-10541	12525	5536	40441	26914	5457	32371		4.98	Si
SLV 1	6.36	2338.93	-13270	-11050	6416	2.14	2.14	-18442	14105	8452	40441	26914	5457	32371		5.05	Si
SLV 1	8.16	-4625.31	-15021	-12508	5628	2.14	2.14	-20875	14592	8743	40441	26914	5457	32371		5.75	Si
SLV 16	6.36	-4241.16	-13219	-11008	-5928	2.14	2.14	-18371	14091	8443	40441	26914	5457	32371		5.46	Si
SLV 16	8.16	3482.02	-8941	-7445	-5143	2.14	2.0416	-12425	12902	7375	40441	26914	5457	32371		6.29	Si
SLV 2	6.36	2939.64	-13511	-11251	7769	2.14	2.14	-18776	14172	8492	40441	26914	5457	32371		4.17	Si
SLV 2	8.16	-5267.76	-16377	-13637	6981	2.14	2.14	-22759	14969	8969	40441	26914	5457	32371		4.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	6.36	2932.31	-19656	-16368	7938	2.14	2.14	-27316	15880	9515	40441	26914	5457	32371		4.08	Si
SLV 4	8.16	-4910	-22807	-18992	7222	2.14	2.14	-31696	16250	9737	40441	26914	5457	32371		4.48	Si
SLV 3	6.36	2331.59	-19415	-16167	6585	2.14	2.14	-26982	15813	9475	40441	26914	5457	32371		4.92	Si
SLV 3	8.16	-4267.56	-21451	-17863	5869	2.14	2.14	-29811	16250	9737	40441	26914	5457	32371		5.52	Si
SLD 4	6.36	710.31	-16030	-13348	3533	2.14	2.14	-22277	14872	8911	40441	26914	5457	32371		9.16	Si
SLD 4	8.16	-2423.97	-16653	-13868	3226	2.14	2.14	-23144	15045	9015	40441	26914	5457	32371		10.03	Si
SLD 2	6.36	712.57	-13318	-11090	3460	2.14	2.14	-18508	14118	8460	40441	26914	5457	32371		9.36	Si
SLD 2	8.16	-2581.91	-13815	-11504	3123	2.14	2.14	-19199	14257	8542	40441	26914	5457	32371		10.37	Si
SLV 13	6.36	-4834.54	-6833	-5690	-7450	1.712	1.0875	0	0	0	40441	21531	4366	25897		3.48	Si
SLV 13	8.16	3766.71	-1155	-962	-6738	2.14	0	0	16250	0	40441	26914	5457	32371		4.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.39	0	-889	222.56	0	0	No, e>t/2
SLV 9	179667	0.39	0	-299	222.56	0	0	No, e>t/2
SLV 5	179667	0.39	5877	-3521	222.56	474.03	2.13	Si
SLV 13	179667	0.39	6313	-3783	222.56	507.71	2.28	Si
SLV 6	179667	0.39	6861	-4111	222.56	549.67	2.47	Si
SLV 14	179667	0.39	7840	-4698	222.56	623.9	2.8	Si
SLV 15	179667	0.39	16907	-10131	222.56	1261.29	5.67	Si
SLV 16	179667	0.39	18434	-11046	222.56	1359.71	6.11	Si
SLV 1	179667	0.39	24240	-14524	222.56	1710.64	7.69	Si
SLV 2	179667	0.39	25766	-15439	222.56	1796.77	8.07	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-22166	-23144	440	0.524	2553.8	0.965	7.8943	12.68333	No
SLV 7	-21512	-22765	440	0.538	2487.2	0.964	8.10516	12.68333	No
SLV 12	-19303	-19441	321	0.595	2262.5	0.961	9.00231	12.68333	No
SLV 11	-18649	-19062	321	0.613	2195.9	0.96	9.2799	12.68333	No
SLV 4	-18678	-21401	312	0.612	2198.9	0.96	9.27408	5.63352	Si
SLV 3	-17662	-20813	312	0.642	2095.6	0.958	9.74182	5.63352	Si
SLV 2	-12670	-16114	83	0.864	1588.5	0.946	13.27356	5.63352	Si
SLV 1	-11655	-15527	84	0.926	1485.6	0.943	14.26949	5.63352	Si
SLV 16	-9135	-9058	-85	1.128	1230.5	0.934	17.56737	5.63352	Si
SLV 15	-8119	-8470	-84	1.239	1128	0.929	19.38715	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.094	SLU 45	Si
V_SLU	27.392	SLU 42	Si
PF_SLV	0	SLV 9	No
V_SLV	3.476	SLV 13	Si
PFFP_SLV	0	SLV 9	No
R_SLV	0.622	SLV 8	No

Maschio 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L5	L6	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	7.46	-2174.98	-27395	-0.0000861	0.0003743	0.0035	2.28	18067.43	22922.8	22922.8	10.54	No	Si
SLU 77	8.26	-2477.29	-23794	-0.0000776	0.0003743	0.0035	2.28	17195.32	21069.21	21069.21	8.5	No	Si
SLU 75	7.46	-2166.96	-26585	-0.0000836	0.0003743	0.0035	2.28	17910.96	22611.65	22611.65	10.43	No	Si
SLU 75	8.26	-2379.3	-23046	-0.0000747	0.0003743	0.0035	2.28	16957.29	20669.32	20669.32	8.69	No	Si
SLU 80	7.46	-2186	-26867	-0.0000846	0.0003743	0.0035	2.28	17967.95	22726.58	22726.58	10.4	No	Si
SLU 80	8.26	-2431.6	-23320	-0.0000759	0.0003743	0.0035	2.28	17046.54	20814.36	20814.36	8.56	No	Si
SLU 78	7.46	-2212.27	-27182	-0.0000857	0.0003743	0.0035	2.28	18028.43	22848.06	22848.06	10.33	No	Si
SLU 78	8.26	-2459.62	-23604	-0.0000769	0.0003743	0.0035	2.28	17136.8	20966.9	20966.9	8.52	No	Si
SLU 82	7.46	-2167.28	-26698	-0.000084	0.0003743	0.0035	2.28	17934.08	22658.33	22658.33	10.45	No	Si
SLU 82	8.26	-2393.37	-23155	-0.0000751	0.0003743	0.0035	2.28	16993	20726.7	20726.7	8.66	No	Si
SLU 81	7.46	-2129.99	-26911	-0.0000843	0.0003743	0.0035	2.28	17976.7	22744.2	22744.2	10.68	No	Si
SLU 81	8.26	-2411.04	-23344	-0.0000758	0.0003743	0.0035	2.28	17054.52	20827.59	20827.59	8.64	No	Si
SLU 74	7.46	-2129.68	-26799	-0.000084	0.0003743	0.0035	2.28	17954.43	22699.35	22699.35	10.66	No	Si
SLU 74	8.26	-2396.97	-23236	-0.0000754	0.0003743	0.0035	2.28	17019.52	20769.86	20769.86	8.67	No	Si
SLU 84	7.46	-2212.58	-27294	-0.0000861	0.0003743	0.0035	2.28	18049.2	22888.11	22888.11	10.34	No	Si
SLU 84	8.26	-2473.69	-23713	-0.0000773	0.0003743	0.0035	2.28	17170.39	21025.28	21025.28	8.5	No	Si
SLU 83	7.46	-2175.29	-27508	-0.0000865	0.0003743	0.0035	2.28	18087.36	22961.66	22961.66	10.56	No	Si
SLU 83	8.26	-2491.36	-23902	-0.000078	0.0003743	0.0035	2.28	17228.19	21127.93	21127.93	8.48	No	Si
SLU 79	7.46	-2148.71	-27080	-0.000085	0.0003743	0.0035	2.28	18009.31	22809.71	22809.71	10.62	No	Si
SLU 79	8.26	-2449.27	-23509	-0.0000766	0.0003743	0.0035	2.28	17106.95	20915.78	20915.78	8.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	7.46	106.7	-16389	-0.0000399	0.0005615	0.0035	2.28		16243.31	16243.31	152.23		Si
SLV 1	8.26	-4939.93	-15931	-0.00007	0.0005615	0.0035	2.28		17261.98	17261.98	3.49		Si
SLV 6	7.46	-646.39	-10484	-0.0000288	0.0005615	0.0035	2.28		12282.37	12282.37	19		Si
SLV 6	8.26	-2232.61	-9539	-0.0000364	0.0005615	0.0035	2.28		11371.01	11371.01	5.09		Si
SLD 4	7.46	-782.45	-19325	-0.0000516	0.0005615	0.0035	2.28		20101.57	20101.57	25.69		Si
SLD 4	8.26	-3409.48	-17592	-0.0000643	0.0005615	0.0035	2.28		18667.77	18667.77	5.48		Si
SLD 2	7.46	-707.91	-17279	-0.000046	0.0005615	0.0035	2.28		18402.56	18402.56	26		Si
SLD 2	8.26	-3235.13	-15780	-0.0000585	0.0005615	0.0035	2.28		17129.51	17129.51	5.29		Si
SLD 1	7.46	-784.8	-17372	-0.0000467	0.0005615	0.0035	2.28		18481.66	18481.66	23.55		Si
SLD 1	8.26	-3001.76	-15718	-0.0000568	0.0005615	0.0035	2.28		17073.58	17073.58	5.69		Si
SLV 2	7.46	285.77	-16171	-0.0000405	0.0005615	0.0035	2.28		16053.3	16053.3	56.18		Si
SLV 2	8.26	-5483.45	-16077	-0.0000739	0.0005615	0.0035	2.28		17387.43	17387.43	3.17		Si
SLV 4	7.46	118.42	-20812	-0.0000511	0.0005615	0.0035	2.28		20164.84	20164.84	170.28		Si
SLV 4	8.26	-5878.46	-20187	-0.0000876	0.0005615	0.0035	2.28		20791.83	20791.83	3.54		Si
SLV 3	7.46	-60.65	-21031	-0.0000513	0.0005615	0.0035	2.28		21468.85	21468.85	354		Si
SLV 3	8.26	-5334.95	-20041	-0.0000836	0.0005615	0.0035	2.28		20674.72	20674.72	3.88		Si
SLV 13	7.46	-3023.48	-15502	-0.0000564	0.0005615	0.0035	2.28		16880.97	16880.97	5.58		Si
SLV 13	8.26	2755.38	-11024	-0.0000434	0.0005615	0.0035	2.28		11675.54	11675.54	4.24		Si
SLV 14	7.46	-2844.42	-15284	-0.0000547	0.0005615	0.0035	2.28		16686.51	16686.51	5.87		Si
SLV 14	8.26	2211.86	-11170	-0.0000403	0.0005615	0.0035	2.28		11796.65	11796.65	5.33		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	7.46	-2212.58	-27294	-22728	-3274	2.28	2.28	-35602	10833	6916	40441	19117	5814	24931	No	7.61	Si
SLU 84	8.26	-2473.69	-23713	-19746	-1988	2.28	2.28	-30930	10833	6916	40441	19117	5814	24931	No	12.54	Si
SLU 75	7.46	-2166.96	-26585	-22138	-3273	2.28	2.28	-34677	10833	6916	40441	19117	5814	24931	No	7.62	Si
SLU 75	8.26	-2379.3	-23046	-19191	-1994	2.28	2.28	-30061	10833	6916	40441	19117	5814	24931	No	12.51	Si
SLU 77	7.46	-2174.98	-27395	-22812	-3253	2.28	2.28	-35733	10833	6916	40441	19117	5814	24931	No	7.66	Si
SLU 77	8.26	-2477.29	-23794	-19814	-1947	2.28	2.28	-31036	10833	6916	40441	19117	5814	24931	No	12.81	Si
SLU 78	7.46	-2212.27	-27182	-22634	-3286	2.28	2.28	-35455	10833	6916	40441	19117	5814	24931	No	7.59	Si
SLU 78	8.26	-2459.62	-23604	-19656	-1992	2.28	2.28	-30789	10833	6916	40441	19117	5814	24931	No	12.51	Si
SLU 82	7.46	-2167.28	-26698	-22232	-3261	2.28	2.28	-34824	10833	6916	40441	19117	5814	24931	No	7.65	Si
SLU 82	8.26	-2393.37	-23155	-19281	-1989	2.28	2.28	-30202	10833	6916	40441	19117	5814	24931	No	12.54	Si
SLU 83	7.46	-2175.29	-27508	-22906	-3241	2.28	2.28	-35880	10833	6916	40441	19117	5814	24931	No	7.69	Si
SLU 83	8.26	-2491.36	-23902	-19904	-1942	2.28	2.28	-31177	10833	6916	40441	19117	5814	24931	No	12.84	Si
SLU 74	7.46	-2129.68	-26799	-22316	-3240	2.28	2.28	-34955	10833	6916	40441	19117	5814	24931	No	7.69	Si
SLU 74	8.26	-2396.97	-23236	-19349	-1948	2.28	2.28	-30308	10833	6916	40441	19117	5814	24931	No	12.8	Si
SLU 73	7.46	-2120.25	-25532	-21261	-3239	2.28	2.28	-33303	10833	6916	40441	19117	5814	24931	No	7.7	Si
SLU 73	8.26	-2259.17	-22077	-18384	-2000	2.28	2.28	-28797	10784	6885	40441	19117	5814	24931	No	12.46	Si
SLU 76	7.46	-2165.55	-26128	-21757	-3252	2.28	2.28	-34080	10833	6916	40441	19117	5814	24931	No	7.67	Si
SLU 76	8.26	-2339.5	-22635	-18849	-1999	2.28	2.28	-29525	10833	6916	40441	19117	5814	24931	No	12.47	Si
SLU 80	7.46	-2186	-26867	-22372	-3243	2.28	2.28	-35044	10833	6916	40441	19117	5814	24931	No	7.69	Si
SLU 80	8.26	-2431.6	-23320	-19419	-1967	2.28	2.28	-30417	10833	6916	40441	19117	5814	24931	No	12.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	7.46	-2197.15	-19036	-15851	-7028	2.28	2.28	-24830	15383	9820	40441	28675	5814	34489		4.91	Si
SLD 15	8.26	112.04	-15431	-12849	-4924	2.28	2.28	-20127	14442	9220	40441	28675	5814	34489		7	Si
SLV 13	7.46	-3023.48	-15502	-12909	-12762	2.28	2.28	-20221	14461	9232	40441	28675	5814	34489		2.7	Si
SLV 13	8.26	2755.38	-11024	-9180	-9508	2.28	2.28	-14379	13293	8486	40441	28675	5814	34489		3.63	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	7.46	-3011.77	-19925	-16592	-11826	2.28	2.28	-25990	15615	9968	40441	28675	5814	34489		2.92	Si
SLV 16	8.26	1816.84	-15280	-12724	-8509	2.28	2.28	-19930	14403	9195	40441	28675	5814	34489		4.05	Si
SLD 13	7.46	-2122.61	-16990	-14148	-6789	2.28	2.28	-22161	14849	9480	40441	28675	5814	34489		5.08	Si
SLD 13	8.26	286.39	-13619	-11340	-4876	2.28	2.28	-17764	13969	8918	40441	28675	5814	34489		7.07	Si
SLV 14	7.46	-2844.42	-15284	-12727	-11285	2.28	2.28	-19936	14404	9195	40441	28675	5814	34489		3.06	Si
SLV 14	8.26	2211.86	-11170	-9301	-8402	2.28	2.28	-14569	13331	8510	40441	28675	5814	34489		4.1	Si
SLV 2	7.46	285.77	-16171	-13466	8628	2.28	2.28	-21093	14635	9343	40441	28675	5814	34489		4	Si
SLV 2	8.26	-5483.45	-16077	-13388	6774	2.28	2.28	-20970	14611	9328	40441	28675	5814	34489		5.09	Si
SLV 4	7.46	118.42	-20812	-17331	8086	2.28	2.28	-27147	15846	10116	40441	28675	5814	34489		4.27	Si
SLV 4	8.26	-5878.46	-20187	-16810	6667	2.28	2.28	-26331	15683	10012	40441	28675	5814	34489		5.17	Si
SLV 15	7.46	-3190.83	-20144	-16774	-13304	2.28	2.28	-26275	15672	10005	40441	28675	5814	34489		2.59	Si
SLV 15	8.26	2360.36	-15134	-12602	-9615	2.28	2.28	-19740	14365	9171	40441	28675	5814	34489		3.59	Si
SLV 1	7.46	106.7	-16389	-13647	7150	2.28	2.28	-21377	14692	9380	40441	28675	5814	34489		4.82	Si
SLV 1	8.26	-4939.93	-15931	-13266	5668	2.28	2.28	-20780	14573	9303	40441	28675	5814	34489		6.09	Si
SLV 11	7.46	-2258.67	-25830	-21509	-6703	2.28	2.28	-33692	16250	10374	40441	28675	5814	34489		5.14	Si
SLV 11	8.26	-890.48	-21672	-18047	-4231	2.28	2.28	-28269	16070	10259	40441	28675	5814	34489		8.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	14180	-9053	237.13	1149.68	4.85	Si
SLV 10	179667	0.39	14198	-9064	237.13	1151.03	4.85	Si
SLV 5	179667	0.39	16103	-10280	237.13	1287.46	5.43	Si
SLV 6	179667	0.39	16121	-10292	237.13	1288.76	5.43	Si
SLV 13	179667	0.39	19703	-12579	237.13	1533.8	6.47	Si
SLV 14	179667	0.39	19732	-12597	237.13	1535.71	6.48	Si
SLV 1	179667	0.39	26112	-16670	237.13	1934.79	8.16	Si
SLV 2	179667	0.39	26141	-16689	237.13	1936.48	8.17	Si
SLV 15	179667	0.39	26364	-16831	237.13	1949.57	8.22	Si
SLV 16	179667	0.39	26393	-16850	237.13	1951.26	8.23	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-19756	-22958	532	0.607	2328.1	0.96	9.19459	12.68333	No
SLV 7	-19712	-22944	532	0.608	2323.7	0.96	9.21236	12.68333	No
SLV 12	-18817	-20899	544	0.632	2232.6	0.958	9.58871	12.68333	No
SLV 11	-18774	-20885	544	0.633	2228.2	0.958	9.60815	12.68333	No
SLV 6	-7915	-11109	-534	1.283	1127.8	0.925	20.15489	12.68333	Si
SLV 5	-7872	-11095	-534	1.288	1123.4	0.925	20.24525	12.68333	Si
SLV 10	-6976	-9050	-523	1.414	1033.4	0.92	22.33721	12.68333	Si
SLV 9	-6933	-9036	-523	1.42	1029.1	0.92	22.44828	12.68333	Si
SLV 4	-16718	-21217	145	0.72	2019.4	0.954	10.96264	5.63352	Si
SLV 3	-16651	-21196	145	0.722	2012.5	0.954	11.00148	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.48	SLU 83	Si
V_SLU	7.586	SLU 78	Si
PF_SLV	3.171	SLV 2	Si
V_SLV	2.592	SLV 15	Si
PFFP_SLV	4.848	SLV 9	Si
R_SLV	0.725	SLV 8	No

Maschio 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L5	L6	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	7.46	191.6	-7554	-0.0001068	0.0003743	0.0035	0.55	1076.42	1390.12	1390.12	7.26	No	Si
SLU 70	8.26	332.63	-7005	-0.0001182	0.0003743	0.0035	0.55	1065.66	1324.45	1324.45	3.98	No	Si
SLU 75	7.46	217.14	-8178	-0.0001189	0.0003743	0.0035	0.55	1075.84	1443.02	1443.02	6.65	No	Si
SLU 75	8.26	344.96	-7615	-0.0001284	0.0003743	0.0035	0.55	1076.97	1397.63	1397.63	4.05	No	Si
SLU 69	7.46	199.01	-7601	-0.0001085	0.0003743	0.0035	0.55	1076.86	1395.95	1395.95	7.01	No	Si
SLU 69	8.26	328.57	-7030	-0.000118	0.0003743	0.0035	0.55	1066.36	1327.34	1327.34	4.04	No	Si
SLU 72	7.46	190.31	-7476	-0.0001056	0.0003743	0.0035	0.55	1075.53	1380.62	1380.62	7.25	No	Si
SLU 72	8.26	326.59	-6931	-0.0001163	0.0003743	0.0035	0.55	1063.39	1315.77	1315.77	4.03	No	Si
SLU 66	7.46	190.96	-7411	-0.0001048	0.0003743	0.0035	0.55	1074.63	1372.75	1372.75	7.19	No	Si
SLU 66	8.26	323.24	-6860	-0.0001149	0.0003743	0.0035	0.55	1061.04	1307.48	1307.48	4.04	No	Si
SLU 68	7.46	177.33	-7253	-0.000101	0.0003743	0.0035	0.55	1071.83	1353.82	1353.82	7.63	No	Si
SLU 68	8.26	323.96	-6745	-0.0001134	0.0003743	0.0035	0.55	1056.86	1294.17	1294.17	3.99	No	Si
SLU 67	7.46	183.56	-7363	-0.0001032	0.0003743	0.0035	0.55	1073.87	1367	1367	7.45	No	Si
SLU 67	8.26	327.3	-6836	-0.0001151	0.0003743	0.0035	0.55	1060.19	1304.63	1304.63	3.99	No	Si
SLU 76	7.46	210.91	-8068	-0.0001165	0.0003743	0.0035	0.55	1076.93	1437.25	1437.25	6.81	No	Si
SLU 76	8.26	341.62	-7525	-0.0001267	0.0003743	0.0035	0.55	1076.11	1386.58	1386.58	4.06	No	Si
SLU 65	7.46	169.28	-7063	-0.0000974	0.0003743	0.0035	0.55	1067.27	1331.17	1331.17	7.86	No	Si
SLU 65	8.26	318.63	-6576	-0.0001104	0.0003743	0.0035	0.55	1049.85	1274.36	1274.36	4	No	Si
SLU 78	7.46	225.19	-8368	-0.0001227	0.0003743	0.0035	0.55	1072.94	1453.15	1453.15	6.45	No	Si
SLU 78	8.26	350.29	-7785	-0.0001316	0.0003743	0.0035	0.55	1077.8	1418.55	1418.55	4.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	7.46	-201.87	-3671	-0.0000586	0.0005615	0.0035	0.55		957.72	957.72	4.74		Si
SLD 13	8.26	551.18	-4158	-0.0001106	0.0005615	0.0035	0.55		989.12	989.12	1.79		Si
SLV 16	7.46	-543.2	-2832	-0.0001306	0.0005615	0.0035	0.44		773.92	773.92	1.42		Si
SLV 16	8.26	952.79	-4223	-0.0004302	0.0005615	0.0035	0.55		1003.06	1003.06	1.05		Si
SLV 9	7.46	-164.09	-2260	-0.0000397	0.0005615	0.0035	0.55		641.8	641.8	3.91		Si
SLV 9	8.26	365.92	-2629	-0.0000711	0.0005615	0.0035	0.55		672.9	672.9	1.84		Si
SLD 14	7.46	-163.74	-3841	-0.0000561	0.0005615	0.0035	0.55		994.05	994.05	6.07		Si
SLD 14	8.26	511.69	-4231	-0.0001034	0.0005615	0.0035	0.55		1004.78	1004.78	1.96		Si
SLV 2	7.46	920.85	-8659	-0.0002113	0.0005615	0.0035	0.55		1744.69	1744.69	1.89		Si
SLV 2	8.26	-571.41	-6227	-0.0001308	0.0005615	0.0035	0.55		1447.04	1447.04	2.53		Si
SLD 15	7.46	-187.31	-4226	-0.0000629	0.0005615	0.0035	0.55		1072.87	1072.87	5.73		Si
SLD 15	8.26	582.5	-4681	-0.0001185	0.0005615	0.0035	0.55		1101.42	1101.42	1.89		Si
SLV 4	7.46	954.03	-9918	-0.0002324	0.0005615	0.0035	0.55		1891.11	1891.11	1.98		Si
SLV 4	8.26	-500.39	-7413	-0.0001367	0.0005615	0.0035	0.55		1615.88	1615.88	3.23		Si
SLV 15	7.46	-632.02	-2437	-0.000556	0.0005615	0.0035	0.44		683.47	683.47	1.08		Si
SLV 15	8.26	1044.77	-4052	-0.0080376	0.0005615	0.0035	0.44		966.66	966.66	0.93		No
SLV 14	7.46	-576.38	-1574	-0.0021737	0.0005615	0.0035	0.44		476.04	476.04	0.83		No
SLV 14	8.26	881.77	-3037	-0.011065	0.0005615	0.0035	0.44		755.55	755.55	0.86		No
SLV 13	7.46	-665.2	-1178	-0.0052343	0.0005615	0.0035	0.44		377.04	377.04	0.57		No
SLV 13	8.26	973.74	-2866	-0.0214153	0.0005615	0.0035	0.44		720.7	720.7	0.74		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	7.46	230.25	-8449	-7035	469	0.55	0.55	-45686	10833	1668	40441	4611	1402	6014	No	12.82	Si
SLU 84	8.26	346.48	-7875	-6558	-483	0.55	0.55	-42583	10833	1668	40441	4611	1402	6014	No	12.46	Si
SLU 83	7.46	237.65	-8496	-7075	489	0.55	0.55	-45943	10833	1668	40441	4611	1402	6014	No	12.29	Si
SLU 83	8.26	342.41	-7899	-6578	-473	0.55	0.55	-42716	10833	1668	40441	4611	1402	6014	No	12.71	Si
SLU 80	7.46	223.9	-8290	-6903	442	0.55	0.55	-44829	10833	1668	40441	4611	1402	6014	No	13.6	Si
SLU 80	8.26	344.24	-7711	-6421	-467	0.55	0.55	-41695	10833	1668	40441	4611	1402	6014	No	12.87	Si
SLU 79	7.46	231.31	-8338	-6943	463	0.55	0.55	-45087	10833	1668	40441	4611	1402	6014	No	13	Si
SLU 79	8.26	340.18	-7735	-6441	-458	0.55	0.55	-41827	10833	1668	40441	4611	1402	6014	No	13.14	Si
SLU 76	7.46	210.91	-8068	-6718	411	0.55	0.55	-43626	10833	1668	40441	4611	1402	6014	No	14.62	Si
SLU 76	8.26	341.62	-7525	-6266	-470	0.55	0.55	-40689	10833	1668	40441	4611	1402	6014	No	12.78	Si
SLU 73	7.46	202.87	-7877	-6559	394	0.55	0.55	-42595	10833	1668	40441	4611	1402	6014	No	15.25	Si
SLU 73	8.26	336.29	-7355	-6125	-467	0.55	0.55	-39771	10833	1668	40441	4611	1402	6014	No	12.87	Si
SLU 75	7.46	217.14	-8178	-6810	421	0.55	0.55	-44220	10833	1668	40441	4611	1402	6014	No	14.29	Si
SLU 75	8.26	344.96	-7615	-6341	-466	0.55	0.55	-41178	10833	1668	40441	4611	1402	6014	No	12.91	Si
SLU 82	7.46	222.2	-8258	-6877	452	0.55	0.55	-44655	10833	1668	40441	4611	1402	6014	No	13.31	Si
SLU 82	8.26	341.14	-7705	-6416	-480	0.55	0.55	-41666	10833	1668	40441	4611	1402	6014	No	12.54	Si
SLU 81	7.46	229.6	-8306	-6916	472	0.55	0.55	-44912	10833	1668	40441	4611	1402	6014	No	12.73	Si
SLU 81	8.26	337.08	-7730	-6437	-470	0.55	0.55	-41798	10833	1668	40441	4611	1402	6014	No	12.79	Si
SLU 78	7.46	225.19	-8368	-6968	438	0.55	0.55	-45251	10833	1668	40441	4611	1402	6014	No	13.73	Si
SLU 78	8.26	350.29	-7785	-6483	-469	0.55	0.55	-42096	10833	1668	40441	4611	1402	6014	No	12.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	7.46	920.85	-8659	-7211	3239	0.55	0.5059	-46824	16250	2302	40441	6917	1402	8319		2.57	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.26	-571.41	-6227	-5185	449	0.55	0.5497	-33672	16250	2501	40441	6917	1402	8319		18.53	Si
SLV 3	7.46	865.2	-9522	-7929	2794	0.55	0.55	-51490	16250	2502	40441	6917	1402	8319		2.98	Si
SLV 3	8.26	-408.41	-7242	-6030	342	0.55	0.55	-39158	16250	2502	40441	6917	1402	8319		24.31	Si
SLV 15	7.46	-632.02	-2437	-2029	-2695	0.44	0.0469	0	0	0	40441	5534	1122	6655		2.47	Si
SLV 15	8.26	1044.77	-4052	-3374	-1085	0.44	0.0514	0	0	0	40441	5534	1122	6655		6.14	Si
SLV 16	7.46	-543.2	-2832	-2358	-2361	0.44	0.2496	0	0	0	40441	5534	1122	6655		2.82	Si
SLV 16	8.26	952.79	-4223	-3517	-991	0.55	0.1481	-91092	16250	674	40441	6917	1402	8319		8.39	Si
SLV 14	7.46	-576.38	-1574	-1311	-2250	0.44	0	0	0	0	40441	5534	1122	6655		2.96	Si
SLV 14	8.26	881.77	-3037	-2529	-978	0.44	0	0	0	0	40441	5534	1122	6655		6.8	Si
SLV 13	7.46	-665.2	-1178	-981	-2583	0.44	0	0	0	0	40441	5534	1122	6655		2.58	Si
SLV 13	8.26	973.74	-2866	-2387	-1071	0.44	0	0	0	0	40441	5534	1122	6655		6.21	Si
SLV 4	7.46	954.03	-9918	-8259	3128	0.55	0.5364	-53629	16250	2441	40441	6917	1402	8319		2.66	Si
SLV 4	8.26	-500.39	-7413	-6173	436	0.55	0.55	-40084	16250	2502	40441	6917	1402	8319		19.1	Si
SLD 2	7.46	476.14	-6870	-5720	1541	0.55	0.55	-37147	16250	2502	40441	6917	1402	8319		5.4	Si
SLD 2	8.26	-109.15	-5598	-4661	7	0.55	0.55	-30270	16250	2502	40441	6917	1402	8319		1155.3	Si
SLD 4	7.46	490.7	-7425	-6183	1493	0.55	0.55	-40149	16250	2502	40441	6917	1402	8319		5.57	Si
SLD 4	8.26	-77.83	-6121	-5097	2	0.55	0.55	-33100	16250	2502	40441	6917	1402	8319		5394.06	Si
SLV 1	7.46	832.02	-8264	-6881	2906	0.55	0.5229	-44685	16250	2379	40441	6917	1402	8319		2.86	Si
SLV 1	8.26	-479.44	-6056	-5043	356	0.55	0.55	-32746	16250	2502	40441	6917	1402	8319		23.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.39	12873	-1982	57.2	254.14	4.44	Si
SLV 9	179667	0.39	13092	-2016	57.2	258.05	4.51	Si
SLV 10	179667	0.39	13745	-2117	57.2	269.65	4.71	Si
SLV 14	179667	0.39	13886	-2138	57.2	272.15	4.76	Si
SLV 15	179667	0.39	19065	-2936	57.2	359.71	6.29	Si
SLV 5	179667	0.39	19316	-2975	57.2	363.77	6.36	Si
SLV 6	179667	0.39	19969	-3075	57.2	374.22	6.54	Si
SLV 16	179667	0.39	20078	-3092	57.2	375.95	6.57	Si
SLV 1	179667	0.39	33622	-5178	57.2	565.28	9.88	Si
SLV 11	179667	0.39	33731	-5194	57.2	566.59	9.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-4517	-5609	-12	0.658	536.4	0.958	9.99103	12.68333	No
SLV 7	-4427	-5642	-12	0.67	527.2	0.957	10.17018	12.68333	No
SLV 12	-3912	-5405	-12	0.743	474.9	0.953	11.33706	12.68333	No
SLV 11	-3823	-5438	-12	0.758	465.7	0.952	11.57131	12.68333	No
SLV 6	-1892	-2897	-2	1.345	270.3	0.925	21.13773	12.68333	Si
SLV 5	-1802	-2930	-2	1.396	261.3	0.923	21.99147	12.68333	Si
SLV 4	-4329	-4889	-8	0.683	517.2	0.956	10.38518	5.63352	Si
SLV 3	-4190	-4940	-8	0.703	503	0.955	10.68993	5.63352	Si
SLV 2	-3542	-4075	-5	0.81	437.2	0.949	12.39798	5.63352	Si
SLV 10	-1287	-2693	-3	1.789	209.8	0.909	28.59618	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.982	SLU 70	Si
V_SLU	12.287	SLU 83	Si
PF_SLV	0.567	SLV 13	No
V_SLV	2.47	SLV 15	Si
PFFP_SLV	4.443	SLV 13	Si
R_SLV	0.788	SLV 8	No

Maschio 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L5	L6	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	5.46	4132.11	-47972	-0.000093	0.0004492	0.0035	4.82	56755.43	91924.04	91924.04	22.25	No	Si
SLU 63	8.98	-804.57	-28034	-0.0000487	0.0004492	0.0035	4.82	47462.41	71134.56	71134.56	88.41	No	Si
SLU 44	5.46	3736.46	-40924	-0.0000787	0.0004492	0.0035	4.82	55793.61	81896.27	81896.27	21.92	No	Si
SLU 44	8.98	-375.95	-23802	-0.0000404	0.0004492	0.0035	4.82	42872.93	63436.54	63436.54	168.74	No	Si
SLU 68	5.46	4050.66	-46453	-0.0000899	0.0004492	0.0035	4.82	56762.96	89880.83	89880.83	22.19	No	Si
SLU 68	8.98	-502.79	-27370	-0.0000469	0.0004492	0.0035	4.82	46802.43	69972.45	69972.45	139.17	No	Si
SLU 52	5.46	3988.6	-45321	-0.0000876	0.0004492	0.0035	4.82	56691.78	88356.4	88356.4	22.15	No	Si
SLU 52	8.98	-715.11	-26291	-0.0000454	0.0004492	0.0035	4.82	45683.55	68067.7	68067.7	95.18	No	Si
SLU 59	5.46	4101.73	-46895	-0.0000909	0.0004492	0.0035	4.82	56772.93	90474.5	90474.5	22.06	No	Si
SLU 59	8.98	-557.95	-27669	-0.0000475	0.0004492	0.0035	4.82	47102.56	70496	70496	126.35	No	Si
SLU 72	5.46	4086.1	-47220	-0.0000915	0.0004492	0.0035	4.82	56773.9	90912.56	90912.56	22.25	No	Si
SLU 72	8.98	-446.9	-28046	-0.0000479	0.0004492	0.0035	4.82	47473.42	71154.27	71154.27	159.22	No	Si
SLU 47	5.46	3814.14	-41731	-0.0000804	0.0004492	0.0035	4.82	56032.63	83296.97	83296.97	21.84	No	Si
SLU 47	8.98	-274.69	-24503	-0.0000414	0.0004492	0.0035	4.82	43697.31	64742.03	64742.03	235.69	No	Si
SLU 49	5.46	3830.32	-42984	-0.0000828	0.0004492	0.0035	4.82	56337.72	85212.64	85212.64	22.25	No	Si
SLU 49	8.98	-295.9	-25589	-0.0000433	0.0004492	0.0035	4.82	44923.07	66761.74	66761.74	225.63	No	Si
SLU 55	5.46	4066.29	-46128	-0.0000893	0.0004492	0.0035	4.82	56749.23	89442.77	89442.77	22	No	Si
SLU 55	8.98	-613.85	-26993	-0.0000464	0.0004492	0.0035	4.82	46418.55	69314.17	69314.17	112.92	No	Si
SLU 51	5.46	3849.59	-42498	-0.0000819	0.0004492	0.0035	4.82	56228.76	84557.38	84557.38	21.97	No	Si
SLU 51	8.98	-218.79	-25179	-0.0000424	0.0004492	0.0035	4.82	44467.4	65999.24	65999.24	301.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.46	7492.16	-28126	-0.0000623	0.0006738	0.0035	4.82		61882.9	61882.9	8.26		Si
SLV 14	8.98	4497.87	-17911	-0.0000385	0.0006738	0.0035	4.82		42182.73	42182.73	9.38		Si
SLV 7	5.46	-5521.06	-32699	-0.0000661	0.0006738	0.0035	4.82		81548.54	81548.54	14.77		Si
SLV 7	8.98	-7668.49	-19411	-0.0000477	0.0006738	0.0035	4.82		55972	55972	7.3		Si
SLV 13	5.46	7650.02	-28067	-0.0000626	0.0006738	0.0035	4.82		61779.77	61779.77	8.08		Si
SLV 13	8.98	4828.5	-17866	-0.0000392	0.0006738	0.0035	4.82		42089.53	42089.53	8.72		Si
SLV 5	5.46	10290.01	-42988	-0.0000948	0.0006738	0.0035	4.82		87939.08	87939.08	8.55		Si
SLV 5	8.98	4634.35	-23624	-0.0000485	0.0006738	0.0035	4.82		53809.85	53809.85	11.61		Si
SLV 9	5.46	11612.7	-37768	-0.0000883	0.0006738	0.0035	4.82		78787.97	78787.97	6.78		Si
SLV 9	8.98	6684.21	-21651	-0.0000495	0.0006738	0.0035	4.82		49851.29	49851.29	7.46		Si
SLV 12	5.46	-4300.11	-27517	-0.0000545	0.0006738	0.0035	4.82		71938.28	71938.28	16.73		Si
SLV 12	8.98	-5831.7	-17466	-0.0000406	0.0006738	0.0035	4.82		52023.49	52023.49	8.92		Si
SLV 6	5.46	10188.28	-43026	-0.0000947	0.0006738	0.0035	4.82		88005.54	88005.54	8.64		Si
SLV 6	8.98	4421.28	-23653	-0.0000481	0.0006738	0.0035	4.82		53867.9	53867.9	12.18		Si
SLV 8	5.46	-5622.8	-32737	-0.0000664	0.0006738	0.0035	4.82		81617.81	81617.81	14.52		Si
SLV 8	8.98	-7881.56	-19440	-0.0000482	0.0006738	0.0035	4.82		56031.04	56031.04	7.11		Si
SLV 10	5.46	11510.97	-37806	-0.0000882	0.0006738	0.0035	4.82		78854.43	78854.43	6.85		Si
SLV 10	8.98	6471.14	-21680	-0.0000491	0.0006738	0.0035	4.82		49910.35	49910.35	7.71		Si
SLV 11	5.46	-4198.37	-27480	-0.0000542	0.0006738	0.0035	4.82		71865.16	71865.16	17.12		Si
SLV 11	8.98	-5618.63	-17437	-0.0000401	0.0006738	0.0035	4.82		51964.44	51964.44	9.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	5.46	3736.46	-40924	-24029	-2965	4.82	4.82	-31157	10833	8355	115546	27715	24582	52297	No	17.64	Si
SLU 44	8.98	-375.95	-23802	-13975	-2684	4.82	4.82	-18121	10750	8290	115546	27715	24582	52297	No	19.49	Si
SLU 51	5.46	3849.59	-42498	-24953	-3118	4.82	4.82	-32356	10833	8355	115546	27715	24582	52297	No	16.77	Si
SLU 51	8.98	-218.79	-25179	-14784	-2815	4.82	4.82	-19170	10833	8355	115546	27715	24582	52297	No	18.58	Si
SLU 72	5.46	4086.1	-47220	-27726	-2998	4.82	4.82	-35951	10833	8355	115546	27715	24582	52297	No	17.44	Si
SLU 72	8.98	-446.9	-28046	-16467	-2690	4.82	4.82	-21353	10833	8355	115546	27715	24582	52297	No	19.44	Si
SLU 70	5.46	4066.84	-47707	-28011	-2985	4.82	4.82	-36322	10833	8355	115546	27715	24582	52297	No	17.52	Si
SLU 70	8.98	-524	-28456	-16708	-2676	4.82	4.82	-21665	10833	8355	115546	27715	24582	52297	No	19.54	Si
SLU 46	5.46	3752.64	-42177	-24765	-3012	4.82	4.82	-32112	10833	8355	115546	27715	24582	52297	No	17.36	Si
SLU 46	8.98	-397.16	-24887	-14613	-2720	4.82	4.82	-18948	10833	8355	115546	27715	24582	52297	No	19.22	Si
SLU 48	5.46	3766.96	-42924	-25203	-3056	4.82	4.82	-32680	10833	8355	115546	27715	24582	52297	No	17.11	Si
SLU 48	8.98	-363.95	-25550	-15002	-2755	4.82	4.82	-19453	10833	8355	115546	27715	24582	52297	No	18.98	Si
SLU 50	5.46	3786.22	-42437	-24917	-3069	4.82	4.82	-32309	10833	8355	115546	27715	24582	52297	No	17.04	Si
SLU 50	8.98	-286.84	-25140	-14761	-2768	4.82	4.82	-19141	10833	8355	115546	27715	24582	52297	No	18.89	Si
SLU 49	5.46	3830.32	-42984	-25239	-3105	4.82	4.82	-32726	10833	8355	115546	27715	24582	52297	No	16.84	Si
SLU 49	8.98	-295.9	-25589	-15025	-2802	4.82	4.82	-19482	10833	8355	115546	27715	24582	52297	No	18.67	Si
SLU 47	5.46	3814.14	-41731	-24503	-3058	4.82	4.82	-31772	10833	8355	115546	27715	24582	52297	No	17.1	Si
SLU 47	8.98	-274.69	-24503	-14387	-2765	4.82	4.82	-18656	10821	8345	115546	27715	24582	52297	No	18.91	Si
SLU 45	5.46	3689.27	-42116	-24729	-2963	4.82	4.82	-32065	10833	8355	115546	27715	24582	52297	No	17.65	Si
SLU 45	8.98	-465.21	-24848	-14590	-2674	4.82	4.82	-18918	10833	8355	115546	27715	24582	52297	No	19.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	5.46	11510.97	-37806	-22198	-8319	4.82	4.82	-28784	16250	12532	115546	41573	24582	66155		7.95	Si
SLV 10	8.98	6471.14	-21680	-12729	-4595	4.82	4.82	-16506	15801	12186	115546	41573	24582	66155		14.4	Si
SLD 10	5.46	6743.08	-36416	-21382	-4787	4.82	4.82	-27726	16250	12532	115546	41573	24582	66155		13.82	Si
SLD 10	8.98	2485.86	-21052	-12361	-3005	4.82	4.82	-16028	15706	12112	115546	41573	24582	66155		22.02	Si
SLV 8	5.46	-5622.8	-32737	-19222	4698	4.82	4.82	-24924	16250	12532	115546	41573	24582	66155		14.08	Si
SLV 8	8.98	-7881.56	-19440	-11414	1481	4.82	4.82	-14800	15460	11923	115546	41573	24582	66155		44.66	Si
SLV 13	5.46	7650.02	-28067	-16480	-7059	4.82	4.82	-21369	16250	12532	115546	41573	24582	66155		9.37	Si
SLV 13	8.98	4828.5	-17866	-10490	-4780	4.82	4.82	-13602	15220	11738	115546	41573	24582	66155		13.84	Si
SLD 9	5.46	6787.52	-36400	-21372	-4971	4.82	4.82	-27713	16250	12532	115546	41573	24582	66155		13.31	Si
SLD 9	8.98	2578.93	-21039	-12353	-3222	4.82	4.82	-16018	15704	12111	115546	41573	24582	66155		20.53	Si
SLV 7	5.46	-5521.06	-32699	-19199	4277	4.82	4.82	-24896	16250	12532	115546	41573	24582	66155		15.47	Si
SLV 7	8.98	-7668.49	-19411	-11397	985	4.82	4.82	-14778	15456	11919	115546	41573	24582	66155		67.18	Si
SLV 6	5.46	10188.28	-43026	-25263	-6501	4.82	4.82	-32758	16250	12532	115546	41573	24582	66155		10.18	Si
SLV 6	8.98	4421.28	-23653	-13888	-3489	4.82	4.82	-18008	16102	12418	115546	41573	24582	66155		18.96	Si
SLV 9	5.46	11612.7	-37768	-22176	-8741	4.82	4.82	-28755	16250	12532	115546	41573	24582	66155		7.57	Si
SLV 9	8.98	6684.21	-21651	-12712	-5092	4.82	4.82	-16484	15797	12182	115546	41573	24582	66155		12.99	Si
SLV 14	5.46	7492.16	-28126	-16514	-6405	4.82	4.82	-21414	16250	12532	115546	41573	24582	66155		10.33	Si
SLV 14	8.98	4497.87	-17911	-10517	-4009	4.82	4.82	-13637	15227	11743	115546	41573	24582	66155		16.5	Si
SLV 5	5.46	10290.01	-42988	-25241	-6922	4.82	4.82	-32729	16250	12532	115546	41573	24582	66155		9.56	Si
SLV 5	8.98	4634.35	-23624	-13871	-3985	4.82	4.82	-17986	16097	12414	115546	41573	24582	66155		16.6	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-22570	0.39	303.11	1517.3	2480.25	1998.78	6.59	Si
SLV 16	-22708	0.39	303.11	1524.81	2492.84	2008.83	6.63	Si
SLV 13	-23689	0.39	303.11	1577.51	2582.22	2079.86	6.86	Si
SLV 14	-23827	0.39	303.11	1584.85	2594.82	2089.83	6.89	Si
SLV 11	-24269	0.39	303.11	1608.15	2635.09	2121.62	7	Si
SLV 12	-24358	0.39	303.11	1612.82	2643.22	2128.02	7.02	Si
SLV 7	-26822	0.39	303.11	1738.59	2864.46	2301.52	7.59	Si
SLV 8	-26911	0.39	303.11	1743	2872.39	2307.7	7.61	Si
SLV 9	-27998	0.39	303.11	1796.16	2969.14	2382.65	7.86	Si
SLV 10	-28087	0.39	303.11	1800.46	2977.08	2388.77	7.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-23653	-43026	-178	1.056	2790.8	0.959	15.9908	16.76087	No
SLV 5	-23624	-42988	-178	1.057	2787.9	0.959	16.00885	16.76087	No
SLV 10	-21680	-37806	170	1.14	2590.2	0.956	17.32663	16.76087	Si
SLV 9	-21651	-37768	170	1.142	2587.2	0.956	17.34799	16.76087	Si
SLV 8	-19440	-32737	-168	1.255	2362.6	0.953	19.141	16.76087	Si
SLV 7	-19411	-32699	-168	1.256	2359.6	0.953	19.167	16.76087	Si
SLV 12	-17466	-27517	180	1.376	2162.2	0.949	21.07923	16.76087	Si
SLV 11	-17437	-27480	180	1.378	2159.2	0.949	21.11097	16.76087	Si
SLV 2	-24489	-45525	-580	1.009	2875.8	0.96	15.26172	8.72685	Si
SLV 1	-24443	-45466	-580	1.01	2871.2	0.96	15.28759	8.72685	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.839	SLU 47	Si
V_SLU	16.77	SLU 51	Si
PF_SLV	6.785	SLV 9	Si
V_SLV	7.569	SLV 9	Si
PFFP_SLV	6.594	SLV 15	Si
R_SLV	0.954	SLV 6	No

Maschio 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L5	L6	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 67	6.36	472.88	-11785	-0.0000832	0.0003743	0.0035	1.03	3633.3	4353.65	4353.65	9.21	No	Si
SLU 67	8.16	693.77	-8897	-0.0000723	0.0003743	0.0035	1.03	3193.64	3592.55	3592.55	5.18	No	Si
SLU 69	6.36	500.37	-12088	-0.0000862	0.0003743	0.0035	1.03	3662.49	4419.18	4419.18	8.83	No	Si
SLU 69	8.16	704.74	-9139	-0.0000742	0.0003743	0.0035	1.03	3241.66	3670.84	3670.84	5.21	No	Si
SLU 65	6.36	461.12	-11381	-0.0000801	0.0003743	0.0035	1.03	3589.33	4267.39	4267.39	9.25	No	Si
SLU 65	8.16	659.77	-8540	-0.0000688	0.0003743	0.0035	1.03	3118.93	3478.14	3478.14	5.27	No	Si
SLU 70	6.36	486.79	-12077	-0.0000857	0.0003743	0.0035	1.03	3661.43	4416.64	4416.64	9.07	No	Si
SLU 70	8.16	711.2	-9141	-0.0000744	0.0003743	0.0035	1.03	3241.98	3671.38	3671.38	5.16	No	Si
SLU 71	6.36	511.58	-11983	-0.0000859	0.0003743	0.0035	1.03	3652.72	4396.32	4396.32	8.59	No	Si
SLU 71	8.16	683.88	-9024	-0.0000727	0.0003743	0.0035	1.03	3219.09	3633.55	3633.55	5.31	No	Si
SLU 72	6.36	497.99	-11971	-0.0000854	0.0003743	0.0035	1.03	3651.61	4393.8	4393.8	8.82	No	Si
SLU 72	8.16	690.33	-9026	-0.000073	0.0003743	0.0035	1.03	3219.42	3634.08	3634.08	5.26	No	Si
SLU 68	6.36	475.03	-11672	-0.0000825	0.0003743	0.0035	1.03	3621.59	4329.4	4329.4	9.11	No	Si
SLU 68	8.16	677.21	-8783	-0.000071	0.0003743	0.0035	1.03	3170.32	3555.94	3555.94	5.25	No	Si
SLU 25	6.36	366.35	-9723	-0.0000662	0.0003743	0.0035	1.03	3349.19	3862.7	3862.7	10.54	No	Si
SLU 25	8.16	591.36	-7446	-0.0000598	0.0003743	0.0035	1.03	2862.21	3135.85	3135.85	5.3	No	Si
SLU 28	6.36	380.26	-10014	-0.0000685	0.0003743	0.0035	1.03	3398.4	3957.38	3957.38	10.41	No	Si
SLU 28	8.16	608.79	-7689	-0.0000618	0.0003743	0.0035	1.03	2922.94	3210.86	3210.86	5.27	No	Si
SLU 66	6.36	486.46	-11797	-0.0000838	0.0003743	0.0035	1.03	3634.49	4356.16	4356.16	8.95	No	Si
SLU 66	8.16	687.31	-8896	-0.000072	0.0003743	0.0035	1.03	3193.31	3592.02	3592.02	5.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.36	4062.76	-13828	-0.000271	0.0005615	0.0035	1.03		5502.85	5502.85	1.35		Si
SLV 4	8.16	-1855.43	-6164	-0.0001089	0.0005615	0.0035	0.824		3075.86	3075.86	1.66		Si
SLV 14	6.36	-2862.35	-4202	-0.004146	0.0005615	0.0035	0.824		2240.42	2240.42	0.78		No
SLV 14	8.16	2537.76	-6820	-0.0001935	0.0005615	0.0035	1.03		3089.66	3089.66	1.22		Si
SLV 3	6.36	3677.45	-13502	-0.0002334	0.0005615	0.0035	1.03		5397.91	5397.91	1.47		Si
SLV 3	8.16	-1585.3	-6368	-0.0000891	0.0005615	0.0035	1.03		3158.56	3158.56	1.99		Si
SLV 15	6.36	-3278.47	-4952	-0.0049023	0.0005615	0.0035	0.824		2567.16	2567.16	0.78		No
SLV 15	8.16	3003.09	-8124	-0.0002347	0.0005615	0.0035	1.03		3609.7	3609.7	1.2		Si
SLD 15	6.36	-1169.05	-7190	-0.0000751	0.0005615	0.0035	1.03		3486.68	3486.68	2.98		Si
SLD 15	8.16	1558.25	-7255	-0.00009	0.0005615	0.0035	1.03		3261.67	3261.67	2.09		Si
SLV 13	6.36	-3247.66	-3876	-0.0065273	0.0005615	0.0035	0.824		2097.86	2097.86	0.65		No
SLV 13	8.16	2807.89	-7024	-0.0002622	0.0005615	0.0035	1.03		3170.15	3170.15	1.13		Si
SLD 13	6.36	-1155.53	-6720	-0.0000719	0.0005615	0.0035	1.03		3300.92	3300.92	2.86		Si
SLD 13	8.16	1472.08	-6772	-0.0000844	0.0005615	0.0035	1.03		3070.88	3070.88	2.09		Si
SLV 1	6.36	3708.26	-12426	-0.0002426	0.0005615	0.0035	1.03		5053.81	5053.81	1.36		Si
SLV 1	8.16	-1780.5	-5268	-0.0001127	0.0005615	0.0035	0.824		2701.87	2701.87	1.52		Si
SLV 2	6.36	4093.57	-12751	-0.0002898	0.0005615	0.0035	1.03		5157.28	5157.28	1.26		Si
SLV 2	8.16	-2050.63	-5064	-0.0001823	0.0005615	0.0035	0.824		2615.05	2615.05	1.28		Si
SLV 16	6.36	-2893.16	-5278	-0.0022748	0.0005615	0.0035	0.824		2706.11	2706.11	0.94		No
SLV 16	8.16	2732.96	-7920	-0.0001881	0.0005615	0.0035	1.03		3527.54	3527.54	1.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	6.36	662.23	-12207	-10165	809	1.03	1.03	-35246	10833	3124	40441	8636	2627	11262	No	13.92	Si
SLU 63	8.16	567.34	-9020	-7511	77	1.03	1.03	-26045	10417	3004	40441	8636	2627	11262	No	147.19	Si
SLU 60	6.36	661.9	-11927	-9932	809	1.03	1.03	-34438	10833	3124	40441	8636	2627	11262	No	13.93	Si
SLU 60	8.16	543.45	-8775	-7307	91	1.03	1.03	-25338	10323	2977	40441	8636	2627	11262	No	123.41	Si
SLU 59	6.36	619.6	-11996	-9989	752	1.03	1.03	-34635	10833	3124	40441	8636	2627	11262	No	14.98	Si
SLU 59	8.16	587.72	-8878	-7393	20	1.03	1.03	-25633	10362	2988	40441	8636	2627	11262	No	559.51	Si
SLU 58	6.36	633.18	-12007	-9999	770	1.03	1.03	-34669	10833	3124	40441	8636	2627	11262	No	14.63	Si
SLU 58	8.16	581.26	-8876	-7391	28	1.03	1.03	-25628	10362	2988	40441	8636	2627	11262	No	401.26	Si
SLU 84	6.36	672.55	-13356	-11122	776	1.03	1.03	-38565	10833	3124	40441	8636	2627	11262	No	14.52	Si
SLU 84	8.16	663.11	-10069	-8385	72	1.03	1.03	-29074	10821	3121	40441	8636	2627	11262	No	156.24	Si
SLU 61	6.36	648.32	-11916	-9922	790	1.03	1.03	-34404	10833	3124	40441	8636	2627	11262	No	14.25	Si
SLU 61	8.16	549.91	-8777	-7309	83	1.03	1.03	-25342	10323	2977	40441	8636	2627	11262	No	135.17	Si
SLU 62	6.36	675.81	-12219	-10175	827	1.03	1.03	-35280	10833	3124	40441	8636	2627	11262	No	13.62	Si
SLU 62	8.16	560.88	-9019	-7510	84	1.03	1.03	-26040	10416	3004	40441	8636	2627	11262	No	133.35	Si
SLU 81	6.36	672.23	-13077	-10889	775	1.03	1.03	-37757	10833	3124	40441	8636	2627	11262	No	14.53	Si
SLU 81	8.16	639.22	-9824	-8181	87	1.03	1.03	-28366	10727	3094	40441	8636	2627	11262	No	129.71	Si
SLU 82	6.36	658.64	-13065	-10879	757	1.03	1.03	-37723	10833	3124	40441	8636	2627	11262	No	14.88	Si
SLU 82	8.16	645.68	-9826	-8182	79	1.03	1.03	-28371	10727	3094	40441	8636	2627	11262	No	142.77	Si
SLU 83	6.36	686.14	-13368	-11132	794	1.03	1.03	-38598	10833	3124	40441	8636	2627	11262	No	14.19	Si
SLU 83	8.16	656.65	-10068	-8384	80	1.03	1.03	-29069	10820	3121	40441	8636	2627	11262	No	140.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	6.36	1984.14	-10514	-8755	3133	1.03	0.9789	-30357	16250	4454	40441	12954	2627	15580		4.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	8.16	-605.79	-5933	-4941	1131	1.03	1.03	-17132	13843	3992	40441	12954	2627	15580		13.77	Si
SLD 4	6.36	1970.62	-10984	-9146	3036	1.03	1.0068	-31715	16250	4581	40441	12954	2627	15580		5.13	Si
SLD 4	8.16	-519.62	-6416	-5343	1045	1.03	1.03	-18525	14122	4073	40441	12954	2627	15580		14.91	Si
SLV 14	6.36	-2862.35	-4202	-3499	-4945	0.824	0	0	0	0	40441	10363	2101	12464		2.52	Si
SLV 14	8.16	2537.76	-6820	-5679	-2225	1.03	0.4287	-19691	14355	1723	40441	12954	2627	15580		7	Si
SLV 16	6.36	-2893.16	-5278	-4395	-5167	0.824	0	0	0	0	40441	10363	2101	12464		2.41	Si
SLV 16	8.16	2732.96	-7920	-6595	-2422	1.03	0.5098	-22868	14990	2140	40441	12954	2627	15580		6.43	Si
SLV 4	6.36	4062.76	-13828	-11515	6486	1.03	0.6636	-39927	16250	3019	40441	12954	2627	15580		2.4	Si
SLV 4	8.16	-1855.43	-6164	-5133	2481	0.824	0.642	0	0	0	40441	10363	2101	12464		5.02	Si
SLV 13	6.36	-3247.66	-3876	-3227	-5567	0.824	0	0	0	0	40441	10363	2101	12464		2.24	Si
SLV 13	8.16	2807.89	-7024	-5849	-2534	1.03	0.3457	-20280	14473	1401	40441	12954	2627	15580		6.15	Si
SLV 15	6.36	-3278.47	-4952	-4124	-5789	0.824	0	0	0	0	40441	10363	2101	12464		2.15	Si
SLV 15	8.16	3003.09	-8124	-6765	-2730	1.03	0.436	-23456	15108	1844	40441	12954	2627	15580		5.71	Si
SLV 1	6.36	3708.26	-12426	-10347	6086	1.03	0.6497	-35878	16250	2956	40441	12954	2627	15580		2.56	Si
SLV 1	8.16	-1780.5	-5268	-4387	2369	0.824	0.5311	0	0	0	40441	10363	2101	12464		5.26	Si
SLV 3	6.36	3677.45	-13502	-11244	5864	1.03	0.7279	-38986	16250	3312	40441	12954	2627	15580		2.66	Si
SLV 3	8.16	-1585.3	-6368	-5303	2172	1.03	0.7982	-24008	15219	3401	40441	12954	2627	15580		7.17	Si
SLV 2	6.36	4093.57	-12751	-10618	6708	1.03	0.5819	-36818	16250	2648	40441	12954	2627	15580		2.32	Si
SLV 2	8.16	-2050.63	-5064	-4217	2678	0.824	0.3302	0	0	0	40441	10363	2101	12464		4.66	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.39	12004	-3462	107.12	446.59	4.17	Si
SLV 14	179667	0.39	13134	-3788	107.12	484.68	4.52	Si
SLV 15	179667	0.39	15810	-4560	107.12	572.26	5.34	Si
SLV 16	179667	0.39	16939	-4885	107.12	608.08	5.68	Si
SLV 9	179667	0.39	18121	-5226	107.12	644.84	6.02	Si
SLV 10	179667	0.39	18849	-5436	107.12	667.11	6.23	Si
SLV 5	179667	0.39	26998	-7786	107.12	897.35	8.38	Si
SLV 6	179667	0.39	27725	-7996	107.12	916.21	8.55	Si
SLV 11	179667	0.39	30807	-8885	107.12	992.94	9.27	Si
SLV 12	179667	0.39	31535	-9095	107.12	1010.33	9.43	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-7804	-10165	230	0.681	937.8	0.955	10.36418	12.68333	No
SLV 12	-7650	-9927	230	0.693	922.2	0.955	10.54681	12.68333	No
SLV 7	-6534	-8801	213	0.793	808.8	0.949	12.14165	12.68333	No
SLV 8	-6381	-8563	214	0.809	793.2	0.948	12.39614	12.68333	No
SLV 9	-4357	-6556	-219	1.103	588.2	0.933	17.17791	12.68333	Si
SLV 10	-4203	-6318	-218	1.135	572.7	0.932	17.70419	12.68333	Si
SLV 5	-3087	-5192	-235	1.436	460.4	0.919	22.71249	12.68333	Si
SLV 15	-8122	-10559	93	0.674	970.1	0.957	10.23884	5.63352	Si
SLV 6	-2933	-4954	-235	1.492	445	0.917	23.64939	12.68333	Si
SLV 16	-7883	-10190	93	0.691	945.8	0.956	10.51103	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.162	SLU 70	Si
V_SLU	13.615	SLU 62	Si
PF_SLV	0.646	SLV 13	No
V_SLV	2.153	SLV 15	Si
PFFP_SLV	4.169	SLV 13	Si
R_SLV	0.817	SLV 11	No

Maschio 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L5	L6	3.221	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	5.46	3139.84	-23387	-0.0000751	0.0004492	0.0035	3.2207	23672.66	31978.85	31978.85	10.18	No	Si
SLU 48	7.56	420.76	-19292	-0.0000505	0.0004492	0.0035	3.2207	21547.81	27266.51	27266.51	64.8	No	Si
SLU 47	5.46	3105.11	-22686	-0.000073	0.0004492	0.0035	3.2207	23369.58	31171.65	31171.65	10.04	No	Si
SLU 47	7.56	467.55	-18510	-0.0000486	0.0004492	0.0035	3.2207	21044.55	26366.75	26366.75	56.39	No	Si
SLU 49	5.46	3154.56	-23415	-0.0000753	0.0004492	0.0035	3.2207	23684.38	32011.46	32011.46	10.15	No	Si
SLU 49	7.56	468.17	-19289	-0.0000507	0.0004492	0.0035	3.2207	21546.31	27263.74	27263.74	58.23	No	Si
SLU 44	5.46	3040.76	-22184	-0.0000713	0.0004492	0.0035	3.2207	23137.44	30594.48	30594.48	10.06	No	Si
SLU 44	7.56	484.48	-18004	-0.0000474	0.0004492	0.0035	3.2207	20702.54	25785.05	25785.05	53.22	No	Si
SLU 46	5.46	3090.22	-22914	-0.0000736	0.0004492	0.0035	3.2207	23470.96	31434.3	31434.3	10.17	No	Si
SLU 46	7.56	485.11	-18784	-0.0000494	0.0004492	0.0035	3.2207	21224.46	26682.04	26682.04	55	No	Si
SLU 43	5.46	3016.22	-22137	-0.000071	0.0004492	0.0035	3.2207	23114.91	30540.14	30540.14	10.13	No	Si
SLU 43	7.56	405.46	-18008	-0.000047	0.0004492	0.0035	3.2207	20705.3	25789.66	25789.66	63.61	No	Si
SLU 51	5.46	3159.64	-23168	-0.0000746	0.0004492	0.0035	3.2207	23580.83	31727.07	31727.07	10.04	No	Si
SLU 51	7.56	419	-19017	-0.0000497	0.0004492	0.0035	3.2207	21374.51	26950.3	26950.3	64.32	No	Si
SLU 50	5.46	3144.92	-23140	-0.0000745	0.0004492	0.0035	3.2207	23568.75	31694.46	31694.46	10.08	No	Si
SLU 50	7.56	371.59	-19019	-0.0000495	0.0004492	0.0035	3.2207	21376.04	26953.06	26953.06	72.53	No	Si
SLU 59	5.46	3331.91	-25675	-0.0000826	0.0004492	0.0035	3.2207	24486.06	34610.97	34610.97	10.39	No	Si
SLU 59	7.56	706.23	-21238	-0.0000571	0.0004492	0.0035	3.2207	22664.46	29505.67	29505.67	41.78	No	Si
SLU 45	5.46	3075.49	-22885	-0.0000734	0.0004492	0.0035	3.2207	23458.52	31401.69	31401.69	10.21	No	Si
SLU 45	7.56	437.7	-18786	-0.0000492	0.0004492	0.0035	3.2207	21226.02	26684.8	26684.8	60.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	5.46	2422.22	-17658	-0.000055	0.0006738	0.0035	3.2207		26389.06	26389.06	10.89		Si
SLV 9	7.56	3993.52	-14759	-0.000055	0.0006738	0.0035	3.2207		22661.37	22661.37	5.67		Si
SLV 11	5.46	2129.02	-17976	-0.0000544	0.0006738	0.0035	3.2207		26759.44	26759.44	12.57		Si
SLV 11	7.56	-2987.61	-14005	-0.0000483	0.0006738	0.0035	3.2207		26222.33	26222.33	8.78		Si
SLV 8	5.46	2452.41	-20748	-0.0000631	0.0006738	0.0035	3.2207		29982.24	29982.24	12.23		Si
SLV 8	7.56	-2864.14	-16888	-0.0000551	0.0006738	0.0035	3.2207		30013.91	30013.91	10.48		Si
SLV 5	5.46	2697.59	-20488	-0.0000636	0.0006738	0.0035	3.2207		29679.63	29679.63	11		Si
SLV 5	7.56	4337.14	-17687	-0.0000642	0.0006738	0.0035	3.2207		26422.65	26422.65	6.09		Si
SLV 10	5.46	2470.24	-17600	-0.0000551	0.0006738	0.0035	3.2207		26321.3	26321.3	10.66		Si
SLV 10	7.56	3773.37	-14714	-0.0000538	0.0006738	0.0035	3.2207		22600.74	22600.74	5.99		Si
SLD 10	5.46	2469.8	-18533	-0.0000575	0.0006738	0.0035	3.2207		27406.19	27406.19	11.1		Si
SLD 10	7.56	1984	-15359	-0.000047	0.0006738	0.0035	3.2207		23471.13	23471.13	11.83		Si
SLV 14	5.46	2059.6	-14394	-0.0000449	0.0006738	0.0035	3.2207		22168.69	22168.69	10.76		Si
SLV 14	7.56	868.34	-11022	-0.0000309	0.0006738	0.0035	3.2207		17520.79	17520.79	20.18		Si
SLV 12	5.46	2177.04	-17918	-0.0000545	0.0006738	0.0035	3.2207		26691.67	26691.67	12.26		Si
SLV 12	7.56	-3207.77	-13960	-0.0000492	0.0006738	0.0035	3.2207		26161.22	26161.22	8.16		Si
SLV 6	5.46	2745.61	-20429	-0.0000637	0.0006738	0.0035	3.2207		29611.86	29611.86	10.79		Si
SLV 6	7.56	4116.99	-17642	-0.000063	0.0006738	0.0035	3.2207		26370.4	26370.4	6.41		Si
SLD 6	5.46	2573.61	-19707	-0.000061	0.0006738	0.0035	3.2207		28771.73	28771.73	11.18		Si
SLD 6	7.56	2117.18	-16590	-0.0000508	0.0006738	0.0035	3.2207		25103	25103	11.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.46	3450.29	-28873	-16953	2638	3.2207	3.2207	-32899	10833	5583	115546	18519	16426	34945	No	13.25	Si
SLU 83	7.56	1109.58	-24119	-14161	2597	3.2207	3.2207	-27481	10833	5583	115546	18519	16426	34945	No	13.46	Si
SLU 76	5.46	3401	-27846	-16350	2529	3.2207	3.2207	-31729	10833	5583	115546	18519	16426	34945	No	13.82	Si
SLU 76	7.56	1065.5	-23163	-13600	2610	3.2207	3.2207	-26392	10833	5583	115546	18519	16426	34945	No	13.39	Si
SLU 55	5.46	3277.37	-25192	-14792	2520	3.2207	3.2207	-28704	10833	5583	115546	18519	16426	34945	No	13.87	Si
SLU 55	7.56	754.77	-20730	-12172	2605	3.2207	3.2207	-23621	10833	5583	115546	18519	16426	34945	No	13.41	Si
SLU 63	5.46	3341.39	-26247	-15411	2606	3.2207	3.2207	-29907	10833	5583	115546	18519	16426	34945	No	13.41	Si
SLU 63	7.56	846.26	-21684	-12732	2642	3.2207	3.2207	-24707	10833	5583	115546	18519	16426	34945	No	13.23	Si
SLU 61	5.46	3277.04	-25746	-15117	2570	3.2207	3.2207	-29335	10833	5583	115546	18519	16426	34945	No	13.6	Si
SLU 61	7.56	863.2	-21178	-12435	2606	3.2207	3.2207	-24131	10833	5583	115546	18519	16426	34945	No	13.41	Si
SLU 80	5.46	3455.53	-28329	-16634	2580	3.2207	3.2207	-32279	10833	5583	115546	18519	16426	34945	No	13.54	Si
SLU 80	7.56	1016.95	-23670	-13898	2613	3.2207	3.2207	-26970	10833	5583	115546	18519	16426	34945	No	13.38	Si
SLU 62	5.46	3326.67	-26219	-15395	2628	3.2207	3.2207	-29874	10833	5583	115546	18519	16426	34945	No	13.3	Si
SLU 62	7.56	798.85	-21686	-12733	2592	3.2207	3.2207	-24710	10833	5583	115546	18519	16426	34945	No	13.48	Si
SLU 59	5.46	3331.91	-25675	-15075	2571	3.2207	3.2207	-29254	10833	5583	115546	18519	16426	34945	No	13.59	Si
SLU 59	7.56	706.23	-21238	-12470	2608	3.2207	3.2207	-24199	10833	5583	115546	18519	16426	34945	No	13.4	Si
SLU 82	5.46	3400.67	-28400	-16675	2579	3.2207	3.2207	-32360	10833	5583	115546	18519	16426	34945	No	13.55	Si
SLU 82	7.56	1173.92	-23611	-13863	2611	3.2207	3.2207	-26903	10833	5583	115546	18519	16426	34945	No	13.38	Si
SLU 84	5.46	3465.01	-28902	-16970	2615	3.2207	3.2207	-32931	10833	5583	115546	18519	16426	34945	No	13.36	Si
SLU 84	7.56	1156.99	-24116	-14160	2647	3.2207	3.2207	-27479	10833	5583	115546	18519	16426	34945	No	13.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	5.46	1971.64	-14490	-8508	3621	3.2207	3.2207	-16510	15802	8143	115546	27778	16426	44204		12.21	Si
SLV 16	7.56	-1226	-10796	-6339	3042	3.2207	3.2207	-12301	14960	7709	115546	27778	16426	44204		14.53	Si
SLV 12	5.46	2177.04	-17918	-10521	4268	3.2207	3.2207	-20416	16250	8374	115546	27778	16426	44204		10.36	Si
SLV 12	7.56	-3207.77	-13960	-8197	3501	3.2207	3.2207	-15906	15681	8081	115546	27778	16426	44204		12.63	Si
SLV 8	5.46	2452.41	-20748	-12182	3633	3.2207	3.2207	-23640	16250	8374	115546	27778	16426	44204		12.17	Si
SLV 8	7.56	-2864.14	-16888	-9916	3084	3.2207	3.2207	-19242	16250	8374	115546	27778	16426	44204		14.33	Si
SLV 7	5.46	2404.39	-20806	-12216	3515	3.2207	3.2207	-23707	16250	8374	115546	27778	16426	44204		12.58	Si
SLV 7	7.56	-2643.99	-16933	-9942	2967	3.2207	3.2207	-19293	16250	8374	115546	27778	16426	44204		14.9	Si
SLV 11	5.46	2129.02	-17976	-10555	4150	3.2207	3.2207	-20483	16250	8374	115546	27778	16426	44204		10.65	Si
SLV 11	7.56	-2987.61	-14005	-8223	3384	3.2207	3.2207	-15957	15691	8086	115546	27778	16426	44204		13.06	Si
SLD 11	5.46	2301.02	-18699	-10979	2857	3.2207	3.2207	-21306	16250	8374	115546	27778	16426	44204		15.47	Si
SLD 11	7.56	-987.81	-15056	-8840	2501	3.2207	3.2207	-17156	15931	8209	115546	27778	16426	44204		17.67	Si
SLD 12	5.46	2321.99	-18673	-10964	2909	3.2207	3.2207	-21277	16250	8374	115546	27778	16426	44204		15.2	Si
SLD 12	7.56	-1083.96	-15037	-8829	2553	3.2207	3.2207	-17133	15927	8207	115546	27778	16426	44204		17.32	Si
SLV 15	5.46	1897.13	-14580	-8561	3439	3.2207	3.2207	-16613	15823	8154	115546	27778	16426	44204		12.85	Si
SLV 15	7.56	-884.38	-10866	-6380	2860	3.2207	3.2207	-12380	14976	7717	115546	27778	16426	44204		15.46	Si
SLD 8	5.46	2425.81	-19848	-11654	2647	3.2207	3.2207	-22615	16250	8374	115546	27778	16426	44204		16.7	Si
SLD 8	7.56	-950.78	-16268	-9552	2377	3.2207	3.2207	-18536	16207	8352	115546	27778	16426	44204		18.59	Si
SLD 16	5.46	2258.11	-17248	-10127	2605	3.2207	3.2207	-19652	16250	8374	115546	27778	16426	44204		16.97	Si
SLD 16	7.56	-190.82	-13708	-8049	2349	3.2207	3.2207	-15619	15624	8051	115546	27778	16426	44204		18.82	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-11681	0.39	202.53	818.9	1348.31	1083.61	5.35	Si
SLV 14	-11726	0.39	202.53	821.62	1352.52	1087.07	5.37	Si
SLV 15	-11775	0.39	202.53	824.58	1357.09	1090.83	5.39	Si
SLV 13	-11821	0.39	202.53	827.29	1361.29	1094.29	5.4	Si
SLV 12	-14940	0.39	202.53	1006.14	1647.95	1327.04	6.55	Si
SLV 11	-15001	0.39	202.53	1009.46	1653.49	1331.47	6.57	Si
SLV 10	-15091	0.39	202.53	1014.37	1661.68	1338.02	6.61	Si
SLV 9	-15152	0.39	202.53	1017.67	1667.22	1342.45	6.63	Si
SLV 8	-17764	0.39	202.53	1153.84	1903.33	1528.58	7.55	Si
SLV 7	-17825	0.39	202.53	1156.88	1908.74	1532.81	7.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-13512	-20488	-214	1.206	1631.7	0.954	18.36374	16.76087	Si
SLV 6	-13502	-20429	-214	1.206	1630.7	0.954	18.37654	16.76087	Si
SLV 7	-12073	-20806	-77	1.34	1485.5	0.95	20.494	16.76087	Si
SLV 8	-12062	-20748	-77	1.341	1484.5	0.95	20.50986	16.76087	Si
SLV 9	-11714	-17658	79	1.375	1449.1	0.949	21.05618	16.76087	Si
SLV 10	-11704	-17600	79	1.376	1448.1	0.949	21.07296	16.76087	Si
SLV 11	-10275	-17976	217	1.527	1303.1	0.944	23.5044	16.76087	Si
SLV 12	-10264	-17918	217	1.528	1302	0.944	23.52549	16.76087	Si
SLV 1	-15109	-23916	-508	1.075	1794	0.958	16.3137	8.72685	Si
SLV 2	-15093	-23826	-508	1.076	1792.4	0.958	16.32959	8.72685	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.039	SLU 47	Si
V_SLU	13.203	SLU 84	Si
PF_SLV	5.675	SLV 9	Si
V_SLV	10.358	SLV 12	Si
PFFP_SLV	5.35	SLV 16	Si
R_SLV	1.096	SLV 5	Si

Maschio 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L5	L6	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	5.46	-551.32	-16352	-0.0000638	0.0003743	0.0035	1.655	8841.61	10712.26	10712.26	19.43	No	Si
SLU 84	7.56	1893.56	-17211	-0.0000854	0.0003743	0.0035	1.655	9046.79	10665.39	10665.39	5.63	No	Si
SLU 40	5.46	-575.13	-13284	-0.0000525	0.0003743	0.0035	1.655	7897.45	9469.44	9469.44	16.46	No	Si
SLU 40	7.56	1665.64	-14294	-0.0000706	0.0003743	0.0035	1.655	8244.78	9266.67	9266.67	5.56	No	Si
SLU 32	5.46	-530.22	-13202	-0.0000516	0.0003743	0.0035	1.655	7867.89	9428.65	9428.65	17.78	No	Si
SLU 32	7.56	1641.2	-14179	-0.0000698	0.0003743	0.0035	1.655	8207	9207.79	9207.79	5.61	No	Si
SLU 33	5.46	-537.51	-13214	-0.0000517	0.0003743	0.0035	1.655	7872.23	9434.61	9434.61	17.55	No	Si
SLU 33	7.56	1651.45	-14188	-0.00007	0.0003743	0.0035	1.655	8210.11	9212.61	9212.61	5.58	No	Si
SLU 41	5.46	-562.4	-13639	-0.0000536	0.0003743	0.0035	1.655	8023.72	9648.8	9648.8	17.16	No	Si
SLU 41	7.56	1681.57	-14684	-0.0000723	0.0003743	0.0035	1.655	8369.4	9467.47	9467.47	5.63	No	Si
SLU 39	5.46	-567.83	-13272	-0.0000523	0.0003743	0.0035	1.655	7893.14	9463.46	9463.46	16.67	No	Si
SLU 39	7.56	1655.39	-14285	-0.0000704	0.0003743	0.0035	1.655	8241.7	9261.84	9261.84	5.59	No	Si
SLU 31	5.46	-531.09	-12754	-0.0000499	0.0003743	0.0035	1.655	7701.12	9206.21	9206.21	17.33	No	Si
SLU 31	7.56	1596.7	-13659	-0.0000672	0.0003743	0.0035	1.655	8030.69	8943.95	8943.95	5.6	No	Si
SLU 36	5.46	-532.08	-13582	-0.000053	0.0003743	0.0035	1.655	8003.56	9619.59	9619.59	18.08	No	Si
SLU 36	7.56	1677.62	-14588	-0.0000719	0.0003743	0.0035	1.655	8339.16	9417.79	9417.79	5.61	No	Si
SLU 34	5.46	-525.66	-13122	-0.0000512	0.0003743	0.0035	1.655	7838.37	9388.32	9388.32	17.86	No	Si
SLU 34	7.56	1622.88	-14059	-0.0000691	0.0003743	0.0035	1.655	8167.16	9146.63	9146.63	5.64	No	Si
SLU 42	5.46	-569.69	-13651	-0.0000538	0.0003743	0.0035	1.655	8027.87	9654.86	9654.86	16.95	No	Si
SLU 42	7.56	1691.81	-14694	-0.0000725	0.0003743	0.0035	1.655	8372.35	9472.35	9472.35	5.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	5.46	-5055.28	-6849	-0.0002973	0.0005615	0.0035	1.324		5910.22	5910.22	1.17		Si
SLV 13	7.56	6036.55	-15196	-0.0001366	0.0005615	0.0035	1.655		10678.69	10678.69	1.77		Si
SLV 15	5.46	-5405.24	-7489	-0.0002853	0.0005615	0.0035	1.324		6360.08	6360.08	1.18		Si
SLV 15	7.56	6340.13	-16502	-0.0001449	0.0005615	0.0035	1.655		11328.5	11328.5	1.79		Si
SLV 14	5.46	-4615.62	-7109	-0.0001542	0.0005615	0.0035	1.324		6092.66	6092.66	1.32		Si
SLV 14	7.56	5538.28	-14657	-0.0001249	0.0005615	0.0035	1.655		10344.81	10344.81	1.87		Si
SLV 4	5.46	4491.13	-15177	-0.0001079	0.0005615	0.0035	1.655		10667.7	10667.7	2.38		Si
SLV 4	7.56	-3616.77	-7449	-0.0000805	0.0005615	0.0035	1.324		6331.88	6331.88	1.75		Si
SLV 2	5.46	4841.09	-14537	-0.0001114	0.0005615	0.0035	1.655		10265.94	10265.94	2.12		Si
SLV 2	7.56	-3920.35	-6144	-0.0001226	0.0005615	0.0035	1.324		5411.58	5411.58	1.38		Si
SLD 13	5.46	-2321.48	-9229	-0.0000582	0.0005615	0.0035	1.655		7548.35	7548.35	3.25		Si
SLD 13	7.56	3271.64	-12971	-0.0000835	0.0005615	0.0035	1.655		9250.08	9250.08	2.83		Si
SLD 15	5.46	-2474.26	-9511	-0.000061	0.0005615	0.0035	1.655		7737.53	7737.53	3.13		Si
SLD 15	7.56	3405.7	-13547	-0.0000874	0.0005615	0.0035	1.655		9621.2	9621.2	2.83		Si
SLV 3	5.46	4051.47	-14917	-0.0001008	0.0005615	0.0035	1.655		10515.02	10515.02	2.6		Si
SLV 3	7.56	-3118.5	-7988	-0.0000669	0.0005615	0.0035	1.655		6708.48	6708.48	2.15		Si
SLV 1	5.46	4401.43	-14277	-0.0001036	0.0005615	0.0035	1.655		10095.78	10095.78	2.29		Si
SLV 1	7.56	-3422.08	-6683	-0.0000781	0.0005615	0.0035	1.324		5793.84	5793.84	1.69		Si
SLV 16	5.46	-4965.59	-7749	-0.0001618	0.0005615	0.0035	1.324		6544.01	6544.01	1.32		Si
SLV 16	7.56	5841.86	-15963	-0.0001334	0.0005615	0.0035	1.655		11066.39	11066.39	1.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	5.46	-549.46	-15973	-13301	-2231	1.655	1.655	-28702	10771	4992	40441	13876	4220	18097	No	8.11	Si
SLU 81	7.56	1857.13	-16802	-13991	-2369	1.655	1.655	-30192	10833	5020	40441	13876	4220	18097	No	7.64	Si
SLU 77	5.46	-506.41	-16271	-13549	-2234	1.655	1.655	-29237	10833	5020	40441	13876	4220	18097	No	8.1	Si
SLU 77	7.56	1869.11	-17096	-14236	-2367	1.655	1.655	-30721	10833	5020	40441	13876	4220	18097	No	7.64	Si
SLU 83	5.46	-544.03	-16340	-13607	-2252	1.655	1.655	-29362	10833	5020	40441	13876	4220	18097	No	8.04	Si
SLU 83	7.56	1883.31	-17202	-14324	-2392	1.655	1.655	-30911	10833	5020	40441	13876	4220	18097	No	7.56	Si
SLU 75	5.46	-519.14	-15915	-13253	-2220	1.655	1.655	-28599	10758	4985	40441	13876	4220	18097	No	8.15	Si
SLU 75	7.56	1853.19	-16706	-13911	-2355	1.655	1.655	-30019	10833	5020	40441	13876	4220	18097	No	7.68	Si
SLU 78	5.46	-513.71	-16283	-13559	-2241	1.655	1.655	-29259	10833	5020	40441	13876	4220	18097	No	8.07	Si
SLU 78	7.56	1879.36	-17105	-14244	-2379	1.655	1.655	-30738	10833	5020	40441	13876	4220	18097	No	7.61	Si
SLU 82	5.46	-556.76	-15985	-13311	-2238	1.655	1.655	-28724	10774	4993	40441	13876	4220	18097	No	8.09	Si
SLU 82	7.56	1867.38	-16811	-13999	-2380	1.655	1.655	-30209	10833	5020	40441	13876	4220	18097	No	7.6	Si
SLU 80	5.46	-496.99	-16182	-13475	-2203	1.655	1.655	-29078	10822	5015	40441	13876	4220	18097	No	8.21	Si
SLU 80	7.56	1843.96	-16970	-14131	-2339	1.655	1.655	-30494	10833	5020	40441	13876	4220	18097	No	7.74	Si
SLU 74	5.46	-511.85	-15903	-13243	-2213	1.655	1.655	-28577	10755	4984	40441	13876	4220	18097	No	8.18	Si
SLU 74	7.56	1842.94	-16696	-13903	-2344	1.655	1.655	-30002	10833	5020	40441	13876	4220	18097	No	7.72	Si
SLU 84	5.46	-551.32	-16352	-13617	-2259	1.655	1.655	-29384	10833	5020	40441	13876	4220	18097	No	8.01	Si
SLU 84	7.56	1893.56	-17211	-14332	-2404	1.655	1.655	-30928	10833	5020	40441	13876	4220	18097	No	7.53	Si
SLU 79	5.46	-489.69	-16170	-13465	-2196	1.655	1.655	-29057	10819	5013	40441	13876	4220	18097	No	8.24	Si
SLU 79	7.56	1833.71	-16960	-14123	-2328	1.655	1.655	-30477	10833	5020	40441	13876	4220	18097	No	7.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	5.46	-5055.28	-6849	-5703	-9510	1.324	0.2682	0	0	0	40441	16652	3376	20028		2.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	7.56	6036.55	-15196	-12654	-8840	1.655	1.2908	-27307	15878	5739	40441	20815	4220	25035		2.83	Si
SLD 15	5.46	-2474.26	-9511	-7920	-5164	1.655	1.655	-17090	13835	6411	40441	20815	4220	25035		4.85	Si
SLD 15	7.56	3405.7	-13547	-11280	-4950	1.655	1.655	-24343	15285	7083	40441	20815	4220	25035		5.06	Si
SLV 15	5.46	-5405.24	-7489	-6236	-10114	1.324	0.3173	0	0	0	40441	16652	3376	20028		1.98	Si
SLV 15	7.56	6340.13	-16502	-13741	-9502	1.655	1.3299	-29653	16250	6051	40441	20815	4220	25035		2.63	Si
SLV 3	5.46	4051.47	-14917	-12421	5828	1.655	1.655	-26805	15778	7311	40441	20815	4220	25035		4.3	Si
SLV 3	7.56	-3118.5	-7988	-6652	4992	1.655	1.3114	-18275	14072	5167	40441	20815	4220	25035		5.01	Si
SLV 14	5.46	-4615.62	-7109	-5920	-8749	1.324	0.5348	0	0	0	40441	16652	3376	20028		2.29	Si
SLV 14	7.56	5538.28	-14657	-12205	-8078	1.655	1.349	-26339	15684	5924	40441	20815	4220	25035		3.1	Si
SLV 11	5.46	-2425.51	-10882	-9061	-5102	1.655	1.655	-19554	14327	6639	40441	20815	4220	25035		4.91	Si
SLV 11	7.56	3295.2	-14950	-12449	-5066	1.655	1.655	-26863	15789	7317	40441	20815	4220	25035		4.94	Si
SLV 4	5.46	4491.13	-15177	-12638	6589	1.655	1.5948	-27272	15871	7087	40441	20815	4220	25035		3.8	Si
SLV 4	7.56	-3616.77	-7449	-6203	5754	1.324	1.0259	0	0	0	40441	16652	3376	20028		3.48	Si
SLV 1	5.46	4401.43	-14277	-11888	6431	1.655	1.5576	-25654	15548	6781	40441	20815	4220	25035		3.89	Si
SLV 1	7.56	-3422.08	-6683	-5565	5655	1.324	0.9463	0	0	0	40441	16652	3376	20028		3.54	Si
SLV 2	5.46	4841.09	-14537	-12105	7192	1.655	1.4835	-26122	15641	6497	40441	20815	4220	25035		3.48	Si
SLV 2	7.56	-3920.35	-6144	-5116	6416	1.324	0.5682	0	0	0	40441	16652	3376	20028		3.12	Si
SLV 16	5.46	-4965.59	-7749	-6453	-9352	1.324	0.5602	0	0	0	40441	16652	3376	20028		2.14	Si
SLV 16	7.56	5841.86	-15963	-13293	-8740	1.655	1.3846	-28685	16154	6263	40441	20815	4220	25035		2.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.39	13894	-6438	172.13	819.38	4.76	Si
SLV 1	179667	0.39	15057	-6977	172.13	880.53	5.12	Si
SLV 4	179667	0.39	16690	-7734	172.13	964.45	5.6	Si
SLV 6	179667	0.39	17274	-8005	172.13	993.9	5.77	Si
SLV 3	179667	0.39	17853	-8273	172.13	1022.84	5.94	Si
SLV 5	179667	0.39	18023	-8352	172.13	1031.29	5.99	Si
SLV 10	179667	0.39	22789	-10561	172.13	1257.87	7.31	Si
SLV 9	179667	0.39	23539	-10908	172.13	1291.75	7.5	Si
SLV 8	179667	0.39	26594	-12324	172.13	1424.87	8.28	Si
SLV 7	179667	0.39	27343	-12671	172.13	1456.32	8.46	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-10803	-13278	324	0.776	1330.5	0.95	11.86618	12.68333	No
SLV 7	-10768	-13110	325	0.778	1326.9	0.95	11.89931	12.68333	No
SLV 12	-9897	-11050	392	0.828	1238.6	0.947	12.71634	12.68333	Si
SLV 11	-9862	-10882	392	0.831	1235	0.947	12.75495	12.68333	Si
SLV 6	-7308	-11144	-341	1.067	976.2	0.935	16.58513	12.68333	Si
SLV 5	-7273	-10977	-340	1.071	972.7	0.935	16.65383	12.68333	Si
SLV 10	-6402	-8916	-274	1.194	884.8	0.929	18.66379	12.68333	Si
SLV 9	-6367	-8748	-273	1.199	881.2	0.929	18.75043	12.68333	Si
SLV 4	-10647	-15177	13	0.811	1314.6	0.949	12.412	5.63352	Si
SLV 3	-10592	-14917	14	0.814	1309	0.949	12.46676	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.563	SLU 40	Si
V_SLU	7.529	SLU 84	Si
PF_SLV	1.169	SLV 13	Si
V_SLV	1.98	SLV 15	Si
PFFP_SLV	4.76	SLV 2	Si
R_SLV	0.936	SLV 8	No

Maschio 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.526	L5	L6	4.36	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	5.46	-6458.36	-29667	-0.000073	0.0004492	0.0035	4.36	42164.61	65069.91	65069.91	10.08	No	Si
SLU 82	7.56	-8020.24	-26102	-0.00007	0.0004492	0.0035	4.36	39477.33	59494.42	59494.42	7.42	No	Si
SLU 32	5.46	-5453.45	-24827	-0.0000605	0.0004492	0.0035	4.36	38358.88	57482.02	57482.02	10.54	No	Si
SLU 32	7.56	-6717.13	-22013	-0.0000583	0.0004492	0.0035	4.36	35595.59	52834.24	52834.24	7.87	No	Si
SLU 41	5.46	-5587.77	-25478	-0.0000622	0.0004492	0.0035	4.36	38940.55	58509.91	58509.91	10.47	No	Si
SLU 41	7.56	-7165.48	-22664	-0.0000608	0.0004492	0.0035	4.36	36270.96	53928.12	53928.12	7.53	No	Si
SLU 74	5.46	-6360.01	-29741	-0.0000729	0.0004492	0.0035	4.36	42213.44	65179.12	65179.12	10.25	No	Si
SLU 74	7.56	-7604.9	-26176	-0.000069	0.0004492	0.0035	4.36	39539.64	59611.12	59611.12	7.84	No	Si
SLU 40	5.46	-5551.8	-24753	-0.0000606	0.0004492	0.0035	4.36	38291.48	57365.31	57365.31	10.33	No	Si
SLU 40	7.56	-7132.47	-21939	-0.0000592	0.0004492	0.0035	4.36	35517.54	52710.05	52710.05	7.39	No	Si
SLU 39	5.46	-5589.38	-24730	-0.0000607	0.0004492	0.0035	4.36	38269.93	57328.11	57328.11	10.26	No	Si
SLU 39	7.56	-7226.14	-21916	-0.0000594	0.0004492	0.0035	4.36	35492.6	52670.45	52670.45	7.29	No	Si
SLU 42	5.46	-5550.2	-25502	-0.0000621	0.0004492	0.0035	4.36	38961.2	58547.12	58547.12	10.55	No	Si
SLU 42	7.56	-7071.81	-22688	-0.0000606	0.0004492	0.0035	4.36	36295	53967.72	53967.72	7.63	No	Si
SLU 84	5.46	-6456.76	-30416	-0.0000745	0.0004492	0.0035	4.36	42646.18	66175.84	66175.84	10.25	No	Si
SLU 84	7.56	-7959.59	-26850	-0.0000714	0.0004492	0.0035	4.36	40095.42	60676.22	60676.22	7.62	No	Si
SLU 81	5.46	-6495.94	-29644	-0.0000731	0.0004492	0.0035	4.36	42148.98	65035.09	65035.09	10.01	No	Si
SLU 81	7.56	-8113.92	-26078	-0.0000702	0.0004492	0.0035	4.36	39457.4	59457.21	59457.21	7.33	No	Si
SLU 83	5.46	-6494.33	-30392	-0.0000746	0.0004492	0.0035	4.36	42631.45	66141.03	66141.03	10.18	No	Si
SLU 83	7.56	-8053.26	-26827	-0.0000716	0.0004492	0.0035	4.36	40076.39	60639.02	60639.02	7.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	5.46	-11103.71	-17756	-0.0000605	0.0006738	0.0035	4.36		46281.51	46281.51	4.17		Si
SLV 2	7.56	-1602.48	-14379	-0.0000299	0.0006738	0.0035	4.36		40041.96	40041.96	24.99		Si
SLV 11	5.46	-7902.32	-18283	-0.0000532	0.0006738	0.0035	4.36		47248.66	47248.66	5.98		Si
SLV 11	7.56	-15743.42	-15810	-0.0000714	0.0006738	0.0035	4.36		42710.36	42710.36	2.71		Si
SLV 1	5.46	-11376.84	-17605	-0.0000609	0.0006738	0.0035	4.36		46003.94	46003.94	4.04		Si
SLV 1	7.56	-1349	-14228	-0.000029	0.0006738	0.0035	4.36		39750.41	39750.41	29.47		Si
SLV 8	5.46	-12945	-16043	-0.0000621	0.0006738	0.0035	4.36		43137.61	43137.61	3.33		Si
SLV 8	7.56	-15838.34	-13179	-0.000072	0.0006738	0.0035	4.36		37727.67	37727.67	2.38		Si
SLV 7	5.46	-13121.01	-15946	-0.0000625	0.0006738	0.0035	4.36		42958.73	42958.73	3.27		Si
SLV 7	7.56	-15674.99	-13082	-0.0000712	0.0006738	0.0035	4.36		37539.79	37539.79	2.39		Si
SLV 12	5.46	-7726.3	-18380	-0.000053	0.0006738	0.0035	4.36		47427.54	47427.54	6.14		Si
SLV 12	7.56	-15906.77	-15908	-0.0000721	0.0006738	0.0035	4.36		42889.24	42889.24	2.7		Si
SLV 3	5.46	-15014.32	-15568	-0.0000684	0.0006738	0.0035	4.36		42265.72	42265.72	2.82		Si
SLV 3	7.56	-7903.34	-12217	-0.0000418	0.0006738	0.0035	4.36		35873.47	35873.47	4.54		Si
SLD 8	5.46	-8094.11	-18589	-0.0000543	0.0006738	0.0035	4.36		47809.67	47809.67	5.91		Si
SLD 8	7.56	-9717.18	-15810	-0.0000532	0.0006738	0.0035	4.36		42710.42	42710.42	4.4		Si
SLV 4	5.46	-14741.19	-15719	-0.0000675	0.0006738	0.0035	4.36		42543.29	42543.29	2.89		Si
SLV 4	7.56	-8156.83	-12369	-0.0000427	0.0006738	0.0035	4.36		36165.03	36165.03	4.43		Si
SLD 7	5.46	-8170.99	-18546	-0.0000544	0.0006738	0.0035	4.36		47731.54	47731.54	5.84		Si
SLD 7	7.56	-9645.83	-15768	-0.0000529	0.0006738	0.0035	4.36		42632.29	42632.29	4.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	5.46	-6458.36	-29667	-17419	775	4.36	4.36	-24970	10833	7557	115546	25070	22236	47306	No	61.04	Si
SLU 82	7.56	-8020.24	-26102	-15326	775	4.36	4.36	-21969	10833	7557	115546	25070	22236	47306	No	61.04	Si
SLU 40	5.46	-5551.8	-24753	-14534	776	4.36	4.36	-20834	10833	7557	115546	25070	22236	47306	No	60.93	Si
SLU 40	7.56	-7132.47	-21939	-12882	776	4.36	4.36	-18466	10795	7531	115546	25070	22236	47306	No	60.93	Si
SLU 83	5.46	-6494.33	-30392	-17845	774	4.36	4.36	-25581	10833	7557	115546	25070	22236	47306	No	61.15	Si
SLU 83	7.56	-8053.26	-26827	-15752	774	4.36	4.36	-22580	10833	7557	115546	25070	22236	47306	No	61.15	Si
SLU 81	5.46	-6495.94	-29644	-17406	802	4.36	4.36	-24951	10833	7557	115546	25070	22236	47306	No	59.01	Si
SLU 81	7.56	-8113.92	-26078	-15312	802	4.36	4.36	-21950	10833	7557	115546	25070	22236	47306	No	59.01	Si
SLU 18	5.46	-4763.56	-22223	-13048	695	4.36	4.36	-18704	10827	7553	115546	25070	22236	47306	No	68.08	Si
SLU 18	7.56	-6171.81	-19553	-11480	695	4.36	4.36	-16457	10528	7344	115546	25070	22236	47306	No	68.08	Si
SLU 39	5.46	-5589.38	-24730	-14520	803	4.36	4.36	-20815	10833	7557	115546	25070	22236	47306	No	58.9	Si
SLU 39	7.56	-7226.14	-21916	-12868	803	4.36	4.36	-18446	10793	7529	115546	25070	22236	47306	No	58.9	Si
SLU 60	5.46	-5670.11	-27137	-15933	693	4.36	4.36	-22840	10833	7557	115546	25070	22236	47306	No	68.23	Si
SLU 60	7.56	-7059.58	-23715	-13924	693	4.36	4.36	-19960	10833	7557	115546	25070	22236	47306	No	68.23	Si
SLU 42	5.46	-5550.2	-25502	-14974	748	4.36	4.36	-21464	10833	7557	115546	25070	22236	47306	No	63.21	Si
SLU 42	7.56	-7071.81	-22688	-13321	748	4.36	4.36	-19096	10833	7557	115546	25070	22236	47306	No	63.21	Si
SLU 84	5.46	-6456.76	-30416	-17859	747	4.36	4.36	-25601	10833	7557	115546	25070	22236	47306	No	63.34	Si
SLU 84	7.56	-7959.59	-26850	-15765	747	4.36	4.36	-22599	10833	7557	115546	25070	22236	47306	No	63.34	Si
SLU 41	5.46	-5587.77	-25478	-14960	775	4.36	4.36	-21445	10833	7557	115546	25070	22236	47306	No	61.04	Si
SLU 41	7.56	-7165.48	-22664	-13308	775	4.36	4.36	-19076	10833	7557	115546	25070	22236	47306	No	61.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	5.46	-996.07	-22734	-13349	-4147	4.36	4.36	-19135	16250	11336	115546	37605	22236	59841		14.43	Si
SLV 5	7.56	6172.84	-19785	-11617	-2945	4.36	4.36	-16652	15830	11043	115546	37605	22236	59841		20.32	Si
SLV 16	5.46	2654.47	-23510	-13804	5215	4.36	4.36	-19788	16250	11336	115546	37605	22236	59841		11.47	Si
SLV 16	7.56	-8384.94	-21464	-12603	4888	4.36	4.36	-18066	16113	11241	115546	37605	22236	59841		12.24	Si
SLV 1	5.46	-11376.84	-17605	-10337	-4685	4.36	4.36	-14818	15464	10787	115546	37605	22236	59841		12.77	Si
SLV 1	7.56	-1349	-14228	-8354	-4358	4.36	4.36	-11976	14895	10391	115546	37605	22236	59841		13.73	Si
SLV 14	5.46	6291.95	-25547	-15000	3314	4.36	4.36	-21502	16250	11336	115546	37605	22236	59841		18.06	Si
SLV 14	7.56	-1830.59	-23475	-13784	3714	4.36	4.36	-19759	16250	11336	115546	37605	22236	59841		16.11	Si
SLV 2	5.46	-11103.71	-17756	-10426	-4435	4.36	4.36	-14945	15489	10805	115546	37605	22236	59841		13.49	Si
SLV 2	7.56	-1602.48	-14379	-8443	-4107	4.36	4.36	-12103	14921	10409	115546	37605	22236	59841		14.57	Si
SLV 11	5.46	-7902.32	-18283	-10735	4515	4.36	4.36	-15388	15578	10867	115546	37605	22236	59841		13.25	Si
SLV 11	7.56	-15743.42	-15810	-9283	3314	4.36	3.5527	-16453	15791	8976	115546	37605	22236	59841		18.06	Si
SLV 6	5.46	-820.06	-22832	-13406	-3985	4.36	4.36	-19217	16250	11336	115546	37605	22236	59841		15.02	Si
SLV 6	7.56	6009.48	-19882	-11674	-2784	4.36	4.36	-16734	15847	11055	115546	37605	22236	59841		21.5	Si
SLV 15	5.46	2381.33	-23359	-13715	4965	4.36	4.36	-19661	16250	11336	115546	37605	22236	59841		12.05	Si
SLV 15	7.56	-8131.45	-21313	-12514	4637	4.36	4.36	-17939	16088	11223	115546	37605	22236	59841		12.9	Si
SLV 13	5.46	6018.82	-25396	-14911	3063	4.36	4.36	-21375	16250	11336	115546	37605	22236	59841		19.53	Si
SLV 13	7.56	-1577.11	-23324	-13695	3463	4.36	4.36	-19631	16250	11336	115546	37605	22236	59841		17.28	Si
SLV 12	5.46	-7726.3	-18380	-10792	4677	4.36	4.36	-15470	15594	10878	115546	37605	22236	59841		12.8	Si
SLV 12	7.56	-15906.77	-15908	-9340	3475	4.36	3.5402	-16614	15823	8963	115546	37605	22236	59841		17.22	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-12547	0.39	274.18	905.24	1523.13	1214.18	4.43	Si
SLV 4	-12698	0.39	274.18	914.95	1537.33	1226.14	4.47	Si
SLV 7	-13532	0.39	274.18	967.96	1615.5	1291.73	4.71	Si
SLV 8	-13629	0.39	274.18	974.1	1624.63	1299.37	4.74	Si
SLV 1	-14572	0.39	274.18	1032.92	1713.12	1373.02	5.01	Si
SLV 2	-14724	0.39	274.18	1042.24	1727.32	1384.78	5.05	Si
SLV 11	-16379	0.39	274.18	1142.43	1879.13	1510.78	5.51	Si
SLV 12	-16476	0.39	274.18	1148.23	1888.06	1518.14	5.54	Si
SLV 5	-20284	0.39	274.18	1365.27	2236.46	1800.86	6.57	Si
SLV 6	-20381	0.39	274.18	1370.59	2245.33	1807.96	6.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18516	-25169	239	1.195	2231.8	0.955	18.19771	16.76087	Si
SLV 9	-18507	-25072	239	1.196	2230.8	0.955	18.20616	16.76087	Si
SLV 6	-17203	-22832	-227	1.275	2098.3	0.952	19.46712	16.76087	Si
SLV 5	-17193	-22734	-227	1.276	2097.4	0.952	19.47681	16.76087	Si
SLV 12	-10693	-18380	217	1.908	1438.5	0.934	29.69462	16.76087	Si
SLV 11	-10684	-18283	217	1.909	1437.6	0.934	29.71721	16.76087	Si
SLV 8	-9380	-16043	-250	2.119	1305.9	0.928	33.16604	16.76087	Si
SLV 7	-9370	-15946	-250	2.12	1305	0.928	33.19423	16.76087	Si
SLV 14	-17313	-25547	775	1.24	2109.5	0.952	18.92601	8.72685	Si
SLV 13	-17299	-25396	775	1.241	2108.1	0.952	18.94052	8.72685	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.289	SLU 39	Si
V_SLU	58.899	SLU 39	Si
PF_SLV	2.382	SLV 8	Si
V_SLV	11.474	SLV 16	Si
PFFP_SLV	4.428	SLV 3	Si
R_SLV	1.086	SLV 10	Si

Maschio 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L5	L6	1.439	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

											εlim,conv / ε,CNR DT-200						CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	5.46	-336.11	-13614	-0.0000597	0.0003743	0.0035	1.4393	6546.73	7885.37	7885.37	23.46	No	Si
SLU 41	8.98	-93.92	-9792	-0.0000393	0.0003743	0.0035	1.4393	5365.09	6347.79	6347.79	67.59	No	Si
SLU 74	5.46	-355.47	-15480	-0.0000684	0.0003743	0.0035	1.4393	6937.37	8532.51	8532.51	24	No	Si
SLU 74	8.98	-148.2	-11149	-0.0000459	0.0003743	0.0035	1.4393	5843.46	6975.46	6975.46	47.07	No	Si
SLU 84	5.46	-363.31	-16016	-0.0000709	0.0003743	0.0035	1.4393	7027.05	8729.02	8729.02	24.03	No	Si
SLU 84	8.98	-115.81	-11472	-0.0000467	0.0003743	0.0035	1.4393	5947.58	7115.83	7115.83	61.44	No	Si
SLU 81	5.46	-369.43	-15708	-0.0000696	0.0003743	0.0035	1.4393	6976.69	8615.4	8615.4	23.32	No	Si
SLU 81	8.98	-126.85	-11177	-0.0000456	0.0003743	0.0035	1.4393	5852.47	6987.35	6987.35	55.08	No	Si
SLU 39	5.46	-331	-13298	-0.0000582	0.0003743	0.0035	1.4393	6468.56	7781.52	7781.52	23.51	No	Si
SLU 39	8.98	-87.31	-9466	-0.0000379	0.0003743	0.0035	1.4393	5240.82	6188.18	6188.18	70.88	No	Si
SLU 77	5.46	-360.57	-15795	-0.0000699	0.0003743	0.0035	1.4393	6991.39	8647.63	8647.63	23.98	No	Si
SLU 77	8.98	-154.81	-11475	-0.0000474	0.0003743	0.0035	1.4393	5948.51	7117.12	7117.12	45.97	No	Si
SLU 82	5.46	-358.21	-15700	-0.0000694	0.0003743	0.0035	1.4393	6975.48	8612.77	8612.77	24.04	No	Si
SLU 82	8.98	-109.2	-11146	-0.0000452	0.0003743	0.0035	1.4393	5842.49	6974.18	6974.18	63.87	No	Si
SLU 35	5.46	-322.14	-13386	-0.0000585	0.0003743	0.0035	1.4393	6490.68	7810.28	7810.28	24.24	No	Si
SLU 35	8.98	-115.27	-9764	-0.0000396	0.0003743	0.0035	1.4393	5354.74	6334.44	6334.44	54.95	No	Si
SLU 79	5.46	-356.47	-15694	-0.0000694	0.0003743	0.0035	1.4393	6974.45	8610.55	8610.55	24.16	No	Si
SLU 79	8.98	-154.87	-11399	-0.0000471	0.0003743	0.0035	1.4393	5924.31	7083.87	7083.87	45.74	No	Si
SLU 83	5.46	-374.53	-16023	-0.0000712	0.0003743	0.0035	1.4393	7028.19	8731.7	8731.7	23.31	No	Si
SLU 83	8.98	-133.46	-11502	-0.0000471	0.0003743	0.0035	1.4393	5957.22	7129.17	7129.17	53.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	5.46	-688.98	-14293	-0.0000665	0.0005615	0.0035	1.4393		9018.01	9018.01	13.09		Si
SLV 8	8.98	-1249.65	-12407	-0.0000679	0.0005615	0.0035	1.4393		8085.06	8085.06	6.47		Si
SLV 4	5.46	-565.14	-13032	-0.0000592	0.0005615	0.0035	1.4393		8406.76	8406.76	14.88		Si
SLV 4	8.98	-1482.58	-9787	-0.0000609	0.0005615	0.0035	1.4393		6697.95	6697.95	4.52		Si
SLV 5	5.46	107.32	-7657	-0.0000304	0.0005615	0.0035	1.4393		5069.3	5069.3	47.24		Si
SLV 5	8.98	352.69	-3178	-0.0000171	0.0005615	0.0035	1.4393		2306.57	2306.57	6.54		Si
SLV 3	5.46	-548.55	-12919	-0.0000585	0.0005615	0.0035	1.4393		8348.53	8348.53	15.22		Si
SLV 3	8.98	-1385.01	-9710	-0.000059	0.0005615	0.0035	1.4393		6655.86	6655.86	4.81		Si
SLV 14	5.46	93.89	-8160	-0.0000321	0.0005615	0.0035	1.4393		5329.2	5329.2	56.76		Si
SLV 14	8.98	1134.68	-5378	-0.0000377	0.0005615	0.0035	1.4393		3724.54	3724.54	3.28		Si
SLV 1	5.46	-312.87	-10950	-0.0000466	0.0005615	0.0035	1.4393		7326.18	7326.18	23.42		Si
SLV 1	8.98	-923.18	-6956	-0.0000406	0.0005615	0.0035	1.4393		5068.23	5068.23	5.49		Si
SLV 13	5.46	110.48	-8047	-0.000032	0.0005615	0.0035	1.4393		5270.57	5270.57	47.71		Si
SLV 13	8.98	1232.24	-5301	-0.000039	0.0005615	0.0035	1.4393		3676.58	3676.58	2.98		Si
SLV 10	5.46	223.63	-6859	-0.0000292	0.0005615	0.0035	1.4393		4634.61	4634.61	20.72		Si
SLV 10	8.98	936.44	-2731	-0.0000257	0.0005615	0.0035	1.4393		2008.13	2008.13	2.14		Si
SLV 9	5.46	234.32	-6786	-0.000029	0.0005615	0.0035	1.4393		4590.57	4590.57	19.59		Si
SLV 9	8.98	999.31	-2681	-0.0000274	0.0005615	0.0035	1.4393		1975.18	1975.18	1.98		Si
SLV 2	5.46	-329.46	-11063	-0.0000474	0.0005615	0.0035	1.4393		7387.26	7387.26	22.42		Si
SLV 2	8.98	-1020.74	-7033	-0.0000424	0.0005615	0.0035	1.4393		5114.44	5114.44	5.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	5.46	-356.47	-15694	-13069	-3041	1.4393	1.4393	-32428	10833	4366	40441	12068	3670	15738	No	5.17	Si
SLU 79	8.98	-154.87	-11399	-9492	1111	1.4393	1.4393	-23552	10085	4064	40441	12068	3670	15738	No	14.17	Si
SLU 78	5.46	-349.35	-15788	-13147	-3052	1.4393	1.4393	-32622	10833	4366	40441	12068	3670	15738	No	5.16	Si
SLU 78	8.98	-137.16	-11444	-9530	1069	1.4393	1.4393	-23646	10097	4069	40441	12068	3670	15738	No	14.73	Si
SLU 82	5.46	-358.21	-15700	-13074	-3169	1.4393	1.4393	-32440	10833	4366	40441	12068	3670	15738	No	4.97	Si
SLU 82	8.98	-109.2	-11146	-9282	925	1.4393	1.4393	-23031	10015	4036	40441	12068	3670	15738	No	17.01	Si
SLU 83	5.46	-374.53	-16023	-13343	-3233	1.4393	1.4393	-33108	10833	4366	40441	12068	3670	15738	No	4.87	Si
SLU 83	8.98	-133.46	-11502	-9578	1013	1.4393	1.4393	-23766	10113	4076	40441	12068	3670	15738	No	15.54	Si
SLU 80	5.46	-345.25	-15687	-13063	-3025	1.4393	1.4393	-32413	10833	4366	40441	12068	3670	15738	No	5.2	Si
SLU 80	8.98	-137.22	-11368	-9466	1063	1.4393	1.4393	-23489	10076	4061	40441	12068	3670	15738	No	14.8	Si
SLU 75	5.46	-344.25	-15473	-12884	-3005	1.4393	1.4393	-31970	10833	4366	40441	12068	3670	15738	No	5.24	Si
SLU 75	8.98	-130.55	-11119	-9259	1029	1.4393	1.4393	-22974	10008	4033	40441	12068	3670	15738	No	15.3	Si
SLU 77	5.46	-360.57	-15795	-13153	-3068	1.4393	1.4393	-32637	10833	4366	40441	12068	3670	15738	No	5.13	Si
SLU 77	8.98	-154.81	-11475	-9555	1116	1.4393	1.4393	-23709	10106	4073	40441	12068	3670	15738	No	14.1	Si
SLU 74	5.46	-355.47	-15480	-12890	-3021	1.4393	1.4393	-31985	10833	4366	40441	12068	3670	15738	No	5.21	Si
SLU 74	8.98	-148.2	-11149	-9284	1077	1.4393	1.4393	-23037	10016	4037	40441	12068	3670	15738	No	14.62	Si
SLU 81	5.46	-369.43	-15708	-13080	-3185	1.4393	1.4393	-32455	10833	4366	40441	12068	3670	15738	No	4.94	Si
SLU 81	8.98	-126.85	-11177	-9307	973	1.4393	1.4393	-23094	10024	4040	40441	12068	3670	15738	No	16.17	Si
SLU 84	5.46	-363.31	-16016	-13337	-3217	1.4393	1.4393	-33093	10833	4366	40441	12068	3670	15738	No	4.89	Si
SLU 84	8.98	-115.81	-11472	-9553	965	1.4393	1.4393	-23703	10105	4072	40441	12068	3670	15738	No	16.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.46	-565.14	-13032	-10852	4375	1.4393	1.4393	-26927	15802	6368	40441	18102	3670	21772		4.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.98	-1482.58	-9787	-8150	5010	1.4393	1.4393	-20222	14461	5828	40441	18102	3670	21772		4.35	Si
SLV 14	5.46	93.89	-8160	-6795	-7663	1.4393	1.4393	-16861	13789	5557	40441	18102	3670	21772		2.84	Si
SLV 14	8.98	1134.68	-5378	-4478	-2937	1.4393	1.4393	-11112	12639	5094	40441	18102	3670	21772		7.41	Si
SLV 9	5.46	234.32	-6786	-5651	-5367	1.4393	1.4393	-14021	13221	5328	40441	18102	3670	21772		4.06	Si
SLV 9	8.98	999.31	-2681	-2233	-1011	1.4393	1.0409	-5540	11525	3359	40441	18102	3670	21772		21.54	Si
SLV 2	5.46	-329.46	-11063	-9212	3396	1.4393	1.4393	-22859	14988	6041	40441	18102	3670	21772		6.41	Si
SLV 2	8.98	-1020.74	-7033	-5856	4641	1.4393	1.4393	-14532	13323	5369	40441	18102	3670	21772		4.69	Si
SLV 10	5.46	223.63	-6859	-5712	-5028	1.4393	1.4393	-14172	13251	5340	40441	18102	3670	21772		4.33	Si
SLV 10	8.98	936.44	-2731	-2274	-779	1.4393	1.1302	-5642	11545	3654	40441	18102	3670	21772		27.94	Si
SLV 3	5.46	-548.55	-12919	-10758	3849	1.4393	1.4393	-26693	15755	6350	40441	18102	3670	21772		5.66	Si
SLV 3	8.98	-1385.01	-9710	-8086	4650	1.4393	1.4393	-20064	14429	5815	40441	18102	3670	21772		4.68	Si
SLD 13	5.46	-81.25	-9461	-7878	-4598	1.4393	1.4393	-19548	14326	5774	40441	18102	3670	21772		4.74	Si
SLD 13	8.98	458.5	-6567	-5468	-921	1.4393	1.4393	-13568	13130	5292	40441	18102	3670	21772		23.63	Si
SLV 16	5.46	-141.79	-10129	-8435	-6685	1.4393	1.4393	-20930	14603	5885	40441	18102	3670	21772		3.26	Si
SLV 16	8.98	672.84	-8132	-6772	-2568	1.4393	1.4393	-16803	13777	5552	40441	18102	3670	21772		8.48	Si
SLV 13	5.46	110.48	-8047	-6701	-8189	1.4393	1.4393	-16627	13742	5538	40441	18102	3670	21772		2.66	Si
SLV 13	8.98	1232.24	-5301	-4415	-3297	1.4393	1.4393	-10954	12607	5081	40441	18102	3670	21772		6.6	Si
SLV 15	5.46	-125.2	-10016	-8341	-7211	1.4393	1.4393	-20696	14556	5866	40441	18102	3670	21772		3.02	Si
SLV 15	8.98	770.4	-8055	-6708	-2928	1.4393	1.4393	-16644	13746	5540	40441	18102	3670	21772		7.44	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.39	10616	-4278	153.17	557.34	3.64	Si
SLV 5	179667	0.39	10682	-4305	153.17	560.53	3.66	Si
SLV 10	179667	0.39	11065	-4459	153.17	579.09	3.78	Si
SLV 9	179667	0.39	11131	-4486	153.17	582.26	3.8	Si
SLV 2	179667	0.39	17762	-7158	153.17	885.62	5.78	Si
SLV 1	179667	0.39	17864	-7200	153.17	890.03	5.81	Si
SLV 14	179667	0.39	19260	-7762	153.17	949.64	6.2	Si
SLV 13	179667	0.39	19362	-7803	153.17	953.94	6.23	Si
SLV 4	179667	0.39	24353	-9814	153.17	1154.91	7.54	Si
SLV 3	179667	0.39	24455	-9856	153.17	1158.83	7.57	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-12407	-14293	-114	0.626	1463.1	0.959	9.48282	12.68333	No
SLV 7	-12358	-14220	-114	0.628	1458.1	0.959	9.51576	12.68333	No
SLV 12	-11911	-13422	-42	0.654	1412.7	0.958	9.91323	12.68333	No
SLV 11	-11861	-13349	-42	0.656	1407.6	0.958	9.94913	12.68333	No
SLV 4	-9787	-13032	-141	0.762	1196.9	0.951	11.64564	5.63352	Si
SLV 3	-9710	-12919	-141	0.767	1189.1	0.951	11.72515	5.63352	Si
SLV 6	-3227	-7730	48	1.835	534.9	0.908	29.38294	12.68333	Si
SLV 5	-3178	-7657	48	1.855	530	0.907	29.72112	12.68333	Si
SLV 16	-8132	-10129	99	0.894	1028.9	0.945	13.7535	5.63352	Si
SLV 15	-8055	-10016	98	0.901	1021.1	0.944	13.86771	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.314	SLU 83	Si
V_SLU	4.868	SLU 83	Si
PF_SLV	1.977	SLV 9	Si
V_SLV	2.659	SLV 13	Si
PFFP_SLV	3.639	SLV 6	Si
R_SLV	0.748	SLV 8	No

Maschio 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.384	-13.778	-0.354	Z medio 634 cm	L6	3.031	0.28	2.64	1.759	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	7.22	1614.78	-23724	-0.00005	0.0003743	0.0035	3.0307	26078.15	28812.05	28812.05	17.84	No	Si
SLU 19	8.98	3377.17	-20215	-0.0000497	0.0003743	0.0035	3.0307	23465.35	25725.52	25725.52	7.62	No	Si
SLU 18	7.22	1579.41	-23641	-0.0000497	0.0003743	0.0035	3.0307	26020.94	28737.04	28737.04	18.19	No	Si
SLU 18	8.98	3302.24	-20120	-0.0000492	0.0003743	0.0035	3.0307	23387.87	25642.97	25642.97	7.77	No	Si
SLU 62	7.22	1954.03	-29394	-0.0000631	0.0003743	0.0035	3.0307	29387.25	34076.11	34076.11	17.44	No	Si
SLU 62	8.98	3682.67	-24914	-0.0000605	0.0003743	0.0035	3.0307	26865.91	29888.76	29888.76	8.12	No	Si
SLU 60	7.22	1933.11	-28669	-0.0000615	0.0003743	0.0035	3.0307	29027.26	33384.06	33384.06	17.27	No	Si
SLU 60	8.98	3636.46	-24182	-0.0000588	0.0003743	0.0035	3.0307	26387.07	29224.29	29224.29	8.04	No	Si
SLU 42	7.22	1757.64	-27064	-0.0000574	0.0003743	0.0035	3.0307	28164.01	31872.69	31872.69	18.13	No	Si
SLU 42	8.98	3514.37	-23195	-0.0000562	0.0003743	0.0035	3.0307	25711.42	28337.98	28337.98	8.06	No	Si
SLU 63	7.22	1989.4	-29477	-0.0000634	0.0003743	0.0035	3.0307	29427.6	34156.34	34156.34	17.17	No	Si
SLU 63	8.98	3757.61	-25010	-0.0000609	0.0003743	0.0035	3.0307	26927.26	29976.3	29976.3	7.98	No	Si
SLU 40	7.22	1736.72	-26340	-0.0000558	0.0003743	0.0035	3.0307	27744.82	31200.56	31200.56	17.97	No	Si
SLU 40	8.98	3468.16	-22463	-0.0000546	0.0003743	0.0035	3.0307	25188.44	27688.28	27688.28	7.98	No	Si
SLU 20	7.22	1600.32	-24365	-0.0000513	0.0003743	0.0035	3.0307	26508.72	29390.06	29390.06	18.37	No	Si
SLU 20	8.98	3348.44	-20851	-0.0000508	0.0003743	0.0035	3.0307	23971.01	26275.6	26275.6	7.85	No	Si
SLU 61	7.22	1968.48	-28753	-0.0000618	0.0003743	0.0035	3.0307	29069.73	33463.57	33463.57	17	No	Si
SLU 61	8.98	3711.4	-24278	-0.0000592	0.0003743	0.0035	3.0307	26450.88	29311	29311	7.9	No	Si
SLU 21	7.22	1635.7	-24449	-0.0000516	0.0003743	0.0035	3.0307	26563.8	29465.78	29465.78	18.01	No	Si
SLU 21	8.98	3423.38	-20947	-0.0000513	0.0003743	0.0035	3.0307	24046.03	26358.97	26358.97	7.7	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	7.22	6737.55	-27260	-0.0000747	0.0005615	0.0035	3.0307		35086.18	35086.18	5.21		Si
SLV 9	8.98	8265.72	-25301	-0.0000765	0.0005615	0.0035	3.0307		32767.48	32767.48	3.96		Si
SLD 5	7.22	3525.59	-24450	-0.0000572	0.0005615	0.0035	3.0307		31768.51	31768.51	9.01		Si
SLD 5	8.98	4796.68	-21213	-0.0000556	0.0005615	0.0035	3.0307		28019.43	28019.43	5.84		Si
SLV 7	7.22	-3853.29	-15317	-0.000041	0.0005615	0.0035	3.0307		23613.09	23613.09	6.13		Si
SLV 7	8.98	-4889.74	-9889	-0.0000346	0.0005615	0.0035	3.0307		16570.49	16570.49	3.39		Si
SLV 11	7.22	-3311.57	-14089	-0.0000368	0.0005615	0.0035	3.0307		22041.75	22041.75	6.66		Si
SLV 11	8.98	-5395.78	-9328	-0.0000356	0.0005615	0.0035	3.0307		15832.91	15832.91	2.93		Si
SLV 12	7.22	-3384.99	-14065	-0.000037	0.0005615	0.0035	3.0307		22010.88	22010.88	6.5		Si
SLV 12	8.98	-5449.93	-9245	-0.0000357	0.0005615	0.0035	3.0307		15722.66	15722.66	2.88		Si
SLV 8	7.22	-3926.71	-15293	-0.0000412	0.0005615	0.0035	3.0307		23583.23	23583.23	6.01		Si
SLV 8	8.98	-4943.89	-9805	-0.0000346	0.0005615	0.0035	3.0307		16460.33	16460.33	3.33		Si
SLD 6	7.22	3493.52	-24439	-0.000057	0.0005615	0.0035	3.0307		31756.19	31756.19	9.09		Si
SLD 6	8.98	4773.02	-21177	-0.0000554	0.0005615	0.0035	3.0307		27977.62	27977.62	5.86		Si
SLV 6	7.22	6122.41	-28464	-0.0000748	0.0005615	0.0035	3.0307		36469.26	36469.26	5.96		Si
SLV 6	8.98	8717.6	-25778	-0.0000791	0.0005615	0.0035	3.0307		33329.47	33329.47	3.82		Si
SLV 5	7.22	6195.83	-28488	-0.0000751	0.0005615	0.0035	3.0307		36494.87	36494.87	5.89		Si
SLV 5	8.98	8771.75	-25862	-0.0000795	0.0005615	0.0035	3.0307		33428.07	33428.07	3.81		Si
SLV 10	7.22	6664.13	-27236	-0.0000743	0.0005615	0.0035	3.0307		35057.48	35057.48	5.26		Si
SLV 10	8.98	8211.56	-25218	-0.0000761	0.0005615	0.0035	3.0307		32669.24	32669.24	3.98		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	7.22	1736.72	-26340	-21933	134	3.0307	3.0307	-25847	10391	8817	28547	25410	7728	33139	No	246.67	Si
SLU 40	8.98	3468.16	-22463	-18705	-2016	3.0307	3.0307	-22042	9883	8387	28547	25410	7728	33139	No	16.44	Si
SLU 21	7.22	1635.7	-24449	-20359	262	3.0307	3.0307	-23991	10143	8607	28547	25410	7728	33139	No	126.53	Si
SLU 21	8.98	3423.38	-20947	-17443	-1951	3.0307	3.0307	-20556	9685	8219	28547	25410	7728	33139	No	16.98	Si
SLU 42	7.22	1757.64	-27064	-22537	166	3.0307	3.0307	-26558	10485	8898	28547	25410	7728	33139	No	199.96	Si
SLU 42	8.98	3514.37	-23195	-19314	-2046	3.0307	3.0307	-22761	9979	8468	28547	25410	7728	33139	No	16.2	Si
SLU 84	7.22	2111.34	-32093	-26724	556	3.0307	3.0307	-31492	10833	9193	28547	25410	7728	33139	No	59.55	Si
SLU 84	8.98	3848.6	-27257	-22697	-2076	3.0307	3.0307	-26747	10511	8919	28547	25410	7728	33139	No	15.97	Si
SLU 41	7.22	1722.26	-26980	-22467	199	3.0307	3.0307	-26476	10475	8889	28547	25410	7728	33139	No	166.92	Si
SLU 41	8.98	3439.43	-23099	-19235	-1992	3.0307	3.0307	-22667	9967	8458	28547	25410	7728	33139	No	16.64	Si
SLU 81	7.22	2055.05	-31285	-26051	558	3.0307	3.0307	-30699	10833	9193	28547	25410	7728	33139	No	59.4	Si
SLU 81	8.98	3727.45	-26429	-22008	-1991	3.0307	3.0307	-25935	10402	8827	28547	25410	7728	33139	No	16.64	Si
SLU 39	7.22	1701.35	-26256	-21864	167	3.0307	3.0307	-25765	10380	8808	28547	25410	7728	33139	No	198.26	Si
SLU 39	8.98	3393.23	-22367	-18625	-1962	3.0307	3.0307	-21948	9871	8376	28547	25410	7728	33139	No	16.89	Si
SLU 63	7.22	1989.4	-29477	-24546	653	3.0307	3.0307	-28926	10801	9166	28547	25410	7728	33139	No	50.78	Si
SLU 63	8.98	3757.61	-25010	-20826	-1981	3.0307	3.0307	-24542	10217	8670	28547	25410	7728	33139	No	16.73	Si
SLU 83	7.22	2075.97	-32009	-26654	589	3.0307	3.0307	-31410	10833	9193	28547	25410	7728	33139	No	56.24	Si
SLU 83	8.98	3773.66	-27161	-22617	-2022	3.0307	3.0307	-26653	10498	8909	28547	25410	7728	33139	No	16.39	Si
SLU 82	7.22	2090.42	-31368	-26121	525	3.0307	3.0307	-30781	10833	9193	28547	25410	7728	33139	No	63.11	Si
SLU 82	8.98	3802.39	-26525	-22088	-2045	3.0307	3.0307	-26029	10415	8838	28547	25410	7728	33139	No	16.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	7.22	3758.69	-21186	-17642	-1073	3.0307	3.0307	-20790	14575	12368	28547	38116	7728	40914		38.14	Si
SLV 14	8.98	2824.73	-18950	-15780	-2513	3.0307	3.0307	-18596	14136	11995	28547	38116	7728	40542		16.14	Si
SLV 9	7.22	6737.55	-27260	-22699	-1890	3.0307	3.0307	-26750	15767	13379	28547	38116	7728	41926		22.18	Si
SLV 9	8.98	8265.72	-25301	-21069	-2539	3.0307	3.0307	-24828	15382	13053	28547	38116	7728	41600		16.39	Si
SLV 7	7.22	-3853.29	-15317	-12755	3841	3.0307	3.0307	-15031	13423	11390	28547	38116	7728	39937		10.4	Si
SLV 7	8.98	-4889.74	-9889	-8234	1331	3.0307	3.0307	-9704	12357	10486	28547	38116	7728	39033		29.32	Si
SLV 4	7.22	-1061.78	-21329	-17761	3042	3.0307	3.0307	-20930	14603	12392	28547	38116	7728	40938		13.46	Si
SLV 4	8.98	413.07	-16026	-13345	1496	3.0307	3.0307	-15727	13562	11509	28547	38116	7728	40055		26.77	Si
SLV 3	7.22	-947.85	-21367	-17792	3031	3.0307	3.0307	-20967	14610	12398	28547	38116	7728	40944		13.51	Si
SLV 3	8.98	497.1	-16156	-13453	1380	3.0307	3.0307	-15854	13587	11530	28547	38116	7728	40077		29.04	Si
SLV 13	7.22	3872.63	-21223	-17673	-1084	3.0307	3.0307	-20826	14582	12374	28547	38116	7728	40921		37.75	Si
SLV 13	8.98	2908.75	-19080	-15888	-2629	3.0307	3.0307	-18723	14161	12017	28547	38116	7728	40564		15.43	Si
SLV 10	7.22	6664.13	-27236	-22679	-1883	3.0307	3.0307	-26726	15762	13375	28547	38116	7728	41922		22.26	Si
SLV 10	8.98	8211.56	-25218	-20999	-2464	3.0307	3.0307	-24746	15366	13039	28547	38116	7728	41586		16.88	Si
SLV 8	7.22	-3926.71	-15293	-12735	3849	3.0307	3.0307	-15007	13418	11386	28547	38116	7728	39933		10.38	Si
SLV 8	8.98	-4943.89	-9805	-8165	1406	3.0307	3.0307	-9622	12341	10472	28547	38116	7728	39019		27.75	Si
SLV 11	7.22	-3311.57	-14089	-11732	3052	3.0307	3.0307	-13825	13182	11186	28547	38116	7728	39732		13.02	Si
SLV 11	8.98	-5395.78	-9328	-7768	393	3.0307	2.8107	-9911	12399	9758	28547	38116	7728	38304		97.59	Si
SLV 12	7.22	-3384.99	-14065	-11712	3059	3.0307	3.0307	-13801	13177	11182	28547	38116	7728	39728		12.99	Si
SLV 12	8.98	-5449.93	-9245	-7698	467	3.0307	2.7774	-9938	12404	9647	28547	38116	7728	38193		81.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.41	13515	-11468	189.66	1463.5	7.72	Si
SLV 11	179667	0.41	13548	-11497	189.66	1466.75	7.73	Si
SLV 8	179667	0.41	15025	-12750	189.66	1609.37	8.49	Si
SLV 7	179667	0.41	15058	-12778	189.66	1612.54	8.5	Si
SLV 16	179667	0.41	17268	-14653	189.66	1819.49	9.59	Si
SLV 15	179667	0.41	17319	-14697	189.66	1824.23	9.62	Si
SLV 14	179667	0.41	22003	-18671	189.66	2237.35	11.8	Si
SLV 13	179667	0.41	22054	-18715	189.66	2241.71	11.82	Si
SLV 4	179667	0.41	22301	-18925	189.66	2262.55	11.93	Si
SLV 3	179667	0.41	22353	-18968	189.66	2266.88	11.95	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.1 Wa = 0.05 Ta = 0.0416

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-25862	-28488	-533	0.648	2948.4	0.968	9.73946	7.14928	Si
SLV 6	-25778	-28464	-533	0.65	2939.9	0.967	9.76715	7.14928	Si
SLV 9	-25301	-27260	263	0.67	2891.3	0.967	10.07736	7.14928	Si
SLV 10	-25218	-27236	263	0.672	2882.8	0.967	10.10682	7.14928	Si
SLV 1	-20948	-25318	-1319	0.742	2448.3	0.961	11.20909	4.59513	Si
SLV 2	-20818	-25280	-1319	0.745	2435.2	0.961	11.27027	4.59513	Si
SLV 13	-19080	-21223	1335	0.802	2258.4	0.959	12.15568	4.59513	Si
SLV 14	-18950	-21186	1335	0.806	2245.2	0.958	12.22878	4.59513	Si
SLV 3	-16156	-21367	-1196	0.93	1961.2	0.953	14.18088	4.59513	Si
SLV 4	-16026	-21329	-1196	0.936	1948	0.953	14.281	4.59513	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.617	SLU 19	Si
V_SLU	15.966	SLU 84	Si
PF_SLV	2.885	SLV 12	Si
V_SLV	10.376	SLV 8	Si
PFFP_SLV	7.716	SLV 12	Si
R_SLV	1.362	SLV 5	Si

Maschio 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L5	L6	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	6.36	2947.47	-18813	-0.0000746	0.0003743	0.0035	2.105	13592.91	15407.99	15407.99	5.23	No	Si
SLU 49	8.16	500.68	-16279	-0.0000473	0.0003743	0.0035	2.105	12485.61	13758.78	13758.78	27.48	No	Si
SLU 46	6.36	2898.45	-18516	-0.0000733	0.0003743	0.0035	2.105	13474.67	15211.36	15211.36	5.25	No	Si
SLU 46	8.16	473.01	-15982	-0.0000462	0.0003743	0.0035	2.105	12340.95	13570.09	13570.09	28.69	No	Si
SLU 50	6.36	2910.89	-18410	-0.0000731	0.0003743	0.0035	2.105	13431.54	15141.14	15141.14	5.2	No	Si
SLU 50	8.16	486.28	-15876	-0.000046	0.0003743	0.0035	2.105	12288.35	13502.71	13502.71	27.77	No	Si
SLU 43	6.36	2812.85	-17815	-0.0000704	0.0003743	0.0035	2.105	13183.55	14750.1	14750.1	5.24	No	Si
SLU 43	8.16	430.95	-15281	-0.0000438	0.0003743	0.0035	2.105	11987.51	13127.99	13127.99	30.46	No	Si
SLU 51	6.36	2916.9	-18426	-0.0000732	0.0003743	0.0035	2.105	13438.15	15151.85	15151.85	5.19	No	Si
SLU 51	8.16	485.13	-15892	-0.000046	0.0003743	0.0035	2.105	12296.4	13512.99	13512.99	27.85	No	Si
SLU 47	6.36	2871.89	-18139	-0.0000719	0.0003743	0.0035	2.105	13320.39	14963.04	14963.04	5.21	No	Si
SLU 47	8.16	456.7	-15605	-0.000045	0.0003743	0.0035	2.105	12153.18	13332.13	13332.13	29.19	No	Si
SLU 48	6.36	2941.46	-18797	-0.0000745	0.0003743	0.0035	2.105	13586.52	15397.2	15397.2	5.23	No	Si
SLU 48	8.16	501.83	-16263	-0.0000472	0.0003743	0.0035	2.105	12477.78	13748.42	13748.42	27.4	No	Si
SLU 44	6.36	2822.87	-17842	-0.0000706	0.0003743	0.0035	2.105	13195.13	14767.85	14767.85	5.23	No	Si
SLU 44	8.16	429.03	-15308	-0.0000439	0.0003743	0.0035	2.105	12001.5	13145.01	13145.01	30.64	No	Si
SLU 72	6.36	3108.59	-20997	-0.0000829	0.0003743	0.0035	2.105	14366.47	16836.68	16836.68	5.42	No	Si
SLU 72	8.16	651.02	-18434	-0.0000548	0.0003743	0.0035	2.105	13441.44	15157.19	15157.19	23.28	No	Si
SLU 45	6.36	2892.44	-18500	-0.0000732	0.0003743	0.0035	2.105	13468.11	15200.63	15200.63	5.26	No	Si
SLU 45	8.16	474.16	-15966	-0.0000461	0.0003743	0.0035	2.105	12332.95	13559.8	13559.8	28.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	6.36	3788.4	-9528	-0.0000527	0.0005615	0.0035	2.105		9390.75	9390.75	2.48		Si
SLV 12	8.16	-1069.05	-7549	-0.0000269	0.0005615	0.0035	2.105		8665.5	8665.5	8.11		Si
SLV 16	6.36	8460.33	-1682	-0.0448447	0.0005615	0.0035	2.105		1977.41	1977.41	0.23		No
SLV 16	8.16	-4311.09	641	0.0464122	0.0005615	0.0035	1.684		0	0	0		No
SLD 15	6.36	4629.86	-10331	-0.0000623	0.0005615	0.0035	2.105		10013.79	10013.79	2.16		Si
SLD 15	8.16	-1334.51	-8211	-0.0000306	0.0005615	0.0035	2.105		9277.57	9277.57	6.95		Si
SLD 14	6.36	5089.22	-10287	-0.0000675	0.0005615	0.0035	2.105		9979.85	9979.85	1.96		Si
SLD 14	8.16	-1574.94	-8141	-0.0000322	0.0005615	0.0035	2.105		9212.93	9212.93	5.85		Si
SLV 15	6.36	7731.4	-3006	-0.0307818	0.0005615	0.0035	2.105		3311.39	3311.39	0.43		No
SLV 15	8.16	-3749.55	-683	-0.0012936	0.0005615	0.0035	1.684		2003.74	2003.74	0.53		No
SLV 10	6.36	4883.98	-13522	-0.0000718	0.0005615	0.0035	2.105		12537.65	12537.65	2.57		Si
SLV 10	8.16	-1057.91	-11337	-0.0000369	0.0005615	0.0035	2.105		12030.4	12030.4	11.37		Si
SLV 14	6.36	8789	-2881	-0.038601	0.0005615	0.0035	2.105		3185.4	3185.4	0.36		No
SLV 14	8.16	-4307.75	-495	-0.0017978	0.0005615	0.0035	1.684		1811.74	1811.74	0.42		No
SLV 13	6.36	8060.08	-4205	-0.0252971	0.0005615	0.0035	2.105		4493.12	4493.12	0.56		No
SLV 13	8.16	-3746.21	-1819	-0.0007841	0.0005615	0.0035	1.684		3156.11	3156.11	0.84		No
SLD 16	6.36	4942.83	-9762	-0.0000653	0.0005615	0.0035	2.105		9572.04	9572.04	1.94		Si
SLD 16	8.16	-1575.62	-7643	-0.0000309	0.0005615	0.0035	2.105		8752.3	8752.3	5.55		Si
SLD 13	6.36	4776.24	-10856	-0.0000647	0.0005615	0.0035	2.105		10423.71	10423.71	2.18		Si
SLD 13	8.16	-1333.83	-8709	-0.0000319	0.0005615	0.0035	2.105		9730.64	9730.64	7.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	6.36	3283.21	-23430	-19511	1357	2.105	2.105	-33103	10833	6385	40441	17649	5368	23017	No	16.96	Si
SLU 80	8.16	802.04	-20867	-17376	1357	2.105	2.105	-29482	10833	6385	40441	17649	5368	23017	No	16.96	Si
SLU 74	6.36	3258.74	-23504	-19572	1350	2.105	2.105	-33208	10833	6385	40441	17649	5368	23017	No	17.05	Si
SLU 74	8.16	791.07	-20941	-17438	1350	2.105	2.105	-29586	10833	6385	40441	17649	5368	23017	No	17.05	Si
SLU 75	6.36	3264.76	-23521	-19586	1354	2.105	2.105	-33231	10833	6385	40441	17649	5368	23017	No	17	Si
SLU 75	8.16	789.92	-20958	-17452	1354	2.105	2.105	-29609	10833	6385	40441	17649	5368	23017	No	17	Si
SLU 57	6.36	3122.09	-21247	-17692	1351	2.105	2.105	-30018	10833	6385	40441	17649	5368	23017	No	17.04	Si
SLU 57	8.16	651.7	-18713	-15582	1351	2.105	2.105	-26438	10469	6171	40441	17649	5368	23017	No	17.04	Si
SLU 79	6.36	3277.2	-23414	-19497	1353	2.105	2.105	-33080	10833	6385	40441	17649	5368	23017	No	17.01	Si
SLU 79	8.16	803.19	-20851	-17363	1353	2.105	2.105	-29459	10833	6385	40441	17649	5368	23017	No	17.01	Si
SLU 84	6.36	3309.02	-24176	-20132	1351	2.105	2.105	-34157	10833	6385	40441	17649	5368	23017	No	17.04	Si
SLU 84	8.16	839.1	-21613	-17997	1351	2.105	2.105	-30535	10833	6385	40441	17649	5368	23017	No	17.04	Si
SLU 69	6.36	3133.15	-21368	-17794	1349	2.105	2.105	-30190	10833	6385	40441	17649	5368	23017	No	17.07	Si
SLU 69	8.16	667.71	-18805	-15659	1349	2.105	2.105	-26569	10487	6181	40441	17649	5368	23017	No	17.07	Si
SLU 70	6.36	3139.16	-21385	-17807	1353	2.105	2.105	-30213	10833	6385	40441	17649	5368	23017	No	17.02	Si
SLU 70	8.16	666.56	-18821	-15673	1353	2.105	2.105	-26592	10490	6183	40441	17649	5368	23017	No	17.02	Si
SLU 78	6.36	3313.78	-23818	-19834	1366	2.105	2.105	-33651	10833	6385	40441	17649	5368	23017	No	16.85	Si
SLU 78	8.16	817.59	-21255	-17699	1366	2.105	2.105	-30029	10833	6385	40441	17649	5368	23017	No	16.85	Si
SLU 77	6.36	3307.77	-23802	-19820	1362	2.105	2.105	-33628	10833	6385	40441	17649	5368	23017	No	16.9	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	8.16	818.74	-21239	-17686	1362	2.105	2.105	-30006	10833	6385	40441	17649	5368	23017	No	16.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	6.36	5089.22	-10287	-8566	3808	2.105	1.6733	-14534	13323	6242	40441	26474	5368	31841		8.36	Si
SLD 14	8.16	-1574.94	-8141	-6779	3666	2.105	2.105	-11502	12717	7495	40441	26474	5368	31841		8.69	Si
SLV 13	6.36	8060.08	-4205	-3501	6830	2.105	0	-229049	16250	0	40441	26474	5368	31841		4.66	Si
SLV 13	8.16	-3746.21	-1819	-1515	6496	1.684	0	0	0	0	40441	21179	4294	25473		3.92	Si
SLV 15	6.36	7731.4	-3006	-2504	6719	2.105	0	0	16250	0	40441	26474	5368	31841		4.74	Si
SLV 15	8.16	-3749.55	-683	-568	6329	1.684	0	0	0	0	40441	21179	4294	25473		4.02	Si
SLV 16	6.36	8460.33	-1682	-1401	7436	2.105	0	0	16250	0	40441	26474	5368	31841		4.28	Si
SLV 16	8.16	-4311.09	641	534	7046	1.684	0	0	0	0	40441	21179	4294	25473		3.62	Si
SLV 1	6.36	-3822.45	-29941	-24933	-5410	2.105	2.105	-42302	16250	9578	40441	26474	5368	31841		5.89	Si
SLV 1	8.16	5242.68	-28335	-23595	-5020	2.105	2.105	-40032	16250	9578	40441	26474	5368	31841		6.34	Si
SLV 4	6.36	-3422.2	-27419	-22832	-4804	2.105	2.105	-38739	16250	9578	40441	26474	5368	31841		6.63	Si
SLV 4	8.16	4677.79	-25874	-21546	-4470	2.105	2.105	-36556	16250	9578	40441	26474	5368	31841		7.12	Si
SLD 16	6.36	4942.83	-9762	-8129	3759	2.105	1.6385	-13792	13175	6044	40441	26474	5368	31841		8.47	Si
SLD 16	8.16	-1575.62	-7643	-6364	3592	2.105	2.105	-10798	12576	7412	40441	26474	5368	31841		8.86	Si
SLV 14	6.36	8789	-2881	-2399	7547	2.105	0	0	16250	0	40441	26474	5368	31841		4.22	Si
SLV 14	8.16	-4307.75	-495	-412	7213	1.684	0	0	0	0	40441	21179	4294	25473		3.53	Si
SLV 3	6.36	-4151.12	-28743	-23935	-5521	2.105	2.105	-40609	16250	9578	40441	26474	5368	31841		5.77	Si
SLV 3	8.16	5239.34	-27198	-22648	-5187	2.105	2.105	-38427	16250	9578	40441	26474	5368	31841		6.14	Si
SLV 2	6.36	-3093.52	-28617	-23830	-4693	2.105	2.105	-40431	16250	9578	40441	26474	5368	31841		6.78	Si
SLV 2	8.16	4681.14	-27011	-22492	-4303	2.105	2.105	-38162	16250	9578	40441	26474	5368	31841		7.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.39	0	-588	218.92	0	0	No, e>t/2
SLV 14	179667	0.39	2927	-1725	218.92	236.88	1.08	Si
SLV 15	179667	0.39	3244	-1912	218.92	262.01	1.2	Si
SLV 13	179667	0.39	5173	-3049	218.92	412.4	1.88	Si
SLV 12	179667	0.39	14734	-8684	218.92	1098.48	5.02	Si
SLV 11	179667	0.39	16182	-9537	218.92	1193.75	5.45	Si
SLV 10	179667	0.39	21164	-12474	218.92	1504.32	6.87	Si
SLV 9	179667	0.39	22611	-13327	218.92	1589.53	7.26	Si
SLV 8	179667	0.39	28094	-16559	218.92	1891.75	8.64	Si
SLV 7	179667	0.39	29542	-17412	218.92	1966.11	8.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16622	-21990	689	0.646	1985	0.957	9.81512	12.68333	No
SLV 6	-16152	-20780	689	0.662	1937.2	0.956	10.06557	12.68333	No
SLV 7	-12859	-18492	-764	0.796	1602.7	0.948	12.20698	12.68333	No
SLV 8	-12388	-17283	-764	0.821	1555	0.946	12.60816	12.68333	No
SLV 9	-11756	-11517	759	0.857	1490.9	0.944	13.19822	12.68333	Si
SLV 10	-11285	-10307	759	0.887	1443.2	0.943	13.67097	12.68333	Si
SLV 11	-7992	-8019	-693	1.176	1110.2	0.929	18.4063	12.68333	Si
SLV 1	-21112	-33318	98	0.553	2441.6	0.964	8.34091	5.63352	Si
SLV 3	-19983	-32269	-338	0.569	2326.8	0.962	8.59027	5.63352	Si
SLV 12	-7522	-6810	-693	1.233	1062.8	0.926	19.34919	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.194	SLU 51	Si
V_SLU	16.853	SLU 78	Si
PF_SLV	0	SLV 16	No
V_SLV	3.531	SLV 14	Si
PFFP_SLV	0	SLV 16	No
R_SLV	0.774	SLV 5	No

Maschio 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	6.36	1694.37	-51902	-0.0000812	0.0003743	0.0035	3.98	56036.89	70345.75	70345.75	41.52	No	Si
SLU 63	8.16	-2407.33	-47065	-0.0000747	0.0003743	0.0035	3.98	54807.44	69579.78	69579.78	28.9	No	Si
SLU 62	6.36	1690.73	-51862	-0.0000811	0.0003743	0.0035	3.98	56030.02	70310.77	70310.77	41.59	No	Si
SLU 62	8.16	-2401.66	-47025	-0.0000746	0.0003743	0.0035	3.98	54793.71	69546.47	69546.47	28.96	No	Si
SLU 84	6.36	1750.9	-57743	-0.0000916	0.0003743	0.0035	3.98	56427.47	74967.32	74967.32	42.82	No	Si
SLU 84	8.16	-2591.43	-52851	-0.000085	0.0003743	0.0035	3.98	56181.74	73412.68	73412.68	28.33	No	Si
SLU 81	6.36	1736.31	-56867	-0.00009	0.0003743	0.0035	3.98	56445.17	74525.83	74525.83	42.92	No	Si
SLU 81	8.16	-2638	-51975	-0.0000836	0.0003743	0.0035	3.98	56049.11	72879.37	72879.37	27.63	No	Si
SLU 83	6.36	1747.26	-57703	-0.0000915	0.0003743	0.0035	3.98	56428.88	74952.85	74952.85	42.9	No	Si
SLU 83	8.16	-2585.77	-52811	-0.0000849	0.0003743	0.0035	3.98	56176.21	73387.86	73387.86	28.38	No	Si
SLU 60	6.36	1679.78	-51026	-0.0000796	0.0003743	0.0035	3.98	55875.12	69590.62	69590.62	41.43	No	Si
SLU 60	8.16	-2453.89	-46189	-0.0000733	0.0003743	0.0035	3.98	54497.01	68845.01	68845.01	28.06	No	Si
SLU 61	6.36	1683.43	-51067	-0.0000797	0.0003743	0.0035	3.98	55883.17	69625.33	69625.33	41.36	No	Si
SLU 61	8.16	-2459.56	-46230	-0.0000734	0.0003743	0.0035	3.98	54511.93	68879.51	68879.51	28	No	Si
SLU 52	6.36	1624.95	-48747	-0.0000756	0.0003743	0.0035	3.98	55328.03	67655.66	67655.66	41.64	No	Si
SLU 52	8.16	-2342.44	-43910	-0.0000693	0.0003743	0.0035	3.98	53563.14	66800.96	66800.96	28.52	No	Si
SLU 73	6.36	1681.47	-54588	-0.0000858	0.0003743	0.0035	3.98	56365.09	72700.42	72700.42	43.24	No	Si
SLU 73	8.16	-2526.55	-49696	-0.0000794	0.0003743	0.0035	3.98	55577.88	71536.09	71536.09	28.31	No	Si
SLU 82	6.36	1739.95	-56908	-0.00009	0.0003743	0.0035	3.98	56444.95	74556.64	74556.64	42.85	No	Si
SLU 82	8.16	-2643.67	-52016	-0.0000837	0.0003743	0.0035	3.98	56055.83	72903.77	72903.77	27.58	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	6.36	10111.71	-33755	-0.0000683	0.0005615	0.0035	3.98		57392.6	57392.6	5.68		Si
SLD 16	8.16	-9497.06	-29941	-0.0000613	0.0005615	0.0035	3.98		56200.78	56200.78	5.92		Si
SLV 15	6.36	20097.67	-28692	-0.0000824	0.0005615	0.0035	3.98		49575.34	49575.34	2.47		Si
SLV 15	8.16	-17901.56	-24790	-0.0000718	0.0005615	0.0035	3.98		48383.63	48383.63	2.7		Si
SLV 1	6.36	-19620.12	-47919	-0.0001117	0.0005615	0.0035	3.98		80119.62	80119.62	4.08		Si
SLV 1	8.16	16347.5	-44319	-0.0000985	0.0005615	0.0035	3.98		70984.61	70984.61	4.34		Si
SLV 2	6.36	-17682.41	-47323	-0.0001063	0.0005615	0.0035	3.98		79385.91	79385.91	4.49		Si
SLV 2	8.16	14382.81	-43723	-0.0000931	0.0005615	0.0035	3.98		70277.72	70277.72	4.89		Si
SLV 14	6.36	22306.41	-30612	-0.0000905	0.0005615	0.0035	3.98		52516.53	52516.53	2.35		Si
SLV 14	8.16	-20192.64	-26661	-0.0000799	0.0005615	0.0035	3.98		51233.16	51233.16	2.54		Si
SLV 16	6.36	22035.38	-28096	-0.0000866	0.0005615	0.0035	3.98		48667.61	48667.61	2.21		Si
SLV 16	8.16	-19866.25	-24194	-0.0000762	0.0005615	0.0035	3.98		47436.43	47436.43	2.39		Si
SLV 3	6.36	-19891.15	-45403	-0.0001082	0.0005615	0.0035	3.98		77042.93	77042.93	3.87		Si
SLV 3	8.16	16673.89	-41852	-0.0000952	0.0005615	0.0035	3.98		68064.62	68064.62	4.08		Si
SLD 14	6.36	10230.43	-34861	-0.0000702	0.0005615	0.0035	3.98		59124.04	59124.04	5.78		Si
SLD 14	8.16	-9641.79	-31026	-0.0000632	0.0005615	0.0035	3.98		57763.05	57763.05	5.99		Si
SLV 4	6.36	-17953.45	-44807	-0.0001029	0.0005615	0.0035	3.98		76321.71	76321.71	4.25		Si
SLV 4	8.16	14709.2	-41256	-0.0000899	0.0005615	0.0035	3.98		67363.31	67363.31	4.58		Si
SLV 13	6.36	20368.7	-31208	-0.0000867	0.0005615	0.0035	3.98		53435.43	53435.43	2.62		Si
SLV 13	8.16	-18227.95	-27257	-0.000076	0.0005615	0.0035	3.98		52141.91	52141.91	2.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	6.36	1736.31	-56867	-47354	2447	3.98	3.98	-42493	10833	12073	40441	33370	10149	43519	No	17.78	Si
SLU 81	8.16	-2638	-51975	-43280	2447	3.98	3.98	-38837	10833	12073	40441	33370	10149	43519	No	17.78	Si
SLU 82	6.36	1739.95	-56908	-47388	2452	3.98	3.98	-42523	10833	12073	40441	33370	10149	43519	No	17.75	Si
SLU 82	8.16	-2643.67	-52016	-43314	2452	3.98	3.98	-38868	10833	12073	40441	33370	10149	43519	No	17.75	Si
SLU 77	6.36	1701.93	-56983	-47450	2321	3.98	3.98	-42579	10833	12073	40441	33370	10149	43519	No	18.75	Si
SLU 77	8.16	-2444.7	-52091	-43377	2321	3.98	3.98	-38924	10833	12073	40441	33370	10149	43519	No	18.75	Si
SLU 83	6.36	1747.26	-57703	-48050	2424	3.98	3.98	-43117	10833	12073	40441	33370	10149	43519	No	17.95	Si
SLU 83	8.16	-2585.77	-52811	-43976	2424	3.98	3.98	-39462	10833	12073	40441	33370	10149	43519	No	17.95	Si
SLU 75	6.36	1694.62	-56188	-46788	2349	3.98	3.98	-41985	10833	12073	40441	33370	10149	43519	No	18.53	Si
SLU 75	8.16	-2502.61	-51296	-42715	2349	3.98	3.98	-38330	10833	12073	40441	33370	10149	43519	No	18.53	Si
SLU 74	6.36	1690.98	-56147	-46755	2343	3.98	3.98	-41955	10833	12073	40441	33370	10149	43519	No	18.57	Si
SLU 74	8.16	-2496.94	-51255	-42681	2343	3.98	3.98	-38299	10833	12073	40441	33370	10149	43519	No	18.57	Si
SLU 76	6.36	1692.42	-55423	-46152	2332	3.98	3.98	-41414	10833	12073	40441	33370	10149	43519	No	18.66	Si
SLU 76	8.16	-2474.31	-50531	-42078	2332	3.98	3.98	-37759	10833	12073	40441	33370	10149	43519	No	18.66	Si
SLU 73	6.36	1681.47	-54588	-45456	2355	3.98	3.98	-40790	10833	12073	40441	33370	10149	43519	No	18.48	Si
SLU 73	8.16	-2526.55	-49696	-41382	2355	3.98	3.98	-37134	10833	12073	40441	33370	10149	43519	No	18.48	Si
SLU 84	6.36	1750.9	-57743	-48084	2429	3.98	3.98	-43148	10833	12073	40441	33370	10149	43519	No	17.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.16	-2591.43	-52851	-44010	2429	3.98	3.98	-39492	10833	12073	40441	33370	10149	43519	No	17.91	Si
SLU 78	6.36	1705.57	-57023	-47484	2326	3.98	3.98	-42609	10833	12073	40441	33370	10149	43519	No	18.71	Si
SLU 78	8.16	-2450.37	-52131	-43410	2326	3.98	3.98	-38954	10833	12073	40441	33370	10149	43519	No	18.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	6.36	22035.38	-28096	-23396	23819	3.98	3.6172	-20994	14616	14803	40441	50055	10149	55244		2.32	Si
SLV 16	8.16	-19866.25	-24194	-20147	23116	3.98	3.5066	-20681	14553	14289	40441	50055	10149	54730		2.37	Si
SLV 15	6.36	20097.67	-28692	-23892	21651	3.98	3.8686	-21440	14705	15928	40441	50055	10149	56369		2.6	Si
SLV 15	8.16	-17901.56	-24790	-20643	20948	3.98	3.8036	-19566	14330	15261	40441	50055	10149	55702		2.66	Si
SLV 14	6.36	22306.41	-30612	-25491	24003	3.98	3.7839	-22874	14991	15884	40441	50055	10149	56324		2.35	Si
SLV 14	8.16	-20192.64	-26661	-22201	23352	3.98	3.6979	-21660	14749	15271	40441	50055	10149	55712		2.39	Si
SLV 3	6.36	-19891.15	-45403	-37808	-20680	3.98	3.98	-33927	16250	18109	40441	50055	10149	58550		2.83	Si
SLV 3	8.16	16673.89	-41852	-34850	-20030	3.98	3.98	-31273	16250	18109	40441	50055	10149	58550		2.92	Si
SLV 13	6.36	20368.7	-31208	-25987	21835	3.98	3.98	-23319	15081	16806	40441	50055	10149	57247		2.62	Si
SLV 13	8.16	-18227.95	-27257	-22698	21184	3.98	3.9638	-20368	14490	16082	40441	50055	10149	56523		2.67	Si
SLV 1	6.36	-19620.12	-47919	-39903	-20497	3.98	3.98	-35807	16250	18109	40441	50055	10149	58550		2.86	Si
SLV 1	8.16	16347.5	-44319	-36905	-19794	3.98	3.98	-33117	16250	18109	40441	50055	10149	58550		2.96	Si
SLV 2	6.36	-17682.41	-47323	-39407	-18329	3.98	3.98	-35361	16250	18109	40441	50055	10149	58550		3.19	Si
SLV 2	8.16	14382.81	-43723	-36409	-17626	3.98	3.98	-32671	16250	18109	40441	50055	10149	58550		3.32	Si
SLD 14	6.36	10230.43	-34861	-29029	11214	3.98	3.98	-26049	15626	17414	40441	50055	10149	57855		5.16	Si
SLD 14	8.16	-9641.79	-31026	-25836	10937	3.98	3.98	-23184	15053	16775	40441	50055	10149	57216		5.23	Si
SLD 16	6.36	10111.71	-33755	-28109	11132	3.98	3.98	-25223	15461	17230	40441	50055	10149	57671		5.18	Si
SLD 16	8.16	-9497.06	-29941	-24932	10831	3.98	3.98	-22373	14891	16595	40441	50055	10149	57036		5.27	Si
SLV 4	6.36	-17953.45	-44807	-37312	-18512	3.98	3.98	-33481	16250	18109	40441	50055	10149	58550		3.16	Si
SLV 4	8.16	14709.2	-41256	-34354	-17862	3.98	3.98	-30827	16250	18109	40441	50055	10149	58550		3.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.39	23574	-26271	413.93	3110.2	7.51	Si
SLV 15	179667	0.39	24109	-26867	413.93	3167.59	7.65	Si
SLV 14	179667	0.39	25793	-28743	413.93	3344.44	8.08	Si
SLV 13	179667	0.39	26327	-29339	413.93	3399.4	8.21	Si
SLV 12	179667	0.39	26437	-29461	413.93	3410.55	8.24	Si
SLV 11	179667	0.39	26781	-29845	413.93	3445.59	8.32	Si
SLV 8	179667	0.39	31027	-34577	413.93	3857.27	9.32	Si
SLV 7	179667	0.39	31372	-34961	413.93	3889.07	9.4	Si
SLV 10	179667	0.39	33832	-37702	413.93	4108.99	9.93	Si
SLV 9	179667	0.39	34176	-38086	413.93	4138.81	10	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-33131	-43532	1140	0.622	3926.1	0.958	9.43767	12.68333	No
SLV 6	-32857	-43147	1140	0.627	3898.4	0.958	9.50661	12.68333	No
SLV 9	-29793	-37808	1148	0.68	3586.9	0.955	10.35666	12.68333	No
SLV 10	-29520	-37423	1148	0.686	3559.2	0.954	10.44064	12.68333	No
SLV 7	-26211	-35253	-1156	0.757	3223	0.95	11.58168	12.68333	No
SLV 8	-25938	-34868	-1156	0.764	3195.3	0.95	11.68803	12.68333	No
SLV 11	-22874	-29529	-1148	0.848	2884.4	0.945	13.04247	12.68333	Si
SLV 12	-22601	-29145	-1148	0.857	2856.7	0.945	13.17875	12.68333	Si
SLV 1	-34677	-47418	327	0.62	4083.4	0.96	9.3886	5.63352	Si
SLV 2	-34254	-46821	327	0.627	4040.3	0.959	9.49095	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	27.577	SLU 82	Si
V_SLU	17.747	SLU 82	Si
PF_SLV	2.209	SLV 16	Si
V_SLV	2.319	SLV 16	Si
PFFP_SLV	7.514	SLV 16	Si
R_SLV	0.744	SLV 5	No

Maschio 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	6.36	-201.06	-51737	-0.0000773	0.0003743	0.0035	3.98	56008.33	72735.75	72735.75	361.77	No	Si
SLU 64	8.16	841.65	-46817	-0.0000706	0.0003743	0.0035	3.98	54722.24	66050.85	66050.85	78.48	No	Si
SLU 44	6.36	-260.11	-45684	-0.0000673	0.0003743	0.0035	3.98	54305.78	68409.06	68409.06	263	No	Si
SLU 44	8.16	854.76	-40818	-0.0000608	0.0003743	0.0035	3.98	52005.4	61260.37	61260.37	71.67	No	Si
SLU 45	6.36	-244.77	-47292	-0.0000699	0.0003743	0.0035	3.98	54883.54	69765.92	69765.92	285.02	No	Si
SLU 45	8.16	818.04	-42427	-0.0000633	0.0003743	0.0035	3.98	52857.65	62515.53	62515.53	76.42	No	Si
SLU 49	6.36	-244.92	-48210	-0.0000715	0.0003743	0.0035	3.98	55172.55	70499.54	70499.54	287.85	No	Si
SLU 49	8.16	813.31	-43344	-0.0000648	0.0003743	0.0035	3.98	53303.28	63241.3	63241.3	77.76	No	Si
SLU 65	6.36	-197.61	-51818	-0.0000774	0.0003743	0.0035	3.98	56022.51	72784.81	72784.81	368.33	No	Si
SLU 65	8.16	856.18	-46899	-0.0000707	0.0003743	0.0035	3.98	54750.51	66118.09	66118.09	77.22	No	Si
SLU 51	6.36	-265.92	-47389	-0.0000701	0.0003743	0.0035	3.98	54915.31	69844.44	69844.44	262.65	No	Si
SLU 51	8.16	822.06	-42523	-0.0000635	0.0003743	0.0035	3.98	52905.89	62591.51	62591.51	76.14	No	Si
SLU 50	6.36	-267.99	-47340	-0.0000701	0.0003743	0.0035	3.98	54899.22	69804.62	69804.62	260.47	No	Si
SLU 50	8.16	813.34	-42474	-0.0000634	0.0003743	0.0035	3.98	52881.44	62552.93	62552.93	76.91	No	Si
SLU 43	6.36	-263.56	-45602	-0.0000672	0.0003743	0.0035	3.98	54274.04	68337.77	68337.77	259.29	No	Si
SLU 43	8.16	840.24	-40737	-0.0000607	0.0003743	0.0035	3.98	51959.73	61197.23	61197.23	72.83	No	Si
SLU 47	6.36	-262.33	-46553	-0.0000688	0.0003743	0.0035	3.98	54629.12	69153.26	69153.26	263.61	No	Si
SLU 47	8.16	841.32	-41687	-0.0000622	0.0003743	0.0035	3.98	52477.01	61935.68	61935.68	73.62	No	Si
SLU 46	6.36	-242.7	-47341	-0.00007	0.0003743	0.0035	3.98	54899.71	69805.82	69805.82	287.62	No	Si
SLU 46	8.16	826.76	-42476	-0.0000634	0.0003743	0.0035	3.98	52882.18	62554.09	62554.09	75.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	6.36	21361.66	-41634	-0.0001054	0.0005615	0.0035	3.98		67808.83	67808.83	3.17		Si
SLV 16	8.16	-21195.92	-37737	-0.0000988	0.0005615	0.0035	3.98		67210.94	67210.94	3.17		Si
SLD 3	6.36	-9457.16	-38072	-0.0000734	0.0005615	0.0035	3.98		67670.63	67670.63	7.16		Si
SLD 3	8.16	9737.63	-34363	-0.0000684	0.0005615	0.0035	3.98		58343.82	58343.82	5.99		Si
SLV 2	6.36	-19672.64	-38751	-0.000097	0.0005615	0.0035	3.98		68593.23	68593.23	3.49		Si
SLV 2	8.16	20265.99	-35104	-0.0000926	0.0005615	0.0035	3.98		59506.57	59506.57	2.94		Si
SLV 1	6.36	-21610.73	-38631	-0.0001012	0.0005615	0.0035	3.98		68430.34	68430.34	3.17		Si
SLV 1	8.16	22471.73	-34983	-0.0000972	0.0005615	0.0035	3.98		59316.96	59316.96	2.64		Si
SLV 3	6.36	-21945.95	-35367	-0.0000967	0.0005615	0.0035	3.98		63948.86	63948.86	2.91		Si
SLV 3	8.16	21941.47	-31744	-0.0000911	0.0005615	0.0035	3.98		54263.67	54263.67	2.47		Si
SLV 13	6.36	19758.79	-44778	-0.0001069	0.0005615	0.0035	3.98		71529.56	71529.56	3.62		Si
SLV 13	8.16	-18459.92	-40856	-0.0000977	0.0005615	0.0035	3.98		71310.8	71310.8	3.86		Si
SLV 14	6.36	21696.88	-44898	-0.0001115	0.0005615	0.0035	3.98		71673.1	71673.1	3.3		Si
SLV 14	8.16	-20665.66	-40977	-0.0001028	0.0005615	0.0035	3.98		71467.01	71467.01	3.46		Si
SLV 15	6.36	19423.57	-41514	-0.0001009	0.0005615	0.0035	3.98		67666.93	67666.93	3.48		Si
SLV 15	8.16	-18990.18	-37616	-0.0000937	0.0005615	0.0035	3.98		67044.74	67044.74	3.53		Si
SLD 1	6.36	-9309.63	-39507	-0.0000753	0.0005615	0.0035	3.98		69572.26	69572.26	7.47		Si
SLD 1	8.16	9972.1	-35789	-0.0000711	0.0005615	0.0035	3.98		60585.53	60585.53	6.08		Si
SLV 4	6.36	-20007.86	-35487	-0.0000926	0.0005615	0.0035	3.98		64113.65	64113.65	3.2		Si
SLV 4	8.16	19735.73	-31864	-0.0000863	0.0005615	0.0035	3.98		54450.4	54450.4	2.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	6.36	-267.99	-47340	-39420	-605	3.98	3.98	-35374	10833	12073	40441	33370	10149	43519	No	71.96	Si
SLU 50	8.16	813.34	-42474	-35369	-605	3.98	3.98	-31738	10833	12073	40441	33370	10149	43519	No	71.96	Si
SLU 51	6.36	-265.92	-47389	-39461	-608	3.98	3.98	-35410	10833	12073	40441	33370	10149	43519	No	71.52	Si
SLU 51	8.16	822.06	-42523	-35410	-608	3.98	3.98	-31775	10833	12073	40441	33370	10149	43519	No	71.52	Si
SLU 43	6.36	-263.56	-45602	-37974	-617	3.98	3.98	-34076	10833	12073	40441	33370	10149	43519	No	70.5	Si
SLU 43	8.16	840.24	-40737	-33922	-617	3.98	3.98	-30440	10833	12073	40441	33370	10149	43519	No	70.5	Si
SLU 44	6.36	-260.11	-45684	-38042	-623	3.98	3.98	-34137	10833	12073	40441	33370	10149	43519	No	69.81	Si
SLU 44	8.16	854.76	-40818	-33990	-623	3.98	3.98	-30501	10833	12073	40441	33370	10149	43519	No	69.81	Si
SLU 49	6.36	-244.92	-48210	-40145	-592	3.98	3.98	-36024	10833	12073	40441	33370	10149	43519	No	73.52	Si
SLU 49	8.16	813.31	-43344	-36093	-592	3.98	3.98	-32388	10833	12073	40441	33370	10149	43519	No	73.52	Si
SLU 47	6.36	-262.33	-46553	-38765	-617	3.98	3.98	-34786	10833	12073	40441	33370	10149	43519	No	70.51	Si
SLU 47	8.16	841.32	-41687	-34713	-617	3.98	3.98	-31150	10833	12073	40441	33370	10149	43519	No	70.51	Si
SLU 46	6.36	-242.7	-47341	-39422	-598	3.98	3.98	-35375	10833	12073	40441	33370	10149	43519	No	72.75	Si
SLU 46	8.16	826.76	-42476	-35370	-598	3.98	3.98	-31739	10833	12073	40441	33370	10149	43519	No	72.75	Si
SLU 48	6.36	-246.99	-48161	-40104	-588	3.98	3.98	-35987	10833	12073	40441	33370	10149	43519	No	73.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	8.16	804.59	-43295	-36053	-588	3.98	3.98	-32352	10833	12073	40441	33370	10149	43519	No	73.98	Si
SLU 45	6.36	-244.77	-47292	-39381	-595	3.98	3.98	-35338	10833	12073	40441	33370	10149	43519	No	73.2	Si
SLU 45	8.16	818.04	-42427	-35329	-595	3.98	3.98	-31703	10833	12073	40441	33370	10149	43519	No	73.2	Si
SLU 65	6.36	-197.61	-51818	-43150	-589	3.98	3.98	-38720	10833	12073	40441	33370	10149	43519	No	73.85	Si
SLU 65	8.16	856.18	-46899	-39053	-589	3.98	3.98	-35044	10833	12073	40441	33370	10149	43519	No	73.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	6.36	-9457.16	-38072	-31703	-10727	3.98	3.98	-28448	16106	17949	40441	50055	10149	58390		5.44	Si
SLD 3	8.16	9737.63	-34363	-28615	-10433	3.98	3.98	-25677	15552	17331	40441	50055	10149	57772		5.54	Si
SLV 13	6.36	19758.79	-44778	-37287	21372	3.98	3.98	-33459	16250	18109	40441	50055	10149	58550		2.74	Si
SLV 13	8.16	-18459.92	-40856	-34021	20685	3.98	3.98	-30529	16250	18109	40441	50055	10149	58550		2.83	Si
SLV 15	6.36	19423.57	-41514	-34569	21412	3.98	3.98	-31020	16250	18109	40441	50055	10149	58550		2.73	Si
SLV 15	8.16	-18990.18	-37616	-31324	20781	3.98	3.98	-28108	16038	17873	40441	50055	10149	58314		2.81	Si
SLV 3	6.36	-21945.95	-35367	-29450	-24527	3.98	3.98	-26427	15702	17498	40441	50055	10149	57939		2.36	Si
SLV 3	8.16	21941.47	-31744	-26433	-23840	3.98	3.8964	-23720	15161	16540	40441	50055	10149	56981		2.39	Si
SLV 4	6.36	-20007.86	-35487	-29551	-22225	3.98	3.98	-26517	15720	17518	40441	50055	10149	57959		2.61	Si
SLV 4	8.16	19735.73	-31864	-26534	-21538	3.98	3.98	-23810	15179	16915	40441	50055	10149	57356		2.66	Si
SLV 16	6.36	21361.66	-41634	-34670	23714	3.98	3.98	-31111	16250	18109	40441	50055	10149	58550		2.47	Si
SLV 16	8.16	-21195.92	-37737	-31424	23083	3.98	3.98	-28198	16056	17893	40441	50055	10149	58334		2.53	Si
SLV 14	6.36	21696.88	-44898	-37387	23674	3.98	3.98	-33549	16250	18109	40441	50055	10149	58550		2.47	Si
SLV 14	8.16	-20665.66	-40977	-34122	22987	3.98	3.98	-30619	16250	18109	40441	50055	10149	58550		2.55	Si
SLV 2	6.36	-19672.64	-38751	-32269	-22265	3.98	3.98	-28956	16208	18062	40441	50055	10149	58503		2.63	Si
SLV 2	8.16	20265.99	-35104	-29231	-21635	3.98	3.98	-26231	15663	17455	40441	50055	10149	57896		2.68	Si
SLV 1	6.36	-21610.73	-38631	-32168	-24567	3.98	3.98	-28866	16190	18042	40441	50055	10149	58483		2.38	Si
SLV 1	8.16	22471.73	-34983	-29131	-23937	3.98	3.98	-26141	15645	17435	40441	50055	10149	57876		2.42	Si
SLD 1	6.36	-9309.63	-39507	-32898	-10745	3.98	3.98	-29521	16250	18109	40441	50055	10149	58550		5.45	Si
SLD 1	8.16	9972.1	-35789	-29802	-10476	3.98	3.98	-26742	15765	17569	40441	50055	10149	58010		5.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	28708	-31993	413.93	3636.99	8.79	Si
SLV 8	179667	0.39	28778	-32070	413.93	3643.77	8.8	Si
SLV 3	179667	0.39	29995	-33427	413.93	3760.59	9.09	Si
SLV 4	179667	0.39	30103	-33547	413.93	3770.83	9.11	Si
SLV 11	179667	0.39	30494	-33983	413.93	3807.58	9.2	Si
SLV 12	179667	0.39	30564	-34060	413.93	3814.11	9.21	Si
SLV 1	179667	0.39	32901	-36664	413.93	4027.18	9.73	Si
SLV 2	179667	0.39	33009	-36785	413.93	4036.77	9.75	Si
SLV 15	179667	0.39	35948	-40060	413.93	4288.26	10.36	Si
SLV 16	179667	0.39	36056	-40181	413.93	4297.18	10.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-34637	-45878	1184	0.598	4079.3	0.96	9.05807	12.68333	No
SLV 9	-34565	-45804	1184	0.599	4072	0.96	9.07467	12.68333	No
SLV 6	-33322	-43951	1184	0.618	3945.6	0.958	9.37181	12.68333	No
SLV 5	-33250	-43876	1184	0.619	3938.3	0.958	9.38966	12.68333	No
SLV 12	-25856	-35228	-1191	0.765	3187	0.95	11.7019	12.68333	No
SLV 11	-25784	-35153	-1191	0.767	3179.7	0.95	11.73042	12.68333	No
SLV 8	-24541	-33301	-1191	0.799	3053.5	0.948	12.24635	12.68333	No
SLV 7	-24469	-33226	-1191	0.801	3046.2	0.948	12.27771	12.68333	No
SLV 14	-33118	-44421	352	0.644	3924.9	0.958	9.76673	5.63352	Si
SLV 13	-33006	-44304	352	0.646	3913.5	0.958	9.79587	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	71.669	SLU 44	Si
V_SLU	69.806	SLU 44	Si
PF_SLV	2.473	SLV 3	Si
V_SLV	2.362	SLV 3	Si
PFFP_SLV	8.787	SLV 7	Si
R_SLV	0.714	SLV 10	No

Maschio 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L5	L6	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	6.36	-2929.16	-21639	-0.0000922	0.0003743	0.0035	1.965	13047.85	16222.73	16222.73	5.54	No	Si
SLU 76	8.16	557.97	-21152	-0.0000674	0.0003743	0.0035	1.965	12934.93	15359.28	15359.28	27.53	No	Si
SLU 81	6.36	-2987.76	-22042	-0.0000942	0.0003743	0.0035	1.965	13134.94	16412.89	16412.89	5.49	No	Si
SLU 81	8.16	508.49	-21643	-0.0000686	0.0003743	0.0035	1.965	13048.74	15549.21	15549.21	30.58	No	Si
SLU 75	6.36	-2963.4	-21917	-0.0000935	0.0003743	0.0035	1.965	13108.6	16353.77	16353.77	5.52	No	Si
SLU 75	8.16	550.54	-21475	-0.0000684	0.0003743	0.0035	1.965	13010.8	15484.37	15484.37	28.13	No	Si
SLU 84	6.36	-3018.11	-22461	-0.000096	0.0003743	0.0035	1.965	13219.65	16613.88	16613.88	5.5	No	Si
SLU 84	8.16	516.73	-22115	-0.0000702	0.0003743	0.0035	1.965	13150.16	15730.78	15730.78	30.44	No	Si
SLU 78	6.36	-2990.49	-22297	-0.0000951	0.0003743	0.0035	1.965	13187.27	16534.97	16534.97	5.53	No	Si
SLU 78	8.16	548.84	-21905	-0.0000698	0.0003743	0.0035	1.965	13105.93	15649.64	15649.64	28.51	No	Si
SLU 74	6.36	-2960.14	-21878	-0.0000933	0.0003743	0.0035	1.965	13100.15	16335.11	16335.11	5.52	No	Si
SLU 74	8.16	540.59	-21433	-0.0000682	0.0003743	0.0035	1.965	13001.04	15467.88	15467.88	28.61	No	Si
SLU 82	6.36	-2991.02	-22081	-0.0000944	0.0003743	0.0035	1.965	13143.17	16431.66	16431.66	5.49	No	Si
SLU 82	8.16	518.43	-21685	-0.0000688	0.0003743	0.0035	1.965	13058.2	15565.48	15565.48	30.02	No	Si
SLU 73	6.36	-2902.07	-21259	-0.0000906	0.0003743	0.0035	1.965	12960.41	16045.62	16045.62	5.53	No	Si
SLU 73	8.16	559.67	-20723	-0.000066	0.0003743	0.0035	1.965	12828.47	15194.44	15194.44	27.15	No	Si
SLU 77	6.36	-2987.23	-22258	-0.000095	0.0003743	0.0035	1.965	13179.34	16516.06	16516.06	5.53	No	Si
SLU 77	8.16	538.89	-21862	-0.0000696	0.0003743	0.0035	1.965	13096.81	15633.29	15633.29	29.01	No	Si
SLU 83	6.36	-3014.85	-22421	-0.0000958	0.0003743	0.0035	1.965	13211.95	16594.86	16594.86	5.5	No	Si
SLU 83	8.16	506.79	-22072	-0.00007	0.0003743	0.0035	1.965	13141.35	15714.36	15714.36	31.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	6.36	-6724.07	-16269	-0.0001077	0.0005615	0.0035	1.965		14718.49	14718.49	2.19		Si
SLV 2	8.16	7056.68	-7121	-0.0054828	0.0005615	0.0035	1.965		6735.91	6735.91	0.95		No
SLV 4	6.36	-6568.06	-13335	-0.0001024	0.0005615	0.0035	1.965		12565.69	12565.69	1.91		Si
SLV 4	8.16	6256.6	-3875	-0.0188404	0.0005615	0.0035	1.965		3860.75	3860.75	0.62		No
SLD 2	6.36	-4060.81	-15485	-0.0000789	0.0005615	0.0035	1.965		14148.49	14148.49	3.48		Si
SLD 2	8.16	3286	-11207	-0.000059	0.0005615	0.0035	1.965		9934.58	9934.58	3.02		Si
SLV 7	6.36	-3436.03	-10025	-0.0000569	0.0005615	0.0035	1.965		9992.26	9992.26	2.91		Si
SLV 7	8.16	1313.46	-5731	-0.0000264	0.0005615	0.0035	1.965		5525.81	5525.81	4.21		Si
SLD 1	6.36	-4288.19	-15545	-0.0000811	0.0005615	0.0035	1.965		14191.79	14191.79	3.31		Si
SLD 1	8.16	3577.93	-10782	-0.0000603	0.0005615	0.0035	1.965		9630.85	9630.85	2.69		Si
SLV 3	6.36	-7097.6	-13474	-0.000112	0.0005615	0.0035	1.965		12671.67	12671.67	1.79		Si
SLV 3	8.16	6936.51	-2887	-0.029803	0.0005615	0.0035	1.965		2950.61	2950.61	0.43		No
SLV 16	6.36	3104.54	-13333	-0.0000638	0.0005615	0.0035	1.965		11476.49	11476.49	3.7		Si
SLV 16	8.16	-6796.94	-22318	-0.0001262	0.0005615	0.0035	1.965		18670.4	18670.4	2.75		Si
SLV 15	6.36	2574.99	-13473	-0.0000596	0.0005615	0.0035	1.965		11578.61	11578.61	4.5		Si
SLV 15	8.16	-6117.03	-21329	-0.0001165	0.0005615	0.0035	1.965		18070.55	18070.55	2.95		Si
SLV 1	6.36	-7253.62	-16408	-0.0001154	0.0005615	0.0035	1.965		14817.62	14817.62	2.04		Si
SLV 1	8.16	7736.58	-6133	-0.015326	0.0005615	0.0035	1.965		5879.34	5879.34	0.76		No
SLD 3	6.36	-4219.39	-14255	-0.0000765	0.0005615	0.0035	1.965		13265.51	13265.51	3.14		Si
SLD 3	8.16	3228.99	-9361	-0.0000532	0.0005615	0.0035	1.965		8608.52	8608.52	2.67		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	6.36	-2516.22	-17737	-14770	-1044	1.965	1.965	-26845	10524	5790	40441	16476	5011	21487	No	20.57	Si
SLU 45	8.16	680.56	-16648	-13863	-1056	1.965	1.965	-25196	10304	5669	40441	16476	5011	21487	No	20.35	Si
SLU 49	6.36	-2546.57	-18157	-15119	-1037	1.965	1.965	-27479	10608	5837	40441	16476	5011	21487	No	20.71	Si
SLU 49	8.16	688.81	-17120	-14256	-1049	1.965	1.965	-25910	10399	5722	40441	16476	5011	21487	No	20.49	Si
SLU 51	6.36	-2510.16	-17853	-14866	-1043	1.965	1.965	-27019	10547	5803	40441	16476	5011	21487	No	20.59	Si
SLU 51	8.16	689.61	-16769	-13963	-1055	1.965	1.965	-25378	10328	5683	40441	16476	5011	21487	No	20.37	Si
SLU 44	6.36	-2458.15	-17119	-14255	-1073	1.965	1.965	-25909	10399	5722	40441	16476	5011	21487	No	20.03	Si
SLU 44	8.16	699.65	-15939	-13272	-1084	1.965	1.965	-24122	10161	5591	40441	16476	5011	21487	No	19.82	Si
SLU 46	6.36	-2519.48	-17777	-14803	-1050	1.965	1.965	-26904	10532	5795	40441	16476	5011	21487	No	20.46	Si
SLU 46	8.16	690.51	-16691	-13899	-1061	1.965	1.965	-25261	10313	5674	40441	16476	5011	21487	No	20.24	Si
SLU 48	6.36	-2543.31	-18117	-15087	-1032	1.965	1.965	-27420	10600	5832	40441	16476	5011	21487	No	20.82	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	8.16	678.86	-17077	-14221	-1043	1.965	1.965	-25846	10391	5717	40441	16476	5011	21487	No	20.6	Si
SLU 43	6.36	-2452.71	-17053	-14200	-1063	1.965	1.965	-25809	10386	5714	40441	16476	5011	21487	No	20.21	Si
SLU 43	8.16	683.07	-15868	-13213	-1074	1.965	1.965	-24015	10146	5583	40441	16476	5011	21487	No	20	Si
SLU 50	6.36	-2506.89	-17813	-14833	-1038	1.965	1.965	-26959	10539	5799	40441	16476	5011	21487	No	20.71	Si
SLU 50	8.16	679.67	-16726	-13928	-1049	1.965	1.965	-25314	10320	5678	40441	16476	5011	21487	No	20.48	Si
SLU 47	6.36	-2485.24	-17499	-14572	-1060	1.965	1.965	-26484	10476	5764	40441	16476	5011	21487	No	20.27	Si
SLU 47	8.16	697.95	-16368	-13630	-1071	1.965	1.965	-24772	10247	5638	40441	16476	5011	21487	No	20.06	Si
SLU 65	6.36	-2689.45	-19280	-16055	-984	1.965	1.965	-29179	10833	5961	40441	16476	5011	21487	No	21.83	Si
SLU 65	8.16	640.42	-18411	-15331	-995	1.965	1.965	-27865	10660	5865	40441	16476	5011	21487	No	21.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	6.36	-7097.6	-13474	-11220	-12684	1.965	1.3672	-29764	16250	6221	40441	24714	5011	29724		2.34	Si
SLV 3	8.16	6936.51	-2887	-2404	-12500	1.965	0	0	16250	0	40441	24714	5011	29724		2.38	Si
SLV 1	6.36	-7253.62	-16408	-13663	-12892	1.965	1.6213	-30586	16250	7377	40441	24714	5011	29724		2.31	Si
SLV 1	8.16	7736.58	-6133	-5107	-12691	1.965	0	-241778	16250	0	40441	24714	5011	29724		2.34	Si
SLD 3	6.36	-4219.39	-14255	-11871	-5841	1.965	1.965	-21575	14732	8105	40441	24714	5011	29724		5.09	Si
SLD 3	8.16	3228.99	-9361	-7795	-5766	1.965	1.9127	-14167	13250	7096	40441	24714	5011	29724		5.15	Si
SLV 2	6.36	-6724.07	-16269	-13547	-11616	1.965	1.7076	-28646	16146	7720	40441	24714	5011	29724		2.56	Si
SLV 2	8.16	7056.68	-7121	-5930	-11396	1.965	0	-169578	16250	0	40441	24714	5011	29724		2.61	Si
SLD 1	6.36	-4288.19	-15545	-12945	-5934	1.965	1.965	-23527	15122	8320	40441	24714	5011	29724		5.01	Si
SLD 1	8.16	3577.93	-10782	-8979	-5853	1.965	1.952	-16319	13680	7477	40441	24714	5011	29724		5.08	Si
SLV 14	6.36	2948.52	-16268	-13546	11207	1.965	1.965	-24620	15341	8441	40441	24714	5011	29724		2.65	Si
SLV 14	8.16	-5996.86	-25563	-21287	11007	1.965	1.965	-38689	16250	8941	40441	24714	5011	29724		2.7	Si
SLV 16	6.36	3104.54	-13333	-11103	11415	1.965	1.965	-20179	14453	7952	40441	24714	5011	29724		2.6	Si
SLV 16	8.16	-6796.94	-22318	-18584	11198	1.965	1.965	-33777	16250	8941	40441	24714	5011	29724		2.65	Si
SLV 4	6.36	-6568.06	-13335	-11104	-11408	1.965	1.4699	-27364	15890	6540	40441	24714	5011	29724		2.61	Si
SLV 4	8.16	6256.6	-3875	-3227	-11205	1.965	0	-202853	16250	0	40441	24714	5011	29724		2.65	Si
SLV 15	6.36	2574.99	-13473	-11219	10139	1.965	1.965	-20390	14495	7975	40441	24714	5011	29724		2.93	Si
SLV 15	8.16	-6117.03	-21329	-17761	9903	1.965	1.965	-32281	16250	8941	40441	24714	5011	29724		3	Si
SLV 13	6.36	2418.98	-16407	-13662	9931	1.965	1.965	-24831	15383	8464	40441	24714	5011	29724		2.99	Si
SLV 13	8.16	-5316.95	-24575	-20464	9713	1.965	1.965	-37193	16250	8941	40441	24714	5011	29724		3.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.39	9448	-5199	204.37	682.77	3.34	Si
SLV 4	179667	0.39	10794	-5939	204.37	772.68	3.78	Si
SLV 7	179667	0.39	12690	-6982	204.37	896.29	4.39	Si
SLV 8	179667	0.39	13557	-7459	204.37	951.61	4.66	Si
SLV 1	179667	0.39	14987	-8246	204.37	1041.15	5.09	Si
SLV 2	179667	0.39	16333	-8986	204.37	1123.54	5.5	Si
SLV 11	179667	0.39	20803	-11446	204.37	1384.14	6.77	Si
SLV 12	179667	0.39	21670	-11923	204.37	1432.36	7.01	Si
SLV 5	179667	0.39	31153	-17140	204.37	1910.16	9.35	Si
SLV 6	179667	0.39	32020	-17618	204.37	1949.33	9.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-16842	-17186	778	0.596	1987.7	0.959	9.02298	12.68333	No
SLV 9	-16411	-17172	777	0.609	1943.9	0.958	9.23153	12.68333	No
SLV 6	-13027	-15713	785	0.739	1600	0.951	11.29385	12.68333	No
SLV 5	-12596	-15699	783	0.76	1556.3	0.949	11.63067	12.68333	No
SLV 12	-9709	-10716	-793	0.94	1263.6	0.939	14.54904	12.68333	Si
SLV 11	-9279	-10702	-794	0.975	1220	0.938	15.12057	12.68333	Si
SLV 14	-18915	-16643	221	0.567	2198.6	0.963	8.55458	5.63352	Si
SLV 13	-18247	-16622	219	0.584	2130.6	0.962	8.83159	5.63352	Si
SLV 16	-16775	-14702	-250	0.626	1980.9	0.959	9.48643	5.63352	Si
SLV 8	-5894	-9243	-786	1.391	878.8	0.919	21.99885	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.493	SLU 81	Si
V_SLU	19.822	SLU 44	Si
PF_SLV	0.425	SLV 3	No
V_SLV	2.306	SLV 1	Si
PFFP_SLV	3.341	SLV 3	Si
R_SLV	0.711	SLV 10	No

Maschio 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L5	L6	4.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	5.46	-5714.34	-41747	-0.0000647	0.0004492	0.0035	4.02	58440.73	78335.42	78335.42	13.71	No	Si
SLU 49	7.56	638.69	-35952	-0.0000467	0.0004492	0.0035	4.02	53374	62082.34	62082.34	97.2	No	Si
SLU 44	5.46	-5525.84	-39584	-0.0000613	0.0004492	0.0035	4.02	56664.36	75370.68	75370.68	13.64	No	Si
SLU 44	7.56	746.78	-33777	-0.000044	0.0004492	0.0035	4.02	51217.96	58903.99	58903.99	78.88	No	Si
SLU 50	5.46	-5676.4	-41163	-0.0000638	0.0004492	0.0035	4.02	57974.74	77535.2	77535.2	13.66	No	Si
SLU 50	7.56	707.48	-35330	-0.000046	0.0004492	0.0035	4.02	52771.73	61173.67	61173.67	86.47	No	Si
SLU 46	5.46	-5643.84	-40932	-0.0000634	0.0004492	0.0035	4.02	57787.37	77218.18	77218.18	13.68	No	Si
SLU 46	7.56	639.26	-35149	-0.0000456	0.0004492	0.0035	4.02	52594.05	60908.82	60908.82	95.28	No	Si
SLU 48	5.46	-5720.08	-41716	-0.0000647	0.0004492	0.0035	4.02	58416.53	78293.44	78293.44	13.69	No	Si
SLU 48	7.56	615.79	-35921	-0.0000466	0.0004492	0.0035	4.02	53343.51	62035.92	62035.92	100.74	No	Si
SLU 64	5.46	-5718.38	-43376	-0.000067	0.0004492	0.0035	4.02	59688.65	80533.62	80533.62	14.08	No	Si
SLU 64	7.56	273.75	-38138	-0.0000488	0.0004492	0.0035	4.02	55400.57	65275.22	65275.22	238.45	No	Si
SLU 43	5.46	-5535.41	-39533	-0.0000613	0.0004492	0.0035	4.02	56620.79	75300.72	75300.72	13.6	No	Si
SLU 43	7.56	708.62	-33724	-0.0000438	0.0004492	0.0035	4.02	51163.75	58826.62	58826.62	83.02	No	Si
SLU 47	5.46	-5596.34	-40399	-0.0000626	0.0004492	0.0035	4.02	57349.83	76487.92	76487.92	13.67	No	Si
SLU 47	7.56	746.22	-34580	-0.000045	0.0004492	0.0035	4.02	52030.13	60077.51	60077.51	80.51	No	Si
SLU 51	5.46	-5670.66	-41193	-0.0000638	0.0004492	0.0035	4.02	57999.43	77577.18	77577.18	13.68	No	Si
SLU 51	7.56	730.38	-35362	-0.000046	0.0004492	0.0035	4.02	52802.77	61220.09	61220.09	83.82	No	Si
SLU 45	5.46	-5649.58	-40901	-0.0000634	0.0004492	0.0035	4.02	57762.44	77176.2	77176.2	13.66	No	Si
SLU 45	7.56	616.36	-35117	-0.0000455	0.0004492	0.0035	4.02	52562.81	60862.4	60862.4	98.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	5.46	-8165.8	-27373	-0.0000492	0.0006738	0.0035	4.02		59004.69	59004.69	7.23		Si
SLD 13	7.56	4931.9	-22454	-0.0000368	0.0006738	0.0035	4.02		43402.63	43402.63	8.8		Si
SLV 14	5.46	-12896.9	-19465	-0.000048	0.0006738	0.0035	4.02		45497.73	45497.73	3.53		Si
SLV 14	7.56	10934.07	-12874	-0.0000366	0.0006738	0.0035	4.02		26310.75	26310.75	2.41		Si
SLD 15	5.46	-8568.35	-28709	-0.0000517	0.0006738	0.0035	4.02		61200.47	61200.47	7.14		Si
SLD 15	7.56	4044.24	-23221	-0.0000361	0.0006738	0.0035	4.02		44730.06	44730.06	11.06		Si
SLV 10	5.46	-5444.49	-24591	-0.0000405	0.0006738	0.0035	4.02		54282.51	54282.51	9.97		Si
SLV 10	7.56	6442.08	-21804	-0.0000388	0.0006738	0.0035	4.02		42275.61	42275.61	6.56		Si
SLV 13	5.46	-13235.53	-19231	-0.0000483	0.0006738	0.0035	4.02		45080.01	45080.01	3.41		Si
SLV 13	7.56	11336.58	-12991	-0.0000377	0.0006738	0.0035	4.02		26526.73	26526.73	2.34		Si
SLV 16	5.46	-13839.02	-22573	-0.0000538	0.0006738	0.0035	4.02		50855.69	50855.69	3.67		Si
SLV 16	7.56	8871.51	-14659	-0.0000343	0.0006738	0.0035	4.02		29571.29	29571.29	3.33		Si
SLV 9	5.46	-5662.72	-24440	-0.0000407	0.0006738	0.0035	4.02		54026.07	54026.07	9.54		Si
SLV 9	7.56	6701.47	-21879	-0.0000394	0.0006738	0.0035	4.02		42406.31	42406.31	6.33		Si
SLD 14	5.46	-8020.4	-27473	-0.0000491	0.0006738	0.0035	4.02		59175.55	59175.55	7.38		Si
SLD 14	7.56	4759.08	-22404	-0.0000364	0.0006738	0.0035	4.02		43315.54	43315.54	9.1		Si
SLD 16	5.46	-8422.95	-28810	-0.0000516	0.0006738	0.0035	4.02		61362.83	61362.83	7.29		Si
SLD 16	7.56	3871.41	-23170	-0.0000357	0.0006738	0.0035	4.02		44642.98	44642.98	11.53		Si
SLV 15	5.46	-14177.66	-22338	-0.0000541	0.0006738	0.0035	4.02		50457.76	50457.76	3.56		Si
SLV 15	7.56	9274.02	-14776	-0.0000352	0.0006738	0.0035	4.02		29783.97	29783.97	3.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	5.46	-5649.58	-40901	-29178	-3086	4.02	4.02	-25922	10833	12194	115546	40451	20502	60953	No	19.75	Si
SLU 45	7.56	616.36	-35117	-25052	-3087	4.02	4.02	-22256	10833	12194	115546	40451	20502	60953	No	19.75	Si
SLU 44	5.46	-5525.84	-39584	-28238	-3111	4.02	4.02	-25087	10833	12194	115546	40451	20502	60953	No	19.59	Si
SLU 44	7.56	746.78	-33777	-24095	-3113	4.02	4.02	-21407	10833	12194	115546	40451	20502	60953	No	19.58	Si
SLU 51	5.46	-5670.66	-41193	-29386	-3195	4.02	4.02	-26107	10833	12194	115546	40451	20502	60953	No	19.08	Si
SLU 51	7.56	730.38	-35362	-25227	-3197	4.02	4.02	-22412	10833	12194	115546	40451	20502	60953	No	19.07	Si
SLU 48	5.46	-5720.08	-41716	-29759	-3130	4.02	4.02	-26438	10833	12194	115546	40451	20502	60953	No	19.47	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	7.56	615.79	-35921	-25625	-3131	4.02	4.02	-22766	10833	12194	115546	40451	20502	60953	No	19.46	Si
SLU 49	5.46	-5714.34	-41747	-29781	-3137	4.02	4.02	-26458	10833	12194	115546	40451	20502	60953	No	19.43	Si
SLU 49	7.56	638.69	-35952	-25648	-3138	4.02	4.02	-22786	10833	12194	115546	40451	20502	60953	No	19.42	Si
SLU 72	5.46	-5853.63	-45036	-32128	-2416	4.02	4.02	-28543	10833	12194	115546	40451	20502	60953	No	25.23	Si
SLU 72	7.56	295.51	-39777	-28376	-2417	4.02	4.02	-25209	10833	12194	115546	40451	20502	60953	No	25.22	Si
SLU 46	5.46	-5643.84	-40932	-29200	-3093	4.02	4.02	-25941	10833	12194	115546	40451	20502	60953	No	19.71	Si
SLU 46	7.56	639.26	-35149	-25075	-3094	4.02	4.02	-22277	10833	12194	115546	40451	20502	60953	No	19.7	Si
SLU 43	5.46	-5535.41	-39533	-28202	-3099	4.02	4.02	-25055	10833	12194	115546	40451	20502	60953	No	19.67	Si
SLU 43	7.56	708.62	-33724	-24058	-3101	4.02	4.02	-21373	10833	12194	115546	40451	20502	60953	No	19.66	Si
SLU 47	5.46	-5596.34	-40399	-28820	-3156	4.02	4.02	-25604	10833	12194	115546	40451	20502	60953	No	19.32	Si
SLU 47	7.56	746.22	-34580	-24669	-3157	4.02	4.02	-21916	10833	12194	115546	40451	20502	60953	No	19.31	Si
SLU 50	5.46	-5676.4	-41163	-29365	-3188	4.02	4.02	-26088	10833	12194	115546	40451	20502	60953	No	19.12	Si
SLU 50	7.56	707.48	-35330	-25204	-3190	4.02	4.02	-22392	10833	12194	115546	40451	20502	60953	No	19.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	5.46	-14177.66	-22338	-15935	-15080	4.02	4.02	-14157	15331	17257	115546	60677	20502	81179		5.38	Si
SLV 15	7.56	9274.02	-14776	-10541	-14294	4.02	4.02	-9365	14373	16178	115546	60677	20502	81179		5.68	Si
SLV 16	5.46	-13839.02	-22573	-16103	-15064	4.02	4.02	-14306	15361	17291	115546	60677	20502	81179		5.39	Si
SLV 16	7.56	8871.51	-14659	-10457	-14278	4.02	4.02	-9291	14358	16161	115546	60677	20502	81179		5.69	Si
SLV 1	5.46	5088.64	-44352	-31640	11706	4.02	4.02	-28109	16250	18291	115546	60677	20502	81179		6.93	Si
SLV 1	7.56	-8577.3	-44393	-31669	10918	4.02	4.02	-28135	16250	18291	115546	60677	20502	81179		7.44	Si
SLV 13	5.46	-13235.53	-19231	-13719	-14409	4.02	3.9653	-12188	14938	16585	115546	60677	20502	81179		5.63	Si
SLV 13	7.56	11336.58	-12991	-9268	-13312	4.02	3.4121	-8234	14147	13516	115546	60677	20502	81179		6.1	Si
SLV 2	5.46	5427.28	-44586	-31807	11722	4.02	4.02	-28258	16250	18291	115546	60677	20502	81179		6.93	Si
SLV 2	7.56	-8979.82	-44276	-31586	10934	4.02	4.02	-28061	16250	18291	115546	60677	20502	81179		7.42	Si
SLV 4	5.46	4485.15	-47693	-34023	11051	4.02	4.02	-30227	16250	18291	115546	60677	20502	81179		7.35	Si
SLV 4	7.56	-11042.37	-46061	-32859	9952	4.02	4.02	-29192	16250	18291	115546	60677	20502	81179		8.16	Si
SLV 3	5.46	4146.52	-47459	-33856	11035	4.02	4.02	-30078	16250	18291	115546	60677	20502	81179		7.36	Si
SLV 3	7.56	-10639.86	-46178	-32942	9935	4.02	4.02	-29267	16250	18291	115546	60677	20502	81179		8.17	Si
SLD 15	5.46	-8568.35	-28709	-20480	-7409	4.02	4.02	-18195	16139	18166	115546	60677	20502	81179		10.96	Si
SLD 15	7.56	4044.24	-23221	-16565	-7074	4.02	4.02	-14717	15443	17383	115546	60677	20502	81179		11.48	Si
SLV 14	5.46	-12896.9	-19465	-13886	-14393	4.02	4.02	-12337	14967	16847	115546	60677	20502	81179		5.64	Si
SLV 14	7.56	10934.07	-12874	-9184	-13296	4.02	3.4821	-8159	14132	13779	115546	60677	20502	81179		6.11	Si
SLD 16	5.46	-8422.95	-28810	-20552	-7402	4.02	4.02	-18259	16152	18180	115546	60677	20502	81179		10.97	Si
SLD 16	7.56	3871.41	-23170	-16529	-7067	4.02	4.02	-14685	15437	17376	115546	60677	20502	81179		11.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-13558	0.39	427.81	1773.42	2596.71	2185.06	5.11	Si
SLV 13	-13675	0.39	427.81	1787.64	2614.61	2201.13	5.15	Si
SLV 16	-15490	0.39	427.81	2005.79	2890.79	2448.29	5.72	Si
SLV 15	-15607	0.39	427.81	2019.71	2908.52	2464.12	5.76	Si
SLV 10	-22285	0.39	427.81	2782.85	3915.84	3349.35	7.83	Si
SLV 9	-22360	0.39	427.81	2791.13	3927.15	3359.14	7.85	Si
SLV 12	-28724	0.39	427.81	3461.47	4871.55	4166.51	9.74	Si
SLV 11	-28800	0.39	427.81	3469.08	4882.67	4175.88	9.76	Si
SLV 6	-31678	0.39	427.81	3753.97	5305.63	4529.8	10.59	Si
SLV 5	-31754	0.39	427.81	3761.29	5316.64	4538.97	10.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-30478	-42333	1059	0.676	3662.1	0.955	10.28661	12.68333	No
SLV 8	-30378	-42484	1059	0.678	3651.9	0.955	10.31666	12.68333	No
SLV 5	-27809	-31976	-1048	0.731	3391	0.952	11.1524	12.68333	No
SLV 6	-27709	-32127	-1049	0.733	3380.8	0.952	11.18749	12.68333	No
SLV 11	-25845	-34797	1066	0.776	3191.5	0.949	11.88025	12.68333	No
SLV 12	-25744	-34948	1066	0.779	3181.3	0.949	11.92087	12.68333	No
SLV 9	-23176	-24440	-1041	0.851	2920.7	0.945	13.07493	12.68333	Si
SLV 10	-23076	-24591	-1042	0.854	2910.6	0.945	13.12387	12.68333	Si
SLV 3	-34977	-47459	314	0.621	4119.5	0.96	9.40648	5.63352	Si
SLV 4	-34821	-47693	313	0.624	4103.7	0.96	9.44388	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.603	SLU 43	Si
V_SLU	19.067	SLU 51	Si
PF_SLV	2.34	SLV 13	Si
V_SLV	5.383	SLV 15	Si
PFFP_SLV	5.108	SLV 14	Si
R_SLV	0.811	SLV 7	No

Maschio 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L5	L6	7.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	5.46	9964.81	-97739	-0.0000731	0.0004492	0.0035	7.55	229353.46	295994.06	295994.06	29.7	No	Si
SLU 50	7.96	3543.37	-81933	-0.0000577	0.0004492	0.0035	7.55	211189.96	258391.4	258391.4	72.92	No	Si
SLU 44	5.46	9327.85	-94170	-0.0000701	0.0004492	0.0035	7.55	225890.11	288425.24	288425.24	30.92	No	Si
SLU 44	7.96	3069.36	-78619	-0.000055	0.0004492	0.0035	7.55	206454.19	249298.36	249298.36	81.22	No	Si
SLU 43	5.46	9460.05	-94029	-0.00007	0.0004492	0.0035	7.55	225745.26	288125.43	288125.43	30.46	No	Si
SLU 43	7.96	3201.66	-78546	-0.0000551	0.0004492	0.0035	7.55	206347.47	249100.29	249100.29	77.8	No	Si
SLU 48	5.46	9790.82	-99324	-0.0000742	0.0004492	0.0035	7.55	230771.92	299354.87	299354.87	30.58	No	Si
SLU 48	7.96	3124.79	-83624	-0.0000587	0.0004492	0.0035	7.55	213481.6	263029	263029	84.18	No	Si
SLU 47	5.46	9580.23	-96025	-0.0000716	0.0004492	0.0035	7.55	227736.85	292359.56	292359.56	30.52	No	Si
SLU 47	7.96	3240.22	-80312	-0.0000564	0.0004492	0.0035	7.55	208913.79	253943.91	253943.91	78.37	No	Si
SLU 45	5.46	9538.44	-97469	-0.0000727	0.0004492	0.0035	7.55	229104.07	295420.56	295420.56	30.97	No	Si
SLU 45	7.96	2953.93	-81931	-0.0000574	0.0004492	0.0035	7.55	211185.96	258383.45	258383.45	87.47	No	Si
SLU 59	5.46	10191.16	-107352	-0.0000805	0.0004492	0.0035	7.55	236828.94	316377.95	316377.95	31.04	No	Si
SLU 59	7.96	2960.34	-92594	-0.0000652	0.0004492	0.0035	7.55	224242.22	285082.94	285082.94	96.3	No	Si
SLU 51	5.46	9885.49	-97824	-0.0000731	0.0004492	0.0035	7.55	229431.24	296173.95	296173.95	29.96	No	Si
SLU 51	7.96	3463.99	-81977	-0.0000577	0.0004492	0.0035	7.55	211249.73	258510.24	258510.24	74.63	No	Si
SLU 58	5.46	10270.48	-107267	-0.0000805	0.0004492	0.0035	7.55	236774.78	316198.07	316198.07	30.79	No	Si
SLU 58	7.96	3039.72	-92551	-0.0000652	0.0004492	0.0035	7.55	224195.9	284991.07	284991.07	93.76	No	Si
SLU 49	5.46	9711.5	-99409	-0.0000742	0.0004492	0.0035	7.55	230845.77	299534.76	299534.76	30.84	No	Si
SLU 49	7.96	3045.41	-83667	-0.0000587	0.0004492	0.0035	7.55	213539.22	263147.84	263147.84	86.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.46	-57081.51	-75819	-0.0000819	0.0006738	0.0035	7.55		282032.22	282032.22	4.94		Si
SLV 14	7.96	18826.17	-58000	-0.0000484	0.0006738	0.0035	7.55		201681.83	201681.83	10.71		Si
SLV 1	5.46	63848.1	-89021	-0.0000953	0.0006738	0.0035	7.55		287645.54	287645.54	4.51		Si
SLV 1	7.96	-23011.21	-82186	-0.0000675	0.0006738	0.0035	7.55		300090.61	300090.61	13.04		Si
SLV 16	5.46	-49810.36	-72962	-0.0000758	0.0006738	0.0035	7.55		273876.29	273876.29	5.5		Si
SLV 16	7.96	27255.8	-57135	-0.0000523	0.0006738	0.0035	7.55		199284.85	199284.85	7.31		Si
SLV 3	5.46	71119.24	-86164	-0.0000973	0.0006738	0.0035	7.55		279728.25	279728.25	3.93		Si
SLV 3	7.96	-14581.58	-81321	-0.0000622	0.0006738	0.0035	7.55		297739.78	297739.78	20.42		Si
SLV 2	5.46	64320.47	-88825	-0.0000954	0.0006738	0.0035	7.55		287105.05	287105.05	4.46		Si
SLV 2	7.96	-23255.44	-82415	-0.0000678	0.0006738	0.0035	7.55		300708.58	300708.58	12.93		Si
SLV 15	5.46	-50282.74	-73157	-0.0000762	0.0006738	0.0035	7.55		274433.07	274433.07	5.46		Si
SLV 15	7.96	27500.03	-56906	-0.0000523	0.0006738	0.0035	7.55		198649.02	198649.02	7.22		Si
SLV 13	5.46	-57553.88	-76014	-0.0000823	0.0006738	0.0035	7.55		282589	282589	4.91		Si
SLV 13	7.96	19070.4	-57771	-0.0000483	0.0006738	0.0035	7.55		201045.99	201045.99	10.54		Si
SLV 4	5.46	71591.61	-85969	-0.0000974	0.0006738	0.0035	7.55		279187.76	279187.76	3.9		Si
SLV 4	7.96	-14825.81	-81550	-0.0000625	0.0006738	0.0035	7.55		298378.95	298378.95	20.13		Si
SLV 7	5.46	37195.53	-78243	-0.0000726	0.0006738	0.0035	7.55		257779.52	257779.52	6.93		Si
SLV 7	7.96	9938.13	-71807	-0.000053	0.0006738	0.0035	7.55		239943.82	239943.82	24.14		Si
SLV 8	5.46	37499.94	-78118	-0.0000726	0.0006738	0.0035	7.55		257431.21	257431.21	6.86		Si
SLV 8	7.96	9780.74	-71955	-0.0000531	0.0006738	0.0035	7.55		240353.57	240353.57	24.57		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	5.46	8699.18	-104979	-74890	-2704	7.55	7.55	-35426	10833	22902	115546	75972	38505	114477	No	42.34	Si
SLU 65	7.96	2711.51	-89915	-64143	819	7.55	7.55	-30342	10833	22902	115546	75972	38505	114477	No	139.82	Si
SLU 66	5.46	8909.76	-108278	-77243	-2714	7.55	7.55	-36539	10833	22902	115546	75972	38505	114477	No	42.19	Si
SLU 66	7.96	2596.08	-93227	-66506	892	7.55	7.55	-31460	10833	22902	115546	75972	38505	114477	No	128.31	Si
SLU 51	5.46	9885.49	-97824	-69785	-2504	7.55	7.55	-33011	10833	22902	115546	75972	38505	114477	No	45.72	Si
SLU 51	7.96	3463.99	-81977	-58480	772	7.55	7.55	-27663	10833	22902	115546	75972	38505	114477	No	148.23	Si
SLU 70	5.46	9082.83	-110218	-78627	-2809	7.55	7.55	-37193	10833	22902	115546	75972	38505	114477	No	40.75	Si
SLU 70	7.96	2687.56	-94964	-67745	852	7.55	7.55	-32046	10833	22902	115546	75972	38505	114477	No	134.38	Si
SLU 67	5.46	8830.44	-108363	-77303	-2739	7.55	7.55	-36567	10833	22902	115546	75972	38505	114477	No	41.8	Si
SLU 67	7.96	2516.7	-93270	-66537	870	7.55	7.55	-31474	10833	22902	115546	75972	38505	114477	No	131.53	Si
SLU 64	5.46	8831.37	-104838	-74789	-2662	7.55	7.55	-35378	10833	22902	115546	75972	38505	114477	No	43	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	7.96	2843.81	-89843	-64092	855	7.55	7.55	-30318	10833	22902	115546	75972	38505	114477	No	133.88	Si
SLU 68	5.46	8951.56	-106835	-76213	-2775	7.55	7.55	-36052	10833	22902	115546	75972	38505	114477	No	41.26	Si
SLU 68	7.96	2882.37	-91609	-65351	800	7.55	7.55	-30914	10833	22902	115546	75972	38505	114477	No	143.05	Si
SLU 72	5.46	9256.82	-108633	-77496	-2829	7.55	7.55	-36659	10833	22902	115546	75972	38505	114477	No	40.47	Si
SLU 72	7.96	3106.14	-93273	-66539	796	7.55	7.55	-31475	10833	22902	115546	75972	38505	114477	No	143.75	Si
SLU 71	5.46	9336.14	-108548	-77436	-2804	7.55	7.55	-36630	10833	22902	115546	75972	38505	114477	No	40.83	Si
SLU 71	7.96	3185.52	-93230	-66508	818	7.55	7.55	-31461	10833	22902	115546	75972	38505	114477	No	139.92	Si
SLU 69	5.46	9162.14	-110133	-78566	-2784	7.55	7.55	-37165	10833	22902	115546	75972	38505	114477	No	41.11	Si
SLU 69	7.96	2766.94	-94921	-67714	874	7.55	7.55	-32031	10833	22902	115546	75972	38505	114477	No	131.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	5.46	-20631.45	-78878	-56270	-22154	7.55	7.55	-26618	16250	34352	115546	113958	38505	149898		6.77	Si
SLD 13	7.96	9312.32	-64585	-46073	-17446	7.55	7.55	-21794	16250	34352	115546	113958	38505	149898		8.59	Si
SLV 2	5.46	64320.47	-88825	-63366	45682	7.55	7.55	-29974	16250	34352	115546	113958	38505	149898		3.28	Si
SLV 2	7.96	-23255.44	-82415	-58793	42946	7.55	7.55	-27811	16250	34352	115546	113958	38505	149898		3.49	Si
SLV 16	5.46	-49810.36	-72962	-52049	-48488	7.55	7.55	-24621	16250	34352	115546	113958	38505	149898		3.09	Si
SLV 16	7.96	27255.8	-57135	-40759	-40346	7.55	7.55	-19281	16250	34352	115546	113958	38505	149898		3.72	Si
SLD 15	5.46	-17421.39	-77628	-55378	-22019	7.55	7.55	-26196	16250	34352	115546	113958	38505	149898		6.81	Si
SLD 15	7.96	13013.32	-64208	-45804	-16976	7.55	7.55	-21667	16250	34352	115546	113958	38505	149898		8.83	Si
SLV 15	5.46	-50282.74	-73157	-52188	-49184	7.55	7.55	-24687	16250	34352	115546	113958	38505	149898		3.05	Si
SLV 15	7.96	27500.03	-56906	-40595	-41017	7.55	7.55	-19203	16250	34352	115546	113958	38505	149898		3.65	Si
SLV 1	5.46	63848.1	-89021	-63505	44986	7.55	7.55	-30040	16250	34352	115546	113958	38505	149898		3.33	Si
SLV 1	7.96	-23011.21	-82186	-58629	42276	7.55	7.55	-27734	16250	34352	115546	113958	38505	149898		3.55	Si
SLV 13	5.46	-57553.88	-76014	-54226	-49478	7.55	7.55	-25651	16250	34352	115546	113958	38505	149898		3.03	Si
SLV 13	7.96	19070.4	-57771	-41212	-42097	7.55	7.55	-19495	16250	34352	115546	113958	38505	149898		3.56	Si
SLV 14	5.46	-57081.51	-75819	-54087	-48783	7.55	7.55	-25585	16250	34352	115546	113958	38505	149898		3.07	Si
SLV 14	7.96	18826.17	-58000	-41376	-41426	7.55	7.55	-19572	16250	34352	115546	113958	38505	149898		3.62	Si
SLV 3	5.46	71119.24	-86164	-61467	45281	7.55	7.55	-29076	16250	34352	115546	113958	38505	149898		3.31	Si
SLV 3	7.96	-14581.58	-81321	-58012	43355	7.55	7.55	-27442	16250	34352	115546	113958	38505	149898		3.46	Si
SLV 4	5.46	71591.61	-85969	-61328	45976	7.55	7.55	-29010	16250	34352	115546	113958	38505	149898		3.26	Si
SLV 4	7.96	-14825.81	-81550	-58176	44026	7.55	7.55	-27519	16250	34352	115546	113958	38505	149898		3.4	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-64977	0.39	803.48	7571.24	10747.71	9159.48	11.4	Si
SLV 16	-65063	0.39	803.48	7579.26	10760.34	9169.8	11.41	Si
SLV 13	-66462	0.39	803.48	7708.58	10965	9336.79	11.62	Si
SLV 14	-66548	0.39	803.48	7716.51	10977.63	9347.07	11.63	Si
SLV 11	-69649	0.39	803.48	7998.02	11427.4	9712.71	12.09	Si
SLV 12	-69704	0.39	803.48	8003	11435.39	9719.2	12.1	Si
SLV 9	-74597	0.39	803.48	8432.9	12139.33	10286.12	12.8	Si
SLV 10	-74653	0.39	803.48	8437.68	12147.33	10292.51	12.81	Si
SLV 7	-75124	0.39	803.48	8478.18	12215.18	10346.68	12.88	Si
SLV 8	-75180	0.39	803.48	8482.94	12223.18	10353.06	12.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-68012	-78118	1123	0.596	7973	0.961	9.01459	12.68333	No
SLV 7	-67866	-78243	1124	0.597	7958.1	0.961	9.03147	12.68333	No
SLV 6	-64792	-87641	-1187	0.62	7645.5	0.959	9.39471	12.68333	No
SLV 5	-64646	-87767	-1186	0.621	7630.7	0.959	9.41361	12.68333	No
SLV 12	-64233	-74216	1189	0.625	7588.7	0.959	9.46636	12.68333	No
SLV 11	-64087	-74341	1190	0.626	7573.9	0.959	9.48513	12.68333	No
SLV 10	-61014	-83739	-1121	0.653	7261.3	0.957	9.92019	12.68333	No
SLV 9	-60868	-83864	-1120	0.655	7246.5	0.957	9.94135	12.68333	No
SLV 4	-71334	-85969	237	0.584	8310.9	0.962	8.81487	5.63352	Si
SLV 3	-71107	-86164	238	0.585	8287.8	0.962	8.83935	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	29.704	SLU 50	Si
V_SLU	40.469	SLU 72	Si
PF_SLV	3.9	SLV 4	Si
V_SLV	3.03	SLV 13	Si
PFFP_SLV	11.4	SLV 15	Si
R_SLV	0.711	SLV 8	No

Maschio 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L5	L6	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	5.46	3269.91	-35202	-0.0001296	0.0004492	0.0035	1.9353	15953.27	24824.94	24824.94	7.59	No	Si
SLU 81	7.96	1916.48	-28327	-0.0000945	0.0004492	0.0035	1.9353	15683.77	21237.42	21237.42	11.08	No	Si
SLU 73	5.46	3171.66	-33881	-0.0001243	0.0004492	0.0035	1.9353	16008.69	24213.21	24213.21	7.63	No	Si
SLU 73	7.96	1803.67	-27094	-0.0000897	0.0004492	0.0035	1.9353	15489.27	20576.59	20576.59	11.41	No	Si
SLU 78	5.46	3253.94	-35289	-0.0001298	0.0004492	0.0035	1.9353	15947.83	24857.14	24857.14	7.64	No	Si
SLU 78	7.96	1895.73	-28354	-0.0000944	0.0004492	0.0035	1.9353	15687.44	21251.55	21251.55	11.21	No	Si
SLU 82	5.46	3279.4	-35241	-0.0001299	0.0004492	0.0035	1.9353	15950.83	24839.55	24839.55	7.57	No	Si
SLU 82	7.96	1917.19	-28360	-0.0000946	0.0004492	0.0035	1.9353	15688.35	21255.06	21255.06	11.09	No	Si
SLU 75	5.46	3223.73	-34794	-0.0001278	0.0004492	0.0035	1.9353	15975.84	24674.14	24674.14	7.65	No	Si
SLU 75	7.96	1858.65	-27917	-0.0000927	0.0004492	0.0035	1.9353	15623.94	21017.36	21017.36	11.31	No	Si
SLU 83	5.46	3300.12	-35697	-0.0001316	0.0004492	0.0035	1.9353	15919.36	25007.94	25007.94	7.58	No	Si
SLU 83	7.96	1953.56	-28764	-0.0000962	0.0004492	0.0035	1.9353	15742.03	21471.61	21471.61	10.99	No	Si
SLU 80	5.46	3225.75	-34845	-0.000128	0.0004492	0.0035	1.9353	15973.27	24693.06	24693.06	7.65	No	Si
SLU 80	7.96	1877.35	-27946	-0.000093	0.0004492	0.0035	1.9353	15628.41	21033.22	21033.22	11.2	No	Si
SLU 76	5.46	3201.87	-34376	-0.0001262	0.0004492	0.0035	1.9353	15993.89	24478.48	24478.48	7.65	No	Si
SLU 76	7.96	1840.74	-27531	-0.0000914	0.0004492	0.0035	1.9353	15563.29	20810.78	20810.78	11.31	No	Si
SLU 84	5.46	3309.6	-35737	-0.0001318	0.0004492	0.0035	1.9353	15916.34	25022.55	25022.55	7.56	No	Si
SLU 84	7.96	1954.26	-28797	-0.0000963	0.0004492	0.0035	1.9353	15746.19	21489.25	21489.25	11	No	Si
SLU 77	5.46	3244.45	-35249	-0.0001295	0.0004492	0.0035	1.9353	15950.33	24842.53	24842.53	7.66	No	Si
SLU 77	7.96	1895.02	-28321	-0.0000943	0.0004492	0.0035	1.9353	15682.85	21233.92	21233.92	11.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	5.46	6685.35	-25332	-0.0001243	0.0006738	0.0035	1.9353		20673.75	20673.75	3.09		Si
SLD 3	7.96	-1396.74	-18441	-0.0000593	0.0006738	0.0035	1.9353		17673.47	17673.47	12.65		Si
SLV 14	5.46	-8370.58	-19784	-0.0001263	0.0006738	0.0035	1.9353		18664.54	18664.54	2.23		Si
SLV 14	7.96	7412.67	-19218	-0.000114	0.0006738	0.0035	1.9353		16383.27	16383.27	2.21		Si
SLV 16	5.46	-8660.45	-17881	-0.0001288	0.0006738	0.0035	1.9353		17259.85	17259.85	1.99		Si
SLV 16	7.96	7204.6	-17639	-0.0001085	0.0006738	0.0035	1.9353		15274.48	15274.48	2.12		Si
SLD 4	5.46	6748.24	-25406	-0.0001251	0.0006738	0.0035	1.9353		20725.87	20725.87	3.07		Si
SLD 4	7.96	-1431.09	-18480	-0.0000597	0.0006738	0.0035	1.9353		17702.34	17702.34	12.37		Si
SLV 3	5.46	12728.93	-27571	-0.000198	0.0006738	0.0035	1.9353		22245.15	22245.15	1.75		Si
SLV 3	7.96	-4930.19	-18142	-0.0000882	0.0006738	0.0035	1.9353		17452.7	17452.7	3.54		Si
SLV 4	5.46	12875.38	-27744	-0.0002005	0.0006738	0.0035	1.9353		22366.52	22366.52	1.74		Si
SLV 4	7.96	-5010.19	-18233	-0.0000891	0.0006738	0.0035	1.9353		17519.93	17519.93	3.5		Si
SLV 2	5.46	13165.24	-29647	-0.0002069	0.0006738	0.0035	1.9353		23680.66	23680.66	1.8		Si
SLV 2	7.96	-4802.12	-19813	-0.0000919	0.0006738	0.0035	1.9353		18685.67	18685.67	3.89		Si
SLV 13	5.46	-8517.04	-19611	-0.000128	0.0006738	0.0035	1.9353		18536.94	18536.94	2.18		Si
SLV 13	7.96	7492.66	-19127	-0.0001147	0.0006738	0.0035	1.9353		16319.32	16319.32	2.18		Si
SLV 1	5.46	13018.79	-29475	-0.0002045	0.0006738	0.0035	1.9353		23581.22	23581.22	1.81		Si
SLV 1	7.96	-4722.13	-19722	-0.0000909	0.0006738	0.0035	1.9353		18618.44	18618.44	3.94		Si
SLV 15	5.46	-8806.9	-17708	-0.0001313	0.0006738	0.0035	1.9353		17132.24	17132.24	1.95		Si
SLV 15	7.96	7284.59	-17547	-0.0001093	0.0006738	0.0035	1.9353		15210.53	15210.53	2.09		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	5.46	3253.94	-35289	-25174	2233	1.9353	1.9353	-46457	10833	5870	115546	19474	9870	29344	No	13.14	Si
SLU 78	7.96	1895.73	-28354	-20227	-412	1.9353	1.9353	-37327	10833	5870	115546	19474	9870	29344	No	71.15	Si
SLU 74	5.46	3214.24	-34754	-24793	2201	1.9353	1.9353	-45753	10833	5870	115546	19474	9870	29344	No	13.33	Si
SLU 74	7.96	1857.95	-27884	-19892	-390	1.9353	1.9353	-36708	10833	5870	115546	19474	9870	29344	No	75.23	Si
SLU 82	5.46	3279.4	-35241	-25140	2202	1.9353	1.9353	-46394	10833	5870	115546	19474	9870	29344	No	13.33	Si
SLU 82	7.96	1917.19	-28360	-20232	-347	1.9353	1.9353	-37335	10833	5870	115546	19474	9870	29344	No	84.68	Si
SLU 81	5.46	3269.91	-35202	-25112	2196	1.9353	1.9353	-46342	10833	5870	115546	19474	9870	29344	No	13.37	Si
SLU 81	7.96	1916.48	-28327	-20208	-349	1.9353	1.9353	-37292	10833	5870	115546	19474	9870	29344	No	83.99	Si
SLU 75	5.46	3223.73	-34794	-24821	2208	1.9353	1.9353	-45805	10833	5870	115546	19474	9870	29344	No	13.29	Si
SLU 75	7.96	1858.65	-27917	-19915	-387	1.9353	1.9353	-36751	10833	5870	115546	19474	9870	29344	No	75.77	Si
SLU 77	5.46	3244.45	-35249	-25146	2226	1.9353	1.9353	-46405	10833	5870	115546	19474	9870	29344	No	13.18	Si
SLU 77	7.96	1895.02	-28321	-20203	-415	1.9353	1.9353	-37283	10833	5870	115546	19474	9870	29344	No	70.67	Si
SLU 83	5.46	3300.12	-35697	-25465	2220	1.9353	1.9353	-46994	10833	5870	115546	19474	9870	29344	No	13.22	Si
SLU 83	7.96	1953.56	-28764	-20520	-375	1.9353	1.9353	-37867	10833	5870	115546	19474	9870	29344	No	78.35	Si
SLU 79	5.46	3216.26	-34806	-24829	2206	1.9353	1.9353	-45820	10833	5870	115546	19474	9870	29344	No	13.3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	7.96	1876.64	-27913	-19913	-415	1.9353	1.9353	-36747	10833	5870	115546	19474	9870	29344	No	70.63	Si
SLU 84	5.46	3309.6	-35737	-25494	2227	1.9353	1.9353	-47046	10833	5870	115546	19474	9870	29344	No	13.18	Si
SLU 84	7.96	1954.26	-28797	-20543	-372	1.9353	1.9353	-37911	10833	5870	115546	19474	9870	29344	No	78.94	Si
SLU 80	5.46	3225.75	-34845	-24858	2213	1.9353	1.9353	-45872	10833	5870	115546	19474	9870	29344	No	13.26	Si
SLU 80	7.96	1877.35	-27946	-19936	-413	1.9353	1.9353	-36790	10833	5870	115546	19474	9870	29344	No	71.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	5.46	13165.24	-29647	-21150	11019	1.9353	1.5708	-39030	16250	7147	115546	29211	9870	39081		3.55	Si
SLV 2	7.96	-4802.12	-19813	-14134	5403	1.9353	1.9353	-26083	16250	8806	115546	29211	9870	39081		7.23	Si
SLV 15	5.46	-8806.9	-17708	-12632	-7948	1.9353	1.4109	-32463	16250	6420	115546	29211	9870	39081		4.92	Si
SLV 15	7.96	7284.59	-17547	-12518	-6076	1.9353	1.6575	-23101	16250	7542	115546	29211	9870	39081		6.43	Si
SLD 1	5.46	6814.58	-26165	-18666	5535	1.9353	1.9353	-34446	16250	8806	115546	29211	9870	39081		7.06	Si
SLD 1	7.96	-1306.03	-19136	-13651	2080	1.9353	1.9353	-25192	16250	8806	115546	29211	9870	39081		18.79	Si
SLV 1	5.46	13018.79	-29475	-21026	10891	1.9353	1.5779	-38802	16250	7179	115546	29211	9870	39081		3.59	Si
SLV 1	7.96	-4722.13	-19722	-14069	5315	1.9353	1.9353	-25963	16250	8806	115546	29211	9870	39081		7.35	Si
SLV 14	5.46	-8370.58	-19784	-14114	-7663	1.9353	1.6337	-31315	16250	7433	115546	29211	9870	39081		5.1	Si
SLV 14	7.96	7412.67	-19218	-13710	-5422	1.9353	1.7458	-25300	16250	7944	115546	29211	9870	39081		7.21	Si
SLV 13	5.46	-8517.04	-19611	-13990	-7792	1.9353	1.6001	-31697	16250	7280	115546	29211	9870	39081		5.02	Si
SLV 13	7.96	7492.66	-19127	-13645	-5510	1.9353	1.7278	-25180	16250	7861	115546	29211	9870	39081		7.09	Si
SLD 2	5.46	6877.46	-26239	-18719	5590	1.9353	1.9353	-34543	16250	8806	115546	29211	9870	39081		6.99	Si
SLD 2	7.96	-1340.37	-19175	-13679	2118	1.9353	1.9353	-25243	16250	8806	115546	29211	9870	39081		18.45	Si
SLV 4	5.46	12875.38	-27744	-19792	10863	1.9353	1.5107	-36524	16250	6874	115546	29211	9870	39081		3.6	Si
SLV 4	7.96	-5010.19	-18233	-13007	4838	1.9353	1.9353	-24003	16250	8806	115546	29211	9870	39081		8.08	Si
SLV 3	5.46	12728.93	-27571	-19668	10734	1.9353	1.5179	-36296	16250	6907	115546	29211	9870	39081		3.64	Si
SLV 3	7.96	-4930.19	-18142	-12942	4749	1.9353	1.9353	-23883	16250	8806	115546	29211	9870	39081		8.23	Si
SLV 16	5.46	-8660.45	-17881	-12756	-7819	1.9353	1.4499	-31892	16250	6597	115546	29211	9870	39081		5	Si
SLV 16	7.96	7204.6	-17639	-12583	-5987	1.9353	1.6776	-23221	16250	7633	115546	29211	9870	39081		6.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-16127	0.39	205.96	1891.15	2688.95	2290.05	11.12	Si
SLV 16	-16300	0.39	205.96	1907.46	2714.32	2310.89	11.22	Si
SLV 11	-17542	0.39	205.96	2022.13	2896.51	2459.32	11.94	Si
SLV 12	-17654	0.39	205.96	2032.2	2912.58	2472.39	12	Si
SLV 13	-17878	0.39	205.96	2052.34	2944.88	2498.61	12.13	Si
SLV 14	-18051	0.39	205.96	2067.79	2969.8	2518.8	12.23	Si
SLV 7	-20480	0.39	205.96	2275.95	3319.72	2797.83	13.58	Si
SLV 8	-20591	0.39	205.96	2285.1	3335.77	2810.44	13.65	Si
SLV 9	-23378	0.39	205.96	2502.53	3735.22	3118.87	15.14	Si
SLV 10	-23490	0.39	205.96	2510.77	3751.19	3130.98	15.2	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-18478	-28386	-764	0.544	2149.9	0.963	8.20787	12.68333	No
SLV 5	-18432	-28274	-764	0.545	2145.2	0.962	8.22588	12.68333	No
SLV 10	-17917	-25427	-757	0.558	2092.9	0.962	8.43844	12.68333	No
SLV 9	-17871	-25315	-757	0.56	2088.2	0.962	8.45754	12.68333	No
SLV 8	-14321	-22040	789	0.673	1727.3	0.954	10.24331	12.68333	No
SLV 7	-14275	-21928	788	0.675	1722.6	0.954	10.27246	12.68333	No
SLV 12	-13760	-19081	795	0.695	1670.3	0.953	10.60135	12.68333	No
SLV 11	-13714	-18970	795	0.697	1665.6	0.953	10.63271	12.68333	No
SLV 2	-17690	-29647	-228	0.592	2069.8	0.961	8.94567	5.63352	Si
SLV 1	-17618	-29475	-228	0.594	2062.5	0.961	8.97765	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.561	SLU 84	Si
V_SLU	13.142	SLU 78	Si
PF_SLV	1.737	SLV 4	Si
V_SLV	3.547	SLV 2	Si
PFFP_SLV	11.119	SLV 15	Si
R_SLV	0.647	SLV 6	No

Maschio 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L5	L6	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	5.46	1618.81	-23212	-0.0001022	0.0004492	0.0035	1.55	10115	13849.9	13849.9	8.56	No	Si
SLU 45	7.56	-1342.3	-21440	-0.0000914	0.0004492	0.0035	1.55	9898.1	14148.38	14148.38	10.54	No	Si
SLU 43	5.46	1588.3	-22443	-0.0000988	0.0004492	0.0035	1.55	10032.16	13509.79	13509.79	8.51	No	Si
SLU 43	7.56	-1321.09	-20696	-0.0000882	0.0004492	0.0035	1.55	9779.56	13819.82	13819.82	10.46	No	Si
SLU 50	5.46	1640.44	-23329	-0.000103	0.0004492	0.0035	1.55	10126.17	13902.01	13902.01	8.47	No	Si
SLU 50	7.56	-1365.69	-21504	-0.0000919	0.0004492	0.0035	1.55	9907.53	14175.85	14175.85	10.38	No	Si
SLU 46	5.46	1625.84	-23232	-0.0001024	0.0004492	0.0035	1.55	10116.94	13858.81	13858.81	8.52	No	Si
SLU 46	7.56	-1342.19	-21449	-0.0000914	0.0004492	0.0035	1.55	9899.38	14152.08	14152.08	10.54	No	Si
SLU 44	5.46	1600.02	-22477	-0.0000991	0.0004492	0.0035	1.55	10036.14	13524.64	13524.64	8.45	No	Si
SLU 44	7.56	-1320.92	-20710	-0.0000883	0.0004492	0.0035	1.55	9781.99	13826.48	13826.48	10.47	No	Si
SLU 48	5.46	1644.88	-23655	-0.0001043	0.0004492	0.0035	1.55	10154.92	14046	14046	8.54	No	Si
SLU 48	7.56	-1364.59	-21844	-0.0000932	0.0004492	0.0035	1.55	9955.68	14321.95	14321.95	10.5	No	Si
SLU 49	5.46	1651.91	-23675	-0.0001045	0.0004492	0.0035	1.55	10156.59	14054.91	14054.91	8.51	No	Si
SLU 49	7.56	-1364.49	-21853	-0.0000933	0.0004492	0.0035	1.55	9956.85	14325.64	14325.64	10.5	No	Si
SLU 68	5.46	1722.2	-25315	-0.0001121	0.0004492	0.0035	1.55	10253.39	14780.39	14780.39	8.58	No	Si
SLU 68	7.56	-1377.16	-23952	-0.0001016	0.0004492	0.0035	1.55	10178.47	15204.42	15204.42	11.04	No	Si
SLU 51	5.46	1647.47	-23350	-0.0001032	0.0004492	0.0035	1.55	10128.03	13910.92	13910.92	8.44	No	Si
SLU 51	7.56	-1365.59	-21513	-0.000092	0.0004492	0.0035	1.55	9908.79	14179.54	14179.54	10.38	No	Si
SLU 47	5.46	1626.09	-22920	-0.0001012	0.0004492	0.0035	1.55	10085.58	13720.75	13720.75	8.44	No	Si
SLU 47	7.56	-1343.22	-21114	-0.0000901	0.0004492	0.0035	1.55	9848.2	14008.44	14008.44	10.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	5.46	-5743.09	-23530	-0.000157	0.0006738	0.0035	1.55		16058.17	16058.17	2.8		Si
SLV 15	7.56	4961.33	-22913	-0.0001436	0.0006738	0.0035	1.55		14743.72	14743.72	2.97		Si
SLD 3	5.46	4135.81	-17189	-0.0001107	0.0006738	0.0035	1.55		11517.7	11517.7	2.78		Si
SLD 3	7.56	-3542.38	-16494	-0.0001002	0.0006738	0.0035	1.55		12312.23	12312.23	3.48		Si
SLV 16	5.46	-5639.29	-23608	-0.0001558	0.0006738	0.0035	1.55		16097.11	16097.11	2.85		Si
SLV 16	7.56	4906.11	-22833	-0.0001425	0.0006738	0.0035	1.55		14707.82	14707.82	3		Si
SLV 3	5.46	8001.38	-14527	-0.0002422	0.0006738	0.0035	1.55		9986.36	9986.36	1.25		Si
SLV 3	7.56	-6953.44	-14106	-0.0001792	0.0006738	0.0035	1.24		10907.25	10907.25	1.57		Si
SLV 1	5.46	8145.1	-14736	-0.0002489	0.0006738	0.0035	1.55		10107.07	10107.07	1.24		Si
SLV 1	7.56	-6896.15	-13702	-0.0001808	0.0006738	0.0035	1.24		10667.31	10667.31	1.55		Si
SLD 4	5.46	4180.37	-17223	-0.0001115	0.0006738	0.0035	1.55		11537.01	11537.01	2.76		Si
SLD 4	7.56	-3566.09	-16460	-0.0001004	0.0006738	0.0035	1.55		12292.98	12292.98	3.45		Si
SLD 1	5.46	4199.48	-17277	-0.0001119	0.0006738	0.0035	1.55		11568.33	11568.33	2.75		Si
SLD 1	7.56	-3516.52	-16315	-0.0000993	0.0006738	0.0035	1.55		12211.86	12211.86	3.47		Si
SLV 2	5.46	8248.9	-14815	-0.0002561	0.0006738	0.0035	1.55		10152.03	10152.03	1.23		Si
SLV 2	7.56	-6951.37	-13622	-0.0001849	0.0006738	0.0035	1.24		10619.92	10619.92	1.53		Si
SLV 4	5.46	8105.18	-14605	-0.0002492	0.0006738	0.0035	1.55		10031.33	10031.33	1.24		Si
SLV 4	7.56	-7008.66	-14026	-0.0001829	0.0006738	0.0035	1.24		10859.86	10859.86	1.55		Si
SLD 2	5.46	4244.05	-17311	-0.0001126	0.0006738	0.0035	1.55		11587.64	11587.64	2.73		Si
SLD 2	7.56	-3540.23	-16281	-0.0000995	0.0006738	0.0035	1.55		12192.6	12192.6	3.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	5.46	1748.02	-26070	-18598	1553	1.55	1.55	-42851	10833	4702	115546	15597	7905	23502	No	15.14	Si
SLU 70	7.56	-1398.44	-24691	-17614	1553	1.55	1.55	-40585	10833	4702	115546	15597	7905	23502	No	15.13	Si
SLU 69	5.46	1740.99	-26050	-18583	1544	1.55	1.55	-42818	10833	4702	115546	15597	7905	23502	No	15.22	Si
SLU 69	7.56	-1398.54	-24682	-17608	1545	1.55	1.55	-40571	10833	4702	115546	15597	7905	23502	No	15.21	Si
SLU 51	5.46	1647.47	-23350	-16657	1494	1.55	1.55	-38380	10833	4702	115546	15597	7905	23502	No	15.74	Si
SLU 51	7.56	-1365.59	-21513	-15347	1494	1.55	1.55	-35361	10833	4702	115546	15597	7905	23502	No	15.73	Si
SLU 66	5.46	1714.92	-25606	-18267	1522	1.55	1.55	-42090	10833	4702	115546	15597	7905	23502	No	15.44	Si
SLU 66	7.56	-1376.24	-24278	-17319	1523	1.55	1.55	-39907	10833	4702	115546	15597	7905	23502	No	15.43	Si
SLU 71	5.46	1736.55	-25724	-18351	1538	1.55	1.55	-42283	10833	4702	115546	15597	7905	23502	No	15.28	Si
SLU 71	7.56	-1399.63	-24342	-17365	1538	1.55	1.55	-40012	10833	4702	115546	15597	7905	23502	No	15.28	Si
SLU 49	5.46	1651.91	-23675	-16889	1500	1.55	1.55	-38915	10833	4702	115546	15597	7905	23502	No	15.67	Si
SLU 49	7.56	-1364.49	-21853	-15589	1501	1.55	1.55	-35920	10833	4702	115546	15597	7905	23502	No	15.66	Si
SLU 72	5.46	1743.58	-25744	-18365	1546	1.55	1.55	-42316	10833	4702	115546	15597	7905	23502	No	15.2	Si
SLU 72	7.56	-1399.53	-24351	-17371	1547	1.55	1.55	-40026	10833	4702	115546	15597	7905	23502	No	15.2	Si
SLU 68	5.46	1722.2	-25315	-18059	1529	1.55	1.55	-41610	10833	4702	115546	15597	7905	23502	No	15.37	Si
SLU 68	7.56	-1377.16	-23952	-17087	1530	1.55	1.55	-39371	10833	4702	115546	15597	7905	23502	No	15.36	Si
SLU 65	5.46	1696.13	-24871	-17743	1507	1.55	1.55	-40882	10833	4702	115546	15597	7905	23502	No	15.59	Si
SLU 65	7.56	-1354.87	-23548	-16798	1508	1.55	1.55	-38706	10833	4702	115546	15597	7905	23502	No	15.59	Si
SLU 67	5.46	1721.95	-25627	-18281	1530	1.55	1.55	-42123	10833	4702	115546	15597	7905	23502	No	15.36	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	7.56	-1376.14	-24287	-17326	1531	1.55	1.55	-39921	10833	4702	115546	15597	7905	23502	No	15.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.46	8105.18	-14605	-10419	8408	1.55	0.6601	-24006	16250	3003	115546	23395	7905	31300		3.72	Si
SLV 4	7.56	-7008.66	-14026	-10006	7982	1.24	0.8259	0	0	0	115546	18716	6324	25040		3.14	Si
SLD 2	5.46	4244.05	-17311	-12349	4371	1.55	1.55	-28454	16250	7052	115546	23395	7905	31300		7.16	Si
SLD 2	7.56	-3540.23	-16281	-11614	4202	1.55	1.55	-26761	16250	7052	115546	23395	7905	31300		7.45	Si
SLV 14	5.46	-5495.56	-23818	-16991	-6035	1.55	1.55	-39150	16250	7052	115546	23395	7905	31300		5.19	Si
SLV 14	7.56	4963.39	-22429	-16001	-5608	1.55	1.55	-36868	16250	7052	115546	23395	7905	31300		5.58	Si
SLV 13	5.46	-5599.36	-23739	-16935	-6234	1.55	1.55	-39021	16250	7052	115546	23395	7905	31300		5.02	Si
SLV 13	7.56	5018.61	-22509	-16057	-5807	1.55	1.55	-36999	16250	7052	115546	23395	7905	31300		5.39	Si
SLD 1	5.46	4199.48	-17277	-12325	4285	1.55	1.55	-28399	16250	7052	115546	23395	7905	31300		7.3	Si
SLD 1	7.56	-3516.52	-16315	-11639	4116	1.55	1.55	-26818	16250	7052	115546	23395	7905	31300		7.6	Si
SLV 16	5.46	-5639.29	-23608	-16841	-6392	1.55	1.55	-38805	16250	7052	115546	23395	7905	31300		4.9	Si
SLV 16	7.56	4906.11	-22833	-16289	-5994	1.55	1.55	-37532	16250	7052	115546	23395	7905	31300		5.22	Si
SLV 15	5.46	-5743.09	-23530	-16785	-6591	1.55	1.55	-38676	16250	7052	115546	23395	7905	31300		4.75	Si
SLV 15	7.56	4961.33	-22913	-16346	-6193	1.55	1.55	-37663	16250	7052	115546	23395	7905	31300		5.05	Si
SLV 1	5.46	8145.1	-14736	-10513	8566	1.55	0.6668	-24223	16250	3034	115546	23395	7905	31300		3.65	Si
SLV 1	7.56	-6896.15	-13702	-9774	8169	1.24	0.8151	0	0	0	115546	18716	6324	25040		3.07	Si
SLV 3	5.46	8001.38	-14527	-10363	8209	1.55	0.6726	-23878	16250	3060	115546	23395	7905	31300		3.81	Si
SLV 3	7.56	-6953.44	-14106	-10063	7783	1.24	0.8462	0	0	0	115546	18716	6324	25040		3.22	Si
SLV 2	5.46	8248.9	-14815	-10568	8765	1.55	0.6546	-24351	16250	2978	115546	23395	7905	31300		3.57	Si
SLV 2	7.56	-6951.37	-13622	-9718	8368	1.24	0.7941	0	0	0	115546	18716	6324	25040		2.99	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-13918	0.39	164.95	1607.61	2297.14	1952.37	11.84	Si
SLV 1	-13998	0.39	164.95	1614.86	2308.86	1961.86	11.89	Si
SLV 4	-14321	0.39	164.95	1643.96	2355.5	1999.73	12.12	Si
SLV 3	-14401	0.39	164.95	1651.11	2367.02	2009.06	12.18	Si
SLV 6	-16530	0.39	164.95	1833.3	2673.94	2253.62	13.66	Si
SLV 5	-16582	0.39	164.95	1837.5	2681.36	2259.43	13.7	Si
SLV 8	-17872	0.39	164.95	1939.93	2867.21	2403.57	14.57	Si
SLV 7	-17924	0.39	164.95	1943.89	2874.62	2409.26	14.61	Si
SLV 10	-19159	0.39	164.95	2036.24	3052.53	2544.39	15.43	Si
SLV 9	-19211	0.39	164.95	2039.97	3059.94	2549.95	15.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-14677	-20148	8	0.585	1709.5	0.962	8.83589	12.68333	No
SLV 12	-14630	-20198	9	0.587	1704.7	0.962	8.8601	12.68333	No
SLV 7	-13310	-17447	-8	0.636	1570.5	0.959	9.63293	12.68333	No
SLV 8	-13263	-17497	-7	0.638	1565.7	0.959	9.66373	12.68333	No
SLV 9	-12433	-20847	-2	0.674	1481.3	0.957	10.23683	12.68333	No
SLV 10	-12386	-20897	-1	0.676	1476.5	0.957	10.27178	12.68333	No
SLV 5	-11066	-18146	-18	0.743	1342.4	0.953	11.32213	12.68333	No
SLV 6	-11019	-18197	-17	0.745	1337.6	0.953	11.3653	12.68333	No
SLV 15	-15499	-23530	23	0.558	1793.1	0.964	8.40704	5.63352	Si
SLV 16	-15426	-23608	24	0.56	1785.7	0.964	8.44087	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.438	SLU 47	Si
V_SLU	15.13	SLU 70	Si
PF_SLV	1.231	SLV 2	Si
V_SLV	2.992	SLV 2	Si
PFFP_SLV	11.836	SLV 2	Si
R_SLV	0.697	SLV 11	No

Maschio 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	5.46	6310.23	-39487	-0.0000636	0.0004492	0.0035	3.98	55791.6	66481.87	66481.87	10.54	No	Si
SLU 46	7.56	-335.36	-34164	-0.0000441	0.0004492	0.0035	3.98	50928.39	66955.75	66955.75	199.65	No	Si
SLU 51	5.46	6330.55	-39719	-0.0000639	0.0004492	0.0035	3.98	55984.96	66818.27	66818.27	10.55	No	Si
SLU 51	7.56	-426.11	-34353	-0.0000446	0.0004492	0.0035	3.98	51115.13	67228.91	67228.91	157.77	No	Si
SLU 50	5.46	6332.66	-39690	-0.0000639	0.0004492	0.0035	3.98	55961.35	66777.04	66777.04	10.54	No	Si
SLU 50	7.56	-407.38	-34319	-0.0000445	0.0004492	0.0035	3.98	51082.01	67180.35	67180.35	164.91	No	Si
SLU 64	5.46	6468.58	-41903	-0.0000673	0.0004492	0.0035	3.98	57726.17	69981.67	69981.67	10.82	No	Si
SLU 64	7.56	118.67	-37140	-0.0000477	0.0004492	0.0035	3.98	53750	63083.92	63083.92	531.6	No	Si
SLU 47	5.46	6248.45	-38951	-0.0000627	0.0004492	0.0035	3.98	55339.68	65706.12	65706.12	10.52	No	Si
SLU 47	7.56	-423.49	-33598	-0.0000436	0.0004492	0.0035	3.98	50363.25	66138.22	66138.22	156.17	No	Si
SLU 49	5.46	6390.92	-40273	-0.0000648	0.0004492	0.0035	3.98	56440.29	67621.5	67621.5	10.58	No	Si
SLU 49	7.56	-350.47	-34940	-0.0000452	0.0004492	0.0035	3.98	51689.5	68078.82	68078.82	194.25	No	Si
SLU 45	5.46	6312.34	-39458	-0.0000635	0.0004492	0.0035	3.98	55767.79	66440.65	66440.65	10.53	No	Si
SLU 45	7.56	-316.63	-34130	-0.0000441	0.0004492	0.0035	3.98	50895.08	66907.19	66907.19	211.31	No	Si
SLU 44	5.46	6167.76	-38164	-0.0000614	0.0004492	0.0035	3.98	54660.56	64566.49	64566.49	10.47	No	Si
SLU 44	7.56	-408.38	-32822	-0.0000425	0.0004492	0.0035	3.98	49571.68	65015.15	65015.15	159.2	No	Si
SLU 43	5.46	6171.28	-38116	-0.0000614	0.0004492	0.0035	3.98	54619.04	64497.78	64497.78	10.45	No	Si
SLU 43	7.56	-377.16	-32766	-0.0000424	0.0004492	0.0035	3.98	49513.96	64934.21	64934.21	172.17	No	Si
SLU 48	5.46	6393.03	-40245	-0.0000648	0.0004492	0.0035	3.98	56417.14	67580.28	67580.28	10.57	No	Si
SLU 48	7.56	-331.73	-34907	-0.0000451	0.0004492	0.0035	3.98	51656.95	68030.26	68030.26	205.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	5.46	12373.88	-18229	-0.0000461	0.0006738	0.0035	3.98		35592.01	35592.01	2.88		Si
SLV 2	7.56	-10870.6	-12912	-0.0000371	0.0006738	0.0035	3.98		33489.23	33489.23	3.08		Si
SLV 1	5.46	12089.8	-18543	-0.000046	0.0006738	0.0035	3.98		36140.88	36140.88	2.99		Si
SLV 1	7.56	-10552.54	-12827	-0.0000362	0.0006738	0.0035	3.98		33334.93	33334.93	3.16		Si
SLD 2	5.46	8116.66	-26289	-0.0000484	0.0006738	0.0035	3.98		49396.6	49396.6	6.09		Si
SLD 2	7.56	-4546.4	-21978	-0.0000359	0.0006738	0.0035	3.98		49341.07	49341.07	10.85		Si
SLV 4	5.46	13090.06	-21153	-0.0000513	0.0006738	0.0035	3.98		40681.55	40681.55	3.11		Si
SLV 4	7.56	-9393.69	-14579	-0.0000357	0.0006738	0.0035	3.98		36432.75	36432.75	3.88		Si
SLV 16	5.46	-2216.87	-46098	-0.0000628	0.0006738	0.0035	3.98		87060.87	87060.87	39.27		Si
SLV 16	7.56	10909.69	-44685	-0.0000784	0.0006738	0.0035	3.98		76682.92	76682.92	7.03		Si
SLV 3	5.46	12805.97	-21467	-0.0000511	0.0006738	0.0035	3.98		41220.78	41220.78	3.22		Si
SLV 3	7.56	-9075.63	-14494	-0.000035	0.0006738	0.0035	3.98		36283.13	36283.13	4		Si
SLV 15	5.46	-2500.95	-46412	-0.0000638	0.0006738	0.0035	3.98		87509.21	87509.21	34.99		Si
SLV 15	7.56	11227.74	-44600	-0.0000789	0.0006738	0.0035	3.98		76558.76	76558.76	6.82		Si
SLD 4	5.46	8423.52	-27549	-0.0000506	0.0006738	0.0035	3.98		51488.47	51488.47	6.11		Si
SLD 4	7.56	-3909.31	-22695	-0.0000356	0.0006738	0.0035	3.98		50544.07	50544.07	12.93		Si
SLD 1	5.46	7994.68	-26424	-0.0000483	0.0006738	0.0035	3.98		49620.66	49620.66	6.21		Si
SLD 1	7.56	-4409.83	-21942	-0.0000356	0.0006738	0.0035	3.98		49279.89	49279.89	11.17		Si
SLD 3	5.46	8301.55	-27683	-0.0000505	0.0006738	0.0035	3.98		51712.53	51712.53	6.23		Si
SLD 3	7.56	-3772.74	-22658	-0.0000353	0.0006738	0.0035	3.98		50482.89	50482.89	13.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	5.46	6167.76	-38164	-27225	2870	3.98	3.98	-24430	10833	12073	115546	40049	20298	60347	No	21.03	Si
SLU 44	7.56	-408.38	-32822	-23414	2867	3.98	3.98	-21011	10833	12073	115546	40049	20298	60347	No	21.05	Si
SLU 45	5.46	6312.34	-39458	-28148	2882	3.98	3.98	-25259	10833	12073	115546	40049	20298	60347	No	20.94	Si
SLU 45	7.56	-316.63	-34130	-24348	2879	3.98	3.98	-21848	10833	12073	115546	40049	20298	60347	No	20.96	Si
SLU 50	5.46	6332.66	-39690	-28314	2976	3.98	3.98	-25407	10833	12073	115546	40049	20298	60347	No	20.28	Si
SLU 50	7.56	-407.38	-34319	-24482	2973	3.98	3.98	-21969	10833	12073	115546	40049	20298	60347	No	20.3	Si
SLU 46	5.46	6310.23	-39487	-28169	2885	3.98	3.98	-25277	10833	12073	115546	40049	20298	60347	No	20.92	Si
SLU 46	7.56	-335.36	-34164	-24372	2882	3.98	3.98	-21870	10833	12073	115546	40049	20298	60347	No	20.94	Si
SLU 49	5.46	6390.92	-40273	-28730	2940	3.98	3.98	-25781	10833	12073	115546	40049	20298	60347	No	20.52	Si
SLU 49	7.56	-350.47	-34940	-24925	2937	3.98	3.98	-22367	10833	12073	115546	40049	20298	60347	No	20.55	Si
SLU 47	5.46	6248.45	-38951	-27787	2925	3.98	3.98	-24934	10833	12073	115546	40049	20298	60347	No	20.63	Si
SLU 47	7.56	-423.49	-33598	-23968	2922	3.98	3.98	-21508	10833	12073	115546	40049	20298	60347	No	20.65	Si
SLU 72	5.46	6627.85	-43505	-31036	2217	3.98	3.98	-27850	10833	12073	115546	40049	20298	60347	No	27.22	Si
SLU 72	7.56	69.72	-38727	-27627	2214	3.98	3.98	-24791	10833	12073	115546	40049	20298	60347	No	27.26	Si
SLU 43	5.46	6171.28	-38116	-27191	2865	3.98	3.98	-24400	10833	12073	115546	40049	20298	60347	No	21.07	Si
SLU 43	7.56	-377.16	-32766	-23374	2862	3.98	3.98	-20975	10833	12073	115546	40049	20298	60347	No	21.09	Si
SLU 51	5.46	6330.55	-39719	-28334	2979	3.98	3.98	-25426	10833	12073	115546	40049	20298	60347	No	20.26	Si
SLU 51	7.56	-426.11	-34353	-24506	2976	3.98	3.98	-21990	10833	12073	115546	40049	20298	60347	No	20.28	Si
SLU 48	5.46	6393.03	-40245	-28710	2937	3.98	3.98	-25762	10833	12073	115546	40049	20298	60347	No	20.55	Si
SLU 48	7.56	-331.73	-34907	-24902	2934	3.98	3.98	-22345	10833	12073	115546	40049	20298	60347	No	20.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.46	13090.06	-21153	-15090	13680	3.98	3.98	-13541	15208	16948	115546	60073	20298	80371		5.88	Si
SLV 4	7.56	-9393.69	-14579	-10400	12704	3.98	3.98	-9333	14367	16010	115546	60073	20298	80371		6.33	Si
SLD 3	5.46	8301.55	-27683	-19749	6741	3.98	3.98	-17721	16044	17880	115546	60073	20298	80371		11.92	Si
SLD 3	7.56	-3772.74	-22658	-16164	6322	3.98	3.98	-14505	15401	17163	115546	60073	20298	80371		12.71	Si
SLV 1	5.46	12089.8	-18543	-13228	12987	3.98	3.98	-11870	14874	16576	115546	60073	20298	80371		6.19	Si
SLV 1	7.56	-10552.54	-12827	-9150	12022	3.98	3.5019	-9370	14374	14094	115546	60073	20298	80371		6.69	Si
SLD 4	5.46	8423.52	-27549	-19652	6702	3.98	3.98	-17635	16027	17861	115546	60073	20298	80371		11.99	Si
SLD 4	7.56	-3909.31	-22695	-16190	6283	3.98	3.98	-14528	15406	17168	115546	60073	20298	80371		12.79	Si
SLV 14	5.46	-2933.04	-43174	-30799	-10795	3.98	3.98	-27638	16250	18109	115546	60073	20298	80371		7.45	Si
SLV 14	7.56	9432.78	-43017	-30687	-9824	3.98	3.98	-27537	16250	18109	115546	60073	20298	80371		8.18	Si
SLV 16	5.46	-2216.87	-46098	-32885	-10010	3.98	3.98	-29509	16250	18109	115546	60073	20298	80371		8.03	Si
SLV 16	7.56	10909.69	-44685	-31877	-9051	3.98	3.98	-28604	16250	18109	115546	60073	20298	80371		8.88	Si
SLV 2	5.46	12373.88	-18229	-13004	12896	3.98	3.9336	-11669	14834	16338	115546	60073	20298	80371		6.23	Si
SLV 2	7.56	-10870.6	-12912	-9211	11931	3.98	3.4443	-9591	14418	13905	115546	60073	20298	80371		6.74	Si
SLV 13	5.46	-3217.12	-43488	-31024	-10703	3.98	3.98	-27839	16250	18109	115546	60073	20298	80371		7.51	Si
SLV 13	7.56	9750.83	-42932	-30627	-9733	3.98	3.98	-27483	16250	18109	115546	60073	20298	80371		8.26	Si
SLV 15	5.46	-2500.95	-46412	-33109	-9919	3.98	3.98	-29710	16250	18109	115546	60073	20298	80371		8.1	Si
SLV 15	7.56	11227.74	-44600	-31816	-8960	3.98	3.98	-28550	16250	18109	115546	60073	20298	80371		8.97	Si
SLV 3	5.46	12805.97	-21467	-15314	13771	3.98	3.98	-13742	15248	16993	115546	60073	20298	80371		5.84	Si
SLV 3	7.56	-9075.63	-14494	-10340	12796	3.98	3.98	-9278	14356	15998	115546	60073	20298	80371		6.28	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-13573	0.39	423.56	1773.92	2598.32	2186.12	5.16	Si
SLV 2	-13658	0.39	423.56	1784.22	2611.3	2197.76	5.19	Si
SLV 3	-15221	0.39	423.56	1972.09	2849.1	2410.6	5.69	Si
SLV 4	-15305	0.39	423.56	1982.2	2861.98	2422.09	5.72	Si
SLV 5	-22181	0.39	423.56	2768.11	3899.1	3333.6	7.87	Si
SLV 6	-22236	0.39	423.56	2774.1	3907.29	3340.7	7.89	Si
SLV 7	-27674	0.39	423.56	3349.39	4714.78	4032.09	9.52	Si
SLV 8	-27728	0.39	423.56	3354.97	4722.85	4038.91	9.54	Si
SLV 9	-31194	0.39	423.56	3700.22	5232.51	4466.37	10.54	Si
SLV 10	-31249	0.39	423.56	3705.54	5240.49	4473.01	10.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-29998	-40834	1033	0.68	3607.7	0.955	10.34704	12.68333	No
SLV 11	-29930	-41037	1032	0.681	3600.8	0.955	10.36791	12.68333	No
SLV 10	-27436	-31088	-1022	0.733	3347.4	0.952	11.19462	12.68333	No
SLV 9	-27368	-31290	-1022	0.735	3340.5	0.952	11.21874	12.68333	No
SLV 8	-25222	-33351	1039	0.786	3122.7	0.949	12.03882	12.68333	No
SLV 7	-25154	-33553	1039	0.788	3115.7	0.949	12.06746	12.68333	No
SLV 6	-22660	-23604	-1015	0.86	2862.7	0.945	13.22661	12.68333	Si
SLV 5	-22592	-23807	-1016	0.862	2855.8	0.945	13.26081	12.68333	Si
SLV 16	-34692	-46098	306	0.62	4084.9	0.96	9.39323	5.63352	Si
SLV 15	-34586	-46412	305	0.622	4074.2	0.96	9.41883	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.451	SLU 43	Si
V_SLU	20.259	SLU 51	Si
PF_SLV	2.876	SLV 2	Si
V_SLV	5.836	SLV 3	Si
PFFP_SLV	5.161	SLV 1	Si
R_SLV	0.816	SLV 12	No

Maschio 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.384	L5	L6	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	5.46	-657.58	-15261	-0.0000727	0.0003743	0.0035	1.44	6903.16	8458.89	8458.89	12.86	No	Si
SLU 69	8.98	-1148	-9769	-0.0000569	0.0003743	0.0035	1.44	5359.93	6340.28	6340.28	5.52	No	Si
SLU 56	5.46	-660.02	-15313	-0.000073	0.0003743	0.0035	1.44	6912.88	8477.88	8477.88	12.84	No	Si
SLU 56	8.98	-1138.31	-9696	-0.0000564	0.0003743	0.0035	1.44	5332.4	6304.82	6304.82	5.54	No	Si
SLU 81	5.46	-751.84	-16829	-0.0000817	0.0003743	0.0035	1.44	7149.69	8992.18	8992.18	11.96	No	Si
SLU 81	8.98	-1216.93	-10529	-0.0000613	0.0003743	0.0035	1.44	5636.46	6695.47	6695.47	5.5	No	Si
SLU 74	5.46	-734.29	-16574	-0.0000802	0.0003743	0.0035	1.44	7115.52	8932.79	8932.79	12.17	No	Si
SLU 74	8.98	-1213.38	-10479	-0.0000611	0.0003743	0.0035	1.44	5619.09	6672.13	6672.13	5.5	No	Si
SLU 77	5.46	-746.53	-16894	-0.0000819	0.0003743	0.0035	1.44	7158.04	9006.76	9006.76	12.06	No	Si
SLU 77	8.98	-1244.3	-10763	-0.0000628	0.0003743	0.0035	1.44	5717.87	6806.99	6806.99	5.47	No	Si
SLU 71	5.46	-649.24	-15135	-0.000072	0.0003743	0.0035	1.44	6879.69	8413.97	8413.97	12.96	No	Si
SLU 71	8.98	-1141.19	-9676	-0.0000564	0.0003743	0.0035	1.44	5324.87	6295.14	6295.14	5.52	No	Si
SLU 58	5.46	-651.68	-15188	-0.0000723	0.0003743	0.0035	1.44	6889.64	8432.85	8432.85	12.94	No	Si
SLU 58	8.98	-1131.5	-9604	-0.0000559	0.0003743	0.0035	1.44	5297.11	6259.47	6259.47	5.53	No	Si
SLU 79	5.46	-738.2	-16768	-0.0000812	0.0003743	0.0035	1.44	7141.76	8978.63	8978.63	12.16	No	Si
SLU 79	8.98	-1237.5	-10671	-0.0000623	0.0003743	0.0035	1.44	5686.04	6762.95	6762.95	5.47	No	Si
SLU 80	5.46	-725.84	-16753	-0.0000809	0.0003743	0.0035	1.44	7139.81	8975.32	8975.32	12.37	No	Si
SLU 80	8.98	-1216.92	-10633	-0.0000618	0.0003743	0.0035	1.44	5672.88	6744.91	6744.91	5.54	No	Si
SLU 83	5.46	-764.08	-17149	-0.0000835	0.0003743	0.0035	1.44	7189.35	9064.41	9064.41	11.86	No	Si
SLU 83	8.98	-1247.85	-10813	-0.0000631	0.0003743	0.0035	1.44	5734.75	6830.58	6830.58	5.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	5.46	173.73	-6249	-0.000026	0.0005615	0.0035	1.44		4266.07	4266.07	24.56		Si
SLV 6	8.98	495.17	-1824	-0.0000143	0.0005615	0.0035	1.44		1395.32	1395.32	2.82		Si
SLV 16	5.46	-885.78	-13946	-0.0000682	0.0005615	0.0035	1.44		8853.92	8853.92	10		Si
SLV 16	8.98	-1834.9	-8700	-0.0000622	0.0005615	0.0035	1.44		6090.41	6090.41	3.32		Si
SLV 14	5.46	-535.46	-11197	-0.0000512	0.0005615	0.0035	1.44		7463.06	7463.06	13.94		Si
SLV 14	8.98	-1176.45	-5584	-0.0000392	0.0005615	0.0035	1.44		4231.56	4231.56	3.6		Si
SLV 13	5.46	-556.11	-11302	-0.000052	0.0005615	0.0035	1.44		7518.91	7518.91	13.52		Si
SLV 13	8.98	-1241.87	-5611	-0.0000403	0.0005615	0.0035	1.44		4247.85	4247.85	3.42		Si
SLV 5	5.46	160.42	-6316	-0.0000261	0.0005615	0.0035	1.44		4307.32	4307.32	26.85		Si
SLV 5	8.98	453.01	-1841	-0.0000136	0.0005615	0.0035	1.44		1406.84	1406.84	3.11		Si
SLV 12	5.46	-1134.39	-16223	-0.0000821	0.0005615	0.0035	1.44		9916.5	9916.5	8.74		Si
SLV 12	8.98	-2121.99	-12270	-0.0000818	0.0005615	0.0035	1.44		8019.49	8019.49	3.78		Si
SLV 15	5.46	-906.44	-14051	-0.000069	0.0005615	0.0035	1.44		8904.92	8904.92	9.82		Si
SLV 15	8.98	-1900.32	-8726	-0.0000633	0.0005615	0.0035	1.44		6105.09	6105.09	3.21		Si
SLV 11	5.46	-1147.7	-16291	-0.0000826	0.0005615	0.0035	1.44		9946.9	9946.9	8.67		Si
SLV 11	8.98	-2164.15	-12287	-0.0000826	0.0005615	0.0035	1.44		8028.16	8028.16	3.71		Si
SLD 16	5.46	-659.81	-12433	-0.0000583	0.0005615	0.0035	1.44		8102.73	8102.73	12.28		Si
SLD 16	8.98	-1267.22	-7780	-0.0000493	0.0005615	0.0035	1.44		5555.77	5555.77	4.38		Si
SLD 15	5.46	-668.68	-12478	-0.0000586	0.0005615	0.0035	1.44		8125.84	8125.84	12.15		Si
SLD 15	8.98	-1295.31	-7791	-0.0000498	0.0005615	0.0035	1.44		5562.41	5562.41	4.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	5.46	-739.48	-16814	-14001	-2272	1.44	1.44	-34725	10833	4368	40441	12074	3672	15746	No	6.93	Si
SLU 82	8.98	-1196.35	-10491	-8736	2216	1.44	1.44	-21665	9833	3965	40441	12074	3672	15746	No	7.1	Si
SLU 77	5.46	-746.53	-16894	-14068	-2211	1.44	1.44	-34890	10833	4368	40441	12074	3672	15746	No	7.12	Si
SLU 77	8.98	-1244.3	-10763	-8963	2345	1.44	1.44	-22229	9908	3995	40441	12074	3672	15746	No	6.71	Si
SLU 81	5.46	-751.84	-16829	-14014	-2293	1.44	1.44	-34755	10833	4368	40441	12074	3672	15746	No	6.87	Si
SLU 81	8.98	-1216.93	-10529	-8767	2262	1.44	1.44	-21744	9844	3969	40441	12074	3672	15746	No	6.96	Si
SLU 69	5.46	-657.58	-15261	-12708	-1781	1.44	1.44	-31516	10833	4368	40441	12074	3672	15746	No	8.84	Si
SLU 69	8.98	-1148	-9769	-8135	2268	1.44	1.44	-20175	9634	3885	40441	12074	3672	15746	No	6.94	Si
SLU 84	5.46	-751.72	-17134	-14268	-2299	1.44	1.44	-35385	10833	4368	40441	12074	3672	15746	No	6.85	Si
SLU 84	8.98	-1227.27	-10775	-8972	2274	1.44	1.44	-22252	9911	3996	40441	12074	3672	15746	No	6.92	Si
SLU 78	5.46	-734.18	-16879	-14055	-2190	1.44	1.44	-34859	10833	4368	40441	12074	3672	15746	No	7.19	Si
SLU 78	8.98	-1223.72	-10725	-8931	2299	1.44	1.44	-22150	9898	3991	40441	12074	3672	15746	No	6.85	Si
SLU 83	5.46	-764.08	-17149	-14280	-2320	1.44	1.44	-35416	10833	4368	40441	12074	3672	15746	No	6.79	Si
SLU 83	8.98	-1247.85	-10813	-9004	2320	1.44	1.44	-22331	9922	4001	40441	12074	3672	15746	No	6.79	Si
SLU 80	5.46	-725.84	-16753	-13951	-2142	1.44	1.44	-34600	10833	4368	40441	12074	3672	15746	No	7.35	Si
SLU 80	8.98	-1216.92	-10633	-8854	2299	1.44	1.44	-21959	9872	3981	40441	12074	3672	15746	No	6.85	Si
SLU 79	5.46	-738.2	-16768	-13963	-2163	1.44	1.44	-34630	10833	4368	40441	12074	3672	15746	No	7.28	Si
SLU 79	8.98	-1237.5	-10671	-8886	2345	1.44	1.44	-22038	9883	3985	40441	12074	3672	15746	No	6.71	Si
SLU 74	5.46	-734.29	-16574	-13802	-2184	1.44	1.44	-34229	10833	4368	40441	12074	3672	15746	No	7.21	Si
SLU 74	8.98	-1213.38	-10479	-8726	2287	1.44	1.44	-21642	9830	3964	40441	12074	3672	15746	No	6.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	5.46	-906.44	-14051	-11700	4541	1.44	1.44	-29018	16220	6540	40441	18111	3672	21783		4.8	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	8.98	-1900.32	-8726	-7267	5718	1.44	1.44	-18022	14021	5653	40441	18111	3672	21783		3.81	Si
SLV 3	5.46	-438.51	-11342	-9445	-6032	1.44	1.44	-23424	15101	6089	40441	18111	3672	21783		3.61	Si
SLV 3	8.98	-492.53	-8527	-7100	-1517	1.44	1.44	-17610	13939	5620	40441	18111	3672	21783		14.36	Si
SLV 1	5.46	-88.19	-8594	-7156	-6681	1.44	1.44	-17747	13966	5631	40441	18111	3672	21783		3.26	Si
SLV 1	8.98	165.92	-5411	-4506	-2081	1.44	1.44	-11175	12652	5101	40441	18111	3672	21783		10.47	Si
SLV 14	5.46	-535.46	-11197	-9324	3364	1.44	1.44	-23125	15042	6065	40441	18111	3672	21783		6.47	Si
SLV 14	8.98	-1176.45	-5584	-4650	4828	1.44	1.44	-11533	12723	5130	40441	18111	3672	21783		4.51	Si
SLV 16	5.46	-885.78	-13946	-11613	4014	1.44	1.44	-28801	16177	6523	40441	18111	3672	21783		5.43	Si
SLV 16	8.98	-1834.9	-8700	-7245	5392	1.44	1.44	-17968	14010	5649	40441	18111	3672	21783		4.04	Si
SLV 4	5.46	-417.85	-11237	-9357	-6559	1.44	1.44	-23207	15058	6072	40441	18111	3672	21783		3.32	Si
SLV 4	8.98	-427.11	-8500	-7078	-1844	1.44	1.44	-17555	13928	5616	40441	18111	3672	21783		11.81	Si
SLV 6	5.46	173.73	-6249	-5203	-4173	1.44	1.44	-12905	12998	5241	40441	18111	3672	21783		5.22	Si
SLV 6	8.98	495.17	-1824	-1519	-475	1.44	1.3456	-3767	11170	4209	40441	18111	3672	21783		45.88	Si
SLD 2	5.46	-305.29	-10062	-8378	-3849	1.44	1.44	-20780	14573	5876	40441	18111	3672	21783		5.66	Si
SLD 2	8.98	-373.67	-6320	-5263	-85	1.44	1.44	-13052	13027	5253	40441	18111	3672	21783		257.49	Si
SLV 2	5.46	-67.53	-8489	-7069	-7209	1.44	1.44	-17531	13923	5614	40441	18111	3672	21783		3.02	Si
SLV 2	8.98	231.34	-5385	-4484	-2407	1.44	1.44	-11120	12641	5097	40441	18111	3672	21783		9.05	Si
SLV 13	5.46	-556.11	-11302	-9412	3892	1.44	1.44	-23342	15085	6082	40441	18111	3672	21783		5.6	Si
SLV 13	8.98	-1241.87	-5611	-4672	5154	1.44	1.44	-11587	12734	5134	40441	18111	3672	21783		4.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	6842	-2759	153.25	368.95	2.41	Si
SLV 10	179667	0.39	6936	-2797	153.25	373.77	2.44	Si
SLV 5	179667	0.39	7820	-3153	153.25	418.85	2.73	Si
SLV 6	179667	0.39	7914	-3191	153.25	423.61	2.76	Si
SLV 13	179667	0.39	14204	-5727	153.25	727.25	4.75	Si
SLV 14	179667	0.39	14350	-5786	153.25	733.94	4.79	Si
SLV 1	179667	0.39	17464	-7042	153.25	873.1	5.7	Si
SLV 2	179667	0.39	17610	-7100	153.25	879.44	5.74	Si
SLV 15	179667	0.39	21515	-8675	153.25	1043.4	6.81	Si
SLV 16	179667	0.39	21661	-8734	153.25	1049.3	6.85	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-12287	-16291	113	0.631	1451	0.959	9.56887	12.68333	No
SLV 12	-12270	-16223	114	0.632	1449.3	0.959	9.57941	12.68333	No
SLV 7	-12227	-15478	45	0.639	1444.9	0.959	9.68738	12.68333	No
SLV 8	-12210	-15411	46	0.64	1443.2	0.959	9.69813	12.68333	No
SLV 15	-8726	-14051	136	0.84	1089.3	0.947	12.88481	5.63352	Si
SLV 16	-8700	-13946	138	0.842	1086.6	0.947	12.91632	5.63352	Si
SLV 3	-8527	-11342	-93	0.86	1069	0.946	13.21427	5.63352	Si
SLV 4	-8500	-11237	-92	0.863	1066.4	0.946	13.25218	5.63352	Si
SLV 9	-1901	-7129	-50	2.585	405.5	0.893	42.08496	12.68333	Si
SLV 10	-1884	-7061	-49	2.599	403.8	0.893	42.31995	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.465	SLU 79	Si
V_SLU	6.714	SLU 77	Si
PF_SLV	2.818	SLV 6	Si
V_SLV	3.022	SLV 2	Si
PFFP_SLV	2.407	SLV 9	Si
R_SLV	0.754	SLV 11	No

Maschio 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.714	L5	Z medio 800 cm	2.67	0.28	2.536	1.761	3.311			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	5.46	2988.79	-34511	-0.0000925	0.0003743	0.0035	2.6699	25181.18	31456.69	31456.69	10.52	No	Si
SLU 62	7.22	2944.07	-26433	-0.0000717	0.0003743	0.0035	2.6699	23031.97	26858.78	26858.78	9.12	No	Si
SLU 60	5.46	2952.16	-33868	-0.0000906	0.0003743	0.0035	2.6699	25093.96	31102.25	31102.25	10.54	No	Si
SLU 60	7.22	2897.43	-25837	-0.00007	0.0003743	0.0035	2.6699	22782.72	26363.48	26363.48	9.1	No	Si
SLU 83	5.46	3202.28	-37970	-0.000103	0.0003743	0.0035	2.6699	25401.42	33422.03	33422.03	10.44	No	Si
SLU 83	7.22	3166.54	-28977	-0.0000792	0.0003743	0.0035	2.6699	23955.92	28481.1	28481.1	8.99	No	Si
SLU 81	5.46	3165.64	-37327	-0.0001011	0.0003743	0.0035	2.6699	25392.24	33049.07	33049.07	10.44	No	Si
SLU 81	7.22	3119.89	-28381	-0.0000774	0.0003743	0.0035	2.6699	23759.87	28172.04	28172.04	9.03	No	Si
SLU 75	5.46	3115.06	-36672	-0.000099	0.0003743	0.0035	2.6699	25367.96	32672.66	32672.66	10.49	No	Si
SLU 75	7.22	3076.17	-28164	-0.0000767	0.0003743	0.0035	2.6699	23685.44	28060.32	28060.32	9.12	No	Si
SLU 61	5.46	2963.58	-33901	-0.0000908	0.0003743	0.0035	2.6699	25098.72	31120.09	31120.09	10.5	No	Si
SLU 61	7.22	2913.96	-25862	-0.0000701	0.0003743	0.0035	2.6699	22793.56	26384.61	26384.61	9.05	No	Si
SLU 78	5.46	3151.69	-37315	-0.0001009	0.0003743	0.0035	2.6699	25391.93	33042.11	33042.11	10.48	No	Si
SLU 78	7.22	3122.81	-28760	-0.0000784	0.0003743	0.0035	2.6699	23886.03	28368.3	28368.3	9.08	No	Si
SLU 82	5.46	3177.06	-37360	-0.0001012	0.0003743	0.0035	2.6699	25393.05	33067.84	33067.84	10.41	No	Si
SLU 82	7.22	3136.43	-28407	-0.0000776	0.0003743	0.0035	2.6699	23768.45	28185.11	28185.11	8.99	No	Si
SLU 63	5.46	3000.21	-34544	-0.0000927	0.0003743	0.0035	2.6699	25185.21	31474.71	31474.71	10.49	No	Si
SLU 63	7.22	2960.61	-26458	-0.0000718	0.0003743	0.0035	2.6699	23042.29	26879.31	26879.31	9.08	No	Si
SLU 84	5.46	3213.7	-38003	-0.0001032	0.0003743	0.0035	2.6699	25401.5	33440.98	33440.98	10.41	No	Si
SLU 84	7.22	3183.07	-29003	-0.0000793	0.0003743	0.0035	2.6699	23963.97	28494.29	28494.29	8.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.46	3799.5	-26639	-0.0000737	0.0005615	0.0035	2.6699		29613.76	29613.76	7.79		Si
SLV 14	7.22	3045.37	-22040	-0.0000597	0.0005615	0.0035	2.6699		25146.21	25146.21	8.26		Si
SLV 5	5.46	2827.5	-24465	-0.0000641	0.0005615	0.0035	2.6699		27646.34	27646.34	9.78		Si
SLV 5	7.22	4232.74	-19256	-0.0000592	0.0005615	0.0035	2.6699		22328.98	22328.98	5.28		Si
SLV 10	5.46	3602.8	-25551	-0.0000703	0.0005615	0.0035	2.6699		28744.89	28744.89	7.98		Si
SLV 10	7.22	4420.24	-20797	-0.0000635	0.0005615	0.0035	2.6699		23881.13	23881.13	5.4		Si
SLD 5	5.46	2471.2	-24686	-0.0000629	0.0005615	0.0035	2.6699		27875.42	27875.42	11.28		Si
SLD 5	7.22	3035.8	-19250	-0.0000536	0.0005615	0.0035	2.6699		22322.98	22322.98	7.35		Si
SLD 10	5.46	2802.3	-25150	-0.0000655	0.0005615	0.0035	2.6699		28359.84	28359.84	10.12		Si
SLD 10	7.22	3116.05	-19908	-0.0000554	0.0005615	0.0035	2.6699		22984.01	22984.01	7.38		Si
SLV 9	5.46	3629.75	-25469	-0.0000702	0.0005615	0.0035	2.6699		28672.95	28672.95	7.9		Si
SLV 9	7.22	4389.46	-20801	-0.0000634	0.0005615	0.0035	2.6699		23885.21	23885.21	5.44		Si
SLD 6	5.46	2459.43	-24721	-0.0000629	0.0005615	0.0035	2.6699		27912.74	27912.74	11.35		Si
SLD 6	7.22	3049.24	-19248	-0.0000536	0.0005615	0.0035	2.6699		22321.21	22321.21	7.32		Si
SLV 6	5.46	2800.55	-24547	-0.0000641	0.0005615	0.0035	2.6699		27731.67	27731.67	9.9		Si
SLV 6	7.22	4263.52	-19252	-0.0000594	0.0005615	0.0035	2.6699		22324.95	22324.95	5.24		Si
SLD 9	5.46	2814.08	-25114	-0.0000655	0.0005615	0.0035	2.6699		28322.4	28322.4	10.06		Si
SLD 9	7.22	3102.61	-19910	-0.0000553	0.0005615	0.0035	2.6699		22985.78	22985.78	7.41		Si
SLV 13	5.46	3841.32	-26512	-0.0000736	0.0005615	0.0035	2.6699		29516.37	29516.37	7.68		Si
SLV 13	7.22	2997.6	-22047	-0.0000595	0.0005615	0.0035	2.6699		25152.6	25152.6	8.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	5.46	2641.57	-29714	-24743	3290	2.6699	2.6699	-33098	10833	8099	28547	22386	6808	29194	No	8.87	Si
SLU 50	7.22	2530.52	-23440	-19519	3135	2.6699	2.6699	-26109	10426	7794	28547	22386	6808	29194	No	9.31	Si
SLU 48	5.46	2658.09	-30015	-24994	3202	2.6699	2.6699	-33433	10833	8099	28547	22386	6808	29194	No	9.12	Si
SLU 48	7.22	2561.68	-23678	-19717	3071	2.6699	2.6699	-26375	10461	7820	28547	22386	6808	29194	No	9.51	Si
SLU 72	5.46	2866.48	-33206	-27651	3143	2.6699	2.6699	-36987	10833	8099	28547	22386	6808	29194	No	9.29	Si
SLU 72	7.22	2769.53	-26010	-21659	3072	2.6699	2.6699	-28972	10807	8079	28547	22386	6808	29194	No	9.5	Si
SLU 43	5.46	2568.31	-28428	-23672	3097	2.6699	2.6699	-31665	10833	8099	28547	22386	6808	29194	No	9.43	Si
SLU 43	7.22	2437.23	-22248	-18526	2973	2.6699	2.6699	-24781	10249	7662	28547	22386	6808	29194	No	9.82	Si
SLU 51	5.46	2652.99	-29746	-24770	3282	2.6699	2.6699	-33134	10833	8099	28547	22386	6808	29194	No	8.9	Si
SLU 51	7.22	2547.06	-23465	-19540	3109	2.6699	2.6699	-26137	10429	7797	28547	22386	6808	29194	No	9.39	Si
SLU 46	5.46	2632.88	-29405	-24486	3097	2.6699	2.6699	-32753	10833	8099	28547	22386	6808	29194	No	9.43	Si
SLU 46	7.22	2531.56	-23108	-19242	2964	2.6699	2.6699	-25739	10376	7757	28547	22386	6808	29194	No	9.85	Si
SLU 45	5.46	2621.46	-29372	-24459	3106	2.6699	2.6699	-32717	10833	8099	28547	22386	6808	29194	No	9.4	Si
SLU 45	7.22	2515.03	-23082	-19221	2990	2.6699	2.6699	-25711	10373	7754	28547	22386	6808	29194	No	9.76	Si
SLU 49	5.46	2669.51	-30048	-25021	3194	2.6699	2.6699	-33470	10833	8099	28547	22386	6808	29194	No	9.14	Si
SLU 49	7.22	2578.21	-23704	-19738	3045	2.6699	2.6699	-26403	10465	7823	28547	22386	6808	29194	No	9.59	Si
SLU 47	5.46	2623.97	-29125	-24253	3180	2.6699	2.6699	-32442	10833	8099	28547	22386	6808	29194	No	9.18	Si
SLU 47	7.22	2511.44	-22886	-19058	3011	2.6699	2.6699	-25492	10343	7733	28547	22386	6808	29194	No	9.7	Si
SLU 71	5.46	2855.06	-33173	-27624	3151	2.6699	2.6699	-36951	10833	8099	28547	22386	6808	29194	No	9.27	Si
SLU 71	7.22	2752.99	-25984	-21638	3098	2.6699	2.6699	-28944	10804	8077	28547	22386	6808	29194	No	9.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.46	498.06	-23201	-19320	6334	2.6699	2.6699	-25843	15585	11651	28547	33579	6808	40198		6.35	Si
SLV 4	7.22	1180.53	-16413	-13667	4421	2.6699	2.6699	-18282	14073	10521	28547	33579	6808	39067		8.84	Si
SLD 7	5.46	1537.08	-24562	-20453	4307	2.6699	2.6699	-27360	15889	11878	28547	33579	6808	40387		9.38	Si
SLD 7	7.22	1062.08	-18551	-15447	3355	2.6699	2.6699	-20663	14549	10877	28547	33579	6808	39423		11.75	Si
SLD 4	5.46	1449.14	-24151	-20111	3957	2.6699	2.6699	-26901	15797	11809	28547	33579	6808	40356		10.2	Si
SLD 4	7.22	1691.91	-18023	-15008	3127	2.6699	2.6699	-20076	14432	10789	28547	33579	6808	39335		12.58	Si
SLV 7	5.46	736.58	-24161	-20119	7073	2.6699	2.6699	-26912	15799	11811	28547	33579	6808	40358		5.71	Si
SLV 7	7.22	-242.11	-17662	-14708	4919	2.6699	2.6699	-19674	14351	10729	28547	33579	6808	39275		7.98	Si
SLV 12	5.46	1511.88	-25247	-21023	5359	2.6699	2.6699	-28122	16041	11992	28547	33579	6808	40387		7.54	Si
SLV 12	7.22	-54.61	-19203	-15991	4001	2.6699	2.6699	-21390	14695	10985	28547	33579	6808	39532		9.88	Si
SLV 11	5.46	1538.83	-25165	-20955	5317	2.6699	2.6699	-28031	16023	11978	28547	33579	6808	40387		7.6	Si
SLV 11	7.22	-85.39	-19207	-15994	3982	2.6699	2.6699	-21394	14696	10986	28547	33579	6808	39533		9.93	Si
SLD 8	5.46	1525.3	-24598	-20483	4325	2.6699	2.6699	-27400	15897	11884	28547	33579	6808	40387		9.34	Si
SLD 8	7.22	1075.52	-18549	-15446	3364	2.6699	2.6699	-20661	14549	10876	28547	33579	6808	39423		11.72	Si
SLV 3	5.46	539.88	-23073	-19214	6268	2.6699	2.6699	-25701	15557	11630	28547	33579	6808	40177		6.41	Si
SLV 3	7.22	1132.77	-16419	-13672	4391	2.6699	2.6699	-18289	14074	10522	28547	33579	6808	39068		8.9	Si
SLV 8	5.46	709.63	-24243	-20187	7115	2.6699	2.6699	-27004	15817	11825	28547	33579	6808	40371		5.67	Si
SLV 8	7.22	-211.33	-17658	-14704	4938	2.6699	2.6699	-19669	14350	10728	28547	33579	6808	39275		7.95	Si
SLD 3	5.46	1467.1	-24096	-20065	3929	2.6699	2.6699	-26840	15785	11800	28547	33579	6808	40347		10.27	Si
SLD 3	7.22	1671.4	-18026	-15010	3115	2.6699	2.6699	-20079	14432	10789	28547	33579	6808	39336		12.63	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.34 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.37	26185	-19575	140.74	2270.65	16.13	Si
SLV 4	179667	0.37	26268	-19637	140.74	2276.32	16.17	Si
SLV 1	179667	0.37	26609	-19892	140.74	2299.68	16.34	Si
SLV 2	179667	0.37	26691	-19954	140.74	2305.3	16.38	Si
SLV 7	179667	0.37	27830	-20805	140.74	2381.92	16.92	Si
SLV 8	179667	0.37	27883	-20845	140.74	2385.46	16.95	Si
SLV 5	179667	0.37	29243	-21861	140.74	2474.54	17.58	Si
SLV 6	179667	0.37	29296	-21901	140.74	2477.98	17.61	Si
SLV 11	179667	0.37	29651	-22167	140.74	2500.8	17.77	Si
SLV 12	179667	0.37	29705	-22206	140.74	2504.2	17.79	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.34 Wa = 0.05 Ta = 0.0384

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-20801	-25469	8	0.725	2384.7	0.966	10.91104	6.27525	Si
SLV 10	-20797	-25551	8	0.725	2384.3	0.966	10.9129	6.27525	Si
SLV 5	-19256	-24465	-22	0.774	2227.5	0.964	11.6703	6.27525	Si
SLV 6	-19252	-24547	-22	0.774	2227.1	0.964	11.67247	6.27525	Si
SLV 11	-19207	-25165	9	0.776	2222.5	0.964	11.70618	6.27525	Si
SLV 12	-19203	-25247	9	0.777	2222.1	0.964	11.70834	6.27525	Si
SLV 7	-17662	-24161	-21	0.833	2065.3	0.961	12.59648	6.27525	Si
SLV 8	-17658	-24243	-21	0.833	2064.9	0.961	12.59903	6.27525	Si
SLV 13	-22047	-26512	44	0.689	2511.5	0.968	10.34277	4.19048	Si
SLV 14	-22040	-26639	44	0.689	2510.9	0.968	10.34534	4.19048	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.952	SLU 84	Si
V_SLU	8.873	SLU 50	Si
PF_SLV	5.236	SLV 6	Si
V_SLV	5.674	SLV 8	Si
PFFP_SLV	16.133	SLV 3	Si
R_SLV	1.739	SLV 9	Si

Maschio 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.714	Z medio 800 cm	L6	2.67	0.28	0.984	1.759	0.209			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	8.77	417.65	-20896	-0.0000459	0.0003743	0.0035	2.6699	20236.99	22380.86	22380.86	53.59	No	Si
SLU 51	8.98	536.02	-20257	-0.000045	0.0003743	0.0035	2.6699	19845.04	21884.41	21884.41	40.83	No	Si
SLU 18	8.77	-371.69	-18068	-0.0000394	0.0003743	0.0035	2.6699	18394.34	21902.37	21902.37	58.93	No	Si
SLU 18	8.98	-494.71	-17182	-0.000038	0.0003743	0.0035	2.6699	17758.98	21097.93	21097.93	42.65	No	Si
SLU 49	8.77	395.54	-21102	-0.0000463	0.0003743	0.0035	2.6699	20360.04	22541.6	22541.6	56.99	No	Si
SLU 49	8.98	515.76	-20445	-0.0000454	0.0003743	0.0035	2.6699	19962.06	22030.25	22030.25	42.71	No	Si
SLU 40	8.77	-550.48	-20199	-0.000045	0.0003743	0.0035	2.6699	19808.68	23744.66	23744.66	43.13	No	Si
SLU 40	8.98	-665.3	-19212	-0.0000433	0.0003743	0.0035	2.6699	19173.65	22906.32	22906.32	34.43	No	Si
SLU 39	8.77	-584.97	-20161	-0.0000451	0.0003743	0.0035	2.6699	19784.95	23712.18	23712.18	40.54	No	Si
SLU 39	8.98	-712.28	-19172	-0.0000435	0.0003743	0.0035	2.6699	19146.72	22872.11	22872.11	32.11	No	Si
SLU 42	8.77	-544.6	-20829	-0.0000464	0.0003743	0.0035	2.6699	20196.5	24285.96	24285.96	44.59	No	Si
SLU 42	8.98	-641.34	-19848	-0.0000446	0.0003743	0.0035	2.6699	19586.78	23444.54	23444.54	36.56	No	Si
SLU 41	8.77	-579.1	-20791	-0.0000465	0.0003743	0.0035	2.6699	20173.61	24253.96	24253.96	41.88	No	Si
SLU 41	8.98	-688.32	-19807	-0.0000448	0.0003743	0.0035	2.6699	19560.76	23409.87	23409.87	34.01	No	Si
SLU 44	8.77	428.91	-19661	-0.0000432	0.0003743	0.0035	2.6699	19466.67	21425.85	21425.85	49.95	No	Si
SLU 44	8.98	519.41	-19013	-0.0000422	0.0003743	0.0035	2.6699	19040.98	20931.81	20931.81	40.3	No	Si
SLU 47	8.77	434.78	-20291	-0.0000446	0.0003743	0.0035	2.6699	19866.39	21910.88	21910.88	50.4	No	Si
SLU 47	8.98	543.37	-19648	-0.0000437	0.0003743	0.0035	2.6699	19458.56	21416.23	21416.23	39.41	No	Si
SLU 46	8.77	389.67	-20472	-0.0000448	0.0003743	0.0035	2.6699	19978.25	22050.58	22050.58	56.59	No	Si
SLU 46	8.98	491.8	-19810	-0.0000438	0.0003743	0.0035	2.6699	19562.25	21539.89	21539.89	43.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.77	-3186.75	-15343	-0.0000458	0.0005615	0.0035	2.6699		20251.16	20251.16	6.35		Si
SLV 12	8.98	-4114.89	-14310	-0.0000479	0.0005615	0.0035	2.6699		19134.81	19134.81	4.65		Si
SLV 8	8.77	-3143.49	-14903	-0.0000447	0.0005615	0.0035	2.6699		19773.61	19773.61	6.29		Si
SLV 8	8.98	-3910.57	-14192	-0.0000467	0.0005615	0.0035	2.6699		19007.9	19007.9	4.86		Si
SLV 6	8.77	3304.23	-18121	-0.0000524	0.0005615	0.0035	2.6699		21196.75	21196.75	6.42		Si
SLV 6	8.98	4281.53	-17897	-0.0000565	0.0005615	0.0035	2.6699		20974.73	20974.73	4.9		Si
SLV 10	8.77	3260.97	-18561	-0.0000531	0.0005615	0.0035	2.6699		21634.82	21634.82	6.63		Si
SLV 10	8.98	4077.21	-18015	-0.0000558	0.0005615	0.0035	2.6699		21091.91	21091.91	5.17		Si
SLD 5	8.77	1475.13	-17318	-0.0000421	0.0005615	0.0035	2.6699		20401.86	20401.86	13.83		Si
SLD 5	8.98	1908.17	-16865	-0.0000431	0.0005615	0.0035	2.6699		19955.41	19955.41	10.46		Si
SLD 6	8.77	1484.26	-17335	-0.0000422	0.0005615	0.0035	2.6699		20418.01	20418.01	13.76		Si
SLD 6	8.98	1924.66	-16883	-0.0000433	0.0005615	0.0035	2.6699		19973.16	19973.16	10.38		Si
SLV 7	8.77	-3164.41	-14866	-0.0000447	0.0005615	0.0035	2.6699		19733.13	19733.13	6.24		Si
SLV 7	8.98	-3948.31	-14151	-0.0000468	0.0005615	0.0035	2.6699		18963.58	18963.58	4.8		Si
SLV 9	8.77	3240.06	-18524	-0.000053	0.0005615	0.0035	2.6699		21597.51	21597.51	6.67		Si
SLV 9	8.98	4039.46	-17974	-0.0000555	0.0005615	0.0035	2.6699		21050.95	21050.95	5.21		Si
SLV 5	8.77	3283.32	-18083	-0.0000522	0.0005615	0.0035	2.6699		21159.57	21159.57	6.44		Si
SLV 5	8.98	4243.79	-17856	-0.0000562	0.0005615	0.0035	2.6699		20933.81	20933.81	4.93		Si
SLV 11	8.77	-3207.66	-15306	-0.0000458	0.0005615	0.0035	2.6699		20210.42	20210.42	6.3		Si
SLV 11	8.98	-4152.63	-14269	-0.000048	0.0005615	0.0035	2.6699		19090.44	19090.44	4.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	8.77	417.65	-20896	-17401	2943	2.6699	2.6699	-23276	10048	7512	9516	22386	6808	17027	No	5.79	Si
SLU 51	8.98	536.02	-20257	-16868	3020	2.6699	2.6699	-22564	9953	7441	9516	22386	6808	16956	No	5.61	Si
SLU 45	8.77	355.17	-20434	-17016	2851	2.6699	2.6699	-22761	9979	7460	9516	22386	6808	16976	No	5.95	Si
SLU 45	8.98	444.82	-19769	-16462	2910	2.6699	2.6699	-22020	9880	7386	9516	22386	6808	16902	No	5.81	Si
SLU 44	8.77	428.91	-19661	-16372	2767	2.6699	2.6699	-21900	9864	7374	9516	22386	6808	16890	No	6.1	Si
SLU 44	8.98	519.41	-19013	-15832	2831	2.6699	2.6699	-21178	9768	7302	9516	22386	6808	16818	No	5.94	Si
SLU 47	8.77	434.78	-20291	-16897	2839	2.6699	2.6699	-22602	9958	7444	9516	22386	6808	16960	No	5.97	Si
SLU 47	8.98	543.37	-19648	-16361	2909	2.6699	2.6699	-21886	9863	7373	9516	22386	6808	16889	No	5.81	Si
SLU 50	8.77	383.16	-20858	-17369	2992	2.6699	2.6699	-23234	10042	7507	9516	22386	6808	17023	No	5.69	Si
SLU 50	8.98	489.04	-20216	-16834	3068	2.6699	2.6699	-22519	9947	7436	9516	22386	6808	16952	No	5.52	Si
SLU 43	8.77	371.41	-19598	-16319	2848	2.6699	2.6699	-21830	9855	7367	9516	22386	6808	16883	No	5.93	Si
SLU 43	8.98	441.12	-18945	-15776	2911	2.6699	2.6699	-21102	9758	7295	9516	22386	6808	16810	No	5.77	Si
SLU 46	8.77	389.67	-20472	-17047	2803	2.6699	2.6699	-22803	9985	7464	9516	22386	6808	16980	No	6.06	Si
SLU 46	8.98	491.8	-19810	-16496	2861	2.6699	2.6699	-22066	9887	7391	9516	22386	6808	16906	No	5.91	Si
SLU 71	8.77	169.87	-22951	-19112	2882	2.6699	2.6699	-25565	10353	7740	9516	22386	6808	17255	No	5.99	Si
SLU 71	8.98	271.47	-22206	-18492	2885	2.6699	2.6699	-24735	10242	7657	9516	22386	6808	17173	No	5.95	Si
SLU 49	8.77	395.54	-21102	-17572	2874	2.6699	2.6699	-23505	10078	7534	9516	22386	6808	17050	No	5.93	Si
SLU 49	8.98	515.76	-20445	-17025	2940	2.6699	2.6699	-22774	9981	7462	9516	22386	6808	16977	No	5.77	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	8.77	361.05	-21064	-17540	2923	2.6699	2.6699	-23463	10073	7530	9516	22386	6808	17046	No	5.83	Si
SLU 48	8.98	468.78	-20405	-16991	2988	2.6699	2.6699	-22728	9975	7457	9516	22386	6808	16973	No	5.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.77	-3143.49	-14903	-12410	3244	2.6699	2.6699	-16600	13737	10269	9516	33579	6808	19785		6.1	Si
SLV 8	8.98	-3910.57	-14192	-11818	3730	2.6699	2.6699	-15809	13578	10151	9516	33579	6808	19666		5.27	Si
SLD 11	8.77	-1387.69	-16092	-13400	2639	2.6699	2.6699	-17925	14002	10467	9516	33579	6808	19983		7.57	Si
SLD 11	8.98	-1795.76	-15283	-12726	2739	2.6699	2.6699	-17023	13821	10333	9516	33579	6808	19848		7.25	Si
SLV 11	8.77	-3207.66	-15306	-12746	3499	2.6699	2.6699	-17049	13826	10336	9516	33579	6808	19852		5.67	Si
SLV 11	8.98	-4152.63	-14269	-11882	3768	2.6699	2.6699	-15894	13596	10164	9516	33579	6808	19679		5.22	Si
SLV 7	8.77	-3164.41	-14866	-12379	3307	2.6699	2.6699	-16559	13728	10263	9516	33579	6808	19779		5.98	Si
SLV 7	8.98	-3948.31	-14151	-11784	3785	2.6699	2.6699	-15763	13569	10144	9516	33579	6808	19660		5.19	Si
SLD 12	8.77	-1378.56	-16109	-13414	2611	2.6699	2.6699	-17943	14005	10470	9516	33579	6808	19986		7.65	Si
SLD 12	8.98	-1779.28	-15301	-12741	2715	2.6699	2.6699	-17043	13825	10336	9516	33579	6808	19851		7.31	Si
SLV 12	8.77	-3186.75	-15343	-12777	3435	2.6699	2.6699	-17091	13835	10343	9516	33579	6808	19858		5.78	Si
SLV 12	8.98	-4114.89	-14310	-11917	3713	2.6699	2.6699	-15940	13605	10171	9516	33579	6808	19686		5.3	Si
SLV 15	8.77	-1007.19	-16936	-14103	2773	2.6699	2.6699	-18864	14190	10608	9516	33579	6808	20123		7.26	Si
SLV 15	8.98	-1534.19	-15692	-13067	2505	2.6699	2.6699	-17479	13913	10401	9516	33579	6808	19916		7.95	Si
SLD 8	8.77	-1360.09	-15921	-13257	2529	2.6699	2.6699	-17734	13963	10439	9516	33579	6808	19954		7.89	Si
SLD 8	8.98	-1692.17	-15251	-12700	2722	2.6699	2.6699	-16988	13814	10327	9516	33579	6808	19843		7.29	Si
SLV 16	8.77	-974.74	-16994	-14151	2674	2.6699	2.6699	-18929	14202	10617	9516	33579	6808	20133		7.53	Si
SLV 16	8.98	-1475.62	-15756	-13121	2420	2.6699	2.6699	-17551	13927	10411	9516	33579	6808	19927		8.23	Si
SLD 7	8.77	-1369.23	-15904	-13244	2557	2.6699	2.6699	-17715	13960	10436	9516	33579	6808	19952		7.8	Si
SLD 7	8.98	-1708.66	-15233	-12685	2746	2.6699	2.6699	-16968	13810	10324	9516	33579	6808	19840		7.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.875 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.42	18965	-14178	24.12	1738.44	72.09	Si
SLV 8	179667	0.42	19020	-14219	24.12	1742.71	72.27	Si
SLV 11	179667	0.42	19098	-14277	24.12	1748.83	72.52	Si
SLV 12	179667	0.42	19152	-14318	24.12	1753.08	72.7	Si
SLV 3	179667	0.42	20431	-15274	24.12	1852.29	76.81	Si
SLV 4	179667	0.42	20516	-15337	24.12	1858.74	77.08	Si
SLV 15	179667	0.42	20872	-15603	24.12	1885.92	78.21	Si
SLV 16	179667	0.42	20956	-15666	24.12	1892.33	78.47	Si
SLV 1	179667	0.42	21833	-16322	24.12	1958.38	81.21	Si
SLV 2	179667	0.42	21917	-16385	24.12	1964.67	81.47	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.875 Wa = 0.05 Ta = 0.0058

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18015	-18561	396	0.929	1938.3	0.983	13.7331	3.91198	Si
SLV 9	-17974	-18524	396	0.931	1934.1	0.983	13.75917	3.91198	Si
SLV 6	-17897	-18121	-363	0.936	1926.2	0.983	13.83444	3.91198	Si
SLV 5	-17856	-18083	-363	0.938	1922	0.983	13.86128	3.91198	Si
SLV 14	-16868	-17959	1304	0.929	1821.3	0.982	13.74345	3.70749	Si
SLV 13	-16804	-17901	1304	0.932	1814.8	0.982	13.7867	3.70749	Si
SLV 2	-16474	-16491	-1227	0.951	1781.2	0.982	14.08237	3.70749	Si
SLV 1	-16410	-16433	-1227	0.954	1774.7	0.982	14.12856	3.70749	Si
SLV 16	-15756	-16994	1322	0.981	1708.1	0.981	14.5311	3.70749	Si
SLV 15	-15692	-16936	1323	0.984	1701.6	0.981	14.58048	3.70749	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	32.111	SLU 39	Si
V_SLU	5.525	SLU 50	Si
PF_SLV	4.597	SLV 11	Si
V_SLV	5.194	SLV 7	Si
PFFP_SLV	72.09	SLV 7	Si
R_SLV	3.511	SLV 10	Si

Maschio 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L5	L6	3.35	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	5.46	-8744.3	-17456	-0.0000815	0.0004492	0.0035	3.35	21445.33	31836.03	31836.03	3.64	No	Si
SLU 60	8.98	-956.32	-12839	-0.0000346	0.0004492	0.0035	3.35	17289.88	25740.36	25740.36	26.92	No	Si
SLU 82	5.46	-9816.06	-19017	-0.0000907	0.0004492	0.0035	3.35	22604.15	33806.33	33806.33	3.44	No	Si
SLU 82	8.98	-1059.99	-14225	-0.0000385	0.0004492	0.0035	3.35	18651.34	27638.37	27638.37	26.07	No	Si
SLU 73	5.46	-9228.38	-18742	-0.0000873	0.0004492	0.0035	3.35	22409	33472.03	33472.03	3.63	No	Si
SLU 73	8.98	-961.58	-13950	-0.0000374	0.0004492	0.0035	3.35	18388.74	27261.4	27261.4	28.35	No	Si
SLU 84	5.46	-9729.25	-19930	-0.0000929	0.0004492	0.0035	3.35	23224.17	34915.98	34915.98	3.59	No	Si
SLU 84	8.98	-1092.81	-15138	-0.0000409	0.0004492	0.0035	3.35	19495.21	28840.16	28840.16	26.39	No	Si
SLU 41	5.46	-8465.9	-16538	-0.0000778	0.0004492	0.0035	3.35	20706.12	30649.94	30649.94	3.62	No	Si
SLU 41	8.98	-1018.04	-12765	-0.0000347	0.0004492	0.0035	3.35	17213.52	25637.8	25637.8	25.18	No	Si
SLU 40	5.46	-8526.29	-15608	-0.0000756	0.0004492	0.0035	3.35	19912.93	29447.75	29447.75	3.45	No	Si
SLU 40	8.98	-928.12	-11835	-0.000032	0.0004492	0.0035	3.35	16240.81	24363.49	24363.49	26.25	No	Si
SLU 42	5.46	-8439.48	-16521	-0.0000776	0.0004492	0.0035	3.35	20692.18	30628.22	30628.22	3.63	No	Si
SLU 42	8.98	-960.95	-12748	-0.0000344	0.0004492	0.0035	3.35	17196.34	25614.78	25614.78	26.66	No	Si
SLU 81	5.46	-9842.48	-19034	-0.0000909	0.0004492	0.0035	3.35	22615.95	33826.75	33826.75	3.44	No	Si
SLU 81	8.98	-1117.08	-14241	-0.0000388	0.0004492	0.0035	3.35	18667.25	27661.4	27661.4	24.76	No	Si
SLU 83	5.46	-9755.67	-19947	-0.000093	0.0004492	0.0035	3.35	23235.17	34936.4	34936.4	3.58	No	Si
SLU 83	8.98	-1149.91	-15155	-0.0000412	0.0004492	0.0035	3.35	19510.34	28861.88	28861.88	25.1	No	Si
SLU 39	5.46	-8552.71	-15625	-0.0000757	0.0004492	0.0035	3.35	19927.65	29469.47	29469.47	3.45	No	Si
SLU 39	8.98	-985.21	-11851	-0.0000323	0.0004492	0.0035	3.35	16258.78	24386.51	24386.51	24.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	5.46	-4167.16	-11456	-0.0000447	0.0006738	0.0035	3.35		24179.15	24179.15	5.8		Si
SLV 9	8.98	4705.94	-8393	-0.0000396	0.0006738	0.0035	3.35		14418.16	14418.16	3.06		Si
SLD 11	5.46	-7286.55	-15063	-0.0000672	0.0006738	0.0035	3.35		29269.13	29269.13	4.02		Si
SLD 11	8.98	-3184.26	-11178	-0.0000398	0.0006738	0.0035	3.35		23772.85	23772.85	7.47		Si
SLD 12	5.46	-7281.29	-15045	-0.0000671	0.0006738	0.0035	3.35		29244.53	29244.53	4.02		Si
SLD 12	8.98	-3137.26	-11160	-0.0000396	0.0006738	0.0035	3.35		23747.02	23747.02	7.57		Si
SLV 6	5.46	-3903.1	-10865	-0.0000421	0.0006738	0.0035	3.35		23308.81	23308.81	5.97		Si
SLV 6	8.98	4903.91	-7771	-0.0000391	0.0006738	0.0035	3.35		13476.73	13476.73	2.75		Si
SLV 11	5.46	-8593.1	-16723	-0.0000772	0.0006738	0.0035	3.35		31541.76	31541.76	3.67		Si
SLV 11	8.98	-6322.82	-12521	-0.0000567	0.0006738	0.0035	3.35		25681.77	25681.77	4.06		Si
SLV 10	5.46	-4155.12	-11417	-0.0000446	0.0006738	0.0035	3.35		24122.83	24122.83	5.81		Si
SLV 10	8.98	4813.53	-8353	-0.00004	0.0006738	0.0035	3.35		14357.73	14357.73	2.98		Si
SLV 8	5.46	-8329.05	-16131	-0.0000745	0.0006738	0.0035	3.35		30748.14	30748.14	3.69		Si
SLV 8	8.98	-6124.84	-11899	-0.0000543	0.0006738	0.0035	3.35		24804.33	24804.33	4.05		Si
SLV 7	5.46	-8341.08	-16171	-0.0000747	0.0006738	0.0035	3.35		30801.63	30801.63	3.69		Si
SLV 7	8.98	-6232.43	-11939	-0.0000548	0.0006738	0.0035	3.35		24860.65	24860.65	3.99		Si
SLV 12	5.46	-8581.07	-16683	-0.000077	0.0006738	0.0035	3.35		31488.27	31488.27	3.67		Si
SLV 12	8.98	-6215.22	-12481	-0.0000561	0.0006738	0.0035	3.35		25625.45	25625.45	4.12		Si
SLV 5	5.46	-3915.14	-10904	-0.0000423	0.0006738	0.0035	3.35		23367.95	23367.95	5.97		Si
SLV 5	8.98	4796.32	-7811	-0.0000387	0.0006738	0.0035	3.35		13537.16	13537.16	2.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	5.46	-9816.06	-19017	-11166	-2488	3.35	3.35	-20832	10833	5807	115546	19262	17085	36347	No	14.61	Si
SLU 82	8.98	-1059.99	-14225	-8352	-2488	3.35	3.35	-15582	10411	5580	115546	19262	17085	36347	No	14.61	Si
SLU 81	5.46	-9842.48	-19034	-11176	-2479	3.35	3.35	-20850	10833	5807	115546	19262	17085	36347	No	14.66	Si
SLU 81	8.98	-1117.08	-14241	-8362	-2479	3.35	3.35	-15601	10413	5582	115546	19262	17085	36347	No	14.66	Si
SLU 74	5.46	-9343.27	-19674	-11552	-2342	3.35	3.35	-21551	10833	5807	115546	19262	17085	36347	No	15.52	Si
SLU 74	8.98	-1100.27	-14881	-8738	-2342	3.35	3.35	-16302	10507	5632	115546	19262	17085	36347	No	15.52	Si
SLU 73	5.46	-9228.38	-18742	-11004	-2349	3.35	3.35	-20531	10833	5807	115546	19262	17085	36347	No	15.48	Si
SLU 73	8.98	-961.58	-13950	-8191	-2349	3.35	3.35	-15281	10371	5559	115546	19262	17085	36347	No	15.48	Si
SLU 75	5.46	-9316.85	-19657	-11542	-2350	3.35	3.35	-21533	10833	5807	115546	19262	17085	36347	No	15.46	Si
SLU 75	8.98	-1043.18	-14865	-8728	-2350	3.35	3.35	-16283	10504	5630	115546	19262	17085	36347	No	15.46	Si
SLU 77	5.46	-9256.45	-20587	-12088	-2308	3.35	3.35	-22552	10833	5807	115546	19262	17085	36347	No	15.75	Si
SLU 77	8.98	-1133.1	-15795	-9274	-2308	3.35	3.35	-17302	10640	5703	115546	19262	17085	36347	No	15.75	Si
SLU 78	5.46	-9230.03	-20570	-12078	-2316	3.35	3.35	-22533	10833	5807	115546	19262	17085	36347	No	15.69	Si
SLU 78	8.98	-1076.01	-15778	-9264	-2316	3.35	3.35	-17284	10638	5702	115546	19262	17085	36347	No	15.69	Si
SLU 76	5.46	-9141.56	-19655	-11541	-2315	3.35	3.35	-21531	10833	5807	115546	19262	17085	36347	No	15.7	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	8.98	-994.4	-14863	-8727	-2315	3.35	3.35	-16281	10504	5630	115546	19262	17085	36347	No	15.7	Si
SLU 83	5.46	-9755.67	-19947	-11712	-2445	3.35	3.35	-21851	10833	5807	115546	19262	17085	36347	No	14.87	Si
SLU 83	8.98	-1149.91	-15155	-8898	-2445	3.35	3.35	-16601	10547	5653	115546	19262	17085	36347	No	14.87	Si
SLU 84	5.46	-9729.25	-19930	-11702	-2454	3.35	3.35	-21832	10833	5807	115546	19262	17085	36347	No	14.81	Si
SLU 84	8.98	-1092.81	-15138	-8888	-2454	3.35	3.35	-16583	10544	5652	115546	19262	17085	36347	No	14.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 9	5.46	-5316.08	-12761	-7493	-2296	3.35	3.35	-13979	15296	8199	115546	28894	17085	45979		20.03	Si
SLD 9	8.98	1680.76	-9364	-5498	-1725	3.35	3.35	-10258	14552	7800	115546	28894	17085	45979		26.66	Si
SLV 1	5.46	-5173.52	-12115	-7113	-2294	3.35	3.35	-13271	15154	8123	115546	28894	17085	45979		20.05	Si
SLV 1	8.98	1012.02	-8588	-5043	-1613	3.35	3.35	-9408	14382	7709	115546	28894	17085	45979		28.51	Si
SLV 10	5.46	-4155.12	-11417	-6703	-3240	3.35	3.35	-12506	15001	8041	115546	28894	17085	45979		14.19	Si
SLV 10	8.98	4813.53	-8353	-4904	-1951	3.35	3.2962	-9150	14330	7557	115546	28894	17085	45979		23.57	Si
SLV 2	5.46	-5154.84	-12053	-7077	-2336	3.35	3.35	-13203	15141	8115	115546	28894	17085	45979		19.69	Si
SLV 2	8.98	1178.98	-8526	-5006	-1655	3.35	3.35	-9340	14368	7701	115546	28894	17085	45979		27.78	Si
SLV 5	5.46	-3915.14	-10904	-6403	-3348	3.35	3.35	-11945	14889	7981	115546	28894	17085	45979		13.73	Si
SLV 5	8.98	4796.32	-7811	-4586	-1897	3.35	3.1828	-8556	14211	7237	115546	28894	17085	45979		24.24	Si
SLV 9	5.46	-4167.16	-11456	-6727	-3213	3.35	3.35	-12550	15010	8045	115546	28894	17085	45979		14.31	Si
SLV 9	8.98	4705.94	-8393	-4928	-1924	3.35	3.3428	-9194	14339	7669	115546	28894	17085	45979		23.9	Si
SLD 10	5.46	-5310.82	-12744	-7483	-2308	3.35	3.35	-13960	15292	8197	115546	28894	17085	45979		19.92	Si
SLD 10	8.98	1727.75	-9347	-5488	-1736	3.35	3.35	-10239	14548	7798	115546	28894	17085	45979		26.48	Si
SLV 6	5.46	-3903.1	-10865	-6379	-3375	3.35	3.35	-11901	14880	7976	115546	28894	17085	45979		13.62	Si
SLV 6	8.98	4903.91	-7771	-4563	-1924	3.35	3.1318	-8513	14203	7117	115546	28894	17085	45979		23.9	Si
SLD 5	5.46	-5214.91	-12542	-7364	-2348	3.35	3.35	-13739	15248	8173	115546	28894	17085	45979		19.58	Si
SLD 5	8.98	1718.36	-9132	-5362	-1714	3.35	3.35	-10003	14501	7772	115546	28894	17085	45979		26.83	Si
SLD 6	5.46	-5209.66	-12525	-7354	-2360	3.35	3.35	-13720	15244	8171	115546	28894	17085	45979		19.48	Si
SLD 6	8.98	1765.35	-9114	-5352	-1726	3.35	3.35	-9984	14497	7770	115546	28894	17085	45979		26.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-9472	0.39	210.66	684.72	1156.49	920.6	4.37	Si
SLV 5	-9512	0.39	210.66	687.29	1160.24	923.76	4.39	Si
SLV 2	-10034	0.39	210.66	720.76	1209.31	965.03	4.58	Si
SLV 1	-10096	0.39	210.66	724.7	1215.13	969.91	4.6	Si
SLV 10	-10285	0.39	210.66	736.64	1232.83	984.74	4.67	Si
SLV 9	-10325	0.39	210.66	739.16	1236.58	987.87	4.69	Si
SLV 4	-11338	0.39	210.66	802.37	1331.71	1067.04	5.07	Si
SLV 3	-11400	0.39	210.66	806.18	1337.52	1071.85	5.09	Si
SLV 14	-12743	0.39	210.66	887.19	1462.11	1174.65	5.58	Si
SLV 13	-12805	0.39	210.66	890.85	1467.78	1179.31	5.6	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-12521	-16723	180	1.336	1541.5	0.95	20.43968	16.76087	Si
SLV 12	-12481	-16683	180	1.34	1537.4	0.95	20.49871	16.76087	Si
SLV 7	-11939	-16171	-181	1.392	1482.4	0.948	21.33499	16.76087	Si
SLV 8	-11899	-16131	-181	1.396	1478.4	0.948	21.39935	16.76087	Si
SLV 9	-8393	-11456	169	1.875	1123.1	0.935	29.15094	16.76087	Si
SLV 10	-8353	-11417	169	1.882	1119.1	0.934	29.27133	16.76087	Si
SLV 5	-7811	-10904	-192	1.986	1064.3	0.932	30.97234	16.76087	Si
SLV 6	-7771	-10865	-192	1.994	1060.3	0.931	31.10835	16.76087	Si
SLV 15	-11766	-15535	596	1.379	1464.8	0.948	21.14403	8.72685	Si
SLV 16	-11704	-15473	596	1.385	1458.6	0.948	21.2445	8.72685	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.437	SLU 81	Si
V_SLU	14.612	SLU 82	Si
PF_SLV	2.748	SLV 6	Si
V_SLV	13.624	SLV 6	Si
PFFP_SLV	4.37	SLV 6	Si
R_SLV	1.219	SLV 11	Si

Maschio 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L5	L6	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	5.46	795.43	-16974	-0.0000687	0.0003743	0.0035	1.67	9120.04	10729.48	10729.48	13.49	No	Si
SLU 80	7.56	-2124.78	-18028	-0.0000908	0.0003743	0.0035	1.67	9353.11	11520.42	11520.42	5.42	No	Si
SLU 82	5.46	823.35	-16877	-0.0000687	0.0003743	0.0035	1.67	9096.53	10688.91	10688.91	12.98	No	Si
SLU 82	7.56	-2115.42	-17886	-0.0000901	0.0003743	0.0035	1.67	9324	11461.03	11461.03	5.42	No	Si
SLU 76	5.46	794.17	-16617	-0.0000673	0.0003743	0.0035	1.67	9032.25	10575.21	10575.21	13.32	No	Si
SLU 76	7.56	-2089.28	-17612	-0.0000886	0.0003743	0.0035	1.67	9265.61	11346.97	11346.97	5.43	No	Si
SLU 84	5.46	830.36	-17235	-0.0000702	0.0003743	0.0035	1.67	9181.27	10817.74	10817.74	13.03	No	Si
SLU 84	7.56	-2158.44	-18302	-0.0000924	0.0003743	0.0035	1.67	9407.15	11635.61	11635.61	5.39	No	Si
SLU 79	5.46	786.8	-16973	-0.0000686	0.0003743	0.0035	1.67	9119.74	10728.96	10728.96	13.64	No	Si
SLU 79	7.56	-2113.49	-18031	-0.0000906	0.0003743	0.0035	1.67	9353.64	11521.51	11521.51	5.45	No	Si
SLU 75	5.46	794.92	-16759	-0.0000679	0.0003743	0.0035	1.67	9067.75	10638.49	10638.49	13.38	No	Si
SLU 75	7.56	-2104.02	-17776	-0.0000895	0.0003743	0.0035	1.67	9300.9	11415.14	11415.14	5.43	No	Si
SLU 78	5.46	801.93	-17117	-0.0000694	0.0003743	0.0035	1.67	9153.96	10778.73	10778.73	13.44	No	Si
SLU 78	7.56	-2147.04	-18191	-0.0000918	0.0003743	0.0035	1.67	9385.66	11588.98	11588.98	5.4	No	Si
SLU 83	5.46	821.73	-17233	-0.0000701	0.0003743	0.0035	1.67	9180.98	10817.32	10817.32	13.16	No	Si
SLU 83	7.56	-2147.15	-18304	-0.0000922	0.0003743	0.0035	1.67	9407.65	11636.71	11636.71	5.42	No	Si
SLU 77	5.46	793.3	-17116	-0.0000692	0.0003743	0.0035	1.67	9153.67	10778.31	10778.31	13.59	No	Si
SLU 77	7.56	-2135.75	-18194	-0.0000916	0.0003743	0.0035	1.67	9386.17	11590.08	11590.08	5.43	No	Si
SLU 81	5.46	814.72	-16876	-0.0000686	0.0003743	0.0035	1.67	9096.23	10688.38	10688.38	13.12	No	Si
SLU 81	7.56	-2104.13	-17889	-0.0000899	0.0003743	0.0035	1.67	9324.54	11462.11	11462.11	5.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	5.46	-4846.05	-17357	-0.0001191	0.0005615	0.0035	1.67		12573.24	12573.24	2.59		Si
SLV 16	7.56	3774.68	-8811	-0.0000801	0.0005615	0.0035	1.67		6715.48	6715.48	1.78		Si
SLV 2	5.46	6310.08	-5334	-0.02032	0.0005615	0.0035	1.336		4359.33	4359.33	0.69		No
SLV 2	7.56	-7085.43	-15791	-0.0001612	0.0005615	0.0035	1.336		11701.15	11701.15	1.65		Si
SLV 15	5.46	-5312.97	-17687	-0.0001269	0.0005615	0.0035	1.67		12748.26	12748.26	2.4		Si
SLV 15	7.56	4290.67	-8287	-0.0000979	0.0005615	0.0035	1.67		6394	6394	1.49		Si
SLD 2	5.46	2982.32	-8862	-0.000065	0.0005615	0.0035	1.67		6746.62	6746.62	2.26		Si
SLD 2	7.56	-3828.15	-13631	-0.0000918	0.0005615	0.0035	1.67		10440.3	10440.3	2.73		Si
SLV 3	5.46	5879.95	-7076	-0.0060756	0.0005615	0.0035	1.336		5626.19	5626.19	0.96		No
SLV 3	7.56	-6700.91	-17091	-0.0001509	0.0005615	0.0035	1.67		12428.27	12428.27	1.85		Si
SLV 4	5.46	6346.87	-6745	-0.0114197	0.0005615	0.0035	1.336		5389.8	5389.8	0.85		No
SLV 4	7.56	-7216.9	-17614	-0.0001637	0.0005615	0.0035	1.67		12709.99	12709.99	1.76		Si
SLV 13	5.46	-5349.77	-16276	-0.0001229	0.0005615	0.0035	1.67		11973.06	11973.06	2.24		Si
SLV 13	7.56	4422.13	-6464	-0.0001703	0.0005615	0.0035	1.67		5186.73	5186.73	1.17		Si
SLD 4	5.46	2999.4	-9482	-0.0000669	0.0005615	0.0035	1.67		7130.38	7130.38	2.38		Si
SLD 4	7.56	-3885.95	-14436	-0.0000955	0.0005615	0.0035	1.67		10915.72	10915.72	2.81		Si
SLV 14	5.46	-4882.85	-15945	-0.0001146	0.0005615	0.0035	1.67		11787.53	11787.53	2.41		Si
SLV 14	7.56	3906.15	-6988	-0.0000947	0.0005615	0.0035	1.67		5563.52	5563.52	1.42		Si
SLV 1	5.46	5843.16	-5664	-0.0139951	0.0005615	0.0035	1.336		4603.28	4603.28	0.79		No
SLV 1	7.56	-6569.45	-15267	-0.0001471	0.0005615	0.0035	1.67		11406	11406	1.74		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	5.46	794.92	-16759	-13956	2574	1.67	1.67	-29845	10833	5066	40441	14002	4259	18261	No	7.1	Si
SLU 75	7.56	-2104.02	-17776	-14803	2716	1.67	1.67	-31656	10833	5066	40441	14002	4259	18261	No	6.72	Si
SLU 83	5.46	821.73	-17233	-14351	2607	1.67	1.67	-30690	10833	5066	40441	14002	4259	18261	No	7.01	Si
SLU 83	7.56	-2147.15	-18304	-15242	2753	1.67	1.67	-32596	10833	5066	40441	14002	4259	18261	No	6.63	Si
SLU 78	5.46	801.93	-17117	-14254	2619	1.67	1.67	-30483	10833	5066	40441	14002	4259	18261	No	6.97	Si
SLU 78	7.56	-2147.04	-18191	-15148	2764	1.67	1.67	-32395	10833	5066	40441	14002	4259	18261	No	6.61	Si
SLU 74	5.46	786.29	-16758	-13955	2566	1.67	1.67	-29843	10833	5066	40441	14002	4259	18261	No	7.12	Si
SLU 74	7.56	-2092.73	-17779	-14805	2704	1.67	1.67	-31661	10833	5066	40441	14002	4259	18261	No	6.75	Si
SLU 84	5.46	830.36	-17235	-14352	2615	1.67	1.67	-30692	10833	5066	40441	14002	4259	18261	No	6.98	Si
SLU 84	7.56	-2158.44	-18302	-15240	2765	1.67	1.67	-32592	10833	5066	40441	14002	4259	18261	No	6.6	Si
SLU 77	5.46	793.3	-17116	-14253	2611	1.67	1.67	-30480	10833	5066	40441	14002	4259	18261	No	6.99	Si
SLU 77	7.56	-2135.75	-18194	-15150	2752	1.67	1.67	-32400	10833	5066	40441	14002	4259	18261	No	6.64	Si
SLU 81	5.46	814.72	-16876	-14052	2562	1.67	1.67	-30052	10833	5066	40441	14002	4259	18261	No	7.13	Si
SLU 81	7.56	-2104.13	-17889	-14896	2706	1.67	1.67	-31857	10833	5066	40441	14002	4259	18261	No	6.75	Si
SLU 80	5.46	795.43	-16974	-14135	2598	1.67	1.67	-30228	10833	5066	40441	14002	4259	18261	No	7.03	Si
SLU 80	7.56	-2124.78	-18028	-15013	2742	1.67	1.67	-32105	10833	5066	40441	14002	4259	18261	No	6.66	Si
SLU 79	5.46	786.8	-16973	-14134	2590	1.67	1.67	-30226	10833	5066	40441	14002	4259	18261	No	7.05	Si
SLU 79	7.56	-2113.49	-18031	-15015	2730	1.67	1.67	-32110	10833	5066	40441	14002	4259	18261	No	6.69	Si
SLU 82	5.46	823.35	-16877	-14054	2570	1.67	1.67	-30054	10833	5066	40441	14002	4259	18261	No	7.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	7.56	-2115.42	-17886	-14894	2718	1.67	1.67	-31852	10833	5066	40441	14002	4259	18261	No	6.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	5.46	-5349.77	-16276	-13553	-8284	1.67	1.5189	-32429	16250	6911	40441	21003	4259	25262		3.05	Si
SLV 13	7.56	4422.13	-6464	-5383	-7540	1.67	0.4526	-43529	16250	2059	40441	21003	4259	25262		3.35	Si
SLV 1	5.46	5843.16	-5664	-4717	10636	1.336	0	0	0	0	40441	16803	3407	20209		1.9	Si
SLV 1	7.56	-6569.45	-15267	-12713	9945	1.67	1.2141	-38192	16250	5524	40441	21003	4259	25262		2.54	Si
SLD 2	5.46	2982.32	-8862	-7379	5891	1.67	1.4954	-15781	13573	5683	40441	21003	4259	25262		4.29	Si
SLD 2	7.56	-3828.15	-13631	-11350	5647	1.67	1.6625	-24274	15271	7109	40441	21003	4259	25262		4.47	Si
SLV 14	5.46	-4882.85	-15945	-13278	-7477	1.67	1.5864	-28396	16096	7149	40441	21003	4259	25262		3.38	Si
SLV 14	7.56	3906.15	-6988	-5819	-6732	1.67	0.828	-12444	12905	2992	40441	21003	4259	25262		3.75	Si
SLD 4	5.46	2999.4	-9482	-7896	6039	1.67	1.5561	-16886	13794	6010	40441	21003	4259	25262		4.18	Si
SLD 4	7.56	-3885.95	-14436	-12021	5849	1.67	1.67	-25707	15558	7275	40441	21003	4259	25262		4.32	Si
SLV 2	5.46	6310.08	-5334	-4442	11443	1.336	0	0	0	0	40441	16803	3407	20209		1.77	Si
SLV 2	7.56	-7085.43	-15791	-13149	10753	1.336	1.1589	0	0	0	40441	16803	3407	20209		1.88	Si
SLV 3	5.46	5879.95	-7076	-5892	10974	1.336	0.012	0	0	0	40441	16803	3407	20209		1.84	Si
SLV 3	7.56	-6700.91	-17091	-14232	10408	1.67	1.3288	-39075	16250	6046	40441	21003	4259	25262		2.43	Si
SLV 4	5.46	6346.87	-6745	-5617	11781	1.336	0	0	0	0	40441	16803	3407	20209		1.72	Si
SLV 4	7.56	-7216.9	-17614	-14668	11215	1.67	1.2759	-42046	16250	5805	40441	21003	4259	25262		2.25	Si
SLV 15	5.46	-5312.97	-17687	-14728	-7946	1.67	1.6039	-31498	16250	7298	40441	21003	4259	25262		3.18	Si
SLV 15	7.56	4290.67	-8287	-6901	-7078	1.67	0.9518	-14758	13368	3563	40441	21003	4259	25262		3.57	Si
SLV 16	5.46	-4846.05	-17357	-14453	-7139	1.67	1.6674	-30909	16250	7587	40441	21003	4259	25262		3.54	Si
SLV 16	7.56	3774.68	-8811	-7337	-6270	1.67	1.2198	-15691	13555	4630	40441	21003	4259	25262		4.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.39	14468	-6765	173.68	857.4	4.94	Si
SLV 14	179667	0.39	15588	-7289	173.68	916.32	5.28	Si
SLV 9	179667	0.39	16722	-7819	173.68	974.84	5.61	Si
SLV 10	179667	0.39	17444	-8157	173.68	1011.53	5.82	Si
SLV 15	179667	0.39	18352	-8581	173.68	1057.02	6.09	Si
SLV 16	179667	0.39	19472	-9105	173.68	1112.2	6.4	Si
SLV 5	179667	0.39	22367	-10459	173.68	1249.81	7.2	Si
SLV 6	179667	0.39	23089	-10797	173.68	1283.01	7.39	Si
SLV 11	179667	0.39	29668	-13873	173.68	1564.91	9.01	Si
SLV 12	179667	0.39	30391	-14211	173.68	1593.59	9.18	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-12276	-15561	308	0.704	1482.1	0.954	10.71549	12.68333	No
SLV 12	-12209	-15348	309	0.707	1475.4	0.954	10.76548	12.68333	No
SLV 7	-10708	-12378	403	0.781	1323	0.949	11.9572	12.68333	No
SLV 8	-10642	-12165	404	0.785	1316.2	0.949	12.02092	12.68333	No
SLV 9	-6591	-10856	-370	1.163	906	0.93	18.17314	12.68333	Si
SLV 10	-6524	-10643	-369	1.173	899.3	0.93	18.32857	12.68333	Si
SLV 5	-5023	-7673	-275	1.449	748.3	0.919	22.90456	12.68333	Si
SLV 6	-4957	-7460	-274	1.463	741.6	0.919	23.14986	12.68333	Si
SLV 15	-12133	-17687	-40	0.73	1467.6	0.954	11.1264	5.63352	Si
SLV 16	-12030	-17357	-39	0.736	1457.2	0.953	11.21166	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.391	SLU 84	Si
V_SLU	6.604	SLU 84	Si
PF_SLV	0.691	SLV 2	No
V_SLV	1.715	SLV 4	Si
PFFP_SLV	4.937	SLV 13	Si
R_SLV	0.845	SLV 11	No

Maschio 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L5	L6	3.12	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	5.46	3573.74	-25286	-0.0000862	0.0004492	0.0035	3.12	23093.61	32945.74	32945.74	9.22	No	Si
SLU 46	7.56	1898.61	-20913	-0.0000646	0.0004492	0.0035	3.12	21438.84	28051.79	28051.79	14.77	No	Si
SLU 59	5.46	3889	-28340	-0.0000971	0.0004492	0.0035	3.12	23669.33	36180.84	36180.84	9.3	No	Si
SLU 59	7.56	2290.64	-23635	-0.0000744	0.0004492	0.0035	3.12	22583.92	31098.52	31098.52	13.58	No	Si
SLU 44	5.46	3493.07	-24494	-0.0000835	0.0004492	0.0035	3.12	22866.64	32060.16	32060.16	9.18	No	Si
SLU 44	7.56	1897.75	-20096	-0.0000623	0.0004492	0.0035	3.12	21021.08	27137.11	27137.11	14.3	No	Si
SLU 48	5.46	3637.47	-25796	-0.0000881	0.0004492	0.0035	3.12	23222.93	33516.58	33516.58	9.21	No	Si
SLU 48	7.56	1831.74	-21447	-0.0000657	0.0004492	0.0035	3.12	21693.21	28649.12	28649.12	15.64	No	Si
SLU 45	5.46	3556.64	-25240	-0.000086	0.0004492	0.0035	3.12	23081.46	32894.96	32894.96	9.25	No	Si
SLU 45	7.56	1842.22	-20897	-0.0000642	0.0004492	0.0035	3.12	21431.16	28034.28	28034.28	15.22	No	Si
SLU 47	5.46	3573.9	-25050	-0.0000855	0.0004492	0.0035	3.12	23029.31	32681.78	32681.78	9.14	No	Si
SLU 47	7.56	1887.27	-20645	-0.0000638	0.0004492	0.0035	3.12	21305.66	27751.95	27751.95	14.7	No	Si
SLU 51	5.46	3643.34	-25575	-0.0000875	0.0004492	0.0035	3.12	23168.6	33269.55	33269.55	9.13	No	Si
SLU 51	7.56	1839.2	-21184	-0.000065	0.0004492	0.0035	3.12	21569.83	28355.12	28355.12	15.42	No	Si
SLU 43	5.46	3464.57	-24419	-0.0000831	0.0004492	0.0035	3.12	22843.28	31975.54	31975.54	9.23	No	Si
SLU 43	7.56	1803.78	-20070	-0.0000617	0.0004492	0.0035	3.12	21007.19	27107.91	27107.91	15.03	No	Si
SLU 49	5.46	3654.57	-25841	-0.0000883	0.0004492	0.0035	3.12	23233.79	33567.35	33567.35	9.19	No	Si
SLU 49	7.56	1888.13	-21462	-0.0000661	0.0004492	0.0035	3.12	21700.45	28666.64	28666.64	15.18	No	Si
SLU 50	5.46	3626.24	-25530	-0.0000872	0.0004492	0.0035	3.12	23157.12	33218.78	33218.78	9.16	No	Si
SLU 50	7.56	1782.82	-21169	-0.0000647	0.0004492	0.0035	3.12	21562.37	28337.6	28337.6	15.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	5.46	2695.3	-19917	-0.0000647	0.0006738	0.0035	3.12		27891.79	27891.79	10.35		Si
SLV 5	7.56	5505.62	-17051	-0.0000713	0.0006738	0.0035	3.12		24650.58	24650.58	4.48		Si
SLV 2	5.46	1416.49	-17704	-0.0000522	0.0006738	0.0035	3.12		25388.49	25388.49	17.92		Si
SLV 2	7.56	3873.93	-14313	-0.0000556	0.0006738	0.0035	3.12		21265.54	21265.54	5.49		Si
SLV 14	5.46	4356.4	-24718	-0.0000864	0.0006738	0.0035	3.12		33321.17	33321.17	7.65		Si
SLV 14	7.56	2214.08	-21378	-0.0000661	0.0006738	0.0035	3.12		29544.49	29544.49	13.34		Si
SLV 1	5.46	1501.61	-17574	-0.0000523	0.0006738	0.0035	3.12		25241.28	25241.28	16.81		Si
SLV 1	7.56	3489.74	-14181	-0.0000534	0.0006738	0.0035	3.12		21092.86	21092.86	6.04		Si
SLD 5	5.46	2797.56	-20650	-0.0000672	0.0006738	0.0035	3.12		28720.69	28720.69	10.27		Si
SLD 5	7.56	3409.19	-17379	-0.0000615	0.0006738	0.0035	3.12		25021.17	25021.17	7.34		Si
SLD 6	5.46	2773.6	-20687	-0.0000671	0.0006738	0.0035	3.12		28762.13	28762.13	10.37		Si
SLD 6	7.56	3517.33	-17416	-0.0000621	0.0006738	0.0035	3.12		25063.1	25063.1	7.13		Si
SLV 13	5.46	4441.52	-24587	-0.0000865	0.0006738	0.0035	3.12		33173.96	33173.96	7.47		Si
SLV 13	7.56	1829.89	-21247	-0.0000638	0.0006738	0.0035	3.12		29395.52	29395.52	16.06		Si
SLV 10	5.46	3522.42	-22105	-0.0000749	0.0006738	0.0035	3.12		30366.46	30366.46	8.62		Si
SLV 10	7.56	5255.24	-19256	-0.000076	0.0006738	0.0035	3.12		27143.94	27143.94	5.17		Si
SLV 9	5.46	3577.27	-22021	-0.0000749	0.0006738	0.0035	3.12		30271.6	30271.6	8.46		Si
SLV 9	7.56	5007.66	-19171	-0.0000745	0.0006738	0.0035	3.12		27047.94	27047.94	5.4		Si
SLV 6	5.46	2640.45	-20001	-0.0000646	0.0006738	0.0035	3.12		27986.66	27986.66	10.6		Si
SLV 6	7.56	5753.2	-17136	-0.0000728	0.0006738	0.0035	3.12		24746.58	24746.58	4.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	5.46	3871.9	-28295	-16613	2326	3.12	3.12	-33280	10833	5408	115546	17940	15912	33852	No	14.55	Si
SLU 58	7.56	2234.26	-23620	-13868	2293	3.12	3.12	-27781	10833	5408	115546	17940	15912	33852	No	14.76	Si
SLU 78	5.46	4112.6	-31572	-18538	2288	3.12	3.12	-37135	10833	5408	115546	17940	15912	33852	No	14.79	Si
SLU 78	7.56	2797.76	-26609	-15624	2324	3.12	3.12	-31297	10833	5408	115546	17940	15912	33852	No	14.57	Si
SLU 83	5.46	4108.72	-31890	-18724	2353	3.12	3.12	-37509	10833	5408	115546	17940	15912	33852	No	14.39	Si
SLU 83	7.56	2896.4	-26816	-15745	2314	3.12	3.12	-31541	10833	5408	115546	17940	15912	33852	No	14.63	Si
SLU 63	5.46	3913.46	-28969	-17010	2309	3.12	3.12	-34074	10833	5408	115546	17940	15912	33852	No	14.66	Si
SLU 63	7.56	2494.59	-24136	-14172	2348	3.12	3.12	-28389	10833	5408	115546	17940	15912	33852	No	14.42	Si
SLU 76	5.46	4031.93	-30781	-18073	2249	3.12	3.12	-36204	10833	5408	115546	17940	15912	33852	No	15.06	Si
SLU 76	7.56	2796.9	-25792	-15144	2333	3.12	3.12	-30336	10833	5408	115546	17940	15912	33852	No	14.51	Si
SLU 80	5.46	4101.37	-31306	-18381	2315	3.12	3.12	-36822	10833	5408	115546	17940	15912	33852	No	14.62	Si
SLU 80	7.56	2748.83	-26331	-15460	2351	3.12	3.12	-30970	10833	5408	115546	17940	15912	33852	No	14.4	Si
SLU 59	5.46	3889	-28340	-16640	2299	3.12	3.12	-33333	10833	5408	115546	17940	15912	33852	No	14.73	Si
SLU 59	7.56	2290.64	-23635	-13878	2338	3.12	3.12	-27800	10833	5408	115546	17940	15912	33852	No	14.48	Si
SLU 62	5.46	3896.35	-28924	-16983	2337	3.12	3.12	-34020	10833	5408	115546	17940	15912	33852	No	14.49	Si
SLU 62	7.56	2438.21	-24121	-14163	2302	3.12	3.12	-28371	10833	5408	115546	17940	15912	33852	No	14.7	Si
SLU 79	5.46	4084.27	-31260	-18355	2343	3.12	3.12	-36768	10833	5408	115546	17940	15912	33852	No	14.45	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	7.56	2692.45	-26315	-15451	2305	3.12	3.12	-30951	10833	5408	115546	17940	15912	33852	No	14.69	Si
SLU 84	5.46	4125.82	-31935	-18751	2326	3.12	3.12	-37562	10833	5408	115546	17940	15912	33852	No	14.56	Si
SLU 84	7.56	2952.79	-26832	-15754	2360	3.12	3.12	-31559	10833	5408	115546	17940	15912	33852	No	14.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 12	5.46	2906.29	-21757	-12774	2761	3.12	3.12	-25590	16250	8112	115546	26910	15912	42822		15.51	Si
SLD 12	7.56	127.33	-17860	-10487	2351	3.12	3.12	-21007	16250	8112	115546	26910	15912	42822		18.21	Si
SLV 8	5.46	2126.58	-20385	-11969	3362	3.12	3.12	-23977	16250	8112	115546	26910	15912	42822		12.74	Si
SLV 8	7.56	-1471.14	-16068	-9434	2525	3.12	3.12	-18899	16250	8112	115546	26910	15912	42822		16.96	Si
SLV 11	5.46	3063.4	-22406	-13156	4322	3.12	3.12	-26353	16250	8112	115546	26910	15912	42822		9.91	Si
SLV 11	7.56	-2216.68	-18103	-10629	3441	3.12	3.12	-21292	16250	8112	115546	26910	15912	42822		12.45	Si
SLV 7	5.46	2181.43	-20301	-11920	3506	3.12	3.12	-23878	16250	8112	115546	26910	15912	42822		12.21	Si
SLV 7	7.56	-1718.72	-15983	-9385	2670	3.12	3.12	-18799	16250	8112	115546	26910	15912	42822		16.04	Si
SLV 15	5.46	4287.36	-24703	-14504	3785	3.12	3.12	-29055	16250	8112	115546	26910	15912	42822		11.31	Si
SLV 15	7.56	-337.41	-20926	-12287	3434	3.12	3.12	-24613	16250	8112	115546	26910	15912	42822		12.47	Si
SLV 12	5.46	3008.55	-22489	-13205	4178	3.12	3.12	-26452	16250	8112	115546	26910	15912	42822		10.25	Si
SLV 12	7.56	-1969.1	-18188	-10679	3296	3.12	3.12	-21392	16250	8112	115546	26910	15912	42822		12.99	Si
SLD 15	5.46	3461.47	-22699	-13328	2575	3.12	3.12	-26698	16250	8112	115546	26910	15912	42822		16.63	Si
SLD 15	7.56	854.59	-19032	-11175	2405	3.12	3.12	-22385	16250	8112	115546	26910	15912	42822		17.8	Si
SLV 13	5.46	4441.52	-24587	-14437	2474	3.12	3.12	-28920	16250	8112	115546	26910	15912	42822		17.31	Si
SLV 13	7.56	1829.89	-21247	-12475	2624	3.12	3.12	-24990	16250	8112	115546	26910	15912	42822		16.32	Si
SLV 16	5.46	4202.24	-24833	-14581	3561	3.12	3.12	-29208	16250	8112	115546	26910	15912	42822		12.03	Si
SLV 16	7.56	46.77	-21058	-12364	3209	3.12	3.12	-24768	16250	8112	115546	26910	15912	42822		13.34	Si
SLD 11	5.46	2930.25	-21720	-12753	2824	3.12	3.12	-25547	16250	8112	115546	26910	15912	42822		15.16	Si
SLD 11	7.56	19.19	-17823	-10465	2415	3.12	3.12	-20963	16250	8112	115546	26910	15912	42822		17.74	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-14836	0.39	196.2	994.4	1635.69	1315.05	6.7	Si
SLV 4	-14992	0.39	196.2	1002.86	1649.95	1326.4	6.76	Si
SLV 1	-14993	0.39	196.2	1002.87	1649.97	1326.42	6.76	Si
SLV 2	-15149	0.39	196.2	1011.28	1664.23	1337.75	6.82	Si
SLV 7	-17008	0.39	196.2	1107.73	1831.99	1469.86	7.49	Si
SLV 8	-17109	0.39	196.2	1112.8	1840.97	1476.88	7.53	Si
SLV 5	-17532	0.39	196.2	1133.78	1878.48	1506.13	7.68	Si
SLV 6	-17633	0.39	196.2	1138.76	1887.46	1513.11	7.71	Si
SLV 11	-19004	0.39	196.2	1204.53	2009.43	1606.98	8.19	Si
SLV 12	-19105	0.39	196.2	1209.25	2018.42	1613.83	8.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-14319	-22105	167	1.117	1705.7	0.957	16.95518	16.76087	Si
SLV 9	-14291	-22021	167	1.119	1702.8	0.957	16.98591	16.76087	Si
SLV 12	-12825	-22489	80	1.236	1553.9	0.953	18.84311	16.76087	Si
SLV 11	-12797	-22406	80	1.239	1551	0.953	18.88098	16.76087	Si
SLV 6	-12567	-20001	-81	1.258	1527.7	0.953	19.19289	16.76087	Si
SLV 5	-12539	-19917	-81	1.261	1524.8	0.953	19.23224	16.76087	Si
SLV 8	-11074	-20385	-169	1.397	1376	0.948	21.41389	16.76087	Si
SLV 7	-11045	-20301	-169	1.4	1373.1	0.948	21.46322	16.76087	Si
SLV 14	-15847	-24718	427	1.006	1861.1	0.96	15.22096	8.72685	Si
SLV 13	-15804	-24587	427	1.008	1856.6	0.96	15.25986	8.72685	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.132	SLU 51	Si
V_SLU	14.343	SLU 84	Si
PF_SLV	4.301	SLV 6	Si
V_SLV	9.907	SLV 11	Si
PFFP_SLV	6.703	SLV 3	Si
R_SLV	1.012	SLV 10	Si

Maschio 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L5	L6	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	6.36	-357.49	-11987	-0.0000815	0.0003743	0.0035	1.02	3593.18	4501.06	4501.06	12.59	No	Si
SLU 71	8.16	-861.56	-9356	-0.0000822	0.0003743	0.0035	1.02	3236.19	3869.76	3869.76	4.49	No	Si
SLU 64	6.36	-341.05	-11384	-0.0000769	0.0003743	0.0035	1.02	3532.78	4390.35	4390.35	12.87	No	Si
SLU 64	8.16	-814.5	-8823	-0.000077	0.0003743	0.0035	1.02	3134.46	3744.25	3744.25	4.6	No	Si
SLU 67	6.36	-332.08	-11790	-0.0000792	0.0003743	0.0035	1.02	3574.87	4468.26	4468.26	13.46	No	Si
SLU 67	8.16	-860.85	-9204	-0.0000812	0.0003743	0.0035	1.02	3208.13	3833.42	3833.42	4.45	No	Si
SLU 66	6.36	-346.22	-11804	-0.0000798	0.0003743	0.0035	1.02	3576.23	4470.68	4470.68	12.91	No	Si
SLU 66	8.16	-853.69	-9202	-0.0000809	0.0003743	0.0035	1.02	3207.89	3833.12	3833.12	4.49	No	Si
SLU 68	6.36	-325.7	-11662	-0.0000781	0.0003743	0.0035	1.02	3562.21	4445.3	4445.3	13.65	No	Si
SLU 68	8.16	-849.97	-9092	-0.00008	0.0003743	0.0035	1.02	3186.98	3806.93	3806.93	4.48	No	Si
SLU 78	6.36	-465.92	-13285	-0.0000943	0.0003743	0.0035	1.02	3679.79	4728.41	4728.41	10.15	No	Si
SLU 78	8.16	-891.4	-10407	-0.0000903	0.0003743	0.0035	1.02	3407.92	4131.27	4131.27	4.63	No	Si
SLU 72	6.36	-343.35	-11973	-0.0000808	0.0003743	0.0035	1.02	3591.91	4498.69	4498.69	13.1	No	Si
SLU 72	8.16	-868.72	-9357	-0.0000824	0.0003743	0.0035	1.02	3236.42	3870.07	3870.07	4.45	No	Si
SLU 69	6.36	-354.44	-12106	-0.0000821	0.0003743	0.0035	1.02	3603.57	4521.03	4521.03	12.76	No	Si
SLU 69	8.16	-877.22	-9468	-0.0000835	0.0003743	0.0035	1.02	3256.46	3896.94	3896.94	4.44	No	Si
SLU 65	6.36	-317.48	-11360	-0.0000759	0.0003743	0.0035	1.02	3530.16	4384.06	4384.06	13.81	No	Si
SLU 65	8.16	-826.44	-8826	-0.0000775	0.0003743	0.0035	1.02	3134.89	3744.75	3744.75	4.53	No	Si
SLU 70	6.36	-340.3	-12092	-0.0000815	0.0003743	0.0035	1.02	3602.36	4518.64	4518.64	13.28	No	Si
SLU 70	8.16	-884.38	-9470	-0.0000838	0.0003743	0.0035	1.02	3256.69	3897.25	3897.25	4.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.36	3810.74	-4210	-0.0433552	0.0005615	0.0035	0.816		2051.33	2051.33	0.54		No
SLV 4	8.16	-3445	-8463	-0.0003898	0.0005615	0.0035	0.816		3928.83	3928.83	1.14		Si
SLV 16	6.36	-4099.21	-14391	-0.0002788	0.0005615	0.0035	0.816		5733.06	5733.06	1.4		Si
SLV 16	8.16	1842.28	-6458	-0.0001087	0.0005615	0.0035	1.02		2914.21	2914.21	1.58		Si
SLV 1	6.36	3504.65	-3284	-0.0463089	0.0005615	0.0035	0.816		1644.28	1644.28	0.47		No
SLV 1	8.16	-3051.23	-7170	-0.0003981	0.0005615	0.0035	0.816		3441.24	3441.24	1.13		Si
SLD 4	6.36	1458.19	-6867	-0.0000857	0.0005615	0.0035	1.02		3074.08	3074.08	2.11		Si
SLD 4	8.16	-1819.65	-7526	-0.0001058	0.0005615	0.0035	1.02		3578.33	3578.33	1.97		Si
SLV 3	6.36	3421.86	-4568	-0.0304947	0.0005615	0.0035	0.816		2194.05	2194.05	0.64		No
SLV 3	8.16	-3172.61	-8270	-0.0002847	0.0005615	0.0035	0.816		3858.09	3858.09	1.22		Si
SLV 14	6.36	-4016.42	-13107	-0.0002814	0.0005615	0.0035	0.816		5419.79	5419.79	1.35		Si
SLV 14	8.16	1963.66	-5357	-0.0001455	0.0005615	0.0035	1.02		2491.52	2491.52	1.27		Si
SLV 2	6.36	3893.53	-2926	-0.059664	0.0005615	0.0035	0.816		1480.79	1480.79	0.38		No
SLV 2	8.16	-3323.62	-7363	-0.0008093	0.0005615	0.0035	0.816		3515.63	3515.63	1.06		Si
SLV 15	6.36	-4488.09	-14750	-0.0003265	0.0005615	0.0035	0.816		5822.68	5822.68	1.3		Si
SLV 15	8.16	2114.66	-6264	-0.000141	0.0005615	0.0035	1.02		2839.23	2839.23	1.34		Si
SLV 13	6.36	-4405.3	-13466	-0.0003389	0.0005615	0.0035	0.816		5506.01	5506.01	1.25		Si
SLV 13	8.16	2236.04	-5164	-0.0002972	0.0005615	0.0035	1.02		2418.21	2418.21	1.08		Si
SLD 2	6.36	1495.15	-6303	-0.0000858	0.0005615	0.0035	1.02		2854.3	2854.3	1.91		Si
SLD 2	8.16	-1766.3	-7042	-0.0001022	0.0005615	0.0035	1.02		3391.59	3391.59	1.92		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	6.36	-514.59	-13376	-11138	-435	1.02	1.02	-38999	10833	3094	40441	8552	2601	11153	No	25.61	Si
SLU 84	8.16	-855.22	-10430	-8685	178	1.02	1.02	-30409	10833	3094	40441	8552	2601	11153	No	62.5	Si
SLU 82	6.36	-506.37	-13074	-10887	-430	1.02	1.02	-38120	10833	3094	40441	8552	2601	11153	No	25.93	Si
SLU 82	8.16	-831.69	-10164	-8463	167	1.02	1.02	-29634	10833	3094	40441	8552	2601	11153	No	66.65	Si
SLU 63	6.36	-510.23	-12194	-10154	-486	1.02	1.02	-35552	10833	3094	40441	8552	2601	11153	No	22.96	Si
SLU 63	8.16	-745.73	-9331	-7770	154	1.02	1.02	-27206	10572	3019	40441	8552	2601	11153	No	72.38	Si
SLU 83	6.36	-528.73	-13390	-11150	-455	1.02	1.02	-39041	10833	3094	40441	8552	2601	11153	No	24.5	Si
SLU 83	8.16	-848.06	-10428	-8684	170	1.02	1.02	-30406	10833	3094	40441	8552	2601	11153	No	65.69	Si
SLU 56	6.36	-475.71	-12117	-10090	-434	1.02	1.02	-35329	10833	3094	40441	8552	2601	11153	No	25.67	Si
SLU 56	8.16	-774.74	-9307	-7750	210	1.02	1.02	-27136	10563	3017	40441	8552	2601	11153	No	53.11	Si
SLU 61	6.36	-502.01	-11892	-9903	-480	1.02	1.02	-34673	10833	3094	40441	8552	2601	11153	No	23.22	Si
SLU 61	8.16	-722.2	-9065	-7549	143	1.02	1.02	-26431	10469	2990	40441	8552	2601	11153	No	78.02	Si
SLU 60	6.36	-516.16	-11906	-9914	-500	1.02	1.02	-34714	10833	3094	40441	8552	2601	11153	No	22.3	Si
SLU 60	8.16	-715.03	-9064	-7547	134	1.02	1.02	-26427	10468	2990	40441	8552	2601	11153	No	83.06	Si
SLU 58	6.36	-478.76	-11998	-9991	-443	1.02	1.02	-34983	10833	3094	40441	8552	2601	11153	No	25.2	Si
SLU 58	8.16	-759.09	-9194	-7656	197	1.02	1.02	-26807	10519	3004	40441	8552	2601	11153	No	56.58	Si
SLU 62	6.36	-524.38	-12208	-10166	-505	1.02	1.02	-35594	10833	3094	40441	8552	2601	11153	No	22.06	Si
SLU 62	8.16	-738.56	-9330	-7769	145	1.02	1.02	-27203	10571	3019	40441	8552	2601	11153	No	76.7	Si
SLU 81	6.36	-520.51	-13088	-10899	-450	1.02	1.02	-38161	10833	3094	40441	8552	2601	11153	No	24.8	Si
SLU 81	8.16	-824.53	-10162	-8462	159	1.02	1.02	-29630	10833	3094	40441	8552	2601	11153	No	70.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	6.36	3893.53	-2926	-2436	6853	0.816	0	0	0	0	40441	10263	2081	12343		1.8	Si
SLV 2	8.16	-3323.62	-7363	-6131	3167	0.816	0.1758	0	0	0	40441	10263	2081	12343		3.9	Si
SLV 16	6.36	-4099.21	-14391	-11984	-6675	0.816	0.6755	0	0	0	40441	10263	2081	12343		1.85	Si
SLV 16	8.16	1842.28	-6458	-5377	-2466	1.02	0.6741	-18828	14182	2677	40441	12828	2601	15429		6.26	Si
SLV 13	6.36	-4405.3	-13466	-11213	-7182	0.816	0.5486	0	0	0	40441	10263	2081	12343		1.72	Si
SLV 13	8.16	2236.04	-5164	-4300	-2900	1.02	0.231	-69565	16250	1051	40441	12828	2601	15429		5.32	Si
SLV 1	6.36	3504.65	-3284	-2735	6220	0.816	0	0	0	0	40441	10263	2081	12343		1.98	Si
SLV 1	8.16	-3051.23	-7170	-5970	2854	0.816	0.2533	0	0	0	40441	10263	2081	12343		4.33	Si
SLV 15	6.36	-4488.09	-14750	-12283	-7308	0.816	0.6172	0	0	0	40441	10263	2081	12343		1.69	Si
SLV 15	8.16	2114.66	-6264	-5216	-2780	1.02	0.5173	-18264	14070	2038	40441	12828	2601	15429		5.55	Si
SLV 14	6.36	-4016.42	-13107	-10915	-6548	0.816	0.6107	0	0	0	40441	10263	2081	12343		1.88	Si
SLV 14	8.16	1963.66	-5357	-4461	-2587	1.02	0.4304	-15620	13541	1632	40441	12828	2601	15429		5.97	Si
SLV 3	6.36	3421.86	-4568	-3804	6094	0.816	0	0	0	0	40441	10263	2081	12343		2.03	Si
SLV 3	8.16	-3172.61	-8270	-6886	2974	0.816	0.3791	0	0	0	40441	10263	2081	12343		4.15	Si
SLD 15	6.36	-2089.71	-11373	-9470	-3255	1.02	0.9787	-33158	16250	4453	40441	12828	2601	15429		4.74	Si
SLD 15	8.16	557.35	-6585	-5484	-1077	1.02	1.02	-19200	14257	4072	40441	12828	2601	15429		14.32	Si
SLD 13	6.36	-2052.75	-10808	-9000	-3200	1.02	0.9602	-31513	16250	4369	40441	12828	2601	15429		4.82	Si
SLD 13	8.16	610.69	-6101	-5081	-1130	1.02	1.02	-17789	13974	3991	40441	12828	2601	15429		13.66	Si
SLV 4	6.36	3810.74	-4210	-3506	6727	0.816	0	0	0	0	40441	10263	2081	12343		1.83	Si
SLV 4	8.16	-3445	-8463	-7047	3287	0.816	0.3088	0	0	0	40441	10263	2081	12343		3.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.39	8816	-2518	106.08	332.16	3.13	Si
SLV 1	179667	0.39	10072	-2877	106.08	376.16	3.55	Si
SLV 4	179667	0.39	13227	-3777	106.08	483.05	4.55	Si
SLV 3	179667	0.39	14482	-4136	106.08	524.14	4.94	Si
SLV 6	179667	0.39	16402	-4685	106.08	585.4	5.52	Si
SLV 5	179667	0.39	17212	-4916	106.08	610.63	5.76	Si
SLV 10	179667	0.39	27124	-7746	106.08	891.89	8.41	Si
SLV 9	179667	0.39	27933	-7978	106.08	912.58	8.6	Si
SLV 8	179667	0.39	31103	-8883	106.08	990.34	9.34	Si
SLV 7	179667	0.39	31912	-9114	106.08	1009.34	9.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-8180	-10253	222	0.65	974.6	0.957	9.8698	12.68333	No
SLV 7	-8021	-10025	222	0.661	958.4	0.956	10.04196	12.68333	No
SLV 12	-6660	-8797	237	0.771	820.1	0.95	11.7889	12.68333	No
SLV 11	-6500	-8569	237	0.786	803.9	0.949	12.04059	12.68333	No
SLV 6	-4814	-6830	-242	1.006	633	0.938	15.58946	12.68333	Si
SLV 5	-4654	-6602	-242	1.033	616.8	0.936	16.0428	12.68333	Si
SLV 10	-3293	-5374	-226	1.359	479.6	0.922	21.42453	12.68333	Si
SLV 4	-8820	-10817	41	0.628	1039.7	0.96	9.51772	5.63352	Si
SLV 3	-8572	-10464	42	0.644	1014.5	0.959	9.75941	5.63352	Si
SLV 9	-3133	-5146	-226	1.411	463.6	0.92	22.29575	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.407	SLU 70	Si
V_SLU	22.064	SLU 62	Si
PF_SLV	0.38	SLV 2	No
V_SLV	1.689	SLV 15	Si
PFFP_SLV	3.131	SLV 2	Si
R_SLV	0.778	SLV 8	No

Maschio 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L5	L6	4.68	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	5.46	-2209.35	-41554	-0.0000883	0.0004492	0.0035	4.68	46765.5	88247.12	88247.12	39.94	No	Si
SLU 83	8.98	-2429.2	-25099	-0.0000543	0.0004492	0.0035	4.68	40318.14	62654.08	62654.08	25.79	No	Si
SLU 40	5.46	-1806.43	-34684	-0.0000725	0.0004492	0.0035	4.68	45998.56	78288.46	78288.46	43.34	No	Si
SLU 40	8.98	-2107.98	-20853	-0.0000449	0.0004492	0.0035	4.68	36086.19	55103.84	55103.84	26.14	No	Si
SLU 74	5.46	-2172.68	-40394	-0.0000857	0.0004492	0.0035	4.68	46829.6	86646.98	86646.98	39.88	No	Si
SLU 74	8.98	-2299.16	-24572	-0.0000529	0.0004492	0.0035	4.68	39850.72	61758.43	61758.43	26.86	No	Si
SLU 84	5.46	-2194.65	-41580	-0.0000883	0.0004492	0.0035	4.68	46763.14	88283.25	88283.25	40.23	No	Si
SLU 84	8.98	-2376.61	-25138	-0.0000542	0.0004492	0.0035	4.68	40352.52	62721.21	62721.21	26.39	No	Si
SLU 42	5.46	-1823.99	-35282	-0.0000738	0.0004492	0.0035	4.68	46174.93	79177.43	79177.43	43.41	No	Si
SLU 42	8.98	-2110.89	-21342	-0.0000459	0.0004492	0.0035	4.68	36627.44	55988.78	55988.78	26.52	No	Si
SLU 41	5.46	-1838.7	-35256	-0.0000738	0.0004492	0.0035	4.68	46167.64	79138.49	79138.49	43.04	No	Si
SLU 41	8.98	-2163.49	-21303	-0.000046	0.0004492	0.0035	4.68	36584.31	55917.4	55917.4	25.85	No	Si
SLU 82	5.46	-2177.09	-40982	-0.000087	0.0004492	0.0035	4.68	46806.92	87458.57	87458.57	40.17	No	Si
SLU 82	8.98	-2373.7	-24649	-0.0000532	0.0004492	0.0035	4.68	39919.79	61888.86	61888.86	26.07	No	Si
SLU 81	5.46	-2191.8	-40956	-0.0000869	0.0004492	0.0035	4.68	46808.36	87422.45	87422.45	39.89	No	Si
SLU 81	8.98	-2426.3	-24609	-0.0000533	0.0004492	0.0035	4.68	39884.28	61821.73	61821.73	25.48	No	Si
SLU 39	5.46	-1821.14	-34658	-0.0000724	0.0004492	0.0035	4.68	45990.36	78249.52	78249.52	42.97	No	Si
SLU 39	8.98	-2160.58	-20814	-0.000045	0.0004492	0.0035	4.68	36041.93	55032.47	55032.47	25.47	No	Si
SLU 32	5.46	-1802.02	-34096	-0.0000712	0.0004492	0.0035	4.68	45804.6	77413.59	77413.59	42.96	No	Si
SLU 32	8.98	-2033.44	-20777	-0.0000446	0.0004492	0.0035	4.68	36000.11	54965.17	54965.17	27.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	5.46	-2431.27	-25828	-0.0000548	0.0006738	0.0035	4.68		65471.44	65471.44	26.93		Si
SLD 8	8.98	-3776.48	-14716	-0.0000366	0.0006738	0.0035	4.68		44113.52	44113.52	11.68		Si
SLV 10	5.46	542.53	-31822	-0.0000619	0.0006738	0.0035	4.68		65250.67	65250.67	120.27		Si
SLV 10	8.98	4197.63	-21363	-0.0000505	0.0006738	0.0035	4.68		47400.49	47400.49	11.29		Si
SLV 5	5.46	1813.89	-26940	-0.0000555	0.0006738	0.0035	4.68		56929.06	56929.06	31.39		Si
SLV 5	8.98	4094.93	-18212	-0.0000441	0.0006738	0.0035	4.68		41230.96	41230.96	10.07		Si
SLV 11	5.46	-4866.15	-28406	-0.0000661	0.0006738	0.0035	4.68		70054.95	70054.95	14.4		Si
SLV 11	8.98	-7429.03	-14988	-0.000046	0.0006738	0.0035	4.68		44649.7	44649.7	6.01		Si
SLV 12	5.46	-4858.22	-28353	-0.0000659	0.0006738	0.0035	4.68		69961.88	69961.88	14.4		Si
SLV 12	8.98	-7021.71	-15152	-0.0000454	0.0006738	0.0035	4.68		44973.98	44973.98	6.4		Si
SLV 6	5.46	1821.82	-26887	-0.0000554	0.0006738	0.0035	4.68		56839.85	56839.85	31.2		Si
SLV 6	8.98	4502.25	-18376	-0.0000454	0.0006738	0.0035	4.68		41555.77	41555.77	9.23		Si
SLD 7	5.46	-2434.73	-25850	-0.0000549	0.0006738	0.0035	4.68		65512.09	65512.09	26.91		Si
SLD 7	8.98	-3954.39	-14644	-0.0000369	0.0006738	0.0035	4.68		43971.88	43971.88	11.12		Si
SLV 7	5.46	-3586.87	-23471	-0.0000531	0.0006738	0.0035	4.68		61061.88	61061.88	17.02		Si
SLV 7	8.98	-7124.41	-12001	-0.0000395	0.0006738	0.0035	4.68		38515.04	38515.04	5.41		Si
SLV 8	5.46	-3578.94	-23418	-0.000053	0.0006738	0.0035	4.68		60963.68	60963.68	17.03		Si
SLV 8	8.98	-6717.09	-12165	-0.0000388	0.0006738	0.0035	4.68		38855.43	38855.43	5.78		Si
SLD 11	5.46	-2982.83	-27950	-0.0000604	0.0006738	0.0035	4.68		69245.1	69245.1	23.21		Si
SLD 11	8.98	-4086.65	-15915	-0.0000396	0.0006738	0.0035	4.68		46481.05	46481.05	11.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	5.46	-1850.35	-33413	-18526	-2707	4.68	4.68	-28275	10833	7098	115546	23546	23868	47414	No	17.52	Si
SLU 49	8.98	-1518.41	-20586	-11414	-2149	4.68	4.68	-17421	10656	6982	115546	23546	23868	47414	No	22.07	Si
SLU 46	5.46	-1832.8	-32815	-18194	-2618	4.68	4.68	-27769	10833	7098	115546	23546	23868	47414	No	18.11	Si
SLU 46	8.98	-1515.5	-20097	-11143	-2069	4.68	4.68	-17007	10601	6946	115546	23546	23868	47414	No	22.92	Si
SLU 51	5.46	-1820.32	-32994	-18294	-2698	4.68	4.68	-27921	10833	7098	115546	23546	23868	47414	No	17.57	Si
SLU 51	8.98	-1473.44	-20205	-11203	-2148	4.68	4.68	-17099	10613	6954	115546	23546	23868	47414	No	22.07	Si
SLU 70	5.46	-2019.87	-37333	-20699	-2609	4.68	4.68	-31592	10833	7098	115546	23546	23868	47414	No	18.17	Si
SLU 70	8.98	-1841.11	-22984	-12744	-1996	4.68	4.68	-19450	10833	7098	115546	23546	23868	47414	No	23.76	Si
SLU 45	5.46	-1847.51	-32789	-18180	-2582	4.68	4.68	-27747	10833	7098	115546	23546	23868	47414	No	18.37	Si
SLU 45	8.98	-1568.1	-20058	-11121	-2034	4.68	4.68	-16974	10596	6943	115546	23546	23868	47414	No	23.31	Si
SLU 48	5.46	-1865.06	-33387	-18511	-2671	4.68	4.68	-28253	10833	7098	115546	23546	23868	47414	No	17.75	Si
SLU 48	8.98	-1571.01	-20547	-11392	-2114	4.68	4.68	-17388	10652	6979	115546	23546	23868	47414	No	22.43	Si
SLU 72	5.46	-1989.83	-36914	-20467	-2600	4.68	4.68	-31238	10833	7098	115546	23546	23868	47414	No	18.23	Si
SLU 72	8.98	-1796.15	-22603	-12532	-1996	4.68	4.68	-19128	10833	7098	115546	23546	23868	47414	No	23.76	Si
SLU 69	5.46	-2034.58	-37307	-20685	-2573	4.68	4.68	-31570	10833	7098	115546	23546	23868	47414	No	18.42	Si
SLU 69	8.98	-1893.71	-22945	-12722	-1961	4.68	4.68	-19417	10833	7098	115546	23546	23868	47414	No	24.18	Si
SLU 50	5.46	-1835.03	-32968	-18279	-2662	4.68	4.68	-27898	10833	7098	115546	23546	23868	47414	No	17.81	Si
SLU 50	8.98	-1526.04	-20166	-11181	-2114	4.68	4.68	-17065	10609	6951	115546	23546	23868	47414	No	22.43	Si
SLU 47	5.46	-1792.96	-32413	-17972	-2633	4.68	4.68	-27429	10833	7098	115546	23546	23868	47414	No	18.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	8.98	-1435.47	-19743	-10946	-2091	4.68	4.68	-16707	10561	6920	115546	23546	23868	47414	No	22.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	5.46	-64.97	-27366	-15173	-3545	4.68	4.68	-23158	16250	10647	115546	35319	23868	59187		16.69	Si
SLD 5	8.98	981.97	-17377	-9635	-2116	4.68	4.68	-14705	15441	10117	115546	35319	23868	59187		27.97	Si
SLV 6	5.46	1821.82	-26887	-14908	-6212	4.68	4.68	-22753	16250	10647	115546	35319	23868	59187		9.53	Si
SLV 6	8.98	4502.25	-18376	-10189	-3685	4.68	4.68	-15551	15610	10228	115546	35319	23868	59187		16.06	Si
SLD 9	5.46	-613.07	-29465	-16337	-3555	4.68	4.68	-24935	16250	10647	115546	35319	23868	59187		16.65	Si
SLD 9	8.98	849.7	-18648	-10339	-2308	4.68	4.68	-15781	15656	10258	115546	35319	23868	59187		25.65	Si
SLV 10	5.46	542.53	-31822	-17644	-6248	4.68	4.68	-26929	16250	10647	115546	35319	23868	59187		9.47	Si
SLV 10	8.98	4197.63	-21363	-11845	-4132	4.68	4.68	-18078	16116	10559	115546	35319	23868	59187		14.33	Si
SLV 2	5.46	1426.24	-19901	-11034	-3264	4.68	4.68	-16841	15868	10397	115546	35319	23868	59187		18.13	Si
SLV 2	8.98	1043.24	-12763	-7077	-1624	4.68	4.68	-10801	14660	9605	115546	35319	23868	59187		36.44	Si
SLV 9	5.46	534.6	-31875	-17673	-5874	4.68	4.68	-26973	16250	10647	115546	35319	23868	59187		10.08	Si
SLV 9	8.98	3790.32	-21199	-11754	-3664	4.68	4.68	-17939	16088	10541	115546	35319	23868	59187		16.15	Si
SLD 10	5.46	-609.61	-29442	-16324	-3718	4.68	4.68	-24915	16250	10647	115546	35319	23868	59187		15.92	Si
SLD 10	8.98	1027.61	-18720	-10379	-2512	4.68	4.68	-15841	15668	10266	115546	35319	23868	59187		23.56	Si
SLV 14	5.46	-2838.05	-36351	-20155	-3382	4.68	4.68	-30762	16250	10647	115546	35319	23868	59187		17.5	Si
SLV 14	8.98	27.85	-22719	-12597	-3113	4.68	4.68	-19226	16250	10647	115546	35319	23868	59187		19.01	Si
SLD 6	5.46	-61.51	-27343	-15160	-3709	4.68	4.68	-23138	16250	10647	115546	35319	23868	59187		15.96	Si
SLD 6	8.98	1159.88	-17449	-9674	-2321	4.68	4.68	-14766	15453	10125	115546	35319	23868	59187		25.5	Si
SLV 5	5.46	1813.89	-26940	-14937	-5838	4.68	4.68	-22797	16250	10647	115546	35319	23868	59187		10.14	Si
SLV 5	8.98	4094.93	-18212	-10098	-3218	4.68	4.68	-15412	15582	10210	115546	35319	23868	59187		18.4	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.22 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-16648	0.39	260.34	1003.79	1717.17	1360.48	5.23	Si
SLV 4	-16848	0.39	260.34	1013.88	1733.67	1373.77	5.28	Si
SLV 1	-16992	0.39	260.34	1021.13	1745.58	1383.35	5.31	Si
SLV 2	-17192	0.39	260.34	1031.14	1762.09	1396.61	5.36	Si
SLV 7	-20531	0.39	260.34	1191.47	2036.21	1613.84	6.2	Si
SLV 8	-20660	0.39	260.34	1197.39	2046.78	1622.09	6.23	Si
SLV 5	-21678	0.39	260.34	1243.54	2130.1	1686.82	6.48	Si
SLV 6	-21807	0.39	260.34	1249.29	2140.41	1694.85	6.51	Si
SLV 11	-24174	0.39	260.34	1351.52	2330.04	1840.78	7.07	Si
SLV 12	-24302	0.39	260.34	1356.89	2340.37	1848.63	7.1	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-21363	-31822	175	1.136	2500	0.961	17.17194	16.76087	Si
SLV 9	-21199	-31875	176	1.144	2483.3	0.961	17.29472	16.76087	Si
SLV 6	-18376	-26887	-147	1.3	2196.3	0.956	19.75528	16.76087	Si
SLV 5	-18212	-26940	-146	1.31	2179.6	0.956	19.91968	16.76087	Si
SLV 12	-15152	-28353	142	1.54	1868.7	0.95	23.56596	16.76087	Si
SLV 11	-14988	-28406	143	1.555	1852	0.949	23.79904	16.76087	Si
SLV 14	-22719	-36351	540	1.06	2637.9	0.963	15.9962	10.11238	Si
SLV 13	-22464	-36432	541	1.071	2612	0.963	16.16404	10.11238	Si
SLV 8	-12165	-23418	-180	1.856	1565.8	0.941	28.65363	16.76087	Si
SLV 16	-20856	-35310	530	1.145	2448.4	0.96	17.32484	10.11238	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.471	SLU 39	Si
V_SLU	17.516	SLU 49	Si
PF_SLV	5.406	SLV 7	Si
V_SLV	9.474	SLV 10	Si
PFFP_SLV	5.226	SLV 3	Si
R_SLV	1.025	SLV 10	Si

Maschio 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L5	L6	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	7.46	-92.34	-7623	-0.0000946	0.0003743	0.0035	0.55	1077.18	1421.82	1421.82	15.4	No	Si
SLU 70	8.26	-427.99	-7390	-0.0001366	0.0003743	0.0035	0.55	1074.45	1396.87	1396.87	3.26	No	Si
SLU 68	7.46	-79.72	-7309	-0.000089	0.0003743	0.0035	0.55	1073.07	1388.44	1388.44	17.42	No	Si
SLU 68	8.26	-418.17	-7111	-0.0001312	0.0003743	0.0035	0.55	1068.69	1367.98	1367.98	3.27	No	Si
SLU 69	7.46	-99.9	-7669	-0.0000962	0.0003743	0.0035	0.55	1077.49	1426.84	1426.84	14.28	No	Si
SLU 69	8.26	-423.23	-7411	-0.0001363	0.0003743	0.0035	0.55	1074.78	1399.15	1399.15	3.31	No	Si
SLU 76	7.46	-104.65	-8122	-0.0001029	0.0003743	0.0035	0.55	1076.61	1466.54	1466.54	14.01	No	Si
SLU 76	8.26	-438.84	-7923	-0.0001461	0.0003743	0.0035	0.55	1077.88	1453.54	1453.54	3.31	No	Si
SLU 78	7.46	-117.26	-8435	-0.0001088	0.0003743	0.0035	0.55	1071.78	1482.86	1482.86	12.65	No	Si
SLU 78	8.26	-448.66	-8202	-0.0001518	0.0003743	0.0035	0.55	1075.7	1471.06	1471.06	3.28	No	Si
SLU 65	7.46	-73.57	-7108	-0.0000856	0.0003743	0.0035	0.55	1068.62	1367.68	1367.68	18.59	No	Si
SLU 65	8.26	-410.54	-6926	-0.0001275	0.0003743	0.0035	0.55	1063.36	1349.24	1349.24	3.29	No	Si
SLU 67	7.46	-86.19	-7422	-0.0000913	0.0003743	0.0035	0.55	1074.94	1400.28	1400.28	16.25	No	Si
SLU 67	8.26	-420.36	-7204	-0.0001329	0.0003743	0.0035	0.55	1070.92	1377.55	1377.55	3.28	No	Si
SLU 72	7.46	-90.92	-7541	-0.0000934	0.0003743	0.0035	0.55	1076.44	1413	1413	15.54	No	Si
SLU 72	8.26	-422.62	-7311	-0.0001347	0.0003743	0.0035	0.55	1073.09	1388.59	1388.59	3.29	No	Si
SLU 75	7.46	-111.11	-8234	-0.0001052	0.0003743	0.0035	0.55	1075.27	1472.74	1472.74	13.25	No	Si
SLU 75	8.26	-441.03	-8017	-0.0001479	0.0003743	0.0035	0.55	1077.45	1459.99	1459.99	3.31	No	Si
SLU 80	7.46	-115.84	-8354	-0.0001075	0.0003743	0.0035	0.55	1073.37	1478.73	1478.73	12.77	No	Si
SLU 80	8.26	-443.3	-8123	-0.0001498	0.0003743	0.0035	0.55	1076.6	1466.62	1466.62	3.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	7.46	226.7	-4379	-0.000069	0.0005615	0.0035	0.55		1036.47	1036.47	4.57		Si
SLD 3	8.26	-646.92	-5001	-0.0001323	0.0005615	0.0035	0.55		1225.92	1225.92	1.9		Si
SLV 6	7.46	277.63	-2091	-0.0000532	0.0005615	0.0035	0.55		553.41	553.41	1.99		Si
SLV 6	8.26	-515.35	-2802	-0.0001169	0.0005615	0.0035	0.44		766.97	766.97	1.49		Si
SLV 3	7.46	625.82	-2751	-0.0002449	0.0005615	0.0035	0.55		697.55	697.55	1.11		Si
SLV 3	8.26	-1103.79	-4441	-0.001943	0.0005615	0.0035	0.44		1116.64	1116.64	1.01		Si
SLD 4	7.46	263.72	-4215	-0.0000714	0.0005615	0.0035	0.55		1001.37	1001.37	3.8		Si
SLD 4	8.26	-687.76	-4934	-0.0001412	0.0005615	0.0035	0.55		1213.11	1213.11	1.76		Si
SLV 4	7.46	712.03	-2369	-0.010354	0.0005615	0.0035	0.44		618.98	618.98	0.87		No
SLV 4	8.26	-1198.91	-4284	-0.0050555	0.0005615	0.0035	0.44		1084.64	1084.64	0.9		No
SLD 2	7.46	287.6	-3618	-0.0000676	0.0005615	0.0035	0.55		875.48	875.48	3.04		Si
SLD 2	8.26	-669.72	-4390	-0.0001388	0.0005615	0.0035	0.44		1106.25	1106.25	1.65		Si
SLV 5	7.46	222.07	-2338	-0.0000468	0.0005615	0.0035	0.55		611.92	611.92	2.76		Si
SLV 5	8.26	-454.06	-2903	-0.0000912	0.0005615	0.0035	0.44		790.06	790.06	1.74		Si
SLV 1	7.46	680.13	-1399	-0.0268413	0.0005615	0.0035	0.44		383.79	383.79	0.56		No
SLV 1	8.26	-1062.81	-3209	-0.0053479	0.0005615	0.0035	0.44		858.19	858.19	0.81		No
SLV 2	7.46	766.34	-1016	-0.0420775	0.0005615	0.0035	0.44		287.03	287.03	0.37		No
SLV 2	8.26	-1157.93	-3051	-0.0072839	0.0005615	0.0035	0.44		823.71	823.71	0.71		No
SLD 1	7.46	250.58	-3782	-0.0000652	0.0005615	0.0035	0.55		909.83	909.83	3.63		Si
SLD 1	8.26	-628.88	-4458	-0.0001278	0.0005615	0.0035	0.55		1119.99	1119.99	1.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	7.46	-115.84	-8354	-6956	-99	0.55	0.55	-45169	10833	1668	40441	4612	1403	6014	No	60.96	Si
SLU 80	8.26	-443.3	-8123	-6764	671	0.55	0.55	-43921	10833	1668	40441	4612	1403	6014	No	8.96	Si
SLU 75	7.46	-111.11	-8234	-6857	-86	0.55	0.55	-44523	10833	1668	40441	4612	1403	6014	No	69.79	Si
SLU 75	8.26	-441.03	-8017	-6676	669	0.55	0.55	-43347	10833	1668	40441	4612	1403	6014	No	8.99	Si
SLU 78	7.46	-117.26	-8435	-7024	-97	0.55	0.55	-45611	10833	1668	40441	4612	1403	6014	No	62	Si
SLU 78	8.26	-448.66	-8202	-6830	675	0.55	0.55	-44348	10833	1668	40441	4612	1403	6014	No	8.91	Si
SLU 84	7.46	-120.37	-8501	-7079	-122	0.55	0.55	-45964	10833	1668	40441	4612	1403	6014	No	49.43	Si
SLU 84	8.26	-444.53	-8286	-6900	691	0.55	0.55	-44803	10833	1668	40441	4612	1403	6014	No	8.7	Si
SLU 82	7.46	-114.22	-8300	-6911	-111	0.55	0.55	-44877	10833	1668	40441	4612	1403	6014	No	54.26	Si
SLU 82	8.26	-436.9	-8101	-6746	685	0.55	0.55	-43802	10833	1668	40441	4612	1403	6014	No	8.79	Si
SLU 81	7.46	-121.79	-8346	-6950	-133	0.55	0.55	-45127	10833	1668	40441	4612	1403	6014	No	45.3	Si
SLU 81	8.26	-432.15	-8122	-6764	674	0.55	0.55	-43918	10833	1668	40441	4612	1403	6014	No	8.92	Si
SLU 76	7.46	-104.65	-8122	-6763	-73	0.55	0.55	-43915	10833	1668	40441	4612	1403	6014	No	82.14	Si
SLU 76	8.26	-438.84	-7923	-6598	672	0.55	0.55	-42842	10833	1668	40441	4612	1403	6014	No	8.95	Si
SLU 73	7.46	-98.5	-7921	-6596	-62	0.55	0.55	-42827	10833	1668	40441	4612	1403	6014	No	96.4	Si
SLU 73	8.26	-431.22	-7738	-6444	665	0.55	0.55	-41841	10833	1668	40441	4612	1403	6014	No	9.04	Si
SLU 83	7.46	-127.94	-8547	-7117	-144	0.55	0.55	-46214	10833	1668	40441	4612	1403	6014	No	41.88	Si
SLU 83	8.26	-439.78	-8308	-6918	681	0.55	0.55	-44919	10833	1668	40441	4612	1403	6014	No	8.84	Si
SLU 77	7.46	-124.82	-8482	-7063	-119	0.55	0.55	-45861	10833	1668	40441	4612	1403	6014	No	50.57	Si
SLU 77	8.26	-443.91	-8223	-6848	665	0.55	0.55	-44465	10833	1668	40441	4612	1403	6014	No	9.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	7.46	712.03	-2369	-1973	3085	0.44	0	0	0	0	40441	5534	1122	6656		2.16	Si
SLV 4	8.26	-1198.91	-4284	-3567	1066	0.44	0	0	0	0	40441	5534	1122	6656		6.24	Si
SLV 15	7.46	-907.74	-10138	-8442	-3286	0.55	0.55	-54814	16250	2503	40441	6917	1403	8320		2.53	Si
SLV 15	8.26	547.21	-7755	-6458	-142	0.55	0.55	-41933	16250	2503	40441	6917	1403	8320		58.49	Si
SLV 1	7.46	680.13	-1399	-1165	2878	0.44	0	0	0	0	40441	5534	1122	6656		2.31	Si
SLV 1	8.26	-1062.81	-3209	-2672	960	0.44	0	0	0	0	40441	5534	1122	6656		6.94	Si
SLD 15	7.46	-429	-7536	-6275	-1427	0.55	0.55	-40747	16250	2503	40441	6917	1403	8320		5.83	Si
SLD 15	8.26	59.01	-6417	-5343	200	0.55	0.55	-34695	16250	2503	40441	6917	1403	8320		41.68	Si
SLV 2	7.46	766.34	-1016	-846	3213	0.44	0	0	0	0	40441	5534	1122	6656		2.07	Si
SLV 2	8.26	-1157.93	-3051	-2541	1053	0.44	0	0	0	0	40441	5534	1122	6656		6.32	Si
SLV 13	7.46	-853.43	-8785	-7315	-3158	0.55	0.5336	-47500	16250	2428	40441	6917	1403	8320		2.63	Si
SLV 13	8.26	588.19	-6523	-5432	-155	0.55	0.55	-35270	16250	2503	40441	6917	1403	8320		53.67	Si
SLD 13	7.46	-405.12	-6939	-5778	-1371	0.55	0.55	-37520	16250	2503	40441	6917	1403	8320		6.07	Si
SLD 13	8.26	77.05	-5873	-4890	194	0.55	0.55	-31755	16250	2503	40441	6917	1403	8320		42.8	Si
SLV 16	7.46	-821.53	-9755	-8123	-2952	0.55	0.55	-52746	16250	2503	40441	6917	1403	8320		2.82	Si
SLV 16	8.26	452.09	-7598	-6327	-48	0.55	0.55	-41082	16250	2503	40441	6917	1403	8320		171.81	Si
SLV 14	7.46	-767.22	-8402	-6997	-2824	0.55	0.55	-45433	16250	2503	40441	6917	1403	8320		2.95	Si
SLV 14	8.26	493.07	-6365	-5301	-61	0.55	0.55	-34418	16250	2503	40441	6917	1403	8320		135.94	Si
SLV 3	7.46	625.82	-2751	-2291	2750	0.55	0.1427	-59500	16250	649	40441	6917	1403	8320		3.03	Si
SLV 3	8.26	-1103.79	-4441	-3698	972	0.44	0.0794	0	0	0	40441	5534	1122	6656		6.84	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.39	13816	-2128	57.2	270.93	4.74	Si
SLV 6	179667	0.39	14356	-2211	57.2	280.42	4.9	Si
SLV 1	179667	0.39	14980	-2307	57.2	291.3	5.09	Si
SLV 5	179667	0.39	15106	-2326	57.2	293.48	5.13	Si
SLV 4	179667	0.39	20811	-3205	57.2	387.56	6.78	Si
SLV 10	179667	0.39	21636	-3332	57.2	400.4	7	Si
SLV 3	179667	0.39	21975	-3384	57.2	405.63	7.09	Si
SLV 9	179667	0.39	22387	-3448	57.2	411.92	7.2	Si
SLV 8	179667	0.39	37674	-5802	57.2	611.89	10.7	Si
SLV 14	179667	0.39	38085	-5865	57.2	616.36	10.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-4828	-6035	-13	0.622	568	0.96	9.41897	12.68333	No
SLV 12	-4742	-6075	-13	0.632	559.2	0.959	9.57113	12.68333	No
SLV 7	-4076	-5963	-12	0.718	491.5	0.954	10.93603	12.68333	No
SLV 8	-3990	-6003	-12	0.731	482.7	0.954	11.14499	12.68333	No
SLV 9	-2119	-3412	-5	1.23	293.2	0.929	19.24003	12.68333	Si
SLV 10	-2033	-3452	-5	1.271	284.5	0.928	19.91745	12.68333	Si
SLV 15	-4781	-5190	-11	0.628	563.2	0.96	9.50708	5.63352	Si
SLV 16	-4647	-5252	-10	0.643	549.5	0.959	9.75007	5.63352	Si
SLV 13	-3969	-4403	-8	0.736	480.6	0.954	11.21099	5.63352	Si
SLV 14	-3834	-4465	-8	0.757	466.9	0.952	11.55617	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.264	SLU 70	Si
V_SLU	8.703	SLU 84	Si
PF_SLV	0.375	SLV 2	No
V_SLV	2.072	SLV 2	Si
PFFP_SLV	4.736	SLV 2	Si
R_SLV	0.743	SLV 11	No

Maschio 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L5	L6	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	7.46	2658.7	-26869	-0.0000881	0.0003743	0.0035	2.28	17967.88	21712.29	21712.29	8.17	No	Si
SLU 82	8.26	1445.37	-23503	-0.0000694	0.0003743	0.0035	2.28	17104.65	20158.4	20158.4	13.95	No	Si
SLU 79	7.46	2642.35	-27334	-0.0000894	0.0003743	0.0035	2.28	18055.92	21931.3	21931.3	8.3	No	Si
SLU 79	8.26	1495.84	-23942	-0.000071	0.0003743	0.0035	2.28	17239.63	20356.64	20356.64	13.61	No	Si
SLU 73	7.46	2595.48	-25720	-0.0000842	0.0003743	0.0035	2.28	17717.91	21176.95	21176.95	8.16	No	Si
SLU 73	8.26	1342.23	-22419	-0.0000656	0.0003743	0.0035	2.28	16741.75	19525.08	19525.08	14.55	No	Si
SLU 77	7.46	2668.11	-27639	-0.0000905	0.0003743	0.0035	2.28	18109.59	22076.05	22076.05	8.27	No	Si
SLU 77	8.26	1513.4	-24225	-0.0000719	0.0003743	0.0035	2.28	17323.28	20485.61	20485.61	13.54	No	Si
SLU 80	7.46	2681.97	-27125	-0.000089	0.0003743	0.0035	2.28	18017.21	21832.46	21832.46	8.14	No	Si
SLU 80	8.26	1482.24	-23748	-0.0000703	0.0003743	0.0035	2.28	17180.79	20268.8	20268.8	13.67	No	Si
SLU 76	7.46	2651.93	-26353	-0.0000865	0.0003743	0.0035	2.28	17861.25	21471.24	21471.24	8.1	No	Si
SLU 76	8.26	1407.71	-23019	-0.0000677	0.0003743	0.0035	2.28	16947.6	19911.58	19911.58	14.14	No	Si
SLU 83	7.46	2675.53	-27711	-0.0000908	0.0003743	0.0035	2.28	18121.67	22110.03	22110.03	8.26	No	Si
SLU 83	8.26	1524.44	-24297	-0.0000722	0.0003743	0.0035	2.28	17344.1	20518.5	20518.5	13.46	No	Si
SLU 75	7.46	2651.28	-26798	-0.0000878	0.0003743	0.0035	2.28	17953.69	21678.82	21678.82	8.18	No	Si
SLU 75	8.26	1434.34	-23431	-0.0000691	0.0003743	0.0035	2.28	17081.83	20125.97	20125.97	14.03	No	Si
SLU 84	7.46	2715.15	-27501	-0.0000904	0.0003743	0.0035	2.28	18085.73	22010.53	22010.53	8.11	No	Si
SLU 84	8.26	1510.85	-24103	-0.0000716	0.0003743	0.0035	2.28	17287.67	20430.09	20430.09	13.52	No	Si
SLU 78	7.46	2707.73	-27430	-0.0000902	0.0003743	0.0035	2.28	18073.12	21976.67	21976.67	8.12	No	Si
SLU 78	8.26	1499.81	-24031	-0.0000713	0.0003743	0.0035	2.28	17266.36	20397.31	20397.31	13.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	7.46	3616.43	-20885	-0.0000744	0.0005615	0.0035	2.28		20224.19	20224.19	5.59		Si
SLV 4	8.26	-3612.58	-16152	-0.0000619	0.0005615	0.0035	2.28		17451.23	17451.23	4.83		Si
SLV 5	7.46	2060.93	-10929	-0.0000387	0.0005615	0.0035	2.28		11596.03	11596.03	5.63		Si
SLV 5	8.26	-863.54	-8542	-0.0000254	0.0005615	0.0035	2.28		10398.74	10398.74	12.04		Si
SLV 1	7.46	3329.68	-16243	-0.0000603	0.0005615	0.0035	2.28		16115.32	16115.32	4.84		Si
SLV 1	8.26	-3381.76	-12145	-0.0000502	0.0005615	0.0035	2.28		13847.31	13847.31	4.09		Si
SLV 6	7.46	2180.09	-11063	-0.0000398	0.0005615	0.0035	2.28		11707.51	11707.51	5.37		Si
SLV 6	8.26	-1262.36	-8484	-0.0000277	0.0005615	0.0035	2.28		10339.74	10339.74	8.19		Si
SLV 13	7.46	-49.8	-15735	-0.0000379	0.0005615	0.0035	2.28		17088.67	17088.67	343.11		Si
SLV 13	8.26	5421	-15557	-0.0000722	0.0005615	0.0035	2.28		15520.69	15520.69	2.86		Si
SLV 16	7.46	236.94	-20377	-0.0000508	0.0005615	0.0035	2.28		19777.93	19777.93	83.47		Si
SLV 16	8.26	5190.17	-19564	-0.0000813	0.0005615	0.0035	2.28		19047.14	19047.14	3.67		Si
SLV 15	7.46	52.03	-20169	-0.000049	0.0005615	0.0035	2.28		19590.54	19590.54	376.53		Si
SLV 15	8.26	5809.05	-19655	-0.0000857	0.0005615	0.0035	2.28		19129.01	19129.01	3.29		Si
SLV 2	7.46	3514.59	-16451	-0.000062	0.0005615	0.0035	2.28		16296.65	16296.65	4.64		Si
SLV 2	8.26	-4000.63	-12054	-0.0000539	0.0005615	0.0035	2.28		13763.22	13763.22	3.44		Si
SLD 13	7.46	997.67	-17180	-0.0000476	0.0005615	0.0035	2.28		16935.01	16935.01	16.97		Si
SLD 13	8.26	2832.46	-15701	-0.0000557	0.0005615	0.0035	2.28		15645.04	15645.04	5.52		Si
SLV 14	7.46	135.11	-15943	-0.000039	0.0005615	0.0035	2.28		15855.12	15855.12	117.35		Si
SLV 14	8.26	4802.12	-15466	-0.0000679	0.0005615	0.0035	2.28		15441.65	15441.65	3.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	7.46	2651.93	-26353	-21944	4486	2.28	2.28	-34374	10833	6916	40441	19116	5814	24930	No	5.56	Si
SLU 76	8.26	1407.71	-23019	-19168	3183	2.28	2.28	-30025	10833	6916	40441	19116	5814	24930	No	7.83	Si
SLU 80	7.46	2681.97	-27125	-22587	4495	2.28	2.28	-35381	10833	6916	40441	19116	5814	24930	No	5.55	Si
SLU 80	8.26	1482.24	-23748	-19775	3168	2.28	2.28	-30977	10833	6916	40441	19116	5814	24930	No	7.87	Si
SLU 84	7.46	2715.15	-27501	-22901	4532	2.28	2.28	-35872	10833	6916	40441	19116	5814	24930	No	5.5	Si
SLU 84	8.26	1510.85	-24103	-20071	3198	2.28	2.28	-31440	10833	6916	40441	19116	5814	24930	No	7.79	Si
SLU 79	7.46	2642.35	-27334	-22761	4452	2.28	2.28	-35654	10833	6916	40441	19116	5814	24930	No	5.6	Si
SLU 79	8.26	1495.84	-23942	-19937	3116	2.28	2.28	-31229	10833	6916	40441	19116	5814	24930	No	8	Si
SLU 77	7.46	2668.11	-27639	-23016	4495	2.28	2.28	-36052	10833	6916	40441	19116	5814	24930	No	5.55	Si
SLU 77	8.26	1513.4	-24225	-20173	3145	2.28	2.28	-31599	10833	6916	40441	19116	5814	24930	No	7.93	Si
SLU 83	7.46	2675.53	-27711	-23075	4489	2.28	2.28	-36146	10833	6916	40441	19116	5814	24930	No	5.55	Si
SLU 83	8.26	1524.44	-24297	-20233	3146	2.28	2.28	-31693	10833	6916	40441	19116	5814	24930	No	7.92	Si
SLU 82	7.46	2658.7	-26869	-22374	4495	2.28	2.28	-35048	10833	6916	40441	19116	5814	24930	No	5.55	Si
SLU 82	8.26	1445.37	-23503	-19572	3179	2.28	2.28	-30658	10833	6916	40441	19116	5814	24930	No	7.84	Si
SLU 74	7.46	2611.66	-27007	-22489	4458	2.28	2.28	-35228	10833	6916	40441	19116	5814	24930	No	5.59	Si
SLU 74	8.26	1447.93	-23625	-19673	3125	2.28	2.28	-30816	10833	6916	40441	19116	5814	24930	No	7.98	Si
SLU 75	7.46	2651.28	-26798	-22315	4501	2.28	2.28	-34954	10833	6916	40441	19116	5814	24930	No	5.54	Si
SLU 75	8.26	1434.34	-23431	-19512	3177	2.28	2.28	-30564	10833	6916	40441	19116	5814	24930	No	7.85	Si
SLU 78	7.46	2707.73	-27430	-22841	4538	2.28	2.28	-35779	10833	6916	40441	19116	5814	24930	No	5.49	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	8.26	1499.81	-24031	-20011	3197	2.28	2.28	-31346	10833	6916	40441	19116	5814	24930	No	7.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	7.46	-49.8	-15735	-13103	-8396	2.28	2.28	-20525	14522	9271	40441	28675	5814	34489		4.11	Si
SLV 13	8.26	5421	-15557	-12955	-6671	2.28	2.28	-20293	14475	9241	40441	28675	5814	34489		5.17	Si
SLV 3	7.46	3431.52	-20677	-17218	13312	2.28	2.28	-26970	15811	10093	40441	28675	5814	34489		2.59	Si
SLV 3	8.26	-2993.71	-16243	-13526	10018	2.28	2.28	-21187	14654	9355	40441	28675	5814	34489		3.44	Si
SLD 4	7.46	2568.95	-19439	-16188	8152	2.28	2.28	-25357	15488	9887	40441	28675	5814	34489		4.23	Si
SLD 4	8.26	-1024.04	-16008	-13330	6061	2.28	2.28	-20881	14593	9316	40441	28675	5814	34489		5.69	Si
SLD 1	7.46	2443.95	-17396	-14486	7415	2.28	2.28	-22691	14955	9547	40441	28675	5814	34489		4.65	Si
SLD 1	8.26	-929.65	-14241	-11858	5636	2.28	2.28	-18575	14132	9022	40441	28675	5814	34489		6.12	Si
SLD 3	7.46	2489.56	-19350	-16113	7519	2.28	2.28	-25240	15465	9873	40441	28675	5814	34489		4.59	Si
SLD 3	8.26	-758.32	-16047	-13363	5568	2.28	2.28	-20932	14603	9323	40441	28675	5814	34489		6.19	Si
SLD 2	7.46	2523.35	-17485	-14560	8048	2.28	2.28	-22807	14978	9562	40441	28675	5814	34489		4.29	Si
SLD 2	8.26	-1195.37	-14201	-11826	6129	2.28	2.28	-18524	14122	9015	40441	28675	5814	34489		5.63	Si
SLV 15	7.46	52.03	-20169	-16795	-8155	2.28	2.28	-26308	15678	10009	40441	28675	5814	34489		4.23	Si
SLV 15	8.26	5809.05	-19655	-16367	-6827	2.28	2.28	-25638	15544	9923	40441	28675	5814	34489		5.05	Si
SLV 1	7.46	3329.68	-16243	-13525	13070	2.28	2.28	-21187	14654	9355	40441	28675	5814	34489		2.64	Si
SLV 1	8.26	-3381.76	-12145	-10114	10174	2.28	2.28	-15842	13585	8673	40441	28675	5814	34489		3.39	Si
SLV 2	7.46	3514.59	-16451	-13699	14544	2.28	2.28	-21458	14708	9390	40441	28675	5814	34489		2.37	Si
SLV 2	8.26	-4000.63	-12054	-10037	11322	2.28	2.28	-15723	13561	8657	40441	28675	5814	34489		3.05	Si
SLV 4	7.46	3616.43	-20885	-17391	14786	2.28	2.28	-27242	15865	10128	40441	28675	5814	34489		2.33	Si
SLV 4	8.26	-3612.58	-16152	-13450	11166	2.28	2.28	-21068	14630	9340	40441	28675	5814	34489		3.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.39	14133	-9022	237.12	1146.22	4.83	Si
SLV 5	179667	0.39	14216	-9076	237.12	1152.32	4.86	Si
SLV 10	179667	0.39	16070	-10259	237.12	1285.15	5.42	Si
SLV 9	179667	0.39	16154	-10313	237.12	1291.06	5.44	Si
SLV 2	179667	0.39	19415	-12394	237.12	1514.61	6.39	Si
SLV 1	179667	0.39	19545	-12477	237.12	1523.27	6.42	Si
SLV 14	179667	0.39	25874	-16518	237.12	1920.69	8.1	Si
SLV 4	179667	0.39	25900	-16534	237.12	1922.23	8.11	Si
SLV 13	179667	0.39	26004	-16601	237.12	1928.36	8.13	Si
SLV 3	179667	0.39	26030	-16617	237.12	1929.9	8.14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-18565	-21625	548	0.639	2207	0.958	9.69978	12.68333	No
SLV 12	-18510	-21596	548	0.641	2201.5	0.957	9.72502	12.68333	No
SLV 7	-17729	-19792	546	0.665	2122.1	0.956	10.10287	12.68333	No
SLV 8	-17674	-19764	546	0.666	2116.5	0.956	10.13038	12.68333	No
SLV 9	-7712	-10177	-537	1.309	1107.3	0.924	20.58267	12.68333	Si
SLV 10	-7657	-10148	-537	1.316	1101.8	0.924	20.70227	12.68333	Si
SLV 5	-6876	-8344	-540	1.427	1023.3	0.919	22.56704	12.68333	Si
SLV 6	-6821	-8316	-540	1.436	1017.8	0.919	22.71104	12.68333	Si
SLV 15	-15757	-19763	172	0.755	1921.6	0.952	11.52518	5.63352	Si
SLV 16	-15672	-19719	172	0.758	1913	0.952	11.57996	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.096	SLU 76	Si
V_SLU	5.493	SLU 78	Si
PF_SLV	2.863	SLV 13	Si
V_SLV	2.333	SLV 4	Si
PFFP_SLV	4.834	SLV 6	Si
R_SLV	0.765	SLV 11	No

Maschio 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L5	L6	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	6.36	1425.13	-16218	-0.0000529	0.0003743	0.0035	2.15	12821.34	14093.07	14093.07	9.89	No	Si
SLU 49	8.16	401.54	-14181	-0.0000395	0.0003743	0.0035	2.15	11717.32	12802.95	12802.95	31.88	No	Si
SLU 46	6.36	1401.69	-15809	-0.0000516	0.0003743	0.0035	2.15	12611.49	13831.13	13831.13	9.87	No	Si
SLU 46	8.16	364.06	-13753	-0.0000381	0.0003743	0.0035	2.15	11467.28	12538.26	12538.26	34.44	No	Si
SLU 43	6.36	1410.18	-15342	-0.0000503	0.0003743	0.0035	2.15	12364.23	13532.77	13532.77	9.6	No	Si
SLU 43	8.16	320.57	-13256	-0.0000364	0.0003743	0.0035	2.15	11168.49	12206.69	12206.69	38.08	No	Si
SLU 66	6.36	1537.5	-17780	-0.0000583	0.0003743	0.0035	2.15	13568.77	15111.46	15111.46	9.83	No	Si
SLU 66	8.16	504.59	-15872	-0.000045	0.0003743	0.0035	2.15	12644.04	13871.15	13871.15	27.49	No	Si
SLU 50	6.36	1457.05	-16159	-0.000053	0.0003743	0.0035	2.15	12791.49	14055.24	14055.24	9.65	No	Si
SLU 50	8.16	395.53	-14111	-0.0000393	0.0003743	0.0035	2.15	11677.06	12759.72	12759.72	32.26	No	Si
SLU 64	6.36	1492.65	-17148	-0.0000561	0.0003743	0.0035	2.15	13276.52	14695.77	14695.77	9.85	No	Si
SLU 64	8.16	464.25	-15231	-0.0000429	0.0003743	0.0035	2.15	12304.78	13462.73	13462.73	29	No	Si
SLU 45	6.36	1455.03	-15974	-0.0000525	0.0003743	0.0035	2.15	12696.52	13936.15	13936.15	9.58	No	Si
SLU 45	8.16	360.92	-13897	-0.0000385	0.0003743	0.0035	2.15	11552.13	12627.09	12627.09	34.99	No	Si
SLU 48	6.36	1478.47	-16383	-0.0000538	0.0003743	0.0035	2.15	12904.02	14198.88	14198.88	9.6	No	Si
SLU 48	8.16	398.4	-14324	-0.0000399	0.0003743	0.0035	2.15	11800.02	12892.49	12892.49	32.36	No	Si
SLU 69	6.36	1560.93	-18188	-0.0000597	0.0003743	0.0035	2.15	13750.36	15382.88	15382.88	9.85	No	Si
SLU 69	8.16	542.07	-16299	-0.0000465	0.0003743	0.0035	2.15	12862.31	14145.32	14145.32	26.09	No	Si
SLU 71	6.36	1539.52	-17965	-0.0000589	0.0003743	0.0035	2.15	13651.98	15234.49	15234.49	9.9	No	Si
SLU 71	8.16	539.2	-16086	-0.0000459	0.0003743	0.0035	2.15	12754.14	14008.18	14008.18	25.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	6.36	-3068.46	-12782	-0.0000542	0.0005615	0.0035	2.15		13558.27	13558.27	4.42		Si
SLV 13	8.16	5114.72	-15989	-0.000078	0.0005615	0.0035	2.15		14882.77	14882.77	2.91		Si
SLV 3	6.36	4711.43	-13861	-0.0000691	0.0005615	0.0035	2.15		13126.59	13126.59	2.79		Si
SLV 3	8.16	-3692.52	-8970	-0.0000488	0.0005615	0.0035	2.15		10183.52	10183.52	2.76		Si
SLV 5	6.36	2357.03	-2787	-0.0000437	0.0005615	0.0035	2.15		3167.74	3167.74	1.34		Si
SLV 5	8.16	-395.28	458	0.0338518	0.0005615	0.0035	1.72		0	0	0		No
SLV 2	6.36	5462.83	-7779	-0.000077	0.0005615	0.0035	2.15		8064.37	8064.37	1.48		Si
SLV 2	8.16	-4156.31	-1204	-0.0012015	0.0005615	0.0035	1.72		2581.12	2581.12	0.62		No
SLV 10	6.36	371.88	-4085	-0.0000126	0.0005615	0.0035	2.15		4480.42	4480.42	12.05		Si
SLV 10	8.16	1776.77	-2696	-0.0000229	0.0005615	0.0035	2.15		3074.98	3074.98	1.73		Si
SLV 6	6.36	2748.86	-2648	-0.0002441	0.0005615	0.0035	2.15		3026.06	3026.06	1.1		Si
SLV 6	8.16	-811.01	1332	0.0976848	0.0005615	0.0035	1.72		0	0	0		No
SLV 4	6.36	5319.46	-13646	-0.0000732	0.0005615	0.0035	2.15		12951.07	12951.07	2.43		Si
SLV 4	8.16	-4337.63	-7613	-0.0000546	0.0005615	0.0035	2.15		8914.54	8914.54	2.06		Si
SLV 1	6.36	4854.8	-7994	-0.0000623	0.0005615	0.0035	2.15		8266.04	8266.04	1.7		Si
SLV 1	8.16	-3511.2	-2561	-0.0004074	0.0005615	0.0035	1.72		3975.56	3975.56	1.13		Si
SLV 14	6.36	-2460.43	-12567	-0.0000492	0.0005615	0.0035	2.15		13370.47	13370.47	5.43		Si
SLV 14	8.16	4469.61	-14632	-0.0000695	0.0005615	0.0035	2.15		13759.1	13759.1	3.08		Si
SLV 9	6.36	-19.95	-4223	-0.0000105	0.0005615	0.0035	2.15		5648.29	5648.29	283.14		Si
SLV 9	8.16	2192.49	-3570	-0.0000275	0.0005615	0.0035	2.15		3963.5	3963.5	1.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	6.36	1410.18	-15342	-12775	404	2.15	2.15	-21221	9774	5884	40441	18027	5483	23509	No	58.23	Si
SLU 43	8.16	320.57	-13256	-11039	404	2.15	2.15	-18337	9389	5652	40441	18027	5483	23509	No	58.26	Si
SLU 48	6.36	1478.47	-16383	-13642	382	2.15	2.15	-22661	9966	6000	40441	18027	5483	23509	No	61.52	Si
SLU 48	8.16	398.4	-14324	-11928	382	2.15	2.15	-19814	9586	5771	40441	18027	5483	23509	No	61.55	Si
SLU 39	6.36	1166.14	-16185	-13478	-364	2.15	2.15	-22388	9930	5978	40441	18027	5483	23509	No	64.57	Si
SLU 39	8.16	743.2	-15285	-12728	-364	2.15	2.15	-21143	9763	5878	40441	18027	5483	23509	No	64.52	Si
SLU 50	6.36	1457.05	-16159	-13456	366	2.15	2.15	-22352	9925	5975	40441	18027	5483	23509	No	64.23	Si
SLU 50	8.16	395.53	-14111	-11751	366	2.15	2.15	-19519	9547	5747	40441	18027	5483	23509	No	64.27	Si
SLU 40	6.36	1112.8	-16021	-13341	-413	2.15	2.15	-22161	9899	5959	40441	18027	5483	23509	No	56.86	Si
SLU 40	8.16	746.35	-15141	-12608	-403	2.15	2.15	-20944	9737	5862	40441	18027	5483	23509	No	58.37	Si
SLU 46	6.36	1401.69	-15809	-13165	352	2.15	2.15	-21868	9860	5936	40441	18027	5483	23509	No	66.85	Si
SLU 46	8.16	364.06	-13753	-11453	362	2.15	2.15	-19024	9481	5708	40441	18027	5483	23509	No	64.86	Si
SLU 42	6.36	1136.24	-16430	-13682	-432	2.15	2.15	-22727	9975	6005	40441	18027	5483	23509	No	54.38	Si
SLU 42	8.16	783.82	-15569	-12964	-422	2.15	2.15	-21535	9816	5909	40441	18027	5483	23509	No	55.76	Si
SLU 49	6.36	1425.13	-16218	-13505	333	2.15	2.15	-22434	9936	5981	40441	18027	5483	23509	No	70.64	Si
SLU 49	8.16	401.54	-14181	-11808	344	2.15	2.15	-19615	9560	5755	40441	18027	5483	23509	No	68.42	Si
SLU 41	6.36	1189.57	-16594	-13818	-383	2.15	2.15	-22954	10005	6023	40441	18027	5483	23509	No	61.39	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	8.16	780.68	-15712	-13084	-383	2.15	2.15	-21734	9842	5925	40441	18027	5483	23509	No	61.34	Si
SLU 45	6.36	1455.03	-15974	-13302	401	2.15	2.15	-22095	9890	5954	40441	18027	5483	23509	No	58.62	Si
SLU 45	8.16	360.92	-13897	-11572	401	2.15	2.15	-19223	9508	5724	40441	18027	5483	23509	No	58.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	6.36	-2603.8	-18434	-15350	-7100	2.15	2.15	-25499	15516	9341	40441	27040	5483	32523		4.58	Si
SLV 16	8.16	4288.29	-21041	-17521	-6308	2.15	2.15	-29104	16238	9775	40441	27040	5483	32523		5.16	Si
SLD 2	6.36	2982.66	-10847	-9032	3813	2.15	2.15	-15004	13417	8077	40441	27040	5483	32523		8.53	Si
SLD 2	8.16	-1553.44	-7223	-6015	3475	2.15	2.15	-9991	12415	7474	40441	27040	5483	32523		9.36	Si
SLV 2	6.36	5462.83	-7779	-6478	8738	2.15	1.1182	-10760	12569	3935	40441	27040	5483	32523		3.72	Si
SLV 2	8.16	-4156.31	-1204	-1002	7945	1.72	0	0	0	0	40441	21632	4386	26018		3.27	Si
SLV 1	6.36	4854.8	-7994	-6657	7360	2.15	1.4031	-11057	12628	4961	40441	27040	5483	32523		4.42	Si
SLV 1	8.16	-3511.2	-2561	-2132	6568	1.72	0	0	0	0	40441	21632	4386	26018		3.96	Si
SLV 15	6.36	-3211.83	-18649	-15529	-8478	2.15	2.15	-25796	15576	9377	40441	27040	5483	32523		3.84	Si
SLV 15	8.16	4933.4	-22398	-18651	-7686	2.15	2.15	-30981	16250	9783	40441	27040	5483	32523		4.23	Si
SLV 6	6.36	2748.86	-2648	-2205	3721	2.15	0.1109	-58961	16250	505	40441	27040	5483	32523		8.74	Si
SLV 6	8.16	-811.01	1332	1110	3466	1.72	1.399	0	0	0	40441	21632	4386	26018		7.51	Si
SLV 4	6.36	5319.46	-13646	-11363	8229	2.15	2.0556	-18876	14192	8168	40441	27040	5483	32523		3.95	Si
SLV 4	8.16	-4337.63	-7613	-6339	7448	2.15	1.5157	-15042	13425	5698	40441	27040	5483	32523		4.37	Si
SLV 13	6.36	-3068.46	-12782	-10644	-7969	2.15	2.15	-17680	13953	8400	40441	27040	5483	32523		4.08	Si
SLV 13	8.16	5114.72	-15989	-13314	-7188	2.15	2.15	-22116	14840	8934	40441	27040	5483	32523		4.52	Si
SLV 3	6.36	4711.43	-13861	-11542	6851	2.15	2.15	-19173	14251	8579	40441	27040	5483	32523		4.75	Si
SLV 3	8.16	-3692.52	-8970	-7469	6070	2.15	1.99	-13484	13113	7307	40441	27040	5483	32523		5.36	Si
SLV 14	6.36	-2460.43	-12567	-10465	-6591	2.15	2.15	-17383	13893	8364	40441	27040	5483	32523		4.93	Si
SLV 14	8.16	4469.61	-14632	-12184	-5811	2.15	2.15	-20239	14464	8708	40441	27040	5483	32523		5.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.39	0	-489	223.61	0	0	No, e>t/2
SLV 5	179667	0.39	0	-1072	223.61	0	0	No, e>t/2
SLV 10	179667	0.39	5615	-3380	223.61	455.8	2.04	Si
SLV 9	179667	0.39	6582	-3963	223.61	530.86	2.37	Si
SLV 2	179667	0.39	7022	-4227	223.61	564.62	2.53	Si
SLV 1	179667	0.39	8524	-5132	223.61	678.32	3.03	Si
SLV 4	179667	0.39	17375	-10460	223.61	1297.76	5.8	Si
SLV 3	179667	0.39	18877	-11364	223.61	1394.29	6.24	Si
SLV 14	179667	0.39	23027	-13863	223.61	1648.12	7.37	Si
SLV 13	179667	0.39	24529	-14767	223.61	1735.28	7.76	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-22203	-23030	416	0.527	2559	0.965	7.93107	12.68333	No
SLV 12	-21516	-22664	417	0.541	2489.1	0.964	8.15338	12.68333	No
SLV 7	-19788	-19605	285	0.587	2313.3	0.961	8.8698	12.68333	No
SLV 8	-19102	-19240	285	0.605	2243.4	0.96	9.15012	12.68333	No
SLV 15	-18120	-21062	323	0.63	2143.6	0.959	9.55703	5.63352	Si
SLV 16	-17054	-20494	324	0.664	2035.2	0.957	10.08046	5.63352	Si
SLV 13	-12043	-15864	112	0.903	1526.4	0.944	13.89651	5.63352	Si
SLV 14	-10977	-15296	113	0.974	1418.4	0.941	15.05176	5.63352	Si
SLV 3	-10071	-9647	-115	1.045	1326.6	0.937	16.19966	5.63352	Si
SLV 4	-9005	-9079	-115	1.143	1218.8	0.933	17.80907	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.578	SLU 45	Si
V_SLU	54.377	SLU 42	Si
PF_SLV	0	SLV 5	No
V_SLV	3.275	SLV 2	Si
PFFP_SLV	0	SLV 5	No
R_SLV	0.625	SLV 11	No

Maschio 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	6.36	423.53	-23510	-0.0000673	0.0003743	0.0035	2.13	15343.56	18236.91	18236.91	43.06	No	Si
SLU 83	8.16	-1962.03	-25419	-0.0000861	0.0003743	0.0035	2.13	15738.3	20044.31	20044.31	10.22	No	Si
SLU 73	6.36	447.81	-22272	-0.0000637	0.0003743	0.0035	2.13	15019.2	17701.89	17701.89	39.53	No	Si
SLU 73	8.16	-1894.72	-24026	-0.0000811	0.0003743	0.0035	2.13	15462.81	19379.27	19379.27	10.23	No	Si
SLU 76	6.36	420.2	-22761	-0.000065	0.0003743	0.0035	2.13	15153.77	17911.73	17911.73	42.63	No	Si
SLU 76	8.16	-1912.23	-24581	-0.000083	0.0003743	0.0035	2.13	15580.61	19663.3	19663.3	10.28	No	Si
SLU 82	6.36	448.11	-23071	-0.0000662	0.0003743	0.0035	2.13	15234.61	18045.59	18045.59	40.27	No	Si
SLU 82	8.16	-1947.08	-24924	-0.0000844	0.0003743	0.0035	2.13	15648.12	19835.08	19835.08	10.19	No	Si
SLU 62	6.36	442.6	-21297	-0.0000608	0.0003743	0.0035	2.13	14725.82	17275.78	17275.78	39.03	No	Si
SLU 62	8.16	-1833.78	-22964	-0.0000772	0.0003743	0.0035	2.13	15206.95	18849.13	18849.13	10.28	No	Si
SLU 60	6.36	470.22	-20808	-0.0000595	0.0003743	0.0035	2.13	14566.14	16979.16	16979.16	36.11	No	Si
SLU 60	8.16	-1816.26	-22409	-0.0000753	0.0003743	0.0035	2.13	15057.7	18579.9	18579.9	10.23	No	Si
SLU 63	6.36	439.57	-21347	-0.0000609	0.0003743	0.0035	2.13	14741.59	17299.64	17299.64	39.36	No	Si
SLU 63	8.16	-1836.34	-23023	-0.0000774	0.0003743	0.0035	2.13	15222.2	18878.08	18878.08	10.28	No	Si
SLU 61	6.36	467.18	-20858	-0.0000597	0.0003743	0.0035	2.13	14582.75	17013.52	17013.52	36.42	No	Si
SLU 61	8.16	-1818.82	-22468	-0.0000755	0.0003743	0.0035	2.13	15074.1	18608.31	18608.31	10.23	No	Si
SLU 84	6.36	420.49	-23560	-0.0000674	0.0003743	0.0035	2.13	15355.47	18258.67	18258.67	43.42	No	Si
SLU 84	8.16	-1964.59	-25478	-0.0000863	0.0003743	0.0035	2.13	15748.46	20068.07	20068.07	10.21	No	Si
SLU 81	6.36	451.14	-23021	-0.000066	0.0003743	0.0035	2.13	15221.85	18024.04	18024.04	39.95	No	Si
SLU 81	8.16	-1944.52	-24865	-0.0000842	0.0003743	0.0035	2.13	15636.81	19809	19809	10.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.36	3555.11	-11710	-0.0000556	0.0005615	0.0035	2.13		11256.23	11256.23	3.17		Si
SLV 1	8.16	-4198.69	-22376	-0.0000907	0.0005615	0.0035	2.13		20761.09	20761.09	4.94		Si
SLV 14	6.36	-3118.24	-22918	-0.0000839	0.0005615	0.0035	2.13		21139.47	21139.47	6.78		Si
SLV 14	8.16	1404.32	-14909	-0.0000485	0.0005615	0.0035	2.13		13840.96	13840.96	9.86		Si
SLV 4	6.36	3266.85	-8826	-0.0000457	0.0005615	0.0035	2.13		8944.83	8944.83	2.74		Si
SLV 4	8.16	-3673.74	-17972	-0.0000739	0.0005615	0.0035	2.13		17584.7	17584.7	4.79		Si
SLV 3	6.36	3827.23	-8369	-0.0000497	0.0005615	0.0035	2.13		8527.8	8527.8	2.23		Si
SLV 3	8.16	-4134.32	-18709	-0.0000795	0.0005615	0.0035	2.13		18132.55	18132.55	4.39		Si
SLV 8	6.36	1544.41	-8610	-0.0000327	0.0005615	0.0035	2.13		8747.94	8747.94	5.66		Si
SLV 8	8.16	-1880.69	-11469	-0.0000427	0.0005615	0.0035	2.13		12296.22	12296.22	6.54		Si
SLV 2	6.36	2994.73	-12167	-0.0000527	0.0005615	0.0035	2.13		11620.83	11620.83	3.88		Si
SLV 2	8.16	-3738.11	-21639	-0.000085	0.0005615	0.0035	2.13		20245.94	20245.94	5.42		Si
SLD 3	6.36	1841.98	-12514	-0.0000452	0.0005615	0.0035	2.13		11898.34	11898.34	6.46		Si
SLD 3	8.16	-2548.57	-17598	-0.0000644	0.0005615	0.0035	2.13		17298.23	17298.23	6.79		Si
SLV 16	6.36	-2846.12	-19577	-0.0000722	0.0005615	0.0035	2.13		18772.66	18772.66	6.6		Si
SLV 16	8.16	1468.68	-11242	-0.0000391	0.0005615	0.0035	2.13		10884.4	10884.4	7.41		Si
SLD 1	6.36	1720.48	-13985	-0.0000483	0.0005615	0.0035	2.13		13085.98	13085.98	7.61		Si
SLD 1	8.16	-2577.4	-19214	-0.0000691	0.0005615	0.0035	2.13		18504.17	18504.17	7.18		Si
SLV 7	6.36	1905.53	-8316	-0.0000345	0.0005615	0.0035	2.13		8478.51	8478.51	4.45		Si
SLV 7	8.16	-2177.5	-11944	-0.0000461	0.0005615	0.0035	2.13		12701.34	12701.34	5.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	6.36	384.64	-23498	-19567	3972	2.13	2.13	-32809	10833	6461	40441	17859	5431	23290	No	5.86	Si
SLU 78	8.16	-1931.17	-25377	-21132	3966	2.13	2.13	-35433	10833	6461	40441	17859	5431	23290	No	5.87	Si
SLU 81	6.36	451.14	-23021	-19170	3994	2.13	2.13	-32143	10833	6461	40441	17859	5431	23290	No	5.83	Si
SLU 81	8.16	-1944.52	-24865	-20705	3988	2.13	2.13	-34717	10833	6461	40441	17859	5431	23290	No	5.84	Si
SLU 80	6.36	394.6	-23217	-19333	3975	2.13	2.13	-32417	10833	6461	40441	17859	5431	23290	No	5.86	Si
SLU 80	8.16	-1928.04	-25096	-20898	3969	2.13	2.13	-35040	10833	6461	40441	17859	5431	23290	No	5.87	Si
SLU 77	6.36	387.67	-23448	-19526	3967	2.13	2.13	-32740	10833	6461	40441	17859	5431	23290	No	5.87	Si
SLU 77	8.16	-1928.61	-25318	-21083	3961	2.13	2.13	-35351	10833	6461	40441	17859	5431	23290	No	5.88	Si
SLU 76	6.36	420.2	-22761	-18954	3943	2.13	2.13	-31781	10833	6461	40441	17859	5431	23290	No	5.91	Si
SLU 76	8.16	-1912.23	-24581	-20469	3937	2.13	2.13	-34321	10833	6461	40441	17859	5431	23290	No	5.92	Si
SLU 82	6.36	448.11	-23071	-19212	4000	2.13	2.13	-32213	10833	6461	40441	17859	5431	23290	No	5.82	Si
SLU 82	8.16	-1947.08	-24924	-20754	3994	2.13	2.13	-34800	10833	6461	40441	17859	5431	23290	No	5.83	Si
SLU 84	6.36	420.49	-23560	-19619	4035	2.13	2.13	-32896	10833	6461	40441	17859	5431	23290	No	5.77	Si
SLU 84	8.16	-1964.59	-25478	-21216	4029	2.13	2.13	-35574	10833	6461	40441	17859	5431	23290	No	5.78	Si
SLU 79	6.36	397.64	-23168	-19292	3969	2.13	2.13	-32348	10833	6461	40441	17859	5431	23290	No	5.87	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	8.16	-1925.48	-25037	-20848	3963	2.13	2.13	-34957	10833	6461	40441	17859	5431	23290	No	5.88	Si
SLU 75	6.36	412.25	-23009	-19160	3937	2.13	2.13	-32126	10833	6461	40441	17859	5431	23290	No	5.92	Si
SLU 75	8.16	-1913.66	-24823	-20670	3931	2.13	2.13	-34659	10833	6461	40441	17859	5431	23290	No	5.93	Si
SLU 83	6.36	423.53	-23510	-19577	4029	2.13	2.13	-32826	10833	6461	40441	17859	5431	23290	No	5.78	Si
SLU 83	8.16	-1962.03	-25419	-21167	4024	2.13	2.13	-35492	10833	6461	40441	17859	5431	23290	No	5.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.36	3555.11	-11710	-9751	12242	2.13	2.13	-16351	13687	8163	40441	26788	5431	32219		2.63	Si
SLV 1	8.16	-4198.69	-22376	-18633	11557	2.13	2.13	-31242	16250	9691	40441	26788	5431	32219		2.79	Si
SLD 4	6.36	1601.37	-12710	-10584	6248	2.13	2.13	-17746	13966	8329	40441	26788	5431	32219		5.16	Si
SLD 4	8.16	-2350.82	-17282	-14391	5951	2.13	2.13	-24130	15243	9091	40441	26788	5431	32219		5.41	Si
SLV 4	6.36	3266.85	-8826	-7350	10819	2.13	2.0846	-12324	12881	7519	40441	26788	5431	32219		2.98	Si
SLV 4	8.16	-3673.74	-17972	-14965	10130	2.13	2.13	-25093	15435	9205	40441	26788	5431	32219		3.18	Si
SLD 3	6.36	1841.98	-12514	-10420	6796	2.13	2.13	-17472	13911	8297	40441	26788	5431	32219		4.74	Si
SLD 3	8.16	-2548.57	-17598	-14654	6492	2.13	2.13	-24572	15331	9143	40441	26788	5431	32219		4.96	Si
SLD 1	6.36	1720.48	-13985	-11645	6859	2.13	2.13	-19526	14322	8541	40441	26788	5431	32219		4.7	Si
SLD 1	8.16	-2577.4	-19214	-16000	6565	2.13	2.13	-26828	15782	9412	40441	26788	5431	32219		4.91	Si
SLV 16	6.36	-2846.12	-19577	-16302	-6563	2.13	2.13	-27335	15884	9473	40441	26788	5431	32219		4.91	Si
SLV 16	8.16	1468.68	-11242	-9362	-5889	2.13	2.13	-15697	13556	8085	40441	26788	5431	32219		5.47	Si
SLV 3	6.36	3827.23	-8369	-6969	12095	2.13	1.8231	-11686	12754	6510	40441	26788	5431	32219		2.66	Si
SLV 3	8.16	-4134.32	-18709	-15579	11389	2.13	2.13	-26122	15641	9328	40441	26788	5431	32219		2.83	Si
SLV 14	6.36	-3118.24	-22918	-19084	-6416	2.13	2.13	-32000	16250	9691	40441	26788	5431	32219		5.02	Si
SLV 14	8.16	1404.32	-14909	-12415	-5720	2.13	2.13	-20817	14580	8695	40441	26788	5431	32219		5.63	Si
SLD 2	6.36	1479.87	-14181	-11809	6311	2.13	2.13	-19800	14377	8574	40441	26788	5431	32219		5.11	Si
SLD 2	8.16	-2379.64	-18898	-15736	6025	2.13	2.13	-26386	15694	9360	40441	26788	5431	32219		5.35	Si
SLV 2	6.36	2994.73	-12167	-10132	10966	2.13	2.13	-16989	13814	8239	40441	26788	5431	32219		2.94	Si
SLV 2	8.16	-3738.11	-21639	-18019	10299	2.13	2.13	-30213	16250	9691	40441	26788	5431	32219		3.13	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.39	17099	-10198	221.52	1267.83	5.72	Si
SLV 7	179667	0.39	17181	-10247	221.52	1273.16	5.75	Si
SLV 12	179667	0.39	18563	-11071	221.52	1361.5	6.15	Si
SLV 11	179667	0.39	18645	-11120	221.52	1366.7	6.17	Si
SLV 4	179667	0.39	22533	-13439	221.52	1603.8	7.24	Si
SLV 3	179667	0.39	22661	-13515	221.52	1611.32	7.27	Si
SLV 16	179667	0.39	27412	-16348	221.52	1877.95	8.48	Si
SLV 15	179667	0.39	27540	-16425	221.52	1884.78	8.51	Si
SLV 2	179667	0.39	28674	-17101	221.52	1944.62	8.78	Si
SLV 1	179667	0.39	28802	-17177	221.52	1951.28	8.81	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-19152	-18890	-620	0.583	2245.7	0.961	8.81175	12.68333	No
SLV 6	-18857	-18944	-625	0.59	2215.8	0.96	8.92897	12.68333	No
SLV 9	-18041	-21290	-647	0.611	2132.8	0.959	9.2667	12.68333	No
SLV 10	-17747	-21344	-652	0.62	2102.9	0.958	9.39778	12.68333	No
SLV 7	-10326	-9254	650	0.972	1349.5	0.939	15.05282	12.68333	Si
SLV 8	-10032	-9308	645	0.996	1319.8	0.937	15.4343	12.68333	Si
SLV 11	-9216	-11654	623	1.068	1237.3	0.934	16.61464	12.68333	Si
SLV 12	-8922	-11708	618	1.096	1207.5	0.933	17.08097	12.68333	Si
SLV 1	-17439	-12703	-143	0.655	2071.5	0.958	9.94346	5.63352	Si
SLV 2	-16982	-12787	-150	0.67	2025.1	0.957	10.17234	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.187	SLU 81	Si
V_SLU	5.772	SLU 84	Si
PF_SLV	2.228	SLV 3	Si
V_SLV	2.632	SLV 1	Si
PFFP_SLV	5.723	SLV 8	Si
R_SLV	0.695	SLV 5	No

Maschio 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L5	L6	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	6.36	1764.77	-14183	-0.0000576	0.0003743	0.0035	1.93	10158.67	11171.9	11171.9	6.33	No	Si
SLU 47	8.16	277.11	-12331	-0.0000379	0.0003743	0.0035	1.93	9232.65	10107.8	10107.8	36.48	No	Si
SLU 49	6.36	1804.42	-14693	-0.0000596	0.0003743	0.0035	1.93	10392.41	11457.15	11457.15	6.35	No	Si
SLU 49	8.16	325.53	-12860	-0.00004	0.0003743	0.0035	1.93	9509.61	10444.44	10444.44	32.08	No	Si
SLU 51	6.36	1790.34	-14494	-0.0000588	0.0003743	0.0035	1.93	10302.08	11345.22	11345.22	6.34	No	Si
SLU 51	8.16	310.19	-12656	-0.0000392	0.0003743	0.0035	1.93	9403.57	10322.71	10322.71	33.28	No	Si
SLU 46	6.36	1779.45	-14331	-0.0000582	0.0003743	0.0035	1.93	10227.56	11254.51	11254.51	6.32	No	Si
SLU 46	8.16	294.64	-12476	-0.0000385	0.0003743	0.0035	1.93	9309.34	10206.02	10206.02	34.64	No	Si
SLU 44	6.36	1739.8	-13822	-0.0000562	0.0003743	0.0035	1.93	9987.36	10971.42	10971.42	6.31	No	Si
SLU 44	8.16	246.23	-11946	-0.0000364	0.0003743	0.0035	1.93	9025.23	9821.5	9821.5	39.89	No	Si
SLU 50	6.36	1791.24	-14417	-0.0000586	0.0003743	0.0035	1.93	10266.93	11302.26	11302.26	6.31	No	Si
SLU 50	8.16	313.49	-12565	-0.0000389	0.0003743	0.0035	1.93	9356.38	10264.83	10264.83	32.74	No	Si
SLU 45	6.36	1780.36	-14255	-0.0000579	0.0003743	0.0035	1.93	10191.98	11211.69	11211.69	6.3	No	Si
SLU 45	8.16	297.94	-12386	-0.0000382	0.0003743	0.0035	1.93	9261.57	10145.19	10145.19	34.05	No	Si
SLU 48	6.36	1805.33	-14616	-0.0000593	0.0003743	0.0035	1.93	10357.8	11414.01	11414.01	6.32	No	Si
SLU 48	8.16	328.82	-12770	-0.0000397	0.0003743	0.0035	1.93	9463.07	10394.06	10394.06	31.61	No	Si
SLU 64	6.36	1796.55	-15175	-0.0000611	0.0003743	0.0035	1.93	10604.99	11729.62	11729.62	6.53	No	Si
SLU 64	8.16	458.87	-13551	-0.0000433	0.0003743	0.0035	1.93	9856.13	10822.35	10822.35	23.58	No	Si
SLU 43	6.36	1741.31	-13694	-0.0000558	0.0003743	0.0035	1.93	9925.66	10900.85	10900.85	6.26	No	Si
SLU 43	8.16	251.72	-11796	-0.000036	0.0003743	0.0035	1.93	8942.67	9706.13	9706.13	38.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	6.36	-1903.4	-10945	-0.0000475	0.0005615	0.0035	1.93		10512.31	10512.31	5.52		Si
SLV 16	8.16	3959.83	-12611	-0.0000711	0.0005615	0.0035	1.93		10718.44	10718.44	2.71		Si
SLV 7	6.36	2703.46	-2176	-0.0048218	0.0005615	0.0035	1.93		2240.16	2240.16	0.83		No
SLV 7	8.16	-457.12	1142	0.0924591	0.0005615	0.0035	1.544		0	0	0		No
SLV 1	6.36	4654.64	-12477	-0.0000778	0.0005615	0.0035	1.93		10622.24	10622.24	2.28		Si
SLV 1	8.16	-3224.2	-8375	-0.0000522	0.0005615	0.0035	1.93		8466.69	8466.69	2.63		Si
SLV 11	6.36	858.21	-3275	-0.0000163	0.0005615	0.0035	1.93		3243.87	3243.87	3.78		Si
SLV 11	8.16	1492.86	-1538	-0.0002978	0.0005615	0.0035	1.93		1647.59	1647.59	1.1		Si
SLV 2	6.36	4109.67	-12641	-0.0000726	0.0005615	0.0035	1.93		10739.83	10739.83	2.61		Si
SLV 2	8.16	-2726.37	-9614	-0.0000509	0.0005615	0.0035	1.93		9474.37	9474.37	3.48		Si
SLV 4	6.36	4247.44	-7281	-0.00007	0.0005615	0.0035	1.93		6737.41	6737.41	1.59		Si
SLV 4	8.16	-2540.09	-3677	-0.0000481	0.0005615	0.0035	1.544		4450.59	4450.59	1.75		Si
SLV 12	6.36	507.01	-3380	-0.0000136	0.0005615	0.0035	1.93		3339.63	3339.63	6.59		Si
SLV 12	8.16	1813.68	-2337	-0.0000445	0.0005615	0.0035	1.93		2388.23	2388.23	1.32		Si
SLV 8	6.36	2352.27	-2281	-0.0011262	0.0005615	0.0035	1.93		2337.23	2337.23	0.99		No
SLV 8	8.16	-136.3	343	0.0277793	0.0005615	0.0035	1.544		0	0	0		No
SLV 15	6.36	-1358.43	-10781	-0.0000422	0.0005615	0.0035	1.93		10384.91	10384.91	7.64		Si
SLV 15	8.16	3461.99	-11372	-0.0000628	0.0005615	0.0035	1.93		9834.25	9834.25	2.84		Si
SLV 3	6.36	4792.41	-7117	-0.000091	0.0005615	0.0035	1.93		6599.15	6599.15	1.38		Si
SLV 3	8.16	-3037.92	-2438	-0.000453	0.0005615	0.0035	1.544		3331.24	3331.24	1.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	6.36	1780.36	-14255	-11870	655	1.93	1.93	-21965	9873	5335	40441	16182	4922	21104	No	32.21	Si
SLU 45	8.16	297.94	-12386	-10314	658	1.93	1.93	-19085	9489	5128	40441	16182	4922	21104	No	32.06	Si
SLU 49	6.36	1804.42	-14693	-12235	633	1.93	1.93	-22641	9963	5384	40441	16182	4922	21104	No	33.32	Si
SLU 49	8.16	325.53	-12860	-10709	637	1.93	1.93	-19817	9587	5181	40441	16182	4922	21104	No	33.14	Si
SLU 51	6.36	1790.34	-14494	-12069	637	1.93	1.93	-22333	9922	5362	40441	16182	4922	21104	No	33.12	Si
SLU 51	8.16	310.19	-12656	-10538	640	1.93	1.93	-19501	9545	5158	40441	16182	4922	21104	No	32.96	Si
SLU 46	6.36	1779.45	-14331	-11934	649	1.93	1.93	-22083	9889	5344	40441	16182	4922	21104	No	32.51	Si
SLU 46	8.16	294.64	-12476	-10389	652	1.93	1.93	-19224	9508	5138	40441	16182	4922	21104	No	32.35	Si
SLU 1	6.36	1354.04	-10924	-9097	454	1.93	1.93	-16833	9189	4966	40441	16182	4922	21104	No	46.5	Si
SLU 1	8.16	248.26	-9537	-7941	456	1.93	1.93	-14695	8904	4812	40441	16182	4922	21104	No	46.25	Si
SLU 48	6.36	1805.33	-14616	-12171	639	1.93	1.93	-22522	9947	5376	40441	16182	4922	21104	No	33.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	8.16	328.82	-12770	-10634	643	1.93	1.93	-19678	9568	5171	40441	16182	4922	21104	No	32.84	Si
SLU 44	6.36	1739.8	-13822	-11510	665	1.93	1.93	-21298	9784	5287	40441	16182	4922	21104	No	31.75	Si
SLU 44	8.16	246.23	-11946	-9948	668	1.93	1.93	-18408	9399	5079	40441	16182	4922	21104	No	31.61	Si
SLU 50	6.36	1791.24	-14417	-12005	643	1.93	1.93	-22215	9906	5354	40441	16182	4922	21104	No	32.82	Si
SLU 50	8.16	313.49	-12565	-10463	646	1.93	1.93	-19362	9526	5148	40441	16182	4922	21104	No	32.65	Si
SLU 43	6.36	1741.31	-13694	-11403	675	1.93	1.93	-21101	9758	5273	40441	16182	4922	21104	No	31.29	Si
SLU 43	8.16	251.72	-11796	-9823	678	1.93	1.93	-18176	9368	5063	40441	16182	4922	21104	No	31.14	Si
SLU 47	6.36	1764.77	-14183	-11811	649	1.93	1.93	-21855	9858	5328	40441	16182	4922	21104	No	32.52	Si
SLU 47	8.16	277.11	-12331	-10268	652	1.93	1.93	-19001	9478	5122	40441	16182	4922	21104	No	32.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	6.36	-2041.18	-16305	-13577	-5736	1.93	1.93	-25124	15441	8345	40441	24273	4922	29195		5.09	Si
SLV 14	8.16	3773.55	-18548	-15445	-5083	1.93	1.93	-28581	16133	8718	40441	24273	4922	29195		5.74	Si
SLV 1	6.36	4654.64	-12477	-10390	5975	1.93	1.7758	-19226	14262	7091	40441	24273	4922	29195		4.89	Si
SLV 1	8.16	-3224.2	-8375	-6974	5260	1.93	1.7401	-14396	13296	6478	40441	24273	4922	29195		5.55	Si
SLV 4	6.36	4247.44	-7281	-6063	5189	1.93	1.145	-11219	12661	4059	40441	24273	4922	29195		5.63	Si
SLV 4	8.16	-2540.09	-3677	-3062	4541	1.544	0.8225	0	0	0	40441	19419	3937	23356		5.14	Si
SLV 2	6.36	4109.67	-12641	-10526	4819	1.93	1.9197	-19478	14312	7693	40441	24273	4922	29195		6.06	Si
SLV 2	8.16	-2726.37	-9614	-8006	4105	1.93	1.93	-14814	13380	7230	40441	24273	4922	29195		7.11	Si
SLV 16	6.36	-1903.4	-10945	-9114	-5367	1.93	1.93	-16865	13790	7452	40441	24273	4922	29195		5.44	Si
SLV 16	8.16	3959.83	-12611	-10501	-4647	1.93	1.93	-19432	14303	7729	40441	24273	4922	29195		6.28	Si
SLV 3	6.36	4792.41	-7117	-5927	6344	1.93	0.8749	-10967	12610	3089	40441	24273	4922	29195		4.6	Si
SLV 3	8.16	-3037.92	-2438	-2030	5697	1.544	0	0	0	0	40441	19419	3937	23356		4.1	Si
SLV 13	6.36	-1496.2	-16141	-13441	-4581	1.93	1.93	-24871	15391	8317	40441	24273	4922	29195		6.37	Si
SLV 13	8.16	3275.71	-17309	-14413	-3928	1.93	1.93	-26672	15751	8512	40441	24273	4922	29195		7.43	Si
SLD 3	6.36	2838.4	-9710	-8085	2889	1.93	1.93	-14962	13409	7246	40441	24273	4922	29195		10.1	Si
SLD 3	8.16	-1087.34	-7008	-5835	2614	1.93	1.93	-10798	12576	6796	40441	24273	4922	29195		11.17	Si
SLV 7	6.36	2703.46	-2176	-1812	2876	1.93	0	-119232	16250	0	40441	24273	4922	29195		10.15	Si
SLV 7	8.16	-457.12	1142	951	2785	1.544	1.6941	0	0	0	40441	19419	3937	23356		8.39	Si
SLV 15	6.36	-1358.43	-10781	-8978	-4211	1.93	1.93	-16613	13739	7425	40441	24273	4922	29195		6.93	Si
SLV 15	8.16	3461.99	-11372	-9469	-3491	1.93	1.93	-17523	13921	7523	40441	24273	4922	29195		8.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.39	0	-998	200.73	0	0	No, e>t/2
SLV 7	179667	0.39	0	-473	200.73	0	0	No, e>t/2
SLV 11	179667	0.39	4423	-2390	200.73	324.93	1.62	Si
SLV 12	179667	0.39	5396	-2916	200.73	393.81	1.96	Si
SLV 3	179667	0.39	8868	-4792	200.73	631.95	3.15	Si
SLV 4	179667	0.39	10378	-5608	200.73	731.79	3.65	Si
SLV 1	179667	0.39	19498	-10537	200.73	1286.8	6.41	Si
SLV 15	179667	0.39	20696	-11184	200.73	1353.6	6.74	Si
SLV 2	179667	0.39	21008	-11353	200.73	1370.74	6.83	Si
SLV 16	179667	0.39	22206	-12000	200.73	1435.74	7.15	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19420	-19643	-443	0.535	2245.1	0.964	8.06504	12.68333	No
SLV 9	-18831	-19309	-444	0.549	2185.1	0.963	8.28663	12.68333	No
SLV 6	-18015	-16751	-315	0.577	2102.1	0.962	8.71491	12.68333	No
SLV 5	-17426	-16417	-316	0.593	2042.2	0.961	8.97391	12.68333	No
SLV 14	-14769	-17684	-325	0.682	1772.1	0.956	10.37277	5.63352	Si
SLV 13	-13854	-17166	-326	0.72	1679.1	0.953	10.97103	5.63352	Si
SLV 2	-10086	-8044	103	0.956	1296.7	0.942	14.75142	5.63352	Si
SLV 16	-9238	-13034	-95	1.027	1210.9	0.938	15.91568	5.63352	Si
SLV 1	-9171	-7526	102	1.033	1204.1	0.938	16.00472	5.63352	Si
SLV 15	-8323	-12516	-96	1.117	1118.4	0.934	17.38681	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.26	SLU 43	Si
V_SLU	31.145	SLU 43	Si
PF_SLV	0	SLV 7	No
V_SLV	4.1	SLV 3	Si
PFFP_SLV	0	SLV 7	No
R_SLV	0.636	SLV 10	No

Maschio 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	1.266	L5	L6	4.58	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	5.46	8666.43	-51287	-0.0000803	0.0003743	0.0035	4.5801	71314.58	85062.77	85062.77	9.82	No	Si
SLU 76	7.56	7143.46	-42237	-0.0000646	0.0003743	0.0035	4.5801	65435.1	74733.74	74733.74	10.46	No	Si
SLU 47	5.46	6599.41	-41293	-0.0000624	0.0003743	0.0035	4.5801	64656.12	73385.14	73385.14	11.12	No	Si
SLU 47	7.56	6385.97	-34353	-0.0000525	0.0003743	0.0035	4.5801	57970.94	63717.88	63717.88	9.98	No	Si
SLU 44	5.46	6519.41	-40394	-0.000061	0.0003743	0.0035	4.5801	63885.64	72104.56	72104.56	11.06	No	Si
SLU 44	7.56	6272.45	-33460	-0.0000512	0.0003743	0.0035	4.5801	56988.48	62515.08	62515.08	9.97	No	Si
SLU 75	5.46	8610.98	-51864	-0.0000811	0.0003743	0.0035	4.5801	71591.99	85605.1	85605.1	9.94	No	Si
SLU 75	7.56	7124.32	-42781	-0.0000654	0.0003743	0.0035	4.5801	65869.69	75515.25	75515.25	10.6	No	Si
SLU 83	5.46	8783.23	-53459	-0.0000838	0.0003743	0.0035	4.5801	72298.48	87119.5	87119.5	9.92	No	Si
SLU 83	7.56	6997.43	-43897	-0.0000667	0.0003743	0.0035	4.5801	66728.38	77128.14	77128.14	11.02	No	Si
SLU 73	5.46	8586.43	-50388	-0.0000789	0.0003743	0.0035	4.5801	70859.17	84223.41	84223.41	9.81	No	Si
SLU 73	7.56	7029.95	-41344	-0.0000632	0.0003743	0.0035	4.5801	64699.52	73458.61	73458.61	10.45	No	Si
SLU 81	5.46	8703.22	-52561	-0.0000823	0.0003743	0.0035	4.5801	71911.56	86263.98	86263.98	9.91	No	Si
SLU 81	7.56	6883.91	-43004	-0.0000653	0.0003743	0.0035	4.5801	66044.77	75836.44	75836.44	11.02	No	Si
SLU 82	5.46	8918.16	-52493	-0.0000826	0.0003743	0.0035	4.5801	71881.25	86199.77	86199.77	9.67	No	Si
SLU 82	7.56	7047.61	-42952	-0.0000655	0.0003743	0.0035	4.5801	66004.06	75761.42	75761.42	10.75	No	Si
SLU 78	5.46	8690.99	-52762	-0.0000826	0.0003743	0.0035	4.5801	72000.88	86455.44	86455.44	9.95	No	Si
SLU 78	7.56	7237.83	-43674	-0.0000668	0.0003743	0.0035	4.5801	66560.28	76804.73	76804.73	10.61	No	Si
SLU 84	5.46	8998.16	-53392	-0.0000841	0.0003743	0.0035	4.5801	72270.31	87054.79	87054.79	9.67	No	Si
SLU 84	7.56	7161.13	-43845	-0.0000669	0.0003743	0.0035	4.5801	66689.3	77052.6	77052.6	10.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	5.46	10348.04	-20435	-0.00004	0.0005615	0.0035	4.5801		44141.75	44141.75	4.27		Si
SLV 6	7.56	19099.53	-16682	-0.0000527	0.0005615	0.0035	4.5801		36742.92	36742.92	1.92		Si
SLV 2	5.46	3730.85	-14401	-0.0000225	0.0005615	0.0035	4.5801		32133.5	32133.5	8.61		Si
SLV 2	7.56	10489.56	-15512	-0.0000342	0.0005615	0.0035	4.5801		34388.13	34388.13	3.28		Si
SLV 10	5.46	12273.78	-31024	-0.0000564	0.0005615	0.0035	4.5801		62161.91	62161.91	5.06		Si
SLV 10	7.56	18815.31	-23111	-0.0000569	0.0005615	0.0035	4.5801		48629.93	48629.93	2.58		Si
SLV 1	5.46	4625.35	-15487	-0.0000251	0.0005615	0.0035	4.5801		34337.67	34337.67	7.42		Si
SLV 1	7.56	8353.97	-15909	-0.0000314	0.0005615	0.0035	4.5801		35187.57	35187.57	4.21		Si
SLD 10	5.46	8507.88	-33382	-0.0000533	0.0005615	0.0035	4.5801		66283.82	66283.82	7.79		Si
SLD 10	7.56	11061.86	-26447	-0.0000487	0.0005615	0.0035	4.5801		54279.02	54279.02	4.91		Si
SLD 6	5.46	7685.04	-28851	-0.0000463	0.0005615	0.0035	4.5801		58399.95	58399.95	7.6		Si
SLD 6	7.56	11183.03	-23694	-0.0000454	0.0005615	0.0035	4.5801		49610.81	49610.81	4.44		Si
SLV 5	5.46	10924.48	-21136	-0.0000418	0.0005615	0.0035	4.5801		45323.65	45323.65	4.15		Si
SLV 5	7.56	17723.29	-16937	-0.0000492	0.0005615	0.0035	4.5801		37253.6	37253.6	2.1		Si
SLD 5	5.46	7936.82	-29157	-0.0000471	0.0005615	0.0035	4.5801		58927.41	58927.41	7.42		Si
SLD 5	7.56	10581.92	-23805	-0.0000446	0.0005615	0.0035	4.5801		49799.06	49799.06	4.71		Si
SLD 9	5.46	8759.65	-33688	-0.0000541	0.0005615	0.0035	4.5801		66821.29	66821.29	7.63		Si
SLD 9	7.56	10460.75	-26559	-0.0000478	0.0005615	0.0035	4.5801		54469.52	54469.52	5.21		Si
SLV 9	5.46	12850.22	-31724	-0.0000582	0.0005615	0.0035	4.5801		63381.58	63381.58	4.93		Si
SLV 9	7.56	17439.08	-23366	-0.0000549	0.0005615	0.0035	4.5801		49059.93	49059.93	2.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 32	5.46	7227.06	-43952	-36599	-201	4.5801	4.5801	-28539	10750	13786	40441	38402	11679	50081	No	249.68	Si
SLU 32	7.56	5697.83	-36203	-30147	-251	4.5801	4.5801	-23508	10079	12925	40441	38402	11679	50081	No	199.48	Si
SLU 27	5.46	6198.68	-40044	-33346	-176	4.5801	4.5801	-26002	10411	13352	40441	38402	11679	50081	No	285.36	Si
SLU 27	7.56	5515.48	-33426	-27834	-221	4.5801	4.5801	-21704	9838	12617	40441	38402	11679	50081	No	226.86	Si
SLU 39	5.46	7534.24	-44581	-37123	-174	4.5801	4.5801	-28948	10804	13856	40441	38402	11679	50081	No	287.4	Si
SLU 39	7.56	5621.13	-36374	-30289	-226	4.5801	4.5801	-23618	10094	12944	40441	38402	11679	50081	No	221.62	Si
SLU 35	5.46	7307.07	-44850	-37348	-188	4.5801	4.5801	-29123	10827	13885	40441	38402	11679	50081	No	266.24	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	7.56	5811.35	-37096	-30890	-239	4.5801	4.5801	-24087	10156	13024	40441	38402	11679	50081	No	209.2	Si
SLU 24	5.46	6118.67	-39146	-32597	-188	4.5801	4.5801	-25418	10334	13252	40441	38402	11679	50081	No	266.41	Si
SLU 24	7.56	5401.96	-32533	-27091	-232	4.5801	4.5801	-21125	9761	12518	40441	38402	11679	50081	No	215.47	Si
SLU 40	5.46	7749.17	-44513	-37067	-191	4.5801	4.5801	-28904	10798	13848	40441	38402	11679	50081	No	261.68	Si
SLU 40	7.56	5784.83	-36322	-30246	-204	4.5801	4.5801	-23585	10089	12939	40441	38402	11679	50081	No	245.74	Si
SLU 25	5.46	6333.61	-39078	-32541	-205	4.5801	4.5801	-25374	10328	13245	40441	38402	11679	50081	No	244.18	Si
SLU 25	7.56	5565.67	-32481	-27047	-210	4.5801	4.5801	-21091	9757	12512	40441	38402	11679	50081	No	238.21	Si
SLU 33	5.46	7442	-43884	-36543	-218	4.5801	4.5801	-28495	10744	13778	40441	38402	11679	50081	No	230.04	Si
SLU 33	7.56	5861.54	-36151	-30103	-229	4.5801	4.5801	-23474	10074	12920	40441	38402	11679	50081	No	218.82	Si
SLU 41	5.46	7614.24	-45480	-37872	-162	4.5801	4.5801	-29531	10833	13893	40441	38402	11679	50081	No	309.56	Si
SLU 41	7.56	5734.65	-37266	-31032	-214	4.5801	4.5801	-24198	10171	13043	40441	38402	11679	50081	No	233.68	Si
SLU 36	5.46	7522	-44783	-37291	-205	4.5801	4.5801	-29079	10822	13878	40441	38402	11679	50081	No	244.03	Si
SLU 36	7.56	5975.06	-37044	-30847	-217	4.5801	4.5801	-24053	10152	13019	40441	38402	11679	50081	No	230.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	5.46	817.51	-50330	-41911	9787	4.5801	4.5801	-32681	16250	20839	40441	57602	11679	61280		6.26	Si
SLV 11	7.56	-9193.01	-41657	-34688	7254	4.5801	4.5801	-27049	15826	20296	40441	57602	11679	60737		8.37	Si
SLV 2	5.46	3730.85	-14401	-11992	-8881	4.5801	4.5801	-9351	12287	15757	40441	57602	11679	56198		6.33	Si
SLV 2	7.56	10489.56	-15512	-12917	-8025	4.5801	4.5801	-10073	12431	15942	40441	57602	11679	56383		7.03	Si
SLV 6	5.46	10348.04	-20435	-17017	-9789	4.5801	4.5801	-13269	13071	16762	40441	57602	11679	57203		5.84	Si
SLV 6	7.56	19099.53	-16682	-13891	-7337	4.5801	3.4353	-10832	12583	12104	40441	57602	11679	52545		7.16	Si
SLV 12	5.46	241.06	-49630	-41328	7843	4.5801	4.5801	-32226	16250	20839	40441	57602	11679	61280		7.81	Si
SLV 12	7.56	-7816.77	-41401	-34476	5311	4.5801	4.5801	-26883	15793	20254	40441	57602	11679	60695		11.43	Si
SLV 10	5.46	12273.78	-31024	-25834	-6673	4.5801	4.5801	-20145	14446	18525	40441	57602	11679	58966		8.84	Si
SLV 10	7.56	18815.31	-23111	-19245	-4318	4.5801	4.4277	-15006	13418	16635	40441	57602	11679	57076		13.22	Si
SLV 5	5.46	10924.48	-21136	-17600	-7846	4.5801	4.5801	-13724	13161	16879	40441	57602	11679	57320		7.31	Si
SLV 5	7.56	17723.29	-16937	-14104	-5394	4.5801	3.731	-10998	12616	13180	40441	57602	11679	53621		9.94	Si
SLV 1	5.46	4625.35	-15487	-12896	-5866	4.5801	4.5801	-10056	12428	15938	40441	57602	11679	56379		9.61	Si
SLV 1	7.56	8353.97	-15909	-13248	-5010	4.5801	4.5801	-10330	12483	16008	40441	57602	11679	56449		11.27	Si
SLV 16	5.46	6540.19	-55278	-46031	5863	4.5801	4.5801	-35894	16250	20839	40441	57602	11679	61280		10.45	Si
SLV 16	7.56	1552.55	-42430	-35332	4927	4.5801	4.5801	-27551	15927	20425	40441	57602	11679	60866		12.35	Si
SLV 7	5.46	-1108.24	-39742	-33093	6670	4.5801	4.5801	-25805	15578	19977	40441	57602	11679	60418		9.06	Si
SLV 7	7.56	-8908.79	-35228	-29335	4235	4.5801	4.5801	-22874	14992	19226	40441	57602	11679	59667		14.09	Si
SLV 15	5.46	7434.69	-56365	-46936	8879	4.5801	4.5801	-36599	16250	20839	40441	57602	11679	61280		6.9	Si
SLV 15	7.56	-583.04	-42826	-35662	7942	4.5801	4.5801	-27808	15978	20491	40441	57602	11679	60932		7.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.39	12617	-16180	476.34	2078.11	4.36	Si
SLV 1	179667	0.39	12926	-16577	476.34	2124.37	4.46	Si
SLV 6	179667	0.39	13327	-17092	476.34	2184	4.58	Si
SLV 5	179667	0.39	13527	-17347	476.34	2213.5	4.65	Si
SLV 4	179667	0.39	17080	-21904	476.34	2723.62	5.72	Si
SLV 3	179667	0.39	17390	-22301	476.34	2766.64	5.81	Si
SLV 10	179667	0.39	18353	-23536	476.34	2899.05	6.09	Si
SLV 9	179667	0.39	18552	-23792	476.34	2926.19	6.14	Si
SLV 8	179667	0.39	28205	-36171	476.34	4128.69	8.67	Si
SLV 7	179667	0.39	28405	-36427	476.34	4151.22	8.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-36225	-50330	398	0.672	4324.9	0.957	10.21625	12.68333	No
SLV 12	-35850	-49630	398	0.678	4286.7	0.956	10.31034	12.68333	No
SLV 7	-32145	-39742	-362	0.745	3910.3	0.953	11.36304	12.68333	No
SLV 8	-31770	-39041	-362	0.752	3872.1	0.952	11.48086	12.68333	No
SLV 9	-15466	-31724	379	1.346	2221.8	0.924	21.17416	12.68333	Si
SLV 10	-15090	-31024	379	1.372	2184	0.923	21.60048	12.68333	Si
SLV 15	-33823	-56365	1278	0.689	4080.8	0.954	10.49833	5.63352	Si
SLV 16	-33240	-55278	1278	0.7	4021.6	0.954	10.6594	5.63352	Si
SLV 5	-11385	-21136	-381	1.691	1813.2	0.912	26.9559	12.68333	Si
SLV 6	-11010	-20435	-381	1.732	1775.8	0.91	27.65059	12.68333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.666	SLU 82	Si
V_SLU	199.481	SLU 32	Si
PF_SLV	1.924	SLV 6	Si
V_SLV	5.843	SLV 6	Si
PFFP_SLV	4.363	SLV 2	Si
R_SLV	0.805	SLV 11	No

Maschio 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	2.066	-0.133	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	5.46	-4284.72	-34785	-0.0000635	0.0003743	0.0035	3.7599	44171.62	54168.45	54168.45	12.64	No	Si
SLU 39	7.56	-5220.03	-29459	-0.0000569	0.0003743	0.0035	3.7599	40160.3	48565.84	48565.84	9.3	No	Si
SLU 82	5.46	-5280.07	-41355	-0.0000775	0.0003743	0.0035	3.7599	47748.67	59516.91	59516.91	11.27	No	Si
SLU 82	7.56	-5892.03	-34784	-0.0000676	0.0003743	0.0035	3.7599	44170.83	54167.47	54167.47	9.19	No	Si
SLU 83	5.46	-5362.65	-41981	-0.0000788	0.0003743	0.0035	3.7599	48010.53	60061.41	60061.41	11.2	No	Si
SLU 83	7.56	-6021.81	-35400	-0.000069	0.0003743	0.0035	3.7599	44570.38	54659.9	54659.9	9.08	No	Si
SLU 79	5.46	-5374.49	-41227	-0.0000775	0.0003743	0.0035	3.7599	47693.33	59406.17	59406.17	11.05	No	Si
SLU 79	7.56	-5740.99	-34758	-0.0000672	0.0003743	0.0035	3.7599	44153.18	54145.36	54145.36	9.43	No	Si
SLU 84	5.46	-5368.5	-42103	-0.0000791	0.0003743	0.0035	3.7599	48059.72	60167.76	60167.76	11.21	No	Si
SLU 84	7.56	-5956.77	-35507	-0.000069	0.0003743	0.0035	3.7599	44638.71	54742.31	54742.31	9.19	No	Si
SLU 81	5.46	-5274.23	-41234	-0.0000773	0.0003743	0.0035	3.7599	47696.29	59412.05	59412.05	11.26	No	Si
SLU 81	7.56	-5957.06	-34677	-0.0000676	0.0003743	0.0035	3.7599	44099.78	54078.33	54078.33	9.08	No	Si
SLU 77	5.46	-5416.5	-41650	-0.0000784	0.0003743	0.0035	3.7599	47873.81	59772.76	59772.76	11.04	No	Si
SLU 77	7.56	-5814.13	-35176	-0.0000681	0.0003743	0.0035	3.7599	44426.55	54484.45	54484.45	9.37	No	Si
SLU 74	5.46	-5328.08	-40903	-0.0000768	0.0003743	0.0035	3.7599	47550.9	59127.47	59127.47	11.1	No	Si
SLU 74	7.56	-5749.39	-34453	-0.0000667	0.0003743	0.0035	3.7599	43950.26	53889.34	53889.34	9.37	No	Si
SLU 41	5.46	-4373.14	-35533	-0.000065	0.0003743	0.0035	3.7599	44654.93	54761.97	54761.97	12.52	No	Si
SLU 41	7.56	-5284.77	-30182	-0.0000583	0.0003743	0.0035	3.7599	40763.25	49415.28	49415.28	9.35	No	Si
SLU 40	5.46	-4290.57	-34907	-0.0000637	0.0003743	0.0035	3.7599	44251.46	54268.07	54268.07	12.65	No	Si
SLU 40	7.56	-5154.99	-29567	-0.0000569	0.0003743	0.0035	3.7599	40251.01	48693.68	48693.68	9.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	5.46	-4015.11	-11395	-0.0000253	0.0005615	0.0035	3.7599		24250.91	24250.91	6.04		Si
SLV 3	7.56	-4888.01	-9805	-0.0000249	0.0005615	0.0035	3.7599		21527.99	21527.99	4.4		Si
SLV 8	5.46	-6429.59	-13252	-0.0000335	0.0005615	0.0035	3.7599		27288.45	27288.45	4.24		Si
SLV 8	7.56	-11755.13	-10645	-0.0000495	0.0005615	0.0035	3.0079		22970.09	22970.09	1.95		Si
SLV 4	5.46	-5120.25	-12707	-0.0000297	0.0005615	0.0035	3.7599		26395.65	26395.65	5.16		Si
SLV 4	7.56	-3128.03	-10103	-0.0000214	0.0005615	0.0035	3.7599		22039.92	22039.92	7.05		Si
SLV 11	5.46	-5677.93	-19930	-0.0000418	0.0005615	0.0035	3.7599		37928.12	37928.12	6.68		Si
SLV 11	7.56	-14420.06	-16735	-0.0000598	0.0005615	0.0035	3.7599		32919.54	32919.54	2.28		Si
SLD 7	5.46	-4664.97	-21185	-0.0000413	0.0005615	0.0035	3.7599		39810.07	39810.07	8.53		Si
SLD 7	7.56	-7788.34	-17675	-0.0000433	0.0005615	0.0035	3.7599		34398.91	34398.91	4.42		Si
SLV 12	5.46	-6390.11	-20776	-0.0000447	0.0005615	0.0035	3.7599		39194.34	39194.34	6.13		Si
SLV 12	7.56	-13285.88	-16928	-0.0000561	0.0005615	0.0035	3.7599		33221.76	33221.76	2.5		Si
SLV 7	5.46	-5717.4	-12406	-0.0000306	0.0005615	0.0035	3.7599		25905.54	25905.54	4.53		Si
SLV 7	7.56	-12889.31	-10452	-0.0000586	0.0005615	0.0035	3.0079		22638.84	22638.84	1.76		Si
SLD 12	5.46	-4958.08	-24773	-0.0000475	0.0005615	0.0035	3.7599		45140.72	45140.72	9.1		Si
SLD 12	7.56	-7948.05	-20448	-0.0000479	0.0005615	0.0035	3.7599		38703.6	38703.6	4.87		Si
SLD 8	5.46	-4976.04	-21554	-0.0000426	0.0005615	0.0035	3.7599		40367.17	40367.17	8.11		Si
SLD 8	7.56	-7292.95	-17759	-0.0000423	0.0005615	0.0035	3.7599		34531.98	34531.98	4.73		Si
SLD 11	5.46	-4647.02	-24404	-0.0000462	0.0005615	0.0035	3.7599		44613.11	44613.11	9.6		Si
SLD 11	7.56	-8443.44	-20364	-0.0000489	0.0005615	0.0035	3.7599		38577.61	38577.61	4.57		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	5.46	-5422.35	-41772	-34784	-901	3.7599	3.7599	-33040	10833	11405	40441	31525	9588	41112	No	45.65	Si
SLU 78	7.56	-5749.1	-35283	-29381	-903	3.7599	3.7599	-27908	10666	11228	40441	31525	9588	41112	No	45.54	Si
SLU 65	5.46	-5028.69	-36430	-30336	-890	3.7599	3.7599	-28815	10786	11356	40441	31525	9588	41112	No	46.2	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	7.56	-4696.79	-30304	-25235	-892	3.7599	3.7599	-23970	10140	10676	40441	31525	9588	41112	No	46.1	Si
SLU 68	5.46	-5117.11	-37178	-30958	-923	3.7599	3.7599	-29407	10833	11405	40441	31525	9588	41112	No	44.54	Si
SLU 68	7.56	-4761.54	-31027	-25837	-925	3.7599	3.7599	-24542	10217	10756	40441	31525	9588	41112	No	44.45	Si
SLU 67	5.46	-5155.22	-37520	-31243	-882	3.7599	3.7599	-29677	10833	11405	40441	31525	9588	41112	No	46.63	Si
SLU 67	7.56	-4878.04	-31374	-26126	-884	3.7599	3.7599	-24816	10253	10794	40441	31525	9588	41112	No	46.52	Si
SLU 76	5.46	-5295.81	-40682	-33876	-909	3.7599	3.7599	-32178	10833	11405	40441	31525	9588	41112	No	45.24	Si
SLU 76	7.56	-5567.85	-34213	-28490	-911	3.7599	3.7599	-27062	10553	11110	40441	31525	9588	41112	No	45.14	Si
SLU 72	5.46	-5201.64	-37844	-31513	-925	3.7599	3.7599	-29934	10833	11405	40441	31525	9588	41112	No	44.43	Si
SLU 72	7.56	-4869.64	-31679	-26379	-927	3.7599	3.7599	-25057	10285	10828	40441	31525	9588	41112	No	44.34	Si
SLU 80	5.46	-5380.34	-41348	-34431	-911	3.7599	3.7599	-32705	10833	11405	40441	31525	9588	41112	No	45.13	Si
SLU 80	7.56	-5675.95	-34865	-29032	-913	3.7599	3.7599	-27577	10621	11182	40441	31525	9588	41112	No	45.02	Si
SLU 73	5.46	-5207.38	-39934	-33254	-876	3.7599	3.7599	-31587	10833	11405	40441	31525	9588	41112	No	46.95	Si
SLU 73	7.56	-5503.11	-33490	-27888	-878	3.7599	3.7599	-26490	10476	11029	40441	31525	9588	41112	No	46.84	Si
SLU 70	5.46	-5243.65	-38268	-31866	-915	3.7599	3.7599	-30269	10833	11405	40441	31525	9588	41112	No	44.94	Si
SLU 70	7.56	-4942.79	-32097	-26728	-917	3.7599	3.7599	-25388	10330	10875	40441	31525	9588	41112	No	44.84	Si
SLU 71	5.46	-5195.79	-37723	-31412	-879	3.7599	3.7599	-29838	10833	11405	40441	31525	9588	41112	No	46.78	Si
SLU 71	7.56	-4934.68	-31571	-26290	-881	3.7599	3.7599	-24972	10274	10816	40441	31525	9588	41112	No	46.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	5.46	-1244.01	-42786	-35629	-5715	3.7599	3.7599	-33843	16250	17108	40441	47287	9588	56875		9.95	Si
SLV 9	7.56	4232.32	-35981	-29962	-3720	3.7599	3.7599	-28460	16109	16959	40441	47287	9588	56875		15.29	Si
SLV 12	5.46	-6390.11	-20776	-17300	3851	3.7599	3.7599	-16433	13703	14426	40441	47287	9588	54867		14.25	Si
SLV 12	7.56	-13285.88	-16928	-14096	1862	3.7599	3.2853	-15439	13504	12422	40441	47287	9588	52863		28.39	Si
SLV 8	5.46	-6429.59	-13252	-11035	4506	3.7599	3.7599	-10482	12513	13173	40441	47287	9588	53614		11.9	Si
SLV 8	7.56	-11755.13	-10645	-8864	2508	3.0079	2.3269	0	0	0	40441	37830	7670	40441		16.12	Si
SLV 14	5.46	-3658.49	-44643	-37175	-4486	3.7599	3.7599	-35312	16250	17108	40441	47287	9588	56875		12.68	Si
SLV 14	7.56	-2634.81	-36821	-30661	-3874	3.7599	3.7599	-29124	16242	17099	40441	47287	9588	56875		14.68	Si
SLV 3	5.46	-4015.11	-11395	-9488	3278	3.7599	3.7599	-9013	12219	12864	40441	47287	9588	53305		16.26	Si
SLV 3	7.56	-4888.01	-9805	-8164	2663	3.7599	3.7599	-7755	11968	12599	40441	47287	9588	53040		19.92	Si
SLV 5	5.46	-1283.49	-35262	-29363	-5060	3.7599	3.7599	-27892	15995	16839	40441	47287	9588	56875		11.24	Si
SLV 5	7.56	5763.06	-29698	-24730	-3074	3.7599	3.7599	-23490	15115	15912	40441	47287	9588	56353		18.33	Si
SLV 7	5.46	-5717.4	-12406	-10331	5970	3.7599	3.7599	-9813	12379	13033	40441	47287	9588	53473		8.96	Si
SLV 7	7.56	-12889.31	-10452	-8704	3972	3.0079	1.9403	0	0	0	40441	37830	7670	40441		10.18	Si
SLV 11	5.46	-5677.93	-19930	-16596	5315	3.7599	3.7599	-15764	13569	14286	40441	47287	9588	54727		10.3	Si
SLV 11	7.56	-14420.06	-16735	-13936	3326	3.7599	3.0549	-16420	13701	11719	40441	47287	9588	52160		15.68	Si
SLV 10	5.46	-1956.2	-43632	-36333	-7179	3.7599	3.7599	-34512	16250	17108	40441	47287	9588	56875		7.92	Si
SLV 10	7.56	5366.5	-36173	-30122	-5183	3.7599	3.7599	-28612	16139	16991	40441	47287	9588	56875		10.97	Si
SLV 6	5.46	-1995.67	-36108	-30067	-6523	3.7599	3.7599	-28560	16129	16980	40441	47287	9588	56875		8.72	Si
SLV 6	7.56	6897.24	-29890	-24890	-4537	3.7599	3.7599	-23642	15145	15944	40441	47287	9588	56385		12.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.22 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	10199	-10737	391.04	1402.77	3.59	Si
SLV 3	179667	0.39	10376	-10924	391.04	1425.4	3.65	Si
SLV 8	179667	0.39	10382	-10929	391.04	1426.1	3.65	Si
SLV 4	179667	0.39	10660	-11222	391.04	1461.47	3.74	Si
SLV 11	179667	0.39	15812	-16646	391.04	2089.18	5.34	Si
SLV 12	179667	0.39	15995	-16839	391.04	2110.52	5.4	Si
SLV 1	179667	0.39	16185	-17039	391.04	2132.61	5.45	Si
SLV 2	179667	0.39	16468	-17337	391.04	2165.5	5.54	Si
SLV 15	179667	0.39	29087	-30622	391.04	3470.51	8.88	Si
SLV 16	179667	0.39	29370	-30920	391.04	3496.33	8.94	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.22 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-30614	-43632	504	0.651	3639.4	0.958	9.8792	12.68333	No
SLV 9	-30277	-42786	504	0.657	3605.2	0.957	9.97585	12.68333	No
SLV 6	-27047	-36108	-242	0.731	3276.9	0.953	11.14786	12.68333	No
SLV 5	-26710	-35262	-241	0.739	3242.7	0.953	11.27123	12.68333	No
SLV 14	-27662	-44643	1285	0.684	3339.4	0.954	10.41679	5.63352	Si
SLV 13	-27140	-43331	1285	0.695	3286.3	0.954	10.59224	5.63352	Si
SLV 12	-10025	-20776	251	1.612	1556.2	0.914	25.61649	12.68333	Si
SLV 11	-9689	-19930	251	1.652	1522.5	0.913	26.30072	12.68333	Si
SLV 16	-21486	-37786	1209	0.847	2712.4	0.945	13.02975	5.63352	Si
SLV 15	-20963	-36474	1209	0.865	2659.4	0.944	13.30994	5.63352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.077	SLU 83	Si
V_SLU	44.337	SLU 72	Si
PF_SLV	1.756	SLV 7	Si
V_SLV	7.923	SLV 10	Si
PFFP_SLV	3.587	SLV 7	Si
R_SLV	0.779	SLV 10	No

Maschio 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L6	L7	9.141	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	8.98	-6353.74	-59300	-0.0000385	0.0003743	0.0035	9.1407	209343.65	251278.76	251278.76	39.55	No	Si
SLU 60	12.5	-1480.25	-32214	-0.0000196	0.0003743	0.0035	9.1407	129028.04	158408.53	158408.53	107.01	No	Si
SLU 83	8.98	-7138.02	-67119	-0.0000439	0.0003743	0.0035	9.1407	227741.54	275074.98	275074.98	38.54	No	Si
SLU 83	12.5	-1317.49	-37299	-0.0000226	0.0003743	0.0035	9.1407	146069.41	177288.02	177288.02	134.57	No	Si
SLU 41	8.98	-6121.01	-56792	-0.0000368	0.0003743	0.0035	9.1407	202987.74	243458.23	243458.23	39.77	No	Si
SLU 41	12.5	-998.75	-31596	-0.000019	0.0003743	0.0035	9.1407	126893.73	156090.66	156090.66	156.29	No	Si
SLU 39	8.98	-6212.21	-55154	-0.0000358	0.0003743	0.0035	9.1407	198718.61	238248.73	238248.73	38.35	No	Si
SLU 39	12.5	-1150.54	-30018	-0.0000181	0.0003743	0.0035	9.1407	121387.47	150234.15	150234.15	130.58	No	Si
SLU 66	8.98	-6346.8	-60494	-0.0000393	0.0003743	0.0035	9.1407	212292	254969.02	254969.02	40.17	No	Si
SLU 66	12.5	-1240.09	-34477	-0.0000209	0.0003743	0.0035	9.1407	136724.43	166966.98	166966.98	134.64	No	Si
SLU 32	8.98	-5992.06	-55407	-0.0000359	0.0003743	0.0035	9.1407	199384.09	239068.62	239068.62	39.9	No	Si
SLU 32	12.5	-999.48	-31216	-0.0000188	0.0003743	0.0035	9.1407	125577.84	154673.21	154673.21	154.75	No	Si
SLU 64	8.98	-6283.11	-57995	-0.0000377	0.0003743	0.0035	9.1407	206065.09	247222.5	247222.5	39.35	No	Si
SLU 64	12.5	-1357.67	-32232	-0.0000196	0.0003743	0.0035	9.1407	129089.52	158475.65	158475.65	116.73	No	Si
SLU 81	8.98	-7229.23	-65481	-0.0000429	0.0003743	0.0035	9.1407	224065.66	270145.58	270145.58	37.37	No	Si
SLU 81	12.5	-1469.28	-35722	-0.0000217	0.0003743	0.0035	9.1407	140878.85	171701.1	171701.1	116.86	No	Si
SLU 74	8.98	-7009.08	-65734	-0.000043	0.0003743	0.0035	9.1407	224639.51	270906.82	270906.82	38.65	No	Si
SLU 74	12.5	-1318.22	-36920	-0.0000224	0.0003743	0.0035	9.1407	144829.42	175950.57	175950.57	133.48	No	Si
SLU 77	8.98	-6917.87	-67372	-0.000044	0.0003743	0.0035	9.1407	228300.86	275836.37	275836.37	39.87	No	Si
SLU 77	12.5	-1166.43	-38498	-0.0000233	0.0003743	0.0035	9.1407	149953.64	181534.32	181534.32	155.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.98	28573.37	-31229	-0.0000293	0.0005615	0.0035	9.1407		137820.71	137820.71	4.82		Si
SLV 13	12.5	21194.22	-22371	-0.0000211	0.0005615	0.0035	9.1407		101478.86	101478.86	4.79		Si
SLD 9	8.98	30557.78	-43185	-0.0000373	0.0005615	0.0035	9.1407		184301.55	184301.55	6.03		Si
SLD 9	12.5	21134.36	-24298	-0.0000222	0.0005615	0.0035	9.1407		109498.6	109498.6	5.18		Si
SLV 11	8.98	-77451.89	-40150	-0.0000551	0.0005615	0.0035	9.1407		193399.16	193399.16	2.5		Si
SLV 11	12.5	-44840.58	-24321	-0.0000318	0.0005615	0.0035	9.1407		130099.38	130099.38	2.9		Si
SLV 6	8.98	67791.95	-49351	-0.0000559	0.0005615	0.0035	9.1407		204846.26	204846.26	3.02		Si
SLV 6	12.5	42702.39	-25120	-0.0000312	0.0005615	0.0035	9.1407		112885.85	112885.85	2.64		Si
SLV 10	8.98	72872.53	-41205	-0.0000532	0.0005615	0.0035	9.1407		177184.72	177184.72	2.43		Si
SLV 10	12.5	46081.73	-23773	-0.0000322	0.0005615	0.0035	9.1407		107333.81	107333.81	2.33		Si
SLV 5	8.98	70370.08	-49240	-0.0000569	0.0005615	0.0035	9.1407		204471.99	204471.99	2.91		Si
SLV 5	12.5	45934.7	-25097	-0.0000326	0.0005615	0.0035	9.1407		112789.19	112789.19	2.46		Si
SLV 8	8.98	-85110.6	-48407	-0.0000628	0.0005615	0.0035	9.1407		224917.98	224917.98	2.64		Si
SLV 8	12.5	-51452.23	-25693	-0.0000357	0.0005615	0.0035	9.1407		135811.79	135811.79	2.64		Si
SLV 9	8.98	75450.66	-41094	-0.0000545	0.0005615	0.0035	9.1407		176750.74	176750.74	2.34		Si
SLV 9	12.5	49314.04	-23749	-0.000034	0.0005615	0.0035	9.1407		107236.76	107236.76	2.17		Si
SLV 12	8.98	-80030.02	-40261	-0.0000566	0.0005615	0.0035	9.1407		193822.15	193822.15	2.42		Si
SLV 12	12.5	-48072.89	-24345	-0.0000334	0.0005615	0.0035	9.1407		130196.73	130196.73	2.71		Si
SLV 7	8.98	-82532.47	-48295	-0.0000615	0.0005615	0.0035	9.1407		224515.76	224515.76	2.72		Si
SLV 7	12.5	-48219.92	-25669	-0.000034	0.0005615	0.0035	9.1407		135713.99	135713.99	2.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	8.98	-6212.21	-55154	-45928	-1333	9.1407	9.1407	-17945	9337	23897	40441	76640	23309	64338	No	48.27	Si
SLU 39	12.5	-1150.54	-30018	-24996	-1324	9.1407	9.1407	-9766	8247	21106	40441	76640	23309	61547	No	46.49	Si
SLU 83	8.98	-7138.02	-67119	-55891	-1231	9.1407	9.1407	-21837	9856	25226	40441	76640	23309	65667	No	53.36	Si
SLU 83	12.5	-1317.49	-37299	-31060	-1220	9.1407	9.1407	-12136	8563	21915	40441	76640	23309	62356	No	51.12	Si
SLU 35	8.98	-5900.86	-57045	-47502	-1271	9.1407	9.1407	-18560	9419	24107	40441	76640	23309	64548	No	50.77	Si
SLU 35	12.5	-847.69	-32794	-27308	-1262	9.1407	9.1407	-10670	8367	21415	40441	76640	23309	61856	No	49.01	Si
SLU 77	8.98	-6917.87	-67372	-56101	-1199	9.1407	9.1407	-21920	9867	25254	40441	76640	23309	65695	No	54.79	Si
SLU 77	12.5	-1166.43	-38498	-32058	-1188	9.1407	9.1407	-12526	8615	22048	40441	76640	23309	62489	No	52.59	Si
SLU 81	8.98	-7229.23	-65481	-54527	-1261	9.1407	9.1407	-21305	9785	25044	40441	76640	23309	65485	No	51.95	Si
SLU 81	12.5	-1469.28	-35722	-29746	-1250	9.1407	9.1407	-11622	8494	21740	40441	76640	23309	62181	No	49.74	Si
SLU 37	8.98	-5745.97	-56184	-46785	-1168	9.1407	9.1407	-18280	9382	24012	40441	76640	23309	64453	No	55.18	Si
SLU 37	12.5	-813.48	-32127	-26752	-1159	9.1407	9.1407	-10453	8338	21341	40441	76640	23309	61782	No	53.32	Si
SLU 32	8.98	-5992.06	-55407	-46138	-1301	9.1407	9.1407	-18027	9348	23925	40441	76640	23309	64366	No	49.46	Si
SLU 32	12.5	-999.48	-31216	-25994	-1292	9.1407	9.1407	-10156	8299	21239	40441	76640	23309	61680	No	47.73	Si
SLU 41	8.98	-6121.01	-56792	-47291	-1303	9.1407	9.1407	-18478	9408	24079	40441	76640	23309	64520	No	49.52	Si
SLU 41	12.5	-998.75	-31596	-26310	-1294	9.1407	9.1407	-10280	8315	21282	40441	76640	23309	61723	No	47.71	Si
SLU 74	8.98	-7009.08	-65734	-54738	-1229	9.1407	9.1407	-21387	9796	25072	40441	76640	23309	65513	No	53.31	Si
SLU 74	12.5	-1318.22	-36920	-30744	-1218	9.1407	9.1407	-12012	8546	21873	40441	76640	23309	62314	No	51.14	Si
SLU 40	8.98	-5439.11	-55170	-45940	-1130	9.1407	9.1407	-17950	9338	23899	40441	76640	23309	64340	No	56.93	Si
SLU 40	12.5	-648.1	-30022	-24999	-1054	9.1407	9.1407	-9768	8247	21107	40441	76640	23309	61548	No	58.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.98	72872.53	-41205	-34312	18855	9.1407	8.4055	-13406	13098	30826	40441	114959	23309	71267		3.78	Si
SLV 10	12.5	46081.73	-23773	-19796	25579	9.1407	7.8957	-7735	11964	26449	40441	114959	23309	66890		2.62	Si
SLV 9	8.98	75450.66	-41094	-34219	17447	9.1407	8.2029	-13370	13091	30067	40441	114959	23309	70508		4.04	Si
SLV 9	12.5	49314.04	-23749	-19776	24172	9.1407	7.4817	-7727	11962	25059	40441	114959	23309	65500		2.71	Si
SLD 7	8.98	-39091.65	-46267	-38527	-9236	9.1407	9.1407	-15053	13427	34366	40441	114959	23309	74807		8.1	Si
SLD 7	12.5	-21860.74	-25133	-20929	-12205	9.1407	9.1407	-8177	12052	30846	40441	114959	23309	71287		5.84	Si
SLV 11	8.98	-77451.89	-40150	-33433	-19504	9.1407	7.9238	-15180	13453	29847	40441	114959	23309	70288		3.6	Si
SLV 11	12.5	-44840.58	-24321	-20253	-26048	9.1407	8.18	-8868	12190	27921	40441	114959	23309	68362		2.62	Si
SLV 12	8.98	-80030.02	-40261	-33526	-18095	9.1407	7.7477	-15571	13531	29353	40441	114959	23309	69794		3.86	Si
SLV 12	12.5	-48072.89	-24345	-20272	-24641	9.1407	7.787	-9337	12284	26784	40441	114959	23309	67225		2.73	Si
SLV 7	8.98	-82532.47	-48295	-40216	-20145	9.1407	8.5843	-16862	13789	33144	40441	114959	23309	73585		3.65	Si
SLV 7	12.5	-48219.92	-25669	-21375	-26854	9.1407	8.0755	-9494	12316	27847	40441	114959	23309	68288		2.54	Si
SLV 8	8.98	-85110.6	-48407	-40309	-18736	9.1407	8.4363	-17196	13856	32730	40441	114959	23309	73171		3.91	Si
SLV 8	12.5	-51452.23	-25693	-21395	-25447	9.1407	7.7032	-9964	12410	26766	40441	114959	23309	67207		2.64	Si
SLV 6	8.98	67791.95	-49351	-41095	18214	9.1407	9.1407	-16057	13628	34879	40441	114959	23309	75320		4.14	Si
SLV 6	12.5	42702.39	-25120	-20918	24773	9.1407	8.6113	-8173	12051	29058	40441	114959	23309	69499		2.81	Si
SLD 11	8.98	-36912.54	-42776	-35620	-8962	9.1407	9.1407	-13917	13200	33784	40441	114959	23309	74225		8.28	Si
SLD 11	12.5	-20412.19	-24553	-20446	-11860	9.1407	9.1407	-7988	12014	30749	40441	114959	23309	71190		6	Si
SLV 5	8.98	70370.08	-49240	-41002	16806	9.1407	9.1407	-16020	13621	34861	40441	114959	23309	75302		4.48	Si
SLV 5	12.5	45934.7	-25097	-20899	23366	9.1407	8.2202	-8165	12050	27734	40441	114959	23309	68175		2.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	10735	-27475	1124.08	3576.1	3.18	Si
SLV 14	179667	0.46	10763	-27547	1124.08	3584.84	3.19	Si
SLV 15	179667	0.46	10839	-27741	1124.08	3608.05	3.21	Si
SLV 16	179667	0.46	10867	-27813	1124.08	3616.78	3.22	Si
SLV 9	179667	0.46	12443	-31847	1124.08	4095.35	3.64	Si
SLV 10	179667	0.46	12462	-31894	1124.08	4100.83	3.65	Si
SLV 11	179667	0.46	12790	-32733	1124.08	4198.89	3.74	Si
SLV 12	179667	0.46	12808	-32780	1124.08	4204.35	3.74	Si
SLV 5	179667	0.46	14007	-35850	1124.08	4558.66	4.06	Si
SLV 6	179667	0.46	14026	-35897	1124.08	4564.01	4.06	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-25693	-48407	-1002	1.539	3915.1	0.916	24.40073	14.44577	Si
SLV 7	-25669	-48295	-1002	1.54	3912.8	0.916	24.41814	14.44577	Si
SLV 6	-25120	-49351	-1006	1.564	3857.9	0.916	24.83233	14.44577	Si
SLV 5	-25097	-49240	-1006	1.565	3855.6	0.916	24.85036	14.44577	Si
SLV 12	-24345	-40261	993	1.601	3780.4	0.914	25.45147	14.44577	Si
SLV 11	-24321	-40150	993	1.602	3778.1	0.914	25.47049	14.44577	Si
SLV 10	-23773	-41205	989	1.629	3723.3	0.913	25.92537	14.44577	Si
SLV 9	-23749	-41094	989	1.631	3721	0.913	25.9451	14.44577	Si
SLV 4	-27071	-58272	-3331	1.414	4053.1	0.919	22.36845	6.41634	Si
SLV 3	-27035	-58098	-3331	1.415	4049.5	0.918	22.39219	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	37.369	SLU 81	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	46.489	SLU 39	Si
PF_SLV	2.175	SLV 9	Si
V_SLV	2.543	SLV 7	Si
PFFP_SLV	3.181	SLV 13	Si
R_SLV	1.689	SLV 8	Si

Maschio 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	5.826	-22.713	5.826	L6	L7	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	9.88	1076.28	-10226	-0.000039	0.0003743	0.0035	1.92	7982.98	8472.33	8472.33	7.87	No	Si
SLU 51	11.68	260.76	-8240	-0.0000257	0.0003743	0.0035	1.92	6719.16	7036.43	7036.43	26.98	No	Si
SLU 45	9.88	1056.09	-9899	-0.0000379	0.0003743	0.0035	1.92	7784.47	8231.53	8231.53	7.79	No	Si
SLU 45	11.68	248.24	-7940	-0.0000247	0.0003743	0.0035	1.92	6516.44	6825.28	6825.28	27.5	No	Si
SLU 49	9.88	1083.23	-10400	-0.0000396	0.0003743	0.0035	1.92	8086.97	8601.33	8601.33	7.94	No	Si
SLU 49	11.68	286.2	-8441	-0.0000265	0.0003743	0.0035	1.92	6853.62	7179.12	7179.12	25.08	No	Si
SLU 43	9.88	1026.61	-9323	-0.0000358	0.0003743	0.0035	1.92	7425.4	7811.4	7811.4	7.61	No	Si
SLU 43	11.68	176.98	-7311	-0.0000222	0.0003743	0.0035	1.92	6081.28	6387.39	6387.39	36.09	No	Si
SLU 44	9.88	1034.28	-9487	-0.0000364	0.0003743	0.0035	1.92	7528.53	7930.13	7930.13	7.67	No	Si
SLU 44	11.68	163.9	-7435	-0.0000224	0.0003743	0.0035	1.92	6168.12	6473.18	6473.18	39.49	No	Si
SLU 1	9.88	777.66	-7382	-0.0000278	0.0003743	0.0035	1.92	6130.62	6436.04	6436.04	8.28	No	Si
SLU 1	11.68	187.08	-5921	-0.0000182	0.0003743	0.0035	1.92	5069.47	5415.36	5415.36	28.95	No	Si
SLU 50	9.88	1071.68	-10128	-0.0000387	0.0003743	0.0035	1.92	7923.77	8399.78	8399.78	7.84	No	Si
SLU 50	11.68	268.6	-8165	-0.0000255	0.0003743	0.0035	1.92	6669.22	6983.96	6983.96	26	No	Si
SLU 48	9.88	1078.62	-10302	-0.0000393	0.0003743	0.0035	1.92	8028.35	8528.4	8528.4	7.91	No	Si
SLU 48	11.68	294.05	-8367	-0.0000263	0.0003743	0.0035	1.92	6804.19	7126.42	7126.42	24.24	No	Si
SLU 47	9.88	1056.81	-9889	-0.0000378	0.0003743	0.0035	1.92	7778.24	8224.07	8224.07	7.78	No	Si
SLU 47	11.68	209.72	-7862	-0.0000241	0.0003743	0.0035	1.92	6463.44	6770.85	6770.85	32.29	No	Si
SLU 46	9.88	1060.69	-9998	-0.0000382	0.0003743	0.0035	1.92	7844.47	8303.63	8303.63	7.83	No	Si
SLU 46	11.68	240.39	-8014	-0.0000248	0.0003743	0.0035	1.92	6566.97	6877.47	6877.47	28.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	9.88	764.02	2128	0.1626565	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	11.68	429.21	1443	0.1110316	0.0005615	0.0035	1.536		0	0	0		No
SLV 3	9.88	-907.12	-4264	-0.0000196	0.0005615	0.0035	1.92		4941.29	4941.29	5.45		Si
SLV 3	11.68	2656.62	-6717	-0.0000427	0.0005615	0.0035	1.92		6224.95	6224.95	2.34		Si
SLV 14	9.88	2399.42	-11251	-0.0000533	0.0005615	0.0035	1.92		9686.56	9686.56	4.04		Si
SLV 14	11.68	-2077.78	-6265	-0.0000356	0.0005615	0.0035	1.92		6670.28	6670.28	3.21		Si
SLD 7	9.88	315.86	-3344	-0.0000119	0.0005615	0.0035	1.92		3287.19	3287.19	10.41		Si
SLD 7	11.68	944.87	-3752	-0.0000185	0.0005615	0.0035	1.92		3651.77	3651.77	3.86		Si
SLV 7	9.88	-242.72	2249	0.1791824	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	11.68	1793.45	-304	-0.0112921	0.0005615	0.0035	1.92		480.74	480.74	0.27		No
SLV 16	9.88	2108.12	-5283	-0.0000336	0.0005615	0.0035	1.92		4998.39	4998.39	2.37		Si
SLV 16	11.68	-1584.63	-2029	-0.0000396	0.0005615	0.0035	1.536		2943.44	2943.44	1.86		Si
SLV 4	9.88	-610.48	-3729	-0.0000155	0.0005615	0.0035	1.92		4474.8	4474.8	7.33		Si
SLV 4	11.68	2389.88	-5729	-0.0000378	0.0005615	0.0035	1.92		5384.51	5384.51	2.25		Si
SLV 11	9.88	572.85	1783	0.136897	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	11.68	601.1	806	0.0580029	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	9.88	-51.56	2594	0.2053868	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	11.68	1621.56	333	-0.0128916	0.0005615	0.0035	1.92		0	0	0		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	9.88	1811.48	-5818	-0.000032	0.0005615	0.0035	1.92		5460.57	5460.57	3.01		Si
SLV 15	11.68	-1317.89	-3017	-0.0000204	0.0005615	0.0035	1.92		3838.92	3838.92	2.91		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 33	9.88	701.45	-9372	-7804	-455	1.92	1.92	-14516	8880	4774	40441	16098	4896	20994	No	46.14	Si
SLU 33	11.68	608.69	-8618	-7176	-457	1.92	1.92	-13349	8724	4690	40441	16098	4896	20994	No	45.96	Si
SLU 38	9.88	717.05	-9600	-7994	-456	1.92	1.92	-14871	8927	4799	40441	16098	4896	20994	No	46.05	Si
SLU 38	11.68	629.05	-8844	-7364	-458	1.92	1.92	-13698	8771	4715	40441	16098	4896	20994	No	45.87	Si
SLU 40	9.88	644.26	-9017	-7509	-539	1.92	1.92	-13967	8807	4734	40441	16098	4896	20994	No	38.98	Si
SLU 40	11.68	608.16	-8361	-6963	-540	1.92	1.92	-12951	8671	4662	40441	16098	4896	20994	No	38.86	Si
SLU 42	9.88	666.8	-9420	-7844	-564	1.92	1.92	-14591	8890	4779	40441	16098	4896	20994	No	37.19	Si
SLU 42	11.68	653.98	-8788	-7318	-566	1.92	1.92	-13613	8759	4709	40441	16098	4896	20994	No	37.08	Si
SLU 39	9.88	639.66	-8919	-7427	-558	1.92	1.92	-13815	8786	4724	40441	16098	4896	20994	No	37.6	Si
SLU 39	11.68	616.01	-8287	-6901	-560	1.92	1.92	-12836	8656	4653	40441	16098	4896	20994	No	37.5	Si
SLU 36	9.88	723.99	-9774	-8139	-481	1.92	1.92	-15140	8963	4819	40441	16098	4896	20994	No	43.66	Si
SLU 36	11.68	654.5	-9045	-7532	-483	1.92	1.92	-14010	8812	4738	40441	16098	4896	20994	No	43.49	Si
SLU 41	9.88	662.2	-9321	-7762	-584	1.92	1.92	-14439	8870	4768	40441	16098	4896	20994	No	35.94	Si
SLU 41	11.68	661.82	-8714	-7256	-586	1.92	1.92	-13498	8744	4701	40441	16098	4896	20994	No	35.84	Si
SLU 32	9.88	696.85	-9273	-7722	-475	1.92	1.92	-14364	8860	4763	40441	16098	4896	20994	No	44.22	Si
SLU 32	11.68	616.53	-8544	-7114	-476	1.92	1.92	-13234	8709	4682	40441	16098	4896	20994	No	44.07	Si
SLU 35	9.88	719.39	-9676	-8057	-501	1.92	1.92	-14988	8943	4808	40441	16098	4896	20994	No	41.95	Si
SLU 35	11.68	662.34	-8971	-7470	-502	1.92	1.92	-13895	8797	4729	40441	16098	4896	20994	No	41.79	Si
SLU 37	9.88	712.44	-9502	-7913	-476	1.92	1.92	-14718	8907	4788	40441	16098	4896	20994	No	44.15	Si
SLU 37	11.68	636.9	-8769	-7302	-477	1.92	1.92	-13583	8756	4707	40441	16098	4896	20994	No	43.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.88	-610.48	-3729	-3106	-3918	1.92	1.92	-5777	11572	6221	40441	24147	4896	29043		7.41	Si
SLV 4	11.68	2389.88	-5729	-4770	-3230	1.92	1.6285	-8874	12191	5559	40441	24147	4896	29043		8.99	Si
SLV 16	9.88	2108.12	-5283	-4399	3170	1.92	1.6829	-8183	12053	5680	40441	24147	4896	29043		9.16	Si
SLV 16	11.68	-1584.63	-2029	-1690	2476	1.536	0.5372	0	0	0	40441	19318	3917	23234		9.38	Si
SLV 9	9.88	1543.86	-18109	-15079	3191	1.92	1.92	-28050	16027	8616	40441	24147	4896	29043		9.1	Si
SLV 9	11.68	-1042.72	-13315	-11088	2987	1.92	1.92	-20624	14542	7817	40441	24147	4896	29043		9.72	Si
SLV 3	9.88	-907.12	-4264	-3551	-4473	1.92	1.92	-6605	11738	6310	40441	24147	4896	29043		6.49	Si
SLV 3	11.68	2656.62	-6717	-5593	-3785	1.92	1.6934	-10404	12497	5926	40441	24147	4896	29043		7.67	Si
SLV 14	9.88	2399.42	-11251	-9369	4535	1.92	1.92	-17427	13902	7474	40441	24147	4896	29043		6.4	Si
SLV 14	11.68	-2077.78	-6265	-5217	3844	1.92	1.8851	-9705	12358	6523	40441	24147	4896	29043		7.55	Si
SLV 10	9.88	1735.03	-17764	-14793	3548	1.92	1.92	-27516	15920	8558	40441	24147	4896	29043		8.19	Si
SLV 10	11.68	-1214.61	-12678	-10557	3344	1.92	1.92	-19638	14344	7711	40441	24147	4896	29043		8.68	Si
SLV 7	9.88	-242.72	2249	1873	-3486	1.536	1.92	0	0	0	40441	19318	3917	23234		6.66	Si
SLV 7	11.68	1793.45	-304	-253	-3285	1.92	0	0	16250	0	40441	24147	4896	29043		8.84	Si
SLV 1	9.88	-615.81	-10232	-8520	-3107	1.92	1.92	-15849	13586	7304	40441	24147	4896	29043		9.35	Si
SLV 1	11.68	2163.47	-10953	-9121	-2417	1.92	1.92	-16966	13810	7424	40441	24147	4896	29043		12.02	Si
SLV 13	9.88	2102.78	-11785	-9814	3980	1.92	1.92	-18255	14068	7563	40441	24147	4896	29043		7.3	Si
SLV 13	11.68	-1811.04	-7253	-6040	3290	1.92	1.92	-11235	12664	6808	40441	24147	4896	29043		8.83	Si
SLV 8	9.88	-51.56	2594	2160	-3129	1.536	1.92	0	0	0	40441	19318	3917	23234		7.43	Si
SLV 8	11.68	1621.56	333	277	-2927	1.92	0	0	9723	0	40441	24147	4896	29043		9.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	0	964	236.11	0	0	No, Trazione
SLV 12	179667	0.46	0	1517	236.11	0	0	No, Trazione
SLV 7	179667	0.46	0	447	236.11	0	0	No, Trazione
SLV 11	179667	0.46	0	1001	236.11	0	0	No, Trazione
SLV 16	179667	0.46	6461	-3474	236.11	465.73	1.97	Si
SLV 15	179667	0.46	7953	-4275	236.11	567.4	2.4	Si
SLV 4	179667	0.46	9893	-5318	236.11	696.32	2.95	Si
SLV 3	179667	0.46	11384	-6120	236.11	792.94	3.36	Si
SLV 14	179667	0.46	15676	-8427	236.11	1058.7	4.48	Si
SLV 13	179667	0.46	17167	-9229	236.11	1146.82	4.86	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-11761	-16811	389	0.817	1465.2	0.948	12.52742	14.44577	No
SLV 9	-11446	-16247	261	0.845	1433.2	0.947	12.97581	14.44577	No
SLV 6	-11268	-16333	390	0.846	1415.2	0.946	13.00215	14.44577	No
SLV 10	-10953	-15769	262	0.877	1383.2	0.945	13.48097	14.44577	No
SLV 1	-8107	-11223	309	1.115	1095	0.933	17.36061	6.41634	Si
SLV 2	-7341	-10481	309	1.205	1017.8	0.929	18.85872	6.41634	Si
SLV 13	-7056	-9343	-117	1.265	989.1	0.927	19.82967	6.41634	Si
SLV 14	-6291	-8601	-116	1.383	912	0.923	21.78121	6.41634	Si
SLV 3	-4542	-5756	112	1.76	737.1	0.91	28.10782	6.41634	Si
SLV 4	-3776	-5014	113	2	661.3	0.903	32.17473	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.609	SLU 43	Si
V_SLU	35.836	SLU 41	Si
PF_SLV	0	SLV 7	No
V_SLV	6.405	SLV 14	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.867	SLV 5	No

Maschio 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-21.813	5.826	-19.613	5.826	L6	L7	2.2	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	9.88	305.88	-12688	-0.0000339	0.0003743	0.0035	2.2	11133.45	11998.96	11998.96	39.23	No	Si
SLU 50	11.68	-1400.21	-12207	-0.0000403	0.0003743	0.0035	2.2	10814.47	12838.44	12838.44	9.17	No	Si
SLU 47	9.88	348.39	-12181	-0.0000328	0.0003743	0.0035	2.2	10796.73	11553.1	11553.1	33.16	No	Si
SLU 47	11.68	-1392.66	-11661	-0.0000387	0.0003743	0.0035	2.2	10441.95	12410.34	12410.34	8.91	No	Si
SLU 46	9.88	324.61	-12381	-0.0000332	0.0003743	0.0035	2.2	10930.46	11728.47	11728.47	36.13	No	Si
SLU 46	11.68	-1385.04	-11868	-0.0000392	0.0003743	0.0035	2.2	10584.35	12574.89	12574.89	9.08	No	Si
SLU 44	9.88	385.93	-11563	-0.0000315	0.0003743	0.0035	2.2	10374.44	11016.01	11016.01	28.54	No	Si
SLU 44	11.68	-1368.88	-11012	-0.0000368	0.0003743	0.0035	2.2	9986.26	11864.52	11864.52	8.67	No	Si
SLU 60	9.88	383.03	-12669	-0.0000344	0.0003743	0.0035	2.2	11120.89	11982.07	11982.07	31.28	No	Si
SLU 60	11.68	-1420.94	-12453	-0.0000411	0.0003743	0.0035	2.2	10978.75	13030.94	13030.94	9.17	No	Si
SLU 51	9.88	308.86	-12755	-0.0000341	0.0003743	0.0035	2.2	11176.81	12057.43	12057.43	39.04	No	Si
SLU 51	11.68	-1409.95	-12269	-0.0000405	0.0003743	0.0035	2.2	10855.56	12886.24	12886.24	9.14	No	Si
SLU 61	9.88	386.01	-12735	-0.0000346	0.0003743	0.0035	2.2	11164.3	12040.53	12040.53	31.19	No	Si
SLU 61	11.68	-1430.67	-12515	-0.0000413	0.0003743	0.0035	2.2	11019.32	13079.05	13079.05	9.14	No	Si
SLU 43	9.88	380.97	-11453	-0.0000311	0.0003743	0.0035	2.2	10297.46	10920.81	10920.81	28.67	No	Si
SLU 43	11.68	-1352.66	-10910	-0.0000365	0.0003743	0.0035	2.2	9913.19	11779.43	11779.43	8.71	No	Si
SLU 52	9.88	387.38	-12415	-0.0000337	0.0003743	0.0035	2.2	10952.98	11758.23	11758.23	30.35	No	Si
SLU 52	11.68	-1416.68	-12092	-0.0000401	0.0003743	0.0035	2.2	10737.05	12749	12749	9	No	Si
SLU 45	9.88	321.64	-12314	-0.000033	0.0003743	0.0035	2.2	10886.22	11670.22	11670.22	36.28	No	Si
SLU 45	11.68	-1375.3	-11807	-0.000039	0.0003743	0.0035	2.2	10542.4	12527.58	12527.58	9.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.88	2027.38	-10469	-0.0000393	0.0005615	0.0035	2.2		10707	10707	5.28		Si
SLV 13	11.68	-3755.7	-11005	-0.0000525	0.0005615	0.0035	2.2		12312.7	12312.7	3.28		Si
SLV 3	9.88	-1798.71	-9458	-0.0000351	0.0005615	0.0035	2.2		10879.86	10879.86	6.05		Si
SLV 3	11.68	1975.09	-8200	-0.0000331	0.0005615	0.0035	2.2		8678.58	8678.58	4.39		Si
SLV 15	9.88	1844.6	-6437	-0.0000278	0.0005615	0.0035	2.2		6964.36	6964.36	3.78		Si
SLV 15	11.68	-3228.3	-7432	-0.00004	0.0005615	0.0035	2.2		8950.85	8950.85	2.77		Si
SLV 14	9.88	2339.11	-10057	-0.0000403	0.0005615	0.0035	2.2		10375.59	10375.59	4.44		Si
SLV 14	11.68	-4132.07	-10819	-0.0000546	0.0005615	0.0035	2.2		12143.25	12143.25	2.94		Si
SLD 14	9.88	1156.47	-9911	-0.000032	0.0005615	0.0035	2.2		10259.04	10259.04	8.87		Si
SLD 14	11.68	-2386.6	-10098	-0.0000408	0.0005615	0.0035	2.2		11472.14	11472.14	4.81		Si
SLD 15	9.88	942.39	-8309	-0.0000265	0.0005615	0.0035	2.2		8782.69	8782.69	9.32		Si
SLD 15	11.68	-1992.52	-8600	-0.0000343	0.0005615	0.0035	2.2		10079.26	10079.26	5.06		Si
SLV 16	9.88	2156.32	-6025	-0.0000289	0.0005615	0.0035	2.2		6557.38	6557.38	3.04		Si
SLV 16	11.68	-3604.67	-7246	-0.0000432	0.0005615	0.0035	2.2		8772.45	8772.45	2.43		Si
SLD 13	9.88	1022.62	-10088	-0.0000315	0.0005615	0.0035	2.2		10400.98	10400.98	10.17		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	11.68	-2225	-10178	-0.0000399	0.0005615	0.0035	2.2		11546.42	11546.42	5.19		Si
SLV 12	9.88	612.5	-2452	-0.0000099	0.0005615	0.0035	2.2		2902.48	2902.48	4.74		Si
SLV 12	11.68	-1101.27	-3379	-0.0000153	0.0005615	0.0035	2.2		4910.75	4910.75	4.46		Si
SLD 16	9.88	1076.23	-8132	-0.0000269	0.0005615	0.0035	2.2		8613.27	8613.27	8		Si
SLD 16	11.68	-2154.12	-8520	-0.0000352	0.0005615	0.0035	2.2		10003.15	10003.15	4.64		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	9.88	343.67	-14017	-11673	2484	2.2	2.2	-18949	9471	5834	40441	18446	5610	24056	No	9.68	Si
SLU 82	11.68	-1474.95	-13987	-11647	2486	2.2	2.2	-18907	9465	5831	40441	18446	5610	24056	No	9.68	Si
SLU 80	9.88	267.96	-14888	-12398	2439	2.2	2.2	-20126	9628	5931	40441	18446	5610	24056	No	9.86	Si
SLU 80	11.68	-1502.02	-14821	-12342	2441	2.2	2.2	-20036	9616	5923	40441	18446	5610	24056	No	9.85	Si
SLU 81	9.88	340.69	-13951	-11617	2480	2.2	2.2	-18859	9459	5827	40441	18446	5610	24056	No	9.7	Si
SLU 81	11.68	-1465.21	-13926	-11596	2482	2.2	2.2	-18825	9454	5824	40441	18446	5610	24056	No	9.69	Si
SLU 76	9.88	307.49	-14315	-11920	2430	2.2	2.2	-19350	9524	5867	40441	18446	5610	24056	No	9.9	Si
SLU 76	11.68	-1484.73	-14213	-11836	2431	2.2	2.2	-19214	9506	5856	40441	18446	5610	24056	No	9.89	Si
SLU 83	9.88	303.15	-14569	-12132	2493	2.2	2.2	-19694	9570	5895	40441	18446	5610	24056	No	9.65	Si
SLU 83	11.68	-1488.99	-14574	-12136	2495	2.2	2.2	-19702	9571	5896	40441	18446	5610	24056	No	9.64	Si
SLU 77	9.88	243.2	-15066	-12546	2425	2.2	2.2	-20366	9660	5951	40441	18446	5610	24056	No	9.92	Si
SLU 77	11.68	-1491.15	-15008	-12498	2427	2.2	2.2	-20288	9650	5944	40441	18446	5610	24056	No	9.91	Si
SLU 78	9.88	246.18	-15132	-12601	2429	2.2	2.2	-20456	9672	5958	40441	18446	5610	24056	No	9.91	Si
SLU 78	11.68	-1500.88	-15069	-12549	2431	2.2	2.2	-20371	9661	5951	40441	18446	5610	24056	No	9.9	Si
SLU 73	9.88	345.04	-13697	-11405	2417	2.2	2.2	-18515	9413	5799	40441	18446	5610	24056	No	9.95	Si
SLU 73	11.68	-1460.95	-13565	-11295	2419	2.2	2.2	-18337	9389	5784	40441	18446	5610	24056	No	9.94	Si
SLU 84	9.88	306.12	-14635	-12187	2497	2.2	2.2	-19784	9582	5903	40441	18446	5610	24056	No	9.64	Si
SLU 84	11.68	-1498.73	-14636	-12187	2499	2.2	2.2	-19785	9582	5903	40441	18446	5610	24056	No	9.63	Si
SLU 79	9.88	264.98	-14822	-12342	2436	2.2	2.2	-20036	9616	5923	40441	18446	5610	24056	No	9.88	Si
SLU 79	11.68	-1492.28	-14760	-12291	2438	2.2	2.2	-19953	9605	5917	40441	18446	5610	24056	No	9.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	9.88	1076.23	-8132	-6772	3440	2.2	2.2	-10993	12615	7771	40441	27669	5610	33279		9.67	Si
SLD 16	11.68	-2154.12	-8520	-7095	3175	2.2	2.2	-11518	12720	7836	40441	27669	5610	33279		10.48	Si
SLD 14	9.88	1156.47	-9911	-8253	3462	2.2	2.2	-13398	13096	8067	40441	27669	5610	33279		9.61	Si
SLD 14	11.68	-2386.6	-10098	-8409	3212	2.2	2.2	-13650	13147	8098	40441	27669	5610	33279		10.36	Si
SLV 15	9.88	1844.6	-6437	-5360	5190	2.2	2.2	-8701	12157	7489	40441	27669	5610	33279		6.41	Si
SLV 15	11.68	-3228.3	-7432	-6188	4565	2.2	1.9968	-11116	12640	7067	40441	27669	5610	33279		7.29	Si
SLD 15	9.88	942.39	-8309	-6919	3217	2.2	2.2	-11232	12663	7801	40441	27669	5610	33279		10.34	Si
SLD 15	11.68	-1992.52	-8600	-7161	2952	2.2	2.2	-11626	12742	7849	40441	27669	5610	33279		11.27	Si
SLV 10	9.88	1221.78	-15891	-13233	3113	2.2	2.2	-21482	14713	9063	40441	27669	5610	33279		10.69	Si
SLV 10	11.68	-2859.27	-15290	-12732	2990	2.2	2.2	-20669	14551	8963	40441	27669	5610	33279		11.13	Si
SLV 16	9.88	2156.32	-6025	-5017	5709	2.2	2.2	-8144	12046	7420	40441	27669	5610	33279		5.83	Si
SLV 16	11.68	-3604.67	-7246	-6034	5084	2.2	1.8076	-11988	12814	6486	40441	27669	5610	33279		6.55	Si
SLV 12	9.88	612.5	-2452	-2042	2951	2.2	2.2	-3314	11079	6825	40441	27669	5610	33279		11.28	Si
SLV 12	11.68	-1101.27	-3379	-2814	2711	2.2	2.2	-4568	11330	6979	40441	27669	5610	33279		12.28	Si
SLV 13	9.88	2027.38	-10469	-8717	5239	2.2	2.2	-14152	13247	8160	40441	27669	5610	33279		6.35	Si
SLV 13	11.68	-3755.7	-11005	-9164	4649	2.2	2.2	-14877	13392	8250	40441	27669	5610	33279		7.16	Si
SLD 13	9.88	1022.62	-10088	-8401	3240	2.2	2.2	-13637	13144	8097	40441	27669	5610	33279		10.27	Si
SLD 13	11.68	-2225	-10178	-8475	2989	2.2	2.2	-13758	13168	8112	40441	27669	5610	33279		11.13	Si
SLV 14	9.88	2339.11	-10057	-8374	5758	2.2	2.2	-13595	13136	8092	40441	27669	5610	33279		5.78	Si
SLV 14	11.68	-4132.07	-10819	-9009	5168	2.2	2.1543	-14626	13342	8048	40441	27669	5610	33279		6.44	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	5203	-3205	270.55	433.46	1.6	Si
SLV 11	179667	0.46	5507	-3393	270.55	457.83	1.69	Si
SLV 8	179667	0.46	5974	-3680	270.55	495.07	1.83	Si
SLV 7	179667	0.46	6278	-3867	270.55	519.17	1.92	Si
SLV 16	179667	0.46	11561	-7121	270.55	921.53	3.41	Si
SLV 15	179667	0.46	12032	-7412	270.55	955.91	3.53	Si
SLV 4	179667	0.46	14130	-8704	270.55	1105.83	4.09	Si
SLV 3	179667	0.46	14602	-8995	270.55	1138.85	4.21	Si
SLV 14	179667	0.46	17852	-10997	270.55	1359.62	5.03	Si
SLV 13	179667	0.46	18324	-11288	270.55	1390.66	5.14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12330	-16257	334	0.887	1562.5	0.944	13.65391	14.44577	No
SLV 6	-12101	-16253	333	0.901	1539.4	0.944	13.87701	14.44577	No
SLV 9	-11159	-16380	358	0.961	1443.9	0.94	14.84976	14.44577	Si
SLV 10	-10931	-16377	358	0.977	1420.8	0.94	15.11589	14.44577	Si
SLV 7	-4120	-2975	-349	2.031	737.4	0.902	32.72877	14.44577	Si
SLV 8	-3891	-2972	-349	2.108	715	0.9	34.0465	14.44577	Si
SLV 1	-10885	-11465	66	1.003	1416.1	0.939	15.52285	6.41634	Si
SLV 2	-10530	-11460	65	1.031	1380.3	0.938	15.96953	6.41634	Si
SLV 11	-2949	-3099	-324	2.511	623.8	0.893	40.86599	14.44577	Si
SLV 12	-2721	-3095	-325	2.632	602	0.892	42.89653	14.44577	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.667	SLU 44	Si
V_SLU	9.628	SLU 84	Si
PF_SLV	2.434	SLV 16	Si
V_SLV	5.78	SLV 14	Si
PFFP_SLV	1.602	SLV 12	Si
R_SLV	0.945	SLV 5	No

Maschio 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L6	L7	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	9.88	-437.35	-11076	-0.0000315	0.0003743	0.0035	2.14	9699.26	11562.26	11562.26	26.44	No	Si
SLU 42	11.68	-1178.13	-10203	-0.0000346	0.0003743	0.0035	2.14	9091.55	10861.24	10861.24	9.22	No	Si
SLU 38	9.88	-490.39	-11131	-0.0000321	0.0003743	0.0035	2.14	9736.77	11607.11	11607.11	23.67	No	Si
SLU 38	11.68	-1149.04	-10192	-0.0000344	0.0003743	0.0035	2.14	9083.43	10852.15	10852.15	9.44	No	Si
SLU 34	9.88	-469	-10647	-0.0000306	0.0003743	0.0035	2.14	9403.68	11215.44	11215.44	23.91	No	Si
SLU 34	11.68	-1093.11	-9692	-0.0000326	0.0003743	0.0035	2.14	8722.81	10446.45	10446.45	9.56	No	Si
SLU 40	9.88	-427.3	-10687	-0.0000304	0.0003743	0.0035	2.14	9431.54	11247.65	11247.65	26.32	No	Si
SLU 40	11.68	-1112.23	-9767	-0.0000329	0.0003743	0.0035	2.14	8777.39	10508.15	10508.15	9.45	No	Si
SLU 36	9.88	-515.02	-11363	-0.0000329	0.0003743	0.0035	2.14	9893.61	11796.73	11796.73	22.91	No	Si
SLU 36	11.68	-1168.35	-10416	-0.0000351	0.0003743	0.0035	2.14	9241.93	11030.41	11030.41	9.44	No	Si
SLU 37	9.88	-507.38	-11274	-0.0000326	0.0003743	0.0035	2.14	9833.41	11723.54	11723.54	23.11	No	Si
SLU 37	11.68	-1134.11	-10287	-0.0000345	0.0003743	0.0035	2.14	9151.12	10927.93	10927.93	9.64	No	Si
SLU 83	9.88	-640.31	-13405	-0.0000394	0.0003743	0.0035	2.14	11191.73	13361.16	13361.16	20.87	No	Si
SLU 83	11.68	-1277.74	-11990	-0.0000402	0.0003743	0.0035	2.14	10307.69	12279.77	12279.77	9.61	No	Si
SLU 84	9.88	-623.32	-13263	-0.0000389	0.0003743	0.0035	2.14	11105.76	13255.01	13255.01	21.27	No	Si
SLU 84	11.68	-1292.67	-11895	-0.0000401	0.0003743	0.0035	2.14	10245.69	12208.1	12208.1	9.44	No	Si
SLU 35	9.88	-532.01	-11506	-0.0000334	0.0003743	0.0035	2.14	9989.09	11912.69	11912.69	22.39	No	Si
SLU 35	11.68	-1153.41	-10511	-0.0000353	0.0003743	0.0035	2.14	9308.88	11106.6	11106.6	9.63	No	Si
SLU 41	9.88	-454.35	-11218	-0.000032	0.0003743	0.0035	2.14	9796.18	11678.53	11678.53	25.7	No	Si
SLU 41	11.68	-1163.2	-10299	-0.0000348	0.0003743	0.0035	2.14	9159.21	10937.01	10937.01	9.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	9.88	-784.22	1897	0.1380074	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	11.68	-1066.02	628	0.0472442	0.0005615	0.0035	1.712		0	0	0		No
SLV 1	9.88	1547.54	-7175	-0.0000288	0.0005615	0.0035	2.14		7455.28	7455.28	4.82		Si
SLV 1	11.68	-3754.34	-8520	-0.0000489	0.0005615	0.0035	2.14		9722.2	9722.2	2.59		Si
SLV 15	9.88	-3025.24	-10396	-0.0000478	0.0005615	0.0035	2.14		11415.89	11415.89	3.77		Si
SLV 15	11.68	2651.76	-5878	-0.0000339	0.0005615	0.0035	2.14		6215.55	6215.55	2.34		Si
SLV 16	9.88	-2686.89	-11085	-0.0000472	0.0005615	0.0035	2.14		12027.94	12027.94	4.48		Si
SLV 16	11.68	2332.22	-6995	-0.0000339	0.0005615	0.0035	2.14		7284.64	7284.64	3.12		Si
SLV 9	9.88	-1002.26	2341	0.1704209	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	11.68	-860.09	1348	0.0989212	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	9.88	309.73	1370	0.0957072	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	11.68	-2581.63	-823	-0.0006154	0.0005615	0.0035	1.712		2176.94	2176.94	0.84		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.88	-2825.78	-3938	-0.0000399	0.0005615	0.0035	1.712		5341.69	5341.69	1.89		Si
SLV 13	11.68	1984.11	-1282	-0.0029436	0.0005615	0.0035	2.14		1602.39	1602.39	0.81		No
SLV 14	9.88	-2487.44	-4627	-0.0000309	0.0005615	0.0035	2.14		6015.46	6015.46	2.42		Si
SLV 14	11.68	1664.56	-2399	-0.0000226	0.0005615	0.0035	2.14		2755.7	2755.7	1.66		Si
SLV 2	9.88	1885.89	-7864	-0.000033	0.0005615	0.0035	2.14		8102.3	8102.3	4.3		Si
SLV 2	11.68	-4073.89	-9637	-0.0000539	0.0005615	0.0035	2.14		10729.99	10729.99	2.63		Si
SLV 6	9.88	527.78	926	0.0622867	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	11.68	-2787.55	-1543	-0.0004604	0.0005615	0.0035	1.712		2920.46	2920.46	1.05		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	9.88	-490.39	-11131	-9269	1041	2.14	2.14	-15469	9007	5397	40441	17943	5457	23399	No	22.48	Si
SLU 38	11.68	-1149.04	-10192	-8487	1031	2.14	2.14	-14164	8833	5293	40441	17943	5457	23399	No	22.69	Si
SLU 41	9.88	-454.35	-11218	-9342	1075	2.14	2.14	-15590	9023	5407	40441	17943	5457	23399	No	21.78	Si
SLU 41	11.68	-1163.2	-10299	-8576	1075	2.14	2.14	-14312	8853	5305	40441	17943	5457	23399	No	21.76	Si
SLU 78	9.88	-700.98	-13550	-11283	1056	2.14	2.14	-18831	9455	5666	40441	17943	5457	23399	No	22.16	Si
SLU 78	11.68	-1282.89	-12107	-10082	1046	2.14	2.14	-16825	9188	5505	40441	17943	5457	23399	No	22.36	Si
SLU 82	9.88	-613.26	-12874	-10720	1090	2.14	2.14	-17891	9330	5590	40441	17943	5457	23399	No	21.47	Si
SLU 82	11.68	-1226.78	-11458	-9541	1080	2.14	2.14	-15924	9068	5433	40441	17943	5457	23399	No	21.67	Si
SLU 42	9.88	-437.35	-11076	-9223	1126	2.14	2.14	-15392	8997	5391	40441	17943	5457	23399	No	20.78	Si
SLU 42	11.68	-1178.13	-10203	-8497	1116	2.14	2.14	-14180	8835	5294	40441	17943	5457	23399	No	20.96	Si
SLU 83	9.88	-640.31	-13405	-11163	1098	2.14	2.14	-18630	9428	5649	40441	17943	5457	23399	No	21.32	Si
SLU 83	11.68	-1277.74	-11990	-9984	1099	2.14	2.14	-16663	9166	5492	40441	17943	5457	23399	No	21.3	Si
SLU 81	9.88	-630.26	-13016	-10839	1038	2.14	2.14	-18089	9356	5606	40441	17943	5457	23399	No	22.53	Si
SLU 81	11.68	-1211.85	-11553	-9621	1039	2.14	2.14	-16056	9085	5444	40441	17943	5457	23399	No	22.52	Si
SLU 40	9.88	-427.3	-10687	-8899	1067	2.14	2.14	-14852	8925	5348	40441	17943	5457	23399	No	21.93	Si
SLU 40	11.68	-1112.23	-9767	-8133	1057	2.14	2.14	-13573	8754	5245	40441	17943	5457	23399	No	22.14	Si
SLU 84	9.88	-623.32	-13263	-11044	1149	2.14	2.14	-18431	9402	5634	40441	17943	5457	23399	No	20.36	Si
SLU 84	11.68	-1292.67	-11895	-9905	1139	2.14	2.14	-16530	9148	5482	40441	17943	5457	23399	No	20.54	Si
SLU 80	9.88	-676.35	-13318	-11090	1064	2.14	2.14	-18508	9412	5640	40441	17943	5457	23399	No	21.99	Si
SLU 80	11.68	-1263.59	-11883	-9895	1054	2.14	2.14	-16515	9146	5480	40441	17943	5457	23399	No	22.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.88	1686.43	-14323	-11927	4475	2.14	2.14	-19905	14398	8627	40441	26914	5457	32371		7.23	Si
SLV 4	11.68	-3406.23	-14233	-11852	3760	2.14	2.14	-19780	14373	8612	40441	26914	5457	32371		8.61	Si
SLV 11	9.88	-1667.13	-19187	-15977	-3761	2.14	2.14	-26665	15750	9437	40441	26914	5457	32371		8.61	Si
SLV 11	11.68	1365.43	-13971	-11634	-3524	2.14	2.14	-19416	14300	8568	40441	26914	5457	32371		9.19	Si
SLV 3	9.88	1348.08	-13634	-11353	3855	2.14	2.14	-18947	14206	8512	40441	26914	5457	32371		8.4	Si
SLV 3	11.68	-3086.69	-13115	-10921	3140	2.14	2.14	-18227	14062	8426	40441	26914	5457	32371		10.31	Si
SLV 5	9.88	309.73	1370	1141	4318	1.712	2.14	0	0	0	40441	21531	4366	25897		6	Si
SLV 5	11.68	-2581.63	-823	-686	4081	1.712	0	0	0	0	40441	21531	4366	25897		6.35	Si
SLV 1	9.88	1547.54	-7175	-5975	5470	2.14	2.14	-9972	12411	7437	40441	26914	5457	32371		5.92	Si
SLV 1	11.68	-3754.34	-8520	-7094	4742	2.14	1.888	-13507	13118	6935	40441	26914	5457	32371		6.83	Si
SLV 13	9.88	-2825.78	-3938	-3279	-3519	1.712	1.0572	0	0	0	40441	21531	4366	25897		7.36	Si
SLV 13	11.68	1984.11	-1282	-1067	-2803	2.14	0	-94466	16250	0	40441	26914	5457	32371		11.55	Si
SLV 16	9.88	-2686.89	-11085	-9231	-4514	2.14	2.14	-15406	13498	8088	40441	26914	5457	32371		7.17	Si
SLV 16	11.68	2332.22	-6995	-5825	-3785	2.14	2.14	-9721	12361	7407	40441	26914	5457	32371		8.55	Si
SLV 2	9.88	1885.89	-7864	-6549	6090	2.14	2.14	-10929	12602	7551	40441	26914	5457	32371		5.32	Si
SLV 2	11.68	-4073.89	-9637	-8025	5362	2.14	1.9418	-14851	13387	7278	40441	26914	5457	32371		6.04	Si
SLV 15	9.88	-3025.24	-10396	-8657	-5134	2.14	2.14	-14448	13306	7973	40441	26914	5457	32371		6.31	Si
SLV 15	11.68	2651.76	-5878	-4894	-4405	2.14	1.8565	-8168	12050	6264	40441	26914	5457	32371		7.35	Si
SLV 6	9.88	527.78	926	771	4717	1.712	1.5005	0	0	0	40441	21531	4366	25897		5.49	Si
SLV 6	11.68	-2787.55	-1543	-1285	4480	1.712	0	0	0	0	40441	21531	4366	25897		5.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	-220	263.17	0	0	No, e>t/2
SLV 6	179667	0.46	0	-828	263.17	0	0	No, e>t/2
SLV 9	179667	0.46	0	1514	263.17	0	0	No, Trazione
SLV 10	179667	0.46	0	906	263.17	0	0	No, Trazione
SLV 13	179667	0.46	4252	-2548	263.17	346.73	1.32	Si
SLV 14	179667	0.46	5826	-3491	263.17	470.07	1.79	Si
SLV 15	179667	0.46	13196	-7907	263.17	1011.29	3.84	Si
SLV 1	179667	0.46	13897	-8327	263.17	1059.73	4.03	Si
SLV 16	179667	0.46	14770	-8850	263.17	1119.16	4.25	Si
SLV 2	179667	0.46	15472	-9270	263.17	1166.38	4.43	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-13925	-20516	397	0.779	1715.9	0.95	11.92066	14.44577	No
SLV 7	-13353	-19907	397	0.807	1657.9	0.948	12.36461	14.44577	No
SLV 12	-12675	-18095	226	0.854	1589	0.946	13.11909	14.44577	No
SLV 11	-12102	-17486	226	0.888	1531	0.945	13.65507	14.44577	No
SLV 4	-10919	-16455	376	0.954	1411	0.941	14.74124	6.41634	Si
SLV 3	-10031	-15510	377	1.022	1321.1	0.937	15.84866	6.41634	Si
SLV 2	-6956	-10409	188	1.385	1010.9	0.922	21.81841	6.41634	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-6750	-8386	-194	1.416	990.2	0.921	22.34327	6.41634	Si
SLV 1	-6068	-9464	189	1.534	921.9	0.917	24.32514	6.41634	Si
SLV 15	-5862	-7441	-193	1.574	901.3	0.915	24.98341	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.219	SLU 42	Si
V_SLU	20.362	SLU 84	Si
PF_SLV	0	SLV 5	No
V_SLV	5.316	SLV 2	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.825	SLV 8	No

Maschio 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	10.98	-1093.93	-17351	-0.0000499	0.0003743	0.0035	2.28	14500.1	17361.8	17361.8	15.87	No	Si
SLU 80	11.78	-1137.92	-15111	-0.0000443	0.0003743	0.0035	2.28	13221.8	15692.29	15692.29	13.79	No	Si
SLU 79	10.98	-1082.88	-17460	-0.0000501	0.0003743	0.0035	2.28	14557.56	17442.63	17442.63	16.11	No	Si
SLU 79	11.78	-1143.7	-15208	-0.0000446	0.0003743	0.0035	2.28	13280.58	15768.2	15768.2	13.79	No	Si
SLU 37	10.98	-915.29	-14806	-0.000042	0.0003743	0.0035	2.28	13034.1	15453.88	15453.88	16.88	No	Si
SLU 37	11.78	-1014.37	-13008	-0.000038	0.0003743	0.0035	2.28	11861.29	14020.09	14020.09	13.82	No	Si
SLU 35	10.98	-939.89	-15139	-0.000043	0.0003743	0.0035	2.28	13238.84	15714.24	15714.24	16.72	No	Si
SLU 35	11.78	-1032.19	-13319	-0.0000389	0.0003743	0.0035	2.28	12072.56	14277.99	14277.99	13.83	No	Si
SLU 36	10.98	-950.94	-15031	-0.0000428	0.0003743	0.0035	2.28	13172.54	15629.15	15629.15	16.44	No	Si
SLU 36	11.78	-1026.4	-13223	-0.0000386	0.0003743	0.0035	2.28	12007.37	14197.76	14197.76	13.83	No	Si
SLU 83	10.98	-1061.63	-17327	-0.0000496	0.0003743	0.0035	2.28	14487.41	17344.06	17344.06	16.34	No	Si
SLU 83	11.78	-1123.55	-15079	-0.0000441	0.0003743	0.0035	2.28	13202.14	15667.04	15667.04	13.94	No	Si
SLU 77	10.98	-1107.47	-17793	-0.0000512	0.0003743	0.0035	2.28	14731.31	17682.14	17682.14	15.97	No	Si
SLU 77	11.78	-1161.52	-15519	-0.0000455	0.0003743	0.0035	2.28	13467.82	16011.23	16011.23	13.78	No	Si
SLU 38	10.98	-926.34	-14698	-0.0000418	0.0003743	0.0035	2.28	12966.53	15369.48	15369.48	16.59	No	Si
SLU 38	11.78	-1008.59	-12911	-0.0000377	0.0003743	0.0035	2.28	11795.04	13940.47	13940.47	13.82	No	Si
SLU 84	10.98	-1072.68	-17219	-0.0000494	0.0003743	0.0035	2.28	14429.44	17263.49	17263.49	16.09	No	Si
SLU 84	11.78	-1117.76	-14982	-0.0000438	0.0003743	0.0035	2.28	13142.91	15591.38	15591.38	13.95	No	Si
SLU 78	10.98	-1118.53	-17684	-0.000051	0.0003743	0.0035	2.28	14675.11	17607.53	17607.53	15.74	No	Si
SLU 78	11.78	-1155.73	-15423	-0.0000452	0.0003743	0.0035	2.28	13410.08	15936.34	15936.34	13.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	10.98	372.32	-9374	-0.0000244	0.0005615	0.0035	2.28		10192.38	10192.38	27.38		Si
SLV 1	11.78	-3507.14	-9050	-0.0000432	0.0005615	0.0035	2.28		10899.95	10899.95	3.11		Si
SLV 6	10.98	-393.56	-5459	-0.0000151	0.0005615	0.0035	2.28		7261.93	7261.93	18.45		Si
SLV 6	11.78	-1504.46	-4917	-0.0000207	0.0005615	0.0035	2.28		6699.86	6699.86	4.45		Si
SLV 15	10.98	-1939.54	-13636	-0.0000447	0.0005615	0.0035	2.28		15226.8	15226.8	7.85		Si
SLV 15	11.78	2604.8	-10486	-0.0000411	0.0005615	0.0035	2.28		11228.12	11228.12	4.31		Si
SLV 5	10.98	-461.36	-5418	-0.0000154	0.0005615	0.0035	2.28		7219.19	7219.19	15.65		Si
SLV 5	11.78	-1236.35	-4782	-0.0000187	0.0005615	0.0035	2.28		6560.98	6560.98	5.31		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	10.98	477.54	-9438	-0.0000252	0.0005615	0.0035	2.28		10254.35	10254.35	21.47		Si
SLV 2	11.78	-3923.18	-9259	-0.0000466	0.0005615	0.0035	2.28		11103.52	11103.52	2.83		Si
SLV 3	10.98	400.83	-12974	-0.0000333	0.0005615	0.0035	2.28		13310.73	13310.73	33.21		Si
SLV 3	11.78	-3642.69	-12220	-0.000052	0.0005615	0.0035	2.28		13916.55	13916.55	3.82		Si
SLV 13	10.98	-1968.05	-10037	-0.000036	0.0005615	0.0035	2.28		11849.56	11849.56	6.02		Si
SLV 13	11.78	2740.35	-7316	-0.0000341	0.0005615	0.0035	2.28		8142.97	8142.97	2.97		Si
SLV 14	10.98	-1862.83	-10101	-0.0000355	0.0005615	0.0035	2.28		11911.22	11911.22	6.39		Si
SLV 14	11.78	2324.31	-7525	-0.000032	0.0005615	0.0035	2.28		8354.43	8354.43	3.59		Si
SLV 16	10.98	-1834.32	-13700	-0.0000442	0.0005615	0.0035	2.28		15284.22	15284.22	8.33		Si
SLV 16	11.78	2188.76	-10695	-0.000039	0.0005615	0.0035	2.28		11402.35	11402.35	5.21		Si
SLV 4	10.98	506.05	-13038	-0.0000341	0.0005615	0.0035	2.28		13364.76	13364.76	26.41		Si
SLV 4	11.78	-4058.73	-12429	-0.0000552	0.0005615	0.0035	2.28		14109.76	14109.76	3.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	10.98	-1080.6	-17055	-14202	-1415	2.28	2.28	-22245	9910	6327	40441	19117	5814	24931	No	17.62	Si
SLU 75	11.78	-1075.33	-14811	-12334	-916	2.28	2.28	-19319	9520	6078	40441	19117	5814	24931	No	27.21	Si
SLU 64	10.98	-968.08	-15039	-12524	-1478	2.28	2.28	-19617	9560	6103	40441	19117	5814	24931	No	16.87	Si
SLU 64	11.78	-842.32	-12860	-10708	-968	2.28	2.28	-16774	9181	5861	40441	19117	5814	24931	No	25.74	Si
SLU 68	10.98	-1024.44	-15488	-12897	-1456	2.28	2.28	-20203	9638	6153	40441	19117	5814	24931	No	17.13	Si
SLU 68	11.78	-913.08	-13310	-11083	-963	2.28	2.28	-17361	9259	5911	40441	19117	5814	24931	No	25.9	Si
SLU 70	10.98	-1079.6	-16524	-13759	-1467	2.28	2.28	-21553	9818	6268	40441	19117	5814	24931	No	16.99	Si
SLU 70	11.78	-1015.15	-14297	-11905	-953	2.28	2.28	-18649	9431	6021	40441	19117	5814	24931	No	26.17	Si
SLU 71	10.98	-1043.95	-16299	-13573	-1424	2.28	2.28	-21260	9779	6243	40441	19117	5814	24931	No	17.51	Si
SLU 71	11.78	-1003.12	-14082	-11726	-912	2.28	2.28	-18368	9394	5997	40441	19117	5814	24931	No	27.35	Si
SLU 69	10.98	-1068.54	-16632	-13850	-1465	2.28	2.28	-21694	9837	6280	40441	19117	5814	24931	No	17.02	Si
SLU 69	11.78	-1020.94	-14394	-11986	-939	2.28	2.28	-18775	9448	6031	40441	19117	5814	24931	No	26.55	Si
SLU 67	10.98	-1041.66	-15894	-13235	-1494	2.28	2.28	-20731	9709	6198	40441	19117	5814	24931	No	16.68	Si
SLU 67	11.78	-934.75	-13686	-11396	-981	2.28	2.28	-17851	9325	5953	40441	19117	5814	24931	No	25.41	Si
SLU 65	10.98	-986.51	-14859	-12373	-1483	2.28	2.28	-19381	9529	6083	40441	19117	5814	24931	No	16.81	Si
SLU 65	11.78	-832.67	-12699	-10574	-991	2.28	2.28	-16564	9153	5843	40441	19117	5814	24931	No	25.16	Si
SLU 66	10.98	-1030.61	-16002	-13325	-1492	2.28	2.28	-20873	9727	6210	40441	19117	5814	24931	No	16.72	Si
SLU 66	11.78	-940.53	-13782	-11477	-968	2.28	2.28	-17977	9341	5964	40441	19117	5814	24931	No	25.77	Si
SLU 72	10.98	-1055	-16191	-13482	-1427	2.28	2.28	-21118	9760	6231	40441	19117	5814	24931	No	17.47	Si
SLU 72	11.78	-997.34	-13986	-11646	-925	2.28	2.28	-18242	9377	5986	40441	19117	5814	24931	No	26.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	10.98	-1248.53	-12459	-10375	-4457	2.28	2.28	-16251	13667	8725	40441	28675	5814	34489		7.74	Si
SLD 15	11.78	736.3	-10156	-8457	-3305	2.28	2.28	-13247	13066	8341	40441	28675	5814	34489		10.44	Si
SLV 14	10.98	-1862.83	-10101	-8411	-7626	2.28	2.28	-13175	13052	8332	40441	28675	5814	34489		4.52	Si
SLV 14	11.78	2324.31	-7525	-6266	-6029	2.28	2.28	-9815	12380	7903	40441	28675	5814	34489		5.72	Si
SLV 15	10.98	-1939.54	-13636	-11355	-8948	2.28	2.28	-17787	13974	8921	40441	28675	5814	34489		3.85	Si
SLV 15	11.78	2604.8	-10486	-8732	-6772	2.28	2.28	-13678	13152	8396	40441	28675	5814	34489		5.09	Si
SLV 13	10.98	-1968.05	-10037	-8358	-8502	2.28	2.28	-13092	13035	8322	40441	28675	5814	34489		4.06	Si
SLV 13	11.78	2740.35	-7316	-6092	-6749	2.28	2.28	-9543	12325	7869	40441	28675	5814	34489		5.11	Si
SLV 11	10.98	-1068.44	-17615	-14668	-4276	2.28	2.28	-22977	15012	9584	40441	28675	5814	34489		8.07	Si
SLV 11	11.78	186.07	-14828	-12348	-2689	2.28	2.28	-19342	14285	9120	40441	28675	5814	34489		12.83	Si
SLV 16	10.98	-1834.32	-13700	-11408	-8072	2.28	2.28	-17870	13991	8932	40441	28675	5814	34489		4.27	Si
SLV 16	11.78	2188.76	-10695	-8906	-6052	2.28	2.28	-13950	13207	8431	40441	28675	5814	34489		5.7	Si
SLV 2	10.98	477.54	-9438	-7859	6764	2.28	2.28	-12311	12879	8222	40441	28675	5814	34489		5.1	Si
SLV 2	11.78	-3923.18	-9259	-7710	5351	2.28	2.1489	-12889	12994	7819	40441	28675	5814	34489		6.45	Si
SLV 4	10.98	506.05	-13038	-10857	6319	2.28	2.28	-17006	13818	8821	40441	28675	5814	34489		5.46	Si
SLV 4	11.78	-4058.73	-12429	-10350	5328	2.28	2.28	-16212	13659	8720	40441	28675	5814	34489		6.47	Si
SLV 3	10.98	400.83	-12974	-10804	5442	2.28	2.28	-16923	13801	8811	40441	28675	5814	34489		6.34	Si
SLV 3	11.78	-3642.69	-12220	-10176	4608	2.28	2.28	-15939	13605	8685	40441	28675	5814	34489		7.49	Si
SLV 1	10.98	372.32	-9374	-7806	5888	2.28	2.28	-12228	12862	8211	40441	28675	5814	34489		5.86	Si
SLV 1	11.78	-3507.14	-9050	-7536	4631	2.28	2.2574	-11805	12778	8077	40441	28675	5814	34489		7.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	7487	-4780	280.39	636.38	2.27	Si
SLV 10	179667	0.46	7683	-4905	280.39	652.16	2.33	Si
SLV 5	179667	0.46	8433	-5384	280.39	712.13	2.54	Si
SLV 6	179667	0.46	8629	-5509	280.39	727.69	2.6	Si
SLV 13	179667	0.46	12445	-7945	280.39	1021.68	3.64	Si
SLV 14	179667	0.46	12750	-8139	280.39	1044.38	3.72	Si
SLV 1	179667	0.46	15599	-9958	280.39	1251.78	4.46	Si
SLV 2	179667	0.46	15903	-10153	280.39	1273.36	4.54	Si
SLV 15	179667	0.46	17688	-11292	280.39	1397.76	4.99	Si
SLV 16	179667	0.46	17992	-11486	280.39	1418.59	5.06	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-11579	-17174	580	0.945	1497.9	0.94	14.59666	14.44577	Si
SLV 7	-11497	-17023	580	0.95	1489.6	0.94	14.68613	14.44577	Si
SLV 12	-11399	-15550	615	0.954	1479.6	0.94	14.75431	14.44577	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-11317	-15399	615	0.96	1471.3	0.94	14.84603	14.44577	Si
SLV 6	-4097	-6425	-619	2.045	747.3	0.9	33.00175	14.44577	Si
SLV 5	-4015	-6275	-619	2.072	739.2	0.9	33.46561	14.44577	Si
SLV 10	-3917	-4801	-585	2.111	729.7	0.899	34.1279	14.44577	Si
SLV 9	-3834	-4650	-585	2.14	721.6	0.898	34.62183	14.44577	Si
SLV 4	-9193	-15349	120	1.178	1256.6	0.931	18.38684	6.41634	Si
SLV 3	-9066	-15114	120	1.191	1243.7	0.931	18.60285	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.785	SLU 77	Si
V_SLU	16.683	SLU 67	Si
PF_SLV	2.83	SLV 2	Si
V_SLV	3.854	SLV 15	Si
PFFP_SLV	2.27	SLV 9	Si
R_SLV	1.01	SLV 8	Si

Maschio 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	10.98	130.47	-4389	-0.00006	0.0003743	0.0035	0.55	869.07	962.8	962.8	7.38	No	Si
SLU 64	11.78	172.27	-3933	-0.0000597	0.0003743	0.0035	0.55	810.2	887.82	887.82	5.15	No	Si
SLU 25	10.98	115.32	-3849	-0.0000522	0.0003743	0.0035	0.55	798.65	874.37	874.37	7.58	No	Si
SLU 25	11.78	154.44	-3476	-0.0000525	0.0003743	0.0035	0.55	743.93	814.63	814.63	5.27	No	Si
SLU 69	10.98	152.63	-4871	-0.0000682	0.0003743	0.0035	0.55	923.32	1044.11	1044.11	6.84	No	Si
SLU 69	11.78	184.93	-4357	-0.0000661	0.0003743	0.0035	0.55	865.21	957.53	957.53	5.18	No	Si
SLU 23	10.98	101.3	-3550	-0.0000472	0.0003743	0.0035	0.55	755.23	826.81	826.81	8.16	No	Si
SLU 23	11.78	145.9	-3217	-0.0000487	0.0003743	0.0035	0.55	703.17	760.6	760.6	5.21	No	Si
SLU 66	10.98	142.09	-4667	-0.0000646	0.0003743	0.0035	0.55	901.38	1009.4	1009.4	7.1	No	Si
SLU 66	11.78	181.85	-4181	-0.0000637	0.0003743	0.0035	0.55	843.16	928.36	928.36	5.11	No	Si
SLU 68	10.98	135.02	-4541	-0.0000623	0.0003743	0.0035	0.55	887	988.06	988.06	7.32	No	Si
SLU 68	11.78	177.94	-4083	-0.0000621	0.0003743	0.0035	0.55	830.42	912.28	912.28	5.13	No	Si
SLU 65	10.98	124.48	-4337	-0.0000587	0.0003743	0.0035	0.55	862.7	954.12	954.12	7.67	No	Si
SLU 65	11.78	174.85	-3907	-0.0000597	0.0003743	0.0035	0.55	806.67	883.67	883.67	5.05	No	Si
SLU 67	10.98	138.5	-4636	-0.0000638	0.0003743	0.0035	0.55	897.87	1004.1	1004.1	7.25	No	Si
SLU 67	11.78	183.39	-4166	-0.0000637	0.0003743	0.0035	0.55	841.18	925.82	925.82	5.05	No	Si
SLU 72	10.98	147.96	-4765	-0.0000664	0.0003743	0.0035	0.55	912.11	1026.02	1026.02	6.93	No	Si
SLU 72	11.78	180	-4270	-0.0000645	0.0003743	0.0035	0.55	854.36	942.96	942.96	5.24	No	Si
SLU 70	10.98	149.04	-4840	-0.0000674	0.0003743	0.0035	0.55	920.04	1038.74	1038.74	6.97	No	Si
SLU 70	11.78	186.48	-4342	-0.0000661	0.0003743	0.0035	0.55	863.33	954.97	954.97	5.12	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	10.98	-171.24	-1174	-0.0000324	0.0005615	0.0035	0.55		375.95	375.95	2.2		Si
SLV 9	11.78	265	-1806	-0.0000509	0.0005615	0.0035	0.55		484.42	484.42	1.83		Si
SLD 16	10.98	-115.02	-2537	-0.0000372	0.0005615	0.0035	0.55		706.29	706.29	6.14		Si
SLD 16	11.78	362.52	-2738	-0.0000705	0.0005615	0.0035	0.55		694.81	694.81	1.92		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	10.98	679.03	-5742	-0.0001423	0.0005615	0.0035	0.55		1292.98	1292.98	1.9		Si
SLV 2	11.78	-479.71	-3918	-0.0000961	0.0005615	0.0035	0.55		1010.01	1010.01	2.11		Si
SLD 15	10.98	-141.66	-2394	-0.0000386	0.0005615	0.0035	0.55		673.7	673.7	4.76		Si
SLD 15	11.78	387.81	-2668	-0.0000758	0.0005615	0.0035	0.55		680.65	680.65	1.76		Si
SLD 13	10.98	-164.02	-2040	-0.0000374	0.0005615	0.0035	0.55		589.03	589.03	3.59		Si
SLD 13	11.78	374.37	-2440	-0.0000738	0.0005615	0.0035	0.55		633.77	633.77	1.69		Si
SLV 15	10.98	-470.92	-1045	-0.0021955	0.0005615	0.0035	0.44		343.68	343.68	0.73		No
SLV 15	11.78	734.98	-2162	-0.0161001	0.0005615	0.0035	0.44		570.21	570.21	0.78		No
SLV 13	10.98	-521.63	-242	-0.0061379	0.0005615	0.0035	0.44		133.86	133.86	0.26		No
SLV 13	11.78	704.72	-1644	-0.0238945	0.0005615	0.0035	0.44		444.52	444.52	0.63		No
SLD 14	10.98	-137.37	-2183	-0.000036	0.0005615	0.0035	0.55		623.18	623.18	4.54		Si
SLD 14	11.78	349.08	-2510	-0.0000676	0.0005615	0.0035	0.55		648.41	648.41	1.86		Si
SLV 16	10.98	-408.87	-1377	-0.0006445	0.0005615	0.0035	0.44		426.67	426.67	1.04		Si
SLV 16	11.78	676.09	-2326	-0.0083816	0.0005615	0.0035	0.44		609.04	609.04	0.9		No
SLV 14	10.98	-459.57	-574	-0.0036324	0.0005615	0.0035	0.44		221.69	221.69	0.48		No
SLV 14	11.78	645.83	-1807	-0.0159054	0.0005615	0.0035	0.44		484.66	484.66	0.75		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	10.98	176.34	-5284	-4400	376	0.55	0.55	-28573	10754	1656	40441	4611	1402	6014	No	16	Si
SLU 77	11.78	184.64	-4748	-3953	-208	0.55	0.55	-25672	10367	1597	40441	4611	1402	6014	No	28.94	Si
SLU 58	10.98	161.24	-4752	-3957	363	0.55	0.55	-25695	10370	1597	40441	4611	1402	6014	No	16.55	Si
SLU 58	11.78	156.32	-4235	-3527	-195	0.55	0.55	-22900	9998	1540	40441	4611	1402	6014	No	30.85	Si
SLU 84	10.98	171.28	-5152	-4290	382	0.55	0.55	-27857	10659	1641	40441	4611	1402	6014	No	15.75	Si
SLU 84	11.78	176.5	-4651	-3873	-219	0.55	0.55	-25150	10298	1586	40441	4611	1402	6014	No	27.43	Si
SLU 78	10.98	172.74	-5253	-4374	367	0.55	0.55	-28404	10732	1653	40441	4611	1402	6014	No	16.41	Si
SLU 78	11.78	186.19	-4732	-3940	-213	0.55	0.55	-25589	10356	1595	40441	4611	1402	6014	No	28.2	Si
SLU 63	10.98	157.26	-4694	-3909	364	0.55	0.55	-25381	10329	1591	40441	4611	1402	6014	No	16.52	Si
SLU 63	11.78	154.66	-4211	-3506	-208	0.55	0.55	-22769	9980	1537	40441	4611	1402	6014	No	28.86	Si
SLU 83	10.98	174.88	-5183	-4316	391	0.55	0.55	-28026	10681	1645	40441	4611	1402	6014	No	15.38	Si
SLU 83	11.78	174.95	-4666	-3886	-214	0.55	0.55	-25233	10309	1588	40441	4611	1402	6014	No	28.13	Si
SLU 79	10.98	175.26	-5210	-4338	381	0.55	0.55	-28170	10700	1648	40441	4611	1402	6014	No	15.78	Si
SLU 79	11.78	178.16	-4675	-3893	-206	0.55	0.55	-25281	10315	1588	40441	4611	1402	6014	No	29.22	Si
SLU 81	10.98	164.33	-4979	-4146	366	0.55	0.55	-26924	10534	1622	40441	4611	1402	6014	No	16.43	Si
SLU 81	11.78	171.86	-4490	-3739	-215	0.55	0.55	-24281	10182	1568	40441	4611	1402	6014	No	27.95	Si
SLU 62	10.98	160.86	-4725	-3935	373	0.55	0.55	-25550	10351	1594	40441	4611	1402	6014	No	16.11	Si
SLU 62	11.78	153.11	-4226	-3519	-203	0.55	0.55	-22852	9991	1539	40441	4611	1402	6014	No	29.64	Si
SLU 80	10.98	171.66	-5178	-4312	372	0.55	0.55	-28001	10678	1644	40441	4611	1402	6014	No	16.17	Si
SLU 80	11.78	179.71	-4660	-3880	-211	0.55	0.55	-25198	10304	1587	40441	4611	1402	6014	No	28.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	10.98	-459.57	-574	-478	-1773	0.44	0	0	0	0	40441	5534	1122	6655		3.75	Si
SLV 14	11.78	645.83	-1807	-1505	-541	0.44	0	0	0	0	40441	5534	1122	6655		12.3	Si
SLV 16	10.98	-408.87	-1377	-1146	-1756	0.44	0	0	0	0	40441	5534	1122	6655		3.79	Si
SLV 16	11.78	676.09	-2326	-1937	-378	0.44	0	0	0	0	40441	5534	1122	6655		17.59	Si
SLV 13	10.98	-521.63	-242	-202	-1997	0.44	0	0	0	0	40441	5534	1122	6655		3.33	Si
SLV 13	11.78	704.72	-1644	-1369	-610	0.44	0	0	0	0	40441	5534	1122	6655		10.91	Si
SLD 4	10.98	372.13	-4747	-3953	1156	0.55	0.55	-25669	15550	2395	40441	6917	1402	8319		7.2	Si
SLD 4	11.78	-119.09	-3640	-3031	47	0.55	0.55	-19685	14354	2210	40441	6917	1402	8319		175.96	Si
SLV 1	10.98	616.98	-5411	-4505	2179	0.55	0.4829	-29257	16250	2197	40441	6917	1402	8319		3.82	Si
SLV 1	11.78	-420.82	-3754	-3126	77	0.55	0.4887	-20300	14477	1981	40441	6917	1402	8319		107.56	Si
SLD 2	10.98	349.77	-4393	-3658	1149	0.55	0.55	-23755	15168	2336	40441	6917	1402	8319		7.24	Si
SLD 2	11.78	-132.53	-3412	-2841	-24	0.55	0.55	-18450	14107	2172	40441	6917	1402	8319		339.57	Si
SLV 3	10.98	667.68	-6213	-5174	2196	0.55	0.5026	-33597	16250	2287	40441	6917	1402	8319		3.79	Si
SLV 3	11.78	-390.55	-4273	-3558	240	0.55	0.55	-23105	15038	2316	40441	6917	1402	8319		34.65	Si
SLV 2	10.98	679.03	-5742	-4782	2402	0.55	0.4702	-31051	16250	2139	40441	6917	1402	8319		3.46	Si
SLV 2	11.78	-479.71	-3918	-3262	146	0.55	0.4576	-25800	15577	1996	40441	6917	1402	8319		56.91	Si
SLV 15	10.98	-470.92	-1045	-870	-1979	0.44	0	0	0	0	40441	5534	1122	6655		3.36	Si
SLV 15	11.78	734.98	-2162	-1801	-447	0.44	0	0	0	0	40441	5534	1122	6655		14.88	Si
SLV 4	10.98	729.74	-6545	-5450	2419	0.55	0.4905	-35390	16250	2232	40441	6917	1402	8319		3.44	Si
SLV 4	11.78	-449.45	-4436	-3694	309	0.55	0.521	-23989	15215	2220	40441	6917	1402	8319		26.93	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	6013	-926	67.63	124.53	1.84	Si
SLV 13	179667	0.46	6042	-930	67.63	125.11	1.85	Si
SLV 10	179667	0.46	6702	-1032	67.63	138.15	2.04	Si
SLV 14	179667	0.46	7112	-1095	67.63	146.18	2.16	Si
SLV 5	179667	0.46	10577	-1629	67.63	212.25	3.14	Si
SLV 15	179667	0.46	10795	-1662	67.63	216.28	3.2	Si
SLV 6	179667	0.46	11266	-1735	67.63	224.98	3.33	Si
SLV 16	179667	0.46	11864	-1827	67.63	235.92	3.49	Si
SLV 1	179667	0.46	21258	-3274	67.63	394.5	5.83	Si
SLV 11	179667	0.46	21856	-3366	67.63	403.76	5.97	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2658	-3937	-10	1.025	347.6	0.939	15.87271	14.44577	Si
SLV 7	-2570	-3901	-9	1.053	338.8	0.937	16.3316	14.44577	Si
SLV 12	-2125	-3814	-10	1.226	293.7	0.929	19.16539	14.44577	Si
SLV 11	-2038	-3777	-10	1.267	285	0.928	19.84328	14.44577	Si
SLV 6	-1162	-1015	2	1.923	197.3	0.906	30.8607	14.44577	Si
SLV 5	-1074	-979	2	2.028	188.7	0.903	32.64052	14.44577	Si
SLV 4	-2780	-3069	-5	0.99	360	0.94	15.29725	6.41634	Si
SLV 3	-2645	-3013	-4	1.031	346.3	0.938	15.96612	6.41634	Si
SLV 2	-2331	-2193	-1	1.142	314.6	0.933	17.78812	6.41634	Si
SLV 1	-2196	-2136	-1	1.198	300.9	0.931	18.704	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.048	SLU 67	Si
V_SLU	15.381	SLU 83	Si
PF_SLV	0.257	SLV 13	No
V_SLV	3.333	SLV 13	Si
PFFP_SLV	1.841	SLV 9	Si
R_SLV	1.099	SLV 8	Si

Maschio 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L6	L7	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	8.98	-2369.84	-28153	-0.0000523	0.0004492	0.0035	4.82	47577.97	71342.22	71342.22	30.1	No	Si
SLU 81	12.5	-419.21	-14444	-0.0000245	0.0004492	0.0035	4.82	29474.07	45226.03	45226.03	107.88	No	Si
SLU 64	8.98	-2181.43	-25031	-0.0000464	0.0004492	0.0035	4.82	44300.5	65723.51	65723.51	30.13	No	Si
SLU 64	12.5	-384.33	-13057	-0.0000221	0.0004492	0.0035	4.82	27107.42	42337.35	42337.35	110.16	No	Si
SLU 74	8.98	-2374.54	-28292	-0.0000526	0.0004492	0.0035	4.82	47711.84	71584.42	71584.42	30.15	No	Si
SLU 74	12.5	-409.66	-14942	-0.0000253	0.0004492	0.0035	4.82	30300.56	46264.16	46264.16	112.93	No	Si
SLU 60	8.98	-2189.47	-25579	-0.0000474	0.0004492	0.0035	4.82	44911.98	66743.01	66743.01	30.48	No	Si
SLU 60	12.5	-474.02	-13059	-0.0000223	0.0004492	0.0035	4.82	27110.09	42340.54	42340.54	89.32	No	Si
SLU 53	8.98	-2194.17	-25718	-0.0000476	0.0004492	0.0035	4.82	45064.08	67000.66	67000.66	30.54	No	Si
SLU 53	12.5	-464.47	-13557	-0.0000231	0.0004492	0.0035	4.82	27971.89	43378.66	43378.66	93.39	No	Si
SLU 66	8.98	-2242.65	-26106	-0.0000484	0.0004492	0.0035	4.82	45485.44	67723.29	67723.29	30.2	No	Si
SLU 66	12.5	-385.25	-13972	-0.0000237	0.0004492	0.0035	4.82	28678.98	44242.08	44242.08	114.84	No	Si
SLU 82	8.98	-2307.48	-28188	-0.0000522	0.0004492	0.0035	4.82	47611.34	71402.43	71402.43	30.94	No	Si
SLU 82	12.5	-391.63	-14458	-0.0000245	0.0004492	0.0035	4.82	29497.81	45255.63	45255.63	115.56	No	Si
SLU 45	8.98	-2062.28	-23532	-0.0000435	0.0004492	0.0035	4.82	42549.96	62935.68	62935.68	30.52	No	Si
SLU 45	12.5	-440.06	-12586	-0.0000215	0.0004492	0.0035	4.82	26281.53	41356.58	41356.58	93.98	No	Si
SLU 43	8.98	-2001.06	-22457	-0.0000415	0.0004492	0.0035	4.82	41223.47	60935.9	60935.9	30.45	No	Si
SLU 43	12.5	-439.14	-11672	-0.0000199	0.0004492	0.0035	4.82	24645.18	39451.85	39451.85	89.84	No	Si
SLU 83	8.98	-2343.77	-28829	-0.0000535	0.0004492	0.0035	4.82	48222.07	72524.4	72524.4	30.94	No	Si
SLU 83	12.5	-334.45	-15013	-0.0000253	0.0004492	0.0035	4.82	30416.96	46411.66	46411.66	138.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	8.98	-8783.94	-15213	-0.0000429	0.0006738	0.0035	4.82		47332.33	47332.33	5.39		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.5	-3668.88	-7659	-0.0000198	0.0006738	0.0035	4.82		31053.84	31053.84	8.46		Si
SLV 16	8.98	-2393.74	-14549	-0.0000286	0.0006738	0.0035	4.82		45916.59	45916.59	19.18		Si
SLV 16	12.5	-3568.5	-6539	-0.0000178	0.0006738	0.0035	4.82		28557.39	28557.39	8		Si
SLV 6	8.98	5431.81	-23414	-0.0000498	0.0006738	0.0035	4.82		53390.23	53390.23	9.83		Si
SLV 6	12.5	3039.56	-12374	-0.0000263	0.0006738	0.0035	4.82		30409.58	30409.58	10		Si
SLV 12	8.98	-8932.36	-15237	-0.0000432	0.0006738	0.0035	4.82		47383.5	47383.5	5.3		Si
SLV 12	12.5	-4018.27	-7524	-0.0000203	0.0006738	0.0035	4.82		30751.49	30751.49	7.65		Si
SLV 8	8.98	-9955.72	-17582	-0.0000494	0.0006738	0.0035	4.82		52257.72	52257.72	5.25		Si
SLV 8	12.5	-2749.64	-9268	-0.0000206	0.0006738	0.0035	4.82		34600.45	34600.45	12.58		Si
SLV 5	8.98	5580.23	-23390	-0.0000501	0.0006738	0.0035	4.82		53342.32	53342.32	9.56		Si
SLV 5	12.5	3388.95	-12510	-0.0000272	0.0006738	0.0035	4.82		30703.89	30703.89	9.06		Si
SLV 10	8.98	6455.17	-21069	-0.000048	0.0006738	0.0035	4.82		48669.44	48669.44	7.54		Si
SLV 10	12.5	1770.93	-10631	-0.0000208	0.0006738	0.0035	4.82		26605.8	26605.8	15.02		Si
SLV 15	8.98	-2163.43	-14512	-0.000028	0.0006738	0.0035	4.82		45837.18	45837.18	21.19		Si
SLV 15	12.5	-3026.34	-6750	-0.000017	0.0006738	0.0035	4.82		29026.56	29026.56	9.59		Si
SLV 7	8.98	-9807.3	-17558	-0.000049	0.0006738	0.0035	4.82		52208.98	52208.98	5.32		Si
SLV 7	12.5	-2400.25	-9403	-0.0000201	0.0006738	0.0035	4.82		34898.86	34898.86	14.54		Si
SLV 9	8.98	6603.59	-21045	-0.0000483	0.0006738	0.0035	4.82		48620.69	48620.69	7.36		Si
SLV 9	12.5	2120.32	-10766	-0.0000218	0.0006738	0.0035	4.82		26904.78	26904.78	12.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	8.98	-1948.92	-23809	-13980	-1395	4.82	4.82	-18127	10750	8291	115546	27715	24582	52297	No	37.5	Si
SLU 50	12.5	-269.62	-12810	-7522	-973	4.82	4.82	-9753	9634	7430	115546	27715	24582	52297	No	53.77	Si
SLU 45	8.98	-2062.28	-23532	-13817	-1241	4.82	4.82	-17916	10722	8269	115546	27715	24582	52297	No	42.15	Si
SLU 45	12.5	-440.06	-12586	-7390	-832	4.82	4.82	-9583	9611	7412	115546	27715	24582	52297	No	62.89	Si
SLU 49	8.98	-1973.84	-24243	-14234	-1292	4.82	4.82	-18457	10794	8325	115546	27715	24582	52297	No	40.48	Si
SLU 49	12.5	-327.72	-13170	-7733	-860	4.82	4.82	-10027	9670	7458	115546	27715	24582	52297	No	60.8	Si
SLU 43	8.98	-2001.06	-22457	-13186	-1194	4.82	4.82	-17098	10613	8185	115546	27715	24582	52297	No	43.79	Si
SLU 43	12.5	-439.14	-11672	-6853	-809	4.82	4.82	-8886	9518	7340	115546	27715	24582	52297	No	64.66	Si
SLU 46	8.98	-1999.92	-23567	-13837	-1192	4.82	4.82	-17943	10726	8272	115546	27715	24582	52297	No	43.88	Si
SLU 46	12.5	-412.48	-12601	-7398	-778	4.82	4.82	-9593	9612	7413	115546	27715	24582	52297	No	67.21	Si
SLU 71	8.98	-2129.29	-26383	-15491	-1219	4.82	4.82	-20087	10833	8355	115546	27715	24582	52297	No	42.91	Si
SLU 71	12.5	-214.82	-14195	-8335	-753	4.82	4.82	-10808	9774	7538	115546	27715	24582	52297	No	69.48	Si
SLU 51	8.98	-1886.56	-23844	-14000	-1346	4.82	4.82	-18154	10754	8293	115546	27715	24582	52297	No	38.86	Si
SLU 51	12.5	-242.05	-12825	-7530	-919	4.82	4.82	-9764	9635	7431	115546	27715	24582	52297	No	56.89	Si
SLU 72	8.98	-2066.93	-26418	-15511	-1170	4.82	4.82	-20113	10833	8355	115546	27715	24582	52297	No	44.71	Si
SLU 72	12.5	-187.24	-14210	-8343	-699	4.82	4.82	-10819	9776	7539	115546	27715	24582	52297	No	74.78	Si
SLU 48	8.98	-2036.21	-24208	-14214	-1341	4.82	4.82	-18431	10791	8322	115546	27715	24582	52297	No	39	Si
SLU 48	12.5	-355.3	-13156	-7724	-913	4.82	4.82	-10016	9669	7457	115546	27715	24582	52297	No	57.25	Si
SLU 47	8.98	-1871.05	-23191	-13617	-1213	4.82	4.82	-17656	10688	8242	115546	27715	24582	52297	No	43.12	Si
SLU 47	12.5	-308.42	-12265	-7201	-802	4.82	4.82	-9338	9578	7387	115546	27715	24582	52297	No	65.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.98	6455.17	-21069	-12371	3614	4.82	4.82	-16041	15708	12114	115546	41572	24582	66154		18.31	Si
SLV 10	12.5	1770.93	-10631	-6242	7036	4.82	4.82	-8094	14119	10888	115546	41572	24582	66154		9.4	Si
SLV 6	8.98	5431.81	-23414	-13748	5401	4.82	4.82	-17826	16065	12390	115546	41572	24582	66154		12.25	Si
SLV 6	12.5	3039.56	-12374	-7266	8308	4.82	4.82	-9421	14384	11093	115546	41572	24582	66154		7.96	Si
SLV 9	8.98	6603.59	-21045	-12357	3699	4.82	4.82	-16023	15705	12111	115546	41572	24582	66154		17.88	Si
SLV 9	12.5	2120.32	-10766	-6321	7140	4.82	4.82	-8197	14139	10904	115546	41572	24582	66154		9.27	Si
SLV 7	8.98	-9807.3	-17558	-10309	-4970	4.82	4.82	-13368	15174	11702	115546	41572	24582	66154		13.31	Si
SLV 7	12.5	-2400.25	-9403	-5521	-7733	4.82	4.82	-7159	13932	10744	115546	41572	24582	66154		8.56	Si
SLV 5	8.98	5580.23	-23390	-13734	5486	4.82	4.82	-17808	16062	12387	115546	41572	24582	66154		12.06	Si
SLV 5	12.5	3388.95	-12510	-7345	8412	4.82	4.82	-9525	14405	11109	115546	41572	24582	66154		7.86	Si
SLV 16	8.98	-2393.74	-14549	-8543	-5291	4.82	4.82	-11077	14715	11349	115546	41572	24582	66154		12.5	Si
SLV 16	12.5	-3568.5	-6539	-3839	-4971	4.82	4.82	-4979	13496	10408	115546	41572	24582	66154		13.31	Si
SLV 11	8.98	-8783.94	-15213	-8932	-6758	4.82	4.82	-11582	14816	11426	115546	41572	24582	66154		9.79	Si
SLV 11	12.5	-3668.88	-7659	-4497	-9005	4.82	4.82	-5831	13666	10539	115546	41572	24582	66154		7.35	Si
SLV 8	8.98	-9955.72	-17582	-10323	-5056	4.82	4.82	-13386	15177	11705	115546	41572	24582	66154		13.09	Si
SLV 8	12.5	-2749.64	-9268	-5441	-7836	4.82	4.82	-7056	13911	10728	115546	41572	24582	66154		8.44	Si
SLV 12	8.98	-8932.36	-15237	-8946	-6843	4.82	4.82	-11601	14820	11429	115546	41572	24582	66154		9.67	Si
SLV 12	12.5	-4018.27	-7524	-4418	-9109	4.82	4.82	-5728	13646	10524	115546	41572	24582	66154		7.26	Si
SLV 15	8.98	-2163.43	-14512	-8521	-5159	4.82	4.82	-11049	14710	11344	115546	41572	24582	66154		12.82	Si
SLV 15	12.5	-3026.34	-6750	-3963	-4810	4.82	4.82	-5139	13528	10433	115546	41572	24582	66154		13.75	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-11818	0.46	358.4	866.38	1485.71	1176.05	3.28	Si
SLV 15	-11926	0.46	358.4	873.56	1495.93	1184.74	3.31	Si
SLV 12	-12198	0.46	358.4	891.62	1521.73	1206.68	3.37	Si
SLV 11	-12267	0.46	358.4	896.22	1528.31	1212.27	3.38	Si
SLV 14	-13077	0.46	358.4	949.36	1604.95	1277.16	3.56	Si
SLV 13	-13185	0.46	358.4	956.38	1615.09	1285.74	3.59	Si
SLV 8	-13766	0.46	358.4	994.05	1669.62	1331.84	3.72	Si
SLV 7	-13836	0.46	358.4	998.52	1676.14	1337.33	3.73	Si
SLV 10	-16395	0.46	358.4	1159.45	1914.61	1537.03	4.29	Si
SLV 9	-16464	0.46	358.4	1163.72	1921.02	1542.37	4.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12510	-23390	-212	1.823	1659.9	0.936	28.30206	19.08992	Si
SLV 6	-12374	-23414	-213	1.839	1646.2	0.936	28.57119	19.08992	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-10766	-21045	203	2.061	1483.7	0.93	32.21287	19.08992	Si
SLV 10	-10631	-21069	203	2.082	1470.1	0.929	32.56194	19.08992	Si
SLV 7	-9403	-17558	-200	2.296	1346.4	0.924	36.09851	19.08992	Si
SLV 8	-9268	-17582	-201	2.322	1332.8	0.924	36.5359	19.08992	Si
SLV 11	-7659	-15213	215	2.687	1171.5	0.916	42.62835	19.08992	Si
SLV 12	-7524	-15237	215	2.723	1157.9	0.915	43.23743	19.08992	Si
SLV 1	-13495	-24078	-693	1.681	1759.5	0.939	26.02277	9.9395	Si
SLV 2	-13284	-24115	-694	1.704	1738.2	0.938	26.38367	9.9395	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.104	SLU 81	Si
V_SLU	37.496	SLU 50	Si
PF_SLV	5.249	SLV 8	Si
V_SLV	7.263	SLV 12	Si
PFFP_SLV	3.281	SLV 16	Si
R_SLV	1.483	SLV 5	Si

Maschio 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L6	L7	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 24	9.88	139.36	-6311	-0.0000383	0.0003743	0.0035	1.03	2551.5	2784.42	2784.42	19.98	No	Si
SLU 24	11.68	431.22	-4790	-0.0000389	0.0003743	0.0035	1.03	2064.43	2172.13	2172.13	5.04	No	Si
SLU 25	9.88	132.32	-6292	-0.000038	0.0003743	0.0035	1.03	2546.02	2777.71	2777.71	20.99	No	Si
SLU 25	11.68	432.85	-4781	-0.0000389	0.0003743	0.0035	1.03	2061.21	2168.45	2168.45	5.01	No	Si
SLU 70	9.88	206.67	-7992	-0.0000503	0.0003743	0.0035	1.03	2995.69	3305.28	3305.28	15.99	No	Si
SLU 70	11.68	519.91	-5977	-0.0000486	0.0003743	0.0035	1.03	2451.65	2654.13	2654.13	5.1	No	Si
SLU 28	9.88	146.69	-6609	-0.0000402	0.0003743	0.0035	1.03	2637.39	2882.68	2882.68	19.65	No	Si
SLU 28	11.68	452.02	-5053	-0.0000411	0.0003743	0.0035	1.03	2154.52	2277.1	2277.1	5.04	No	Si
SLU 23	9.88	130.09	-5859	-0.0000354	0.0003743	0.0035	1.03	2415.27	2605.21	2605.21	20.03	No	Si
SLU 23	11.68	389.9	-4375	-0.0000353	0.0003743	0.0035	1.03	1917.26	2009.18	2009.18	5.15	No	Si
SLU 26	9.88	144.46	-6175	-0.0000377	0.0003743	0.0035	1.03	2511.46	2734.62	2734.62	18.93	No	Si
SLU 26	11.68	409.08	-4647	-0.0000374	0.0003743	0.0035	1.03	2014.45	2115.67	2115.67	5.17	No	Si
SLU 67	9.88	192.3	-7676	-0.0000479	0.0003743	0.0035	1.03	2919.68	3206.75	3206.75	16.68	No	Si
SLU 67	11.68	500.74	-5705	-0.0000464	0.0003743	0.0035	1.03	2367.17	2541.67	2541.67	5.08	No	Si
SLU 66	9.88	199.34	-7695	-0.0000483	0.0003743	0.0035	1.03	2924.26	3212.52	3212.52	16.12	No	Si
SLU 66	11.68	499.11	-5714	-0.0000464	0.0003743	0.0035	1.03	2370.09	2545.49	2545.49	5.1	No	Si
SLU 69	9.88	213.71	-8011	-0.0000506	0.0003743	0.0035	1.03	3000.06	3311.13	3311.13	15.49	No	Si
SLU 69	11.68	518.29	-5987	-0.0000486	0.0003743	0.0035	1.03	2454.48	2657.97	2657.97	5.13	No	Si
SLU 27	9.88	153.73	-6627	-0.0000406	0.0003743	0.0035	1.03	2642.67	2888.25	2888.25	18.79	No	Si
SLU 27	11.68	450.39	-5062	-0.0000411	0.0003743	0.0035	1.03	2157.66	2280.82	2280.82	5.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	9.88	-2278.85	-2245	-0.0047766	0.0005615	0.0035	0.824		1344.82	1344.82	0.59		No
SLV 14	11.68	1878.31	-4335	-0.0002196	0.0005615	0.0035	1.03		2127.54	2127.54	1.13		Si
SLV 16	9.88	-2474.39	-2947	-0.004476	0.0005615	0.0035	0.824		1673.02	1673.02	0.68		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	11.68	2203.98	-5208	-0.000239	0.0005615	0.0035	1.03		2464.65	2464.65	1.12		Si
SLV 3	9.88	2656.1	-8985	-0.0001617	0.0005615	0.0035	1.03		3960.03	3960.03	1.49		Si
SLV 3	11.68	-1232.1	-3786	-0.0000734	0.0005615	0.0035	0.824		2056.87	2056.87	1.67		Si
SLV 6	9.88	1405.4	-5480	-0.0000782	0.0005615	0.0035	1.03		2568.61	2568.61	1.83		Si
SLV 6	11.68	-814.6	-2360	-0.0000501	0.0005615	0.0035	0.824		1399.14	1399.14	1.72		Si
SLV 1	9.88	2851.64	-8282	-0.0001973	0.0005615	0.0035	1.03		3673.8	3673.8	1.29		Si
SLV 1	11.68	-1557.78	-2913	-0.0005894	0.0005615	0.0035	0.824		1657.21	1657.21	1.06		Si
SLV 4	9.88	2912.97	-9260	-0.0001861	0.0005615	0.0035	1.03		4067.85	4067.85	1.4		Si
SLV 4	11.68	-1400.47	-3715	-0.0001006	0.0005615	0.0035	0.824		2024.92	2024.92	1.45		Si
SLV 13	9.88	-2535.72	-1969	-0.0064767	0.0005615	0.0035	0.824		1215.16	1215.16	0.48		No
SLV 13	11.68	2046.67	-4406	-0.0004363	0.0005615	0.0035	1.03		2156.19	2156.19	1.05		Si
SLV 15	9.88	-2731.26	-2672	-0.0061914	0.0005615	0.0035	0.824		1545.58	1545.58	0.57		No
SLV 15	11.68	2372.34	-5278	-0.0003871	0.0005615	0.0035	1.03		2491.45	2491.45	1.05		Si
SLV 2	9.88	3108.51	-8558	-0.0002373	0.0005615	0.0035	1.03		3785.71	3785.71	1.22		Si
SLV 2	11.68	-1726.14	-2843	-0.0011707	0.0005615	0.0035	0.824		1624.78	1624.78	0.94		No
SLV 11	9.88	-1028.15	-5750	-0.0000624	0.0005615	0.0035	1.03		2906.14	2906.14	2.83		Si
SLV 11	11.68	1460.8	-5761	-0.0000816	0.0005615	0.0035	1.03		2676.87	2676.87	1.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	9.88	373.41	-7728	-6435	339	1.03	1.03	-22314	9920	2861	40441	8636	2627	11262	No	33.26	Si
SLU 63	11.68	348.5	-5501	-4581	159	1.03	1.03	-15884	9062	2614	40441	8636	2627	11262	No	70.76	Si
SLU 62	9.88	380.45	-7747	-6451	348	1.03	1.03	-22368	9927	2863	40441	8636	2627	11262	No	32.33	Si
SLU 62	11.68	346.87	-5510	-4589	161	1.03	1.03	-15911	9066	2615	40441	8636	2627	11262	No	69.8	Si
SLU 55	9.88	327.57	-7490	-6237	280	1.03	1.03	-21626	9828	2834	40441	8636	2627	11262	No	40.26	Si
SLU 55	11.68	365.28	-5334	-4442	106	1.03	1.03	-15402	8998	2595	40441	8636	2627	11262	No	106.13	Si
SLU 20	9.88	320.48	-6363	-5298	287	1.03	1.03	-18372	9394	2709	40441	8636	2627	11262	No	39.19	Si
SLU 20	11.68	278.98	-4586	-3819	161	1.03	1.03	-13242	8710	2512	40441	8636	2627	11262	No	70.16	Si
SLU 58	9.88	353.67	-7838	-6526	311	1.03	1.03	-22630	9962	2873	40441	8636	2627	11262	No	36.19	Si
SLU 58	11.68	381.74	-5622	-4682	105	1.03	1.03	-16234	9109	2627	40441	8636	2627	11262	No	107.45	Si
SLU 56	9.88	336.84	-7942	-6613	275	1.03	1.03	-22931	10002	2885	40441	8636	2627	11262	No	40.96	Si
SLU 56	11.68	406.59	-5750	-4788	86	1.03	1.03	-16602	9158	2641	40441	8636	2627	11262	No	130.67	Si
SLU 60	9.88	366.09	-7430	-6187	333	1.03	1.03	-21454	9805	2828	40441	8636	2627	11262	No	33.8	Si
SLU 60	11.68	327.7	-5238	-4362	166	1.03	1.03	-15124	8961	2584	40441	8636	2627	11262	No	67.72	Si
SLU 61	9.88	359.05	-7412	-6172	323	1.03	1.03	-21400	9798	2826	40441	8636	2627	11262	No	34.82	Si
SLU 61	11.68	329.33	-5229	-4354	164	1.03	1.03	-15097	8957	2583	40441	8636	2627	11262	No	68.62	Si
SLU 21	9.88	313.43	-6344	-5283	278	1.03	1.03	-18318	9387	2707	40441	8636	2627	11262	No	40.57	Si
SLU 21	11.68	280.61	-4577	-3811	158	1.03	1.03	-13216	8707	2511	40441	8636	2627	11262	No	71.14	Si
SLU 59	9.88	346.63	-7819	-6511	301	1.03	1.03	-22576	9955	2871	40441	8636	2627	11262	No	37.37	Si
SLU 59	11.68	383.37	-5613	-4674	103	1.03	1.03	-16207	9105	2626	40441	8636	2627	11262	No	109.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	9.88	1405.4	-5480	-4563	2282	1.03	0.7756	-15822	13581	2949	40441	12954	2627	15580		6.83	Si
SLV 6	11.68	-814.6	-2360	-1965	1223	0.824	0.5094	0	0	0	40441	10363	2101	12464		10.19	Si
SLV 1	9.88	2851.64	-8282	-6897	4656	1.03	0.5121	-23914	15199	2179	40441	12954	2627	15580		3.35	Si
SLV 1	11.68	-1557.78	-2913	-2426	1920	0.824	0	0	0	0	40441	10363	2101	12464		6.49	Si
SLV 15	9.88	-2731.26	-2672	-2225	-4850	0.824	0	0	0	0	40441	10363	2101	12464		2.57	Si
SLV 15	11.68	2372.34	-5278	-4395	-2061	1.03	0.1966	-84752	16250	894	40441	12954	2627	15580		7.56	Si
SLV 2	9.88	3108.51	-8558	-7126	5062	1.03	0.4553	-24709	15359	1958	40441	12954	2627	15580		3.08	Si
SLV 2	11.68	-1726.14	-2843	-2367	2112	0.824	0	0	0	0	40441	10363	2101	12464		5.9	Si
SLV 4	9.88	2912.97	-9260	-7711	4655	1.03	0.6013	-26738	15764	2654	40441	12954	2627	15580		3.35	Si
SLV 4	11.68	-1400.47	-3715	-3094	1757	0.824	0.4142	0	0	0	40441	10363	2101	12464		7.09	Si
SLD 2	9.88	1439.1	-6870	-5720	2229	1.03	0.9165	-19835	14384	3691	40441	12954	2627	15580		6.99	Si
SLD 2	11.68	-555.69	-3533	-2942	921	1.03	1.03	-10202	12457	3593	40441	12954	2627	15580		16.91	Si
SLV 3	9.88	2656.1	-8985	-7482	4248	1.03	0.6581	-25942	15605	2876	40441	12954	2627	15580		3.67	Si
SLV 3	11.68	-1232.1	-3786	-3152	1565	0.824	0.5686	0	0	0	40441	10363	2101	12464		7.96	Si
SLV 16	9.88	-2474.39	-2947	-2454	-4443	0.824	0	0	0	0	40441	10363	2101	12464		2.81	Si
SLV 16	11.68	2203.98	-5208	-4337	-1869	1.03	0.2754	-58297	16250	1253	40441	12954	2627	15580		8.34	Si
SLV 13	9.88	-2535.72	-1969	-1640	-4442	0.824	0	0	0	0	40441	10363	2101	12464		2.81	Si
SLV 13	11.68	2046.67	-4406	-3669	-1706	1.03	0.1513	-91956	16250	688	40441	12954	2627	15580		9.13	Si
SLV 14	9.88	-2278.85	-2245	-1869	-4035	0.824	0	0	0	0	40441	10363	2101	12464		3.09	Si
SLV 14	11.68	1878.31	-4335	-3610	-1514	1.03	0.2452	-54291	16250	1116	40441	12954	2627	15580		10.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	5387	-1554	126.66	209.83	1.66	Si
SLV 14	179667	0.46	6342	-1829	126.66	245.44	1.94	Si
SLV 15	179667	0.46	8197	-2364	126.66	313.2	2.47	Si
SLV 16	179667	0.46	9153	-2640	126.66	347.4	2.74	Si
SLV 9	179667	0.46	9818	-2832	126.66	370.94	2.93	Si
SLV 10	179667	0.46	10434	-3009	126.66	392.5	3.1	Si
SLV 5	179667	0.46	16281	-4696	126.66	587.29	4.64	Si
SLV 6	179667	0.46	16897	-4873	126.66	606.75	4.79	Si
SLV 11	179667	0.46	19186	-5533	126.66	677.34	5.35	Si
SLV 12	179667	0.46	19802	-5711	126.66	695.85	5.49	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-4963	-7345	-54	1.021	649.6	0.938	15.81645	14.44577	Si
SLV 12	-4900	-7220	-54	1.032	643.1	0.938	15.99162	14.44577	Si
SLV 7	-4148	-6194	-52	1.18	567.2	0.931	18.41405	14.44577	Si
SLV 8	-4084	-6069	-52	1.194	560.7	0.93	18.65326	14.44577	Si
SLV 9	-2730	-4105	46	1.625	424.6	0.914	25.83608	14.44577	Si
SLV 10	-2666	-3980	46	1.653	418.3	0.913	26.30971	14.44577	Si
SLV 5	-1914	-2954	48	2.081	343.8	0.901	33.55816	14.44577	Si
SLV 6	-1851	-2828	49	2.128	337.6	0.9	34.35445	14.44577	Si
SLV 15	-5150	-7589	-21	0.996	668.5	0.94	15.40688	6.41634	Si
SLV 16	-5052	-7395	-21	1.012	658.5	0.939	15.66452	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.01	SLU 25	Si
V_SLU	32.33	SLU 62	Si
PF_SLV	0.479	SLV 13	No
V_SLV	2.57	SLV 15	Si
PFFP_SLV	1.657	SLV 13	Si
R_SLV	1.095	SLV 11	Si

Maschio 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L6	L7	3.221	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	8.98	2278.15	-15217	-0.0000488	0.0004492	0.0035	3.2207	18582.35	22578.16	22578.16	9.91	No	Si
SLU 49	11.08	143.58	-11868	-0.0000299	0.0004492	0.0035	3.2207	15509.03	18374.62	18374.62	127.98	No	Si
SLU 55	8.98	2256.93	-15825	-0.0000503	0.0004492	0.0035	3.2207	19079.04	23278.15	23278.15	10.31	No	Si
SLU 55	11.08	414.45	-12232	-0.0000321	0.0004492	0.0035	3.2207	15871.34	18864.75	18864.75	45.52	No	Si
SLU 46	8.98	2190.63	-14708	-0.000047	0.0004492	0.0035	3.2207	18152.35	21992.63	21992.63	10.04	No	Si
SLU 46	11.08	170.48	-11335	-0.0000287	0.0004492	0.0035	3.2207	14967.4	17658.41	17658.41	103.58	No	Si
SLU 47	8.98	2264.48	-14496	-0.0000468	0.0004492	0.0035	3.2207	17969.06	21748.39	21748.39	9.6	No	Si
SLU 47	11.08	108.15	-11071	-0.0000277	0.0004492	0.0035	3.2207	14693.36	17301.33	17301.33	159.98	No	Si
SLU 5	8.98	1777.15	-11689	-0.0000372	0.0004492	0.0035	3.2207	15328.57	18133.84	18133.84	10.2	No	Si
SLU 5	11.08	168.75	-9024	-0.0000229	0.0004492	0.0035	3.2207	12449.57	14476.31	14476.31	85.79	No	Si
SLU 50	8.98	2251.5	-15012	-0.0000481	0.0004492	0.0035	3.2207	18411.13	22342.85	22342.85	9.92	No	Si
SLU 50	11.08	68.17	-11651	-0.000029	0.0004492	0.0035	3.2207	15289.95	18082.6	18082.6	265.27	No	Si
SLU 51	8.98	2311.8	-15008	-0.0000484	0.0004492	0.0035	3.2207	18407.21	22337.49	22337.49	9.66	No	Si
SLU 51	11.08	76.01	-11622	-0.000029	0.0004492	0.0035	3.2207	15261.31	18044.66	18044.66	237.39	No	Si
SLU 48	8.98	2217.84	-15222	-0.0000485	0.0004492	0.0035	3.2207	18586.23	22583.51	22583.51	10.18	No	Si
SLU 48	11.08	135.73	-11896	-0.0000299	0.0004492	0.0035	3.2207	15537.32	18412.56	18412.56	135.65	No	Si
SLU 44	8.98	2176.96	-13987	-0.000045	0.0004492	0.0035	3.2207	17520.28	21162.87	21162.87	9.72	No	Si
SLU 44	11.08	135.06	-10538	-0.0000265	0.0004492	0.0035	3.2207	14130.02	16571.28	16571.28	122.7	No	Si
SLU 43	8.98	2076.46	-13995	-0.0000446	0.0004492	0.0035	3.2207	17527.23	21171.81	21171.81	10.2	No	Si
SLU 43	11.08	121.98	-10585	-0.0000266	0.0004492	0.0035	3.2207	14180.34	16635.74	16635.74	136.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	8.98	7298.94	-12237	-0.0000643	0.0006738	0.0035	3.2207		19218.48	19218.48	2.63		Si
SLV 9	11.08	37.92	-6818	-0.0000167	0.0006738	0.0035	3.2207		11470.05	11470.05	302.44		Si
SLD 10	8.98	4035.6	-12122	-0.0000484	0.0006738	0.0035	3.2207		19057.02	19057.02	4.72		Si
SLD 10	11.08	171.61	-8240	-0.0000208	0.0006738	0.0035	3.2207		13547.56	13547.56	78.95		Si
SLD 9	8.98	4099.75	-12131	-0.0000487	0.0006738	0.0035	3.2207		19070.34	19070.34	4.65		Si
SLD 9	11.08	223.04	-8219	-0.000021	0.0006738	0.0035	3.2207		13517.22	13517.22	60.61		Si
SLD 5	8.98	3913.19	-12780	-0.0000495	0.0006738	0.0035	3.2207		19965.1	19965.1	5.1		Si
SLD 5	11.08	282.49	-8981	-0.0000231	0.0006738	0.0035	3.2207		14617.32	14617.32	51.74		Si
SLV 6	8.98	6720.02	-13746	-0.0000652	0.0006738	0.0035	3.2207		21291.39	21291.39	3.17		Si
SLV 6	11.08	64.94	-8655	-0.0000213	0.0006738	0.0035	3.2207		14147.03	14147.03	217.83		Si
SLV 14	8.98	3813.68	-9748	-0.0000413	0.0006738	0.0035	3.2207		15715.83	15715.83	4.12		Si
SLV 14	11.08	-60.85	-5887	-0.0000145	0.0006738	0.0035	3.2207		14815.07	14815.07	243.48		Si
SLD 6	8.98	3849.04	-12770	-0.0000492	0.0006738	0.0035	3.2207		19952	19952	5.18		Si
SLD 6	11.08	231.06	-9002	-0.0000229	0.0006738	0.0035	3.2207		14647.66	14647.66	63.39		Si
SLV 5	8.98	6866.89	-13767	-0.000066	0.0006738	0.0035	3.2207		21321.38	21321.38	3.1		Si
SLV 5	11.08	182.69	-8607	-0.0000217	0.0006738	0.0035	3.2207		14077.57	14077.57	77.06		Si
SLV 13	8.98	4041.59	-9782	-0.0000425	0.0006738	0.0035	3.2207		15763.97	15763.97	3.9		Si
SLV 13	11.08	121.87	-5812	-0.0000146	0.0006738	0.0035	3.2207		9981.44	9981.44	81.9		Si
SLV 10	8.98	7152.07	-12216	-0.0000635	0.0006738	0.0035	3.2207		19187.98	19187.98	2.68		Si
SLV 10	11.08	-79.83	-6866	-0.000017	0.0006738	0.0035	3.2207		16247.38	16247.38	203.54		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	8.98	2270.59	-16546	-9715	1464	3.2207	3.2207	-18853	10833	5583	115546	18519	16426	34945	No	23.87	Si
SLU 57	11.08	449.88	-13029	-7650	1530	3.2207	3.2207	-14846	10313	5314	115546	18519	16426	34945	No	22.84	Si
SLU 51	8.98	2311.8	-15008	-8812	1560	3.2207	3.2207	-17100	10613	5469	115546	18519	16426	34945	No	22.41	Si
SLU 51	11.08	76.01	-11622	-6824	1627	3.2207	3.2207	-13243	10099	5204	115546	18519	16426	34945	No	21.48	Si
SLU 52	8.98	2169.41	-15316	-8993	1476	3.2207	3.2207	-17452	10660	5493	115546	18519	16426	34945	No	23.68	Si
SLU 52	11.08	441.36	-11700	-6869	1591	3.2207	3.2207	-13331	10111	5210	115546	18519	16426	34945	No	21.97	Si
SLU 50	8.98	2251.5	-15012	-8815	1546	3.2207	3.2207	-17105	10614	5470	115546	18519	16426	34945	No	22.6	Si
SLU 50	11.08	68.17	-11651	-6841	1542	3.2207	3.2207	-13275	10103	5206	115546	18519	16426	34945	No	22.67	Si
SLU 55	8.98	2256.93	-15825	-9292	1512	3.2207	3.2207	-18032	10738	5533	115546	18519	16426	34945	No	23.11	Si
SLU 55	11.08	414.45	-12232	-7182	1627	3.2207	3.2207	-13938	10192	5252	115546	18519	16426	34945	No	21.48	Si
SLU 49	8.98	2278.15	-15217	-8935	1484	3.2207	3.2207	-17338	10645	5486	115546	18519	16426	34945	No	23.55	Si
SLU 49	11.08	143.58	-11868	-6968	1551	3.2207	3.2207	-13522	10136	5223	115546	18519	16426	34945	No	22.53	Si
SLU 44	8.98	2176.96	-13987	-8212	1495	3.2207	3.2207	-15937	10458	5389	115546	18519	16426	34945	No	23.37	Si
SLU 44	11.08	135.06	-10538	-6188	1612	3.2207	3.2207	-12008	9934	5119	115546	18519	16426	34945	No	21.68	Si
SLU 59	8.98	2304.25	-16337	-9592	1540	3.2207	3.2207	-18615	10815	5573	115546	18519	16426	34945	No	22.7	Si
SLU 59	11.08	382.31	-12784	-7506	1606	3.2207	3.2207	-14566	10275	5295	115546	18519	16426	34945	No	21.76	Si
SLU 63	8.98	2213.49	-16398	-9628	1495	3.2207	3.2207	-18684	10825	5578	115546	18519	16426	34945	No	23.38	Si
SLU 63	11.08	540.49	-12749	-7486	1561	3.2207	3.2207	-14526	10270	5292	115546	18519	16426	34945	No	22.39	Si
SLU 47	8.98	2264.48	-14496	-8511	1532	3.2207	3.2207	-16517	10536	5429	115546	18519	16426	34945	No	22.81	Si
SLU 47	11.08	108.15	-11071	-6500	1648	3.2207	3.2207	-12614	10015	5161	115546	18519	16426	34945	No	21.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.98	6720.02	-13746	-8071	4667	3.2207	3.2207	-15662	15632	8056	115546	27778	16426	44204		9.47	Si
SLV 6	11.08	64.94	-8655	-5082	5794	3.2207	3.2207	-9862	14472	7458	115546	27778	16426	44204		7.63	Si
SLD 9	8.98	4099.75	-12131	-7123	2901	3.2207	3.2207	-13823	15265	7866	115546	27778	16426	44204		15.24	Si
SLD 9	11.08	223.04	-8219	-4826	3393	3.2207	3.2207	-9365	14373	7407	115546	27778	16426	44204		13.03	Si
SLV 12	8.98	-3710.59	-10283	-6038	-2668	3.2207	3.2207	-11717	14843	7649	115546	27778	16426	44204		16.57	Si
SLV 12	11.08	549.78	-9993	-5867	-3804	3.2207	3.2207	-11386	14777	7615	115546	27778	16426	44204		11.62	Si
SLV 10	8.98	7152.07	-12216	-7172	5210	3.2207	3.0746	-13919	15284	7519	115546	27778	16426	44204		8.48	Si
SLV 10	11.08	-79.83	-6866	-4031	6326	3.2207	3.2207	-7823	14065	7248	115546	27778	16426	44204		6.99	Si
SLV 7	8.98	-3995.77	-11835	-6949	-3145	3.2207	3.2207	-13485	15197	7831	115546	27778	16426	44204		14.06	Si
SLV 7	11.08	812.3	-11734	-6890	-4268	3.2207	3.2207	-13370	15174	7819	115546	27778	16426	44204		10.36	Si
SLV 13	8.98	4041.59	-9782	-5744	3173	3.2207	3.2207	-11146	14729	7590	115546	27778	16426	44204		13.93	Si
SLV 13	11.08	121.87	-5812	-3412	3488	3.2207	3.2207	-6622	13824	7124	115546	27778	16426	44204		12.67	Si
SLV 8	8.98	-4142.64	-11813	-6936	-3212	3.2207	3.2207	-13460	15192	7829	115546	27778	16426	44204		13.76	Si
SLV 8	11.08	694.55	-11782	-6918	-4336	3.2207	3.2207	-13425	15185	7825	115546	27778	16426	44204		10.2	Si
SLV 9	8.98	7298.94	-12237	-7185	5278	3.2207	3.0417	-13944	15289	7441	115546	27778	16426	44204		8.38	Si
SLV 9	11.08	37.92	-6818	-4003	6394	3.2207	3.2207	-7768	14054	7242	115546	27778	16426	44204		6.91	Si
SLV 5	8.98	6866.89	-13767	-8084	4734	3.2207	3.2207	-15687	15637	8058	115546	27778	16426	44204		9.34	Si
SLV 5	11.08	182.69	-8607	-5054	5861	3.2207	3.2207	-9807	14461	7452	115546	27778	16426	44204		7.54	Si
SLV 11	8.98	-3563.72	-10305	-6050	-2601	3.2207	3.2207	-11741	14848	7651	115546	27778	16426	44204		17	Si
SLV 11	11.08	667.53	-9945	-5839	-3736	3.2207	3.2207	-11331	14766	7609	115546	27778	16426	44204		11.83	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-6733	0.46	239.48	500.21	881.61	690.91	2.89	Si
SLV 14	-6780	0.46	239.48	503.43	886.08	694.76	2.9	Si
SLV 15	-7224	0.46	239.48	533.73	928.38	731.05	3.05	Si
SLV 16	-7271	0.46	239.48	536.91	932.85	734.88	3.07	Si
SLV 9	-8136	0.46	239.48	594.81	1015.02	804.92	3.36	Si
SLV 10	-8166	0.46	239.48	596.82	1017.9	807.36	3.37	Si
SLV 11	-9775	0.46	239.48	701.04	1169.62	935.33	3.91	Si
SLV 12	-9805	0.46	239.48	702.96	1172.46	937.71	3.92	Si
SLV 5	-9823	0.46	239.48	704.13	1174.2	939.17	3.92	Si
SLV 6	-9854	0.46	239.48	706.05	1177.05	941.55	3.93	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-7569	-13767	-226	1.968	1029.2	0.932	30.69343	19.08992	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-7549	-13746	-226	1.973	1027.2	0.932	30.76269	19.08992	Si
SLV 9	-6661	-12237	59	2.201	937.7	0.927	34.51989	19.08992	Si
SLV 10	-6642	-12216	59	2.206	935.7	0.927	34.60658	19.08992	Si
SLV 7	-5888	-11835	-59	2.425	860	0.922	38.24184	19.08992	Si
SLV 8	-5868	-11813	-59	2.432	858	0.922	38.34801	19.08992	Si
SLV 11	-4981	-10305	226	2.73	769.1	0.915	43.35772	19.08992	Si
SLV 12	-4961	-10283	226	2.738	767.1	0.915	43.49487	19.08992	Si
SLV 1	-8044	-14882	-501	1.844	1077.3	0.934	28.68285	9.9395	Si
SLV 2	-8014	-14848	-501	1.85	1074.2	0.934	28.77828	9.9395	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.604	SLU 47	Si
V_SLU	21.207	SLU 47	Si
PF_SLV	2.633	SLV 9	Si
V_SLV	6.914	SLV 9	Si
PFFP_SLV	2.885	SLV 13	Si
R_SLV	1.608	SLV 5	Si

Maschio 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L6	L7	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.98	-816.11	-8349	-0.0000376	0.0003743	0.0035	1.655	5686.42	6699.93	6699.93	8.21	No	Si
SLU 40	11.08	1563.61	-9137	-0.0000497	0.0003743	0.0035	1.655	6096.51	6526.35	6526.35	4.17	No	Si
SLU 31	8.98	-763.44	-8162	-0.0000363	0.0003743	0.0035	1.655	5585.93	6581.37	6581.37	8.62	No	Si
SLU 31	11.08	1496.38	-8811	-0.0000477	0.0003743	0.0035	1.655	5929.77	6313.6	6313.6	4.22	No	Si
SLU 35	8.98	-769.06	-8995	-0.0000393	0.0003743	0.0035	1.655	6024.22	7092.63	7092.63	9.22	No	Si
SLU 35	11.08	1622.18	-9788	-0.0000528	0.0003743	0.0035	1.655	6419.5	6956.49	6956.49	4.29	No	Si
SLU 36	8.98	-777.53	-9000	-0.0000394	0.0003743	0.0035	1.655	6026.78	7095.62	7095.62	9.13	No	Si
SLU 36	11.08	1627.22	-9786	-0.0000529	0.0003743	0.0035	1.655	6418.21	6954.72	6954.72	4.27	No	Si
SLU 32	8.98	-774.07	-8611	-0.000038	0.0003743	0.0035	1.655	5825.4	6863.85	6863.85	8.87	No	Si
SLU 32	11.08	1582.67	-9373	-0.0000508	0.0003743	0.0035	1.655	6215.5	6681.96	6681.96	4.22	No	Si
SLU 34	8.98	-758.44	-8546	-0.0000376	0.0003743	0.0035	1.655	5790.78	6823	6823	9	No	Si
SLU 34	11.08	1535.89	-9227	-0.0000497	0.0003743	0.0035	1.655	6141.95	6585.4	6585.4	4.29	No	Si
SLU 41	8.98	-802.64	-8728	-0.0000388	0.0003743	0.0035	1.655	5886.15	6933.87	6933.87	8.64	No	Si
SLU 41	11.08	1598.07	-9554	-0.0000517	0.0003743	0.0035	1.655	6305.26	6801.52	6801.52	4.26	No	Si
SLU 42	8.98	-811.11	-8733	-0.0000389	0.0003743	0.0035	1.655	5888.76	6936.83	6936.83	8.55	No	Si
SLU 42	11.08	1603.12	-9552	-0.0000517	0.0003743	0.0035	1.655	6303.95	6799.76	6799.76	4.24	No	Si
SLU 33	8.98	-782.53	-8617	-0.0000381	0.0003743	0.0035	1.655	5828.04	6866.96	6866.96	8.78	No	Si
SLU 33	11.08	1587.71	-9371	-0.0000509	0.0003743	0.0035	1.655	6214.17	6680.21	6680.21	4.21	No	Si
SLU 39	8.98	-807.65	-8344	-0.0000375	0.0003743	0.0035	1.655	5683.74	6696.77	6696.77	8.29	No	Si
SLU 39	11.08	1558.56	-9139	-0.0000497	0.0003743	0.0035	1.655	6097.86	6528.1	6528.1	4.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	8.98	-4487.42	-5295	-0.000602	0.0005615	0.0035	1.324		4790.05	4790.05	1.07		Si
SLV 16	11.08	4974.04	-11409	-0.0001103	0.0005615	0.0035	1.655		8254.58	8254.58	1.66		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	8.98	-2311.82	-6443	-0.0000496	0.0005615	0.0035	1.655		5625.41	5625.41	2.43		Si
SLD 15	11.08	2922.77	-9296	-0.0000663	0.0005615	0.0035	1.655		6937.85	6937.85	2.37		Si
SLV 2	8.98	3841.86	-9705	-0.0000833	0.0005615	0.0035	1.655		7190.45	7190.45	1.87		Si
SLV 2	11.08	-3020.33	-3111	-0.000585	0.0005615	0.0035	1.324		3155.63	3155.63	1.04		Si
SLD 13	8.98	-2133.63	-6000	-0.0000458	0.0005615	0.0035	1.655		5305.72	5305.72	2.49		Si
SLD 13	11.08	2773.19	-8790	-0.0000626	0.0005615	0.0035	1.655		6627.41	6627.41	2.39		Si
SLV 1	8.98	3553.03	-9541	-0.0000773	0.0005615	0.0035	1.655		7089.03	7089.03	2		Si
SLV 1	11.08	-2693.21	-3466	-0.000191	0.0005615	0.0035	1.324		3424.06	3424.06	1.27		Si
SLV 15	8.98	-4776.24	-5130	-0.0010196	0.0005615	0.0035	1.324		4670.85	4670.85	0.98		No
SLV 15	11.08	5301.16	-11763	-0.000119	0.0005615	0.0035	1.655		8478.97	8478.97	1.6		Si
SLV 14	8.98	-4076.4	-4274	-0.0008566	0.0005615	0.0035	1.324		4034.62	4034.62	0.99		No
SLV 14	11.08	4636.05	-10261	-0.0001028	0.0005615	0.0035	1.655		7535.2	7535.2	1.63		Si
SLV 13	8.98	-4365.22	-4110	-0.0012873	0.0005615	0.0035	1.324		3909.98	3909.98	0.9		No
SLV 13	11.08	4963.17	-10616	-0.0001118	0.0005615	0.0035	1.655		7756.44	7756.44	1.56		Si
SLV 4	8.98	3430.84	-10726	-0.000078	0.0005615	0.0035	1.655		7825.32	7825.32	2.28		Si
SLV 4	11.08	-2682.34	-4259	-0.0000788	0.0005615	0.0035	1.324		4023.1	4023.1	1.5		Si
SLV 3	8.98	3142.01	-10562	-0.0000733	0.0005615	0.0035	1.655		7722.67	7722.67	2.46		Si
SLV 3	11.08	-2355.22	-4614	-0.0000526	0.0005615	0.0035	1.324		4293.44	4293.44	1.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.98	-833.63	-10285	-8565	-1471	1.655	1.655	-18482	9409	4360	40441	13876	4220	18097	No	12.3	Si
SLU 82	11.08	1753.67	-10799	-8993	-2538	1.655	1.655	-19406	9532	4417	40441	13876	4220	18097	No	7.13	Si
SLU 78	8.98	-795.05	-10936	-9106	-1522	1.655	1.655	-19651	9565	4432	40441	13876	4220	18097	No	11.89	Si
SLU 78	11.08	1817.29	-11449	-9533	-2616	1.655	1.655	-20572	9687	4489	40441	13876	4220	18097	No	6.92	Si
SLU 79	8.98	-756.85	-10856	-9040	-1464	1.655	1.655	-19508	9546	4423	40441	13876	4220	18097	No	12.36	Si
SLU 79	11.08	1757.05	-11309	-9417	-2533	1.655	1.655	-20322	9654	4474	40441	13876	4220	18097	No	7.14	Si
SLU 74	8.98	-791.59	-10547	-8783	-1510	1.655	1.655	-18953	9471	4389	40441	13876	4220	18097	No	11.98	Si
SLU 74	11.08	1772.74	-11036	-9190	-2565	1.655	1.655	-19831	9589	4443	40441	13876	4220	18097	No	7.05	Si
SLU 84	8.98	-828.63	-10668	-8884	-1480	1.655	1.655	-19170	9501	4403	40441	13876	4220	18097	No	12.22	Si
SLU 84	11.08	1793.18	-11215	-9339	-2581	1.655	1.655	-20152	9631	4463	40441	13876	4220	18097	No	7.01	Si
SLU 80	8.98	-765.31	-10861	-9045	-1466	1.655	1.655	-19517	9547	4424	40441	13876	4220	18097	No	12.34	Si
SLU 80	11.08	1762.1	-11306	-9415	-2540	1.655	1.655	-20317	9653	4473	40441	13876	4220	18097	No	7.12	Si
SLU 81	8.98	-825.17	-10280	-8560	-1469	1.655	1.655	-18473	9407	4359	40441	13876	4220	18097	No	12.32	Si
SLU 81	11.08	1748.63	-10802	-8995	-2531	1.655	1.655	-19411	9533	4417	40441	13876	4220	18097	No	7.15	Si
SLU 77	8.98	-786.58	-10931	-9102	-1519	1.655	1.655	-19642	9563	4432	40441	13876	4220	18097	No	11.91	Si
SLU 77	11.08	1812.24	-11451	-9536	-2608	1.655	1.655	-20577	9688	4490	40441	13876	4220	18097	No	6.94	Si
SLU 75	8.98	-800.05	-10552	-8787	-1513	1.655	1.655	-18962	9473	4390	40441	13876	4220	18097	No	11.96	Si
SLU 75	11.08	1777.78	-11033	-9188	-2573	1.655	1.655	-19827	9588	4443	40441	13876	4220	18097	No	7.03	Si
SLU 83	8.98	-820.16	-10663	-8880	-1478	1.655	1.655	-19161	9499	4402	40441	13876	4220	18097	No	12.25	Si
SLU 83	11.08	1788.14	-11217	-9341	-2574	1.655	1.655	-20157	9632	4464	40441	13876	4220	18097	No	7.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.98	-4076.4	-4274	-3559	-7294	1.324	0	0	0	0	40441	16652	3376	20028		2.75	Si
SLV 14	11.08	4636.05	-10261	-8545	-6799	1.655	1.1271	-18439	14104	4451	40441	20815	4220	25035		3.68	Si
SLV 16	8.98	-4487.42	-5295	-4409	-7549	1.324	0	0	0	0	40441	16652	3376	20028		2.65	Si
SLV 16	11.08	4974.04	-11409	-9500	-7177	1.655	1.1746	-20501	14517	4774	40441	20815	4220	25035		3.49	Si
SLV 13	8.98	-4365.22	-4110	-3422	-7795	1.324	0	0	0	0	40441	16652	3376	20028		2.57	Si
SLV 13	11.08	4963.17	-10616	-8840	-7297	1.655	1.0799	-19076	14232	4303	40441	20815	4220	25035		3.43	Si
SLV 15	8.98	-4776.24	-5130	-4272	-8050	1.324	0	0	0	0	40441	16652	3376	20028		2.49	Si
SLV 15	11.08	5301.16	-11763	-9796	-7675	1.655	1.1306	-21138	14644	4636	40441	20815	4220	25035		3.26	Si
SLV 4	8.98	3430.84	-10726	-8932	5814	1.655	1.5229	-19274	14271	6086	40441	20815	4220	25035		4.31	Si
SLV 4	11.08	-2682.34	-4259	-3547	3962	1.324	0.5931	0	0	0	40441	16652	3376	20028		5.05	Si
SLD 15	8.98	-2311.82	-6443	-5365	-4011	1.655	1.4061	-13717	13160	5181	40441	20815	4220	25035		6.24	Si
SLD 15	11.08	2922.77	-9296	-7741	-4241	1.655	1.5393	-16704	13758	5929	40441	20815	4220	25035		5.9	Si
SLV 1	8.98	3553.03	-9541	-7945	5568	1.655	1.3654	-17145	13846	5293	40441	20815	4220	25035		4.5	Si
SLV 1	11.08	-2693.21	-3466	-2886	3843	1.324	0.1514	0	0	0	40441	16652	3376	20028		5.21	Si
SLV 2	8.98	3841.86	-9705	-8082	6069	1.655	1.295	-17440	13905	5042	40441	20815	4220	25035		4.12	Si
SLV 2	11.08	-3020.33	-3111	-2591	4340	1.324	0	0	0	0	40441	16652	3376	20028		4.61	Si
SLV 11	8.98	-2433.03	-8251	-6871	-3582	1.655	1.5979	-14827	13382	5987	40441	20815	4220	25035		6.99	Si
SLV 11	11.08	2957.6	-10537	-8774	-4128	1.655	1.6405	-18934	14203	6524	40441	20815	4220	25035		6.06	Si
SLV 3	8.98	3142.01	-10562	-8795	5312	1.655	1.5901	-18979	14212	6328	40441	20815	4220	25035		4.71	Si
SLV 3	11.08	-2355.22	-4614	-3842	3465	1.324	0.9511	0	0	0	40441	16652	3376	20028		5.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	7337	-3400	203.53	453.16	2.23	Si
SLV 1	179667	0.46	8103	-3755	203.53	497.8	2.45	Si
SLV 4	179667	0.46	9813	-4547	203.53	595.71	2.93	Si
SLV 6	179667	0.46	9989	-4629	203.53	605.66	2.98	Si
SLV 5	179667	0.46	10482	-4857	203.53	633.37	3.11	Si
SLV 3	179667	0.46	10578	-4902	203.53	638.74	3.14	Si
SLV 10	179667	0.46	14620	-6775	203.53	857.7	4.21	Si
SLV 9	179667	0.46	15113	-7004	203.53	883.47	4.34	Si
SLV 8	179667	0.46	18240	-8452	203.53	1042	5.12	Si
SLV 7	179667	0.46	18733	-8681	203.53	1066.26	5.24	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-5681	-9881	270	1.311	812.2	0.925	20.60035	14.44577	Si
SLV 8	-5677	-9986	269	1.311	811.8	0.925	20.6122	14.44577	Si
SLV 11	-5356	-8251	354	1.359	779.5	0.922	21.41425	14.44577	Si
SLV 12	-5352	-8357	353	1.36	779.1	0.922	21.42715	14.44577	Si
SLV 5	-4112	-6479	-353	1.653	655	0.912	26.3525	14.44577	Si
SLV 6	-4108	-6585	-353	1.654	654.6	0.912	26.37032	14.44577	Si
SLV 9	-3787	-4850	-269	1.769	622.6	0.909	28.29323	14.44577	Si
SLV 10	-3783	-4955	-269	1.77	622.3	0.909	28.31361	14.44577	Si
SLV 3	-5512	-10562	-46	1.373	795.2	0.923	21.61681	6.41634	Si
SLV 4	-5506	-10726	-47	1.374	794.6	0.923	21.63469	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.174	SLU 40	Si
V_SLU	6.919	SLU 78	Si
PF_SLV	0.896	SLV 13	No
V_SLV	2.488	SLV 15	Si
PFFP_SLV	2.227	SLV 2	Si
R_SLV	1.426	SLV 7	Si

Maschio 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.386	L6	L7	4.22	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	8.98	957.39	-21277	-0.0000431	0.0004492	0.0035	4.22	33316.22	40679.42	40679.42	42.49	No	Si
SLU 83	11.08	-3764.05	-17829	-0.0000441	0.0004492	0.0035	4.22	29489.03	43602.82	43602.82	11.58	No	Si
SLU 81	8.98	974.41	-20468	-0.0000416	0.0004492	0.0035	4.22	32472.69	39450.46	39450.46	40.49	No	Si
SLU 81	11.08	-3885.46	-17019	-0.0000429	0.0004492	0.0035	4.22	28502.76	42204.86	42204.86	10.86	No	Si
SLU 19	8.98	929.23	-15276	-0.0000313	0.0004492	0.0035	4.22	26264.35	31058.43	31058.43	33.42	No	Si
SLU 19	11.08	-2976.92	-12694	-0.0000319	0.0004492	0.0035	4.22	22663.25	34672.57	34672.57	11.65	No	Si
SLU 18	8.98	827.05	-15242	-0.0000309	0.0004492	0.0035	4.22	26219.09	30998.09	30998.09	37.48	No	Si
SLU 18	11.08	-3025.53	-12660	-0.0000319	0.0004492	0.0035	4.22	22613.5	34610.45	34610.45	11.44	No	Si
SLU 82	8.98	1076.59	-20502	-0.0000419	0.0004492	0.0035	4.22	32508.85	39502.15	39502.15	36.69	No	Si
SLU 82	11.08	-3836.85	-17053	-0.0000428	0.0004492	0.0035	4.22	28544.93	42263.66	42263.66	11.02	No	Si
SLU 60	8.98	916.54	-18580	-0.0000377	0.0004492	0.0035	4.22	30375.24	36584.22	36584.22	39.92	No	Si
SLU 60	11.08	-3437.4	-15272	-0.0000382	0.0004492	0.0035	4.22	26258.27	39185.46	39185.46	11.4	No	Si
SLU 39	8.98	884.92	-17129	-0.0000347	0.0004492	0.0035	4.22	28638.83	34298.97	34298.97	38.76	No	Si
SLU 39	11.08	-3473.59	-14408	-0.0000366	0.0004492	0.0035	4.22	25091.48	37693.44	37693.44	10.85	No	Si
SLU 61	8.98	1018.72	-18614	-0.000038	0.0004492	0.0035	4.22	30414.68	36635.92	36635.92	35.96	No	Si
SLU 61	11.08	-3388.79	-15306	-0.0000381	0.0004492	0.0035	4.22	26303.48	39244.26	39244.26	11.58	No	Si
SLU 40	8.98	987.1	-17163	-0.0000351	0.0004492	0.0035	4.22	28680.8	34358.18	34358.18	34.81	No	Si
SLU 40	11.08	-3424.98	-14442	-0.0000365	0.0004492	0.0035	4.22	25138.19	37752.24	37752.24	11.02	No	Si
SLU 41	8.98	867.89	-17939	-0.0000363	0.0004492	0.0035	4.22	29620.54	35609.62	35609.62	41.03	No	Si
SLU 41	11.08	-3352.18	-15217	-0.0000378	0.0004492	0.0035	4.22	26185.84	39091.4	39091.4	11.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.98	7285.76	-17062	-0.0000517	0.0006738	0.0035	4.22		34845.2	34845.2	4.78		Si
SLV 13	11.08	-1758.59	-14224	-0.0000312	0.0006738	0.0035	4.22		37889.88	37889.88	21.55		Si
SLV 10	8.98	12495.94	-18242	-0.0000683	0.0006738	0.0035	4.22		36955.63	36955.63	2.96		Si
SLV 10	11.08	4673.66	-14374	-0.0000394	0.0006738	0.0035	4.22		29946.27	29946.27	6.41		Si
SLV 12	8.98	-9578.44	-11266	-0.0000472	0.0006738	0.0035	4.22		32363.77	32363.77	3.38		Si
SLV 12	11.08	-10511.58	-9994	-0.0000499	0.0006738	0.0035	4.22		29987.41	29987.41	2.85		Si
SLV 8	8.98	-11637.76	-10187	-0.0000558	0.0006738	0.0035	4.22		30347.85	30347.85	2.61		Si
SLV 8	11.08	-9345.93	-8811	-0.0000442	0.0006738	0.0035	4.22		27777.17	27777.17	2.97		Si
SLV 9	8.98	12584.76	-18244	-0.0000686	0.0006738	0.0035	4.22		36959.92	36959.92	2.94		Si
SLV 9	11.08	4863.73	-14376	-0.0000399	0.0006738	0.0035	4.22		29950.71	29950.71	6.16		Si
SLV 11	8.98	-9489.63	-11269	-0.0000469	0.0006738	0.0035	4.22		32368.28	32368.28	3.41		Si
SLV 11	11.08	-10321.51	-9996	-0.000049	0.0006738	0.0035	4.22		29991.92	29991.92	2.91		Si
SLV 14	8.98	7147.94	-17059	-0.0000513	0.0006738	0.0035	4.22		34838.43	34838.43	4.87		Si
SLV 14	11.08	-2053.52	-14221	-0.000032	0.0006738	0.0035	4.22		37882.89	37882.89	18.45		Si
SLV 5	8.98	10525.44	-17165	-0.0000608	0.0006738	0.0035	4.22		35030.7	35030.7	3.33		Si
SLV 5	11.08	6029.37	-13193	-0.0000407	0.0006738	0.0035	4.22		27760.92	27760.92	4.6		Si
SLV 7	8.98	-11548.94	-10189	-0.0000553	0.0006738	0.0035	4.22		30352.36	30352.36	2.63		Si
SLV 7	11.08	-9155.87	-8813	-0.0000433	0.0006738	0.0035	4.22		27781.67	27781.67	3.03		Si
SLV 6	8.98	10436.63	-17162	-0.0000605	0.0006738	0.0035	4.22		35026.34	35026.34	3.36		Si
SLV 6	11.08	5839.3	-13191	-0.0000402	0.0006738	0.0035	4.22		27756.41	27756.41	4.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	8.98	827.39	-20873	-12256	2131	4.22	4.22	-18151	10753	7261	115546	24265	21522	45787	No	21.48	Si
SLU 74	11.08	-3589.37	-17425	-10231	2131	4.22	4.22	-15152	10354	6991	115546	24265	21522	45787	No	21.48	Si
SLU 40	8.98	987.1	-17163	-10078	2122	4.22	4.22	-14925	10323	6970	115546	24265	21522	45787	No	21.57	Si
SLU 40	11.08	-3424.98	-14442	-8480	2122	4.22	4.22	-12559	10008	6757	115546	24265	21522	45787	No	21.57	Si
SLU 83	8.98	957.39	-21277	-12493	2276	4.22	4.22	-18503	10800	7292	115546	24265	21522	45787	No	20.12	Si
SLU 83	11.08	-3764.05	-17829	-10468	2276	4.22	4.22	-15504	10401	7022	115546	24265	21522	45787	No	20.12	Si
SLU 60	8.98	916.54	-18580	-10910	2102	4.22	4.22	-16158	10488	7081	115546	24265	21522	45787	No	21.79	Si
SLU 60	11.08	-3437.4	-15272	-8967	2102	4.22	4.22	-13280	10104	6822	115546	24265	21522	45787	No	21.79	Si
SLU 82	8.98	1076.59	-20502	-12038	2368	4.22	4.22	-17828	10710	7232	115546	24265	21522	45787	No	19.34	Si
SLU 82	11.08	-3836.85	-17053	-10013	2368	4.22	4.22	-14830	10311	6962	115546	24265	21522	45787	No	19.34	Si
SLU 61	8.98	1018.72	-18614	-10930	2127	4.22	4.22	-16187	10492	7084	115546	24265	21522	45787	No	21.53	Si
SLU 61	11.08	-3388.79	-15306	-8987	2127	4.22	4.22	-13310	10108	6825	115546	24265	21522	45787	No	21.53	Si
SLU 75	8.98	929.57	-20907	-12276	2157	4.22	4.22	-18181	10757	7263	115546	24265	21522	45787	No	21.23	Si
SLU 75	11.08	-3540.76	-17459	-10251	2157	4.22	4.22	-15182	10358	6993	115546	24265	21522	45787	No	21.23	Si
SLU 73	8.98	1005.93	-19937	-11706	2156	4.22	4.22	-17338	10645	7188	115546	24265	21522	45787	No	21.24	Si
SLU 73	11.08	-3462.28	-16489	-9682	2156	4.22	4.22	-14339	10245	6918	115546	24265	21522	45787	No	21.24	Si
SLU 81	8.98	974.41	-20468	-12018	2342	4.22	4.22	-17799	10707	7229	115546	24265	21522	45787	No	19.55	Si
SLU 81	11.08	-3885.46	-17019	-9993	2342	4.22	4.22	-14800	10307	6959	115546	24265	21522	45787	No	19.55	Si
SLU 84	8.98	1059.57	-21311	-12513	2302	4.22	4.22	-18532	10804	7295	115546	24265	21522	45787	No	19.89	Si
SLU 84	11.08	-3715.43	-17863	-10488	2302	4.22	4.22	-15533	10404	7025	115546	24265	21522	45787	No	19.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	8.98	663.45	-14970	-8790	3280	4.22	4.22	-13018	15104	10198	115546	36398	21522	57920		17.66	Si
SLV 15	11.08	-6314.16	-12910	-7580	2806	4.22	4.22	-11227	14745	9956	115546	36398	21522	57920		20.64	Si
SLD 9	8.98	5798.73	-15988	-9388	2312	4.22	4.22	-13904	15281	10318	115546	36398	21522	57920		25.05	Si
SLD 9	11.08	901.95	-12815	-7524	3009	4.22	4.22	-11144	14729	9945	115546	36398	21522	57920		19.25	Si
SLV 5	8.98	10525.44	-17165	-10078	2115	4.22	4.22	-14927	15485	10456	115546	36398	21522	57920		27.39	Si
SLV 5	11.08	6029.37	-13193	-7746	3696	4.22	4.22	-11473	14795	9989	115546	36398	21522	57920		15.67	Si
SLD 10	8.98	5759.93	-15987	-9387	2333	4.22	4.22	-13903	15281	10317	115546	36398	21522	57920		24.83	Si
SLD 10	11.08	818.93	-12814	-7524	3030	4.22	4.22	-11143	14729	9945	115546	36398	21522	57920		19.11	Si
SLV 9	8.98	12584.76	-18244	-10712	3599	4.22	4.22	-15865	15673	10582	115546	36398	21522	57920		16.09	Si
SLV 9	11.08	4863.73	-14376	-8441	5181	4.22	4.22	-12502	15000	10128	115546	36398	21522	57920		11.18	Si
SLV 14	8.98	7147.94	-17059	-10016	4295	4.22	4.22	-14834	15467	10443	115546	36398	21522	57920		13.48	Si
SLV 14	11.08	-2053.52	-14221	-8350	4770	4.22	4.22	-12366	14973	10110	115546	36398	21522	57920		12.14	Si
SLV 16	8.98	525.62	-14966	-8787	3355	4.22	4.22	-13014	15103	10197	115546	36398	21522	57920		17.26	Si
SLV 16	11.08	-6609.09	-12907	-7578	2881	4.22	4.22	-11224	14745	9956	115546	36398	21522	57920		20.1	Si
SLV 13	8.98	7285.76	-17062	-10018	4221	4.22	4.22	-14837	15467	10444	115546	36398	21522	57920		13.72	Si
SLV 13	11.08	-1758.59	-14224	-8352	4695	4.22	4.22	-12370	14974	10110	115546	36398	21522	57920		12.34	Si
SLV 6	8.98	10436.63	-17162	-10077	2163	4.22	4.22	-14924	15485	10455	115546	36398	21522	57920		26.78	Si
SLV 6	11.08	5839.3	-13191	-7745	3744	4.22	4.22	-11471	14794	9989	115546	36398	21522	57920		15.47	Si
SLV 10	8.98	12495.94	-18242	-10711	3647	4.22	4.22	-15863	15673	10582	115546	36398	21522	57920		15.88	Si
SLV 10	11.08	4673.66	-14374	-8440	5229	4.22	4.22	-12500	15000	10128	115546	36398	21522	57920		11.08	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-8657	0.46	313.79	644.14	1140.83	892.48	2.84	Si
SLV 7	-8660	0.46	313.79	644.3	1141.06	892.68	2.84	Si
SLV 4	-9179	0.46	313.79	679.84	1190.34	935.09	2.98	Si
SLV 3	-9183	0.46	313.79	680.1	1190.7	935.4	2.98	Si
SLV 12	-9906	0.46	313.79	729.03	1259.38	994.2	3.17	Si
SLV 11	-9908	0.46	313.79	729.19	1259.61	994.4	3.17	Si
SLV 2	-10875	0.46	313.79	793.53	1351.28	1072.41	3.42	Si
SLV 1	-10879	0.46	313.79	793.78	1351.64	1072.71	3.42	Si
SLV 16	-13340	0.46	313.79	952.16	1583.14	1267.65	4.04	Si
SLV 15	-13344	0.46	313.79	952.4	1583.49	1267.94	4.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9091	-17165	-228	2.118	1265.2	0.928	33.14698	19.08992	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-9059	-18244	252	2.121	1262	0.928	33.21308	19.08992	Si
SLV 6	-9059	-17162	-228	2.123	1262	0.928	33.24505	19.08992	Si
SLV 10	-9027	-18242	252	2.127	1258.8	0.928	33.31164	19.08992	Si
SLV 7	-6468	-10189	-249	2.753	1001.9	0.915	43.75299	19.08992	Si
SLV 8	-6436	-10187	-249	2.764	998.7	0.914	43.92284	19.08992	Si
SLV 11	-6436	-11269	231	2.766	998.7	0.914	43.95774	19.08992	Si
SLV 12	-6404	-11266	231	2.776	995.5	0.914	44.12902	19.08992	Si
SLV 1	-8219	-13465	-796	2.239	1177.4	0.924	35.20605	9.9395	Si
SLV 2	-8170	-13461	-796	2.25	1172.5	0.924	35.38196	9.9395	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.851	SLU 39	Si
V_SLU	19.338	SLU 82	Si
PF_SLV	2.608	SLV 8	Si
V_SLV	11.077	SLV 10	Si
PFFP_SLV	2.844	SLV 8	Si
R_SLV	1.736	SLV 5	Si

Maschio 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L6	L7	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	8.98	-316.39	-11088	-0.0000485	0.0003743	0.0035	1.4395	5824.43	6950.25	6950.25	21.97	No	Si
SLU 83	12.5	100.97	-6268	-0.0000253	0.0003743	0.0035	1.4395	3822.32	4021.89	4021.89	39.83	No	Si
SLU 81	8.98	-310.2	-10764	-0.000047	0.0003743	0.0035	1.4395	5715.27	6804.36	6804.36	21.94	No	Si
SLU 81	12.5	119.29	-5943	-0.0000243	0.0003743	0.0035	1.4395	3658.17	3853.48	3853.48	32.3	No	Si
SLU 77	8.98	-316.02	-11102	-0.0000485	0.0003743	0.0035	1.4395	5829.02	6956.25	6956.25	22.01	No	Si
SLU 77	12.5	69.39	-6483	-0.0000256	0.0003743	0.0035	1.4395	3928.94	4134.28	4134.28	59.58	No	Si
SLU 37	8.98	-275.13	-9328	-0.0000404	0.0003743	0.0035	1.4395	5187.86	6120.36	6120.36	22.25	No	Si
SLU 37	12.5	68.6	-5478	-0.0000217	0.0003743	0.0035	1.4395	3416.41	3615.04	3615.04	52.7	No	Si
SLU 39	8.98	-274.48	-9061	-0.0000393	0.0003743	0.0035	1.4395	5081.64	5987.16	5987.16	21.81	No	Si
SLU 39	12.5	140.12	-4965	-0.0000208	0.0003743	0.0035	1.4395	3141.38	3355.06	3355.06	23.94	No	Si
SLU 32	8.98	-274.11	-9075	-0.0000394	0.0003743	0.0035	1.4395	5087.22	5994.05	5994.05	21.87	No	Si
SLU 32	12.5	108.54	-5180	-0.0000211	0.0003743	0.0035	1.4395	3257.81	3464.38	3464.38	31.92	No	Si
SLU 74	8.98	-309.83	-10778	-0.000047	0.0003743	0.0035	1.4395	5720.02	6810.99	6810.99	21.98	No	Si
SLU 74	12.5	87.71	-6158	-0.0000246	0.0003743	0.0035	1.4395	3767.23	3964.75	3964.75	45.2	No	Si
SLU 41	8.98	-280.67	-9385	-0.0000407	0.0003743	0.0035	1.4395	5210.18	6148.85	6148.85	21.91	No	Si
SLU 41	12.5	121.8	-5290	-0.0000218	0.0003743	0.0035	1.4395	3316.67	3519.78	3519.78	28.9	No	Si
SLU 35	8.98	-280.3	-9399	-0.0000408	0.0003743	0.0035	1.4395	5215.61	6155.77	6155.77	21.96	No	Si
SLU 35	12.5	90.22	-5505	-0.0000221	0.0003743	0.0035	1.4395	3430.66	3628.79	3628.79	40.22	No	Si
SLU 79	8.98	-310.85	-11031	-0.0000481	0.0003743	0.0035	1.4395	5805.51	6925.67	6925.67	22.28	No	Si
SLU 79	12.5	47.77	-6456	-0.0000252	0.0003743	0.0035	1.4395	3915.62	4120.11	4120.11	86.24	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	8.98	610.26	-3379	-0.0000219	0.0005615	0.0035	1.4395		2439.98	2439.98	4		Si
SLV 5	12.5	-458.51	-1542	-0.0000128	0.0005615	0.0035	1.4395		1587.69	1587.69	3.46		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.98	-177.54	-6725	-0.0000279	0.0005615	0.0035	1.4395		4928.48	4928.48	27.76		Si
SLV 15	12.5	1052.46	-4394	-0.0000326	0.0005615	0.0035	1.4395		3100.36	3100.36	2.95		Si
SLV 14	8.98	326.33	-4211	-0.0000206	0.0005615	0.0035	1.4395		2983.1	2983.1	9.14		Si
SLV 14	12.5	868.84	-2734	-0.0000241	0.0005615	0.0035	1.4395		2010.35	2010.35	2.31		Si
SLV 13	8.98	355.76	-4044	-0.0000204	0.0005615	0.0035	1.4395		2874.71	2874.71	8.08		Si
SLV 13	12.5	926.61	-2703	-0.0000254	0.0005615	0.0035	1.4395		1990.06	1990.06	2.15		Si
SLV 2	8.98	-231.3	-7954	-0.0000335	0.0005615	0.0035	1.4395		5656.5	5656.5	24.46		Si
SLV 2	12.5	-1020.42	-3974	-0.0000305	0.0005615	0.0035	1.4395		3211.12	3211.12	3.15		Si
SLV 1	8.98	-201.87	-7787	-0.0000324	0.0005615	0.0035	1.4395		5557.73	5557.73	27.53		Si
SLV 1	12.5	-962.65	-3944	-0.0000295	0.0005615	0.0035	1.4395		3190.93	3190.93	3.31		Si
SLV 9	8.98	777.55	-2256	-0.0000213	0.0005615	0.0035	1.4395		1688.17	1688.17	2.17		Si
SLV 9	12.5	108.27	-1170	-0.0000059	0.0005615	0.0035	1.4395		942.96	942.96	8.71		Si
SLV 10	8.98	758.58	-2364	-0.0000209	0.0005615	0.0035	1.4395		1761.57	1761.57	2.32		Si
SLV 10	12.5	71.04	-1190	-0.0000054	0.0005615	0.0035	1.4395		956.53	956.53	13.46		Si
SLV 6	8.98	591.29	-3487	-0.000022	0.0005615	0.0035	1.4395		2510.75	2510.75	4.25		Si
SLV 6	12.5	-495.74	-1562	-0.0000136	0.0005615	0.0035	1.4395		1601.11	1601.11	3.23		Si
SLV 16	8.98	-206.98	-6892	-0.000029	0.0005615	0.0035	1.4395		5030.18	5030.18	24.3		Si
SLV 16	12.5	994.7	-4424	-0.0000318	0.0005615	0.0035	1.4395		3119.81	3119.81	3.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	8.98	-309.83	-10778	-8975	-2416	1.4395	1.4395	-22266	9913	3996	40441	12070	3671	15740	No	6.52	Si
SLU 74	12.5	87.71	-6158	-5128	-74	1.4395	1.4395	-12722	8641	3483	40441	12070	3671	15740	No	212.85	Si
SLU 78	8.98	-298.49	-11072	-9220	-2412	1.4395	1.4395	-22874	9994	4028	40441	12070	3671	15740	No	6.53	Si
SLU 78	12.5	77.93	-6472	-5389	-35	1.4395	1.4395	-13371	8727	3518	40441	12070	3671	15740	No	449.48	Si
SLU 83	8.98	-316.39	-11088	-9233	-2576	1.4395	1.4395	-22908	9999	4030	40441	12070	3671	15740	No	6.11	Si
SLU 83	12.5	100.97	-6268	-5219	-185	1.4395	1.4395	-12949	8671	3495	40441	12070	3671	15740	No	85.26	Si
SLU 80	8.98	-293.31	-11001	-9161	-2377	1.4395	1.4395	-22727	9975	4020	40441	12070	3671	15740	No	6.62	Si
SLU 80	12.5	56.31	-6445	-5367	-1	1.4395	1.4395	-13315	8720	3515	40441	12070	3671	15740	No	18577.1	Si
SLU 84	8.98	-298.86	-11058	-9208	-2534	1.4395	1.4395	-22845	9990	4027	40441	12070	3671	15740	No	6.21	Si
SLU 84	12.5	109.51	-6257	-5210	-205	1.4395	1.4395	-12927	8668	3494	40441	12070	3671	15740	No	76.72	Si
SLU 82	8.98	-292.67	-10733	-8938	-2495	1.4395	1.4395	-22175	9901	3991	40441	12070	3671	15740	No	6.31	Si
SLU 82	12.5	127.83	-5932	-4940	-265	1.4395	1.4395	-12256	8579	3458	40441	12070	3671	15740	No	59.47	Si
SLU 79	8.98	-310.85	-11031	-9186	-2418	1.4395	1.4395	-22790	9983	4024	40441	12070	3671	15740	No	6.51	Si
SLU 79	12.5	47.77	-6456	-5376	20	1.4395	1.4395	-13337	8723	3516	40441	12070	3671	15740	No	798.43	Si
SLU 75	8.98	-292.3	-10747	-8949	-2374	1.4395	1.4395	-22203	9905	3992	40441	12070	3671	15740	No	6.63	Si
SLU 75	12.5	96.25	-6147	-5119	-95	1.4395	1.4395	-12700	8638	3482	40441	12070	3671	15740	No	166.55	Si
SLU 81	8.98	-310.2	-10764	-8963	-2537	1.4395	1.4395	-22238	9909	3994	40441	12070	3671	15740	No	6.2	Si
SLU 81	12.5	119.29	-5943	-4949	-244	1.4395	1.4395	-12278	8582	3459	40441	12070	3671	15740	No	64.48	Si
SLU 77	8.98	-316.02	-11102	-9245	-2454	1.4395	1.4395	-22937	10003	4032	40441	12070	3671	15740	No	6.41	Si
SLU 77	12.5	69.39	-6483	-5398	-14	1.4395	1.4395	-13393	8730	3519	40441	12070	3671	15740	No	1088.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	8.98	610.26	-3379	-2813	93	1.4395	1.4395	-6980	11813	4761	40441	18104	3671	21775		233.04	Si
SLV 5	12.5	-458.51	-1542	-1284	3376	1.4395	1.2674	-3624	11141	3954	40441	18104	3671	21775		6.45	Si
SLV 6	8.98	591.29	-3487	-2903	308	1.4395	1.4395	-7203	11857	4779	40441	18104	3671	21775		70.71	Si
SLV 6	12.5	-495.74	-1562	-1301	3544	1.4395	1.207	-3854	11187	3781	40441	18104	3671	21775		6.15	Si
SLV 1	8.98	-201.87	-7787	-6484	2706	1.4395	1.4395	-16087	13634	5495	40441	18104	3671	21775		8.05	Si
SLV 1	12.5	-962.65	-3944	-3284	4126	1.4395	1.427	-8147	12046	4813	40441	18104	3671	21775		5.28	Si
SLV 2	8.98	-231.3	-7954	-6624	3039	1.4395	1.4395	-16433	13703	5523	40441	18104	3671	21775		7.16	Si
SLV 2	12.5	-1020.42	-3974	-3309	4387	1.4395	1.3889	-8210	12059	4690	40441	18104	3671	21775		4.96	Si
SLD 15	8.98	-196.72	-7096	-5909	-3449	1.4395	1.4395	-14661	13349	5380	40441	18104	3671	21775		6.31	Si
SLD 15	12.5	460.66	-4284	-3567	-1718	1.4395	1.4395	-8851	12187	4912	40441	18104	3671	21775		12.68	Si
SLV 14	8.98	326.33	-4211	-3507	-5455	1.4395	1.4395	-8700	12157	4900	40441	18104	3671	21775		3.99	Si
SLV 14	12.5	868.84	-2734	-2276	-2508	1.4395	1.2058	-5647	11546	3898	40441	18104	3671	21775		8.68	Si
SLD 13	8.98	38.86	-5912	-4923	-3333	1.4395	1.4395	-12214	12860	5183	40441	18104	3671	21775		6.53	Si
SLD 13	12.5	404.08	-3541	-2949	-1108	1.4395	1.4395	-7316	11880	4788	40441	18104	3671	21775		19.65	Si
SLV 13	8.98	355.76	-4044	-3367	-5788	1.4395	1.4395	-8354	12087	4872	40441	18104	3671	21775		3.76	Si
SLV 13	12.5	926.61	-2703	-2251	-2768	1.4395	1.1309	-5585	11534	3652	40441	18104	3671	21775		7.87	Si
SLV 16	8.98	-206.98	-6892	-5739	-5713	1.4395	1.4395	-14239	13264	5346	40441	18104	3671	21775		3.81	Si
SLV 16	12.5	994.7	-4424	-3684	-3893	1.4395	1.4395	-9141	12245	4935	40441	18104	3671	21775		5.59	Si
SLV 15	8.98	-177.54	-6725	-5600	-6046	1.4395	1.4395	-13893	13195	5319	40441	18104	3671	21775		3.6	Si
SLV 15	12.5	1052.46	-4394	-3659	-4153	1.4395	1.4395	-9078	12232	4930	40441	18104	3671	21775		5.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	4833	-1948	181.14	264.08	1.46	Si
SLV 5	179667	0.46	4847	-1954	181.14	264.82	1.46	Si
SLV 10	179667	0.46	5158	-2079	181.14	281.24	1.55	Si
SLV 9	179667	0.46	5172	-2085	181.14	281.97	1.56	Si
SLV 2	179667	0.46	10545	-4250	181.14	553.94	3.06	Si
SLV 1	179667	0.46	10566	-4259	181.14	554.99	3.06	Si
SLV 14	179667	0.46	11629	-4687	181.14	606.24	3.35	Si
SLV 13	179667	0.46	11651	-4696	181.14	607.27	3.35	Si
SLV 4	179667	0.46	15769	-6356	181.14	797.95	4.41	Si
SLV 3	179667	0.46	15791	-6365	181.14	798.92	4.41	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-7198	-12423	-133	0.984	934.3	0.94	15.21873	14.44577	Si
SLV 7	-7178	-12315	-134	0.986	932.3	0.94	15.25187	14.44577	Si
SLV 12	-6826	-11300	-80	1.034	896.6	0.938	16.02593	14.44577	Si
SLV 11	-6806	-11192	-82	1.036	894.6	0.938	16.06268	14.44577	Si
SLV 4	-5665	-10635	-117	1.195	779.3	0.93	18.67157	6.41634	Si
SLV 3	-5634	-10468	-119	1.2	776.2	0.93	18.75072	6.41634	Si
SLV 6	-1562	-3487	87	2.875	373.3	0.89	46.9601	14.44577	Si
SLV 5	-1542	-3379	86	2.896	371.5	0.89	47.29572	14.44577	Si
SLV 16	-4424	-6892	59	1.457	654.5	0.92	23.00952	6.41634	Si
SLV 15	-4394	-6725	57	1.465	651.4	0.92	23.14215	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.812	SLU 39	Si
V_SLU	6.111	SLU 83	Si
PF_SLV	2.148	SLV 13	Si
V_SLV	3.601	SLV 15	Si
PFFP_SLV	1.458	SLV 6	Si
R_SLV	1.054	SLV 8	Si

Maschio 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L6	L7	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	9.88	967.63	-13644	-0.0000434	0.0003743	0.0035	2.105	11094.86	12116.36	12116.36	12.52	No	Si
SLU 52	11.68	525.54	-11129	-0.0000329	0.0003743	0.0035	2.105	9540.65	10141.8	10141.8	19.3	No	Si
SLU 47	9.88	949.01	-12809	-0.0000409	0.0003743	0.0035	2.105	10603.74	11561.95	11561.95	12.18	No	Si
SLU 47	11.68	428.58	-10294	-0.0000299	0.0003743	0.0035	2.105	8975.91	9450.91	9450.91	22.05	No	Si
SLU 48	9.88	974.23	-13444	-0.0000429	0.0003743	0.0035	2.105	10979.78	11995.11	11995.11	12.31	No	Si
SLU 48	11.68	484.76	-10929	-0.0000321	0.0003743	0.0035	2.105	9407.98	9975.81	9975.81	20.58	No	Si
SLU 49	9.88	978.33	-13468	-0.000043	0.0003743	0.0035	2.105	10993.55	12009.54	12009.54	12.28	No	Si
SLU 49	11.68	482.96	-10953	-0.0000321	0.0003743	0.0035	2.105	9423.85	9995.54	9995.54	20.7	No	Si
SLU 43	9.88	936.05	-12494	-0.0000399	0.0003743	0.0035	2.105	10412.18	11294.15	11294.15	12.07	No	Si
SLU 43	11.68	395.07	-9980	-0.0000288	0.0003743	0.0035	2.105	8756.58	9194.13	9194.13	23.27	No	Si
SLU 45	9.88	968.11	-13169	-0.000042	0.0003743	0.0035	2.105	10818.61	11817.93	11817.93	12.21	No	Si
SLU 45	11.68	448.25	-10654	-0.0000311	0.0003743	0.0035	2.105	9222.53	9747.61	9747.61	21.75	No	Si
SLU 46	9.88	972.22	-13193	-0.0000421	0.0003743	0.0035	2.105	10832.61	11833.81	11833.81	12.17	No	Si
SLU 46	11.68	446.44	-10678	-0.0000311	0.0003743	0.0035	2.105	9238.63	9767.25	9767.25	21.88	No	Si
SLU 44	9.88	942.89	-12534	-0.00004	0.0003743	0.0035	2.105	10436.44	11327.78	11327.78	12.01	No	Si
SLU 44	11.68	392.06	-10019	-0.0000289	0.0003743	0.0035	2.105	8784.34	9226.31	9226.31	23.53	No	Si
SLU 50	9.88	948.29	-13045	-0.0000415	0.0003743	0.0035	2.105	10744.88	11732.9	11732.9	12.37	No	Si
SLU 50	11.68	468.11	-10530	-0.0000309	0.0003743	0.0035	2.105	9137.84	9644.83	9644.83	20.6	No	Si
SLU 51	9.88	952.39	-13069	-0.0000416	0.0003743	0.0035	2.105	10758.99	11749.36	11749.36	12.34	No	Si
SLU 51	11.68	466.3	-10554	-0.0000309	0.0003743	0.0035	2.105	9154.04	9664.43	9664.43	20.73	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.88	-1911.79	-14333	-0.0000514	0.0005615	0.0035	2.105		14514.36	14514.36	7.59		Si
SLV 2	11.68	4100.82	-12072	-0.0000617	0.0005615	0.0035	2.105		11381.58	11381.58	2.78		Si
SLV 4	9.88	-2175.62	-12798	-0.0000492	0.0005615	0.0035	2.105		13266.4	13266.4	6.1		Si
SLV 4	11.68	4203.42	-10533	-0.0000586	0.0005615	0.0035	2.105		10171.57	10171.57	2.42		Si
SLV 13	9.88	3663.38	-8547	-0.0000495	0.0005615	0.0035	2.105		8575.96	8575.96	2.34		Si
SLV 13	11.68	-3346.45	-6908	-0.0000437	0.0005615	0.0035	2.105		8078.45	8078.45	2.41		Si
SLV 1	9.88	-2142.69	-14545	-0.0000538	0.0005615	0.0035	2.105		14685.86	14685.86	6.85		Si
SLV 1	11.68	4492.56	-12284	-0.0000654	0.0005615	0.0035	2.105		11549.63	11549.63	2.57		Si
SLV 16	9.88	3630.44	-6800	-0.0000473	0.0005615	0.0035	2.105		6970.84	6970.84	1.92		Si
SLV 16	11.68	-3635.59	-5157	-0.0000536	0.0005615	0.0035	1.684		6423.4	6423.4	1.77		Si
SLV 15	9.88	3399.54	-7012	-0.0000444	0.0005615	0.0035	2.105		7168.16	7168.16	2.11		Si
SLV 15	11.68	-3243.86	-5369	-0.000043	0.0005615	0.0035	1.684		6625.8	6625.8	2.04		Si
SLD 3	9.88	-605.87	-11665	-0.0000344	0.0005615	0.0035	2.105		12305.9	12305.9	20.31		Si
SLD 3	11.68	2211.31	-9579	-0.0000407	0.0005615	0.0035	2.105		9430.36	9430.36	4.26		Si
SLV 7	9.88	-641.15	-9083	-0.0000278	0.0005615	0.0035	2.105		10059.74	10059.74	15.69		Si
SLV 7	11.68	1901.55	-7030	-0.0000317	0.0005615	0.0035	2.105		7184.86	7184.86	3.78		Si
SLV 14	9.88	3894.28	-8335	-0.0000515	0.0005615	0.0035	2.105		8384.13	8384.13	2.15		Si
SLV 14	11.68	-3738.18	-6696	-0.0000489	0.0005615	0.0035	2.105		7885.25	7885.25	2.11		Si
SLV 3	9.88	-2406.52	-13010	-0.0000515	0.0005615	0.0035	2.105		13443.44	13443.44	5.59		Si
SLV 3	11.68	4595.15	-10745	-0.0000627	0.0005615	0.0035	2.105		10337.13	10337.13	2.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	9.88	974.23	-13444	-11195	312	2.105	2.105	-18995	9477	5586	40441	17649	5368	23017	No	73.84	Si
SLU 48	11.68	484.76	-10929	-9101	312	2.105	2.105	-15441	9003	5306	40441	17649	5368	23017	No	73.84	Si
SLU 44	9.88	942.89	-12534	-10437	346	2.105	2.105	-17708	9306	5485	40441	17649	5368	23017	No	66.56	Si
SLU 44	11.68	392.06	-10019	-8343	346	2.105	2.105	-14155	8832	5205	40441	17649	5368	23017	No	66.56	Si
SLU 52	9.88	967.63	-13644	-11361	285	2.105	2.105	-19276	9515	5608	40441	17649	5368	23017	No	80.64	Si
SLU 52	11.68	525.54	-11129	-9267	285	2.105	2.105	-15723	9041	5329	40441	17649	5368	23017	No	80.64	Si
SLU 49	9.88	978.33	-13468	-11215	315	2.105	2.105	-19028	9482	5588	40441	17649	5368	23017	No	73.07	Si
SLU 49	11.68	482.96	-10953	-9121	315	2.105	2.105	-15475	9008	5309	40441	17649	5368	23017	No	73.07	Si
SLU 50	9.88	948.29	-13045	-10863	307	2.105	2.105	-18430	9402	5541	40441	17649	5368	23017	No	75.08	Si
SLU 50	11.68	468.11	-10530	-8768	307	2.105	2.105	-14877	8928	5262	40441	17649	5368	23017	No	75.08	Si
SLU 43	9.88	936.05	-12494	-10404	340	2.105	2.105	-17653	9298	5480	40441	17649	5368	23017	No	67.63	Si
SLU 43	11.68	395.07	-9980	-8310	340	2.105	2.105	-14099	8824	5201	40441	17649	5368	23017	No	67.63	Si
SLU 46	9.88	972.22	-13193	-10986	332	2.105	2.105	-18639	9430	5558	40441	17649	5368	23017	No	69.35	Si
SLU 46	11.68	446.44	-10678	-8892	332	2.105	2.105	-15086	8956	5279	40441	17649	5368	23017	No	69.35	Si
SLU 47	9.88	949.01	-12809	-10666	329	2.105	2.105	-18097	9357	5515	40441	17649	5368	23017	No	69.97	Si
SLU 47	11.68	428.58	-10294	-8572	329	2.105	2.105	-14544	8884	5236	40441	17649	5368	23017	No	69.97	Si
SLU 45	9.88	968.11	-13169	-10966	329	2.105	2.105	-18606	9425	5555	40441	17649	5368	23017	No	70.04	Si
SLU 45	11.68	448.25	-10654	-8872	329	2.105	2.105	-15053	8951	5276	40441	17649	5368	23017	No	70.04	Si
SLU 51	9.88	952.39	-13069	-10882	310	2.105	2.105	-18464	9406	5544	40441	17649	5368	23017	No	74.28	Si
SLU 51	11.68	466.3	-10554	-8788	310	2.105	2.105	-14910	8933	5265	40441	17649	5368	23017	No	74.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.88	3663.38	-8547	-7117	4054	2.105	1.8716	-12075	12832	6724	40441	26474	5368	31841		7.85	Si
SLV 13	11.68	-3346.45	-6908	-5753	3541	2.105	1.7042	-12122	12841	6128	40441	26474	5368	31841		8.99	Si
SLV 16	9.88	3630.44	-6800	-5663	4181	2.105	1.5559	-9608	12338	5375	40441	26474	5368	31841		7.62	Si
SLV 16	11.68	-3635.59	-5157	-4295	3657	1.684	1.0427	0	0	0	40441	21179	4294	25473		6.97	Si
SLV 14	9.88	3894.28	-8335	-6941	4400	2.105	1.7558	-11776	12772	6279	40441	26474	5368	31841		7.24	Si
SLV 14	11.68	-3738.18	-6696	-5576	3887	2.105	1.4827	-13514	13120	5447	40441	26474	5368	31841		8.19	Si
SLV 4	9.88	-2175.62	-12798	-10657	-3642	2.105	2.105	-18082	14033	8271	40441	26474	5368	31841		8.74	Si
SLV 4	11.68	4203.42	-10533	-8771	-3130	2.105	1.9602	-14881	13393	7351	40441	26474	5368	31841		10.17	Si
SLV 2	9.88	-1911.79	-14333	-11935	-3424	2.105	2.105	-20250	14467	8527	40441	26474	5368	31841		9.3	Si
SLV 2	11.68	4100.82	-12072	-10052	-2899	2.105	2.105	-17055	13828	8150	40441	26474	5368	31841		10.98	Si
SLV 1	9.88	-2142.69	-14545	-12112	-3769	2.105	2.105	-20549	14526	8562	40441	26474	5368	31841		8.45	Si
SLV 1	11.68	4492.56	-12284	-10229	-3245	2.105	2.0603	-17355	13888	8011	40441	26474	5368	31841		9.81	Si
SLD 14	9.88	2093.63	-9680	-8061	2001	2.105	2.105	-13677	13152	7752	40441	26474	5368	31841		15.91	Si
SLD 14	11.68	-1354.34	-7862	-6547	1782	2.105	2.105	-11108	12638	7449	40441	26474	5368	31841		17.87	Si
SLD 16	9.88	1977.46	-9006	-7499	1905	2.105	2.105	-12723	12961	7639	40441	26474	5368	31841		16.72	Si
SLD 16	11.68	-1308.9	-7185	-5983	1681	2.105	2.105	-10152	12447	7336	40441	26474	5368	31841		18.94	Si
SLV 15	9.88	3399.54	-7012	-5839	3835	2.105	1.7031	-9907	12398	5912	40441	26474	5368	31841		8.3	Si
SLV 15	11.68	-3243.86	-5369	-4471	3311	1.684	1.345	0	0	0	40441	21179	4294	25473		7.69	Si
SLV 3	9.88	-2406.52	-13010	-10834	-3988	2.105	2.105	-18381	14093	8306	40441	26474	5368	31841		7.98	Si
SLV 3	11.68	4595.15	-10745	-8947	-3476	2.105	1.8745	-15181	13453	7061	40441	26474	5368	31841		9.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	10289	-6064	258.86	791.79	3.06	Si
SLV 12	179667	0.46	10431	-6148	258.86	801.92	3.1	Si
SLV 15	179667	0.46	10648	-6276	258.86	817.39	3.16	Si
SLV 11	179667	0.46	10663	-6284	258.86	818.39	3.16	Si
SLV 14	179667	0.46	12887	-7596	258.86	973.67	3.76	Si
SLV 8	179667	0.46	13096	-7719	258.86	987.98	3.82	Si
SLV 13	179667	0.46	13247	-7808	258.86	998.26	3.86	Si
SLV 7	179667	0.46	13328	-7855	258.86	1003.79	3.88	Si
SLV 10	179667	0.46	19093	-11253	258.86	1378.48	5.33	Si
SLV 4	179667	0.46	19174	-11301	258.86	1383.49	5.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-9992	-9949	637	0.989	1312.2	0.938	15.33229	14.44577	Si
SLV 9	-9951	-10310	637	0.993	1308	0.938	15.38569	14.44577	Si
SLV 6	-9714	-13891	648	1.011	1284.1	0.937	15.68858	14.44577	Si
SLV 5	-9673	-14252	648	1.015	1280	0.936	15.74462	14.44577	Si
SLV 12	-4692	-6001	-646	1.755	779.6	0.908	28.10635	14.44577	Si
SLV 11	-4651	-6362	-646	1.766	775.5	0.907	28.28804	14.44577	Si
SLV 8	-4414	-9943	-635	1.833	752.1	0.905	29.41923	14.44577	Si
SLV 7	-4374	-10304	-635	1.845	748.1	0.905	29.61783	14.44577	Si
SLV 14	-8472	-3869	175	1.174	1158.5	0.931	18.31941	6.41634	Si
SLV 13	-8409	-4430	175	1.181	1152.2	0.931	18.43437	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.014	SLU 44	Si
V_SLU	66.557	SLU 44	Si
PF_SLV	1.767	SLV 16	Si
V_SLV	6.965	SLV 16	Si
PFFP_SLV	3.059	SLV 16	Si
R_SLV	1.061	SLV 10	Si

Maschio 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	9.88	2201.28	-31973	-0.00005	0.0003743	0.0035	3.98	45695.92	50641.06	50641.06	23.01	No	Si
SLU 63	11.68	-601.44	-27764	-0.0000401	0.0003743	0.0035	3.98	41730.44	50084.65	50084.65	83.27	No	Si
SLU 60	9.88	2167.47	-31100	-0.0000486	0.0003743	0.0035	3.98	44924.48	49594.17	49594.17	22.88	No	Si
SLU 60	11.68	-743.23	-26891	-0.0000391	0.0003743	0.0035	3.98	40830.12	48912.79	48912.79	65.81	No	Si
SLU 84	9.88	2365.64	-35170	-0.0000553	0.0003743	0.0035	3.98	48293.11	54529.63	54529.63	23.05	No	Si
SLU 84	11.68	-549.72	-30899	-0.0000447	0.0003743	0.0035	3.98	44743.02	54046.27	54046.27	98.32	No	Si
SLU 62	9.88	2195.78	-31938	-0.0000499	0.0003743	0.0035	3.98	45665.48	50598.89	50598.89	23.04	No	Si
SLU 62	11.68	-591.61	-27729	-0.00004	0.0003743	0.0035	3.98	41694.83	50037.35	50037.35	84.58	No	Si
SLU 52	9.88	2080.77	-30067	-0.0000468	0.0003743	0.0035	3.98	43976.92	48366.7	48366.7	23.24	No	Si
SLU 52	11.68	-713	-25858	-0.0000375	0.0003743	0.0035	3.98	39730.04	47544.7	47544.7	66.68	No	Si
SLU 81	9.88	2331.83	-34297	-0.0000539	0.0003743	0.0035	3.98	47619.56	53456.63	53456.63	22.92	No	Si
SLU 81	11.68	-691.51	-30026	-0.0000437	0.0003743	0.0035	3.98	43938.69	52958.22	52958.22	76.58	No	Si
SLU 73	9.88	2245.13	-33264	-0.0000521	0.0003743	0.0035	3.98	46787.87	52198.31	52198.31	23.25	No	Si
SLU 73	11.68	-661.28	-28993	-0.0000421	0.0003743	0.0035	3.98	42952.21	51669.18	51669.18	78.13	No	Si
SLU 61	9.88	2172.97	-31135	-0.0000486	0.0003743	0.0035	3.98	44955.94	49636	49636	22.84	No	Si
SLU 61	11.68	-753.06	-26926	-0.0000392	0.0003743	0.0035	3.98	40866.76	48959.53	48959.53	65.01	No	Si
SLU 83	9.88	2360.14	-35135	-0.0000553	0.0003743	0.0035	3.98	48266.6	54486.41	54486.41	23.09	No	Si
SLU 83	11.68	-539.89	-30864	-0.0000446	0.0003743	0.0035	3.98	44711.27	54002.98	54002.98	100.03	No	Si
SLU 82	9.88	2337.33	-34332	-0.000054	0.0003743	0.0035	3.98	47647.1	53499.51	53499.51	22.89	No	Si
SLU 82	11.68	-701.34	-30061	-0.0000438	0.0003743	0.0035	3.98	43971.48	53001.83	53001.83	75.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.88	-11664.51	-28267	-0.0000634	0.0005615	0.0035	3.98		53689.4	53689.4	4.6		Si
SLV 2	11.68	13529.98	-24918	-0.0000624	0.0005615	0.0035	3.98		43870.71	43870.71	3.24		Si
SLD 16	9.88	7695.44	-21462	-0.0000451	0.0005615	0.0035	3.98		38740.93	38740.93	5.03		Si
SLD 16	11.68	-7039.41	-18224	-0.0000391	0.0005615	0.0035	3.98		37721.62	37721.62	5.36		Si
SLV 15	9.88	14815.91	-18950	-0.000057	0.0005615	0.0035	3.98		35066.04	35066.04	2.37		Si
SLV 15	11.68	-14439.7	-15756	-0.0000531	0.0005615	0.0035	3.98		33586.89	33586.89	2.33		Si
SLD 14	9.88	7882.05	-22459	-0.0000469	0.0005615	0.0035	3.98		40211.2	40211.2	5.1		Si
SLD 14	11.68	-7338.25	-19214	-0.0000411	0.0005615	0.0035	3.98		39379.47	39379.47	5.37		Si
SLV 13	9.88	15239.18	-21217	-0.0000608	0.0005615	0.0035	3.98		38379.06	38379.06	2.52		Si
SLV 13	11.68	-15117.56	-18008	-0.0000568	0.0005615	0.0035	3.98		37360.68	37360.68	2.47		Si
SLV 3	9.88	-13159.47	-26329	-0.0000637	0.0005615	0.0035	3.98		50727.26	50727.26	3.85		Si
SLV 3	11.68	15633.54	-22994	-0.0000641	0.0005615	0.0035	3.98		41003.81	41003.81	2.62		Si
SLV 1	9.88	-12736.2	-28595	-0.0000662	0.0005615	0.0035	3.98		54194.53	54194.53	4.26		Si
SLV 1	11.68	14955.69	-25246	-0.0000659	0.0005615	0.0035	3.98		44362.31	44362.31	2.97		Si
SLV 4	9.88	-12087.79	-26001	-0.000061	0.0005615	0.0035	3.98		50229.76	50229.76	4.16		Si
SLV 4	11.68	14207.83	-22666	-0.0000605	0.0005615	0.0035	3.98		40517.69	40517.69	2.85		Si
SLV 14	9.88	16310.86	-20888	-0.000063	0.0005615	0.0035	3.98		37897.18	37897.18	2.32		Si
SLV 14	11.68	-16543.27	-17680	-0.0000611	0.0005615	0.0035	3.98		36814.77	36814.77	2.23		Si
SLV 16	9.88	15887.59	-18622	-0.0000596	0.0005615	0.0035	3.98		34589.58	34589.58	2.18		Si
SLV 16	11.68	-15865.41	-15428	-0.0000583	0.0005615	0.0035	3.98		33011.37	33011.37	2.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	9.88	2167.47	-31100	-25897	1609	3.98	3.98	-23239	10043	11192	40441	33370	10149	43519	No	27.04	Si
SLU 60	11.68	-743.23	-26891	-22393	1609	3.98	3.98	-20094	9624	10725	40441	33370	10149	43519	No	27.04	Si
SLU 74	9.88	2288.03	-34849	-29020	1549	3.98	3.98	-26041	10417	11608	40441	33370	10149	43519	No	28.09	Si
SLU 74	11.68	-514.31	-30578	-25463	1549	3.98	3.98	-22849	9991	11134	40441	33370	10149	43519	No	28.09	Si
SLU 84	9.88	2365.64	-35170	-29286	1612	3.98	3.98	-26280	10448	11644	40441	33370	10149	43519	No	27	Si
SLU 84	11.68	-549.72	-30899	-25730	1612	3.98	3.98	-23089	10023	11170	40441	33370	10149	43519	No	27	Si
SLU 63	9.88	2201.28	-31973	-26624	1549	3.98	3.98	-23891	10130	11289	40441	33370	10149	43519	No	28.09	Si
SLU 63	11.68	-601.44	-27764	-23120	1549	3.98	3.98	-20746	9711	10822	40441	33370	10149	43519	No	28.09	Si
SLU 81	9.88	2331.83	-34297	-28560	1672	3.98	3.98	-25628	10361	11547	40441	33370	10149	43519	No	26.03	Si
SLU 81	11.68	-691.51	-30026	-25003	1672	3.98	3.98	-22436	9936	11073	40441	33370	10149	43519	No	26.03	Si
SLU 83	9.88	2360.14	-35135	-29257	1604	3.98	3.98	-26254	10445	11640	40441	33370	10149	43519	No	27.14	Si
SLU 83	11.68	-539.89	-30864	-25701	1604	3.98	3.98	-23062	10019	11166	40441	33370	10149	43519	No	27.14	Si
SLU 82	9.88	2337.33	-34332	-28589	1681	3.98	3.98	-25654	10365	11551	40441	33370	10149	43519	No	25.9	Si
SLU 82	11.68	-701.34	-30061	-25032	1681	3.98	3.98	-22462	9939	11077	40441	33370	10149	43519	No	25.9	Si
SLU 73	9.88	2245.13	-33264	-27699	1607	3.98	3.98	-24856	10259	11432	40441	33370	10149	43519	No	27.08	Si
SLU 73	11.68	-661.28	-28993	-24143	1607	3.98	3.98	-21664	9833	10958	40441	33370	10149	43519	No	27.08	Si
SLU 75	9.88	2293.53	-34884	-29049	1558	3.98	3.98	-26067	10420	11612	40441	33370	10149	43519	No	27.94	Si
SLU 75	11.68	-524.14	-30613	-25492	1558	3.98	3.98	-22875	9994	11138	40441	33370	10149	43519	No	27.94	Si
SLU 61	9.88	2172.97	-31135	-25926	1618	3.98	3.98	-23265	10046	11196	40441	33370	10149	43519	No	26.9	Si
SLU 61	11.68	-753.06	-26926	-22422	1618	3.98	3.98	-20120	9627	10728	40441	33370	10149	43519	No	26.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	9.88	16310.86	-20888	-17394	18786	3.98	3.6274	-15608	13538	13751	40441	50055	10149	54192		2.88	Si
SLV 14	11.68	-16543.27	-17680	-14722	17644	3.98	3.1628	-16756	13768	12193	40441	50055	10149	52634		2.98	Si
SLV 2	9.88	-11664.51	-28267	-23538	-14419	3.98	3.98	-21122	14641	16316	40441	50055	10149	56757		3.94	Si
SLV 2	11.68	13529.98	-24918	-20749	-13517	3.98	3.98	-18619	14141	15758	40441	50055	10149	56199		4.16	Si
SLV 13	9.88	15239.18	-21217	-17667	17398	3.98	3.8152	-15854	13587	14515	40441	50055	10149	54956		3.16	Si
SLV 13	11.68	-15117.56	-18008	-14995	16256	3.98	3.4515	-15634	13544	13089	40441	50055	10149	53530		3.29	Si
SLV 1	9.88	-12736.2	-28595	-23811	-15806	3.98	3.98	-21367	14690	16371	40441	50055	10149	56812		3.59	Si
SLV 1	11.68	14955.69	-25246	-21022	-14904	3.98	3.98	-18864	14190	15813	40441	50055	10149	56254		3.77	Si
SLV 4	9.88	-12087.79	-26001	-21651	-15154	3.98	3.98	-19428	14302	15939	40441	50055	10149	56379		3.72	Si
SLV 4	11.68	14207.83	-22666	-18874	-14012	3.98	3.98	-16937	13804	15383	40441	50055	10149	55824		3.98	Si
SLV 15	9.88	14815.91	-18950	-15780	16663	3.98	3.6245	-14160	13249	13446	40441	50055	10149	53887		3.23	Si
SLV 15	11.68	-14439.7	-15756	-13120	15761	3.98	3.2206	-14649	13347	12036	40441	50055	10149	52477		3.33	Si
SLV 3	9.88	-13159.47	-26329	-21924	-16542	3.98	3.98	-19674	14351	15993	40441	50055	10149	56434		3.41	Si
SLV 3	11.68	15633.54	-22994	-19147	-15399	3.98	3.9303	-17182	13853	15245	40441	50055	10149	55686		3.62	Si
SLD 16	9.88	7695.44	-21462	-17872	8358	3.98	3.98	-16037	13624	15183	40441	50055	10149	55624		6.66	Si
SLD 16	11.68	-7039.41	-18224	-15176	7973	3.98	3.98	-13618	13140	14643	40441	50055	10149	55084		6.91	Si
SLD 14	9.88	7882.05	-22459	-18702	8680	3.98	3.98	-16782	13773	15349	40441	50055	10149	55790		6.43	Si
SLD 14	11.68	-7338.25	-19214	-16000	8192	3.98	3.98	-14357	13288	14808	40441	50055	10149	55249		6.74	Si
SLV 16	9.88	15887.59	-18622	-15507	18051	3.98	3.4105	-13915	13200	12605	40441	50055	10149	53046		2.94	Si
SLV 16	11.68	-15865.41	-15428	-12847	17149	3.98	2.885	-16025	13622	11004	40441	50055	10149	51445		3	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	15144	-16877	489.44	2128.47	4.35	Si
SLV 12	179667	0.46	15173	-16909	489.44	2132.1	4.36	Si
SLV 11	179667	0.46	15363	-17121	489.44	2155.77	4.4	Si
SLV 15	179667	0.46	15439	-17205	489.44	2165.2	4.42	Si
SLV 14	179667	0.46	17165	-19129	489.44	2377.01	4.86	Si
SLV 8	179667	0.46	17174	-19139	489.44	2378.1	4.86	Si
SLV 7	179667	0.46	17364	-19350	489.44	2401	4.91	Si
SLV 13	179667	0.46	17459	-19457	489.44	2412.52	4.93	Si
SLV 4	179667	0.46	21813	-24308	489.44	2917.08	5.96	Si
SLV 10	179667	0.46	21909	-24415	489.44	2927.73	5.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18874	-28231	1119	0.994	2479.1	0.938	15.40388	14.44577	Si
SLV 6	-18732	-27969	1119	1	2464.8	0.937	15.50273	14.44577	Si
SLV 9	-17704	-25024	1096	1.048	2360.8	0.935	16.28017	14.44577	Si
SLV 10	-17563	-24762	1096	1.054	2346.5	0.935	16.39081	14.44577	Si
SLV 7	-12966	-21487	-1094	1.337	1883.1	0.922	21.0678	14.44577	Si
SLV 8	-12824	-21226	-1094	1.348	1868.9	0.922	21.25474	14.44577	Si
SLV 11	-11796	-18281	-1118	1.435	1765.7	0.919	22.69821	14.44577	Si
SLV 12	-11655	-18019	-1118	1.448	1751.5	0.918	22.91568	14.44577	Si
SLV 1	-18209	-29684	372	1.057	2411.9	0.936	16.41366	6.41634	Si
SLV 2	-17990	-29278	372	1.068	2389.7	0.936	16.5833	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	22.842	SLU 61	Si
V_SLU	25.896	SLU 82	Si
PF_SLV	2.081	SLV 16	Si
V_SLV	2.885	SLV 14	Si
PFFP_SLV	4.349	SLV 16	Si
R_SLV	1.066	SLV 5	Si

Maschio 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	9.88	-1009.78	-30760	-0.0000455	0.0003743	0.0035	3.98	44617.36	53875.16	53875.16	53.35	No	Si
SLU 48	11.68	-80.46	-26438	-0.000037	0.0003743	0.0035	3.98	40351.92	48309.84	48309.84	600.42	No	Si
SLU 46	9.88	-994.79	-29877	-0.0000441	0.0003743	0.0035	3.98	43799.33	52773.73	52773.73	53.05	No	Si
SLU 46	11.68	-1.36	-25555	-0.0000355	0.0003743	0.0035	3.98	39400	47146.97	47146.97	34762.69	No	Si
SLU 45	9.88	-993.56	-29840	-0.0000441	0.0003743	0.0035	3.98	43763.59	52726.76	52726.76	53.07	No	Si
SLU 45	11.68	-9.45	-25517	-0.0000355	0.0003743	0.0035	3.98	39358.52	47097.18	47097.18	4984.79	No	Si
SLU 43	9.88	-996.04	-28127	-0.0000415	0.0003743	0.0035	3.98	42096.46	50564.8	50564.8	50.77	No	Si
SLU 43	11.68	76.53	-23804	-0.0000331	0.0003743	0.0035	3.98	37431.66	40565.47	40565.47	530.06	No	Si
SLU 44	9.88	-998.09	-28190	-0.0000416	0.0003743	0.0035	3.98	42159.79	50646.16	50646.16	50.74	No	Si
SLU 44	11.68	90.02	-23867	-0.0000333	0.0003743	0.0035	3.98	37504.57	40666.33	40666.33	451.76	No	Si
SLU 50	9.88	-1028.49	-29968	-0.0000444	0.0003743	0.0035	3.98	43884.91	52886.86	52886.86	51.42	No	Si
SLU 50	11.68	-65.49	-25646	-0.0000358	0.0003743	0.0035	3.98	39499.38	47266.14	47266.14	721.68	No	Si
SLU 65	9.88	-1019.77	-31472	-0.0000466	0.0003743	0.0035	3.98	45256.23	54750.8	54750.8	53.69	No	Si
SLU 65	11.68	-21.58	-27086	-0.0000378	0.0003743	0.0035	3.98	41033.43	49173.14	49173.14	2278.55	No	Si
SLU 51	9.88	-1029.71	-30006	-0.0000444	0.0003743	0.0035	3.98	43920.47	52934.02	52934.02	51.41	No	Si
SLU 51	11.68	-57.4	-25684	-0.0000358	0.0003743	0.0035	3.98	39540.69	47315.82	47315.82	824.28	No	Si
SLU 49	9.88	-1011.01	-30798	-0.0000456	0.0003743	0.0035	3.98	44651.87	53922.1	53922.1	53.33	No	Si
SLU 49	11.68	-72.37	-26476	-0.000037	0.0003743	0.0035	3.98	40392.18	48360.1	48360.1	668.25	No	Si
SLU 47	9.88	-1014.31	-29111	-0.000043	0.0003743	0.0035	3.98	43066.85	51817.96	51817.96	51.09	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	11.68	19	-24788	-0.0000344	0.0003743	0.0035	3.98	38551.26	42101.69	42101.69	2215.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	9.88	-16059.15	-21461	-0.000063	0.0005615	0.0035	3.98		43062.87	43062.87	2.68		Si
SLV 4	11.68	15433.85	-18020	-0.0000578	0.0005615	0.0035	3.98		33716.9	33716.9	2.18		Si
SLV 2	9.88	-15887.16	-23976	-0.000066	0.0005615	0.0035	3.98		47084.89	47084.89	2.96		Si
SLV 2	11.68	15846.75	-20524	-0.0000614	0.0005615	0.0035	3.98		37363.17	37363.17	2.36		Si
SLV 1	9.88	-17142.5	-23852	-0.0000687	0.0005615	0.0035	3.98		46883.97	46883.97	2.73		Si
SLV 1	11.68	17384.39	-20400	-0.0000655	0.0005615	0.0035	3.98		37180.82	37180.82	2.14		Si
SLD 1	9.88	-7767.32	-24056	-0.000049	0.0005615	0.0035	3.98		47213.94	47213.94	6.08		Si
SLD 1	11.68	7411.13	-20657	-0.0000433	0.0005615	0.0035	3.98		37557.49	37557.49	5.07		Si
SLV 16	9.88	15613.55	-24515	-0.0000663	0.0005615	0.0035	3.98		43269	43269	2.77		Si
SLV 16	11.68	-17463.73	-21248	-0.0000665	0.0005615	0.0035	3.98		42725.55	42725.55	2.45		Si
SLV 15	9.88	14358.22	-24391	-0.0000634	0.0005615	0.0035	3.98		43082.96	43082.96	3		Si
SLV 15	11.68	-15926.1	-21124	-0.0000623	0.0005615	0.0035	3.98		42528.63	42528.63	2.67		Si
SLV 3	9.88	-17314.49	-21337	-0.0000661	0.0005615	0.0035	3.98		42865.66	42865.66	2.48		Si
SLV 3	11.68	16971.48	-17895	-0.0000627	0.0005615	0.0035	3.98		33536.82	33536.82	1.98		Si
SLV 14	9.88	15785.54	-27030	-0.0000704	0.0005615	0.0035	3.98		47050.64	47050.64	2.98		Si
SLV 14	11.68	-17050.83	-23753	-0.0000684	0.0005615	0.0035	3.98		46724.21	46724.21	2.74		Si
SLD 3	9.88	-7841.78	-22950	-0.0000475	0.0005615	0.0035	3.98		45434.44	45434.44	5.79		Si
SLD 3	11.68	7228.57	-19556	-0.0000414	0.0005615	0.0035	3.98		35947.52	35947.52	4.97		Si
SLV 13	9.88	14530.21	-26906	-0.0000675	0.0005615	0.0035	3.98		46862.32	46862.32	3.23		Si
SLV 13	11.68	-15513.19	-23628	-0.0000647	0.0005615	0.0035	3.98		46523.59	46523.59	3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	9.88	-996.04	-28127	-23422	-602	3.98	3.98	-21017	9747	10862	40441	33370	10149	43519	No	72.29	Si
SLU 43	11.68	76.53	-23804	-19822	-602	3.98	3.98	-17787	9316	10382	40441	33370	10149	43519	No	72.29	Si
SLU 51	9.88	-1029.71	-30006	-24987	-546	3.98	3.98	-22422	9934	11070	40441	33370	10149	43519	No	79.66	Si
SLU 51	11.68	-57.4	-25684	-21387	-546	3.98	3.98	-19192	9503	10591	40441	33370	10149	43519	No	79.66	Si
SLU 50	9.88	-1028.49	-29968	-24955	-541	3.98	3.98	-22393	9930	11066	40441	33370	10149	43519	No	80.43	Si
SLU 50	11.68	-65.49	-25646	-21356	-541	3.98	3.98	-19163	9500	10586	40441	33370	10149	43519	No	80.43	Si
SLU 45	9.88	-993.56	-29840	-24848	-553	3.98	3.98	-22297	9917	11052	40441	33370	10149	43519	No	78.72	Si
SLU 45	11.68	-9.45	-25517	-21248	-553	3.98	3.98	-19067	9487	10572	40441	33370	10149	43519	No	78.72	Si
SLU 44	9.88	-998.09	-28190	-23474	-611	3.98	3.98	-21064	9753	10869	40441	33370	10149	43519	No	71.27	Si
SLU 44	11.68	90.02	-23867	-19875	-611	3.98	3.98	-17834	9322	10389	40441	33370	10149	43519	No	71.27	Si
SLU 68	9.88	-1035.99	-32392	-26974	-530	3.98	3.98	-24205	10172	11335	40441	33370	10149	43519	No	82.09	Si
SLU 68	11.68	-92.59	-28007	-23322	-530	3.98	3.98	-20928	9735	10848	40441	33370	10149	43519	No	82.09	Si
SLU 65	9.88	-1019.77	-31472	-26207	-561	3.98	3.98	-23516	10080	11233	40441	33370	10149	43519	No	77.63	Si
SLU 65	11.68	-21.58	-27086	-22555	-561	3.98	3.98	-20240	9643	10746	40441	33370	10149	43519	No	77.63	Si
SLU 46	9.88	-994.79	-29877	-24879	-558	3.98	3.98	-22325	9921	11056	40441	33370	10149	43519	No	77.99	Si
SLU 46	11.68	-1.36	-25555	-21280	-558	3.98	3.98	-19095	9490	10576	40441	33370	10149	43519	No	77.99	Si
SLU 64	9.88	-1017.72	-31408	-26154	-552	3.98	3.98	-23469	10074	11226	40441	33370	10149	43519	No	78.85	Si
SLU 64	11.68	-35.07	-27023	-22502	-552	3.98	3.98	-20192	9637	10739	40441	33370	10149	43519	No	78.85	Si
SLU 47	9.88	-1014.31	-29111	-24241	-580	3.98	3.98	-21752	9845	10971	40441	33370	10149	43519	No	75.01	Si
SLU 47	11.68	19	-24788	-20641	-580	3.98	3.98	-18522	9414	10491	40441	33370	10149	43519	No	75.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	9.88	15613.55	-24515	-20414	18984	3.98	3.98	-18319	14080	15691	40441	50055	10149	56132		2.96	Si
SLV 16	11.68	-17463.73	-21248	-17694	18068	3.98	3.5043	-18196	14056	13792	40441	50055	10149	54233		3	Si
SLD 1	9.88	-7767.32	-24056	-20032	-8698	3.98	3.98	-17976	14012	15615	40441	50055	10149	56056		6.44	Si
SLD 1	11.68	7411.13	-20657	-17201	-8308	3.98	3.98	-15435	13504	15049	40441	50055	10149	55490		6.68	Si
SLV 4	9.88	-16059.15	-21461	-17871	-18253	3.98	3.7251	-17271	13871	14468	40441	50055	10149	54909		3.01	Si
SLV 4	11.68	15433.85	-18020	-15005	-17195	3.98	3.4005	-13465	13110	12482	40441	50055	10149	52923		3.08	Si
SLV 3	9.88	-17314.49	-21337	-17767	-19804	3.98	3.5355	-18073	14031	13890	40441	50055	10149	54331		2.74	Si
SLV 3	11.68	16971.48	-17895	-14902	-18746	3.98	3.1249	-13372	13091	11454	40441	50055	10149	51895		2.77	Si
SLD 3	9.88	-7841.78	-22950	-19111	-8700	3.98	3.98	-17149	13847	15431	40441	50055	10149	55872		6.42	Si
SLD 3	11.68	7228.57	-19556	-16284	-8247	3.98	3.98	-14613	13339	14865	40441	50055	10149	55306		6.71	Si
SLV 13	9.88	14530.21	-26906	-22405	17438	3.98	3.98	-20105	14438	16089	40441	50055	10149	56530		3.24	Si
SLV 13	11.68	-15513.19	-23628	-19675	16380	3.98	3.98	-17656	13948	15543	40441	50055	10149	55984		3.42	Si
SLV 14	9.88	15785.54	-27030	-22509	18990	3.98	3.98	-20198	14456	16110	40441	50055	10149	56551		2.98	Si
SLV 14	11.68	-17050.83	-23753	-19779	17932	3.98	3.8165	-18676	14152	15123	40441	50055	10149	55564		3.1	Si
SLV 15	9.88	14358.22	-24391	-20311	17433	3.98	3.98	-18226	14062	15670	40441	50055	10149	56111		3.22	Si
SLV 15	11.68	-15926.1	-21124	-17590	16516	3.98	3.7082	-17074	13831	14361	40441	50055	10149	54802		3.32	Si
SLV 2	9.88	-15887.16	-23976	-19965	-18247	3.98	3.98	-17916	14000	15601	40441	50055	10149	56042		3.07	Si
SLV 2	11.68	15846.75	-20524	-17091	-17331	3.98	3.6537	-15336	13484	13795	40441	50055	10149	54236		3.13	Si
SLV 1	9.88	-17142.5	-23852	-19862	-19799	3.98	3.8139	-18767	14170	15132	40441	50055	10149	55573		2.81	Si
SLV 1	11.68	17384.39	-20400	-16987	-18883	3.98	3.4134	-15243	13465	12870	40441	50055	10149	53311		2.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	15993	-17823	489.44	2233.86	4.56	Si
SLV 8	179667	0.46	16065	-17903	489.44	2242.74	4.58	Si
SLV 11	179667	0.46	16912	-18847	489.44	2346.37	4.79	Si
SLV 12	179667	0.46	16984	-18927	489.44	2355.11	4.81	Si
SLV 3	179667	0.46	17520	-19525	489.44	2419.86	4.94	Si
SLV 4	179667	0.46	17632	-19649	489.44	2433.28	4.97	Si
SLV 1	179667	0.46	19766	-22027	489.44	2684.64	5.49	Si
SLV 2	179667	0.46	19877	-22151	489.44	2697.55	5.51	Si
SLV 15	179667	0.46	20584	-22939	489.44	2778.62	5.68	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	20696	-23064	489.44	2791.34	5.7	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19194	-29181	1036	0.984	2511.6	0.938	15.24064	14.44577	Si
SLV 9	-19129	-29107	1036	0.987	2505	0.938	15.28484	14.44577	Si
SLV 6	-18711	-27966	1042	1.004	2462.7	0.937	15.57151	14.44577	Si
SLV 5	-18646	-27892	1042	1.007	2456.1	0.937	15.61772	14.44577	Si
SLV 12	-12873	-20856	-1039	1.348	1873.7	0.922	21.24329	14.44577	Si
SLV 11	-12808	-20782	-1039	1.353	1867.2	0.922	21.3302	14.44577	Si
SLV 8	-12389	-19641	-1034	1.388	1825.2	0.921	21.91225	14.44577	Si
SLV 7	-12324	-19567	-1034	1.393	1818.6	0.92	22.00474	14.44577	Si
SLV 14	-17564	-27705	303	1.092	2346.7	0.935	16.97395	6.41634	Si
SLV 13	-17463	-27591	303	1.097	2336.5	0.935	17.05689	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	50.743	SLU 44	Si
V_SLU	71.271	SLU 44	Si
PF_SLV	1.976	SLV 3	Si
V_SLV	2.743	SLV 3	Si
PFFP_SLV	4.564	SLV 7	Si
R_SLV	1.055	SLV 10	Si

Maschio 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L6	L7	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	9.88	-1362.09	-11759	-0.000045	0.0003743	0.0035	1.965	9128.25	10850.64	10850.64	7.97	No	Si
SLU 43	11.68	-367.33	-9273	-0.0000289	0.0003743	0.0035	1.965	7602.86	9057.54	9057.54	24.66	No	Si
SLU 45	9.88	-1390.01	-12479	-0.0000475	0.0003743	0.0035	1.965	9529.36	11344.32	11344.32	8.16	No	Si
SLU 45	11.68	-434.64	-9993	-0.0000316	0.0003743	0.0035	1.965	8066.72	9588.58	9588.58	22.06	No	Si
SLU 48	9.88	-1401.93	-12841	-0.0000487	0.0003743	0.0035	1.965	9724.45	11582.31	11582.31	8.26	No	Si
SLU 48	11.68	-466.32	-10355	-0.0000329	0.0003743	0.0035	1.965	8293.41	9857.54	9857.54	21.14	No	Si
SLU 47	9.88	-1388.51	-12172	-0.0000465	0.0003743	0.0035	1.965	9360.42	11136.93	11136.93	8.02	No	Si
SLU 47	11.68	-380.64	-9686	-0.0000302	0.0003743	0.0035	1.965	7871	9360.63	9360.63	24.59	No	Si
SLU 65	9.88	-1392.67	-13153	-0.0000496	0.0003743	0.0035	1.965	9888.9	11789.44	11789.44	8.47	No	Si
SLU 65	11.68	-532.5	-10638	-0.0000343	0.0003743	0.0035	1.965	8467.19	10063.28	10063.28	18.9	No	Si
SLU 49	9.88	-1410.63	-12871	-0.0000489	0.0003743	0.0035	1.965	9740.46	11602.2	11602.2	8.22	No	Si
SLU 49	11.68	-455.29	-10385	-0.0000329	0.0003743	0.0035	1.965	8312.05	9879.63	9879.63	21.7	No	Si
SLU 50	9.88	-1385.92	-12484	-0.0000474	0.0003743	0.0035	1.965	9532.11	11347.62	11347.62	8.19	No	Si
SLU 50	11.68	-430.7	-9998	-0.0000316	0.0003743	0.0035	1.965	8069.92	9592.34	9592.34	22.27	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	9.88	-1376.6	-11809	-0.0000453	0.0003743	0.0035	1.965	9156.82	10885.86	10885.86	7.91	No	Si
SLU 44	11.68	-348.95	-9323	-0.0000289	0.0003743	0.0035	1.965	7635.81	9094.23	9094.23	26.06	No	Si
SLU 51	9.88	-1394.63	-12514	-0.0000476	0.0003743	0.0035	1.965	9548.5	11367.31	11367.31	8.15	No	Si
SLU 51	11.68	-419.67	-10028	-0.0000316	0.0003743	0.0035	1.965	8088.93	9614.91	9614.91	22.91	No	Si
SLU 46	9.88	-1398.72	-12509	-0.0000476	0.0003743	0.0035	1.965	9545.76	11364.01	11364.01	8.12	No	Si
SLU 46	11.68	-423.61	-10023	-0.0000316	0.0003743	0.0035	1.965	8085.75	9611.12	9611.12	22.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	9.88	1316.12	-7678	-0.000032	0.0005615	0.0035	1.965		7211.83	7211.83	5.48		Si
SLV 11	11.68	-3071.54	-5758	-0.0000462	0.0005615	0.0035	1.965		6389.98	6389.98	2.08		Si
SLV 1	9.88	-7212.34	-7111	-0.0007187	0.0005615	0.0035	1.572		7555.88	7555.88	1.05		Si
SLV 1	11.68	6176.36	-5261	-0.0099671	0.0005615	0.0035	1.965		5109.29	5109.29	0.83		No
SLV 2	9.88	-6704.68	-7517	-0.0002984	0.0005615	0.0035	1.572		7907.17	7907.17	1.18		Si
SLV 2	11.68	5642.84	-5667	-0.0037201	0.0005615	0.0035	1.965		5469.34	5469.34	0.97		No
SLV 4	9.88	-6203.36	-5465	-0.0008876	0.0005615	0.0035	1.572		6128.08	6128.08	0.99		No
SLV 4	11.68	5047.37	-3636	-0.0119927	0.0005615	0.0035	1.965		3642.99	3642.99	0.72		No
SLV 3	9.88	-6711.01	-5059	-0.0014873	0.0005615	0.0035	1.572		5763.7	5763.7	0.86		No
SLV 3	11.68	5580.9	-3231	-0.0181656	0.0005615	0.0035	1.965		3269.7	3269.7	0.59		No
SLV 12	9.88	1643.27	-7939	-0.0000355	0.0005615	0.0035	1.965		7433.01	7433.01	4.52		Si
SLV 12	11.68	-3415.36	-6020	-0.0000524	0.0005615	0.0035	1.572		6619.72	6619.72	1.94		Si
SLV 13	9.88	4098.44	-14712	-0.0000768	0.0005615	0.0035	1.965		12493.77	12493.77	3.05		Si
SLV 13	11.68	-5920.38	-12684	-0.0000917	0.0005615	0.0035	1.965		12072.93	12072.93	2.04		Si
SLV 14	9.88	4606.1	-15118	-0.0000826	0.0005615	0.0035	1.965		12795.73	12795.73	2.78		Si
SLV 14	11.68	-6453.9	-13089	-0.0001004	0.0005615	0.0035	1.965		12379.53	12379.53	1.92		Si
SLV 15	9.88	4599.76	-12660	-0.0000753	0.0005615	0.0035	1.965		10984.69	10984.69	2.39		Si
SLV 15	11.68	-6515.84	-10653	-0.0001084	0.0005615	0.0035	1.572		10485.68	10485.68	1.61		Si
SLV 16	9.88	5107.42	-13066	-0.0000818	0.0005615	0.0035	1.965		11280.56	11280.56	2.21		Si
SLV 16	11.68	-7049.36	-11059	-0.0001222	0.0005615	0.0035	1.572		10806.95	10806.95	1.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	9.88	-1385.92	-12484	-10395	-519	1.965	1.965	-18894	9464	5207	40441	16476	5011	21487	No	41.39	Si
SLU 50	11.68	-430.7	-9998	-8325	-519	1.965	1.965	-15131	8962	4931	40441	16476	5011	21487	No	41.39	Si
SLU 45	9.88	-1390.01	-12479	-10391	-519	1.965	1.965	-18886	9463	5206	40441	16476	5011	21487	No	41.38	Si
SLU 45	11.68	-434.64	-9993	-8321	-519	1.965	1.965	-15124	8961	4930	40441	16476	5011	21487	No	41.38	Si
SLU 46	9.88	-1398.72	-12509	-10416	-530	1.965	1.965	-18932	9469	5210	40441	16476	5011	21487	No	40.53	Si
SLU 46	11.68	-423.61	-10023	-8346	-530	1.965	1.965	-15169	8967	4934	40441	16476	5011	21487	No	40.53	Si
SLU 43	9.88	-1362.09	-11759	-9792	-541	1.965	1.965	-17797	9317	5126	40441	16476	5011	21487	No	39.71	Si
SLU 43	11.68	-367.33	-9273	-7722	-541	1.965	1.965	-14035	8816	4850	40441	16476	5011	21487	No	39.71	Si
SLU 65	9.88	-1392.67	-13153	-10953	-466	1.965	1.965	-19907	9599	5281	40441	16476	5011	21487	No	46.09	Si
SLU 65	11.68	-532.5	-10638	-8859	-466	1.965	1.965	-16100	9091	5002	40441	16476	5011	21487	No	46.09	Si
SLU 47	9.88	-1388.51	-12172	-10136	-548	1.965	1.965	-18421	9401	5172	40441	16476	5011	21487	No	39.18	Si
SLU 47	11.68	-380.64	-9686	-8066	-548	1.965	1.965	-14659	8899	4896	40441	16476	5011	21487	No	39.18	Si
SLU 49	9.88	-1410.63	-12871	-10718	-519	1.965	1.965	-19480	9542	5250	40441	16476	5011	21487	No	41.39	Si
SLU 49	11.68	-455.29	-10385	-8648	-519	1.965	1.965	-15718	9040	4974	40441	16476	5011	21487	No	41.39	Si
SLU 44	9.88	-1376.6	-11809	-9834	-559	1.965	1.965	-17873	9328	5132	40441	16476	5011	21487	No	38.41	Si
SLU 44	11.68	-348.95	-9323	-7764	-559	1.965	1.965	-14111	8826	4856	40441	16476	5011	21487	No	38.41	Si
SLU 51	9.88	-1394.63	-12514	-10421	-530	1.965	1.965	-18939	9470	5210	40441	16476	5011	21487	No	40.54	Si
SLU 51	11.68	-419.67	-10028	-8351	-530	1.965	1.965	-15177	8968	4934	40441	16476	5011	21487	No	40.54	Si
SLU 48	9.88	-1401.93	-12841	-10693	-508	1.965	1.965	-19434	9536	5247	40441	16476	5011	21487	No	42.28	Si
SLU 48	11.68	-466.32	-10355	-8623	-508	1.965	1.965	-15672	9034	4971	40441	16476	5011	21487	No	42.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	9.88	-7212.34	-7111	-5921	-7692	1.572	0	0	0	0	40441	19771	4009	23779		3.09	Si
SLV 1	11.68	6176.36	-5261	-4381	-7227	1.965	0	-190651	16250	0	40441	24714	5011	29724		4.11	Si
SLV 4	9.88	-6203.36	-5465	-4551	-6407	1.572	0	0	0	0	40441	19771	4009	23779		3.71	Si
SLV 4	11.68	5047.37	-3636	-3028	-6157	1.965	0	-169096	16250	0	40441	24714	5011	29724		4.83	Si
SLD 1	9.88	-3689.25	-8827	-7350	-3483	1.965	1.6936	-15617	13540	6421	40441	24714	5011	29724		8.53	Si
SLD 1	11.68	2394.56	-6932	-5773	-3283	1.965	1.9113	-10492	12515	6698	40441	24714	5011	29724		9.05	Si
SLV 13	9.88	4098.44	-14712	-12251	5740	1.965	1.965	-22266	14870	8182	40441	24714	5011	29724		5.18	Si
SLV 13	11.68	-5920.38	-12684	-10562	5491	1.965	1.5472	-24680	15353	6651	40441	24714	5011	29724		5.41	Si
SLV 5	9.88	-3748.19	-12238	-10190	-3712	1.965	1.965	-18521	14121	7769	40441	24714	5011	29724		8.01	Si
SLV 5	11.68	2542.36	-10300	-8577	-3245	1.965	1.965	-15589	13534	7447	40441	24714	5011	29724		9.16	Si
SLV 14	9.88	4606.1	-15118	-12589	6319	1.965	1.965	-22880	14993	8249	40441	24714	5011	29724		4.7	Si
SLV 14	11.68	-6453.9	-13089	-10900	6069	1.965	1.4683	-26881	15793	6493	40441	24714	5011	29724		4.9	Si
SLV 16	9.88	5107.42	-13066	-10880	7025	1.965	1.7748	-19774	14372	7142	40441	24714	5011	29724		4.23	Si
SLV 16	11.68	-7049.36	-11059	-9209	6560	1.572	1.0352	0	0	0	40441	19771	4009	23779		3.62	Si
SLV 2	9.88	-6704.68	-7517	-6259	-7113	1.572	0.2716	0	0	0	40441	19771	4009	23779		3.34	Si
SLV 2	11.68	5642.84	-5667	-4719	-6648	1.965	0	-151962	16250	0	40441	24714	5011	29724		4.47	Si
SLV 3	9.88	-6711.01	-5059	-4213	-6985	1.572	0	0	0	0	40441	19771	4009	23779		3.4	Si
SLV 3	11.68	5580.9	-3231	-2690	-6736	1.965	0	-181087	16250	0	40441	24714	5011	29724		4.41	Si
SLV 15	9.88	4599.76	-12660	-10542	6447	1.965	1.8576	-19160	14249	7411	40441	24714	5011	29724		4.61	Si
SLV 15	11.68	-6515.84	-10653	-8871	5982	1.572	1.1126	0	0	0	40441	19771	4009	23779		3.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.46	7674	-4222	241.65	561.38	2.32	Si
SLV 7	179667	0.46	8304	-4569	241.65	604.9	2.5	Si
SLV 4	179667	0.46	8411	-4628	241.65	612.2	2.53	Si
SLV 8	179667	0.46	8780	-4831	241.65	637.41	2.64	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.46	11277	-6205	241.65	804.51	3.33	Si
SLV 2	179667	0.46	12014	-6610	241.65	852.64	3.53	Si
SLV 11	179667	0.46	12336	-6788	241.65	873.49	3.61	Si
SLV 12	179667	0.46	12811	-7049	241.65	904.07	3.74	Si
SLV 5	179667	0.46	20316	-11178	241.65	1356.73	5.61	Si
SLV 6	179667	0.46	20791	-11439	241.65	1383.48	5.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-10147	-8567	602	0.923	1308	0.941	14.25719	14.44577	No
SLV 6	-10147	-9135	602	0.923	1307.9	0.941	14.25788	14.44577	No
SLV 9	-9968	-13989	621	0.935	1289.8	0.94	14.45242	14.44577	Si
SLV 10	-9967	-14557	621	0.935	1289.7	0.94	14.45313	14.44577	Si
SLV 7	-3335	-4125	-620	2.105	624.9	0.899	34.04278	14.44577	Si
SLV 8	-3334	-4693	-620	2.105	624.8	0.899	34.04686	14.44577	Si
SLV 11	-3155	-9547	-601	2.185	607.4	0.897	35.38991	14.44577	Si
SLV 12	-3155	-10114	-601	2.185	607.3	0.897	35.39429	14.44577	Si
SLV 1	-7973	-531	152	1.167	1088	0.931	18.21292	6.41634	Si
SLV 2	-7972	-1412	152	1.167	1087.9	0.931	18.21462	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.908	SLU 44	Si
V_SLU	38.414	SLU 44	Si
PF_SLV	0.586	SLV 3	No
V_SLV	3.092	SLV 1	Si
PFFP_SLV	2.323	SLV 3	Si
R_SLV	0.987	SLV 5	No

Maschio 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L6	L7	4.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	8.98	-5138.29	-28140	-0.0000451	0.0004492	0.0035	4.02	44988.88	58668.52	58668.52	11.42	No	Si
SLU 64	11.08	-1861.46	-23505	-0.0000327	0.0004492	0.0035	4.02	39170.23	51387.41	51387.41	27.61	No	Si
SLU 48	8.98	-5262.81	-28553	-0.0000459	0.0004492	0.0035	4.02	45476.41	59310.6	59310.6	11.27	No	Si
SLU 48	11.08	-1730.59	-23235	-0.0000321	0.0004492	0.0035	4.02	38813.08	50943.69	50943.69	29.44	No	Si
SLU 44	8.98	-5020.49	-26447	-0.0000427	0.0004492	0.0035	4.02	42936.23	56033.81	56033.81	11.16	No	Si
SLU 44	11.08	-1345.35	-21044	-0.0000286	0.0004492	0.0035	4.02	35825.98	47330.51	47330.51	35.18	No	Si
SLU 46	8.98	-5186.95	-27808	-0.0000448	0.0004492	0.0035	4.02	44592.42	58151.14	58151.14	11.21	No	Si
SLU 46	11.08	-1641.14	-22492	-0.000031	0.0004492	0.0035	4.02	37815.28	49717.72	49717.72	30.29	No	Si
SLU 51	8.98	-5171.4	-27965	-0.000045	0.0004492	0.0035	4.02	44779.95	58395.34	58395.34	11.29	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	11.08	-1494.58	-22536	-0.0000308	0.0004492	0.0035	4.02	37874.95	49790.48	49790.48	33.31	No	Si
SLU 43	8.98	-5021.49	-26413	-0.0000426	0.0004492	0.0035	4.02	42893.86	55980.53	55980.53	11.15	No	Si
SLU 43	11.08	-1382.44	-21038	-0.0000287	0.0004492	0.0035	4.02	35817.51	47320.5	47320.5	34.23	No	Si
SLU 50	8.98	-5172	-27944	-0.0000449	0.0004492	0.0035	4.02	44755.44	58363.37	58363.37	11.28	No	Si
SLU 50	11.08	-1516.83	-22532	-0.0000308	0.0004492	0.0035	4.02	37870.02	49784.47	49784.47	32.82	No	Si
SLU 45	8.98	-5187.55	-27787	-0.0000448	0.0004492	0.0035	4.02	44567.81	58119.18	58119.18	11.2	No	Si
SLU 45	11.08	-1663.39	-22488	-0.0000311	0.0004492	0.0035	4.02	37810.35	49711.71	49711.71	29.89	No	Si
SLU 49	8.98	-5262.21	-28573	-0.0000459	0.0004492	0.0035	4.02	45500.55	59342.56	59342.56	11.28	No	Si
SLU 49	11.08	-1708.33	-23239	-0.0000321	0.0004492	0.0035	4.02	38817.93	50949.7	50949.7	29.82	No	Si
SLU 47	8.98	-5095.74	-27213	-0.0000438	0.0004492	0.0035	4.02	43874.82	57225.23	57225.23	11.23	No	Si
SLU 47	11.08	-1412.55	-21791	-0.0000297	0.0004492	0.0035	4.02	36860.27	48562.5	48562.5	34.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	8.98	-5852.85	-19071	-0.0000343	0.0006738	0.0035	4.02		44794.33	44794.33	7.65		Si
SLD 16	11.08	2252.23	-14615	-0.000022	0.0006738	0.0035	4.02		29491.58	29491.58	13.09		Si
SLV 1	8.98	600.23	-27295	-0.0000348	0.0006738	0.0035	4.02		51649.64	51649.64	86.05		Si
SLV 1	11.08	-10162.3	-26201	-0.0000515	0.0006738	0.0035	4.02		57016.14	57016.14	5.61		Si
SLV 2	8.98	336.23	-27172	-0.0000341	0.0006738	0.0035	4.02		51444.35	51444.35	153		Si
SLV 2	11.08	-10330.76	-26193	-0.0000518	0.0006738	0.0035	4.02		57001.57	57001.57	5.52		Si
SLV 9	8.98	-4307.26	-18146	-0.0000302	0.0006738	0.0035	4.02		43146.13	43146.13	10.02		Si
SLV 9	11.08	3617.22	-13529	-0.0000232	0.0006738	0.0035	4.02		27519.11	27519.11	7.61		Si
SLV 16	8.98	-8435.63	-15771	-0.0000349	0.0006738	0.0035	4.02		38913.55	38913.55	4.61		Si
SLV 16	11.08	7238.05	-9963	-0.0000254	0.0006738	0.0035	4.02		20909.95	20909.95	2.89		Si
SLV 3	8.98	137.21	-28240	-0.0000351	0.0006738	0.0035	4.02		53233.04	53233.04	387.98		Si
SLV 3	11.08	-11477.75	-27369	-0.0000555	0.0006738	0.0035	4.02		58998.02	58998.02	5.14		Si
SLV 14	8.98	-7972.61	-14826	-0.0000328	0.0006738	0.0035	4.02		37230.03	37230.03	4.67		Si
SLV 14	11.08	8553.5	-8795	-0.0000278	0.0006738	0.0035	4.02		18723.61	18723.61	2.19		Si
SLV 15	8.98	-8171.63	-15893	-0.0000346	0.0006738	0.0035	4.02		39131.82	39131.82	4.79		Si
SLV 15	11.08	7406.51	-9971	-0.0000258	0.0006738	0.0035	4.02		20926.03	20926.03	2.83		Si
SLV 13	8.98	-7708.61	-14949	-0.0000325	0.0006738	0.0035	4.02		37448.3	37448.3	4.86		Si
SLV 13	11.08	8721.96	-8804	-0.0000284	0.0006738	0.0035	4.02		18739.69	18739.69	2.15		Si
SLV 4	8.98	-126.79	-28117	-0.0000349	0.0006738	0.0035	4.02		60245.84	60245.84	475.17		Si
SLV 4	11.08	-11646.21	-27360	-0.0000558	0.0006738	0.0035	4.02		58983.44	58983.44	5.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	8.98	-5021.49	-26413	-18842	-1444	4.02	4.02	-16740	10565	11892	115546	40451	20502	60953	No	42.21	Si
SLU 43	11.08	-1382.44	-21038	-15008	-1433	4.02	4.02	-13333	10111	11381	115546	40451	20502	60953	No	42.52	Si
SLU 41	8.98	-4039.73	-24598	-17547	1792	4.02	4.02	-15589	10412	11720	115546	40451	20502	60953	No	34.02	Si
SLU 41	11.08	-2413.51	-22766	-16241	1803	4.02	4.02	-14429	10257	11545	115546	40451	20502	60953	No	33.8	Si
SLU 50	8.98	-5172	-27944	-19935	-1487	4.02	4.02	-17710	10695	12038	115546	40451	20502	60953	No	40.98	Si
SLU 50	11.08	-1516.83	-22532	-16074	-1476	4.02	4.02	-14280	10237	11523	115546	40451	20502	60953	No	41.3	Si
SLU 44	8.98	-5020.49	-26447	-18867	-1488	4.02	4.02	-16761	10568	11896	115546	40451	20502	60953	No	40.96	Si
SLU 44	11.08	-1345.35	-21044	-15012	-1477	4.02	4.02	-13337	10112	11382	115546	40451	20502	60953	No	41.26	Si
SLU 39	8.98	-3964.48	-23832	-17001	1813	4.02	4.02	-15104	10347	11647	115546	40451	20502	60953	No	33.61	Si
SLU 39	11.08	-2346.31	-22019	-15708	1825	4.02	4.02	-13955	10194	11474	115546	40451	20502	60953	No	33.4	Si
SLU 32	8.98	-4144.28	-24807	-17697	1439	4.02	4.02	-15722	10430	11740	115546	40451	20502	60953	No	42.35	Si
SLU 32	11.08	-2424	-22654	-16161	1451	4.02	4.02	-14357	10248	11535	115546	40451	20502	60953	No	42.01	Si
SLU 42	8.98	-4039.13	-24618	-17562	1765	4.02	4.02	-15602	10414	11722	115546	40451	20502	60953	No	34.53	Si
SLU 42	11.08	-2391.25	-22770	-16244	1777	4.02	4.02	-14431	10257	11546	115546	40451	20502	60953	No	34.3	Si
SLU 40	8.98	-3963.87	-23852	-17016	1787	4.02	4.02	-15117	10349	11649	115546	40451	20502	60953	No	34.11	Si
SLU 40	11.08	-2324.06	-22023	-15710	1798	4.02	4.02	-13957	10194	11475	115546	40451	20502	60953	No	33.89	Si
SLU 47	8.98	-5095.74	-27213	-19413	-1510	4.02	4.02	-17247	10633	11968	115546	40451	20502	60953	No	40.37	Si
SLU 47	11.08	-1412.55	-21791	-15545	-1499	4.02	4.02	-13811	10175	11453	115546	40451	20502	60953	No	40.67	Si
SLU 51	8.98	-5171.4	-27965	-19949	-1514	4.02	4.02	-17723	10696	12040	115546	40451	20502	60953	No	40.27	Si
SLU 51	11.08	-1494.58	-22536	-16077	-1502	4.02	4.02	-14283	10238	11524	115546	40451	20502	60953	No	40.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	8.98	-5541.74	-18713	-13349	-4685	4.02	4.02	-11860	14872	16740	115546	60677	20502	81179		17.33	Si
SLD 13	11.08	2899.27	-14108	-10064	-4192	4.02	4.02	-8941	14288	16083	115546	60677	20502	81179		19.36	Si
SLV 9	8.98	-4307.26	-18146	-12945	-4681	4.02	4.02	-11500	14800	16659	115546	60677	20502	81179		17.34	Si
SLV 9	11.08	3617.22	-13529	-9652	-4396	4.02	4.02	-8575	14215	16000	115546	60677	20502	81179		18.47	Si
SLV 13	8.98	-7708.61	-14949	-10664	-10626	4.02	4.02	-9474	14395	16203	115546	60677	20502	81179		7.64	Si
SLV 13	11.08	8721.96	-8804	-6280	-9481	4.02	3.0579	-5580	13616	11658	115546	60677	20502	81179		8.56	Si
SLV 1	8.98	600.23	-27295	-19472	9228	4.02	4.02	-17299	15960	17964	115546	60677	20502	81179		8.8	Si
SLV 1	11.08	-10162.3	-26201	-18691	8060	4.02	4.02	-16606	15821	17808	115546	60677	20502	81179		10.07	Si
SLV 15	8.98	-8171.63	-15893	-11338	-9755	4.02	4.02	-10073	14515	16338	115546	60677	20502	81179		8.32	Si
SLV 15	11.08	7406.51	-9971	-7113	-8568	4.02	3.8016	-6320	13764	14651	115546	60677	20502	81179		9.47	Si
SLV 4	8.98	-126.79	-28117	-20058	10163	4.02	4.02	-17820	16064	18082	115546	60677	20502	81179		7.99	Si
SLV 4	11.08	-11646.21	-27360	-19518	9036	4.02	4.02	-17340	15968	17974	115546	60677	20502	81179		8.98	Si
SLV 14	8.98	-7972.61	-14826	-10577	-10562	4.02	4.02	-9396	14379	16185	115546	60677	20502	81179		7.69	Si
SLV 14	11.08	8553.5	-8795	-6274	-9418	4.02	3.1125	-5574	13615	11865	115546	60677	20502	81179		8.62	Si
SLV 3	8.98	137.21	-28240	-20145	10099	4.02	4.02	-17898	16080	18099	115546	60677	20502	81179		8.04	Si
SLV 3	11.08	-11477.75	-27369	-19524	8973	4.02	4.02	-17346	15969	17975	115546	60677	20502	81179		9.05	Si
SLV 16	8.98	-8435.63	-15771	-11250	-9691	4.02	4.02	-9995	14499	16320	115546	60677	20502	81179		8.38	Si
SLV 16	11.08	7238.05	-9963	-7107	-8504	4.02	3.8505	-6314	13763	14838	115546	60677	20502	81179		9.55	Si
SLV 2	8.98	336.23	-27172	-19384	9292	4.02	4.02	-17221	15944	17947	115546	60677	20502	81179		8.74	Si
SLV 2	11.08	-10330.76	-26193	-18685	8123	4.02	4.02	-16600	15820	17807	115546	60677	20502	81179		9.99	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-9560	0.46	505.86	1276.44	1984.16	1630.3	3.22	Si
SLV 13	-9569	0.46	505.86	1277.53	1985.49	1631.51	3.23	Si
SLV 16	-10716	0.46	505.86	1422.31	2161.51	1791.91	3.54	Si
SLV 15	-10725	0.46	505.86	1423.38	2162.82	1793.1	3.54	Si
SLV 10	-14271	0.46	505.86	1859.69	2705.68	2282.69	4.51	Si
SLV 9	-14276	0.46	505.86	1860.36	2706.53	2283.44	4.51	Si
SLV 12	-18122	0.46	505.86	2314.25	3289.67	2801.96	5.54	Si
SLV 11	-18128	0.46	505.86	2314.89	3290.51	2802.7	5.54	Si
SLV 6	-19462	0.46	505.86	2467.66	3492.44	2980.05	5.89	Si
SLV 5	-19468	0.46	505.86	2468.29	3493.27	2980.78	5.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-18403	-24920	1035	1.027	2437.2	0.936	15.93946	14.44577	Si
SLV 7	-18401	-24999	1036	1.027	2437.1	0.936	15.9403	14.44577	Si
SLV 6	-16302	-21771	-1022	1.132	2224.9	0.931	17.66326	14.44577	Si
SLV 5	-16300	-21850	-1022	1.132	2224.7	0.931	17.66496	14.44577	Si
SLV 12	-16000	-21216	1019	1.149	2194.4	0.931	17.94325	14.44577	Si
SLV 11	-15998	-21295	1020	1.149	2194.3	0.931	17.94436	14.44577	Si
SLV 10	-13899	-18067	-1038	1.281	1982.7	0.925	20.13572	14.44577	Si
SLV 9	-13897	-18146	-1038	1.282	1982.5	0.925	20.13789	14.44577	Si
SLV 4	-20472	-28117	334	0.971	2646.6	0.941	15.00585	6.41634	Si
SLV 3	-20469	-28240	335	0.971	2646.4	0.941	15.00694	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.148	SLU 43	Si
V_SLU	33.405	SLU 39	Si
PF_SLV	2.149	SLV 13	Si
V_SLV	7.64	SLV 13	Si
PFFP_SLV	3.223	SLV 14	Si
R_SLV	1.103	SLV 8	Si

Maschio 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L6	L7	7.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	8.98	1256.93	-68402	-0.0000467	0.0004492	0.0035	7.55	189838.43	221274.07	221274.07	176.04	No	Si
SLU 60	11.48	-3546.04	-56913	-0.0000399	0.0004492	0.0035	7.55	167507.97	220128.83	220128.83	62.08	No	Si
SLU 52	8.98	1055.38	-66851	-0.0000455	0.0004492	0.0035	7.55	187049.45	217019.99	217019.99	205.63	No	Si
SLU 52	11.48	-3601.88	-54831	-0.0000385	0.0004492	0.0035	7.55	163048.73	214077.66	214077.66	59.43	No	Si
SLU 45	8.98	821.18	-66693	-0.0000453	0.0004492	0.0035	7.55	186760.38	216585.1	216585.1	263.75	No	Si
SLU 45	11.48	-3477.14	-53285	-0.0000374	0.0004492	0.0035	7.55	159655.02	209583.65	209583.65	60.27	No	Si
SLU 54	8.98	928.55	-70394	-0.0000479	0.0004492	0.0035	7.55	193318.06	226738.96	226738.96	244.19	No	Si
SLU 54	11.48	-3852.7	-58302	-0.0000411	0.0004492	0.0035	7.55	170413.93	224153.54	224153.54	58.18	No	Si
SLU 53	8.98	1002.78	-70377	-0.000048	0.0004492	0.0035	7.55	193288.89	226692.39	226692.39	226.06	No	Si
SLU 53	11.48	-3749.23	-58270	-0.000041	0.0004492	0.0035	7.55	170346.18	224064.25	224064.25	59.76	No	Si
SLU 43	8.98	997.5	-63138	-0.0000429	0.0004492	0.0035	7.55	180086.58	206835.08	206835.08	207.35	No	Si
SLU 43	11.48	-3157.33	-49791	-0.0000348	0.0004492	0.0035	7.55	151730.09	199430.04	199430.04	63.16	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	8.98	1215.49	-72120	-0.0000493	0.0004492	0.0035	7.55	196238.21	231472.44	231472.44	190.44	No	Si
SLU 57	11.48	-3575.84	-59881	-0.000042	0.0004492	0.0035	7.55	173646.52	228462.46	228462.46	63.89	No	Si
SLU 44	8.98	873.77	-63166	-0.0000428	0.0004492	0.0035	7.55	180141.17	206912.7	206912.7	236.8	No	Si
SLU 44	11.48	-3329.79	-49846	-0.0000349	0.0004492	0.0035	7.55	151856.52	199588.5	199588.5	59.94	No	Si
SLU 46	8.98	746.95	-66710	-0.0000452	0.0004492	0.0035	7.55	186791.37	216631.67	216631.67	290.02	No	Si
SLU 46	11.48	-3580.61	-53317	-0.0000374	0.0004492	0.0035	7.55	159727.54	209678.73	209678.73	58.56	No	Si
SLU 61	8.98	1182.7	-68419	-0.0000467	0.0004492	0.0035	7.55	189868.57	221320.64	221320.64	187.13	No	Si
SLU 61	11.48	-3649.51	-56945	-0.00004	0.0004492	0.0035	7.55	167577.02	220223.91	220223.91	60.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	8.98	31559.77	-56517	-0.0000542	0.0006738	0.0035	7.55		197570.18	197570.18	6.26		Si
SLV 1	11.48	-37717.3	-52819	-0.000055	0.0006738	0.0035	7.55		213981.93	213981.93	5.67		Si
SLV 16	8.98	-31145.85	-49014	-0.0000488	0.0006738	0.0035	7.55		201891.51	201891.51	6.48		Si
SLV 16	11.48	33072.33	-33252	-0.0000391	0.0006738	0.0035	7.55		123362.74	123362.74	3.73		Si
SLV 2	8.98	31768.18	-56746	-0.0000545	0.0006738	0.0035	7.55		198206.7	198206.7	6.24		Si
SLV 2	11.48	-37865.29	-53106	-0.0000553	0.0006738	0.0035	7.55		214893.44	214893.44	5.68		Si
SLV 15	8.98	-31354.26	-48785	-0.0000488	0.0006738	0.0035	7.55		201161.66	201161.66	6.42		Si
SLV 15	11.48	33220.31	-32965	-0.000039	0.0006738	0.0035	7.55		122399.9	122399.9	3.68		Si
SLV 13	8.98	-37396.38	-47818	-0.0000514	0.0006738	0.0035	7.55		198090.3	198090.3	5.3		Si
SLV 13	11.48	24243.54	-33665	-0.0000347	0.0006738	0.0035	7.55		124751.65	124751.65	5.15		Si
SLV 4	8.98	37810.3	-57713	-0.0000584	0.0006738	0.0035	7.55		200885.35	200885.35	5.31		Si
SLV 4	11.48	-28888.52	-52406	-0.0000499	0.0006738	0.0035	7.55		212667.06	212667.06	7.36		Si
SLV 3	8.98	37601.89	-57483	-0.0000582	0.0006738	0.0035	7.55		200248.82	200248.82	5.33		Si
SLV 3	11.48	-28740.53	-52119	-0.0000497	0.0006738	0.0035	7.55		211755.54	211755.54	7.37		Si
SLV 11	8.98	-133.42	-52998	-0.0000349	0.0006738	0.0035	7.55		214548.56	214548.56	1608.11		Si
SLV 11	11.48	21980.61	-38902	-0.000037	0.0006738	0.0035	7.55		142133.06	142133.06	6.47		Si
SLV 14	8.98	-37187.96	-48048	-0.0000514	0.0006738	0.0035	7.55		198820.15	198820.15	5.35		Si
SLV 14	11.48	24095.56	-33952	-0.0000348	0.0006738	0.0035	7.55		125714.49	125714.49	5.22		Si
SLV 12	8.98	0.89	-53146	-0.0000349	0.0006738	0.0035	7.55		187839.5	187839.5	210591.03		Si
SLV 12	11.48	21885.24	-39087	-0.0000371	0.0006738	0.0035	7.55		142743.73	142743.73	6.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	8.98	-80.38	-74159	-52903	-2546	7.55	7.55	-25025	10833	22902	115546	75972	38505	114477	No	44.96	Si
SLU 70	11.48	-2968.92	-60921	-43459	-226	7.55	7.55	-20558	10833	22902	115546	75972	38505	114477	No	505.97	Si
SLU 66	8.98	-293.08	-72417	-51660	-2433	7.55	7.55	-24437	10833	22902	115546	75972	38505	114477	No	47.06	Si
SLU 66	11.48	-3142.31	-59309	-42310	-158	7.55	7.55	-20014	10833	22902	115546	75972	38505	114477	No	725.07	Si
SLU 51	8.98	1497.14	-66606	-47515	-2455	7.55	7.55	-22477	10833	22902	115546	75972	38505	114477	No	46.63	Si
SLU 51	11.48	-2707.09	-52981	-37795	-349	7.55	7.55	-17879	10717	22656	115546	75972	38505	114477	No	327.86	Si
SLU 68	8.98	46.45	-70616	-50376	-2534	7.55	7.55	-23830	10833	22902	115546	75972	38505	114477	No	45.17	Si
SLU 68	11.48	-2718.1	-57449	-40983	-293	7.55	7.55	-19386	10833	22902	115546	75972	38505	114477	No	391.07	Si
SLU 67	8.98	-367.32	-72434	-51672	-2431	7.55	7.55	-24443	10833	22902	115546	75972	38505	114477	No	47.1	Si
SLU 67	11.48	-3245.78	-59342	-42333	-150	7.55	7.55	-20025	10833	22902	115546	75972	38505	114477	No	760.72	Si
SLU 71	8.98	457.11	-72313	-51587	-2653	7.55	7.55	-24402	10833	22902	115546	75972	38505	114477	No	43.15	Si
SLU 71	11.48	-2268.79	-58973	-42070	-381	7.55	7.55	-19901	10833	22902	115546	75972	38505	114477	No	300.6	Si
SLU 50	8.98	1571.38	-66589	-47503	-2457	7.55	7.55	-22471	10833	22902	115546	75972	38505	114477	No	46.59	Si
SLU 50	11.48	-2603.62	-52948	-37772	-357	7.55	7.55	-17868	10716	22653	115546	75972	38505	114477	No	321.06	Si
SLU 72	8.98	382.88	-72330	-51599	-2651	7.55	7.55	-24408	10833	22902	115546	75972	38505	114477	No	43.18	Si
SLU 72	11.48	-2372.26	-59006	-42093	-373	7.55	7.55	-19912	10833	22902	115546	75972	38505	114477	No	306.56	Si
SLU 69	8.98	-6.14	-74142	-52891	-2548	7.55	7.55	-25020	10833	22902	115546	75972	38505	114477	No	44.93	Si
SLU 69	11.48	-2865.45	-60888	-43436	-234	7.55	7.55	-20547	10833	22902	115546	75972	38505	114477	No	489.95	Si
SLU 64	8.98	-116.76	-68862	-49125	-2422	7.55	7.55	-23238	10833	22902	115546	75972	38505	114477	No	47.27	Si
SLU 64	11.48	-2822.5	-55816	-39818	-229	7.55	7.55	-18835	10833	22902	115546	75972	38505	114477	No	499.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.98	37810.3	-57713	-41171	33765	7.55	7.55	-19475	16250	34352	115546	113958	38505	149898		4.44	Si
SLV 4	11.48	-28888.52	-52406	-37385	30595	7.55	7.55	-17684	16037	33902	115546	113958	38505	149448		4.88	Si
SLD 15	8.98	-13263.72	-51073	-36435	-17164	7.55	7.55	-17235	15947	33712	115546	113958	38505	149257		8.7	Si
SLD 15	11.48	12920.97	-38730	-27629	-13492	7.55	7.55	-13070	15114	31951	115546	113958	38505	147496		10.93	Si
SLV 3	8.98	37601.89	-57483	-41007	33618	7.55	7.55	-19398	16250	34352	115546	113958	38505	149898		4.46	Si
SLV 3	11.48	-28740.53	-52119	-37180	30468	7.55	7.55	-17588	16018	33861	115546	113958	38505	149407		4.9	Si
SLV 15	8.98	-31354.26	-48785	-34802	-38032	7.55	7.55	-16463	15793	33385	115546	113958	38505	148931		3.92	Si
SLV 15	11.48	33220.31	-32965	-23516	-31687	7.55	7.55	-11124	14725	31128	115546	113958	38505	146674		4.63	Si
SLV 13	8.98	-37396.38	-47818	-34112	-36887	7.55	7.55	-16136	15727	33247	115546	113958	38505	148793		4.03	Si
SLV 13	11.48	24243.54	-33665	-24016	-30351	7.55	7.55	-11360	14772	31228	115546	113958	38505	146774		4.84	Si
SLD 16	8.98	-13174.24	-51172	-36505	-17101	7.55	7.55	-17268	15954	33726	115546	113958	38505	149272		8.73	Si
SLD 16	11.48	12857.43	-38853	-27717	-13438	7.55	7.55	-13111	15122	31968	115546	113958	38505	147514		10.98	Si
SLV 16	8.98	-31145.85	-49014	-34966	-37886	7.55	7.55	-16540	15808	33418	115546	113958	38505	148964		3.93	Si
SLV 16	11.48	33072.33	-33252	-23721	-31560	7.55	7.55	-11221	14744	31169	115546	113958	38505	146715		4.65	Si
SLV 2	8.98	31768.18	-56746	-40482	34910	7.55	7.55	-19149	16250	34352	115546	113958	38505	149898		4.29	Si
SLV 2	11.48	-37865.29	-53106	-37885	31931	7.55	7.55	-17921	16084	34002	115546	113958	38505	149548		4.68	Si
SLV 1	8.98	31559.77	-56517	-40318	34763	7.55	7.55	-19072	16250	34352	115546	113958	38505	149898		4.31	Si
SLV 1	11.48	-37717.3	-52819	-37680	31804	7.55	7.55	-17824	16065	33961	115546	113958	38505	149507		4.7	Si
SLV 14	8.98	-37187.96	-48048	-34276	-36740	7.55	7.55	-16214	15743	33280	115546	113958	38505	148826		4.05	Si
SLV 14	11.48	24095.56	-33952	-24221	-30224	7.55	7.55	-11457	14791	31269	115546	113958	38505	146815		4.86	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-40133	0.46	950.06	5036.65	7084.96	6060.81	6.38	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-40421	0.46	950.06	5068.61	7127.72	6098.16	6.42	Si
SLV 14	-40435	0.46	950.06	5070.15	7129.78	6099.96	6.42	Si
SLV 16	-40723	0.46	950.06	5102.04	7172.55	6137.29	6.46	Si
SLV 9	-44391	0.46	950.06	5502.72	7717.48	6610.1	6.96	Si
SLV 10	-44586	0.46	950.06	5523.71	7746.43	6635.07	6.98	Si
SLV 11	-45352	0.46	950.06	5606.04	7860.36	6733.2	7.09	Si
SLV 12	-45546	0.46	950.06	5626.9	7889.32	6758.11	7.11	Si
SLV 5	-48283	0.46	950.06	5917.24	8293.96	7105.6	7.48	Si
SLV 6	-48477	0.46	950.06	5937.69	8322.65	7130.17	7.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-43274	-55755	1059	0.873	5459.7	0.945	13.41714	14.44577	No
SLV 7	-43090	-55607	1060	0.876	5441.1	0.945	13.46659	14.44577	No
SLV 12	-41272	-53146	1139	0.906	5256.7	0.943	13.95291	14.44577	No
SLV 11	-41088	-52998	1139	0.909	5238.2	0.943	14.00664	14.44577	No
SLV 6	-36074	-52533	-1114	1.011	4730.3	0.938	15.6705	14.44577	Si
SLV 5	-35891	-52385	-1114	1.016	4711.8	0.938	15.73882	14.44577	Si
SLV 10	-34072	-49924	-1035	1.061	4527.8	0.936	16.48023	14.44577	Si
SLV 9	-33889	-49776	-1035	1.066	4509.2	0.936	16.55584	14.44577	Si
SLV 4	-43140	-57713	206	0.892	5446.2	0.945	13.71642	6.41634	Si
SLV 3	-42856	-57483	206	0.897	5417.3	0.945	13.79532	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	58.181	SLU 54	Si
V_SLU	43.149	SLU 71	Si
PF_SLV	3.684	SLV 15	Si
V_SLV	3.916	SLV 15	Si
PFFP_SLV	6.379	SLV 13	Si
R_SLV	0.929	SLV 8	No

Maschio 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L6	L7	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	8.98	1298.92	-19679	-0.0000633	0.0004492	0.0035	1.9353	13382.68	16042.69	16042.69	12.35	No	Si
SLU 64	11.48	508.71	-14175	-0.0000411	0.0004492	0.0035	1.9353	10779.74	12220.81	12220.81	24.02	No	Si
SLU 29	8.98	1163.79	-16912	-0.0000542	0.0004492	0.0035	1.9353	12184.87	14121.43	14121.43	12.13	No	Si
SLU 29	11.48	407.3	-12415	-0.0000355	0.0004492	0.0035	1.9353	9760.7	10998.88	10998.88	27	No	Si
SLU 25	8.98	1158.04	-17004	-0.0000544	0.0004492	0.0035	1.9353	12228.28	14185.3	14185.3	12.25	No	Si
SLU 25	11.48	406.39	-12530	-0.0000358	0.0004492	0.0035	1.9353	9830.33	11079.05	11079.05	27.26	No	Si
SLU 27	8.98	1171.2	-17431	-0.0000558	0.0004492	0.0035	1.9353	12426.63	14481.85	14481.85	12.37	No	Si
SLU 27	11.48	424.92	-12902	-0.000037	0.0004492	0.0035	1.9353	10051.98	11337.29	11337.29	26.68	No	Si
SLU 22	8.98	1135.77	-15993	-0.0000514	0.0004492	0.0035	1.9353	11737.79	13483.67	13483.67	11.87	No	Si
SLU 22	11.48	353.86	-11613	-0.0000329	0.0004492	0.0035	1.9353	9266.17	10441.9	10441.9	29.51	No	Si
SLU 23	8.98	1137.2	-16047	-0.0000516	0.0004492	0.0035	1.9353	11764.55	13520.88	13520.88	11.89	No	Si
SLU 23	11.48	367.51	-11661	-0.0000331	0.0004492	0.0035	1.9353	9296.68	10475.65	10475.65	28.5	No	Si
SLU 26	8.98	1151.21	-16506	-0.000053	0.0004492	0.0035	1.9353	11990.45	13839.76	13839.76	12.02	No	Si
SLU 26	11.48	394.23	-12062	-0.0000344	0.0004492	0.0035	1.9353	9545.72	10754.14	10754.14	27.28	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 24	8.98	1157.18	-16972	-0.0000544	0.0004492	0.0035	1.9353	12213.13	14162.97	14162.97	12.24	No	Si
SLU 24	11.48	398.2	-12501	-0.0000356	0.0004492	0.0035	1.9353	9812.78	11058.8	11058.8	27.77	No	Si
SLU 30	8.98	1164.65	-16944	-0.0000543	0.0004492	0.0035	1.9353	12200.07	14143.75	14143.75	12.14	No	Si
SLU 30	11.48	415.49	-12444	-0.0000356	0.0004492	0.0035	1.9353	9778.33	11019.13	11019.13	26.52	No	Si
SLU 65	8.98	1300.35	-19732	-0.0000634	0.0004492	0.0035	1.9353	13403.67	16079.9	16079.9	12.37	No	Si
SLU 65	11.48	522.36	-14223	-0.0000414	0.0004492	0.0035	1.9353	10806.6	12254.56	12254.56	23.46	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.98	-7235.75	-13903	-0.0001068	0.0006738	0.0035	1.9353		14206.5	14206.5	1.96		Si
SLV 15	11.48	6619.64	-12982	-0.0000969	0.0006738	0.0035	1.9353		11840.8	11840.8	1.79		Si
SLD 3	8.98	4523.33	-14999	-0.0000759	0.0006738	0.0035	1.9353		13421.73	13421.73	2.97		Si
SLD 3	11.48	-2484.67	-9414	-0.000044	0.0006738	0.0035	1.9353		10541.38	10541.38	4.24		Si
SLV 2	8.98	9082.11	-16335	-0.000139	0.0006738	0.0035	1.9353		14359.53	14359.53	1.58		Si
SLV 2	11.48	-5740.32	-8900	-0.0000937	0.0006738	0.0035	1.5482		10099.27	10099.27	1.76		Si
SLV 16	8.98	-7188.69	-13973	-0.0001059	0.0006738	0.0035	1.9353		14260.61	14260.61	1.98		Si
SLV 16	11.48	6588.68	-13028	-0.0000963	0.0006738	0.0035	1.9353		11877.91	11877.91	1.8		Si
SLV 14	8.98	-7491.28	-15382	-0.0001102	0.0006738	0.0035	1.9353		15357.22	15357.22	2.05		Si
SLV 14	11.48	7269.42	-14490	-0.0001069	0.0006738	0.0035	1.9353		13048.97	13048.97	1.8		Si
SLV 4	8.98	9384.71	-14926	-0.0001559	0.0006738	0.0035	1.9353		13370.54	13370.54	1.42		Si
SLV 4	11.48	-6421.06	-7437	-0.0002158	0.0006738	0.0035	1.5482		8843.61	8843.61	1.38		Si
SLD 4	8.98	4543.53	-15028	-0.0000762	0.0006738	0.0035	1.9353		13442.68	13442.68	2.96		Si
SLD 4	11.48	-2497.97	-9434	-0.0000441	0.0006738	0.0035	1.9353		10558.24	10558.24	4.23		Si
SLV 1	8.98	9035.05	-16265	-0.0001382	0.0006738	0.0035	1.9353		14310.74	14310.74	1.58		Si
SLV 1	11.48	-5709.36	-8854	-0.0000932	0.0006738	0.0035	1.5482		10060	10060	1.76		Si
SLV 3	8.98	9337.65	-14856	-0.000155	0.0006738	0.0035	1.9353		13321.74	13321.74	1.43		Si
SLV 3	11.48	-6390.1	-7392	-0.0002159	0.0006738	0.0035	1.5482		8804.35	8804.35	1.38		Si
SLV 13	8.98	-7538.34	-15313	-0.0001109	0.0006738	0.0035	1.9353		15303.11	15303.11	2.03		Si
SLV 13	11.48	7300.38	-14444	-0.0001074	0.0006738	0.0035	1.9353		13012.51	13012.51	1.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	8.98	1320.34	-20657	-14736	1368	1.9353	1.9353	-27194	10833	5870	115546	19474	9870	29344	No	21.46	Si
SLU 66	11.48	553.05	-15063	-10746	-95	1.9353	1.9353	-19830	10833	5870	115546	19474	9870	29344	No	308.32	Si
SLU 64	8.98	1298.92	-19679	-14038	1337	1.9353	1.9353	-25906	10833	5870	115546	19474	9870	29344	No	21.95	Si
SLU 64	11.48	508.71	-14175	-10112	-77	1.9353	1.9353	-18660	10821	5864	115546	19474	9870	29344	No	381.16	Si
SLU 69	8.98	1334.35	-21116	-15064	1389	1.9353	1.9353	-27799	10833	5870	115546	19474	9870	29344	No	21.12	Si
SLU 69	11.48	579.77	-15464	-11032	-115	1.9353	1.9353	-20358	10833	5870	115546	19474	9870	29344	No	254.21	Si
SLU 77	8.98	1280.89	-22383	-15968	1321	1.9353	1.9353	-29467	10833	5870	115546	19474	9870	29344	No	22.21	Si
SLU 77	11.48	690.71	-16698	-11912	-65	1.9353	1.9353	-21982	10833	5870	115546	19474	9870	29344	No	451.35	Si
SLU 68	8.98	1314.36	-20192	-14404	1357	1.9353	1.9353	-26582	10833	5870	115546	19474	9870	29344	No	21.63	Si
SLU 68	11.48	549.08	-14624	-10433	-105	1.9353	1.9353	-19252	10833	5870	115546	19474	9870	29344	No	279.58	Si
SLU 67	8.98	1321.19	-20689	-14759	1366	1.9353	1.9353	-27237	10833	5870	115546	19474	9870	29344	No	21.48	Si
SLU 67	11.48	561.24	-15092	-10766	-100	1.9353	1.9353	-19868	10833	5870	115546	19474	9870	29344	No	294.02	Si
SLU 70	8.98	1335.21	-21148	-15087	1388	1.9353	1.9353	-27841	10833	5870	115546	19474	9870	29344	No	21.14	Si
SLU 70	11.48	587.96	-15493	-11053	-120	1.9353	1.9353	-20396	10833	5870	115546	19474	9870	29344	No	244.41	Si
SLU 65	8.98	1300.35	-19732	-14077	1335	1.9353	1.9353	-25977	10833	5870	115546	19474	9870	29344	No	21.99	Si
SLU 65	11.48	522.36	-14223	-10146	-85	1.9353	1.9353	-18724	10830	5869	115546	19474	9870	29344	No	346.45	Si
SLU 71	8.98	1326.94	-20597	-14694	1381	1.9353	1.9353	-27116	10833	5870	115546	19474	9870	29344	No	21.25	Si
SLU 71	11.48	562.15	-14977	-10684	-118	1.9353	1.9353	-19716	10833	5870	115546	19474	9870	29344	No	249.73	Si
SLU 72	8.98	1327.8	-20629	-14717	1380	1.9353	1.9353	-27158	10833	5870	115546	19474	9870	29344	No	21.27	Si
SLU 72	11.48	570.34	-15006	-10705	-122	1.9353	1.9353	-19755	10833	5870	115546	19474	9870	29344	No	240.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.98	9384.71	-14926	-10648	8912	1.9353	1.0167	-19649	16250	4626	115546	29211	9870	39081		4.39	Si
SLV 4	11.48	-6421.06	-7437	-5306	5537	1.5482	0.3129	0	0	0	115546	23369	7896	31265		5.65	Si
SLV 16	8.98	-7188.69	-13973	-9968	-6545	1.9353	1.3595	-26496	16250	6186	115546	29211	9870	39081		5.97	Si
SLV 16	11.48	6588.68	-13028	-9294	-5238	1.9353	1.3858	-17151	15930	6181	115546	29211	9870	39081		7.46	Si
SLV 15	8.98	-7235.75	-13903	-9918	-6586	1.9353	1.3417	-26716	16250	6105	115546	29211	9870	39081		5.93	Si
SLV 15	11.48	6619.64	-12982	-9261	-5283	1.9353	1.3733	-17091	15918	6121	115546	29211	9870	39081		7.4	Si
SLV 14	8.98	-7491.28	-15382	-10973	-6954	1.9353	1.4419	-27524	16250	6561	115546	29211	9870	39081		5.62	Si
SLV 14	11.48	7269.42	-14490	-10337	-5671	1.9353	1.3979	-19076	16250	6360	115546	29211	9870	39081		6.89	Si
SLV 3	8.98	9337.65	-14856	-10598	8871	1.9353	1.0173	-19558	16250	4629	115546	29211	9870	39081		4.41	Si
SLV 3	11.48	-6390.1	-7392	-5273	5492	1.5482	0.3095	0	0	0	115546	23369	7896	31265		5.69	Si
SLD 4	8.98	4543.53	-15028	-10721	4362	1.9353	1.9353	-19785	16250	8806	115546	29211	9870	39081		8.96	Si
SLD 4	11.48	-2497.97	-9434	-6730	2319	1.9353	1.9353	-12419	14984	8120	115546	29211	9870	39081		16.85	Si
SLV 1	8.98	9035.05	-16265	-11603	8462	1.9353	1.2365	-21413	16250	5626	115546	29211	9870	39081		4.62	Si
SLV 1	11.48	-5709.36	-8854	-6316	5059	1.5482	0.9684	0	0	0	115546	23369	7896	31265		6.18	Si
SLD 3	8.98	4523.33	-14999	-10700	4344	1.9353	1.9353	-19745	16250	8806	115546	29211	9870	39081		9	Si
SLD 3	11.48	-2484.67	-9414	-6716	2300	1.9353	1.9353	-12394	14979	8117	115546	29211	9870	39081		17	Si
SLV 2	8.98	9082.11	-16335	-11653	8503	1.9353	1.235	-21504	16250	5619	115546	29211	9870	39081		4.6	Si
SLV 2	11.48	-5740.32	-8900	-6349	5104	1.5482	0.9679	0	0	0	115546	23369	7896	31265		6.13	Si
SLV 13	8.98	-7538.34	-15313	-10924	-6995	1.9353	1.4261	-27705	16250	6489	115546	29211	9870	39081		5.59	Si
SLV 13	11.48	7300.38	-14444	-10304	-5717	1.9353	1.3867	-19015	16250	6310	115546	29211	9870	39081		6.84	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-10852	0.46	243.53	1353.31	1905.9	1629.61	6.69	Si
SLV 12	-10897	0.46	243.53	1358.21	1912.63	1635.42	6.72	Si
SLV 7	-11164	0.46	243.53	1387.23	1952.65	1669.94	6.86	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-11208	0.46	243.53	1392.09	1959.38	1675.74	6.88	Si
SLV 15	-12154	0.46	243.53	1493.32	2101.13	1797.22	7.38	Si
SLV 16	-12223	0.46	243.53	1500.67	2111.47	1806.07	7.42	Si
SLV 3	-13191	0.46	243.53	1601.51	2255.38	1928.44	7.92	Si
SLV 4	-13261	0.46	243.53	1608.65	2265.7	1937.18	7.95	Si
SLV 13	-13591	0.46	243.53	1642.4	2314.78	1978.59	8.12	Si
SLV 14	-13661	0.46	243.53	1649.47	2325.11	1987.29	8.16	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-9979	-17633	-837	0.903	1286.7	0.941	13.9529	14.44577	No
SLV 5	-9951	-17588	-837	0.906	1283.8	0.941	13.98619	14.44577	No
SLV 10	-9947	-17347	-808	0.908	1283.4	0.941	14.0309	14.44577	No
SLV 9	-9919	-17302	-808	0.91	1280.5	0.941	14.06448	14.44577	No
SLV 8	-7755	-12936	824	1.108	1061.7	0.931	17.29306	14.44577	Si
SLV 12	-7722	-12650	853	1.108	1058.4	0.931	17.30547	14.44577	Si
SLV 7	-7727	-12891	824	1.111	1058.9	0.931	17.34521	14.44577	Si
SLV 11	-7694	-12605	853	1.111	1055.6	0.931	17.35784	14.44577	Si
SLV 2	-9246	-16335	-290	1.011	1212.5	0.938	15.66559	6.41634	Si
SLV 1	-9203	-16265	-290	1.015	1208.1	0.938	15.728	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.872	SLU 22	Si
V_SLU	21.119	SLU 69	Si
PF_SLV	1.377	SLV 4	Si
V_SLV	4.385	SLV 4	Si
PFFP_SLV	6.692	SLV 11	Si
R_SLV	0.966	SLV 6	No

Maschio 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L6	L7	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	8.98	1155.91	-14743	-0.000064	0.0004492	0.0035	1.55	8249.18	9739.85	9739.85	8.43	No	Si
SLU 46	11.08	-930.79	-13215	-0.0000555	0.0004492	0.0035	1.55	7689.53	10031.11	10031.11	10.78	No	Si
SLU 51	8.98	1186.11	-14803	-0.0000646	0.0004492	0.0035	1.55	8269.86	9774.15	9774.15	8.24	No	Si
SLU 51	11.08	-961.87	-13177	-0.0000558	0.0004492	0.0035	1.55	7674.75	10009.52	10009.52	10.41	No	Si
SLU 49	8.98	1175.92	-15145	-0.0000657	0.0004492	0.0035	1.55	8385.3	9968.89	9968.89	8.48	No	Si
SLU 49	11.08	-944.98	-13565	-0.000057	0.0004492	0.0035	1.55	7823.84	10230.32	10230.32	10.83	No	Si
SLU 48	8.98	1172.09	-15142	-0.0000656	0.0004492	0.0035	1.55	8384.32	9967.22	9967.22	8.5	No	Si
SLU 48	11.08	-947.17	-13564	-0.000057	0.0004492	0.0035	1.55	7823.38	10229.64	10229.64	10.8	No	Si
SLU 45	8.98	1152.08	-14740	-0.0000639	0.0004492	0.0035	1.55	8248.17	9738.18	9738.18	8.45	No	Si
SLU 45	11.08	-932.97	-13214	-0.0000556	0.0004492	0.0035	1.55	7689.06	10030.43	10030.43	10.75	No	Si
SLU 43	8.98	1142.26	-13995	-0.0000611	0.0004492	0.0035	1.55	7983.77	9314.39	9314.39	8.15	No	Si
SLU 43	11.08	-935.66	-12476	-0.000053	0.0004492	0.0035	1.55	7394.11	9610.41	9610.41	10.27	No	Si
SLU 47	8.98	1168.66	-14403	-0.0000629	0.0004492	0.0035	1.55	8130.42	9546.23	9546.23	8.17	No	Si
SLU 47	11.08	-946.22	-12828	-0.0000544	0.0004492	0.0035	1.55	7536.79	9810.77	9810.77	10.37	No	Si
SLU 44	8.98	1148.66	-14000	-0.0000612	0.0004492	0.0035	1.55	7985.56	9317.19	9317.19	8.11	No	Si
SLU 44	11.08	-932.02	-12478	-0.000053	0.0004492	0.0035	1.55	7394.94	9611.56	9611.56	10.31	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.98	1182.28	-14800	-0.0000646	0.0004492	0.0035	1.55	8268.85	9772.47	9772.47	8.27	No	Si
SLU 50	11.08	-964.05	-13176	-0.0000559	0.0004492	0.0035	1.55	7674.28	10008.83	10008.83	10.38	No	Si
SLU 65	8.98	1159.85	-15090	-0.0000653	0.0004492	0.0035	1.55	8367.05	9937.72	9937.72	8.57	No	Si
SLU 65	11.08	-909.01	-14023	-0.0000581	0.0004492	0.0035	1.55	7994.14	10485.77	10485.77	11.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	8.98	-4238.91	-13989	-0.0001015	0.0006738	0.0035	1.55		10837.7	10837.7	2.56		Si
SLV 14	11.08	3994.52	-12801	-0.0000943	0.0006738	0.0035	1.55		8993.64	8993.64	2.25		Si
SLV 16	8.98	-4228.53	-14782	-0.0001037	0.0006738	0.0035	1.55		11308.39	11308.39	2.67		Si
SLV 16	11.08	3658.11	-13297	-0.0000905	0.0006738	0.0035	1.55		9279.42	9279.42	2.54		Si
SLV 3	8.98	5916.16	-9117	-0.0002762	0.0006738	0.0035	1.55		6784.36	6784.36	1.15		Si
SLV 3	11.08	-5299.42	-8864	-0.000176	0.0006738	0.0035	1.24		7601.28	7601.28	1.43		Si
SLV 4	8.98	5956.57	-9051	-0.0003004	0.0006738	0.0035	1.55		6740.63	6740.63	1.13		Si
SLV 4	11.08	-5289.9	-8730	-0.0001815	0.0006738	0.0035	1.24		7512.89	7512.89	1.42		Si
SLV 13	8.98	-4279.32	-14055	-0.0001023	0.0006738	0.0035	1.55		10876.77	10876.77	2.54		Si
SLV 13	11.08	3985.01	-12935	-0.0000945	0.0006738	0.0035	1.55		9070.98	9070.98	2.28		Si
SLD 2	8.98	3022.36	-10141	-0.0000716	0.0006738	0.0035	1.55		7456.57	7456.57	2.47		Si
SLD 2	11.08	-2489.89	-9719	-0.0000627	0.0006738	0.0035	1.55		8163.15	8163.15	3.28		Si
SLD 1	8.98	3005.01	-10169	-0.0000714	0.0006738	0.0035	1.55		7475.05	7475.05	2.49		Si
SLD 1	11.08	-2493.97	-9777	-0.000063	0.0006738	0.0035	1.55		8201.1	8201.1	3.29		Si
SLD 4	8.98	3027.34	-10490	-0.0000726	0.0006738	0.0035	1.55		7664.74	7664.74	2.53		Si
SLD 4	11.08	-2637.65	-9939	-0.0000654	0.0006738	0.0035	1.55		8307.59	8307.59	3.15		Si
SLV 2	8.98	5946.19	-8258	-0.0008151	0.0006738	0.0035	1.55		6212.28	6212.28	1.04		Si
SLV 2	11.08	-4953.49	-8233	-0.0001657	0.0006738	0.0035	1.24		7186.3	7186.3	1.45		Si
SLV 1	8.98	5905.78	-8324	-0.0005938	0.0006738	0.0035	1.55		6256.68	6256.68	1.06		Si
SLV 1	11.08	-4963	-8367	-0.0001606	0.0006738	0.0035	1.24		7274.69	7274.69	1.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	8.98	1155.91	-14743	-10517	939	1.55	1.55	-24233	10833	4702	115546	15597	7905	23502	No	25.02	Si
SLU 46	11.08	-930.79	-13215	-9428	939	1.55	1.55	-21722	10833	4702	115546	15597	7905	23502	No	25.02	Si
SLU 45	8.98	1152.08	-14740	-10515	949	1.55	1.55	-24228	10833	4702	115546	15597	7905	23502	No	24.77	Si
SLU 45	11.08	-932.97	-13214	-9427	949	1.55	1.55	-21720	10833	4702	115546	15597	7905	23502	No	24.77	Si
SLU 71	8.98	1193.47	-15890	-11336	947	1.55	1.55	-26120	10833	4702	115546	15597	7905	23502	No	24.83	Si
SLU 71	11.08	-941.03	-14722	-10502	947	1.55	1.55	-24198	10833	4702	115546	15597	7905	23502	No	24.82	Si
SLU 47	8.98	1168.66	-14403	-10274	942	1.55	1.55	-23674	10833	4702	115546	15597	7905	23502	No	24.96	Si
SLU 47	11.08	-946.22	-12828	-9151	942	1.55	1.55	-21086	10833	4702	115546	15597	7905	23502	No	24.96	Si
SLU 69	8.98	1183.28	-16233	-11580	938	1.55	1.55	-26682	10833	4702	115546	15597	7905	23502	No	25.06	Si
SLU 69	11.08	-924.15	-15110	-10779	938	1.55	1.55	-24836	10833	4702	115546	15597	7905	23502	No	25.05	Si
SLU 48	8.98	1172.09	-15142	-10802	954	1.55	1.55	-24890	10833	4702	115546	15597	7905	23502	No	24.62	Si
SLU 48	11.08	-947.17	-13564	-9676	955	1.55	1.55	-22296	10833	4702	115546	15597	7905	23502	No	24.62	Si
SLU 43	8.98	1142.26	-13995	-9984	952	1.55	1.55	-23004	10833	4702	115546	15597	7905	23502	No	24.7	Si
SLU 43	11.08	-935.66	-12476	-8900	952	1.55	1.55	-20507	10833	4702	115546	15597	7905	23502	No	24.7	Si
SLU 50	8.98	1182.28	-14800	-10558	963	1.55	1.55	-24327	10833	4702	115546	15597	7905	23502	No	24.4	Si
SLU 50	11.08	-964.05	-13176	-9400	963	1.55	1.55	-21658	10833	4702	115546	15597	7905	23502	No	24.4	Si
SLU 51	8.98	1186.11	-14803	-10560	954	1.55	1.55	-24332	10833	4702	115546	15597	7905	23502	No	24.64	Si
SLU 51	11.08	-961.87	-13177	-9400	954	1.55	1.55	-21660	10833	4702	115546	15597	7905	23502	No	24.64	Si
SLU 49	8.98	1175.92	-15145	-10804	945	1.55	1.55	-24895	10833	4702	115546	15597	7905	23502	No	24.87	Si
SLU 49	11.08	-944.98	-13565	-9677	945	1.55	1.55	-22298	10833	4702	115546	15597	7905	23502	No	24.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.98	5905.78	-8324	-5938	5696	1.55	0.1965	-113450	16250	894	115546	23395	7905	31300		5.5	Si
SLV 1	11.08	-4963	-8367	-5969	5189	1.24	0.5455	0	0	0	115546	18716	6324	25040		4.83	Si
SLV 4	8.98	5956.57	-9051	-6457	6496	1.55	0.3506	-68221	16250	1595	115546	23395	7905	31300		4.82	Si
SLV 4	11.08	-5289.9	-8730	-6227	5951	1.24	0.5071	0	0	0	115546	18716	6324	25040		4.21	Si
SLV 7	8.98	2370.66	-12036	-8586	3568	1.55	1.55	-19784	16250	7052	115546	23395	7905	31300		8.77	Si
SLV 7	11.08	-2558.41	-11019	-7860	3346	1.55	1.55	-18111	16122	6997	115546	23395	7905	31300		9.35	Si
SLV 15	8.98	-4268.94	-14848	-10592	-4412	1.55	1.4624	-26168	16250	6654	115546	23395	7905	31300		7.09	Si
SLV 15	11.08	3648.59	-13432	-9582	-3905	1.55	1.5101	-22078	16250	6871	115546	23395	7905	31300		8.01	Si
SLV 8	8.98	2396.7	-11993	-8556	3585	1.55	1.55	-19714	16250	7052	115546	23395	7905	31300		8.73	Si
SLV 8	11.08	-2552.27	-10932	-7799	3364	1.55	1.55	-17969	16094	6985	115546	23395	7905	31300		9.3	Si
SLV 2	8.98	5946.19	-8258	-5891	5723	1.55	0.1648	-133963	16250	750	115546	23395	7905	31300		5.47	Si
SLV 2	11.08	-4953.49	-8233	-5873	5216	1.24	0.5199	0	0	0	115546	18716	6324	25040		4.8	Si
SLV 14	8.98	-4238.91	-13989	-9979	-5158	1.55	1.4159	-25439	16250	6442	115546	23395	7905	31300		6.07	Si
SLV 14	11.08	3994.52	-12801	-9132	-4613	1.55	1.3888	-21041	16250	6319	115546	23395	7905	31300		6.78	Si
SLV 13	8.98	-4279.32	-14055	-10026	-5186	1.55	1.4116	-25638	16250	6423	115546	23395	7905	31300		6.04	Si
SLV 13	11.08	3985.01	-12935	-9228	-4641	1.55	1.4008	-21262	16250	6373	115546	23395	7905	31300		6.74	Si
SLV 16	8.98	-4228.53	-14782	-10545	-4385	1.55	1.4668	-25973	16250	6674	115546	23395	7905	31300		7.14	Si
SLV 16	11.08	3658.11	-13297	-9486	-3878	1.55	1.4997	-21857	16250	6824	115546	23395	7905	31300		8.07	Si
SLV 3	8.98	5916.16	-9117	-6504	6469	1.55	0.3782	-63539	16250	1721	115546	23395	7905	31300		4.84	Si
SLV 3	11.08	-5299.42	-8864	-6323	5924	1.24	0.5314	0	0	0	115546	18716	6324	25040		4.23	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-8514	0.46	195.05	1064.43	1495.72	1280.07	6.56	Si
SLV 1	-8649	0.46	195.05	1079.19	1515.94	1297.56	6.65	Si
SLV 4	-9096	0.46	195.05	1127.82	1583.15	1355.49	6.95	Si
SLV 3	-9230	0.46	195.05	1142.31	1603.37	1372.84	7.04	Si
SLV 6	-9423	0.46	195.05	1162.99	1632.39	1397.69	7.17	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-9510	0.46	195.05	1172.24	1645.42	1408.83	7.22	Si
SLV 10	-10764	0.46	195.05	1303.01	1831.98	1567.49	8.04	Si
SLV 9	-10850	0.46	195.05	1311.84	1844.86	1578.35	8.09	Si
SLV 8	-11362	0.46	195.05	1363.47	1920.92	1642.2	8.42	Si
SLV 7	-11449	0.46	195.05	1372.13	1933.81	1652.97	8.47	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-9264	-13755	-18	0.862	1159.4	0.947	13.22668	14.44577	No
SLV 12	-9194	-13713	-17	0.867	1152.4	0.946	13.31378	14.44577	No
SLV 7	-8326	-12036	-35	0.939	1064.3	0.943	14.48154	14.44577	Si
SLV 8	-8257	-11993	-34	0.946	1057.3	0.942	14.5868	14.44577	Si
SLV 9	-6245	-11112	31	1.185	853.8	0.931	18.50231	14.44577	Si
SLV 10	-6176	-11070	32	1.196	846.8	0.931	18.67442	14.44577	Si
SLV 5	-5307	-9393	14	1.349	759.3	0.924	21.20274	14.44577	Si
SLV 6	-5238	-9350	15	1.362	752.3	0.924	21.42949	14.44577	Si
SLV 15	-9320	-14848	19	0.857	1165.1	0.947	13.15567	6.41634	Si
SLV 16	-9213	-14782	19	0.865	1154.2	0.947	13.28801	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.111	SLU 44	Si
V_SLU	24.4	SLU 50	Si
PF_SLV	1.045	SLV 2	Si
V_SLV	4.207	SLV 4	Si
PFFP_SLV	6.563	SLV 2	Si
R_SLV	0.916	SLV 11	No

Maschio 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	8.98	5296.6	-26623	-0.000044	0.0004492	0.0035	3.98	42621.23	47852.45	47852.45	9.03	No	Si
SLU 47	11.08	1366.46	-21444	-0.0000295	0.0004492	0.0035	3.98	35952.81	40264.27	40264.27	29.47	No	Si
SLU 43	8.98	5216.96	-25829	-0.0000428	0.0004492	0.0035	3.98	41649.65	46702.36	46702.36	8.95	No	Si
SLU 43	11.08	1337.45	-20688	-0.0000284	0.0004492	0.0035	3.98	34914.25	39014.88	39014.88	29.17	No	Si
SLU 49	8.98	5480.51	-27978	-0.0000462	0.0004492	0.0035	3.98	44236.69	49815.09	49815.09	9.09	No	Si
SLU 49	11.08	1626.96	-22878	-0.0000318	0.0004492	0.0035	3.98	37878.51	42429.49	42429.49	26.08	No	Si
SLU 48	8.98	5485.46	-27955	-0.0000461	0.0004492	0.0035	3.98	44209.65	49781.7	49781.7	9.08	No	Si
SLU 48	11.08	1638.65	-22866	-0.0000319	0.0004492	0.0035	3.98	37862.68	42412.14	42412.14	25.88	No	Si
SLU 51	8.98	5387.78	-27363	-0.0000452	0.0004492	0.0035	3.98	43510.4	48924.64	48924.64	9.08	No	Si
SLU 51	11.08	1422.74	-22171	-0.0000305	0.0004492	0.0035	3.98	36937.16	41405.72	41405.72	29.1	No	Si
SLU 46	8.98	5392.62	-27222	-0.000045	0.0004492	0.0035	3.98	43342.47	48720.64	48720.64	9.03	No	Si
SLU 46	11.08	1578.47	-22143	-0.0000308	0.0004492	0.0035	3.98	36898.47	41363.97	41363.97	26.21	No	Si
SLU 64	8.98	5366.62	-27556	-0.0000454	0.0004492	0.0035	3.98	43739.44	49203.98	49203.98	9.17	No	Si
SLU 64	11.08	1786.74	-23154	-0.0000325	0.0004492	0.0035	3.98	38241.18	42828.22	42828.22	23.97	No	Si
SLU 44	8.98	5208.71	-25867	-0.0000428	0.0004492	0.0035	3.98	41697.08	46758	46758	8.98	No	Si
SLU 44	11.08	1317.97	-20708	-0.0000284	0.0004492	0.0035	3.98	34941.91	39047.89	39047.89	29.63	No	Si
SLU 45	8.98	5397.57	-27199	-0.000045	0.0004492	0.0035	3.98	43314.93	48687.26	48687.26	9.02	No	Si
SLU 45	11.08	1590.16	-22131	-0.0000308	0.0004492	0.0035	3.98	36882.38	41346.62	41346.62	26	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.98	5392.73	-27340	-0.0000451	0.0004492	0.0035	3.98	43482.96	48891.25	48891.25	9.07	No	Si
SLU 50	11.08	1434.43	-22159	-0.0000305	0.0004492	0.0035	3.98	36921.08	41388.36	41388.36	28.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	8.98	7200.47	-14236	-0.0000311	0.0006738	0.0035	3.98		28474.63	28474.63	3.95		Si
SLV 3	11.08	-7746.91	-8632	-0.0000259	0.0006738	0.0035	3.98		25661.61	25661.61	3.31		Si
SLV 2	8.98	5993.42	-13518	-0.0000279	0.0006738	0.0035	3.98		27181.58	27181.58	4.54		Si
SLV 2	11.08	-8483.84	-7717	-0.0000284	0.0006738	0.0035	3.184		23964.44	23964.44	2.82		Si
SLV 1	8.98	6317.65	-13451	-0.0000285	0.0006738	0.0035	3.98		27061.56	27061.56	4.28		Si
SLV 1	11.08	-8387.63	-7701	-0.000028	0.0006738	0.0035	3.98		23935.07	23935.07	2.85		Si
SLV 4	8.98	6876.23	-14303	-0.0000306	0.0006738	0.0035	3.98		28594.65	28594.65	4.16		Si
SLV 4	11.08	-7843.11	-8648	-0.0000262	0.0006738	0.0035	3.98		25690.64	25690.64	3.28		Si
SLV 15	8.98	2168.55	-28629	-0.0000399	0.0006738	0.0035	3.98		53189.02	53189.02	24.53		Si
SLV 15	11.08	11340.88	-27899	-0.0000567	0.0006738	0.0035	3.98		52070.35	52070.35	4.59		Si
SLV 8	8.98	6202.65	-20245	-0.0000369	0.0006738	0.0035	3.98		39108.99	39108.99	6.31		Si
SLV 8	11.08	-397.77	-16475	-0.0000211	0.0006738	0.0035	3.98		39776.28	39776.28	100		Si
SLV 7	8.98	6411.6	-20202	-0.0000372	0.0006738	0.0035	3.98		39034.02	39034.02	6.09		Si
SLV 7	11.08	-335.77	-16465	-0.000021	0.0006738	0.0035	3.98		39758.38	39758.38	118.41		Si
SLV 16	8.98	1844.31	-28696	-0.0000394	0.0006738	0.0035	3.98		53286.62	53286.62	28.89		Si
SLV 16	11.08	11244.68	-27915	-0.0000566	0.0006738	0.0035	3.98		52096.53	52096.53	4.63		Si
SLV 14	8.98	961.5	-27911	-0.0000366	0.0006738	0.0035	3.98		52089.82	52089.82	54.18		Si
SLV 14	11.08	10603.96	-26983	-0.0000541	0.0006738	0.0035	3.98		50549.01	50549.01	4.77		Si
SLV 13	8.98	1285.73	-27844	-0.0000372	0.0006738	0.0035	3.98		51979.03	51979.03	40.43		Si
SLV 13	11.08	10700.16	-26967	-0.0000543	0.0006738	0.0035	3.98		50522.84	50522.84	4.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.98	4125.76	-23354	-16660	-1856	3.98	3.98	-14950	10327	11508	115546	40049	20298	60347	No	32.52	Si
SLU 40	11.08	2349.18	-21737	-15507	-1866	3.98	3.98	-13915	10189	11354	115546	40049	20298	60347	No	32.34	Si
SLU 41	8.98	4218.59	-24087	-17183	-1831	3.98	3.98	-15419	10389	11578	115546	40049	20298	60347	No	32.95	Si
SLU 41	11.08	2409.36	-22461	-16023	-1842	3.98	3.98	-14378	10250	11423	115546	40049	20298	60347	No	32.76	Si
SLU 32	8.98	4332.76	-24318	-17348	-1450	3.98	3.98	-15567	10409	11600	115546	40049	20298	60347	No	41.61	Si
SLU 32	11.08	2384.29	-22359	-15951	-1461	3.98	3.98	-14313	10242	11413	115546	40049	20298	60347	No	41.32	Si
SLU 39	8.98	4130.71	-23331	-16644	-1869	3.98	3.98	-14935	10325	11506	115546	40049	20298	60347	No	32.28	Si
SLU 39	11.08	2360.87	-21725	-15498	-1879	3.98	3.98	-13907	10188	11353	115546	40049	20298	60347	No	32.11	Si
SLU 47	8.98	5296.6	-26623	-18992	1453	3.98	3.98	-17042	10606	11819	115546	40049	20298	60347	No	41.53	Si
SLU 47	11.08	1366.46	-21444	-15297	1443	3.98	3.98	-13727	10164	11326	115546	40049	20298	60347	No	41.81	Si
SLU 35	8.98	4420.65	-25074	-17887	-1412	3.98	3.98	-16051	10473	11672	115546	40049	20298	60347	No	42.73	Si
SLU 35	11.08	2432.78	-23095	-16475	-1423	3.98	3.98	-14784	10305	11483	115546	40049	20298	60347	No	42.4	Si
SLU 50	8.98	5392.73	-27340	-19504	1468	3.98	3.98	-17502	10667	11887	115546	40049	20298	60347	No	41.1	Si
SLU 50	11.08	1434.43	-22159	-15808	1458	3.98	3.98	-14185	10225	11394	115546	40049	20298	60347	No	41.39	Si
SLU 51	8.98	5387.78	-27363	-19520	1482	3.98	3.98	-17516	10669	11889	115546	40049	20298	60347	No	40.72	Si
SLU 51	11.08	1422.74	-22171	-15817	1472	3.98	3.98	-14193	10226	11396	115546	40049	20298	60347	No	41.01	Si
SLU 42	8.98	4213.64	-24110	-17200	-1818	3.98	3.98	-15434	10391	11580	115546	40049	20298	60347	No	33.2	Si
SLU 42	11.08	2397.67	-22473	-16032	-1828	3.98	3.98	-14386	10251	11424	115546	40049	20298	60347	No	33.01	Si
SLU 33	8.98	4327.81	-24341	-17364	-1437	3.98	3.98	-15582	10411	11602	115546	40049	20298	60347	No	42.01	Si
SLU 33	11.08	2372.6	-22371	-15959	-1447	3.98	3.98	-14321	10243	11415	115546	40049	20298	60347	No	41.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.98	7200.47	-14236	-10156	9162	3.98	3.98	-9113	14323	15961	115546	60073	20298	80371		8.77	Si
SLV 3	11.08	-7746.91	-8632	-6158	7958	3.98	3.2777	-6728	13846	12707	115546	60073	20298	80371		10.1	Si
SLD 2	8.98	4897.11	-17838	-12725	4069	3.98	3.98	-11419	14784	16475	115546	60073	20298	80371		19.75	Si
SLD 2	11.08	-2812.69	-13486	-9620	3591	3.98	3.98	-8633	14227	15854	115546	60073	20298	80371		22.38	Si
SLV 2	8.98	5993.42	-13518	-9643	9238	3.98	3.98	-8653	14231	15859	115546	60073	20298	80371		8.7	Si
SLV 2	11.08	-8483.84	-7717	-5505	8128	3.184	2.6717	0	0	0	115546	48059	16238	64297		7.91	Si
SLV 4	8.98	6876.23	-14303	-10203	9102	3.98	3.98	-9156	14331	15971	115546	60073	20298	80371		8.83	Si
SLV 4	11.08	-7843.11	-8648	-6169	7897	3.98	3.2493	-6800	13860	12610	115546	60073	20298	80371		10.18	Si
SLV 1	8.98	6317.65	-13451	-9596	9299	3.98	3.98	-8611	14222	15849	115546	60073	20298	80371		8.64	Si
SLV 1	11.08	-8387.63	-7701	-5494	8189	3.98	2.7024	-7277	13956	10560	115546	60073	20298	80371		9.81	Si
SLV 13	8.98	1285.73	-27844	-19863	-8701	3.98	3.98	-17824	16065	17903	115546	60073	20298	80371		9.24	Si
SLV 13	11.08	10700.16	-26967	-19238	-7512	3.98	3.98	-17263	15953	17778	115546	60073	20298	80371		10.7	Si
SLV 15	8.98	2168.55	-28629	-20423	-8837	3.98	3.98	-18327	16165	18015	115546	60073	20298	80371		9.09	Si
SLV 15	11.08	11340.88	-27899	-19902	-7744	3.98	3.98	-17859	16072	17911	115546	60073	20298	80371		10.38	Si
SLV 14	8.98	961.5	-27911	-19911	-8761	3.98	3.98	-17867	16073	17912	115546	60073	20298	80371		9.17	Si
SLV 14	11.08	10603.96	-26983	-19249	-7573	3.98	3.98	-17273	15955	17780	115546	60073	20298	80371		10.61	Si
SLV 16	8.98	1844.31	-28696	-20471	-8898	3.98	3.98	-18369	16174	18024	115546	60073	20298	80371		9.03	Si
SLV 16	11.08	11244.68	-27915	-19914	-7804	3.98	3.98	-17869	16074	17913	115546	60073	20298	80371		10.3	Si
SLD 1	8.98	5036.32	-17809	-12705	4095	3.98	3.98	-11401	14780	16471	115546	60073	20298	80371		19.63	Si
SLD 1	11.08	-2771.38	-13479	-9616	3617	3.98	3.98	-8628	14226	15853	115546	60073	20298	80371		22.22	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-8200	0.46	500.83	1101.94	1773.33	1437.63	2.87	Si
SLV 2	-8216	0.46	500.83	1103.96	1775.76	1439.86	2.87	Si
SLV 3	-9135	0.46	500.83	1221.64	1917.84	1569.74	3.13	Si
SLV 4	-9150	0.46	500.83	1223.65	1920.28	1571.97	3.14	Si
SLV 5	-14000	0.46	500.83	1825.63	2663.63	2244.63	4.48	Si
SLV 6	-14010	0.46	500.83	1826.85	2665.18	2246.02	4.48	Si
SLV 7	-17114	0.46	500.83	2195.23	3136.02	2665.63	5.32	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-17124	0.46	500.83	2196.42	3137.56	2666.99	5.33	Si
SLV 9	-19903	0.46	500.83	2514.87	3557.36	3036.12	6.06	Si
SLV 10	-19913	0.46	500.83	2516.02	3558.88	3037.45	6.06	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-18173	-24520	1007	1.03	2408.3	0.936	15.98682	14.44577	Si
SLV 12	-18159	-24563	1008	1.031	2406.8	0.936	15.99721	14.44577	Si
SLV 9	-16415	-21902	-1007	1.117	2230.6	0.932	17.41862	14.44577	Si
SLV 10	-16401	-21945	-1006	1.118	2229.2	0.932	17.43163	14.44577	Si
SLV 7	-15427	-20202	1004	1.173	2130.9	0.93	18.34621	14.44577	Si
SLV 8	-15413	-20245	1005	1.174	2129.5	0.93	18.36002	14.44577	Si
SLV 5	-13670	-17584	-1010	1.289	1953.8	0.925	20.26086	14.44577	Si
SLV 6	-13655	-17627	-1009	1.29	1952.4	0.925	20.27848	14.44577	Si
SLV 15	-20765	-28629	306	0.953	2670.7	0.942	14.71199	6.41634	Si
SLV 16	-20743	-28696	307	0.954	2668.4	0.941	14.72515	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.952	SLU 43	Si
V_SLU	32.11	SLU 39	Si
PF_SLV	2.825	SLV 2	Si
V_SLV	7.91	SLV 2	Si
PFFP_SLV	2.871	SLV 1	Si
R_SLV	1.107	SLV 11	Si

Maschio 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.314	L6	L7	1.51	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	8.98	-158.84	-10567	-0.0000413	0.0003743	0.0035	1.51	6019.54	7210.03	7210.03	45.39	No	Si
SLU 48	12.5	-198.63	-5840	-0.0000238	0.0003743	0.0035	1.51	3810.76	4602.62	4602.62	23.17	No	Si
SLU 47	8.98	-117.16	-10050	-0.0000387	0.0003743	0.0035	1.51	5816.35	6945.94	6945.94	59.28	No	Si
SLU 47	12.5	-188.93	-5435	-0.0000222	0.0003743	0.0035	1.51	3585.28	4351.47	4351.47	23.03	No	Si
SLU 44	8.98	-115.14	-9702	-0.0000373	0.0003743	0.0035	1.51	5674.11	6769.68	6769.68	58.8	No	Si
SLU 44	12.5	-168.36	-5107	-0.0000206	0.0003743	0.0035	1.51	3398.13	4145.76	4145.76	24.63	No	Si
SLU 8	8.98	-127.25	-8526	-0.0000329	0.0003743	0.0035	1.51	5162.16	6145.39	6145.39	48.29	No	Si
SLU 8	12.5	-175.14	-4787	-0.0000196	0.0003743	0.0035	1.51	3212.29	3947.88	3947.88	22.54	No	Si
SLU 9	8.98	-108.49	-8488	-0.0000325	0.0003743	0.0035	1.51	5144.67	6124.94	6124.94	56.46	No	Si
SLU 9	12.5	-166.87	-4768	-0.0000194	0.0003743	0.0035	1.51	3201.1	3936.16	3936.16	23.59	No	Si
SLU 50	8.98	-150.46	-10462	-0.0000408	0.0003743	0.0035	1.51	5979.18	7157.5	7157.5	47.57	No	Si
SLU 50	12.5	-223.27	-5795	-0.000024	0.0003743	0.0035	1.51	3786.17	4576.46	4576.46	20.5	No	Si
SLU 51	8.98	-131.7	-10424	-0.0000404	0.0003743	0.0035	1.51	5964.29	7137.7	7137.7	54.2	No	Si
SLU 51	12.5	-215.01	-5776	-0.0000238	0.0003743	0.0035	1.51	3775.66	4565.06	4565.06	21.23	No	Si
SLU 43	8.98	-146.41	-9766	-0.000038	0.0003743	0.0035	1.51	5700.5	6801.81	6801.81	46.46	No	Si
SLU 43	12.5	-182.13	-5138	-0.000021	0.0003743	0.0035	1.51	3416.4	4165.55	4165.55	22.87	No	Si
SLU 49	8.98	-140.07	-10529	-0.0000409	0.0003743	0.0035	1.51	6004.79	7191.22	7191.22	51.34	No	Si
SLU 49	12.5	-190.37	-5821	-0.0000236	0.0003743	0.0035	1.51	3800.27	4591.47	4591.47	24.12	No	Si
SLU 58	8.98	-170.07	-11610	-0.0000456	0.0003743	0.0035	1.51	6401.27	7710.41	7710.41	45.34	No	Si
SLU 58	12.5	-197.95	-6234	-0.0000253	0.0003743	0.0035	1.51	4024.81	4835.24	4835.24	24.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.98	210.78	-6036	-0.0000244	0.0005615	0.0035	1.51		4356.33	4356.33	20.67		Si
SLV 2	12.5	507.2	-3204	-0.0000183	0.0005615	0.0035	1.51		2449.7	2449.7	4.83		Si
SLV 13	8.98	131.7	-7610	-0.000029	0.0005615	0.0035	1.51		5258.86	5258.86	39.93		Si
SLV 13	12.5	-947.26	-3605	-0.000026	0.0005615	0.0035	1.51		3223.63	3223.63	3.4		Si
SLV 14	8.98	137.18	-7530	-0.0000288	0.0005615	0.0035	1.51		5213.31	5213.31	38		Si
SLV 14	12.5	-914	-3602	-0.0000255	0.0005615	0.0035	1.51		3222.08	3222.08	3.53		Si
SLV 9	8.98	885.27	-3157	-0.0000235	0.0005615	0.0035	1.51		2416.3	2416.3	2.73		Si
SLV 9	12.5	-676.97	-1029	-0.0000351	0.0005615	0.0035	1.208		1406.57	1406.57	2.08		Si
SLV 3	8.98	-417.7	-9473	-0.0000401	0.0005615	0.0035	1.51		6985.96	6985.96	16.72		Si
SLV 3	12.5	673.7	-5295	-0.0000283	0.0005615	0.0035	1.51		3870.99	3870.99	5.75		Si
SLV 6	8.98	910.88	-2656	-0.0000228	0.0005615	0.0035	1.51		2065.54	2065.54	2.27		Si
SLV 6	12.5	-229.18	-908	-0.0000063	0.0005615	0.0035	1.51		1318.82	1318.82	5.75		Si
SLV 4	8.98	-412.22	-9392	-0.0000397	0.0005615	0.0035	1.51		6938.4	6938.4	16.83		Si
SLV 4	12.5	706.96	-5293	-0.0000287	0.0005615	0.0035	1.51		3869.48	3869.48	5.47		Si
SLV 1	8.98	205.3	-6116	-0.0000246	0.0005615	0.0035	1.51		4407.61	4407.61	21.47		Si
SLV 1	12.5	473.95	-3207	-0.0000179	0.0005615	0.0035	1.51		2451.29	2451.29	5.17		Si
SLV 10	8.98	888.8	-3105	-0.0000234	0.0005615	0.0035	1.51		2379.85	2379.85	2.68		Si
SLV 10	12.5	-655.54	-1027	-0.0000298	0.0005615	0.0035	1.208		1405.52	1405.52	2.14		Si
SLV 5	8.98	907.35	-2709	-0.0000228	0.0005615	0.0035	1.51		2102.53	2102.53	2.32		Si
SLV 5	12.5	-250.61	-909	-0.0000066	0.0005615	0.0035	1.51		1319.89	1319.89	5.27		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	8.98	-191.32	-10672	-8887	-1964	1.51	1.51	-21020	9747	4121	40441	12661	3851	16511	No	8.41	Si
SLU 39	12.5	-74.68	-5432	-4523	600	1.51	1.51	-10698	8371	3539	40441	12661	3851	16511	No	27.53	Si
SLU 78	8.98	-199.78	-12879	-10725	-1983	1.51	1.51	-25366	10327	4366	40441	12661	3851	16511	No	8.32	Si
SLU 78	12.5	-141.9	-6934	-5774	1037	1.51	1.51	-13656	8765	3706	40441	12661	3851	16511	No	15.92	Si
SLU 75	8.98	-197.76	-12531	-10435	-1969	1.51	1.51	-24681	10235	4327	40441	12661	3851	16511	No	8.39	Si
SLU 75	12.5	-121.33	-6605	-5500	957	1.51	1.51	-13010	8679	3670	40441	12661	3851	16511	No	17.25	Si
SLU 41	8.98	-193.34	-11021	-9177	-1979	1.51	1.51	-21705	9838	4160	40441	12661	3851	16511	No	8.34	Si
SLU 41	12.5	-95.26	-5760	-4796	679	1.51	1.51	-11344	8457	3576	40441	12661	3851	16511	No	24.3	Si
SLU 77	8.98	-218.55	-12918	-10757	-2039	1.51	1.51	-25442	10337	4370	40441	12661	3851	16511	No	8.1	Si
SLU 77	12.5	-150.17	-6953	-5790	1056	1.51	1.51	-13694	8770	3708	40441	12661	3851	16511	No	15.64	Si
SLU 84	8.98	-197.79	-12919	-10757	-2080	1.51	1.51	-25443	10337	4370	40441	12661	3851	16511	No	7.94	Si
SLU 84	12.5	-135.12	-6749	-5620	953	1.51	1.51	-13292	8717	3685	40441	12661	3851	16511	No	17.32	Si
SLU 82	8.98	-195.76	-12570	-10468	-2065	1.51	1.51	-24758	10245	4332	40441	12661	3851	16511	No	8	Si
SLU 82	12.5	-114.55	-6421	-5346	873	1.51	1.51	-12645	8631	3649	40441	12661	3851	16511	No	18.91	Si
SLU 74	8.98	-216.52	-12570	-10467	-2025	1.51	1.51	-24756	10245	4332	40441	12661	3851	16511	No	8.15	Si
SLU 74	12.5	-129.6	-6625	-5516	976	1.51	1.51	-13047	8684	3672	40441	12661	3851	16511	No	16.92	Si
SLU 83	8.98	-216.55	-12957	-10789	-2136	1.51	1.51	-25519	10347	4375	40441	12661	3851	16511	No	7.73	Si
SLU 83	12.5	-143.39	-6768	-5636	972	1.51	1.51	-13329	8722	3688	40441	12661	3851	16511	No	16.99	Si
SLU 81	8.98	-214.53	-12609	-10499	-2121	1.51	1.51	-24833	10256	4336	40441	12661	3851	16511	No	7.78	Si
SLU 81	12.5	-122.82	-6440	-5362	892	1.51	1.51	-12683	8636	3651	40441	12661	3851	16511	No	18.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	8.98	-491.3	-10967	-9133	2473	1.51	1.51	-21600	14737	6231	40441	18991	3851	22841		9.24	Si
SLV 15	12.5	-747.51	-5693	-4740	3792	1.51	1.51	-11212	12659	5352	40441	18991	3851	22841		6.02	Si
SLV 9	8.98	885.27	-3157	-2629	1007	1.51	1.4237	-6217	11660	4648	40441	18991	3851	22841		22.68	Si
SLV 9	12.5	-676.97	-1029	-857	4931	1.208	0.2908	0	0	0	40441	15193	3080	18273		3.71	Si
SLV 10	8.98	888.8	-3105	-2585	819	1.51	1.4061	-6115	11640	4583	40441	18991	3851	22841		27.88	Si
SLV 10	12.5	-655.54	-1027	-855	4751	1.208	0.3506	0	0	0	40441	15193	3080	18273		3.85	Si
SLV 4	8.98	-412.22	-9392	-7821	-5432	1.51	1.51	-18499	14116	5968	40441	18991	3851	22841		4.21	Si
SLV 4	12.5	706.96	-5293	-4407	-3923	1.51	1.51	-10424	12501	5286	40441	18991	3851	22841		5.82	Si
SLV 14	8.98	137.18	-7530	-6270	2758	1.51	1.51	-14830	13383	5658	40441	18991	3851	22841		8.28	Si
SLV 14	12.5	-914	-3602	-3000	5263	1.51	1.5038	-7095	11836	4984	40441	18991	3851	22841		4.34	Si
SLV 3	8.98	-417.7	-9473	-7889	-5140	1.51	1.51	-18658	14148	5982	40441	18991	3851	22841		4.44	Si
SLV 3	12.5	673.7	-5295	-4409	-3644	1.51	1.51	-10428	12502	5286	40441	18991	3851	22841		6.27	Si
SLV 13	8.98	131.7	-7610	-6337	3050	1.51	1.51	-14989	13414	5672	40441	18991	3851	22841		7.49	Si
SLV 13	12.5	-947.26	-3605	-3002	5542	1.51	1.4766	-7099	11837	4894	40441	18991	3851	22841		4.12	Si
SLV 2	8.98	210.78	-6036	-5026	-4854	1.51	1.51	-11887	12794	5409	40441	18991	3851	22841		4.71	Si
SLV 2	12.5	507.2	-3204	-2668	-2173	1.51	1.51	-6311	11679	4938	40441	18991	3851	22841		10.51	Si
SLV 1	8.98	205.3	-6116	-5093	-4563	1.51	1.51	-12046	12826	5423	40441	18991	3851	22841		5.01	Si
SLV 1	12.5	473.95	-3207	-2670	-1894	1.51	1.51	-6316	11680	4938	40441	18991	3851	22841		12.06	Si
SLV 16	8.98	-485.83	-10886	-9065	2181	1.51	1.51	-21441	14705	6217	40441	18991	3851	22841		10.47	Si
SLV 16	12.5	-714.25	-5690	-4739	3513	1.51	1.51	-11207	12658	5352	40441	18991	3851	22841		6.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	0	-890	190.01	0	0	No, e>t/2
SLV 5	179667	0.46	0	-952	190.01	0	0	No, e>t/2
SLV 10	179667	0.46	3755	-1588	190.01	216.83	1.14	Si
SLV 9	179667	0.46	3902	-1650	190.01	225.08	1.18	Si
SLV 2	179667	0.46	7978	-3373	190.01	447.58	2.36	Si
SLV 1	179667	0.46	8206	-3470	190.01	459.63	2.42	Si
SLV 14	179667	0.46	13477	-5698	190.01	727.31	3.83	Si
SLV 13	179667	0.46	13704	-5794	190.01	738.39	3.89	Si
SLV 4	179667	0.46	14696	-6213	190.01	786.18	4.14	Si
SLV 3	179667	0.46	14924	-6310	190.01	797.04	4.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-7988	-14294	99	0.944	1024.3	0.942	14.56723	14.44577	Si
SLV 11	-7989	-14346	97	0.944	1024.5	0.942	14.56793	14.44577	Si
SLV 8	-7868	-13846	52	0.961	1012.2	0.941	14.83548	14.44577	Si
SLV 7	-7870	-13898	50	0.961	1012.4	0.941	14.83614	14.44577	Si
SLV 15	-5693	-10967	93	1.24	792.3	0.928	19.41439	6.41634	Si
SLV 16	-5690	-10886	96	1.24	792.1	0.928	19.41455	6.41634	Si
SLV 3	-5295	-9473	-62	1.317	752.2	0.925	20.68031	6.41634	Si
SLV 4	-5293	-9392	-60	1.318	752	0.925	20.6942	6.41634	Si
SLV 9	-1029	-3157	-68	3.615	336.6	0.891	58.99662	14.44577	Si
SLV 10	-1027	-3105	-66	3.618	336.5	0.891	59.04391	14.44577	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.497	SLU 50	Si
V_SLU	7.731	SLU 83	Si
PF_SLV	2.078	SLV 9	Si
V_SLV	3.705	SLV 9	Si
PFFP_SLV	0	SLV 5	No
R_SLV	1.008	SLV 12	Si

Maschio 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.714	L6	Z medio 1151 cm	2.6	0.28	2.532	1.758	3.306			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 5	8.98	760.11	-15267	-0.0000361	0.0003743	0.0035	2.6	15758.26	16969.34	16969.34	22.32	No	Si
SLU 5	10.74	238.55	-11836	-0.000026	0.0003743	0.0035	2.6	12929.58	13559.26	13559.26	56.84	No	Si
SLU 50	8.98	983.28	-19535	-0.0000471	0.0003743	0.0035	2.6	18701.76	20598.81	20598.81	20.95	No	Si
SLU 50	10.74	247.88	-15173	-0.0000334	0.0003743	0.0035	2.6	15686.47	16873.63	16873.63	68.07	No	Si
SLU 49	8.98	991.24	-19770	-0.0000476	0.0003743	0.0035	2.6	18845.32	20776.2	20776.2	20.96	No	Si
SLU 49	10.74	304.64	-15424	-0.0000342	0.0003743	0.0035	2.6	15878.2	17130.46	17130.46	56.23	No	Si
SLU 51	8.98	1024.39	-19575	-0.0000474	0.0003743	0.0035	2.6	18726.05	20628.6	20628.6	20.14	No	Si
SLU 51	10.74	257	-15181	-0.0000334	0.0003743	0.0035	2.6	15692.66	16881.87	16881.87	65.69	No	Si
SLU 47	8.98	1016.05	-18989	-0.000046	0.0003743	0.0035	2.6	18360.72	20189.17	20189.17	19.87	No	Si
SLU 47	10.74	281.13	-14634	-0.0000323	0.0003743	0.0035	2.6	15267.57	16325.53	16325.53	58.07	No	Si
SLU 45	8.98	914.39	-19118	-0.0000457	0.0003743	0.0035	2.6	18442.61	20286.07	20286.07	22.19	No	Si
SLU 45	10.74	313.57	-14863	-0.000033	0.0003743	0.0035	2.6	15447.29	16558.55	16558.55	52.81	No	Si
SLU 46	8.98	955.5	-19158	-0.000046	0.0003743	0.0035	2.6	18467.47	20315.68	20315.68	21.26	No	Si
SLU 46	10.74	322.69	-14872	-0.0000331	0.0003743	0.0035	2.6	15453.58	16566.76	16566.76	51.34	No	Si
SLU 43	8.98	911.8	-18311	-0.0000438	0.0003743	0.0035	2.6	17922.82	19684.76	19684.76	21.59	No	Si
SLU 43	10.74	283.98	-14068	-0.0000311	0.0003743	0.0035	2.6	14816.78	15754.59	15754.59	55.48	No	Si
SLU 44	8.98	980.31	-18377	-0.0000444	0.0003743	0.0035	2.6	17966.1	19733.69	19733.69	20.13	No	Si
SLU 44	10.74	299.18	-14081	-0.0000312	0.0003743	0.0035	2.6	14827.64	15768.11	15768.11	52.7	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	8.98	950.13	-19731	-0.0000473	0.0003743	0.0035	2.6	18821.31	20746.31	20746.31	21.84	No	Si
SLU 48	10.74	295.52	-15416	-0.0000341	0.0003743	0.0035	2.6	15872.07	17122.19	17122.19	57.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	8.98	4551.1	-17305	-0.0000587	0.0005615	0.0035	2.6		19758.87	19758.87	4.34		Si
SLV 5	10.74	2554.79	-11102	-0.0000352	0.0005615	0.0035	2.6		13674.81	13674.81	5.35		Si
SLD 9	8.98	2349.66	-16522	-0.000046	0.0005615	0.0035	2.6		19003	19003	8.09		Si
SLD 9	10.74	1230.05	-12415	-0.0000316	0.0005615	0.0035	2.6		15097.15	15097.15	12.27		Si
SLV 6	8.98	4575.63	-17348	-0.0000589	0.0005615	0.0035	2.6		19801.03	19801.03	4.33		Si
SLV 6	10.74	2588.98	-11065	-0.0000353	0.0005615	0.0035	2.6		13632.8	13632.8	5.27		Si
SLV 11	8.98	-3637.23	-13799	-0.0000463	0.0005615	0.0035	2.6		18063.83	18063.83	4.97		Si
SLV 11	10.74	-1942.08	-13180	-0.0000367	0.0005615	0.0035	2.6		17420.12	17420.12	8.97		Si
SLV 7	8.98	-3819.25	-13373	-0.0000463	0.0005615	0.0035	2.6		17622.6	17622.6	4.61		Si
SLV 7	10.74	-1762.35	-11466	-0.0000322	0.0005615	0.0035	2.6		15538.48	15538.48	8.82		Si
SLD 10	8.98	2360.38	-16541	-0.0000461	0.0005615	0.0035	2.6		19021.3	19021.3	8.06		Si
SLD 10	10.74	1244.98	-12399	-0.0000317	0.0005615	0.0035	2.6		15080.7	15080.7	12.11		Si
SLV 10	8.98	4757.65	-17773	-0.0000607	0.0005615	0.0035	2.6		20213.64	20213.64	4.25		Si
SLV 10	10.74	2409.25	-12779	-0.0000381	0.0005615	0.0035	2.6		15451.2	15451.2	6.41		Si
SLV 9	8.98	4733.11	-17730	-0.0000605	0.0005615	0.0035	2.6		20171.36	20171.36	4.26		Si
SLV 9	10.74	2375.06	-12817	-0.000038	0.0005615	0.0035	2.6		15486.44	15486.44	6.52		Si
SLV 12	8.98	-3612.7	-13842	-0.0000463	0.0005615	0.0035	2.6		18109.09	18109.09	5.01		Si
SLV 12	10.74	-1907.89	-13143	-0.0000365	0.0005615	0.0035	2.6		17379.2	17379.2	9.11		Si
SLV 8	8.98	-3794.71	-13417	-0.0000463	0.0005615	0.0035	2.6		17667.67	17667.67	4.66		Si
SLV 8	10.74	-1728.16	-11428	-0.0000319	0.0005615	0.0035	2.6		15497.4	15497.4	8.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	8.98	851.78	-21483	-17889	2397	2.6	2.6	-24573	10221	7441	28547	21799	6630	28429	No	11.86	Si
SLU 72	10.74	344.03	-16883	-14058	1252	2.6	2.6	-19311	9519	6930	28547	21799	6630	28429	No	22.71	Si
SLU 69	8.98	777.52	-21639	-18019	2253	2.6	2.6	-24752	10245	7458	28547	21799	6630	28429	No	12.62	Si
SLU 69	10.74	382.55	-17118	-14254	1093	2.6	2.6	-19580	9555	6956	28547	21799	6630	28429	No	26.02	Si
SLU 47	8.98	1016.05	-18989	-15812	2297	2.6	2.6	-21721	9841	7164	28547	21799	6630	28429	No	12.38	Si
SLU 47	10.74	281.13	-14634	-12186	1387	2.6	2.6	-16739	9176	6680	28547	21799	6630	28429	No	20.5	Si
SLU 70	8.98	818.63	-21678	-18052	2310	2.6	2.6	-24797	10251	7462	28547	21799	6630	28429	No	12.31	Si
SLU 70	10.74	391.67	-17126	-14261	1138	2.6	2.6	-19589	9556	6957	28547	21799	6630	28429	No	24.98	Si
SLU 68	8.98	843.44	-20897	-17401	2325	2.6	2.6	-23903	10132	7376	28547	21799	6630	28429	No	12.23	Si
SLU 68	10.74	368.16	-16336	-13603	1198	2.6	2.6	-18686	9436	6869	28547	21799	6630	28429	No	23.74	Si
SLU 48	8.98	950.13	-19731	-16430	2225	2.6	2.6	-22569	9954	7246	28547	21799	6630	28429	No	12.78	Si
SLU 48	10.74	295.52	-15416	-12837	1282	2.6	2.6	-17634	9296	6767	28547	21799	6630	28429	No	22.18	Si
SLU 51	8.98	1024.39	-19575	-16300	2369	2.6	2.6	-22391	9930	7229	28547	21799	6630	28429	No	12	Si
SLU 51	10.74	257	-15181	-12641	1441	2.6	2.6	-17365	9260	6741	28547	21799	6630	28429	No	19.73	Si
SLU 50	8.98	983.28	-19535	-16267	2312	2.6	2.6	-22345	9924	7224	28547	21799	6630	28429	No	12.3	Si
SLU 50	10.74	247.88	-15173	-12635	1396	2.6	2.6	-17356	9259	6740	28547	21799	6630	28429	No	20.37	Si
SLU 49	8.98	991.24	-19770	-16463	2282	2.6	2.6	-22614	9960	7251	28547	21799	6630	28429	No	12.46	Si
SLU 49	10.74	304.64	-15424	-12844	1327	2.6	2.6	-17643	9297	6768	28547	21799	6630	28429	No	21.42	Si
SLU 71	8.98	810.67	-21443	-17856	2340	2.6	2.6	-24528	10215	7436	28547	21799	6630	28429	No	12.15	Si
SLU 71	10.74	334.91	-16875	-14052	1207	2.6	2.6	-19302	9518	6929	28547	21799	6630	28429	No	23.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.98	1440.43	-15488	-12897	2968	2.6	2.6	-17716	13960	10163	28547	32699	6630	38709		13.04	Si
SLV 2	10.74	1297.09	-9181	-7645	4020	2.6	2.6	-10502	12517	9112	28547	32699	6630	37659		9.37	Si
SLV 9	8.98	4733.11	-17730	-14764	2537	2.6	2.6	-20280	14473	10536	28547	32699	6630	39083		15.4	Si
SLV 9	10.74	2375.06	-12817	-10673	5029	2.6	2.6	-14661	13349	9718	28547	32699	6630	38264		7.61	Si
SLV 11	8.98	-3637.23	-13799	-11490	-177	2.6	2.6	-15784	13573	9881	28547	32699	6630	38428		217.3	Si
SLV 11	10.74	-1942.08	-13180	-10975	-4725	2.6	2.6	-15076	13432	9778	28547	32699	6630	38325		8.11	Si
SLV 7	8.98	-3819.25	-13373	-11136	431	2.6	2.6	-15297	13476	9810	28547	32699	6630	38357		88.93	Si
SLV 7	10.74	-1762.35	-11466	-9548	-3657	2.6	2.6	-13115	13040	9493	28547	32699	6630	38039		10.4	Si
SLV 6	8.98	4575.63	-17348	-14446	3195	2.6	2.6	-19844	14385	10472	28547	32699	6630	39019		12.21	Si
SLV 6	10.74	2588.98	-11065	-9214	6167	2.6	2.6	-12656	12948	9426	28547	32699	6630	37972		6.16	Si
SLV 10	8.98	4757.65	-17773	-14800	2587	2.6	2.6	-20330	14483	10543	28547	32699	6630	39090		15.11	Si
SLV 10	10.74	2409.25	-12779	-10641	5098	2.6	2.6	-14618	13340	9711	28547	32699	6630	38258		7.5	Si
SLV 8	8.98	-3794.71	-13417	-11172	481	2.6	2.6	-15347	13486	9818	28547	32699	6630	38364		79.76	Si
SLV 8	10.74	-1728.16	-11428	-9516	-3587	2.6	2.6	-13072	13031	9486	28547	32699	6630	38033		10.6	Si
SLV 1	8.98	1402.36	-15421	-12841	2891	2.6	2.6	-17639	13944	10151	28547	32699	6630	38698		13.38	Si
SLV 1	10.74	1244.04	-9239	-7694	3911	2.6	2.6	-10569	12530	9122	28547	32699	6630	37669		9.63	Si
SLV 5	8.98	4551.1	-17305	-14410	3145	2.6	2.6	-19794	14375	10465	28547	32699	6630	39012		12.4	Si
SLV 5	10.74	2554.79	-11102	-9245	6098	2.6	2.6	-12699	12957	9432	28547	32699	6630	37979		6.23	Si
SLV 12	8.98	-3612.7	-13842	-11526	-127	2.6	2.6	-15833	13583	9888	28547	32699	6630	38435		302.19	Si
SLV 12	10.74	-1907.89	-13143	-10944	-4656	2.6	2.6	-15033	13423	9772	28547	32699	6630	38319		8.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.859 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.44	15792	-11496	162.72	1443.06	8.87	Si
SLV 4	179667	0.44	15793	-11497	162.72	1443.17	8.87	Si
SLV 1	179667	0.44	16579	-12069	162.72	1506.27	9.26	Si
SLV 2	179667	0.44	16580	-12070	162.72	1506.38	9.26	Si
SLV 7	179667	0.44	16670	-12136	162.72	1513.52	9.3	Si
SLV 8	179667	0.44	16671	-12136	162.72	1513.59	9.3	Si
SLV 11	179667	0.44	18209	-13256	162.72	1634.58	10.05	Si
SLV 12	179667	0.44	18210	-13257	162.72	1634.65	10.05	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.44	19294	-14045	162.72	1717.94	10.56	Si
SLV 6	179667	0.44	19294	-14046	162.72	1718.01	10.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.859 Wa = 0.05 Ta = 0.0382

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-13180	-13799	12	1.045	1602.2	0.953	15.93867	7.16172	Si
SLV 12	-13143	-13842	12	1.047	1598.4	0.953	15.9785	7.16172	Si
SLV 9	-12817	-17730	-30	1.068	1565.3	0.952	16.3154	7.16172	Si
SLV 10	-12779	-17773	-30	1.071	1561.5	0.952	16.35782	7.16172	Si
SLV 7	-11466	-13373	15	1.174	1428.1	0.948	18.00237	7.16172	Si
SLV 8	-11428	-13417	15	1.177	1424.3	0.948	18.05377	7.16172	Si
SLV 5	-11102	-17305	-27	1.205	1391.2	0.946	18.49924	7.16172	Si
SLV 6	-11065	-17348	-27	1.208	1387.4	0.946	18.5543	7.16172	Si
SLV 15	-15064	-15659	-6	0.934	1793.6	0.957	14.17631	4.78936	Si
SLV 16	-15005	-15726	-6	0.937	1787.7	0.957	14.22535	4.78936	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.87	SLU 47	Si
V_SLU	11.862	SLU 72	Si
PF_SLV	4.249	SLV 10	Si
V_SLV	6.157	SLV 6	Si
PFFP_SLV	8.868	SLV 3	Si
R_SLV	2.226	SLV 11	Si

Maschio 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L6	L7	3.21	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	8.98	-2.75	-12798	-0.0000317	0.0004492	0.0035	3.21	16351.79	24124.25	24124.25	8763.87	No	Si
SLU 61	12.5	474.64	-8375	-0.0000227	0.0004492	0.0035	3.21	11647.66	13514.22	13514.22	28.47	No	Si
SLU 73	8.98	12.81	-13903	-0.0000346	0.0004492	0.0035	3.21	17371.05	20974.52	20974.52	1637.32	No	Si
SLU 73	12.5	523.89	-9311	-0.0000253	0.0004492	0.0035	3.21	12727.29	14818.97	14818.97	28.29	No	Si
SLU 40	8.98	-101.78	-11788	-0.0000296	0.0004492	0.0035	3.21	15366.18	22795.44	22795.44	223.96	No	Si
SLU 40	12.5	475.25	-8173	-0.0000222	0.0004492	0.0035	3.21	11408.78	13227.54	13227.54	27.83	No	Si
SLU 10	8.98	40.96	-10133	-0.0000251	0.0004492	0.0035	3.21	13637.1	15952.48	15952.48	389.5	No	Si
SLU 10	12.5	409.07	-6686	-0.0000182	0.0004492	0.0035	3.21	9587.34	11109.29	11109.29	27.16	No	Si
SLU 39	8.98	-157.7	-11805	-0.0000299	0.0004492	0.0035	3.21	15383.01	22817.56	22817.56	144.69	No	Si
SLU 39	12.5	433.97	-8189	-0.0000221	0.0004492	0.0035	3.21	11428.72	13251.38	13251.38	30.54	No	Si
SLU 52	8.98	76.4	-12523	-0.0000314	0.0004492	0.0035	3.21	16088.38	19179.24	19179.24	251.04	No	Si
SLU 52	12.5	466.18	-8100	-0.000022	0.0004492	0.0035	3.21	11321.99	13124.01	13124.01	28.15	No	Si
SLU 82	8.98	-66.34	-14178	-0.0000356	0.0004492	0.0035	3.21	17615.04	25911	25911	390.57	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	12.5	532.36	-9586	-0.0000261	0.0004492	0.0035	3.21	13035.9	15202.06	15202.06	28.56	No	Si
SLU 31	8.98	-22.63	-11513	-0.0000285	0.0004492	0.0035	3.21	15088.56	22433.33	22433.33	991.21	No	Si
SLU 31	12.5	466.78	-7897	-0.0000215	0.0004492	0.0035	3.21	11080.27	12837.33	12837.33	27.5	No	Si
SLU 19	8.98	-38.2	-10408	-0.0000258	0.0004492	0.0035	3.21	13934.15	20978.54	20978.54	549.25	No	Si
SLU 19	12.5	417.54	-6961	-0.0000189	0.0004492	0.0035	3.21	9932.9	11506.62	11506.62	27.56	No	Si
SLU 18	8.98	-94.11	-10425	-0.0000261	0.0004492	0.0035	3.21	13952.17	21000.66	21000.66	223.15	No	Si
SLU 18	12.5	376.26	-6978	-0.0000188	0.0004492	0.0035	3.21	9953.88	11530.89	11530.89	30.65	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	8.98	2399.4	-9379	-0.000034	0.0006738	0.0035	3.21		15132.12	15132.12	6.31		Si
SLD 10	12.5	1777.26	-5877	-0.0000224	0.0006738	0.0035	3.21		10038.03	10038.03	5.65		Si
SLD 6	8.98	2452.99	-9219	-0.0000339	0.0006738	0.0035	3.21		14904.05	14904.05	6.08		Si
SLD 6	12.5	1770.19	-5722	-0.000022	0.0006738	0.0035	3.21		9808.1	9808.1	5.54		Si
SLV 9	8.98	5328.71	-8494	-0.0000458	0.0006738	0.0035	3.21		13860.58	13860.58	2.6		Si
SLV 9	12.5	3551.53	-4983	-0.0000292	0.0006738	0.0035	3.21		8707.97	8707.97	2.45		Si
SLV 8	8.98	-5329.94	-11736	-0.0000537	0.0006738	0.0035	3.21		23059.85	23059.85	4.33		Si
SLV 8	12.5	-2957.95	-8257	-0.0000338	0.0006738	0.0035	3.21		18175.52	18175.52	6.14		Si
SLV 6	8.98	5567.2	-8059	-0.0000465	0.0006738	0.0035	3.21		13234.38	13234.38	2.38		Si
SLV 6	12.5	3641.17	-4561	-0.0000295	0.0006738	0.0035	3.21		8075.34	8075.34	2.22		Si
SLV 5	8.98	5462.41	-8099	-0.0000459	0.0006738	0.0035	3.21		13291.83	13291.83	2.43		Si
SLV 5	12.5	3534.62	-4601	-0.0000287	0.0006738	0.0035	3.21		8135.63	8135.63	2.3		Si
SLV 11	8.98	-5568.44	-12171	-0.000056	0.0006738	0.0035	3.21		23649.25	23649.25	4.25		Si
SLV 11	12.5	-3047.59	-8679	-0.0000353	0.0006738	0.0035	3.21		18775.81	18775.81	6.16		Si
SLV 10	8.98	5433.51	-8454	-0.0000463	0.0006738	0.0035	3.21		13803.13	13803.13	2.54		Si
SLV 10	12.5	3658.08	-4943	-0.0000299	0.0006738	0.0035	3.21		8648.63	8648.63	2.36		Si
SLV 12	8.98	-5463.64	-12131	-0.0000554	0.0006738	0.0035	3.21		23595.18	23595.18	4.32		Si
SLV 12	12.5	-2941.03	-8640	-0.0000347	0.0006738	0.0035	3.21		18719.06	18719.06	6.36		Si
SLV 7	8.98	-5434.74	-11776	-0.0000543	0.0006738	0.0035	3.21		23113.93	23113.93	4.25		Si
SLV 7	12.5	-3064.5	-8297	-0.0000344	0.0006738	0.0035	3.21		18232.27	18232.27	5.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	8.98	-122.26	-14195	-8335	-174	3.21	3.21	-16228	10497	5391	115546	18458	16371	34829	No	199.88	Si
SLU 81	12.5	491.08	-9603	-5639	-174	3.21	3.21	-10979	9797	5032	115546	18458	16371	34829	No	199.88	Si
SLU 40	8.98	-101.78	-11788	-6922	-164	3.21	3.21	-13477	10130	5203	115546	18458	16371	34829	No	212.46	Si
SLU 40	12.5	475.25	-8173	-4799	-164	3.21	3.21	-9343	9579	4920	115546	18458	16371	34829	No	212.46	Si
SLU 82	8.98	-66.34	-14178	-8325	-170	3.21	3.21	-16209	10495	5390	115546	18458	16371	34829	No	204.77	Si
SLU 82	12.5	532.36	-9586	-5629	-170	3.21	3.21	-10959	9795	5031	115546	18458	16371	34829	No	204.77	Si
SLU 41	8.98	-126.6	-12718	-7468	-147	3.21	3.21	-14540	10272	5276	115546	18458	16371	34829	No	236.74	Si
SLU 41	12.5	391.25	-9103	-5345	-147	3.21	3.21	-10406	9721	4993	115546	18458	16371	34829	No	236.74	Si
SLU 83	8.98	-91.16	-15109	-8871	-153	3.21	3.21	-17272	10636	5463	115546	18458	16371	34829	No	227.23	Si
SLU 83	12.5	448.36	-10517	-6175	-153	3.21	3.21	-12023	9936	5103	115546	18458	16371	34829	No	227.23	Si
SLU 73	8.98	12.81	-13903	-8163	-145	3.21	3.21	-15895	10453	5368	115546	18458	16371	34829	No	239.88	Si
SLU 73	12.5	523.89	-9311	-5467	-145	3.21	3.21	-10645	9753	5009	115546	18458	16371	34829	No	239.88	Si
SLU 84	8.98	-35.24	-15092	-8861	-149	3.21	3.21	-17253	10634	5461	115546	18458	16371	34829	No	233.57	Si
SLU 84	12.5	489.64	-10500	-6165	-149	3.21	3.21	-12003	9934	5102	115546	18458	16371	34829	No	233.57	Si
SLU 39	8.98	-157.7	-11805	-6931	-168	3.21	3.21	-13496	10133	5204	115546	18458	16371	34829	No	207.2	Si
SLU 39	12.5	433.97	-8189	-4808	-168	3.21	3.21	-9362	9582	4921	115546	18458	16371	34829	No	207.2	Si
SLU 42	8.98	-70.68	-12702	-7458	-143	3.21	3.21	-14521	10269	5274	115546	18458	16371	34829	No	243.63	Si
SLU 42	12.5	432.53	-9086	-5335	-143	3.21	3.21	-10387	9718	4991	115546	18458	16371	34829	No	243.63	Si
SLU 74	8.98	-60.65	-14835	-8711	-143	3.21	3.21	-16960	10595	5441	115546	18458	16371	34829	No	244.33	Si
SLU 74	12.5	441.11	-10243	-6014	-143	3.21	3.21	-11710	9895	5082	115546	18458	16371	34829	No	244.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 12	8.98	-2408.45	-10994	-6455	2	3.21	3.21	-12569	15014	7711	115546	27686	16371	44057		25912.34	Si
SLD 12	12.5	-1130.07	-7500	-4404	-610	3.21	3.21	-8574	14215	7301	115546	27686	16371	44057		72.23	Si
SLV 7	8.98	-5434.74	-11776	-6914	194	3.21	3.21	-13463	15193	7803	115546	27686	16371	44057		227.15	Si
SLV 7	12.5	-3064.5	-8297	-4872	-1211	3.21	3.21	-9486	14397	7394	115546	27686	16371	44057		36.37	Si
SLV 11	8.98	-5568.44	-12171	-7146	107	3.21	3.21	-13914	15283	7849	115546	27686	16371	44057		411	Si
SLV 11	12.5	-3047.59	-8679	-5096	-1273	3.21	3.21	-9922	14484	7439	115546	27686	16371	44057		34.61	Si
SLV 9	8.98	5328.71	-8494	-4987	-362	3.21	2.933	-9711	14442	6777	115546	27686	16371	44057		121.56	Si
SLV 9	12.5	3551.53	-4983	-2926	1043	3.21	2.6767	-5696	13639	5841	115546	27686	16371	44057		42.25	Si
SLD 11	8.98	-2454.22	-11011	-6465	2	3.21	3.21	-12588	15018	7713	115546	27686	16371	44057		22971.1	Si
SLD 11	12.5	-1176.61	-7518	-4414	-610	3.21	3.21	-8594	14219	7303	115546	27686	16371	44057		72.25	Si
SLV 12	8.98	-5463.64	-12131	-7123	107	3.21	3.21	-13869	15274	7845	115546	27686	16371	44057		412.92	Si
SLV 12	12.5	-2941.03	-8640	-5073	-1273	3.21	3.21	-9877	14475	7435	115546	27686	16371	44057		34.6	Si
SLV 5	8.98	5462.41	-8099	-4756	-276	3.21	2.7917	-9259	14352	6411	115546	27686	16371	44057		159.81	Si
SLV 5	12.5	3534.62	-4601	-2701	1104	3.21	2.5101	-5259	13552	5443	115546	27686	16371	44057		39.89	Si
SLV 10	8.98	5433.51	-8454	-4964	-363	3.21	2.887	-9665	14433	6667	115546	27686	16371	44057		121.39	Si
SLV 10	12.5	3658.08	-4943	-2902	1042	3.21	2.5947	-5651	13630	5659	115546	27686	16371	44057		42.27	Si
SLV 6	8.98	5567.2	-8059	-4732	-276	3.21	2.7427	-9214	14343	6294	115546	27686	16371	44057		159.53	Si
SLV 6	12.5	3641.17	-4561	-2678	1104	3.21	2.4198	-5214	13543	5243	115546	27686	16371	44057		39.91	Si
SLV 8	8.98	-5329.94	-11736	-6891	193	3.21	3.21	-13417	15183	7798	115546	27686	16371	44057		227.73	Si
SLV 8	12.5	-2957.95	-8257	-4848	-1212	3.21	3.21	-9440	14388	7390	115546	27686	16371	44057		36.36	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-6295	0.46	238.69	469.9	839.83	654.86	2.74	Si
SLV 5	-6335	0.46	238.69	472.66	843.63	658.14	2.76	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-6681	0.46	238.69	496.54	876.58	686.56	2.88	Si
SLV 9	-6721	0.46	238.69	499.28	880.37	689.83	2.89	Si
SLV 2	-7166	0.46	238.69	529.66	922.75	726.21	3.04	Si
SLV 1	-7228	0.46	238.69	533.85	928.65	731.25	3.06	Si
SLV 4	-8309	0.46	238.69	606.05	1031.33	818.69	3.43	Si
SLV 3	-8371	0.46	238.69	610.13	1037.21	823.67	3.45	Si
SLV 14	-8454	0.46	238.69	615.57	1045.07	830.32	3.48	Si
SLV 13	-8516	0.46	238.69	619.63	1050.95	835.29	3.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-8679	-12171	180	1.758	1140.7	0.938	27.25243	19.08992	Si
SLV 12	-8640	-12131	180	1.765	1136.6	0.937	27.36235	19.08992	Si
SLV 7	-8297	-11776	-172	1.826	1102	0.936	28.35598	19.08992	Si
SLV 8	-8257	-11736	-172	1.833	1098	0.936	28.47495	19.08992	Si
SLV 9	-4983	-8494	175	2.73	768.3	0.915	43.35377	19.08992	Si
SLV 10	-4943	-8454	175	2.746	764.4	0.915	43.62999	19.08992	Si
SLV 5	-4601	-8099	-177	2.896	730.2	0.912	46.14254	19.08992	Si
SLV 6	-4561	-8059	-177	2.914	726.2	0.912	46.45472	19.08992	Si
SLV 15	-7842	-11356	588	1.869	1056	0.934	29.08889	9.9395	Si
SLV 16	-7781	-11294	588	1.881	1049.8	0.933	29.28814	9.9395	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	27.157	SLU 10	Si
V_SLU	199.883	SLU 81	Si
PF_SLV	2.218	SLV 6	Si
V_SLV	34.597	SLV 12	Si
PFFP_SLV	2.744	SLV 6	Si
R_SLV	1.428	SLV 11	Si

Maschio 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L6	L7	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	8.98	891.25	-11481	-0.0000492	0.0003743	0.0035	1.67	7274.92	7963.5	7963.5	8.94	No	Si
SLU 83	11.08	-2035.19	-12347	-0.0000669	0.0003743	0.0035	1.67	7635.81	9087.39	9087.39	4.47	No	Si
SLU 75	8.98	889.12	-11304	-0.0000486	0.0003743	0.0035	1.67	7197.82	7877.71	7877.71	8.86	No	Si
SLU 75	11.08	-2008.34	-12108	-0.0000657	0.0003743	0.0035	1.67	7539.11	8957.09	8957.09	4.46	No	Si
SLU 76	8.98	885.08	-11173	-0.000048	0.0003743	0.0035	1.67	7139.83	7814.22	7814.22	8.83	No	Si
SLU 76	11.08	-1982.67	-11954	-0.0000648	0.0003743	0.0035	1.67	7475.19	8872.95	8872.95	4.48	No	Si
SLU 79	8.98	888.4	-11561	-0.0000495	0.0003743	0.0035	1.67	7309.07	8002.01	8002.01	9.01	No	Si
SLU 79	11.08	-2038.93	-12416	-0.0000673	0.0003743	0.0035	1.67	7663.76	9125.77	9125.77	4.48	No	Si
SLU 78	8.98	905.79	-11668	-0.0000501	0.0003743	0.0035	1.67	7354.9	8054.02	8054.02	8.89	No	Si
SLU 78	11.08	-2076.86	-12555	-0.0000683	0.0003743	0.0035	1.67	7718.86	9202.35	9202.35	4.43	No	Si
SLU 80	8.98	896.42	-11546	-0.0000495	0.0003743	0.0035	1.67	7302.79	7994.9	7994.9	8.92	No	Si
SLU 80	11.08	-2046.29	-12407	-0.0000673	0.0003743	0.0035	1.67	7659.93	9120.48	9120.48	4.46	No	Si
SLU 36	8.98	832.53	-9708	-0.0000421	0.0003743	0.0035	1.67	6453.34	6969.01	6969.01	8.37	No	Si
SLU 36	11.08	-1832.15	-10750	-0.0000583	0.0003743	0.0035	1.67	6949.41	8203.33	8203.33	4.48	No	Si
SLU 77	8.98	897.78	-11682	-0.0000501	0.0003743	0.0035	1.67	7361.13	8061.13	8061.13	8.98	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	11.08	-2069.5	-12565	-0.0000682	0.0003743	0.0035	1.67	7722.64	9207.66	9207.66	4.45	No	Si
SLU 82	8.98	882.59	-11103	-0.0000478	0.0003743	0.0035	1.67	7108.95	7780.75	7780.75	8.82	No	Si
SLU 82	11.08	-1974.03	-11890	-0.0000644	0.0003743	0.0035	1.67	7448.78	8838.62	8838.62	4.48	No	Si
SLU 84	8.98	899.26	-11467	-0.0000493	0.0003743	0.0035	1.67	7268.6	7956.4	7956.4	8.85	No	Si
SLU 84	11.08	-2042.56	-12337	-0.000067	0.0003743	0.0035	1.67	7631.95	9082.12	9082.12	4.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.98	5254.36	-4255	-0.0181173	0.0005615	0.0035	1.336		3550.31	3550.31	0.68		No
SLV 4	11.08	-6075.8	-13150	-0.0001362	0.0005615	0.0035	1.336		10149.54	10149.54	1.67		Si
SLV 1	8.98	4850.27	-2683	-0.0253357	0.0005615	0.0035	1.336		2336.34	2336.34	0.48		No
SLV 1	11.08	-5610.95	-11045	-0.0001298	0.0005615	0.0035	1.336		8821.64	8821.64	1.57		Si
SLV 13	8.98	-4083.9	-11426	-0.0000891	0.0005615	0.0035	1.67		9070.39	9070.39	2.22		Si
SLV 13	11.08	3437.62	-3149	-0.0091727	0.0005615	0.0035	1.336		2700.01	2700.01	0.79		No
SLV 6	8.98	1824.68	-3426	-0.0000406	0.0005615	0.0035	1.67		2915.5	2915.5	1.6		Si
SLV 6	11.08	-2584.49	-6521	-0.0000538	0.0005615	0.0035	1.67		5733.93	5733.93	2.22		Si
SLV 14	8.98	-3795.89	-11183	-0.0000835	0.0005615	0.0035	1.67		8912.2	8912.2	2.35		Si
SLV 14	11.08	3094.28	-3498	-0.002884	0.0005615	0.0035	1.336		2970.8	2970.8	0.96		No
SLV 3	8.98	4966.36	-4498	-0.0139076	0.0005615	0.0035	1.336		3733.68	3733.68	0.75		No
SLV 3	11.08	-5732.46	-12800	-0.0001268	0.0005615	0.0035	1.336		9930.04	9930.04	1.73		Si
SLV 2	8.98	5138.28	-2440	-0.0297628	0.0005615	0.0035	1.336		2145.69	2145.69	0.42		No
SLV 2	11.08	-5954.29	-11395	-0.0001414	0.0005615	0.0035	1.336		9049.76	9049.76	1.52		Si
SLV 15	8.98	-3967.81	-13241	-0.0000923	0.0005615	0.0035	1.67		10206.92	10206.92	2.57		Si
SLV 15	11.08	3316.11	-4904	-0.0001176	0.0005615	0.0035	1.67		4039.43	4039.43	1.22		Si
SLD 2	8.98	2532.23	-5521	-0.0000531	0.0005615	0.0035	1.67		4497.7	4497.7	1.78		Si
SLD 2	11.08	-3300.53	-9526	-0.0000716	0.0005615	0.0035	1.67		7823.18	7823.18	2.37		Si
SLV 16	8.98	-3679.81	-12998	-0.0000876	0.0005615	0.0035	1.67		10053.93	10053.93	2.73		Si
SLV 16	11.08	2972.77	-5254	-0.0000717	0.0005615	0.0035	1.67		4300.11	4300.11	1.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	8.98	905.79	-11668	-9716	1879	1.67	1.67	-20778	9715	4543	40441	14002	4259	18261	No	9.72	Si
SLU 78	11.08	-2076.86	-12555	-10455	2970	1.67	1.67	-22358	9926	4641	40441	14002	4259	18261	No	6.15	Si
SLU 77	8.98	897.78	-11682	-9728	1870	1.67	1.67	-20804	9718	4544	40441	14002	4259	18261	No	9.76	Si
SLU 77	11.08	-2069.5	-12565	-10463	2956	1.67	1.67	-22375	9928	4642	40441	14002	4259	18261	No	6.18	Si
SLU 84	8.98	899.26	-11467	-9548	1807	1.67	1.67	-20420	9667	4520	40441	14002	4259	18261	No	10.11	Si
SLU 84	11.08	-2042.56	-12337	-10273	2901	1.67	1.67	-21970	9874	4617	40441	14002	4259	18261	No	6.29	Si
SLU 74	8.98	881.1	-11319	-9425	1817	1.67	1.67	-20157	9632	4504	40441	14002	4259	18261	No	10.05	Si
SLU 74	11.08	-2000.98	-12118	-10091	2869	1.67	1.67	-21580	9822	4593	40441	14002	4259	18261	No	6.37	Si
SLU 80	8.98	896.42	-11546	-9614	1861	1.67	1.67	-20561	9686	4529	40441	14002	4259	18261	No	9.81	Si
SLU 80	11.08	-2046.29	-12407	-10331	2932	1.67	1.67	-22094	9890	4625	40441	14002	4259	18261	No	6.23	Si
SLU 76	8.98	885.08	-11173	-9304	1814	1.67	1.67	-19896	9597	4488	40441	14002	4259	18261	No	10.07	Si
SLU 76	11.08	-1982.67	-11954	-9954	2853	1.67	1.67	-21287	9783	4574	40441	14002	4259	18261	No	6.4	Si
SLU 79	8.98	888.4	-11561	-9627	1852	1.67	1.67	-20587	9689	4531	40441	14002	4259	18261	No	9.86	Si
SLU 79	11.08	-2038.93	-12416	-10339	2919	1.67	1.67	-22111	9893	4626	40441	14002	4259	18261	No	6.26	Si
SLU 70	8.98	860.23	-11004	-9164	1881	1.67	1.67	-19597	9557	4469	40441	14002	4259	18261	No	9.71	Si
SLU 70	11.08	-1925.69	-11676	-9723	2837	1.67	1.67	-20792	9717	4544	40441	14002	4259	18261	No	6.44	Si
SLU 83	8.98	891.25	-11481	-9561	1798	1.67	1.67	-20446	9671	4522	40441	14002	4259	18261	No	10.16	Si
SLU 83	11.08	-2035.19	-12347	-10281	2888	1.67	1.67	-21987	9876	4618	40441	14002	4259	18261	No	6.32	Si
SLU 75	8.98	889.12	-11304	-9413	1826	1.67	1.67	-20131	9629	4502	40441	14002	4259	18261	No	10	Si
SLU 75	11.08	-2008.34	-12108	-10083	2882	1.67	1.67	-21563	9819	4592	40441	14002	4259	18261	No	6.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.98	5254.36	-4255	-3543	9729	1.336	0	0	0	0	40441	16803	3407	20209		2.08	Si
SLV 4	11.08	-6075.8	-13150	-10950	9312	1.336	1.1189	0	0	0	40441	16803	3407	20209		2.17	Si
SLV 14	8.98	-3795.89	-11183	-9312	-6684	1.67	1.4867	-22579	14932	6216	40441	21003	4259	25262		3.78	Si
SLV 14	11.08	3094.28	-3498	-2913	-4909	1.336	0	0	0	0	40441	16803	3407	20209		4.12	Si
SLV 15	8.98	-3967.81	-13241	-11026	-6854	1.67	1.606	-23580	15133	6805	40441	21003	4259	25262		3.69	Si
SLV 15	11.08	3316.11	-4904	-4084	-5348	1.67	0.4764	-31121	16250	2168	40441	21003	4259	25262		4.72	Si
SLV 16	8.98	-3679.81	-12998	-10823	-6318	1.67	1.6557	-23147	15046	6975	40441	21003	4259	25262		4	Si
SLV 16	11.08	2972.77	-5254	-4375	-4809	1.67	0.8075	-9356	12288	2778	40441	21003	4259	25262		5.25	Si
SLV 2	8.98	5138.28	-2440	-2032	9363	1.336	0	0	0	0	40441	16803	3407	20209		2.16	Si
SLV 2	11.08	-5954.29	-11395	-9488	9212	1.336	0.9373	0	0	0	40441	16803	3407	20209		2.19	Si
SLD 2	8.98	2532.23	-5521	-4597	4722	1.67	1.1291	-9832	12383	3915	40441	21003	4259	25262		5.35	Si
SLD 2	11.08	-3300.53	-9526	-7932	5045	1.67	1.4656	-19520	14321	5877	40441	21003	4259	25262		5.01	Si
SLV 3	8.98	4966.36	-4498	-3745	9194	1.336	0	0	0	0	40441	16803	3407	20209		2.2	Si
SLV 3	11.08	-5732.46	-12800	-10659	8773	1.336	1.1615	0	0	0	40441	16803	3407	20209		2.3	Si
SLV 1	8.98	4850.27	-2683	-2234	8828	1.336	0	0	0	0	40441	16803	3407	20209		2.29	Si
SLV 1	11.08	-5610.95	-11045	-9197	8673	1.336	0.981	0	0	0	40441	16803	3407	20209		2.33	Si
SLV 13	8.98	-4083.9	-11426	-9515	-7219	1.67	1.4328	-24011	15219	6106	40441	21003	4259	25262		3.5	Si
SLV 13	11.08	3437.62	-3149	-2622	-5448	1.336	0	0	0	0	40441	16803	3407	20209		3.71	Si
SLD 4	8.98	2582.4	-6318	-5261	4880	1.67	1.2788	-11251	12667	4535	40441	21003	4259	25262		5.18	Si
SLD 4	11.08	-3354.07	-10300	-8577	5089	1.67	1.5281	-20227	14462	6188	40441	21003	4259	25262		4.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	7308	-3417	205.37	455.5	2.22	Si
SLV 14	179667	0.46	8055	-3767	205.37	499.52	2.43	Si
SLV 9	179667	0.46	8949	-4185	205.37	551.53	2.69	Si
SLV 10	179667	0.46	9431	-4410	205.37	579.27	2.82	Si
SLV 15	179667	0.46	11073	-5178	205.37	672.36	3.27	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	11821	-5528	205.37	713.96	3.48	Si
SLV 5	179667	0.46	14008	-6550	205.37	832.93	4.06	Si
SLV 6	179667	0.46	14490	-6776	205.37	858.59	4.18	Si
SLV 11	179667	0.46	21502	-10055	205.37	1209.44	5.89	Si
SLV 12	179667	0.46	21984	-10280	205.37	1232	6	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6995	-12255	264	1.122	946.8	0.933	17.4854	14.44577	Si
SLV 12	-6974	-12098	264	1.125	944.6	0.933	17.53072	14.44577	Si
SLV 7	-6161	-9632	389	1.224	862.7	0.928	19.17744	14.44577	Si
SLV 8	-6140	-9475	390	1.227	860.5	0.927	19.23287	14.44577	Si
SLV 9	-3050	-6206	-392	2.036	552.2	0.901	32.84802	14.44577	Si
SLV 10	-3029	-6049	-392	2.046	550.1	0.901	33.01074	14.44577	Si
SLV 5	-2216	-3583	-267	2.52	471.4	0.893	41.02581	14.44577	Si
SLV 6	-2195	-3426	-267	2.535	469.3	0.893	41.27217	14.44577	Si
SLV 15	-6593	-13241	-112	1.195	906.2	0.93	18.66716	6.41634	Si
SLV 16	-6560	-12998	-112	1.2	902.9	0.93	18.74694	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.431	SLU 78	Si
V_SLU	6.149	SLU 78	Si
PF_SLV	0.418	SLV 2	No
V_SLV	2.077	SLV 4	Si
PFFP_SLV	2.218	SLV 13	Si
R_SLV	1.21	SLV 11	Si

Maschio 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L6	L7	3.12	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 33	8.98	1242.64	-15628	-0.0000466	0.0004492	0.0035	3.12	18133	22136.05	22136.05	17.81	No	Si
SLU 33	11.08	1675.75	-12940	-0.0000415	0.0004492	0.0035	3.12	15904.21	19083.14	19083.14	11.39	No	Si
SLU 82	8.98	1542.7	-18414	-0.0000557	0.0004492	0.0035	3.12	20054.11	25255.15	25255.15	16.37	No	Si
SLU 82	11.08	1930.36	-14902	-0.0000481	0.0004492	0.0035	3.12	17567.93	21324.36	21324.36	11.05	No	Si
SLU 41	8.98	1187.77	-16017	-0.0000473	0.0004492	0.0035	3.12	18425.59	22572.31	22572.31	19	No	Si
SLU 41	11.08	1762.23	-13259	-0.0000428	0.0004492	0.0035	3.12	16187.71	19484.8	19484.8	11.06	No	Si
SLU 31	8.98	1209.95	-14874	-0.0000443	0.0004492	0.0035	3.12	17545.05	21292.29	21292.29	17.6	No	Si
SLU 31	11.08	1660.42	-12121	-0.0000393	0.0004492	0.0035	3.12	15151.53	18033.49	18033.49	10.86	No	Si
SLU 81	8.98	1490.96	-18413	-0.0000555	0.0004492	0.0035	3.12	20052.96	25253.08	25253.08	16.94	No	Si
SLU 81	11.08	1914.07	-14921	-0.0000481	0.0004492	0.0035	3.12	17582.69	21345.09	21345.09	11.15	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	8.98	1299.26	-15418	-0.0000463	0.0004492	0.0035	3.12	17972.12	21900.98	21900.98	16.86	No	Si
SLU 34	11.08	1619.23	-12688	-0.0000406	0.0004492	0.0035	3.12	15676.33	18760.25	18760.25	11.59	No	Si
SLU 39	8.98	1098.46	-15474	-0.0000454	0.0004492	0.0035	3.12	18015.21	21963.61	21963.61	19.99	No	Si
SLU 39	11.08	1803.42	-12692	-0.0000415	0.0004492	0.0035	3.12	15679.46	18764.65	18764.65	10.41	No	Si
SLU 42	8.98	1239.51	-16019	-0.0000476	0.0004492	0.0035	3.12	18426.96	22574.37	22574.37	18.21	No	Si
SLU 42	11.08	1778.53	-13240	-0.0000429	0.0004492	0.0035	3.12	16171.37	19464.07	19464.07	10.94	No	Si
SLU 40	8.98	1150.19	-15475	-0.0000457	0.0004492	0.0035	3.12	18016.63	21965.68	21965.68	19.1	No	Si
SLU 40	11.08	1819.72	-12673	-0.0000416	0.0004492	0.0035	3.12	15662.58	18740.92	18740.92	10.3	No	Si
SLU 32	8.98	1190.91	-15626	-0.0000463	0.0004492	0.0035	3.12	18131.59	22133.98	22133.98	18.59	No	Si
SLU 32	11.08	1659.46	-12959	-0.0000415	0.0004492	0.0035	3.12	15920.83	19106.87	19106.87	11.51	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	8.98	3442.32	-13342	-0.0000509	0.0006738	0.0035	3.12		19993.16	19993.16	5.81		Si
SLD 9	11.08	1321.23	-10316	-0.0000325	0.0006738	0.0035	3.12		15926.52	15926.52	12.05		Si
SLV 7	8.98	-3987.75	-10996	-0.0000474	0.0006738	0.0035	3.12		21442.2	21442.2	5.38		Si
SLV 7	11.08	339.89	-9605	-0.0000258	0.0006738	0.0035	3.12		14946.74	14946.74	43.97		Si
SLD 6	8.98	3300.83	-12677	-0.0000484	0.0006738	0.0035	3.12		19109.1	19109.1	5.79		Si
SLD 6	11.08	1527.56	-9630	-0.0000317	0.0006738	0.0035	3.12		14981.45	14981.45	9.81		Si
SLV 5	8.98	5819.33	-12660	-0.000061	0.0006738	0.0035	3.12		19085.63	19085.63	3.28		Si
SLV 5	11.08	1991.02	-9037	-0.0000325	0.0006738	0.0035	3.12		14163.61	14163.61	7.11		Si
SLV 6	8.98	5944.08	-12696	-0.0000617	0.0006738	0.0035	3.12		19134.66	19134.66	3.22		Si
SLV 6	11.08	2126.19	-9013	-0.0000331	0.0006738	0.0035	3.12		14130.5	14130.5	6.65		Si
SLV 8	8.98	-3863	-11033	-0.0000469	0.0006738	0.0035	3.12		21490.5	21490.5	5.56		Si
SLV 8	11.08	475.06	-9581	-0.0000264	0.0006738	0.0035	3.12		14913.63	14913.63	31.39		Si
SLV 9	8.98	6278.43	-14254	-0.0000676	0.0006738	0.0035	3.12		21188.51	21188.51	3.37		Si
SLV 9	11.08	1646.01	-10616	-0.0000348	0.0006738	0.0035	3.12		16334.39	16334.39	9.92		Si
SLV 10	8.98	6403.17	-14291	-0.0000683	0.0006738	0.0035	3.12		21236.71	21236.71	3.32		Si
SLV 10	11.08	1781.18	-10592	-0.0000354	0.0006738	0.0035	3.12		16301.82	16301.82	9.15		Si
SLD 5	8.98	3246.35	-12661	-0.0000481	0.0006738	0.0035	3.12		19087.69	19087.69	5.88		Si
SLD 5	11.08	1468.52	-9641	-0.0000314	0.0006738	0.0035	3.12		14995.91	14995.91	10.21		Si
SLD 10	8.98	3496.81	-13358	-0.0000512	0.0006738	0.0035	3.12		20014.21	20014.21	5.72		Si
SLD 10	11.08	1380.26	-10305	-0.0000327	0.0006738	0.0035	3.12		15912.06	15912.06	11.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	8.98	1790.31	-15991	-9389	779	3.12	3.12	-18808	10833	5408	115546	17940	15912	33852	No	43.43	Si
SLU 48	11.08	927.1	-12880	-7563	773	3.12	3.12	-15149	10353	5168	115546	17940	15912	33852	No	43.81	Si
SLU 51	8.98	1864.17	-15781	-9266	845	3.12	3.12	-18562	10808	5395	115546	17940	15912	33852	No	40.05	Si
SLU 51	11.08	876.01	-12622	-7411	911	3.12	3.12	-14846	10313	5148	115546	17940	15912	33852	No	37.17	Si
SLU 47	8.98	1809.35	-15239	-8947	802	3.12	3.12	-17923	10723	5353	115546	17940	15912	33852	No	42.23	Si
SLU 47	11.08	928.06	-12043	-7071	916	3.12	3.12	-14164	10222	5103	115546	17940	15912	33852	No	36.97	Si
SLU 59	8.98	1805.23	-17188	-10092	739	3.12	3.12	-20216	10833	5408	115546	17940	15912	33852	No	45.84	Si
SLU 59	11.08	1273.04	-13881	-8150	803	3.12	3.12	-16327	10510	5247	115546	17940	15912	33852	No	42.17	Si
SLU 46	8.98	1752.74	-15449	-9071	737	3.12	3.12	-18170	10756	5369	115546	17940	15912	33852	No	45.96	Si
SLU 46	11.08	984.58	-12294	-7219	802	3.12	3.12	-14461	10261	5123	115546	17940	15912	33852	No	42.19	Si
SLU 49	8.98	1842.05	-15992	-9390	782	3.12	3.12	-18810	10833	5408	115546	17940	15912	33852	No	43.3	Si
SLU 49	11.08	943.39	-12862	-7552	847	3.12	3.12	-15128	10350	5167	115546	17940	15912	33852	No	39.96	Si
SLU 55	8.98	1750.41	-16645	-9773	695	3.12	3.12	-19578	10833	5408	115546	17940	15912	33852	No	48.71	Si
SLU 55	11.08	1325.09	-13302	-7810	808	3.12	3.12	-15645	10419	5201	115546	17940	15912	33852	No	41.91	Si
SLU 52	8.98	1661.1	-16101	-9454	650	3.12	3.12	-18938	10833	5408	115546	17940	15912	33852	No	52.1	Si
SLU 52	11.08	1366.28	-12735	-7477	763	3.12	3.12	-14978	10330	5157	115546	17940	15912	33852	No	44.37	Si
SLU 44	8.98	1720.04	-14695	-8628	757	3.12	3.12	-17284	10638	5310	115546	17940	15912	33852	No	44.75	Si
SLU 44	11.08	969.25	-11475	-6738	871	3.12	3.12	-13497	10133	5058	115546	17940	15912	33852	No	38.87	Si
SLU 50	8.98	1812.44	-15779	-9265	843	3.12	3.12	-18559	10808	5395	115546	17940	15912	33852	No	40.16	Si
SLU 50	11.08	859.71	-12640	-7422	836	3.12	3.12	-14868	10316	5150	115546	17940	15912	33852	No	40.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.98	6403.17	-14291	-8391	3781	3.12	3.12	-16809	15862	7918	115546	26910	15912	42822		11.32	Si
SLV 10	11.08	1781.18	-10592	-6219	4977	3.12	3.12	-12458	14992	7484	115546	26910	15912	42822		8.6	Si
SLV 5	8.98	5819.33	-12660	-7433	3162	3.12	3.12	-14890	15478	7727	115546	26910	15912	42822		13.54	Si
SLV 5	11.08	1991.02	-9037	-5306	4391	3.12	3.12	-10629	14626	7301	115546	26910	15912	42822		9.75	Si
SLV 9	8.98	6278.43	-14254	-8369	3741	3.12	3.12	-16766	15853	7914	115546	26910	15912	42822		11.45	Si
SLV 9	11.08	1646.01	-10616	-6233	4937	3.12	3.12	-12487	14997	7487	115546	26910	15912	42822		8.67	Si
SLV 8	8.98	-3863	-11033	-6478	-2885	3.12	3.12	-12977	15095	7536	115546	26910	15912	42822		14.84	Si
SLV 8	11.08	475.06	-9581	-5626	-4092	3.12	3.12	-11269	14754	7365	115546	26910	15912	42822		10.47	Si
SLV 6	8.98	5944.08	-12696	-7455	3202	3.12	3.12	-14933	15487	7731	115546	26910	15912	42822		13.37	Si
SLV 6	11.08	2126.19	-9013	-5292	4431	3.12	3.12	-10601	14620	7298	115546	26910	15912	42822		9.66	Si
SLV 7	8.98	-3987.75	-10996	-6456	-2925	3.12	3.12	-12934	15087	7531	115546	26910	15912	42822		14.64	Si
SLV 7	11.08	339.89	-9605	-5640	-4132	3.12	3.12	-11297	14759	7368	115546	26910	15912	42822		10.36	Si
SLV 11	8.98	-3528.66	-12591	-7393	-2346	3.12	3.12	-14809	15462	7719	115546	26910	15912	42822		18.25	Si
SLV 11	11.08	-5.12	-11184	-6567	-3586	3.12	3.12	-13155	15131	7553	115546	26910	15912	42822		11.94	Si
SLV 14	8.98	3540.72	-15579	-9147	2337	3.12	3.12	-18324	16165	8069	115546	26910	15912	42822		18.32	Si
SLV 14	11.08	838.06	-12626	-7414	2642	3.12	3.12	-14851	15470	7723	115546	26910	15912	42822		16.21	Si
SLV 13	8.98	3347.14	-15522	-9114	2275	3.12	3.12	-18257	16151	8063	115546	26910	15912	42822		18.82	Si
SLV 13	11.08	628.31	-12664	-7436	2580	3.12	3.12	-14895	15479	7727	115546	26910	15912	42822		16.6	Si
SLV 12	8.98	-3403.91	-12627	-7414	-2306	3.12	3.12	-14852	15470	7723	115546	26910	15912	42822		18.57	Si
SLV 12	11.08	130.05	-11160	-6553	-3546	3.12	3.12	-13126	15125	7551	115546	26910	15912	42822		12.08	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-7928	0.46	232	579.31	994.18	786.75	3.39	Si
SLV 1	-7939	0.46	232	579.99	995.16	787.58	3.39	Si
SLV 4	-8312	0.46	232	604.56	1030.6	817.58	3.52	Si
SLV 3	-8322	0.46	232	605.23	1031.58	818.41	3.53	Si
SLV 6	-9219	0.46	232	663.23	1116.04	889.64	3.83	Si
SLV 5	-9226	0.46	232	663.66	1116.67	890.16	3.84	Si
SLV 8	-10498	0.46	232	743.5	1236.21	989.85	4.27	Si
SLV 7	-10505	0.46	232	743.91	1236.84	990.37	4.27	Si
SLV 10	-10708	0.46	232	756.39	1255.92	1006.15	4.34	Si
SLV 9	-10715	0.46	232	756.8	1256.54	1006.67	4.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-7997	-14291	197	1.836	1064.2	0.936	28.51565	19.08992	Si
SLV 9	-7971	-14254	197	1.841	1061.6	0.935	28.59703	19.08992	Si
SLV 6	-6915	-12696	-91	2.079	955	0.93	32.49989	19.08992	Si
SLV 5	-6889	-12660	-91	2.085	952.4	0.929	32.60492	19.08992	Si
SLV 12	-6139	-12627	91	2.286	876.8	0.925	35.92378	19.08992	Si
SLV 11	-6112	-12591	91	2.293	874.1	0.925	36.05188	19.08992	Si
SLV 8	-5057	-11033	-197	2.638	768.2	0.917	41.82364	19.08992	Si
SLV 7	-5031	-10996	-197	2.649	765.6	0.917	41.99765	19.08992	Si
SLV 14	-8615	-15579	497	1.696	1126.8	0.939	26.26665	9.9395	Si
SLV 13	-8575	-15522	497	1.703	1122.7	0.938	26.37579	9.9395	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.299	SLU 40	Si
V_SLU	36.973	SLU 47	Si
PF_SLV	3.219	SLV 6	Si
V_SLV	8.604	SLV 10	Si
PFFP_SLV	3.391	SLV 2	Si
R_SLV	1.494	SLV 10	Si

Maschio 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L6	L7	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	9.88	62.78	-7863	-0.0000453	0.0003743	0.0035	1.02	2925.73	3224.98	3224.98	51.37	No	Si
SLU 72	11.68	-610.31	-6616	-0.0000562	0.0003743	0.0035	1.02	2606.31	3063.09	3063.09	5.02	No	Si
SLU 67	9.88	75.37	-7627	-0.0000443	0.0003743	0.0035	1.02	2869.36	3151.97	3151.97	41.82	No	Si
SLU 67	11.68	-603.38	-6399	-0.0000546	0.0003743	0.0035	1.02	2545.19	2986.33	2986.33	4.95	No	Si
SLU 46	9.88	29.96	-6983	-0.000039	0.0003743	0.0035	1.02	2706.01	2956.6	2956.6	98.68	No	Si
SLU 46	11.68	-531.81	-5677	-0.0000479	0.0003743	0.0035	1.02	2329.91	2725.96	2725.96	5.13	No	Si
SLU 64	9.88	66.35	-7190	-0.0000414	0.0003743	0.0035	1.02	2760.13	3018.9	3018.9	45.5	No	Si
SLU 64	11.68	-565.42	-5951	-0.0000507	0.0003743	0.0035	1.02	2413.82	2826.13	2826.13	5	No	Si
SLU 65	9.88	79.97	-7154	-0.0000417	0.0003743	0.0035	1.02	2750.79	3007.98	3007.98	37.62	No	Si
SLU 65	11.68	-567.95	-5938	-0.0000507	0.0003743	0.0035	1.02	2409.93	2821.45	2821.45	4.97	No	Si
SLU 71	9.88	54.62	-7885	-0.0000451	0.0003743	0.0035	1.02	2930.8	3231.7	3231.7	59.17	No	Si
SLU 71	11.68	-608.79	-6623	-0.0000562	0.0003743	0.0035	1.02	2608.46	3065.81	3065.81	5.04	No	Si
SLU 70	9.88	69.5	-7974	-0.0000462	0.0003743	0.0035	1.02	2951.49	3259.45	3259.45	46.9	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	11.68	-625.07	-6735	-0.0000574	0.0003743	0.0035	1.02	2639.21	3104.85	3104.85	4.97	No	Si
SLU 69	9.88	61.34	-7996	-0.000046	0.0003743	0.0035	1.02	2956.48	3266.21	3266.21	53.25	No	Si
SLU 69	11.68	-623.55	-6743	-0.0000574	0.0003743	0.0035	1.02	2641.33	3107.55	3107.55	4.98	No	Si
SLU 66	9.88	67.21	-7648	-0.0000441	0.0003743	0.0035	1.02	2874.61	3158.64	3158.64	47	No	Si
SLU 66	11.68	-601.86	-6406	-0.0000546	0.0003743	0.0035	1.02	2547.4	2989.09	2989.09	4.97	No	Si
SLU 68	9.88	74.1	-7501	-0.0000435	0.0003743	0.0035	1.02	2838.68	3113.53	3113.53	42.02	No	Si
SLU 68	11.68	-589.64	-6274	-0.0000534	0.0003743	0.0035	1.02	2509.39	2941.96	2941.96	4.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	9.88	3139.29	-2452	-0.0470093	0.0005615	0.0035	0.816		1261.77	1261.77	0.4		No
SLV 3	11.68	-2198.97	-6801	-0.0001412	0.0005615	0.0035	0.816		3297.47	3297.47	1.5		Si
SLV 6	9.88	969.84	-2646	-0.0000675	0.0005615	0.0035	1.02		1352.02	1352.02	1.39		Si
SLV 6	11.68	-632.72	-3459	-0.0000378	0.0005615	0.0035	1.02		1888.75	1888.75	2.99		Si
SLV 13	9.88	-3364.37	-8915	-0.0002958	0.0005615	0.0035	0.816		4093.26	4093.26	1.22		Si
SLV 13	11.68	1509.52	-2126	-0.0120615	0.0005615	0.0035	0.816		1109	1109	0.73		No
SLD 4	9.88	1467.49	-4109	-0.000101	0.0005615	0.0035	1.02		2009.85	2009.85	1.37		Si
SLD 4	11.68	-1239.33	-5573	-0.0000711	0.0005615	0.0035	1.02		2802.01	2802.01	2.26		Si
SLV 15	9.88	-3303.5	-9927	-0.0002348	0.0005615	0.0035	0.816		4448.87	4448.87	1.35		Si
SLV 15	11.68	1298.41	-3131	-0.000126	0.0005615	0.0035	1.02		1574.72	1574.72	1.21		Si
SLV 1	9.88	3078.43	-1440	-0.0577987	0.0005615	0.0035	0.816		782.02	782.02	0.25		No
SLV 1	11.68	-1987.86	-5797	-0.0001335	0.0005615	0.0035	0.816		2895.59	2895.59	1.46		Si
SLV 4	9.88	3403.71	-2174	-0.0566934	0.0005615	0.0035	0.816		1131.37	1131.37	0.33		No
SLV 4	11.68	-2339.14	-6946	-0.0001574	0.0005615	0.0035	0.816		3354	3354	1.43		Si
SLD 2	9.88	1440.34	-3664	-0.0001196	0.0005615	0.0035	1.02		1814.74	1814.74	1.26		Si
SLD 2	11.68	-1146.19	-5131	-0.0000654	0.0005615	0.0035	1.02		2616.14	2616.14	2.28		Si
SLV 14	9.88	-3099.96	-8636	-0.0002403	0.0005615	0.0035	0.816		3992.37	3992.37	1.29		Si
SLV 14	11.68	1369.35	-2271	-0.0072014	0.0005615	0.0035	0.816		1176.89	1176.89	0.86		No
SLV 2	9.88	3342.84	-1161	-0.0680038	0.0005615	0.0035	0.816		646.67	646.67	0.19		No
SLV 2	11.68	-2128.03	-5941	-0.0001528	0.0005615	0.0035	0.816		2954.06	2954.06	1.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	9.88	74.1	-7501	-6246	426	1.02	1.02	-21871	9861	2816	40441	8552	2601	11153	No	26.2	Si
SLU 68	11.68	-589.64	-6274	-5225	578	1.02	1.02	-18293	9384	2680	40441	8552	2601	11153	No	19.29	Si
SLU 67	9.88	75.37	-7627	-6351	434	1.02	1.02	-22236	9909	2830	40441	8552	2601	11153	No	25.73	Si
SLU 67	11.68	-603.38	-6399	-5328	595	1.02	1.02	-18656	9432	2694	40441	8552	2601	11153	No	18.73	Si
SLU 71	9.88	54.62	-7885	-6566	413	1.02	1.02	-22989	10010	2859	40441	8552	2601	11153	No	27.03	Si
SLU 71	11.68	-608.79	-6623	-5515	589	1.02	1.02	-19311	9519	2719	40441	8552	2601	11153	No	18.95	Si
SLU 69	9.88	61.34	-7996	-6658	428	1.02	1.02	-23313	10053	2871	40441	8552	2601	11153	No	26.03	Si
SLU 69	11.68	-623.55	-6743	-5615	608	1.02	1.02	-19659	9566	2732	40441	8552	2601	11153	No	18.33	Si
SLU 65	9.88	79.97	-7154	-5957	419	1.02	1.02	-20858	9725	2778	40441	8552	2601	11153	No	26.63	Si
SLU 65	11.68	-567.95	-5938	-4945	561	1.02	1.02	-17313	9253	2643	40441	8552	2601	11153	No	19.86	Si
SLU 64	9.88	66.35	-7190	-5987	399	1.02	1.02	-20963	9740	2782	40441	8552	2601	11153	No	27.95	Si
SLU 64	11.68	-565.42	-5951	-4955	555	1.02	1.02	-17351	9258	2644	40441	8552	2601	11153	No	20.09	Si
SLU 70	9.88	69.5	-7974	-6640	440	1.02	1.02	-23249	10044	2869	40441	8552	2601	11153	No	25.33	Si
SLU 70	11.68	-625.07	-6735	-5608	612	1.02	1.02	-19636	9563	2731	40441	8552	2601	11153	No	18.22	Si
SLU 72	9.88	62.78	-7863	-6548	425	1.02	1.02	-22926	10001	2856	40441	8552	2601	11153	No	26.27	Si
SLU 72	11.68	-610.31	-6616	-5509	592	1.02	1.02	-19289	9516	2718	40441	8552	2601	11153	No	18.83	Si
SLU 66	9.88	67.21	-7648	-6369	422	1.02	1.02	-22300	9918	2833	40441	8552	2601	11153	No	26.45	Si
SLU 66	11.68	-601.86	-6406	-5335	592	1.02	1.02	-18679	9435	2695	40441	8552	2601	11153	No	18.85	Si
SLU 49	9.88	24.09	-7330	-6104	319	1.02	1.02	-21373	9794	2797	40441	8552	2601	11153	No	34.94	Si
SLU 49	11.68	-553.5	-6013	-5007	549	1.02	1.02	-17532	9282	2651	40441	8552	2601	11153	No	20.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.88	3403.71	-2174	-1810	5958	0.816	0	0	0	0	40441	10263	2081	12343		2.07	Si
SLV 4	11.68	-2339.14	-6946	-5784	3503	0.816	0.5197	0	0	0	40441	10263	2081	12343		3.52	Si
SLV 15	9.88	-3303.5	-9927	-8266	-5243	0.816	0.5316	0	0	0	40441	10263	2081	12343		2.35	Si
SLV 15	11.68	1298.41	-3131	-2607	-2357	1.02	0.2858	-33160	16250	1300	40441	12828	2601	15429		6.55	Si
SLD 2	9.88	1440.34	-3664	-3051	2605	1.02	0.3507	-10683	12553	1233	40441	12828	2601	15429		5.92	Si
SLD 2	11.68	-1146.19	-5131	-4272	1553	1.02	0.8598	-17904	13997	3370	40441	12828	2601	15429		9.93	Si
SLD 4	9.88	1467.49	-4109	-3422	2695	1.02	0.4587	-11981	12813	1646	40441	12828	2601	15429		5.73	Si
SLD 4	11.68	-1239.33	-5573	-4641	1721	1.02	0.8629	-19395	14296	3454	40441	12828	2601	15429		8.97	Si
SLV 2	9.88	3342.84	-1161	-967	5753	0.816	0	0	0	0	40441	10263	2081	12343		2.15	Si
SLV 2	11.68	-2128.03	-5941	-4947	3124	0.816	0.4554	0	0	0	40441	10263	2081	12343		3.95	Si
SLV 3	9.88	3139.29	-2452	-2042	5543	0.816	0	0	0	0	40441	10263	2081	12343		2.23	Si
SLV 3	11.68	-2198.97	-6801	-5664	3261	0.816	0.5601	0	0	0	40441	10263	2081	12343		3.79	Si
SLV 14	9.88	-3099.96	-8636	-7191	-5033	0.816	0.4531	0	0	0	40441	10263	2081	12343		2.45	Si
SLV 14	11.68	1369.35	-2271	-1891	-2494	0.816	0	0	0	0	40441	10263	2081	12343		4.95	Si
SLV 16	9.88	-3039.09	-9648	-8034	-4828	0.816	0.585	0	0	0	40441	10263	2081	12343		2.56	Si
SLV 16	11.68	1158.24	-3275	-2727	-2115	1.02	0.4691	-9549	12326	1619	40441	12828	2601	15429		7.3	Si
SLV 13	9.88	-3364.37	-8915	-7423	-5448	0.816	0.3978	0	0	0	40441	10263	2081	12343		2.27	Si
SLV 13	11.68	1509.52	-2126	-1770	-2736	0.816	0	0	0	0	40441	10263	2081	12343		4.51	Si
SLV 1	9.88	3078.43	-1440	-1199	5338	0.816	0	0	0	0	40441	10263	2081	12343		2.31	Si
SLV 1	11.68	-1987.86	-5797	-4827	2882	0.816	0.5012	0	0	0	40441	10263	2081	12343		4.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	0	-790	125.44	0	0	No, e>t/2
SLV 1	179667	0.46	3740	-1068	125.44	145.88	1.16	Si
SLV 4	179667	0.46	6283	-1794	125.44	240.88	1.92	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.46	7258	-2073	125.44	276.41	2.2	Si
SLV 6	179667	0.46	7953	-2271	125.44	301.42	2.4	Si
SLV 5	179667	0.46	8581	-2451	125.44	323.83	2.58	Si
SLV 10	179667	0.46	15768	-4503	125.44	565.39	4.51	Si
SLV 9	179667	0.46	16397	-4683	125.44	585.22	4.67	Si
SLV 8	179667	0.46	19679	-5620	125.44	685.45	5.46	Si
SLV 7	179667	0.46	20307	-5800	125.44	704	5.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-5394	-7852	-40	0.949	691.7	0.942	14.63644	14.44577	Si
SLV 7	-5318	-7720	-40	0.96	684.1	0.942	14.8157	14.44577	Si
SLV 12	-4265	-6464	-60	1.143	577.5	0.933	17.81573	14.44577	Si
SLV 11	-4190	-6332	-60	1.16	569.9	0.932	18.0854	14.44577	Si
SLV 6	-3258	-4437	55	1.412	476.1	0.922	22.25907	14.44577	Si
SLV 5	-3183	-4304	55	1.437	468.5	0.921	22.6823	14.44577	Si
SLV 4	-5984	-8313	16	0.874	751.6	0.946	13.43117	6.41634	Si
SLV 3	-5867	-8107	17	0.889	739.7	0.945	13.66369	6.41634	Si
SLV 10	-2130	-3049	35	1.928	363.5	0.905	30.95891	14.44577	Si
SLV 9	-2054	-2916	35	1.977	356	0.904	31.77638	14.44577	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.949	SLU 67	Si
V_SLU	18.22	SLU 70	Si
PF_SLV	0.193	SLV 2	No
V_SLV	2.072	SLV 4	Si
PFFP_SLV	0	SLV 2	No
R_SLV	1.013	SLV 8	Si

Maschio 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L6	L7	4.68	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 56	8.98	-3298.59	-21100	-0.0000484	0.0004492	0.0035	4.68	36360.83	55550.01	55550.01	16.84	No	Si
SLU 56	12.5	-917.78	-11646	-0.000024	0.0004492	0.0035	4.68	23286.87	37457.09	37457.09	40.81	No	Si
SLU 69	8.98	-3357.66	-21384	-0.0000492	0.0004492	0.0035	4.68	36672.84	56064.06	56064.06	16.7	No	Si
SLU 69	12.5	-882.17	-11974	-0.0000245	0.0004492	0.0035	4.68	23827.74	38120.83	38120.83	43.21	No	Si
SLU 77	8.98	-3572.5	-23229	-0.0000534	0.0004492	0.0035	4.68	38584.05	59401.95	59401.95	16.63	No	Si
SLU 77	12.5	-935.05	-12773	-0.0000262	0.0004492	0.0035	4.68	25120.89	39740.12	39740.12	42.5	No	Si
SLU 81	8.98	-3473.27	-22721	-0.0000521	0.0004492	0.0035	4.68	38077.31	58482.26	58482.26	16.84	No	Si
SLU 81	12.5	-896.27	-11961	-0.0000245	0.0004492	0.0035	4.68	23807.35	38095.67	38095.67	42.5	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	8.98	-3295.03	-21014	-0.0000483	0.0004492	0.0035	4.68	36265.43	55394.37	55394.37	16.81	No	Si
SLU 71	12.5	-766.65	-11661	-0.0000236	0.0004492	0.0035	4.68	23312.31	37488.14	37488.14	48.9	No	Si
SLU 53	8.98	-3234.25	-20636	-0.0000473	0.0004492	0.0035	4.68	35840.66	54709.75	54709.75	16.92	No	Si
SLU 53	12.5	-944.81	-11224	-0.0000232	0.0004492	0.0035	4.68	22582.67	36604.23	36604.23	38.74	No	Si
SLU 66	8.98	-3293.32	-20920	-0.0000481	0.0004492	0.0035	4.68	36160.38	55223.8	55223.8	16.77	No	Si
SLU 66	12.5	-909.21	-11552	-0.0000238	0.0004492	0.0035	4.68	23131.61	37267.97	37267.97	40.99	No	Si
SLU 74	8.98	-3508.16	-22764	-0.0000523	0.0004492	0.0035	4.68	38121.67	58561.69	58561.69	16.69	No	Si
SLU 74	12.5	-962.08	-12352	-0.0000254	0.0004492	0.0035	4.68	24444.46	38887.25	38887.25	40.42	No	Si
SLU 79	8.98	-3509.87	-22859	-0.0000525	0.0004492	0.0035	4.68	38216.55	58732.26	58732.26	16.73	No	Si
SLU 79	12.5	-819.53	-12461	-0.0000253	0.0004492	0.0035	4.68	24620.08	39107.42	39107.42	47.72	No	Si
SLU 83	8.98	-3537.61	-23185	-0.0000532	0.0004492	0.0035	4.68	38540.88	59322.52	59322.52	16.77	No	Si
SLU 83	12.5	-869.23	-12382	-0.0000253	0.0004492	0.0035	4.68	24493.41	38948.53	38948.53	44.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.98	4458.54	-13291	-0.0000355	0.0006738	0.0035	4.68		31269.87	31269.87	7.01		Si
SLV 4	12.5	6638.08	-8813	-0.0000322	0.0006738	0.0035	4.68		21846.18	21846.18	3.29		Si
SLV 14	8.98	-8799.05	-18013	-0.0000553	0.0006738	0.0035	4.68		50621.95	50621.95	5.75		Si
SLV 14	12.5	-7461.3	-8017	-0.000033	0.0006738	0.0035	4.68		30208.02	30208.02	4.05		Si
SLV 1	8.98	8658.3	-14990	-0.0000491	0.0006738	0.0035	4.68		34753.52	34753.52	4.01		Si
SLV 1	12.5	7795.1	-9974	-0.0000373	0.0006738	0.0035	4.68		24327.19	24327.19	3.12		Si
SLV 11	8.98	-13195.4	-12521	-0.0000573	0.0006738	0.0035	4.68		39592.56	39592.56	3		Si
SLV 11	12.5	-5847.76	-5593	-0.000025	0.0006738	0.0035	4.68		24992.91	24992.91	4.27		Si
SLV 13	8.98	-9332.21	-17728	-0.0000561	0.0006738	0.0035	4.68		50058.78	50058.78	5.36		Si
SLV 13	12.5	-7923.36	-7792	-0.0000342	0.0006738	0.0035	4.68		29728.7	29728.7	3.75		Si
SLV 2	8.98	9191.46	-15275	-0.0000509	0.0006738	0.0035	4.68		35336.41	35336.41	3.84		Si
SLV 2	12.5	8257.16	-10199	-0.0000388	0.0006738	0.0035	4.68		24800.36	24800.36	3		Si
SLV 3	8.98	3925.38	-13005	-0.0000337	0.0006738	0.0035	4.68		30677.59	30677.59	7.82		Si
SLV 3	12.5	6176.02	-8589	-0.0000307	0.0006738	0.0035	4.68		21365.63	21365.63	3.46		Si
SLV 16	8.98	-13531.97	-16029	-0.0000632	0.0006738	0.0035	4.68		46704.96	46704.96	3.45		Si
SLV 16	12.5	-9080.38	-6631	-0.0000397	0.0006738	0.0035	3.744		27238.49	27238.49	3		Si
SLV 12	8.98	-12851.82	-12705	-0.0000562	0.0006738	0.0035	4.68		39973.51	39973.51	3.11		Si
SLV 12	12.5	-5549.99	-5738	-0.0000242	0.0006738	0.0035	4.68		25305.86	25305.86	4.56		Si
SLV 15	8.98	-14065.13	-15744	-0.0000643	0.0006738	0.0035	4.68		46141.79	46141.79	3.28		Si
SLV 15	12.5	-9542.44	-6406	-0.0000438	0.0006738	0.0035	3.744		26752.87	26752.87	2.8		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.98	-3413.86	-22761	-12620	1171	4.68	4.68	-19262	10833	7098	115546	23546	23868	47414	No	40.48	Si
SLU 82	12.5	-866.37	-11989	-6648	1371	4.68	4.68	-10146	9686	6346	115546	23546	23868	47414	No	34.59	Si
SLU 42	8.98	-2882.95	-19643	-10891	1168	4.68	4.68	-16623	10550	6912	115546	23546	23868	47414	No	40.6	Si
SLU 42	12.5	-658.48	-10472	-5806	1337	4.68	4.68	-8862	9515	6234	115546	23546	23868	47414	No	35.47	Si
SLU 40	8.98	-2818.61	-19179	-10634	1210	4.68	4.68	-16230	10497	6878	115546	23546	23868	47414	No	39.18	Si
SLU 40	12.5	-685.51	-10050	-5573	1375	4.68	4.68	-8505	9467	6203	115546	23546	23868	47414	No	34.47	Si
SLU 39	8.98	-2878.02	-19138	-10611	1162	4.68	4.68	-16196	10493	6875	115546	23546	23868	47414	No	40.79	Si
SLU 39	12.5	-715.41	-10022	-5557	1326	4.68	4.68	-8481	9464	6201	115546	23546	23868	47414	No	35.76	Si
SLU 84	8.98	-3478.2	-23226	-12878	1129	4.68	4.68	-19655	10833	7098	115546	23546	23868	47414	No	42.01	Si
SLU 84	12.5	-839.33	-12411	-6881	1332	4.68	4.68	-10502	9734	6377	115546	23546	23868	47414	No	35.59	Si
SLU 81	8.98	-3473.27	-22721	-12598	1123	4.68	4.68	-19227	10833	7098	115546	23546	23868	47414	No	42.21	Si
SLU 81	12.5	-896.27	-11961	-6632	1321	4.68	4.68	-10122	9683	6344	115546	23546	23868	47414	No	35.89	Si
SLU 41	8.98	-2942.36	-19603	-10869	1120	4.68	4.68	-16588	10545	6909	115546	23546	23868	47414	No	42.34	Si
SLU 41	12.5	-688.37	-10444	-5790	1287	4.68	4.68	-8838	9512	6232	115546	23546	23868	47414	No	36.83	Si
SLU 31	8.98	-2686.93	-18416	-10211	1020	4.68	4.68	-15584	10411	6821	115546	23546	23868	47414	No	46.48	Si
SLU 31	12.5	-642.92	-9726	-5393	1181	4.68	4.68	-8231	9431	6179	115546	23546	23868	47414	No	40.14	Si
SLU 73	8.98	-3282.17	-21998	-12197	981	4.68	4.68	-18616	10815	7086	115546	23546	23868	47414	No	48.33	Si
SLU 73	12.5	-823.78	-11665	-6468	1177	4.68	4.68	-9872	9650	6322	115546	23546	23868	47414	No	40.3	Si
SLU 83	8.98	-3537.61	-23185	-12855	1081	4.68	4.68	-19620	10833	7098	115546	23546	23868	47414	No	43.87	Si
SLU 83	12.5	-869.23	-12382	-6866	1283	4.68	4.68	-10479	9730	6375	115546	23546	23868	47414	No	36.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	8.98	2581	-19135	-10610	4691	4.68	4.68	-16193	15739	10312	115546	35319	23868	59187		12.62	Si
SLV 9	12.5	-450.82	-10213	-5662	6990	4.68	4.68	-8642	14228	9322	115546	35319	23868	59187		8.47	Si
SLV 8	8.98	-7454.67	-11883	-6589	-3919	4.68	4.68	-10056	14511	9508	115546	35319	23868	59187		15.1	Si
SLV 8	12.5	-834.46	-6393	-3544	-5939	4.68	4.68	-5410	13582	8899	115546	35319	23868	59187		9.97	Si
SLV 5	8.98	7978.15	-18314	-10154	5327	4.68	4.68	-15498	15600	10221	115546	35319	23868	59187		11.11	Si
SLV 5	12.5	4264.71	-10867	-6025	8681	4.68	4.68	-9196	14339	9395	115546	35319	23868	59187		6.82	Si
SLV 1	8.98	8658.3	-14990	-8311	2881	4.68	4.68	-12685	15037	9852	115546	35319	23868	59187		20.54	Si
SLV 1	12.5	7795.1	-9974	-5530	5596	4.68	4.6755	-8441	14188	9287	115546	35319	23868	59187		10.58	Si
SLV 7	8.98	-7798.25	-11700	-6487	-3842	4.68	4.68	-9901	14480	9487	115546	35319	23868	59187		15.41	Si
SLV 7	12.5	-1132.22	-6248	-3464	-5845	4.68	4.68	-5287	13557	8883	115546	35319	23868	59187		10.13	Si
SLV 10	8.98	2924.58	-19319	-10711	4615	4.68	4.68	-16348	15770	10332	115546	35319	23868	59187		12.83	Si
SLV 10	12.5	-153.06	-10357	-5743	6895	4.68	4.68	-8765	14253	9339	115546	35319	23868	59187		8.58	Si
SLV 6	8.98	8321.73	-18498	-10256	5251	4.68	4.68	-15653	15631	10241	115546	35319	23868	59187		11.27	Si
SLV 6	12.5	4562.48	-11012	-6106	8587	4.68	4.68	-9319	14364	9411	115546	35319	23868	59187		6.89	Si
SLV 11	8.98	-13195.4	-12521	-6942	-4478	4.68	3.8584	-12927	15086	8149	115546	35319	23868	59187		13.22	Si
SLV 11	12.5	-5847.76	-5593	-3101	-7536	4.68	3.8836	-5718	13644	7418	115546	35319	23868	59187		7.85	Si
SLV 12	8.98	-12851.82	-12705	-7044	-4555	4.68	3.9853	-12700	15040	8391	115546	35319	23868	59187		13	Si
SLV 12	12.5	-5549.99	-5738	-3181	-7631	4.68	4.1183	-5532	13606	7845	115546	35319	23868	59187		7.76	Si
SLV 16	8.98	-13531.97	-16029	-8887	-2108	4.68	4.4873	-14240	15348	9642	115546	35319	23868	59187		28.07	Si
SLV 16	12.5	-9080.38	-6631	-3676	-4546	3.744	2.9117	0	0	0	115546	28255	19094	47350		10.42	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.74 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-5443	0.46	307.84	363.72	768.99	566.35	1.84	Si
SLV 4	-5715	0.46	307.84	381.01	792.69	586.85	1.91	Si
SLV 1	-7107	0.46	307.84	468.06	913.37	690.72	2.24	Si
SLV 2	-7380	0.46	307.84	484.83	936.94	710.88	2.31	Si
SLV 7	-7698	0.46	307.84	504.34	964.52	734.43	2.39	Si
SLV 8	-7874	0.46	307.84	515.03	979.65	747.34	2.43	Si
SLV 11	-11255	0.46	307.84	714	1268.33	991.17	3.22	Si
SLV 12	-11430	0.46	307.84	723.97	1283.17	1003.57	3.26	Si
SLV 5	-13247	0.46	307.84	825	1436.56	1130.78	3.67	Si
SLV 6	-13423	0.46	307.84	834.56	1451.17	1142.86	3.71	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-11012	-18498	-167	2.019	1449	0.937	31.29848	19.08992	Si
SLV 5	-10867	-18314	-168	2.041	1434.4	0.937	31.66231	19.08992	Si
SLV 10	-10357	-19319	176	2.123	1382.8	0.935	33.00655	19.08992	Si
SLV 9	-10213	-19135	176	2.148	1368.2	0.934	33.41184	19.08992	Si
SLV 8	-6393	-11883	-176	3.108	983.8	0.915	49.3525	19.08992	Si
SLV 7	-6248	-11700	-176	3.162	969.4	0.914	50.25331	19.08992	Si
SLV 12	-5738	-12705	167	3.368	918.5	0.911	53.72361	19.08992	Si
SLV 2	-10199	-15275	-571	2.118	1366.8	0.934	32.9507	11.51757	Si
SLV 11	-5593	-12521	167	3.431	904.1	0.91	54.7887	19.08992	Si
SLV 1	-9974	-14990	-571	2.157	1344.1	0.933	33.59054	11.51757	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.628	SLU 77	Si
V_SLU	34.472	SLU 40	Si
PF_SLV	2.804	SLV 15	Si
V_SLV	6.818	SLV 5	Si
PFFP_SLV	1.84	SLV 3	Si
R_SLV	1.64	SLV 6	Si

Maschio 198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 67	10.98	-68.09	-4577	-0.0000548	0.0003743	0.0035	0.55	891.33	1059.04	1059.04	15.55	No	Si
SLU 67	11.78	-260.94	-4274	-0.0000742	0.0003743	0.0035	0.55	855.02	1015.4	1015.4	3.89	No	Si
SLU 66	10.98	-71.71	-4609	-0.0000556	0.0003743	0.0035	0.55	894.95	1063.31	1063.31	14.83	No	Si
SLU 66	11.78	-259.18	-4290	-0.0000741	0.0003743	0.0035	0.55	857	1017.8	1017.8	3.93	No	Si
SLU 65	10.98	-54.31	-4258	-0.0000496	0.0003743	0.0035	0.55	853.03	1012.96	1012.96	18.65	No	Si
SLU 65	11.78	-252.54	-3996	-0.0000699	0.0003743	0.0035	0.55	818.91	967.46	967.46	3.83	No	Si
SLU 23	10.98	-44.3	-3493	-0.0000401	0.0003743	0.0035	0.55	746.58	875.28	875.28	19.76	No	Si
SLU 23	11.78	-209.02	-3297	-0.0000568	0.0003743	0.0035	0.55	716.04	837.5	837.5	4.01	No	Si
SLU 69	10.98	-81.39	-4833	-0.0000593	0.0003743	0.0035	0.55	919.49	1092.67	1092.67	13.42	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	11.78	-263.59	-4486	-0.000077	0.0003743	0.0035	0.55	880.76	1046.46	1046.46	3.97	No	Si
SLU 70	10.98	-77.77	-4802	-0.0000585	0.0003743	0.0035	0.55	916.12	1088.49	1088.49	14	No	Si
SLU 70	11.78	-265.35	-4470	-0.000077	0.0003743	0.0035	0.55	878.89	1044.23	1044.23	3.94	No	Si
SLU 64	10.98	-60.34	-4311	-0.0000509	0.0003743	0.0035	0.55	859.63	1021	1021	16.92	No	Si
SLU 64	11.78	-249.61	-4023	-0.0000698	0.0003743	0.0035	0.55	822.46	972.23	972.23	3.89	No	Si
SLU 68	10.98	-63.99	-4483	-0.0000533	0.0003743	0.0035	0.55	880.33	1045.95	1045.95	16.35	No	Si
SLU 68	11.78	-256.95	-4193	-0.0000727	0.0003743	0.0035	0.55	844.7	1001.89	1001.89	3.9	No	Si
SLU 44	10.98	-46.39	-3794	-0.0000436	0.0003743	0.0035	0.55	790.97	930.8	930.8	20.07	No	Si
SLU 44	11.78	-224.08	-3533	-0.0000612	0.0003743	0.0035	0.55	752.75	882.85	882.85	3.94	No	Si
SLU 72	10.98	-76.08	-4728	-0.0000575	0.0003743	0.0035	0.55	908.19	1078.88	1078.88	14.18	No	Si
SLU 72	11.78	-260.19	-4399	-0.0000756	0.0003743	0.0035	0.55	870.4	1034.03	1034.03	3.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	10.98	557.04	-164	-0.0444376	0.0005615	0.0035	0.44		62.67	62.67	0.11		No
SLV 1	11.78	-805.51	-1637	-0.0060834	0.0005615	0.0035	0.44		491.85	491.85	0.61		No
SLV 6	10.98	250.16	-908	-0.0007356	0.0005615	0.0035	0.44		259.11	259.11	1.04		Si
SLV 6	11.78	-376.63	-1715	-0.0001161	0.0005615	0.0035	0.44		511.06	511.06	1.36		Si
SLD 4	10.98	210.07	-2214	-0.0000442	0.0005615	0.0035	0.55		582.58	582.58	2.77		Si
SLD 4	11.78	-484.83	-2662	-0.0001081	0.0005615	0.0035	0.44		734.96	734.96	1.52		Si
SLV 5	10.98	211.08	-1117	-0.0000468	0.0005615	0.0035	0.55		312.82	312.82	1.48		Si
SLV 5	11.78	-337.13	-1815	-0.0000747	0.0005615	0.0035	0.44		535.22	535.22	1.59		Si
SLV 2	10.98	617.69	161	-0.0578515	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	11.78	-866.82	-1480	-0.0075313	0.0005615	0.0035	0.44		452.65	452.65	0.52		No
SLV 4	10.98	558.75	-708	-0.0313568	0.0005615	0.0035	0.44		207.42	207.42	0.37		No
SLV 4	11.78	-883.08	-2058	-0.00601	0.0005615	0.0035	0.44		593.31	593.31	0.67		No
SLD 1	10.98	210.02	-1970	-0.000042	0.0005615	0.0035	0.55		524.23	524.23	2.5		Si
SLD 1	11.78	-451.29	-2474	-0.0001001	0.0005615	0.0035	0.44		692.13	692.13	1.53		Si
SLD 3	10.98	184.02	-2354	-0.0000428	0.0005615	0.0035	0.55		615.74	615.74	3.35		Si
SLD 3	11.78	-458.51	-2729	-0.0000954	0.0005615	0.0035	0.44		750.32	750.32	1.64		Si
SLD 2	10.98	236.06	-1831	-0.0000451	0.0005615	0.0035	0.55		490.46	490.46	2.08		Si
SLD 2	11.78	-477.61	-2407	-0.0001193	0.0005615	0.0035	0.44		676.76	676.76	1.42		Si
SLV 3	10.98	498.1	-1034	-0.019389	0.0005615	0.0035	0.44		291.5	291.5	0.59		No
SLV 3	11.78	-821.78	-2214	-0.0044668	0.0005615	0.0035	0.44		630.84	630.84	0.77		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	10.98	-92.93	-5079	-4229	-85	0.55	0.55	-27461	10606	1633	40441	4612	1403	6014	No	70.83	Si
SLU 84	11.78	-260.55	-4766	-3968	314	0.55	0.55	-25768	10380	1599	40441	4612	1403	6014	No	19.16	Si
SLU 78	10.98	-96.34	-5204	-4334	-78	0.55	0.55	-28139	10696	1647	40441	4612	1403	6014	No	76.68	Si
SLU 78	11.78	-268.69	-4864	-4051	307	0.55	0.55	-26301	10451	1610	40441	4612	1403	6014	No	19.62	Si
SLU 76	10.98	-82.56	-4885	-4068	-51	0.55	0.55	-26414	10466	1612	40441	4612	1403	6014	No	118.31	Si
SLU 76	11.78	-260.29	-4586	-3819	308	0.55	0.55	-24799	10251	1579	40441	4612	1403	6014	No	19.54	Si
SLU 73	10.98	-72.87	-4661	-3881	-28	0.55	0.55	-25201	10305	1587	40441	4612	1403	6014	No	211.87	Si
SLU 73	11.78	-255.88	-4390	-3656	309	0.55	0.55	-23738	10109	1557	40441	4612	1403	6014	No	19.48	Si
SLU 81	10.98	-86.87	-4886	-4069	-72	0.55	0.55	-26419	10467	1612	40441	4612	1403	6014	No	83.03	Si
SLU 81	11.78	-254.38	-4585	-3818	310	0.55	0.55	-24793	10250	1579	40441	4612	1403	6014	No	19.42	Si
SLU 82	10.98	-83.25	-4854	-4042	-62	0.55	0.55	-26248	10444	1608	40441	4612	1403	6014	No	96.29	Si
SLU 82	11.78	-256.14	-4569	-3805	315	0.55	0.55	-24707	10239	1577	40441	4612	1403	6014	No	19.1	Si
SLU 83	10.98	-96.55	-5110	-4256	-95	0.55	0.55	-27633	10629	1637	40441	4612	1403	6014	No	63.39	Si
SLU 83	11.78	-258.79	-4782	-3982	309	0.55	0.55	-25854	10392	1600	40441	4612	1403	6014	No	19.48	Si
SLU 75	10.98	-86.66	-4980	-4147	-56	0.55	0.55	-26926	10535	1622	40441	4612	1403	6014	No	107.43	Si
SLU 75	11.78	-264.28	-4668	-3887	308	0.55	0.55	-25240	10310	1588	40441	4612	1403	6014	No	19.55	Si
SLU 80	10.98	-94.65	-5131	-4272	-80	0.55	0.55	-27741	10643	1639	40441	4612	1403	6014	No	75.24	Si
SLU 80	11.78	-263.53	-4793	-3991	303	0.55	0.55	-25917	10400	1602	40441	4612	1403	6014	No	19.83	Si
SLU 74	10.98	-90.28	-5012	-4173	-66	0.55	0.55	-27098	10557	1626	40441	4612	1403	6014	No	91.18	Si
SLU 74	11.78	-262.52	-4684	-3900	302	0.55	0.55	-25326	10321	1590	40441	4612	1403	6014	No	19.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	10.98	617.69	161	134	2539	0.44	0	0	0	0	40441	5534	1122	6656		2.62	Si
SLV 2	11.78	-866.82	-1480	-1233	676	0.44	0	0	0	0	40441	5534	1122	6656		9.84	Si
SLV 3	10.98	498.1	-1034	-861	2249	0.44	0	0	0	0	40441	5534	1122	6656		2.96	Si
SLV 3	11.78	-821.78	-2214	-1844	472	0.44	0	0	0	0	40441	5534	1122	6656		14.1	Si
SLV 1	10.98	557.04	-164	-137	2312	0.44	0	0	0	0	40441	5534	1122	6656		2.88	Si
SLV 1	11.78	-805.51	-1637	-1363	609	0.44	0	0	0	0	40441	5534	1122	6656		10.93	Si
SLV 14	10.98	-598.06	-5625	-4684	-2258	0.55	0.5061	-30414	16250	2303	40441	6917	1403	8320		3.68	Si
SLV 14	11.78	448.36	-3996	-3327	-42	0.55	0.4884	-21606	14738	2016	40441	6917	1403	8320		200.09	Si
SLV 6	10.98	250.16	-908	-756	893	0.44	0	0	0	0	40441	5534	1122	6656		7.45	Si
SLV 6	11.78	-376.63	-1715	-1428	573	0.44	0.1661	0	0	0	40441	5534	1122	6656		11.62	Si
SLV 15	10.98	-717.65	-6820	-5679	-2548	0.55	0.5093	-36874	16250	2317	40441	6917	1403	8320		3.27	Si
SLV 15	11.78	493.4	-4730	-3939	-246	0.55	0.5121	-25576	15532	2227	40441	6917	1403	8320		33.83	Si
SLV 4	10.98	558.75	-708	-590	2476	0.44	0	0	0	0	40441	5534	1122	6656		2.69	Si
SLV 4	11.78	-883.08	-2058	-1714	540	0.44	0	0	0	0	40441	5534	1122	6656		12.33	Si
SLV 16	10.98	-657	-6494	-5408	-2321	0.55	0.5215	-35115	16250	2373	40441	6917	1403	8320		3.58	Si
SLV 16	11.78	432.1	-4574	-3808	-178	0.55	0.5416	-24730	15363	2330	40441	6917	1403	8320		46.66	Si
SLD 15	10.98	-336.02	-4828	-4020	-1093	0.55	0.55	-26105	15638	2408	40441	6917	1403	8320		7.61	Si
SLD 15	11.78	104.2	-3803	-3167	17	0.55	0.55	-20563	14529	2238	40441	6917	1403	8320		497.64	Si
SLV 13	10.98	-658.71	-5950	-4955	-2485	0.55	0.4929	-32173	16250	2243	40441	6917	1403	8320		3.35	Si
SLV 13	11.78	509.66	-4152	-3458	-109	0.55	0.4568	-22452	14907	1907	40441	6917	1403	8320		76.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	5537	-853	67.64	115.06	1.7	Si
SLV 6	179667	0.46	6173	-951	67.64	127.71	1.89	Si
SLV 1	179667	0.46	6751	-1040	67.64	139.13	2.06	Si
SLV 5	179667	0.46	6955	-1071	67.64	143.13	2.12	Si
SLV 4	179667	0.46	10945	-1686	67.64	219.07	3.24	Si
SLV 10	179667	0.46	11940	-1839	67.64	237.31	3.51	Si
SLV 3	179667	0.46	12159	-1873	67.64	241.29	3.57	Si
SLV 9	179667	0.46	12722	-1959	67.64	251.45	3.72	Si
SLV 8	179667	0.46	24198	-3727	67.64	439.06	6.49	Si
SLV 14	179667	0.46	24761	-3813	67.64	447.31	6.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2781	-4207	-9	0.988	360.1	0.94	15.27226	14.44577	Si
SLV 12	-2696	-4170	-9	1.013	351.5	0.939	15.68259	14.44577	Si
SLV 7	-2203	-4134	-10	1.191	301.7	0.931	18.59809	14.44577	Si
SLV 8	-2119	-4096	-10	1.229	293.2	0.929	19.2152	14.44577	Si
SLV 9	-1220	-1263	1	1.86	203.1	0.907	29.7917	14.44577	Si
SLV 10	-1135	-1226	1	1.955	194.7	0.905	31.39586	14.44577	Si
SLV 15	-2931	-3273	-5	0.948	375.3	0.942	14.61403	6.41634	Si
SLV 16	-2800	-3215	-5	0.984	362	0.941	15.20275	6.41634	Si
SLV 13	-2463	-2390	-2	1.093	327.9	0.935	16.97628	6.41634	Si
SLV 14	-2331	-2332	-2	1.142	314.6	0.933	17.78106	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.831	SLU 65	Si
V_SLU	19.095	SLU 82	Si
PF_SLV	0	SLV 2	No
V_SLV	2.621	SLV 2	Si
PFFP_SLV	1.701	SLV 2	Si
R_SLV	1.057	SLV 11	Si

Maschio 199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	10.98	1261.07	-17272	-0.0000508	0.0003743	0.0035	2.28	14457.64	15913.27	15913.27	12.62	No	Si
SLU 76	11.78	760.69	-14680	-0.0000406	0.0003743	0.0035	2.28	12955.05	14195.85	14195.85	18.66	No	Si
SLU 80	10.98	1303.13	-18017	-0.0000531	0.0003743	0.0035	2.28	14845.82	16420.52	16420.52	12.6	No	Si
SLU 80	11.78	852.49	-15393	-0.0000431	0.0003743	0.0035	2.28	13392	14661.57	14661.57	17.2	No	Si
SLU 75	10.98	1271.39	-17669	-0.000052	0.0003743	0.0035	2.28	14666.81	16182.62	16182.62	12.73	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	11.78	781.11	-15050	-0.0000417	0.0003743	0.0035	2.28	13184.07	14436.83	14436.83	18.48	No	Si
SLU 72	10.98	1242.62	-16838	-0.0000495	0.0003743	0.0035	2.28	14222.39	15620.59	15620.59	12.57	No	Si
SLU 72	11.78	729.12	-14259	-0.0000393	0.0003743	0.0035	2.28	12688.89	13871.97	13871.97	19.03	No	Si
SLU 70	10.98	1260.4	-17162	-0.0000505	0.0003743	0.0035	2.28	14398.3	15838.45	15838.45	12.57	No	Si
SLU 70	11.78	744.52	-14563	-0.0000402	0.0003743	0.0035	2.28	12881.9	14115.13	14115.13	18.96	No	Si
SLU 68	10.98	1200.55	-16093	-0.0000473	0.0003743	0.0035	2.28	13803.39	15123.66	15123.66	12.6	No	Si
SLU 68	11.78	637.31	-13545	-0.0000369	0.0003743	0.0035	2.28	12223.55	13240.35	13240.35	20.78	No	Si
SLU 69	10.98	1249.21	-17271	-0.0000507	0.0003743	0.0035	2.28	14457.18	15912.68	15912.68	12.74	No	Si
SLU 69	11.78	752.05	-14662	-0.0000405	0.0003743	0.0035	2.28	12944.06	14184.46	14184.46	18.86	No	Si
SLU 78	10.98	1320.91	-18341	-0.0000541	0.0003743	0.0035	2.28	15008.35	16642.87	16642.87	12.6	No	Si
SLU 78	11.78	867.89	-15697	-0.000044	0.0003743	0.0035	2.28	13572.91	14861.99	14861.99	17.12	No	Si
SLU 84	10.98	1279.54	-17851	-0.0000525	0.0003743	0.0035	2.28	14760.82	16306.68	16306.68	12.74	No	Si
SLU 84	11.78	818.59	-15232	-0.0000425	0.0003743	0.0035	2.28	13294.81	14555.8	14555.8	17.78	No	Si
SLU 67	10.98	1210.87	-16490	-0.0000484	0.0003743	0.0035	2.28	14028.97	15387.52	15387.52	12.71	No	Si
SLU 67	11.78	657.74	-13916	-0.000038	0.0003743	0.0035	2.28	12467.31	13577.77	13577.77	20.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	10.98	501.55	-5897	-0.0000168	0.0005615	0.0035	2.28		6690.64	6690.64	13.34		Si
SLV 9	11.78	1315.84	-5121	-0.00002	0.0005615	0.0035	2.28		5883.09	5883.09	4.47		Si
SLV 3	10.98	2040.47	-14602	-0.0000478	0.0005615	0.0035	2.28		14697.31	14697.31	7.2		Si
SLV 3	11.78	-2638.25	-11137	-0.0000429	0.0005615	0.0035	2.28		12911.8	12911.8	4.89		Si
SLV 1	10.98	2071.7	-11103	-0.0000392	0.0005615	0.0035	2.28		11740.77	11740.77	5.67		Si
SLV 1	11.78	-2803.7	-8059	-0.0000363	0.0005615	0.0035	2.28		9910.52	9910.52	3.53		Si
SLV 14	10.98	-324.47	-9326	-0.0000239	0.0005615	0.0035	2.28		11167.48	11167.48	34.42		Si
SLV 14	11.78	3530.78	-8909	-0.000043	0.0005615	0.0035	2.28		9733.99	9733.99	2.76		Si
SLV 2	10.98	2175.63	-11036	-0.0000397	0.0005615	0.0035	2.28		11685.51	11685.51	5.37		Si
SLV 2	11.78	-3216.97	-7844	-0.0000385	0.0005615	0.0035	2.28		9694.5	9694.5	3.01		Si
SLD 13	10.98	307.1	-10840	-0.0000275	0.0005615	0.0035	2.28		11522.52	11522.52	37.52		Si
SLD 13	11.78	1941.55	-9618	-0.0000348	0.0005615	0.0035	2.28		10428.56	10428.56	5.37		Si
SLV 16	10.98	-355.71	-12825	-0.0000327	0.0005615	0.0035	2.28		14476.75	14476.75	40.7		Si
SLV 16	11.78	3696.22	-11987	-0.0000518	0.0005615	0.0035	2.28		12479.59	12479.59	3.38		Si
SLV 15	10.98	-459.63	-12891	-0.0000335	0.0005615	0.0035	2.28		14538.57	14538.57	31.63		Si
SLV 15	11.78	4109.49	-12202	-0.000055	0.0005615	0.0035	2.28		12659.74	12659.74	3.08		Si
SLV 4	10.98	2144.39	-14535	-0.0000483	0.0005615	0.0035	2.28		14640.3	14640.3	6.83		Si
SLV 4	11.78	-3051.52	-10922	-0.000045	0.0005615	0.0035	2.28		12708.11	12708.11	4.16		Si
SLV 13	10.98	-428.4	-9392	-0.0000248	0.0005615	0.0035	2.28		11230.93	11230.93	26.22		Si
SLV 13	11.78	3944.05	-9124	-0.0000464	0.0005615	0.0035	2.28		9945.59	9945.59	2.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	10.98	1210.87	-16490	-13731	2524	2.28	2.28	-21509	9812	6264	40441	19116	5814	24930	No	9.88	Si
SLU 67	11.78	657.74	-13916	-11588	1776	2.28	2.28	-18151	9365	5978	40441	19116	5814	24930	No	14.04	Si
SLU 69	10.98	1249.21	-17271	-14382	2507	2.28	2.28	-22529	9948	6351	40441	19116	5814	24930	No	9.94	Si
SLU 69	11.78	752.05	-14662	-12209	1742	2.28	2.28	-19125	9494	6061	40441	19116	5814	24930	No	14.31	Si
SLU 64	10.98	1132.38	-15604	-12994	2496	2.28	2.28	-20354	9658	6166	40441	19116	5814	24930	No	9.99	Si
SLU 64	11.78	563.1	-13063	-10878	1756	2.28	2.28	-17040	9216	5884	40441	19116	5814	24930	No	14.2	Si
SLU 68	10.98	1200.55	-16093	-13401	2497	2.28	2.28	-20991	9743	6220	40441	19116	5814	24930	No	9.98	Si
SLU 68	11.78	637.31	-13545	-11279	1765	2.28	2.28	-17669	9300	5937	40441	19116	5814	24930	No	14.13	Si
SLU 74	10.98	1260.2	-17779	-14805	2503	2.28	2.28	-23191	10037	6407	40441	19116	5814	24930	No	9.96	Si
SLU 74	11.78	788.65	-15149	-12615	1747	2.28	2.28	-19760	9579	6115	40441	19116	5814	24930	No	14.27	Si
SLU 65	10.98	1151.03	-15421	-12841	2507	2.28	2.28	-20115	9626	6145	40441	19116	5814	24930	No	9.94	Si
SLU 65	11.78	550.53	-12898	-10740	1783	2.28	2.28	-16824	9188	5865	40441	19116	5814	24930	No	13.98	Si
SLU 75	10.98	1271.39	-17669	-14713	2510	2.28	2.28	-23047	10017	6395	40441	19116	5814	24930	No	9.93	Si
SLU 75	11.78	781.11	-15050	-12532	1763	2.28	2.28	-19631	9562	6104	40441	19116	5814	24930	No	14.14	Si
SLU 66	10.98	1199.68	-16600	-13823	2518	2.28	2.28	-21652	9831	6276	40441	19116	5814	24930	No	9.9	Si
SLU 66	11.78	665.28	-14015	-11670	1760	2.28	2.28	-18281	9382	5989	40441	19116	5814	24930	No	14.17	Si
SLU 70	10.98	1260.4	-17162	-14291	2514	2.28	2.28	-22385	9929	6339	40441	19116	5814	24930	No	9.92	Si
SLU 70	11.78	744.52	-14563	-12127	1758	2.28	2.28	-18996	9477	6050	40441	19116	5814	24930	No	14.18	Si
SLU 78	10.98	1320.91	-18341	-15273	2500	2.28	2.28	-23924	10134	6470	40441	19116	5814	24930	No	9.97	Si
SLU 78	11.78	867.89	-15697	-13071	1745	2.28	2.28	-20475	9674	6176	40441	19116	5814	24930	No	14.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	10.98	2175.63	-11036	-9190	10138	2.28	2.28	-14396	13296	8488	40441	28675	5814	34489		3.4	Si
SLV 2	11.78	-3216.97	-7844	-6532	8030	2.28	2.1896	-10232	12463	7641	40441	28675	5814	34489		4.3	Si
SLV 13	10.98	-428.4	-9392	-7821	-6810	2.28	2.28	-12251	12867	8214	40441	28675	5814	34489		5.06	Si
SLV 13	11.78	3944.05	-9124	-7597	-5376	2.28	2.1231	-11901	12797	7607	40441	28675	5814	34489		6.41	Si
SLV 15	10.98	-459.63	-12891	-10735	-6397	2.28	2.28	-16815	13780	8797	40441	28675	5814	34489		5.39	Si
SLV 15	11.78	4109.49	-12202	-10161	-5402	2.28	2.28	-15916	13600	8682	40441	28675	5814	34489		6.38	Si
SLD 4	10.98	1408.89	-13087	-10898	5588	2.28	2.28	-17071	13831	8830	40441	28675	5814	34489		6.17	Si
SLD 4	11.78	-1049.03	-10428	-8684	4177	2.28	2.28	-13603	13137	8387	40441	28675	5814	34489		8.26	Si
SLV 1	10.98	2071.7	-11103	-9246	9260	2.28	2.28	-14482	13313	8499	40441	28675	5814	34489		3.72	Si
SLV 1	11.78	-2803.7	-8059	-6711	7309	2.28	2.28	-10512	12519	7992	40441	28675	5814	34489		4.72	Si
SLV 16	10.98	-355.71	-12825	-10679	-5519	2.28	2.28	-16728	13762	8786	40441	28675	5814	34489		6.25	Si
SLV 16	11.78	3696.22	-11987	-9982	-4681	2.28	2.28	-15636	13544	8646	40441	28675	5814	34489		7.37	Si
SLV 14	10.98	-324.47	-9326	-7766	-5932	2.28	2.28	-12165	12850	8203	40441	28675	5814	34489		5.81	Si
SLV 14	11.78	3530.78	-8909	-7419	-4656	2.28	2.231	-11621	12741	7959	40441	28675	5814	34489		7.41	Si
SLV 4	10.98	2144.39	-14535	-12104	10551	2.28	2.28	-18960	14209	9071	40441	28675	5814	34489		3.27	Si
SLV 4	11.78	-3051.52	-10922	-9095	8004	2.28	2.28	-14247	13266	8469	40441	28675	5814	34489		4.31	Si
SLV 3	10.98	2040.47	-14602	-12159	9673	2.28	2.28	-19046	14226	9082	40441	28675	5814	34489		3.57	Si
SLV 3	11.78	-2638.25	-11137	-9274	7283	2.28	2.28	-14527	13322	8505	40441	28675	5814	34489		4.74	Si
SLD 2	10.98	1422.87	-11544	-9613	5406	2.28	2.28	-15058	13428	8573	40441	28675	5814	34489		6.38	Si
SLD 2	11.78	-1122.07	-9070	-7553	4188	2.28	2.28	-11831	12783	8161	40441	28675	5814	34489		8.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	7935	-5066	280.38	672.34	2.4	Si
SLV 5	179667	0.46	8184	-5224	280.38	692.22	2.47	Si
SLV 10	179667	0.46	8938	-5706	280.38	752.1	2.68	Si
SLV 9	179667	0.46	9187	-5865	280.38	771.69	2.75	Si
SLV 2	179667	0.46	12709	-8114	280.38	1041.38	3.71	Si
SLV 1	179667	0.46	13095	-8360	280.38	1070.03	3.82	Si
SLV 14	179667	0.46	16054	-10249	280.38	1283.97	4.58	Si
SLV 13	179667	0.46	16440	-10495	280.38	1311.12	4.68	Si
SLV 4	179667	0.46	17864	-11404	280.38	1409.83	5.03	Si
SLV 3	179667	0.46	18250	-11651	280.38	1436.16	5.12	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-11375	-16789	589	0.958	1477.2	0.94	14.81069	14.44577	Si
SLV 7	-11316	-15391	643	0.958	1471.2	0.94	14.81471	14.44577	Si
SLV 12	-11290	-16656	589	0.964	1468.6	0.939	14.90564	14.44577	Si
SLV 8	-11231	-15257	643	0.964	1462.6	0.939	14.91012	14.44577	Si
SLV 9	-4185	-6363	-647	2.012	755.9	0.901	32.4461	14.44577	Si
SLV 5	-4126	-4964	-593	2.039	750.1	0.901	32.90793	14.44577	Si
SLV 10	-4101	-6229	-647	2.039	747.6	0.9	32.90901	14.44577	Si
SLV 6	-4041	-4831	-593	2.067	741.8	0.9	33.3819	14.44577	Si
SLV 15	-8951	-14808	94	1.206	1232.1	0.93	18.83852	6.41634	Si
SLV 3	-8754	-10147	273	1.21	1212.3	0.929	18.93109	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.566	SLU 70	Si
V_SLU	9.876	SLU 67	Si
PF_SLV	2.522	SLV 13	Si
V_SLV	3.269	SLV 4	Si
PFFP_SLV	2.398	SLV 6	Si
R_SLV	1.025	SLV 11	Si

Maschio 200

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L6	L7	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	9.88	1055.2	-10581	-0.0000345	0.0003743	0.0035	2.15	9410.82	9916.96	9916.96	9.4	No	Si
SLU 44	11.68	395.98	-8408	-0.000024	0.0003743	0.0035	2.15	7799.12	8144.05	8144.05	20.57	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	9.88	1137.02	-11877	-0.0000386	0.0003743	0.0035	2.15	10293.59	11013.05	11013.05	9.69	No	Si
SLU 48	11.68	514.63	-9696	-0.0000282	0.0003743	0.0035	2.15	8774.4	9185.38	9185.38	17.85	No	Si
SLU 47	9.88	1073.25	-10999	-0.0000358	0.0003743	0.0035	2.15	9701.82	10267.36	10267.36	9.57	No	Si
SLU 47	11.68	455.16	-8860	-0.0000256	0.0003743	0.0035	2.15	8148.1	8506.49	8506.49	18.69	No	Si
SLU 45	9.88	1118.97	-11459	-0.0000374	0.0003743	0.0035	2.15	10015.46	10656.74	10656.74	9.52	No	Si
SLU 45	11.68	455.45	-9244	-0.0000266	0.0003743	0.0035	2.15	8438.67	8816.73	8816.73	19.36	No	Si
SLU 43	9.88	1080.32	-10816	-0.0000353	0.0003743	0.0035	2.15	9575.68	10114.22	10114.22	9.36	No	Si
SLU 43	11.68	376.15	-8572	-0.0000243	0.0003743	0.0035	2.15	7926.26	8274.85	8274.85	22	No	Si
SLU 51	9.88	1101.36	-11511	-0.0000374	0.0003743	0.0035	2.15	10050.11	10700.54	10700.54	9.72	No	Si
SLU 51	11.68	506.41	-9378	-0.0000273	0.0003743	0.0035	2.15	8538.81	8925.52	8925.52	17.63	No	Si
SLU 46	9.88	1103.89	-11318	-0.0000369	0.0003743	0.0035	2.15	9919.97	10536.85	10536.85	9.55	No	Si
SLU 46	11.68	467.35	-9146	-0.0000264	0.0003743	0.0035	2.15	8364.81	8737.11	8737.11	18.7	No	Si
SLU 49	9.88	1121.95	-11735	-0.0000381	0.0003743	0.0035	2.15	10200.17	10892.07	10892.07	9.71	No	Si
SLU 49	11.68	526.53	-9598	-0.0000281	0.0003743	0.0035	2.15	8702.1	9105.03	9105.03	17.29	No	Si
SLU 1	9.88	837.61	-8627	-0.0000277	0.0003743	0.0035	2.15	7968.75	8318.88	8318.88	9.93	No	Si
SLU 1	11.68	326.82	-6925	-0.0000196	0.0003743	0.0035	2.15	6603.37	6977.84	6977.84	21.35	No	Si
SLU 50	9.88	1116.44	-11652	-0.0000379	0.0003743	0.0035	2.15	10144.65	10820.85	10820.85	9.69	No	Si
SLU 50	11.68	494.51	-9476	-0.0000275	0.0003743	0.0035	2.15	8611.87	9005.51	9005.51	18.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	9.88	2812.42	-5687	-0.000035	0.0005615	0.0035	2.15		6062.99	6062.99	2.16		Si
SLV 1	11.68	-2380.52	-2226	-0.0001251	0.0005615	0.0035	1.72		3634.12	3634.12	1.53		Si
SLV 3	9.88	2998.53	-12064	-0.0000518	0.0005615	0.0035	2.15		11669.91	11669.91	3.89		Si
SLV 3	11.68	-3025.3	-6836	-0.0000387	0.0005615	0.0035	2.15		8186.8	8186.8	2.71		Si
SLV 13	9.88	-1695.8	-6998	-0.0000292	0.0005615	0.0035	2.15		8337.68	8337.68	4.92		Si
SLV 13	11.68	4195.95	-9442	-0.0000543	0.0005615	0.0035	2.15		9584.87	9584.87	2.28		Si
SLV 10	9.88	-54.88	1482	0.1057218	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	11.68	2382.72	-606	-0.0105054	0.0005615	0.0035	2.15		902.58	902.58	0.38		No
SLV 2	9.88	3153.18	-4980	-0.0000404	0.0005615	0.0035	2.15		5369.18	5369.18	1.7		Si
SLV 2	11.68	-2701.26	-1093	-0.0005655	0.0005615	0.0035	1.72		2466.15	2466.15	0.91		No
SLV 4	9.88	3339.29	-11357	-0.0000523	0.0005615	0.0035	2.15		11103	11103	3.32		Si
SLV 4	11.68	-3346.04	-5703	-0.0000419	0.0005615	0.0035	1.72		7092.33	7092.33	2.12		Si
SLV 14	9.88	-1355.04	-6291	-0.000025	0.0005615	0.0035	2.15		7667.03	7667.03	5.66		Si
SLV 14	11.68	3875.21	-8309	-0.0000493	0.0005615	0.0035	2.15		8561.6	8561.6	2.21		Si
SLV 6	9.88	1297.59	1876	0.1244097	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	11.68	409.77	1559	0.1086956	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	9.88	-274.47	1027	0.0741547	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	11.68	2589.41	-1336	-0.00695	0.0005615	0.0035	2.15		1668.84	1668.84	0.64		No
SLV 5	9.88	1077.99	1420	0.0931627	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	11.68	616.47	829	0.0544768	0.0005615	0.0035	1.72		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	9.88	747.56	-10880	-9060	-392	2.15	2.15	-15050	8951	5389	40441	18027	5483	23509	No	59.91	Si
SLU 39	11.68	756.6	-9625	-8015	-393	2.15	2.15	-13314	8720	5249	40441	18027	5483	23509	No	59.82	Si
SLU 84	9.88	993.25	-13346	-11113	-380	2.15	2.15	-18461	9406	5662	40441	18027	5483	23509	No	61.91	Si
SLU 84	11.68	877.01	-11626	-9681	-370	2.15	2.15	-16081	9089	5471	40441	18027	5483	23509	No	63.59	Si
SLU 33	9.88	805.64	-11054	-9205	-348	2.15	2.15	-15291	8983	5408	40441	18027	5483	23509	No	67.49	Si
SLU 33	11.68	761.49	-9765	-8132	-338	2.15	2.15	-13508	8746	5265	40441	18027	5483	23509	No	69.51	Si
SLU 38	9.88	803.11	-11247	-9366	-395	2.15	2.15	-15558	9019	5429	40441	18027	5483	23509	No	59.57	Si
SLU 38	11.68	800.55	-9997	-8325	-385	2.15	2.15	-13829	8788	5291	40441	18027	5483	23509	No	61.1	Si
SLU 37	9.88	818.19	-11389	-9484	-348	2.15	2.15	-15753	9045	5445	40441	18027	5483	23509	No	67.52	Si
SLU 37	11.68	788.65	-10096	-8407	-349	2.15	2.15	-13965	8806	5301	40441	18027	5483	23509	No	67.31	Si
SLU 41	9.88	765.61	-11298	-9408	-436	2.15	2.15	-15628	9028	5435	40441	18027	5483	23509	No	53.97	Si
SLU 41	11.68	815.78	-10077	-8391	-436	2.15	2.15	-13939	8803	5299	40441	18027	5483	23509	No	53.87	Si
SLU 40	9.88	732.48	-10739	-8942	-439	2.15	2.15	-14854	8925	5373	40441	18027	5483	23509	No	53.57	Si
SLU 40	11.68	768.5	-9527	-7933	-429	2.15	2.15	-13178	8701	5238	40441	18027	5483	23509	No	54.86	Si
SLU 36	9.88	823.7	-11472	-9553	-392	2.15	2.15	-15869	9060	5454	40441	18027	5483	23509	No	60.05	Si
SLU 36	11.68	820.67	-10217	-8508	-382	2.15	2.15	-14133	8829	5315	40441	18027	5483	23509	No	61.61	Si
SLU 42	9.88	750.54	-11157	-9290	-482	2.15	2.15	-15432	9002	5419	40441	18027	5483	23509	No	48.77	Si
SLU 42	11.68	827.68	-9979	-8309	-472	2.15	2.15	-13803	8785	5289	40441	18027	5483	23509	No	49.81	Si
SLU 34	9.88	775	-10735	-8939	-382	2.15	2.15	-14850	8924	5373	40441	18027	5483	23509	No	61.47	Si
SLU 34	11.68	749.3	-9480	-7894	-365	2.15	2.15	-13113	8693	5233	40441	18027	5483	23509	No	64.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	9.88	-54.88	1482	1234	-3872	1.72	2.15	0	0	0	40441	21632	4386	26018		6.72	Si
SLV 10	11.68	2382.72	-606	-505	-3641	2.15	0	0	16250	0	40441	27040	5483	32523		8.93	Si
SLV 3	9.88	2998.53	-12064	-10046	5793	2.15	2.15	-16688	13754	8280	40441	27040	5483	32523		5.61	Si
SLV 3	11.68	-3025.3	-6836	-5693	4962	2.15	1.8974	-10769	12570	6678	40441	27040	5483	32523		6.55	Si
SLV 2	9.88	3153.18	-4980	-4147	4889	2.15	1.3255	-6888	11794	4377	40441	27040	5483	32523		6.65	Si
SLV 2	11.68	-2701.26	-1093	-910	4047	1.72	0	0	0	0	40441	21632	4386	26018		6.43	Si
SLV 14	9.88	-1355.04	-6291	-5238	-5682	2.15	2.15	-8701	12157	7319	40441	27040	5483	32523		5.72	Si
SLV 14	11.68	3875.21	-8309	-6919	-4853	2.15	1.8259	-11493	12715	6501	40441	27040	5483	32523		6.7	Si
SLV 15	9.88	-1509.69	-13375	-11137	-4779	2.15	2.15	-18501	14117	8498	40441	27040	5483	32523		6.81	Si
SLV 15	11.68	3551.17	-14053	-11702	-3938	2.15	2.15	-19438	14304	8611	40441	27040	5483	32523		8.26	Si
SLV 4	9.88	3339.29	-11357	-9457	6414	2.15	2.15	-15709	13559	8162	40441	27040	5483	32523		5.07	Si
SLV 4	11.68	-3346.04	-5703	-4749	5584	1.72	1.465	0	0	0	40441	21632	4386	26018		4.66	Si
SLV 8	9.88	1917.96	-19381	-16139	4383	2.15	2.15	-26809	15778	9499	40441	27040	5483	32523		7.42	Si
SLV 8	11.68	-1739.49	-13809	-11499	4151	2.15	2.15	-19101	14237	8571	40441	27040	5483	32523		7.83	Si
SLV 13	9.88	-1695.8	-6998	-5827	-6304	2.15	2.15	-9680	12353	7436	40441	27040	5483	32523		5.16	Si
SLV 13	11.68	4195.95	-9442	-7863	-5475	2.15	1.8919	-13061	13029	6902	40441	27040	5483	32523		5.94	Si
SLV 1	9.88	2812.42	-5687	-4736	4268	2.15	1.7415	-7867	11990	5846	40441	27040	5483	32523		7.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	11.68	-2380.52	-2226	-1853	3426	1.72	0.0163	0	0	0	40441	21632	4386	26018		7.6	Si
SLV 9	9.88	-274.47	1027	855	-4272	1.72	2.15	0	0	0	40441	21632	4386	26018		6.09	Si
SLV 9	11.68	2589.41	-1336	-1113	-4042	2.15	0	0	16250	0	40441	27040	5483	32523		8.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.46	0	-25	264.4	0	0	No, e>t/2
SLV 9	179667	0.46	0	-643	264.4	0	0	No, e>t/2
SLV 6	179667	0.46	0	1487	264.4	0	0	No, Trazione
SLV 5	179667	0.46	0	869	264.4	0	0	No, Trazione
SLV 2	179667	0.46	4662	-2806	264.4	380.91	1.44	Si
SLV 1	179667	0.46	6255	-3765	264.4	505.55	1.91	Si
SLV 14	179667	0.46	13033	-7846	264.4	1004.69	3.8	Si
SLV 4	179667	0.46	13529	-8144	264.4	1039.2	3.93	Si
SLV 13	179667	0.46	14626	-8805	264.4	1114.6	4.22	Si
SLV 3	179667	0.46	15121	-9103	264.4	1148.24	4.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-13844	-20254	383	0.787	1709	0.949	12.04693	14.44577	No
SLV 12	-13261	-19640	383	0.816	1649.9	0.948	12.50649	14.44577	No
SLV 7	-12693	-18289	222	0.857	1592.3	0.946	13.1615	14.44577	No
SLV 8	-12110	-17675	222	0.891	1533.2	0.944	13.70832	14.44577	No
SLV 15	-10697	-15695	356	0.976	1390	0.94	15.08996	6.41634	Si
SLV 16	-9793	-14742	357	1.048	1298.5	0.936	16.26827	6.41634	Si
SLV 3	-6861	-9144	-179	1.405	1002.8	0.922	22.16384	6.41634	Si
SLV 13	-6711	-9676	174	1.43	987.8	0.921	22.56819	6.41634	Si
SLV 4	-5957	-8191	-178	1.562	912.2	0.916	24.7936	6.41634	Si
SLV 14	-5808	-8723	174	1.592	897.3	0.915	25.29671	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.362	SLU 43	Si
V_SLU	48.771	SLU 42	Si
PF_SLV	0	SLV 5	No
V_SLV	4.66	SLV 4	Si
PFFP_SLV	0	SLV 6	No
R_SLV	0.834	SLV 11	No

Maschio 201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L6	L7	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	9.88	807.04	-14236	-0.0000432	0.0003743	0.0035	2.13	11606.31	12676.68	12676.68	15.71	No	Si
SLU 44	11.68	-1426.16	-11797	-0.0000411	0.0003743	0.0035	2.13	10122.9	12070.88	12070.88	8.46	No	Si
SLU 52	9.88	813.53	-15352	-0.0000464	0.0003743	0.0035	2.13	12215.93	13375.29	13375.29	16.44	No	Si
SLU 52	11.68	-1449.28	-12914	-0.0000443	0.0003743	0.0035	2.13	10828.01	12916.23	12916.23	8.91	No	Si
SLU 45	9.88	750.93	-15082	-0.0000451	0.0003743	0.0035	2.13	12072.47	13204.95	13204.95	17.58	No	Si
SLU 45	11.68	-1411.61	-12644	-0.0000433	0.0003743	0.0035	2.13	10661.45	12709.43	12709.43	9	No	Si
SLU 47	9.88	776.43	-14878	-0.0000448	0.0003743	0.0035	2.13	11962.28	13076.7	13076.7	16.84	No	Si
SLU 47	11.68	-1420.52	-12439	-0.0000428	0.0003743	0.0035	2.13	10533.79	12554.02	12554.02	8.84	No	Si
SLU 61	9.88	816.4	-15802	-0.0000477	0.0003743	0.0035	2.13	12449.22	13660.8	13660.8	16.73	No	Si
SLU 61	11.68	-1449.53	-13364	-0.0000456	0.0003743	0.0035	2.13	11099.78	13259.07	13259.07	9.15	No	Si
SLU 65	9.88	788.3	-15795	-0.0000474	0.0003743	0.0035	2.13	12445.69	13656.41	13656.41	17.32	No	Si
SLU 65	11.68	-1458.89	-13325	-0.0000456	0.0003743	0.0035	2.13	11076.64	13231.17	13231.17	9.07	No	Si
SLU 43	9.88	807.26	-14164	-0.000043	0.0003743	0.0035	2.13	11565.79	12632.44	12632.44	15.65	No	Si
SLU 43	11.68	-1402.03	-11726	-0.0000407	0.0003743	0.0035	2.13	10076.27	12017.61	12017.61	8.57	No	Si
SLU 46	9.88	750.8	-15125	-0.0000453	0.0003743	0.0035	2.13	12095.42	13231.95	13231.95	17.62	No	Si
SLU 46	11.68	-1426.09	-12687	-0.0000435	0.0003743	0.0035	2.13	10688.07	12742.18	12742.18	8.94	No	Si
SLU 64	9.88	788.51	-15723	-0.0000472	0.0003743	0.0035	2.13	12409.08	13610.99	13610.99	17.26	No	Si
SLU 64	11.68	-1434.76	-13253	-0.0000452	0.0003743	0.0035	2.13	11033.83	13178.38	13178.38	9.19	No	Si
SLU 2	9.88	615.81	-11378	-0.0000338	0.0003743	0.0035	2.13	9846.93	10481.86	10481.86	17.02	No	Si
SLU 2	11.68	-1111.25	-9494	-0.0000324	0.0003743	0.0035	2.13	8530.21	10227.28	10227.28	9.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.88	-2898.32	-11684	-0.0000507	0.0005615	0.0035	2.13		12479.47	12479.47	4.31		Si
SLV 13	11.68	629.11	-9851	-0.0000294	0.0005615	0.0035	2.13		9788.47	9788.47	15.56		Si
SLV 5	9.88	1717.4	-16822	-0.000056	0.0005615	0.0035	2.13		15423.04	15423.04	8.98		Si
SLV 5	11.68	-3300.88	-14883	-0.0000624	0.0005615	0.0035	2.13		15155.76	15155.76	4.59		Si
SLV 2	9.88	4005.17	-14963	-0.0000679	0.0005615	0.0035	2.13		13884.91	13884.91	3.47		Si
SLV 2	11.68	-3684.17	-12995	-0.0000601	0.0005615	0.0035	2.13		13603.44	13603.44	3.69		Si
SLV 1	9.88	4569.17	-15141	-0.0000727	0.0005615	0.0035	2.13		14031.45	14031.45	3.07		Si
SLV 1	11.68	-3972.08	-13173	-0.0000627	0.0005615	0.0035	2.13		13753.82	13753.82	3.46		Si
SLV 3	9.88	4687.36	-12637	-0.0000666	0.0005615	0.0035	2.13		11996.74	11996.74	2.56		Si
SLV 3	11.68	-3123.16	-10684	-0.0000496	0.0005615	0.0035	2.13		11616.3	11616.3	3.72		Si
SLV 14	9.88	-3462.32	-11506	-0.0000543	0.0005615	0.0035	2.13		12327.43	12327.43	3.56		Si
SLV 14	11.68	917.01	-9672	-0.000031	0.0005615	0.0035	2.13		9648.92	9648.92	10.52		Si
SLV 7	9.88	2111.35	-8472	-0.0000364	0.0005615	0.0035	2.13		8622.12	8622.12	4.08		Si
SLV 7	11.68	-471.15	-6585	-0.0000198	0.0005615	0.0035	2.13		7877.27	7877.27	16.72		Si
SLV 15	9.88	-2780.13	-9180	-0.0000431	0.0005615	0.0035	2.13		10270.33	10270.33	3.69		Si
SLV 15	11.68	1478.03	-7361	-0.000029	0.0005615	0.0035	2.13		7590.75	7590.75	5.14		Si
SLV 16	9.88	-3344.13	-9001	-0.0000468	0.0005615	0.0035	2.13		10112.02	10112.02	3.02		Si
SLV 16	11.68	1765.93	-7183	-0.0000305	0.0005615	0.0035	2.13		7423.58	7423.58	4.2		Si
SLV 4	9.88	4123.36	-12458	-0.0000618	0.0005615	0.0035	2.13		11853.52	11853.52	2.87		Si
SLV 4	11.68	-2835.25	-10506	-0.0000471	0.0005615	0.0035	2.13		11457.88	11457.88	4.04		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	9.88	807.04	-14236	-11854	1217	2.13	2.13	-19876	9595	5722	40441	17859	5431	23290	No	19.14	Si
SLU 44	11.68	-1426.16	-11797	-9824	1217	2.13	2.13	-16472	9141	5451	40441	17859	5431	23290	No	19.14	Si
SLU 82	9.88	797.65	-17361	-14457	1242	2.13	2.13	-24241	10177	6069	40441	17859	5431	23290	No	18.75	Si
SLU 82	11.68	-1482.26	-14891	-12400	1242	2.13	2.13	-20792	9717	5795	40441	17859	5431	23290	No	18.75	Si
SLU 84	9.88	767.05	-18003	-14992	1222	2.13	2.13	-25137	10296	6141	40441	17859	5431	23290	No	19.06	Si
SLU 84	11.68	-1476.62	-15533	-12935	1222	2.13	2.13	-21688	9836	5866	40441	17859	5431	23290	No	19.06	Si
SLU 73	9.88	794.79	-16911	-14082	1241	2.13	2.13	-23612	10093	6019	40441	17859	5431	23290	No	18.77	Si
SLU 73	11.68	-1482.01	-14441	-12025	1241	2.13	2.13	-20164	9633	5745	40441	17859	5431	23290	No	18.77	Si
SLU 60	9.88	816.53	-15759	-13123	1227	2.13	2.13	-22003	9878	5891	40441	17859	5431	23290	No	18.98	Si
SLU 60	11.68	-1435.05	-13321	-11092	1227	2.13	2.13	-18599	9424	5621	40441	17859	5431	23290	No	18.98	Si
SLU 52	9.88	813.53	-15352	-12784	1233	2.13	2.13	-21435	9802	5846	40441	17859	5431	23290	No	18.89	Si
SLU 52	11.68	-1449.28	-12914	-10753	1233	2.13	2.13	-18031	9349	5575	40441	17859	5431	23290	No	18.89	Si
SLU 81	9.88	797.78	-17318	-14421	1234	2.13	2.13	-24181	10169	6064	40441	17859	5431	23290	No	18.87	Si
SLU 81	11.68	-1467.78	-14848	-12364	1234	2.13	2.13	-20732	9709	5790	40441	17859	5431	23290	No	18.87	Si
SLU 65	9.88	788.3	-15795	-13153	1224	2.13	2.13	-22054	9885	5895	40441	17859	5431	23290	No	19.03	Si
SLU 65	11.68	-1458.89	-13325	-11096	1224	2.13	2.13	-18605	9425	5621	40441	17859	5431	23290	No	19.03	Si
SLU 61	9.88	816.4	-15802	-13158	1235	2.13	2.13	-22063	9886	5896	40441	17859	5431	23290	No	18.86	Si
SLU 61	11.68	-1449.53	-13364	-11128	1235	2.13	2.13	-18659	9432	5625	40441	17859	5431	23290	No	18.86	Si
SLU 76	9.88	764.18	-17553	-14617	1220	2.13	2.13	-24509	10212	6091	40441	17859	5431	23290	No	19.08	Si
SLU 76	11.68	-1476.37	-15083	-12560	1220	2.13	2.13	-21060	9752	5816	40441	17859	5431	23290	No	19.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	9.88	-2780.13	-9180	-7644	-2603	2.13	2.13	-12817	12980	7741	40441	26788	5431	32219		12.38	Si
SLV 15	11.68	1478.03	-7361	-6130	-2109	2.13	2.13	-10278	12472	7438	40441	26788	5431	32219		15.28	Si
SLV 14	9.88	-3462.32	-11506	-9581	-2637	2.13	2.13	-16065	13630	8129	40441	26788	5431	32219		12.22	Si
SLV 14	11.68	917.01	-9672	-8054	-2172	2.13	2.13	-13504	13118	7823	40441	26788	5431	32219		14.83	Si
SLV 16	9.88	-3344.13	-9001	-7495	-3076	2.13	2.0804	-12945	13006	7576	40441	26788	5431	32219		10.47	Si
SLV 16	11.68	1765.93	-7183	-5981	-2582	2.13	2.13	-10029	12422	7409	40441	26788	5431	32219		12.48	Si
SLV 1	9.88	4569.17	-15141	-12608	4945	2.13	2.13	-21141	14645	8734	40441	26788	5431	32219		6.52	Si
SLV 1	11.68	-3972.08	-13173	-10970	4451	2.13	2.13	-18393	14095	8406	40441	26788	5431	32219		7.24	Si
SLV 6	9.88	1353.94	-16707	-13912	2580	2.13	2.13	-23327	15082	8995	40441	26788	5431	32219		12.49	Si
SLV 6	11.68	-3115.35	-14768	-12297	2387	2.13	2.13	-20619	14541	8672	40441	26788	5431	32219		13.5	Si
SLV 5	9.88	1717.4	-16822	-14008	2885	2.13	2.13	-23488	15114	9014	40441	26788	5431	32219		11.17	Si
SLV 5	11.68	-3300.88	-14883	-12393	2692	2.13	2.13	-20780	14573	8691	40441	26788	5431	32219		11.97	Si
SLV 4	9.88	4123.36	-12458	-10374	4033	2.13	2.13	-17394	13896	8287	40441	26788	5431	32219		7.99	Si
SLV 4	11.68	-2835.25	-10506	-8748	3568	2.13	2.13	-14669	13350	7962	40441	26788	5431	32219		9.03	Si
SLV 2	9.88	4005.17	-14963	-12460	4472	2.13	2.13	-20892	14595	8704	40441	26788	5431	32219		7.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.68	-3684.17	-12995	-10821	3977	2.13	2.13	-18144	14046	8377	40441	26788	5431	32219		8.1	Si
SLD 1	9.88	2304.59	-13403	-11161	2652	2.13	2.13	-18714	14159	8445	40441	26788	5431	32219		12.15	Si
SLD 1	11.68	-2336.17	-11477	-9557	2441	2.13	2.13	-16025	13622	8124	40441	26788	5431	32219		13.2	Si
SLV 3	9.88	4687.36	-12637	-10523	4506	2.13	2.0822	-17644	13945	8130	40441	26788	5431	32219		7.15	Si
SLV 3	11.68	-3123.16	-10684	-8897	4041	2.13	2.13	-14918	13400	7992	40441	26788	5431	32219		7.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	10841	-6466	261.94	840.94	3.21	Si
SLV 11	179667	0.46	11034	-6581	261.94	854.74	3.26	Si
SLV 8	179667	0.46	12703	-7576	261.94	972.42	3.71	Si
SLV 7	179667	0.46	12896	-7691	261.94	985.83	3.76	Si
SLV 16	179667	0.46	13495	-8049	261.94	1027.22	3.92	Si
SLV 15	179667	0.46	13795	-8227	261.94	1047.75	4	Si
SLV 14	179667	0.46	17678	-10543	261.94	1305.14	4.98	Si
SLV 13	179667	0.46	17977	-10721	261.94	1324.29	5.06	Si
SLV 4	179667	0.46	19701	-11750	261.94	1432.74	5.47	Si
SLV 3	179667	0.46	20000	-11928	261.94	1451.24	5.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-11011	-15360	-645	0.923	1418.9	0.941	14.25295	14.44577	No
SLV 9	-10930	-15746	-645	0.929	1410.7	0.941	14.34352	14.44577	No
SLV 6	-10729	-18083	-655	0.942	1390.3	0.94	14.5615	14.44577	Si
SLV 5	-10648	-18470	-655	0.948	1382.1	0.94	14.65625	14.44577	Si
SLV 12	-5135	-6904	657	1.66	827.3	0.91	26.49842	14.44577	Si
SLV 11	-5054	-7290	657	1.679	819.3	0.91	26.81787	14.44577	Si
SLV 8	-4853	-9627	647	1.729	799.3	0.908	27.66746	14.44577	Si
SLV 7	-4772	-10014	647	1.75	791.3	0.908	28.01523	14.44577	Si
SLV 14	-9306	-9116	-178	1.099	1246.4	0.934	17.09688	6.41634	Si
SLV 13	-9180	-9716	-178	1.111	1233.7	0.934	17.29419	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.464	SLU 44	Si
V_SLU	18.748	SLU 82	Si
PF_SLV	2.559	SLV 3	Si
V_SLV	6.515	SLV 1	Si
PFFP_SLV	3.21	SLV 12	Si
R_SLV	0.987	SLV 10	No

Maschio 202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L6	L7	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	9.88	1067.47	-10659	-0.00004	0.0003743	0.0035	1.93	8293.15	8844.23	8844.23	8.29	No	Si
SLU 50	11.68	482.1	-8801	-0.0000291	0.0003743	0.0035	1.93	7134.52	7481.69	7481.69	15.52	No	Si
SLU 51	9.88	1071.6	-10756	-0.0000403	0.0003743	0.0035	1.93	8350.44	8917.16	8917.16	8.32	No	Si
SLU 51	11.68	472.86	-8873	-0.0000293	0.0003743	0.0035	1.93	7181.87	7533.63	7533.63	15.93	No	Si
SLU 43	9.88	1045.64	-9915	-0.0000375	0.0003743	0.0035	1.93	7843.55	8291.27	8291.27	7.93	No	Si
SLU 43	11.68	375.71	-7982	-0.0000258	0.0003743	0.0035	1.93	6585.15	6898.81	6898.81	18.36	No	Si
SLU 49	9.88	1081.86	-10963	-0.0000411	0.0003743	0.0035	1.93	8471.5	9073.12	9073.12	8.39	No	Si
SLU 49	11.68	500.05	-9106	-0.0000302	0.0003743	0.0035	1.93	7332.72	7701.07	7701.07	15.4	No	Si
SLU 44	9.88	1052.52	-10077	-0.0000381	0.0003743	0.0035	1.93	7943.1	8410.75	8410.75	7.99	No	Si
SLU 44	11.68	360.33	-8102	-0.000026	0.0003743	0.0035	1.93	6667.42	6983.85	6983.85	19.38	No	Si
SLU 47	9.88	1063.44	-10449	-0.0000393	0.0003743	0.0035	1.93	8168.21	8687.14	8687.14	8.17	No	Si
SLU 47	11.68	413.52	-8512	-0.0000277	0.0003743	0.0035	1.93	6943.31	7274.73	7274.73	17.59	No	Si
SLU 48	9.88	1077.73	-10866	-0.0000407	0.0003743	0.0035	1.93	8414.9	8999.89	8999.89	8.35	No	Si
SLU 48	11.68	509.28	-9033	-0.0000301	0.0003743	0.0035	1.93	7285.96	7648.86	7648.86	15.02	No	Si
SLU 46	9.88	1070.95	-10591	-0.0000398	0.0003743	0.0035	1.93	8253.1	8793.6	8793.6	8.21	No	Si
SLU 46	11.68	446.86	-8696	-0.0000285	0.0003743	0.0035	1.93	7065.35	7406.29	7406.29	16.57	No	Si
SLU 1	9.88	793.78	-7863	-0.0000291	0.0003743	0.0035	1.93	6503.53	6815.19	6815.19	8.59	No	Si
SLU 1	11.68	342.05	-6459	-0.000021	0.0003743	0.0035	1.93	5501.46	5844.03	5844.03	17.09	No	Si
SLU 45	9.88	1066.82	-10494	-0.0000395	0.0003743	0.0035	1.93	8195.24	8720.91	8720.91	8.17	No	Si
SLU 45	11.68	456.09	-8624	-0.0000284	0.0003743	0.0035	1.93	7017.56	7354.55	7354.55	16.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	9.88	-725.25	-4618	-0.0000189	0.0005615	0.0035	1.93		5275.1	5275.1	7.27		Si
SLV 15	11.68	2828.81	-6806	-0.0000446	0.0005615	0.0035	1.93		6337.22	6337.22	2.24		Si
SLV 4	9.88	2043.19	-5953	-0.0000342	0.0005615	0.0035	1.93		5608.78	5608.78	2.75		Si
SLV 4	11.68	-1408.6	-3024	-0.0000214	0.0005615	0.0035	1.93		3863.97	3863.97	2.74		Si
SLV 1	9.88	2573.98	-11349	-0.0000547	0.0005615	0.0035	1.93		9817.8	9817.8	3.81		Si
SLV 1	11.68	-2201.19	-6294	-0.0000366	0.0005615	0.0035	1.93		6729.9	6729.9	3.06		Si
SLV 8	9.88	776.07	1417	0.1059093	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	11.68	722.93	513	0.0299642	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	9.88	56.73	2029	0.1602007	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	11.68	1898.47	-260	-0.0122857	0.0005615	0.0035	1.93		443.76	443.76	0.23		No
SLV 3	9.88	2366.06	-5341	-0.0000366	0.0005615	0.0035	1.93		5078.3	5078.3	2.15		Si
SLV 3	11.68	-1686.39	-1973	-0.0000584	0.0005615	0.0035	1.544		2906.36	2906.36	1.72		Si
SLV 7	9.88	984.13	1811	0.1354815	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	11.68	543.91	1190	0.0899919	0.0005615	0.0035	1.544		0	0	0		No
SLV 16	9.88	-1048.12	-5229	-0.0000234	0.0005615	0.0035	1.93		5812.54	5812.54	5.55		Si
SLV 16	11.68	3106.6	-7857	-0.0000498	0.0005615	0.0035	1.93		7217.06	7217.06	2.32		Si
SLD 12	9.88	366.56	-3910	-0.0000139	0.0005615	0.0035	1.93		3814.2	3814.2	10.41		Si
SLD 12	11.68	1160.12	-4355	-0.0000219	0.0005615	0.0035	1.93		4211.98	4211.98	3.63		Si
SLV 12	9.88	-151.33	1634	0.1301453	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	11.68	2077.49	-937	-0.0085549	0.0005615	0.0035	1.93		1084.04	1084.04	0.52		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	9.88	711.77	-10195	-8490	-611	1.93	1.93	-15710	9039	4885	40441	16182	4922	21104	No	34.55	Si
SLU 38	11.68	826.48	-9508	-7917	-613	1.93	1.93	-14650	8898	4808	40441	16182	4922	21104	No	34.42	Si
SLU 42	9.88	671.75	-10077	-8392	-709	1.93	1.93	-15528	9015	4872	40441	16182	4922	21104	No	29.78	Si
SLU 42	11.68	853.08	-9504	-7914	-711	1.93	1.93	-14644	8897	4808	40441	16182	4922	21104	No	29.7	Si
SLU 41	9.88	667.62	-9980	-8311	-729	1.93	1.93	-15379	8995	4861	40441	16182	4922	21104	No	28.93	Si
SLU 41	11.68	862.31	-9431	-7854	-731	1.93	1.93	-14533	8882	4800	40441	16182	4922	21104	No	28.85	Si
SLU 83	9.88	919.49	-12032	-10019	-590	1.93	1.93	-18540	9416	5089	40441	16182	4922	21104	No	35.77	Si
SLU 83	11.68	895.97	-10954	-9121	-592	1.93	1.93	-16879	9195	4969	40441	16182	4922	21104	No	35.64	Si
SLU 40	9.88	660.84	-9705	-8082	-665	1.93	1.93	-14955	8938	4830	40441	16182	4922	21104	No	31.72	Si
SLU 40	11.68	799.89	-9094	-7573	-667	1.93	1.93	-14013	8813	4763	40441	16182	4922	21104	No	31.64	Si
SLU 35	9.88	717.9	-10305	-8581	-654	1.93	1.93	-15879	9062	4897	40441	16182	4922	21104	No	32.25	Si
SLU 35	11.68	862.9	-9668	-8050	-657	1.93	1.93	-14897	8931	4826	40441	16182	4922	21104	No	32.14	Si
SLU 36	9.88	722.03	-10402	-8662	-634	1.93	1.93	-16029	9082	4908	40441	16182	4922	21104	No	33.31	Si
SLU 36	11.68	853.67	-9740	-8111	-636	1.93	1.93	-15008	8946	4834	40441	16182	4922	21104	No	33.19	Si
SLU 37	9.88	707.64	-10098	-8409	-632	1.93	1.93	-15560	9019	4874	40441	16182	4922	21104	No	33.41	Si
SLU 37	11.68	835.71	-9435	-7857	-634	1.93	1.93	-14539	8883	4800	40441	16182	4922	21104	No	33.3	Si
SLU 39	9.88	656.71	-9608	-8001	-686	1.93	1.93	-14805	8918	4820	40441	16182	4922	21104	No	30.76	Si
SLU 39	11.68	809.12	-9022	-7513	-688	1.93	1.93	-13902	8798	4754	40441	16182	4922	21104	No	30.69	Si
SLU 32	9.88	706.99	-9933	-8271	-611	1.93	1.93	-15306	8985	4856	40441	16182	4922	21104	No	34.54	Si
SLU 32	11.68	809.71	-9258	-7709	-613	1.93	1.93	-14266	8847	4781	40441	16182	4922	21104	No	34.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	9.88	56.73	2029	1689	-3261	1.544	1.93	0	0	0	40441	19419	3937	23356		7.16	Si
SLV 11	11.68	1898.47	-260	-217	-3040	1.93	0	0	16250	0	40441	24273	4922	29195		9.6	Si
SLV 3	9.88	2366.06	-5341	-4448	3496	1.93	1.5661	-8231	12063	5290	40441	24273	4922	29195		8.35	Si
SLV 3	11.68	-1686.39	-1973	-1643	2713	1.544	0.3312	0	0	0	40441	19419	3937	23356		8.61	Si
SLV 16	9.88	-1048.12	-5229	-4355	-4967	1.93	1.93	-8058	12028	6500	40441	24273	4922	29195		5.88	Si
SLV 16	11.68	3106.6	-7857	-6542	-4194	1.93	1.7088	-12106	12838	6143	40441	24273	4922	29195		6.96	Si
SLV 6	9.88	1469.12	-18607	-15494	3096	1.93	1.93	-28671	16151	8728	40441	24273	4922	29195		9.43	Si
SLV 6	11.68	-993.07	-13891	-11567	2873	1.93	1.93	-21404	14698	7943	40441	24273	4922	29195		10.16	Si
SLV 15	9.88	-725.25	-4618	-3845	-4399	1.93	1.93	-7115	11840	6398	40441	24273	4922	29195		6.64	Si
SLV 15	11.68	2828.81	-6806	-5668	-3625	1.93	1.6482	-10488	12514	5775	40441	24273	4922	29195		8.05	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	9.88	2573.98	-11349	-9450	4802	1.93	1.93	-17487	13914	7519	40441	24273	4922	29195		6.08	Si
SLV 1	11.68	-2201.19	-6294	-5241	4026	1.93	1.8459	-10187	12454	6437	40441	24273	4922	29195		7.25	Si
SLV 5	9.88	1677.19	-18212	-15166	3462	1.93	1.93	-28063	16029	8662	40441	24273	4922	29195		8.43	Si
SLV 5	11.68	-1172.08	-13214	-11003	3239	1.93	1.93	-20361	14489	7830	40441	24273	4922	29195		9.01	Si
SLV 12	9.88	-151.33	1634	1361	-3627	1.544	1.93	0	0	0	40441	19419	3937	23356		6.44	Si
SLV 12	11.68	2077.49	-937	-780	-3407	1.93	0	0	16250	0	40441	24273	4922	29195		8.57	Si
SLV 2	9.88	2251.11	-11960	-9960	4234	1.93	1.93	-18430	14103	7621	40441	24273	4922	29195		6.9	Si
SLV 2	11.68	-1923.4	-7345	-6116	3457	1.93	1.93	-11318	12680	6852	40441	24273	4922	29195		8.44	Si
SLV 14	9.88	-840.2	-11237	-9357	-3661	1.93	1.93	-17314	13880	7501	40441	24273	4922	29195		7.97	Si
SLV 14	11.68	2591.8	-12178	-10141	-2880	1.93	1.93	-18765	14170	7657	40441	24273	4922	29195		10.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	0	364	237.35	0	0	No, Trazione
SLV 7	179667	0.46	0	1226	237.35	0	0	No, Trazione
SLV 8	179667	0.46	0	666	237.35	0	0	No, Trazione
SLV 12	179667	0.46	0	-196	237.35	0	0	No, e>t/2
SLV 3	179667	0.46	6413	-3466	237.35	464.83	1.96	Si
SLV 4	179667	0.46	8021	-4334	237.35	574.95	2.42	Si
SLV 15	179667	0.46	11729	-6339	237.35	819.24	3.45	Si
SLV 16	179667	0.46	13337	-7207	237.35	920.89	3.88	Si
SLV 1	179667	0.46	15694	-8481	237.35	1065.34	4.49	Si
SLV 2	179667	0.46	17301	-9350	237.35	1160.68	4.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12530	-17814	-404	0.777	1544.6	0.95	11.89527	14.44577	No
SLV 9	-12014	-17277	-404	0.805	1492.3	0.948	12.33891	14.44577	No
SLV 6	-11892	-16538	-271	0.822	1479.9	0.948	12.59993	14.44577	No
SLV 5	-11376	-16002	-271	0.853	1427.5	0.946	13.09483	14.44577	No
SLV 14	-9132	-13008	-321	1.016	1200.1	0.938	15.74981	6.41634	Si
SLV 13	-8331	-12174	-322	1.094	1119.2	0.934	17.02211	6.41634	Si
SLV 2	-7005	-8756	123	1.277	985.3	0.927	20.02734	6.41634	Si
SLV 1	-6204	-7923	122	1.402	904.8	0.922	22.10942	6.41634	Si
SLV 16	-5458	-7485	-118	1.545	830	0.917	24.49026	6.41634	Si
SLV 15	-4658	-6652	-118	1.734	750.1	0.911	27.67289	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.929	SLU 43	Si
V_SLU	28.852	SLU 41	Si
PF_SLV	0	SLV 7	No
V_SLV	5.877	SLV 16	Si
PFFP_SLV	0	SLV 11	No
R_SLV	0.823	SLV 10	No

Maschio 203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L6	L7	9.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 5	8.98	-528.33	-43366	-0.0000261	0.0003743	0.0035	9.14	165197.92	198931.56	198931.56	376.53	No	Si
SLU 5	12.5	1142.71	-25054	-0.0000151	0.0003743	0.0035	9.14	103487.1	110230.61	110230.61	96.46	No	Si
SLU 10	8.98	-621.23	-47010	-0.0000284	0.0003743	0.0035	9.14	176075.3	211300.85	211300.85	340.13	No	Si
SLU 10	12.5	1312.04	-25962	-0.0000158	0.0003743	0.0035	9.14	106824.94	113792.84	113792.84	86.73	No	Si
SLU 64	8.98	-2546.3	-58368	-0.0000364	0.0003743	0.0035	9.14	206986.67	248361.12	248361.12	97.54	No	Si
SLU 64	12.5	529.95	-32983	-0.0000197	0.0003743	0.0035	9.14	131651.97	138211.81	138211.81	260.8	No	Si
SLU 23	8.98	-866.9	-48065	-0.0000292	0.0003743	0.0035	9.14	179136.68	214902.36	214902.36	247.9	No	Si
SLU 23	12.5	1329.96	-27253	-0.0000165	0.0003743	0.0035	9.14	111518.19	118824.74	118824.74	89.34	No	Si
SLU 73	8.98	-1396.62	-63685	-0.0000393	0.0003743	0.0035	9.14	219903.08	264687.71	264687.71	189.52	No	Si
SLU 73	12.5	1532.4	-35486	-0.0000216	0.0003743	0.0035	9.14	140083.97	146509.14	146509.14	95.61	No	Si
SLU 34	8.98	-1025.63	-54991	-0.0000336	0.0003743	0.0035	9.14	198269.98	237701.3	237701.3	231.76	No	Si
SLU 34	12.5	1512.79	-31329	-0.0000191	0.0003743	0.0035	9.14	125959	132783.34	132783.34	87.77	No	Si
SLU 2	8.98	-495.42	-41725	-0.0000251	0.0003743	0.0035	9.14	160147.65	193099.8	193099.8	389.77	No	Si
SLU 2	12.5	1135.96	-23470	-0.0000142	0.0003743	0.0035	9.14	97595.89	103943.73	103943.73	91.5	No	Si
SLU 13	8.98	-654.14	-48651	-0.0000294	0.0003743	0.0035	9.14	180821.33	216914.29	216914.29	331.6	No	Si
SLU 13	12.5	1318.79	-27546	-0.0000167	0.0003743	0.0035	9.14	112577.65	119949.13	119949.13	90.95	No	Si
SLU 26	8.98	-899.82	-49706	-0.0000302	0.0003743	0.0035	9.14	183822	220552.49	220552.49	245.11	No	Si
SLU 26	12.5	1336.71	-28837	-0.0000175	0.0003743	0.0035	9.14	117199.18	124633.34	124633.34	93.24	No	Si
SLU 31	8.98	-992.72	-53350	-0.0000325	0.0003743	0.0035	9.14	193888.91	232418.81	232418.81	234.12	No	Si
SLU 31	12.5	1506.04	-29745	-0.0000181	0.0003743	0.0035	9.14	120416.51	127624.67	127624.67	84.74	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.98	76887.02	-42003	-0.0000556	0.0005615	0.0035	9.14		180192	180192	2.34		Si
SLV 6	12.5	49669.25	-24868	-0.0000345	0.0005615	0.0035	9.14		111834.71	111834.71	2.25		Si
SLV 9	8.98	73358.23	-50582	-0.000059	0.0005615	0.0035	9.14		208958.62	208958.62	2.85		Si
SLV 9	12.5	45860.04	-25936	-0.000033	0.0005615	0.0035	9.14		116244.33	116244.33	2.53		Si
SLV 7	8.98	-80189.26	-39468	-0.0000564	0.0005615	0.0035	9.14		190805.03	190805.03	2.38		Si
SLV 7	12.5	-48372.49	-24553	-0.0000337	0.0005615	0.0035	9.14		131052.2	131052.2	2.71		Si
SLV 8	8.98	-77184.22	-39448	-0.0000547	0.0005615	0.0035	9.14		190727.84	190727.84	2.47		Si
SLV 8	12.5	-45029.4	-24569	-0.000032	0.0005615	0.0035	9.14		131119.12	131119.12	2.91		Si
SLV 5	8.98	73881.98	-42024	-0.0000541	0.0005615	0.0035	9.14		180265.06	180265.06	2.44		Si
SLV 5	12.5	46326.16	-24852	-0.0000327	0.0005615	0.0035	9.14		111768.37	111768.37	2.41		Si
SLD 6	8.98	32856.88	-43736	-0.0000386	0.0005615	0.0035	9.14		186107.42	186107.42	5.66		Si
SLD 6	12.5	22142.63	-25088	-0.0000231	0.0005615	0.0035	9.14		112741.73	112741.73	5.09		Si
SLV 11	8.98	-80713.01	-48026	-0.0000605	0.0005615	0.0035	9.14		223527.95	223527.95	2.77		Si
SLV 11	12.5	-48838.6	-25637	-0.0000343	0.0005615	0.0035	9.14		135568.98	135568.98	2.78		Si
SLD 10	8.98	32626.96	-47403	-0.0000408	0.0005615	0.0035	9.14		198307.71	198307.71	6.08		Si
SLD 10	12.5	21940.19	-25554	-0.0000233	0.0005615	0.0035	9.14		114666.88	114666.88	5.23		Si
SLV 10	8.98	76363.27	-50561	-0.0000602	0.0005615	0.0035	9.14		208890	208890	2.74		Si
SLV 10	12.5	49203.13	-25952	-0.0000346	0.0005615	0.0035	9.14		116310.87	116310.87	2.36		Si
SLV 12	8.98	-77707.97	-48006	-0.0000592	0.0005615	0.0035	9.14		223453.55	223453.55	2.88		Si
SLV 12	12.5	-45495.51	-25653	-0.0000327	0.0005615	0.0035	9.14		135636.17	135636.17	2.98		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	8.98	-2726.04	-65918	-54891	-1808	9.14	9.14	-21448	9804	25091	40441	76634	23307	65532	No	36.25	Si
SLU 81	12.5	781.49	-36544	-30430	-1798	9.14	9.14	-11891	8530	21830	40441	76634	23307	62271	No	34.63	Si
SLU 32	8.98	-2333.53	-55876	-46528	-1738	9.14	9.14	-18181	9369	23976	40441	76634	23307	64417	No	37.06	Si
SLU 32	12.5	738.44	-32045	-26684	-1730	9.14	9.14	-10427	8335	21330	40441	76634	23307	61771	No	35.71	Si
SLU 35	8.98	-2366.44	-57517	-47895	-1759	9.14	9.14	-18715	9440	24158	40441	76634	23307	64599	No	36.73	Si
SLU 35	12.5	745.19	-33629	-28003	-1751	9.14	9.14	-10942	8403	21506	40441	76634	23307	61947	No	35.39	Si
SLU 79	8.98	-2737.94	-66935	-55737	-1762	9.14	9.14	-21779	9848	25204	40441	76634	23307	65645	No	37.26	Si
SLU 79	12.5	719.52	-38644	-32179	-1752	9.14	9.14	-12574	8621	22063	40441	76634	23307	62504	No	35.68	Si
SLU 83	8.98	-2758.95	-67559	-56257	-1828	9.14	9.14	-21982	9875	25273	40441	76634	23307	65714	No	35.94	Si
SLU 83	12.5	788.24	-38128	-31749	-1818	9.14	9.14	-12406	8599	22005	40441	76634	23307	62446	No	34.34	Si
SLU 39	8.98	-2322.13	-55584	-46285	-1726	9.14	9.14	-18086	9356	23944	40441	76634	23307	64385	No	37.31	Si
SLU 39	12.5	755.13	-30803	-25650	-1717	9.14	9.14	-10023	8281	21192	40441	76634	23307	61633	No	35.89	Si
SLU 77	8.98	-2770.35	-67851	-56500	-1841	9.14	9.14	-22077	9888	25306	40441	76634	23307	65747	No	35.72	Si
SLU 77	12.5	771.55	-39370	-32784	-1831	9.14	9.14	-12810	8652	22143	40441	76634	23307	62584	No	34.18	Si
SLU 41	8.98	-2355.04	-57225	-47652	-1746	9.14	9.14	-18620	9427	24126	40441	76634	23307	64567	No	36.97	Si
SLU 41	12.5	761.88	-32387	-26969	-1738	9.14	9.14	-10538	8350	21368	40441	76634	23307	61809	No	35.56	Si
SLU 74	8.98	-2737.44	-66210	-55134	-1820	9.14	9.14	-21543	9817	25123	40441	76634	23307	65564	No	36.02	Si
SLU 74	12.5	764.8	-37786	-31465	-1811	9.14	9.14	-12295	8584	21968	40441	76634	23307	62408	No	34.47	Si
SLU 37	8.98	-2334.03	-56600	-47132	-1680	9.14	9.14	-18417	9400	24056	40441	76634	23307	64497	No	38.4	Si
SLU 37	12.5	693.16	-32903	-27399	-1671	9.14	9.14	-10706	8372	21425	40441	76634	23307	61866	No	37.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	8.98	-35140.42	-42617	-35488	-9384	9.14	9.14	-13867	13190	33756	40441	114951	23307	74197		7.91	Si
SLD 8	12.5	-19649.35	-24958	-20783	-12404	9.14	9.14	-8121	12041	30815	40441	114951	23307	71256		5.74	Si
SLV 12	8.98	-77707.97	-48006	-39975	-19382	9.14	8.8538	-16250	13667	33881	40441	114951	23307	74322		3.83	Si
SLV 12	12.5	-45495.51	-25653	-21362	-26164	9.14	8.3895	-9126	12242	28757	40441	114951	23307	69198		2.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.98	76887.02	-42003	-34977	15888	9.14	8.2185	-13667	13150	30261	40441	114951	23307	70702		4.45	Si
SLV 6	12.5	49669.25	-24868	-20708	22685	9.14	7.718	-8092	12035	26008	40441	114951	23307	66449		2.93	Si
SLV 9	8.98	73358.23	-50582	-42120	17678	9.14	9.14	-16458	13708	35082	40441	114951	23307	75523		4.27	Si
SLV 9	12.5	45860.04	-25936	-21597	24513	9.14	8.4053	-8439	12104	28488	40441	114951	23307	68929		2.81	Si
SLD 12	8.98	-35370.33	-46285	-38542	-9166	9.14	9.14	-15060	13429	34367	40441	114951	23307	74808		8.16	Si
SLD 12	12.5	-19851.8	-25424	-21171	-12170	9.14	9.14	-8272	12071	30893	40441	114951	23307	71333		5.86	Si
SLV 8	8.98	-77184.22	-39448	-32849	-19890	9.14	7.8402	-15072	13431	29485	40441	114951	23307	69926		3.52	Si
SLV 8	12.5	-45029.4	-24569	-20459	-26711	9.14	8.2117	-8925	12202	28055	40441	114951	23307	68496		2.56	Si
SLV 10	8.98	76363.27	-50561	-42103	16396	9.14	9.14	-16452	13707	35079	40441	114951	23307	75520		4.61	Si
SLV 10	12.5	49203.13	-25952	-21610	23232	9.14	8.0222	-8444	12106	27191	40441	114951	23307	67632		2.91	Si
SLV 11	8.98	-80713.01	-48026	-39992	-18100	9.14	8.6682	-16606	13738	33343	40441	114951	23307	73784		4.08	Si
SLV 11	12.5	-48838.6	-25637	-21348	-24883	9.14	7.9949	-9578	12332	27607	40441	114951	23307	68048		2.73	Si
SLV 7	8.98	-80189.26	-39468	-32866	-18607	9.14	7.6148	-15529	13523	28832	40441	114951	23307	69273		3.72	Si
SLV 7	12.5	-48372.49	-24553	-20446	-25430	9.14	7.7996	-9402	12297	26855	40441	114951	23307	67296		2.65	Si
SLV 5	8.98	73881.98	-42024	-34994	17171	9.14	8.4357	-13674	13151	31064	40441	114951	23307	71505		4.16	Si
SLV 5	12.5	46326.16	-24852	-20694	23966	9.14	8.1177	-8086	12034	27353	40441	114951	23307	67794		2.83	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.74 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.46	11008	-28171	1124	3659.7	3.26	Si
SLV 4	179667	0.46	11018	-28196	1124	3662.67	3.26	Si
SLV 1	179667	0.46	11089	-28379	1124	3684.56	3.28	Si
SLV 2	179667	0.46	11099	-28404	1124	3687.53	3.28	Si
SLV 7	179667	0.46	12667	-32418	1124	4162.04	3.7	Si
SLV 8	179667	0.46	12673	-32434	1124	4163.9	3.7	Si
SLV 5	179667	0.46	12938	-33110	1124	4242.69	3.77	Si
SLV 6	179667	0.46	12944	-33126	1124	4244.55	3.78	Si
SLV 11	179667	0.46	14169	-36261	1124	4605.59	4.1	Si
SLV 12	179667	0.46	14175	-36277	1124	4607.41	4.1	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.74 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-25952	-50561	1057	1.526	3940.9	0.917	24.18236	14.44577	Si
SLV 9	-25936	-50582	1057	1.526	3939.3	0.917	24.19417	14.44577	Si
SLV 12	-25653	-48006	1049	1.539	3911.1	0.916	24.40685	14.44577	Si
SLV 11	-25637	-48026	1049	1.54	3909.4	0.916	24.41887	14.44577	Si
SLV 6	-24868	-42003	-1033	1.575	3832.6	0.915	25.01428	14.44577	Si
SLV 5	-24852	-42024	-1033	1.576	3830.9	0.915	25.02687	14.44577	Si
SLV 8	-24569	-39448	-1041	1.589	3802.7	0.915	25.24651	14.44577	Si
SLV 7	-24553	-39468	-1041	1.59	3801.1	0.915	25.25933	14.44577	Si
SLV 14	-27116	-59645	3491	1.407	4057.6	0.919	22.2654	6.41634	Si
SLV 13	-27091	-59677	3491	1.408	4055.1	0.919	22.28167	6.41634	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	84.742	SLU 31	Si
V_SLU	34.18	SLU 77	Si
PF_SLV	2.252	SLV 6	Si
V_SLV	2.564	SLV 8	Si
PFFP_SLV	3.256	SLV 3	Si
R_SLV	1.674	SLV 10	Si

Maschio 204

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L7	L8	9.141	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 1	12.5	-893.45	-22431	-0.0000135	0.0003743	0.0035	9.1407	93693.45	120783.17	120783.17	135.19	No	Si
SLU 1	15.66	82.25	-3821	-0.0000022	0.0003743	0.0035	9.1407	17207.86	21208.35	21208.35	257.85	No	Si
SLU 22	12.5	-952.16	-25519	-0.0000153	0.0003743	0.0035	9.1407	105209.18	132765.51	132765.51	139.44	No	Si
SLU 22	15.66	120.44	-4867	-0.0000029	0.0003743	0.0035	9.1407	21830.36	25860.15	25860.15	214.72	No	Si
SLU 43	12.5	-1141.35	-28102	-0.000017	0.0003743	0.0035	9.1407	114584.33	142982.37	142982.37	125.27	No	Si
SLU 43	15.66	93.83	-4609	-0.0000027	0.0003743	0.0035	9.1407	20691.07	24711.39	24711.39	263.36	No	Si
SLU 74	12.5	-1159.05	-35379	-0.0000214	0.0003743	0.0035	9.1407	139742.18	170411.66	170411.66	147.03	No	Si
SLU 74	15.66	100.3	-7195	-0.0000042	0.0003743	0.0035	9.1407	31975.88	36064.65	36064.65	359.57	No	Si
SLU 18	12.5	-1008.24	-25298	-0.0000152	0.0003743	0.0035	9.1407	104396.81	131898.56	131898.56	130.82	No	Si
SLU 18	15.66	87.51	-4077	-0.0000024	0.0003743	0.0035	9.1407	18342.67	22348.43	22348.43	255.39	No	Si
SLU 53	12.5	-1100.34	-32292	-0.0000195	0.0003743	0.0035	9.1407	129294.52	158699.59	158699.59	144.23	No	Si
SLU 53	15.66	62.11	-6149	-0.0000036	0.0003743	0.0035	9.1407	27438.81	31483.13	31483.13	506.89	No	Si
SLU 81	12.5	-1314.85	-34057	-0.0000207	0.0003743	0.0035	9.1407	135308.29	165368.08	165368.08	125.77	No	Si
SLU 81	15.66	137.28	-5911	-0.0000035	0.0003743	0.0035	9.1407	26403	30447.17	30447.17	221.79	No	Si
SLU 39	12.5	-1066.95	-28386	-0.0000171	0.0003743	0.0035	9.1407	115601.98	144095.02	144095.02	135.05	No	Si
SLU 39	15.66	125.7	-5124	-0.000003	0.0003743	0.0035	9.1407	22955.77	26990.55	26990.55	214.73	No	Si
SLU 64	12.5	-1200.06	-31190	-0.0000189	0.0003743	0.0035	9.1407	125485.81	154574.41	154574.41	128.81	No	Si
SLU 64	15.66	132.02	-5655	-0.0000033	0.0003743	0.0035	9.1407	25284.67	29332.05	29332.05	222.18	No	Si
SLU 60	12.5	-1256.14	-30969	-0.0000188	0.0003743	0.0035	9.1407	124717.37	153754.07	153754.07	122.4	No	Si
SLU 60	15.66	99.09	-4865	-0.0000028	0.0003743	0.0035	9.1407	21818.8	25848.49	25848.49	260.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.5	-49074.4	-23888	-0.0000339	0.0005615	0.0035	9.1407		128301.09	128301.09	2.61		Si
SLV 11	15.66	6319.2	-3641	-0.0000045	0.0005615	0.0035	9.1407		20471.73	20471.73	3.24		Si
SLV 5	12.5	50457.39	-23865	-0.0000347	0.0005615	0.0035	9.1407		107716.95	107716.95	2.13		Si
SLV 5	15.66	-6380.62	-4683	-0.0000051	0.0005615	0.0035	9.1407		46444.39	46444.39	7.28		Si
SLV 6	12.5	47208.04	-23885	-0.0000328	0.0005615	0.0035	9.1407		107798.8	107798.8	2.28		Si
SLV 6	15.66	-6130.78	-4702	-0.000005	0.0005615	0.0035	9.1407		46525.29	46525.29	7.59		Si
SLV 10	12.5	51119.88	-23541	-0.000035	0.0005615	0.0035	9.1407		106374.86	106374.86	2.08		Si
SLV 10	15.66	-5126.1	-3725	-0.0000041	0.0005615	0.0035	9.1407		42205.17	42205.17	8.23		Si
SLV 9	12.5	54369.23	-23522	-0.0000372	0.0005615	0.0035	9.1407		106292.18	106292.18	1.96		Si
SLV 9	15.66	-5375.94	-3706	-0.0000041	0.0005615	0.0035	9.1407		42124.07	42124.07	7.84		Si
SLV 12	12.5	-52323.75	-23908	-0.0000359	0.0005615	0.0035	9.1407		128383.72	128383.72	2.45		Si
SLV 12	15.66	6569.05	-3659	-0.0000046	0.0005615	0.0035	9.1407		20553.92	20553.92	3.13		Si
SLV 8	12.5	-56235.6	-24252	-0.0000386	0.0005615	0.0035	9.1407		129812.18	129812.18	2.31		Si
SLV 8	15.66	5564.37	-4636	-0.0000048	0.0005615	0.0035	9.1407		24907.59	24907.59	4.48		Si
SLV 16	12.5	-12451.1	-23384	-0.0000184	0.0005615	0.0035	9.1407		126209.25	126209.25	10.14		Si
SLV 16	15.66	3716.79	-2547	-0.0000028	0.0005615	0.0035	9.1407		15569	15569	4.19		Si
SLV 7	12.5	-52986.24	-24232	-0.0000363	0.0005615	0.0035	9.1407		129729.47	129729.47	2.45		Si
SLV 7	15.66	5314.53	-4618	-0.0000046	0.0005615	0.0035	9.1407		24826.18	24826.18	4.67		Si
SLV 13	12.5	23624.22	-23243	-0.0000225	0.0005615	0.0035	9.1407		105134.16	105134.16	4.45		Si
SLV 13	15.66	-179.45	-2539	-0.0000015	0.0005615	0.0035	9.1407		36944.04	36944.04	205.88		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 55	12.5	-76.2	-31674	-26376	1627	9.1407	9.1407	-10305	8319	21290	35683	76640	23309	56974	No	35.01	Si
SLU 55	15.66	-118.81	-6235	-5192	1715	9.1407	9.1407	-2028	7215	18466	35683	76640	23309	54149	No	31.57	Si
SLU 13	12.5	171.71	-26004	-21654	1442	9.1407	9.1407	-8460	8073	20661	35683	76640	23309	56344	No	39.08	Si
SLU 13	15.66	-130.39	-5447	-4536	1530	9.1407	9.1407	-1772	7181	18378	35683	76640	23309	54062	No	35.34	Si
SLU 76	12.5	-134.91	-34762	-28947	1500	9.1407	9.1407	-11310	8452	21633	35683	76640	23309	57316	No	38.2	Si
SLU 76	15.66	-80.62	-7281	-6063	1588	9.1407	9.1407	-2369	7260	18582	35683	76640	23309	54265	No	34.17	Si
SLU 5	12.5	252.06	-23997	-19982	1409	9.1407	9.1407	-7807	7985	20438	35683	76640	23309	56121	No	39.83	Si
SLU 5	15.66	-134.07	-5268	-4386	1497	9.1407	9.1407	-1714	7173	18358	35683	76640	23309	54042	No	36.1	Si
SLU 68	12.5	-54.55	-32755	-27276	1468	9.1407	9.1407	-10657	8365	21410	35683	76640	23309	57094	No	38.9	Si
SLU 68	15.66	-84.3	-7102	-5914	1555	9.1407	9.1407	-2311	7253	18562	35683	76640	23309	54245	No	34.88	Si
SLU 51	12.5	-204.37	-31225	-26002	1501	9.1407	9.1407	-10159	8299	21240	35683	76640	23309	56924	No	37.92	Si
SLU 51	15.66	-100.33	-7478	-6227	1553	9.1407	9.1407	-2433	7269	18604	35683	76640	23309	54287	No	34.97	Si
SLU 52	12.5	-254.54	-30114	-25077	1427	9.1407	9.1407	-9798	8251	21117	35683	76640	23309	56800	No	39.8	Si
SLU 52	15.66	-72.83	-4805	-4001	1516	9.1407	9.1407	-1563	7153	18307	35683	76640	23309	53990	No	35.62	Si
SLU 59	12.5	-284.72	-33232	-27673	1534	9.1407	9.1407	-10812	8386	21463	35683	76640	23309	57146	No	37.26	Si
SLU 59	15.66	-96.65	-7657	-6376	1585	9.1407	9.1407	-2491	7277	18624	35683	76640	23309	54307	No	34.26	Si
SLU 57	12.5	-341.7	-33855	-28191	1450	9.1407	9.1407	-11015	8413	21532	35683	76640	23309	57216	No	39.46	Si
SLU 57	15.66	-86.07	-7588	-6319	1501	9.1407	9.1407	-2469	7274	18616	35683	76640	23309	54299	No	36.16	Si
SLU 47	12.5	4.16	-29667	-24704	1595	9.1407	9.1407	-9652	8231	21067	35683	76640	23309	56751	No	35.59	Si
SLU 47	15.66	-122.49	-6055	-5042	1683	9.1407	9.1407	-1970	7207	18446	35683	76640	23309	54129	No	32.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	12.5	-56235.6	-24252	-20195	-41039	9.1407	6.7547	-10729	12563	23760	35683	114959	23309	59443		1.45	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	15.66	5564.37	-4636	-3861	-44088	9.1407	9.1407	-1508	10718	27432	35683	114959	23309	63116		1.43	Si
SLV 5	12.5	50457.39	-23865	-19873	40561	9.1407	7.3683	-7765	11970	24695	35683	114959	23309	60378		1.49	Si
SLV 5	15.66	-6380.62	-4683	-3900	43837	9.1407	9.1407	-1524	10721	27440	35683	114959	23309	63124		1.44	Si
SLV 12	12.5	-52323.75	-23908	-19909	-39667	9.1407	7.1455	-9992	12415	24840	35683	114959	23309	60523		1.53	Si
SLV 12	15.66	6569.05	-3659	-3047	-42945	9.1407	8.3254	-1191	10655	24837	35683	114959	23309	60521		1.41	Si
SLV 7	12.5	-52986.24	-24232	-20179	-38874	9.1407	7.1513	-10120	12441	24911	35683	114959	23309	60594		1.56	Si
SLV 7	15.66	5314.53	-4618	-3845	-41922	9.1407	9.1407	-1502	10717	27429	35683	114959	23309	63113		1.51	Si
SLD 5	12.5	21766.49	-23876	-19882	18153	9.1407	9.1407	-7768	11970	30637	35683	114959	23309	66320		3.65	Si
SLD 5	15.66	-2746.12	-4391	-3657	19598	9.1407	9.1407	-1429	10702	27392	35683	114959	23309	63075		3.22	Si
SLD 9	12.5	23440.7	-23727	-19757	18740	9.1407	9.1407	-7720	11961	30612	35683	114959	23309	66295		3.54	Si
SLD 9	15.66	-2316.39	-3973	-3308	20087	9.1407	9.1407	-1293	10675	27322	35683	114959	23309	63005		3.14	Si
SLV 6	12.5	47208.04	-23885	-19890	38396	9.1407	7.7817	-7771	11971	26083	35683	114959	23309	61766		1.61	Si
SLV 6	15.66	-6130.78	-4702	-3915	41671	9.1407	9.1407	-1530	10723	27443	35683	114959	23309	63127		1.51	Si
SLV 10	12.5	51119.88	-23541	-19603	39767	9.1407	7.1966	-7659	11949	24077	35683	114959	23309	59760		1.5	Si
SLV 10	15.66	-5126.1	-3725	-3102	42814	9.1407	9.1407	-1212	10659	27281	35683	114959	23309	62964		1.47	Si
SLV 9	12.5	54369.23	-23522	-19587	41933	9.1407	6.7766	-7653	11947	22669	35683	114959	23309	58353		1.39	Si
SLV 9	15.66	-5375.94	-3706	-3086	44980	9.1407	9.1407	-1206	10658	27278	35683	114959	23309	62961		1.4	Si
SLV 11	12.5	-49074.4	-23888	-19892	-37502	9.1407	7.5481	-9452	12307	26011	35683	114959	23309	61694		1.65	Si
SLV 11	15.66	6319.2	-3641	-3032	-40779	9.1407	8.5042	-1185	10654	25368	35683	114959	23309	61051		1.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.53	5495	-14063	1038.54	1897.95	1.83	Si
SLV 3	179667	0.53	5500	-14078	1038.54	1899.89	1.83	Si
SLV 2	179667	0.53	5504	-14088	1038.54	1901.23	1.83	Si
SLV 4	179667	0.53	5510	-14103	1038.54	1903.17	1.83	Si
SLV 5	179667	0.53	5645	-14447	1038.54	1947.83	1.88	Si
SLV 6	179667	0.53	5651	-14463	1038.54	1949.94	1.88	Si
SLV 7	179667	0.53	5664	-14497	1038.54	1954.27	1.88	Si
SLV 8	179667	0.53	5670	-14513	1038.54	1956.38	1.88	Si
SLV 9	179667	0.53	5778	-14788	1038.54	1991.94	1.92	Si
SLV 10	179667	0.53	5784	-14804	1038.54	1994.04	1.92	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-4702	-23885	-1495	4.232	1754.1	0.893	68.83723	12.42528	Si
SLV 5	-4683	-23865	-1494	4.238	1752.6	0.894	68.9358	12.42528	Si
SLV 8	-4636	-24252	-1424	4.261	1748.7	0.894	69.28568	12.42528	Si
SLV 7	-4618	-24232	-1424	4.267	1747.2	0.894	69.38521	12.42528	Si
SLV 10	-3725	-23541	1457	4.607	1676	0.899	74.45434	12.42528	Si
SLV 9	-3706	-23522	1458	4.615	1674.6	0.899	74.56479	12.42528	Si
SLV 12	-3659	-23908	1528	4.628	1671	0.9	74.74805	12.42528	Si
SLV 11	-3641	-23888	1528	4.636	1669.6	0.9	74.85923	12.42528	Si
SLV 2	-5824	-24421	-4914	3.612	1849.3	0.89	58.98221	6.42939	Si
SLV 4	-5804	-24531	-4893	3.619	1847.6	0.89	59.09374	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	122.402	SLU 60	Si
V_SLU	31.566	SLU 55	Si
PF_SLV	1.955	SLV 9	Si
V_SLV	1.392	SLV 9	Si
PFFP_SLV	1.828	SLV 1	Si
R_SLV	5.54	SLV 6	Si

Maschio 205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L7	L8	1.92	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	13.4	-386.07	-4668	-0.0000164	0.0003743	0.0035	1.92	4098.82	5224.26	5224.26	13.53	No	Si
SLU 37	15.2	-1670.09	-3924	-0.0000263	0.0003743	0.0035	1.92	3496.62	4588.66	4588.66	2.75	No	Si
SLU 30	13.4	-542.81	-4944	-0.0000185	0.0003743	0.0035	1.92	4317.1	5449.95	5449.95	10.04	No	Si
SLU 30	15.2	-1632	-3943	-0.0000259	0.0003743	0.0035	1.92	3512.77	4605.59	4605.59	2.82	No	Si
SLU 29	13.4	-535.25	-4881	-0.0000183	0.0003743	0.0035	1.92	4267.69	5398.68	5398.68	10.09	No	Si
SLU 29	15.2	-1642.77	-3930	-0.000026	0.0003743	0.0035	1.92	3502.23	4594.54	4594.54	2.8	No	Si
SLU 80	13.4	-596.59	-5888	-0.0000218	0.0003743	0.0035	1.92	5044.21	6230.33	6230.33	10.44	No	Si
SLU 80	15.2	-1726.84	-4615	-0.0000283	0.0003743	0.0035	1.92	4057.04	5180.51	5180.51	3	No	Si
SLU 35	13.4	-409.35	-4906	-0.0000173	0.0003743	0.0035	1.92	4287.22	5418.92	5418.92	13.24	No	Si
SLU 35	15.2	-1710.83	-4259	-0.0000274	0.0003743	0.0035	1.92	3770.6	4878.73	4878.73	2.85	No	Si
SLU 38	13.4	-393.63	-4730	-0.0000166	0.0003743	0.0035	1.92	4148.69	5276.15	5276.15	13.4	No	Si
SLU 38	15.2	-1659.32	-3936	-0.0000262	0.0003743	0.0035	1.92	3507.17	4599.71	4599.71	2.77	No	Si
SLU 36	13.4	-416.91	-4968	-0.0000175	0.0003743	0.0035	1.92	4336.57	5470.23	5470.23	13.12	No	Si
SLU 36	15.2	-1700.07	-4272	-0.0000273	0.0003743	0.0035	1.92	3780.99	4889.73	4889.73	2.88	No	Si
SLU 28	13.4	-566.09	-5181	-0.0000194	0.0003743	0.0035	1.92	4503.2	5645.58	5645.58	9.97	No	Si
SLU 28	15.2	-1672.74	-4279	-0.000027	0.0003743	0.0035	1.92	3786.52	4895.58	4895.58	2.93	No	Si
SLU 27	13.4	-558.53	-5119	-0.0000192	0.0003743	0.0035	1.92	4454.32	5593.64	5593.64	10.01	No	Si
SLU 27	15.2	-1683.51	-4266	-0.0000271	0.0003743	0.0035	1.92	3776.13	4884.59	4884.59	2.9	No	Si
SLU 79	13.4	-589.03	-5825	-0.0000215	0.0003743	0.0035	1.92	4996.89	6179.77	6179.77	10.49	No	Si
SLU 79	15.2	-1737.6	-4602	-0.0000284	0.0003743	0.0035	1.92	4046.8	5169.79	5169.79	2.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	13.4	-170.6	-1624	-0.0000059	0.0005615	0.0035	1.92		2572.2	2572.2	15.08		Si
SLV 4	15.2	-1551.86	-2748	-0.0000246	0.0005615	0.0035	1.536		3596.15	3596.15	2.32		Si
SLD 7	13.4	-96.46	-1521	-0.000005	0.0005615	0.0035	1.92		2477.89	2477.89	25.69		Si
SLD 7	15.2	-1123.95	-2587	-0.0000173	0.0005615	0.0035	1.92		3451.06	3451.06	3.07		Si
SLV 7	13.4	397.46	1622	0.1255547	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	15.2	-1724.95	-2298	-0.0000387	0.0005615	0.0035	1.536		3188.4	3188.4	1.85		Si
SLD 4	13.4	-346.89	-2961	-0.0000111	0.0005615	0.0035	1.92		3788.09	3788.09	10.92		Si
SLD 4	15.2	-1042.93	-2784	-0.0000167	0.0005615	0.0035	1.92		3629.18	3629.18	3.48		Si
SLV 12	13.4	281.6	1687	0.1315715	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	15.2	-1277.32	-2065	-0.0000213	0.0005615	0.0035	1.536		2976.11	2976.11	2.33		Si
SLV 8	13.4	346.17	1945	0.1515408	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	15.2	-1682.38	-2190	-0.0000401	0.0005615	0.0035	1.536		3089.39	3089.39	1.84		Si
SLV 3	13.4	-91.02	-2125	-0.0000066	0.0005615	0.0035	1.92		3030.79	3030.79	33.3		Si
SLV 3	15.2	-1617.93	-2917	-0.0000255	0.0005615	0.0035	1.536		3748.37	3748.37	2.32		Si
SLD 3	13.4	-312.71	-3176	-0.0000114	0.0005615	0.0035	1.92		3982.15	3982.15	12.73		Si
SLD 3	15.2	-1071.3	-2857	-0.0000172	0.0005615	0.0035	1.92		3694.54	3694.54	3.45		Si
SLD 8	13.4	-118.86	-1380	-0.0000048	0.0005615	0.0035	1.92		2348.24	2348.24	19.76		Si
SLD 8	15.2	-1105.35	-2540	-0.000017	0.0005615	0.0035	1.92		3407.88	3407.88	3.08		Si
SLV 11	13.4	332.89	1364	0.1055901	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	15.2	-1319.89	-2174	-0.0000217	0.0005615	0.0035	1.536		3075.09	3075.09	2.33		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	13.4	-409.35	-4906	-4085	1357	1.92	1.92	-7599	7958	4278	35683	16098	4896	20994	No	15.47	Si
SLU 35	15.2	-1710.83	-4259	-3547	1355	1.92	1.6749	-7603	7958	3732	35683	16098	4896	20994	No	15.5	Si
SLU 37	13.4	-386.07	-4668	-3887	1296	1.92	1.92	-7230	7908	4252	35683	16098	4896	20994	No	16.2	Si
SLU 37	15.2	-1670.09	-3924	-3267	1293	1.92	1.603	-7316	7920	3555	35683	16098	4896	20994	No	16.24	Si
SLU 41	13.4	-281.94	-4218	-3513	1157	1.92	1.92	-6534	7816	4202	35683	16098	4896	20994	No	18.14	Si
SLU 41	15.2	-1290.57	-3502	-2916	1155	1.92	1.7744	-5890	7730	3840	35683	16098	4896	20994	No	18.17	Si
SLU 78	13.4	-619.87	-6126	-5101	1274	1.92	1.92	-9488	8210	4413	35683	16098	4896	20994	No	16.47	Si
SLU 78	15.2	-1767.58	-4951	-4123	1272	1.92	1.8089	-8184	8036	4070	35683	16098	4896	20994	No	16.51	Si
SLU 77	13.4	-612.3	-6063	-5049	1311	1.92	1.92	-9391	8197	4406	35683	16098	4896	20994	No	16.01	Si
SLU 77	15.2	-1778.34	-4938	-4112	1309	1.92	1.7996	-8205	8038	4050	35683	16098	4896	20994	No	16.04	Si
SLU 79	13.4	-589.03	-5825	-4851	1250	1.92	1.92	-9023	8147	4380	35683	16098	4896	20994	No	16.8	Si
SLU 79	15.2	-1737.6	-4602	-3833	1247	1.92	1.7474	-7870	7994	3911	35683	16098	4896	20994	No	16.84	Si
SLU 80	13.4	-596.59	-5888	-4903	1213	1.92	1.92	-9120	8160	4387	35683	16098	4896	20994	No	17.31	Si
SLU 80	15.2	-1726.84	-4615	-3843	1210	1.92	1.7575	-7847	7991	3932	35683	16098	4896	20994	No	17.35	Si
SLU 27	13.4	-558.53	-5119	-4262	1149	1.92	1.92	-7929	8002	4302	35683	16098	4896	20994	No	18.27	Si
SLU 27	15.2	-1683.51	-4266	-3552	1147	1.92	1.6961	-7519	7947	3774	35683	16098	4896	20994	No	18.31	Si
SLU 38	13.4	-393.63	-4730	-3939	1259	1.92	1.92	-7327	7921	4259	35683	16098	4896	20994	No	16.68	Si
SLU 38	15.2	-1659.32	-3936	-3278	1256	1.92	1.6154	-7283	7916	3580	35683	16098	4896	20994	No	16.71	Si
SLU 36	13.4	-416.91	-4968	-4137	1321	1.92	1.92	-7696	7971	4285	35683	16098	4896	20994	No	15.9	Si
SLU 36	15.2	-1700.07	-4272	-3557	1318	1.92	1.6861	-7575	7954	3755	35683	16098	4896	20994	No	15.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	13.4	-1253.84	-9690	-8069	-2855	1.92	1.92	-15010	13419	7214	35683	24147	4896	29043		10.17	Si
SLV 5	15.2	-35.4	-3564	-2968	-3448	1.92	1.92	-5520	11521	6193	35683	24147	4896	29043		8.42	Si
SLV 9	13.4	-1318.41	-9948	-8284	-3600	1.92	1.92	-15409	13499	7257	35683	24147	4896	29043		8.07	Si
SLV 9	15.2	369.66	-3439	-2864	-2933	1.92	1.92	-5328	11482	6173	35683	24147	4896	29043		9.9	Si
SLV 10	13.4	-1369.7	-9625	-8015	-3538	1.92	1.92	-14909	13398	7203	35683	24147	4896	29043		8.21	Si
SLV 10	15.2	412.23	-3331	-2773	-2871	1.92	1.92	-5159	11448	6155	35683	24147	4896	29043		10.12	Si
SLV 4	13.4	-170.6	-1624	-1352	2807	1.92	1.92	-2516	10920	5870	35683	24147	4896	29043		10.35	Si
SLV 4	15.2	-1551.86	-2748	-2288	695	1.536	1.1857	0	0	0	35683	19318	3917	23234		33.41	Si
SLV 7	13.4	397.46	1622	1351	4398	1.536	1.92	0	0	0	35683	19318	3917	23234		5.28	Si
SLV 7	15.2	-1724.95	-2298	-1914	3729	1.536	0.6284	0	0	0	35683	19318	3917	23234		6.23	Si
SLV 6	13.4	-1305.13	-9367	-7800	-2793	1.92	1.92	-14510	13319	7160	35683	24147	4896	29043		10.4	Si
SLV 6	15.2	7.17	-3455	-2877	-3386	1.92	1.92	-5352	11487	6175	35683	24147	4896	29043		8.58	Si
SLV 11	13.4	332.89	1364	1136	3653	1.536	1.92	0	0	0	35683	19318	3917	23234		6.36	Si
SLV 11	15.2	-1319.89	-2174	-1810	4245	1.536	1.0585	0	0	0	35683	19318	3917	23234		5.47	Si
SLV 3	13.4	-91.02	-2125	-1770	2711	1.92	1.92	-3292	11075	5954	35683	24147	4896	29043		10.71	Si
SLV 3	15.2	-1617.93	-2917	-2429	599	1.536	1.2158	0	0	0	35683	19318	3917	23234		38.78	Si
SLV 12	13.4	281.6	1687	1405	3715	1.536	1.92	0	0	0	35683	19318	3917	23234		6.25	Si
SLV 12	15.2	-1277.32	-2065	-1720	4307	1.536	1.0243	0	0	0	35683	19318	3917	23234		5.4	Si
SLV 8	13.4	346.17	1945	1620	4460	1.536	1.92	0	0	0	35683	19318	3917	23234		5.21	Si
SLV 8	15.2	-1682.38	-2190	-1823	3791	1.536	0.5749	0	0	0	35683	19318	3917	23234		6.13	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	0	83	218.14	0	0	No, Trazione
SLV 11	179667	0.53	0	-74	218.14	0	0	No, e>t/2
SLV 8	179667	0.53	0	318	218.14	0	0	No, Trazione
SLV 12	179667	0.53	0	161	218.14	0	0	No, Trazione
SLV 4	179667	0.53	3842	-2065	218.14	281.86	1.29	Si
SLV 3	179667	0.53	4521	-2430	218.14	330.18	1.51	Si
SLV 16	179667	0.53	4813	-2588	218.14	350.85	1.61	Si
SLV 15	179667	0.53	5493	-2953	218.14	398.52	1.83	Si
SLV 2	179667	0.53	8036	-4320	218.14	573.01	2.63	Si
SLV 1	179667	0.53	8715	-4685	218.14	618.52	2.84	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-2571	-10114	-435	2.585	513.7	0.895	41.96263	12.42528	Si
SLV 6	-2538	-9663	-435	2.606	510.6	0.895	42.31064	12.42528	Si
SLV 9	-2354	-9969	-241	2.777	492.8	0.893	45.17634	12.42528	Si
SLV 10	-2321	-9517	-241	2.8	489.7	0.893	45.57041	12.42528	Si
SLV 7	-2024	1571	244	3.03	461.4	0.891	49.43997	12.42528	Si, Trazione
SLV 8	-1991	2022	244	3.058	458.4	0.891	49.90161	12.42528	Si, Trazione
SLV 11	-1807	1716	437	3.167	441.1	0.89	51.73271	12.42528	Si, Trazione
SLV 12	-1774	2167	438	3.197	438.1	0.889	52.24285	12.42528	Si, Trazione
SLV 1	-2642	-6318	-424	2.545	520.6	0.896	41.27692	6.42939	Si
SLV 2	-2591	-5618	-423	2.576	515.7	0.896	41.80194	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.748	SLU 37	Si
V_SLU	15.467	SLU 35	Si
PF_SLV	0	SLV 7	No
V_SLV	5.21	SLV 8	Si
PFFP_SLV	0	SLV 12	No
R_SLV	3.377	SLV 5	Si

Maschio 206

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	5.826	-21.813	5.826	L7	L8	2.2	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	13.4	-452.79	-6025	-0.0000177	0.0003743	0.0035	2.2	5990.51	7448.73	7448.73	16.45	No	Si
SLU 61	15.2	1871.4	-4462	-0.0000234	0.0003743	0.0035	2.2	4559.32	4907.18	4907.18	2.62	No	Si
SLU 10	13.4	-340.16	-4842	-0.000014	0.0003743	0.0035	2.2	4914.66	6322.67	6322.67	18.59	No	Si
SLU 10	15.2	1445.26	-3653	-0.0000184	0.0003743	0.0035	2.2	3784.25	4101.26	4101.26	2.84	No	Si
SLU 43	13.4	-310.65	-6016	-0.0000167	0.0003743	0.0035	2.2	5982.71	7440.36	7440.36	23.95	No	Si
SLU 43	15.2	1874.43	-4596	-0.0000237	0.0003743	0.0035	2.2	4685.32	5039.43	5039.43	2.69	No	Si
SLU 52	13.4	-415.49	-6046	-0.0000175	0.0003743	0.0035	2.2	6009.91	7469.58	7469.58	17.98	No	Si
SLU 52	15.2	1876.19	-4525	-0.0000236	0.0003743	0.0035	2.2	4617.98	4969.04	4969.04	2.65	No	Si
SLU 19	13.4	-377.47	-4820	-0.0000142	0.0003743	0.0035	2.2	4894.33	6300.75	6300.75	16.69	No	Si
SLU 19	15.2	1440.47	-3591	-0.0000182	0.0003743	0.0035	2.2	3723.68	4038.82	4038.82	2.8	No	Si
SLU 18	13.4	-371.94	-4794	-0.0000141	0.0003743	0.0035	2.2	4870.75	6275.35	6275.35	16.87	No	Si
SLU 18	15.2	1436.46	-3568	-0.0000182	0.0003743	0.0035	2.2	3701.42	4015.92	4015.92	2.8	No	Si
SLU 60	13.4	-447.27	-5999	-0.0000176	0.0003743	0.0035	2.2	5968	7424.57	7424.57	16.6	No	Si
SLU 60	15.2	1867.39	-4439	-0.0000233	0.0003743	0.0035	2.2	4537.76	4884.5	4884.5	2.62	No	Si
SLU 44	13.4	-319.85	-6058	-0.0000169	0.0003743	0.0035	2.2	6020.2	7480.64	7480.64	23.39	No	Si
SLU 44	15.2	1881.11	-4634	-0.0000239	0.0003743	0.0035	2.2	4721.04	5076.52	5076.52	2.7	No	Si
SLU 1	13.4	-235.32	-4811	-0.0000132	0.0003743	0.0035	2.2	4886.17	6291.95	6291.95	26.74	No	Si
SLU 1	15.2	1443.5	-3725	-0.0000186	0.0003743	0.0035	2.2	3853.77	4173.02	4173.02	2.89	No	Si
SLU 2	13.4	-244.52	-4853	-0.0000134	0.0003743	0.0035	2.2	4925.43	6334.3	6334.3	25.9	No	Si
SLU 2	15.2	1450.18	-3763	-0.0000187	0.0003743	0.0035	2.2	3890.66	4211.14	4211.14	2.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	13.4	-177.13	-3976	-0.0000107	0.0005615	0.0035	2.2		5524.47	5524.47	31.19		Si
SLV 8	15.2	1002.07	-1964	-0.0000117	0.0005615	0.0035	2.2		2386.6	2386.6	2.38		Si
SLD 3	13.4	-512	-5924	-0.0000177	0.0005615	0.0035	2.2		7477.77	7477.77	14.61		Si
SLD 3	15.2	1325.64	-3348	-0.0000167	0.0005615	0.0035	2.2		3839.38	3839.38	2.9		Si
SLV 11	13.4	225.6	-2803	-0.0000082	0.0005615	0.0035	2.2		3270.15	3270.15	14.5		Si
SLV 11	15.2	1083.29	-2415	-0.000013	0.0005615	0.0035	2.2		2864.38	2864.38	2.64		Si
SLD 7	13.4	-222.13	-4665	-0.0000127	0.0005615	0.0035	2.2		6218.83	6218.83	28		Si
SLD 7	15.2	1245.58	-3048	-0.0000155	0.0005615	0.0035	2.2		3526.78	3526.78	2.83		Si
SLD 4	13.4	-508.63	-5735	-0.0000172	0.0005615	0.0035	2.2		7286.93	7286.93	14.33		Si
SLD 4	15.2	1331.35	-3348	-0.0000168	0.0005615	0.0035	2.2		3838.49	3838.49	2.88		Si
SLD 8	13.4	-219.92	-4541	-0.0000124	0.0005615	0.0035	2.2		6095.87	6095.87	27.72		Si
SLD 8	15.2	1249.32	-3048	-0.0000155	0.0005615	0.0035	2.2		3526.19	3526.19	2.82		Si
SLV 3	13.4	-857.39	-7171	-0.0000231	0.0005615	0.0035	2.2		8700.22	8700.22	10.15		Si
SLV 3	15.2	1167.22	-2636	-0.0000141	0.0005615	0.0035	2.2		3095.65	3095.65	2.65		Si
SLV 7	13.4	-182.18	-4260	-0.0000115	0.0005615	0.0035	2.2		5812.69	5812.69	31.91		Si
SLV 7	15.2	993.51	-1965	-0.0000116	0.0005615	0.0035	2.2		2387.97	2387.97	2.4		Si
SLV 12	13.4	230.66	-2519	-0.0000075	0.0005615	0.0035	2.2		2972.85	2972.85	12.89		Si
SLV 12	15.2	1091.86	-2414	-0.0000131	0.0005615	0.0035	2.2		2863.03	2863.03	2.62		Si
SLV 4	13.4	-849.55	-6730	-0.0000219	0.0005615	0.0035	2.2		8278.28	8278.28	9.74		Si
SLV 4	15.2	1180.51	-2634	-0.0000142	0.0005615	0.0035	2.2		3093.56	3093.56	2.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.4	-119	-8760	-7295	-2238	2.2	2.2	-11842	8523	5250	35683	18446	5610	24056	No	10.75	Si
SLU 78	15.2	1914.19	-7748	-6452	-2238	2.2	2.2	-10474	8341	5138	35683	18446	5610	24056	No	10.75	Si
SLU 48	13.4	-31.63	-8051	-6704	-2206	2.2	2.2	-10884	8396	5172	35683	18446	5610	24056	No	10.91	Si
SLU 48	15.2	1908.92	-7118	-5927	-2206	2.2	2.2	-9622	8227	5068	35683	18446	5610	24056	No	10.9	Si
SLU 77	13.4	-113.47	-8735	-7274	-2236	2.2	2.2	-11808	8519	5248	35683	18446	5610	24056	No	10.76	Si
SLU 77	15.2	1910.18	-7725	-6433	-2236	2.2	2.2	-10443	8337	5136	35683	18446	5610	24056	No	10.76	Si
SLU 72	13.4	-60.14	-8502	-7080	-2199	2.2	2.2	-11493	8477	5222	35683	18446	5610	24056	No	10.94	Si
SLU 72	15.2	1800.7	-7599	-6328	-2199	2.2	2.2	-10272	8314	5122	35683	18446	5610	24056	No	10.94	Si
SLU 70	13.4	-23.36	-8772	-7305	-2240	2.2	2.2	-11858	8525	5252	35683	18446	5610	24056	No	10.74	Si
SLU 70	15.2	1919.12	-7858	-6543	-2241	2.2	2.2	-10622	8361	5150	35683	18446	5610	24056	No	10.74	Si
SLU 49	13.4	-37.16	-8076	-6725	-2208	2.2	2.2	-10918	8400	5175	35683	18446	5610	24056	No	10.9	Si
SLU 49	15.2	1912.93	-7141	-5946	-2208	2.2	2.2	-9653	8231	5071	35683	18446	5610	24056	No	10.89	Si
SLU 71	13.4	-54.62	-8477	-7059	-2197	2.2	2.2	-11459	8472	5219	35683	18446	5610	24056	No	10.95	Si
SLU 71	15.2	1796.69	-7576	-6309	-2197	2.2	2.2	-10241	8310	5119	35683	18446	5610	24056	No	10.95	Si
SLU 56	13.4	-127.27	-8040	-6695	-2204	2.2	2.2	-10868	8393	5170	35683	18446	5610	24056	No	10.92	Si
SLU 56	15.2	1903.99	-7008	-5836	-2204	2.2	2.2	-9474	8208	5056	35683	18446	5610	24056	No	10.92	Si
SLU 69	13.4	-17.84	-8747	-7283	-2238	2.2	2.2	-11824	8521	5249	35683	18446	5610	24056	No	10.75	Si
SLU 69	15.2	1915.11	-7835	-6524	-2238	2.2	2.2	-10591	8357	5148	35683	18446	5610	24056	No	10.75	Si
SLU 57	13.4	-132.79	-8065	-6716	-2206	2.2	2.2	-10902	8398	5173	35683	18446	5610	24056	No	10.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	15.2	1908	-7031	-5855	-2206	2.2	2.2	-9504	8212	5058	35683	18446	5610	24056	No	10.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	13.4	509.74	-1872	-1559	-3691	2.2	2.2	-2531	10923	6728	35683	27669	5610	33279		9.02	Si
SLV 16	15.2	1479.79	-4135	-3443	-1581	2.2	2.2	-5590	11535	7105	35683	27669	5610	33279		21.04	Si
SLV 10	13.4	-335.23	-5753	-4790	-2461	2.2	2.2	-7776	11972	7375	35683	27669	5610	33279		13.52	Si
SLV 10	15.2	1894.21	-5831	-4856	-1735	2.2	2.2	-7883	11993	7388	35683	27669	5610	33279		19.18	Si
SLV 9	13.4	-340.28	-6037	-5027	-2292	2.2	2.2	-8160	12049	7422	35683	27669	5610	33279		14.52	Si
SLV 9	15.2	1885.65	-5832	-4857	-1566	2.2	2.2	-7884	11994	7388	35683	27669	5610	33279		21.25	Si
SLV 13	13.4	332.14	-3283	-2734	-3534	2.2	2.2	-4438	11304	6963	35683	27669	5610	33279		9.42	Si
SLV 13	15.2	1707.21	-5162	-4299	-1373	2.2	2.2	-6978	11812	7276	35683	27669	5610	33279		24.24	Si
SLV 14	13.4	339.98	-2842	-2367	-3796	2.2	2.2	-3842	11185	6890	35683	27669	5610	33279		8.77	Si
SLV 14	15.2	1720.5	-5160	-4297	-1635	2.2	2.2	-6975	11812	7276	35683	27669	5610	33279		20.36	Si
SLD 16	13.4	69.2	-3660	-3048	-2494	2.2	2.2	-4947	11406	7026	35683	27669	5610	33279		13.34	Si
SLD 16	15.2	1455.4	-3996	-3328	-1589	2.2	2.2	-5402	11497	7082	35683	27669	5610	33279		20.94	Si
SLD 13	13.4	-8.78	-4278	-3562	-2428	2.2	2.2	-5783	11573	7129	35683	27669	5610	33279		13.71	Si
SLD 13	15.2	1556.37	-4449	-3704	-1501	2.2	2.2	-6014	11619	7158	35683	27669	5610	33279		22.18	Si
SLD 14	13.4	-5.41	-4089	-3405	-2540	2.2	2.2	-5527	11522	7098	35683	27669	5610	33279		13.1	Si
SLD 14	15.2	1562.08	-4448	-3704	-1613	2.2	2.2	-6013	11619	7157	35683	27669	5610	33279		20.63	Si
SLD 15	13.4	65.84	-3849	-3205	-2381	2.2	2.2	-5203	11457	7058	35683	27669	5610	33279		13.97	Si
SLD 15	15.2	1449.69	-3997	-3328	-1477	2.2	2.2	-5403	11497	7082	35683	27669	5610	33279		22.54	Si
SLV 15	13.4	501.9	-2313	-1926	-3430	2.2	2.2	-3126	11042	6802	35683	27669	5610	33279		9.7	Si
SLV 15	15.2	1466.5	-4137	-3445	-1320	2.2	2.2	-5592	11535	7106	35683	27669	5610	33279		25.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.53	3826	-2357	249.96	321.69	1.29	Si
SLV 15	179667	0.53	4320	-2661	249.96	362.03	1.45	Si
SLV 14	179667	0.53	4494	-2768	249.96	376.17	1.5	Si
SLV 13	179667	0.53	4988	-3073	249.96	416.14	1.66	Si
SLV 12	179667	0.53	5423	-3341	249.96	451.06	1.8	Si
SLV 11	179667	0.53	5741	-3537	249.96	476.52	1.91	Si
SLV 8	179667	0.53	7384	-4549	249.96	606.04	2.42	Si
SLV 10	179667	0.53	7650	-4712	249.96	626.68	2.51	Si
SLV 7	179667	0.53	7703	-4745	249.96	630.79	2.52	Si
SLV 9	179667	0.53	7968	-4908	249.96	651.33	2.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4455	-7871	-391	1.985	736.7	0.908	31.76684	12.42528	Si
SLV 9	-4409	-8124	-393	1.999	732.1	0.908	32.00438	12.42528	Si
SLV 6	-3581	-9255	-425	2.296	650.5	0.901	37.05263	12.42528	Si
SLV 5	-3536	-9507	-428	2.315	646	0.9	37.37598	12.42528	Si
SLV 12	-2162	-1260	381	3.124	514	0.89	51.02066	12.42528	Si
SLV 11	-2116	-1512	378	3.161	509.7	0.89	51.63857	12.42528	Si
SLV 14	-4685	-3874	-80	1.964	759.5	0.91	31.36878	6.42939	Si
SLV 13	-4613	-4265	-84	1.985	752.4	0.909	31.72115	6.42939	Si
SLV 8	-1288	-2643	346	4.021	435.3	0.891	65.57299	12.42528	Si
SLV 7	-1242	-2895	344	4.083	431.4	0.892	66.53589	12.42528	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.616	SLU 60	Si
V_SLU	10.736	SLU 70	Si
PF_SLV	2.382	SLV 8	Si
V_SLV	8.768	SLV 14	Si
PFFP_SLV	1.287	SLV 16	Si
R_SLV	2.557	SLV 10	Si

Maschio 207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L7	L8	2.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	13.4	-148.16	-5096	-0.0000138	0.0003743	0.0035	2.14	4997.27	6389.62	6389.62	43.13	No	Si
SLU 38	15.2	-1857.17	-4466	-0.0000244	0.0003743	0.0035	2.14	4428.64	5788.51	5788.51	3.12	No	Si
SLU 79	13.4	-265.26	-6352	-0.0000178	0.0003743	0.0035	2.14	6088.66	7548.42	7548.42	28.46	No	Si
SLU 79	15.2	-1995.02	-5231	-0.0000272	0.0003743	0.0035	2.14	5117.27	6514.08	6514.08	3.27	No	Si
SLU 30	13.4	-324.49	-5255	-0.0000154	0.0003743	0.0035	2.14	5138.77	6536.31	6536.31	20.14	No	Si
SLU 30	15.2	-1786.68	-4431	-0.0000237	0.0003743	0.0035	2.14	4397.19	5755.23	5755.23	3.22	No	Si
SLU 35	13.4	-201.13	-5431	-0.000015	0.0003743	0.0035	2.14	5293.94	6696.75	6696.75	33.3	No	Si
SLU 35	15.2	-1864.62	-4793	-0.0000252	0.0003743	0.0035	2.14	4725.44	6105.33	6105.33	3.27	No	Si
SLU 80	13.4	-253.19	-6269	-0.0000175	0.0003743	0.0035	2.14	6018.85	7471.47	7471.47	29.51	No	Si
SLU 80	15.2	-2023.17	-5212	-0.0000274	0.0003743	0.0035	2.14	5100.59	6496.81	6496.81	3.21	No	Si
SLU 36	13.4	-189.06	-5349	-0.0000147	0.0003743	0.0035	2.14	5221.48	6621.65	6621.65	35.02	No	Si
SLU 36	15.2	-1892.77	-4774	-0.0000254	0.0003743	0.0035	2.14	4708.46	6087.46	6087.46	3.22	No	Si
SLU 72	13.4	-429.52	-6429	-0.0000192	0.0003743	0.0035	2.14	6153.79	7620.6	7620.6	17.74	No	Si
SLU 72	15.2	-1952.67	-5178	-0.0000268	0.0003743	0.0035	2.14	5070.03	6465.16	6465.16	3.31	No	Si
SLU 37	13.4	-160.23	-5178	-0.0000141	0.0003743	0.0035	2.14	5070.47	6465.61	6465.61	40.35	No	Si
SLU 37	15.2	-1829.02	-4485	-0.0000242	0.0003743	0.0035	2.14	4445.82	5806.71	5806.71	3.17	No	Si
SLU 29	13.4	-336.56	-5338	-0.0000157	0.0003743	0.0035	2.14	5211.51	6611.35	6611.35	19.64	No	Si
SLU 29	15.2	-1758.53	-4450	-0.0000235	0.0003743	0.0035	2.14	4414.39	5773.42	5773.42	3.28	No	Si
SLU 78	13.4	-294.09	-6522	-0.0000185	0.0003743	0.0035	2.14	6232.65	7706.95	7706.95	26.21	No	Si
SLU 78	15.2	-2058.76	-5520	-0.0000284	0.0003743	0.0035	2.14	5372.33	6778.46	6778.46	3.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	13.4	514.22	-3003	-0.000011	0.0005615	0.0035	2.14		3370.86	3370.86	6.56		Si
SLV 2	15.2	-1856.08	-4143	-0.0000236	0.0005615	0.0035	2.14		5544.17	5544.17	2.99		Si
SLD 6	13.4	155.99	-1656	-0.0000051	0.0005615	0.0035	2.14		1990.07	1990.07	12.76		Si
SLD 6	15.2	-1462.06	-3009	-0.0000182	0.0005615	0.0035	2.14		4411.95	4411.95	3.02		Si
SLD 5	13.4	124.83	-1500	-0.0000045	0.0005615	0.0035	2.14		1829.12	1829.12	14.65		Si
SLD 5	15.2	-1444.05	-2955	-0.0000179	0.0005615	0.0035	2.14		4357.92	4357.92	3.02		Si
SLV 9	13.4	287.88	2203	0.1551409	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	15.2	-1759.73	-2079	-0.0000325	0.0005615	0.0035	1.712		3469.26	3469.26	1.97		Si
SLV 6	13.4	646.3	1659	0.1140863	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	15.2	-2156.44	-2874	-0.0000319	0.0005615	0.0035	1.712		4275.7	4275.7	1.98		Si
SLV 10	13.4	359.21	1846	0.1293208	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	15.2	-1800.94	-2202	-0.0000307	0.0005615	0.0035	1.712		3594.6	3594.6	2		Si
SLD 9	13.4	1.57	-1420	-0.0000035	0.0005615	0.0035	2.14		1746.32	1746.32	1114.24		Si
SLD 9	15.2	-1291.83	-2668	-0.000016	0.0005615	0.0035	2.14		4067.13	4067.13	3.15		Si
SLV 5	13.4	574.96	2016	0.1400981	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	15.2	-2115.22	-2751	-0.0000324	0.0005615	0.0035	1.712		4151.31	4151.31	1.96		Si
SLV 1	13.4	403.52	-2449	-0.0000088	0.0005615	0.0035	2.14		2806.97	2806.97	6.96		Si
SLV 1	15.2	-1792.12	-3953	-0.0000227	0.0005615	0.0035	2.14		5356.31	5356.31	2.99		Si
SLD 10	13.4	32.72	-1576	-0.0000041	0.0005615	0.0035	2.14		1907.79	1907.79	58.3		Si
SLD 10	15.2	-1309.83	-2721	-0.0000163	0.0005615	0.0035	2.14		4121.48	4121.48	3.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	13.4	-189.06	-5349	-4454	1835	2.14	2.14	-7434	7936	4755	35683	17943	5457	23399	No	12.75	Si
SLU 36	15.2	-1892.77	-4774	-3975	1823	2.14	2.0206	-7059	7886	4461	35683	17943	5457	23399	No	12.84	Si
SLU 38	13.4	-148.16	-5096	-4244	1805	2.14	2.14	-7082	7889	4727	35683	17943	5457	23399	No	12.96	Si
SLU 38	15.2	-1857.17	-4466	-3719	1793	2.14	1.9624	-6795	7851	4314	35683	17943	5457	23399	No	13.05	Si
SLU 83	13.4	-142.82	-5879	-4895	1755	2.14	2.14	-8170	8034	4814	35683	17943	5457	23399	No	13.34	Si
SLU 83	15.2	-1682.72	-4733	-3941	1752	2.14	2.14	-6578	7822	4687	35683	17943	5457	23399	No	13.35	Si
SLU 76	13.4	-198.27	-5810	-4838	1755	2.14	2.14	-8074	8021	4806	35683	17943	5457	23399	No	13.33	Si
SLU 76	15.2	-1699.42	-4687	-3903	1737	2.14	2.1223	-6514	7813	4643	35683	17943	5457	23399	No	13.47	Si
SLU 84	13.4	-130.75	-5797	-4827	1820	2.14	2.14	-8056	8019	4805	35683	17943	5457	23399	No	12.86	Si
SLU 84	15.2	-1710.86	-4714	-3926	1808	2.14	2.1213	-6552	7818	4644	35683	17943	5457	23399	No	12.94	Si
SLU 80	13.4	-253.19	-6269	-5221	1941	2.14	2.14	-8713	8106	4857	35683	17943	5457	23399	No	12.06	Si
SLU 80	15.2	-2023.17	-5212	-4340	1928	2.14	2.0455	-7617	7960	4559	35683	17943	5457	23399	No	12.14	Si
SLU 35	13.4	-201.13	-5431	-4523	1770	2.14	2.14	-7548	7951	4764	35683	17943	5457	23399	No	13.22	Si
SLU 35	15.2	-1864.62	-4793	-3991	1767	2.14	2.0429	-7010	7879	4507	35683	17943	5457	23399	No	13.24	Si
SLU 79	13.4	-265.26	-6352	-5289	1875	2.14	2.14	-8827	8121	4866	35683	17943	5457	23399	No	12.48	Si
SLU 79	15.2	-1995.02	-5231	-4356	1872	2.14	2.0658	-7570	7954	4601	35683	17943	5457	23399	No	12.5	Si
SLU 78	13.4	-294.09	-6522	-5431	1971	2.14	2.14	-9064	8153	4885	35683	17943	5457	23399	No	11.87	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	15.2	-2058.76	-5520	-4597	1958	2.14	2.0912	-7894	7997	4682	35683	17943	5457	23399	No	11.95	Si
SLU 77	13.4	-306.16	-6605	-5500	1905	2.14	2.14	-9178	8168	4894	35683	17943	5457	23399	No	12.28	Si
SLU 77	15.2	-2030.62	-5539	-4613	1902	2.14	2.1102	-7698	7971	4710	35683	17943	5457	23399	No	12.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	13.4	-1102.69	-10213	-8505	-3699	2.14	2.14	-14194	13255	7943	35683	26914	5457	32371		8.75	Si
SLV 11	15.2	315.95	-3372	-2808	-3168	2.14	2.14	-4686	11354	6803	35683	26914	5457	32371		10.22	Si
SLV 7	13.4	-815.6	-10400	-8660	-2903	2.14	2.14	-14453	13307	7974	35683	26914	5457	32371		11.15	Si
SLV 7	15.2	-39.55	-4043	-3367	-3370	2.14	2.14	-5619	11540	6915	35683	26914	5457	32371		9.6	Si
SLV 8	13.4	-744.27	-10757	-8958	-2980	2.14	2.14	-14949	13407	8033	35683	26914	5457	32371		10.86	Si
SLV 8	15.2	-80.77	-4166	-3469	-3447	2.14	2.14	-5789	11575	6935	35683	26914	5457	32371		9.39	Si
SLV 2	13.4	514.22	-3003	-2501	3450	2.14	2.14	-4173	11251	6742	35683	26914	5457	32371		9.38	Si
SLV 2	15.2	-1856.08	-4143	-3450	1777	2.14	1.866	-6622	11741	6135	35683	26914	5457	32371		18.21	Si
SLV 1	13.4	403.52	-2449	-2040	3569	2.14	2.14	-3404	11097	6650	35683	26914	5457	32371		9.07	Si
SLV 1	15.2	-1792.12	-3953	-3291	1896	2.14	1.8498	-6372	11691	6055	35683	26914	5457	32371		17.07	Si
SLV 5	13.4	574.96	2016	1679	5594	1.712	2.14	0	0	0	35683	21531	4366	25897		4.63	Si
SLV 5	15.2	-2115.22	-2751	-2291	5062	1.712	0.9032	0	0	0	35683	21531	4366	25897		5.12	Si
SLV 6	13.4	646.3	1659	1382	5517	1.712	2.0414	0	0	0	35683	21531	4366	25897		4.69	Si
SLV 6	15.2	-2156.44	-2874	-2393	4985	1.712	0.9587	0	0	0	35683	21531	4366	25897		5.19	Si
SLV 9	13.4	287.88	2203	1834	4798	1.712	2.14	0	0	0	35683	21531	4366	25897		5.4	Si
SLV 9	15.2	-1759.73	-2079	-1732	5264	1.712	0.6712	0	0	0	35683	21531	4366	25897		4.92	Si
SLV 12	13.4	-1031.35	-10570	-8802	-3775	2.14	2.14	-14690	13355	8002	35683	26914	5457	32371		8.57	Si
SLV 12	15.2	274.73	-3494	-2910	-3245	2.14	2.14	-4856	11388	6824	35683	26914	5457	32371		9.98	Si
SLV 10	13.4	359.21	1846	1537	4722	1.712	2.14	0	0	0	35683	21531	4366	25897		5.48	Si
SLV 10	15.2	-1800.94	-2202	-1834	5187	1.712	0.7565	0	0	0	35683	21531	4366	25897		4.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.53	0	-1718	243.14	0	0	No, e>t/2
SLV 10	179667	0.53	0	190	243.14	0	0	No, Trazione
SLV 6	179667	0.53	0	-234	243.14	0	0	No, e>t/2
SLV 9	179667	0.53	0	452	243.14	0	0	No, Trazione
SLV 5	179667	0.53	0	28	243.14	0	0	No, Trazione
SLV 14	179667	0.53	3544	-2123	243.14	290.39	1.19	Si
SLV 1	179667	0.53	5224	-3130	243.14	423.25	1.74	Si
SLV 2	179667	0.53	5901	-3536	243.14	475.92	1.96	Si
SLV 15	179667	0.53	6780	-4063	243.14	543.51	2.24	Si
SLV 16	179667	0.53	7457	-4468	243.14	595.03	2.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2840	-11427	479	2.601	570.1	0.895	42.2253	12.42528	Si
SLV 7	-2802	-10930	478	2.623	566.4	0.895	42.59902	12.42528	Si
SLV 12	-2505	-10640	257	2.857	538	0.892	46.52444	12.42528	Si
SLV 11	-2466	-10143	257	2.883	534.3	0.892	46.96651	12.42528	Si
SLV 6	-2291	887	-258	3.007	517.7	0.891	49.05237	12.42528	Si, Trazione
SLV 5	-2252	1384	-258	3.036	514	0.891	49.53846	12.42528	Si, Trazione
SLV 10	-1956	1674	-480	3.218	486.3	0.889	52.59317	12.42528	Si, Trazione
SLV 9	-1917	2171	-480	3.252	482.7	0.889	53.15534	12.42528	Si, Trazione
SLV 4	-3050	-8172	479	2.488	590.5	0.897	40.31135	6.42939	Si
SLV 3	-2990	-7401	479	2.519	584.6	0.896	40.84427	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.117	SLU 38	Si
V_SLU	11.875	SLU 78	Si
PF_SLV	0	SLV 5	No
V_SLV	4.63	SLV 5	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.398	SLV 8	Si

Maschio 208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L7	L8	2.28	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	14.5	23.41	-8060	-0.0000192	0.0003743	0.0035	2.28	8048.81	8474.66	8474.66	361.95	No	Si
SLU 72	15.3	340.45	-6265	-0.0000169	0.0003743	0.0035	2.28	6453.89	6920.2	6920.2	20.33	No	Si
SLU 5	14.5	-21.68	-5470	-0.000013	0.0003743	0.0035	2.28	5710.59	7177.78	7177.78	331.14	No	Si
SLU 5	15.3	226.45	-4151	-0.0000111	0.0003743	0.0035	2.28	4429.66	4790.01	4790.01	21.15	No	Si
SLU 9	14.5	64.64	-6225	-0.000015	0.0003743	0.0035	2.28	6416.59	6880.3	6880.3	106.44	No	Si
SLU 9	15.3	281.01	-4845	-0.0000131	0.0003743	0.0035	2.28	5111.83	5502.35	5502.35	19.58	No	Si
SLU 71	14.5	30.44	-8081	-0.0000193	0.0003743	0.0035	2.28	8067.17	8492.31	8492.31	279.03	No	Si
SLU 71	15.3	339.15	-6281	-0.0000169	0.0003743	0.0035	2.28	6468.48	6935.82	6935.82	20.45	No	Si
SLU 51	14.5	44.33	-7442	-0.0000179	0.0003743	0.0035	2.28	7512.81	7969.45	7969.45	179.79	No	Si
SLU 51	15.3	327.09	-5699	-0.0000154	0.0003743	0.0035	2.28	5927.34	6359.81	6359.81	19.44	No	Si
SLU 29	14.5	50.75	-6864	-0.0000165	0.0003743	0.0035	2.28	6998.25	7499.22	7499.22	147.77	No	Si
SLU 29	15.3	293.07	-5427	-0.0000145	0.0003743	0.0035	2.28	5670.4	6088.88	6088.88	20.78	No	Si
SLU 50	14.5	51.35	-7464	-0.000018	0.0003743	0.0035	2.28	7531.64	7986.88	7986.88	155.55	No	Si
SLU 50	15.3	325.79	-5715	-0.0000154	0.0003743	0.0035	2.28	5942.24	6375.57	6375.57	19.57	No	Si
SLU 47	14.5	-41.99	-6687	-0.000016	0.0003743	0.0035	2.28	6839.06	8379.93	8379.93	199.58	No	Si
SLU 47	15.3	272.52	-5005	-0.0000134	0.0003743	0.0035	2.28	5265.97	5663.28	5663.28	20.78	No	Si
SLU 30	14.5	43.73	-6842	-0.0000164	0.0003743	0.0035	2.28	6978.97	7480.79	7480.79	171.08	No	Si
SLU 30	15.3	294.37	-5411	-0.0000145	0.0003743	0.0035	2.28	5655.34	6073.04	6073.04	20.63	No	Si
SLU 8	14.5	71.66	-6246	-0.0000151	0.0003743	0.0035	2.28	6436.34	6901.42	6901.42	96.31	No	Si
SLU 8	15.3	279.71	-4861	-0.0000131	0.0003743	0.0035	2.28	5127.21	5518.53	5518.53	19.73	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	14.5	-803.4	-6387	-0.0000199	0.0005615	0.0035	2.28		8228.61	8228.61	10.24		Si
SLV 15	15.3	885.9	-4620	-0.0000162	0.0005615	0.0035	2.28		5355.88	5355.88	6.05		Si
SLV 2	14.5	614.39	-3445	-0.0000117	0.0005615	0.0035	2.28		4103.99	4103.99	6.68		Si
SLV 2	15.3	-563.3	-2664	-0.0000096	0.0005615	0.0035	2.28		4309.91	4309.91	7.65		Si
SLD 13	14.5	-425.54	-5063	-0.0000144	0.0005615	0.0035	2.28		6850.66	6850.66	16.1		Si
SLD 13	15.3	485.61	-3734	-0.0000116	0.0005615	0.0035	2.28		4413.87	4413.87	9.09		Si
SLV 16	14.5	-701.26	-6391	-0.0000192	0.0005615	0.0035	2.28		8232.21	8232.21	11.74		Si
SLV 16	15.3	787.98	-4661	-0.0000157	0.0005615	0.0035	2.28		5399.01	5399.01	6.85		Si
SLV 10	14.5	-371.87	-3336	-0.00001	0.0005615	0.0035	2.28		5034.15	5034.15	13.54		Si
SLV 10	15.3	388.91	-2588	-0.0000083	0.0005615	0.0035	2.28		3176.01	3176.01	8.17		Si
SLV 14	14.5	-763.42	-5277	-0.000017	0.0005615	0.0035	2.28		7072.74	7072.74	9.26		Si
SLV 14	15.3	819.07	-3909	-0.0000141	0.0005615	0.0035	2.28		4600.13	4600.13	5.62		Si
SLV 4	14.5	676.55	-4559	-0.0000147	0.0005615	0.0035	2.28		5290.47	5290.47	7.82		Si
SLV 4	15.3	-594.38	-3417	-0.0000115	0.0005615	0.0035	2.28		5120.46	5120.46	8.61		Si
SLV 13	14.5	-865.56	-5274	-0.0000176	0.0005615	0.0035	2.28		7069.13	7069.13	8.17		Si
SLV 13	15.3	916.98	-3868	-0.0000146	0.0005615	0.0035	2.28		4556.84	4556.84	4.97		Si
SLV 9	14.5	-437.7	-3334	-0.0000104	0.0005615	0.0035	2.28		5031.75	5031.75	11.5		Si
SLV 9	15.3	452.01	-2562	-0.0000087	0.0005615	0.0035	2.28		3147.54	3147.54	6.96		Si
SLV 1	14.5	512.25	-3442	-0.0000111	0.0005615	0.0035	2.28		4100.23	4100.23	8		Si
SLV 1	15.3	-465.38	-2624	-0.0000089	0.0005615	0.0035	2.28		4265.91	4265.91	9.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	14.5	1.61	-8368	-6968	-1241	2.28	2.28	-10915	8400	5362	35683	19117	5814	24931	No	20.09	Si
SLU 78	15.3	284.64	-6588	-5486	-1053	2.28	2.28	-8593	8090	5165	35683	19117	5814	24931	No	23.67	Si
SLU 70	14.5	-9.16	-8455	-7040	-1371	2.28	2.28	-11028	8415	5372	35683	19117	5814	24931	No	18.19	Si
SLU 70	15.3	324.45	-6632	-5522	-1135	2.28	2.28	-8650	8098	5170	35683	19117	5814	24931	No	21.97	Si
SLU 67	14.5	-90.8	-7714	-6423	-1321	2.28	2.28	-10061	8286	5290	35683	19117	5814	24931	No	18.87	Si
SLU 67	15.3	269.02	-5948	-4953	-1093	2.28	2.28	-7758	7979	5094	35683	19117	5814	24931	No	22.8	Si
SLU 69	14.5	-2.14	-8476	-7058	-1369	2.28	2.28	-11056	8419	5374	35683	19117	5814	24931	No	18.21	Si
SLU 69	15.3	323.15	-6648	-5536	-1126	2.28	2.28	-8671	8101	5171	35683	19117	5814	24931	No	22.13	Si
SLU 66	14.5	-83.78	-7735	-6441	-1319	2.28	2.28	-10089	8290	5292	35683	19117	5814	24931	No	18.9	Si
SLU 66	15.3	267.72	-5964	-4966	-1085	2.28	2.28	-7779	7982	5096	35683	19117	5814	24931	No	22.97	Si
SLU 68	14.5	-62.9	-7305	-6083	-1259	2.28	2.28	-9528	8215	5244	35683	19117	5814	24931	No	19.8	Si
SLU 68	15.3	285.88	-5571	-4639	-1051	2.28	2.28	-7266	7913	5052	35683	19117	5814	24931	No	23.71	Si
SLU 48	14.5	18.77	-7858	-6544	-1274	2.28	2.28	-10250	8311	5306	35683	19117	5814	24931	No	19.56	Si
SLU 48	15.3	309.79	-6082	-5064	-1034	2.28	2.28	-7933	8002	5109	35683	19117	5814	24931	No	24.12	Si
SLU 72	14.5	23.41	-8060	-6711	-1308	2.28	2.28	-10513	8346	5328	35683	19117	5814	24931	No	19.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	15.3	340.45	-6265	-5217	-1087	2.28	2.28	-8172	8034	5129	35683	19117	5814	24931	No	22.94	Si
SLU 49	14.5	11.75	-7837	-6526	-1276	2.28	2.28	-10222	8307	5304	35683	19117	5814	24931	No	19.54	Si
SLU 49	15.3	311.09	-6066	-5051	-1042	2.28	2.28	-7912	7999	5107	35683	19117	5814	24931	No	23.93	Si
SLU 71	14.5	30.44	-8081	-6729	-1306	2.28	2.28	-10541	8350	5331	35683	19117	5814	24931	No	19.09	Si
SLU 71	15.3	339.15	-6281	-5230	-1079	2.28	2.28	-8193	8037	5131	35683	19117	5814	24931	No	23.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	14.5	-763.42	-5277	-4394	-3385	2.28	2.28	-6883	11793	7529	35683	28675	5814	34489		10.19	Si
SLV 14	15.3	819.07	-3909	-3255	-2536	2.28	2.28	-5098	11436	7301	35683	28675	5814	34489		13.6	Si
SLD 16	14.5	-354.05	-5555	-4626	-2060	2.28	2.28	-7245	11866	7575	35683	28675	5814	34489		16.74	Si
SLD 16	15.3	429.91	-4084	-3401	-1494	2.28	2.28	-5327	11482	7330	35683	28675	5814	34489		23.08	Si
SLV 15	14.5	-803.4	-6387	-5319	-3950	2.28	2.28	-8331	12083	7714	35683	28675	5814	34489		8.73	Si
SLV 15	15.3	885.9	-4620	-3847	-2786	2.28	2.28	-6027	11622	7420	35683	28675	5814	34489		12.38	Si
SLD 15	14.5	-397.91	-5553	-4624	-2193	2.28	2.28	-7243	11865	7575	35683	28675	5814	34489		15.73	Si
SLD 15	15.3	471.95	-4066	-3386	-1608	2.28	2.28	-5304	11477	7327	35683	28675	5814	34489		21.45	Si
SLV 12	14.5	-164.66	-7048	-5869	-2037	2.28	2.28	-9193	12255	7824	35683	28675	5814	34489		16.93	Si
SLV 12	15.3	285.3	-5096	-4244	-1195	2.28	2.28	-6647	11746	7499	35683	28675	5814	34489		28.85	Si
SLV 13	14.5	-865.56	-5274	-4391	-3694	2.28	2.28	-6879	11792	7528	35683	28675	5814	34489		9.34	Si
SLV 13	15.3	916.98	-3868	-3221	-2800	2.28	2.28	-5045	11426	7294	35683	28675	5814	34489		12.32	Si
SLV 16	14.5	-701.26	-6391	-5322	-3641	2.28	2.28	-8336	12084	7714	35683	28675	5814	34489		9.47	Si
SLV 16	15.3	787.98	-4661	-3881	-2522	2.28	2.28	-6080	11633	7426	35683	28675	5814	34489		13.68	Si
SLV 2	14.5	614.39	-3445	-2869	2209	2.28	2.28	-4494	11315	7224	35683	28675	5814	34489		15.61	Si
SLV 2	15.3	-563.3	-2664	-2219	1340	2.28	2.28	-3475	11112	7094	35683	28675	5814	34489		25.73	Si
SLV 11	14.5	-230.48	-7046	-5867	-2236	2.28	2.28	-9190	12255	7823	35683	28675	5814	34489		15.42	Si
SLV 11	15.3	348.4	-5070	-4222	-1366	2.28	2.28	-6613	11739	7494	35683	28675	5814	34489		25.25	Si
SLD 13	14.5	-425.54	-5063	-4216	-2079	2.28	2.28	-6604	11737	7493	35683	28675	5814	34489		16.59	Si
SLD 13	15.3	485.61	-3734	-3110	-1614	2.28	2.28	-4871	11391	7272	35683	28675	5814	34489		21.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	4890	-3122	259.05	423.08	1.63	Si
SLV 5	179667	0.53	4898	-3127	259.05	423.73	1.64	Si
SLV 10	179667	0.53	4992	-3187	259.05	431.6	1.67	Si
SLV 6	179667	0.53	5000	-3192	259.05	432.25	1.67	Si
SLV 13	179667	0.53	6805	-4345	259.05	581.14	2.24	Si
SLV 1	179667	0.53	6831	-4361	259.05	583.24	2.25	Si
SLV 14	179667	0.53	6964	-4446	259.05	594	2.29	Si
SLV 2	179667	0.53	6989	-4462	259.05	596.1	2.3	Si
SLV 15	179667	0.53	8479	-5413	259.05	715.74	2.76	Si
SLV 3	179667	0.53	8505	-5429	259.05	717.79	2.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3816	-8483	877	2.177	684.4	0.902	35.09621	12.42528	Si
SLV 11	-3807	-8377	877	2.18	683.5	0.901	35.15325	12.42528	Si
SLV 8	-3618	-8915	846	2.261	664.9	0.9	36.50942	12.42528	Si
SLV 7	-3609	-8810	846	2.264	664.1	0.9	36.57086	12.42528	Si
SLV 10	-2290	-2487	-830	2.981	537.4	0.89	48.6635	12.42528	Si
SLV 9	-2282	-2382	-830	2.987	536.5	0.89	48.76941	12.42528	Si
SLV 6	-2092	-2920	-861	3.122	518.9	0.889	51.01176	12.42528	Si
SLV 5	-2083	-2814	-861	3.129	518.1	0.889	51.12755	12.42528	Si
SLV 16	-3516	-5909	316	2.402	655	0.899	38.83552	6.42939	Si
SLV 15	-3502	-5745	316	2.408	653.6	0.899	38.93897	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.444	SLU 51	Si
V_SLU	18.19	SLU 70	Si
PF_SLV	4.969	SLV 13	Si
V_SLV	8.732	SLV 15	Si
PFFP_SLV	1.633	SLV 9	Si
R_SLV	2.825	SLV 12	Si

Maschio 209

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L7	L8	0.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	14.5	26.25	-1776	-0.0000202	0.0003743	0.0035	0.55	433.01	459.61	459.61	17.51	No	Si
SLU 64	15.3	61.29	-1717	-0.0000234	0.0003743	0.0035	0.55	420.43	448.07	448.07	7.31	No	Si
SLU 66	14.5	37.49	-2032	-0.000024	0.0003743	0.0035	0.55	486.33	510.53	510.53	13.62	No	Si
SLU 66	15.3	65.5	-2003	-0.0000268	0.0003743	0.0035	0.55	480.51	504.82	504.82	7.71	No	Si
SLU 25	14.5	28.24	-1652	-0.0000192	0.0003743	0.0035	0.55	406.33	433.97	433.97	15.37	No	Si
SLU 25	15.3	60.35	-1679	-0.0000229	0.0003743	0.0035	0.55	412.27	439.98	439.98	7.29	No	Si
SLU 31	14.5	19.01	-1395	-0.0000156	0.0003743	0.0035	0.55	349.49	375.74	375.74	19.77	No	Si
SLU 31	15.3	48.86	-1414	-0.000019	0.0003743	0.0035	0.55	353.69	380.13	380.13	7.78	No	Si
SLU 23	14.5	15.61	-1387	-0.0000152	0.0003743	0.0035	0.55	347.77	373.95	373.95	23.96	No	Si
SLU 23	15.3	57.26	-1396	-0.0000197	0.0003743	0.0035	0.55	349.82	376.08	376.08	6.57	No	Si
SLU 24	14.5	30.34	-1664	-0.0000195	0.0003743	0.0035	0.55	408.95	436.62	436.62	14.39	No	Si
SLU 24	15.3	58.67	-1673	-0.0000227	0.0003743	0.0035	0.55	411.02	438.71	438.71	7.48	No	Si
SLU 67	14.5	35.39	-2020	-0.0000237	0.0003743	0.0035	0.55	483.86	508.11	508.11	14.36	No	Si
SLU 67	15.3	67.18	-2009	-0.000027	0.0003743	0.0035	0.55	481.7	505.98	505.98	7.53	No	Si
SLU 22	14.5	19.11	-1408	-0.0000157	0.0003743	0.0035	0.55	352.32	378.7	378.7	19.82	No	Si
SLU 22	15.3	54.46	-1387	-0.0000193	0.0003743	0.0035	0.55	347.62	373.79	373.79	6.86	No	Si
SLU 65	14.5	22.76	-1756	-0.0000196	0.0003743	0.0035	0.55	428.72	455.66	455.66	20.02	No	Si
SLU 65	15.3	64.09	-1727	-0.0000238	0.0003743	0.0035	0.55	422.51	449.97	449.97	7.02	No	Si
SLU 26	14.5	26.51	-1541	-0.0000179	0.0003743	0.0035	0.55	382.11	409.42	409.42	15.44	No	Si
SLU 26	15.3	52.42	-1570	-0.0000209	0.0003743	0.0035	0.55	388.55	415.96	415.96	7.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	14.5	-160.24	-244	-0.0006445	0.0005615	0.0035	0.44		134.26	134.26	0.84		No
SLV 15	15.3	389.83	-819	-0.0148838	0.0005615	0.0035	0.44		236.29	236.29	0.61		No
SLV 3	14.5	209.68	-2285	-0.0000449	0.0005615	0.0035	0.55		599.23	599.23	2.86		Si
SLV 3	15.3	-244.68	-1341	-0.0000524	0.0005615	0.0035	0.44		417.69	417.69	1.71		Si
SLV 12	14.5	36.35	-1012	-0.0000136	0.0005615	0.0035	0.55		286	286	7.87		Si
SLV 12	15.3	163.69	-506	-0.0016036	0.0005615	0.0035	0.44		154	154	0.94		No
SLV 13	14.5	-196.53	-287	-0.0008613	0.0005615	0.0035	0.44		145.8	145.8	0.74		No
SLV 13	15.3	366.17	-1247	-0.0038358	0.0005615	0.0035	0.44		345.76	345.76	0.94		No
SLD 15	14.5	-56.11	-876	-0.0000143	0.0005615	0.0035	0.55		300.36	300.36	5.35		Si
SLD 15	15.3	190.86	-1090	-0.0000391	0.0005615	0.0035	0.55		305.77	305.77	1.6		Si
SLV 14	14.5	-166.38	-415	-0.0004239	0.0005615	0.0035	0.44		179.65	179.65	1.08		Si
SLV 14	15.3	327.67	-1252	-0.0004118	0.0005615	0.0035	0.44		346.84	346.84	1.06		Si
SLV 16	14.5	-130.09	-371	-0.000258	0.0005615	0.0035	0.44		168.18	168.18	1.29		Si
SLV 16	15.3	351.33	-823	-0.0116013	0.0005615	0.0035	0.44		237.39	237.39	0.68		No
SLV 4	14.5	239.83	-2412	-0.0000496	0.0005615	0.0035	0.55		627.99	627.99	2.62		Si
SLV 4	15.3	-283.18	-1345	-0.0000763	0.0005615	0.0035	0.44		418.76	418.76	1.48		Si
SLV 2	14.5	203.55	-2455	-0.000046	0.0005615	0.0035	0.55		637.07	637.07	3.13		Si
SLV 2	15.3	-306.84	-1773	-0.0000634	0.0005615	0.0035	0.44		525.08	525.08	1.71		Si
SLV 11	14.5	16.92	-930	-0.0000107	0.0005615	0.0035	0.55		264.9	264.9	15.66		Si
SLV 11	15.3	188.51	-503	-0.0040513	0.0005615	0.0035	0.44		153.26	153.26	0.81		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 59	14.5	51.56	-1994	-1661	222	0.55	0.55	-10783	8382	1291	35683	4611	1402	6014	No	27.08	Si
SLU 59	15.3	30.08	-1954	-1627	-114	0.55	0.55	-10565	8353	1286	35683	4611	1402	6014	No	52.79	Si
SLU 79	14.5	51.46	-2090	-1741	204	0.55	0.55	-11304	8452	1302	35683	4611	1402	6014	No	29.49	Si
SLU 79	15.3	43.2	-2082	-1733	-116	0.55	0.55	-11256	8445	1301	35683	4611	1402	6014	No	51.86	Si
SLU 50	14.5	50.26	-1999	-1664	201	0.55	0.55	-10808	8385	1291	35683	4611	1402	6014	No	29.94	Si
SLU 50	15.3	36.81	-1931	-1608	-109	0.55	0.55	-10440	8337	1284	35683	4611	1402	6014	No	55.07	Si
SLU 58	14.5	53.66	-2006	-1671	228	0.55	0.55	-10849	8391	1292	35683	4611	1402	6014	No	26.4	Si
SLU 58	15.3	28.41	-1948	-1622	-108	0.55	0.55	-10533	8349	1286	35683	4611	1402	6014	No	55.59	Si
SLU 77	14.5	51.79	-2193	-1826	198	0.55	0.55	-11858	8526	1313	35683	4611	1402	6014	No	30.33	Si
SLU 77	15.3	52.25	-2194	-1827	-122	0.55	0.55	-11865	8526	1313	35683	4611	1402	6014	No	49.36	Si
SLU 57	14.5	51.89	-2097	-1746	216	0.55	0.55	-11338	8456	1302	35683	4611	1402	6014	No	27.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	15.3	39.14	-2066	-1721	-120	0.55	0.55	-11174	8434	1299	35683	4611	1402	6014	No	50.2	Si
SLU 63	14.5	42.12	-1844	-1535	196	0.55	0.55	-9971	8274	1274	35683	4611	1402	6014	No	30.67	Si
SLU 63	15.3	31.33	-1787	-1488	-114	0.55	0.55	-9665	8233	1268	35683	4611	1402	6014	No	52.71	Si
SLU 62	14.5	44.22	-1856	-1545	202	0.55	0.55	-10036	8283	1275	35683	4611	1402	6014	No	29.8	Si
SLU 62	15.3	29.65	-1782	-1484	-108	0.55	0.55	-9634	8229	1267	35683	4611	1402	6014	No	55.5	Si
SLU 80	14.5	49.36	-2078	-1731	198	0.55	0.55	-11238	8443	1300	35683	4611	1402	6014	No	30.35	Si
SLU 80	15.3	44.88	-2087	-1738	-122	0.55	0.55	-11287	8449	1301	35683	4611	1402	6014	No	49.42	Si
SLU 56	14.5	53.99	-2109	-1756	222	0.55	0.55	-11403	8465	1304	35683	4611	1402	6014	No	27.07	Si
SLU 56	15.3	37.46	-2061	-1716	-114	0.55	0.55	-11143	8430	1298	35683	4611	1402	6014	No	52.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	14.5	209.68	-2285	-1902	1057	0.55	0.5496	-12354	12887	1983	35683	6917	1402	8319		7.87	Si
SLV 3	15.3	-244.68	-1341	-1116	70	0.44	0.2775	0	0	0	35683	5534	1122	6655		95.24	Si
SLV 2	14.5	203.55	-2455	-2045	1209	0.55	0.55	-13277	13072	2013	35683	6917	1402	8319		6.88	Si
SLV 2	15.3	-306.84	-1773	-1477	-65	0.44	0.3059	0	0	0	35683	5534	1122	6655		103.14	Si
SLV 4	14.5	239.83	-2412	-2009	1178	0.55	0.5267	-13043	13025	1921	35683	6917	1402	8319		7.06	Si
SLV 4	15.3	-283.18	-1345	-1120	123	0.44	0.1934	0	0	0	35683	5534	1122	6655		53.91	Si
SLD 2	14.5	99.41	-1824	-1519	571	0.55	0.55	-9861	12389	1908	35683	6917	1402	8319		14.58	Si
SLD 2	15.3	-107.86	-1503	-1251	-80	0.55	0.55	-8126	12042	1854	35683	6917	1402	8319		104.62	Si
SLV 16	14.5	-130.09	-371	-309	-906	0.44	0	0	0	0	35683	5534	1122	6655		7.34	Si
SLV 16	15.3	351.33	-823	-686	-60	0.44	0	0	0	0	35683	5534	1122	6655		111.36	Si
SLV 15	14.5	-160.24	-244	-203	-1027	0.44	0	0	0	0	35683	5534	1122	6655		6.48	Si
SLV 15	15.3	389.83	-819	-682	-113	0.44	0	0	0	0	35683	5534	1122	6655		58.73	Si
SLD 4	14.5	115.31	-1804	-1502	556	0.55	0.55	-9756	12368	1905	35683	6917	1402	8319		14.96	Si
SLD 4	15.3	-97.43	-1314	-1094	3	0.55	0.55	-7107	11838	1823	35683	6917	1402	8319		2416.37	Si
SLV 14	14.5	-166.38	-415	-345	-875	0.44	0	0	0	0	35683	5534	1122	6655		7.61	Si
SLV 14	15.3	327.67	-1252	-1042	-248	0.44	0.0397	0	0	0	35683	5534	1122	6655		26.86	Si
SLV 1	14.5	173.39	-2328	-1938	1089	0.55	0.55	-12588	12934	1992	35683	6917	1402	8319		7.64	Si
SLV 1	15.3	-268.33	-1769	-1473	-118	0.44	0.3699	0	0	0	35683	5534	1122	6655		56.36	Si
SLV 13	14.5	-196.53	-287	-239	-995	0.44	0	0	0	0	35683	5534	1122	6655		6.69	Si
SLV 13	15.3	366.17	-1247	-1039	-301	0.44	0	0	0	0	35683	5534	1122	6655		22.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	0	-175	62.49	0	0	No, e>t/2
SLV 5	179667	0.53	0	-12	62.49	0	0	No, e>t/2
SLV 2	179667	0.53	0	-433	62.49	0	0	No, e>t/2
SLV 10	179667	0.53	0	-199	62.49	0	0	No, e>t/2
SLV 6	179667	0.53	0	-36	62.49	0	0	No, e>t/2
SLV 1	179667	0.53	0	-396	62.49	0	0	No, e>t/2
SLV 3	179667	0.53	5804	-894	62.49	120.38	1.93	Si
SLV 4	179667	0.53	6047	-931	62.49	125.22	2	Si
SLV 13	179667	0.53	6103	-940	62.49	126.31	2.02	Si
SLV 14	179667	0.53	6346	-977	62.49	131.12	2.1	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1495	-206	11	1.647	222.2	0.919	26.02771	12.42528	Si
SLV 5	-1489	-145	11	1.652	221.6	0.919	26.11604	12.42528	Si
SLV 10	-1340	-112	8	1.788	206.7	0.915	28.39821	12.42528	Si
SLV 9	-1334	-50	8	1.794	206.1	0.915	28.5032	12.42528	Si
SLV 2	-1302	-1077	11	1.825	202.9	0.914	29.02402	6.42939	Si
SLV 1	-1292	-982	11	1.835	201.9	0.914	29.19464	6.42939	Si
SLV 8	-420	-2331	1	3.667	117.4	0.889	59.95725	12.42528	Si
SLV 7	-414	-2270	1	3.694	116.8	0.889	60.39463	12.42528	Si
SLV 4	-979	-1715	8	2.233	170.8	0.904	35.91497	6.42939	Si
SLV 3	-969	-1619	8	2.248	169.9	0.903	36.17434	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.568	SLU 23	Si
V_SLU	26.4	SLU 58	Si
PF_SLV	0.606	SLV 15	No
V_SLV	6.482	SLV 15	Si
PFFP_SLV	0	SLV 1	No
R_SLV	2.095	SLV 6	Si

Maschio 212

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L7	L8	4.82	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	12.5	-260.83	-11047	-0.0000185	0.0004492	0.0035	4.82	23502.7	38150.61	38150.61	146.27	No	Si
SLU 44	15.66	-1322.15	-479	-0.0000182	0.0004492	0.0035	3.856	0	14804.43	14804.43	11.2	No	Si
SLU 18	12.5	241.64	-9858	-0.0000165	0.0004492	0.0035	4.82	21273.23	24640.51	24640.51	101.97	No	Si
SLU 18	15.66	-1320.78	-345	-0.0000245	0.0004492	0.0035	3.856	0	14493.11	14493.11	10.97	No	Si
SLU 81	12.5	354.88	-13265	-0.0000224	0.0004492	0.0035	4.82	27468.45	31893.84	31893.84	89.87	No	Si
SLU 81	15.66	-1580.45	-569	-0.000022	0.0004492	0.0035	3.856	0	15012.22	15012.22	9.5	No	Si
SLU 43	12.5	-358.24	-11028	-0.0000187	0.0004492	0.0035	4.82	23466.44	38109.68	38109.68	106.38	No	Si
SLU 43	15.66	-1303.55	-473	-0.0000179	0.0004492	0.0035	3.856	0	14790.42	14790.42	11.35	No	Si
SLU 61	12.5	147.24	-12106	-0.00002	0.0004492	0.0035	4.82	25427.98	29458.72	29458.72	200.07	No	Si
SLU 61	15.66	-1647.5	-416	-0.0000312	0.0004492	0.0035	3.856	0	14658.81	14658.81	8.9	No	Si
SLU 73	12.5	318.18	-12965	-0.0000218	0.0004492	0.0035	4.82	26945.94	31262.86	31262.86	98.26	No	Si
SLU 73	15.66	-1499.21	-593	-0.0000175	0.0004492	0.0035	3.856	0	15068.23	15068.23	10.05	No	Si
SLU 52	12.5	52.1	-11794	-0.0000193	0.0004492	0.0035	4.82	24866.36	28791.23	28791.23	552.64	No	Si
SLU 52	15.66	-1555.11	-437	-0.0000277	0.0004492	0.0035	3.856	0	14706.42	14706.42	9.46	No	Si
SLU 82	12.5	413.32	-13277	-0.0000226	0.0004492	0.0035	4.82	27488.86	31918.6	31918.6	77.22	No	Si
SLU 82	15.66	-1591.61	-573	-0.0000221	0.0004492	0.0035	3.856	0	15020.62	15020.62	9.44	No	Si
SLU 60	12.5	88.8	-12095	-0.0000199	0.0004492	0.0035	4.82	25406.87	29433.52	29433.52	331.47	No	Si
SLU 60	15.66	-1636.35	-413	-0.000031	0.0004492	0.0035	3.856	0	14650.41	14650.41	8.95	No	Si
SLU 19	12.5	300.09	-9870	-0.0000167	0.0004492	0.0035	4.82	21295.69	24666.15	24666.15	82.2	No	Si
SLU 19	15.66	-1331.94	-348	-0.0000247	0.0004492	0.0035	3.856	0	14501.51	14501.51	10.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.5	5068.64	-9358	-0.0000254	0.0006738	0.0035	4.82		23800.42	23800.42	4.7		Si
SLV 9	15.66	-2544.57	-1012	-0.0000294	0.0006738	0.0035	3.856		16019.5	16019.5	6.3		Si
SLV 8	12.5	-5148.57	-9321	-0.0000256	0.0006738	0.0035	4.82		34718.1	34718.1	6.74		Si
SLV 8	15.66	467.41	137	-0.0001367	0.0006738	0.0035	3.856		2062.31	2062.31	4.41		Si
SLV 5	12.5	6430.56	-11359	-0.0000316	0.0006738	0.0035	4.82		28206.76	28206.76	4.39		Si
SLV 5	15.66	-3201.43	-641	-0.0000663	0.0006738	0.0035	3.856		15166.35	15166.35	4.74		Si
SLV 12	12.5	-6510.49	-7320	-0.0000251	0.0006738	0.0035	4.82		30296.77	30296.77	4.65		Si
SLV 12	15.66	1124.27	-235	-0.0001323	0.0006738	0.0035	3.856		2936.67	2936.67	2.61		Si
SLV 1	12.5	4260.47	-13064	-0.0000299	0.0006738	0.0035	4.82		31905.51	31905.51	7.49		Si
SLV 1	15.66	-2792.9	76	-0.000068	0.0006738	0.0035	3.856		13505.97	13505.97	4.84		Si
SLV 11	12.5	-6041.22	-7453	-0.0000243	0.0006738	0.0035	4.82		30593.69	30593.69	5.06		Si
SLV 11	15.66	949.74	-216	-0.0001044	0.0006738	0.0035	3.856		2893.43	2893.43	3.05		Si
SLV 10	12.5	4599.37	-9224	-0.0000243	0.0006738	0.0035	4.82		23506.82	23506.82	5.11		Si
SLV 10	15.66	-2370.04	-1031	-0.0000215	0.0006738	0.0035	3.856		16061.69	16061.69	6.78		Si
SLV 2	12.5	3532.28	-12857	-0.0000281	0.0006738	0.0035	4.82		31457.03	31457.03	8.91		Si
SLV 2	15.66	-2522.08	47	-0.0000612	0.0006738	0.0035	3.856		13571.97	13571.97	5.38		Si
SLV 16	12.5	-4340.4	-5615	-0.0000178	0.0006738	0.0035	4.82		26488.07	26488.07	6.1		Si
SLV 16	15.66	715.74	-952	-0.000003	0.0006738	0.0035	4.82		4620.9	4620.9	6.46		Si
SLV 6	12.5	5961.29	-11226	-0.0000304	0.0006738	0.0035	4.82		27917.4	27917.4	4.68		Si
SLV 6	15.66	-3026.9	-660	-0.000061	0.0006738	0.0035	3.856		15208.54	15208.54	5.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 61	12.5	147.24	-12106	-7108	992	4.82	4.82	-9217	9562	7374	101952	27715	24582	52297	No	52.7	Si
SLU 61	15.66	-1647.5	-416	-245	1431	3.856	0	0	0	0	101952	22172	19666	41838	No	29.23	Si
SLU 75	12.5	271.93	-13839	-8126	1053	4.82	4.82	-10536	9738	7510	101952	27715	24582	52297	No	49.67	Si
SLU 75	15.66	-1203.75	-892	-524	1484	3.856	3.1814	0	0	0	101952	22172	19666	41838	No	28.18	Si
SLU 73	12.5	318.18	-12965	-7612	1100	4.82	4.82	-9871	9649	7442	101952	27715	24582	52297	No	47.54	Si
SLU 73	15.66	-1499.21	-593	-348	1557	3.856	0	0	0	0	101952	22172	19666	41838	No	26.87	Si
SLU 19	12.5	300.09	-9870	-5795	1025	4.82	4.82	-7515	9335	7199	101952	27715	24582	52297	No	51.02	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 19	15.66	-1331.94	-348	-205	1411	3.856	0	0	0	0	101952	22172	19666	41838	No	29.65	Si
SLU 82	12.5	413.32	-13277	-7796	1229	4.82	4.82	-10108	9681	7466	101952	27715	24582	52297	No	42.56	Si
SLU 82	15.66	-1591.61	-573	-336	1733	3.856	0	0	0	0	101952	22172	19666	41838	No	24.13	Si
SLU 31	12.5	471.02	-10728	-6299	1133	4.82	4.82	-8168	9422	7267	101952	27715	24582	52297	No	46.17	Si
SLU 31	15.66	-1183.65	-525	-309	1536	3.856	0.4719	0	0	0	101952	22172	19666	41838	No	27.23	Si
SLU 40	12.5	566.17	-11041	-6483	1261	4.82	4.82	-8406	9454	7291	101952	27715	24582	52297	No	41.46	Si
SLU 40	15.66	-1276.05	-505	-296	1713	3.856	0	0	0	0	101952	22172	19666	41838	No	24.42	Si
SLU 81	12.5	354.88	-13265	-7789	1094	4.82	4.82	-10099	9680	7465	101952	27715	24582	52297	No	47.79	Si
SLU 81	15.66	-1580.45	-569	-334	1607	3.856	0	0	0	0	101952	22172	19666	41838	No	26.04	Si
SLU 74	12.5	213.48	-13827	-8119	918	4.82	4.82	-10527	9737	7509	101952	27715	24582	52297	No	56.95	Si
SLU 74	15.66	-1192.59	-888	-522	1358	3.856	3.2026	0	0	0	101952	22172	19666	41838	No	30.81	Si
SLU 39	12.5	507.72	-11029	-6476	1127	4.82	4.82	-8397	9453	7290	101952	27715	24582	52297	No	46.41	Si
SLU 39	15.66	-1264.89	-501	-294	1586	3.856	0	0	0	0	101952	22172	19666	41838	No	26.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	12.5	-5148.57	-9321	-5473	-13542	4.82	4.82	-7097	13919	10735	101952	41572	24582	66154		4.89	Si
SLV 8	15.66	467.41	137	80	-12446	3.856	0	0	0	0	101952	33258	19666	52924		4.25	Si
SLV 10	12.5	4599.37	-9224	-5416	13679	4.82	4.82	-7023	13905	10723	101952	41572	24582	66154		4.84	Si
SLV 10	15.66	-2370.04	-1031	-605	13103	3.856	0.3326	0	0	0	101952	33258	19666	52924		4.04	Si
SLD 5	12.5	2797.04	-10215	-5998	6351	4.82	4.82	-7777	14055	10840	101952	41572	24582	66154		10.42	Si
SLD 5	15.66	-1983.11	-532	-312	6805	3.856	0	0	0	0	101952	33258	19666	52924		7.78	Si
SLV 11	12.5	-6041.22	-7453	-4376	-12565	4.82	4.7982	-5674	13635	10468	101952	41572	24582	66154		5.26	Si
SLV 11	15.66	949.74	-216	-127	-12552	3.856	0	0	0	0	101952	33258	19666	52924		4.22	Si
SLD 6	12.5	2592.08	-10157	-5964	6084	4.82	4.82	-7733	14047	10833	101952	41572	24582	66154		10.87	Si
SLD 6	15.66	-1906.88	-540	-317	6503	3.856	0	0	0	0	101952	33258	19666	52924		8.14	Si
SLV 5	12.5	6430.56	-11359	-6669	13929	4.82	4.82	-8648	14230	10974	101952	41572	24582	66154		4.75	Si
SLV 5	15.66	-3201.43	-641	-376	14591	3.856	0	0	0	0	101952	33258	19666	52924		3.63	Si
SLV 7	12.5	-4679.3	-9454	-5551	-12929	4.82	4.82	-7198	13940	10750	101952	41572	24582	66154		5.12	Si
SLV 7	15.66	292.88	155	91	-11755	3.856	1.5597	0	0	0	101952	33258	19666	52924		4.5	Si
SLV 12	12.5	-6510.49	-7320	-4298	-13178	4.82	4.5616	-5904	13681	9985	101952	41572	24582	66154		5.02	Si
SLV 12	15.66	1124.27	-235	-138	-13243	3.856	0	0	0	0	101952	33258	19666	52924		4	Si
SLV 6	12.5	5961.29	-11226	-6591	13315	4.82	4.82	-8547	14209	10958	101952	41572	24582	66154		4.97	Si
SLV 6	15.66	-3026.9	-660	-387	13900	3.856	0	0	0	0	101952	33258	19666	52924		3.81	Si
SLV 9	12.5	5068.64	-9358	-5494	14292	4.82	4.82	-7124	13925	10739	101952	41572	24582	66154		4.63	Si
SLV 9	15.66	-2544.57	-1012	-594	13795	3.856	0	0	0	0	101952	33258	19666	52924		3.84	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-3634	0.53	331.13	0	697.33	348.66	1.05	Si
SLV 15	-3742	0.53	331.13	0	708.1	354.05	1.07	Si
SLV 14	-4043	0.53	331.13	0	737.75	368.87	1.11	Si
SLV 12	-4096	0.53	331.13	0	743.01	371.51	1.12	Si
SLV 13	-4152	0.53	331.13	322.37	748.43	535.4	1.62	Si
SLV 11	-4167	0.53	331.13	323.5	749.89	536.7	1.62	Si
SLV 8	-4886	0.53	331.13	377.35	820.4	598.87	1.81	Si
SLV 7	-4956	0.53	331.13	382.57	827.26	604.92	1.83	Si
SLV 10	-5460	0.53	331.13	419.96	876.63	648.3	1.96	Si
SLV 9	-5531	0.53	331.13	425.14	883.49	654.31	1.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-1031	-9224	75	8.416	498.1	0.902	135.62121	21.29986	Si
SLV 9	-1012	-9358	76	8.464	496.7	0.902	136.30701	21.29986	Si
SLV 6	-660	-11226	-92	9.503	472.4	0.918	150.37975	21.29986	Si
SLV 5	-641	-11359	-92	9.564	471.3	0.92	151.16491	21.29986	Si
SLV 12	-235	-7320	92	11.161	451.4	0.958	169.28779	21.29986	Si
SLV 11	-216	-7453	93	11.246	450.8	0.961	170.11557	21.29986	Si
SLV 8	137	-9321	-75	12.756	447.2	1	185.38781	21.29986	Si, Trazione
SLV 7	155	-9454	-75	12.811	447.2	1	186.19078	21.29986	Si, Trazione
SLV 14	-1190	-6186	276	7.961	510.3	0.898	128.89671	9.06791	Si
SLV 13	-1162	-6393	277	8.029	508.1	0.898	129.88892	9.06791	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.898	SLU 61	Si
V_SLU	24.135	SLU 82	Si
PF_SLV	2.612	SLV 12	Si
V_SLV	3.627	SLV 5	Si
PFFP_SLV	1.053	SLV 16	Si
R_SLV	6.367	SLV 10	Si

Maschio 213

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L7	L8	3.221	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.5	980.43	-7274	-0.0000223	0.0004492	0.0035	3.2207	10360.11	12000.86	12000.86	12.24	No	Si
SLU 40	14.6	860.14	-3992	-0.0000136	0.0004492	0.0035	3.2207	6021.44	7196.48	7196.48	8.37	No	Si
SLU 39	12.5	907.11	-7266	-0.0000219	0.0004492	0.0035	3.2207	10350.12	11989.39	11989.39	13.22	No	Si
SLU 39	14.6	892.8	-4016	-0.0000138	0.0004492	0.0035	3.2207	6054.53	7231.82	7231.82	8.1	No	Si
SLU 38	12.5	1294.65	-8254	-0.0000262	0.0004492	0.0035	3.2207	11549	13395.02	13395.02	10.35	No	Si
SLU 38	14.6	1080.7	-5113	-0.0000173	0.0004492	0.0035	3.2207	7565.54	8859.83	8859.83	8.2	No	Si
SLU 35	12.5	1146.07	-8369	-0.0000258	0.0004492	0.0035	3.2207	11685.46	13558.82	13558.82	11.83	No	Si
SLU 35	14.6	1140.23	-5238	-0.0000179	0.0004492	0.0035	3.2207	7732.69	9043.03	9043.03	7.93	No	Si
SLU 42	12.5	1132.97	-7856	-0.0000244	0.0004492	0.0035	3.2207	11072.51	12829.32	12829.32	11.32	No	Si
SLU 42	14.6	1024.18	-4608	-0.0000158	0.0004492	0.0035	3.2207	6877.91	8115.12	8115.12	7.92	No	Si
SLU 32	12.5	993.54	-7786	-0.0000236	0.0004492	0.0035	3.2207	10988.33	12730.37	12730.37	12.81	No	Si
SLU 32	14.6	976.2	-4622	-0.0000156	0.0004492	0.0035	3.2207	6896.03	8134.57	8134.57	8.33	No	Si
SLU 37	12.5	1221.33	-8246	-0.0000258	0.0004492	0.0035	3.2207	11539.41	13383.55	13383.55	10.96	No	Si
SLU 37	14.6	1113.36	-5137	-0.0000175	0.0004492	0.0035	3.2207	7597.28	8894.56	8894.56	7.99	No	Si
SLU 51	12.5	1611.71	-8474	-0.0000282	0.0004492	0.0035	3.2207	11809.42	13707.4	13707.4	8.5	No	Si
SLU 51	14.6	356.29	-4813	-0.0000133	0.0004492	0.0035	3.2207	7158.68	8417.49	8417.49	23.63	No	Si
SLU 41	12.5	1059.64	-7848	-0.0000241	0.0004492	0.0035	3.2207	11062.76	12817.84	12817.84	12.1	No	Si
SLU 41	14.6	1056.83	-4632	-0.000016	0.0004492	0.0035	3.2207	6910.27	8149.85	8149.85	7.71	No	Si
SLU 36	12.5	1219.39	-8377	-0.0000261	0.0004492	0.0035	3.2207	11694.99	13570.3	13570.3	11.13	No	Si
SLU 36	14.6	1107.58	-5214	-0.0000177	0.0004492	0.0035	3.2207	7701.06	9008.3	9008.3	8.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.5	-4857.03	-4437	-0.000045	0.0006738	0.0035	2.5766		12666.42	12666.42	2.61		Si
SLV 11	14.6	3974.23	-5326	-0.0000323	0.0006738	0.0035	3.2207		9256.58	9256.58	2.33		Si
SLV 6	12.5	6732.6	-7940	-0.0000552	0.0006738	0.0035	3.2207		13114.72	13114.72	1.95		Si
SLV 6	14.6	-3313.22	-1127	-0.0001542	0.0006738	0.0035	2.5766		7654.85	7654.85	2.31		Si
SLV 10	12.5	7174.96	-7231	-0.0000622	0.0006738	0.0035	3.2207		12077.24	12077.24	1.68		Si
SLV 10	14.6	-3638.52	-477	-0.0001997	0.0006738	0.0035	2.5766		6655.68	6655.68	1.83		Si
SLV 8	12.5	-5588.33	-5098	-0.0000521	0.0006738	0.0035	2.5766		13650.4	13650.4	2.44		Si
SLV 8	14.6	4404.74	-6083	-0.000036	0.0006738	0.0035	3.2207		10386.23	10386.23	2.36		Si
SLV 14	12.5	3299.01	-5396	-0.0000282	0.0006738	0.0035	3.2207		9361.11	9361.11	2.84		Si
SLV 14	14.6	-1287.72	-1482	-0.0000103	0.0006738	0.0035	3.2207		8200.49	8200.49	6.37		Si
SLV 9	12.5	7463.9	-7280	-0.0000663	0.0006738	0.0035	3.2207		12148.79	12148.79	1.63		Si
SLV 9	14.6	-3743.73	-370	-0.0002088	0.0006738	0.0035	2.5766		6490.72	6490.72	1.73		Si
SLV 5	12.5	7021.54	-7989	-0.000058	0.0006738	0.0035	3.2207		13185.11	13185.11	1.88		Si
SLV 5	14.6	-3418.43	-1020	-0.0001664	0.0006738	0.0035	2.5766		7490.72	7490.72	2.19		Si
SLV 7	12.5	-5299.39	-5146	-0.0000466	0.0006738	0.0035	2.5766		13723.04	13723.04	2.59		Si
SLV 7	14.6	4299.53	-5976	-0.0000352	0.0006738	0.0035	3.2207		10226.85	10226.85	2.38		Si
SLV 12	12.5	-5145.97	-4389	-0.0000523	0.0006738	0.0035	2.5766		12593.77	12593.77	2.45		Si
SLV 12	14.6	4079.44	-5433	-0.0000331	0.0006738	0.0035	3.2207		9415.96	9415.96	2.31		Si
SLV 13	12.5	3747.38	-5472	-0.0000309	0.0006738	0.0035	3.2207		9473.94	9473.94	2.53		Si
SLV 13	14.6	-1450.99	-1316	-0.0000133	0.0006738	0.0035	2.5766		7945.81	7945.81	5.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	12.5	1428.67	-8507	-4995	1345	3.2207	3.2207	-9693	9626	4960	101952	18519	16426	34945	No	25.98	Si
SLU 63	14.6	550.61	-4567	-2682	1410	3.2207	3.2207	-5204	9027	4652	101952	18519	16426	34945	No	24.78	Si
SLU 55	12.5	1486.7	-8328	-4890	1375	3.2207	3.2207	-9489	9599	4946	101952	18519	16426	34945	No	25.41	Si
SLU 55	14.6	421.33	-4441	-2607	1486	3.2207	3.2207	-5060	9008	4642	101952	18519	16426	34945	No	23.52	Si
SLU 52	12.5	1334.17	-7746	-4548	1407	3.2207	3.2207	-8825	9510	4901	101952	18519	16426	34945	No	24.84	Si
SLU 52	14.6	257.3	-3825	-2246	1516	3.2207	3.2207	-4358	8914	4594	101952	18519	16426	34945	No	23.05	Si
SLU 47	12.5	1508.05	-7897	-4637	1373	3.2207	3.2207	-8998	9533	4912	101952	18519	16426	34945	No	25.45	Si
SLU 47	14.6	170.48	-4182	-2455	1484	3.2207	3.2207	-4765	8969	4622	101952	18519	16426	34945	No	23.55	Si
SLU 54	12.5	1362.56	-8446	-4959	1313	3.2207	3.2207	-9623	9616	4955	101952	18519	16426	34945	No	26.61	Si
SLU 54	14.6	469.98	-4557	-2676	1378	3.2207	3.2207	-5192	9026	4651	101952	18519	16426	34945	No	25.36	Si
SLU 51	12.5	1611.71	-8474	-4976	1310	3.2207	3.2207	-9655	9621	4958	101952	18519	16426	34945	No	26.67	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	14.6	356.29	-4813	-2826	1377	3.2207	3.2207	-5484	9065	4671	101952	18519	16426	34945	No	25.37	Si
SLU 61	12.5	1276.13	-7925	-4653	1377	3.2207	3.2207	-9030	9537	4915	101952	18519	16426	34945	No	25.38	Si
SLU 61	14.6	386.58	-3951	-2320	1441	3.2207	3.2207	-4502	8934	4604	101952	18519	16426	34945	No	24.26	Si
SLU 44	12.5	1355.52	-7315	-4295	1404	3.2207	3.2207	-8334	9445	4867	101952	18519	16426	34945	No	24.88	Si
SLU 44	14.6	6.45	-3566	-2094	1514	3.2207	3.2207	-4063	8875	4573	101952	18519	16426	34945	No	23.08	Si
SLU 59	12.5	1590.35	-8905	-5229	1313	3.2207	3.2207	-10146	9686	4991	101952	18519	16426	34945	No	26.62	Si
SLU 59	14.6	607.14	-5072	-2978	1379	3.2207	3.2207	-5780	9104	4691	101952	18519	16426	34945	No	25.33	Si
SLU 46	12.5	1383.92	-8015	-4706	1311	3.2207	3.2207	-9132	9551	4922	101952	18519	16426	34945	No	26.66	Si
SLU 46	14.6	219.13	-4298	-2524	1376	3.2207	3.2207	-4897	8986	4631	101952	18519	16426	34945	No	25.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.5	3747.38	-5472	-3213	3954	3.2207	2.7765	-6235	13747	6107	101952	27778	16426	44204		11.18	Si
SLV 13	14.6	-1450.99	-1316	-773	4232	2.5766	1.5242	0	0	0	101952	22223	13140	35363		8.36	Si
SLV 8	12.5	-5588.33	-5098	-2993	-6793	2.5766	1.5422	0	0	0	101952	22223	13140	35363		5.21	Si
SLV 8	14.6	4404.74	-6083	-3572	-7581	3.2207	2.6588	-6931	13886	5907	101952	27778	16426	44204		5.83	Si
SLV 6	12.5	6732.6	-7940	-4662	8009	3.2207	2.2873	-9047	14309	5237	101952	27778	16426	44204		5.52	Si
SLV 6	14.6	-3313.22	-1127	-662	8763	2.5766	0	0	0	0	101952	22223	13140	35363		4.04	Si
SLD 9	12.5	3814.07	-6675	-3919	4336	3.2207	3.1169	-7606	14021	6992	101952	27778	16426	44204		10.19	Si
SLD 9	14.6	-1465.6	-1970	-1157	4680	3.2207	2.5995	-2784	13057	5431	101952	27778	16426	44204		9.44	Si
SLV 7	12.5	-5299.39	-5146	-3022	-6486	2.5766	1.7418	0	0	0	101952	22223	13140	35363		5.45	Si
SLV 7	14.6	4299.53	-5976	-3509	-7274	3.2207	2.6728	-6810	13862	5928	101952	27778	16426	44204		6.08	Si
SLV 10	12.5	7174.96	-7231	-4246	8348	3.2207	1.8545	-8240	14148	4198	101952	27778	16426	44204		5.3	Si
SLV 10	14.6	-3638.52	-477	-280	9131	2.5766	0	0	0	0	101952	22223	13140	35363		3.87	Si
SLV 11	12.5	-4857.03	-4437	-2605	-6148	2.5766	1.5474	0	0	0	101952	22223	13140	35363		5.75	Si
SLV 11	14.6	3974.23	-5326	-3127	-6906	3.2207	2.5925	-6069	13714	5688	101952	27778	16426	44204		6.4	Si
SLV 9	12.5	7463.9	-7280	-4275	8655	3.2207	1.7553	-8295	14159	3977	101952	27778	16426	44204		5.11	Si
SLV 9	14.6	-3743.73	-370	-217	9438	2.5766	0	0	0	0	101952	22223	13140	35363		3.75	Si
SLV 12	12.5	-5145.97	-4389	-2577	-6454	2.5766	1.3134	0	0	0	101952	22223	13140	35363		5.48	Si
SLV 12	14.6	4079.44	-5433	-3190	-7213	3.2207	2.5784	-6190	13738	5668	101952	27778	16426	44204		6.13	Si
SLV 5	12.5	7021.54	-7989	-4691	8316	3.2207	2.1944	-9103	14321	5028	101952	27778	16426	44204		5.32	Si
SLV 5	14.6	-3418.43	-1020	-599	9070	2.5766	0	0	0	0	101952	22223	13140	35363		3.9	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-2577	0.53	221.26	0	479.99	239.99	1.08	Si
SLV 10	-2626	0.53	221.26	0	484.74	242.37	1.1	Si
SLV 13	-2840	0.53	221.26	220.36	505.76	363.06	1.64	Si
SLV 14	-2915	0.53	221.26	226	513.12	369.56	1.67	Si
SLV 5	-3133	0.53	221.26	242.32	534.46	388.39	1.76	Si
SLV 6	-3181	0.53	221.26	245.93	539.2	392.57	1.77	Si
SLV 15	-3632	0.53	221.26	279.41	583.23	431.32	1.95	Si
SLV 16	-3707	0.53	221.26	284.96	590.54	437.75	1.98	Si
SLV 1	-4692	0.53	221.26	356.74	685.93	521.34	2.36	Si
SLV 2	-4768	0.53	221.26	362.16	693.18	527.67	2.38	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-1796	-5098	-33	5.573	428.8	0.89	91.01933	21.29986	Si
SLV 7	-1779	-5146	-33	5.602	427.2	0.89	91.50214	21.29986	Si
SLV 12	-1660	-4389	216	5.756	416.2	0.889	94.07284	21.29986	Si
SLV 11	-1643	-4437	216	5.787	414.6	0.889	94.58965	21.29986	Si
SLV 6	-1276	-7940	-217	6.559	381.4	0.889	107.17793	21.29986	Si
SLV 5	-1259	-7989	-217	6.599	379.9	0.889	107.83058	21.29986	Si
SLV 10	-1140	-7231	33	6.971	369.5	0.89	113.77184	21.29986	Si
SLV 9	-1123	-7280	33	7.016	368	0.891	114.48959	21.29986	Si
SLV 4	-1777	-6906	-388	5.495	427.1	0.89	89.759	9.06791	Si
SLV 3	-1751	-6982	-388	5.54	424.6	0.89	90.50336	9.06791	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.712	SLU 41	Si
V_SLU	23.053	SLU 52	Si
PF_SLV	1.628	SLV 9	Si
V_SLV	3.747	SLV 9	Si
PFFP_SLV	1.085	SLV 9	Si
R_SLV	4.273	SLV 8	Si

Maschio 216

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.386	L7	L8	4.22	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	12.5	2898.87	-10627	-0.0000276	0.0004492	0.0035	4.22	19534.81	22647.01	22647.01	7.81	No	Si
SLU 73	14.6	-711.44	-7161	-0.0000152	0.0004492	0.0035	4.22	13797.93	24452.87	24452.87	34.37	No	Si
SLU 61	12.5	2715.82	-9652	-0.0000253	0.0004492	0.0035	4.22	17982.53	20821.37	20821.37	7.67	No	Si
SLU 61	14.6	-794.65	-6326	-0.0000138	0.0004492	0.0035	4.22	12323.87	22847.66	22847.66	28.75	No	Si
SLU 10	12.5	2214.98	-7695	-0.0000202	0.0004492	0.0035	4.22	14722.12	17119.09	17119.09	7.73	No	Si
SLU 10	14.6	-634.62	-5100	-0.0000111	0.0004492	0.0035	4.22	10095.07	20490.95	20490.95	32.29	No	Si
SLU 18	12.5	2333.41	-7956	-0.000021	0.0004492	0.0035	4.22	15167.57	17615.33	17615.33	7.55	No	Si
SLU 18	14.6	-631.22	-5360	-0.0000116	0.0004492	0.0035	4.22	10575.12	20991.74	20991.74	33.26	No	Si
SLU 19	12.5	2428.33	-7962	-0.0000213	0.0004492	0.0035	4.22	15178.18	17627.2	17627.2	7.26	No	Si
SLU 19	14.6	-689.68	-5366	-0.0000117	0.0004492	0.0035	4.22	10586.55	21003.71	21003.71	30.45	No	Si
SLU 39	12.5	2729.82	-9198	-0.0000244	0.0004492	0.0035	4.22	17243.67	19971.9	19971.9	7.32	No	Si
SLU 39	14.6	-603.08	-6462	-0.0000136	0.0004492	0.0035	4.22	12566.95	23109.72	23109.72	38.32	No	Si
SLU 81	12.5	3017.3	-10888	-0.0000285	0.0004492	0.0035	4.22	19941.19	23126.14	23126.14	7.66	No	Si
SLU 81	14.6	-708.04	-7421	-0.0000156	0.0004492	0.0035	4.22	14250.5	24953.66	24953.66	35.24	No	Si
SLU 82	12.5	3112.22	-10894	-0.0000287	0.0004492	0.0035	4.22	19950.86	23137.6	23137.6	7.43	No	Si
SLU 82	14.6	-766.51	-7428	-0.0000158	0.0004492	0.0035	4.22	14261.28	24965.64	24965.64	32.57	No	Si
SLU 31	12.5	2611.38	-8937	-0.0000236	0.0004492	0.0035	4.22	16814.77	19484.27	19484.27	7.46	No	Si
SLU 31	14.6	-606.47	-6202	-0.0000131	0.0004492	0.0035	4.22	12101.6	22608.93	22608.93	37.28	No	Si
SLU 40	12.5	2824.73	-9204	-0.0000247	0.0004492	0.0035	4.22	17253.88	19983.56	19983.56	7.07	No	Si
SLU 40	14.6	-661.54	-6468	-0.0000137	0.0004492	0.0035	4.22	12578.04	23121.69	23121.69	34.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.5	10814.66	-7749	-0.0000576	0.0006738	0.0035	4.22		17397.5	17397.5	1.61		Si
SLV 9	14.6	-8308.62	-5114	-0.0000542	0.0006738	0.0035	3.376		20608.29	20608.29	2.48		Si
SLV 5	12.5	9822.46	-7977	-0.0000479	0.0006738	0.0035	4.22		17843.08	17843.08	1.82		Si
SLV 5	14.6	-5555.12	-5369	-0.000026	0.0006738	0.0035	4.22		21108.45	21108.45	3.8		Si
SLV 12	12.5	-6404.47	-7199	-0.0000308	0.0006738	0.0035	4.22		24673.43	24673.43	3.85		Si
SLV 12	14.6	4810.35	-4536	-0.0000225	0.0006738	0.0035	4.22		11057.02	11057.02	2.3		Si
SLV 11	12.5	-6219.62	-7226	-0.0000302	0.0006738	0.0035	4.22		24726.03	24726.03	3.98		Si
SLV 11	14.6	4839.3	-4563	-0.0000226	0.0006738	0.0035	4.22		11111.35	11111.35	2.3		Si
SLV 4	12.5	-2643.23	-7869	-0.0000215	0.0006738	0.0035	4.22		25964.7	25964.7	9.82		Si
SLV 4	14.6	6166.51	-5274	-0.0000293	0.0006738	0.0035	4.22		12525.92	12525.92	2.03		Si
SLV 6	12.5	9637.61	-7950	-0.0000467	0.0006738	0.0035	4.22		17790.4	17790.4	1.85		Si
SLV 6	14.6	-5584.06	-5342	-0.0000262	0.0006738	0.0035	4.22		21055.16	21055.16	3.77		Si
SLV 3	12.5	-2356.39	-7911	-0.0000209	0.0006738	0.0035	4.22		26046.32	26046.32	11.05		Si
SLV 3	14.6	6211.43	-5316	-0.0000295	0.0006738	0.0035	4.22		12610.23	12610.23	2.03		Si
SLV 10	12.5	10629.81	-7722	-0.0000558	0.0006738	0.0035	4.22		17343.99	17343.99	1.63		Si
SLV 10	14.6	-8337.57	-5087	-0.0000555	0.0006738	0.0035	3.376		20554.39	20554.39	2.47		Si
SLV 7	12.5	-7211.82	-7454	-0.0000342	0.0006738	0.0035	4.22		25165.99	25165.99	3.49		Si
SLV 7	14.6	7592.8	-4818	-0.0000476	0.0006738	0.0035	4.22		11619.13	11619.13	1.53		Si
SLV 8	12.5	-7396.67	-7427	-0.0000349	0.0006738	0.0035	4.22		25113.39	25113.39	3.4		Si
SLV 8	14.6	7563.85	-4791	-0.0000476	0.0006738	0.0035	4.22		11564.79	11564.79	1.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	12.5	3112.22	-10894	-6396	1869	4.22	4.22	-9473	9596	6480	101952	24265	21522	45787	No	24.5	Si
SLU 82	14.6	-766.51	-7428	-4361	1869	4.22	4.22	-6459	9195	6208	101952	24265	21522	45787	No	24.5	Si
SLU 61	12.5	2715.82	-9652	-5667	1694	4.22	4.22	-8393	9452	6382	101952	24265	21522	45787	No	27.02	Si
SLU 61	14.6	-794.65	-6326	-3714	1694	4.22	4.22	-5501	9067	6122	101952	24265	21522	45787	No	27.02	Si
SLU 73	12.5	2898.87	-10627	-6240	1741	4.22	4.22	-9241	9566	6459	101952	24265	21522	45787	No	26.29	Si
SLU 73	14.6	-711.44	-7161	-4205	1741	4.22	4.22	-6227	9164	6187	101952	24265	21522	45787	No	26.29	Si
SLU 40	12.5	2824.73	-9204	-5404	1677	4.22	4.22	-8004	9401	6347	101952	24265	21522	45787	No	27.3	Si
SLU 40	14.6	-661.54	-6468	-3798	1677	4.22	4.22	-5625	9083	6133	101952	24265	21522	45787	No	27.3	Si
SLU 76	12.5	2828.4	-11536	-6773	1687	4.22	4.22	-10032	9671	6530	101952	24265	21522	45787	No	27.14	Si
SLU 76	14.6	-667.75	-8070	-4738	1687	4.22	4.22	-7017	9269	6258	101952	24265	21522	45787	No	27.14	Si
SLU 83	12.5	2946.83	-11796	-6926	1742	4.22	4.22	-10258	9701	6550	101952	24265	21522	45787	No	26.29	Si
SLU 83	14.6	-664.36	-8330	-4891	1742	4.22	4.22	-7244	9299	6279	101952	24265	21522	45787	No	26.29	Si
SLU 81	12.5	3017.3	-10888	-6393	1796	4.22	4.22	-9468	9596	6479	101952	24265	21522	45787	No	25.49	Si
SLU 81	14.6	-708.04	-7421	-4358	1796	4.22	4.22	-6454	9194	6208	101952	24265	21522	45787	No	25.49	Si
SLU 78	12.5	2809.2	-12490	-7333	1686	4.22	4.22	-10861	9781	6604	101952	24265	21522	45787	No	27.16	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	14.6	-685.06	-9023	-5298	1686	4.22	4.22	-7847	9380	6333	101952	24265	21522	45787	No	27.16	Si
SLU 75	12.5	2879.67	-11581	-6800	1740	4.22	4.22	-10071	9676	6533	101952	24265	21522	45787	No	26.31	Si
SLU 75	14.6	-728.75	-8114	-4764	1740	4.22	4.22	-7056	9274	6262	101952	24265	21522	45787	No	26.31	Si
SLU 84	12.5	3041.75	-11803	-6930	1815	4.22	4.22	-10264	9702	6551	101952	24265	21522	45787	No	25.23	Si
SLU 84	14.6	-722.82	-8336	-4895	1815	4.22	4.22	-7249	9300	6279	101952	24265	21522	45787	No	25.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.5	6061.23	-7307	-4290	6041	4.22	3.8415	-6354	13771	8464	101952	36398	21522	57920		9.59	Si
SLV 13	14.6	-6911.28	-4631	-2719	6319	3.376	1.8528	0	0	0	101952	29118	17218	46336		7.33	Si
SLV 11	12.5	-6219.62	-7226	-4243	-4971	4.22	3.7478	-7089	13918	8346	101952	36398	21522	57920		11.65	Si
SLV 11	14.6	4839.3	-4563	-2679	-5664	4.22	3.1484	-3968	13294	6697	101952	36398	21522	57920		10.23	Si
SLV 7	12.5	-7211.82	-7454	-4377	-6716	4.22	3.4276	-8008	14102	7734	101952	36398	21522	57920		8.62	Si
SLV 7	14.6	7592.8	-4818	-2829	-7448	4.22	1.6025	-4190	13338	3420	101952	36398	21522	57920		7.78	Si
SLV 10	12.5	10629.81	-7722	-4534	8733	4.22	2.2001	-6715	13843	4873	101952	36398	21522	57920		6.63	Si
SLV 10	14.6	-8337.57	-5087	-2987	9465	3.376	1.4128	0	0	0	101952	29118	17218	46336		4.9	Si
SLV 8	12.5	-7396.67	-7427	-4361	-6790	4.22	3.3423	-8181	14136	7560	101952	36398	21522	57920		8.53	Si
SLV 8	14.6	7563.85	-4791	-2813	-7522	4.22	1.5937	-4166	13333	3400	101952	36398	21522	57920		7.7	Si
SLV 14	12.5	5774.38	-7265	-4265	5926	4.22	3.9454	-6317	13763	8688	101952	36398	21522	57920		9.77	Si
SLV 14	14.6	-6956.2	-4589	-2694	6204	3.376	1.7821	0	0	0	101952	29118	17218	46336		7.47	Si
SLV 5	12.5	9822.46	-7977	-4684	7062	4.22	2.6361	-6937	13887	5857	101952	36398	21522	57920		8.2	Si
SLV 5	14.6	-5555.12	-5369	-3153	7755	4.22	3.2262	-6119	13724	7084	101952	36398	21522	57920		7.47	Si
SLV 12	12.5	-6404.47	-7199	-4227	-5045	4.22	3.661	-7239	13948	8170	101952	36398	21522	57920		11.48	Si
SLV 12	14.6	4810.35	-4536	-2663	-5739	4.22	3.1484	-3944	13289	6694	101952	36398	21522	57920		10.09	Si
SLV 9	12.5	10814.66	-7749	-4550	8807	4.22	2.1431	-6738	13848	4748	101952	36398	21522	57920		6.58	Si
SLV 9	14.6	-8308.62	-5114	-3003	9539	3.376	1.456	0	0	0	101952	29118	17218	46336		4.86	Si
SLV 6	12.5	9637.61	-7950	-4668	6988	4.22	2.6932	-6913	13883	5982	101952	36398	21522	57920		8.29	Si
SLV 6	14.6	-5584.06	-5342	-3137	7681	4.22	3.194	-6148	13730	7017	101952	36398	21522	57920		7.54	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-4983	0.53	289.91	382.56	787.41	584.98	2.02	Si
SLV 15	-5025	0.53	289.91	385.67	791.54	588.61	2.03	Si
SLV 14	-5120	0.53	289.91	392.67	800.84	596.75	2.06	Si
SLV 12	-5128	0.53	289.91	393.22	801.57	597.4	2.06	Si
SLV 11	-5155	0.53	289.91	395.22	804.24	599.73	2.07	Si
SLV 13	-5163	0.53	289.91	395.77	804.97	600.37	2.07	Si
SLV 8	-5383	0.53	289.91	411.93	826.39	619.16	2.14	Si
SLV 7	-5411	0.53	289.91	413.92	829.02	621.47	2.14	Si
SLV 10	-5586	0.53	289.91	426.74	845.97	636.36	2.2	Si
SLV 9	-5614	0.53	289.91	428.73	848.61	638.67	2.2	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4926	-7454	-211	3.464	811.7	0.908	55.42451	21.29986	Si
SLV 8	-4916	-7427	-211	3.469	810.8	0.908	55.50438	21.29986	Si
SLV 11	-3996	-7226	192	4.008	719.9	0.901	64.63038	21.29986	Si
SLV 12	-3987	-7199	192	4.014	719	0.901	64.73782	21.29986	Si
SLV 3	-4434	-7911	-675	3.657	763	0.905	58.75494	9.06791	Si
SLV 4	-4419	-7869	-675	3.666	761.6	0.905	58.89643	9.06791	Si
SLV 5	-414	-7977	-194	10.116	404.2	0.932	157.75514	21.29986	Si
SLV 6	-405	-7950	-194	10.157	403.7	0.933	158.23191	21.29986	Si
SLV 1	-3080	-8068	-670	4.641	630.9	0.894	75.42831	9.06791	Si
SLV 2	-3066	-8026	-670	4.655	629.5	0.894	75.65641	9.06791	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.074	SLU 40	Si
V_SLU	24.496	SLU 82	Si
PF_SLV	1.529	SLV 8	Si
V_SLV	4.858	SLV 9	Si
PFFP_SLV	2.018	SLV 16	Si
R_SLV	2.602	SLV 7	Si

Maschio 217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.454	-13.778	-0.194	L7	L8	3.261	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 27	12.5	261.88	-10751	-0.0000186	0.0003743	0.0035	3.2607	15501.1	16506.13	16506.13	63.03	No	Si
SLU 27	14.6	1135.27	-6135	-0.0000134	0.0003743	0.0035	3.2607	9341.64	10027.87	10027.87	8.83	No	Si
SLU 72	12.5	480.97	-12880	-0.0000229	0.0003743	0.0035	3.2607	18088.93	18979.68	18979.68	39.46	No	Si
SLU 72	14.6	1325.57	-7117	-0.0000157	0.0003743	0.0035	3.2607	10714.59	11462.73	11462.73	8.65	No	Si
SLU 70	12.5	421.26	-12914	-0.0000228	0.0003743	0.0035	3.2607	18129.69	19020.49	19020.49	45.15	No	Si
SLU 70	14.6	1264.46	-7033	-0.0000153	0.0003743	0.0035	3.2607	10598.05	11339.69	11339.69	8.97	No	Si
SLU 30	12.5	404.87	-10798	-0.0000191	0.0003743	0.0035	3.2607	15559.05	16559.14	16559.14	40.9	No	Si
SLU 30	14.6	1205.39	-6228	-0.0000138	0.0003743	0.0035	3.2607	9473.51	10166.16	10166.16	8.43	No	Si
SLU 9	12.5	468.62	-9771	-0.0000175	0.0003743	0.0035	3.2607	14255.67	15223.7	15223.7	32.49	No	Si
SLU 9	14.6	1034.41	-5524	-0.0000121	0.0003743	0.0035	3.2607	8471.45	9126.17	9126.17	8.82	No	Si
SLU 29	12.5	321.58	-10717	-0.0000187	0.0003743	0.0035	3.2607	15457.72	16466.51	16466.51	51.21	No	Si
SLU 29	14.6	1196.37	-6219	-0.0000138	0.0003743	0.0035	3.2607	9460.84	10152.85	10152.85	8.49	No	Si
SLU 26	12.5	358.12	-10063	-0.0000177	0.0003743	0.0035	3.2607	14630.5	15627.77	15627.77	43.64	No	Si
SLU 26	14.6	996.71	-5360	-0.0000117	0.0003743	0.0035	3.2607	8234.39	8880.39	8880.39	8.91	No	Si
SLU 28	12.5	345.16	-10832	-0.000019	0.0003743	0.0035	3.2607	15602.34	16598.8	16598.8	48.09	No	Si
SLU 28	14.6	1144.29	-6144	-0.0000135	0.0003743	0.0035	3.2607	9354.34	10041.17	10041.17	8.78	No	Si
SLU 71	12.5	397.68	-12799	-0.0000225	0.0003743	0.0035	3.2607	17993.5	18884.37	18884.37	47.49	No	Si
SLU 71	14.6	1316.54	-7108	-0.0000156	0.0003743	0.0035	3.2607	10702.2	11449.62	11449.62	8.7	No	Si
SLU 8	12.5	385.34	-9690	-0.0000171	0.0003743	0.0035	3.2607	14151.43	15112.1	15112.1	39.22	No	Si
SLU 8	14.6	1025.39	-5515	-0.0000121	0.0003743	0.0035	3.2607	8458.55	9112.8	9112.8	8.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	12.5	-3346.31	-5545	-0.000019	0.0005615	0.0035	3.2607		11642.64	11642.64	3.48		Si
SLD 11	14.6	-62.5	-2980	-0.000005	0.0005615	0.0035	3.2607		7690.59	7690.59	123.04		Si
SLV 6	12.5	7478.27	-14794	-0.0000474	0.0005615	0.0035	3.2607		22708.72	22708.72	3.04		Si
SLV 6	14.6	2079.07	-6164	-0.0000162	0.0005615	0.0035	3.2607		10218.43	10218.43	4.91		Si
SLV 12	12.5	-7643.57	-1883	-0.0007868	0.0005615	0.0035	2.6085		5972.95	5972.95	0.78		No
SLV 12	14.6	-913.39	-1750	-0.0000055	0.0005615	0.0035	3.2607		5764.88	5764.88	6.31		Si
SLV 7	12.5	-7255.69	-2599	-0.0005471	0.0005615	0.0035	2.6085		7095.38	7095.38	0.98		No
SLV 7	14.6	-1149.48	-2222	-0.000007	0.0005615	0.0035	3.2607		6506.81	6506.81	5.66		Si
SLV 10	12.5	7188.16	-14149	-0.0000453	0.0005615	0.0035	3.2607		21822.19	21822.19	3.04		Si
SLV 10	14.6	2337.23	-5684	-0.0000162	0.0005615	0.0035	3.2607		9486.76	9486.76	4.06		Si
SLV 11	12.5	-7545.79	-1954	-0.0007499	0.0005615	0.0035	2.6085		6084.72	6084.72	0.81		No
SLV 11	14.6	-891.32	-1743	-0.0000054	0.0005615	0.0035	3.2607		5752.56	5752.56	6.45		Si
SLV 8	12.5	-7353.46	-2528	-0.0005799	0.0005615	0.0035	2.6085		6984.3	6984.3	0.95		No
SLV 8	14.6	-1171.55	-2230	-0.0000071	0.0005615	0.0035	3.2607		6519.04	6519.04	5.56		Si
SLV 9	12.5	7285.94	-14220	-0.0000458	0.0005615	0.0035	3.2607		21919.62	21919.62	3.01		Si
SLV 9	14.6	2359.3	-5676	-0.0000162	0.0005615	0.0035	3.2607		9474.78	9474.78	4.02		Si
SLV 5	12.5	7576.04	-14865	-0.0000478	0.0005615	0.0035	3.2607		22806.52	22806.52	3.01		Si
SLV 5	14.6	2101.14	-6156	-0.0000163	0.0005615	0.0035	3.2607		10206.51	10206.51	4.86		Si
SLD 12	12.5	-3389.02	-5514	-0.0000191	0.0005615	0.0035	3.2607		11595.58	11595.58	3.42		Si
SLD 12	14.6	-72.14	-2984	-0.000005	0.0005615	0.0035	3.2607		7695.92	7695.92	106.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	12.5	256.89	-10196	-8490	816	3.2607	3.2607	-9299	8184	7472	35683	27339	8315	35654	No	43.71	Si
SLU 43	14.6	716.17	-4656	-3877	467	3.2607	3.2607	-4246	7511	6857	35683	27339	8315	35654	No	76.29	Si
SLU 2	12.5	319.61	-8249	-6869	807	3.2607	3.2607	-7523	7948	7256	35683	27339	8315	35654	No	44.19	Si
SLU 2	14.6	611.03	-3782	-3149	502	3.2607	3.2607	-3449	7404	6760	35683	27339	8315	35654	No	71	Si
SLU 44	12.5	395.71	-10331	-8602	983	3.2607	3.2607	-9422	8201	7487	35683	27339	8315	35654	No	36.27	Si
SLU 44	14.6	731.21	-4671	-3889	592	3.2607	3.2607	-4260	7512	6859	35683	27339	8315	35654	No	60.26	Si
SLU 64	12.5	193.14	-11222	-9345	861	3.2607	3.2607	-10236	8309	7586	35683	27339	8315	35654	No	41.41	Si
SLU 64	14.6	887.15	-5359	-4463	537	3.2607	3.2607	-4888	7596	6935	35683	27339	8315	35654	No	66.4	Si
SLU 65	12.5	331.95	-11357	-9457	1028	3.2607	3.2607	-10359	8326	7601	35683	27339	8315	35654	No	34.67	Si
SLU 65	14.6	902.19	-5374	-4475	661	3.2607	3.2607	-4902	7598	6937	35683	27339	8315	35654	No	53.92	Si
SLU 46	12.5	382.75	-11100	-9243	858	3.2607	3.2607	-10124	8294	7573	35683	27339	8315	35654	No	41.54	Si
SLU 46	14.6	878.78	-5455	-4542	608	3.2607	3.2607	-4975	7608	6946	35683	27339	8315	35654	No	58.59	Si
SLU 23	12.5	255.85	-9275	-7724	852	3.2607	3.2607	-8460	8072	7370	35683	27339	8315	35654	No	41.84	Si
SLU 23	14.6	782.01	-4486	-3735	572	3.2607	3.2607	-4091	7490	6838	35683	27339	8315	35654	No	62.36	Si
SLU 67	12.5	318.99	-12126	-10098	904	3.2607	3.2607	-11060	8419	7687	35683	27339	8315	35654	No	39.46	Si
SLU 67	14.6	1049.77	-6158	-5128	678	3.2607	3.2607	-5617	7693	7024	35683	27339	8315	35654	No	52.58	Si
SLU 68	12.5	434.22	-12146	-10114	883	3.2607	3.2607	-11078	8421	7689	35683	27339	8315	35654	No	40.39	Si
SLU 68	14.6	1116.88	-6249	-5203	664	3.2607	3.2607	-5699	7704	7034	35683	27339	8315	35654	No	53.7	Si
SLU 47	12.5	497.98	-11119	-9259	837	3.2607	3.2607	-10141	8297	7575	35683	27339	8315	35654	No	42.58	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	14.6	945.9	-5545	-4617	594	3.2607	3.2607	-5057	7619	6956	35683	27339	8315	35654	No	59.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	12.5	3278.79	-11203	-9329	3122	3.2607	3.2607	-10218	12460	11376	35683	41008	8315	47059		15.07	Si
SLD 6	14.6	1250.26	-4926	-4102	3628	3.2607	3.2607	-4493	11315	10331	35683	41008	8315	46014		12.68	Si
SLV 10	12.5	7188.16	-14149	-11782	5916	3.2607	3.2607	-12905	12998	11867	35683	41008	8315	47550		8.04	Si
SLV 10	14.6	2337.23	-5684	-4733	7275	3.2607	3.2607	-5184	11454	10457	35683	41008	8315	46140		6.34	Si
SLV 6	12.5	7478.27	-14794	-12319	6361	3.2607	3.2607	-13493	13115	11974	35683	41008	8315	47657		7.49	Si
SLV 6	14.6	2079.07	-6164	-5133	7845	3.2607	3.2607	-5622	11541	10537	35683	41008	8315	46220		5.89	Si
SLV 7	12.5	-7255.69	-2599	-2164	-4776	2.6085	0	0	0	0	35683	32807	6652	35683		7.47	Si
SLV 7	14.6	-1149.48	-2222	-1850	-6662	3.2607	3.2607	-2027	10822	9880	35683	41008	8315	45564		6.84	Si
SLV 11	12.5	-7545.79	-1954	-1627	-5221	2.6085	0	0	0	0	35683	32807	6652	35683		6.84	Si
SLV 11	14.6	-891.32	-1743	-1451	-7232	3.2607	3.2607	-1589	10735	9801	35683	41008	8315	45484		6.29	Si
SLV 8	12.5	-7353.46	-2528	-2105	-4873	2.6085	0	0	0	0	35683	32807	6652	35683		7.32	Si
SLV 8	14.6	-1171.55	-2230	-1857	-6735	3.2607	3.2607	-2034	10823	9882	35683	41008	8315	45565		6.77	Si
SLV 9	12.5	7285.94	-14220	-11841	6013	3.2607	3.2607	-12970	13011	11879	35683	41008	8315	47562		7.91	Si
SLV 9	14.6	2359.3	-5676	-4727	7347	3.2607	3.2607	-5177	11452	10456	35683	41008	8315	46139		6.28	Si
SLV 5	12.5	7576.04	-14865	-12379	6458	3.2607	3.2607	-13558	13128	11986	35683	41008	8315	47669		7.38	Si
SLV 5	14.6	2101.14	-6156	-5126	7917	3.2607	3.2607	-5615	11540	10536	35683	41008	8315	46219		5.84	Si
SLV 12	12.5	-7643.57	-1883	-1568	-5318	2.6085	0	0	0	0	35683	32807	6652	35683		6.71	Si
SLV 12	14.6	-913.39	-1750	-1458	-7305	3.2607	3.2607	-1596	10736	9802	35683	41008	8315	45485		6.23	Si
SLD 5	12.5	3321.49	-11234	-9355	3164	3.2607	3.2607	-10247	12466	11381	35683	41008	8315	47065		14.87	Si
SLD 5	14.6	1259.9	-4923	-4099	3660	3.2607	3.2607	-4490	11315	10330	35683	41008	8315	46013		12.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	0	-1799	379.08	0	0	No, e>t/2
SLV 11	179667	0.53	0	-1804	379.08	0	0	No, e>t/2
SLV 8	179667	0.53	0	-2410	379.08	0	0	No, e>t/2
SLV 7	179667	0.53	0	-2416	379.08	0	0	No, e>t/2
SLV 16	179667	0.53	3287	-3001	379.08	411.12	1.08	Si
SLV 15	179667	0.53	3296	-3009	379.08	412.2	1.09	Si
SLV 14	179667	0.53	5087	-4645	379.08	628.61	1.66	Si
SLV 13	179667	0.53	5096	-4653	379.08	629.66	1.66	Si
SLV 4	179667	0.53	5521	-5040	379.08	680.12	1.79	Si
SLV 3	179667	0.53	5529	-5048	379.08	681.17	1.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1744	-14794	-531	4.168	631.3	0.893	67.85467	12.42528	Si
SLV 5	-1735	-14865	-531	4.176	630.5	0.893	67.98457	12.42528	Si
SLV 10	-1576	-14149	303	4.389	617.4	0.895	71.28096	12.42528	Si
SLV 9	-1567	-14220	304	4.398	616.7	0.895	71.41991	12.42528	Si
SLV 8	-1031	-2528	-295	5.044	575.9	0.908	80.76164	12.42528	Si
SLV 7	-1022	-2599	-295	5.056	575.3	0.908	80.9296	12.42528	Si
SLV 12	-863	-1883	540	5.216	564.5	0.914	82.90507	12.42528	Si
SLV 11	-854	-1954	540	5.23	563.9	0.915	83.07833	12.42528	Si
SLV 2	-1693	-11234	-1422	4.009	627.1	0.893	65.2271	6.42939	Si
SLV 1	-1679	-11344	-1422	4.022	625.9	0.893	65.42233	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.434	SLU 30	Si
V_SLU	34.67	SLU 65	Si
PF_SLV	0.781	SLV 12	No
V_SLV	5.838	SLV 5	Si
PFFP_SLV	0	SLV 7	No
R_SLV	5.461	SLV 6	Si

Maschio 218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L7	L8	2.105	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	13.4	369.09	-5292	-0.0000161	0.0003743	0.0035	2.105	5078.7	5436.32	5436.32	14.73	No	Si
SLU 35	15.2	1508.81	-3293	-0.0000197	0.0003743	0.0035	2.105	3275.96	3552.33	3552.33	2.35	No	Si
SLU 33	13.4	358.34	-5133	-0.0000156	0.0003743	0.0035	2.105	4940.23	5289.18	5289.18	14.76	No	Si
SLU 33	15.2	1292.98	-3134	-0.0000174	0.0003743	0.0035	2.105	3126.33	3398.54	3398.54	2.63	No	Si
SLU 36	13.4	369.25	-5327	-0.0000162	0.0003743	0.0035	2.105	5108.91	5468.62	5468.62	14.81	No	Si
SLU 36	15.2	1480.8	-3328	-0.0000195	0.0003743	0.0035	2.105	3308.62	3585.98	3585.98	2.42	No	Si
SLU 40	13.4	266.86	-4422	-0.0000131	0.0003743	0.0035	2.105	4311.4	4627.65	4627.65	17.34	No	Si
SLU 40	15.2	1026.63	-2423	-0.0000136	0.0003743	0.0035	2.105	2447.68	2703.39	2703.39	2.63	No	Si
SLU 41	13.4	277.61	-4582	-0.0000136	0.0003743	0.0035	2.105	4453.85	4776.83	4776.83	17.21	No	Si
SLU 41	15.2	1242.46	-2583	-0.000016	0.0003743	0.0035	2.105	2601.28	2860.39	2860.39	2.3	No	Si
SLU 42	13.4	277.78	-4616	-0.0000137	0.0003743	0.0035	2.105	4484.93	4809.45	4809.45	17.31	No	Si
SLU 42	15.2	1214.45	-2618	-0.0000157	0.0003743	0.0035	2.105	2634.82	2894.73	2894.73	2.38	No	Si
SLU 39	13.4	266.7	-4387	-0.000013	0.0003743	0.0035	2.105	4280.08	4594.91	4594.91	17.23	No	Si
SLU 39	15.2	1054.64	-2389	-0.0000138	0.0003743	0.0035	2.105	2413.91	2668.92	2668.92	2.53	No	Si
SLU 32	13.4	358.17	-5098	-0.0000156	0.0003743	0.0035	2.105	4909.77	5257	5257	14.68	No	Si
SLU 32	15.2	1320.99	-3099	-0.0000176	0.0003743	0.0035	2.105	3093.42	3364.82	3364.82	2.55	No	Si
SLU 38	13.4	318.3	-4923	-0.0000148	0.0003743	0.0035	2.105	4756.54	5095.69	5095.69	16.01	No	Si
SLU 38	15.2	1354.68	-2924	-0.0000176	0.0003743	0.0035	2.105	2927.94	3194.98	3194.98	2.36	No	Si
SLU 37	13.4	318.13	-4888	-0.0000147	0.0003743	0.0035	2.105	4725.83	5063.21	5063.21	15.92	No	Si
SLU 37	15.2	1382.7	-2890	-0.0000179	0.0003743	0.0035	2.105	2894.79	3160.99	3160.99	2.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	13.4	214.59	358	0.0237245	0.0005615	0.0035	1.684		0	0	0		No
SLV 7	15.2	5245.74	2271	0.0578631	0.0005615	0.0035	1.684		0	0	0		No
SLD 3	13.4	175.56	-2441	-0.0000074	0.0005615	0.0035	2.105		2744.7	2744.7	15.63		Si
SLD 3	15.2	3177.15	-506	-0.0175899	0.0005615	0.0035	2.105		771.1	771.1	0.24		No
SLV 8	13.4	195.65	152	0.0086254	0.0005615	0.0035	1.684		0	0	0		No
SLV 8	15.2	4999.29	2065	0.0445708	0.0005615	0.0035	1.684		0	0	0		No
SLD 7	13.4	304.39	-2463	-0.0000083	0.0005615	0.0035	2.105		2766.66	2766.66	9.09		Si
SLD 7	15.2	2696.06	-512	-0.0142205	0.0005615	0.0035	2.105		777.75	777.75	0.29		No
SLV 2	13.4	-97.74	-2081	-0.0000059	0.0005615	0.0035	2.105		3419.57	3419.57	34.99		Si
SLV 2	15.2	4245.67	-180	-0.0274447	0.0005615	0.0035	2.105		432.71	432.71	0.1		No
SLV 12	13.4	473.96	-2162	-0.0000088	0.0005615	0.0035	2.105		2464.63	2464.63	5.2		Si
SLV 12	15.2	2229.17	-196	-0.0133915	0.0005615	0.0035	2.105		449.38	449.38	0.2		No
SLV 4	13.4	-114.6	169	0.0125324	0.0005615	0.0035	1.684		0	0	0		No
SLV 4	15.2	6053.71	2047	0.0087297	0.0005615	0.0035	1.684		0	0	0		No
SLV 3	13.4	-85.21	490	0.0350681	0.0005615	0.0035	1.684		0	0	0		No
SLV 3	15.2	6436.15	2367	0.0274249	0.0005615	0.0035	1.684		0	0	0		No
SLV 11	13.4	492.9	-1955	-0.0000084	0.0005615	0.0035	2.105		2255.23	2255.23	4.58		Si
SLV 11	15.2	2475.62	10	-0.0167116	0.0005615	0.0035	2.105		232.34	232.34	0.09		No
SLV 1	13.4	-68.35	-1760	-0.0000049	0.0005615	0.0035	2.105		3097.21	3097.21	45.31		Si
SLV 1	15.2	4628.1	141	-0.0325039	0.0005615	0.0035	2.105		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	13.4	277.61	-4582	-3815	-519	2.105	2.105	-6473	7807	4602	35683	17649	5368	23017	No	44.33	Si
SLU 41	15.2	1242.46	-2583	-2151	-519	2.105	1.7143	-3649	7431	3567	35683	17649	5368	23017	No	44.33	Si
SLU 78	13.4	502.92	-6724	-5599	-569	2.105	2.105	-9499	8211	4840	35683	17649	5368	23017	No	40.46	Si
SLU 78	15.2	1566.26	-4144	-3451	-569	2.105	2.0236	-5855	7725	4377	35683	17649	5368	23017	No	40.46	Si
SLU 36	13.4	369.25	-5327	-4436	-601	2.105	2.105	-7526	7948	4684	35683	17649	5368	23017	No	38.31	Si
SLU 36	15.2	1480.8	-3328	-2771	-601	2.105	1.8227	-4702	7571	3864	35683	17649	5368	23017	No	38.31	Si
SLU 35	13.4	369.09	-5292	-4407	-616	2.105	2.105	-7477	7941	4681	35683	17649	5368	23017	No	37.34	Si
SLU 35	15.2	1508.81	-3293	-2742	-616	2.105	1.783	-4653	7565	3777	35683	17649	5368	23017	No	37.34	Si
SLU 37	13.4	318.13	-4888	-4071	-575	2.105	2.105	-6906	7865	4636	35683	17649	5368	23017	No	40.05	Si
SLU 37	15.2	1382.7	-2890	-2406	-575	2.105	1.7219	-4082	7489	3611	35683	17649	5368	23017	No	40.05	Si
SLU 38	13.4	318.3	-4923	-4100	-559	2.105	2.105	-6956	7872	4640	35683	17649	5368	23017	No	41.18	Si
SLU 38	15.2	1354.68	-2924	-2435	-559	2.105	1.7678	-4132	7495	3710	35683	17649	5368	23017	No	41.18	Si
SLU 77	13.4	502.76	-6689	-5570	-585	2.105	2.105	-9450	8204	4836	35683	17649	5368	23017	No	39.38	Si
SLU 77	15.2	1594.27	-4109	-3422	-585	2.105	1.9935	-5805	7718	4308	35683	17649	5368	23017	No	39.38	Si
SLU 80	13.4	451.97	-6320	-5263	-527	2.105	2.105	-8929	8135	4795	35683	17649	5368	23017	No	43.66	Si
SLU 80	15.2	1440.15	-3740	-3114	-527	2.105	2.0023	-5284	7649	4288	35683	17649	5368	23017	No	43.66	Si
SLU 32	13.4	358.17	-5098	-4245	-518	2.105	2.105	-7203	7905	4659	35683	17649	5368	23017	No	44.42	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 32	15.2	1320.99	-3099	-2581	-518	2.105	1.8788	-4379	7528	3960	35683	17649	5368	23017	No	44.42	Si
SLU 79	13.4	451.8	-6285	-5234	-543	2.105	2.105	-8880	8128	4791	35683	17649	5368	23017	No	42.4	Si
SLU 79	15.2	1468.16	-3705	-3085	-543	2.105	1.9688	-5235	7642	4213	35683	17649	5368	23017	No	42.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	13.4	-68.35	-1760	-1466	-2960	2.105	2.105	-2487	10914	6433	35683	26474	5368	31841		10.76	Si
SLV 1	15.2	4628.1	141	117	-2425	2.105	0	0	1957	0	35683	26474	5368	31841		13.13	Si
SLV 7	13.4	214.59	358	298	-2898	1.684	1.3612	0	0	0	35683	21179	4294	25473		8.79	Si
SLV 7	15.2	5245.74	2271	1891	-2640	1.684	0	0	0	0	35683	21179	4294	25473		9.65	Si
SLV 8	13.4	195.65	152	126	-2772	1.684	0	0	0	0	35683	21179	4294	25473		9.19	Si
SLV 8	15.2	4999.29	2065	1719	-2513	1.684	0	0	0	0	35683	21179	4294	25473		10.14	Si
SLV 16	13.4	813.1	-7544	-6282	2603	2.105	2.105	-10658	12548	7396	35683	26474	5368	31841		12.23	Si
SLV 16	15.2	-3180.02	-5489	-4570	2068	1.684	1.4193	0	0	0	35683	21179	4294	25473		12.32	Si
SLV 3	13.4	-85.21	490	408	-3979	1.684	2.105	0	0	0	35683	21179	4294	25473		6.4	Si
SLV 3	15.2	6436.15	2367	1971	-3390	1.684	0	0	0	0	35683	21179	4294	25473		7.51	Si
SLV 4	13.4	-114.6	169	141	-3783	1.684	1.1247	0	0	0	35683	21179	4294	25473		6.73	Si
SLV 4	15.2	6053.71	2047	1704	-3194	1.684	0	0	0	0	35683	21179	4294	25473		7.97	Si
SLV 2	13.4	-97.74	-2081	-1733	-2764	2.105	2.105	-2940	11005	6486	35683	26474	5368	31841		11.52	Si
SLV 2	15.2	4245.67	-180	-150	-2229	2.105	0	0	0	0	35683	26474	5368	31841		14.28	Si
SLV 10	13.4	530.16	-9663	-8046	2541	2.105	2.105	-13652	13147	7749	35683	26474	5368	31841		12.53	Si
SLV 10	15.2	-3797.65	-7619	-6345	2282	2.105	1.6622	-13717	13160	6125	35683	26474	5368	31841		13.95	Si
SLV 14	13.4	829.96	-9794	-8156	3622	2.105	2.105	-13837	13184	7771	35683	26474	5368	31841		8.79	Si
SLV 14	15.2	-4988.06	-7716	-6425	3033	1.684	1.218	0	0	0	35683	21179	4294	25473		8.4	Si
SLV 13	13.4	859.35	-9473	-7889	3426	2.105	2.105	-13384	13094	7717	35683	26474	5368	31841		9.29	Si
SLV 13	15.2	-4605.63	-7395	-6158	2837	1.684	1.2891	0	0	0	35683	21179	4294	25473		8.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.53	0	848	239.16	0	0	No, Trazione
SLV 3	179667	0.53	0	1181	239.16	0	0	No, Trazione
SLV 2	179667	0.53	0	-1399	239.16	0	0	No, e>t/2
SLV 11	179667	0.53	0	-1265	239.16	0	0	No, e>t/2
SLV 4	179667	0.53	0	861	239.16	0	0	No, Trazione
SLV 7	179667	0.53	0	1054	239.16	0	0	No, Trazione
SLV 1	179667	0.53	0	-1079	239.16	0	0	No, e>t/2
SLV 12	179667	0.53	0	-1472	239.16	0	0	No, e>t/2
SLV 5	179667	0.53	10992	-6479	239.16	841.72	3.52	Si
SLV 15	179667	0.53	11115	-6551	239.16	850.43	3.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-7355	-8375	742	1.28	1014.8	0.93	20.00301	12.42528	Si
SLV 9	-7116	-8272	742	1.313	990.7	0.928	20.5564	12.42528	Si
SLV 6	-4683	-7475	754	1.797	746.6	0.912	28.64705	12.42528	Si
SLV 5	-4444	-7372	754	1.865	722.9	0.91	29.79947	12.42528	Si
SLV 14	-7826	-7479	201	1.275	1062.4	0.932	19.87987	6.42939	Si
SLV 13	-7457	-7318	201	1.325	1025	0.93	20.70099	6.42939	Si
SLV 16	-5502	-5785	-250	1.667	828.5	0.918	26.39232	6.42939	Si
SLV 15	-5133	-5625	-250	1.755	791.5	0.915	27.87227	6.42939	Si
SLV 12	392	-2731	-762	7.562	341.7	1	109.90053	12.42528	Si, Trazione
SLV 11	630	-2628	-762	8.216	341.7	1	119.41217	12.42528	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.286	SLU 37	Si
V_SLU	37.341	SLU 35	Si
PF_SLV	0	SLV 1	No
V_SLV	6.402	SLV 3	Si
PFFP_SLV	0	SLV 8	No
R_SLV	1.61	SLV 10	Si

Maschio 219

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	13.4	2533.93	-12913	-0.0000227	0.0003743	0.0035	3.98	22772.45	24088.97	24088.97	9.51	No	Si
SLU 82	15.2	932.36	-8269	-0.000013	0.0003743	0.0035	3.98	15256.73	16343.66	16343.66	17.53	No	Si
SLU 38	13.4	2315.02	-12069	-0.0000211	0.0003743	0.0035	3.98	21462.31	22892.35	22892.35	9.89	No	Si
SLU 38	15.2	1836.31	-8476	-0.0000151	0.0003743	0.0035	3.98	15607.89	16711.85	16711.85	9.1	No	Si
SLU 40	13.4	2152.5	-10161	-0.0000181	0.0003743	0.0035	3.98	18409.63	19663.1	19663.1	9.14	No	Si
SLU 40	15.2	886.71	-6558	-0.0000105	0.0003743	0.0035	3.98	12296.14	13265.36	13265.36	14.96	No	Si
SLU 84	13.4	2665.91	-13800	-0.0000242	0.0003743	0.0035	3.98	24122.5	25359.02	25359.02	9.51	No	Si
SLU 84	15.2	1411.41	-9161	-0.0000152	0.0003743	0.0035	3.98	16758.7	17918.58	17918.58	12.7	No	Si
SLU 37	13.4	2309.03	-12043	-0.000021	0.0003743	0.0035	3.98	21422.07	22856.13	22856.13	9.9	No	Si
SLU 37	15.2	1843.97	-8451	-0.0000151	0.0003743	0.0035	3.98	15564.43	16666.28	16666.28	9.04	No	Si
SLU 30	13.4	2078.34	-12379	-0.000021	0.0003743	0.0035	3.98	21947.23	23331.26	23331.26	11.23	No	Si
SLU 30	15.2	1816.47	-8791	-0.0000155	0.0003743	0.0035	3.98	16138.87	17266.92	17266.92	9.51	No	Si
SLU 29	13.4	2072.35	-12354	-0.000021	0.0003743	0.0035	3.98	21907.27	23294.92	23294.92	11.24	No	Si
SLU 29	15.2	1824.13	-8765	-0.0000155	0.0003743	0.0035	3.98	16095.69	17221.8	17221.8	9.44	No	Si
SLU 39	13.4	2146.5	-10135	-0.000018	0.0003743	0.0035	3.98	18367.67	19618.55	19618.55	9.14	No	Si
SLU 39	15.2	894.37	-6532	-0.0000105	0.0003743	0.0035	3.98	12250.95	13218.87	13218.87	14.78	No	Si
SLU 42	13.4	2284.47	-11048	-0.0000196	0.0003743	0.0035	3.98	19845.35	21193.38	21193.38	9.28	No	Si
SLU 42	15.2	1365.76	-7450	-0.0000127	0.0003743	0.0035	3.98	13851.65	14878.55	14878.55	10.89	No	Si
SLU 41	13.4	2278.48	-11023	-0.0000195	0.0003743	0.0035	3.98	19804.19	21149.68	21149.68	9.28	No	Si
SLU 41	15.2	1373.42	-7424	-0.0000127	0.0003743	0.0035	3.98	13807.27	14832.42	14832.42	10.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	13.4	9159.14	-11622	-0.0000345	0.0005615	0.0035	3.98		22688.86	22688.86	2.48		Si
SLV 14	15.2	-6682.32	-8038	-0.0000246	0.0005615	0.0035	3.98		19897.83	19897.83	2.98		Si
SLV 15	13.4	8455.71	-9958	-0.0000311	0.0005615	0.0035	3.98		19694.83	19694.83	2.33		Si
SLV 15	15.2	-5600.97	-6408	-0.0000203	0.0005615	0.0035	3.98		16889.08	16889.08	3.02		Si
SLV 16	13.4	8715.74	-9852	-0.0000317	0.0005615	0.0035	3.98		19504.15	19504.15	2.24		Si
SLV 16	15.2	-5897.51	-6299	-0.0000211	0.0005615	0.0035	3.98		16686.01	16686.01	2.83		Si
SLV 2	13.4	-5061.64	-10086	-0.0000237	0.0005615	0.0035	3.98		23579.77	23579.77	4.66		Si
SLV 2	15.2	6868.46	-6524	-0.0000247	0.0005615	0.0035	3.98		13370.71	13370.71	1.95		Si
SLV 13	13.4	8899.11	-11727	-0.000034	0.0005615	0.0035	3.98		22876.43	22876.43	2.57		Si
SLV 13	15.2	-6385.77	-8147	-0.0000239	0.0005615	0.0035	3.98		20095.45	20095.45	3.15		Si
SLV 4	13.4	-5505.04	-8316	-0.0000221	0.0005615	0.0035	3.98		20401	20401	3.71		Si
SLV 4	15.2	7653.26	-4785	-0.000044	0.0005615	0.0035	3.98		10094.89	10094.89	1.32		Si
SLV 1	13.4	-5321.67	-10191	-0.0000244	0.0005615	0.0035	3.98		23770.49	23770.49	4.47		Si
SLV 1	15.2	7165	-6633	-0.0000259	0.0005615	0.0035	3.98		13574.9	13574.9	1.89		Si
SLV 7	13.4	-1258.86	-6876	-0.0000117	0.0005615	0.0035	3.98		17762.13	17762.13	14.11		Si
SLV 7	15.2	4069.93	-3376	-0.0000151	0.0005615	0.0035	3.98		7404.67	7404.67	1.82		Si
SLV 3	13.4	-5765.07	-8422	-0.0000228	0.0005615	0.0035	3.98		20589.1	20589.1	3.57		Si
SLV 3	15.2	7949.81	-4894	-0.0000483	0.0005615	0.0035	3.98		10301.43	10301.43	1.3		Si
SLV 8	13.4	-1091.3	-6808	-0.0000112	0.0005615	0.0035	3.98		17636.22	17636.22	16.16		Si
SLV 8	15.2	3878.82	-3305	-0.0000142	0.0005615	0.0035	3.98		7269.4	7269.4	1.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	13.4	2436.49	-13063	-10878	788	3.98	3.98	-9761	8246	9189	35683	33370	10149	43519	No	55.19	Si
SLU 73	15.2	918.75	-8421	-7013	785	3.98	3.98	-6293	7783	8674	35683	33370	10149	43519	No	55.44	Si
SLU 60	13.4	2277.38	-12232	-10185	875	3.98	3.98	-9140	8163	9097	35683	33370	10149	43519	No	49.72	Si
SLU 60	15.2	606.89	-7648	-6368	873	3.98	3.98	-5715	7706	8588	35683	33370	10149	43519	No	49.83	Si
SLU 19	13.4	1901.93	-9505	-7915	709	3.98	3.98	-7103	7891	8794	35683	33370	10149	43519	No	61.39	Si
SLU 19	15.2	553.57	-5962	-4965	708	3.98	3.98	-4455	7538	8401	35683	33370	10149	43519	No	61.48	Si
SLU 81	13.4	2527.94	-12887	-10732	828	3.98	3.98	-9630	8228	9170	35683	33370	10149	43519	No	52.53	Si
SLU 81	15.2	940.02	-8244	-6865	826	3.98	3.98	-6160	7766	8654	35683	33370	10149	43519	No	52.71	Si
SLU 82	13.4	2533.93	-12913	-10753	836	3.98	3.98	-9649	8231	9173	35683	33370	10149	43519	No	52.06	Si
SLU 82	15.2	932.36	-8269	-6886	833	3.98	3.98	-6179	7768	8657	35683	33370	10149	43519	No	52.23	Si
SLU 43	13.4	1939.26	-12675	-10555	700	3.98	3.98	-9471	8207	9146	35683	33370	10149	43519	No	62.13	Si
SLU 43	15.2	578.54	-8097	-6743	696	3.98	3.98	-6051	7751	8638	35683	33370	10149	43519	No	62.57	Si
SLU 52	13.4	2185.93	-12407	-10332	835	3.98	3.98	-9271	8181	9116	35683	33370	10149	43519	No	52.09	Si
SLU 52	15.2	585.61	-7825	-6516	833	3.98	3.98	-5847	7724	8608	35683	33370	10149	43519	No	52.26	Si
SLU 44	13.4	1949.25	-12718	-10590	713	3.98	3.98	-9503	8212	9151	35683	33370	10149	43519	No	61.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	15.2	565.77	-8140	-6778	708	3.98	3.98	-6082	7755	8643	35683	33370	10149	43519	No	61.45	Si
SLU 18	13.4	1895.94	-9479	-7894	701	3.98	3.98	-7083	7889	8791	35683	33370	10149	43519	No	62.05	Si
SLU 18	15.2	561.24	-5936	-4943	700	3.98	3.98	-4436	7536	8398	35683	33370	10149	43519	No	62.15	Si
SLU 61	13.4	2283.37	-12257	-10207	883	3.98	3.98	-9159	8166	9100	35683	33370	10149	43519	No	49.29	Si
SLU 61	15.2	599.22	-7673	-6390	881	3.98	3.98	-5734	7709	8591	35683	33370	10149	43519	No	49.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	13.4	4652.94	-13167	-10965	4356	3.98	3.98	-9839	12384	13801	35683	50055	10149	49484		11.36	Si
SLV 10	15.2	-2802.44	-9557	-7958	3904	3.98	3.98	-7141	11845	13200	35683	50055	10149	48883		12.52	Si
SLD 14	13.4	4892.7	-10716	-8923	4403	3.98	3.98	-8007	12018	13393	35683	50055	10149	49076		11.15	Si
SLD 14	15.2	-2500.84	-7148	-5952	3806	3.98	3.98	-5341	11485	12799	35683	50055	10149	48482		12.74	Si
SLV 14	13.4	9159.14	-11622	-9678	9547	3.98	3.6057	-8684	12154	12270	35683	50055	10149	47953		5.02	Si
SLV 14	15.2	-6682.32	-8038	-6694	8157	3.98	3.476	-6898	11796	11481	35683	50055	10149	47164		5.78	Si
SLV 16	13.4	8715.74	-9852	-8204	8852	3.98	3.3161	-7362	11889	11039	35683	50055	10149	46722		5.28	Si
SLV 16	15.2	-5897.51	-6299	-5245	7484	3.98	3.1613	-5939	11605	10272	35683	50055	10149	45955		6.14	Si
SLV 1	13.4	-5321.67	-10191	-8486	-7756	3.98	3.98	-7615	11940	13306	35683	50055	10149	48989		6.32	Si
SLV 1	15.2	7165	-6633	-5524	-6395	3.98	2.7296	-4957	11408	8719	35683	50055	10149	44402		6.94	Si
SLV 15	13.4	8455.71	-9958	-8292	8544	3.98	3.4226	-7441	11905	11409	35683	50055	10149	47092		5.51	Si
SLV 15	15.2	-5600.97	-6408	-5336	7171	3.98	3.3479	-5706	11558	10834	35683	50055	10149	46518		6.49	Si
SLV 2	13.4	-5061.64	-10086	-8399	-7448	3.98	3.98	-7536	11924	13288	35683	50055	10149	48971		6.58	Si
SLV 2	15.2	6868.46	-6524	-5433	-6082	3.98	2.8118	-4875	11392	8969	35683	50055	10149	44652		7.34	Si
SLV 3	13.4	-5765.07	-8422	-7013	-8452	3.98	3.9164	-6413	11699	12829	35683	50055	10149	48512		5.74	Si
SLV 3	15.2	7949.81	-4894	-4076	-7069	3.98	1.0971	-13351	13087	4020	35683	50055	10149	39703		5.62	Si
SLV 13	13.4	8899.11	-11727	-9765	9239	3.98	3.6935	-8763	12169	12585	35683	50055	10149	48268		5.22	Si
SLV 13	15.2	-6385.77	-8147	-6784	7845	3.98	3.6186	-6711	11759	11914	35683	50055	10149	47597		6.07	Si
SLV 4	13.4	-5505.04	-8316	-6925	-8143	3.98	3.98	-6214	11660	12993	35683	50055	10149	48677		5.98	Si
SLV 4	15.2	7653.26	-4785	-3985	-6756	3.98	1.172	-12213	12859	4220	35683	50055	10149	39903		5.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.53	4776	-5322	452.2	721.77	1.6	Si
SLV 7	179667	0.53	4839	-5392	452.2	730.99	1.62	Si
SLV 12	179667	0.53	5151	-5740	452.2	776.55	1.72	Si
SLV 11	179667	0.53	5214	-5811	452.2	785.71	1.74	Si
SLV 4	179667	0.53	6195	-6904	452.2	927.35	2.05	Si
SLV 3	179667	0.53	6293	-7013	452.2	941.36	2.08	Si
SLV 16	179667	0.53	7447	-8299	452.2	1105.18	2.44	Si
SLV 15	179667	0.53	7545	-8408	452.2	1118.94	2.47	Si
SLV 2	179667	0.53	7802	-8695	452.2	1155.12	2.55	Si
SLV 1	179667	0.53	7900	-8804	452.2	1168.81	2.58	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-7970	-13550	1352	1.942	1323.9	0.908	31.10198	12.42528	Si
SLV 10	-7931	-13438	1352	1.949	1320	0.907	31.21561	12.42528	Si
SLV 5	-6976	-14378	1335	2.13	1225.7	0.903	34.28024	12.42528	Si
SLV 6	-6937	-14265	1335	2.138	1221.8	0.903	34.41771	12.42528	Si
SLV 11	-2372	-7757	-1332	3.863	791.1	0.891	63.0216	12.42528	Si
SLV 12	-2333	-7645	-1332	3.891	787.8	0.891	63.44924	12.42528	Si
SLV 13	-7181	-10588	433	2.176	1245.9	0.904	34.98135	6.42939	Si
SLV 14	-7120	-10414	433	2.188	1239.9	0.904	35.19541	6.42939	Si
SLV 7	-1378	-8585	-1349	4.694	711.5	0.904	75.42905	12.42528	Si
SLV 8	-1339	-8472	-1349	4.735	708.7	0.905	75.99644	12.42528	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.038	SLU 37	Si
V_SLU	49.292	SLU 61	Si
PF_SLV	1.296	SLV 3	Si
V_SLV	5.023	SLV 14	Si
PFFP_SLV	1.596	SLV 8	Si
R_SLV	2.503	SLV 9	Si

Maschio 220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	13.4	-1227.41	-12398	-0.0000193	0.0003743	0.0035	3.98	21976.53	27216.7	27216.7	22.17	No	Si
SLU 84	15.2	-2300.45	-7767	-0.000015	0.0003743	0.0035	3.98	14398.14	19167.4	19167.4	8.33	No	Si
SLU 40	13.4	-934.88	-8826	-0.0000137	0.0003743	0.0035	3.98	16197.29	21063.55	21063.55	22.53	No	Si
SLU 40	15.2	-1842.36	-5223	-0.0000106	0.0003743	0.0035	3.98	9915.68	14556.45	14556.45	7.9	No	Si
SLU 42	13.4	-1021.94	-9827	-0.0000153	0.0003743	0.0035	3.98	17862.2	22813.57	22813.57	22.32	No	Si
SLU 42	15.2	-2148.08	-6235	-0.0000126	0.0003743	0.0035	3.98	11726.1	16444.48	16444.48	7.66	No	Si
SLU 83	13.4	-1222.03	-12374	-0.0000192	0.0003743	0.0035	3.98	21938.96	27178	27178	22.24	No	Si
SLU 83	15.2	-2308.69	-7743	-0.000015	0.0003743	0.0035	3.98	14356.3	19124.18	19124.18	8.28	No	Si
SLU 39	13.4	-929.5	-8802	-0.0000137	0.0003743	0.0035	3.98	16156.69	21019.9	21019.9	22.61	No	Si
SLU 39	15.2	-1850.6	-5199	-0.0000106	0.0003743	0.0035	3.98	9871.66	14511.32	14511.32	7.84	No	Si
SLU 35	13.4	-1036.23	-11818	-0.0000181	0.0003743	0.0035	3.98	21068.09	26218.59	26218.59	25.3	No	Si
SLU 35	15.2	-2324.27	-8247	-0.0000158	0.0003743	0.0035	3.98	15219.3	20023.09	20023.09	8.61	No	Si
SLU 38	13.4	-1096.87	-11085	-0.0000172	0.0003743	0.0035	3.98	19904	24951.71	24951.71	22.75	No	Si
SLU 38	15.2	-2319.6	-7509	-0.0000147	0.0003743	0.0035	3.98	13953.77	18710.24	18710.24	8.07	No	Si
SLU 41	13.4	-1016.56	-9803	-0.0000152	0.0003743	0.0035	3.98	17822.45	22772.92	22772.92	22.4	No	Si
SLU 41	15.2	-2156.32	-6211	-0.0000126	0.0003743	0.0035	3.98	11682.95	16398.92	16398.92	7.61	No	Si
SLU 34	13.4	-1013.4	-10100	-0.0000156	0.0003743	0.0035	3.98	18309.61	23273.57	23273.57	22.97	No	Si
SLU 34	15.2	-2008.39	-6513	-0.0000127	0.0003743	0.0035	3.98	12217.17	16956.32	16956.32	8.44	No	Si
SLU 37	13.4	-1091.49	-11061	-0.0000171	0.0003743	0.0035	3.98	19865.32	24910.18	24910.18	22.82	No	Si
SLU 37	15.2	-2327.85	-7485	-0.0000147	0.0003743	0.0035	3.98	13911.71	18667.18	18667.18	8.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	13.4	8014.32	-10060	-0.00003	0.0005615	0.0035	3.98		19878.77	19878.77	2.48		Si
SLV 14	15.2	-8889.55	-6183	-0.0000399	0.0005615	0.0035	3.184		16469.96	16469.96	1.85		Si
SLV 15	13.4	7567.19	-8262	-0.0000273	0.0005615	0.0035	3.98		16597.01	16597.01	2.19		Si
SLV 15	15.2	-9108.04	-4526	-0.0001495	0.0005615	0.0035	3.184		13359.05	13359.05	1.47		Si
SLV 12	13.4	1787.26	-6369	-0.000012	0.0005615	0.0035	3.98		13078.47	13078.47	7.32		Si
SLV 12	15.2	-4653.67	-2952	-0.0000248	0.0005615	0.0035	3.184		10370.01	10370.01	2.23		Si
SLV 4	13.4	-9282.54	-8304	-0.0000339	0.0005615	0.0035	3.184		20378.74	20378.74	2.2		Si
SLV 4	15.2	6121.9	-5070	-0.0000229	0.0005615	0.0035	3.98		10634.32	10634.32	1.74		Si
SLV 11	13.4	1535.95	-6294	-0.0000114	0.0005615	0.0035	3.98		12938.68	12938.68	8.42		Si
SLV 11	15.2	-4409.41	-2886	-0.0000218	0.0005615	0.0035	3.184		10243.75	10243.75	2.32		Si
SLV 16	13.4	7957.17	-8378	-0.0000286	0.0005615	0.0035	3.98		16812.1	16812.1	2.11		Si
SLV 16	15.2	-9487.08	-4629	-0.000169	0.0005615	0.0035	3.184		13553.46	13553.46	1.43		Si
SLV 1	13.4	-9615.37	-9870	-0.0000347	0.0005615	0.0035	3.98		23190.27	23190.27	2.41		Si
SLV 1	15.2	7098.48	-6521	-0.0000256	0.0005615	0.0035	3.98		13364.42	13364.42	1.88		Si
SLV 13	13.4	7624.34	-9944	-0.0000289	0.0005615	0.0035	3.98		19669.39	19669.39	2.58		Si
SLV 13	15.2	-8510.5	-6080	-0.0000366	0.0005615	0.0035	3.184		16277.82	16277.82	1.91		Si
SLV 2	13.4	-9225.39	-9986	-0.0000334	0.0005615	0.0035	3.98		23399.62	23399.62	2.54		Si
SLV 2	15.2	6719.43	-6624	-0.000024	0.0005615	0.0035	3.98		13556.93	13556.93	2.02		Si
SLV 3	13.4	-9672.52	-8188	-0.0000361	0.0005615	0.0035	3.184		20169.4	20169.4	2.09		Si
SLV 3	15.2	6500.94	-4967	-0.0000259	0.0005615	0.0035	3.98		10439.37	10439.37	1.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.4	-1247.08	-14413	-12002	620	3.98	3.98	-10770	8380	9339	35683	33370	10149	43519	No	70.15	Si
SLU 78	15.2	-2468.4	-9804	-8164	603	3.98	3.98	-7325	7921	8827	35683	33370	10149	43519	No	72.2	Si
SLU 80	13.4	-1302.34	-13656	-11372	596	3.98	3.98	-10204	8305	9255	35683	33370	10149	43519	No	73.07	Si
SLU 80	15.2	-2471.98	-9041	-7528	580	3.98	3.98	-6755	7845	8743	35683	33370	10149	43519	No	75.07	Si
SLU 77	13.4	-1241.7	-14389	-11982	628	3.98	3.98	-10752	8378	9336	35683	33370	10149	43519	No	69.29	Si
SLU 77	15.2	-2476.64	-9779	-8143	611	3.98	3.98	-7307	7919	8825	35683	33370	10149	43519	No	71.28	Si
SLU 41	13.4	-1016.56	-9803	-8163	595	3.98	3.98	-7325	7921	8827	35683	33370	10149	43519	No	73.18	Si
SLU 41	15.2	-2156.32	-6211	-5172	593	3.98	3.98	-4641	7563	8428	35683	33370	10149	43519	No	73.43	Si
SLU 38	13.4	-1096.87	-11085	-9231	633	3.98	3.98	-8283	8049	8970	35683	33370	10149	43519	No	68.73	Si
SLU 38	15.2	-2319.6	-7509	-6253	623	3.98	3.98	-5611	7693	8573	35683	33370	10149	43519	No	69.86	Si
SLU 36	13.4	-1041.61	-11842	-9861	658	3.98	3.98	-8849	8124	9054	35683	33370	10149	43519	No	66.15	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	15.2	-2316.03	-8272	-6888	646	3.98	3.98	-6181	7769	8657	35683	33370	10149	43519	No	67.37	Si
SLU 37	13.4	-1091.49	-11061	-9211	641	3.98	3.98	-8265	8046	8967	35683	33370	10149	43519	No	67.91	Si
SLU 37	15.2	-2327.85	-7485	-6232	631	3.98	3.98	-5593	7690	8570	35683	33370	10149	43519	No	69	Si
SLU 42	13.4	-1021.94	-9827	-8183	587	3.98	3.98	-7343	7924	8830	35683	33370	10149	43519	No	74.14	Si
SLU 42	15.2	-2148.08	-6235	-5192	585	3.98	3.98	-4659	7566	8431	35683	33370	10149	43519	No	74.4	Si
SLU 79	13.4	-1296.96	-13632	-11352	603	3.98	3.98	-10186	8303	9252	35683	33370	10149	43519	No	72.13	Si
SLU 79	15.2	-2480.22	-9016	-7508	588	3.98	3.98	-6737	7843	8740	35683	33370	10149	43519	No	74.07	Si
SLU 35	13.4	-1036.23	-11818	-9841	666	3.98	3.98	-8831	8122	9051	35683	33370	10149	43519	No	65.38	Si
SLU 35	15.2	-2324.27	-8247	-6868	654	3.98	3.98	-6163	7766	8655	35683	33370	10149	43519	No	66.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	13.4	-9225.39	-9986	-8316	-9612	3.98	3.1985	-9323	12281	10999	35683	50055	10149	46682		4.86	Si
SLV 2	15.2	6719.43	-6624	-5516	-8467	3.98	2.9267	-4950	11407	9347	35683	50055	10149	45031		5.32	Si
SLV 3	13.4	-9672.52	-8188	-6818	-9581	3.184	2.4261	0	0	0	35683	40044	8119	35683		3.72	Si
SLV 3	15.2	6500.94	-4967	-4136	-8533	3.98	2.0435	-3712	11159	6385	35683	50055	10149	42068		4.93	Si
SLD 16	13.4	2927.63	-8793	-7322	4540	3.98	3.98	-6570	11731	13073	35683	50055	10149	48756		10.74	Si
SLD 16	15.2	-4746.26	-5158	-4295	4040	3.98	3.2095	-4788	11374	10222	35683	50055	10149	45905		11.36	Si
SLV 4	13.4	-9282.54	-8304	-6915	-9157	3.184	2.6165	0	0	0	35683	40044	8119	35683		3.9	Si
SLV 4	15.2	6121.9	-5070	-4222	-8092	3.98	2.3474	-3788	11174	7345	35683	50055	10149	43028		5.32	Si
SLV 14	13.4	8014.32	-10060	-8377	9923	3.98	3.58	-7517	11920	11949	35683	50055	10149	47632		4.8	Si
SLV 14	15.2	-8889.55	-6183	-5149	8852	3.184	1.6568	0	0	0	35683	40044	8119	35683		4.03	Si
SLV 1	13.4	-9615.37	-9870	-8219	-10036	3.98	3.0475	-9669	12351	10539	35683	50055	10149	46222		4.61	Si
SLV 1	15.2	7098.48	-6521	-5430	-8908	3.98	2.7044	-4873	11391	8626	35683	50055	10149	44309		4.97	Si
SLV 16	13.4	7957.17	-8378	-6976	10378	3.98	3.1205	-6260	11669	10195	35683	50055	10149	45879		4.42	Si
SLV 16	15.2	-9487.08	-4629	-3855	9227	3.184	0	0	0	0	35683	40044	8119	35683		3.87	Si
SLV 13	13.4	7624.34	-9944	-8280	9500	3.98	3.6698	-7430	11903	12231	35683	50055	10149	47914		5.04	Si
SLV 13	15.2	-8510.5	-6080	-5063	8411	3.184	1.771	0	0	0	35683	40044	8119	35683		4.24	Si
SLV 15	13.4	7567.19	-8262	-6880	9954	3.98	3.2222	-6173	11651	10512	35683	50055	10149	46195		4.64	Si
SLV 15	15.2	-9108.04	-4526	-3769	8787	3.184	0	0	0	0	35683	40044	8119	35683		4.06	Si
SLV 12	13.4	1787.26	-6369	-5303	3996	3.98	3.98	-4759	11368	12669	35683	50055	10149	48352		12.1	Si
SLV 12	15.2	-4653.67	-2952	-2458	3525	3.184	1.2406	0	0	0	35683	40044	8119	35683		10.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	4724	-5265	452.2	714.28	1.58	Si
SLV 12	179667	0.53	4784	-5331	452.2	722.98	1.6	Si
SLV 7	179667	0.53	4855	-5411	452.2	733.41	1.62	Si
SLV 8	179667	0.53	4915	-5477	452.2	742.09	1.64	Si
SLV 15	179667	0.53	6218	-6929	452.2	930.57	2.06	Si
SLV 16	179667	0.53	6310	-7032	452.2	943.77	2.09	Si
SLV 3	179667	0.53	6654	-7415	452.2	992.87	2.2	Si
SLV 4	179667	0.53	6746	-7518	452.2	1005.99	2.22	Si
SLV 13	179667	0.53	7643	-8517	452.2	1132.69	2.5	Si
SLV 14	179667	0.53	7735	-8620	452.2	1145.63	2.53	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5708	-13547	1334	2.428	1101.6	0.897	39.33696	12.42528	Si
SLV 5	-5643	-13484	1334	2.446	1095.2	0.897	39.63822	12.42528	Si
SLV 10	-5497	-13903	1343	2.485	1081.1	0.896	40.30765	12.42528	Si
SLV 9	-5431	-13839	1343	2.504	1074.7	0.896	40.62352	12.42528	Si
SLV 8	-1379	-7765	-1350	4.694	711.5	0.904	75.42372	12.42528	Si
SLV 7	-1313	-7702	-1350	4.762	706.8	0.906	76.37511	12.42528	Si
SLV 12	-1167	-8121	-1341	4.923	696.6	0.91	78.58407	12.42528	Si
SLV 11	-1101	-8057	-1341	4.998	692.2	0.913	79.588	12.42528	Si
SLV 2	-4458	-11126	385	2.943	981.4	0.892	47.96991	6.42939	Si
SLV 1	-4356	-11028	384	2.983	971.8	0.891	48.62971	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.605	SLU 41	Si
V_SLU	65.383	SLU 35	Si
PF_SLV	1.429	SLV 16	Si
V_SLV	3.724	SLV 3	Si
PFFP_SLV	1.58	SLV 11	Si
R_SLV	3.166	SLV 6	Si

Maschio 221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.233	6.526	L7	L8	1.825	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 32	13.4	-165.69	-5212	-0.0000169	0.0003743	0.0035	1.825	4279.65	5258.69	5258.69	31.74	No	Si
SLU 32	15.2	-550.41	-3515	-0.0000156	0.0003743	0.0035	1.825	2991.03	3899.22	3899.22	7.08	No	Si
SLU 35	13.4	-170.04	-5479	-0.0000178	0.0003743	0.0035	1.825	4473.23	5466.69	5466.69	32.15	No	Si
SLU 35	15.2	-653.67	-3784	-0.0000174	0.0003743	0.0035	1.825	3201.95	4120.73	4120.73	6.3	No	Si
SLU 37	13.4	-157.62	-5100	-0.0000165	0.0003743	0.0035	1.825	4197.26	5169.79	5169.79	32.8	No	Si
SLU 37	15.2	-562.47	-3401	-0.0000153	0.0003743	0.0035	1.825	2900.55	3805.56	3805.56	6.77	No	Si
SLU 77	13.4	-280.95	-6746	-0.0000227	0.0003743	0.0035	1.825	5357.83	6427.01	6427.01	22.88	No	Si
SLU 77	15.2	-664.94	-4559	-0.0000198	0.0003743	0.0035	1.825	3795.49	4742.04	4742.04	7.13	No	Si
SLU 78	13.4	-288.39	-6763	-0.0000229	0.0003743	0.0035	1.825	5369.09	6439.33	6439.33	22.33	No	Si
SLU 78	15.2	-649.98	-4576	-0.0000197	0.0003743	0.0035	1.825	3808.38	4755.47	4755.47	7.32	No	Si
SLU 36	13.4	-177.47	-5496	-0.0000179	0.0003743	0.0035	1.825	4485.23	5479.54	5479.54	30.88	No	Si
SLU 36	15.2	-638.7	-3801	-0.0000173	0.0003743	0.0035	1.825	3215.31	4134.92	4134.92	6.47	No	Si
SLU 33	13.4	-173.12	-5229	-0.0000171	0.0003743	0.0035	1.825	4291.81	5271.78	5271.78	30.45	No	Si
SLU 33	15.2	-535.44	-3532	-0.0000155	0.0003743	0.0035	1.825	3004.55	3913.29	3913.29	7.31	No	Si
SLU 27	13.4	-257.6	-5610	-0.000019	0.0003743	0.0035	1.825	4567.38	5567.41	5567.41	21.61	No	Si
SLU 27	15.2	-608.7	-3919	-0.0000173	0.0003743	0.0035	1.825	3306.87	4232.16	4232.16	6.95	No	Si
SLU 38	13.4	-165.05	-5116	-0.0000166	0.0003743	0.0035	1.825	4209.48	5182.98	5182.98	31.4	No	Si
SLU 38	15.2	-547.5	-3418	-0.0000152	0.0003743	0.0035	1.825	2914.14	3819.57	3819.57	6.98	No	Si
SLU 28	13.4	-265.04	-5627	-0.0000192	0.0003743	0.0035	1.825	4579.3	5580.14	5580.14	21.05	No	Si
SLU 28	15.2	-593.74	-3936	-0.0000172	0.0003743	0.0035	1.825	3320.15	4246.23	4246.23	7.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	13.4	1844.6	-4135	-0.0000316	0.0005615	0.0035	1.825		3792.41	3792.41	2.06		Si
SLV 13	15.2	-3433.53	-2284	-0.0009637	0.0005615	0.0035	1.46		2893.89	2893.89	0.84		No
SLV 1	13.4	-2867.26	-6002	-0.0000498	0.0005615	0.0035	1.825		5992.04	5992.04	2.09		Si
SLV 1	15.2	4085.29	-4415	-0.0022048	0.0005615	0.0035	1.46		4025.79	4025.79	0.99		No
SLV 3	13.4	-2480.34	-4893	-0.0000433	0.0005615	0.0035	1.46		5091.71	5091.71	2.05		Si
SLV 3	15.2	3206.62	-3391	-0.001694	0.0005615	0.0035	1.46		3163.05	3163.05	0.99		No
SLV 2	13.4	-2743.29	-5977	-0.0000475	0.0005615	0.0035	1.825		5972	5972	2.18		Si
SLV 2	15.2	3846.82	-4382	-0.0005903	0.0005615	0.0035	1.825		3998.54	3998.54	1.04		Si
SLV 12	13.4	1135.72	-2365	-0.0000193	0.0005615	0.0035	1.825		2282.39	2282.39	2.01		Si
SLV 12	15.2	-2901.8	-784	-0.0013856	0.0005615	0.0035	1.46		1582.51	1582.51	0.55		No
SLV 14	13.4	1968.57	-4110	-0.0000338	0.0005615	0.0035	1.825		3771.54	3771.54	1.92		Si
SLV 14	15.2	-3672	-2251	-0.0011668	0.0005615	0.0035	1.46		2865.5	2865.5	0.78		No
SLV 4	13.4	-2356.37	-4868	-0.0000407	0.0005615	0.0035	1.825		5070.72	5070.72	2.15		Si
SLV 4	15.2	2968.15	-3358	-0.0004322	0.0005615	0.0035	1.46		3135.23	3135.23	1.06		Si
SLV 16	13.4	2355.49	-3001	-0.0000873	0.0005615	0.0035	1.825		2831.17	2831.17	1.2		Si
SLV 16	15.2	-4550.67	-1227	-0.0028493	0.0005615	0.0035	1.46		1973.44	1973.44	0.43		No
SLV 11	13.4	1055.83	-2381	-0.0000179	0.0005615	0.0035	1.825		2296.36	2296.36	2.17		Si
SLV 11	15.2	-2748.12	-805	-0.00124	0.0005615	0.0035	1.46		1601.1	1601.1	0.58		No
SLV 15	13.4	2231.53	-3026	-0.0000631	0.0005615	0.0035	1.825		2852.66	2852.66	1.28		Si
SLV 15	15.2	-4312.2	-1260	-0.0024955	0.0005615	0.0035	1.46		2002.14	2002.14	0.46		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 37	13.4	-157.62	-5100	-4246	205	1.825	1.825	-8310	8052	4115	35683	15302	4654	19956	No	97.48	Si
SLU 37	15.2	-562.47	-3401	-2832	176	1.825	1.825	-5542	7683	3926	35683	15302	4654	19956	No	113.55	Si
SLU 38	13.4	-165.05	-5116	-4260	192	1.825	1.825	-8337	8056	4117	35683	15302	4654	19956	No	103.69	Si
SLU 38	15.2	-547.5	-3418	-2846	163	1.825	1.825	-5570	7687	3928	35683	15302	4654	19956	No	122.35	Si
SLU 32	13.4	-165.69	-5212	-4340	194	1.825	1.825	-8494	8077	4127	35683	15302	4654	19956	No	102.77	Si
SLU 32	15.2	-550.41	-3515	-2927	164	1.825	1.825	-5728	7708	3939	35683	15302	4654	19956	No	121.8	Si
SLU 41	13.4	-115.74	-4776	-3977	183	1.825	1.825	-7783	7982	4079	35683	15302	4654	19956	No	109	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	15.2	-478.48	-3074	-2560	154	1.825	1.825	-5010	7612	3890	35683	15302	4654	19956	No	129.84	Si
SLU 35	13.4	-170.04	-5479	-4563	248	1.825	1.825	-8929	8135	4157	35683	15302	4654	19956	No	80.58	Si
SLU 35	15.2	-653.67	-3784	-3151	218	1.825	1.825	-6167	7767	3969	35683	15302	4654	19956	No	91.5	Si
SLU 33	13.4	-173.12	-5229	-4354	182	1.825	1.825	-8521	8081	4129	35683	15302	4654	19956	No	109.7	Si
SLU 33	15.2	-535.44	-3532	-2942	151	1.825	1.825	-5756	7712	3941	35683	15302	4654	19956	No	131.98	Si
SLU 36	13.4	-177.47	-5496	-4576	235	1.825	1.825	-8956	8139	4159	35683	15302	4654	19956	No	84.77	Si
SLU 36	15.2	-638.7	-3801	-3165	205	1.825	1.825	-6195	7770	3971	35683	15302	4654	19956	No	97.13	Si
SLU 77	13.4	-280.95	-6746	-5618	187	1.825	1.825	-10994	8410	4298	35683	15302	4654	19956	No	106.63	Si
SLU 77	15.2	-664.94	-4559	-3796	148	1.825	1.825	-7429	7935	4055	35683	15302	4654	19956	No	134.97	Si
SLU 44	13.4	-421.98	-5771	-4806	-163	1.825	1.825	-9404	8198	4189	35683	15302	4654	19956	No	122.74	Si
SLU 44	15.2	-169.72	-3607	-3004	-205	1.825	1.825	-5878	7728	3949	35683	15302	4654	19956	No	97.44	Si
SLU 43	13.4	-409.58	-5743	-4782	-142	1.825	1.825	-9359	8192	4186	35683	15302	4654	19956	No	140.37	Si
SLU 43	15.2	-194.66	-3579	-2980	-184	1.825	1.825	-5832	7722	3946	35683	15302	4654	19956	No	108.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	13.4	1055.83	-2381	-1983	2200	1.825	1.4074	-3881	11193	4411	35683	22953	4654	27606		12.55	Si
SLV 11	15.2	-2748.12	-805	-670	2076	1.46	0	0	0	0	35683	18362	3723	22085		10.64	Si
SLV 15	13.4	2231.53	-3026	-2520	3845	1.825	0.5251	-17282	13873	2040	35683	22953	4654	27606		7.18	Si
SLV 15	15.2	-4312.2	-1260	-1049	3355	1.46	0	0	0	0	35683	18362	3723	22085		6.58	Si
SLV 16	13.4	2355.49	-3001	-2499	4039	1.825	0.3827	-23570	15133	1622	35683	22953	4654	27606		6.84	Si
SLV 16	15.2	-4550.67	-1227	-1022	3560	1.46	0	0	0	0	35683	18362	3723	22085		6.2	Si
SLV 13	13.4	1844.6	-4135	-3443	3119	1.825	1.3992	-6738	11764	4609	35683	22953	4654	27606		8.85	Si
SLV 13	15.2	-3433.53	-2284	-1902	2598	1.46	0	0	0	0	35683	18362	3723	22085		8.5	Si
SLV 3	13.4	-2480.34	-4893	-4075	-3373	1.46	1.2169	0	0	0	35683	18362	3723	22085		6.55	Si
SLV 3	15.2	3206.62	-3391	-2823	-2927	1.46	0	0	0	0	35683	18362	3723	22085		7.55	Si
SLV 12	13.4	1135.72	-2365	-1970	2325	1.825	1.297	-3854	11188	4063	35683	22953	4654	27606		11.87	Si
SLV 12	15.2	-2901.8	-784	-653	2208	1.46	0	0	0	0	35683	18362	3723	22085		10	Si
SLV 2	13.4	-2743.29	-5977	-4977	-3906	1.825	1.3607	-13145	13046	4970	35683	22953	4654	27606		7.07	Si
SLV 2	15.2	3846.82	-4382	-3649	-3479	1.825	0.1041	-109283	16250	474	35683	22953	4654	27606		7.94	Si
SLV 1	13.4	-2867.26	-6002	-4998	-4099	1.825	1.3045	-13772	13171	4811	35683	22953	4654	27606		6.73	Si
SLV 1	15.2	4085.29	-4415	-3676	-3683	1.46	0	0	0	0	35683	18362	3723	22085		6	Si
SLV 4	13.4	-2356.37	-4868	-4054	-3179	1.825	1.2855	-11320	12681	4564	35683	22953	4654	27606		8.68	Si
SLV 4	15.2	2968.15	-3358	-2796	-2722	1.46	0.0858	0	0	0	35683	18362	3723	22085		8.11	Si
SLV 14	13.4	1968.57	-4110	-3422	3312	1.825	1.3006	-6697	11756	4281	35683	22953	4654	27606		8.33	Si
SLV 14	15.2	-3672	-2251	-1875	2803	1.46	0	0	0	0	35683	18362	3723	22085		7.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	3227	-1649	207.35	225.97	1.09	Si
SLV 11	179667	0.53	3268	-1670	207.35	228.8	1.1	Si
SLV 16	179667	0.53	4218	-2155	207.35	293.4	1.41	Si
SLV 15	179667	0.53	4282	-2188	207.35	297.73	1.44	Si
SLV 8	179667	0.53	4498	-2299	207.35	312.33	1.51	Si
SLV 7	179667	0.53	4540	-2320	207.35	315.11	1.52	Si
SLV 14	179667	0.53	6348	-3244	207.35	435.28	2.1	Si
SLV 13	179667	0.53	6412	-3277	207.35	439.48	2.12	Si
SLV 4	179667	0.53	8456	-4321	207.35	571.44	2.76	Si
SLV 3	179667	0.53	8520	-4354	207.35	575.52	2.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-4923	-4834	600	1.568	733.6	0.919	24.79264	12.42528	Si
SLV 6	-4834	-4946	600	1.59	724.6	0.918	25.15556	12.42528	Si
SLV 9	-3497	-6248	606	2.006	591.4	0.906	32.17425	12.42528	Si
SLV 10	-3407	-6360	606	2.042	582.6	0.905	32.78592	12.42528	Si
SLV 1	-5265	-2508	167	1.555	767.9	0.922	24.51177	6.42939	Si
SLV 2	-5126	-2681	168	1.587	754	0.921	25.0436	6.42939	Si
SLV 3	-4110	-1954	-196	1.863	652.3	0.912	29.69145	6.42939	Si
SLV 4	-3971	-2127	-196	1.91	638.5	0.911	30.47827	6.42939	Si
SLV 7	-1073	-2989	-613	3.884	361.5	0.891	63.35076	12.42528	Si
SLV 8	-984	-3101	-613	4.026	354	0.893	65.54656	12.42528	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.304	SLU 35	Si
V_SLU	80.577	SLU 35	Si
PF_SLV	0.434	SLV 16	No
V_SLV	5.996	SLV 1	Si
PFFP_SLV	1.09	SLV 12	Si
R_SLV	1.995	SLV 5	Si

Maschio 222

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L7	L8	4.02	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	12.5	-3583.96	-15693	-0.000026	0.0004492	0.0035	4.02	27943.51	38296.44	38296.44	10.69	No	Si
SLU 46	14.6	-1459.82	-11348	-0.0000166	0.0004492	0.0035	4.02	20927.07	30694.55	30694.55	21.03	No	Si
SLU 45	12.5	-3575.18	-15689	-0.000026	0.0004492	0.0035	4.02	27938.27	38290.56	38290.56	10.71	No	Si
SLU 45	14.6	-1490.25	-11361	-0.0000166	0.0004492	0.0035	4.02	20949.4	30718.95	30718.95	20.61	No	Si
SLU 49	12.5	-3637.73	-16384	-0.000027	0.0004492	0.0035	4.02	29009.37	39500.52	39500.52	10.86	No	Si
SLU 49	14.6	-1649.31	-11996	-0.0000177	0.0004492	0.0035	4.02	22008.1	31859.23	31859.23	19.32	No	Si
SLU 48	12.5	-3628.95	-16381	-0.000027	0.0004492	0.0035	4.02	29004.2	39494.64	39494.64	10.88	No	Si
SLU 48	14.6	-1679.75	-12009	-0.0000178	0.0004492	0.0035	4.02	22030.18	31882.4	31882.4	18.98	No	Si
SLU 50	12.5	-3443.64	-15570	-0.0000256	0.0004492	0.0035	4.02	27752.44	38082.25	38082.25	11.06	No	Si
SLU 50	14.6	-1319.76	-10947	-0.0000158	0.0004492	0.0035	4.02	20251.65	29959.21	29959.21	22.7	No	Si
SLU 67	12.5	-3296.97	-15453	-0.0000252	0.0004492	0.0035	4.02	27570.69	37878.97	37878.97	11.49	No	Si
SLU 67	14.6	-1597.87	-11734	-0.0000173	0.0004492	0.0035	4.02	21573.48	31403.16	31403.16	19.65	No	Si
SLU 51	12.5	-3452.42	-15573	-0.0000256	0.0004492	0.0035	4.02	27757.69	38088.13	38088.13	11.03	No	Si
SLU 51	14.6	-1289.32	-10933	-0.0000157	0.0004492	0.0035	4.02	20229.16	29934.81	29934.81	23.22	No	Si
SLU 44	12.5	-3350.73	-14192	-0.0000237	0.0004492	0.0035	4.02	25582.79	35683.89	35683.89	10.65	No	Si
SLU 44	14.6	-890.04	-9629	-0.0000134	0.0004492	0.0035	4.02	17999.27	27543.02	27543.02	30.95	No	Si
SLU 43	12.5	-3336.1	-14187	-0.0000236	0.0004492	0.0035	4.02	25573.81	35674.09	35674.09	10.69	No	Si
SLU 43	14.6	-940.76	-9651	-0.0000135	0.0004492	0.0035	4.02	18037.6	27583.69	27583.69	29.32	No	Si
SLU 47	12.5	-3404.5	-14884	-0.0000246	0.0004492	0.0035	4.02	26678.98	36887.97	36887.97	10.84	No	Si
SLU 47	14.6	-1079.54	-10277	-0.0000145	0.0004492	0.0035	4.02	19112.85	28730.78	28730.78	26.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	12.5	-2817.2	-7082	-0.0000137	0.0006738	0.0035	4.02		22989.03	22989.03	8.16		Si
SLV 16	14.6	2650.86	-4326	-0.00001	0.0006738	0.0035	4.02		10188.81	10188.81	3.84		Si
SLV 3	12.5	-1175.26	-14035	-0.0000193	0.0006738	0.0035	4.02		35820.03	35820.03	30.48		Si
SLV 3	14.6	-5279.46	-11276	-0.0000234	0.0006738	0.0035	4.02		30804.91	30804.91	5.83		Si
SLV 14	12.5	-3339.84	-6803	-0.0000143	0.0006738	0.0035	4.02		22463.73	22463.73	6.73		Si
SLV 14	14.6	3719.53	-3726	-0.000012	0.0006738	0.0035	4.02		9030.54	9030.54	2.43		Si
SLV 2	12.5	-1714.8	-13762	-0.0000199	0.0006738	0.0035	4.02		35334.32	35334.32	20.61		Si
SLV 2	14.6	-4303.95	-10717	-0.0000209	0.0006738	0.0035	4.02		29777.09	29777.09	6.92		Si
SLV 15	12.5	-2800.3	-7076	-0.0000137	0.0006738	0.0035	4.02		22976.97	22976.97	8.21		Si
SLV 15	14.6	2744.02	-4285	-0.0000102	0.0006738	0.0035	4.02		10109.56	10109.56	3.68		Si
SLV 9	12.5	-3366.94	-8908	-0.000017	0.0006738	0.0035	4.02		26412.96	26412.96	7.84		Si
SLV 9	14.6	2234.69	-5438	-0.0000106	0.0006738	0.0035	4.02		12334.26	12334.26	5.52		Si
SLV 13	12.5	-3322.94	-6797	-0.0000143	0.0006738	0.0035	4.02		22451.67	22451.67	6.76		Si
SLV 13	14.6	3812.69	-3684	-0.0000123	0.0006738	0.0035	4.02		8951.29	8951.29	2.35		Si
SLV 1	12.5	-1697.91	-13756	-0.0000199	0.0006738	0.0035	4.02		35322.9	35322.9	20.8		Si
SLV 1	14.6	-4210.79	-10676	-0.0000207	0.0006738	0.0035	4.02		29701.61	29701.61	7.05		Si
SLV 4	12.5	-1192.16	-14041	-0.0000193	0.0006738	0.0035	4.02		35831.44	35831.44	30.06		Si
SLV 4	14.6	-5372.62	-11317	-0.0000236	0.0006738	0.0035	4.02		30880.4	30880.4	5.75		Si
SLV 10	12.5	-3377.82	-8912	-0.000017	0.0006738	0.0035	4.02		26420.64	26420.64	7.82		Si
SLV 10	14.6	2174.66	-5465	-0.0000106	0.0006738	0.0035	4.02		12385.33	12385.33	5.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	12.5	-1967.94	-11537	-8230	2461	4.02	4.02	-7312	9308	10477	101952	40451	20502	60953	No	24.77	Si
SLU 35	14.6	-1568.67	-9796	-6988	2462	4.02	4.02	-6208	9161	10312	101952	40451	20502	60953	No	24.75	Si
SLU 81	12.5	-2294.15	-12137	-8658	2258	4.02	4.02	-7692	9359	10534	101952	40451	20502	60953	No	27	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	14.6	-981.04	-9360	-6677	2261	4.02	4.02	-5932	9124	10270	101952	40451	20502	60953	No	26.95	Si
SLU 39	12.5	-1448.59	-8800	-6278	2511	4.02	4.02	-5577	9077	10217	101952	40451	20502	60953	No	24.28	Si
SLU 39	14.6	-800.35	-7234	-5161	2514	4.02	4.02	-4585	8945	10068	101952	40451	20502	60953	No	24.25	Si
SLU 33	12.5	-1922.95	-10849	-7740	2403	4.02	4.02	-6876	9250	10412	101952	40451	20502	60953	No	25.36	Si
SLU 33	14.6	-1348.74	-9134	-6516	2406	4.02	4.02	-5789	9105	10249	101952	40451	20502	60953	No	25.34	Si
SLU 36	12.5	-1976.72	-11541	-8233	2426	4.02	4.02	-7314	9309	10478	101952	40451	20502	60953	No	25.12	Si
SLU 36	14.6	-1538.24	-9782	-6978	2428	4.02	4.02	-6200	9160	10310	101952	40451	20502	60953	No	25.11	Si
SLU 42	12.5	-1511.15	-9495	-6774	2499	4.02	4.02	-6018	9136	10283	101952	40451	20502	60953	No	24.39	Si
SLU 42	14.6	-959.41	-7869	-5614	2501	4.02	4.02	-4987	8998	10128	101952	40451	20502	60953	No	24.37	Si
SLU 40	12.5	-1457.38	-8804	-6280	2476	4.02	4.02	-5579	9077	10217	101952	40451	20502	60953	No	24.61	Si
SLU 40	14.6	-769.92	-7221	-5151	2479	4.02	4.02	-4577	8944	10067	101952	40451	20502	60953	No	24.59	Si
SLU 32	12.5	-1914.17	-10846	-7737	2438	4.02	4.02	-6874	9250	10412	101952	40451	20502	60953	No	25	Si
SLU 32	14.6	-1379.17	-9148	-6526	2440	4.02	4.02	-5798	9106	10250	101952	40451	20502	60953	No	24.98	Si
SLU 41	12.5	-1502.37	-9492	-6771	2534	4.02	4.02	-6016	9135	10283	101952	40451	20502	60953	No	24.06	Si
SLU 41	14.6	-989.85	-7882	-5623	2536	4.02	4.02	-4996	8999	10130	101952	40451	20502	60953	No	24.04	Si
SLU 83	12.5	-2347.92	-12829	-9152	2280	4.02	4.02	-8131	9417	10600	101952	40451	20502	60953	No	26.73	Si
SLU 83	14.6	-1170.54	-10008	-7139	2283	4.02	4.02	-6343	9179	10332	101952	40451	20502	60953	No	26.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	12.5	-1697.91	-13756	-9813	4575	4.02	4.02	-8718	14244	16033	101952	60677	20502	81179		17.74	Si
SLV 1	14.6	-4210.79	-10676	-7616	379	4.02	4.02	-6766	13853	15593	101952	60677	20502	81179		214.18	Si
SLV 2	12.5	-1714.8	-13762	-9818	4645	4.02	4.02	-8722	14244	16034	101952	60677	20502	81179		17.48	Si
SLV 2	14.6	-4303.95	-10717	-7645	449	4.02	4.02	-6792	13858	15599	101952	60677	20502	81179		180.98	Si
SLV 15	12.5	-2800.3	-7076	-5048	-3162	4.02	4.02	-4485	13397	15080	101952	60677	20502	81179		25.67	Si
SLV 15	14.6	2744.02	-4285	-3057	1040	4.02	4.02	-2716	13043	14681	101952	60677	20502	81179		78.07	Si
SLV 16	12.5	-2817.2	-7082	-5052	-3092	4.02	4.02	-4489	13398	15080	101952	60677	20502	81179		26.25	Si
SLV 16	14.6	2650.86	-4326	-3086	1109	4.02	4.02	-2742	13048	14687	101952	60677	20502	81179		73.17	Si
SLV 3	12.5	-1175.26	-14035	-10012	5661	4.02	4.02	-8895	14279	16072	101952	60677	20502	81179		14.34	Si
SLV 3	14.6	-5279.46	-11276	-8044	1456	4.02	4.02	-7146	13929	15679	101952	60677	20502	81179		55.75	Si
SLV 14	12.5	-3339.84	-6803	-4853	-4178	4.02	4.02	-4312	13362	15041	101952	60677	20502	81179		19.43	Si
SLV 14	14.6	3719.53	-3726	-2658	32	4.02	3.0348	-2361	12972	11023	101952	60677	20502	81179		2505.16	Si
SLV 7	12.5	-1137.28	-11926	-8508	3853	4.02	4.02	-7558	14012	15772	101952	60677	20502	81179		21.07	Si
SLV 7	14.6	-3734.59	-9537	-6803	2579	4.02	4.02	-6044	13709	15431	101952	60677	20502	81179		31.47	Si
SLV 13	12.5	-3322.94	-6797	-4849	-4248	4.02	4.02	-4308	13362	15040	101952	60677	20502	81179		19.11	Si
SLV 13	14.6	3812.69	-3684	-2628	-37	4.02	2.9256	-2335	12967	10622	101952	60677	20502	81179		2187.25	Si
SLV 4	12.5	-1192.16	-14041	-10017	5731	4.02	4.02	-8899	14280	16073	101952	60677	20502	81179		14.17	Si
SLV 4	14.6	-5372.62	-11317	-8073	1526	4.02	4.02	-7172	13934	15685	101952	60677	20502	81179		53.21	Si
SLV 8	12.5	-1148.17	-11930	-8511	3897	4.02	4.02	-7561	14012	15772	101952	60677	20502	81179		20.83	Si
SLV 8	14.6	-3794.62	-9563	-6822	2624	4.02	4.02	-6061	13712	15434	101952	60677	20502	81179		30.94	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-4128	0.53	467.36	566.32	1139.46	852.89	1.82	Si
SLV 14	-4163	0.53	467.36	571.06	1145.01	858.03	1.84	Si
SLV 15	-4673	0.53	467.36	639.34	1225.06	932.2	1.99	Si
SLV 16	-4708	0.53	467.36	644.05	1230.61	937.33	2.01	Si
SLV 9	-5999	0.53	467.36	815.45	1432.6	1124.03	2.41	Si
SLV 10	-6022	0.53	467.36	818.45	1436.13	1127.29	2.41	Si
SLV 11	-7815	0.53	467.36	1052.68	1714.24	1383.46	2.96	Si
SLV 12	-7838	0.53	467.36	1055.63	1717.75	1386.69	2.97	Si
SLV 5	-8143	0.53	467.36	1094.97	1764.86	1429.92	3.06	Si
SLV 6	-8165	0.53	467.36	1097.9	1768.38	1433.14	3.07	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-6742	-11930	667	2.262	1208	0.902	36.47071	12.42528	Si
SLV 7	-6739	-11926	667	2.263	1207.7	0.902	36.48203	12.42528	Si
SLV 6	-6436	-11000	-664	2.333	1178.1	0.9	37.66912	12.42528	Si
SLV 5	-6433	-10996	-664	2.334	1177.8	0.9	37.68015	12.42528	Si
SLV 12	-6429	-9842	664	2.335	1177.3	0.9	37.70002	12.42528	Si
SLV 11	-6426	-9838	663	2.336	1177	0.9	37.71208	12.42528	Si
SLV 10	-6123	-8912	-667	2.41	1147.5	0.899	38.96626	12.42528	Si
SLV 9	-6120	-8908	-668	2.41	1147.2	0.899	38.97806	12.42528	Si
SLV 4	-7001	-14041	206	2.251	1233.5	0.903	36.24341	6.42939	Si
SLV 3	-6996	-14035	205	2.252	1233	0.903	36.26045	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.65	SLU 44	Si
V_SLU	24.038	SLU 41	Si
PF_SLV	2.348	SLV 13	Si
V_SLV	14.166	SLV 4	Si
PFFP_SLV	1.825	SLV 13	Si
R_SLV	2.935	SLV 8	Si

Maschio 223

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L7	L8	7.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	12.5	-4886.13	-34134	-0.000025	0.0004492	0.0035	7.55	111828.76	151740.62	151740.62	31.06	No	Si
SLU 43	15	-4923.93	-22880	-0.0000175	0.0004492	0.0035	7.55	78721.08	115046.64	115046.64	23.36	No	Si
SLU 45	12.5	-5283.09	-37941	-0.0000278	0.0004492	0.0035	7.55	122188.45	163511.29	163511.29	30.95	No	Si
SLU 45	15	-5121.9	-26972	-0.0000203	0.0004492	0.0035	7.55	91188.12	128389.4	128389.4	25.07	No	Si
SLU 52	12.5	-4741.44	-32142	-0.0000236	0.0004492	0.0035	7.55	106237.73	145245.08	145245.08	30.63	No	Si
SLU 52	15	-4744.82	-22260	-0.000017	0.0004492	0.0035	7.55	76788.79	113003.3	113003.3	23.82	No	Si
SLU 44	12.5	-4931.05	-34102	-0.000025	0.0004492	0.0035	7.55	111739.69	151636.07	151636.07	30.75	No	Si
SLU 44	15	-4996.55	-22921	-0.0000176	0.0004492	0.0035	7.55	78849.18	115181.12	115181.12	23.05	No	Si
SLU 40	12.5	-4837.54	-24296	-0.0000184	0.0004492	0.0035	7.55	83091.85	119665.14	119665.14	24.74	No	Si
SLU 40	15	-2311.83	-18234	-0.000013	0.0004492	0.0035	7.55	63973.35	99164.76	99164.76	42.89	No	Si
SLU 39	12.5	-4810.59	-24316	-0.0000184	0.0004492	0.0035	7.55	83150.81	119727.87	119727.87	24.89	No	Si
SLU 39	15	-2268.26	-18209	-0.000013	0.0004492	0.0035	7.55	63893.1	99079.69	99079.69	43.68	No	Si
SLU 31	12.5	-4936.76	-25124	-0.000019	0.0004492	0.0035	7.55	85617.23	122362.32	122362.32	24.79	No	Si
SLU 31	15	-2448.75	-18534	-0.0000133	0.0004492	0.0035	7.55	64944.65	100195.96	100195.96	40.92	No	Si
SLU 61	12.5	-4642.21	-31315	-0.000023	0.0004492	0.0035	7.55	103882.06	142547.9	142547.9	30.71	No	Si
SLU 61	15	-4607.89	-21960	-0.0000167	0.0004492	0.0035	7.55	75850.16	111972.1	111972.1	24.3	No	Si
SLU 60	12.5	-4615.26	-31334	-0.000023	0.0004492	0.0035	7.55	103937.07	142610.63	142610.63	30.9	No	Si
SLU 60	15	-4564.32	-21935	-0.0000167	0.0004492	0.0035	7.55	75772.61	111887.03	111887.03	24.51	No	Si
SLU 46	12.5	-5310.04	-37921	-0.0000278	0.0004492	0.0035	7.55	122137.15	163451.96	163451.96	30.78	No	Si
SLU 46	15	-5165.47	-26997	-0.0000204	0.0004492	0.0035	7.55	91262.02	128470.09	128470.09	24.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	12.5	8624.39	-26841	-0.0000219	0.0006738	0.0035	7.55		101654.27	101654.27	11.79		Si
SLV 2	15	-25499.78	-22852	-0.0000281	0.0006738	0.0035	7.55		115933.76	115933.76	4.55		Si
SLV 4	12.5	10012.48	-28807	-0.000024	0.0006738	0.0035	7.55		108356.58	108356.58	10.82		Si
SLV 4	15	-22833.59	-21214	-0.0000256	0.0006738	0.0035	7.55		110292.44	110292.44	4.83		Si
SLV 3	12.5	9705.52	-28568	-0.0000236	0.0006738	0.0035	7.55		107542.5	107542.5	11.08		Si
SLV 3	15	-22263.6	-21238	-0.0000254	0.0006738	0.0035	7.55		110373.7	110373.7	4.96		Si
SLV 11	12.5	-6098.35	-28780	-0.0000219	0.0006738	0.0035	7.55		135941.79	135941.79	22.29		Si
SLV 11	15	7616.91	-14178	-0.0000131	0.0006738	0.0035	7.55		57392.71	57392.71	7.53		Si
SLV 13	12.5	-18571.6	-23334	-0.0000248	0.0006738	0.0035	7.55		117595.61	117595.61	6.33		Si
SLV 13	15	16410.66	-14959	-0.0000182	0.0006738	0.0035	7.55		60182.43	60182.43	3.67		Si
SLV 1	12.5	8317.44	-26602	-0.0000216	0.0006738	0.0035	7.55		100840.19	100840.19	12.12		Si
SLV 1	15	-24929.79	-22875	-0.0000278	0.0006738	0.0035	7.55		116015.01	116015.01	4.65		Si
SLV 15	12.5	-17183.51	-25300	-0.0000254	0.0006738	0.0035	7.55		124323.07	124323.07	7.24		Si
SLV 15	15	19076.85	-13322	-0.0000186	0.0006738	0.0035	7.55		54338.25	54338.25	2.85		Si
SLV 14	12.5	-18264.64	-23573	-0.0000248	0.0006738	0.0035	7.55		118418.15	118418.15	6.48		Si
SLV 14	15	15840.66	-14936	-0.0000178	0.0006738	0.0035	7.55		60098.25	60098.25	3.79		Si
SLV 12	12.5	-5900.54	-28933	-0.0000219	0.0006738	0.0035	7.55		136455.54	136455.54	23.13		Si
SLV 12	15	7249.59	-14162	-0.0000129	0.0006738	0.0035	7.55		57338.46	57338.46	7.91		Si
SLV 16	12.5	-16876.56	-25538	-0.0000254	0.0006738	0.0035	7.55		125120.28	125120.28	7.41		Si
SLV 16	15	18506.85	-13298	-0.0000182	0.0006738	0.0035	7.55		54254.07	54254.07	2.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	12.5	-5626.48	-40176	-28661	-1614	7.55	7.55	-13558	10141	21438	101952	75972	38505	114477	No	70.91	Si
SLU 69	15	-2826.87	-29708	-21193	-365	7.55	7.55	-10025	9670	20442	101952	75972	38505	114477	No	313.48	Si
SLU 71	12.5	-4526.09	-37926	-27055	-1944	7.55	7.55	-12798	10040	21224	101952	75972	38505	114477	No	58.9	Si
SLU 71	15	-1251.61	-27122	-19348	-765	7.55	7.55	-9152	9554	20196	101952	75972	38505	114477	No	149.61	Si
SLU 51	12.5	-3506.23	-37227	-26557	-1730	7.55	7.55	-12562	10008	21158	101952	75972	38505	114477	No	66.17	Si
SLU 51	15	-2212.92	-25917	-18489	-581	7.55	7.55	-8746	9499	20082	101952	75972	38505	114477	No	196.95	Si
SLU 29	12.5	-3674.6	-30228	-21564	-1689	7.55	7.55	-10201	9693	20492	101952	75972	38505	114477	No	67.76	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 29	15	126.72	-22167	-15813	-759	7.55	7.55	-7480	9331	19725	101952	75972	38505	114477	No	150.9	Si
SLU 8	12.5	-2627.79	-29548	-21079	-1503	7.55	7.55	-9971	9663	20427	101952	75972	38505	114477	No	76.16	Si
SLU 8	15	-791.02	-20937	-14936	-609	7.55	7.55	-7065	9275	19608	101952	75972	38505	114477	No	187.93	Si
SLU 30	12.5	-3701.55	-30209	-21550	-1662	7.55	7.55	-10194	9693	20490	101952	75972	38505	114477	No	68.87	Si
SLU 30	15	83.15	-22191	-15831	-724	7.55	7.55	-7489	9332	19727	101952	75972	38505	114477	No	158.07	Si
SLU 72	12.5	-4553.04	-37907	-27042	-1916	7.55	7.55	-12792	10039	21222	101952	75972	38505	114477	No	59.74	Si
SLU 72	15	-1295.18	-27147	-19366	-731	7.55	7.55	-9161	9555	20199	101952	75972	38505	114477	No	156.66	Si
SLU 68	12.5	-5274.43	-36338	-25923	-1676	7.55	7.55	-12262	9968	21073	101952	75972	38505	114477	No	68.29	Si
SLU 68	15	-2701.52	-25657	-18303	-500	7.55	7.55	-8658	9488	20057	101952	75972	38505	114477	No	229.17	Si
SLU 70	12.5	-5653.43	-40157	-28647	-1587	7.55	7.55	-13551	10140	21436	101952	75972	38505	114477	No	72.13	Si
SLU 70	15	-2870.44	-29733	-21211	-331	7.55	7.55	-10034	9671	20445	101952	75972	38505	114477	No	346.12	Si
SLU 50	12.5	-3479.28	-37246	-26571	-1757	7.55	7.55	-12569	10009	21159	101952	75972	38505	114477	No	65.14	Si
SLU 50	15	-2169.35	-25893	-18471	-616	7.55	7.55	-8738	9498	20079	101952	75972	38505	114477	No	185.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	12.5	-5900.54	-28933	-20640	-11122	7.55	7.55	-9764	14453	30553	101952	113958	38505	132505		11.91	Si
SLV 12	15	7249.59	-14162	-10103	-9015	7.55	7.55	-4779	13456	28446	101952	113958	38505	130398		14.46	Si
SLV 13	12.5	-18571.6	-23334	-16646	-19513	7.55	7.55	-7874	14075	29754	101952	113958	38505	131706		6.75	Si
SLV 13	15	16410.66	-14959	-10672	-13518	7.55	7.55	-5048	13510	28559	101952	113958	38505	130511		9.65	Si
SLV 14	12.5	-18264.64	-23573	-16816	-19581	7.55	7.55	-7955	14091	29788	101952	113958	38505	131740		6.73	Si
SLV 14	15	15840.66	-14936	-10655	-13613	7.55	7.55	-5040	13508	28556	101952	113958	38505	130508		9.59	Si
SLV 3	12.5	9705.52	-28568	-20380	17835	7.55	7.55	-9640	14428	30501	101952	113958	38505	132453		7.43	Si
SLV 3	15	-22263.6	-21238	-15150	13614	7.55	7.55	-7167	13933	29455	101952	113958	38505	131407		9.65	Si
SLV 1	12.5	8317.44	-26602	-18978	20381	7.55	7.55	-8977	14295	30221	101952	113958	38505	132173		6.49	Si
SLV 1	15	-24929.79	-22875	-16319	16320	7.55	7.55	-7719	14044	29689	101952	113958	38505	131641		8.07	Si
SLV 15	12.5	-17183.51	-25300	-18048	-22059	7.55	7.55	-8537	14207	30035	101952	113958	38505	131987		5.98	Si
SLV 15	15	19076.85	-13322	-9503	-16224	7.55	7.0289	-4495	13399	26371	101952	113958	38505	128323		7.91	Si
SLV 4	12.5	10012.48	-28807	-20550	17767	7.55	7.55	-9721	14444	30535	101952	113958	38505	132487		7.46	Si
SLV 4	15	-22833.59	-21214	-15134	13519	7.55	7.55	-7159	13932	29452	101952	113958	38505	131404		9.72	Si
SLV 16	12.5	-16876.56	-25538	-18219	-22126	7.55	7.55	-8618	14224	30069	101952	113958	38505	132021		5.97	Si
SLV 16	15	18506.85	-13298	-9487	-16319	7.55	7.1499	-4487	13397	26821	101952	113958	38505	128773		7.89	Si
SLV 11	12.5	-6098.35	-28780	-20531	-11078	7.55	7.55	-9712	14442	30531	101952	113958	38505	132483		11.96	Si
SLV 11	15	7616.91	-14178	-10114	-8954	7.55	7.55	-4784	13457	28448	101952	113958	38505	130400		14.56	Si
SLV 2	12.5	8624.39	-26841	-19148	20313	7.55	7.55	-9058	14312	30255	101952	113958	38505	132207		6.51	Si
SLV 2	15	-25499.78	-22852	-16302	16225	7.55	7.55	-7711	14042	29685	101952	113958	38505	131637		8.11	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-18449	0.53	877.76	2459.91	3808.21	3134.06	3.57	Si
SLV 13	-18481	0.53	877.76	2463.92	3813.06	3138.49	3.58	Si
SLV 16	-18554	0.53	877.76	2473.15	3824.21	3148.68	3.59	Si
SLV 14	-18585	0.53	877.76	2477.15	3829.05	3153.1	3.59	Si
SLV 11	-20173	0.53	877.76	2677.22	4072.19	3374.7	3.84	Si
SLV 12	-20241	0.53	877.76	2685.66	4082.51	3384.08	3.86	Si
SLV 9	-20279	0.53	877.76	2690.43	4088.34	3389.38	3.86	Si
SLV 10	-20346	0.53	877.76	2698.87	4098.65	3398.76	3.87	Si
SLV 7	-21667	0.53	877.76	2863.72	4300.4	3582.06	4.08	Si
SLV 8	-21734	0.53	877.76	2872.09	4310.68	3591.38	4.09	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16182	-23208	-458	1.947	2616.8	0.91	31.083	12.42528	Si
SLV 6	-16120	-23361	-457	1.952	2610.7	0.91	31.17282	12.42528	Si
SLV 9	-15884	-22227	-401	1.975	2587.3	0.909	31.56083	12.42528	Si
SLV 10	-15823	-22381	-400	1.98	2581.2	0.909	31.65327	12.42528	Si
SLV 7	-14327	-29760	425	2.121	2432.9	0.906	34.04233	12.42528	Si
SLV 8	-14266	-29914	426	2.128	2426.9	0.906	34.14827	12.42528	Si
SLV 11	-14030	-28780	482	2.149	2403.6	0.905	34.519	12.42528	Si
SLV 12	-13969	-28933	483	2.156	2397.5	0.905	34.62801	12.42528	Si
SLV 1	-15896	-26602	-215	1.982	2588.5	0.909	31.6782	6.42939	Si
SLV 2	-15801	-26841	-214	1.991	2579	0.909	31.82234	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.052	SLU 44	Si
V_SLU	58.901	SLU 71	Si
PF_SLV	2.848	SLV 15	Si
V_SLV	5.967	SLV 16	Si
PFFP_SLV	3.571	SLV 15	Si
R_SLV	2.502	SLV 5	Si

Maschio 225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L7	L8	1.935	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.5	1074.04	-5901	-0.0000236	0.0004492	0.0035	1.9353	5201.21	5754.43	5754.43	5.36	No	Si
SLU 40	15	-993.92	-2605	-0.0000145	0.0004492	0.0035	1.9353	2421.67	4546.23	4546.23	4.57	No	Si
SLU 23	12.5	1131.46	-6907	-0.0000267	0.0004492	0.0035	1.9353	5986.03	6616.58	6616.58	5.85	No	Si
SLU 23	15	-755.75	-3326	-0.0000144	0.0004492	0.0035	1.9353	3056.52	5183.7	5183.7	6.86	No	Si
SLU 39	12.5	1080.54	-5886	-0.0000236	0.0004492	0.0035	1.9353	5189.37	5741.46	5741.46	5.31	No	Si
SLU 39	15	-1006.05	-2591	-0.0000146	0.0004492	0.0035	1.9353	2408.72	4533.02	4533.02	4.51	No	Si
SLU 81	12.5	1257.41	-7962	-0.0000306	0.0004492	0.0035	1.9353	6777.67	7505.73	7505.73	5.97	No	Si
SLU 81	15	-1072.96	-3652	-0.0000177	0.0004492	0.0035	1.9353	3338.75	5471.72	5471.72	5.1	No	Si
SLU 73	12.5	1265.11	-8285	-0.0000315	0.0004492	0.0035	1.9353	7013.89	7775.48	7775.48	6.15	No	Si
SLU 73	15	-983.72	-3889	-0.0000176	0.0004492	0.0035	1.9353	3542.37	5681.53	5681.53	5.78	No	Si
SLU 22	12.5	1142.3	-6882	-0.0000268	0.0004492	0.0035	1.9353	5967.02	6595.34	6595.34	5.77	No	Si
SLU 22	15	-775.96	-3302	-0.0000145	0.0004492	0.0035	1.9353	3035.45	5162.32	5162.32	6.65	No	Si
SLU 82	12.5	1250.91	-7976	-0.0000305	0.0004492	0.0035	1.9353	6788.6	7518.24	7518.24	6.01	No	Si
SLU 82	15	-1060.83	-3666	-0.0000177	0.0004492	0.0035	1.9353	3351.24	5484.55	5484.55	5.17	No	Si
SLU 31	12.5	1088.24	-6210	-0.0000245	0.0004492	0.0035	1.9353	5445.22	6019.89	6019.89	5.53	No	Si
SLU 31	15	-916.81	-2828	-0.0000144	0.0004492	0.0035	1.9353	2619.71	4744.03	4744.03	5.17	No	Si
SLU 41	12.5	1077.83	-6299	-0.0000247	0.0004492	0.0035	1.9353	5515.69	6096.76	6096.76	5.66	No	Si
SLU 41	15	-810.39	-2959	-0.0000139	0.0004492	0.0035	1.9353	2734.97	4859.34	4859.34	6	No	Si
SLU 42	12.5	1071.32	-6314	-0.0000247	0.0004492	0.0035	1.9353	5527.34	6109.5	6109.5	5.7	No	Si
SLU 42	15	-798.27	-2973	-0.0000138	0.0004492	0.0035	1.9353	2747.76	4872.17	4872.17	6.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	12.5	6582.16	-6858	-0.001447	0.0006738	0.0035	1.9353		6677.05	6677.05	1.01		Si
SLV 4	15	-4900.39	-1425	-0.0006608	0.0006738	0.0035	1.5482		3468.04	3468.04	0.71		No
SLV 2	12.5	5757.5	-7499	-0.0001308	0.0006738	0.0035	1.9353		7235.58	7235.58	1.26		Si
SLV 2	15	-3906.07	-2291	-0.0004179	0.0006738	0.0035	1.5482		4264.93	4264.93	1.09		Si
SLV 16	12.5	-3851.01	-5939	-0.000062	0.0006738	0.0035	1.5482		7548.18	7548.18	1.96		Si
SLV 16	15	2644.93	-4226	-0.0000409	0.0006738	0.0035	1.9353		4327.35	4327.35	1.64		Si
SLV 13	12.5	-4690.75	-6531	-0.0000879	0.0006738	0.0035	1.5482		8065.42	8065.42	1.72		Si
SLV 13	15	3625.05	-5050	-0.0000679	0.0006738	0.0035	1.9353		5070.45	5070.45	1.4		Si
SLV 7	12.5	3880.24	-5750	-0.0000659	0.0006738	0.0035	1.9353		5697.66	5697.66	1.47		Si
SLV 7	15	-3431.25	-1361	-0.0004081	0.0006738	0.0035	1.5482		3408.81	3408.81	0.99		No
SLV 15	12.5	-3866.09	-5891	-0.0000631	0.0006738	0.0035	1.5482		7505.87	7505.87	1.94		Si
SLV 15	15	2630.73	-4185	-0.0000408	0.0006738	0.0035	1.9353		4289.52	4289.52	1.63		Si
SLV 3	12.5	6567.07	-6810	-0.0015477	0.0006738	0.0035	1.9353		6634.83	6634.83	1.01		Si
SLV 3	15	-4914.59	-1384	-0.0006659	0.0006738	0.0035	1.5482		3429.71	3429.71	0.7		No
SLV 14	12.5	-4675.66	-6579	-0.000086	0.0006738	0.0035	1.5482		8106.46	8106.46	1.73		Si
SLV 14	15	3639.25	-5092	-0.0000676	0.0006738	0.0035	1.9353		5107.67	5107.67	1.4		Si
SLV 8	12.5	3889.96	-5780	-0.0000658	0.0006738	0.0035	1.9353		5724.87	5724.87	1.47		Si
SLV 8	15	-3422.1	-1388	-0.0004046	0.0006738	0.0035	1.5482		3433.52	3433.52	1		Si
SLV 1	12.5	5742.42	-7451	-0.000132	0.0006738	0.0035	1.9353		7194.05	7194.05	1.25		Si
SLV 1	15	-3920.27	-2250	-0.000424	0.0006738	0.0035	1.5482		4226.94	4226.94	1.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	12.5	1281.67	-9354	-6673	1391	1.9353	1.9353	-12314	9975	5405	101952	19474	9870	29344	No	21.1	Si
SLU 75	15	-856.76	-4829	-3445	929	1.9353	1.9353	-6357	9181	4975	101952	19474	9870	29344	No	31.6	Si
SLU 69	12.5	1328.68	-10449	-7454	1400	1.9353	1.9353	-13756	10168	5510	101952	19474	9870	29344	No	20.96	Si
SLU 69	15	-512.18	-5680	-4052	636	1.9353	1.9353	-7477	9330	5056	101952	19474	9870	29344	No	46.17	Si
SLU 64	12.5	1319.17	-8957	-6390	1446	1.9353	1.9353	-11792	9906	5368	101952	19474	9870	29344	No	20.3	Si
SLU 64	15	-842.87	-4363	-3112	842	1.9353	1.9353	-5743	9099	4931	101952	19474	9870	29344	No	34.84	Si
SLU 67	12.5	1324.9	-10051	-7170	1445	1.9353	1.9353	-13232	10098	5472	101952	19474	9870	29344	No	20.3	Si
SLU 67	15	-695.7	-5326	-3800	771	1.9353	1.9353	-7012	9268	5022	101952	19474	9870	29344	No	38.04	Si
SLU 73	12.5	1265.11	-8285	-5910	1379	1.9353	1.9353	-10907	9788	5304	101952	19474	9870	29344	No	21.28	Si
SLU 73	15	-983.72	-3889	-2774	982	1.9353	1.9353	-5120	9016	4886	101952	19474	9870	29344	No	29.88	Si
SLU 68	12.5	1305.62	-9395	-6702	1382	1.9353	1.9353	-12369	9982	5409	101952	19474	9870	29344	No	21.24	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	15	-627.01	-4755	-3392	679	1.9353	1.9353	-6260	9168	4968	101952	19474	9870	29344	No	43.24	Si
SLU 74	12.5	1288.17	-9339	-6662	1398	1.9353	1.9353	-12295	9973	5404	101952	19474	9870	29344	No	20.99	Si
SLU 74	15	-868.89	-4814	-3434	939	1.9353	1.9353	-6338	9178	4974	101952	19474	9870	29344	No	31.25	Si
SLU 70	12.5	1322.18	-10464	-7465	1393	1.9353	1.9353	-13776	10170	5511	101952	19474	9870	29344	No	21.06	Si
SLU 70	15	-500.05	-5694	-4062	625	1.9353	1.9353	-7497	9333	5057	101952	19474	9870	29344	No	46.93	Si
SLU 65	12.5	1308.34	-8982	-6408	1434	1.9353	1.9353	-11825	9910	5370	101952	19474	9870	29344	No	20.46	Si
SLU 65	15	-822.66	-4387	-3130	825	1.9353	1.9353	-5775	9103	4933	101952	19474	9870	29344	No	35.57	Si
SLU 66	12.5	1331.4	-10036	-7160	1452	1.9353	1.9353	-13212	10095	5470	101952	19474	9870	29344	No	20.2	Si
SLU 66	15	-707.83	-5312	-3789	782	1.9353	1.9353	-6993	9266	5021	101952	19474	9870	29344	No	37.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	12.5	6567.07	-6810	-4858	6328	1.9353	0.0102	-156161	16250	46	101952	29211	9870	39081		6.18	Si
SLV 3	15	-4914.59	-1384	-987	3794	1.5482	0	0	0	0	101952	23369	7896	31265		8.24	Si
SLV 15	12.5	-3866.09	-5891	-4202	-3372	1.5482	0.9341	0	0	0	101952	23369	7896	31265		9.27	Si
SLV 15	15	2630.73	-4185	-2985	-1725	1.9353	1.0169	-5509	13602	3873	101952	29211	9870	39081		22.66	Si
SLV 4	12.5	6582.16	-6858	-4892	6331	1.9353	0.0237	-154441	16250	108	101952	29211	9870	39081		6.17	Si
SLV 4	15	-4900.39	-1425	-1017	3794	1.5482	0	0	0	0	101952	23369	7896	31265		8.24	Si
SLV 8	12.5	3889.96	-5780	-4124	3936	1.9353	0.8841	-7610	14022	3471	101952	29211	9870	39081		9.93	Si
SLV 8	15	-3422.1	-1388	-990	2792	1.5482	0	0	0	0	101952	23369	7896	31265		11.2	Si
SLV 16	12.5	-3851.01	-5939	-4236	-3368	1.5482	0.9575	0	0	0	101952	23369	7896	31265		9.28	Si
SLV 16	15	2644.93	-4226	-3015	-1726	1.9353	1.0253	-5563	13613	3908	101952	29211	9870	39081		22.65	Si
SLV 2	12.5	5757.5	-7499	-5349	5473	1.9353	0.5996	-32360	16250	2728	101952	29211	9870	39081		7.14	Si
SLV 2	15	-3906.07	-2291	-1635	2997	1.5482	0	0	0	0	101952	23369	7896	31265		10.43	Si
SLV 7	12.5	3880.24	-5750	-4102	3934	1.9353	0.8784	-7569	14014	3447	101952	29211	9870	39081		9.93	Si
SLV 7	15	-3431.25	-1361	-971	2792	1.5482	0	0	0	0	101952	23369	7896	31265		11.2	Si
SLV 13	12.5	-4690.75	-6531	-4659	-4229	1.5482	0.7484	0	0	0	101952	23369	7896	31265		7.39	Si
SLV 13	15	3625.05	-5050	-3603	-2522	1.9353	0.7496	-6649	13830	2903	101952	29211	9870	39081		15.5	Si
SLV 1	12.5	5742.42	-7451	-5315	5470	1.9353	0.5909	-32632	16250	2689	101952	29211	9870	39081		7.15	Si
SLV 1	15	-3920.27	-2250	-1605	2998	1.5482	0	0	0	0	101952	23369	7896	31265		10.43	Si
SLV 14	12.5	-4675.66	-6579	-4693	-4226	1.5482	0.7709	0	0	0	101952	23369	7896	31265		7.4	Si
SLV 14	15	3639.25	-5092	-3632	-2522	1.9353	0.7588	-6703	13841	2941	101952	29211	9870	39081		15.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-3877	0.53	225	521.6	842.95	682.27	3.03	Si
SLV 12	-3908	0.53	225	525.57	847.72	686.65	3.05	Si
SLV 7	-4130	0.53	225	554.11	882.07	718.09	3.19	Si
SLV 8	-4160	0.53	225	558.07	886.84	722.45	3.21	Si
SLV 15	-4276	0.53	225	572.81	904.66	738.73	3.28	Si
SLV 16	-4323	0.53	225	578.92	912.06	745.49	3.31	Si
SLV 13	-4877	0.53	225	649.25	997.6	823.42	3.66	Si
SLV 14	-4925	0.53	225	655.28	1004.93	830.1	3.69	Si
SLV 3	-5118	0.53	225	679.54	1034.5	857.02	3.81	Si
SLV 4	-5165	0.53	225	685.53	1041.83	863.68	3.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-2612	-7640	-310	2.604	519.8	0.896	42.25309	12.42528	Si
SLV 6	-2602	-7916	-316	2.608	518.8	0.895	42.33526	12.42528	Si
SLV 9	-2597	-7609	-310	2.613	518.4	0.895	42.40598	12.42528	Si
SLV 5	-2587	-7885	-316	2.617	517.4	0.895	42.48879	12.42528	Si
SLV 12	-2237	-5505	312	2.857	483.8	0.892	46.53662	12.42528	Si
SLV 8	-2227	-5780	307	2.866	482.8	0.892	46.68731	12.42528	Si
SLV 11	-2222	-5474	312	2.868	482.4	0.892	46.72091	12.42528	Si
SLV 7	-2212	-5750	306	2.877	481.4	0.892	46.87264	12.42528	Si
SLV 14	-2496	-6579	-86	2.732	508.6	0.894	44.3969	6.42939	Si
SLV 13	-2474	-6531	-86	2.748	506.5	0.894	44.65344	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.506	SLU 39	Si
V_SLU	20.203	SLU 66	Si
PF_SLV	0.698	SLV 3	No
V_SLV	6.173	SLV 4	Si
PFFP_SLV	3.032	SLV 11	Si
R_SLV	3.401	SLV 10	Si

Maschio 226

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L7	L8	1.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 1	12.5	622.08	-5197	-0.0000243	0.0004492	0.0035	1.55	3632.93	4043.95	4043.95	6.5	No	Si
SLU 1	14.6	-589.3	-4791	-0.0000226	0.0004492	0.0035	1.55	3377.27	4779.94	4779.94	8.11	No	Si
SLU 44	12.5	818.04	-6794	-0.0000321	0.0004492	0.0035	1.55	4590.85	5119.74	5119.74	6.26	No	Si
SLU 44	14.6	-771.92	-6136	-0.0000293	0.0004492	0.0035	1.55	4204.88	5686.07	5686.07	7.37	No	Si
SLU 50	12.5	865.98	-7543	-0.0000352	0.0004492	0.0035	1.55	5014.34	5611.41	5611.41	6.48	No	Si
SLU 50	14.6	-868.12	-6799	-0.0000327	0.0004492	0.0035	1.55	4593.55	6132.92	6132.92	7.06	No	Si
SLU 51	12.5	867.48	-7541	-0.0000352	0.0004492	0.0035	1.55	5013.21	5610.09	5610.09	6.47	No	Si
SLU 51	14.6	-867.38	-6804	-0.0000328	0.0004492	0.0035	1.55	4596.51	6136.38	6136.38	7.07	No	Si
SLU 2	12.5	624.57	-5194	-0.0000243	0.0004492	0.0035	1.55	3630.82	4041.64	4041.64	6.47	No	Si
SLU 2	14.6	-588.07	-4799	-0.0000226	0.0004492	0.0035	1.55	3382.7	4785.71	4785.71	8.14	No	Si
SLU 68	12.5	823.28	-7046	-0.000033	0.0004492	0.0035	1.55	4735.06	5286.51	5286.51	6.42	No	Si
SLU 68	14.6	-798.83	-6765	-0.0000318	0.0004492	0.0035	1.55	4574.15	6110.27	6110.27	7.65	No	Si
SLU 43	12.5	815.55	-6798	-0.0000321	0.0004492	0.0035	1.55	4592.8	5121.98	5121.98	6.28	No	Si
SLU 43	14.6	-773.15	-6127	-0.0000293	0.0004492	0.0035	1.55	4199.78	5680.3	5680.3	7.35	No	Si
SLU 47	12.5	843.26	-7167	-0.0000337	0.0004492	0.0035	1.55	4803.69	5366.48	5366.48	6.36	No	Si
SLU 47	14.6	-819.41	-6471	-0.000031	0.0004492	0.0035	1.55	4403.33	5912.38	5912.38	7.22	No	Si
SLU 65	12.5	798.07	-6673	-0.0000314	0.0004492	0.0035	1.55	4520.9	5039.62	5039.62	6.31	No	Si
SLU 65	14.6	-751.34	-6429	-0.00003	0.0004492	0.0035	1.55	4378.58	5883.96	5883.96	7.83	No	Si
SLU 64	12.5	795.58	-6677	-0.0000314	0.0004492	0.0035	1.55	4522.86	5041.86	5041.86	6.34	No	Si
SLU 64	14.6	-752.57	-6421	-0.00003	0.0004492	0.0035	1.55	4373.56	5878.18	5878.18	7.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	12.5	3203.69	-3188	-0.0046085	0.0006738	0.0035	1.24		2665.04	2665.04	0.83		No
SLV 2	14.6	-2880.78	-4138	-0.0001507	0.0006738	0.0035	1.24		4363.72	4363.72	1.51		Si
SLD 4	12.5	1781.85	-4474	-0.0000392	0.0006738	0.0035	1.55		3591.77	3591.77	2.02		Si
SLD 4	14.6	-1648.88	-4488	-0.0000363	0.0006738	0.0035	1.55		4612.23	4612.23	2.8		Si
SLV 14	12.5	-2259.79	-6044	-0.0000501	0.0006738	0.0035	1.55		5693.66	5693.66	2.52		Si
SLV 14	14.6	2096.45	-5647	-0.0000464	0.0006738	0.0035	1.55		4422.16	4422.16	2.11		Si
SLD 2	12.5	1692.61	-4203	-0.0000372	0.0006738	0.0035	1.55		3397.75	3397.75	2.01		Si
SLD 2	14.6	-1534.72	-4543	-0.0000342	0.0006738	0.0035	1.55		4651.24	4651.24	3.03		Si
SLV 4	12.5	3405.79	-3803	-0.0034627	0.0006738	0.0035	1.24		3110.72	3110.72	0.91		No
SLV 4	14.6	-3139.96	-4011	-0.0002654	0.0006738	0.0035	1.24		4273.66	4273.66	1.36		Si
SLV 13	12.5	-2276.65	-6130	-0.0000505	0.0006738	0.0035	1.55		5753.37	5753.37	2.53		Si
SLV 13	14.6	2079.55	-5674	-0.0000461	0.0006738	0.0035	1.55		4440.67	4440.67	2.14		Si
SLD 1	12.5	1685.37	-4240	-0.0000371	0.0006738	0.0035	1.55		3424.36	3424.36	2.03		Si
SLD 1	14.6	-1541.98	-4554	-0.0000344	0.0006738	0.0035	1.55		4659.24	4659.24	3.02		Si
SLV 1	12.5	3186.83	-3275	-0.0041989	0.0006738	0.0035	1.24		2727.9	2727.9	0.86		No
SLV 1	14.6	-2897.69	-4164	-0.0001513	0.0006738	0.0035	1.24		4382.35	4382.35	1.51		Si
SLD 3	12.5	1774.61	-4511	-0.000039	0.0006738	0.0035	1.55		3618.39	3618.39	2.04		Si
SLD 3	14.6	-1656.14	-4499	-0.0000365	0.0006738	0.0035	1.55		4620.23	4620.23	2.79		Si
SLV 3	12.5	3388.92	-3889	-0.0029251	0.0006738	0.0035	1.24		3173.5	3173.5	0.94		No
SLV 3	14.6	-3156.86	-4038	-0.000266	0.0006738	0.0035	1.24		4292.38	4292.38	1.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	12.5	846.01	-7422	-5295	496	1.55	1.55	-12200	9960	4323	101952	15597	7905	23502	No	47.39	Si
SLU 71	14.6	-847.54	-7093	-5060	496	1.55	1.55	-11658	9888	4291	101952	15597	7905	23502	No	47.37	Si
SLU 51	12.5	867.48	-7541	-5380	525	1.55	1.55	-12395	9986	4334	101952	15597	7905	23502	No	44.8	Si
SLU 51	14.6	-867.38	-6804	-4854	525	1.55	1.55	-11184	9825	4264	101952	15597	7905	23502	No	44.79	Si
SLU 44	12.5	818.04	-6794	-4847	504	1.55	1.55	-11168	9822	4263	101952	15597	7905	23502	No	46.6	Si
SLU 44	14.6	-771.92	-6136	-4377	504	1.55	1.55	-10085	9678	4200	101952	15597	7905	23502	No	46.59	Si
SLU 50	12.5	865.98	-7543	-5381	546	1.55	1.55	-12399	9986	4334	101952	15597	7905	23502	No	43.04	Si
SLU 50	14.6	-868.12	-6799	-4850	546	1.55	1.55	-11175	9823	4263	101952	15597	7905	23502	No	43.03	Si
SLU 45	12.5	810.58	-7577	-5406	487	1.55	1.55	-12455	9994	4337	101952	15597	7905	23502	No	48.21	Si
SLU 45	14.6	-760.72	-7045	-5026	488	1.55	1.55	-11580	9877	4287	101952	15597	7905	23502	No	48.2	Si
SLU 64	12.5	795.58	-6677	-4763	490	1.55	1.55	-10974	9797	4252	101952	15597	7905	23502	No	47.97	Si
SLU 64	14.6	-752.57	-6421	-4580	490	1.55	1.55	-10554	9741	4227	101952	15597	7905	23502	No	47.95	Si
SLU 72	12.5	847.5	-7420	-5293	475	1.55	1.55	-12197	9960	4322	101952	15597	7905	23502	No	49.53	Si
SLU 72	14.6	-846.8	-7098	-5063	475	1.55	1.55	-11667	9889	4292	101952	15597	7905	23502	No	49.51	Si
SLU 48	12.5	835.79	-7950	-5671	490	1.55	1.55	-13068	10076	4373	101952	15597	7905	23502	No	47.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	14.6	-808.21	-7381	-5265	491	1.55	1.55	-12132	9951	4319	101952	15597	7905	23502	No	47.9	Si
SLU 47	12.5	843.26	-7167	-5113	507	1.55	1.55	-11780	9904	4298	101952	15597	7905	23502	No	46.33	Si
SLU 47	14.6	-819.41	-6471	-4617	507	1.55	1.55	-10637	9752	4232	101952	15597	7905	23502	No	46.31	Si
SLU 43	12.5	815.55	-6798	-4849	540	1.55	1.55	-11173	9823	4263	101952	15597	7905	23502	No	43.52	Si
SLU 43	14.6	-773.15	-6127	-4371	540	1.55	1.55	-10071	9676	4199	101952	15597	7905	23502	No	43.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.5	-586.35	-4343	-3098	-2905	1.55	1.55	-7139	13928	6045	101952	23395	7905	31300		10.77	Si
SLV 10	14.6	653.79	-5272	-3761	-2686	1.55	1.55	-8665	14233	6177	101952	23395	7905	31300		11.65	Si
SLV 8	12.5	1726.35	-5534	-3948	3480	1.55	1.3892	-9097	14319	5570	101952	23395	7905	31300		8.99	Si
SLV 8	14.6	-1703.31	-4396	-3136	3261	1.55	1.1627	-9672	14435	4699	101952	23395	7905	31300		9.6	Si
SLV 7	12.5	1715.48	-5590	-3988	3544	1.55	1.4043	-9188	14338	5638	101952	23395	7905	31300		8.83	Si
SLV 7	14.6	-1714.2	-4413	-3148	3325	1.55	1.1597	-9734	14447	4691	101952	23395	7905	31300		9.41	Si
SLV 14	12.5	-2259.79	-6044	-4311	-3481	1.55	1.2032	-12863	15073	5078	101952	23395	7905	31300		8.99	Si
SLV 14	14.6	2096.45	-5647	-4029	-2777	1.55	1.2113	-9283	14357	4869	101952	23395	7905	31300		11.27	Si
SLV 9	12.5	-597.21	-4399	-3138	-2841	1.55	1.55	-7230	13946	6053	101952	23395	7905	31300		11.02	Si
SLV 9	14.6	642.89	-5288	-3773	-2622	1.55	1.55	-8693	14239	6180	101952	23395	7905	31300		11.94	Si
SLV 4	12.5	3405.79	-3803	-2713	4021	1.24	0	0	0	0	101952	18716	6324	25040		6.23	Si
SLV 4	14.6	-3139.96	-4011	-2862	3317	1.24	0	0	0	0	101952	18716	6324	25040		7.55	Si
SLV 2	12.5	3203.69	-3188	-2275	2658	1.24	0	0	0	0	101952	18716	6324	25040		9.42	Si
SLV 2	14.6	-2880.78	-4138	-2952	1960	1.24	0.2365	0	0	0	101952	18716	6324	25040		12.78	Si
SLV 1	12.5	3186.83	-3275	-2336	2757	1.24	0	0	0	0	101952	18716	6324	25040		9.08	Si
SLV 1	14.6	-2897.69	-4164	-2971	2058	1.24	0.2375	0	0	0	101952	18716	6324	25040		12.16	Si
SLV 13	12.5	-2276.65	-6130	-4373	-3382	1.55	1.2108	-12967	15094	5117	101952	23395	7905	31300		9.25	Si
SLV 13	14.6	2079.55	-5674	-4047	-2678	1.55	1.2254	-9326	14365	4929	101952	23395	7905	31300		11.69	Si
SLV 3	12.5	3388.92	-3889	-2775	4120	1.24	0	0	0	0	101952	18716	6324	25040		6.08	Si
SLV 3	14.6	-3156.86	-4038	-2880	3416	1.24	0	0	0	0	101952	18716	6324	25040		7.33	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-3703	0.53	180.2	494.31	763.41	628.86	3.49	Si
SLV 2	-3724	0.53	180.2	496.96	766.63	631.8	3.51	Si
SLV 3	-3742	0.53	180.2	499.18	769.34	634.26	3.52	Si
SLV 1	-3762	0.53	180.2	501.82	772.57	637.19	3.54	Si
SLV 8	-4358	0.53	180.2	576.74	864.11	720.42	4	Si
SLV 7	-4383	0.53	180.2	579.82	867.9	723.86	4.02	Si
SLV 6	-4428	0.53	180.2	585.39	874.77	730.08	4.05	Si
SLV 5	-4453	0.53	180.2	588.47	878.57	733.52	4.07	Si
SLV 12	-4935	0.53	180.2	648.03	952.54	800.28	4.44	Si
SLV 11	-4960	0.53	180.2	651.06	956.33	803.69	4.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3329	-4343	12	1.962	537.9	0.91	31.32159	12.42528	Si
SLV 6	-3320	-3486	0	1.968	537	0.91	31.42671	12.42528	Si
SLV 9	-3297	-4399	12	1.975	534.8	0.91	31.54561	12.42528	Si
SLV 5	-3288	-3542	0	1.981	533.9	0.91	31.65394	12.42528	Si
SLV 12	-2403	-6391	-7	2.451	446.5	0.899	39.62003	12.42528	Si
SLV 8	-2393	-5534	-19	2.454	445.6	0.899	39.668	12.42528	Si
SLV 11	-2371	-6447	-6	2.473	443.4	0.899	39.98137	12.42528	Si
SLV 7	-2362	-5590	-19	2.475	442.5	0.899	40.03065	12.42528	Si
SLV 14	-3024	-6044	19	2.097	507.7	0.907	33.61598	6.42939	Si
SLV 2	-2994	-3188	-21	2.111	504.7	0.906	33.85695	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.259	SLU 44	Si
V_SLU	43.031	SLU 50	Si
PF_SLV	0.832	SLV 2	No
V_SLV	6.078	SLV 3	Si
PFFP_SLV	3.49	SLV 4	Si
R_SLV	2.521	SLV 10	Si

Maschio 227

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	12.5	3273.98	-15326	-0.0000253	0.0004492	0.0035	3.98	27066.66	29936.78	29936.78	9.14	No	Si
SLU 50	14.6	1553	-10946	-0.0000164	0.0004492	0.0035	3.98	20032.29	22207.53	22207.53	14.3	No	Si
SLU 46	12.5	3335.46	-15434	-0.0000255	0.0004492	0.0035	3.98	27231.85	30123.81	30123.81	9.03	No	Si
SLU 46	14.6	1740.63	-11353	-0.0000173	0.0004492	0.0035	3.98	20709.46	22941.92	22941.92	13.18	No	Si
SLU 51	12.5	3280.37	-15336	-0.0000253	0.0004492	0.0035	3.98	27080.87	29952.85	29952.85	9.13	No	Si
SLU 51	14.6	1543.21	-10946	-0.0000164	0.0004492	0.0035	3.98	20030.75	22205.87	22205.87	14.39	No	Si
SLU 48	12.5	3419.01	-16129	-0.0000266	0.0004492	0.0035	3.98	28294.35	31319.51	31319.51	9.16	No	Si
SLU 48	14.6	1941.7	-12012	-0.0000185	0.0004492	0.0035	3.98	21794.96	24111.28	24111.28	12.42	No	Si
SLU 47	12.5	3194.69	-14638	-0.0000242	0.0004492	0.0035	3.98	25997.46	28735.31	28735.31	8.99	No	Si
SLU 47	14.6	1345.4	-10287	-0.0000152	0.0004492	0.0035	3.98	18925.25	21018.09	21018.09	15.62	No	Si
SLU 45	12.5	3329.07	-15424	-0.0000255	0.0004492	0.0035	3.98	27217.66	30107.73	30107.73	9.04	No	Si
SLU 45	14.6	1750.42	-11354	-0.0000173	0.0004492	0.0035	3.98	20710.99	22943.58	22943.58	13.11	No	Si
SLU 44	12.5	3104.74	-13933	-0.0000232	0.0004492	0.0035	3.98	24890.08	27507.04	27507.04	8.86	No	Si
SLU 44	14.6	1154.11	-9630	-0.000014	0.0004492	0.0035	3.98	17808.13	19831.43	19831.43	17.18	No	Si
SLU 2	12.5	2304.37	-10664	-0.0000175	0.0004492	0.0035	3.98	19558.66	21696.98	21696.98	9.42	No	Si
SLU 2	14.6	917.99	-7513	-0.0000109	0.0004492	0.0035	3.98	14126.2	15957.67	15957.67	17.38	No	Si
SLU 49	12.5	3425.4	-16138	-0.0000266	0.0004492	0.0035	3.98	28308.34	31335.3	31335.3	9.15	No	Si
SLU 49	14.6	1931.91	-12011	-0.0000185	0.0004492	0.0035	3.98	21793.45	24109.65	24109.65	12.48	No	Si
SLU 43	12.5	3094.09	-13918	-0.0000231	0.0004492	0.0035	3.98	24865.77	27480.25	27480.25	8.88	No	Si
SLU 43	14.6	1170.43	-9631	-0.0000141	0.0004492	0.0035	3.98	17810.76	19834.2	19834.2	16.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	12.5	2347.41	-5907	-0.0000116	0.0006738	0.0035	3.98		13075.61	13075.61	5.57		Si
SLV 2	14.6	-3077.97	-3976	-0.0000106	0.0006738	0.0035	3.98		16956.92	16956.92	5.51		Si
SLD 15	12.5	1890.26	-12065	-0.0000184	0.0006738	0.0035	3.98		24531.83	24531.83	12.98		Si
SLD 15	14.6	2695.07	-9003	-0.0000161	0.0006738	0.0035	3.98		18885.92	18885.92	7.01		Si
SLV 14	12.5	1775.05	-14049	-0.0000206	0.0006738	0.0035	3.98		28138.37	28138.37	15.85		Si
SLV 14	14.6	4620.45	-10604	-0.0000217	0.0006738	0.0035	3.98		21856.98	21856.98	4.73		Si
SLV 3	12.5	2285.78	-6387	-0.0000121	0.0006738	0.0035	3.98		13979.64	13979.64	6.12		Si
SLV 3	14.6	-2696.11	-4385	-0.0000103	0.0006738	0.0035	3.98		17725.38	17725.38	6.57		Si
SLV 13	12.5	1863.83	-14085	-0.0000209	0.0006738	0.0035	3.98		28201.63	28201.63	15.13		Si
SLV 13	14.6	4633.46	-10623	-0.0000217	0.0006738	0.0035	3.98		21892.49	21892.49	4.72		Si
SLV 15	12.5	1713.42	-14530	-0.0000211	0.0006738	0.0035	3.98		29002.52	29002.52	16.93		Si
SLV 15	14.6	5002.31	-11012	-0.0000229	0.0006738	0.0035	3.98		22609.45	22609.45	4.52		Si
SLV 16	12.5	1624.65	-14494	-0.0000209	0.0006738	0.0035	3.98		28939.26	28939.26	17.81		Si
SLV 16	14.6	4989.3	-10993	-0.0000229	0.0006738	0.0035	3.98		22574.47	22574.47	4.52		Si
SLV 4	12.5	2197	-6352	-0.0000119	0.0006738	0.0035	3.98		13913.46	13913.46	6.33		Si
SLV 4	14.6	-2709.12	-4365	-0.0000103	0.0006738	0.0035	3.98		17689.34	17689.34	6.53		Si
SLV 1	12.5	2436.19	-5942	-0.0000118	0.0006738	0.0035	3.98		13141.8	13141.8	5.39		Si
SLV 1	14.6	-3064.96	-3996	-0.0000106	0.0006738	0.0035	3.98		16992.96	16992.96	5.54		Si
SLV 11	12.5	1722.49	-12193	-0.0000182	0.0006738	0.0035	3.98		24766.05	24766.05	14.38		Si
SLV 11	14.6	2735.88	-9143	-0.0000163	0.0006738	0.0035	3.98		19146.68	19146.68	7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 33	12.5	1613.55	-10659	-7604	-2812	3.98	3.98	-6823	9243	10301	101952	40049	20298	60347	No	21.46	Si
SLU 33	14.6	1602.02	-9166	-6539	-2812	3.98	3.98	-5867	9116	10159	101952	40049	20298	60347	No	21.46	Si
SLU 32	12.5	1607.16	-10650	-7597	-2830	3.98	3.98	-6818	9242	10300	101952	40049	20298	60347	No	21.33	Si
SLU 32	14.6	1611.81	-9167	-6539	-2829	3.98	3.98	-5868	9116	10159	101952	40049	20298	60347	No	21.33	Si
SLU 36	12.5	1703.5	-11363	-8106	-2817	3.98	3.98	-7274	9303	10368	101952	40049	20298	60347	No	21.42	Si
SLU 36	14.6	1793.31	-9823	-7008	-2814	3.98	3.98	-6288	9172	10221	101952	40049	20298	60347	No	21.44	Si
SLU 35	12.5	1697.11	-11354	-8100	-2834	3.98	3.98	-7268	9302	10367	101952	40049	20298	60347	No	21.29	Si
SLU 35	14.6	1803.1	-9824	-7008	-2832	3.98	3.98	-6289	9172	10221	101952	40049	20298	60347	No	21.31	Si
SLU 39	12.5	1117.57	-8593	-6130	-2905	3.98	3.98	-5501	9067	10104	101952	40049	20298	60347	No	20.77	Si
SLU 39	14.6	1018.4	-7241	-5166	-2906	3.98	3.98	-4635	8951	9975	101952	40049	20298	60347	No	20.77	Si
SLU 41	12.5	1207.52	-9297	-6632	-2909	3.98	3.98	-5951	9127	10171	101952	40049	20298	60347	No	20.74	Si
SLU 41	14.6	1209.69	-7899	-5635	-2908	3.98	3.98	-5056	9008	10038	101952	40049	20298	60347	No	20.75	Si
SLU 40	12.5	1123.97	-8602	-6136	-2888	3.98	3.98	-5506	9068	10105	101952	40049	20298	60347	No	20.9	Si
SLU 40	14.6	1008.61	-7240	-5165	-2889	3.98	3.98	-4635	8951	9975	101952	40049	20298	60347	No	20.89	Si
SLU 81	12.5	1917.95	-11863	-8462	-2743	3.98	3.98	-7594	9346	10415	101952	40049	20298	60347	No	22	Si
SLU 81	14.6	1254.52	-9358	-6676	-2745	3.98	3.98	-5990	9132	10177	101952	40049	20298	60347	No	21.99	Si
SLU 83	12.5	2007.9	-12567	-8965	-2747	3.98	3.98	-8044	9406	10482	101952	40049	20298	60347	No	21.97	Si
SLU 83	14.6	1445.81	-10016	-7145	-2747	3.98	3.98	-6411	9188	10239	101952	40049	20298	60347	No	21.97	Si
SLU 42	12.5	1213.91	-9306	-6639	-2892	3.98	3.98	-5957	9128	10172	101952	40049	20298	60347	No	20.87	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	14.6	1199.9	-7898	-5634	-2891	3.98	3.98	-5056	9007	10038	101952	40049	20298	60347	No	20.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	12.5	1852.14	-12049	-8596	-2756	3.98	3.98	-7713	14043	15649	101952	60073	20298	80371		29.17	Si
SLD 16	14.6	2689.48	-8994	-6416	-735	3.98	3.98	-5758	13652	15213	101952	60073	20298	80371		109.38	Si
SLV 13	12.5	1863.83	-14085	-10048	-4571	3.98	3.98	-9016	14303	15940	101952	60073	20298	80371		17.58	Si
SLV 13	14.6	4633.46	-10623	-7579	162	3.98	3.98	-6801	13860	15446	101952	60073	20298	80371		497.14	Si
SLD 15	12.5	1890.26	-12065	-8607	-2734	3.98	3.98	-7723	14045	15651	101952	60073	20298	80371		29.4	Si
SLD 15	14.6	2695.07	-9003	-6422	-713	3.98	3.98	-5763	13653	15214	101952	60073	20298	80371		112.76	Si
SLV 15	12.5	1713.42	-14530	-10365	-4951	3.98	3.98	-9301	14360	16003	101952	60073	20298	80371		16.23	Si
SLV 15	14.6	5002.31	-11012	-7856	-231	3.98	3.98	-7050	13910	15501	101952	60073	20298	80371		347.66	Si
SLV 12	12.5	1665.28	-12170	-8682	-2831	3.98	3.98	-7791	14058	15666	101952	60073	20298	80371		28.39	Si
SLV 12	14.6	2727.49	-9131	-6514	-1436	3.98	3.98	-5845	13669	15233	101952	60073	20298	80371		55.98	Si
SLV 1	12.5	2436.19	-5942	-4239	2873	3.98	3.98	-3804	13261	14778	101952	60073	20298	80371		27.98	Si
SLV 1	14.6	-3064.96	-3996	-2850	-1850	3.98	3.6687	-2777	13055	13411	101952	60073	20298	80371		43.44	Si
SLV 14	12.5	1775.05	-14049	-10022	-4622	3.98	3.98	-8994	14299	15935	101952	60073	20298	80371		17.39	Si
SLV 14	14.6	4620.45	-10604	-7565	110	3.98	3.98	-6788	13858	15443	101952	60073	20298	80371		727.65	Si
SLV 2	12.5	2347.41	-5907	-4214	2821	3.98	3.98	-3781	13256	14773	101952	60073	20298	80371		28.49	Si
SLV 2	14.6	-3077.97	-3976	-2837	-1901	3.98	3.6478	-2780	13056	13335	101952	60073	20298	80371		42.27	Si
SLV 11	12.5	1722.49	-12193	-8698	-2798	3.98	3.98	-7805	14061	15670	101952	60073	20298	80371		28.73	Si
SLV 11	14.6	2735.88	-9143	-6522	-1403	3.98	3.98	-5853	13671	15235	101952	60073	20298	80371		57.3	Si
SLV 16	12.5	1624.65	-14494	-10340	-5002	3.98	3.98	-9278	14356	15998	101952	60073	20298	80371		16.07	Si
SLV 16	14.6	4989.3	-10993	-7842	-282	3.98	3.98	-7037	13907	15499	101952	60073	20298	80371		284.61	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-4128	0.53	462.71	566.3	1139.2	852.75	1.84	Si
SLV 1	-4151	0.53	462.71	569.38	1142.8	856.09	1.85	Si
SLV 4	-4500	0.53	462.71	616.16	1197.63	906.89	1.96	Si
SLV 3	-4523	0.53	462.71	619.22	1201.24	910.23	1.97	Si
SLV 6	-6234	0.53	462.71	846.08	1468.57	1157.32	2.5	Si
SLV 5	-6248	0.53	462.71	848.02	1470.86	1159.44	2.51	Si
SLV 8	-7473	0.53	462.71	1007.94	1660.87	1334.4	2.88	Si
SLV 7	-7488	0.53	462.71	1009.85	1663.15	1336.5	2.89	Si
SLV 10	-8406	0.53	462.71	1128.46	1805.22	1466.84	3.17	Si
SLV 9	-8421	0.53	462.71	1130.36	1807.5	1468.93	3.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6740	-12193	723	2.242	1202.4	0.902	36.12098	12.42528	Si
SLV 12	-6737	-12170	723	2.242	1202.1	0.902	36.13371	12.42528	Si
SLV 9	-6442	-10709	-752	2.307	1173.2	0.9	37.22672	12.42528	Si
SLV 10	-6439	-10687	-752	2.307	1172.9	0.9	37.2391	12.42528	Si
SLV 7	-6402	-9750	752	2.316	1169.2	0.9	37.38987	12.42528	Si
SLV 8	-6398	-9727	751	2.317	1168.9	0.9	37.40348	12.42528	Si
SLV 5	-6104	-8266	-723	2.392	1140.1	0.899	38.67665	12.42528	Si
SLV 6	-6101	-8244	-723	2.393	1139.8	0.899	38.68999	12.42528	Si
SLV 15	-7031	-14530	173	2.233	1231	0.903	35.92351	6.42939	Si
SLV 16	-7026	-14494	173	2.234	1230.6	0.903	35.94261	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.86	SLU 44	Si
V_SLU	20.743	SLU 41	Si
PF_SLV	4.52	SLV 15	Si
V_SLV	16.068	SLV 16	Si
PFFP_SLV	1.843	SLV 2	Si
R_SLV	2.907	SLV 11	Si

Maschio 228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	1.006	L7	L8	4.32	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	12.5	135.09	-19342	-0.0000244	0.0004492	0.0035	4.32	36311.64	37904.51	37904.51	280.59	No	Si
SLU 73	15.66	2225.96	-3156	-0.0000076	0.0004492	0.0035	4.32	6670.87	7585.98	7585.98	3.41	No	Si
SLU 19	12.5	-874.33	-13872	-0.0000187	0.0004492	0.0035	4.32	27150.5	33247.37	33247.37	38.03	No	Si
SLU 19	15.66	1702.41	-2154	-0.0000055	0.0004492	0.0035	4.32	4585.48	5488.67	5488.67	3.22	No	Si
SLU 61	12.5	-303.1	-17263	-0.0000221	0.0004492	0.0035	4.32	32932.87	39454.31	39454.31	130.17	No	Si
SLU 61	15.66	2028.53	-2599	-0.0000066	0.0004492	0.0035	4.32	5514.75	6421.94	6421.94	3.17	No	Si
SLU 18	12.5	-1002.63	-13825	-0.0000189	0.0004492	0.0035	4.32	27068.16	33162.32	33162.32	33.08	No	Si
SLU 18	15.66	1737.12	-2160	-0.0000056	0.0004492	0.0035	4.32	4597.47	5500.69	5500.69	3.17	No	Si
SLU 39	12.5	-1389.4	-15913	-0.0000222	0.0004492	0.0035	4.32	30670.8	36989.9	36989.9	26.62	No	Si
SLU 39	15.66	2046.6	-2729	-0.0000068	0.0004492	0.0035	4.32	5786.08	6695.01	6695.01	3.27	No	Si
SLU 52	12.5	521.86	-17254	-0.0000224	0.0004492	0.0035	4.32	32918.31	34640.19	34640.19	66.38	No	Si
SLU 52	15.66	1916.49	-2587	-0.0000064	0.0004492	0.0035	4.32	5489.36	6396.39	6396.39	3.34	No	Si
SLU 40	12.5	-1261.1	-15960	-0.0000221	0.0004492	0.0035	4.32	30750.27	37076.85	37076.85	29.4	No	Si
SLU 40	15.66	2011.89	-2723	-0.0000067	0.0004492	0.0035	4.32	5774.18	6683.04	6683.04	3.32	No	Si
SLU 81	12.5	-818.16	-19304	-0.0000256	0.0004492	0.0035	4.32	36250.83	43018.99	43018.99	52.58	No	Si
SLU 81	15.66	2372.73	-3174	-0.0000079	0.0004492	0.0035	4.32	6707.88	7623.38	7623.38	3.21	No	Si
SLU 60	12.5	-431.39	-17216	-0.0000222	0.0004492	0.0035	4.32	32855.18	39373.27	39373.27	91.27	No	Si
SLU 60	15.66	2063.25	-2605	-0.0000067	0.0004492	0.0035	4.32	5526.66	6433.92	6433.92	3.12	No	Si
SLU 82	12.5	-689.86	-19351	-0.0000254	0.0004492	0.0035	4.32	36325.66	43101.86	43101.86	62.48	No	Si
SLU 82	15.66	2338.01	-3168	-0.0000078	0.0004492	0.0035	4.32	6696.06	7611.43	7611.43	3.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	12.5	-10916.67	-11651	-0.0000338	0.0006738	0.0035	4.32		29459.15	29459.15	2.7		Si
SLV 8	15.66	5783.81	-1900	-0.0014715	0.0006738	0.0035	4.32		4967.7	4967.7	0.86		No
SLD 12	12.5	-5158.04	-13634	-0.0000256	0.0006738	0.0035	4.32		33305.48	33305.48	6.46		Si
SLD 12	15.66	3694.63	-2470	-0.000013	0.0006738	0.0035	4.32		6171.53	6171.53	1.67		Si
SLD 11	12.5	-5239.06	-13624	-0.0000257	0.0006738	0.0035	4.32		33284.86	33284.86	6.35		Si
SLD 11	15.66	3712.39	-2479	-0.0000131	0.0006738	0.0035	4.32		6190.41	6190.41	1.67		Si
SLV 4	12.5	303.57	-11801	-0.000015	0.0006738	0.0035	4.32		25275.46	25275.46	83.26		Si
SLV 4	15.66	1933.19	-960	-0.0000226	0.0006738	0.0035	4.32		2972.71	2972.71	1.54		Si
SLV 11	12.5	-12988.8	-12767	-0.0000398	0.0006738	0.0035	4.32		31640.92	31640.92	2.44		Si
SLV 11	15.66	6410.25	-2717	-0.000557	0.0006738	0.0035	4.32		6691.95	6691.95	1.04		Si
SLD 8	12.5	-4351.65	-13148	-0.0000236	0.0006738	0.0035	4.32		32371.06	32371.06	7.44		Si
SLD 8	15.66	3444.39	-2129	-0.0000138	0.0006738	0.0035	4.32		5452.43	5452.43	1.58		Si
SLD 7	12.5	-4432.67	-13137	-0.0000237	0.0006738	0.0035	4.32		32350.49	32350.49	7.3		Si
SLD 7	15.66	3462.16	-2138	-0.0000139	0.0006738	0.0035	4.32		5471.31	5471.31	1.58		Si
SLV 12	12.5	-12803.32	-12791	-0.0000393	0.0006738	0.0035	4.32		31688.1	31688.1	2.47		Si
SLV 12	15.66	6369.58	-2696	-0.0005572	0.0006738	0.0035	4.32		6648.91	6648.91	1.04		Si
SLV 7	12.5	-11102.15	-11626	-0.0000343	0.0006738	0.0035	4.32		29410.47	29410.47	2.65		Si
SLV 7	15.66	5824.48	-1920	-0.0014714	0.0006738	0.0035	4.32		5010.93	5010.93	0.86		No
SLV 3	12.5	15.74	-11763	-0.0000145	0.0006738	0.0035	4.32		25199.51	25199.51	1601.01		Si
SLV 3	15.66	1996.3	-991	-0.0000233	0.0006738	0.0035	4.32		3040.27	3040.27	1.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	12.5	-1389.4	-15913	-13251	-3930	4.32	4.32	-10955	9794	11847	35683	43470	11016	47530	No	12.09	Si
SLU 39	15.66	2046.6	-2729	-2273	-4084	4.32	4.2303	-1879	8584	10167	35683	43470	11016	45851	No	11.23	Si
SLU 32	12.5	-483.92	-17262	-14374	-3793	4.32	4.32	-11883	9918	11997	35683	43470	11016	47680	No	12.57	Si
SLU 32	15.66	2188.9	-3486	-2903	-3656	4.32	4.32	-2400	8653	10467	35683	43470	11016	46150	No	12.62	Si
SLU 42	12.5	-1179.81	-16834	-14018	-3651	4.32	4.32	-11589	9879	11949	35683	43470	11016	47632	No	13.05	Si
SLU 42	15.66	1916.25	-3426	-2853	-3426	4.32	4.32	-2359	8648	10460	35683	43470	11016	46144	No	13.47	Si
SLU 83	12.5	-736.87	-20179	-16803	-3779	4.32	4.32	-13891	10186	12320	35683	43470	11016	48004	No	12.7	Si
SLU 83	15.66	2277.08	-3876	-3228	-3580	4.32	4.32	-2668	8689	10510	35683	43470	11016	46194	No	12.9	Si
SLU 81	12.5	-818.16	-19304	-16075	-3857	4.32	4.32	-13289	10105	12223	35683	43470	11016	47907	No	12.42	Si
SLU 81	15.66	2372.73	-3174	-2643	-4052	4.32	4.2371	-2185	8625	10232	35683	43470	11016	45915	No	11.33	Si
SLU 82	12.5	-689.86	-19351	-16114	-3655	4.32	4.32	-13322	10110	12229	35683	43470	11016	47912	No	13.11	Si
SLU 82	15.66	2338.01	-3168	-2638	-3865	4.32	4.2659	-2181	8624	10301	35683	43470	11016	45984	No	11.9	Si
SLU 40	12.5	-1261.1	-15960	-13290	-3728	4.32	4.32	-10987	9798	11852	35683	43470	11016	47535	No	12.75	Si
SLU 40	15.66	2011.89	-2723	-2268	-3898	4.32	4.2638	-1875	8583	10247	35683	43470	11016	45930	No	11.78	Si
SLU 74	12.5	87.32	-20653	-17198	-3720	4.32	4.32	-14218	10229	12373	35683	43470	11016	48056	No	12.92	Si
SLU 74	15.66	2515.03	-3931	-3273	-3623	4.32	4.32	-2706	8694	10516	35683	43470	11016	46200	No	12.75	Si
SLU 41	12.5	-1308.11	-16787	-13979	-3852	4.32	4.32	-11557	9874	11944	35683	43470	11016	47627	No	12.36	Si
SLU 41	15.66	1950.96	-3432	-2858	-3613	4.32	4.32	-2362	8648	10461	35683	43470	11016	46144	No	12.77	Si
SLU 35	12.5	-402.63	-18136	-15102	-3715	4.32	4.32	-12485	9998	12094	35683	43470	11016	47777	No	12.86	Si
SLU 35	15.66	2093.26	-4189	-3488	-3185	4.32	4.32	-2884	8718	10545	35683	43470	11016	46228	No	14.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 12	12.5	-5158.04	-13634	-11354	-9672	4.32	4.32	-9386	14377	17391	35683	65205	11016	53074		5.49	Si
SLD 12	15.66	3694.63	-2470	-2056	-12018	4.32	1.9919	-1700	12840	7161	35683	65205	11016	42844		3.57	Si
SLV 10	12.5	12819.46	-17003	-14159	13249	4.32	4.2181	-11705	14841	17528	35683	65205	11016	53212		4.02	Si
SLV 10	15.66	-2647.55	-2680	-2232	18903	4.32	3.5167	-2268	12954	12755	35683	65205	11016	48438		2.56	Si
SLV 9	12.5	12633.98	-16978	-14138	12978	4.32	4.2476	-11688	14838	17647	35683	65205	11016	53330		4.11	Si
SLV 9	15.66	-2606.88	-2701	-2249	18686	4.32	3.5844	-2242	12948	12995	35683	65205	11016	48679		2.61	Si
SLV 12	12.5	-12803.32	-12791	-10651	-19791	4.32	3.4772	-10984	14697	14309	35683	65205	11016	49992		2.53	Si
SLV 12	15.66	6369.58	-2696	-2245	-24986	4.32	0	-85858	16250	0	35683	65205	11016	35683		1.43	Si
SLV 8	12.5	-10916.67	-11651	-9702	-16416	4.32	3.669	-9477	14395	14789	35683	65205	11016	50472		3.07	Si
SLV 8	15.66	5783.81	-1900	-1582	-22287	4.32	0	-90072	16250	0	35683	65205	11016	35683		1.6	Si
SLV 6	12.5	14706.11	-15862	-13209	16625	4.32	3.6987	-10920	14684	15207	35683	65205	11016	50890		3.06	Si
SLV 6	15.66	-3233.33	-1884	-1569	21602	3.456	1.3316	0	0	0	35683	52164	8813	35683		1.65	Si
SLV 7	12.5	-11102.15	-11626	-9681	-16687	4.32	3.6152	-9598	14420	14596	35683	65205	11016	50279		3.01	Si
SLV 7	15.66	5824.48	-1920	-1599	-22504	4.32	0	-90562	16250	0	35683	65205	11016	35683		1.59	Si
SLD 11	12.5	-5239.06	-13624	-11345	-9791	4.32	4.32	-9379	14376	17389	35683	65205	11016	53072		5.42	Si
SLD 11	15.66	3712.39	-2479	-2064	-12112	4.32	1.9866	-1706	12841	7143	35683	65205	11016	42826		3.54	Si
SLV 5	12.5	14520.63	-15838	-13188	16353	4.32	3.7295	-10903	14681	15330	35683	65205	11016	51013		3.12	Si
SLV 5	15.66	-3192.65	-1905	-1586	21384	3.456	1.451	0	0	0	35683	52164	8813	35683		1.67	Si
SLV 11	12.5	-12988.8	-12767	-10631	-20063	4.32	3.4278	-11120	14724	14132	35683	65205	11016	49815		2.48	Si
SLV 11	15.66	6410.25	-2717	-2262	-25203	4.32	0	-86089	16250	0	35683	65205	11016	35683		1.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	215625	0.53	4578	-5537	502.24	755.86	1.5	Si
SLV 3	215625	0.53	4596	-5560	502.24	758.85	1.51	Si
SLV 2	215625	0.53	5129	-6204	502.24	844.31	1.68	Si
SLV 1	215625	0.53	5148	-6227	502.24	847.28	1.69	Si
SLV 8	215625	0.53	5821	-7042	502.24	954.52	1.9	Si
SLV 7	215625	0.53	5833	-7056	502.24	956.42	1.9	Si
SLV 12	215625	0.53	7436	-8995	502.24	1208.18	2.41	Si
SLV 11	215625	0.53	7448	-9009	502.24	1210.04	2.41	Si
SLV 6	215625	0.53	7660	-9265	502.24	1242.94	2.47	Si
SLV 5	215625	0.53	7672	-9280	502.24	1244.8	2.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2717	-12767	702	3.896	870.9	0.89	63.60844	12.42528	Si
SLV 12	-2696	-12791	702	3.909	869.1	0.89	63.81209	12.42528	Si
SLV 9	-2701	-16978	560	3.929	869.5	0.89	64.14004	12.42528	Si
SLV 10	-2680	-17003	560	3.942	867.8	0.89	64.34578	12.42528	Si
SLV 5	-1905	-15838	-765	4.47	803.4	0.897	72.41294	12.42528	Si
SLV 7	-1920	-11626	-623	4.483	804.6	0.897	72.64784	12.42528	Si
SLV 6	-1884	-15862	-765	4.487	801.7	0.897	72.66484	12.42528	Si
SLV 8	-1900	-11651	-623	4.5	803	0.897	72.9002	12.42528	Si
SLV 15	-3646	-15565	2198	3.18	953.8	0.889	51.98939	6.42939	Si
SLV 13	-3641	-16828	2156	3.188	953.4	0.889	52.12159	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.118	SLU 60	Si
V_SLU	11.226	SLU 39	Si
PF_SLV	0.859	SLV 8	No
V_SLV	1.416	SLV 11	Si
PFFP_SLV	1.505	SLV 4	Si
R_SLV	5.119	SLV 11	Si

Maschio 230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L7	L8	3.21	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	12.5	474.64	-8350	-0.0000227	0.0004492	0.0035	3.21	11619.14	13479.86	13479.86	28.4	No	Si
SLU 61	15.66	6142.86	-4382	-0.0001219	0.0004492	0.0035	3.21	6542.44	7748.61	7748.61	1.26	No	Si
SLU 52	12.5	466.17	-8075	-0.000022	0.0004492	0.0035	3.21	11293.13	13089.65	13089.65	28.08	No	Si
SLU 52	15.66	5631.29	-4107	-0.0000975	0.0004492	0.0035	3.21	6160.59	7337.55	7337.55	1.3	No	Si
SLU 10	12.5	409.06	-6661	-0.0000182	0.0004492	0.0035	3.21	9556.73	11074.31	11074.31	27.07	No	Si
SLU 10	15.66	4748.22	-3570	-0.0000706	0.0004492	0.0035	3.21	5403.45	6533.46	6533.46	1.38	No	Si
SLU 19	12.5	417.53	-6937	-0.0000189	0.0004492	0.0035	3.21	9902.63	11471.64	11471.64	27.48	No	Si
SLU 19	15.66	5259.79	-3845	-0.0000895	0.0004492	0.0035	3.21	5792.86	6945.06	6945.06	1.32	No	Si
SLU 73	12.5	523.87	-9266	-0.0000252	0.0004492	0.0035	3.21	12675.97	14755.72	14755.72	28.17	No	Si
SLU 73	15.66	6246.86	-5149	-0.0000716	0.0004492	0.0035	3.21	7585.59	8875.15	8875.15	1.42	No	Si
SLU 18	12.5	376.25	-6953	-0.0000187	0.0004492	0.0035	3.21	9923.63	11495.91	11495.91	30.55	No	Si
SLU 18	15.66	5288.5	-3862	-0.0000905	0.0004492	0.0035	3.21	5816.52	6970.2	6970.2	1.32	No	Si
SLU 60	12.5	433.36	-8367	-0.0000225	0.0004492	0.0035	3.21	11638.93	13503.7	13503.7	31.16	No	Si
SLU 60	15.66	6171.57	-4399	-0.0001232	0.0004492	0.0035	3.21	6565.64	7773.31	7773.31	1.26	No	Si
SLU 82	12.5	532.34	-9541	-0.000026	0.0004492	0.0035	3.21	12985.21	15138.82	15138.82	28.44	No	Si
SLU 82	15.66	6758.43	-5424	-0.0000831	0.0004492	0.0035	3.21	7952.79	9279.61	9279.61	1.37	No	Si
SLU 81	12.5	491.06	-9558	-0.0000258	0.0004492	0.0035	3.21	13003.98	15162.22	15162.22	30.88	No	Si
SLU 81	15.66	6787.14	-5441	-0.0000837	0.0004492	0.0035	3.21	7975.09	9304.32	9304.32	1.37	No	Si
SLU 43	12.5	313.41	-7488	-0.0000198	0.0004492	0.0035	3.21	10583.65	12255.96	12255.96	39.11	No	Si
SLU 43	15.66	4530.15	-3519	-0.0000597	0.0004492	0.0035	3.21	5331.79	6458.16	6458.16	1.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.5	-3073.74	-8617	-0.0000352	0.0006738	0.0035	3.21		18687.53	18687.53	6.08		Si
SLV 11	15.66	8048.35	-5420	-0.0002552	0.0006738	0.0035	3.21		9357.84	9357.84	1.16		Si
SLD 11	12.5	-1187.94	-7474	-0.0000236	0.0006738	0.0035	3.21		17061.78	17061.78	14.36		Si
SLD 11	15.66	5849.63	-4313	-0.0000937	0.0006738	0.0035	3.21		7701.77	7701.77	1.32		Si
SLV 8	12.5	-2996.96	-8228	-0.0000339	0.0006738	0.0035	3.21		18134	18134	6.05		Si
SLV 8	15.66	7297.49	-5043	-0.0001784	0.0006738	0.0035	3.21		8797.86	8797.86	1.21		Si
SLV 16	12.5	-570.56	-7691	-0.0000213	0.0006738	0.0035	3.21		17369.72	17369.72	30.44		Si
SLV 16	15.66	6316.56	-4518	-0.0001194	0.0006738	0.0035	3.21		8011.36	8011.36	1.27		Si
SLD 12	12.5	-1141.4	-7457	-0.0000234	0.0006738	0.0035	3.21		17036.99	17036.99	14.93		Si
SLD 12	15.66	5824.13	-4296	-0.0000932	0.0006738	0.0035	3.21		7675.44	7675.44	1.32		Si
SLD 7	12.5	-1200.12	-7333	-0.0000234	0.0006738	0.0035	3.21		16860.43	16860.43	14.05		Si
SLD 7	15.66	5566.52	-4177	-0.0000825	0.0006738	0.0035	3.21		7495.81	7495.81	1.35		Si
SLV 15	12.5	-735.91	-7753	-0.0000223	0.0006738	0.0035	3.21		17457.78	17457.78	23.72		Si
SLV 15	15.66	6407.16	-4580	-0.0001217	0.0006738	0.0035	3.21		8104.91	8104.91	1.26		Si
SLD 8	12.5	-1153.58	-7315	-0.0000231	0.0006738	0.0035	3.21		16835.65	16835.65	14.59		Si
SLD 8	15.66	5541.02	-4160	-0.0000819	0.0006738	0.0035	3.21		7469.48	7469.48	1.35		Si
SLV 12	12.5	-2967.19	-8577	-0.0000346	0.0006738	0.0035	3.21		18630.77	18630.77	6.28		Si
SLV 12	15.66	7989.96	-5380	-0.0002533	0.0006738	0.0035	3.21		9298.5	9298.5	1.16		Si
SLV 7	12.5	-3103.52	-8268	-0.0000345	0.0006738	0.0035	3.21		18190.75	18190.75	5.86		Si
SLV 7	15.66	7355.88	-5083	-0.0001801	0.0006738	0.0035	3.21		8857.2	8857.2	1.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	12.5	433.36	-8367	-4913	-1816	3.21	3.21	-9566	9609	4935	101952	18458	16371	34829	No	19.18	Si
SLU 60	15.66	6171.57	-4399	-2583	-1816	3.21	0.6063	-26997	10833	1051	101952	18458	16371	34829	No	19.18	Si
SLU 73	12.5	523.87	-9266	-5441	-1811	3.21	3.21	-10593	9746	5005	101952	18458	16371	34829	No	19.23	Si
SLU 73	15.66	6246.86	-5149	-3023	-1811	3.21	1.1751	-5886	9118	1714	101952	18458	16371	34829	No	19.23	Si
SLU 84	12.5	489.62	-10454	-6138	-1802	3.21	3.21	-11952	9927	5098	101952	18458	16371	34829	No	19.32	Si
SLU 84	15.66	6185.02	-6337	-3721	-1802	3.21	1.887	-7245	9299	2808	101952	18458	16371	34829	No	19.32	Si
SLU 82	12.5	532.34	-9541	-5602	-1970	3.21	3.21	-10907	9788	5027	101952	18458	16371	34829	No	17.68	Si
SLU 82	15.66	6758.43	-5424	-3185	-1970	3.21	1.0768	-18736	10831	1866	101952	18458	16371	34829	No	17.68	Si
SLU 74	12.5	441.1	-10198	-5988	-1781	3.21	3.21	-11658	9888	5078	101952	18458	16371	34829	No	19.55	Si
SLU 74	15.66	6070.61	-6081	-3570	-1781	3.21	1.8199	-6951	9260	2696	101952	18458	16371	34829	No	19.55	Si
SLU 61	12.5	474.64	-8350	-4903	-1794	3.21	3.21	-9546	9606	4934	101952	18458	16371	34829	No	19.42	Si
SLU 61	15.66	6142.86	-4382	-2573	-1794	3.21	0.6098	-26738	10833	1057	101952	18458	16371	34829	No	19.42	Si
SLU 83	12.5	448.34	-10471	-6148	-1824	3.21	3.21	-11971	9929	5100	101952	18458	16371	34829	No	19.09	Si
SLU 83	15.66	6213.73	-6354	-3731	-1824	3.21	1.8811	-7264	9302	2800	101952	18458	16371	34829	No	19.09	Si
SLU 75	12.5	482.37	-10181	-5978	-1759	3.21	3.21	-11639	9885	5077	101952	18458	16371	34829	No	19.8	Si
SLU 75	15.66	6041.9	-6064	-3560	-1759	3.21	1.8258	-6932	9258	2704	101952	18458	16371	34829	No	19.8	Si
SLU 81	12.5	491.06	-9558	-5612	-1992	3.21	3.21	-10927	9790	5028	101952	18458	16371	34829	No	17.48	Si
SLU 81	15.66	6787.14	-5441	-3194	-1992	3.21	1.0725	-18871	10833	1859	101952	18458	16371	34829	No	17.48	Si
SLU 39	12.5	433.96	-8144	-4782	-1731	3.21	3.21	-9310	9575	4918	101952	18458	16371	34829	No	20.12	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	15.66	5904.07	-4903	-2879	-1731	3.21	1.2025	-5605	9081	1747	101952	18458	16371	34829	No	20.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	12.5	-3103.52	-8268	-4855	-2834	3.21	3.21	-9452	14390	7391	101952	27686	16371	44057		15.55	Si
SLV 7	15.66	7355.88	-5083	-2985	-3873	3.21	0.4736	-39370	16250	1231	101952	27686	16371	44057		11.37	Si
SLV 11	12.5	-3073.74	-8617	-5060	-3040	3.21	3.21	-9852	14470	7432	101952	27686	16371	44057		14.49	Si
SLV 11	15.66	8048.35	-5420	-3182	-4081	3.21	0.3599	-53526	16250	936	101952	27686	16371	44057		10.8	Si
SLV 16	12.5	-570.56	-7691	-4516	-2030	3.21	3.21	-8792	14258	7323	101952	27686	16371	44057		21.71	Si
SLV 16	15.66	6316.56	-4518	-2653	-2344	3.21	0.621	-26907	16250	1615	101952	27686	16371	44057		18.8	Si
SLD 8	12.5	-1153.58	-7315	-4295	-1911	3.21	3.21	-8363	14173	7279	101952	27686	16371	44057		23.06	Si
SLD 8	15.66	5541.02	-4160	-2442	-2364	3.21	0.8187	-18796	16250	2129	101952	27686	16371	44057		18.64	Si
SLD 12	12.5	-1141.4	-7457	-4378	-1995	3.21	3.21	-8525	14205	7296	101952	27686	16371	44057		22.09	Si
SLD 12	15.66	5824.13	-4296	-2522	-2448	3.21	0.7478	-21261	16250	1944	101952	27686	16371	44057		17.99	Si
SLV 15	12.5	-735.91	-7753	-4552	-2111	3.21	3.21	-8863	14273	7330	101952	27686	16371	44057		20.87	Si
SLV 15	15.66	6407.16	-4580	-2689	-2425	3.21	0.6183	-27396	16250	1608	101952	27686	16371	44057		18.17	Si
SLV 12	12.5	-2967.19	-8577	-5036	-2987	3.21	3.21	-9806	14461	7427	101952	27686	16371	44057		14.75	Si
SLV 12	15.66	7989.96	-5380	-3159	-4028	3.21	0.3594	-53180	16250	935	101952	27686	16371	44057		10.94	Si
SLD 11	12.5	-1187.94	-7474	-4389	-2017	3.21	3.21	-8545	14209	7298	101952	27686	16371	44057		21.84	Si
SLD 11	15.66	5849.63	-4313	-2533	-2471	3.21	0.7465	-21385	16250	1941	101952	27686	16371	44057		17.83	Si
SLD 7	12.5	-1200.12	-7333	-4305	-1933	3.21	3.21	-8383	14177	7281	101952	27686	16371	44057		22.79	Si
SLD 7	15.66	5566.52	-4177	-2453	-2387	3.21	0.8171	-18913	16250	2124	101952	27686	16371	44057		18.46	Si
SLV 8	12.5	-2996.96	-8228	-4831	-2781	3.21	3.21	-9407	14381	7386	101952	27686	16371	44057		15.84	Si
SLV 8	15.66	7297.49	-5043	-2961	-3821	3.21	0.4739	-39025	16250	1232	101952	27686	16371	44057		11.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-2926	0.53	220.52	226.83	514.14	370.49	1.68	Si
SLV 5	-2966	0.53	220.52	229.82	518.05	373.94	1.7	Si
SLV 10	-3261	0.53	220.52	251.83	546.9	399.36	1.81	Si
SLV 9	-3301	0.53	220.52	254.8	550.8	402.8	1.83	Si
SLV 2	-3851	0.53	220.52	295.46	604.39	449.92	2.04	Si
SLV 1	-3913	0.53	220.52	300	610.41	455.21	2.06	Si
SLV 14	-4966	0.53	220.52	376.31	712.14	544.22	2.47	Si
SLV 4	-4987	0.53	220.52	377.82	714.18	546	2.48	Si
SLV 13	-5028	0.53	220.52	380.73	718.09	549.41	2.49	Si
SLV 3	-5049	0.53	220.52	382.25	720.13	551.19	2.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-5420	-8617	175	2.626	784.6	0.923	41.35373	21.29986	Si
SLV 12	-5380	-8577	175	2.641	780.6	0.923	41.60627	21.29986	Si
SLV 7	-5083	-8268	-169	2.761	750.8	0.92	43.5979	21.29986	Si
SLV 8	-5043	-8228	-169	2.777	746.8	0.92	43.87819	21.29986	Si
SLV 9	-1868	-4951	169	5.403	434.7	0.89	88.19075	21.29986	Si
SLV 10	-1828	-4911	169	5.468	430.9	0.89	89.28056	21.29986	Si
SLV 5	-1531	-4602	-175	6.006	403.5	0.889	98.19487	21.29986	Si
SLV 6	-1491	-4562	-175	6.087	399.8	0.889	99.52158	21.29986	Si
SLV 15	-4580	-7753	574	2.921	700.5	0.916	46.3458	9.06791	Si
SLV 16	-4518	-7691	574	2.951	694.3	0.915	46.84918	9.06791	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.26	SLU 60	Si
V_SLU	17.48	SLU 81	Si
PF_SLV	1.163	SLV 11	Si
V_SLV	10.797	SLV 11	Si
PFFP_SLV	1.68	SLV 6	Si
R_SLV	1.942	SLV 11	Si

Maschio 232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L7	L8	3.12	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.5	462.99	-7460	-0.0000211	0.0004492	0.0035	3.12	10213.98	11807.66	11807.66	25.5	No	Si
SLU 40	14.6	1417.43	-4568	-0.0000183	0.0004492	0.0035	3.12	6592.94	7738.12	7738.12	5.46	No	Si
SLU 42	12.5	609.81	-8082	-0.0000234	0.0004492	0.0035	3.12	10936.79	12665.54	12665.54	20.77	No	Si
SLU 42	14.6	1554.08	-5235	-0.0000207	0.0004492	0.0035	3.12	7465.62	8691.62	8691.62	5.59	No	Si
SLU 31	12.5	535.71	-7276	-0.0000209	0.0004492	0.0035	3.12	9996.52	11553.86	11553.86	21.57	No	Si
SLU 31	14.6	1276.92	-4427	-0.0000173	0.0004492	0.0035	3.12	6405.03	7536	7536	5.9	No	Si
SLU 41	12.5	547.92	-8074	-0.0000231	0.0004492	0.0035	3.12	10928.3	12655.49	12655.49	23.1	No	Si
SLU 41	14.6	1573.63	-5254	-0.0000208	0.0004492	0.0035	3.12	7490.67	8719.36	8719.36	5.54	No	Si
SLU 37	12.5	726.18	-8507	-0.0000251	0.0004492	0.0035	3.12	11420.18	13242.7	13242.7	18.24	No	Si
SLU 37	14.6	1582.81	-5793	-0.0000223	0.0004492	0.0035	3.12	8178.17	9481.3	9481.3	5.99	No	Si
SLU 36	12.5	727.87	-8636	-0.0000254	0.0004492	0.0035	3.12	11564.72	13417.44	13417.44	18.43	No	Si
SLU 36	14.6	1600.04	-5873	-0.0000226	0.0004492	0.0035	3.12	8280.11	9594.88	9594.88	6	No	Si
SLU 39	12.5	401.1	-7452	-0.0000207	0.0004492	0.0035	3.12	10205.24	11797.43	11797.43	29.41	No	Si
SLU 39	14.6	1436.99	-4588	-0.0000185	0.0004492	0.0035	3.12	6618.65	7765.86	7765.86	5.4	No	Si
SLU 33	12.5	581.05	-8014	-0.0000231	0.0004492	0.0035	3.12	10859.53	12573.34	12573.34	21.64	No	Si
SLU 33	14.6	1463.4	-5207	-0.0000202	0.0004492	0.0035	3.12	7429.19	8651.32	8651.32	5.91	No	Si
SLU 32	12.5	519.15	-8007	-0.0000227	0.0004492	0.0035	3.12	10851.01	12563.1	12563.1	24.2	No	Si
SLU 32	14.6	1482.95	-5226	-0.0000203	0.0004492	0.0035	3.12	7454.27	8679.06	8679.06	5.85	No	Si
SLU 35	12.5	665.97	-8629	-0.0000251	0.0004492	0.0035	3.12	11556.43	13407.4	13407.4	20.13	No	Si
SLU 35	14.6	1619.6	-5893	-0.0000227	0.0004492	0.0035	3.12	8304.53	9622.14	9622.14	5.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	12.5	-5076.51	-4446	-0.0000555	0.0006738	0.0035	2.496		12325.42	12325.42	2.43		Si
SLV 8	14.6	4312.57	-5554	-0.0000372	0.0006738	0.0035	3.12		9231.56	9231.56	2.14		Si
SLV 7	12.5	-5328.82	-4395	-0.0000652	0.0006738	0.0035	2.496		12252.71	12252.71	2.3		Si
SLV 7	14.6	4392.05	-5643	-0.0000379	0.0006738	0.0035	3.12		9359.86	9359.86	2.13		Si
SLV 12	12.5	-4743.65	-5386	-0.0000417	0.0006738	0.0035	2.496		13678.08	13678.08	2.88		Si
SLV 12	14.6	4017.21	-5929	-0.0000352	0.0006738	0.0035	3.12		9773.81	9773.81	2.43		Si
SLV 11	12.5	-4995.96	-5336	-0.000045	0.0006738	0.0035	2.496		13606.32	13606.32	2.72		Si
SLV 11	14.6	4096.68	-6017	-0.0000359	0.0006738	0.0035	3.12		9901.97	9901.97	2.42		Si
SLV 4	12.5	-1507.5	-4376	-0.0000182	0.0006738	0.0035	3.12		12224.88	12224.88	8.11		Si
SLV 4	14.6	2253.43	-3638	-0.0000201	0.0006738	0.0035	3.12		6438.29	6438.29	2.86		Si
SLV 5	12.5	5779.02	-7292	-0.0000502	0.0006738	0.0035	3.12		11717.02	11717.02	2.03		Si
SLV 5	14.6	-2413.12	-1488	-0.0000665	0.0006738	0.0035	2.496		8004	8004	3.32		Si
SLV 9	12.5	6111.88	-8233	-0.0000533	0.0006738	0.0035	3.12		13039.12	13039.12	2.13		Si
SLV 9	14.6	-2708.48	-1863	-0.0000551	0.0006738	0.0035	2.496		8556.25	8556.25	3.16		Si
SLV 10	12.5	6364.19	-8283	-0.0000555	0.0006738	0.0035	3.12		13109.79	13109.79	2.06		Si
SLV 10	14.6	-2787.95	-1774	-0.0000714	0.0006738	0.0035	2.496		8425.58	8425.58	3.02		Si
SLV 3	12.5	-1899.02	-4298	-0.0000199	0.0006738	0.0035	3.12		12112.04	12112.04	6.38		Si
SLV 3	14.6	2376.75	-3776	-0.0000211	0.0006738	0.0035	3.12		6640.51	6640.51	2.79		Si
SLV 6	12.5	6031.33	-7342	-0.0000526	0.0006738	0.0035	3.12		11788.84	11788.84	1.95		Si
SLV 6	14.6	-2492.59	-1399	-0.0000823	0.0006738	0.0035	2.496		7872.67	7872.67	3.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	12.5	732.97	-7467	-4384	561	3.12	3.12	-8783	9504	4745	101952	17940	15912	33852	No	60.33	Si
SLU 43	14.6	637.17	-4173	-2450	558	3.12	3.12	-4908	8988	4487	101952	17940	15912	33852	No	60.63	Si
SLU 49	12.5	1028.29	-8840	-5190	505	3.12	3.12	-10397	9720	4852	101952	17940	15912	33852	No	67.06	Si
SLU 49	14.6	927.69	-5587	-3280	571	3.12	3.12	-6571	9209	4597	101952	17940	15912	33852	No	59.27	Si
SLU 52	12.5	762.76	-7920	-4650	541	3.12	3.12	-9315	9575	4780	101952	17940	15912	33852	No	62.56	Si
SLU 52	14.6	902.01	-4440	-2607	649	3.12	3.12	-5222	9030	4508	101952	17940	15912	33852	No	52.16	Si
SLU 2	12.5	654.9	-5982	-3512	427	3.12	3.12	-7036	9271	4628	101952	17940	15912	33852	No	79.22	Si
SLU 2	14.6	566.47	-3376	-1982	536	3.12	3.12	-3970	8863	4424	101952	17940	15912	33852	No	63.11	Si
SLU 61	12.5	690.04	-8104	-4758	490	3.12	3.12	-9532	9604	4794	101952	17940	15912	33852	No	69.12	Si
SLU 61	14.6	1042.52	-4581	-2690	553	3.12	3.12	-5388	9052	4519	101952	17940	15912	33852	No	61.22	Si
SLU 55	12.5	909.58	-8542	-5015	513	3.12	3.12	-10047	9673	4829	101952	17940	15912	33852	No	66.04	Si
SLU 55	14.6	1038.66	-5106	-2998	622	3.12	3.12	-6006	9134	4560	101952	17940	15912	33852	No	54.43	Si
SLU 47	12.5	982.95	-8101	-4757	584	3.12	3.12	-9529	9604	4794	101952	17940	15912	33852	No	57.95	Si
SLU 47	14.6	741.22	-4807	-2822	694	3.12	3.12	-5654	9087	4536	101952	17940	15912	33852	No	48.77	Si
SLU 51	12.5	1088.51	-8718	-5119	535	3.12	3.12	-10254	9701	4843	101952	17940	15912	33852	No	63.27	Si
SLU 51	14.6	890.9	-5486	-3221	602	3.12	3.12	-6453	9194	4590	101952	17940	15912	33852	No	56.24	Si
SLU 44	12.5	836.13	-7480	-4392	613	3.12	3.12	-8797	9506	4746	101952	17940	15912	33852	No	55.25	Si
SLU 44	14.6	604.58	-4140	-2431	721	3.12	3.12	-4870	8983	4484	101952	17940	15912	33852	No	46.94	Si
SLU 46	12.5	881.47	-8218	-4825	533	3.12	3.12	-9666	9622	4803	101952	17940	15912	33852	No	63.48	Si
SLU 46	14.6	791.05	-4920	-2889	598	3.12	3.12	-5787	9105	4545	101952	17940	15912	33852	No	56.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.5	5779.02	-7292	-4281	6375	3.12	2.3024	-8577	14215	5237	101952	26910	15912	42822		6.72	Si
SLV 5	14.6	-2413.12	-1488	-874	7090	2.496	0	0	0	0	101952	21528	12730	34258		4.83	Si
SLV 11	12.5	-4995.96	-5336	-3133	-6047	2.496	1.8711	0	0	0	101952	21528	12730	34258		5.67	Si
SLV 11	14.6	4096.68	-6017	-3533	-6766	3.12	2.6376	-7078	13916	5873	101952	26910	15912	42822		6.33	Si
SLD 10	12.5	3095.3	-7190	-4222	3366	3.12	3.12	-8457	14191	7084	101952	26910	15912	42822		12.72	Si
SLD 10	14.6	-781.43	-2852	-1675	3695	3.12	3.12	-3354	13171	6575	101952	26910	15912	42822		11.59	Si
SLV 6	12.5	6031.33	-7342	-4311	6636	3.12	2.2156	-8636	14227	5044	101952	26910	15912	42822		6.45	Si
SLV 6	14.6	-2492.59	-1399	-822	7351	2.496	0	0	0	0	101952	21528	12730	34258		4.66	Si
SLV 10	12.5	6364.19	-8283	-4863	7264	3.12	2.375	-9742	14448	5490	101952	26910	15912	42822		5.9	Si
SLV 10	14.6	-2787.95	-1774	-1042	8013	2.496	0	0	0	0	101952	21528	12730	34258		4.28	Si
SLV 7	12.5	-5328.82	-4395	-2581	-6674	2.496	1.0427	0	0	0	101952	21528	12730	34258		5.13	Si
SLV 7	14.6	4392.05	-5643	-3313	-7428	3.12	2.3449	-6637	13827	5188	101952	26910	15912	42822		5.76	Si
SLV 14	12.5	2934.39	-8380	-4921	3500	3.12	3.12	-9857	14471	7224	101952	26910	15912	42822		12.23	Si
SLV 14	14.6	-772.66	-3641	-2138	3777	3.12	3.12	-4283	13357	6668	101952	26910	15912	42822		11.34	Si
SLV 9	12.5	6111.88	-8233	-4834	7002	3.12	2.4528	-9683	14437	5666	101952	26910	15912	42822		6.12	Si
SLV 9	14.6	-2708.48	-1863	-1094	7752	2.496	0.318	0	0	0	101952	21528	12730	34258		4.42	Si
SLV 12	12.5	-4743.65	-5386	-3163	-5786	2.496	2.0379	0	0	0	101952	21528	12730	34258		5.92	Si
SLV 12	14.6	4017.21	-5929	-3481	-6504	3.12	2.6473	-6973	13895	5885	101952	26910	15912	42822		6.58	Si
SLV 8	12.5	-5076.51	-4446	-2610	-6413	2.496	1.2543	0	0	0	101952	21528	12730	34258		5.34	Si
SLV 8	14.6	4312.57	-5554	-3261	-7167	3.12	2.3506	-6533	13807	5193	101952	26910	15912	42822		5.97	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-3325	0.53	214.34	256.36	552.44	404.4	1.89	Si
SLV 5	-3360	0.53	214.34	258.95	555.85	407.4	1.9	Si
SLV 2	-3520	0.53	214.34	270.79	571.45	421.12	1.96	Si
SLV 1	-3574	0.53	214.34	274.78	576.72	425.75	1.99	Si
SLV 10	-3770	0.53	214.34	289.2	595.8	442.5	2.06	Si
SLV 9	-3805	0.53	214.34	291.76	599.19	445.47	2.08	Si
SLV 4	-4141	0.53	214.34	316.26	631.7	473.98	2.21	Si
SLV 3	-4195	0.53	214.34	320.2	636.92	478.56	2.23	Si
SLV 14	-5004	0.53	214.34	378.41	714.94	546.67	2.55	Si
SLV 13	-5058	0.53	214.34	382.25	720.14	551.2	2.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-1915	-5336	79	5.268	431.8	0.891	85.92126	21.29986	Si
SLV 12	-1900	-5386	79	5.292	430.4	0.891	86.32679	21.29986	Si
SLV 7	-1750	-4395	-192	5.505	416.4	0.89	89.89199	21.29986	Si
SLV 8	-1735	-4446	-192	5.531	414.9	0.89	90.33495	21.29986	Si
SLV 9	-1520	-8233	193	5.934	395	0.889	97.01337	21.29986	Si
SLV 10	-1504	-8283	193	5.965	393.6	0.889	97.52268	21.29986	Si
SLV 5	-1355	-7292	-78	6.327	380.1	0.889	103.43262	21.29986	Si
SLV 6	-1340	-7342	-78	6.361	378.7	0.889	104.00053	21.29986	Si
SLV 15	-1973	-7433	435	5.073	437.3	0.892	82.70555	9.06791	Si
SLV 16	-1949	-7511	435	5.109	435.1	0.891	83.30353	9.06791	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.404	SLU 39	Si
V_SLU	46.945	SLU 44	Si
PF_SLV	1.955	SLV 6	Si
V_SLV	4.275	SLV 10	Si
PFFP_SLV	1.887	SLV 6	Si
R_SLV	4.034	SLV 11	Si

Maschio 234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L7	L8	4.68	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 9	12.5	66.05	-8201	-0.0000154	0.0004492	0.0035	4.68	17224.99	20335.35	20335.35	307.87	No	Si
SLU 9	15.66	580.28	-1194	-0.0000036	0.0004492	0.0035	4.68	2751.66	5027.91	5027.91	8.66	No	Si
SLU 28	12.5	223.22	-9461	-0.0000181	0.0004492	0.0035	4.68	19521.65	22981.76	22981.76	102.96	No	Si
SLU 28	15.66	627.93	-1399	-0.000004	0.0004492	0.0035	4.68	3215.73	5491	5491	8.74	No	Si
SLU 29	12.5	262.33	-9137	-0.0000176	0.0004492	0.0035	4.68	18940.72	22309.42	22309.42	85.04	No	Si
SLU 29	15.66	779.55	-1377	-0.0000044	0.0004492	0.0035	4.68	3167.26	5442.52	5442.52	6.98	No	Si
SLU 30	12.5	318.02	-9162	-0.0000178	0.0004492	0.0035	4.68	18986.25	22361.87	22361.87	70.32	No	Si
SLU 30	15.66	734.31	-1369	-0.0000042	0.0004492	0.0035	4.68	3148.35	5423.61	5423.61	7.39	No	Si
SLU 38	12.5	632.41	-9789	-0.0000197	0.0004492	0.0035	4.68	20104.7	23663.76	23663.76	37.42	No	Si
SLU 38	15.66	627.53	-1363	-0.000004	0.0004492	0.0035	4.68	3135.73	5411	5411	8.62	No	Si
SLU 71	12.5	163.95	-11012	-0.0000209	0.0004492	0.0035	4.68	22222.79	26196.99	26196.99	159.79	No	Si
SLU 71	15.66	665.72	-1526	-0.0000044	0.0004492	0.0035	4.68	3503.36	5779.26	5779.26	8.68	No	Si
SLU 8	12.5	10.36	-8176	-0.0000152	0.0004492	0.0035	4.68	17178.04	20282	20282	1958.38	No	Si
SLU 8	15.66	625.52	-1202	-0.0000037	0.0004492	0.0035	4.68	2770.66	5046.83	5046.83	8.07	No	Si
SLU 37	12.5	576.72	-9763	-0.0000196	0.0004492	0.0035	4.68	20060.09	23611.32	23611.32	40.94	No	Si
SLU 37	15.66	672.77	-1372	-0.0000041	0.0004492	0.0035	4.68	3154.65	5429.91	5429.91	8.07	No	Si
SLU 72	12.5	219.64	-11037	-0.0000211	0.0004492	0.0035	4.68	22265.56	26248.53	26248.53	119.51	No	Si
SLU 72	15.66	620.49	-1518	-0.0000042	0.0004492	0.0035	4.68	3484.52	5760.35	5760.35	9.28	No	Si
SLU 27	12.5	167.52	-9435	-0.0000179	0.0004492	0.0035	4.68	19476.56	22929.32	22929.32	136.87	No	Si
SLU 27	15.66	673.17	-1407	-0.0000042	0.0004492	0.0035	4.68	3234.63	5509.91	5509.91	8.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	12.5	-2923.89	-6128	-0.0000183	0.0006738	0.0035	4.68		26150.86	26150.86	8.94		Si
SLV 7	15.66	5789.87	-2461	-0.0002012	0.0006738	0.0035	4.68		7903.7	7903.7	1.37		Si
SLV 11	12.5	-7873.94	-5381	-0.0000356	0.0006738	0.0035	3.744		24532.79	24532.79	3.12		Si
SLV 11	15.66	3030.87	-1073	-0.0002228	0.0006738	0.0035	3.744		4769.23	4769.23	1.57		Si
SLV 12	12.5	-7555.62	-5509	-0.000033	0.0006738	0.0035	3.744		24811.33	24811.33	3.28		Si
SLV 12	15.66	2831.29	-1018	-0.0001993	0.0006738	0.0035	3.744		4644.57	4644.57	1.64		Si
SLV 14	12.5	-6272.78	-7248	-0.0000285	0.0006738	0.0035	4.68		28565.81	28565.81	4.55		Si
SLV 14	15.66	-6293.21	1910	-0.0001668	0.0006738	0.0035	3.744		8329.89	8329.89	1.32		Si
SLV 9	12.5	2849.26	-9342	-0.0000241	0.0006738	0.0035	4.68		22980.28	22980.28	8.07		Si
SLV 9	15.66	-5970.06	916	-0.0001696	0.0006738	0.0035	3.744		10582.07	10582.07	1.77		Si
SLV 13	12.5	-6766.73	-7048	-0.0000296	0.0006738	0.0035	4.68		28139.18	28139.18	4.16		Si
SLV 13	15.66	-5983.51	1825	-0.0001581	0.0006738	0.0035	3.744		8522.73	8522.73	1.42		Si
SLV 8	12.5	-2605.58	-6257	-0.0000177	0.0006738	0.0035	4.68		26429.4	26429.4	10.14		Si
SLV 8	15.66	5590.3	-2407	-0.0001741	0.0006738	0.0035	4.68		7780.73	7780.73	1.39		Si
SLV 3	12.5	6516.46	-8351	-0.0000311	0.0006738	0.0035	4.68		20857.71	20857.71	3.2		Si
SLV 3	15.66	5913.44	-3401	-0.0000328	0.0006738	0.0035	4.68		10009.3	10009.3	1.69		Si
SLV 10	12.5	3167.57	-9471	-0.0000251	0.0006738	0.0035	4.68		23255.92	23255.92	7.34		Si
SLV 10	15.66	-6169.64	971	-0.0001754	0.0006738	0.0035	3.744		10457.8	10457.8	1.7		Si
SLV 4	12.5	7010.41	-8551	-0.0000327	0.0006738	0.0035	4.68		21285.43	21285.43	3.04		Si
SLV 4	15.66	5603.75	-3316	-0.0000296	0.0006738	0.0035	4.68		9818.48	9818.48	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	12.5	618.43	-11101	-6155	2918	4.68	4.68	-9394	9586	6281	101952	23546	23868	47414	No	16.25	Si
SLU 82	15.66	-360.96	-1005	-557	2994	4.68	4.68	-850	8447	5534	101952	23546	23868	47414	No	15.83	Si
SLU 73	12.5	520.82	-10850	-6016	2765	4.68	4.68	-9182	9558	6262	101952	23546	23868	47414	No	17.15	Si
SLU 73	15.66	-345.35	-1002	-555	2837	4.68	4.68	-848	8446	5534	101952	23546	23868	47414	No	16.71	Si
SLU 84	12.5	643.6	-11516	-6385	2881	4.68	4.68	-9746	9633	6311	101952	23546	23868	47414	No	16.46	Si
SLU 84	15.66	53.49	-1257	-697	2935	4.68	4.68	-1064	8475	5553	101952	23546	23868	47414	No	16.15	Si
SLU 78	12.5	439.22	-11961	-6632	2770	4.68	4.68	-10122	9683	6344	101952	23546	23868	47414	No	17.12	Si
SLU 78	15.66	407.33	-1542	-855	2808	4.68	4.68	-1305	8507	5574	101952	23546	23868	47414	No	16.89	Si
SLU 81	12.5	562.74	-11076	-6141	2802	4.68	4.68	-9373	9583	6279	101952	23546	23868	47414	No	16.92	Si
SLU 81	15.66	-315.72	-1013	-562	2878	4.68	4.68	-857	8448	5535	101952	23546	23868	47414	No	16.47	Si
SLU 75	12.5	414.05	-11546	-6402	2807	4.68	4.68	-9771	9636	6314	101952	23546	23868	47414	No	16.89	Si
SLU 75	15.66	-7.13	-1290	-715	2867	4.68	4.68	-1091	8479	5555	101952	23546	23868	47414	No	16.54	Si
SLU 83	12.5	587.9	-11491	-6371	2765	4.68	4.68	-9724	9630	6310	101952	23546	23868	47414	No	17.15	Si
SLU 83	15.66	98.73	-1266	-702	2819	4.68	4.68	-1071	8476	5554	101952	23546	23868	47414	No	16.82	Si
SLU 74	12.5	358.36	-11521	-6388	2691	4.68	4.68	-9749	9633	6312	101952	23546	23868	47414	No	17.62	Si
SLU 74	15.66	38.11	-1298	-720	2751	4.68	4.68	-1098	8480	5556	101952	23546	23868	47414	No	17.24	Si
SLU 77	12.5	383.53	-11936	-6618	2653	4.68	4.68	-10101	9680	6342	101952	23546	23868	47414	No	17.87	Si
SLU 77	15.66	452.56	-1551	-860	2692	4.68	4.68	-1312	8508	5575	101952	23546	23868	47414	No	17.61	Si
SLU 76	12.5	545.99	-11265	-6246	2727	4.68	4.68	-9533	9604	6293	101952	23546	23868	47414	No	17.39	Si
SLU 76	15.66	69.1	-1254	-695	2778	4.68	4.68	-1061	8475	5553	101952	23546	23868	47414	No	17.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.5	3167.57	-9471	-5251	11587	4.68	4.68	-8015	14103	9240	101952	35319	23868	59187		5.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	15.66	-6169.64	971	538	12583	3.744	0	0	0	0	101952	28256	19094	47350		3.76	Si
SLD 5	12.5	3470	-8804	-4881	6498	4.68	4.68	-7450	13990	9166	101952	35319	23868	59187		9.11	Si
SLD 5	15.66	-1540.56	-616	-341	7279	3.744	0	0	0	0	101952	28256	19094	47350		6.51	Si
SLV 12	12.5	-7555.62	-5509	-3055	-9401	3.744	2.9058	0	0	0	101952	28256	19094	47350		5.04	Si
SLV 12	15.66	2831.29	-1018	-564	-11002	3.744	0	0	0	0	101952	28256	19094	47350		4.3	Si
SLV 6	12.5	8117.62	-10219	-5666	13048	4.68	4.6368	-8647	14229	9237	101952	35319	23868	59187		4.54	Si
SLV 6	15.66	-3410.63	-418	-232	14764	3.744	0	0	0	0	101952	28256	19094	47350		3.21	Si
SLV 7	12.5	-2923.89	-6128	-3398	-8304	4.68	4.68	-5186	13537	8870	101952	35319	23868	59187		7.13	Si
SLV 7	15.66	5789.87	-2461	-1365	-9196	4.68	0	-39066	16250	0	101952	35319	23868	59187		6.44	Si
SLV 2	12.5	10227.37	-9740	-5400	7508	4.68	3.8698	-8242	14148	7665	101952	35319	23868	59187		7.88	Si
SLV 2	15.66	2903.47	-2719	-1508	9157	4.68	3.8169	-2301	12960	6926	101952	35319	23868	59187		6.46	Si
SLV 5	12.5	7799.3	-10090	-5594	12684	4.68	4.68	-8538	14208	9309	101952	35319	23868	59187		4.67	Si
SLV 5	15.66	-3211.06	-473	-262	14389	3.744	0	0	0	0	101952	28256	19094	47350		3.29	Si
SLV 11	12.5	-7873.94	-5381	-2983	-9765	3.744	2.63	0	0	0	101952	28256	19094	47350		4.85	Si
SLV 11	15.66	3030.87	-1073	-595	-11377	3.744	0	0	0	0	101952	28256	19094	47350		4.16	Si
SLV 9	12.5	2849.26	-9342	-5180	11223	4.68	4.68	-7906	14081	9226	101952	35319	23868	59187		5.27	Si
SLV 9	15.66	-5970.06	916	508	12208	3.744	0	0	0	0	101952	28256	19094	47350		3.88	Si
SLD 6	12.5	3609.03	-8860	-4912	6658	4.68	4.68	-7498	14000	9172	101952	35319	23868	59187		8.89	Si
SLD 6	15.66	-1627.74	-592	-328	7443	3.744	0	0	0	0	101952	28256	19094	47350		6.36	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.08 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	933	0.53	284.41	0	121.67	60.83	0.21	No
SLV 4	878	0.53	284.41	0	154.03	77.02	0.27	No
SLV 1	580	0.53	284.41	0	211.16	105.58	0.37	No
SLV 2	526	0.53	284.41	0	217.35	108.68	0.38	No
SLV 7	-2360	0.53	284.41	0	496.22	248.11	0.87	No
SLV 8	-2395	0.53	284.41	0	499.39	249.7	0.88	No
SLV 5	-3534	0.53	284.41	0	601.22	300.61	1.06	Si
SLV 6	-3569	0.53	284.41	0	604.33	302.17	1.06	Si
SLV 11	-5527	0.53	284.41	369.06	776.29	572.67	2.01	Si
SLV 12	-5562	0.53	284.41	371.28	779.35	575.32	2.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-2461	-6128	-85	6.09	561.9	0.891	99.36619	21.29986	Si
SLV 8	-2407	-6257	-85	6.168	556.7	0.89	100.67038	21.29986	Si
SLV 11	-1073	-5381	65	8.968	438.4	0.896	145.44252	21.29986	Si
SLV 12	-1018	-5509	64	9.138	434.1	0.897	147.9814	21.29986	Si
SLV 3	-3401	-8351	-251	4.976	652	0.897	80.5812	10.21571	Si
SLV 4	-3316	-8551	-252	5.057	643.8	0.897	81.95997	10.21571	Si
SLV 5	-473	-10090	-63	11.264	396.1	0.925	176.9163	21.29986	Si
SLV 6	-418	-10219	-64	11.534	393.1	0.93	180.1735	21.29986	Si
SLV 1	-2805	-9540	-245	5.61	594.5	0.893	91.31021	10.21571	Si
SLV 2	-2719	-9740	-245	5.714	586.4	0.892	93.05838	10.21571	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.982	SLU 29	Si
V_SLU	15.835	SLU 82	Si
PF_SLV	1.324	SLV 14	Si
V_SLV	3.207	SLV 6	Si
PFFP_SLV	0.214	SLV 3	No
R_SLV	4.665	SLV 7	Si

Maschio 237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-4.953	5.826	L7	L8	1.99	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	13.4	-82.32	-5811	-0.0000164	0.0003743	0.0035	1.99	5189.92	6399.67	6399.67	77.74	No	Si
SLU 61	15.2	-2232.15	-3372	-0.0000366	0.0003743	0.0035	1.592	3155.44	4263.33	4263.33	1.91	No	Si
SLU 44	13.4	-41.35	-5962	-0.0000164	0.0003743	0.0035	1.99	5308.42	6527.03	6527.03	157.86	No	Si
SLU 44	15.2	-2318.11	-3522	-0.0000379	0.0003743	0.0035	1.592	3286.8	4395.71	4395.71	1.9	No	Si
SLU 47	13.4	-171.8	-6738	-0.0000197	0.0003743	0.0035	1.99	5907.75	7165.21	7165.21	41.71	No	Si
SLU 47	15.2	-2541.87	-4298	-0.0000387	0.0003743	0.0035	1.592	3952.56	5088.82	5088.82	2	No	Si
SLU 65	13.4	-158.05	-6514	-0.0000189	0.0003743	0.0035	1.99	5737	6981.02	6981.02	44.17	No	Si
SLU 65	15.2	-2431.01	-4046	-0.0000372	0.0003743	0.0035	1.592	3738.7	4861.85	4861.85	2	No	Si
SLU 43	13.4	-57.1	-5931	-0.0000165	0.0003743	0.0035	1.99	5284.54	6501.61	6501.61	113.86	No	Si
SLU 43	15.2	-2308.73	-3492	-0.0000379	0.0003743	0.0035	1.592	3260.33	4368.92	4368.92	1.89	No	Si
SLU 60	13.4	-91.77	-5793	-0.0000164	0.0003743	0.0035	1.99	5175.5	6383.75	6383.75	69.56	No	Si
SLU 60	15.2	-2226.52	-3354	-0.0000366	0.0003743	0.0035	1.592	3139.46	4247.32	4247.32	1.91	No	Si
SLU 55	13.4	-196.06	-6641	-0.0000196	0.0003743	0.0035	1.99	5834.23	7085.52	7085.52	36.14	No	Si
SLU 55	15.2	-2484.33	-4201	-0.0000377	0.0003743	0.0035	1.592	3870.76	5002.1	5002.1	2.01	No	Si
SLU 52	13.4	-65.62	-5865	-0.0000164	0.0003743	0.0035	1.99	5232.26	6445.87	6445.87	98.24	No	Si
SLU 52	15.2	-2260.57	-3425	-0.000037	0.0003743	0.0035	1.592	3202.37	4310.46	4310.46	1.91	No	Si
SLU 64	13.4	-173.8	-6483	-0.000019	0.0003743	0.0035	1.99	5713.72	6956.13	6956.13	40.02	No	Si
SLU 64	15.2	-2421.63	-4016	-0.0000371	0.0003743	0.0035	1.592	3712.79	4834.66	4834.66	2	No	Si
SLU 73	13.4	-182.32	-6417	-0.0000189	0.0003743	0.0035	1.99	5662.72	6901.83	6901.83	37.86	No	Si
SLU 73	15.2	-2373.46	-3949	-0.0000363	0.0003743	0.0035	1.592	3656.05	4775.32	4775.32	2.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	13.4	-329.76	-3666	-0.0000124	0.0005615	0.0035	1.99		4573.72	4573.72	13.87		Si
SLD 4	15.2	-2887.31	-1844	-0.0005506	0.0005615	0.0035	1.592		2865.86	2865.86	0.99		No
SLV 8	13.4	-1110.42	-2377	-0.0000158	0.0005615	0.0035	1.99		3369.82	3369.82	3.03		Si
SLV 8	15.2	-2213.32	-541	-0.0007366	0.0005615	0.0035	1.592		1615.65	1615.65	0.73		No
SLV 2	13.4	-51.12	-3240	-0.000009	0.0005615	0.0035	1.99		4180.02	4180.02	81.76		Si
SLV 2	15.2	-4509.48	-1506	-0.0017268	0.0005615	0.0035	1.592		2543.87	2543.87	0.56		No
SLD 3	13.4	-333	-3509	-0.000012	0.0005615	0.0035	1.99		4428.93	4428.93	13.3		Si
SLD 3	15.2	-3039.14	-1687	-0.0006862	0.0005615	0.0035	1.592		2716.11	2716.11	0.89		No
SLD 2	13.4	-83.14	-4163	-0.0000118	0.0005615	0.0035	1.99		5027.14	5027.14	60.47		Si
SLD 2	15.2	-2973.18	-2339	-0.0004155	0.0005615	0.0035	1.592		3334.29	3334.29	1.12		Si
SLD 1	13.4	-86.38	-4006	-0.0000114	0.0005615	0.0035	1.99		4885.09	4885.09	56.55		Si
SLD 1	15.2	-3125.01	-2182	-0.0005388	0.0005615	0.0035	1.592		3185.77	3185.77	1.02		Si
SLV 1	13.4	-58.68	-2874	-0.0000081	0.0005615	0.0035	1.99		3837.11	3837.11	65.39		Si
SLV 1	15.2	-4863.09	-1140	-0.0023041	0.0005615	0.0035	1.592		2192.65	2192.65	0.45		No
SLV 3	13.4	-617.89	-1748	-0.0000095	0.0005615	0.0035	1.99		2774.12	2774.12	4.49		Si
SLV 3	15.2	-4668.38	-19	-0.0036208	0.0005615	0.0035	1.592		1105.4	1105.4	0.24		No
SLV 7	13.4	-1115.29	-2141	-0.0000159	0.0005615	0.0035	1.99		3146.9	3146.9	2.82		Si
SLV 7	15.2	-2441.19	-305	-0.0010252	0.0005615	0.0035	1.592		1386.14	1386.14	0.57		No
SLV 4	13.4	-610.33	-2114	-0.0000105	0.0005615	0.0035	1.99		3122.15	3122.15	5.12		Si
SLV 4	15.2	-4314.78	-385	-0.0025255	0.0005615	0.0035	1.592		1464.45	1464.45	0.34		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	13.4	-173.8	-6483	-5399	1195	1.99	1.99	-9689	8236	4589	35683	16685	5074	21759	No	18.2	Si
SLU 64	15.2	-2421.63	-4016	-3344	1195	1.592	1.1759	0	0	0	35683	13348	4060	17407	No	14.56	Si
SLU 55	13.4	-196.06	-6641	-5530	1217	1.99	1.99	-9925	8268	4607	35683	16685	5074	21759	No	17.87	Si
SLU 55	15.2	-2484.33	-4201	-3499	1217	1.592	1.211	0	0	0	35683	13348	4060	17407	No	14.3	Si
SLU 44	13.4	-41.35	-5962	-4964	1211	1.99	1.99	-8910	8132	4531	35683	16685	5074	21759	No	17.97	Si
SLU 44	15.2	-2318.11	-3522	-2933	1211	1.592	1.0104	0	0	0	35683	13348	4060	17407	No	14.37	Si
SLU 43	13.4	-57.1	-5931	-4939	1197	1.99	1.99	-8864	8126	4528	35683	16685	5074	21759	No	18.18	Si
SLU 43	15.2	-2308.73	-3492	-2908	1197	1.592	1.0013	0	0	0	35683	13348	4060	17407	No	14.54	Si
SLU 53	13.4	-246.66	-6918	-5761	1202	1.99	1.99	-10339	8323	4638	35683	16685	5074	21759	No	18.1	Si
SLU 53	15.2	-2507.27	-4478	-3729	1202	1.592	1.3054	0	0	0	35683	13348	4060	17407	No	14.48	Si
SLU 46	13.4	-212.94	-7033	-5857	1256	1.99	1.99	-10511	8346	4650	35683	16685	5074	21759	No	17.33	Si
SLU 46	15.2	-2570.44	-4593	-3825	1256	1.592	1.3062	0	0	0	35683	13348	4060	17407	No	13.86	Si
SLU 54	13.4	-237.21	-6936	-5776	1210	1.99	1.99	-10366	8327	4640	35683	16685	5074	21759	No	17.98	Si
SLU 54	15.2	-2512.89	-4497	-3744	1210	1.592	1.3085	0	0	0	35683	13348	4060	17407	No	14.38	Si
SLU 47	13.4	-171.8	-6738	-5611	1263	1.99	1.99	-10069	8287	4617	35683	16685	5074	21759	No	17.23	Si
SLU 47	15.2	-2541.87	-4298	-3579	1263	1.592	1.2108	0	0	0	35683	13348	4060	17407	No	13.78	Si
SLU 65	13.4	-158.05	-6514	-5424	1209	1.99	1.99	-9735	8242	4593	35683	16685	5074	21759	No	17.99	Si
SLU 65	15.2	-2431.01	-4046	-3369	1209	1.592	1.1825	0	0	0	35683	13348	4060	17407	No	14.39	Si
SLU 45	13.4	-222.39	-7015	-5841	1248	1.99	1.99	-10483	8342	4648	35683	16685	5074	21759	No	17.44	Si
SLU 45	15.2	-2564.81	-4575	-3810	1248	1.592	1.3032	0	0	0	35683	13348	4060	17407	No	13.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	13.4	-83.14	-4163	-3467	1700	1.99	1.99	-6221	11661	6497	35683	25027	5074	30102		17.7	Si
SLD 2	15.2	-2973.18	-2339	-1948	1295	1.592	0	0	0	0	35683	20022	4060	24081		18.6	Si
SLV 6	13.4	753.61	-6129	-5104	2064	1.99	1.99	-9160	12249	6825	35683	25027	5074	30102		14.58	Si
SLV 6	15.2	-2862.32	-4277	-3562	1782	1.592	0.9775	0	0	0	35683	20022	4060	24081		13.52	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	13.4	269.19	-5418	-4511	1411	1.99	1.99	-8096	12036	6706	35683	25027	5074	30102		21.34	Si
SLD 6	15.2	-2270.28	-3543	-2950	1290	1.592	1.0624	0	0	0	35683	20022	4060	24081		18.67	Si
SLV 5	13.4	748.74	-5893	-4907	2188	1.99	1.99	-8807	12178	6786	35683	25027	5074	30102		13.76	Si
SLV 5	15.2	-3090.19	-4041	-3365	1906	1.592	0.691	0	0	0	35683	20022	4060	24081		12.64	Si
SLV 2	13.4	-51.12	-3240	-2698	2753	1.99	1.99	-4842	11385	6344	35683	25027	5074	30102		10.93	Si
SLV 2	15.2	-4509.48	-1506	-1254	1807	1.592	0	0	0	0	35683	20022	4060	24081		13.33	Si
SLD 5	13.4	267.06	-5314	-4425	1465	1.99	1.99	-7942	12005	6689	35683	25027	5074	30102		20.55	Si
SLD 5	15.2	-2369.81	-3439	-2864	1344	1.592	0.918	0	0	0	35683	20022	4060	24081		17.92	Si
SLD 1	13.4	-86.38	-4006	-3336	1783	1.99	1.99	-5986	11614	6471	35683	25027	5074	30102		16.88	Si
SLD 1	15.2	-3125.01	-2182	-1817	1377	1.592	0	0	0	0	35683	20022	4060	24081		17.49	Si
SLV 3	13.4	-617.89	-1748	-1456	2526	1.99	1.9245	-2612	10939	5895	35683	25027	5074	30102		11.92	Si
SLV 3	15.2	-4668.38	-19	-16	1579	1.592	0	0	0	0	35683	20022	4060	24081		15.26	Si
SLV 4	13.4	-610.33	-2114	-1761	2334	1.99	1.99	-3160	11049	6156	35683	25027	5074	30102		12.9	Si
SLV 4	15.2	-4314.78	-385	-321	1386	1.592	0	0	0	0	35683	20022	4060	24081		17.37	Si
SLV 1	13.4	-58.68	-2874	-2393	2946	1.99	1.99	-4295	11276	6283	35683	25027	5074	30102		10.22	Si
SLV 1	15.2	-4863.09	-1140	-949	1999	1.592	0	0	0	0	35683	20022	4060	24081		12.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	0	-1431	226.1	0	0	No, e>t/2
SLV 3	179667	0.53	0	-1064	226.1	0	0	No, e>t/2
SLV 7	179667	0.53	0	-1423	226.1	0	0	No, e>t/2
SLV 8	179667	0.53	2978	-1659	226.1	227.78	1.01	Si
SLV 1	179667	0.53	3922	-2185	226.1	298.1	1.32	Si
SLV 2	179667	0.53	4580	-2552	226.1	346.55	1.53	Si
SLV 11	179667	0.53	5019	-2797	226.1	378.65	1.67	Si
SLV 12	179667	0.53	5443	-3033	226.1	409.45	1.81	Si
SLV 5	179667	0.53	9263	-5161	226.1	678.73	3	Si
SLV 6	179667	0.53	9687	-5397	226.1	707.69	3.13	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3883	-8575	-743	1.965	651.8	0.907	31.50342	12.42528	Si
SLV 9	-3640	-8443	-743	2.055	627.8	0.904	33.0223	12.42528	Si
SLV 6	-2477	-7900	-720	2.636	514.4	0.894	42.86929	12.42528	Si
SLV 5	-2234	-7768	-720	2.802	491.1	0.892	45.65853	12.42528	Si
SLV 12	-1715	-3366	710	3.238	442.7	0.889	52.92791	12.42528	Si
SLV 14	-4832	-7576	-262	1.756	746.3	0.915	27.89929	6.42939	Si
SLV 11	-1472	-3234	710	3.492	420.6	0.889	57.09016	12.42528	Si
SLV 13	-4454	-7371	-262	1.864	708.5	0.912	29.70561	6.42939	Si
SLV 16	-4182	-6013	174	1.965	681.4	0.909	31.39969	6.42939	Si
SLV 15	-3804	-5808	174	2.099	644	0.906	33.67941	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.892	SLU 43	Si
V_SLU	13.783	SLU 47	Si
PF_SLV	0.237	SLV 3	No
V_SLV	10.22	SLV 1	Si
PFFP_SLV	0	SLV 3	No
R_SLV	2.535	SLV 10	Si

Maschio 238

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L7	L8	1.93	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

											εlim,conv / ε,CNR DT-200					CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	13.4	177.19	-4796	-0.0000148	0.0003743	0.0035	1.93	4224.93	4512.98	4512.98	25.47	No	Si
SLU 37	15.2	2089.19	-4216	-0.0000324	0.0003743	0.0035	1.93	3756.99	4020.4	4020.4	1.92	No	Si
SLU 28	13.4	370.29	-5301	-0.0000179	0.0003743	0.0035	1.93	4622.37	4935.77	4935.77	13.33	No	Si
SLU 28	15.2	2068.5	-4551	-0.0000322	0.0003743	0.0035	1.93	4028.64	4305.66	4305.66	2.08	No	Si
SLU 30	13.4	356.5	-5051	-0.0000171	0.0003743	0.0035	1.93	4426.57	4726.84	4726.84	13.26	No	Si
SLU 30	15.2	2027.73	-4202	-0.0000314	0.0003743	0.0035	1.93	3745.21	4007.93	4007.93	1.98	No	Si
SLU 29	13.4	348.08	-4990	-0.0000169	0.0003743	0.0035	1.93	4378.56	4675.79	4675.79	13.43	No	Si
SLU 29	15.2	2039.03	-4195	-0.0000316	0.0003743	0.0035	1.93	3739.22	4001.6	4001.6	1.96	No	Si
SLU 79	13.4	331.53	-5974	-0.0000195	0.0003743	0.0035	1.93	5138.97	5490.94	5490.94	16.56	No	Si
SLU 79	15.2	2213.98	-4955	-0.0000346	0.0003743	0.0035	1.93	4350.75	4646.25	4646.25	2.1	No	Si
SLU 35	13.4	190.98	-5046	-0.0000157	0.0003743	0.0035	1.93	4422.96	4723	4723	24.73	No	Si
SLU 35	15.2	2129.96	-4566	-0.0000331	0.0003743	0.0035	1.93	4040.25	4317.87	4317.87	2.03	No	Si
SLU 36	13.4	199.4	-5107	-0.0000159	0.0003743	0.0035	1.93	4470.85	4774.01	4774.01	23.94	No	Si
SLU 36	15.2	2118.66	-4573	-0.0000329	0.0003743	0.0035	1.93	4046.14	4324.08	4324.08	2.04	No	Si
SLU 38	13.4	185.6	-4857	-0.0000151	0.0003743	0.0035	1.93	4273.36	4564.2	4564.2	24.59	No	Si
SLU 38	15.2	2077.89	-4224	-0.0000322	0.0003743	0.0035	1.93	3762.98	4026.73	4026.73	1.94	No	Si
SLU 27	13.4	361.88	-5240	-0.0000177	0.0003743	0.0035	1.93	4574.89	4884.97	4884.97	13.5	No	Si
SLU 27	15.2	2079.8	-4544	-0.0000323	0.0003743	0.0035	1.93	4022.74	4299.45	4299.45	2.07	No	Si
SLU 16	13.4	292.28	-4615	-0.0000153	0.0003743	0.0035	1.93	4079.58	4359.37	4359.37	14.91	No	Si
SLU 16	15.2	1748.87	-3797	-0.000027	0.0003743	0.0035	1.93	3411.46	3657.96	3657.96	2.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	13.4	-13.92	-1567	-0.0000044	0.0005615	0.0035	1.93		2531.56	2531.56	181.9		Si
SLD 7	15.2	1281.96	-2816	-0.0000195	0.0005615	0.0035	1.93		2825.74	2825.74	2.2		Si
SLV 16	13.4	-212.3	-2299	-0.0000081	0.0005615	0.0035	1.93		3204.48	3204.48	15.09		Si
SLV 16	15.2	1696.74	-3137	-0.0000262	0.0005615	0.0035	1.93		3118.42	3118.42	1.84		Si
SLV 7	13.4	-411.07	1679	0.1349262	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	15.2	1744.2	-2494	-0.0000335	0.0005615	0.0035	1.93		2532.39	2532.39	1.45		Si
SLV 12	13.4	-602.92	1570	0.1270626	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	15.2	2050.28	-2674	-0.0000487	0.0005615	0.0035	1.93		2696.27	2696.27	1.32		Si
SLD 11	13.4	-73.16	-1475	-0.0000046	0.0005615	0.0035	1.93		2447.11	2447.11	33.45		Si
SLD 11	15.2	1401.61	-2852	-0.0000213	0.0005615	0.0035	1.93		2859.17	2859.17	2.04		Si
SLV 15	13.4	-127.51	-1801	-0.000006	0.0005615	0.0035	1.93		2747.48	2747.48	21.55		Si
SLV 15	15.2	1654.8	-2990	-0.0000258	0.0005615	0.0035	1.93		2985	2985	1.8		Si
SLD 12	13.4	-97.02	-1616	-0.0000052	0.0005615	0.0035	1.93		2576.58	2576.58	26.56		Si
SLD 12	15.2	1413.42	-2893	-0.0000215	0.0005615	0.0035	1.93		2896.75	2896.75	2.05		Si
SLV 11	13.4	-548.28	1891	0.1523428	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	15.2	2023.25	-2580	-0.0000516	0.0005615	0.0035	1.93		2610.14	2610.14	1.29		Si
SLV 8	13.4	-465.71	1358	0.1096745	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	15.2	1771.23	-2589	-0.0000329	0.0005615	0.0035	1.93		2618.55	2618.55	1.48		Si
SLD 8	13.4	-37.78	-1707	-0.000005	0.0005615	0.0035	1.93		2660.92	2660.92	70.43		Si
SLD 8	15.2	1293.76	-2857	-0.0000197	0.0005615	0.0035	1.93		2863.33	2863.33	2.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	13.4	516.23	-6417	-5344	-1586	1.93	1.93	-9889	8263	4465	35683	16182	4922	21104	No	13.31	Si
SLU 69	15.2	2204.59	-5282	-4399	-1580	1.93	1.643	-8139	8030	3694	35683	16182	4922	21104	No	13.36	Si
SLU 78	13.4	353.75	-6285	-5233	-1785	1.93	1.93	-9684	8236	4451	35683	16182	4922	21104	No	11.83	Si
SLU 78	15.2	2243.45	-5311	-4423	-1778	1.93	1.6279	-8184	8036	3663	35683	16182	4922	21104	No	11.87	Si
SLU 35	13.4	190.98	-5046	-4202	-1793	1.93	1.93	-7776	7981	4313	35683	16182	4922	21104	No	11.77	Si
SLU 35	15.2	2129.96	-4566	-3802	-1787	1.93	1.4955	-7035	7882	3301	35683	16182	4922	21104	No	11.81	Si
SLU 79	13.4	331.53	-5974	-4975	-1756	1.93	1.93	-9205	8172	4416	35683	16182	4922	21104	No	12.02	Si
SLU 79	15.2	2213.98	-4955	-4126	-1749	1.93	1.5545	-7635	7962	3466	35683	16182	4922	21104	No	12.06	Si
SLU 77	13.4	345.33	-6224	-5183	-1824	1.93	1.93	-9590	8223	4444	35683	16182	4922	21104	No	11.57	Si
SLU 77	15.2	2254.75	-5304	-4417	-1818	1.93	1.6197	-8173	8034	3644	35683	16182	4922	21104	No	11.61	Si
SLU 36	13.4	199.4	-5107	-4253	-1754	1.93	1.93	-7869	7994	4320	35683	16182	4922	21104	No	12.03	Si
SLU 36	15.2	2118.66	-4573	-3808	-1747	1.93	1.5051	-7046	7884	3323	35683	16182	4922	21104	No	12.08	Si
SLU 80	13.4	339.95	-6035	-5025	-1716	1.93	1.93	-9299	8184	4423	35683	16182	4922	21104	No	12.29	Si
SLU 80	15.2	2202.68	-4962	-4132	-1710	1.93	1.5633	-7646	7964	3486	35683	16182	4922	21104	No	12.34	Si
SLU 38	13.4	185.6	-4857	-4045	-1686	1.93	1.93	-7484	7942	4292	35683	16182	4922	21104	No	12.52	Si
SLU 38	15.2	2077.89	-4224	-3517	-1679	1.93	1.4191	-6508	7812	3104	35683	16182	4922	21104	No	12.57	Si
SLU 37	13.4	177.19	-4796	-3994	-1725	1.93	1.93	-7391	7930	4285	35683	16182	4922	21104	No	12.23	Si
SLU 37	15.2	2089.19	-4216	-3511	-1719	1.93	1.4085	-6497	7811	3080	35683	16182	4922	21104	No	12.28	Si
SLU 83	13.4	218.18	-5554	-4625	-1588	1.93	1.93	-8558	8085	4369	35683	16182	4922	21104	No	13.29	Si
SLU 83	15.2	1788.56	-4546	-3786	-1584	1.93	1.7148	-7006	7879	3783	35683	16182	4922	21104	No	13.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	13.4	1205.4	-9830	-8186	3451	1.93	1.93	-15147	13446	7266	35683	24273	4922	29195		8.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	15.2	-217.36	-3458	-2880	3059	1.93	1.93	-5329	11482	6205	35683	24273	4922	29195		9.54	Si
SLV 11	13.4	-548.28	1891	1575	-4995	1.544	1.93	0	0	0	35683	19419	3937	23356		4.68	Si
SLV 11	15.2	2023.25	-2580	-2148	-4600	1.93	0.542	-14250	13267	2013	35683	24273	4922	29195		6.35	Si
SLV 9	13.4	1068.2	-9618	-8009	2638	1.93	1.93	-14820	13381	7231	35683	24273	4922	29195		11.07	Si
SLV 9	15.2	61.68	-3544	-2951	3006	1.93	1.93	-5460	11509	6219	35683	24273	4922	29195		9.71	Si
SLV 8	13.4	-465.71	1358	1131	-4106	1.544	1.8663	0	0	0	35683	19419	3937	23356		5.69	Si
SLV 8	15.2	1771.23	-2589	-2156	-4470	1.93	0.8424	-3989	11214	2645	35683	24273	4922	29195		6.53	Si
SLV 10	13.4	1013.56	-9939	-8276	2714	1.93	1.93	-15315	13480	7284	35683	24273	4922	29195		10.76	Si
SLV 10	15.2	88.71	-3638	-3029	3082	1.93	1.93	-5606	11538	6235	35683	24273	4922	29195		9.47	Si
SLV 16	13.4	-212.3	-2299	-1915	-3176	1.93	1.93	-3543	11125	6012	35683	24273	4922	29195		9.19	Si
SLV 16	15.2	1696.74	-3137	-2612	-1904	1.93	1.2721	-4833	11383	4055	35683	24273	4922	29195		15.34	Si
SLV 7	13.4	-411.07	1679	1398	-4182	1.544	1.93	0	0	0	35683	19419	3937	23356		5.58	Si
SLV 7	15.2	1744.2	-2494	-2077	-4546	1.93	0.7973	-3844	11185	2497	35683	24273	4922	29195		6.42	Si
SLV 15	13.4	-127.51	-1801	-1500	-3294	1.93	1.93	-2775	10972	5929	35683	24273	4922	29195		8.86	Si
SLV 15	15.2	1654.8	-2990	-2490	-2022	1.93	1.2348	-4608	11338	3920	35683	24273	4922	29195		14.44	Si
SLV 6	13.4	1150.76	-10151	-8453	3527	1.93	1.93	-15642	13545	7320	35683	24273	4922	29195		8.28	Si
SLV 6	15.2	-190.33	-3553	-2958	3135	1.93	1.93	-5474	11512	6221	35683	24273	4922	29195		9.31	Si
SLV 12	13.4	-602.92	1570	1308	-4919	1.544	1.7431	0	0	0	35683	19419	3937	23356		4.75	Si
SLV 12	15.2	2050.28	-2674	-2227	-4524	1.93	0.5947	-13458	13108	2183	35683	24273	4922	29195		6.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.53	0	-119	219.28	0	0	No, e>t/2
SLV 11	179667	0.53	0	72	219.28	0	0	No, Trazione
SLV 12	179667	0.53	0	-157	219.28	0	0	No, e>t/2
SLV 7	179667	0.53	0	110	219.28	0	0	No, Trazione
SLV 3	179667	0.53	4325	-2337	219.28	317.94	1.45	Si
SLV 15	179667	0.53	4560	-2464	219.28	334.66	1.53	Si
SLV 4	179667	0.53	4980	-2691	219.28	364.52	1.66	Si
SLV 16	179667	0.53	5215	-2818	219.28	381.08	1.74	Si
SLV 1	179667	0.53	8376	-4527	219.28	598.96	2.73	Si
SLV 13	179667	0.53	8611	-4653	219.28	614.74	2.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-2532	-10364	-445	2.616	511.4	0.895	42.48687	12.42528	Si
SLV 9	-2505	-9906	-444	2.633	508.8	0.895	42.77671	12.42528	Si
SLV 6	-2382	-10102	-268	2.76	496.9	0.894	44.89189	12.42528	Si
SLV 5	-2355	-9644	-267	2.779	494.3	0.893	45.20902	12.42528	Si
SLV 12	-2100	1205	266	2.971	470	0.891	48.44548	12.42528	Si, Trazione
SLV 11	-2073	1663	267	2.992	467.5	0.891	48.80701	12.42528	Si, Trazione
SLV 8	-1949	1467	443	3.047	455.8	0.89	49.73436	12.42528	Si, Trazione
SLV 7	-1922	1925	443	3.07	453.3	0.89	50.11954	12.42528	Si, Trazione
SLV 14	-2564	-6747	-403	2.606	514.4	0.895	42.31813	6.42939	Si
SLV 13	-2522	-6036	-402	2.633	510.4	0.895	42.76448	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.924	SLU 37	Si
V_SLU	11.569	SLU 77	Si
PF_SLV	0	SLV 7	No
V_SLV	4.675	SLV 11	Si
PFFP_SLV	0	SLV 11	No
R_SLV	3.419	SLV 10	Si

Maschio 239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L7	L8	9.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	12.5	1230.17	-37801	-0.0000229	0.0003743	0.0035	9.14	147689.4	154274.06	154274.06	125.41	No	Si
SLU 78	15.66	-1531.55	-8890	-0.0000057	0.0003743	0.0035	9.14	39242.81	64630.78	64630.78	42.2	No	Si
SLU 36	12.5	1186.4	-32094	-0.0000194	0.0003743	0.0035	9.14	128604.16	135288.8	135288.8	114.03	No	Si
SLU 36	15.66	-1480.51	-8093	-0.0000052	0.0003743	0.0035	9.14	35834.83	61230.28	61230.28	41.36	No	Si
SLU 72	12.5	1008.15	-35067	-0.0000212	0.0003743	0.0035	9.14	138686.9	145112.33	145112.33	143.94	No	Si
SLU 72	15.66	-1562.62	-8771	-0.0000057	0.0003743	0.0035	9.14	38734.02	64122.25	64122.25	41.04	No	Si
SLU 7	12.5	894.07	-26682	-0.000016	0.0003743	0.0035	9.14	109449.53	116597.36	116597.36	130.41	No	Si
SLU 7	15.66	-1315.95	-6817	-0.0000044	0.0003743	0.0035	9.14	30337.47	55764.68	55764.68	42.38	No	Si
SLU 9	12.5	852.39	-26003	-0.0000156	0.0003743	0.0035	9.14	106974.53	113952.55	113952.55	133.69	No	Si
SLU 9	15.66	-1334.46	-6877	-0.0000045	0.0003743	0.0035	9.14	30597.36	56021.2	56021.2	41.98	No	Si
SLU 28	12.5	1006.07	-30038	-0.0000181	0.0003743	0.0035	9.14	121449.23	128576.73	128576.73	127.8	No	Si
SLU 28	15.66	-1493.07	-7913	-0.0000051	0.0003743	0.0035	9.14	35065.11	60463.82	60463.82	40.5	No	Si
SLU 30	12.5	964.39	-29359	-0.0000177	0.0003743	0.0035	9.14	119054.16	126375.04	126375.04	131.04	No	Si
SLU 30	15.66	-1511.58	-7973	-0.0000052	0.0003743	0.0035	9.14	35322.69	60720.25	60720.25	40.17	No	Si
SLU 70	12.5	1049.83	-35746	-0.0000216	0.0003743	0.0035	9.14	140946.07	147375.58	147375.58	140.38	No	Si
SLU 70	15.66	-1544.11	-8711	-0.0000056	0.0003743	0.0035	9.14	38478.12	63866.67	63866.67	41.36	No	Si
SLU 38	12.5	1144.72	-31415	-0.000019	0.0003743	0.0035	9.14	126258.04	133065.15	133065.15	116.24	No	Si
SLU 38	15.66	-1499.02	-8153	-0.0000053	0.0003743	0.0035	9.14	36092.03	61486.52	61486.52	41.02	No	Si
SLU 80	12.5	1188.49	-37123	-0.0000225	0.0003743	0.0035	9.14	145479.19	151988.77	151988.77	127.88	No	Si
SLU 80	15.66	-1550.06	-8950	-0.0000058	0.0003743	0.0035	9.14	39498.33	64886.26	64886.26	41.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	12.5	-18067.46	-25225	-0.0000216	0.0005615	0.0035	9.14		133850	133850	7.41		Si
SLV 15	15.66	5972.47	-3623	-0.0000043	0.0005615	0.0035	9.14		20389.19	20389.19	3.41		Si
SLV 10	12.5	54835.13	-24996	-0.0000376	0.0005615	0.0035	9.14		112363.35	112363.35	2.05		Si
SLV 10	15.66	-5748.02	-4022	-0.0000045	0.0005615	0.0035	9.14		43516.66	43516.66	7.57		Si
SLV 7	12.5	-54120.32	-23816	-0.0000371	0.0005615	0.0035	9.14		127992.73	127992.73	2.36		Si
SLV 7	15.66	4908.88	-4532	-0.0000044	0.0005615	0.0035	9.14		24441.28	24441.28	4.98		Si
SLV 11	12.5	-54104.26	-24370	-0.0000371	0.0005615	0.0035	9.14		130291.29	130291.29	2.41		Si
SLV 11	15.66	7434.65	-4129	-0.0000052	0.0005615	0.0035	9.14		22646.69	22646.69	3.05		Si
SLV 5	12.5	51446.68	-24427	-0.0000354	0.0005615	0.0035	9.14		110017.54	110017.54	2.14		Si
SLV 5	15.66	-7946.23	-4427	-0.0000056	0.0005615	0.0035	9.14		45308.06	45308.06	5.7		Si
SLV 8	12.5	-50747.92	-23832	-0.0000349	0.0005615	0.0035	9.14		128058.23	128058.23	2.52		Si
SLV 8	15.66	4581.31	-4530	-0.0000043	0.0005615	0.0035	9.14		24430.79	24430.79	5.33		Si
SLV 9	12.5	51462.74	-24980	-0.0000356	0.0005615	0.0035	9.14		112298.24	112298.24	2.18		Si
SLV 9	15.66	-5420.46	-4024	-0.0000043	0.0005615	0.0035	9.14		43527.1	43527.1	8.03		Si
SLV 16	12.5	-12834.3	-25249	-0.0000196	0.0005615	0.0035	9.14		133952.14	133952.14	10.44		Si
SLV 16	15.66	5464.17	-3619	-0.0000041	0.0005615	0.0035	9.14		20372.76	20372.76	3.73		Si
SLV 6	12.5	54819.08	-24443	-0.0000376	0.0005615	0.0035	9.14		110082.53	110082.53	2.01		Si
SLV 6	15.66	-8273.8	-4424	-0.0000057	0.0005615	0.0035	9.14		45297.64	45297.64	5.47		Si
SLV 12	12.5	-50731.87	-24386	-0.000035	0.0005615	0.0035	9.14		130356.89	130356.89	2.57		Si
SLV 12	15.66	7107.09	-4127	-0.0000051	0.0005615	0.0035	9.14		22636.18	22636.18	3.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	12.5	1275.06	-30145	-25102	1111	9.14	9.14	-9809	8252	21119	35683	76634	23307	56802	No	51.13	Si
SLU 47	15.66	-1074.01	-6212	-5173	1200	9.14	9.14	-2021	7214	18462	35683	76634	23307	54145	No	45.13	Si
SLU 73	12.5	1564.5	-33989	-28303	1015	9.14	9.14	-11059	8419	21546	35683	76634	23307	57229	No	56.37	Si
SLU 73	15.66	-830.24	-6015	-5008	1105	9.14	9.14	-1957	7205	18440	35683	76634	23307	54123	No	48.98	Si
SLU 5	12.5	1231.3	-24438	-20350	1022	9.14	9.14	-7952	8005	20486	35683	76634	23307	56169	No	54.96	Si
SLU 5	15.66	-1022.97	-5415	-4509	1111	9.14	9.14	-1762	7179	18373	35683	76634	23307	54057	No	48.66	Si
SLU 52	12.5	1452.5	-30632	-25508	1122	9.14	9.14	-9967	8273	21173	35683	76634	23307	56856	No	50.66	Si
SLU 52	15.66	-653.12	-4918	-4095	1213	9.14	9.14	-1600	7158	18318	35683	76634	23307	54001	No	44.53	Si
SLU 34	12.5	1523.63	-29850	-24857	1027	9.14	9.14	-9713	8239	21086	35683	76634	23307	56770	No	55.29	Si
SLU 34	15.66	-1187.53	-6691	-5571	1115	9.14	9.14	-2177	7235	18515	35683	76634	23307	54198	No	48.59	Si
SLU 10	12.5	1408.74	-24925	-20755	1033	9.14	9.14	-8110	8026	20540	35683	76634	23307	56223	No	54.41	Si
SLU 10	15.66	-602.08	-4120	-3431	1124	9.14	9.14	-1341	7123	18230	35683	76634	23307	53913	No	47.97	Si
SLU 13	12.5	1411.63	-26494	-22062	1134	9.14	9.14	-8621	8094	20714	35683	76634	23307	56397	No	49.74	Si
SLU 13	15.66	-1010.41	-5594	-4658	1223	9.14	9.14	-1820	7187	18393	35683	76634	23307	54077	No	44.22	Si
SLU 76	12.5	1567.4	-35557	-29609	1116	9.14	9.14	-11570	8487	21720	35683	76634	23307	57403	No	51.45	Si
SLU 76	15.66	-1238.57	-7488	-6236	1204	9.14	9.14	-2437	7269	18604	35683	76634	23307	54287	No	45.08	Si
SLU 55	12.5	1455.4	-32201	-26814	1223	9.14	9.14	-10478	8341	21347	35683	76634	23307	57031	No	46.64	Si
SLU 55	15.66	-1061.45	-6392	-5322	1312	9.14	9.14	-2080	7222	18482	35683	76634	23307	54165	No	41.29	Si
SLU 44	12.5	1272.17	-28576	-23796	1010	9.14	9.14	-9298	8184	20945	35683	76634	23307	56628	No	56.05	Si
SLU 44	15.66	-665.68	-4739	-3946	1101	9.14	9.14	-1542	7150	18298	35683	76634	23307	53982	No	49.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	12.5	-54104.26	-24370	-20293	-41305	9.14	7.0496	-10324	12482	24637	35683	114951	23307	60321		1.46	Si
SLV 11	15.66	7434.65	-4129	-3438	-45049	9.14	8.3083	-1344	10685	24858	35683	114951	23307	60541		1.34	Si
SLV 7	12.5	-54120.32	-23816	-19832	-41503	9.14	6.8928	-10323	12481	24089	35683	114951	23307	59772		1.44	Si
SLV 7	15.66	4908.88	-4532	-3774	-44704	9.14	9.14	-1475	10712	27413	35683	114951	23307	63096		1.41	Si
SLV 12	12.5	-50731.87	-24386	-20306	-39059	9.14	7.4688	-9752	12367	25863	35683	114951	23307	61546		1.58	Si
SLV 12	15.66	7107.09	-4127	-3436	-42802	9.14	8.5433	-1343	10685	25560	35683	114951	23307	61244		1.43	Si
SLV 6	12.5	54819.08	-24443	-20354	41656	9.14	6.9817	-7953	12007	23473	35683	114951	23307	59156		1.42	Si
SLV 6	15.66	-8273.8	-4424	-3684	45397	9.14	8.1	-1623	10741	24361	35683	114951	23307	60045		1.32	Si
SLV 8	12.5	-50747.92	-23832	-19845	-39257	9.14	7.3219	-9721	12361	25341	35683	114951	23307	61025		1.55	Si
SLV 8	15.66	4581.31	-4530	-3772	-42457	9.14	9.14	-1474	10711	27413	35683	114951	23307	63096		1.49	Si
SLD 6	12.5	24387.81	-24425	-20339	18478	9.14	9.14	-7947	12006	30726	35683	114951	23307	66409		3.59	Si
SLD 6	15.66	-3858.34	-4339	-3613	20127	9.14	9.14	-1412	10699	27381	35683	114951	23307	63064		3.13	Si
SLD 10	12.5	24396.04	-24663	-20537	18562	9.14	9.14	-8025	12022	30766	35683	114951	23307	66449		3.58	Si
SLD 10	15.66	-2778.14	-4167	-3470	19979	9.14	9.14	-1356	10688	27352	35683	114951	23307	63036		3.16	Si
SLV 9	12.5	51462.74	-24980	-20801	39607	9.14	7.5296	-8128	12042	25389	35683	114951	23307	61072		1.54	Si
SLV 9	15.66	-5420.46	-4024	-3351	42806	9.14	9.14	-1309	10679	27329	35683	114951	23307	63012		1.47	Si
SLV 5	12.5	51446.68	-24427	-20341	39410	9.14	7.3915	-7948	12006	24848	35683	114951	23307	60532		1.54	Si
SLV 5	15.66	-7946.23	-4427	-3686	43151	9.14	8.325	-1581	10733	25018	35683	114951	23307	60702		1.41	Si
SLV 10	12.5	54835.13	-24996	-20815	41853	9.14	7.1287	-8133	12043	24039	35683	114951	23307	59722		1.43	Si
SLV 10	15.66	-5748.02	-4022	-3349	45052	9.14	9.14	-1309	10678	27328	35683	114951	23307	63011		1.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.53	4967	-12711	1074.69	1721.64	1.6	Si
SLV 16	179667	0.53	4970	-12720	1074.69	1722.9	1.6	Si
SLV 13	179667	0.53	4988	-12765	1074.69	1728.74	1.61	Si
SLV 14	179667	0.53	4992	-12775	1074.69	1730	1.61	Si
SLV 11	179667	0.53	5272	-13491	1074.69	1823.54	1.7	Si
SLV 12	179667	0.53	5274	-13497	1074.69	1824.36	1.7	Si
SLV 9	179667	0.53	5342	-13672	1074.69	1847.1	1.72	Si
SLV 10	179667	0.53	5345	-13678	1074.69	1847.91	1.72	Si
SLV 7	179667	0.53	5554	-14213	1074.69	1917.4	1.78	Si
SLV 8	179667	0.53	5556	-14219	1074.69	1918.21	1.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.08 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4532	-23816	-1530	4.289	1740.1	0.894	69.70511	12.42528	Si
SLV 8	-4530	-23832	-1530	4.29	1739.9	0.894	69.71771	12.42528	Si
SLV 5	-4427	-24427	-1471	4.332	1731.5	0.895	70.36501	12.42528	Si
SLV 6	-4424	-24443	-1471	4.333	1731.3	0.895	70.37779	12.42528	Si
SLV 11	-4129	-24370	1406	4.45	1707.6	0.896	72.13846	12.42528	Si
SLV 12	-4127	-24386	1406	4.451	1707.4	0.896	72.15237	12.42528	Si
SLV 9	-4024	-24980	1466	4.486	1699.3	0.897	72.66243	12.42528	Si
SLV 10	-4022	-24996	1465	4.486	1699.1	0.897	72.67651	12.42528	Si
SLV 3	-4966	-23380	-4935	3.861	1776	0.892	62.87038	6.42939	Si
SLV 4	-4962	-23405	-4935	3.862	1775.7	0.892	62.88758	6.42939	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	40.17	SLU 30	Si
V_SLU	41.29	SLU 55	Si
PF_SLV	2.008	SLV 6	Si
V_SLV	1.323	SLV 6	Si
PFFP_SLV	1.602	SLV 15	Si
R_SLV	5.61	SLV 7	Si

Maschio 241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.203	-3.314	L7	F1	0.87	0.28	3.224	3.224	3.225			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	12.5	-405.62	-2561	-0.0000334	0.0003743	0.0035	0.87	999.07	1173.69	1173.69	2.89	No	Si
SLU 39	14.6	188.44	-1391	-0.0000164	0.0003743	0.0035	0.87	570.96	625.75	625.75	3.32	No	Si
SLU 81	12.5	-485.13	-3314	-0.0000419	0.0003743	0.0035	0.87	1248.97	1446.61	1446.61	2.98	No	Si
SLU 81	14.6	207.04	-1896	-0.0000204	0.0003743	0.0035	0.87	761.64	824.17	824.17	3.98	No	Si
SLU 82	12.5	-485.3	-3310	-0.0000419	0.0003743	0.0035	0.87	1247.72	1445.24	1445.24	2.98	No	Si
SLU 82	14.6	207.66	-1884	-0.0000204	0.0003743	0.0035	0.87	757.34	819.64	819.64	3.95	No	Si
SLU 31	12.5	-406.35	-2645	-0.000034	0.0003743	0.0035	0.87	1027.91	1204.9	1204.9	2.97	No	Si
SLU 31	14.6	192.3	-1435	-0.0000169	0.0003743	0.0035	0.87	588.28	643.65	643.65	3.35	No	Si
SLU 32	12.5	-452.24	-3094	-0.0000389	0.0003743	0.0035	0.87	1178.1	1368.36	1368.36	3.03	No	Si
SLU 32	14.6	194	-1896	-0.0000199	0.0003743	0.0035	0.87	761.85	824.4	824.4	4.25	No	Si
SLU 42	12.5	-428.97	-2843	-0.0000363	0.0003743	0.0035	0.87	1095.1	1278.25	1278.25	2.98	No	Si
SLU 42	14.6	174.38	-1714	-0.0000179	0.0003743	0.0035	0.87	694.13	753.7	753.7	4.32	No	Si
SLU 33	12.5	-452.41	-3090	-0.0000389	0.0003743	0.0035	0.87	1176.82	1366.97	1366.97	3.02	No	Si
SLU 33	14.6	194.62	-1885	-0.0000198	0.0003743	0.0035	0.87	757.55	819.87	819.87	4.21	No	Si
SLU 84	12.5	-508.47	-3596	-0.0000448	0.0003743	0.0035	0.87	1337.55	1544.47	1544.47	3.04	No	Si
SLU 84	14.6	192.98	-2219	-0.0000219	0.0003743	0.0035	0.87	879.07	948.05	948.05	4.91	No	Si
SLU 40	12.5	-405.8	-2557	-0.0000334	0.0003743	0.0035	0.87	997.71	1172.23	1172.23	2.89	No	Si
SLU 40	14.6	189.06	-1379	-0.0000164	0.0003743	0.0035	0.87	566.45	621.1	621.1	3.29	No	Si
SLU 41	12.5	-428.79	-2847	-0.0000363	0.0003743	0.0035	0.87	1096.42	1279.7	1279.7	2.98	No	Si
SLU 41	14.6	173.76	-1726	-0.0000179	0.0003743	0.0035	0.87	698.5	758.22	758.22	4.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	12.5	-1043.8	-4341	-0.0000826	0.0005615	0.0035	0.87		1864.99	1864.99	1.79		Si
SLV 16	14.6	1267.51	900	0.094936	0.0005615	0.0035	0.696		0	0	0		No
SLV 12	12.5	-732.33	-3873	-0.0000572	0.0005615	0.0035	0.87		1694.17	1694.17	2.31		Si
SLV 12	14.6	787.92	-431	-0.0166436	0.0005615	0.0035	0.696		232.82	232.82	0.3		No
SLD 13	12.5	-617.39	-3227	-0.0000477	0.0005615	0.0035	0.87		1453.39	1453.39	2.35		Si
SLD 13	14.6	568.16	-570	-0.0087252	0.0005615	0.0035	0.696		292.06	292.06	0.51		No
SLV 15	12.5	-1078.26	-4425	-0.0000859	0.0005615	0.0035	0.87		1895.59	1895.59	1.76		Si
SLV 15	14.6	1335.97	1087	0.1629374	0.0005615	0.0035	0.696		0	0	0		No
SLV 11	12.5	-754.54	-3928	-0.0000588	0.0005615	0.0035	0.87		1714.29	1714.29	2.27		Si
SLV 11	14.6	832.04	-310	-0.0194345	0.0005615	0.0035	0.696		181.4	181.4	0.22		No
SLD 15	12.5	-667.78	-3433	-0.0000516	0.0005615	0.0035	0.87		1530.29	1530.29	2.29		Si
SLD 15	14.6	659.25	-441	-0.0128458	0.0005615	0.0035	0.696		237.28	237.28	0.36		No
SLV 13	12.5	-963.85	-3960	-0.0000762	0.0005615	0.0035	0.87		1726.22	1726.22	1.79		Si
SLV 13	14.6	1128.95	795	0.0813969	0.0005615	0.0035	0.696		0	0	0		No
SLD 16	12.5	-652.99	-3397	-0.0000506	0.0005615	0.0035	0.87		1516.78	1516.78	2.32		Si
SLD 16	14.6	629.85	-522	-0.0110577	0.0005615	0.0035	0.696		271.47	271.47	0.43		No
SLD 14	12.5	-602.6	-3191	-0.0000467	0.0005615	0.0035	0.87		1439.87	1439.87	2.39		Si
SLD 14	14.6	538.76	-651	-0.0069431	0.0005615	0.0035	0.696		326.06	326.06	0.61		No
SLV 14	12.5	-929.39	-3875	-0.000073	0.0005615	0.0035	0.87		1695	1695	1.82		Si
SLV 14	14.6	1060.49	608	0.0154706	0.0005615	0.0035	0.696		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	12.5	-531.74	-3847	-3204	-695	0.87	0.87	-13151	8698	2119	35683	7294	2219	9513	No	13.69	Si
SLU 74	14.6	212.6	-2402	-2000	-280	0.87	0.87	-8210	8039	1958	35683	7294	2219	9513	No	34.02	Si
SLU 71	12.5	-532.92	-4188	-3487	-684	0.87	0.87	-14316	8853	2157	35683	7294	2219	9513	No	13.91	Si
SLU 71	14.6	187.09	-2781	-2316	-254	0.87	0.87	-9507	8212	2000	35683	7294	2219	9513	No	37.47	Si
SLU 69	12.5	-555.93	-4345	-3618	-708	0.87	0.87	-14851	8925	2174	35683	7294	2219	9513	No	13.44	Si
SLU 69	14.6	204.51	-2887	-2404	-292	0.87	0.87	-9870	8260	2012	35683	7294	2219	9513	No	32.53	Si
SLU 70	12.5	-556.1	-4341	-3614	-709	0.87	0.87	-14838	8923	2174	35683	7294	2219	9513	No	13.42	Si
SLU 70	14.6	205.13	-2876	-2395	-296	0.87	0.87	-9830	8255	2011	35683	7294	2219	9513	No	32.1	Si
SLU 79	12.5	-531.9	-3977	-3312	-703	0.87	0.87	-13595	8757	2133	35683	7294	2219	9513	No	13.53	Si
SLU 79	14.6	180.5	-2631	-2191	-210	0.87	0.87	-8993	8144	1984	35683	7294	2219	9513	No	45.34	Si
SLU 78	12.5	-555.08	-4129	-3439	-728	0.87	0.87	-14116	8827	2150	35683	7294	2219	9513	No	13.07	Si
SLU 78	14.6	198.54	-2725	-2269	-252	0.87	0.87	-9316	8187	1994	35683	7294	2219	9513	No	37.71	Si
SLU 77	12.5	-554.91	-4133	-3442	-727	0.87	0.87	-14129	8828	2151	35683	7294	2219	9513	No	13.09	Si
SLU 77	14.6	197.92	-2737	-2279	-248	0.87	0.87	-9356	8192	1996	35683	7294	2219	9513	No	38.31	Si
SLU 80	12.5	-532.08	-3973	-3308	-704	0.87	0.87	-13581	8755	2133	35683	7294	2219	9513	No	13.52	Si
SLU 80	14.6	181.12	-2619	-2181	-214	0.87	0.87	-8953	8138	1982	35683	7294	2219	9513	No	44.5	Si
SLU 75	12.5	-531.91	-3843	-3200	-696	0.87	0.87	-13138	8696	2118	35683	7294	2219	9513	No	13.67	Si
SLU 75	14.6	213.22	-2390	-1990	-284	0.87	0.87	-8170	8034	1957	35683	7294	2219	9513	No	33.55	Si
SLU 72	12.5	-533.1	-4184	-3484	-685	0.87	0.87	-14303	8851	2156	35683	7294	2219	9513	No	13.89	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	14.6	187.71	-2769	-2306	-258	0.87	0.87	-9467	8207	1999	35683	7294	2219	9513	No	36.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	12.5	-1078.26	-4425	-3685	-1088	0.87	0.574	-23194	15056	2420	35683	10942	2219	13160		12.1	Si
SLV 15	14.6	1335.97	1087	905	-2974	0.696	0	0	0	0	35683	8753	1775	10528		3.54	Si
SLV 12	12.5	-732.33	-3873	-3225	-672	0.87	0.7378	-15733	13563	2802	35683	10942	2219	13160		19.57	Si
SLV 12	14.6	787.92	-431	-359	-1775	0.696	0	0	0	0	35683	8753	1775	10528		5.93	Si
SLV 3	12.5	210.53	-1494	-1244	120	0.87	0.87	-5107	11438	2786	35683	10942	2219	13160		109.89	Si
SLV 3	14.6	-759.12	-3785	-3152	1845	0.87	0.7033	-16129	13642	2686	35683	10942	2219	13160		7.13	Si
SLV 1	12.5	324.94	-1028	-856	139	0.87	0.357	-3515	11120	1112	35683	10942	2219	13160		94.49	Si
SLV 1	14.6	-966.14	-4077	-3395	2389	0.87	0.5941	-20619	14541	2419	35683	10942	2219	13160		5.51	Si
SLV 2	12.5	359.4	-944	-786	158	0.87	0.1629	-17299	13880	633	35683	10942	2219	13160		83.17	Si
SLV 2	14.6	-1034.6	-4265	-3551	2569	0.87	0.5772	-22218	14861	2402	35683	10942	2219	13160		5.12	Si
SLV 4	12.5	244.98	-1410	-1174	139	0.87	0.7836	-4819	11380	2497	35683	10942	2219	13160		94.87	Si
SLV 4	14.6	-827.58	-3972	-3308	2024	0.87	0.68	-17517	13920	2650	35683	10942	2219	13160		6.5	Si
SLV 13	12.5	-963.85	-3960	-3297	-1068	0.87	0.5748	-20698	14557	2343	35683	10942	2219	13160		12.32	Si
SLV 13	14.6	1128.95	795	662	-2429	0.696	0	0	0	0	35683	8753	1775	10528		4.33	Si
SLV 14	12.5	-929.39	-3875	-3227	-1049	0.87	0.5856	-19876	14392	2360	35683	10942	2219	13160		12.54	Si
SLV 14	14.6	1060.49	608	506	-2249	0.696	0	0	0	0	35683	8753	1775	10528		4.68	Si
SLV 16	12.5	-1043.8	-4341	-3615	-1069	0.87	0.5837	-22368	14891	2433	35683	10942	2219	13160		12.31	Si
SLV 16	14.6	1267.51	900	749	-2794	0.696	0	0	0	0	35683	8753	1775	10528		3.77	Si
SLV 11	12.5	-754.54	-3928	-3271	-685	0.87	0.7287	-16156	13648	2785	35683	10942	2219	13160		19.23	Si
SLV 11	14.6	832.04	-310	-258	-1890	0.696	0	0	0	0	35683	8753	1775	10528		5.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.112 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.53	0	3	103.03	0	0	No, Trazione
SLV 16	179667	0.53	0	247	103.03	0	0	No, Trazione
SLV 13	179667	0.53	0	162	103.03	0	0	No, Trazione
SLV 15	179667	0.53	0	407	103.03	0	0	No, Trazione
SLV 11	179667	0.53	3183	-775	103.03	106.29	1.03	Si
SLV 12	179667	0.53	3605	-878	103.03	120.06	1.17	Si
SLV 9	179667	0.53	6526	-1590	103.03	213.06	2.07	Si
SLV 10	179667	0.53	6948	-1693	103.03	226.19	2.2	Si
SLV 7	179667	0.53	8246	-2009	103.03	266.03	2.58	Si
SLV 8	179667	0.53	8668	-2112	103.03	278.84	2.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.112 Wa = 0.05 Ta = 0.062

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1268	-1442	-9	2.529	245.2	0.897	40.97292	13.02938	Si
SLV 5	-1262	-1496	-9	2.536	244.6	0.897	41.09536	13.02938	Si
SLV 10	-1126	-2321	-1	2.726	231.5	0.894	44.30942	13.02938	Si
SLV 9	-1120	-2376	-1	2.734	230.9	0.894	44.45144	13.02938	Si
SLV 8	-593	-2994	-1	3.826	182	0.89	62.49922	13.02938	Si
SLV 7	-587	-3048	-1	3.843	181.5	0.89	62.76641	13.02938	Si
SLV 12	-451	-3873	8	4.284	169.9	0.894	69.66114	13.02938	Si
SLV 11	-445	-3928	8	4.305	169.4	0.894	69.98249	13.02938	Si
SLV 2	-1199	-944	-16	2.615	238.5	0.896	42.43833	6.55333	Si
SLV 1	-1190	-1028	-16	2.627	237.7	0.895	42.64217	6.55333	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.889	SLU 40	Si
V_SLU	13.075	SLU 78	Si
PF_SLV	0	SLV 13	No
V_SLV	3.541	SLV 15	Si
PFFP_SLV	0	SLV 16	No
R_SLV	3.145	SLV 6	Si

Maschio 242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L7	F1	1.655	0.28	3.222	3.222	3.223			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	12.5	-1228.76	-3290	-0.000026	0.0003743	0.0035	1.655	2532.93	3253.86	3253.86	2.65	No	Si
SLU 42	14.6	1163.05	-4780	-0.0000293	0.0003743	0.0035	1.655	3554.81	3815.37	3815.37	3.28	No	Si
SLU 32	12.5	-1219.37	-3495	-0.0000262	0.0003743	0.0035	1.655	2678.18	3408.23	3408.23	2.8	No	Si
SLU 32	14.6	1258.63	-5045	-0.0000314	0.0003743	0.0035	1.655	3728.68	3985.63	3985.63	3.17	No	Si
SLU 33	12.5	-1225.93	-3490	-0.0000263	0.0003743	0.0035	1.655	2674.45	3404.24	3404.24	2.78	No	Si
SLU 33	14.6	1263.03	-5049	-0.0000315	0.0003743	0.0035	1.655	3730.98	3987.82	3987.82	3.16	No	Si
SLU 34	12.5	-1170.26	-3404	-0.0000252	0.0003743	0.0035	1.655	2613.59	3339.27	3339.27	2.85	No	Si
SLU 34	14.6	1173.04	-4788	-0.0000295	0.0003743	0.0035	1.655	3560.26	3820.85	3820.85	3.26	No	Si
SLU 31	12.5	-1157.63	-3025	-0.0000243	0.0003743	0.0035	1.655	2342.8	3055.69	3055.69	2.64	No	Si
SLU 31	14.6	1091.34	-4231	-0.0000266	0.0003743	0.0035	1.655	3186.99	3427.13	3427.13	3.14	No	Si
SLU 82	12.5	-1326.44	-3902	-0.0000288	0.0003743	0.0035	1.655	2962.24	3704.57	3704.57	2.79	No	Si
SLU 82	14.6	1285.28	-5082	-0.0000319	0.0003743	0.0035	1.655	3752.61	4008.34	4008.34	3.12	No	Si
SLU 39	12.5	-1209.57	-2917	-0.0000253	0.0003743	0.0035	1.655	2264.46	2975.29	2975.29	2.46	No	Si
SLU 39	14.6	1076.96	-4219	-0.0000264	0.0003743	0.0035	1.655	3178.97	3418.59	3418.59	3.17	No	Si
SLU 40	12.5	-1216.13	-2912	-0.0000254	0.0003743	0.0035	1.655	2260.63	2971.38	2971.38	2.44	No	Si
SLU 40	14.6	1081.36	-4222	-0.0000265	0.0003743	0.0035	1.655	3181.37	3421.15	3421.15	3.16	No	Si
SLU 41	12.5	-1222.2	-3296	-0.0000258	0.0003743	0.0035	1.655	2536.69	3257.83	3257.83	2.67	No	Si
SLU 41	14.6	1158.65	-4777	-0.0000293	0.0003743	0.0035	1.655	3552.47	3813.03	3813.03	3.29	No	Si
SLU 81	12.5	-1319.87	-3908	-0.0000287	0.0003743	0.0035	1.655	2965.89	3708.32	3708.32	2.81	No	Si
SLU 81	14.6	1280.88	-5079	-0.0000318	0.0003743	0.0035	1.655	3750.32	4006.17	4006.17	3.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	12.5	-1809.88	-2527	-0.0000787	0.0005615	0.0035	1.324		2705.34	2705.34	1.49		Si
SLD 13	14.6	1793.62	-4817	-0.0000379	0.0005615	0.0035	1.655		3934.7	3934.7	2.19		Si
SLD 16	12.5	-1874.66	-2726	-0.0000693	0.0005615	0.0035	1.324		2859.96	2859.96	1.53		Si
SLD 16	14.6	1877.41	-4933	-0.0000395	0.0005615	0.0035	1.655		4020.92	4020.92	2.14		Si
SLV 2	12.5	1724.99	-4466	-0.0000362	0.0005615	0.0035	1.655		3672.09	3672.09	2.13		Si
SLV 2	14.6	-1325.22	-892	-0.0004174	0.0005615	0.0035	1.324		1415.28	1415.28	1.07		Si
SLV 13	12.5	-3121.48	-1596	-0.001644	0.0005615	0.0035	1.324		1975	1975	0.63		No
SLV 13	14.6	2918.56	-6215	-0.0000634	0.0005615	0.0035	1.655		4956.13	4956.13	1.7		Si
SLV 1	12.5	1603.9	-4407	-0.0000339	0.0005615	0.0035	1.655		3628.35	3628.35	2.26		Si
SLV 1	14.6	-1194.42	-1082	-0.0002595	0.0005615	0.0035	1.324		1567.81	1567.81	1.31		Si
SLV 16	12.5	-3266.16	-2049	-0.0014889	0.0005615	0.0035	1.324		2331.74	2331.74	0.71		No
SLV 16	14.6	3105.46	-6472	-0.0000682	0.0005615	0.0035	1.655		5140.72	5140.72	1.66		Si
SLV 14	12.5	-3000.39	-1654	-0.0014623	0.0005615	0.0035	1.324		2021.1	2021.1	0.67		No
SLV 14	14.6	2787.76	-6024	-0.0000601	0.0005615	0.0035	1.655		4819.23	4819.23	1.73		Si
SLD 14	12.5	-1757.89	-2552	-0.0000651	0.0005615	0.0035	1.324		2724.95	2724.95	1.55		Si
SLD 14	14.6	1737.46	-4735	-0.0000368	0.0005615	0.0035	1.655		3873.58	3873.58	2.23		Si
SLV 15	12.5	-3387.25	-1990	-0.0016738	0.0005615	0.0035	1.324		2285.65	2285.65	0.67		No
SLV 15	14.6	3236.26	-6663	-0.0000716	0.0005615	0.0035	1.655		5277.22	5277.22	1.63		Si
SLD 15	12.5	-1926.65	-2701	-0.0000827	0.0005615	0.0035	1.324		2840.61	2840.61	1.47		Si
SLD 15	14.6	1933.58	-5015	-0.0000407	0.0005615	0.0035	1.655		4081.51	4081.51	2.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	12.5	-1195.59	-5139	-4279	-2722	1.655	1.655	-9234	8176	3789	35683	13876	4220	18097	No	6.65	Si
SLU 69	14.6	1560.7	-6477	-5393	-2718	1.655	1.655	-11639	8496	3937	35683	13876	4220	18097	No	6.66	Si
SLU 79	12.5	-1282.26	-4783	-3983	-2744	1.655	1.655	-8594	8090	3749	35683	13876	4220	18097	No	6.59	Si
SLU 79	14.6	1451.32	-6200	-5163	-2736	1.655	1.655	-11141	8430	3906	35683	13876	4220	18097	No	6.61	Si
SLU 78	12.5	-1348.87	-4860	-4047	-2896	1.655	1.6499	-8733	8109	3746	35683	13876	4220	18097	No	6.25	Si
SLU 78	14.6	1548.64	-6467	-5385	-2890	1.655	1.655	-11620	8494	3936	35683	13876	4220	18097	No	6.26	Si
SLU 77	12.5	-1342.31	-4865	-4051	-2888	1.655	1.6548	-8743	8110	3758	35683	13876	4220	18097	No	6.27	Si
SLU 77	14.6	1544.24	-6463	-5382	-2880	1.655	1.655	-11614	8493	3936	35683	13876	4220	18097	No	6.28	Si
SLU 74	12.5	-1329.67	-4486	-3736	-2772	1.655	1.5934	-8062	8019	3578	35683	13876	4220	18097	No	6.53	Si
SLU 74	14.6	1462.55	-5905	-4917	-2767	1.655	1.655	-10612	8359	3874	35683	13876	4220	18097	No	6.54	Si
SLU 80	12.5	-1288.82	-4777	-3978	-2752	1.655	1.655	-8585	8089	3749	35683	13876	4220	18097	No	6.58	Si
SLU 80	14.6	1455.72	-6204	-5166	-2746	1.655	1.655	-11147	8431	3907	35683	13876	4220	18097	No	6.59	Si
SLU 84	12.5	-1339.07	-4281	-3565	-2707	1.655	1.5442	-8290	8050	3481	35683	13876	4220	18097	No	6.68	Si
SLU 84	14.6	1366.97	-5640	-4696	-2702	1.655	1.655	-10135	8296	3844	35683	13876	4220	18097	No	6.7	Si
SLU 70	12.5	-1202.15	-5133	-4275	-2730	1.655	1.655	-9224	8174	3788	35683	13876	4220	18097	No	6.63	Si
SLU 70	14.6	1565.1	-6480	-5396	-2729	1.655	1.655	-11645	8497	3938	35683	13876	4220	18097	No	6.63	Si
SLU 75	12.5	-1336.24	-4481	-3731	-2780	1.655	1.5879	-8052	8018	3565	35683	13876	4220	18097	No	6.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	14.6	1466.95	-5909	-4920	-2777	1.655	1.655	-10618	8360	3874	35683	13876	4220	18097	No	6.52	Si
SLU 83	12.5	-1332.51	-4287	-3570	-2700	1.655	1.55	-7703	7971	3460	35683	13876	4220	18097	No	6.7	Si
SLU 83	14.6	1362.57	-5636	-4694	-2692	1.655	1.655	-10128	8295	3844	35683	13876	4220	18097	No	6.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	12.5	-1926.65	-2701	-2249	-3678	1.324	0.3422	0	0	0	35683	16652	3376	20028		5.44	Si
SLD 15	14.6	1933.58	-5015	-4176	-3067	1.655	1.3259	-9012	12219	4536	35683	20815	4220	25035		8.16	Si
SLV 13	12.5	-3121.48	-1596	-1329	-6027	1.324	0	0	0	0	35683	16652	3376	20028		3.32	Si
SLV 13	14.6	2918.56	-6215	-5175	-4526	1.655	1.0736	-11167	12650	3803	35683	20815	4220	25035		5.53	Si
SLV 11	12.5	-2021.9	-3445	-2869	-3492	1.324	0.7217	0	0	0	35683	16652	3376	20028		5.74	Si
SLV 11	14.6	2144.11	-5356	-4460	-3170	1.655	1.2815	-9624	12341	4428	35683	20815	4220	25035		7.9	Si
SLV 12	12.5	-1943.87	-3483	-2900	-3351	1.324	0.808	0	0	0	35683	16652	3376	20028		5.98	Si
SLV 12	14.6	2059.82	-5233	-4357	-3029	1.655	1.3016	-9403	12297	4482	35683	20815	4220	25035		8.26	Si
SLV 15	12.5	-3387.25	-1990	-1657	-6261	1.324	0	0	0	0	35683	16652	3376	20028		3.2	Si
SLV 15	14.6	3236.26	-6663	-5548	-4831	1.655	1.0254	-11973	12811	3678	35683	20815	4220	25035		5.18	Si
SLV 14	12.5	-3000.39	-1654	-1377	-5809	1.324	0	0	0	0	35683	16652	3376	20028		3.45	Si
SLV 14	14.6	2787.76	-6024	-5016	-4308	1.655	1.0942	-10825	12582	3855	35683	20815	4220	25035		5.81	Si
SLD 13	12.5	-1809.88	-2527	-2104	-3575	1.324	0.3338	0	0	0	35683	16652	3376	20028		5.6	Si
SLD 13	14.6	1793.62	-4817	-4011	-2932	1.655	1.3655	-8656	12148	4645	35683	20815	4220	25035		8.54	Si
SLD 16	12.5	-1874.66	-2726	-2270	-3585	1.324	0.4192	0	0	0	35683	16652	3376	20028		5.59	Si
SLD 16	14.6	1877.41	-4933	-4108	-2973	1.655	1.3409	-8865	12190	4576	35683	20815	4220	25035		8.42	Si
SLD 14	12.5	-1757.89	-2552	-2125	-3482	1.324	0.4161	0	0	0	35683	16652	3376	20028		5.75	Si
SLD 14	14.6	1737.46	-4735	-3943	-2838	1.655	1.3818	-8509	12119	4689	35683	20815	4220	25035		8.82	Si
SLV 16	12.5	-3266.16	-2049	-1706	-6043	1.324	0	0	0	0	35683	16652	3376	20028		3.31	Si
SLV 16	14.6	3105.46	-6472	-5389	-4613	1.655	1.0431	-11630	12743	3722	35683	20815	4220	25035		5.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.111 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.53	0	-1237	195.75	0	0	No, e>t/2
SLV 1	179667	0.53	0	-1390	195.75	0	0	No, e>t/2
SLV 4	179667	0.53	4037	-1871	195.75	254.98	1.3	Si
SLV 6	179667	0.53	4292	-1989	195.75	270.61	1.38	Si
SLV 3	179667	0.53	4365	-2023	195.75	275.12	1.41	Si
SLV 5	179667	0.53	4503	-2087	195.75	283.55	1.45	Si
SLV 10	179667	0.53	6998	-3243	195.75	433.19	2.21	Si
SLV 9	179667	0.53	7210	-3341	195.75	445.65	2.28	Si
SLV 8	179667	0.53	8847	-4100	195.75	540.7	2.76	Si
SLV 7	179667	0.53	9059	-4198	195.75	552.83	2.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.111 Wa = 0.05 Ta = 0.0619

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-2007	-2130	-110	2.802	427.2	0.893	45.62077	13.01058	Si
SLV 5	-1977	-2973	-188	2.804	424.4	0.892	45.65324	13.01058	Si
SLV 10	-2000	-2167	-110	2.808	426.6	0.893	45.71876	13.01058	Si
SLV 6	-1970	-3011	-188	2.809	423.7	0.892	45.75209	13.01058	Si
SLV 11	-1333	-3445	192	3.467	364.3	0.889	56.68119	13.01058	Si
SLV 12	-1325	-3483	192	3.476	363.6	0.889	56.83197	13.01058	Si
SLV 7	-1303	-4288	114	3.535	361.6	0.889	57.79115	13.01058	Si
SLV 8	-1296	-4326	114	3.544	361	0.889	57.94622	13.01058	Si
SLV 13	-1808	-1596	87	2.984	408.3	0.891	48.67424	6.54945	Si
SLV 14	-1796	-1654	87	2.995	407.3	0.891	48.84992	6.54945	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.443	SLU 40	Si
V_SLU	6.249	SLU 78	Si
PF_SLV	0.633	SLV 13	No
V_SLV	3.199	SLV 15	Si
PFFP_SLV	0	SLV 1	No
R_SLV	3.506	SLV 9	Si

Maschio 244

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.454	L7	F1	1.369	0.28	2.766	2.389	3.144			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 30	12.5	-275.91	-4468	-0.0000224	0.0003743	0.0035	1.3693	2708.84	3278.25	3278.25	11.88	No	Si
SLU 30	14.89	223.58	-560	-0.0000069	0.0003743	0.0035	1.3693	377.66	480.51	480.51	2.15	No	Si
SLU 28	12.5	-273.13	-4493	-0.0000224	0.0003743	0.0035	1.3693	2721.99	3292.44	3292.44	12.05	No	Si
SLU 28	14.89	222.5	-587	-0.0000067	0.0003743	0.0035	1.3693	395.52	498.37	498.37	2.24	No	Si
SLU 37	12.5	-342.02	-4683	-0.0000244	0.0003743	0.0035	1.3693	2821.54	3401.12	3401.12	9.94	No	Si
SLU 37	14.89	243.43	-642	-0.0000074	0.0003743	0.0035	1.3693	432.51	535.47	535.47	2.2	No	Si
SLU 8	12.5	-235.41	-4036	-0.0000199	0.0003743	0.0035	1.3693	2477.69	3031.54	3031.54	12.88	No	Si
SLU 8	14.89	194.34	-494	-0.0000059	0.0003743	0.0035	1.3693	333.83	436.78	436.78	2.25	No	Si
SLU 9	12.5	-218.45	-4025	-0.0000196	0.0003743	0.0035	1.3693	2471.56	3025.01	3025.01	13.85	No	Si
SLU 9	14.89	186.88	-494	-0.0000056	0.0003743	0.0035	1.3693	333.69	436.64	436.64	2.34	No	Si
SLU 27	12.5	-290.08	-4504	-0.0000228	0.0003743	0.0035	1.3693	2727.93	3298.86	3298.86	11.37	No	Si
SLU 27	14.89	229.97	-587	-0.000007	0.0003743	0.0035	1.3693	395.67	498.52	498.52	2.17	No	Si
SLU 35	12.5	-339.23	-4708	-0.0000245	0.0003743	0.0035	1.3693	2834.5	3415.44	3415.44	10.07	No	Si
SLU 35	14.89	242.35	-669	-0.0000073	0.0003743	0.0035	1.3693	450.29	553.35	553.35	2.28	No	Si
SLU 71	12.5	-324.16	-5367	-0.0000269	0.0003743	0.0035	1.3693	3169.39	3783.41	3783.41	11.67	No	Si
SLU 71	14.89	244.15	-675	-0.0000073	0.0003743	0.0035	1.3693	454.35	557.43	557.43	2.28	No	Si
SLU 38	12.5	-325.06	-4672	-0.0000241	0.0003743	0.0035	1.3693	2815.67	3394.65	3394.65	10.44	No	Si
SLU 38	14.89	235.96	-642	-0.0000071	0.0003743	0.0035	1.3693	432.37	535.32	535.32	2.27	No	Si
SLU 29	12.5	-292.87	-4479	-0.0000227	0.0003743	0.0035	1.3693	2714.79	3284.66	3284.66	11.22	No	Si
SLU 29	14.89	231.05	-560	-0.0000072	0.0003743	0.0035	1.3693	377.8	480.65	480.65	2.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	12.5	727.1	-1247	-0.0000442	0.0005615	0.0035	1.3693		938.28	938.28	1.29		Si
SLV 6	14.89	-187.99	673	0.0821334	0.0005615	0.0035	1.0955		0	0	0		No
SLV 9	12.5	511.95	-971	-0.0000218	0.0005615	0.0035	1.3693		756.2	756.2	1.48		Si
SLV 9	14.89	-106.94	420	0.0511789	0.0005615	0.0035	1.0955		0	0	0		No
SLV 12	12.5	-1120.04	-6067	-0.0000433	0.0005615	0.0035	1.3693		4295.68	4295.68	3.84		Si
SLV 12	14.89	388.82	-1663	-0.000013	0.0005615	0.0035	1.3693		1212.43	1212.43	3.12		Si
SLV 16	12.5	-785.61	-3982	-0.0000289	0.0005615	0.0035	1.3693		3057.41	3057.41	3.89		Si
SLV 16	14.89	312.59	-1202	-0.0000099	0.0005615	0.0035	1.3693		908.82	908.82	2.91		Si
SLV 5	12.5	719.16	-1235	-0.0000433	0.0005615	0.0035	1.3693		930.54	930.54	1.29		Si
SLV 5	14.89	-189.51	658	0.080315	0.0005615	0.0035	1.0955		0	0	0		No
SLV 2	12.5	397.06	-3338	-0.0000197	0.0005615	0.0035	1.3693		2281.79	2281.79	5.75		Si
SLV 2	14.89	-110.92	220	0.0271467	0.0005615	0.0035	1.0955		0	0	0		No
SLV 14	12.5	-293.64	-2457	-0.0000145	0.0005615	0.0035	1.3693		2104.69	2104.69	7.17		Si
SLV 14	14.89	164.31	-572	-0.000005	0.0005615	0.0035	1.3693		490.38	490.38	2.98		Si
SLV 1	12.5	384.74	-3319	-0.0000194	0.0005615	0.0035	1.3693		2270.41	2270.41	5.9		Si
SLV 1	14.89	-113.27	196	0.0243199	0.0005615	0.0035	1.0955		0	0	0		No
SLV 15	12.5	-797.94	-3964	-0.0000291	0.0005615	0.0035	1.3693		3046.38	3046.38	3.82		Si
SLV 15	14.89	310.23	-1225	-0.00001	0.0005615	0.0035	1.3693		924.38	924.38	2.98		Si
SLV 10	12.5	519.89	-982	-0.0000224	0.0005615	0.0035	1.3693		763.96	763.96	1.47		Si
SLV 10	14.89	-105.42	435	0.0529947	0.0005615	0.0035	1.0955		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	12.5	-356.35	-5560	-4629	-1448	1.3693	1.3693	-12074	8554	3280	30925	11481	3492	14973	No	10.34	Si
SLU 80	14.89	249.07	-758	-631	-1623	1.3693	1.0676	-1645	7164	2141	30925	11481	3492	14973	No	9.22	Si
SLU 36	12.5	-322.28	-4696	-3911	-1383	1.3693	1.3693	-10200	8304	3184	30925	11481	3492	14973	No	10.83	Si
SLU 36	14.89	234.89	-669	-557	-1593	1.3693	1.0006	-1453	7138	2000	30925	11481	3492	14973	No	9.4	Si
SLU 79	12.5	-373.31	-5571	-4639	-1513	1.3693	1.3693	-12099	8558	3281	30925	11481	3492	14973	No	9.89	Si
SLU 79	14.89	256.54	-758	-631	-1664	1.3693	1.0383	-1646	7164	2083	30925	11481	3492	14973	No	9	Si
SLU 78	12.5	-353.57	-5584	-4650	-1498	1.3693	1.3693	-12129	8562	3283	30925	11481	3492	14973	No	10	Si
SLU 78	14.89	247.99	-784	-653	-1633	1.3693	1.1055	-1704	7172	2220	30925	11481	3492	14973	No	9.17	Si
SLU 69	12.5	-321.37	-5392	-4490	-1331	1.3693	1.3693	-11711	8506	3261	30925	11481	3492	14973	No	11.25	Si
SLU 69	14.89	243.07	-702	-585	-1497	1.3693	1.0155	-1525	7148	2032	30925	11481	3492	14973	No	10	Si
SLU 83	12.5	-361.66	-5373	-4474	-1509	1.3693	1.3693	-11669	8500	3259	30925	11481	3492	14973	No	9.92	Si
SLU 83	14.89	207.49	-776	-646	-1417	1.3693	1.2522	-1686	7169	2514	30925	11481	3492	14973	No	10.57	Si
SLU 38	12.5	-325.06	-4672	-3890	-1333	1.3693	1.3693	-10146	8297	3181	30925	11481	3492	14973	No	11.23	Si
SLU 38	14.89	235.96	-642	-535	-1584	1.3693	0.9515	-1394	7130	1900	30925	11481	3492	14973	No	9.45	Si
SLU 77	12.5	-370.52	-5596	-4660	-1563	1.3693	1.3693	-12153	8565	3284	30925	11481	3492	14973	No	9.58	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	14.89	255.46	-785	-653	-1674	1.3693	1.0772	-1704	7172	2163	30925	11481	3492	14973	No	8.95	Si
SLU 35	12.5	-339.23	-4708	-3920	-1448	1.3693	1.3693	-10225	8308	3185	30925	11481	3492	14973	No	10.34	Si
SLU 35	14.89	242.35	-669	-557	-1634	1.3693	0.9675	-1453	7138	1934	30925	11481	3492	14973	No	9.16	Si
SLU 37	12.5	-342.02	-4683	-3899	-1398	1.3693	1.3693	-10170	8301	3183	30925	11481	3492	14973	No	10.71	Si
SLU 37	14.89	243.43	-642	-535	-1625	1.3693	0.9169	-1395	7130	1831	30925	11481	3492	14973	No	9.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	12.5	727.1	-1247	-1038	3120	1.3693	0.3041	-12248	12867	1096	30925	17222	3492	20713		6.64	Si
SLV 6	14.89	-187.99	673	560	2366	1.0955	1.216	0	0	0	30925	13777	2793	16571		7	Si
SLV 13	12.5	-305.96	-2439	-2031	-3056	1.3693	1.3693	-5296	11476	4400	30925	17222	3492	20713		6.78	Si
SLV 13	14.89	161.95	-596	-496	-2114	1.3693	1.2387	-1294	10676	3703	30925	17222	3492	20713		9.8	Si
SLV 11	12.5	-1127.98	-6055	-5042	-4786	1.3693	1.3693	-13151	13047	5002	30925	17222	3492	20713		4.33	Si
SLV 11	14.89	387.3	-1678	-1398	-3625	1.3693	1.3617	-3645	11146	4250	30925	17222	3492	20713		5.71	Si
SLV 2	12.5	397.06	-3338	-2779	3188	1.3693	1.3693	-7249	11866	4550	30925	17222	3492	20713		6.5	Si
SLV 2	14.89	-110.92	220	183	2253	1.0955	0.5419	0	0	0	30925	13777	2793	16571		7.36	Si
SLV 7	12.5	-920.77	-6319	-5262	-2948	1.3693	1.3693	-13724	13162	5046	30925	17222	3492	20713		7.03	Si
SLV 7	14.89	304.73	-1441	-1200	-2334	1.3693	1.3693	-3129	11042	4234	30925	17222	3492	20713		8.88	Si
SLV 1	12.5	384.74	-3319	-2764	3070	1.3693	1.3693	-7209	11859	4547	30925	17222	3492	20713		6.75	Si
SLV 1	14.89	-113.27	196	164	2191	1.0955	0.3245	0	0	0	30925	13777	2793	16571		7.56	Si
SLV 15	12.5	-797.94	-3964	-3301	-4854	1.3693	1.3693	-8609	12138	4654	30925	17222	3492	20713		4.27	Si
SLV 15	14.89	310.23	-1225	-1020	-3512	1.3693	1.2945	-2662	10949	3969	30925	17222	3492	20713		5.9	Si
SLV 12	12.5	-1120.04	-6067	-5052	-4710	1.3693	1.3693	-13176	13052	5004	30925	17222	3492	20713		4.4	Si
SLV 12	14.89	388.82	-1663	-1385	-3585	1.3693	1.3527	-3612	11139	4219	30925	17222	3492	20713		5.78	Si
SLV 16	12.5	-785.61	-3982	-3316	-4736	1.3693	1.3693	-8649	12146	4657	30925	17222	3492	20713		4.37	Si
SLV 16	14.89	312.59	-1202	-1001	-3450	1.3693	1.2738	-2610	10939	3901	30925	17222	3492	20713		6	Si
SLV 5	12.5	719.16	-1235	-1028	3044	1.3693	0.3068	-12027	12823	1101	30925	17222	3492	20713		6.8	Si
SLV 5	14.89	-189.51	658	548	2326	1.0955	1.1897	0	0	0	30925	13777	2793	16571		7.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.694 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.52	0	-56	120.21	0	0	No, e>t/2
SLV 5	179667	0.52	0	-69	120.21	0	0	No, e>t/2
SLV 10	179667	0.52	0	-198	120.21	0	0	No, e>t/2
SLV 9	179667	0.52	0	-211	120.21	0	0	No, e>t/2
SLV 2	179667	0.52	3053	-1171	120.21	160.61	1.34	Si
SLV 1	179667	0.52	3107	-1191	120.21	163.36	1.36	Si
SLV 14	179667	0.52	4288	-1644	120.21	223.69	1.86	Si
SLV 13	179667	0.52	4341	-1664	120.21	226.39	1.88	Si
SLV 4	179667	0.52	5924	-2271	120.21	305.65	2.54	Si
SLV 3	179667	0.52	5978	-2292	120.21	308.3	2.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.694 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-1678	-6055	-119	2.945	327.8	0.896	47.74571	9.38243	Si
SLV 12	-1663	-6067	-119	2.962	326.4	0.896	48.02763	9.38243	Si
SLV 7	-1441	-6319	-69	3.253	304.9	0.893	52.9432	9.38243	Si
SLV 8	-1426	-6331	-70	3.273	303.5	0.893	53.28496	9.38243	Si
SLV 15	-1225	-3964	-110	3.551	284.5	0.89	57.9516	5.74069	Si
SLV 16	-1202	-3982	-110	3.588	282.3	0.89	58.58578	5.74069	Si
SLV 13	-596	-2439	-52	5.009	228.4	0.894	81.40598	5.74069	Si
SLV 14	-572	-2457	-53	5.085	226.4	0.895	82.55819	5.74069	Si
SLV 3	-433	-4845	56	5.588	215.6	0.903	89.92249	5.74069	Si
SLV 4	-409	-4863	56	5.684	213.9	0.905	91.28025	5.74069	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.08	SLU 29	Si
V_SLU	8.946	SLU 77	Si
PF_SLV	0	SLV 1	No
V_SLV	4.268	SLV 15	Si
PFFP_SLV	0	SLV 5	No
R_SLV	5.089	SLV 11	Si

Maschio 245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.314	L7	F1	1.51	0.28	2.803	2.386	3.219			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	12.5	-170.49	-5083	-0.0000206	0.0003743	0.0035	1.51	3384.42	4130.95	4130.95	24.23	No	Si
SLU 28	14.89	332.97	-595	-0.0000107	0.0003743	0.0035	1.51	442.99	573.43	573.43	1.72	No	Si
SLU 29	12.5	-186.78	-5061	-0.0000207	0.0003743	0.0035	1.51	3371.75	4117.29	4117.29	22.04	No	Si
SLU 29	14.89	334.13	-568	-0.000012	0.0003743	0.0035	1.51	423.31	553.71	553.71	1.66	No	Si
SLU 27	12.5	-191.98	-5102	-0.000021	0.0003743	0.0035	1.51	3395.41	4142.82	4142.82	21.58	No	Si
SLU 27	14.89	346.21	-607	-0.0000116	0.0003743	0.0035	1.51	451.84	582.31	582.31	1.68	No	Si
SLU 35	12.5	-225.61	-5438	-0.0000227	0.0003743	0.0035	1.51	3586.76	4353.13	4353.13	19.29	No	Si
SLU 35	14.89	403.11	-740	-0.0000124	0.0003743	0.0035	1.51	549.36	680.38	680.38	1.69	No	Si
SLU 36	12.5	-204.12	-5418	-0.0000223	0.0003743	0.0035	1.51	3576	4341.11	4341.11	21.27	No	Si
SLU 36	14.89	389.88	-728	-0.0000117	0.0003743	0.0035	1.51	540.57	671.59	671.59	1.72	No	Si
SLU 38	12.5	-198.92	-5377	-0.0000221	0.0003743	0.0035	1.51	3552.79	4315.28	4315.28	21.69	No	Si
SLU 38	14.89	377.8	-689	-0.0000117	0.0003743	0.0035	1.51	512.21	643.06	643.06	1.7	No	Si
SLU 79	12.5	-229.99	-6369	-0.0000262	0.0003743	0.0035	1.51	4097.27	4916.15	4916.15	21.38	No	Si
SLU 79	14.89	400.26	-774	-0.0000115	0.0003743	0.0035	1.51	573.83	704.88	704.88	1.76	No	Si
SLU 37	12.5	-220.41	-5397	-0.0000225	0.0003743	0.0035	1.51	3563.58	4327.28	4327.28	19.63	No	Si
SLU 37	14.89	391.03	-702	-0.0000125	0.0003743	0.0035	1.51	521.02	651.95	651.95	1.67	No	Si
SLU 71	12.5	-196.36	-6034	-0.0000245	0.0003743	0.0035	1.51	3916.89	4716.79	4716.79	24.02	No	Si
SLU 71	14.89	343.36	-641	-0.0000103	0.0003743	0.0035	1.51	476.46	607.06	607.06	1.77	No	Si
SLU 30	12.5	-165.29	-5042	-0.0000204	0.0003743	0.0035	1.51	3360.73	4105.43	4105.43	24.84	No	Si
SLU 30	14.89	320.89	-556	-0.000011	0.0003743	0.0035	1.51	414.45	544.83	544.83	1.7	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	12.5	418.22	-2916	-0.0000161	0.0005615	0.0035	1.51		2247.82	2247.82	5.37		Si
SLD 9	14.89	-324.13	570	0.0600802	0.0005615	0.0035	1.208		0	0	0		No
SLV 9	12.5	1089.4	-1361	-0.0006884	0.0005615	0.0035	1.208		1137.28	1137.28	1.04		Si
SLV 9	14.89	-949.52	1878	0.1974906	0.0005615	0.0035	1.208		0	0	0		No
SLD 6	12.5	303.5	-2892	-0.0000144	0.0005615	0.0035	1.51		2230.88	2230.88	7.35		Si
SLD 6	14.89	-229.77	487	0.0511274	0.0005615	0.0035	1.208		0	0	0		No
SLV 13	12.5	643.23	-3400	-0.0000209	0.0005615	0.0035	1.51		2586.25	2586.25	4.02		Si
SLV 13	14.89	-500.06	529	0.056511	0.0005615	0.0035	1.208		0	0	0		No
SLV 5	12.5	836.82	-1301	-0.0000417	0.0005615	0.0035	1.51		1093.3	1093.3	1.31		Si
SLV 5	14.89	-731.34	1690	0.1770573	0.0005615	0.0035	1.208		0	0	0		No
SLV 14	12.5	619.16	-3405	-0.0000206	0.0005615	0.0035	1.51		2589.77	2589.77	4.18		Si
SLV 14	14.89	-496.3	521	0.0556763	0.0005615	0.0035	1.208		0	0	0		No
SLV 10	12.5	1073.89	-1364	-0.0005692	0.0005615	0.0035	1.208		1139.65	1139.65	1.06		Si
SLV 10	14.89	-947.09	1873	0.1969545	0.0005615	0.0035	1.208		0	0	0		No
SLV 6	12.5	821.31	-1304	-0.0000372	0.0005615	0.0035	1.51		1095.67	1095.67	1.33		Si
SLV 6	14.89	-728.92	1685	0.1765212	0.0005615	0.0035	1.208		0	0	0		No
SLD 5	12.5	310.28	-2890	-0.0000145	0.0005615	0.0035	1.51		2229.89	2229.89	7.19		Si
SLD 5	14.89	-230.82	489	0.0513615	0.0005615	0.0035	1.208		0	0	0		No
SLD 10	12.5	411.45	-2917	-0.000016	0.0005615	0.0035	1.51		2248.81	2248.81	5.47		Si
SLD 10	14.89	-323.07	568	0.059846	0.0005615	0.0035	1.208		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 32	12.5	-198.87	-5134	-4275	-1307	1.51	1.51	-10112	8293	3506	30925	12661	3851	16511	No	12.64	Si
SLU 32	14.89	341.74	-714	-594	-882	1.51	0.8283	-1405	7132	1654	30925	12661	3851	16511	No	18.72	Si
SLU 78	12.5	-213.7	-6391	-5322	-1362	1.51	1.51	-12588	8623	3646	30925	12661	3851	16511	No	12.12	Si
SLU 78	14.89	399.11	-801	-667	-979	1.51	0.7697	-1577	7155	1542	30925	12661	3851	16511	No	16.86	Si
SLU 37	12.5	-220.41	-5397	-4494	-1285	1.51	1.51	-10629	8362	3535	30925	12661	3851	16511	No	12.85	Si
SLU 37	14.89	391.03	-702	-584	-1034	1.51	0.5928	-1382	7129	1183	30925	12661	3851	16511	No	15.97	Si
SLU 35	12.5	-225.61	-5438	-4528	-1394	1.51	1.51	-10709	8372	3540	30925	12661	3851	16511	No	11.84	Si
SLU 35	14.89	403.11	-740	-617	-1078	1.51	0.6316	-1458	7139	1262	30925	12661	3851	16511	No	15.32	Si
SLU 74	12.5	-208.45	-6107	-5085	-1359	1.51	1.51	-12028	8548	3614	30925	12661	3851	16511	No	12.15	Si
SLU 74	14.89	350.97	-786	-655	-831	1.51	0.9254	-1548	7151	1853	30925	12661	3851	16511	No	19.88	Si
SLU 36	12.5	-204.12	-5418	-4512	-1310	1.51	1.51	-10672	8367	3538	30925	12661	3851	16511	No	12.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	14.89	389.88	-728	-606	-1030	1.51	0.659	-1434	7136	1317	30925	12661	3851	16511	No	16.02	Si
SLU 77	12.5	-235.19	-6410	-5338	-1446	1.51	1.51	-12625	8628	3648	30925	12661	3851	16511	No	11.42	Si
SLU 77	14.89	412.34	-813	-677	-1026	1.51	0.743	-1601	7158	1489	30925	12661	3851	16511	No	16.09	Si
SLU 79	12.5	-229.99	-6369	-5304	-1337	1.51	1.51	-12544	8617	3643	30925	12661	3851	16511	No	12.35	Si
SLU 79	14.89	400.26	-774	-644	-982	1.51	0.7135	-1524	7148	1428	30925	12661	3851	16511	No	16.81	Si
SLU 83	12.5	-217.66	-6210	-5171	-1347	1.51	1.51	-12230	8575	3626	30925	12661	3851	16511	No	12.26	Si
SLU 83	14.89	363.28	-804	-670	-864	1.51	0.91	-1584	7156	1823	30925	12661	3851	16511	No	19.1	Si
SLU 41	12.5	-208.08	-5237	-4361	-1295	1.51	1.51	-10314	8320	3518	30925	12661	3851	16511	No	12.75	Si
SLU 41	14.89	354.05	-732	-609	-916	1.51	0.8138	-1441	7137	1626	30925	12661	3851	16511	No	18.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	12.5	-861.46	-4892	-4074	-5167	1.51	1.51	-9636	12344	5219	30925	18991	3851	22841		4.42	Si
SLV 4	14.89	834.93	-1453	-1210	-3785	1.51	0.5405	-2861	10989	1663	30925	18991	3851	22841		6.03	Si
SLV 8	12.5	-1307.63	-6931	-5771	-6424	1.51	1.51	-13651	13147	5558	30925	18991	3851	22841		3.56	Si
SLV 8	14.89	1284.39	-2801	-2333	-4733	1.51	0.8896	-5518	11520	2869	30925	18991	3851	22841		4.83	Si
SLV 13	12.5	643.23	-3400	-2831	3745	1.51	1.51	-6696	11756	4970	30925	18991	3851	22841		6.1	Si
SLV 13	14.89	-500.06	529	441	3181	1.208	0	0	0	0	30925	15193	3080	18273		5.74	Si
SLV 14	12.5	619.16	-3405	-2835	3641	1.51	1.51	-6706	11758	4971	30925	18991	3851	22841		6.27	Si
SLV 14	14.89	-496.3	521	434	3118	1.208	0	0	0	0	30925	15193	3080	18273		5.86	Si
SLV 11	12.5	-1039.54	-6988	-5819	-4577	1.51	1.51	-13763	13169	5568	30925	18991	3851	22841		4.99	Si
SLV 11	14.89	1063.79	-2608	-2172	-3289	1.51	1.0413	-5136	11444	3337	30925	18991	3851	22841		6.94	Si
SLV 12	12.5	-1055.05	-6991	-5822	-4644	1.51	1.51	-13769	13170	5568	30925	18991	3851	22841		4.92	Si
SLV 12	14.89	1066.22	-2613	-2176	-3330	1.51	1.0409	-5147	11446	3336	30925	18991	3851	22841		6.86	Si
SLV 3	12.5	-837.39	-4887	-4070	-5063	1.51	1.51	-9626	12342	5218	30925	18991	3851	22841		4.51	Si
SLV 3	14.89	831.18	-1445	-1203	-3722	1.51	0.5389	-2845	10986	1658	30925	18991	3851	22841		6.14	Si
SLV 9	12.5	1089.4	-1361	-1133	5002	1.208	0	0	0	0	30925	15193	3080	18273		3.65	Si
SLV 9	14.89	-949.52	1878	1564	4129	1.208	0.7483	0	0	0	30925	15193	3080	18273		4.43	Si
SLV 10	12.5	1073.89	-1364	-1136	4934	1.208	0	0	0	0	30925	15193	3080	18273		3.7	Si
SLV 10	14.89	-947.09	1873	1560	4088	1.208	0.7481	0	0	0	30925	15193	3080	18273		4.47	Si
SLV 7	12.5	-1292.12	-6928	-5769	-6357	1.51	1.51	-13644	13146	5558	30925	18991	3851	22841		3.59	Si
SLV 7	14.89	1281.97	-2796	-2329	-4692	1.51	0.8897	-5507	11518	2869	30925	18991	3851	22841		4.87	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.693 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.52	0	1252	136.06	0	0	No, Trazione
SLV 13	179667	0.52	0	-252	136.06	0	0	No, e>t/2
SLV 6	179667	0.52	0	1225	136.06	0	0	No, Trazione
SLV 10	179667	0.52	0	1743	136.06	0	0	No, Trazione
SLV 9	179667	0.52	0	1770	136.06	0	0	No, Trazione
SLV 14	179667	0.52	0	-293	136.06	0	0	No, e>t/2
SLV 1	179667	0.52	4680	-1979	136.06	268.55	1.97	Si
SLV 2	179667	0.52	4777	-2020	136.06	273.92	2.01	Si
SLV 15	179667	0.52	5935	-2509	136.06	337.65	2.48	Si
SLV 16	179667	0.52	6032	-2550	136.06	342.93	2.52	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.693 Wa = 0.05 Ta = 0.0469

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2801	-6931	-13	2.253	457.3	0.909	36.0151	9.60318	Si
SLV 7	-2796	-6928	-13	2.256	456.8	0.909	36.06436	9.60318	Si
SLV 12	-2613	-6991	65	2.352	438.7	0.907	37.69702	9.60318	Si
SLV 11	-2608	-6988	65	2.355	438.2	0.907	37.75113	9.60318	Si
SLV 4	-1453	-4892	-123	3.389	325.7	0.891	55.26857	5.79041	Si
SLV 3	-1445	-4887	-123	3.4	325	0.891	55.44545	5.79041	Si
SLV 16	-825	-5093	137	4.491	268.5	0.891	73.28684	5.79041	Si
SLV 15	-817	-5088	137	4.509	267.8	0.891	73.58141	5.79041	Si
SLV 2	-107	-3204	-140	7.206	219.2	0.96	109.05562	5.79041	Si
SLV 1	-99	-3199	-140	7.255	219	0.963	109.52345	5.79041	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.657	SLU 29	Si
V_SLU	11.418	SLU 77	Si
PF_SLV	0	SLD 5	No
V_SLV	3.556	SLV 8	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.75	SLV 8	Si

Maschio 247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L7	F1	1.67	0.28	3.219	3.218	3.219			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	12.5	1246.88	-3886	-0.0000271	0.0003743	0.0035	1.67	2979.7	3209.82	3209.82	2.57	No	Si
SLU 34	14.6	-1460.3	-5121	-0.0000336	0.0003743	0.0035	1.67	3815.87	4614.14	4614.14	3.16	No	Si
SLU 38	12.5	1303.37	-4247	-0.0000289	0.0003743	0.0035	1.67	3229.73	3473.96	3473.96	2.67	No	Si
SLU 38	14.6	-1607.68	-5752	-0.0000376	0.0003743	0.0035	1.67	4222.72	5054	5054	3.14	No	Si
SLU 82	12.5	1373.28	-4494	-0.0000306	0.0003743	0.0035	1.67	3398.48	3653.99	3653.99	2.66	No	Si
SLU 82	14.6	-1544.59	-5372	-0.0000355	0.0003743	0.0035	1.67	3979.69	4788.33	4788.33	3.1	No	Si
SLU 31	12.5	1184.98	-3537	-0.0000253	0.0003743	0.0035	1.67	2733.65	2951.57	2951.57	2.49	No	Si
SLU 31	14.6	-1308.37	-4486	-0.0000297	0.0003743	0.0035	1.67	3392.57	4160.47	4160.47	3.18	No	Si
SLU 41	12.5	1272.78	-3908	-0.0000275	0.0003743	0.0035	1.67	2995.55	3226.46	3226.46	2.53	No	Si
SLU 41	14.6	-1437.28	-5137	-0.0000334	0.0003743	0.0035	1.67	3826.35	4625.18	4625.18	3.22	No	Si
SLU 32	12.5	1254.77	-4013	-0.0000276	0.0003743	0.0035	1.67	3068.15	3302.83	3302.83	2.63	No	Si
SLU 32	14.6	-1507.28	-5274	-0.0000347	0.0003743	0.0035	1.67	3916.17	4720.34	4720.34	3.13	No	Si
SLU 33	12.5	1262.89	-3995	-0.0000276	0.0003743	0.0035	1.67	3055.6	3289.61	3289.61	2.6	No	Si
SLU 33	14.6	-1514.1	-5280	-0.0000348	0.0003743	0.0035	1.67	3919.7	4724.09	4724.09	3.12	No	Si
SLU 42	12.5	1280.89	-3890	-0.0000276	0.0003743	0.0035	1.67	2982.94	3213.23	3213.23	2.51	No	Si
SLU 42	14.6	-1444.1	-5142	-0.0000335	0.0003743	0.0035	1.67	3829.9	4628.91	4628.91	3.21	No	Si
SLU 39	12.5	1210.88	-3559	-0.0000258	0.0003743	0.0035	1.67	2749.78	2968.53	2968.53	2.45	No	Si
SLU 39	14.6	-1285.36	-4502	-0.0000295	0.0003743	0.0035	1.67	3403.41	4172.17	4172.17	3.25	No	Si
SLU 40	12.5	1218.99	-3541	-0.0000258	0.0003743	0.0035	1.67	2736.95	2955.04	2955.04	2.42	No	Si
SLU 40	14.6	-1292.17	-4507	-0.0000296	0.0003743	0.0035	1.67	3407.08	4176.13	4176.13	3.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	12.5	3992.83	-1708	-0.0244781	0.0005615	0.0035	1.336		1563.6	1563.6	0.39		No
SLV 4	14.6	-3913.43	-7962	-0.000086	0.0005615	0.0035	1.336		6755.15	6755.15	1.73		Si
SLV 13	12.5	-2158.11	-5179	-0.0000445	0.0005615	0.0035	1.67		4749.38	4749.38	2.2		Si
SLV 13	14.6	1602.43	115	-0.0162261	0.0005615	0.0035	1.336		0	0	0		No
SLV 2	12.5	3990.43	-544	-0.03392	0.0005615	0.0035	1.336		619.69	619.69	0.16		No
SLV 2	14.6	-3908.12	-7684	-0.0000875	0.0005615	0.0035	1.336		6559.39	6559.39	1.68		Si
SLV 1	12.5	3854.93	-635	-0.031809	0.0005615	0.0035	1.336		694.68	694.68	0.18		No
SLV 1	14.6	-3759.3	-7448	-0.0000835	0.0005615	0.0035	1.336		6391.31	6391.31	1.7		Si
SLV 5	12.5	1771.66	-851	-0.0098083	0.0005615	0.0035	1.336		870.9	870.9	0.49		No
SLV 5	14.6	-1902.96	-4518	-0.0000391	0.0005615	0.0035	1.67		4258.32	4258.32	2.24		Si
SLV 14	12.5	-2022.61	-5087	-0.0000417	0.0005615	0.0035	1.67		4682.21	4682.21	2.31		Si
SLV 14	14.6	1453.6	-120	-0.0127426	0.0005615	0.0035	1.336		271.75	271.75	0.19		No
SLV 6	12.5	1858.98	-792	-0.0111263	0.0005615	0.0035	1.336		822.62	822.62	0.44		No
SLV 6	14.6	-1998.87	-4670	-0.0000412	0.0005615	0.0035	1.67		4375.31	4375.31	2.19		Si
SLV 15	12.5	-2155.72	-6343	-0.0000461	0.0005615	0.0035	1.67		5607.08	5607.08	2.6		Si
SLV 15	14.6	1597.12	-163	-0.0137911	0.0005615	0.0035	1.336		307.34	307.34	0.19		No
SLV 16	12.5	-2020.21	-6251	-0.0000439	0.0005615	0.0035	1.67		5541.33	5541.33	2.74		Si
SLV 16	14.6	1448.3	-399	-0.0102518	0.0005615	0.0035	1.336		501.2	501.2	0.35		No
SLV 3	12.5	3857.33	-1800	-0.0225186	0.0005615	0.0035	1.336		1636.76	1636.76	0.42		No
SLV 3	14.6	-3764.6	-7727	-0.0000822	0.0005615	0.0035	1.336		6590.2	6590.2	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	12.5	1479.08	-5297	-4411	3104	1.67	1.6673	-9432	8202	3829	35683	14002	4259	18261	No	5.88	Si
SLU 78	14.6	-1918.44	-6780	-5646	3102	1.67	1.6562	-12074	8554	3967	35683	14002	4259	18261	No	5.89	Si
SLU 71	12.5	1357.56	-5235	-4359	2964	1.67	1.67	-9323	8187	3829	35683	14002	4259	18261	No	6.16	Si
SLU 71	14.6	-1880.48	-6554	-5457	2959	1.67	1.6442	-11671	8501	3913	35683	14002	4259	18261	No	6.17	Si
SLU 77	12.5	1470.96	-5315	-4426	3089	1.67	1.67	-9465	8206	3837	35683	14002	4259	18261	No	5.91	Si
SLU 77	14.6	-1911.62	-6775	-5641	3083	1.67	1.6585	-12064	8553	3972	35683	14002	4259	18261	No	5.92	Si
SLU 72	12.5	1365.68	-5217	-4344	2979	1.67	1.67	-9291	8183	3827	35683	14002	4259	18261	No	6.13	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	14.6	-1887.29	-6559	-5462	2977	1.67	1.6418	-11680	8502	3908	35683	14002	4259	18261	No	6.13	Si
SLU 70	12.5	1387.1	-5314	-4425	3043	1.67	1.67	-9463	8206	3837	35683	14002	4259	18261	No	6	Si
SLU 70	14.6	-1945.64	-6722	-5597	3042	1.67	1.6367	-11970	8540	3914	35683	14002	4259	18261	No	6	Si
SLU 80	12.5	1457.66	-5200	-4330	3041	1.67	1.664	-9260	8179	3811	35683	14002	4259	18261	No	6.01	Si
SLU 80	14.6	-1860.09	-6617	-5510	3037	1.67	1.6618	-11784	8516	3962	35683	14002	4259	18261	No	6.01	Si
SLU 69	12.5	1378.98	-5332	-4440	3027	1.67	1.67	-9495	8210	3839	35683	14002	4259	18261	No	6.03	Si
SLU 69	14.6	-1938.82	-6716	-5593	3024	1.67	1.639	-11960	8539	3919	35683	14002	4259	18261	No	6.04	Si
SLU 75	12.5	1417.18	-4948	-4120	2888	1.67	1.6457	-8811	8119	3741	35683	14002	4259	18261	No	6.32	Si
SLU 75	14.6	-1766.51	-6145	-5117	2888	1.67	1.6426	-10943	8404	3865	35683	14002	4259	18261	No	6.32	Si
SLU 79	12.5	1449.54	-5218	-4345	3025	1.67	1.67	-9292	8183	3827	35683	14002	4259	18261	No	6.04	Si
SLU 79	14.6	-1853.28	-6612	-5506	3019	1.67	1.6642	-11775	8514	3967	35683	14002	4259	18261	No	6.05	Si
SLU 74	12.5	1409.06	-4966	-4135	2873	1.67	1.6538	-8843	8124	3762	35683	14002	4259	18261	No	6.36	Si
SLU 74	14.6	-1759.7	-6140	-5113	2869	1.67	1.6452	-10933	8402	3871	35683	14002	4259	18261	No	6.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.5	1771.66	-851	-709	4041	1.336	0	0	0	0	35683	16803	3407	20209		5	Si
SLV 5	14.6	-1902.96	-4518	-3762	3516	1.67	1.2415	-10877	12592	4377	35683	21003	4259	25262		7.18	Si
SLD 4	12.5	2233.16	-2709	-2256	4353	1.336	0.0317	0	0	0	35683	16803	3407	20209		4.64	Si
SLD 4	14.6	-2335.19	-5653	-4708	3641	1.67	1.2658	-13366	13090	4639	35683	21003	4259	25262		6.94	Si
SLV 2	12.5	3990.43	-544	-453	7991	1.336	0	0	0	0	35683	16803	3407	20209		2.53	Si
SLV 2	14.6	-3908.12	-7684	-6398	6313	1.336	0.9792	0	0	0	35683	16803	3407	20209		3.2	Si
SLV 6	12.5	1858.98	-792	-660	4212	1.336	0	0	0	0	35683	16803	3407	20209		4.8	Si
SLV 6	14.6	-1998.87	-4670	-3889	3687	1.67	1.2209	-11435	12704	4343	35683	21003	4259	25262		6.85	Si
SLD 2	12.5	2231.95	-2195	-1828	4487	1.336	0	0	0	0	35683	16803	3407	20209		4.5	Si
SLD 2	14.6	-2333.1	-5530	-4605	3770	1.67	1.2393	-13354	13088	4542	35683	21003	4259	25262		6.7	Si
SLV 15	12.5	-2155.72	-6343	-5282	-4260	1.67	1.4854	-12776	12972	5395	35683	21003	4259	25262		5.93	Si
SLV 15	14.6	1597.12	-163	-136	-2583	1.336	0	0	0	0	35683	16803	3407	20209		7.82	Si
SLD 1	12.5	2173.77	-2235	-1861	4373	1.336	0	0	0	0	35683	16803	3407	20209		4.62	Si
SLD 1	14.6	-2269.2	-5429	-4521	3656	1.67	1.2511	-12984	13014	4559	35683	21003	4259	25262		6.91	Si
SLV 3	12.5	3857.33	-1800	-1499	7420	1.336	0	0	0	0	35683	16803	3407	20209		2.72	Si
SLV 3	14.6	-3764.6	-7727	-6434	5757	1.336	1.0434	0	0	0	35683	16803	3407	20209		3.51	Si
SLV 4	12.5	3992.83	-1708	-1422	7685	1.336	0	0	0	0	35683	16803	3407	20209		2.63	Si
SLV 4	14.6	-3913.43	-7962	-6630	6022	1.336	1.0306	0	0	0	35683	16803	3407	20209		3.36	Si
SLV 1	12.5	3854.93	-635	-529	7725	1.336	0	0	0	0	35683	16803	3407	20209		2.62	Si
SLV 1	14.6	-3759.3	-7448	-6202	6048	1.336	0.9909	0	0	0	35683	16803	3407	20209		3.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.109 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.53	0	-1218	197.07	0	0	No, e>t/2
SLV 14	179667	0.53	0	-679	197.07	0	0	No, e>t/2
SLV 13	179667	0.53	0	-494	197.07	0	0	No, e>t/2
SLV 15	179667	0.53	0	-1032	197.07	0	0	No, e>t/2
SLV 9	179667	0.53	4390	-2053	197.07	279.13	1.42	Si
SLV 10	179667	0.53	4646	-2172	197.07	294.87	1.5	Si
SLV 11	179667	0.53	8228	-3847	197.07	509.6	2.59	Si
SLV 5	179667	0.53	8338	-3899	197.07	516.05	2.62	Si
SLV 12	179667	0.53	8483	-3967	197.07	524.5	2.66	Si
SLV 6	179667	0.53	8594	-4018	197.07	530.93	2.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.109 Wa = 0.05 Ta = 0.0618

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-2197	-792	-139	2.662	447.3	0.894	43.25689	12.97607	Si
SLV 5	-2175	-851	-139	2.678	445.3	0.894	43.52455	12.97607	Si
SLV 10	-2099	-2155	-332	2.681	437.9	0.893	43.60668	12.97607	Si
SLV 9	-2077	-2214	-332	2.697	435.8	0.893	43.88352	12.97607	Si
SLV 8	-695	-4672	336	4.486	312	0.899	72.50181	12.97607	Si
SLV 7	-673	-4732	336	4.533	310.4	0.9	73.18463	12.97607	Si
SLV 12	-596	-6035	143	4.809	304.6	0.904	77.30346	12.97607	Si
SLV 11	-575	-6095	143	4.862	303.1	0.905	78.04595	12.97607	Si
SLV 2	-1791	-544	253	2.964	408.7	0.891	48.35105	6.54241	Si
SLV 1	-1758	-635	252	2.995	405.6	0.891	48.87354	6.54241	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.424	SLU 40	Si
V_SLU	5.882	SLU 78	Si
PF_SLV	0	SLV 13	No
V_SLV	2.529	SLV 2	Si
PFFP_SLV	0	SLV 13	No
R_SLV	3.334	SLV 6	Si

Maschio 249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L7	F1	1.02	0.28	3.217	3.216	3.217			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	13.4	195.78	-3307	-0.0000236	0.0003743	0.0035	1.02	1494.89	1583.52	1583.52	8.09	No	Si
SLU 44	15.2	-318.72	-2139	-0.000021	0.0003743	0.0035	1.02	1010.86	1267.63	1267.63	3.98	No	Si
SLU 22	13.4	231.67	-2695	-0.0000214	0.0003743	0.0035	1.02	1247.27	1346.77	1346.77	5.81	No	Si
SLU 22	15.2	-280.38	-1885	-0.0000185	0.0003743	0.0035	1.02	898.88	1150.4	1150.4	4.1	No	Si
SLU 43	13.4	190.31	-3325	-0.0000235	0.0003743	0.0035	1.02	1501.85	1590.04	1590.04	8.35	No	Si
SLU 43	15.2	-319.16	-2153	-0.0000211	0.0003743	0.0035	1.02	1016.64	1273.71	1273.71	3.99	No	Si
SLU 23	13.4	237.14	-2678	-0.0000214	0.0003743	0.0035	1.02	1239.91	1338.94	1338.94	5.65	No	Si
SLU 23	15.2	-279.94	-1871	-0.0000184	0.0003743	0.0035	1.02	892.98	1144.27	1144.27	4.09	No	Si
SLU 64	13.4	257.79	-3434	-0.0000263	0.0003743	0.0035	1.02	1544.53	1630.33	1630.33	6.32	No	Si
SLU 64	15.2	-346.75	-2334	-0.000023	0.0003743	0.0035	1.02	1094.68	1356	1356	3.91	No	Si
SLU 67	13.4	248.13	-4063	-0.0000295	0.0003743	0.0035	1.02	1782.66	1866.73	1866.73	7.52	No	Si
SLU 67	15.2	-361.74	-2839	-0.0000262	0.0003743	0.0035	1.02	1306.38	1580.79	1580.79	4.37	No	Si
SLU 73	13.4	224.95	-3235	-0.0000241	0.0003743	0.0035	1.02	1466.25	1556.88	1556.88	6.92	No	Si
SLU 73	15.2	-294.75	-2130	-0.0000203	0.0003743	0.0035	1.02	1006.92	1263.48	1263.48	4.29	No	Si
SLU 2	13.4	169.66	-2569	-0.0000187	0.0003743	0.0035	1.02	1194.34	1290.65	1290.65	7.61	No	Si
SLU 2	15.2	-252.35	-1690	-0.0000166	0.0003743	0.0035	1.02	812	1060.47	1060.47	4.2	No	Si
SLU 65	13.4	263.26	-3416	-0.0000263	0.0003743	0.0035	1.02	1537.64	1623.78	1623.78	6.17	No	Si
SLU 65	15.2	-346.31	-2320	-0.0000229	0.0003743	0.0035	1.02	1088.99	1350.15	1350.15	3.9	No	Si
SLU 1	13.4	164.19	-2586	-0.0000187	0.0003743	0.0035	1.02	1201.76	1298.48	1298.48	7.91	No	Si
SLU 1	15.2	-252.79	-1704	-0.0000166	0.0003743	0.0035	1.02	817.98	1066.64	1066.64	4.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	13.4	-2014.75	-5050	-0.00018	0.0005615	0.0035	0.816		2581.92	2581.92	1.28		Si
SLV 14	15.2	1020.65	-978	-0.0130004	0.0005615	0.0035	0.816		557.2	557.2	0.55		No
SLV 2	13.4	2245.62	21	-0.056642	0.0005615	0.0035	0.816		58.67	58.67	0.03		No
SLV 2	15.2	-1414.45	-2338	-0.0008841	0.0005615	0.0035	0.816		1375.34	1375.34	0.97		No
SLV 13	13.4	-2148.06	-5212	-0.0002155	0.0005615	0.0035	0.816		2650.42	2650.42	1.23		Si
SLV 13	15.2	1088.42	-946	-0.015001	0.0005615	0.0035	0.816		541.56	541.56	0.5		No
SLV 8	13.4	1267.03	-1654	-0.0114263	0.0005615	0.0035	0.816		884.62	884.62	0.7		No
SLV 8	15.2	-909.45	-2112	-0.0000959	0.0005615	0.0035	0.816		1270.11	1270.11	1.4		Si
SLV 1	13.4	2112.31	-141	-0.0510481	0.0005615	0.0035	0.816		141.21	141.21	0.07		No
SLV 1	15.2	-1346.67	-2306	-0.0007307	0.0005615	0.0035	0.816		1360.41	1360.41	1.01		Si
SLV 15	13.4	-1900.57	-5153	-0.000141	0.0005615	0.0035	0.816		2625.46	2625.46	1.38		Si
SLV 15	15.2	922.58	-1064	-0.009645	0.0005615	0.0035	0.816		599.36	599.36	0.65		No
SLD 4	13.4	1166.66	-1434	-0.0114376	0.0005615	0.0035	0.816		779.33	779.33	0.67		No
SLD 4	15.2	-817.79	-2025	-0.000069	0.0005615	0.0035	0.816		1229.58	1229.58	1.5		Si
SLV 3	13.4	2359.8	-82	-0.0581003	0.0005615	0.0035	0.816		111.46	111.46	0.05		No
SLV 3	15.2	-1512.52	-2424	-0.0010739	0.0005615	0.0035	0.816		1415.79	1415.79	0.94		No
SLV 16	13.4	-1767.25	-4990	-0.000122	0.0005615	0.0035	0.816		2556.8	2556.8	1.45		Si
SLV 16	15.2	854.8	-1096	-0.0075961	0.0005615	0.0035	0.816		614.93	614.93	0.72		No
SLV 4	13.4	2493.11	81	-0.0636697	0.0005615	0.0035	0.816		0	0	0		No
SLV 4	15.2	-1580.29	-2456	-0.0012469	0.0005615	0.0035	0.816		1430.76	1430.76	0.91		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	13.4	263.26	-3416	-2845	747	1.02	1.02	-9961	8273	2363	35683	8552	2601	11153	No	14.94	Si
SLU 65	15.2	-346.31	-2320	-1932	210	1.02	1.02	-6766	7847	2241	35683	8552	2601	11153	No	53.13	Si
SLU 69	13.4	227.59	-4580	-3814	748	1.02	1.02	-13355	8725	2492	35683	8552	2601	11153	No	14.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	15.2	-365.9	-3254	-2709	118	1.02	1.02	-9486	8209	2345	35683	8552	2601	11153	No	94.86	Si
SLU 68	13.4	246	-3923	-3267	746	1.02	1.02	-11438	8470	2419	35683	8552	2601	11153	No	14.95	Si
SLU 68	15.2	-350.21	-2727	-2271	164	1.02	1.02	-7952	8005	2286	35683	8552	2601	11153	No	68.11	Si
SLU 71	13.4	223.27	-4447	-3703	735	1.02	1.02	-12966	8673	2477	35683	8552	2601	11153	No	15.16	Si
SLU 71	15.2	-354.55	-3148	-2621	117	1.02	1.02	-9177	8168	2333	35683	8552	2601	11153	No	95.06	Si
SLU 70	13.4	230.87	-4570	-3805	754	1.02	1.02	-13324	8721	2491	35683	8552	2601	11153	No	14.79	Si
SLU 70	15.2	-365.64	-3246	-2703	118	1.02	1.02	-9463	8206	2344	35683	8552	2601	11153	No	94.73	Si
SLU 67	13.4	248.13	-4063	-3383	755	1.02	1.02	-11847	8524	2434	35683	8552	2601	11153	No	14.78	Si
SLU 67	15.2	-361.74	-2839	-2364	164	1.02	1.02	-8277	8048	2299	35683	8552	2601	11153	No	68.05	Si
SLU 66	13.4	244.85	-4074	-3392	749	1.02	1.02	-11878	8528	2436	35683	8552	2601	11153	No	14.9	Si
SLU 66	15.2	-362	-2847	-2370	164	1.02	1.02	-8300	8051	2299	35683	8552	2601	11153	No	68.12	Si
SLU 72	13.4	226.56	-4437	-3694	742	1.02	1.02	-12936	8669	2476	35683	8552	2601	11153	No	15.04	Si
SLU 72	15.2	-354.29	-3140	-2614	117	1.02	1.02	-9154	8165	2332	35683	8552	2601	11153	No	94.93	Si
SLU 64	13.4	257.79	-3434	-2860	737	1.02	1.02	-10013	8279	2365	35683	8552	2601	11153	No	15.14	Si
SLU 64	15.2	-346.75	-2334	-1943	210	1.02	1.02	-6804	7852	2242	35683	8552	2601	11153	No	53.2	Si
SLU 75	13.4	209.83	-3882	-3232	710	1.02	1.02	-11318	8453	2414	35683	8552	2601	11153	No	15.72	Si
SLU 75	15.2	-310.17	-2649	-2206	106	1.02	1.02	-7723	7974	2277	35683	8552	2601	11153	No	105.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	13.4	1267.03	-1654	-1377	2125	0.816	0	0	0	0	35683	10263	2081	12343		5.81	Si
SLV 8	15.2	-909.45	-2112	-1759	1087	0.816	0.2384	0	0	0	35683	10263	2081	12343		11.36	Si
SLV 4	13.4	2493.11	81	67	4333	0.816	0	0	0	0	35683	10263	2081	12343		2.85	Si
SLV 4	15.2	-1580.29	-2456	-2045	1822	0.816	0	0	0	0	35683	10263	2081	12343		6.77	Si
SLV 16	13.4	-1767.25	-4990	-4156	-2804	0.816	0.4676	0	0	0	35683	10263	2081	12343		4.4	Si
SLV 16	15.2	854.8	-1096	-913	-1161	0.816	0	0	0	0	35683	10263	2081	12343		10.63	Si
SLV 2	13.4	2245.62	21	18	4054	0.816	0	0	0	0	35683	10263	2081	12343		3.04	Si
SLV 2	15.2	-1414.45	-2338	-1947	1543	0.816	0	0	0	0	35683	10263	2081	12343		8	Si
SLV 3	13.4	2359.8	-82	-68	4127	0.816	0	0	0	0	35683	10263	2081	12343		2.99	Si
SLV 3	15.2	-1512.52	-2424	-2019	1722	0.816	0	0	0	0	35683	10263	2081	12343		7.17	Si
SLD 4	13.4	1166.66	-1434	-1194	2154	0.816	0	0	0	0	35683	10263	2081	12343		5.73	Si
SLD 4	15.2	-817.79	-2025	-1686	862	0.816	0.3186	0	0	0	35683	10263	2081	12343		14.33	Si
SLV 1	13.4	2112.31	-141	-117	3847	0.816	0	0	0	0	35683	10263	2081	12343		3.21	Si
SLV 1	15.2	-1346.67	-2306	-1920	1442	0.816	0	0	0	0	35683	10263	2081	12343		8.56	Si
SLV 15	13.4	-1900.57	-5153	-4291	-3010	0.816	0.4235	0	0	0	35683	10263	2081	12343		4.1	Si
SLV 15	15.2	922.58	-1064	-886	-1262	0.816	0	0	0	0	35683	10263	2081	12343		9.78	Si
SLV 14	13.4	-2014.75	-5050	-4205	-3083	0.816	0.3331	0	0	0	35683	10263	2081	12343		4	Si
SLV 14	15.2	1020.65	-978	-815	-1441	0.816	0	0	0	0	35683	10263	2081	12343		8.57	Si
SLV 13	13.4	-2148.06	-5212	-4340	-3289	0.816	0.2936	0	0	0	35683	10263	2081	12343		3.75	Si
SLV 13	15.2	1088.42	-946	-788	-1542	0.816	0	0	0	0	35683	10263	2081	12343		8.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.108 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.53	0	309	120.21	0	0	No, Trazione
SLV 2	179667	0.53	0	471	120.21	0	0	No, Trazione
SLV 4	179667	0.53	0	473	120.21	0	0	No, Trazione
SLV 3	179667	0.53	0	311	120.21	0	0	No, Trazione
SLV 8	179667	0.53	4740	-1354	120.21	183.63	1.53	Si
SLV 6	179667	0.53	4763	-1360	120.21	184.52	1.53	Si
SLV 7	179667	0.53	5106	-1458	120.21	197.33	1.64	Si
SLV 5	179667	0.53	5130	-1465	120.21	198.22	1.65	Si
SLV 12	179667	0.53	10142	-2897	120.21	378.6	3.15	Si
SLV 10	179667	0.53	10166	-2903	120.21	379.42	3.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.108 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1273	-2955	-19	2.781	266.5	0.893	45.23466	12.95694	Si
SLV 5	-1272	-2897	-20	2.781	266.4	0.893	45.2485	12.95694	Si
SLV 10	-1233	-1988	-28	2.829	262.7	0.893	46.06073	12.95694	Si
SLV 9	-1232	-1930	-28	2.83	262.6	0.893	46.07509	12.95694	Si
SLV 8	-661	-4223	32	3.898	210	0.89	63.65195	12.95694	Si
SLV 7	-660	-4166	31	3.9	209.9	0.89	63.68321	12.95694	Si
SLV 12	-621	-3257	23	4.01	206.5	0.891	65.42062	12.95694	Si
SLV 11	-620	-3199	23	4.012	206.5	0.891	65.4533	12.95694	Si
SLV 2	-1105	-4543	8	3.024	250.5	0.891	49.32288	6.53855	Si
SLV 1	-1104	-4453	8	3.026	250.4	0.891	49.35389	6.53855	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.899	SLU 65	Si
V_SLU	14.775	SLU 67	Si
PF_SLV	0	SLV 4	No
V_SLV	2.849	SLV 4	Si
PFFP_SLV	0	SLV 4	No
R_SLV	3.491	SLV 6	Si

Maschio 250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L7	F1	0.55	0.28	3.215	3.215	3.215			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	14.5	4.5	-1577	-0.0000159	0.0003743	0.0035	0.55	390.04	417.48	417.48	92.71	No	Si
SLU 52	15.3	-121.2	-1680	-0.0000295	0.0003743	0.0035	0.55	412.55	492.15	492.15	4.06	No	Si
SLU 43	14.5	3.69	-1595	-0.000016	0.0003743	0.0035	0.55	393.95	421.44	421.44	114.1	No	Si
SLU 43	15.3	-123.98	-1646	-0.0000295	0.0003743	0.0035	0.55	405.11	484.27	484.27	3.91	No	Si
SLU 73	14.5	7.25	-1676	-0.0000172	0.0003743	0.0035	0.55	411.59	439.29	439.29	60.59	No	Si
SLU 73	15.3	-136.31	-1858	-0.000033	0.0003743	0.0035	0.55	450.44	532.99	532.99	3.91	No	Si
SLU 64	14.5	6.44	-1694	-0.0000172	0.0003743	0.0035	0.55	415.43	443.16	443.16	68.81	No	Si
SLU 64	15.3	-139.09	-1824	-0.000033	0.0003743	0.0035	0.55	443.22	525.12	525.12	3.78	No	Si
SLU 23	14.5	9.7	-1333	-0.000014	0.0003743	0.0035	0.55	335.46	360.87	360.87	37.22	No	Si
SLU 23	15.3	-116.14	-1513	-0.0000272	0.0003743	0.0035	0.55	375.95	453.76	453.76	3.91	No	Si
SLU 65	14.5	9.82	-1675	-0.0000174	0.0003743	0.0035	0.55	411.45	439.15	439.15	44.7	No	Si
SLU 65	15.3	-140.76	-1846	-0.0000334	0.0003743	0.0035	0.55	447.88	530.19	530.19	3.77	No	Si
SLU 22	14.5	6.31	-1352	-0.0000138	0.0003743	0.0035	0.55	339.66	365.32	365.32	57.87	No	Si
SLU 22	15.3	-114.46	-1491	-0.0000268	0.0003743	0.0035	0.55	371.03	448.62	448.62	3.92	No	Si
SLU 82	14.5	4.79	-1683	-0.000017	0.0003743	0.0035	0.55	413.24	440.95	440.95	91.99	No	Si
SLU 82	15.3	-133.72	-1854	-0.0000327	0.0003743	0.0035	0.55	449.68	532.16	532.16	3.98	No	Si
SLU 44	14.5	7.08	-1576	-0.0000161	0.0003743	0.0035	0.55	389.91	417.34	417.34	58.97	No	Si
SLU 44	15.3	-125.66	-1668	-0.0000299	0.0003743	0.0035	0.55	409.91	489.35	489.35	3.89	No	Si
SLU 81	14.5	2.76	-1694	-0.0000169	0.0003743	0.0035	0.55	415.62	443.36	443.36	160.41	No	Si
SLU 81	15.3	-132.72	-1841	-0.0000324	0.0003743	0.0035	0.55	446.89	529.11	529.11	3.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	14.5	292.33	183	-0.0262032	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	15.3	-476.21	-1112	-0.0020742	0.0005615	0.0035	0.44		360.45	360.45	0.76		No
SLV 4	14.5	251.59	235	-0.0060831	0.0005615	0.0035	0.44		0	0	0		No
SLV 4	15.3	-475.74	-702	-0.0034543	0.0005615	0.0035	0.44		255.2	255.2	0.54		No
SLD 3	14.5	95.62	-690	-0.0000178	0.0005615	0.0035	0.55		202.49	202.49	2.12		Si
SLD 3	15.3	-246.92	-1083	-0.0000833	0.0005615	0.0035	0.44		353.15	353.15	1.43		Si
SLD 1	14.5	113.47	-713	-0.0000218	0.0005615	0.0035	0.55		208.52	208.52	1.84		Si
SLD 1	15.3	-247.2	-1263	-0.0000577	0.0005615	0.0035	0.44		398.24	398.24	1.61		Si
SLV 8	14.5	21.82	-725	-0.0000092	0.0005615	0.0035	0.55		211.78	211.78	9.71		Si
SLV 8	15.3	-219.81	-545	-0.0005999	0.0005615	0.0035	0.44		214	214	0.97		No
SLD 2	14.5	127.47	-655	-0.0000289	0.0005615	0.0035	0.55		193.48	193.48	1.52		Si
SLD 2	15.3	-262.48	-1261	-0.0000686	0.0005615	0.0035	0.44		397.71	397.71	1.52		Si
SLV 3	14.5	218.99	101	-0.0207496	0.0005615	0.0035	0.44		0	0	0		No
SLV 3	15.3	-440.17	-707	-0.0027864	0.0005615	0.0035	0.44		256.5	256.5	0.58		No
SLV 1	14.5	259.73	49	-0.0237663	0.0005615	0.0035	0.44		0	0	0		No
SLV 1	15.3	-440.64	-1117	-0.001589	0.0005615	0.0035	0.44		361.69	361.69	0.82		No
SLV 7	14.5	0.81	-812	-0.0000079	0.0005615	0.0035	0.55		234.35	234.35	288.58		Si
SLV 7	15.3	-196.89	-548	-0.0004311	0.0005615	0.0035	0.44		214.84	214.84	1.09		Si
SLD 4	14.5	109.62	-632	-0.000022	0.0005615	0.0035	0.55		187.45	187.45	1.71		Si
SLD 4	15.3	-262.19	-1081	-0.0001172	0.0005615	0.0035	0.44		352.61	352.61	1.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	14.5	-23.25	-2187	-1821	6	0.55	0.55	-11824	8521	1312	35683	4612	1403	6014	No	1047.15	Si
SLU 70	15.3	-133.92	-2439	-2031	173	0.55	0.55	-13185	8703	1340	35683	4612	1403	6014	No	34.69	Si
SLU 67	14.5	-8.29	-1982	-1650	58	0.55	0.55	-10717	8373	1290	35683	4612	1403	6014	No	102.97	Si
SLU 67	15.3	-141.21	-2187	-1821	176	0.55	0.55	-11825	8521	1312	35683	4612	1403	6014	No	34.17	Si
SLU 65	14.5	9.82	-1675	-1395	113	0.55	0.55	-9057	8152	1255	35683	4612	1403	6014	No	53.12	Si
SLU 65	15.3	-140.76	-1846	-1537	176	0.55	0.55	-9981	8275	1274	35683	4612	1403	6014	No	34.18	Si
SLU 76	14.5	-7.71	-1880	-1566	42	0.55	0.55	-10167	8300	1278	35683	4612	1403	6014	No	142.89	Si
SLU 76	15.3	-129.02	-2110	-1757	175	0.55	0.55	-11408	8465	1304	35683	4612	1403	6014	No	34.32	Si
SLU 74	14.5	-12.89	-1994	-1660	34	0.55	0.55	-10780	8382	1291	35683	4612	1403	6014	No	175.11	Si
SLU 74	15.3	-135.74	-2186	-1820	173	0.55	0.55	-11819	8520	1312	35683	4612	1403	6014	No	34.68	Si
SLU 82	14.5	4.79	-1683	-1402	83	0.55	0.55	-9102	8158	1256	35683	4612	1403	6014	No	72.36	Si
SLU 82	15.3	-133.72	-1854	-1544	176	0.55	0.55	-10027	8281	1275	35683	4612	1403	6014	No	34.24	Si
SLU 68	14.5	-5.14	-1880	-1565	61	0.55	0.55	-10164	8300	1278	35683	4612	1403	6014	No	99.3	Si
SLU 68	15.3	-133.48	-2098	-1747	173	0.55	0.55	-11342	8457	1302	35683	4612	1403	6014	No	34.69	Si
SLU 78	14.5	-25.83	-2187	-1821	-13	0.55	0.55	-11827	8521	1312	35683	4612	1403	6014	No	472.44	Si
SLU 78	15.3	-129.46	-2451	-2041	175	0.55	0.55	-13251	8711	1342	35683	4612	1403	6014	No	34.32	Si
SLU 75	14.5	-10.86	-1983	-1651	40	0.55	0.55	-10720	8374	1290	35683	4612	1403	6014	No	150.6	Si
SLU 75	15.3	-136.75	-2199	-1831	178	0.55	0.55	-11891	8530	1314	35683	4612	1403	6014	No	33.82	Si
SLU 73	14.5	7.25	-1676	-1395	95	0.55	0.55	-9061	8153	1256	35683	4612	1403	6014	No	63.47	Si
SLU 73	15.3	-136.31	-1858	-1547	178	0.55	0.55	-10047	8284	1276	35683	4612	1403	6014	No	33.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	14.5	218.99	101	84	1373	0.44	0	0	0	0	35683	5534	1122	6656		4.85	Si
SLV 3	15.3	-440.17	-707	-589	-24	0.44	0	0	0	0	35683	5534	1122	6656		272.03	Si
SLV 16	14.5	-252.5	-2611	-2175	-1238	0.55	0.535	-14120	13241	1983	35683	6917	1403	8320		6.72	Si
SLV 16	15.3	235.84	-1618	-1347	91	0.55	0.3877	-8747	12166	1321	35683	6917	1403	8320		91.88	Si
SLV 15	14.5	-285.1	-2746	-2286	-1365	0.55	0.5135	-14846	13386	1925	35683	6917	1403	8320		6.1	Si
SLV 15	15.3	271.42	-1623	-1351	44	0.55	0.3232	-8774	12172	1102	35683	6917	1403	8320		186.98	Si
SLD 2	14.5	127.47	-655	-546	682	0.55	0.2413	-3542	11125	752	35683	6917	1403	8320		12.2	Si
SLD 2	15.3	-262.48	-1261	-1050	166	0.44	0.2005	0	0	0	35683	5534	1122	6656		39.98	Si
SLV 2	14.5	292.33	183	153	1502	0.44	0	0	0	0	35683	5534	1122	6656		4.43	Si
SLV 2	15.3	-476.21	-1112	-926	213	0.44	0	0	0	0	35683	5534	1122	6656		31.27	Si
SLV 14	14.5	-211.76	-2663	-2217	-1236	0.55	0.55	-14399	13296	2048	35683	6917	1403	8320		6.73	Si
SLV 14	15.3	235.37	-2028	-1689	282	0.55	0.4768	-10965	12610	1684	35683	6917	1403	8320		29.52	Si
SLV 13	14.5	-244.36	-2797	-2329	-1363	0.55	0.55	-15124	13442	2070	35683	6917	1403	8320		6.11	Si
SLV 13	15.3	270.95	-2033	-1693	236	0.55	0.4252	-10992	12615	1502	35683	6917	1403	8320		35.29	Si
SLV 1	14.5	259.73	49	41	1375	0.44	0	0	0	0	35683	5534	1122	6656		4.84	Si
SLV 1	15.3	-440.64	-1117	-930	167	0.44	0	0	0	0	35683	5534	1122	6656		39.91	Si
SLV 4	14.5	251.59	235	196	1500	0.44	0	0	0	0	35683	5534	1122	6656		4.44	Si
SLV 4	15.3	-475.74	-702	-584	22	0.44	0	0	0	0	35683	5534	1122	6656		308.34	Si
SLD 4	14.5	109.62	-632	-526	682	0.55	0.3047	-3417	11100	947	35683	6917	1403	8320		12.21	Si
SLD 4	15.3	-262.19	-1081	-900	82	0.44	0.0971	0	0	0	35683	5534	1122	6656		81.17	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.108 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	0	-329	64.76	0	0	No, e>t/2
SLV 9	179667	0.53	0	-346	64.76	0	0	No, e>t/2
SLV 14	179667	0.53	3305	-509	64.76	69.71	1.08	Si
SLV 13	179667	0.53	3478	-536	64.76	73.27	1.13	Si
SLV 6	179667	0.53	3739	-576	64.76	78.63	1.21	Si
SLV 5	179667	0.53	3850	-593	64.76	80.92	1.25	Si
SLV 16	179667	0.53	5940	-915	64.76	123.09	1.9	Si
SLV 15	179667	0.53	6113	-941	64.76	126.52	1.95	Si
SLV 2	179667	0.53	8655	-1333	64.76	176.03	2.72	Si
SLV 1	179667	0.53	8828	-1360	64.76	179.33	2.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.108 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1494	-372	-20	1.636	223.4	0.919	25.88419	12.9425	Si
SLV 10	-1483	-320	-20	1.645	222.2	0.918	26.0382	12.9425	Si
SLV 5	-1132	-353	-15	2.004	187.3	0.908	32.07919	12.9425	Si
SLV 6	-1121	-301	-15	2.018	186.2	0.908	32.31509	12.9425	Si
SLV 13	-1547	-1070	-12	1.598	228.7	0.92	25.23395	6.5356	Si
SLV 14	-1530	-989	-12	1.611	227	0.92	25.4612	6.5356	Si
SLV 11	-432	-2265	19	3.563	119.9	0.889	58.24864	12.9425	Si
SLV 12	-421	-2213	19	3.608	118.9	0.889	58.98889	12.9425	Si
SLV 15	-1229	-1638	-1	1.9	196.9	0.911	30.31298	6.5356	Si
SLV 16	-1211	-1557	-1	1.92	195.1	0.91	30.63999	6.5356	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.767	SLU 65	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	33.816	SLU 75	Si
PF_SLV	0	SLV 1	No
V_SLV	4.431	SLV 2	Si
PFFP_SLV	0	SLV 9	No
R_SLV	2	SLV 9	Si

Maschio 251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L7	F1	2.28	0.28	3.213	3.212	3.214			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	14.5	256.51	-7080	-0.0000183	0.0003743	0.0035	2.28	7191.83	7675.64	7675.64	29.92	No	Si
SLU 47	15.3	-359.8	-5245	-0.0000145	0.0003743	0.0035	2.28	5497.11	6958.13	6958.13	19.34	No	Si
SLU 8	14.5	111.62	-6554	-0.0000161	0.0003743	0.0035	2.28	6718.35	7202.52	7202.52	64.53	No	Si
SLU 8	15.3	-340.44	-5055	-0.0000139	0.0003743	0.0035	2.28	5314.1	6768	6768	19.88	No	Si
SLU 29	14.5	146.14	-7185	-0.0000179	0.0003743	0.0035	2.28	7285.49	7760.7	7760.7	53.11	No	Si
SLU 29	15.3	-362.65	-5631	-0.0000155	0.0003743	0.0035	2.28	5862.72	7335.02	7335.02	20.23	No	Si
SLU 72	14.5	216.12	-8463	-0.0000214	0.0003743	0.0035	2.28	8391.45	8807.73	8807.73	40.75	No	Si
SLU 72	15.3	-430.18	-6515	-0.000018	0.0003743	0.0035	2.28	6682.77	8210.39	8210.39	19.09	No	Si
SLU 51	14.5	181.61	-7832	-0.0000197	0.0003743	0.0035	2.28	7852.59	8287.48	8287.48	45.63	No	Si
SLU 51	15.3	-407.97	-5939	-0.0000165	0.0003743	0.0035	2.28	6152.02	7638.47	7638.47	18.72	No	Si
SLU 68	14.5	291.03	-7711	-0.0000201	0.0003743	0.0035	2.28	7747.34	8188.15	8188.15	28.14	No	Si
SLU 68	15.3	-382.01	-5821	-0.000016	0.0003743	0.0035	2.28	6041.87	7522.24	7522.24	19.69	No	Si
SLU 9	14.5	117.27	-6519	-0.0000161	0.0003743	0.0035	2.28	6686.64	7168.48	7168.48	61.13	No	Si
SLU 9	15.3	-343.64	-5025	-0.0000139	0.0003743	0.0035	2.28	5285.33	6737.99	6737.99	19.61	No	Si
SLU 50	14.5	175.96	-7867	-0.0000197	0.0003743	0.0035	2.28	7882.7	8316.03	8316.03	47.26	No	Si
SLU 50	15.3	-404.77	-5969	-0.0000165	0.0003743	0.0035	2.28	6179.84	7667.95	7667.95	18.94	No	Si
SLU 30	14.5	151.79	-7150	-0.0000178	0.0003743	0.0035	2.28	7254.55	7732.54	7732.54	50.94	No	Si
SLU 30	15.3	-365.85	-5601	-0.0000154	0.0003743	0.0035	2.28	5834.55	7305.79	7305.79	19.97	No	Si
SLU 71	14.5	210.47	-8498	-0.0000215	0.0003743	0.0035	2.28	8420.79	8836.64	8836.64	41.98	No	Si
SLU 71	15.3	-426.98	-6545	-0.0000181	0.0003743	0.0035	2.28	6709.98	8239.97	8239.97	19.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	14.5	-702.4	-4535	-0.0000148	0.0005615	0.0035	2.28		6305.74	6305.74	8.98		Si
SLV 16	15.3	471.66	-3409	-0.0000108	0.0005615	0.0035	2.28		4065.35	4065.35	8.62		Si
SLV 4	14.5	1180.53	-7142	-0.000024	0.0005615	0.0035	2.28		7966.17	7966.17	6.75		Si
SLV 4	15.3	-1146.33	-5096	-0.0000189	0.0005615	0.0035	2.28		6884.63	6884.63	6.01		Si
SLV 2	14.5	1334.28	-5978	-0.0000221	0.0005615	0.0035	2.28		6773.85	6773.85	5.08		Si
SLV 2	15.3	-1043.87	-4279	-0.0000163	0.0005615	0.0035	2.28		6037.27	6037.27	5.78		Si
SLV 5	14.5	769.1	-3703	-0.0000133	0.0005615	0.0035	2.28		4379.97	4379.97	5.69		Si
SLV 5	15.3	-268.47	-2762	-0.000008	0.0005615	0.0035	2.28		4415.12	4415.12	16.45		Si
SLV 14	14.5	-548.66	-3371	-0.0000111	0.0005615	0.0035	2.28		5071.18	5071.18	9.24		Si
SLV 14	15.3	574.12	-2593	-0.0000095	0.0005615	0.0035	2.28		3181.39	3181.39	5.54		Si
SLV 3	14.5	1076.54	-7137	-0.0000233	0.0005615	0.0035	2.28		7960.97	7960.97	7.39		Si
SLV 3	15.3	-1037.39	-5126	-0.0000183	0.0005615	0.0035	2.28		6916.02	6916.02	6.67		Si
SLV 15	14.5	-806.4	-4530	-0.0000155	0.0005615	0.0035	2.28		6300.37	6300.37	7.81		Si
SLV 15	15.3	580.59	-3440	-0.0000115	0.0005615	0.0035	2.28		4098.14	4098.14	7.06		Si
SLV 13	14.5	-652.66	-3366	-0.0000118	0.0005615	0.0035	2.28		5065.67	5065.67	7.76		Si
SLV 13	15.3	683.05	-2623	-0.0000102	0.0005615	0.0035	2.28		3214.33	3214.33	4.71		Si
SLV 6	14.5	836.12	-3706	-0.0000137	0.0005615	0.0035	2.28		4383.52	4383.52	5.24		Si
SLV 6	15.3	-338.67	-2742	-0.0000084	0.0005615	0.0035	2.28		4393.96	4393.96	12.97		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	14.5	1230.28	-5972	-0.0000215	0.0005615	0.0035	2.28		6768.53	6768.53	5.5		Si
SLV 1	15.3	-934.93	-4310	-0.0000157	0.0005615	0.0035	2.28		6069.17	6069.17	6.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	14.5	216.12	-8463	-7047	1907	2.28	2.28	-11039	8416	5373	35683	19116	5814	24930	No	13.07	Si
SLU 72	15.3	-430.18	-6515	-5425	1589	2.28	2.28	-8498	8078	5157	35683	19116	5814	24930	No	15.69	Si
SLU 69	14.5	232.33	-8887	-7400	1934	2.28	2.28	-11591	8490	5420	35683	19116	5814	24930	No	12.89	Si
SLU 69	15.3	-404.85	-6913	-5756	1602	2.28	2.28	-9017	8147	5201	35683	19116	5814	24930	No	15.56	Si
SLU 78	14.5	238.59	-8772	-7305	1814	2.28	2.28	-11442	8470	5407	35683	19116	5814	24930	No	13.74	Si
SLU 78	15.3	-357.16	-6842	-5697	1532	2.28	2.28	-8925	8134	5193	35683	19116	5814	24930	No	16.28	Si
SLU 66	14.5	303.47	-8158	-6793	1883	2.28	2.28	-10641	8363	5339	35683	19116	5814	24930	No	13.24	Si
SLU 66	15.3	-354.55	-6239	-5195	1556	2.28	2.28	-8138	8029	5126	35683	19116	5814	24930	No	16.03	Si
SLU 77	14.5	232.94	-8807	-7334	1811	2.28	2.28	-11488	8476	5411	35683	19116	5814	24930	No	13.77	Si
SLU 77	15.3	-353.97	-6872	-5722	1523	2.28	2.28	-8964	8140	5196	35683	19116	5814	24930	No	16.37	Si
SLU 65	14.5	362.17	-6982	-5814	1807	2.28	2.28	-9107	8159	5208	35683	19116	5814	24930	No	13.8	Si
SLU 65	15.3	-331.71	-5147	-4286	1501	2.28	2.28	-6714	7840	5005	35683	19116	5814	24930	No	16.61	Si
SLU 71	14.5	210.47	-8498	-7076	1904	2.28	2.28	-11084	8422	5377	35683	19116	5814	24930	No	13.09	Si
SLU 71	15.3	-426.98	-6545	-5450	1580	2.28	2.28	-8537	8083	5160	35683	19116	5814	24930	No	15.78	Si
SLU 70	14.5	237.98	-8852	-7371	1937	2.28	2.28	-11546	8484	5416	35683	19116	5814	24930	No	12.87	Si
SLU 70	15.3	-408.05	-6883	-5731	1612	2.28	2.28	-8978	8141	5197	35683	19116	5814	24930	No	15.47	Si
SLU 68	14.5	291.03	-7711	-6421	1858	2.28	2.28	-10058	8285	5289	35683	19116	5814	24930	No	13.42	Si
SLU 68	15.3	-382.01	-5821	-4847	1548	2.28	2.28	-7593	7957	5080	35683	19116	5814	24930	No	16.11	Si
SLU 67	14.5	309.12	-8123	-6764	1886	2.28	2.28	-10595	8357	5335	35683	19116	5814	24930	No	13.22	Si
SLU 67	15.3	-357.75	-6209	-5170	1565	2.28	2.28	-8099	8024	5123	35683	19116	5814	24930	No	15.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	14.5	1334.28	-5978	-4978	4569	2.28	2.28	-7797	11976	7645	35683	28675	5814	34489		7.55	Si
SLV 2	15.3	-1043.87	-4279	-3563	3608	2.28	2.28	-5582	11533	7363	35683	28675	5814	34489		9.56	Si
SLD 1	14.5	678.88	-5555	-4626	2574	2.28	2.28	-7246	11866	7575	35683	28675	5814	34489		13.4	Si
SLD 1	15.3	-532.8	-4047	-3370	2051	2.28	2.28	-5279	11472	7324	35683	28675	5814	34489		16.81	Si
SLD 2	14.5	723.53	-5557	-4628	2712	2.28	2.28	-7249	11866	7575	35683	28675	5814	34489		12.72	Si
SLD 2	15.3	-579.58	-4034	-3359	2171	2.28	2.28	-5262	11469	7322	35683	28675	5814	34489		15.88	Si
SLD 3	14.5	610.56	-6067	-5052	2699	2.28	2.28	-7914	11999	7660	35683	28675	5814	34489		12.78	Si
SLD 3	15.3	-578.16	-4407	-3669	2038	2.28	2.28	-5748	11566	7384	35683	28675	5814	34489		16.92	Si
SLV 1	14.5	1230.28	-5972	-4973	4248	2.28	2.28	-7790	11975	7645	35683	28675	5814	34489		8.12	Si
SLV 1	15.3	-934.93	-4310	-3589	3329	2.28	2.28	-5621	11541	7368	35683	28675	5814	34489		10.36	Si
SLV 3	14.5	1076.54	-7137	-5943	4530	2.28	2.28	-9309	12278	7839	35683	28675	5814	34489		7.61	Si
SLV 3	15.3	-1037.39	-5126	-4268	3298	2.28	2.28	-6686	11754	7504	35683	28675	5814	34489		10.46	Si
SLV 7	14.5	256.63	-7584	-6315	2658	2.28	2.28	-9892	12395	7913	35683	28675	5814	34489		12.98	Si
SLV 7	15.3	-610	-5483	-4566	1660	2.28	2.28	-7152	11847	7563	35683	28675	5814	34489		20.78	Si
SLD 4	14.5	655.22	-6069	-5054	2837	2.28	2.28	-7916	12000	7661	35683	28675	5814	34489		12.16	Si
SLD 4	15.3	-624.93	-4393	-3659	2158	2.28	2.28	-5731	11563	7382	35683	28675	5814	34489		15.98	Si
SLV 4	14.5	1180.53	-7142	-5947	4852	2.28	2.28	-9316	12280	7839	35683	28675	5814	34489		7.11	Si
SLV 4	15.3	-1146.33	-5096	-4243	3578	2.28	2.28	-6647	11746	7499	35683	28675	5814	34489		9.64	Si
SLV 8	14.5	323.65	-7587	-6318	2865	2.28	2.28	-9896	12396	7913	35683	28675	5814	34489		12.04	Si
SLV 8	15.3	-680.2	-5463	-4549	1840	2.28	2.28	-7126	11842	7560	35683	28675	5814	34489		18.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.106 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	4476	-2858	268.15	388.36	1.45	Si
SLV 5	179667	0.53	4626	-2953	268.15	400.94	1.5	Si
SLV 10	179667	0.53	4836	-3087	268.15	418.54	1.56	Si
SLV 9	179667	0.53	4986	-3183	268.15	431.06	1.61	Si
SLV 2	179667	0.53	6010	-3836	268.15	515.97	1.92	Si
SLV 1	179667	0.53	6242	-3985	268.15	535.06	2	Si
SLV 14	179667	0.53	7208	-4602	268.15	613.84	2.29	Si
SLV 13	179667	0.53	7441	-4750	268.15	632.61	2.36	Si
SLV 4	179667	0.53	7719	-4928	268.15	654.99	2.44	Si
SLV 3	179667	0.53	7951	-5076	268.15	673.62	2.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.106 Wa = 0.05 Ta = 0.0616

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-3962	-8635	801	2.125	703.9	0.902	34.22388	12.9259	Si
SLV 7	-3959	-8743	801	2.125	703.7	0.902	34.24022	12.9259	Si
SLV 12	-3485	-9040	801	2.31	657.3	0.898	37.37956	12.9259	Si
SLV 11	-3483	-9149	801	2.312	657	0.898	37.39897	12.9259	Si
SLV 6	-2378	-2593	-789	2.907	551	0.89	47.45287	12.9259	Si
SLV 5	-2375	-2702	-789	2.909	550.8	0.89	47.48383	12.9259	Si
SLV 10	-1902	-2999	-790	3.271	506.9	0.889	53.4826	12.9259	Si
SLV 9	-1899	-3108	-790	3.274	506.7	0.889	53.52115	12.9259	Si
SLV 4	-3964	-6017	245	2.219	704.1	0.902	35.75309	6.53215	Si
SLV 3	-3959	-6185	245	2.221	703.7	0.902	35.77961	6.53215	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.723	SLU 51	Si
V_SLU	12.868	SLU 70	Si
PF_SLV	4.706	SLV 13	Si
V_SLV	7.108	SLV 4	Si
PFFP_SLV	1.448	SLV 6	Si
R_SLV	2.648	SLV 8	Si

Maschio 252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L7	F1	2.15	0.28	3.211	3.21	3.212			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 36	13.4	404.07	-5433	-0.0000163	0.0003743	0.0035	2.15	5323.04	5701.12	5701.12	14.11	No	Si
SLU 36	15.2	1555.38	-4674	-0.0000224	0.0003743	0.0035	2.15	4641.15	4981.8	4981.8	3.2	No	Si
SLU 28	13.4	575.43	-5600	-0.000018	0.0003743	0.0035	2.15	5470.33	5858.61	5858.61	10.18	No	Si
SLU 28	15.2	1483.5	-4643	-0.0000219	0.0003743	0.0035	2.15	4612.75	4952.05	4952.05	3.34	No	Si
SLU 17	13.4	415.36	-4882	-0.000015	0.0003743	0.0035	2.15	4830.02	5180.03	5180.03	12.47	No	Si
SLU 17	15.2	1301.42	-3953	-0.0000188	0.0003743	0.0035	2.15	3974.99	4287.04	4287.04	3.29	No	Si
SLU 29	13.4	560.76	-5444	-0.0000175	0.0003743	0.0035	2.15	5332.34	5711.04	5711.04	10.18	No	Si
SLU 29	15.2	1411.14	-4352	-0.0000206	0.0003743	0.0035	2.15	4346.58	4674.57	4674.57	3.31	No	Si
SLU 80	13.4	541.29	-6374	-0.0000197	0.0003743	0.0035	2.15	6139.35	6549.24	6549.24	12.1	No	Si
SLU 80	15.2	1617.03	-5113	-0.000024	0.0003743	0.0035	2.15	5038.01	5399.43	5399.43	3.34	No	Si
SLU 37	13.4	389.4	-5277	-0.0000158	0.0003743	0.0035	2.15	5184.13	5553.72	5553.72	14.26	No	Si
SLU 37	15.2	1483.02	-4384	-0.0000212	0.0003743	0.0035	2.15	4375.3	4704.42	4704.42	3.17	No	Si
SLU 38	13.4	378.5	-5196	-0.0000156	0.0003743	0.0035	2.15	5112.37	5478.1	5478.1	14.47	No	Si
SLU 38	15.2	1502.89	-4361	-0.0000213	0.0003743	0.0035	2.15	4354.81	4683.12	4683.12	3.12	No	Si
SLU 35	13.4	414.97	-5514	-0.0000166	0.0003743	0.0035	2.15	5394.13	5777.09	5777.09	13.92	No	Si
SLU 35	15.2	1535.51	-4696	-0.0000224	0.0003743	0.0035	2.15	4661.39	5003.03	5003.03	3.26	No	Si
SLU 16	13.4	426.27	-4962	-0.0000153	0.0003743	0.0035	2.15	4902.67	5256.53	5256.53	12.33	No	Si
SLU 16	15.2	1281.55	-3975	-0.0000187	0.0003743	0.0035	2.15	3995.79	4308.73	4308.73	3.36	No	Si
SLU 30	13.4	549.86	-5363	-0.0000172	0.0003743	0.0035	2.15	5261.05	5635.18	5635.18	10.25	No	Si
SLU 30	15.2	1431	-4330	-0.0000207	0.0003743	0.0035	2.15	4326.07	4653.26	4653.26	3.25	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	13.4	875.01	-2002	-0.000011	0.0005615	0.0035	2.15		2361.44	2361.44	2.7		Si
SLV 2	15.2	-51.72	-1138	-0.0000031	0.0005615	0.0035	2.15		2513.06	2513.06	48.59		Si
SLV 10	13.4	-400.41	2022	0.1455787	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	15.2	1919.6	-2914	-0.0000248	0.0005615	0.0035	2.15		3297.72	3297.72	1.72		Si
SLV 13	13.4	-412.1	-2921	-0.00001	0.0005615	0.0035	2.15		4342.36	4342.36	10.54		Si
SLV 13	15.2	2003.82	-4689	-0.0000257	0.0005615	0.0035	2.15		5082.71	5082.71	2.54		Si
SLD 10	13.4	71.48	-1525	-0.0000042	0.0005615	0.0035	2.15		1866.54	1866.54	26.11		Si
SLD 10	15.2	1227.5	-3012	-0.0000159	0.0005615	0.0035	2.15		3397.81	3397.81	2.77		Si
SLD 5	13.4	193.88	-1641	-0.0000053	0.0005615	0.0035	2.15		1986.03	1986.03	10.24		Si
SLD 5	15.2	993.75	-2643	-0.0000133	0.0005615	0.0035	2.15		3021.26	3021.26	3.04		Si
SLV 5	13.4	-114.69	1760	0.1257575	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	15.2	1372.82	-2051	-0.0000178	0.0005615	0.0035	2.15		2412.55	2412.55	1.76		Si
SLV 14	13.4	-305.78	-2352	-0.0000079	0.0005615	0.0035	2.15		3763.01	3763.01	12.31		Si
SLV 14	15.2	1929.83	-4475	-0.0000246	0.0005615	0.0035	2.15		4870.69	4870.69	2.52		Si
SLV 6	13.4	-46.17	2127	0.1515532	0.0005615	0.0035	1.72		0	0	0		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	15.2	1325.14	-1913	-0.0000176	0.0005615	0.0035	2.15		2268.67	2268.67	1.71		Si
SLD 9	13.4	41.55	-1685	-0.0000044	0.0005615	0.0035	2.15		2032.67	2032.67	48.92		Si
SLD 9	15.2	1248.33	-3072	-0.0000162	0.0005615	0.0035	2.15		3459.59	3459.59	2.77		Si
SLV 9	13.4	-468.93	1655	0.1196893	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	15.2	1967.28	-3052	-0.0000251	0.0005615	0.0035	2.15		3439.19	3439.19	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	13.4	419.3	-5880	-4896	-1237	2.15	2.15	-8133	8029	4833	35683	18027	5483	23509	No	19	Si
SLU 84	15.2	1348.38	-4641	-3865	-1223	2.15	2.15	-6420	7800	4696	35683	18027	5483	23509	No	19.22	Si
SLU 36	13.4	404.07	-5433	-4524	-1322	2.15	2.15	-7515	7947	4784	35683	18027	5483	23509	No	17.79	Si
SLU 36	15.2	1555.38	-4674	-3892	-1306	2.15	2.15	-6465	7806	4700	35683	18027	5483	23509	No	18	Si
SLU 80	13.4	541.29	-6374	-5308	-1306	2.15	2.15	-8816	8120	4888	35683	18027	5483	23509	No	17.99	Si
SLU 80	15.2	1617.03	-5113	-4258	-1290	2.15	2.15	-7072	7887	4748	35683	18027	5483	23509	No	18.22	Si
SLU 79	13.4	552.2	-6454	-5375	-1249	2.15	2.15	-8928	8135	4897	35683	18027	5483	23509	No	18.82	Si
SLU 79	15.2	1597.17	-5135	-4276	-1243	2.15	2.15	-7103	7892	4751	35683	18027	5483	23509	No	18.91	Si
SLU 77	13.4	577.77	-6691	-5572	-1309	2.15	2.15	-9256	8179	4924	35683	18027	5483	23509	No	17.96	Si
SLU 77	15.2	1649.66	-5448	-4536	-1303	2.15	2.15	-7535	7949	4785	35683	18027	5483	23509	No	18.04	Si
SLU 37	13.4	389.4	-5277	-4394	-1205	2.15	2.15	-7299	7918	4766	35683	18027	5483	23509	No	19.52	Si
SLU 37	15.2	1483.02	-4384	-3650	-1199	2.15	2.15	-6063	7753	4667	35683	18027	5483	23509	No	19.61	Si
SLU 35	13.4	414.97	-5514	-4591	-1264	2.15	2.15	-7627	7961	4793	35683	18027	5483	23509	No	18.59	Si
SLU 35	15.2	1535.51	-4696	-3910	-1259	2.15	2.15	-6496	7811	4702	35683	18027	5483	23509	No	18.67	Si
SLU 42	13.4	256.5	-4702	-3916	-1193	2.15	2.15	-6504	7812	4703	35683	18027	5483	23509	No	19.71	Si
SLU 42	15.2	1234.23	-3889	-3239	-1179	2.15	2.15	-5380	7662	4612	35683	18027	5483	23509	No	19.95	Si
SLU 38	13.4	378.5	-5196	-4327	-1262	2.15	2.15	-7188	7903	4758	35683	18027	5483	23509	No	18.63	Si
SLU 38	15.2	1502.89	-4361	-3632	-1246	2.15	2.15	-6033	7749	4665	35683	18027	5483	23509	No	18.87	Si
SLU 78	13.4	566.87	-6611	-5505	-1366	2.15	2.15	-9144	8164	4915	35683	18027	5483	23509	No	17.21	Si
SLU 78	15.2	1669.53	-5425	-4518	-1350	2.15	2.15	-7505	7945	4783	35683	18027	5483	23509	No	17.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	13.4	928.22	-10780	-8977	3093	2.15	2.15	-14911	13399	8066	35683	27040	5483	32523		10.51	Si
SLV 11	15.2	52.54	-4284	-3568	3425	2.15	2.15	-5926	11602	6984	35683	27040	5483	32523		9.5	Si
SLV 7	13.4	1282.45	-10675	-8889	4401	2.15	2.15	-14766	13370	8049	35683	27040	5483	32523		7.39	Si
SLV 7	15.2	-541.92	-3284	-2734	4006	2.15	2.15	-4542	11325	6818	35683	27040	5483	32523		8.12	Si
SLV 9	13.4	-468.93	1655	1378	-5368	1.72	2.15	0	0	0	35683	21632	4386	26018		4.85	Si
SLV 9	15.2	1967.28	-3052	-2542	-4970	2.15	1.2914	-4222	11261	4072	35683	27040	5483	32523		6.54	Si
SLV 5	13.4	-114.69	1760	1466	-4060	1.72	2.15	0	0	0	35683	21632	4386	26018		6.41	Si
SLV 5	15.2	1372.82	-2051	-1708	-4388	2.15	1.2172	-2837	10984	3744	35683	27040	5483	32523		7.41	Si
SLV 14	13.4	-305.78	-2352	-1958	-4024	2.15	2.15	-3253	11067	6663	35683	27040	5483	32523		8.08	Si
SLV 14	15.2	1929.83	-4475	-3726	-2801	2.15	1.9312	-6189	11655	6302	35683	27040	5483	32523		11.61	Si
SLV 6	13.4	-46.17	2127	1771	-4132	1.72	2.15	0	0	0	35683	21632	4386	26018		6.3	Si
SLV 6	15.2	1325.14	-1913	-1593	-4460	2.15	1.1467	-2646	10946	3514	35683	27040	5483	32523		7.29	Si
SLV 13	13.4	-412.1	-2921	-2432	-3912	2.15	2.15	-4040	11225	6757	35683	27040	5483	32523		8.31	Si
SLV 13	15.2	2003.82	-4689	-3905	-2690	2.15	1.9431	-6487	11714	6373	35683	27040	5483	32523		12.09	Si
SLV 8	13.4	1350.97	-10308	-8584	4329	2.15	2.15	-14259	13268	7988	35683	27040	5483	32523		7.51	Si
SLV 8	15.2	-589.6	-3145	-2619	3935	2.15	2.15	-4350	11287	6795	35683	27040	5483	32523		8.27	Si
SLV 10	13.4	-400.41	2022	1683	-5439	1.72	2.15	0	0	0	35683	21632	4386	26018		4.78	Si
SLV 10	15.2	1919.6	-2914	-2426	-5041	2.15	1.2486	-4030	11223	3924	35683	27040	5483	32523		6.45	Si
SLV 12	13.4	996.74	-10413	-8671	3022	2.15	2.15	-14404	13297	8005	35683	27040	5483	32523		10.76	Si
SLV 12	15.2	4.86	-4146	-3452	3353	2.15	2.15	-5735	11564	6961	35683	27040	5483	32523		9.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	0	110	252.42	0	0	No, Trazione
SLV 10	179667	0.53	0	-26	252.42	0	0	No, e>t/2
SLV 2	179667	0.53	0	-1797	252.42	0	0	No, e>t/2
SLV 6	179667	0.53	0	383	252.42	0	0	No, Trazione
SLV 9	179667	0.53	0	-299	252.42	0	0	No, e>t/2
SLV 1	179667	0.53	3689	-2221	252.42	303.41	1.2	Si
SLV 14	179667	0.53	5253	-3163	252.42	427.54	1.69	Si
SLV 13	179667	0.53	5957	-3586	252.42	482.51	1.91	Si
SLV 4	179667	0.53	6878	-4140	252.42	553.54	2.19	Si
SLV 3	179667	0.53	7582	-4564	252.42	607.26	2.41	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.105 Wa = 0.05 Ta = 0.0615

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2992	-11361	430	2.521	590.9	0.896	40.9046	12.89929	Si
SLV 12	-2936	-10856	430	2.551	585.5	0.895	41.40716	12.89929	Si
SLV 9	-2369	1005	-242	2.942	531.3	0.891	47.98032	12.89929	Si, Trazione
SLV 10	-2313	1510	-242	2.982	526	0.891	48.65075	12.89929	Si, Trazione
SLV 7	-2222	-10713	243	3.05	517.4	0.89	49.78935	12.89929	Si
SLV 8	-2166	-10207	243	3.093	512.2	0.89	50.5091	12.89929	Si
SLV 5	-1599	1653	-429	3.555	460.3	0.889	58.10649	12.89929	Si, Trazione
SLV 6	-1543	2158	-429	3.614	455.3	0.889	59.07172	12.89929	Si, Trazione
SLV 15	-3687	-7929	413	2.207	658.8	0.902	35.56521	6.52672	Si
SLV 16	-3601	-7145	413	2.242	650.3	0.901	36.16244	6.52672	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.116	SLU 38	Si
V_SLU	17.207	SLU 78	Si
PF_SLV	0	SLV 5	No
V_SLV	4.783	SLV 10	Si
PFFP_SLV	0	SLV 6	No
R_SLV	3.171	SLV 11	Si

Maschio 274

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.638	-4.824	-13.143	-4.824	L3	F1	0.495	0.3	14.268	14.268	14.268			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.62	1077.41	-10286	-0.0004221	0.0003743	0.0035	0.495	813.66	1348.86	1348.86	1.25	No	Si
SLU 82	3.12	-4.77	-7361	-0.0000838	0.0003743	0.0035	0.495	934.77	1212.19	1212.19	253.93	No	Si
SLU 78	0.62	1025.7	-10041	-0.0003727	0.0003743	0.0035	0.495	834.59	1350.65	1350.65	1.32	No	Si
SLU 78	3.12	5.66	-7331	-0.0000836	0.0003743	0.0035	0.495	934.56	1209.24	1209.24	213.65	No	Si
SLU 81	0.62	1081.28	-10248	-0.0004246	0.0003743	0.0035	0.495	817.06	1349.13	1349.13	1.25	No	Si
SLU 81	3.12	-3.12	-7343	-0.0000834	0.0003743	0.0035	0.495	934.65	1211.1	1211.1	388.02	No	Si
SLU 84	0.62	1084.47	-10406	-0.0004342	0.0003743	0.0035	0.495	802.74	1348.01	1348.01	1.24	No	Si
SLU 84	3.12	-4.35	-7483	-0.0000854	0.0003743	0.0035	0.495	935.32	1219.99	1219.99	280.34	No	Si
SLU 83	0.62	1088.34	-10368	-0.0004368	0.0003743	0.0035	0.495	806.29	1348.28	1348.28	1.24	No	Si
SLU 83	3.12	-2.7	-7466	-0.0000849	0.0003743	0.0035	0.495	935.27	1218.89	1218.89	451.56	No	Si
SLU 79	0.62	1028.62	-9962	-0.0003725	0.0003743	0.0035	0.495	840.91	1350.64	1350.64	1.31	No	Si
SLU 79	3.12	4.67	-7258	-0.0000825	0.0003743	0.0035	0.495	933.92	1201.08	1201.08	256.99	No	Si
SLU 77	0.62	1029.56	-10002	-0.0003742	0.0003743	0.0035	0.495	837.69	1350.94	1350.94	1.31	No	Si
SLU 77	3.12	7.31	-7314	-0.0000836	0.0003743	0.0035	0.495	934.42	1207.31	1207.31	165.1	No	Si
SLU 62	0.62	1008.55	-9504	-0.0003492	0.0003743	0.0035	0.495	873.52	1327.83	1327.83	1.32	No	Si
SLU 62	3.12	-4.83	-6746	-0.0000759	0.0003743	0.0035	0.495	924.59	1163.79	1163.79	240.83	No	Si
SLU 74	0.62	1022.5	-9883	-0.0003664	0.0003743	0.0035	0.495	847.03	1347.81	1347.81	1.32	No	Si
SLU 74	3.12	6.89	-7191	-0.0000819	0.0003743	0.0035	0.495	933.19	1193.64	1193.64	173.23	No	Si
SLU 80	0.62	1024.75	-10000	-0.000371	0.0003743	0.0035	0.495	837.87	1350.96	1350.96	1.32	No	Si
SLU 80	3.12	3.02	-7275	-0.0000825	0.0003743	0.0035	0.495	934.09	1203	1203	398.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	0.62	1130.99	-8446	-0.0003142	0.0005615	0.0035	0.495		1516.49	1516.49	1.34		Si
SLV 10	3.12	-746.56	-1460	-0.0121032	0.0005615	0.0035	0.396		373.12	373.12	0.5		No
SLV 16	0.62	1806.21	-11017	-0.0047999	0.0005615	0.0035	0.396		1768.47	1768.47	0.98		No
SLV 16	3.12	-1722.62	1448	1.143538	0.0005615	0.0035	0.396		0	0	0		No
SLV 14	0.62	1876.54	-11304	-0.005496	0.0005615	0.0035	0.396		1784.75	1784.75	0.95		No
SLV 14	3.12	-1870.13	2349	1.934284	0.0005615	0.0035	0.396		0	0	0		No
SLV 4	0.62	-617.07	-1700	-0.0072119	0.0005615	0.0035	0.396		426.38	426.38	0.69		No
SLV 4	3.12	2070.67	-12818	-0.0062299	0.0005615	0.0035	0.495		1872.71	1872.71	0.9		No
SLV 9	0.62	1205.43	-8696	-0.0003484	0.0005615	0.0035	0.495		1542.97	1542.97	1.28		Si
SLV 9	3.12	-862.5	-982	-0.0179116	0.0005615	0.0035	0.396		264.52	264.52	0.31		No
SLD 14	0.62	1195.66	-8665	-0.0003436	0.0005615	0.0035	0.495		1539.7	1539.7	1.29		Si
SLD 14	3.12	-793.86	-1775	-0.011741	0.0005615	0.0035	0.396		442.81	442.81	0.56		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	0.62	1214.91	-8708	-0.0003535	0.0005615	0.0035	0.495		1544.2	1544.2	1.27		Si
SLD 15	3.12	-806.56	-1854	-0.0116765	0.0005615	0.0035	0.396		460.05	460.05	0.57		No
SLV 13	0.62	1992.05	-11692	-0.0063815	0.0005615	0.0035	0.396		1806.98	1806.98	0.91		No
SLV 13	3.12	-2050.04	3091	2.5283111	0.0005615	0.0035	0.396		0	0	0		No
SLV 15	0.62	1921.72	-11405	-0.0059179	0.0005615	0.0035	0.396		1790.53	1790.53	0.93		No
SLV 15	3.12	-1902.52	2190	1.7953832	0.0005615	0.0035	0.396		0	0	0		No
SLD 13	0.62	1245.26	-8832	-0.0003688	0.0005615	0.0035	0.495		1557.43	1557.43	1.25		Si
SLD 13	3.12	-871.11	-1457	-0.0155362	0.0005615	0.0035	0.396		372.35	372.35	0.43		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.62	1025.7	-10041	-8455	1602	0.495	0.436	-56941	10833	1417	166522	4447	1262	5709	No	3.56	Si
SLU 78	3.12	5.66	-7331	-6173	-396	0.495	0.495	-41572	10833	1609	166522	4447	1262	5709	No	14.42	Si
SLU 80	0.62	1024.75	-10000	-8421	1599	0.495	0.4351	-56711	10833	1414	166522	4447	1262	5709	No	3.57	Si
SLU 80	3.12	3.02	-7275	-6126	-388	0.495	0.495	-41256	10833	1609	166522	4447	1262	5709	No	14.73	Si
SLU 79	0.62	1028.62	-9962	-8389	1606	0.495	0.4327	-56493	10833	1406	166522	4447	1262	5709	No	3.55	Si
SLU 79	3.12	4.67	-7258	-6112	-393	0.495	0.495	-41159	10833	1609	166522	4447	1262	5709	No	14.54	Si
SLU 84	0.62	1084.47	-10406	-8763	1685	0.495	0.4298	-59012	10833	1397	166522	4447	1262	5709	No	3.39	Si
SLU 84	3.12	-4.35	-7483	-6302	-377	0.495	0.495	-42436	10833	1609	166522	4447	1262	5709	No	15.14	Si
SLU 81	0.62	1081.28	-10248	-8630	1678	0.495	0.4259	-58116	10833	1384	166522	4447	1262	5709	No	3.4	Si
SLU 81	3.12	-3.12	-7343	-6184	-374	0.495	0.495	-41644	10833	1609	166522	4447	1262	5709	No	15.27	Si
SLU 75	0.62	1018.63	-9921	-8355	1589	0.495	0.4345	-56263	10833	1412	166522	4447	1262	5709	No	3.59	Si
SLU 75	3.12	5.24	-7208	-6070	-388	0.495	0.495	-40878	10833	1609	166522	4447	1262	5709	No	14.73	Si
SLU 82	0.62	1077.41	-10286	-8662	1671	0.495	0.4282	-58334	10833	1392	166522	4447	1262	5709	No	3.42	Si
SLU 82	3.12	-4.77	-7361	-6198	-369	0.495	0.495	-41741	10833	1609	166522	4447	1262	5709	No	15.48	Si
SLU 83	0.62	1088.34	-10368	-8731	1692	0.495	0.4275	-58795	10833	1390	166522	4447	1262	5709	No	3.37	Si
SLU 83	3.12	-2.7	-7466	-6287	-382	0.495	0.495	-42339	10833	1609	166522	4447	1262	5709	No	14.94	Si
SLU 74	0.62	1022.5	-9883	-8322	1596	0.495	0.4321	-56045	10833	1404	166522	4447	1262	5709	No	3.58	Si
SLU 74	3.12	6.89	-7191	-6056	-393	0.495	0.495	-40780	10833	1609	166522	4447	1262	5709	No	14.54	Si
SLU 77	0.62	1029.56	-10002	-8423	1609	0.495	0.4337	-56724	10833	1409	166522	4447	1262	5709	No	3.55	Si
SLU 77	3.12	7.31	-7314	-6159	-401	0.495	0.495	-41475	10833	1609	166522	4447	1262	5709	No	14.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	0.62	-431.22	-2375	-2000	-167	0.396	0.1977	0	0	0	166522	5336	1010	6346		38.03	Si
SLV 1	3.12	1743.26	-11175	-9410	-4290	0.495	0.2745	-63372	16250	1338	166522	6670	1262	7932		1.85	Si
SLV 4	0.62	-617.07	-1700	-1432	-315	0.396	0	0	0	0	166522	5336	1010	6346		20.12	Si
SLV 4	3.12	2070.67	-12818	-10794	-4975	0.495	0.2578	-72689	16250	1257	166522	6670	1262	7932		1.59	Si
SLD 4	0.62	129.73	-4560	-3840	481	0.495	0.495	-25862	15589	2315	166522	6670	1262	7932		16.48	Si
SLD 4	3.12	891.75	-8270	-6964	-2290	0.495	0.419	-46897	16250	2042	166522	6670	1262	7932		3.46	Si
SLD 2	0.62	160.07	-4684	-3945	493	0.495	0.495	-26565	15730	2336	166522	6670	1262	7932		16.1	Si
SLD 2	3.12	827.2	-7872	-6629	-2175	0.495	0.4272	-44644	16250	2083	166522	6670	1262	7932		3.65	Si
SLV 14	0.62	1876.54	-11304	-9519	2346	0.396	0.2444	0	0	0	166522	5336	1010	6346		2.71	Si
SLV 14	3.12	-1870.13	2349	1978	3986	0.396	0	0	0	0	166522	5336	1010	6346		1.59	Si
SLV 2	0.62	-546.74	-1987	-1673	-289	0.396	0	0	0	0	166522	5336	1010	6346		21.99	Si
SLV 2	3.12	1923.16	-11916	-10035	-4712	0.495	0.2583	-67578	16250	1259	166522	6670	1262	7932		1.68	Si
SLV 13	0.62	1992.05	-11692	-9846	2467	0.396	0.2313	0	0	0	166522	5336	1010	6346		2.57	Si
SLV 13	3.12	-2050.04	3091	2603	4408	0.396	0	0	0	0	166522	5336	1010	6346		1.44	Si
SLV 3	0.62	-501.56	-2088	-1758	-194	0.396	0.0219	0	0	0	166522	5336	1010	6346		32.75	Si
SLV 3	3.12	1890.77	-12076	-10169	-4552	0.495	0.2728	-68483	16250	1330	166522	6670	1262	7932		1.74	Si
SLV 15	0.62	1921.72	-11405	-9604	2440	0.396	0.237	0	0	0	166522	5336	1010	6346		2.6	Si
SLV 15	3.12	-1902.52	2190	1844	4146	0.396	0	0	0	0	166522	5336	1010	6346		1.53	Si
SLV 16	0.62	1806.21	-11017	-9278	2319	0.396	0.2506	0	0	0	166522	5336	1010	6346		2.74	Si
SLV 16	3.12	-1722.62	1448	1219	3723	0.396	0	0	0	0	166522	5336	1010	6346		1.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.754 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.4	0	619	929.89	0	0	No, Trazione
SLV 3	179667	0.4	0	-5490	929.89	0	0	No, e>t/2
SLV 2	179667	0.4	0	-4252	929.89	0	0	No, e>t/2
SLV 4	179667	0.4	0	-5724	929.89	0	0	No, e>t/2
SLV 6	179667	0.4	0	-818	929.89	0	0	No, e>t/2
SLV 9	179667	0.4	0	770	929.89	0	0	No, Trazione
SLV 8	179667	0.4	0	-5724	929.89	0	0	No, e>t/2
SLV 5	179667	0.4	0	-667	929.89	0	0	No, e>t/2
SLV 7	179667	0.4	0	-5573	929.89	0	0	No, e>t/2
SLV 1	179667	0.4	0	-4018	929.89	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.754 Wa = 0.05 Ta = 1.1332

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-651	-1700	-35	1.092	415.7	0.913	17.37246	2.39674	Si
SLV 3	-636	-2088	-35	1.098	414.7	0.914	17.45938	2.39674	Si
SLV 8	-612	-4696	-34	1.109	413.1	0.916	17.59711	2.39674	Si
SLV 7	-602	-4946	-34	1.113	412.5	0.916	17.6539	2.39674	Si
SLV 2	-488	-1987	-25	1.169	405.6	0.925	18.374	2.39674	Si
SLV 1	-472	-2375	-25	1.177	404.7	0.926	18.4661	2.39674	Si
SLV 12	-417	-7491	-24	1.205	401.7	0.931	18.80318	2.39674	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-407	-7741	-24	1.21	401.2	0.932	18.86356	2.39674	Si
SLV 6	-67	-5651	-3	1.428	389.2	0.984	21.08824	2.39674	Si
SLV 5	-57	-5901	-3	1.435	389.1	0.986	21.14676	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.239	SLU 83	Si
V_SLU	3.375	SLU 83	Si
PF_SLV	0	SLV 13	No
V_SLV	1.439	SLV 13	Si
PFFP_SLV	0	SLV 14	No
R_SLV	7.248	SLV 4	Si

Maschio 275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.824	-11.143	-4.824	L3	F1	0.6	0.3	14.266	14.267	14.266			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.62	-587.84	-10341	-0.0001649	0.0003743	0.0035	0.6	1351.72	1900.21	1900.21	3.23	No	Si
SLU 82	3.12	-688.44	-11801	-0.0001995	0.0003743	0.0035	0.6	1260.53	1985.75	1985.75	2.88	No	Si
SLU 76	0.62	-522.24	-9943	-0.0001518	0.0003743	0.0035	0.6	1364.48	1875.22	1875.22	3.59	No	Si
SLU 76	3.12	-665.5	-11467	-0.0001912	0.0003743	0.0035	0.6	1287.57	1976.51	1976.51	2.97	No	Si
SLU 77	0.62	-529.92	-10035	-0.0001539	0.0003743	0.0035	0.6	1362.01	1880.85	1880.85	3.55	No	Si
SLU 77	3.12	-671.67	-11676	-0.0001953	0.0003743	0.0035	0.6	1271.04	1985.51	1985.51	2.96	No	Si
SLU 84	0.62	-583.77	-10450	-0.000166	0.0003743	0.0035	0.6	1347.35	1907.22	1907.22	3.27	No	Si
SLU 84	3.12	-697.89	-11983	-0.0002038	0.0003743	0.0035	0.6	1244.27	1986.22	1986.22	2.85	No	Si
SLU 75	0.62	-527.97	-9973	-0.0001528	0.0003743	0.0035	0.6	1363.72	1877.01	1877.01	3.56	No	Si
SLU 75	3.12	-664.58	-11516	-0.0001919	0.0003743	0.0035	0.6	1283.82	1979.48	1979.48	2.98	No	Si
SLU 78	0.62	-523.9	-10081	-0.0001538	0.0003743	0.0035	0.6	1360.66	1883.71	1883.71	3.6	No	Si
SLU 78	3.12	-674.03	-11698	-0.000196	0.0003743	0.0035	0.6	1269.25	1985.55	1985.55	2.95	No	Si
SLU 83	0.62	-589.79	-10404	-0.000166	0.0003743	0.0035	0.6	1349.25	1904.22	1904.22	3.23	No	Si
SLU 83	3.12	-695.54	-11961	-0.0002031	0.0003743	0.0035	0.6	1246.26	1986.15	1986.15	2.86	No	Si
SLU 79	0.62	-528.21	-9975	-0.0001529	0.0003743	0.0035	0.6	1363.66	1877.16	1877.16	3.55	No	Si
SLU 79	3.12	-671.02	-11613	-0.0001942	0.0003743	0.0035	0.6	1276.21	1984.91	1984.91	2.96	No	Si
SLU 80	0.62	-522.19	-10021	-0.0001528	0.0003743	0.0035	0.6	1362.4	1880	1880	3.6	No	Si
SLU 80	3.12	-673.38	-11634	-0.0001949	0.0003743	0.0035	0.6	1274.47	1985.45	1985.45	2.95	No	Si
SLU 81	0.62	-593.86	-10295	-0.000165	0.0003743	0.0035	0.6	1353.46	1897.26	1897.26	3.19	No	Si
SLU 81	3.12	-686.09	-11779	-0.0001989	0.0003743	0.0035	0.6	1262.4	1985.7	1985.7	2.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	0.62	1618.14	-1484	-0.0794363	0.0005615	0.0035	0.48		446.87	446.87	0.28		No
SLV 13	3.12	-2492	-16416	-0.0007014	0.0005615	0.0035	0.48		2835.63	2835.63	1.14		Si
SLV 14	0.62	1441.84	-1959	-0.0583904	0.0005615	0.0035	0.48		575.97	575.97	0.4		No
SLV 14	3.12	-2306.69	-15556	-0.0005453	0.0005615	0.0035	0.48		2777.11	2777.11	1.2		Si
SLV 1	0.62	-2116.15	-11682	-0.0004956	0.0005615	0.0035	0.48		2446.65	2446.65	1.16		Si
SLV 1	3.12	1423.16	1237	0.0619523	0.0005615	0.0035	0.48		0	0	0		No
SLV 3	0.62	-2118.15	-11451	-0.0005089	0.0005615	0.0035	0.48		2420.22	2420.22	1.14		Si
SLV 3	3.12	1404.97	-86	-0.0957954	0.0005615	0.0035	0.48		47.43	47.43	0.03		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	0.62	-2292.45	-12157	-0.0006534	0.0005615	0.0035	0.48		2501.78	2501.78	1.09		Si
SLV 2	3.12	1608.48	2098	0.560693	0.0005615	0.0035	0.48		0	0	0		No
SLV 16	0.62	1439.84	-1728	-0.0626162	0.0005615	0.0035	0.48		513.53	513.53	0.36		No
SLV 16	3.12	-2324.88	-16879	-0.0005659	0.0005615	0.0035	0.6		2844.18	2844.18	1.22		Si
SLD 2	0.62	-1173.45	-9037	-0.0002035	0.0005615	0.0035	0.6		2099.44	2099.44	1.79		Si
SLD 2	3.12	429.36	-3574	-0.0000682	0.0005615	0.0035	0.6		970.12	970.12	2.26		Si
SLD 4	0.62	-1174.33	-8936	-0.000203	0.0005615	0.0035	0.6		2083.6	2083.6	1.77		Si
SLD 4	3.12	421.64	-4154	-0.0000721	0.0005615	0.0035	0.6		1099.2	1099.2	2.61		Si
SLV 4	0.62	-2294.45	-11926	-0.0006975	0.0005615	0.0035	0.48		2474.83	2474.83	1.08		Si
SLV 4	3.12	1590.28	774	-0.1143858	0.0005615	0.0035	0.48		0	0	0		No
SLV 15	0.62	1616.14	-1253	-0.0840955	0.0005615	0.0035	0.48		382.92	382.92	0.24		No
SLV 15	3.12	-2510.19	-17740	-0.0007365	0.0005615	0.0035	0.48		2855.23	2855.23	1.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.62	-589.79	-10404	-8761	-951	0.6	0.6	-48672	10833	1950	166522	5390	1530	6920	No	7.28	Si
SLU 83	3.12	-695.54	-11961	-10073	2283	0.6	0.6	-55960	10833	1950	166522	5390	1530	6920	No	3.03	Si
SLU 81	0.62	-593.86	-10295	-8670	-953	0.6	0.6	-48165	10833	1950	166522	5390	1530	6920	No	7.26	Si
SLU 81	3.12	-686.09	-11779	-9919	2246	0.6	0.6	-55108	10833	1950	166522	5390	1530	6920	No	3.08	Si
SLU 84	0.62	-583.77	-10450	-8800	-943	0.6	0.6	-48887	10833	1950	166522	5390	1530	6920	No	7.34	Si
SLU 84	3.12	-697.89	-11983	-10091	2281	0.6	0.6	-56061	10833	1950	166522	5390	1530	6920	No	3.03	Si
SLU 75	0.62	-527.97	-9973	-8398	-864	0.6	0.6	-46655	10833	1950	166522	5390	1530	6920	No	8.01	Si
SLU 75	3.12	-664.58	-11516	-9698	2195	0.6	0.6	-53876	10833	1950	166522	5390	1530	6920	No	3.15	Si
SLU 77	0.62	-529.92	-10035	-8450	-871	0.6	0.6	-46946	10833	1950	166522	5390	1530	6920	No	7.95	Si
SLU 77	3.12	-671.67	-11676	-9833	2233	0.6	0.6	-54626	10833	1950	166522	5390	1530	6920	No	3.1	Si
SLU 78	0.62	-523.9	-10081	-8489	-862	0.6	0.6	-47162	10833	1950	166522	5390	1530	6920	No	8.02	Si
SLU 78	3.12	-674.03	-11698	-9851	2231	0.6	0.6	-54727	10833	1950	166522	5390	1530	6920	No	3.1	Si
SLU 74	0.62	-533.99	-9927	-8359	-872	0.6	0.6	-46440	10833	1950	166522	5390	1530	6920	No	7.93	Si
SLU 74	3.12	-662.22	-11494	-9679	2196	0.6	0.6	-53775	10833	1950	166522	5390	1530	6920	No	3.15	Si
SLU 82	0.62	-587.84	-10341	-8709	-944	0.6	0.6	-48381	10833	1950	166522	5390	1530	6920	No	7.33	Si
SLU 82	3.12	-688.44	-11801	-9938	2245	0.6	0.6	-55209	10833	1950	166522	5390	1530	6920	No	3.08	Si
SLU 79	0.62	-528.21	-9975	-8400	-867	0.6	0.6	-46667	10833	1950	166522	5390	1530	6920	No	7.98	Si
SLU 79	3.12	-671.02	-11613	-9779	2228	0.6	0.6	-54328	10833	1950	166522	5390	1530	6920	No	3.11	Si
SLU 80	0.62	-522.19	-10021	-8439	-859	0.6	0.6	-46882	10833	1950	166522	5390	1530	6920	No	8.06	Si
SLU 80	3.12	-673.38	-11634	-9797	2226	0.6	0.6	-54430	10833	1950	166522	5390	1530	6920	No	3.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	0.62	1616.14	-1253	-1055	1507	0.48	0	0	0	0	166522	6468	1224	7692		5.1	Si
SLV 15	3.12	-2510.19	-17740	-14939	8260	0.48	0.4755	0	0	0	166522	6468	1224	7692		0.93	No
SLD 15	0.62	497.14	-4373	-3683	323	0.6	0.559	-20460	14509	2433	166522	8085	1530	9615		29.74	Si
SLD 15	3.12	-1331.08	-12068	-10162	4400	0.6	0.5691	-56458	16250	2774	166522	8085	1530	9615		2.19	Si
SLD 13	0.62	498.02	-4474	-3767	323	0.6	0.566	-20930	14603	2480	166522	8085	1530	9615		29.74	Si
SLD 13	3.12	-1323.36	-11487	-9674	4275	0.6	0.5544	-53742	16250	2703	166522	8085	1530	9615		2.25	Si
SLV 14	0.62	1441.84	-1959	-1650	1324	0.48	0	0	0	0	166522	6468	1224	7692		5.81	Si
SLV 14	3.12	-2306.69	-15556	-13099	7355	0.48	0.4551	0	0	0	166522	6468	1224	7692		1.05	Si
SLV 16	0.62	1439.84	-1728	-1455	1324	0.48	0	0	0	0	166522	6468	1224	7692		5.81	Si
SLV 16	3.12	-2324.88	-16879	-14214	7643	0.6	0.4868	-107900	16250	2373	166522	8085	1530	9615		1.26	Si
SLV 1	0.62	-2116.15	-11682	-9837	-2445	0.48	0.3566	0	0	0	166522	6468	1224	7692		3.15	Si
SLV 1	3.12	1423.16	1237	1042	-4609	0.48	0	0	0	0	166522	6468	1224	7692		1.67	Si
SLV 3	0.62	-2118.15	-11451	-9643	-2445	0.48	0.3451	0	0	0	166522	6468	1224	7692		3.15	Si
SLV 3	3.12	1404.97	-86	-73	-4321	0.48	0	0	0	0	166522	6468	1224	7692		1.78	Si
SLV 2	0.62	-2292.45	-12157	-10238	-2628	0.48	0.3343	0	0	0	166522	6468	1224	7692		2.93	Si
SLV 2	3.12	1608.48	2098	1767	-5226	0.48	0	0	0	0	166522	6468	1224	7692		1.47	Si
SLV 13	0.62	1618.14	-1484	-1250	1507	0.48	0	0	0	0	166522	6468	1224	7692		5.1	Si
SLV 13	3.12	-2492	-16416	-13824	7972	0.48	0.4446	0	0	0	166522	6468	1224	7692		0.96	No
SLV 4	0.62	-2294.45	-11926	-10043	-2628	0.48	0.3228	0	0	0	166522	6468	1224	7692		2.93	Si
SLV 4	3.12	1590.28	774	652	-4938	0.48	0	0	0	0	166522	6468	1224	7692		1.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.753 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.4	0	-2884	1126.86	0	0	No, e>t/2
SLV 1	179667	0.4	0	-996	1126.86	0	0	No, e>t/2
SLV 4	179667	0.4	0	-2675	1126.86	0	0	No, e>t/2
SLV 6	179667	0.4	0	-17	1126.86	0	0	No, e>t/2
SLV 2	179667	0.4	0	-787	1126.86	0	0	No, e>t/2
SLV 8	179667	0.4	0	-6311	1126.86	0	0	No, e>t/2
SLV 10	179667	0.4	0	-1214	1126.86	0	0	No, e>t/2
SLV 9	179667	0.4	0	-1348	1126.86	0	0	No, e>t/2
SLV 5	179667	0.4	0	-152	1126.86	0	0	No, e>t/2
SLV 7	179667	0.4	0	-6446	1126.86	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.753 Wa = 0.05 Ta = 1.1329

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-794	-1253	-59	1.085	504.1	0.913	17.26745	2.39674	Si
SLV 16	-777	-1728	-58	1.091	503	0.914	17.34486	2.39674	Si
SLV 11	-692	-4637	-53	1.123	497.6	0.919	17.77231	2.39674	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-681	-4943	-53	1.127	496.9	0.919	17.82378	2.39674	Si
SLV 13	-657	-1484	-45	1.139	495.5	0.921	17.9758	2.39674	Si
SLV 14	-641	-1959	-45	1.145	494.5	0.922	18.05667	2.39674	Si
SLV 7	-470	-7696	-35	1.218	485	0.934	18.94988	2.39674	Si
SLV 8	-459	-8002	-35	1.223	484.5	0.935	19.00424	2.39674	Si
SLV 9	-237	-5408	-9	1.339	475.3	0.96	20.28203	2.39674	Si
SLV 10	-226	-5714	-9	1.345	475	0.961	20.33711	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.846	SLU 84	Si
V_SLU	3.032	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	0.931	SLV 15	No
PFFP_SLV	0	SLV 1	No
R_SLV	7.205	SLV 15	Si

1.9 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

X ini.: *coordinata punto iniziale. [m]*
Y ini.: *coordinata punto iniziale. [m]*
Z ini.inf.: *coordinata punto iniziale. [m]*
Z ini.sup.: *coordinata punto iniziale. [m]*
H ini.: *altezza della sezione iniziale. [m]*
X fin.: *coordinata punto finale. [m]*
Y fin.: *coordinata punto finale. [m]*
Z fin.inf.: *coordinata punto finale. [m]*
Z fin.sup: *coordinata punto finale. [m]*
H fin.: *altezza della sezione finale. [m]*
Luce: *lunghezza della trave. [m]*
Spessore: *spessore. [m]*
R. Trazione: *resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]*
fb_: *resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]*
fhk: *resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fhmedio: *resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fvk,lim: *valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*

***connettori**: presenza di connettori per la prevenzione del distacco del rinforzo.*
***tipo di muratura**: tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
***CRM / Fibrenet?**: dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
***CRM**: stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
***intonaco**: materiale intonaco FRCM ovvero CRM.*
***spessore intonaco**: spessore intonaco. [m]*
***tipo blocco fibrenet**: tipo blocco muratura per verifica a tglio tipo Fibrenet.*
***Comb.**: combinazione.*
***Sez.**: sezione di verifica.*
***M**: momento flettente nel piano. [daN*m]*
***N**: sforzo normale. [daN]*
***εm**: deformazione della muratura.*
***εm_**: deformazione elastica della muratura.*
***εmu**: deformazione ultima della muratura.*
***df**: distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
***M0d**: momento resistente della sezione non rinforzata. [daN*m]*
***M1d**: momento resistente della sezione rinforzata. [daN*m]*
***MRd**: momento resistente della sezione. [daN*m]*
***incremento > 50%**: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
***c.s.**: coefficiente di sicurezza.*
***Verifica**: stato di verifica.*
***V**: taglio nel piano. [daN]*
***df**: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
***fvd**: resistenza a taglio di calcolo. [daN/m²]*
***Vt**: resistenza a taglio della muratura non rinforzata. [daN]*
***Vt,f**: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
***Vt,c**: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*
***Vt,c int.**: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]*
***Vt,R**: resistenza a taglio della sezione rinforzata. [daN]*
***Stato limite**: pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.*
***Coeff.s.**: coefficiente di sicurezza.*

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	-0.98	1.02	2	-16.768	6.576	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	4574.72	-6660	-0.0005732	0.0001872	0.0035	2		10722.86	10722.86	No	2.34	Si
SLU 77	fin.	-1829.16	-4656	-0.0001963	0.0001872	0.0035	2		10737.13	10737.13	No	5.87	Si
SLU 82	ini.	4633.86	-6722	-0.0005823	0.0001872	0.0035	2		10722.86	10722.86	No	2.31	Si
SLU 82	fin.	-1842.32	-4688	-0.0001978	0.0001872	0.0035	2		10737.13	10737.13	No	5.83	Si
SLU 83	ini.	4672.63	-6802	-0.0005884	0.0001872	0.0035	2		10722.86	10722.86	No	2.29	Si
SLU 83	fin.	-1855.51	-4753	-0.0001994	0.0001872	0.0035	2		10737.13	10737.13	No	5.79	Si
SLU 81	ini.	4627.16	-6728	-0.0005813	0.0001872	0.0035	2		10722.86	10722.86	No	2.32	Si
SLU 81	fin.	-1841.61	-4696	-0.0001978	0.0001872	0.0035	2		10737.13	10737.13	No	5.83	Si
SLU 75	ini.	4535.94	-6581	-0.0005672	0.0001872	0.0035	2		10722.86	10722.86	No	2.36	Si
SLU 75	fin.	-1815.97	-4590	-0.0001947	0.0001872	0.0035	2		10737.13	10737.13	No	5.91	Si
SLU 74	ini.	4529.25	-6586	-0.0005662	0.0001872	0.0035	2		10722.86	10722.86	No	2.37	Si
SLU 74	fin.	-1815.27	-4599	-0.0001947	0.0001872	0.0035	2		10737.13	10737.13	No	5.91	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	4551.34	-6612	-0.0005696	0.0001872	0.0035	2		10722.86	10722.86	No	2.36	Si
SLU 80	fin.	-1823.89	-4614	-0.0001957	0.0001872	0.0035	2		10737.13	10737.13	No	5.89	Si
SLU 79	ini.	4544.64	-6618	-0.0005686	0.0001872	0.0035	2		10722.86	10722.86	No	2.36	Si
SLU 79	fin.	-1823.18	-4622	-0.0001956	0.0001872	0.0035	2		10737.13	10737.13	No	5.89	Si
SLU 84	ini.	4679.33	-6796	-0.0005894	0.0001872	0.0035	2		10722.86	10722.86	No	2.29	Si
SLU 84	fin.	-1856.22	-4744	-0.0001995	0.0001872	0.0035	2		10737.13	10737.13	No	5.78	Si
SLU 78	ini.	4581.41	-6654	-0.0005742	0.0001872	0.0035	2		10722.86	10722.86	No	2.34	Si
SLU 78	fin.	-1829.87	-4647	-0.0001964	0.0001872	0.0035	2		10737.13	10737.13	No	5.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	4529.25	-9424	2	0	1304	7930	13475	5100	9234	No	0.98	No
SLU 74	fin.	-1815.27	-7753	2	0	1304	7930	13475	5100	9234	No	1.19	Si
SLU 84	ini.	4679.33	-9746	2	0	1304	7930	13475	5100	9234	No	0.95	No
SLU 84	fin.	-1856.22	-7953	2	0	1304	7930	13475	5100	9234	No	1.16	Si
SLU 79	ini.	4544.64	-9462	2	0	1304	7930	13475	5100	9234	No	0.98	No
SLU 79	fin.	-1823.18	-7777	2	0	1304	7930	13475	5100	9234	No	1.19	Si
SLU 81	ini.	4627.16	-9640	2	0	1304	7930	13475	5100	9234	No	0.96	No
SLU 81	fin.	-1841.61	-7885	2	0	1304	7930	13475	5100	9234	No	1.17	Si
SLU 77	ini.	4574.72	-9521	2	0	1304	7930	13475	5100	9234	No	0.97	No
SLU 77	fin.	-1829.16	-7810	2	0	1304	7930	13475	5100	9234	No	1.18	Si
SLU 83	ini.	4672.63	-9738	2	0	1304	7930	13475	5100	9234	No	0.95	No
SLU 83	fin.	-1855.51	-7942	2	0	1304	7930	13475	5100	9234	No	1.16	Si
SLU 80	ini.	4551.34	-9471	2	0	1304	7930	13475	5100	9234	No	0.97	No
SLU 80	fin.	-1823.89	-7789	2	0	1304	7930	13475	5100	9234	No	1.19	Si
SLU 82	ini.	4633.86	-9649	2	0	1304	7930	13475	5100	9234	No	0.96	No
SLU 82	fin.	-1842.32	-7896	2	0	1304	7930	13475	5100	9234	No	1.17	Si
SLU 75	ini.	4535.94	-9432	2	0	1304	7930	13475	5100	9234	No	0.98	No
SLU 75	fin.	-1815.97	-7764	2	0	1304	7930	13475	5100	9234	No	1.19	Si
SLU 78	ini.	4581.41	-9530	2	0	1304	7930	13475	5100	9234	No	0.97	No
SLU 78	fin.	-1829.87	-7821	2	0	1304	7930	13475	5100	9234	No	1.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	5120.73	-4987	-0.0006196	0.0002807	0.0035	2		15635.95	15635.95		3.05	Si
SLD 16	fin.	-2670.47	-1140	-0.0002887	0.0002807	0.0035	2		15648.46	15648.46		5.86	Si
SLV 10	ini.	5111.17	-3607	-0.0006181	0.0002807	0.0035	2		15635.95	15635.95		3.06	Si
SLV 10	fin.	-2404.21	-276	-0.0002572	0.0002807	0.0035	2		15648.46	15648.46		6.51	Si
SLV 15	ini.	7344.13	-5245	-0.0009815	0.0002807	0.0035	2		15635.95	15635.95		2.13	Si
SLV 15	fin.	-4122.35	1265	-0.0004759	0.0002807	0.0035	2		15648.46	15648.46		3.8	Si
SLD 15	ini.	4934.88	-4851	-0.000592	0.0002807	0.0035	2		15635.95	15635.95		3.17	Si
SLD 15	fin.	-2508.2	-1270	-0.0002694	0.0002807	0.0035	2		15648.46	15648.46		6.24	Si
SLD 14	ini.	5242.69	-4672	-0.0006378	0.0002807	0.0035	2		15635.95	15635.95		2.98	Si
SLD 14	fin.	-2687.06	-801	-0.0002907	0.0002807	0.0035	2		15648.46	15648.46		5.82	Si
SLV 13	ini.	7622.18	-4528	-0.0010315	0.0002807	0.0035	2		15635.95	15635.95		2.05	Si
SLV 13	fin.	-4164.52	2041	-0.0004817	0.0002807	0.0035	2		15648.46	15648.46		3.76	Si
SLV 14	ini.	8055.04	-4844	-0.0011117	0.0002807	0.0035	2		15635.95	15635.95		1.94	Si
SLV 14	fin.	-4542.45	2344	-0.0005347	0.0002807	0.0035	2		15648.46	15648.46		3.44	Si
SLV 16	ini.	7776.99	-5560	-0.0010598	0.0002807	0.0035	2		15635.95	15635.95		2.01	Si
SLV 16	fin.	-4500.28	1568	-0.0005287	0.0002807	0.0035	2		15648.46	15648.46		3.48	Si
SLD 13	ini.	5056.84	-4537	-0.00061	0.0002807	0.0035	2		15635.95	15635.95		3.09	Si
SLD 13	fin.	-2524.79	-931	-0.0002714	0.0002807	0.0035	2		15648.46	15648.46		6.2	Si
SLV 9	ini.	4832.22	-3404	-0.000577	0.0002807	0.0035	2		15635.95	15635.95		3.24	Si
SLV 9	fin.	-2160.66	-471	-0.000229	0.0002807	0.0035	2		15648.46	15648.46		7.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	5120.73	-12274	2	0	1957	7930	20213	5100	9886		0.81	No
SLD 16	fin.	-2670.47	-11558	2	0	1957	7930	20213	5100	9886		0.86	No
SLV 13	ini.	7622.18	-18208	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 13	fin.	-4164.52	-18321	2	0	1957	7930	20213	5100	9886		0.54	No
SLD 13	ini.	5056.84	-11512	2	0	1957	7930	20213	5100	9886		0.86	No
SLD 13	fin.	-2524.79	-10997	2	0	1957	7930	20213	5100	9886		0.9	No
SLD 14	ini.	5242.69	-12128	2	0	1957	7930	20213	5100	9886		0.82	No
SLD 14	fin.	-2687.06	-11593	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 16	ini.	7776.99	-19987	2	0	1957	7930	20213	5100	9886		0.49	No
SLV 16	fin.	-4500.28	-19636	2	0	1957	7930	20213	5100	9886		0.5	No
SLD 15	ini.	4934.88	-11658	2	0	1957	7930	20213	5100	9886		0.85	No
SLD 15	fin.	-2508.2	-10962	2	0	1957	7930	20213	5100	9886		0.9	No
SLV 12	ini.	4184.36	-11327	2	0	1957	7930	20213	5100	9886		0.87	No
SLV 12	fin.	-2263.64	-9890	2	0	1957	7930	20213	5100	9886		1	No
SLV 14	ini.	8055.04	-19642	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 14	fin.	-4542.45	-19708	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 11	ini.	3905.42	-10403	2	0	1957	7930	20213	5100	9886		0.95	No
SLV 11	fin.	-2020.09	-8996	2	0	1957	7930	20213	5100	9886		1.1	Si
SLV 15	ini.	7344.13	-18553	2	0	1957	7930	20213	5100	9886		0.53	No
SLV 15	fin.	-4122.35	-18248	2	0	1957	7930	20213	5100	9886		0.54	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.941	SLV 14	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0.495	SLV 16	No
PF_SLU	2.292	SLU 84	Si
V_SLU	0.947	SLU 84	No

Trave di accoppiamento 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	1.42	1.99	0.57	-16.768	6.576	1.42	1.99	0.57	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	527.25	2022	-0.0008929	0.0001872	0.0035	0.57		908.75	908.75	No	1.72	Si
SLU 77	fin.	-1249.81	-4271	-0.0038421	0.0001872	0.0035	0.57		912.83	912.83	No	0.73	No
SLU 79	ini.	524.94	2013	-0.0008879	0.0001872	0.0035	0.57		908.75	908.75	No	1.73	Si
SLU 79	fin.	-1241.69	-4244	-0.0037953	0.0001872	0.0035	0.57		912.83	912.83	No	0.74	No
SLU 80	ini.	525.62	2015	-0.0008893	0.0001872	0.0035	0.57		908.75	908.75	No	1.73	Si
SLU 80	fin.	-1242.56	-4247	-0.0038004	0.0001872	0.0035	0.57		912.83	912.83	No	0.73	No
SLU 83	ini.	537.07	2058	-0.0009146	0.0001872	0.0035	0.57		908.75	908.75	No	1.69	Si
SLU 83	fin.	-1274.73	-4359	-0.003983	0.0001872	0.0035	0.57		912.83	912.83	No	0.72	No
SLU 78	ini.	527.93	2025	-0.0008944	0.0001872	0.0035	0.57		908.75	908.75	No	1.72	Si
SLU 78	fin.	-1250.68	-4274	-0.0038471	0.0001872	0.0035	0.57		912.83	912.83	No	0.73	No
SLU 75	ini.	523.57	2008	-0.0008848	0.0001872	0.0035	0.57		908.75	908.75	No	1.74	Si
SLU 75	fin.	-1238.18	-4231	-0.003775	0.0001872	0.0035	0.57		912.83	912.83	No	0.74	No
SLU 74	ini.	522.89	2006	-0.0008834	0.0001872	0.0035	0.57		908.75	908.75	No	1.74	Si
SLU 74	fin.	-1237.31	-4228	-0.0037699	0.0001872	0.0035	0.57		912.83	912.83	No	0.74	No
SLU 81	ini.	532.71	2041	-0.000905	0.0001872	0.0035	0.57		908.75	908.75	No	1.71	Si
SLU 81	fin.	-1262.23	-4316	-0.0039128	0.0001872	0.0035	0.57		912.83	912.83	No	0.72	No
SLU 84	ini.	537.75	2060	-0.0009161	0.0001872	0.0035	0.57		908.75	908.75	No	1.69	Si
SLU 84	fin.	-1275.6	-4362	-0.0039879	0.0001872	0.0035	0.57		912.83	912.83	No	0.72	No
SLU 82	ini.	533.39	2044	-0.0009065	0.0001872	0.0035	0.57		908.75	908.75	No	1.7	Si
SLU 82	fin.	-1263.1	-4319	-0.0039178	0.0001872	0.0035	0.57		912.83	912.83	No	0.72	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	523.57	-1583	0.57	0	248	4520	3840	1454	4768	No	3.01	Si
SLU 75	fin.	-1238.18	-5596	0.57	0	248	4520	3840	1454	4768	No	0.85	No
SLU 77	ini.	527.25	-1593	0.57	0	248	4520	3840	1454	4768	No	2.99	Si
SLU 77	fin.	-1249.81	-5648	0.57	0	248	4520	3840	1454	4768	No	0.84	No
SLU 78	ini.	527.93	-1596	0.57	0	248	4520	3840	1454	4768	No	2.99	Si
SLU 78	fin.	-1250.68	-5652	0.57	0	248	4520	3840	1454	4768	No	0.84	No
SLU 84	ini.	537.75	-1627	0.57	0	248	4520	3840	1454	4768	No	2.93	Si
SLU 84	fin.	-1275.6	-5762	0.57	0	248	4520	3840	1454	4768	No	0.83	No
SLU 83	ini.	537.07	-1625	0.57	0	248	4520	3840	1454	4768	No	2.93	Si
SLU 83	fin.	-1274.73	-5758	0.57	0	248	4520	3840	1454	4768	No	0.83	No
SLU 81	ini.	532.71	-1612	0.57	0	248	4520	3840	1454	4768	No	2.96	Si
SLU 81	fin.	-1262.23	-5702	0.57	0	248	4520	3840	1454	4768	No	0.84	No
SLU 80	ini.	525.62	-1590	0.57	0	248	4520	3840	1454	4768	No	3	Si
SLU 80	fin.	-1242.56	-5615	0.57	0	248	4520	3840	1454	4768	No	0.85	No
SLU 74	ini.	522.89	-1580	0.57	0	248	4520	3840	1454	4768	No	3.02	Si
SLU 74	fin.	-1237.31	-5592	0.57	0	248	4520	3840	1454	4768	No	0.85	No
SLU 79	ini.	524.94	-1587	0.57	0	248	4520	3840	1454	4768	No	3	Si
SLU 79	fin.	-1241.69	-5611	0.57	0	248	4520	3840	1454	4768	No	0.85	No
SLU 82	ini.	533.39	-1614	0.57	0	248	4520	3840	1454	4768	No	2.95	Si
SLU 82	fin.	-1263.1	-5706	0.57	0	248	4520	3840	1454	4768	No	0.84	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1268.63	4742	-0.0036429	0.0002807	0.0035	0.57		1278.06	1278.06		1.01	Si
SLV 15	fin.	-1700.36	-5734	-0.0057199	0.0002807	0.0035	0.57		1281.66	1281.66		0.75	No
SLD 15	ini.	753.64	2840	-0.0013602	0.0002807	0.0035	0.57		1278.06	1278.06		1.7	Si
SLD 15	fin.	-1219.16	-4130	-0.0033336	0.0002807	0.0035	0.57		1281.66	1281.66		1.05	Si
SLD 13	ini.	788.54	2808	-0.0014545	0.0002807	0.0035	0.57		1278.06	1278.06		1.62	Si
SLD 13	fin.	-1229.2	-4324	-0.0033937	0.0002807	0.0035	0.57		1281.66	1281.66		1.04	Si
SLV 10	ini.	839.42	2463	-0.0016012	0.0002807	0.0035	0.57		1278.06	1278.06		1.52	Si
SLV 10	fin.	-1204.39	-4769	-0.0032442	0.0002807	0.0035	0.57		1281.66	1281.66		1.06	Si
SLD 14	ini.	836.24	2973	-0.0015917	0.0002807	0.0035	0.57		1278.06	1278.06		1.53	Si
SLD 14	fin.	-1274.71	-4483	-0.0036565	0.0002807	0.0035	0.57		1281.66	1281.66		1.01	Si
SLV 14	ini.	1460.89	5052	-0.0046368	0.0002807	0.0035	0.57		1278.06	1278.06		0.87	No
SLV 14	fin.	-1829.32	-6555	-0.006287	0.0002807	0.0035	0.57		1281.66	1281.66		0.7	No
SLV 16	ini.	1379.71	5126	-0.0042348	0.0002807	0.0035	0.57		1278.06	1278.06		0.93	No
SLV 16	fin.	-1806.37	-6105	-0.0061866	0.0002807	0.0035	0.57		1281.66	1281.66		0.71	No
SLD 16	ini.	801.33	3005	-0.0014902	0.0002807	0.0035	0.57		1278.06	1278.06		1.59	Si
SLD 16	fin.	-1264.68	-4290	-0.0035999	0.0002807	0.0035	0.57		1281.66	1281.66		1.01	Si
SLV 13	ini.	1349.81	4667	-0.0040812	0.0002807	0.0035	0.57		1278.06	1278.06		0.95	No
SLV 13	fin.	-1723.31	-6184	-0.0058215	0.0002807	0.0035	0.57		1281.66	1281.66		0.74	No
SLV 9	ini.	767.84	2216	-0.001398	0.0002807	0.0035	0.57		1278.06	1278.06		1.66	Si
SLV 9	fin.	-1136.07	-4530	-0.0028336	0.0002807	0.0035	0.57		1281.66	1281.66		1.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	753.64	-2666	0.57	0	372	4520	5761	1454	4892		1.83	Si
SLD 15	fin.	-1219.16	-5483	0.57	0	372	4520	5761	1454	4892		0.89	No
SLV 14	ini.	1460.89	-5719	0.57	0	372	4520	5761	1454	4892		0.86	No
SLV 14	fin.	-1829.32	-7434	0.57	0	372	4520	5761	1454	4892		0.66	No
SLV 15	ini.	1268.63	-4741	0.57	0	372	4520	5761	1454	4892		1.03	Si
SLV 15	fin.	-1700.36	-7614	0.57	0	372	4520	5761	1454	4892		0.64	No
SLV 12	ini.	568.81	-1617	0.57	0	372	4520	5761	1454	4892		3.02	Si
SLV 12	fin.	-1127.89	-6125	0.57	0	372	4520	5761	1454	4892		0.8	No
SLD 16	ini.	801.33	-2859	0.57	0	372	4520	5761	1454	4892		1.71	Si
SLD 16	fin.	-1264.68	-5665	0.57	0	372	4520	5761	1454	4892		0.86	No
SLD 14	ini.	836.24	-3085	0.57	0	372	4520	5761	1454	4892		1.59	Si
SLD 14	fin.	-1274.71	-5407	0.57	0	372	4520	5761	1454	4892		0.9	No
SLV 11	ini.	497.22	-1327	0.57	0	372	4520	5761	1454	4892		3.69	Si
SLV 11	fin.	-1059.57	-5852	0.57	0	372	4520	5761	1454	4892		0.84	No
SLD 13	ini.	788.54	-2892	0.57	0	372	4520	5761	1454	4892		1.69	Si
SLD 13	fin.	-1229.2	-5225	0.57	0	372	4520	5761	1454	4892		0.94	No
SLV 16	ini.	1379.71	-5191	0.57	0	372	4520	5761	1454	4892		0.94	No
SLV 16	fin.	-1806.37	-8037	0.57	0	372	4520	5761	1454	4892		0.61	No
SLV 13	ini.	1349.81	-5269	0.57	0	372	4520	5761	1454	4892		0.93	No
SLV 13	fin.	-1723.31	-7011	0.57	0	372	4520	5761	1454	4892		0.7	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.701	SLV 14	No
V_SLV	0.609	SLV 16	No
PF_SLU	0.716	SLU 84	No
V_SLU	0.827	SLU 84	No

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.613	1.046	1.18	1.99	0.81	-13.583	1.046	1.18	1.99	0.81	0.97	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-168	-2053	-0.0001049	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.27	Si
SLU 77	fin.	-65.33	97	-0.0000399	0.0002246	0.0035	0.81		1892.63	1892.63	No	28.97	Si
SLU 79	ini.	-167.96	-2039	-0.0001049	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.27	Si
SLU 79	fin.	-64.43	97	-0.0000393	0.0002246	0.0035	0.81		1892.63	1892.63	No	29.37	Si
SLU 80	ini.	-168.1	-2044	-0.000105	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.26	Si
SLU 80	fin.	-65.1	93	-0.0000398	0.0002246	0.0035	0.81		1892.63	1892.63	No	29.07	Si
SLU 75	ini.	-167.87	-2045	-0.0001049	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.27	Si
SLU 75	fin.	-66.16	83	-0.0000404	0.0002246	0.0035	0.81		1892.63	1892.63	No	28.61	Si
SLU 76	ini.	-167.92	-2034	-0.0001049	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.27	Si
SLU 76	fin.	-65.7	81	-0.0000401	0.0002246	0.0035	0.81		1892.63	1892.63	No	28.81	Si
SLU 83	ini.	-174.61	-2127	-0.0001092	0.0002246	0.0035	0.81		1892.63	1892.63	No	10.84	Si
SLU 83	fin.	-68.57	88	-0.0000419	0.0002246	0.0035	0.81		1892.63	1892.63	No	27.6	Si
SLU 82	ini.	-174.48	-2119	-0.0001092	0.0002246	0.0035	0.81		1892.63	1892.63	No	10.85	Si
SLU 82	fin.	-69.4	74	-0.0000424	0.0002246	0.0035	0.81		1892.63	1892.63	No	27.27	Si
SLU 81	ini.	-174.34	-2113	-0.0001091	0.0002246	0.0035	0.81		1892.63	1892.63	No	10.86	Si
SLU 81	fin.	-68.73	78	-0.000042	0.0002246	0.0035	0.81		1892.63	1892.63	No	27.54	Si
SLU 78	ini.	-168.14	-2058	-0.000105	0.0002246	0.0035	0.81		1892.63	1892.63	No	11.26	Si
SLU 78	fin.	-66	92	-0.0000403	0.0002246	0.0035	0.81		1892.63	1892.63	No	28.68	Si
SLU 84	ini.	-174.75	-2132	-0.0001093	0.0002246	0.0035	0.81		1892.63	1892.63	No	10.83	Si
SLU 84	fin.	-69.24	83	-0.0000423	0.0002246	0.0035	0.81		1892.63	1892.63	No	27.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-167.74	8563	0.81	0	441	6423	6550	2066	6864	No	0.8	No
SLU 74	fin.	-65.49	-4125	0.81	0	441	6423	6550	2066	6864	No	1.66	Si
SLU 84	ini.	-174.75	8908	0.81	0	441	6423	6550	2066	6864	No	0.77	No
SLU 84	fin.	-69.24	-4291	0.81	0	441	6423	6550	2066	6864	No	1.6	Si
SLU 83	ini.	-174.61	8903	0.81	0	441	6423	6550	2066	6864	No	0.77	No
SLU 83	fin.	-68.57	-4285	0.81	0	441	6423	6550	2066	6864	No	1.6	Si
SLU 81	ini.	-174.34	8804	0.81	0	441	6423	6550	2066	6864	No	0.78	No
SLU 81	fin.	-68.73	-4242	0.81	0	441	6423	6550	2066	6864	No	1.62	Si
SLU 77	ini.	-168	8662	0.81	0	441	6423	6550	2066	6864	No	0.79	No
SLU 77	fin.	-65.33	-4169	0.81	0	441	6423	6550	2066	6864	No	1.65	Si
SLU 78	ini.	-168.14	8667	0.81	0	441	6423	6550	2066	6864	No	0.79	No
SLU 78	fin.	-66	-4175	0.81	0	441	6423	6550	2066	6864	No	1.64	Si
SLU 75	ini.	-167.87	8568	0.81	0	441	6423	6550	2066	6864	No	0.8	No
SLU 75	fin.	-66.16	-4131	0.81	0	441	6423	6550	2066	6864	No	1.66	Si
SLU 82	ini.	-174.48	8809	0.81	0	441	6423	6550	2066	6864	No	0.78	No
SLU 82	fin.	-69.4	-4247	0.81	0	441	6423	6550	2066	6864	No	1.62	Si
SLU 79	ini.	-167.96	8595	0.81	0	441	6423	6550	2066	6864	No	0.8	No
SLU 79	fin.	-64.43	-4133	0.81	0	441	6423	6550	2066	6864	No	1.66	Si
SLU 80	ini.	-168.1	8600	0.81	0	441	6423	6550	2066	6864	No	0.8	No
SLU 80	fin.	-65.1	-4138	0.81	0	441	6423	6550	2066	6864	No	1.66	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	435.59	1100	-0.000284	0.0003369	0.0035	0.81		2160.1	2160.1		4.96	Si
SLV 16	fin.	162	3855	-0.0001004	0.0003369	0.0035	0.81		2160.1	2160.1		13.33	Si
SLV 15	ini.	443.3	1138	-0.0002894	0.0003369	0.0035	0.81		2160.1	2160.1		4.87	Si
SLV 15	fin.	161.18	3864	-0.0000998	0.0003369	0.0035	0.81		2160.1	2160.1		13.4	Si
SLV 4	ini.	-464.54	-2969	-0.000304	0.0003369	0.0035	0.81		2165.48	2165.48		4.66	Si
SLV 4	fin.	-340.48	-3130	-0.0002173	0.0003369	0.0035	0.81		2165.48	2165.48		6.36	Si
SLV 6	ini.	-603.9	-3504	-0.0004081	0.0003369	0.0035	0.81		2165.48	2165.48		3.59	Si
SLV 6	fin.	39.49	-1968	-0.000024	0.0003369	0.0035	0.81		2160.1	2160.1		54.71	Si
SLV 11	ini.	372.3	766	-0.0002396	0.0003369	0.0035	0.81		2160.1	2160.1		5.8	Si
SLV 11	fin.	-124.52	2109	-0.0000765	0.0003369	0.0035	0.81		2165.48	2165.48		17.39	Si
SLV 2	ini.	-674.9	-3876	-0.0004642	0.0003369	0.0035	0.81		2165.48	2165.48		3.21	Si
SLV 2	fin.	-246.22	-3723	-0.0001544	0.0003369	0.0035	0.81		2165.48	2165.48		8.8	Si
SLV 5	ini.	-598.94	-3480	-0.0004042	0.0003369	0.0035	0.81		2165.48	2165.48		3.62	Si
SLV 5	fin.	38.96	-1963	-0.0000237	0.0003369	0.0035	0.81		2160.1	2160.1		55.45	Si
SLV 12	ini.	367.34	742	-0.0002362	0.0003369	0.0035	0.81		2160.1	2160.1		5.88	Si
SLV 12	fin.	-123.99	2103	-0.0000762	0.0003369	0.0035	0.81		2165.48	2165.48		17.46	Si
SLV 3	ini.	-456.84	-2931	-0.0002985	0.0003369	0.0035	0.81		2165.48	2165.48		4.74	Si
SLV 3	fin.	-341.3	-3122	-0.0002179	0.0003369	0.0035	0.81		2165.48	2165.48		6.34	Si
SLV 1	ini.	-667.2	-3838	-0.000458	0.0003369	0.0035	0.81		2165.48	2165.48		3.25	Si
SLV 1	fin.	-247.03	-3715	-0.000155	0.0003369	0.0035	0.81		2165.48	2165.48		8.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	232.94	13492	0.81	0	662	6423	9824	2066	7085		0.53	No
SLV 13	fin.	255.45	-3047	0.81	0	662	6423	9824	2066	7085		2.32	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-328.9	10572	0.81	0	662	6423	9824	2066	7085		0.67	No
SLV 9	fin.	189.7	-3743	0.81	0	662	6423	9824	2066	7085		1.89	Si
SLV 14	ini.	225.23	13456	0.81	0	662	6423	9824	2066	7085		0.53	No
SLV 14	fin.	256.27	-3003	0.81	0	662	6423	9824	2066	7085		2.36	Si
SLD 16	ini.	119.77	8378	0.81	0	662	6423	9824	2066	7085		0.85	No
SLD 16	fin.	45.02	-2642	0.81	0	662	6423	9824	2066	7085		2.68	Si
SLV 16	ini.	435.59	11836	0.81	0	662	6423	9824	2066	7085		0.6	No
SLV 16	fin.	162	-2435	0.81	0	662	6423	9824	2066	7085		2.91	Si
SLV 15	ini.	443.3	11873	0.81	0	662	6423	9824	2066	7085		0.6	No
SLV 15	fin.	161.18	-2479	0.81	0	662	6423	9824	2066	7085		2.86	Si
SLV 10	ini.	-333.86	10548	0.81	0	662	6423	9824	2066	7085		0.67	No
SLV 10	fin.	190.23	-3715	0.81	0	662	6423	9824	2066	7085		1.91	Si
SLD 13	ini.	33.24	9090	0.81	0	662	6423	9824	2066	7085		0.78	No
SLD 13	fin.	84.42	-2908	0.81	0	662	6423	9824	2066	7085		2.44	Si
SLD 14	ini.	29.94	9075	0.81	0	662	6423	9824	2066	7085		0.78	No
SLD 14	fin.	84.77	-2889	0.81	0	662	6423	9824	2066	7085		2.45	Si
SLD 15	ini.	123.07	8393	0.81	0	662	6423	9824	2066	7085		0.84	No
SLD 15	fin.	44.67	-2661	0.81	0	662	6423	9824	2066	7085		2.66	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.209	SLV 2	Si
V_SLV	0.525	SLV 13	No
PF_SLU	10.831	SLU 84	Si
V_SLU	0.771	SLU 84	No

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.238	1.046	1.18	1.99	0.81	-12.238	1.046	1.18	1.99	0.81	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-708.39	-3240	-0.0005193	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.67	Si
SLU 79	fin.	-215.02	-2960	-0.0001358	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.8	Si
SLU 74	ini.	-707.82	-3241	-0.0005188	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.67	Si
SLU 74	fin.	-216.24	-2961	-0.0001367	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.75	Si
SLU 75	ini.	-711.06	-3256	-0.0005216	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.66	Si
SLU 75	fin.	-215.7	-2968	-0.0001363	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.77	Si
SLU 81	ini.	-731.58	-3354	-0.00054	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.59	Si
SLU 81	fin.	-224.88	-3058	-0.0001424	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.42	Si
SLU 83	ini.	-739.76	-3385	-0.0005474	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.56	Si
SLU 83	fin.	-223.75	-3082	-0.0001417	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.46	Si
SLU 78	ini.	-719.24	-3287	-0.0005289	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.63	Si
SLU 78	fin.	-214.57	-2992	-0.0001355	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.82	Si
SLU 77	ini.	-716	-3273	-0.0005261	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.64	Si
SLU 77	fin.	-215.1	-2984	-0.0001359	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.8	Si
SLU 80	ini.	-711.63	-3255	-0.0005222	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.66	Si
SLU 80	fin.	-214.48	-2967	-0.0001355	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.82	Si
SLU 82	ini.	-734.82	-3369	-0.0005429	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.58	Si
SLU 82	fin.	-224.35	-3066	-0.0001421	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.44	Si
SLU 84	ini.	-743	-3400	-0.0005503	0.0002246	0.0035	0.81		1892.63	1892.63	No	2.55	Si
SLU 84	fin.	-223.21	-3089	-0.0001413	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-705.61	817	0.81	0	428	6423	6550	2066	6851	No	8.39	Si
SLU 76	fin.	-215.26	603	0.81	0	428	6423	6550	2066	6851	No	11.36	Si
SLU 80	ini.	-711.63	821	0.81	0	428	6423	6550	2066	6851	No	8.34	Si
SLU 80	fin.	-214.48	616	0.81	0	428	6423	6550	2066	6851	No	11.12	Si
SLU 83	ini.	-739.76	861	0.81	0	428	6423	6550	2066	6851	No	7.95	Si
SLU 83	fin.	-223.75	637	0.81	0	428	6423	6550	2066	6851	No	10.76	Si
SLU 77	ini.	-716	823	0.81	0	428	6423	6550	2066	6851	No	8.32	Si
SLU 77	fin.	-215.1	624	0.81	0	428	6423	6550	2066	6851	No	10.98	Si
SLU 81	ini.	-731.58	852	0.81	0	428	6423	6550	2066	6851	No	8.04	Si
SLU 81	fin.	-224.88	618	0.81	0	428	6423	6550	2066	6851	No	11.08	Si
SLU 82	ini.	-734.82	859	0.81	0	428	6423	6550	2066	6851	No	7.98	Si
SLU 82	fin.	-224.35	626	0.81	0	428	6423	6550	2066	6851	No	10.95	Si
SLU 78	ini.	-719.24	830	0.81	0	428	6423	6550	2066	6851	No	8.25	Si
SLU 78	fin.	-214.57	631	0.81	0	428	6423	6550	2066	6851	No	10.85	Si
SLU 84	ini.	-743	869	0.81	0	428	6423	6550	2066	6851	No	7.89	Si
SLU 84	fin.	-223.21	644	0.81	0	428	6423	6550	2066	6851	No	10.64	Si
SLU 75	ini.	-711.06	821	0.81	0	428	6423	6550	2066	6851	No	8.35	Si
SLU 75	fin.	-215.7	613	0.81	0	428	6423	6550	2066	6851	No	11.17	Si
SLU 79	ini.	-708.39	814	0.81	0	428	6423	6550	2066	6851	No	8.41	Si
SLU 79	fin.	-215.02	609	0.81	0	428	6423	6550	2066	6851	No	11.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2949.51	5725	-0.0044681	0.0003369	0.0035	0.81		2160.1	2160.1		0.73	No
SLV 3	fin.	-2440.57	-2208	-0.0031138	0.0003369	0.0035	0.81		2165.48	2165.48		0.89	No
SLV 15	ini.	-3644.03	-8986	-0.0059993	0.0003369	0.0035	0.81		2165.48	2165.48		0.59	No
SLV 15	fin.	2197.59	-943	-0.0024708	0.0003369	0.0035	0.81		2160.1	2160.1		0.98	No
SLV 14	ini.	-3880.49	-9997	-0.0065	0.0003369	0.0035	0.81		2165.48	2165.48		0.56	No
SLV 14	fin.	2133.06	-1762	-0.0023221	0.0003369	0.0035	0.81		2160.1	2160.1		1.01	Si
SLV 4	ini.	2966.01	5754	-0.0045073	0.0003369	0.0035	0.81		2160.1	2160.1		0.73	No
SLV 4	fin.	-2459.25	-2237	-0.0031685	0.0003369	0.0035	0.81		2165.48	2165.48		0.88	No
SLV 13	ini.	-3896.99	-10026	-0.0065345	0.0003369	0.0035	0.81		2165.48	2165.48		0.56	No
SLV 13	fin.	2151.73	-1733	-0.0023641	0.0003369	0.0035	0.81		2160.1	2160.1		1	Si
SLV 16	ini.	-3627.54	-8957	-0.0059639	0.0003369	0.0035	0.81		2165.48	2165.48		0.6	No
SLV 16	fin.	2178.91	-972	-0.0024266	0.0003369	0.0035	0.81		2160.1	2160.1		0.99	No
SLV 2	ini.	2713.05	4714	-0.003884	0.0003369	0.0035	0.81		2160.1	2160.1		0.8	No
SLV 2	fin.	-2505.1	-3027	-0.003302	0.0003369	0.0035	0.81		2165.48	2165.48		0.86	No
SLD 13	ini.	-1933.53	-5515	-0.0019162	0.0003369	0.0035	0.81		2165.48	2165.48		1.12	Si
SLD 13	fin.	832.01	-1879	-0.0005973	0.0003369	0.0035	0.81		2160.1	2160.1		2.6	Si
SLD 14	ini.	-1926.45	-5502	-0.0019036	0.0003369	0.0035	0.81		2165.48	2165.48		1.12	Si
SLD 14	fin.	823.99	-1892	-0.0005903	0.0003369	0.0035	0.81		2160.1	2160.1		2.62	Si
SLV 1	ini.	2696.56	4685	-0.0038412	0.0003369	0.0035	0.81		2160.1	2160.1		0.8	No
SLV 1	fin.	-2486.42	-2998	-0.0032478	0.0003369	0.0035	0.81		2165.48	2165.48		0.87	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-1881.43	5193	0.81	0	642	6423	9824	2066	7065		1.36	Si
SLV 9	fin.	471.56	5953	0.81	0	642	6423	9824	2066	7065		1.19	Si
SLV 1	ini.	2696.56	-8736	0.81	0	642	6423	9824	2066	7065		0.81	No
SLV 1	fin.	-2486.42	-8631	0.81	0	642	6423	9824	2066	7065		0.82	No
SLV 13	ini.	-3896.99	10877	0.81	0	642	6423	9824	2066	7065		0.65	No
SLV 13	fin.	2151.73	10984	0.81	0	642	6423	9824	2066	7065		0.64	No
SLV 16	ini.	-3627.54	9790	0.81	0	642	6423	9824	2066	7065		0.72	No
SLV 16	fin.	2178.91	9337	0.81	0	642	6423	9824	2066	7065		0.76	No
SLV 4	ini.	2966.01	-9823	0.81	0	642	6423	9824	2066	7065		0.72	No
SLV 4	fin.	-2459.25	-10278	0.81	0	642	6423	9824	2066	7065		0.69	No
SLV 10	ini.	-1870.8	5151	0.81	0	642	6423	9824	2066	7065		1.37	Si
SLV 10	fin.	459.53	5911	0.81	0	642	6423	9824	2066	7065		1.2	Si
SLV 14	ini.	-3880.49	10812	0.81	0	642	6423	9824	2066	7065		0.65	No
SLV 14	fin.	2133.06	10919	0.81	0	642	6423	9824	2066	7065		0.65	No
SLV 2	ini.	2713.05	-8801	0.81	0	642	6423	9824	2066	7065		0.8	No
SLV 2	fin.	-2505.1	-8696	0.81	0	642	6423	9824	2066	7065		0.81	No
SLV 15	ini.	-3644.03	9855	0.81	0	642	6423	9824	2066	7065		0.72	No
SLV 15	fin.	2197.59	9402	0.81	0	642	6423	9824	2066	7065		0.75	No
SLV 3	ini.	2949.51	-9758	0.81	0	642	6423	9824	2066	7065		0.72	No
SLV 3	fin.	-2440.57	-10213	0.81	0	642	6423	9824	2066	7065		0.69	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.556	SLV 13	No
V_SLV	0.643	SLV 13	No
PF_SLU	2.547	SLU 84	Si
V_SLU	7.886	SLU 84	Si

Trave di accoppiamento 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.528	1.046	1.12	1.99	0.87	-7.428	1.046	1.12	1.99	0.87	0.9	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-515.03	-5348	-0.0003009	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.08	Si
SLU 75	fin.	-2043.51	-9352	-0.0017834	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si
SLU 79	ini.	-508.5	-5349	-0.0002966	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.13	Si
SLU 79	fin.	-2059.65	-9397	-0.0018073	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 82	ini.	-554.6	-5544	-0.0003276	0.0002246	0.0035	0.87		2102.07	2102.07	No	3.79	Si
SLU 82	fin.	-2075.07	-9577	-0.0018305	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si
SLU 84	ini.	-554.89	-5596	-0.0003278	0.0002246	0.0035	0.87		2102.07	2102.07	No	3.79	Si
SLU 84	fin.	-2103.34	-9691	-0.0018739	0.0002246	0.0035	0.87		2102.07	2102.07	No	1	No
SLU 83	ini.	-550.35	-5578	-0.0003247	0.0002246	0.0035	0.87		2102.07	2102.07	No	3.82	Si
SLU 83	fin.	-2104.04	-9682	-0.001875	0.0002246	0.0035	0.87		2102.07	2102.07	No	1	No
SLU 80	ini.	-513.04	-5367	-0.0002996	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.1	Si
SLU 80	fin.	-2058.95	-9406	-0.0018063	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 81	ini.	-550.06	-5527	-0.0003245	0.0002246	0.0035	0.87		2102.07	2102.07	No	3.82	Si
SLU 81	fin.	-2075.77	-9569	-0.0018316	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si
SLU 78	ini.	-515.32	-5399	-0.0003011	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.08	Si
SLU 78	fin.	-2071.79	-9466	-0.0018255	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si
SLU 74	ini.	-510.48	-5331	-0.0002979	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.12	Si
SLU 74	fin.	-2044.21	-9344	-0.0017845	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si
SLU 77	ini.	-510.78	-5382	-0.0002981	0.0002246	0.0035	0.87		2102.07	2102.07	No	4.12	Si
SLU 77	fin.	-2072.48	-9457	-0.0018266	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-554.89	-2401	0.87	0	548	6899	7035	2219	7447	No	3.1	Si
SLU 84	fin.	-2103.34	-4795	0.87	0	548	6899	7035	2219	7447	No	1.55	Si
SLU 74	ini.	-510.48	-2412	0.87	0	548	6899	7035	2219	7447	No	3.09	Si
SLU 74	fin.	-2044.21	-4676	0.87	0	548	6899	7035	2219	7447	No	1.59	Si
SLU 83	ini.	-550.35	-2411	0.87	0	548	6899	7035	2219	7447	No	3.09	Si
SLU 83	fin.	-2104.04	-4805	0.87	0	548	6899	7035	2219	7447	No	1.55	Si
SLU 80	ini.	-513.04	-2438	0.87	0	548	6899	7035	2219	7447	No	3.05	Si
SLU 80	fin.	-2058.95	-4702	0.87	0	548	6899	7035	2219	7447	No	1.58	Si
SLU 77	ini.	-510.78	-2473	0.87	0	548	6899	7035	2219	7447	No	3.01	Si
SLU 77	fin.	-2072.48	-4737	0.87	0	548	6899	7035	2219	7447	No	1.57	Si
SLU 81	ini.	-550.06	-2350	0.87	0	548	6899	7035	2219	7447	No	3.17	Si
SLU 81	fin.	-2075.77	-4744	0.87	0	548	6899	7035	2219	7447	No	1.57	Si
SLU 78	ini.	-515.32	-2463	0.87	0	548	6899	7035	2219	7447	No	3.02	Si
SLU 78	fin.	-2071.79	-4727	0.87	0	548	6899	7035	2219	7447	No	1.58	Si
SLU 79	ini.	-508.5	-2448	0.87	0	548	6899	7035	2219	7447	No	3.04	Si
SLU 79	fin.	-2059.65	-4712	0.87	0	548	6899	7035	2219	7447	No	1.58	Si
SLU 75	ini.	-515.03	-2402	0.87	0	548	6899	7035	2219	7447	No	3.1	Si
SLU 75	fin.	-2043.51	-4666	0.87	0	548	6899	7035	2219	7447	No	1.6	Si
SLU 82	ini.	-554.6	-2340	0.87	0	548	6899	7035	2219	7447	No	3.18	Si
SLU 82	fin.	-2075.07	-4734	0.87	0	548	6899	7035	2219	7447	No	1.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1908.08	-2197	-0.0014853	0.0003369	0.0035	0.87		2465.18	2465.18		1.29	Si
SLV 3	fin.	-5618.7	-14941	-0.0085001	0.0003369	0.0035	0.87		2471.01	2471.01		0.44	No
SLV 15	ini.	-2077.25	-3815	-0.0016933	0.0003369	0.0035	0.87		2471.01	2471.01		1.19	Si
SLV 15	fin.	2902.44	3141	-0.0033403	0.0003369	0.0035	0.87		2465.18	2465.18		0.85	No
SLD 1	ini.	434.96	-3421	-0.0002426	0.0003369	0.0035	0.87		2465.18	2465.18		5.67	Si
SLD 1	fin.	-3255.23	-10415	-0.0041381	0.0003369	0.0035	0.87		2471.01	2471.01		0.76	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1854.79	-2402	-0.0014233	0.0003369	0.0035	0.87		2465.18	2465.18		1.33	Si
SLV 4	fin.	-5611.82	-15041	-0.0084883	0.0003369	0.0035	0.87		2471.01	2471.01		0.44	No
SLV 1	ini.	1466.85	-3169	-0.0010233	0.0003369	0.0035	0.87		2465.18	2465.18		1.68	Si
SLV 1	fin.	-5728.32	-15808	-0.0086879	0.0003369	0.0035	0.87		2471.01	2471.01		0.43	No
SLD 2	ini.	412.08	-3509	-0.0002289	0.0003369	0.0035	0.87		2465.18	2465.18		5.98	Si
SLD 2	fin.	-3252.27	-10458	-0.0041317	0.0003369	0.0035	0.87		2471.01	2471.01		0.76	No
SLV 16	ini.	-2130.54	-4021	-0.0017663	0.0003369	0.0035	0.87		2471.01	2471.01		1.16	Si
SLV 16	fin.	2909.31	3041	-0.0033574	0.0003369	0.0035	0.87		2465.18	2465.18		0.85	No
SLD 3	ini.	627.04	-2991	-0.0003624	0.0003369	0.0035	0.87		2465.18	2465.18		3.93	Si
SLD 3	fin.	-3209.11	-10039	-0.0040385	0.0003369	0.0035	0.87		2471.01	2471.01		0.77	No
SLV 2	ini.	1413.56	-3374	-0.0009741	0.0003369	0.0035	0.87		2465.18	2465.18		1.74	Si
SLV 2	fin.	-5721.44	-15908	-0.0086761	0.0003369	0.0035	0.87		2471.01	2471.01		0.43	No
SLD 4	ini.	604.15	-3079	-0.0003476	0.0003369	0.0035	0.87		2465.18	2465.18		4.08	Si
SLD 4	fin.	-3206.16	-10082	-0.004032	0.0003369	0.0035	0.87		2471.01	2471.01		0.77	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2077.25	9697	0.87	0	823	6899	10552	2219	7721		0.8	No
SLV 15	fin.	2902.44	7931	0.87	0	823	6899	10552	2219	7721		0.97	No
SLV 4	ini.	1854.79	-13546	0.87	0	823	6899	10552	2219	7721		0.57	No
SLV 4	fin.	-5611.82	-15717	0.87	0	823	6899	10552	2219	7721		0.49	No
SLV 3	ini.	1908.08	-13664	0.87	0	823	6899	10552	2219	7721		0.57	No
SLV 3	fin.	-5618.7	-15834	0.87	0	823	6899	10552	2219	7721		0.49	No
SLV 1	ini.	1466.85	-13217	0.87	0	823	6899	10552	2219	7721		0.58	No
SLV 1	fin.	-5728.32	-14535	0.87	0	823	6899	10552	2219	7721		0.53	No
SLV 2	ini.	1413.56	-13099	0.87	0	823	6899	10552	2219	7721		0.59	No
SLV 2	fin.	-5721.44	-14417	0.87	0	823	6899	10552	2219	7721		0.54	No
SLV 7	ini.	1018.5	-5988	0.87	0	823	6899	10552	2219	7721		1.29	Si
SLV 7	fin.	-2507.19	-9011	0.87	0	823	6899	10552	2219	7721		0.86	No
SLV 14	ini.	-2571.77	10261	0.87	0	823	6899	10552	2219	7721		0.75	No
SLV 14	fin.	2799.7	9348	0.87	0	823	6899	10552	2219	7721		0.83	No
SLV 8	ini.	984.16	-5912	0.87	0	823	6899	10552	2219	7721		1.31	Si
SLV 8	fin.	-2502.76	-8935	0.87	0	823	6899	10552	2219	7721		0.86	No
SLV 13	ini.	-2518.48	10143	0.87	0	823	6899	10552	2219	7721		0.76	No
SLV 13	fin.	2792.82	9230	0.87	0	823	6899	10552	2219	7721		0.84	No
SLV 16	ini.	-2130.54	9814	0.87	0	823	6899	10552	2219	7721		0.79	No
SLV 16	fin.	2909.31	8049	0.87	0	823	6899	10552	2219	7721		0.96	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.431	SLV 1	No
V_SLV	0.488	SLV 3	No
PF_SLU	0.999	SLU 83	No
V_SLU	1.55	SLU 83	Si

Trave di accoppiamento 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.808	3.431	1.22	1.99	0.77	-14.808	3.431	1.22	1.99	0.77	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-369.65	-2013	-0.0002721	0.0002246	0.0035	0.77		2223.54	2223.54	No	6.02	Si
SLU 74	fin.	-769.15	1419	-0.0006491	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.89	Si
SLU 77	ini.	-372.5	-2029	-0.0002745	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.97	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-778.02	1439	-0.0006584	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.86	Si
SLU 75	ini.	-370.09	-2015	-0.0002725	0.0002246	0.0035	0.77		2223.54	2223.54	No	6.01	Si
SLU 75	fin.	-769.22	1419	-0.0006492	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.89	Si
SLU 84	ini.	-386.17	-2097	-0.0002859	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.76	Si
SLU 84	fin.	-797.72	1457	-0.0006793	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.79	Si
SLU 78	ini.	-372.94	-2031	-0.0002748	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.96	Si
SLU 78	fin.	-778.09	1439	-0.0006585	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.86	Si
SLU 82	ini.	-383.32	-2081	-0.0002835	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.8	Si
SLU 82	fin.	-788.85	1437	-0.0006699	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.82	Si
SLU 81	ini.	-382.87	-2079	-0.0002831	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.81	Si
SLU 81	fin.	-788.78	1437	-0.0006698	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.82	Si
SLU 79	ini.	-370.42	-2017	-0.0002727	0.0002246	0.0035	0.77		2223.54	2223.54	No	6	Si
SLU 79	fin.	-772.62	1427	-0.0006527	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.88	Si
SLU 80	ini.	-370.86	-2019	-0.0002731	0.0002246	0.0035	0.77		2223.54	2223.54	No	6	Si
SLU 80	fin.	-772.69	1427	-0.0006528	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.88	Si
SLU 83	ini.	-385.72	-2095	-0.0002855	0.0002246	0.0035	0.77		2223.54	2223.54	No	5.76	Si
SLU 83	fin.	-797.65	1457	-0.0006793	0.0002246	0.0035	0.77		2223.54	2223.54	No	2.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-372.5	1453	0.77	0	258	6106	4151	1964	6114	No	4.21	Si
SLU 77	fin.	-778.02	-3270	0.77	0	258	6106	4151	1964	6114	No	1.87	Si
SLU 82	ini.	-383.32	1475	0.77	0	258	6106	4151	1964	6114	No	4.15	Si
SLU 82	fin.	-788.85	-3331	0.77	0	258	6106	4151	1964	6114	No	1.84	Si
SLU 80	ini.	-370.86	1447	0.77	0	258	6106	4151	1964	6114	No	4.23	Si
SLU 80	fin.	-772.69	-3248	0.77	0	258	6106	4151	1964	6114	No	1.88	Si
SLU 75	ini.	-370.09	1444	0.77	0	258	6106	4151	1964	6114	No	4.24	Si
SLU 75	fin.	-769.22	-3235	0.77	0	258	6106	4151	1964	6114	No	1.89	Si
SLU 78	ini.	-372.94	1455	0.77	0	258	6106	4151	1964	6114	No	4.2	Si
SLU 78	fin.	-778.09	-3270	0.77	0	258	6106	4151	1964	6114	No	1.87	Si
SLU 84	ini.	-386.17	1486	0.77	0	258	6106	4151	1964	6114	No	4.11	Si
SLU 84	fin.	-797.72	-3366	0.77	0	258	6106	4151	1964	6114	No	1.82	Si
SLU 79	ini.	-370.42	1446	0.77	0	258	6106	4151	1964	6114	No	4.23	Si
SLU 79	fin.	-772.62	-3248	0.77	0	258	6106	4151	1964	6114	No	1.88	Si
SLU 83	ini.	-385.72	1485	0.77	0	258	6106	4151	1964	6114	No	4.12	Si
SLU 83	fin.	-797.65	-3365	0.77	0	258	6106	4151	1964	6114	No	1.82	Si
SLU 74	ini.	-369.65	1442	0.77	0	258	6106	4151	1964	6114	No	4.24	Si
SLU 74	fin.	-769.15	-3235	0.77	0	258	6106	4151	1964	6114	No	1.89	Si
SLU 81	ini.	-382.87	1474	0.77	0	258	6106	4151	1964	6114	No	4.15	Si
SLU 81	fin.	-788.78	-3331	0.77	0	258	6106	4151	1964	6114	No	1.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-877.35	-4678	-0.000719	0.0003369	0.0035	0.77		2185.84	2185.84		2.49	Si
SLV 15	fin.	-780.27	1261	-0.0006219	0.0003369	0.0035	0.77		2185.84	2185.84		2.8	Si
SLD 13	ini.	-533.57	-2864	-0.0003967	0.0003369	0.0035	0.77		2185.84	2185.84		4.1	Si
SLD 13	fin.	-628.41	1075	-0.0004796	0.0003369	0.0035	0.77		2185.84	2185.84		3.48	Si
SLD 14	ini.	-535.46	-2876	-0.0003983	0.0003369	0.0035	0.77		2185.84	2185.84		4.08	Si
SLD 14	fin.	-629.81	1077	-0.0004808	0.0003369	0.0035	0.77		2185.84	2185.84		3.47	Si
SLV 14	ini.	-914.9	-4879	-0.000758	0.0003369	0.0035	0.77		2185.84	2185.84		2.39	Si
SLV 14	fin.	-773.96	1204	-0.0006157	0.0003369	0.0035	0.77		2185.84	2185.84		2.82	Si
SLV 13	ini.	-910.49	-4851	-0.0007534	0.0003369	0.0035	0.77		2185.84	2185.84		2.4	Si
SLV 13	fin.	-770.7	1199	-0.0006125	0.0003369	0.0035	0.77		2185.84	2185.84		2.84	Si
SLD 15	ini.	-518.98	-2788	-0.0003844	0.0003369	0.0035	0.77		2185.84	2185.84		4.21	Si
SLD 15	fin.	-632.51	1102	-0.0004833	0.0003369	0.0035	0.77		2185.84	2185.84		3.46	Si
SLV 12	ini.	-391.23	-2118	-0.0002808	0.0003369	0.0035	0.77		2185.84	2185.84		5.59	Si
SLV 12	fin.	-617.92	1163	-0.0004702	0.0003369	0.0035	0.77		2185.84	2185.84		3.54	Si
SLV 11	ini.	-388.39	-2100	-0.0002786	0.0003369	0.0035	0.77		2185.84	2185.84		5.63	Si
SLV 11	fin.	-615.82	1160	-0.0004683	0.0003369	0.0035	0.77		2185.84	2185.84		3.55	Si
SLD 16	ini.	-520.87	-2800	-0.000386	0.0003369	0.0035	0.77		2185.84	2185.84		4.2	Si
SLD 16	fin.	-633.91	1104	-0.0004845	0.0003369	0.0035	0.77		2185.84	2185.84		3.45	Si
SLV 16	ini.	-881.76	-4706	-0.0007236	0.0003369	0.0035	0.77		2185.84	2185.84		2.48	Si
SLV 16	fin.	-783.53	1266	-0.000625	0.0003369	0.0035	0.77		2185.84	2185.84		2.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-877.35	2805	0.77	0	387	6106	6226	1964	6492		2.31	Si
SLV 15	fin.	-780.27	-3118	0.77	0	387	6106	6226	1964	6492		2.08	Si
SLV 13	ini.	-910.49	2901	0.77	0	387	6106	6226	1964	6492		2.24	Si
SLV 13	fin.	-770.7	-3092	0.77	0	387	6106	6226	1964	6492		2.1	Si
SLV 16	ini.	-881.76	2821	0.77	0	387	6106	6226	1964	6492		2.3	Si
SLV 16	fin.	-783.53	-3131	0.77	0	387	6106	6226	1964	6492		2.07	Si
SLD 16	ini.	-520.87	1785	0.77	0	387	6106	6226	1964	6492		3.64	Si
SLD 16	fin.	-633.91	-2598	0.77	0	387	6106	6226	1964	6492		2.5	Si
SLV 12	ini.	-391.23	1414	0.77	0	387	6106	6226	1964	6492		4.59	Si
SLV 12	fin.	-617.92	-2520	0.77	0	387	6106	6226	1964	6492		2.58	Si
SLV 11	ini.	-388.39	1404	0.77	0	387	6106	6226	1964	6492		4.63	Si
SLV 11	fin.	-615.82	-2512	0.77	0	387	6106	6226	1964	6492		2.59	Si
SLD 15	ini.	-518.98	1778	0.77	0	387	6106	6226	1964	6492		3.65	Si
SLD 15	fin.	-632.51	-2592	0.77	0	387	6106	6226	1964	6492		2.51	Si
SLD 13	ini.	-533.57	1820	0.77	0	387	6106	6226	1964	6492		3.57	Si
SLD 13	fin.	-628.41	-2581	0.77	0	387	6106	6226	1964	6492		2.52	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-914.9	2916	0.77	0	387	6106	6226	1964	6492		2.23	Si
SLV 14	fin.	-773.96	-3106	0.77	0	387	6106	6226	1964	6492		2.09	Si
SLD 14	ini.	-535.46	1827	0.77	0	387	6106	6226	1964	6492		3.55	Si
SLD 14	fin.	-629.81	-2587	0.77	0	387	6106	6226	1964	6492		2.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.389	SLV 14	Si
V_SLV	2.073	SLV 16	Si
PF_SLU	2.787	SLU 84	Si
V_SLU	1.817	SLU 84	Si

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	-0.98	1.02	2	-11.888	6.576	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	2311.5	-10638	-0.0002553	0.0001872	0.0035	2		10722.86	10722.86	No	4.64	Si
SLU 80	fin.	229.94	-9301	-0.0000229	0.0001872	0.0035	2		10722.86	10722.86	No	46.63	Si
SLU 79	ini.	2308.85	-10644	-0.000255	0.0001872	0.0035	2		10722.86	10722.86	No	4.64	Si
SLU 79	fin.	227.73	-9307	-0.0000227	0.0001872	0.0035	2		10722.86	10722.86	No	47.09	Si
SLU 75	ini.	2315.9	-10602	-0.0002559	0.0001872	0.0035	2		10722.86	10722.86	No	4.63	Si
SLU 75	fin.	212.98	-9253	-0.0000212	0.0001872	0.0035	2		10722.86	10722.86	No	50.35	Si
SLU 77	ini.	2333.54	-10718	-0.0002581	0.0001872	0.0035	2		10722.86	10722.86	No	4.6	Si
SLU 77	fin.	226.56	-9365	-0.0000226	0.0001872	0.0035	2		10722.86	10722.86	No	47.33	Si
SLU 83	ini.	2400.7	-10950	-0.0002666	0.0001872	0.0035	2		10722.86	10722.86	No	4.47	Si
SLU 83	fin.	213.33	-9544	-0.0000213	0.0001872	0.0035	2		10722.86	10722.86	No	50.26	Si
SLU 84	ini.	2403.35	-10945	-0.0002669	0.0001872	0.0035	2		10722.86	10722.86	No	4.46	Si
SLU 84	fin.	215.53	-9538	-0.0000215	0.0001872	0.0035	2		10722.86	10722.86	No	49.75	Si
SLU 82	ini.	2383.06	-10835	-0.0002644	0.0001872	0.0035	2		10722.86	10722.86	No	4.5	Si
SLU 82	fin.	199.75	-9432	-0.0000199	0.0001872	0.0035	2		10722.86	10722.86	No	53.68	Si
SLU 74	ini.	2313.25	-10608	-0.0002555	0.0001872	0.0035	2		10722.86	10722.86	No	4.64	Si
SLU 74	fin.	210.78	-9259	-0.000021	0.0001872	0.0035	2		10722.86	10722.86	No	50.87	Si
SLU 81	ini.	2380.4	-10840	-0.000264	0.0001872	0.0035	2		10722.86	10722.86	No	4.5	Si
SLU 81	fin.	197.54	-9438	-0.0000197	0.0001872	0.0035	2		10722.86	10722.86	No	54.28	Si
SLU 78	ini.	2336.19	-10712	-0.0002584	0.0001872	0.0035	2		10722.86	10722.86	No	4.59	Si
SLU 78	fin.	228.77	-9359	-0.0000228	0.0001872	0.0035	2		10722.86	10722.86	No	46.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	2380.4	-4864	2	0	1304	7930	13475	5100	9234	No	1.9	Si
SLU 81	fin.	197.54	-2338	2	0	1304	7930	13475	5100	9234	No	3.95	Si
SLU 80	ini.	2311.5	-4653	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 80	fin.	229.94	-2218	2	0	1304	7930	13475	5100	9234	No	4.16	Si
SLU 74	ini.	2313.25	-4677	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 74	fin.	210.78	-2258	2	0	1304	7930	13475	5100	9234	No	4.09	Si
SLU 82	ini.	2383.06	-4863	2	0	1304	7930	13475	5100	9234	No	1.9	Si
SLU 82	fin.	199.75	-2340	2	0	1304	7930	13475	5100	9234	No	3.95	Si
SLU 83	ini.	2400.7	-4897	2	0	1304	7930	13475	5100	9234	No	1.89	Si
SLU 83	fin.	213.33	-2323	2	0	1304	7930	13475	5100	9234	No	3.98	Si
SLU 79	ini.	2308.85	-4653	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 79	fin.	227.73	-2216	2	0	1304	7930	13475	5100	9234	No	4.17	Si
SLU 78	ini.	2336.19	-4711	2	0	1304	7930	13475	5100	9234	No	1.96	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	228.77	-2244	2	0	1304	7930	13475	5100	9234	No	4.12	Si
SLU 75	ini.	2315.9	-4677	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 75	fin.	212.98	-2260	2	0	1304	7930	13475	5100	9234	No	4.09	Si
SLU 84	ini.	2403.35	-4897	2	0	1304	7930	13475	5100	9234	No	1.89	Si
SLU 84	fin.	215.53	-2325	2	0	1304	7930	13475	5100	9234	No	3.97	Si
SLU 77	ini.	2333.54	-4711	2	0	1304	7930	13475	5100	9234	No	1.96	Si
SLU 77	fin.	226.56	-2242	2	0	1304	7930	13475	5100	9234	No	4.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	5903.45	-10145	-0.0007399	0.0002807	0.0035	2		15635.95	15635.95		2.65	Si
SLV 13	fin.	-4374.54	-3227	-0.0005109	0.0002807	0.0035	2		15648.46	15648.46		3.58	Si
SLV 14	ini.	6239.63	-10496	-0.0007939	0.0002807	0.0035	2		15635.95	15635.95		2.51	Si
SLV 14	fin.	-4741.2	-2962	-0.0005632	0.0002807	0.0035	2		15648.46	15648.46		3.3	Si
SLV 15	ini.	5908.55	-11118	-0.0007407	0.0002807	0.0035	2		15635.95	15635.95		2.65	Si
SLV 15	fin.	-4374.42	-4188	-0.0005109	0.0002807	0.0035	2		15648.46	15648.46		3.58	Si
SLV 3	ini.	-3111.74	-4174	-0.0003429	0.0002807	0.0035	2		15648.46	15648.46		5.03	Si
SLV 3	fin.	5026.61	-9893	-0.0006056	0.0002807	0.0035	2		15635.95	15635.95		3.11	Si
SLV 1	ini.	-3116.84	-3202	-0.0003436	0.0002807	0.0035	2		15648.46	15648.46		5.02	Si
SLV 1	fin.	5026.49	-8932	-0.0006055	0.0002807	0.0035	2		15635.95	15635.95		3.11	Si
SLD 14	ini.	3564	-8683	-0.0004013	0.0002807	0.0035	2		15635.95	15635.95		4.39	Si
SLD 14	fin.	-1944.04	-4942	-0.0002043	0.0002807	0.0035	2		15648.46	15648.46		8.05	Si
SLV 4	ini.	-2775.56	-4525	-0.0003014	0.0002807	0.0035	2		15648.46	15648.46		5.64	Si
SLV 4	fin.	4659.96	-9628	-0.000552	0.0002807	0.0035	2		15635.95	15635.95		3.36	Si
SLV 16	ini.	6244.73	-11469	-0.0007947	0.0002807	0.0035	2		15635.95	15635.95		2.5	Si
SLV 16	fin.	-4741.07	-3923	-0.0005632	0.0002807	0.0035	2		15648.46	15648.46		3.3	Si
SLV 2	ini.	-2780.66	-3552	-0.000302	0.0002807	0.0035	2		15648.46	15648.46		5.63	Si
SLV 2	fin.	4659.83	-8667	-0.000552	0.0002807	0.0035	2		15635.95	15635.95		3.36	Si
SLD 16	ini.	3562.66	-9104	-0.0004011	0.0002807	0.0035	2		15635.95	15635.95		4.39	Si
SLD 16	fin.	-1947.1	-5359	-0.0002047	0.0002807	0.0035	2		15648.46	15648.46		8.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	3564	-9956	2	0	1957	7930	20213	5100	9886		0.99	No
SLD 14	fin.	-1944.04	-8499	2	0	1957	7930	20213	5100	9886		1.16	Si
SLV 3	ini.	-3111.74	12985	2	0	1957	7930	20213	5100	9886		0.76	No
SLV 3	fin.	5026.61	14556	2	0	1957	7930	20213	5100	9886		0.68	No
SLV 2	ini.	-2780.66	11835	2	0	1957	7930	20213	5100	9886		0.84	No
SLV 2	fin.	4659.83	12974	2	0	1957	7930	20213	5100	9886		0.76	No
SLV 16	ini.	6244.73	-19307	2	0	1957	7930	20213	5100	9886		0.51	No
SLV 16	fin.	-4741.07	-17461	2	0	1957	7930	20213	5100	9886		0.57	No
SLV 4	ini.	-2775.56	11685	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 4	fin.	4659.96	13257	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 15	ini.	5908.55	-18007	2	0	1957	7930	20213	5100	9886		0.55	No
SLV 15	fin.	-4374.42	-16161	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 13	ini.	5903.45	-17857	2	0	1957	7930	20213	5100	9886		0.55	No
SLV 13	fin.	-4374.54	-16444	2	0	1957	7930	20213	5100	9886		0.6	No
SLV 14	ini.	6239.63	-19157	2	0	1957	7930	20213	5100	9886		0.52	No
SLV 14	fin.	-4741.2	-17743	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 1	ini.	-3116.84	13135	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 1	fin.	5026.49	14273	2	0	1957	7930	20213	5100	9886		0.69	No
SLD 16	ini.	3562.66	-10021	2	0	1957	7930	20213	5100	9886		0.99	No
SLD 16	fin.	-1947.1	-8376	2	0	1957	7930	20213	5100	9886		1.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.504	SLV 16	Si
V_SLV	0.512	SLV 16	No
PF_SLU	4.462	SLU 84	Si
V_SLU	1.886	SLU 83	Si

Trave di accoppiamento 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	1.42	1.99	0.57	-11.888	6.576	1.42	1.99	0.57	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-163.68	-631	-0.0002185	0.0001872	0.0035	0.57		912.83	912.83	No	5.58	Si
SLU 81	fin.	-708.86	-2560	-0.0013281	0.0001872	0.0035	0.57		912.83	912.83	No	1.29	Si
SLU 78	ini.	-168.94	-649	-0.0002263	0.0001872	0.0035	0.57		912.83	912.83	No	5.4	Si
SLU 78	fin.	-696.37	-2515	-0.0012948	0.0001872	0.0035	0.57		912.83	912.83	No	1.31	Si
SLU 84	ini.	-167.94	-647	-0.0002248	0.0001872	0.0035	0.57		912.83	912.83	No	5.44	Si
SLU 84	fin.	-714.94	-2583	-0.0013444	0.0001872	0.0035	0.57		912.83	912.83	No	1.28	Si
SLU 83	ini.	-167.93	-647	-0.0002248	0.0001872	0.0035	0.57		912.83	912.83	No	5.44	Si
SLU 83	fin.	-714.79	-2583	-0.001344	0.0001872	0.0035	0.57		912.83	912.83	No	1.28	Si
SLU 77	ini.	-168.93	-649	-0.0002263	0.0001872	0.0035	0.57		912.83	912.83	No	5.4	Si
SLU 77	fin.	-696.22	-2515	-0.0012945	0.0001872	0.0035	0.57		912.83	912.83	No	1.31	Si
SLU 75	ini.	-164.69	-632	-0.00022	0.0001872	0.0035	0.57		912.83	912.83	No	5.54	Si
SLU 75	fin.	-690.44	-2493	-0.0012793	0.0001872	0.0035	0.57		912.83	912.83	No	1.32	Si
SLU 80	ini.	-168.72	-648	-0.000226	0.0001872	0.0035	0.57		912.83	912.83	No	5.41	Si
SLU 80	fin.	-689.91	-2492	-0.0012779	0.0001872	0.0035	0.57		912.83	912.83	No	1.32	Si
SLU 79	ini.	-168.71	-648	-0.000226	0.0001872	0.0035	0.57		912.83	912.83	No	5.41	Si
SLU 79	fin.	-689.76	-2492	-0.0012775	0.0001872	0.0035	0.57		912.83	912.83	No	1.32	Si
SLU 82	ini.	-163.68	-631	-0.0002185	0.0001872	0.0035	0.57		912.83	912.83	No	5.58	Si
SLU 82	fin.	-709.01	-2561	-0.0013285	0.0001872	0.0035	0.57		912.83	912.83	No	1.29	Si
SLU 74	ini.	-164.68	-632	-0.0002199	0.0001872	0.0035	0.57		912.83	912.83	No	5.54	Si
SLU 74	fin.	-690.29	-2493	-0.0012789	0.0001872	0.0035	0.57		912.83	912.83	No	1.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-168.71	1148	0.57	0	248	4520	3840	1454	4768	No	4.15	Si
SLU 79	fin.	-689.76	-3243	0.57	0	248	4520	3840	1454	4768	No	1.47	Si
SLU 84	ini.	-167.94	1156	0.57	0	248	4520	3840	1454	4768	No	4.12	Si
SLU 84	fin.	-714.94	-3355	0.57	0	248	4520	3840	1454	4768	No	1.42	Si
SLU 74	ini.	-164.68	1131	0.57	0	248	4520	3840	1454	4768	No	4.22	Si
SLU 74	fin.	-690.29	-3244	0.57	0	248	4520	3840	1454	4768	No	1.47	Si
SLU 82	ini.	-163.68	1135	0.57	0	248	4520	3840	1454	4768	No	4.2	Si
SLU 82	fin.	-709.01	-3327	0.57	0	248	4520	3840	1454	4768	No	1.43	Si
SLU 83	ini.	-167.93	1156	0.57	0	248	4520	3840	1454	4768	No	4.12	Si
SLU 83	fin.	-714.79	-3354	0.57	0	248	4520	3840	1454	4768	No	1.42	Si
SLU 78	ini.	-168.94	1152	0.57	0	248	4520	3840	1454	4768	No	4.14	Si
SLU 78	fin.	-696.37	-3273	0.57	0	248	4520	3840	1454	4768	No	1.46	Si
SLU 80	ini.	-168.72	1148	0.57	0	248	4520	3840	1454	4768	No	4.15	Si
SLU 80	fin.	-689.91	-3244	0.57	0	248	4520	3840	1454	4768	No	1.47	Si
SLU 81	ini.	-163.68	1135	0.57	0	248	4520	3840	1454	4768	No	4.2	Si
SLU 81	fin.	-708.86	-3326	0.57	0	248	4520	3840	1454	4768	No	1.43	Si
SLU 75	ini.	-164.69	1131	0.57	0	248	4520	3840	1454	4768	No	4.22	Si
SLU 75	fin.	-690.44	-3245	0.57	0	248	4520	3840	1454	4768	No	1.47	Si
SLU 77	ini.	-168.93	1152	0.57	0	248	4520	3840	1454	4768	No	4.14	Si
SLU 77	fin.	-696.22	-3272	0.57	0	248	4520	3840	1454	4768	No	1.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1284.15	-4752	-0.0037091	0.0002807	0.0035	0.57		1281.66	1281.66		1	No
SLV 4	fin.	694.37	2247	-0.00121	0.0002807	0.0035	0.57		1278.06	1278.06		1.84	Si
SLV 2	ini.	-1284.41	-4396	-0.0037105	0.0002807	0.0035	0.57		1281.66	1281.66		1	No
SLV 2	fin.	686.45	2581	-0.0011908	0.0002807	0.0035	0.57		1278.06	1278.06		1.86	Si
SLD 16	ini.	424.8	1393	-0.0006373	0.0002807	0.0035	0.57		1278.06	1278.06		3.01	Si
SLD 16	fin.	-1007.51	-3676	-0.002195	0.0002807	0.0035	0.57		1281.66	1281.66		1.27	Si
SLV 15	ini.	1051.89	3510	-0.0024093	0.0002807	0.0035	0.57		1278.06	1278.06		1.22	Si
SLV 15	fin.	-1629.4	-5981	-0.0054022	0.0002807	0.0035	0.57		1281.66	1281.66		0.79	No
SLV 1	ini.	-1381.92	-4738	-0.0042258	0.0002807	0.0035	0.57		1281.66	1281.66		0.93	No
SLV 1	fin.	782.66	2922	-0.0014382	0.0002807	0.0035	0.57		1278.06	1278.06		1.63	Si
SLV 3	ini.	-1381.66	-5093	-0.0042245	0.0002807	0.0035	0.57		1281.66	1281.66		0.93	No
SLV 3	fin.	790.57	2588	-0.0014601	0.0002807	0.0035	0.57		1278.06	1278.06		1.62	Si
SLD 14	ini.	424.71	1545	-0.0006371	0.0002807	0.0035	0.57		1278.06	1278.06		3.01	Si
SLD 14	fin.	-1010.85	-3533	-0.0022093	0.0002807	0.0035	0.57		1281.66	1281.66		1.27	Si
SLV 13	ini.	1051.63	3866	-0.0024081	0.0002807	0.0035	0.57		1278.06	1278.06		1.22	Si
SLV 13	fin.	-1637.32	-5647	-0.005438	0.0002807	0.0035	0.57		1281.66	1281.66		0.78	No
SLV 14	ini.	1149.15	4208	-0.002929	0.0002807	0.0035	0.57		1278.06	1278.06		1.11	Si
SLV 14	fin.	-1733.52	-5988	-0.0058665	0.0002807	0.0035	0.57		1281.66	1281.66		0.74	No
SLV 16	ini.	1149.4	3852	-0.0029305	0.0002807	0.0035	0.57		1278.06	1278.06		1.11	Si
SLV 16	fin.	-1725.61	-6322	-0.0058316	0.0002807	0.0035	0.57		1281.66	1281.66		0.74	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	280.63	617	0.57	0	372	4520	5761	1454	4892		7.93	Si
SLV 12	fin.	-852.28	-4976	0.57	0	372	4520	5761	1454	4892		0.98	No
SLV 15	ini.	1051.89	-3469	0.57	0	372	4520	5761	1454	4892		1.41	Si
SLV 15	fin.	-1629.4	-7228	0.57	0	372	4520	5761	1454	4892		0.68	No
SLV 1	ini.	-1381.92	5452	0.57	0	372	4520	5761	1454	4892		0.9	No
SLV 1	fin.	782.66	3160	0.57	0	372	4520	5761	1454	4892		1.55	Si
SLV 4	ini.	-1284.15	5908	0.57	0	372	4520	5761	1454	4892		0.83	No
SLV 4	fin.	694.37	2073	0.57	0	372	4520	5761	1454	4892		2.36	Si
SLV 13	ini.	1051.63	-4316	0.57	0	372	4520	5761	1454	4892		1.13	Si
SLV 13	fin.	-1637.32	-6522	0.57	0	372	4520	5761	1454	4892		0.75	No
SLV 14	ini.	1149.15	-4706	0.57	0	372	4520	5761	1454	4892		1.04	Si
SLV 14	fin.	-1733.52	-6903	0.57	0	372	4520	5761	1454	4892		0.71	No
SLV 3	ini.	-1381.66	6299	0.57	0	372	4520	5761	1454	4892		0.78	No
SLV 3	fin.	790.57	2454	0.57	0	372	4520	5761	1454	4892		1.99	Si
SLV 11	ini.	217.78	869	0.57	0	372	4520	5761	1454	4892		5.63	Si
SLV 11	fin.	-790.28	-4731	0.57	0	372	4520	5761	1454	4892		1.03	Si
SLV 16	ini.	1149.4	-3859	0.57	0	372	4520	5761	1454	4892		1.27	Si
SLV 16	fin.	-1725.61	-7609	0.57	0	372	4520	5761	1454	4892		0.64	No
SLV 2	ini.	-1284.41	5061	0.57	0	372	4520	5761	1454	4892		0.97	No
SLV 2	fin.	686.45	2779	0.57	0	372	4520	5761	1454	4892		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.739	SLV 14	No
V_SLV	0.643	SLV 16	No
PF_SLU	1.277	SLU 84	Si
V_SLU	1.421	SLU 84	Si

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	-0.98	1.02	2	-7.008	6.576	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-2207.85	-6296	-0.0002421	0.0001872	0.0035	2		10737.13	10737.13	No	4.86	Si
SLU 78	fin.	4028.89	-7969	-0.0004908	0.0001872	0.0035	2		10722.86	10722.86	No	2.66	Si
SLU 75	ini.	-2201.46	-6216	-0.0002414	0.0001872	0.0035	2		10737.13	10737.13	No	4.88	Si
SLU 75	fin.	3998.63	-7890	-0.0004864	0.0001872	0.0035	2		10722.86	10722.86	No	2.68	Si
SLU 81	ini.	-2256.59	-6353	-0.0002482	0.0001872	0.0035	2		10737.13	10737.13	No	4.76	Si
SLU 81	fin.	4092.69	-8079	-0.0005003	0.0001872	0.0035	2		10722.86	10722.86	No	2.62	Si
SLU 82	ini.	-2255.76	-6347	-0.0002481	0.0001872	0.0035	2		10737.13	10737.13	No	4.76	Si
SLU 82	fin.	4097.36	-8074	-0.000501	0.0001872	0.0035	2		10722.86	10722.86	No	2.62	Si
SLU 77	ini.	-2208.69	-6302	-0.0002423	0.0001872	0.0035	2		10737.13	10737.13	No	4.86	Si
SLU 77	fin.	4024.22	-7974	-0.0004902	0.0001872	0.0035	2		10722.86	10722.86	No	2.66	Si
SLU 83	ini.	-2262.98	-6433	-0.000249	0.0001872	0.0035	2		10737.13	10737.13	No	4.74	Si
SLU 83	fin.	4122.95	-8159	-0.0005048	0.0001872	0.0035	2		10722.86	10722.86	No	2.6	Si
SLU 74	ini.	-2202.3	-6222	-0.0002415	0.0001872	0.0035	2		10737.13	10737.13	No	4.88	Si
SLU 74	fin.	3993.96	-7894	-0.0004857	0.0001872	0.0035	2		10722.86	10722.86	No	2.68	Si
SLU 79	ini.	-2195.78	-6258	-0.0002407	0.0001872	0.0035	2		10737.13	10737.13	No	4.89	Si
SLU 79	fin.	3996.1	-7920	-0.000486	0.0001872	0.0035	2		10722.86	10722.86	No	2.68	Si
SLU 84	ini.	-2262.15	-6426	-0.0002489	0.0001872	0.0035	2		10737.13	10737.13	No	4.75	Si
SLU 84	fin.	4127.62	-8154	-0.0005055	0.0001872	0.0035	2		10722.86	10722.86	No	2.6	Si
SLU 80	ini.	-2194.94	-6252	-0.0002405	0.0001872	0.0035	2		10737.13	10737.13	No	4.89	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	4000.77	-7915	-0.0004867	0.0001872	0.0035	2		10722.86	10722.86	No	2.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-2255.76	7168	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 82	fin.	4097.36	9159	2	0	1304	7930	13475	5100	9234	No	1.01	Si
SLU 84	ini.	-2262.15	7184	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 84	fin.	4127.62	9218	2	0	1304	7930	13475	5100	9234	No	1	Si
SLU 83	ini.	-2262.98	7178	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 83	fin.	4122.95	9214	2	0	1304	7930	13475	5100	9234	No	1	Si
SLU 75	ini.	-2201.46	7006	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 75	fin.	3998.63	8907	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 81	ini.	-2256.59	7161	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 81	fin.	4092.69	9155	2	0	1304	7930	13475	5100	9234	No	1.01	Si
SLU 80	ini.	-2194.94	6985	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 80	fin.	4000.77	8902	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 79	ini.	-2195.78	6978	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 79	fin.	3996.1	8898	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 78	ini.	-2207.85	7022	2	0	1304	7930	13475	5100	9234	No	1.31	Si
SLU 78	fin.	4028.89	8966	2	0	1304	7930	13475	5100	9234	No	1.03	Si
SLU 74	ini.	-2202.3	7000	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 74	fin.	3993.96	8903	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 77	ini.	-2208.69	7016	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 77	fin.	4024.22	8962	2	0	1304	7930	13475	5100	9234	No	1.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-1657.81	-2309	-0.0001725	0.0002807	0.0035	2		15648.46	15648.46		9.44	Si
SLV 6	fin.	4446.45	-4964	-0.0005216	0.0002807	0.0035	2		15635.95	15635.95		3.52	Si
SLD 4	ini.	-2871.15	-2197	-0.0003131	0.0002807	0.0035	2		15648.46	15648.46		5.45	Si
SLD 4	fin.	4358.11	-5565	-0.0005091	0.0002807	0.0035	2		15635.95	15635.95		3.59	Si
SLD 1	ini.	-2829.48	-1915	-0.000308	0.0002807	0.0035	2		15648.46	15648.46		5.53	Si
SLD 1	fin.	4663.26	-5523	-0.0005525	0.0002807	0.0035	2		15635.95	15635.95		3.35	Si
SLV 4	ini.	-4624.12	590	-0.0005463	0.0002807	0.0035	2		15648.46	15648.46		3.38	Si
SLV 4	fin.	6487.4	-5713	-0.0008346	0.0002807	0.0035	2		15635.95	15635.95		2.41	Si
SLV 3	ini.	-4952.59	929	-0.000594	0.0002807	0.0035	2		15648.46	15648.46		3.16	Si
SLV 3	fin.	6850.21	-5917	-0.0008956	0.0002807	0.0035	2		15635.95	15635.95		2.28	Si
SLV 5	ini.	-1869.48	-2091	-0.000196	0.0002807	0.0035	2		15648.46	15648.46		8.37	Si
SLV 5	fin.	4680.26	-5095	-0.000555	0.0002807	0.0035	2		15635.95	15635.95		3.34	Si
SLV 1	ini.	-4530.84	1239	-0.000533	0.0002807	0.0035	2		15648.46	15648.46		3.45	Si
SLV 1	fin.	7192.94	-5626	-0.0009549	0.0002807	0.0035	2		15635.95	15635.95		2.17	Si
SLV 2	ini.	-4202.38	899	-0.0004869	0.0002807	0.0035	2		15648.46	15648.46		3.72	Si
SLV 2	fin.	6830.13	-5422	-0.0008922	0.0002807	0.0035	2		15635.95	15635.95		2.29	Si
SLD 2	ini.	-2688.45	-2061	-0.0002909	0.0002807	0.0035	2		15648.46	15648.46		5.82	Si
SLD 2	fin.	4507.48	-5436	-0.0005302	0.0002807	0.0035	2		15635.95	15635.95		3.47	Si
SLD 3	ini.	-3012.18	-2052	-0.0003305	0.0002807	0.0035	2		15648.46	15648.46		5.2	Si
SLD 3	fin.	4513.89	-5653	-0.0005311	0.0002807	0.0035	2		15635.95	15635.95		3.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-3275.3	9198	2	0	1957	7930	20213	5100	9886		1.07	Si
SLV 7	fin.	3537.84	10827	2	0	1957	7930	20213	5100	9886		0.91	No
SLD 2	ini.	-2688.45	10183	2	0	1957	7930	20213	5100	9886		0.97	No
SLD 2	fin.	4507.48	10848	2	0	1957	7930	20213	5100	9886		0.91	No
SLV 2	ini.	-4202.38	17124	2	0	1957	7930	20213	5100	9886		0.58	No
SLV 2	fin.	6830.13	17145	2	0	1957	7930	20213	5100	9886		0.58	No
SLD 1	ini.	-2829.48	10692	2	0	1957	7930	20213	5100	9886		0.92	No
SLD 1	fin.	4663.26	11372	2	0	1957	7930	20213	5100	9886		0.87	No
SLD 4	ini.	-2871.15	10179	2	0	1957	7930	20213	5100	9886		0.97	No
SLD 4	fin.	4358.11	11034	2	0	1957	7930	20213	5100	9886		0.9	No
SLV 3	ini.	-4952.59	18310	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 3	fin.	6850.21	18809	2	0	1957	7930	20213	5100	9886		0.53	No
SLV 1	ini.	-4530.84	18310	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 1	fin.	7192.94	18366	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 8	ini.	-3063.63	8434	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 8	fin.	3304.04	10040	2	0	1957	7930	20213	5100	9886		0.98	No
SLV 4	ini.	-4624.12	17124	2	0	1957	7930	20213	5100	9886		0.58	No
SLV 4	fin.	6487.4	17587	2	0	1957	7930	20213	5100	9886		0.56	No
SLD 3	ini.	-3012.18	10688	2	0	1957	7930	20213	5100	9886		0.92	No
SLD 3	fin.	4513.89	11558	2	0	1957	7930	20213	5100	9886		0.86	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.174	SLV 1	Si
V_SLV	0.526	SLV 3	No
PF_SLU	2.598	SLU 84	Si
V_SLU	1.002	SLU 84	Si

Trave di accoppiamento 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	1.42	1.99	0.57	-7.008	6.576	1.42	1.99	0.57	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-1214.98	-4136	-0.003638	0.0001872	0.0035	0.57		912.83	912.83	No	0.75	No
SLU 82	fin.	533.45	2038	-0.0009066	0.0001872	0.0035	0.57		908.75	908.75	No	1.7	Si
SLU 78	ini.	-1198.08	-4075	-0.0035352	0.0001872	0.0035	0.57		912.83	912.83	No	0.76	No
SLU 78	fin.	521.98	1998	-0.0008814	0.0001872	0.0035	0.57		908.75	908.75	No	1.74	Si
SLU 83	ini.	-1224.44	-4168	-0.0036944	0.0001872	0.0035	0.57		912.83	912.83	No	0.75	No
SLU 83	fin.	534.91	2044	-0.0009098	0.0001872	0.0035	0.57		908.75	908.75	No	1.7	Si
SLU 84	ini.	-1224.93	-4170	-0.0036973	0.0001872	0.0035	0.57		912.83	912.83	No	0.75	No
SLU 84	fin.	535.19	2045	-0.0009105	0.0001872	0.0035	0.57		908.75	908.75	No	1.7	Si
SLU 81	ini.	-1214.49	-4134	-0.003635	0.0001872	0.0035	0.57		912.83	912.83	No	0.75	No
SLU 81	fin.	533.17	2036	-0.000906	0.0001872	0.0035	0.57		908.75	908.75	No	1.7	Si
SLU 75	ini.	-1188.13	-4041	-0.0034734	0.0001872	0.0035	0.57		912.83	912.83	No	0.77	No
SLU 75	fin.	520.24	1990	-0.0008776	0.0001872	0.0035	0.57		908.75	908.75	No	1.75	Si
SLU 77	ini.	-1197.59	-4073	-0.0035322	0.0001872	0.0035	0.57		912.83	912.83	No	0.76	No
SLU 77	fin.	521.69	1997	-0.0008807	0.0001872	0.0035	0.57		908.75	908.75	No	1.74	Si
SLU 74	ini.	-1187.64	-4040	-0.0034703	0.0001872	0.0035	0.57		912.83	912.83	No	0.77	No
SLU 74	fin.	519.96	1989	-0.0008769	0.0001872	0.0035	0.57		908.75	908.75	No	1.75	Si
SLU 80	ini.	-1189.85	-4047	-0.0034842	0.0001872	0.0035	0.57		912.83	912.83	No	0.77	No
SLU 80	fin.	518.9	1986	-0.0008746	0.0001872	0.0035	0.57		908.75	908.75	No	1.75	Si
SLU 79	ini.	-1189.37	-4045	-0.0034811	0.0001872	0.0035	0.57		912.83	912.83	No	0.77	No
SLU 79	fin.	518.61	1985	-0.000874	0.0001872	0.0035	0.57		908.75	908.75	No	1.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1214.49	5513	0.57	0	248	4520	3840	1454	4768	No	0.86	No
SLU 81	fin.	533.17	1622	0.57	0	248	4520	3840	1454	4768	No	2.94	Si
SLU 74	ini.	-1187.64	5396	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 74	fin.	519.96	1576	0.57	0	248	4520	3840	1454	4768	No	3.02	Si
SLU 82	ini.	-1214.98	5515	0.57	0	248	4520	3840	1454	4768	No	0.86	No
SLU 82	fin.	533.45	1623	0.57	0	248	4520	3840	1454	4768	No	2.94	Si
SLU 84	ini.	-1224.93	5562	0.57	0	248	4520	3840	1454	4768	No	0.86	No
SLU 84	fin.	535.19	1625	0.57	0	248	4520	3840	1454	4768	No	2.93	Si
SLU 75	ini.	-1188.13	5398	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 75	fin.	520.24	1577	0.57	0	248	4520	3840	1454	4768	No	3.02	Si
SLU 79	ini.	-1189.37	5406	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 79	fin.	518.61	1569	0.57	0	248	4520	3840	1454	4768	No	3.04	Si
SLU 80	ini.	-1189.85	5408	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 80	fin.	518.9	1570	0.57	0	248	4520	3840	1454	4768	No	3.04	Si
SLU 78	ini.	-1198.08	5445	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 78	fin.	521.98	1579	0.57	0	248	4520	3840	1454	4768	No	3.02	Si
SLU 77	ini.	-1197.59	5443	0.57	0	248	4520	3840	1454	4768	No	0.88	No
SLU 77	fin.	521.69	1578	0.57	0	248	4520	3840	1454	4768	No	3.02	Si
SLU 83	ini.	-1224.44	5560	0.57	0	248	4520	3840	1454	4768	No	0.86	No
SLU 83	fin.	534.91	1624	0.57	0	248	4520	3840	1454	4768	No	2.94	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-1370.51	-4033	-0.0041677	0.0002807	0.0035	0.57		1281.66	1281.66		0.94	No
SLV 7	fin.	649.03	2993	-0.0011022	0.0002807	0.0035	0.57		1278.06	1278.06		1.97	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-1183.81	-4157	-0.0031186	0.0002807	0.0035	0.57		1281.66	1281.66		1.08	Si
SLD 1	fin.	782	2815	-0.0014364	0.0002807	0.0035	0.57		1278.06	1278.06		1.63	Si
SLV 2	ini.	-1568.63	-5640	-0.0051246	0.0002807	0.0035	0.57		1281.66	1281.66		0.82	No
SLV 2	fin.	1243.06	4366	-0.0034964	0.0002807	0.0035	0.57		1278.06	1278.06		1.03	Si
SLD 2	ini.	-1143.23	-4016	-0.0028749	0.0002807	0.0035	0.57		1281.66	1281.66		1.12	Si
SLD 2	fin.	741.4	2671	-0.0013283	0.0002807	0.0035	0.57		1278.06	1278.06		1.72	Si
SLV 1	ini.	-1663.13	-5968	-0.005554	0.0002807	0.0035	0.57		1281.66	1281.66		0.77	No
SLV 1	fin.	1337.62	4700	-0.0040176	0.0002807	0.0035	0.57		1278.06	1278.06		0.96	No
SLD 3	ini.	-1249.09	-4210	-0.0035105	0.0002807	0.0035	0.57		1281.66	1281.66		1.03	Si
SLD 3	fin.	775.99	2942	-0.00142	0.0002807	0.0035	0.57		1278.06	1278.06		1.65	Si
SLV 8	ini.	-1309.61	-3821	-0.0038483	0.0002807	0.0035	0.57		1281.66	1281.66		0.98	No
SLV 8	fin.	588.09	2777	-0.0009654	0.0002807	0.0035	0.57		1278.06	1278.06		2.17	Si
SLV 3	ini.	-1815.65	-6091	-0.0062273	0.0002807	0.0035	0.57		1281.66	1281.66		0.71	No
SLV 3	fin.	1323.47	4998	-0.0039428	0.0002807	0.0035	0.57		1278.06	1278.06		0.97	No
SLV 4	ini.	-1721.15	-5763	-0.0058119	0.0002807	0.0035	0.57		1281.66	1281.66		0.74	No
SLV 4	fin.	1228.91	4664	-0.0034131	0.0002807	0.0035	0.57		1278.06	1278.06		1.04	Si
SLD 4	ini.	-1208.51	-4069	-0.0032693	0.0002807	0.0035	0.57		1281.66	1281.66		1.06	Si
SLD 4	fin.	735.39	2799	-0.0013127	0.0002807	0.0035	0.57		1278.06	1278.06		1.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-1309.61	6309	0.57	0	372	4520	5761	1454	4892		0.78	No
SLV 8	fin.	588.09	3215	0.57	0	372	4520	5761	1454	4892		1.52	Si
SLD 3	ini.	-1249.09	5541	0.57	0	372	4520	5761	1454	4892		0.88	No
SLD 3	fin.	775.99	2931	0.57	0	372	4520	5761	1454	4892		1.67	Si
SLV 3	ini.	-1815.65	7931	0.57	0	372	4520	5761	1454	4892		0.62	No
SLV 3	fin.	1323.47	5364	0.57	0	372	4520	5761	1454	4892		0.91	No
SLV 2	ini.	-1568.63	6575	0.57	0	372	4520	5761	1454	4892		0.74	No
SLV 2	fin.	1243.06	4325	0.57	0	372	4520	5761	1454	4892		1.13	Si
SLD 4	ini.	-1208.51	5378	0.57	0	372	4520	5761	1454	4892		0.91	No
SLD 4	fin.	735.39	2769	0.57	0	372	4520	5761	1454	4892		1.77	Si
SLD 1	ini.	-1183.81	5124	0.57	0	372	4520	5761	1454	4892		0.95	No
SLD 1	fin.	782	2648	0.57	0	372	4520	5761	1454	4892		1.85	Si
SLV 4	ini.	-1721.15	7550	0.57	0	372	4520	5761	1454	4892		0.65	No
SLV 4	fin.	1228.91	4986	0.57	0	372	4520	5761	1454	4892		0.98	No
SLV 7	ini.	-1370.51	6554	0.57	0	372	4520	5761	1454	4892		0.75	No
SLV 7	fin.	649.03	3458	0.57	0	372	4520	5761	1454	4892		1.41	Si
SLV 1	ini.	-1663.13	6955	0.57	0	372	4520	5761	1454	4892		0.7	No
SLV 1	fin.	1337.62	4703	0.57	0	372	4520	5761	1454	4892		1.04	Si
SLD 2	ini.	-1143.23	4961	0.57	0	372	4520	5761	1454	4892		0.99	No
SLD 2	fin.	741.4	2486	0.57	0	372	4520	5761	1454	4892		1.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.706	SLV 3	No
V_SLV	0.617	SLV 3	No
PF_SLU	0.745	SLU 84	No
V_SLU	0.857	SLU 84	No

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-10.553	-3.284	1.07	1.99	0.92	-8.253	-3.284	1.07	1.99	0.92	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	205.13	1615	-0.0000996	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.26	Si
SLU 77	fin.	-1879.6	-6051	-0.0013586	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.23	Si
SLU 81	ini.	216.98	1687	-0.0001057	0.0001872	0.0035	0.92		2310.19	2310.19	No	10.65	Si
SLU 81	fin.	-1928.5	-6184	-0.0014102	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.2	Si
SLU 82	ini.	219.11	1692	-0.0001068	0.0001872	0.0035	0.92		2310.19	2310.19	No	10.54	Si
SLU 82	fin.	-1933.19	-6202	-0.0014153	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.2	Si
SLU 79	ini.	203.97	1610	-0.0000991	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.33	Si
SLU 79	fin.	-1869.66	-6013	-0.0013482	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.24	Si
SLU 75	ini.	205.08	1608	-0.0000996	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.26	Si
SLU 75	fin.	-1863.06	-5995	-0.0013414	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.24	Si
SLU 80	ini.	206.1	1615	-0.0001001	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.21	Si
SLU 80	fin.	-1874.35	-6032	-0.0013531	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.24	Si
SLU 83	ini.	219.16	1699	-0.0001068	0.0001872	0.0035	0.92		2310.19	2310.19	No	10.54	Si
SLU 83	fin.	-1949.73	-6259	-0.0014331	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.19	Si
SLU 84	ini.	221.29	1704	-0.0001079	0.0001872	0.0035	0.92		2310.19	2310.19	No	10.44	Si
SLU 84	fin.	-1954.42	-6277	-0.0014382	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.19	Si
SLU 78	ini.	207.26	1620	-0.0001007	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.15	Si
SLU 78	fin.	-1884.29	-6069	-0.0013635	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.23	Si
SLU 74	ini.	202.95	1603	-0.0000985	0.0001872	0.0035	0.92		2310.19	2310.19	No	11.38	Si
SLU 74	fin.	-1858.37	-5976	-0.0013365	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	219.11	4084	0.92	0	400	7295	6199	2346	7695	No	1.88	Si
SLU 82	fin.	-1933.19	-10792	0.92	0	400	7295	6199	2346	7695	No	0.71	No
SLU 84	ini.	221.29	4130	0.92	0	400	7295	6199	2346	7695	No	1.86	Si
SLU 84	fin.	-1954.42	-10908	0.92	0	400	7295	6199	2346	7695	No	0.71	No
SLU 75	ini.	205.08	3991	0.92	0	400	7295	6199	2346	7695	No	1.93	Si
SLU 75	fin.	-1863.06	-10418	0.92	0	400	7295	6199	2346	7695	No	0.74	No
SLU 79	ini.	203.97	4014	0.92	0	400	7295	6199	2346	7695	No	1.92	Si
SLU 79	fin.	-1869.66	-10446	0.92	0	400	7295	6199	2346	7695	No	0.74	No
SLU 80	ini.	206.1	4018	0.92	0	400	7295	6199	2346	7695	No	1.92	Si
SLU 80	fin.	-1874.35	-10480	0.92	0	400	7295	6199	2346	7695	No	0.73	No
SLU 77	ini.	205.13	4034	0.92	0	400	7295	6199	2346	7695	No	1.91	Si
SLU 77	fin.	-1879.6	-10500	0.92	0	400	7295	6199	2346	7695	No	0.73	No
SLU 76	ini.	205.34	3974	0.92	0	400	7295	6199	2346	7695	No	1.94	Si
SLU 76	fin.	-1856.24	-10387	0.92	0	400	7295	6199	2346	7695	No	0.74	No
SLU 81	ini.	216.98	4080	0.92	0	400	7295	6199	2346	7695	No	1.89	Si
SLU 81	fin.	-1928.5	-10758	0.92	0	400	7295	6199	2346	7695	No	0.72	No
SLU 78	ini.	207.26	4038	0.92	0	400	7295	6199	2346	7695	No	1.91	Si
SLU 78	fin.	-1884.29	-10534	0.92	0	400	7295	6199	2346	7695	No	0.73	No
SLU 83	ini.	219.16	4127	0.92	0	400	7295	6199	2346	7695	No	1.86	Si
SLU 83	fin.	-1949.73	-10874	0.92	0	400	7295	6199	2346	7695	No	0.71	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	430.69	1885	-0.0002146	0.0002807	0.0035	0.92		3322.54	3322.54		7.71	Si
SLD 13	fin.	-2439.53	-7119	-0.0019072	0.0002807	0.0035	0.92		3328.52	3328.52		1.36	Si
SLV 9	ini.	548.33	1579	-0.0002791	0.0002807	0.0035	0.92		3322.54	3322.54		6.06	Si
SLV 9	fin.	-2332.29	-7348	-0.0017644	0.0002807	0.0035	0.92		3328.52	3328.52		1.43	Si
SLD 15	ini.	373.09	1910	-0.0001841	0.0002807	0.0035	0.92		3322.54	3322.54		8.91	Si
SLD 15	fin.	-2375.25	-6804	-0.0018201	0.0002807	0.0035	0.92		3328.52	3328.52		1.4	Si
SLV 10	ini.	537.94	1491	-0.0002733	0.0002807	0.0035	0.92		3322.54	3322.54		6.18	Si
SLV 10	fin.	-2246.9	-7185	-0.0016593	0.0002807	0.0035	0.92		3328.52	3328.52		1.48	Si
SLD 14	ini.	423.76	1826	-0.0002109	0.0002807	0.0035	0.92		3322.54	3322.54		7.84	Si
SLD 14	fin.	-2382.64	-7010	-0.0018299	0.0002807	0.0035	0.92		3328.52	3328.52		1.4	Si
SLV 16	ini.	679.18	2885	-0.0003551	0.0002807	0.0035	0.92		3322.54	3322.54		4.89	Si
SLV 16	fin.	-3740.03	-10265	-0.0044802	0.0002807	0.0035	0.92		3328.52	3328.52		0.89	No
SLV 15	ini.	695.31	3021	-0.0003648	0.0002807	0.0035	0.92		3322.54	3322.54		4.78	Si
SLV 15	fin.	-3872.54	-10517	-0.004726	0.0002807	0.0035	0.92		3328.52	3328.52		0.86	No
SLV 14	ini.	813.42	2826	-0.0004378	0.0002807	0.0035	0.92		3322.54	3322.54		4.08	Si
SLV 14	fin.	-3886.67	-10994	-0.0047519	0.0002807	0.0035	0.92		3328.52	3328.52		0.86	No
SLV 13	ini.	829.55	2962	-0.0004481	0.0002807	0.0035	0.92		3322.54	3322.54		4.01	Si
SLV 13	fin.	-4019.18	-11246	-0.0049912	0.0002807	0.0035	0.92		3328.52	3328.52		0.83	No
SLD 16	ini.	366.16	1851	-0.0001804	0.0002807	0.0035	0.92		3322.54	3322.54		9.07	Si
SLD 16	fin.	-2318.35	-6696	-0.0017468	0.0002807	0.0035	0.92		3328.52	3328.52		1.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	548.33	1468	0.92	0	600	7295	9298	2346	7895		5.38	Si
SLV 9	fin.	-2332.29	-9850	0.92	0	600	7295	9298	2346	7895		0.8	No
SLV 10	ini.	537.94	1412	0.92	0	600	7295	9298	2346	7895		5.59	Si
SLV 10	fin.	-2246.9	-9712	0.92	0	600	7295	9298	2346	7895		0.81	No
SLV 15	ini.	695.31	3017	0.92	0	600	7295	9298	2346	7895		2.62	Si
SLV 15	fin.	-3872.54	-11986	0.92	0	600	7295	9298	2346	7895		0.66	No
SLD 13	ini.	430.69	2540	0.92	0	600	7295	9298	2346	7895		3.11	Si
SLD 13	fin.	-2439.53	-9449	0.92	0	600	7295	9298	2346	7895		0.84	No
SLD 15	ini.	373.09	2866	0.92	0	600	7295	9298	2346	7895		2.76	Si
SLD 15	fin.	-2375.25	-9139	0.92	0	600	7295	9298	2346	7895		0.86	No
SLV 16	ini.	679.18	2930	0.92	0	600	7295	9298	2346	7895		2.69	Si
SLV 16	fin.	-3740.03	-11771	0.92	0	600	7295	9298	2346	7895		0.67	No
SLD 16	ini.	366.16	2829	0.92	0	600	7295	9298	2346	7895		2.79	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	fin.	-2318.35	-9047	0.92	0	600	7295	9298	2346	7895		0.87	No
SLV 14	ini.	813.42	2171	0.92	0	600	7295	9298	2346	7895		3.64	Si
SLV 14	fin.	-3886.67	-12490	0.92	0	600	7295	9298	2346	7895		0.63	No
SLD 14	ini.	423.76	2503	0.92	0	600	7295	9298	2346	7895		3.15	Si
SLD 14	fin.	-2382.64	-9356	0.92	0	600	7295	9298	2346	7895		0.84	No
SLV 13	ini.	829.55	2258	0.92	0	600	7295	9298	2346	7895		3.5	Si
SLV 13	fin.	-4019.18	-12705	0.92	0	600	7295	9298	2346	7895		0.62	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.828	SLV 13	No
V_SLV	0.621	SLV 13	No
PF_SLU	1.185	SLU 84	Si
V_SLU	0.705	SLU 84	No

Trave di accoppiamento 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	1.99	2.89	0.9	-18.313	-3.314	1.99	2.89	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	767.28	-1993	-0.0004565	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 77	fin.	-292.91	-4037	-0.0001522	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.12	Si
SLU 63	ini.	766.76	-1924	-0.0004562	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 63	fin.	-326.33	-3720	-0.000171	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.08	Si
SLU 80	ini.	779.24	-1995	-0.0004651	0.0001872	0.0035	0.9		2959	2959	No	3.8	Si
SLU 80	fin.	-314.55	-4106	-0.0001643	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.43	Si
SLU 81	ini.	790.67	-2024	-0.0004734	0.0001872	0.0035	0.9		2959	2959	No	3.74	Si
SLU 81	fin.	-314.33	-3985	-0.0001642	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.43	Si
SLU 82	ini.	800.64	-2028	-0.0004806	0.0001872	0.0035	0.9		2959	2959	No	3.7	Si
SLU 82	fin.	-331.58	-4104	-0.000174	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.94	Si
SLU 84	ini.	812.26	-2060	-0.0004891	0.0001872	0.0035	0.9		2959	2959	No	3.64	Si
SLU 84	fin.	-333.79	-4173	-0.0001752	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.88	Si
SLU 78	ini.	777.25	-1997	-0.0004637	0.0001872	0.0035	0.9		2959	2959	No	3.81	Si
SLU 78	fin.	-310.16	-4157	-0.0001619	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.56	Si
SLU 79	ini.	769.27	-1991	-0.000458	0.0001872	0.0035	0.9		2959	2959	No	3.85	Si
SLU 79	fin.	-297.3	-3987	-0.0001546	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.97	Si
SLU 83	ini.	802.29	-2056	-0.0004818	0.0001872	0.0035	0.9		2959	2959	No	3.69	Si
SLU 83	fin.	-316.55	-4054	-0.0001655	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.37	Si
SLU 76	ini.	774.27	-1965	-0.0004616	0.0001872	0.0035	0.9		2959	2959	No	3.82	Si
SLU 76	fin.	-323.83	-4117	-0.0001696	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	777.25	-4280	0.9	0	329	7137	3773	2295	6068	No	1.42	Si
SLU 78	fin.	-310.16	6109	0.9	0	329	7137	3773	2295	6068	No	0.99	No
SLU 80	ini.	779.24	-4274	0.9	0	329	7137	3773	2295	6068	No	1.42	Si
SLU 80	fin.	-314.55	6034	0.9	0	329	7137	3773	2295	6068	No	1.01	Si
SLU 76	ini.	774.27	-4205	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 76	fin.	-323.83	5994	0.9	0	329	7137	3773	2295	6068	No	1.01	Si
SLU 79	ini.	769.27	-4277	0.9	0	329	7137	3773	2295	6068	No	1.42	Si
SLU 79	fin.	-297.3	5948	0.9	0	329	7137	3773	2295	6068	No	1.02	Si
SLU 84	ini.	812.26	-4435	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 84	fin.	-333.79	6135	0.9	0	329	7137	3773	2295	6068	No	0.99	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	800.64	-4368	0.9	0	329	7137	3773	2295	6068	No	1.39	Si
SLU 82	fin.	-331.58	6038	0.9	0	329	7137	3773	2295	6068	No	1	Si
SLU 75	ini.	765.63	-4214	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 75	fin.	-307.95	6012	0.9	0	329	7137	3773	2295	6068	No	1.01	Si
SLU 77	ini.	767.28	-4283	0.9	0	329	7137	3773	2295	6068	No	1.42	Si
SLU 77	fin.	-292.91	6023	0.9	0	329	7137	3773	2295	6068	No	1.01	Si
SLU 81	ini.	790.67	-4371	0.9	0	329	7137	3773	2295	6068	No	1.39	Si
SLU 81	fin.	-314.33	5952	0.9	0	329	7137	3773	2295	6068	No	1.02	Si
SLU 83	ini.	802.29	-4438	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 83	fin.	-316.55	6049	0.9	0	329	7137	3773	2295	6068	No	1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2650.62	-5215	-0.0024623	0.0002807	0.0035	0.9		2989.59	2989.59		1.13	Si
SLV 4	fin.	-1640.86	1656	-0.0011201	0.0002807	0.0035	0.9		2995.37	2995.37		1.83	Si
SLV 8	ini.	1355.96	-3227	-0.000871	0.0002807	0.0035	0.9		2989.59	2989.59		2.2	Si
SLV 8	fin.	-747.89	486	-0.0004181	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLD 4	ini.	1427.23	-2998	-0.0009313	0.0002807	0.0035	0.9		2989.59	2989.59		2.09	Si
SLD 4	fin.	-815.5	-841	-0.0004631	0.0002807	0.0035	0.9		2995.37	2995.37		3.67	Si
SLD 2	ini.	1380.79	-2811	-0.0008919	0.0002807	0.0035	0.9		2989.59	2989.59		2.17	Si
SLD 2	fin.	-790.23	-1348	-0.0004461	0.0002807	0.0035	0.9		2995.37	2995.37		3.79	Si
SLV 3	ini.	2427.62	-4833	-0.0020655	0.0002807	0.0035	0.9		2989.59	2989.59		1.23	Si
SLV 3	fin.	-1471.76	1109	-0.0009675	0.0002807	0.0035	0.9		2995.37	2995.37		2.04	Si
SLV 13	ini.	-1623.6	2532	-0.001104	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 13	fin.	1241.96	-7074	-0.0007781	0.0002807	0.0035	0.9		2989.59	2989.59		2.41	Si
SLV 14	ini.	-1400.6	2150	-0.0009064	0.0002807	0.0035	0.9		2995.37	2995.37		2.14	Si
SLV 14	fin.	1072.86	-6527	-0.0006474	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 15	ini.	-1516.19	2099	-0.0010065	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 15	fin.	1184.67	-5892	-0.0007328	0.0002807	0.0035	0.9		2989.59	2989.59		2.52	Si
SLV 1	ini.	2320.21	-4399	-0.0019012	0.0002807	0.0035	0.9		2989.59	2989.59		1.29	Si
SLV 1	fin.	-1414.47	-72	-0.0009182	0.0002807	0.0035	0.9		2995.37	2995.37		2.12	Si
SLV 2	ini.	2543.21	-4782	-0.0022612	0.0002807	0.0035	0.9		2989.59	2989.59		1.18	Si
SLV 2	fin.	-1583.56	475	-0.0010672	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1623.6	4534	0.9	0	493	7137	5660	2295	7630		1.68	Si
SLV 13	fin.	1241.96	10650	0.9	0	493	7137	5660	2295	7630		0.72	No
SLV 10	ini.	-185.22	2	0.9	0	493	7137	5660	2295	7630		4190.44	Si
SLV 10	fin.	240.02	7114	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 16	ini.	-1293.19	3146	0.9	0	493	7137	5660	2295	7630		2.43	Si
SLV 16	fin.	1015.57	8847	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 9	ini.	-328.93	476	0.9	0	493	7137	5660	2295	7630		16.04	Si
SLV 9	fin.	348.99	7649	0.9	0	493	7137	5660	2295	7630		1	No
SLV 4	ini.	2650.62	-10251	0.9	0	493	7137	5660	2295	7630		0.74	No
SLV 4	fin.	-1640.86	-2542	0.9	0	493	7137	5660	2295	7630		3	Si
SLV 1	ini.	2320.21	-8863	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 1	fin.	-1414.47	-739	0.9	0	493	7137	5660	2295	7630		10.32	Si
SLV 14	ini.	-1400.6	3798	0.9	0	493	7137	5660	2295	7630		2.01	Si
SLV 14	fin.	1072.86	9818	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 3	ini.	2427.62	-9516	0.9	0	493	7137	5660	2295	7630		0.8	No
SLV 3	fin.	-1471.76	-1711	0.9	0	493	7137	5660	2295	7630		4.46	Si
SLV 15	ini.	-1516.19	3881	0.9	0	493	7137	5660	2295	7630		1.97	Si
SLV 15	fin.	1184.67	9678	0.9	0	493	7137	5660	2295	7630		0.79	No
SLV 2	ini.	2543.21	-9598	0.9	0	493	7137	5660	2295	7630		0.79	No
SLV 2	fin.	-1583.56	-1571	0.9	0	493	7137	5660	2295	7630		4.86	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.128	SLV 4	Si
V_SLV	0.716	SLV 13	No
PF_SLU	3.643	SLU 84	Si
V_SLU	0.989	SLU 84	No

Trave di accoppiamento 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	4.79	5.46	0.67	-18.313	-3.314	4.79	5.46	0.67	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-222.94	-610	-0.0002142	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.43	Si
SLU 81	fin.	-509.95	-2876	-0.0005653	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.25	Si
SLU 82	ini.	-226.11	-620	-0.0002176	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.33	Si
SLU 82	fin.	-503.8	-2855	-0.0005569	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.29	Si
SLU 83	ini.	-227.8	-626	-0.0002194	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.27	Si
SLU 83	fin.	-517.59	-2918	-0.0005757	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.2	Si
SLU 80	ini.	-233.03	-650	-0.000225	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.11	Si
SLU 80	fin.	-487.74	-2773	-0.0005353	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.4	Si
SLU 77	ini.	-234.92	-657	-0.0002271	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.05	Si
SLU 77	fin.	-493.78	-2797	-0.0005434	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.36	Si
SLU 79	ini.	-229.86	-641	-0.0002216	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.21	Si
SLU 79	fin.	-493.89	-2794	-0.0005435	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.36	Si
SLU 84	ini.	-230.98	-635	-0.0002228	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.17	Si
SLU 84	fin.	-511.44	-2897	-0.0005673	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.24	Si
SLU 78	ini.	-238.1	-666	-0.0002305	0.0001872	0.0035	0.67		1657.26	1657.26	No	6.96	Si
SLU 78	fin.	-487.63	-2776	-0.0005351	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.4	Si
SLU 75	ini.	-233.23	-651	-0.0002252	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.11	Si
SLU 75	fin.	-479.99	-2735	-0.0005249	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.45	Si
SLU 74	ini.	-230.05	-641	-0.0002218	0.0001872	0.0035	0.67		1657.26	1657.26	No	7.2	Si
SLU 74	fin.	-486.14	-2756	-0.0005331	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-238.1	2452	0.67	0	182	5313	2809	1709	4517	No	1.84	Si
SLU 78	fin.	-487.63	-5500	0.67	0	182	5313	2809	1709	4517	No	0.82	No
SLU 82	ini.	-226.11	2406	0.67	0	182	5313	2809	1709	4517	No	1.88	Si
SLU 82	fin.	-503.8	-5610	0.67	0	182	5313	2809	1709	4517	No	0.81	No
SLU 84	ini.	-230.98	2448	0.67	0	182	5313	2809	1709	4517	No	1.85	Si
SLU 84	fin.	-511.44	-5693	0.67	0	182	5313	2809	1709	4517	No	0.79	No
SLU 83	ini.	-227.8	2432	0.67	0	182	5313	2809	1709	4517	No	1.86	Si
SLU 83	fin.	-517.59	-5718	0.67	0	182	5313	2809	1709	4517	No	0.79	No
SLU 75	ini.	-233.23	2409	0.67	0	182	5313	2809	1709	4517	No	1.87	Si
SLU 75	fin.	-479.99	-5417	0.67	0	182	5313	2809	1709	4517	No	0.83	No
SLU 77	ini.	-234.92	2435	0.67	0	182	5313	2809	1709	4517	No	1.86	Si
SLU 77	fin.	-493.78	-5525	0.67	0	182	5313	2809	1709	4517	No	0.82	No
SLU 74	ini.	-230.05	2393	0.67	0	182	5313	2809	1709	4517	No	1.89	Si
SLU 74	fin.	-486.14	-5441	0.67	0	182	5313	2809	1709	4517	No	0.83	No
SLU 81	ini.	-222.94	2390	0.67	0	182	5313	2809	1709	4517	No	1.89	Si
SLU 81	fin.	-509.95	-5635	0.67	0	182	5313	2809	1709	4517	No	0.8	No
SLU 80	ini.	-233.03	2418	0.67	0	182	5313	2809	1709	4517	No	1.87	Si
SLU 80	fin.	-487.74	-5477	0.67	0	182	5313	2809	1709	4517	No	0.82	No
SLU 79	ini.	-229.86	2402	0.67	0	182	5313	2809	1709	4517	No	1.88	Si
SLU 79	fin.	-493.89	-5502	0.67	0	182	5313	2809	1709	4517	No	0.82	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	80.37	300	-0.0000722	0.0002807	0.0035	0.67		1663.2	1663.2		20.69	Si
SLD 4	fin.	-737.49	-3641	-0.0008435	0.0002807	0.0035	0.67		1667.53	1667.53		2.26	Si
SLD 2	ini.	67.53	219	-0.0000604	0.0002807	0.0035	0.67		1663.2	1663.2		24.63	Si
SLD 2	fin.	-712.07	-3484	-0.0008063	0.0002807	0.0035	0.67		1667.53	1667.53		2.34	Si
SLV 8	ini.	67.21	402	-0.0000601	0.0002807	0.0035	0.67		1663.2	1663.2		24.75	Si
SLV 8	fin.	-718.83	-3717	-0.0008161	0.0002807	0.0035	0.67		1667.53	1667.53		2.32	Si
SLV 15	ini.	-693.29	-2031	-0.0007792	0.0002807	0.0035	0.67		1667.53	1667.53		2.41	Si
SLV 15	fin.	587.14	2001	-0.0006345	0.0002807	0.0035	0.67		1663.2	1663.2		2.83	Si
SLV 4	ini.	402.3	1308	-0.000403	0.0002807	0.0035	0.67		1663.2	1663.2		4.13	Si
SLV 4	fin.	-1291.28	-6043	-0.0018952	0.0002807	0.0035	0.67		1667.53	1667.53		1.29	Si
SLV 1	ini.	293.6	865	-0.0002818	0.0002807	0.0035	0.67		1663.2	1663.2		5.66	Si
SLV 1	fin.	-1132.04	-5269	-0.0015268	0.0002807	0.0035	0.67		1667.53	1667.53		1.47	Si
SLV 3	ini.	323.42	1052	-0.0003139	0.0002807	0.0035	0.67		1663.2	1663.2		5.14	Si
SLV 3	fin.	-1189.93	-5627	-0.0016512	0.0002807	0.0035	0.67		1667.53	1667.53		1.4	Si
SLV 13	ini.	-723.1	-2218	-0.0008224	0.0002807	0.0035	0.67		1667.53	1667.53		2.31	Si
SLV 13	fin.	645.02	2359	-0.0007135	0.0002807	0.0035	0.67		1663.2	1663.2		2.58	Si
SLD 3	ini.	46.5	189	-0.0000414	0.0002807	0.0035	0.67		1663.2	1663.2		35.77	Si
SLD 3	fin.	-693.97	-3462	-0.0007802	0.0002807	0.0035	0.67		1667.53	1667.53		2.4	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	372.48	1122	-0.0003686	0.0002807	0.0035	0.67		1663.2	1663.2		4.47	Si
SLV 2	fin.	-1233.39	-5685	-0.0017513	0.0002807	0.0035	0.67		1667.53	1667.53		1.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	46.5	617	0.67	0	273	5313	4213	1709	5586		9.05	Si
SLD 3	fin.	-693.97	-5554	0.67	0	273	5313	4213	1709	5586		1.01	Si
SLD 1	ini.	33.66	587	0.67	0	273	5313	4213	1709	5586		9.52	Si
SLD 1	fin.	-668.55	-5305	0.67	0	273	5313	4213	1709	5586		1.05	Si
SLD 2	ini.	67.53	418	0.67	0	273	5313	4213	1709	5586		13.37	Si
SLD 2	fin.	-712.07	-5511	0.67	0	273	5313	4213	1709	5586		1.01	Si
SLV 4	ini.	402.3	-1150	0.67	0	273	5313	4213	1709	5586		4.86	Si
SLV 4	fin.	-1291.28	-8584	0.67	0	273	5313	4213	1709	5586		0.65	No
SLV 1	ini.	293.6	-827	0.67	0	273	5313	4213	1709	5586		6.75	Si
SLV 1	fin.	-1132.04	-7542	0.67	0	273	5313	4213	1709	5586		0.74	No
SLD 4	ini.	80.37	448	0.67	0	273	5313	4213	1709	5586		12.47	Si
SLD 4	fin.	-737.49	-5759	0.67	0	273	5313	4213	1709	5586		0.97	No
SLV 2	ini.	372.48	-1221	0.67	0	273	5313	4213	1709	5586		4.58	Si
SLV 2	fin.	-1233.39	-8021	0.67	0	273	5313	4213	1709	5586		0.7	No
SLV 7	ini.	16.38	1098	0.67	0	273	5313	4213	1709	5586		5.09	Si
SLV 7	fin.	-653.51	-5752	0.67	0	273	5313	4213	1709	5586		0.97	No
SLV 3	ini.	323.42	-757	0.67	0	273	5313	4213	1709	5586		7.38	Si
SLV 3	fin.	-1189.93	-8105	0.67	0	273	5313	4213	1709	5586		0.69	No
SLV 8	ini.	67.21	844	0.67	0	273	5313	4213	1709	5586		6.62	Si
SLV 8	fin.	-718.83	-6061	0.67	0	273	5313	4213	1709	5586		0.92	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.291	SLV 4	Si
V_SLV	0.651	SLV 4	No
PF_SLU	3.202	SLU 83	Si
V_SLU	0.79	SLU 83	No

Trave di accoppiamento 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	4.09	5.46	1.37	-18.518	0.706	4.09	5.46	1.37	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	989.45	-603	-0.0002266	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.14	Si
SLU 48	fin.	152.05	-1136	-0.0000324	0.0002246	0.0035	1.37		7062.19	7062.19	No	46.45	Si
SLU 49	ini.	984.83	-610	-0.0002255	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.17	Si
SLU 49	fin.	154.7	-1141	-0.000033	0.0002246	0.0035	1.37		7062.19	7062.19	No	45.65	Si
SLU 45	ini.	967.9	-596	-0.0002212	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.3	Si
SLU 45	fin.	149.86	-1117	-0.000032	0.0002246	0.0035	1.37		7062.19	7062.19	No	47.12	Si
SLU 43	ini.	952.74	-557	-0.0002174	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.41	Si
SLU 43	fin.	141.14	-1073	-0.0000301	0.0002246	0.0035	1.37		7062.19	7062.19	No	50.04	Si
SLU 46	ini.	963.28	-604	-0.00022	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.33	Si
SLU 46	fin.	152.51	-1122	-0.0000325	0.0002246	0.0035	1.37		7062.19	7062.19	No	46.31	Si
SLU 50	ini.	995.83	-570	-0.0002282	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.09	Si
SLU 50	fin.	145.52	-1111	-0.000031	0.0002246	0.0035	1.37		7062.19	7062.19	No	48.53	Si
SLU 51	ini.	991.21	-578	-0.0002271	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.12	Si
SLU 51	fin.	148.17	-1116	-0.0000316	0.0002246	0.0035	1.37		7062.19	7062.19	No	47.66	Si
SLU 71	ini.	956.37	-894	-0.0002183	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.38	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	fin.	208.92	-1380	-0.0000447	0.0002246	0.0035	1.37		7062.19	7062.19	No	33.8	Si
SLU 47	ini.	966.59	-576	-0.0002209	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.31	Si
SLU 47	fin.	147.74	-1100	-0.0000315	0.0002246	0.0035	1.37		7062.19	7062.19	No	47.8	Si
SLU 72	ini.	951.75	-902	-0.0002172	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.42	Si
SLU 72	fin.	211.57	-1385	-0.0000453	0.0002246	0.0035	1.37		7062.19	7062.19	No	33.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	984.83	-1277	1.37	0	318	6344	3939	3494	6661	No	5.22	Si
SLU 49	fin.	154.7	-1691	1.37	0	318	6344	3939	3494	6661	No	3.94	Si
SLU 46	ini.	963.28	-1242	1.37	0	318	6344	3939	3494	6661	No	5.36	Si
SLU 46	fin.	152.51	-1656	1.37	0	318	6344	3939	3494	6661	No	4.02	Si
SLU 51	ini.	991.21	-1300	1.37	0	318	6344	3939	3494	6661	No	5.12	Si
SLU 51	fin.	148.17	-1714	1.37	0	318	6344	3939	3494	6661	No	3.89	Si
SLU 71	ini.	956.37	-1130	1.37	0	318	6344	3939	3494	6661	No	5.89	Si
SLU 71	fin.	208.92	-1560	1.37	0	318	6344	3939	3494	6661	No	4.27	Si
SLU 48	ini.	989.45	-1288	1.37	0	318	6344	3939	3494	6661	No	5.17	Si
SLU 48	fin.	152.05	-1703	1.37	0	318	6344	3939	3494	6661	No	3.91	Si
SLU 44	ini.	945.04	-1223	1.37	0	318	6344	3939	3494	6661	No	5.45	Si
SLU 44	fin.	145.55	-1637	1.37	0	318	6344	3939	3494	6661	No	4.07	Si
SLU 50	ini.	995.83	-1311	1.37	0	318	6344	3939	3494	6661	No	5.08	Si
SLU 50	fin.	145.52	-1725	1.37	0	318	6344	3939	3494	6661	No	3.86	Si
SLU 43	ini.	952.74	-1242	1.37	0	318	6344	3939	3494	6661	No	5.36	Si
SLU 43	fin.	141.14	-1656	1.37	0	318	6344	3939	3494	6661	No	4.02	Si
SLU 45	ini.	967.9	-1254	1.37	0	318	6344	3939	3494	6661	No	5.31	Si
SLU 45	fin.	149.86	-1668	1.37	0	318	6344	3939	3494	6661	No	3.99	Si
SLU 47	ini.	966.59	-1257	1.37	0	318	6344	3939	3494	6661	No	5.3	Si
SLU 47	fin.	147.74	-1672	1.37	0	318	6344	3939	3494	6661	No	3.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1842.74	783	-0.0004403	0.0003369	0.0035	1.37		7262.22	7262.22		3.94	Si
SLV 7	fin.	266.48	309	-0.000057	0.0003369	0.0035	1.37		7262.22	7262.22		27.25	Si
SLD 12	ini.	1349.52	624	-0.0003097	0.0003369	0.0035	1.37		7262.22	7262.22		5.38	Si
SLD 12	fin.	72.71	-349	-0.0000154	0.0003369	0.0035	1.37		7262.22	7262.22		99.88	Si
SLV 8	ini.	1908.22	882	-0.0004586	0.0003369	0.0035	1.37		7262.22	7262.22		3.81	Si
SLV 8	fin.	246.23	358	-0.0000526	0.0003369	0.0035	1.37		7262.22	7262.22		29.49	Si
SLV 11	ini.	2128.67	2295	-0.0005218	0.0003369	0.0035	1.37		7262.22	7262.22		3.41	Si
SLV 11	fin.	-28.76	511	-0.0000061	0.0003369	0.0035	1.37		7271.11	7271.11		252.84	Si
SLD 8	ini.	1235.22	26	-0.0002811	0.0003369	0.0035	1.37		7262.22	7262.22		5.88	Si
SLD 8	fin.	191.89	-433	-0.0000409	0.0003369	0.0035	1.37		7262.22	7262.22		37.85	Si
SLD 11	ini.	1320.92	581	-0.0003025	0.0003369	0.0035	1.37		7262.22	7262.22		5.5	Si
SLD 11	fin.	81.56	-370	-0.0000173	0.0003369	0.0035	1.37		7262.22	7262.22		89.04	Si
SLV 12	ini.	2194.14	2393	-0.000541	0.0003369	0.0035	1.37		7262.22	7262.22		3.31	Si
SLV 12	fin.	-49.01	560	-0.0000104	0.0003369	0.0035	1.37		7271.11	7271.11		148.35	Si
SLV 15	ini.	1519.43	2428	-0.0003533	0.0003369	0.0035	1.37		7262.22	7262.22		4.78	Si
SLV 15	fin.	-330.41	-307	-0.0000709	0.0003369	0.0035	1.37		7271.11	7271.11		22.01	Si
SLD 7	ini.	1206.62	-17	-0.000274	0.0003369	0.0035	1.37		7262.22	7262.22		6.02	Si
SLD 7	fin.	200.73	-454	-0.0000428	0.0003369	0.0035	1.37		7262.22	7262.22		36.18	Si
SLV 16	ini.	1621.04	2581	-0.0003801	0.0003369	0.0035	1.37		7262.22	7262.22		4.48	Si
SLV 16	fin.	-361.84	-231	-0.0000778	0.0003369	0.0035	1.37		7271.11	7271.11		20.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	2194.14	-4006	1.37	0	477	6344	5908	3494	6820		1.7	Si
SLV 12	fin.	-49.01	-3914	1.37	0	477	6344	5908	3494	6820		1.74	Si
SLV 8	ini.	1908.22	-2972	1.37	0	477	6344	5908	3494	6820		2.29	Si
SLV 8	fin.	246.23	-3539	1.37	0	477	6344	5908	3494	6820		1.93	Si
SLV 15	ini.	1519.43	-3193	1.37	0	477	6344	5908	3494	6820		2.14	Si
SLV 15	fin.	-330.41	-2394	1.37	0	477	6344	5908	3494	6820		2.85	Si
SLV 7	ini.	1842.74	-2823	1.37	0	477	6344	5908	3494	6820		2.42	Si
SLV 7	fin.	266.48	-3390	1.37	0	477	6344	5908	3494	6820		2.01	Si
SLD 11	ini.	1320.92	-2122	1.37	0	477	6344	5908	3494	6820		3.21	Si
SLD 11	fin.	81.56	-2285	1.37	0	477	6344	5908	3494	6820		2.98	Si
SLV 6	ini.	-733.94	2255	1.37	0	477	6344	5908	3494	6820		3.02	Si
SLV 6	fin.	352.53	1509	1.37	0	477	6344	5908	3494	6820		4.52	Si
SLV 5	ini.	-799.41	2405	1.37	0	477	6344	5908	3494	6820		2.84	Si
SLV 5	fin.	372.79	1658	1.37	0	477	6344	5908	3494	6820		4.11	Si
SLD 12	ini.	1349.52	-2188	1.37	0	477	6344	5908	3494	6820		3.12	Si
SLD 12	fin.	72.71	-2351	1.37	0	477	6344	5908	3494	6820		2.9	Si
SLV 11	ini.	2128.67	-3857	1.37	0	477	6344	5908	3494	6820		1.77	Si
SLV 11	fin.	-28.76	-3764	1.37	0	477	6344	5908	3494	6820		1.81	Si
SLV 16	ini.	1621.04	-3425	1.37	0	477	6344	5908	3494	6820		1.99	Si
SLV 16	fin.	-361.84	-2625	1.37	0	477	6344	5908	3494	6820		2.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.31	SLV 12	Si
V_SLV	1.702	SLV 12	Si
PF_SLU	7.092	SLU 50	Si
V_SLU	3.861	SLU 50	Si

Trave di accoppiamento 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.483	-3.314	4.09	5.46	1.37	-16.383	-3.314	4.09	5.46	1.37	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-480.92	-4805	-0.0001057	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.27	Si
SLU 80	fin.	-1056.68	-4091	-0.0002477	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.49	Si
SLU 76	ini.	-483.93	-4740	-0.0001064	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.18	Si
SLU 76	fin.	-1039.3	-4030	-0.0002431	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.6	Si
SLU 77	ini.	-488.49	-4834	-0.0001074	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.05	Si
SLU 77	fin.	-1055.05	-4104	-0.0002472	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.5	Si
SLU 78	ini.	-497.32	-4857	-0.0001094	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.8	Si
SLU 78	fin.	-1057.18	-4120	-0.0002478	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.49	Si
SLU 81	ini.	-458.27	-4787	-0.0001005	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.97	Si
SLU 81	fin.	-1066.42	-4099	-0.0002503	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.43	Si
SLU 82	ini.	-467.1	-4809	-0.0001025	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.69	Si
SLU 82	fin.	-1068.56	-4115	-0.0002508	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.42	Si
SLU 83	ini.	-461.15	-4867	-0.0001011	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.88	Si
SLU 83	fin.	-1085.23	-4170	-0.0002553	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.32	Si
SLU 84	ini.	-469.98	-4889	-0.0001032	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.6	Si
SLU 84	fin.	-1087.36	-4186	-0.0002558	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.31	Si
SLU 79	ini.	-472.09	-4783	-0.0001036	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.53	Si
SLU 79	fin.	-1054.55	-4075	-0.0002471	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.51	Si
SLU 63	ini.	-334.47	-4323	-0.0000725	0.0001872	0.0035	1.37		6861.19	6861.19	No	20.51	Si
SLU 63	fin.	-1039.21	-3823	-0.000243	0.0001872	0.0035	1.37		6861.19	6861.19	No	6.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-467.1	1117	1.37	0	556	7137	5743	3494	7693	No	6.89	Si
SLU 82	fin.	-1068.56	-5429	1.37	0	556	7137	5743	3494	7693	No	1.42	Si
SLU 77	ini.	-488.49	1117	1.37	0	556	7137	5743	3494	7693	No	6.89	Si
SLU 77	fin.	-1055.05	-5271	1.37	0	556	7137	5743	3494	7693	No	1.46	Si
SLU 84	ini.	-469.98	1110	1.37	0	556	7137	5743	3494	7693	No	6.93	Si
SLU 84	fin.	-1087.36	-5512	1.37	0	556	7137	5743	3494	7693	No	1.4	Si
SLU 74	ini.	-485.61	1123	1.37	0	556	7137	5743	3494	7693	No	6.85	Si
SLU 74	fin.	-1036.24	-5188	1.37	0	556	7137	5743	3494	7693	No	1.48	Si
SLU 83	ini.	-461.15	1098	1.37	0	556	7137	5743	3494	7693	No	7.01	Si
SLU 83	fin.	-1085.23	-5519	1.37	0	556	7137	5743	3494	7693	No	1.39	Si
SLU 75	ini.	-494.44	1136	1.37	0	556	7137	5743	3494	7693	No	6.77	Si
SLU 75	fin.	-1038.37	-5181	1.37	0	556	7137	5743	3494	7693	No	1.48	Si
SLU 80	ini.	-480.92	1092	1.37	0	556	7137	5743	3494	7693	No	7.05	Si
SLU 80	fin.	-1056.68	-5257	1.37	0	556	7137	5743	3494	7693	No	1.46	Si
SLU 79	ini.	-472.09	1079	1.37	0	556	7137	5743	3494	7693	No	7.13	Si
SLU 79	fin.	-1054.55	-5264	1.37	0	556	7137	5743	3494	7693	No	1.46	Si
SLU 78	ini.	-497.32	1129	1.37	0	556	7137	5743	3494	7693	No	6.81	Si
SLU 78	fin.	-1057.18	-5263	1.37	0	556	7137	5743	3494	7693	No	1.46	Si
SLU 81	ini.	-458.27	1104	1.37	0	556	7137	5743	3494	7693	No	6.97	Si
SLU 81	fin.	-1066.42	-5437	1.37	0	556	7137	5743	3494	7693	No	1.41	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-4544.86	-7845	-0.0014441	0.0002807	0.0035	1.37		6865.42	6865.42		1.51	Si
SLV 16	fin.	1404.14	-1174	-0.0003285	0.0002807	0.0035	1.37		6856.19	6856.19		4.88	Si
SLV 15	ini.	-4981.09	-8385	-0.0016648	0.0002807	0.0035	1.37		6865.42	6865.42		1.38	Si
SLV 15	fin.	1633.08	-1116	-0.0003906	0.0002807	0.0035	1.37		6856.19	6856.19		4.2	Si
SLD 13	ini.	-2212.92	-5327	-0.0005596	0.0002807	0.0035	1.37		6865.42	6865.42		3.1	Si
SLD 13	fin.	290.66	-2140	-0.0000624	0.0002807	0.0035	1.37		6856.19	6856.19		23.59	Si
SLD 15	ini.	-2323.93	-5447	-0.0005941	0.0002807	0.0035	1.37		6865.42	6865.42		2.95	Si
SLD 15	fin.	288.12	-2058	-0.0000619	0.0002807	0.0035	1.37		6856.19	6856.19		23.8	Si
SLV 3	ini.	3613.5	1085	-0.0010466	0.0002807	0.0035	1.37		6856.19	6856.19		1.9	Si
SLV 3	fin.	-2842.31	-4147	-0.0007638	0.0002807	0.0035	1.37		6865.42	6865.42		2.42	Si
SLV 13	ini.	-4725.77	-8118	-0.0015323	0.0002807	0.0035	1.37		6865.42	6865.42		1.45	Si
SLV 13	fin.	1639.56	-1310	-0.0003924	0.0002807	0.0035	1.37		6856.19	6856.19		4.18	Si
SLV 1	ini.	3868.82	1353	-0.0011487	0.0002807	0.0035	1.37		6856.19	6856.19		1.77	Si
SLV 1	fin.	-2835.83	-4342	-0.0007616	0.0002807	0.0035	1.37		6865.42	6865.42		2.42	Si
SLV 4	ini.	4049.73	1626	-0.0012242	0.0002807	0.0035	1.37		6856.19	6856.19		1.69	Si
SLV 4	fin.	-3071.25	-4205	-0.0008434	0.0002807	0.0035	1.37		6865.42	6865.42		2.24	Si
SLV 2	ini.	4305.05	1894	-0.0013357	0.0002807	0.0035	1.37		6856.19	6856.19		1.59	Si
SLV 2	fin.	-3064.78	-4400	-0.0008411	0.0002807	0.0035	1.37		6865.42	6865.42		2.24	Si
SLV 14	ini.	-4289.54	-7577	-0.0013265	0.0002807	0.0035	1.37		6865.42	6865.42		1.6	Si
SLV 14	fin.	1410.62	-1368	-0.0003302	0.0002807	0.0035	1.37		6856.19	6856.19		4.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-4544.86	12527	1.37	0	834	7137	8615	3494	7971		0.64	No
SLV 16	fin.	1404.14	5626	1.37	0	834	7137	8615	3494	7971		1.42	Si
SLV 4	ini.	4049.73	-11677	1.37	0	834	7137	8615	3494	7971		0.68	No
SLV 4	fin.	-3071.25	-13834	1.37	0	834	7137	8615	3494	7971		0.58	No
SLV 1	ini.	3868.82	-11060	1.37	0	834	7137	8615	3494	7971		0.72	No
SLV 1	fin.	-2835.83	-12512	1.37	0	834	7137	8615	3494	7971		0.64	No
SLV 2	ini.	4305.05	-12270	1.37	0	834	7137	8615	3494	7971		0.65	No
SLV 2	fin.	-3064.78	-13453	1.37	0	834	7137	8615	3494	7971		0.59	No
SLV 3	ini.	3613.5	-10467	1.37	0	834	7137	8615	3494	7971		0.76	No
SLV 3	fin.	-2842.31	-12893	1.37	0	834	7137	8615	3494	7971		0.62	No
SLV 14	ini.	-4289.54	11934	1.37	0	834	7137	8615	3494	7971		0.67	No
SLV 14	fin.	1410.62	6007	1.37	0	834	7137	8615	3494	7971		1.33	Si
SLV 15	ini.	-4981.09	13737	1.37	0	834	7137	8615	3494	7971		0.58	No
SLV 15	fin.	1633.08	6567	1.37	0	834	7137	8615	3494	7971		1.21	Si
SLV 13	ini.	-4725.77	13144	1.37	0	834	7137	8615	3494	7971		0.61	No
SLV 13	fin.	1639.56	6948	1.37	0	834	7137	8615	3494	7971		1.15	Si
SLD 4	ini.	1536.88	-4569	1.37	0	834	7137	8615	3494	7971		1.74	Si
SLD 4	fin.	-1722.35	-7883	1.37	0	834	7137	8615	3494	7971		1.01	Si
SLD 2	ini.	1647.88	-4827	1.37	0	834	7137	8615	3494	7971		1.65	Si
SLD 2	fin.	-1719.82	-7722	1.37	0	834	7137	8615	3494	7971		1.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.378	SLV 15	Si
V_SLV	0.576	SLV 4	No
PF_SLU	6.31	SLU 84	Si
V_SLU	1.394	SLU 83	Si

Trave di accoppiamento 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	4.09	5.46	1.37	-15.033	2.166	4.09	5.46	1.37	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	981.11	-1594	-0.0002245	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.2	Si
SLU 74	fin.	-214.71	-2058	-0.0000459	0.0002246	0.0035	1.37		7070.72	7070.72	No	32.93	Si
SLU 77	ini.	989.37	-1602	-0.0002266	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.14	Si
SLU 77	fin.	-191.04	-2051	-0.0000408	0.0002246	0.0035	1.37		7070.72	7070.72	No	37.01	Si
SLU 75	ini.	976.9	-1580	-0.0002235	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.23	Si
SLU 75	fin.	-196.37	-2031	-0.000042	0.0002246	0.0035	1.37		7070.72	7070.72	No	36.01	Si
SLU 83	ini.	1025.32	-1707	-0.0002357	0.0002246	0.0035	1.37		7062.19	7062.19	No	6.89	Si
SLU 83	fin.	-290.66	-2237	-0.0000625	0.0002246	0.0035	1.37		7070.72	7070.72	No	24.33	Si
SLU 79	ini.	978.63	-1584	-0.0002239	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.22	Si
SLU 79	fin.	-186.56	-2026	-0.0000398	0.0002246	0.0035	1.37		7070.72	7070.72	No	37.9	Si
SLU 82	ini.	1012.85	-1685	-0.0002325	0.0002246	0.0035	1.37		7062.19	7062.19	No	6.97	Si
SLU 82	fin.	-295.99	-2216	-0.0000637	0.0002246	0.0035	1.37		7070.72	7070.72	No	23.89	Si
SLU 80	ini.	974.42	-1569	-0.0002228	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.25	Si
SLU 80	fin.	-168.22	-1999	-0.0000359	0.0002246	0.0035	1.37		7070.72	7070.72	No	42.03	Si
SLU 78	ini.	985.16	-1587	-0.0002255	0.0002246	0.0035	1.37		7062.19	7062.19	No	7.17	Si
SLU 78	fin.	-172.69	-2024	-0.0000368	0.0002246	0.0035	1.37		7070.72	7070.72	No	40.94	Si
SLU 81	ini.	1017.06	-1700	-0.0002336	0.0002246	0.0035	1.37		7062.19	7062.19	No	6.94	Si
SLU 81	fin.	-314.33	-2243	-0.0000678	0.0002246	0.0035	1.37		7070.72	7070.72	No	22.49	Si
SLU 84	ini.	1021.11	-1693	-0.0002346	0.0002246	0.0035	1.37		7062.19	7062.19	No	6.92	Si
SLU 84	fin.	-272.31	-2209	-0.0000585	0.0002246	0.0035	1.37		7070.72	7070.72	No	25.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	1021.11	-1803	1.37	0	318	6344	3939	3494	6661	No	3.69	Si
SLU 84	fin.	-272.31	-2273	1.37	0	318	6344	3939	3494	6661	No	2.93	Si
SLU 83	ini.	1025.32	-1842	1.37	0	318	6344	3939	3494	6661	No	3.62	Si
SLU 83	fin.	-290.66	-2312	1.37	0	318	6344	3939	3494	6661	No	2.88	Si
SLU 39	ini.	876.15	-1741	1.37	0	318	6344	3939	3494	6661	No	3.83	Si
SLU 39	fin.	-329.64	-2111	1.37	0	318	6344	3939	3494	6661	No	3.16	Si
SLU 60	ini.	912.87	-1627	1.37	0	318	6344	3939	3494	6661	No	4.09	Si
SLU 60	fin.	-261.79	-2081	1.37	0	318	6344	3939	3494	6661	No	3.2	Si
SLU 40	ini.	871.94	-1702	1.37	0	318	6344	3939	3494	6661	No	3.91	Si
SLU 40	fin.	-311.29	-2072	1.37	0	318	6344	3939	3494	6661	No	3.22	Si
SLU 82	ini.	1012.85	-1834	1.37	0	318	6344	3939	3494	6661	No	3.63	Si
SLU 82	fin.	-295.99	-2304	1.37	0	318	6344	3939	3494	6661	No	2.89	Si
SLU 77	ini.	989.37	-1605	1.37	0	318	6344	3939	3494	6661	No	4.15	Si
SLU 77	fin.	-191.04	-2074	1.37	0	318	6344	3939	3494	6661	No	3.21	Si
SLU 41	ini.	884.4	-1710	1.37	0	318	6344	3939	3494	6661	No	3.9	Si
SLU 41	fin.	-305.96	-2080	1.37	0	318	6344	3939	3494	6661	No	3.2	Si
SLU 81	ini.	1017.06	-1874	1.37	0	318	6344	3939	3494	6661	No	3.56	Si
SLU 81	fin.	-314.33	-2344	1.37	0	318	6344	3939	3494	6661	No	2.84	Si
SLU 74	ini.	981.11	-1636	1.37	0	318	6344	3939	3494	6661	No	4.07	Si
SLU 74	fin.	-214.71	-2106	1.37	0	318	6344	3939	3494	6661	No	3.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	529.44	1504	-0.000115	0.0003369	0.0035	1.37		7262.22	7262.22		13.72	Si
SLV 6	fin.	2276.42	2762	-0.0005655	0.0003369	0.0035	1.37		7262.22	7262.22		3.19	Si
SLV 15	ini.	805.27	-2969	-0.000178	0.0003369	0.0035	1.37		7262.22	7262.22		9.02	Si
SLV 15	fin.	-2159.43	-4624	-0.00053	0.0003369	0.0035	1.37		7271.11	7271.11		3.37	Si
SLV 5	ini.	515.25	1547	-0.0001119	0.0003369	0.0035	1.37		7262.22	7262.22		14.09	Si
SLV 5	fin.	2333.52	2847	-0.0005827	0.0003369	0.0035	1.37		7262.22	7262.22		3.11	Si
SLV 12	ini.	795.14	-3577	-0.0001756	0.0003369	0.0035	1.37		7262.22	7262.22		9.13	Si
SLV 12	fin.	-2488.86	-5406	-0.0006294	0.0003369	0.0035	1.37		7271.11	7271.11		2.92	Si
SLV 1	ini.	483.11	1004	-0.0001047	0.0003369	0.0035	1.37		7262.22	7262.22		15.03	Si
SLV 1	fin.	2092.69	2197	-0.0005113	0.0003369	0.0035	1.37		7262.22	7262.22		3.47	Si
SLV 8	ini.	715.21	-2770	-0.0001572	0.0003369	0.0035	1.37		7262.22	7262.22		10.15	Si
SLV 8	fin.	-1558.35	-3966	-0.000363	0.0003369	0.0035	1.37		7271.11	7271.11		4.67	Si
SLV 16	ini.	827.28	-3035	-0.0001831	0.0003369	0.0035	1.37		7262.22	7262.22		8.78	Si
SLV 16	fin.	-2248.03	-4756	-0.0005562	0.0003369	0.0035	1.37		7271.11	7271.11		3.23	Si
SLV 11	ini.	780.95	-3535	-0.0001723	0.0003369	0.0035	1.37		7262.22	7262.22		9.3	Si
SLV 11	fin.	-2431.76	-5321	-0.0006118	0.0003369	0.0035	1.37		7271.11	7271.11		2.99	Si
SLV 2	ini.	505.12	938	-0.0001096	0.0003369	0.0035	1.37		7262.22	7262.22		14.38	Si
SLV 2	fin.	2004.09	2065	-0.0004858	0.0003369	0.0035	1.37		7262.22	7262.22		3.62	Si
SLV 7	ini.	701.03	-2727	-0.0001539	0.0003369	0.0035	1.37		7262.22	7262.22		10.36	Si
SLV 7	fin.	-1501.25	-3881	-0.0003481	0.0003369	0.0035	1.37		7271.11	7271.11		4.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	749.53	-3240	1.37	0	477	6344	5908	3494	6820		2.1	Si
SLV 13	fin.	-1009	-3775	1.37	0	477	6344	5908	3494	6820		1.81	Si
SLV 16	ini.	827.28	-5633	1.37	0	477	6344	5908	3494	6820		1.21	Si
SLV 16	fin.	-2248.03	-6102	1.37	0	477	6344	5908	3494	6820		1.12	Si
SLV 8	ini.	715.21	-3627	1.37	0	477	6344	5908	3494	6820		1.88	Si
SLV 8	fin.	-1558.35	-3833	1.37	0	477	6344	5908	3494	6820		1.78	Si
SLV 7	ini.	701.03	-3501	1.37	0	477	6344	5908	3494	6820		1.95	Si
SLV 7	fin.	-1501.25	-3707	1.37	0	477	6344	5908	3494	6820		1.84	Si
SLV 12	ini.	795.14	-5720	1.37	0	477	6344	5908	3494	6820		1.19	Si
SLV 12	fin.	-2488.86	-6013	1.37	0	477	6344	5908	3494	6820		1.13	Si
SLV 15	ini.	805.27	-5438	1.37	0	477	6344	5908	3494	6820		1.25	Si
SLV 15	fin.	-2159.43	-5908	1.37	0	477	6344	5908	3494	6820		1.15	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	771.55	-3435	1.37	0	477	6344	5908	3494	6820		1.99	Si
SLV 14	fin.	-1097.6	-3969	1.37	0	477	6344	5908	3494	6820		1.72	Si
SLV 11	ini.	780.95	-5595	1.37	0	477	6344	5908	3494	6820		1.22	Si
SLV 11	fin.	-2431.76	-5887	1.37	0	477	6344	5908	3494	6820		1.16	Si
SLV 5	ini.	515.25	3826	1.37	0	477	6344	5908	3494	6820		1.78	Si
SLV 5	fin.	2333.52	3403	1.37	0	477	6344	5908	3494	6820		2	Si
SLV 1	ini.	483.11	3738	1.37	0	477	6344	5908	3494	6820		1.82	Si
SLV 1	fin.	2092.69	3492	1.37	0	477	6344	5908	3494	6820		1.95	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.921	SLV 12	Si
V_SLV	1.118	SLV 16	Si
PF_SLU	6.888	SLU 83	Si
V_SLU	2.842	SLU 81	Si

Trave di accoppiamento 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	4.09	5.46	1.37	-13.778	0.706	4.09	5.46	1.37	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 59	ini.	2332.17	65	-0.0006355	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.94	Si
SLU 59	fin.	385.87	-1046	-0.0000841	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.76	Si
SLU 56	ini.	2298.01	-3	-0.0006239	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.98	Si
SLU 56	fin.	396.87	-1094	-0.0000866	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.27	Si
SLU 55	ini.	2278.18	42	-0.0006173	0.0001872	0.0035	1.37		6852.39	6852.39	No	3.01	Si
SLU 55	fin.	384.37	-1042	-0.0000838	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.83	Si
SLU 62	ini.	2445.87	88	-0.0006743	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.8	Si
SLU 62	fin.	400.45	-1084	-0.0000874	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.11	Si
SLU 57	ini.	2278.18	-34	-0.0006173	0.0001872	0.0035	1.37		6852.39	6852.39	No	3.01	Si
SLU 57	fin.	403.06	-1110	-0.000088	0.0001872	0.0035	1.37		6852.39	6852.39	No	17	Si
SLU 60	ini.	2405.09	86	-0.0006603	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.85	Si
SLU 60	fin.	394.83	-1069	-0.0000862	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.36	Si
SLU 58	ini.	2352	97	-0.0006422	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.91	Si
SLU 58	fin.	379.68	-1030	-0.0000827	0.0001872	0.0035	1.37		6852.39	6852.39	No	18.05	Si
SLU 83	ini.	2269.42	-493	-0.0006143	0.0001872	0.0035	1.37		6852.39	6852.39	No	3.02	Si
SLU 83	fin.	519.12	-1522	-0.0001146	0.0001872	0.0035	1.37		6852.39	6852.39	No	13.2	Si
SLU 61	ini.	2385.26	55	-0.0006535	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.87	Si
SLU 61	fin.	401.01	-1085	-0.0000876	0.0001872	0.0035	1.37		6852.39	6852.39	No	17.09	Si
SLU 63	ini.	2426.04	57	-0.0006675	0.0001872	0.0035	1.37		6852.39	6852.39	No	2.82	Si
SLU 63	fin.	406.64	-1100	-0.0000888	0.0001872	0.0035	1.37		6852.39	6852.39	No	16.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 58	ini.	2352	-2658	1.37	0	556	7137	5743	3494	7693	No	2.89	Si
SLU 58	fin.	379.68	-3451	1.37	0	556	7137	5743	3494	7693	No	2.23	Si
SLU 56	ini.	2298.01	-2551	1.37	0	556	7137	5743	3494	7693	No	3.02	Si
SLU 56	fin.	396.87	-3345	1.37	0	556	7137	5743	3494	7693	No	2.3	Si
SLU 55	ini.	2278.18	-2538	1.37	0	556	7137	5743	3494	7693	No	3.03	Si
SLU 55	fin.	384.37	-3332	1.37	0	556	7137	5743	3494	7693	No	2.31	Si
SLU 62	ini.	2445.87	-2774	1.37	0	556	7137	5743	3494	7693	No	2.77	Si
SLU 62	fin.	400.45	-3567	1.37	0	556	7137	5743	3494	7693	No	2.16	Si
SLU 60	ini.	2405.09	-2721	1.37	0	556	7137	5743	3494	7693	No	2.83	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	fin.	394.83	-3515	1.37	0	556	7137	5743	3494	7693	No	2.19	Si
SLU 59	ini.	2332.17	-2617	1.37	0	556	7137	5743	3494	7693	No	2.94	Si
SLU 59	fin.	385.87	-3411	1.37	0	556	7137	5743	3494	7693	No	2.26	Si
SLU 61	ini.	2385.26	-2681	1.37	0	556	7137	5743	3494	7693	No	2.87	Si
SLU 61	fin.	401.01	-3475	1.37	0	556	7137	5743	3494	7693	No	2.21	Si
SLU 57	ini.	2278.18	-2511	1.37	0	556	7137	5743	3494	7693	No	3.06	Si
SLU 57	fin.	403.06	-3305	1.37	0	556	7137	5743	3494	7693	No	2.33	Si
SLU 53	ini.	2257.24	-2499	1.37	0	556	7137	5743	3494	7693	No	3.08	Si
SLU 53	fin.	391.25	-3293	1.37	0	556	7137	5743	3494	7693	No	2.34	Si
SLU 63	ini.	2426.04	-2734	1.37	0	556	7137	5743	3494	7693	No	2.81	Si
SLU 63	fin.	406.64	-3527	1.37	0	556	7137	5743	3494	7693	No	2.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3201.51	2195	-0.0008915	0.0002807	0.0035	1.37		6856.19	6856.19		2.14	Si
SLV 1	fin.	174.99	454	-0.0000373	0.0002807	0.0035	1.37		6856.19	6856.19		39.18	Si
SLV 3	ini.	4282.57	4023	-0.0013257	0.0002807	0.0035	1.37		6856.19	6856.19		1.6	Si
SLV 3	fin.	10.44	1590	-0.0000022	0.0002807	0.0035	1.37		6856.19	6856.19		656.95	Si
SLD 3	ini.	2692.38	1589	-0.0007143	0.0002807	0.0035	1.37		6856.19	6856.19		2.55	Si
SLD 3	fin.	185.93	150	-0.0000397	0.0002807	0.0035	1.37		6856.19	6856.19		36.87	Si
SLV 7	ini.	3974.25	3809	-0.0011923	0.0002807	0.0035	1.37		6856.19	6856.19		1.73	Si
SLV 7	fin.	-22.85	1548	-0.0000048	0.0002807	0.0035	1.37		6865.42	6865.42		300.43	Si
SLV 8	ini.	3968.59	3809	-0.0011899	0.0002807	0.0035	1.37		6856.19	6856.19		1.73	Si
SLV 8	fin.	-24.35	1550	-0.0000051	0.0002807	0.0035	1.37		6865.42	6865.42		281.97	Si
SLV 12	ini.	2624.58	1798	-0.0006918	0.0002807	0.0035	1.37		6856.19	6856.19		2.61	Si
SLV 12	fin.	112.02	376	-0.0000238	0.0002807	0.0035	1.37		6856.19	6856.19		61.2	Si
SLV 11	ini.	2630.24	1798	-0.0006937	0.0002807	0.0035	1.37		6856.19	6856.19		2.61	Si
SLV 11	fin.	113.52	375	-0.0000241	0.0002807	0.0035	1.37		6856.19	6856.19		60.4	Si
SLV 2	ini.	3192.73	2195	-0.0008883	0.0002807	0.0035	1.37		6856.19	6856.19		2.15	Si
SLV 2	fin.	172.67	456	-0.0000368	0.0002807	0.0035	1.37		6856.19	6856.19		39.71	Si
SLD 4	ini.	2688.62	1589	-0.0007131	0.0002807	0.0035	1.37		6856.19	6856.19		2.55	Si
SLD 4	fin.	184.93	152	-0.0000395	0.0002807	0.0035	1.37		6856.19	6856.19		37.07	Si
SLV 4	ini.	4273.8	4022	-0.0013217	0.0002807	0.0035	1.37		6856.19	6856.19		1.6	Si
SLV 4	fin.	8.11	1593	-0.0000017	0.0002807	0.0035	1.37		6856.19	6856.19		844.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	4273.8	-6420	1.37	0	834	7137	8615	3494	7971		1.24	Si
SLV 4	fin.	8.11	-7068	1.37	0	834	7137	8615	3494	7971		1.13	Si
SLV 11	ini.	2630.24	-3968	1.37	0	834	7137	8615	3494	7971		2.01	Si
SLV 11	fin.	113.52	-4172	1.37	0	834	7137	8615	3494	7971		1.91	Si
SLV 7	ini.	3974.25	-6261	1.37	0	834	7137	8615	3494	7971		1.27	Si
SLV 7	fin.	-22.85	-6549	1.37	0	834	7137	8615	3494	7971		1.22	Si
SLV 2	ini.	3192.73	-4269	1.37	0	834	7137	8615	3494	7971		1.87	Si
SLV 2	fin.	172.67	-5143	1.37	0	834	7137	8615	3494	7971		1.55	Si
SLV 8	ini.	3968.59	-6255	1.37	0	834	7137	8615	3494	7971		1.27	Si
SLV 8	fin.	-24.35	-6543	1.37	0	834	7137	8615	3494	7971		1.22	Si
SLD 4	ini.	2688.62	-3629	1.37	0	834	7137	8615	3494	7971		2.2	Si
SLD 4	fin.	184.93	-4260	1.37	0	834	7137	8615	3494	7971		1.87	Si
SLV 1	ini.	3201.51	-4279	1.37	0	834	7137	8615	3494	7971		1.86	Si
SLV 1	fin.	174.99	-5153	1.37	0	834	7137	8615	3494	7971		1.55	Si
SLV 12	ini.	2624.58	-3962	1.37	0	834	7137	8615	3494	7971		2.01	Si
SLV 12	fin.	112.02	-4166	1.37	0	834	7137	8615	3494	7971		1.91	Si
SLD 3	ini.	2692.38	-3633	1.37	0	834	7137	8615	3494	7971		2.19	Si
SLD 3	fin.	185.93	-4264	1.37	0	834	7137	8615	3494	7971		1.87	Si
SLV 3	ini.	4282.57	-6429	1.37	0	834	7137	8615	3494	7971		1.24	Si
SLV 3	fin.	10.44	-7077	1.37	0	834	7137	8615	3494	7971		1.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.601	SLV 3	Si
V_SLV	1.126	SLV 3	Si
PF_SLU	2.802	SLU 62	Si
V_SLU	2.156	SLU 62	Si

Trave di accoppiamento 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	1.99	2.89	0.9	-16.768	6.526	1.99	2.89	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	1428.64	-4469	-0.0009955	0.0001872	0.0035	0.9		2959	2959	No	2.07	Si
SLU 75	fin.	-203.81	-2215	-0.0001037	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.55	Si
SLU 83	ini.	1467.54	-4599	-0.0010317	0.0001872	0.0035	0.9		2959	2959	No	2.02	Si
SLU 83	fin.	-202.25	-2294	-0.0001029	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.66	Si
SLU 80	ini.	1434.58	-4490	-0.001001	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 80	fin.	-203.17	-2228	-0.0001034	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.59	Si
SLU 81	ini.	1452.06	-4544	-0.0010172	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 81	fin.	-204.69	-2257	-0.0001042	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.48	Si
SLU 82	ini.	1453.75	-4548	-0.0010188	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 82	fin.	-205.67	-2257	-0.0001047	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.42	Si
SLU 77	ini.	1442.44	-4521	-0.0010083	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 77	fin.	-200.4	-2252	-0.0001019	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.79	Si
SLU 74	ini.	1426.96	-4466	-0.0009939	0.0001872	0.0035	0.9		2959	2959	No	2.07	Si
SLU 74	fin.	-202.84	-2215	-0.0001032	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.62	Si
SLU 79	ini.	1432.9	-4486	-0.0009994	0.0001872	0.0035	0.9		2959	2959	No	2.07	Si
SLU 79	fin.	-202.2	-2228	-0.0001029	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.66	Si
SLU 84	ini.	1469.22	-4603	-0.0010333	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 84	fin.	-203.22	-2294	-0.0001034	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.59	Si
SLU 78	ini.	1444.12	-4524	-0.0010098	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 78	fin.	-201.37	-2252	-0.0001024	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	1453.75	-4081	0.9	0	329	7137	3773	2295	6068	No	1.49	Si
SLU 82	fin.	-205.67	-1203	0.9	0	329	7137	3773	2295	6068	No	5.04	Si
SLU 84	ini.	1469.22	-4123	0.9	0	329	7137	3773	2295	6068	No	1.47	Si
SLU 84	fin.	-203.22	-1202	0.9	0	329	7137	3773	2295	6068	No	5.05	Si
SLU 74	ini.	1426.96	-3994	0.9	0	329	7137	3773	2295	6068	No	1.52	Si
SLU 74	fin.	-202.84	-1196	0.9	0	329	7137	3773	2295	6068	No	5.07	Si
SLU 78	ini.	1444.12	-4041	0.9	0	329	7137	3773	2295	6068	No	1.5	Si
SLU 78	fin.	-201.37	-1199	0.9	0	329	7137	3773	2295	6068	No	5.06	Si
SLU 81	ini.	1452.06	-4076	0.9	0	329	7137	3773	2295	6068	No	1.49	Si
SLU 81	fin.	-204.69	-1199	0.9	0	329	7137	3773	2295	6068	No	5.06	Si
SLU 77	ini.	1442.44	-4037	0.9	0	329	7137	3773	2295	6068	No	1.5	Si
SLU 77	fin.	-200.4	-1195	0.9	0	329	7137	3773	2295	6068	No	5.08	Si
SLU 80	ini.	1434.58	-4014	0.9	0	329	7137	3773	2295	6068	No	1.51	Si
SLU 80	fin.	-203.17	-1202	0.9	0	329	7137	3773	2295	6068	No	5.05	Si
SLU 79	ini.	1432.9	-4009	0.9	0	329	7137	3773	2295	6068	No	1.51	Si
SLU 79	fin.	-202.2	-1198	0.9	0	329	7137	3773	2295	6068	No	5.06	Si
SLU 75	ini.	1428.64	-3999	0.9	0	329	7137	3773	2295	6068	No	1.52	Si
SLU 75	fin.	-203.81	-1200	0.9	0	329	7137	3773	2295	6068	No	5.06	Si
SLU 83	ini.	1467.54	-4118	0.9	0	329	7137	3773	2295	6068	No	1.47	Si
SLU 83	fin.	-202.25	-1198	0.9	0	329	7137	3773	2295	6068	No	5.06	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	3264.81	-5648	-0.0038658	0.0002807	0.0035	0.9		2989.59	2989.59		0.92	No
SLV 16	fin.	-2626.16	2356	-0.0024056	0.0002807	0.0035	0.9		2995.37	2995.37		1.14	Si
SLD 14	ini.	2042.96	-4481	-0.0015413	0.0002807	0.0035	0.9		2989.59	2989.59		1.46	Si
SLD 14	fin.	-1274.2	93	-0.000802	0.0002807	0.0035	0.9		2995.37	2995.37		2.35	Si
SLV 10	ini.	2048.99	-5187	-0.0015484	0.0002807	0.0035	0.9		2989.59	2989.59		1.46	Si
SLV 10	fin.	-1194.79	-537	-0.000739	0.0002807	0.0035	0.9		2995.37	2995.37		2.51	Si
SLV 13	ini.	3165.83	-5962	-0.0036473	0.0002807	0.0035	0.9		2989.59	2989.59		0.94	No
SLV 13	fin.	-2479.38	1804	-0.002143	0.0002807	0.0035	0.9		2995.37	2995.37		1.21	Si
SLV 14	ini.	3443.62	-6345	-0.0042403	0.0002807	0.0035	0.9		2989.59	2989.59		0.87	No
SLV 14	fin.	-2760.54	2206	-0.0026784	0.0002807	0.0035	0.9		2995.37	2995.37		1.09	Si
SLV 3	ini.	-1452.58	170	-0.0009509	0.0002807	0.0035	0.9		2995.37	2995.37		2.06	Si
SLV 3	fin.	2433.71	-5175	-0.0020753	0.0002807	0.0035	0.9		2989.59	2989.59		1.23	Si
SLV 15	ini.	2987.02	-5265	-0.0032246	0.0002807	0.0035	0.9		2989.59	2989.59		1	Si
SLV 15	fin.	-2345	1954	-0.0019314	0.0002807	0.0035	0.9		2995.37	2995.37		1.28	Si
SLV 1	ini.	-1273.77	-527	-0.0008017	0.0002807	0.0035	0.9		2995.37	2995.37		2.35	Si
SLV 1	fin.	2299.33	-5325	-0.0018711	0.0002807	0.0035	0.9		2989.59	2989.59		1.3	Si
SLV 2	ini.	-995.98	-909	-0.0005893	0.0002807	0.0035	0.9		2995.37	2995.37		3.01	Si
SLV 2	fin.	2018.17	-4924	-0.0015127	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1174.79	-212	-0.0007234	0.0002807	0.0035	0.9		2995.37	2995.37		2.55	Si
SLV 4	fin.	2152.55	-4773	-0.0016741	0.0002807	0.0035	0.9		2989.59	2989.59		1.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	1869.97	-6259	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 9	fin.	-1013.6	-5084	0.9	0	493	7137	5660	2295	7630		1.5	Si
SLV 4	ini.	-1174.79	4538	0.9	0	493	7137	5660	2295	7630		1.68	Si
SLV 4	fin.	2152.55	6960	0.9	0	493	7137	5660	2295	7630		1.1	Si
SLV 1	ini.	-1273.77	4474	0.9	0	493	7137	5660	2295	7630		1.71	Si
SLV 1	fin.	2299.33	6593	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 15	ini.	2987.02	-9118	0.9	0	493	7137	5660	2295	7630		0.84	No
SLV 15	fin.	-2345	-7523	0.9	0	493	7137	5660	2295	7630		1.01	Si
SLV 13	ini.	3165.83	-10076	0.9	0	493	7137	5660	2295	7630		0.76	No
SLV 13	fin.	-2479.38	-8810	0.9	0	493	7137	5660	2295	7630		0.87	No
SLV 10	ini.	2048.99	-6835	0.9	0	493	7137	5660	2295	7630		1.12	Si
SLV 10	fin.	-1194.79	-5678	0.9	0	493	7137	5660	2295	7630		1.34	Si
SLV 3	ini.	-1452.58	5431	0.9	0	493	7137	5660	2295	7630		1.4	Si
SLV 3	fin.	2433.71	7880	0.9	0	493	7137	5660	2295	7630		0.97	No
SLD 14	ini.	2042.96	-6276	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLD 14	fin.	-1274.2	-4692	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLV 14	ini.	3443.62	-10969	0.9	0	493	7137	5660	2295	7630		0.7	No
SLV 14	fin.	-2760.54	-9731	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 16	ini.	3264.81	-10012	0.9	0	493	7137	5660	2295	7630		0.76	No
SLV 16	fin.	-2626.16	-8444	0.9	0	493	7137	5660	2295	7630		0.9	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.868	SLV 14	No
V_SLV	0.696	SLV 14	No
PF_SLU	2.014	SLU 84	Si
V_SLU	1.472	SLU 84	Si

Trave di accoppiamento 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	4.79	5.46	0.67	-16.768	6.526	4.79	5.46	0.67	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-33.01	-972	-0.0000293	0.0001872	0.0035	0.67		1657.26	1657.26	No	50.2	Si
SLU 75	fin.	-1121.12	-3298	-0.0016163	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 82	ini.	-34.28	-988	-0.0000304	0.0001872	0.0035	0.67		1657.26	1657.26	No	48.35	Si
SLU 82	fin.	-1149.68	-3371	-0.001682	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.44	Si
SLU 79	ini.	-34.84	-979	-0.0000309	0.0001872	0.0035	0.67		1657.26	1657.26	No	47.57	Si
SLU 79	fin.	-1120.79	-3301	-0.0016155	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 80	ini.	-34.48	-979	-0.0000306	0.0001872	0.0035	0.67		1657.26	1657.26	No	48.06	Si
SLU 80	fin.	-1121.98	-3305	-0.0016182	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 78	ini.	-37.07	-995	-0.0000329	0.0001872	0.0035	0.67		1657.26	1657.26	No	44.7	Si
SLU 78	fin.	-1131.35	-3335	-0.0016395	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.46	Si
SLU 74	ini.	-33.37	-972	-0.0000296	0.0001872	0.0035	0.67		1657.26	1657.26	No	49.66	Si
SLU 74	fin.	-1119.93	-3294	-0.0016136	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 77	ini.	-37.43	-995	-0.0000333	0.0001872	0.0035	0.67		1657.26	1657.26	No	44.27	Si
SLU 77	fin.	-1130.16	-3331	-0.0016368	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.47	Si
SLU 81	ini.	-34.64	-988	-0.0000308	0.0001872	0.0035	0.67		1657.26	1657.26	No	47.84	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-1148.49	-3367	-0.0016792	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.44	Si
SLU 83	ini.	-38.7	-1011	-0.0000344	0.0001872	0.0035	0.67		1657.26	1657.26	No	42.82	Si
SLU 83	fin.	-1158.71	-3404	-0.0017034	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.43	Si
SLU 84	ini.	-38.34	-1011	-0.0000341	0.0001872	0.0035	0.67		1657.26	1657.26	No	43.23	Si
SLU 84	fin.	-1159.9	-3408	-0.0017062	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-33.01	818	0.67	0	182	5313	2809	1709	4517	No	5.52	Si
SLU 75	fin.	-1121.12	-4653	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 77	ini.	-37.43	838	0.67	0	182	5313	2809	1709	4517	No	5.39	Si
SLU 77	fin.	-1130.16	-4690	0.67	0	182	5313	2809	1709	4517	No	0.96	No
SLU 81	ini.	-34.64	855	0.67	0	182	5313	2809	1709	4517	No	5.28	Si
SLU 81	fin.	-1148.49	-4779	0.67	0	182	5313	2809	1709	4517	No	0.95	No
SLU 84	ini.	-38.34	872	0.67	0	182	5313	2809	1709	4517	No	5.18	Si
SLU 84	fin.	-1159.9	-4825	0.67	0	182	5313	2809	1709	4517	No	0.94	No
SLU 80	ini.	-34.48	820	0.67	0	182	5313	2809	1709	4517	No	5.51	Si
SLU 80	fin.	-1121.98	-4654	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 74	ini.	-33.37	820	0.67	0	182	5313	2809	1709	4517	No	5.51	Si
SLU 74	fin.	-1119.93	-4649	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 82	ini.	-34.28	854	0.67	0	182	5313	2809	1709	4517	No	5.29	Si
SLU 82	fin.	-1149.68	-4784	0.67	0	182	5313	2809	1709	4517	No	0.94	No
SLU 79	ini.	-34.84	821	0.67	0	182	5313	2809	1709	4517	No	5.5	Si
SLU 79	fin.	-1120.79	-4650	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 83	ini.	-38.7	873	0.67	0	182	5313	2809	1709	4517	No	5.17	Si
SLU 83	fin.	-1158.71	-4821	0.67	0	182	5313	2809	1709	4517	No	0.94	No
SLU 78	ini.	-37.07	837	0.67	0	182	5313	2809	1709	4517	No	5.4	Si
SLU 78	fin.	-1131.35	-4694	0.67	0	182	5313	2809	1709	4517	No	0.96	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1779.89	-4715	-0.003707	0.0002807	0.0035	0.67		1667.53	1667.53		0.94	No
SLV 1	fin.	701.73	823	-0.0007939	0.0002807	0.0035	0.67		1663.2	1663.2		2.37	Si
SLV 14	ini.	1716.2	3118	-0.0034626	0.0002807	0.0035	0.67		1663.2	1663.2		0.97	No
SLV 14	fin.	-2313.08	-5476	-0.0055773	0.0002807	0.0035	0.67		1667.53	1667.53		0.72	No
SLD 16	ini.	750.85	1123	-0.0008661	0.0002807	0.0035	0.67		1663.2	1663.2		2.22	Si
SLD 16	fin.	-1395.61	-3565	-0.0021911	0.0002807	0.0035	0.67		1667.53	1667.53		1.19	Si
SLV 2	ini.	-1588.42	-4298	-0.002889	0.0002807	0.0035	0.67		1667.53	1667.53		1.05	Si
SLV 2	fin.	527.55	451	-0.0005565	0.0002807	0.0035	0.67		1663.2	1663.2		3.15	Si
SLV 16	ini.	1765.66	3463	-0.0036672	0.0002807	0.0035	0.67		1663.2	1663.2		0.94	No
SLV 16	fin.	-2237.07	-5327	-0.0053301	0.0002807	0.0035	0.67		1667.53	1667.53		0.75	No
SLV 3	ini.	-1730.43	-4369	-0.0035048	0.0002807	0.0035	0.67		1667.53	1667.53		0.96	No
SLV 3	fin.	777.74	972	-0.0009067	0.0002807	0.0035	0.67		1663.2	1663.2		2.14	Si
SLV 15	ini.	1574.19	3046	-0.0028457	0.0002807	0.0035	0.67		1663.2	1663.2		1.06	Si
SLV 15	fin.	-2062.89	-4955	-0.004746	0.0002807	0.0035	0.67		1667.53	1667.53		0.81	No
SLD 14	ini.	729.69	974	-0.0008347	0.0002807	0.0035	0.67		1663.2	1663.2		2.28	Si
SLD 14	fin.	-1428.87	-3632	-0.0022965	0.0002807	0.0035	0.67		1667.53	1667.53		1.17	Si
SLV 13	ini.	1524.73	2700	-0.0026483	0.0002807	0.0035	0.67		1663.2	1663.2		1.09	Si
SLV 13	fin.	-2138.91	-5105	-0.0050044	0.0002807	0.0035	0.67		1667.53	1667.53		0.78	No
SLV 4	ini.	-1538.96	-3952	-0.0026888	0.0002807	0.0035	0.67		1667.53	1667.53		1.08	Si
SLV 4	fin.	603.56	601	-0.0006566	0.0002807	0.0035	0.67		1663.2	1663.2		2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1765.66	-5928	0.67	0	273	5313	4213	1709	5586		0.94	No
SLV 16	fin.	-2237.07	-8137	0.67	0	273	5313	4213	1709	5586		0.69	No
SLV 13	ini.	1524.73	-5134	0.67	0	273	5313	4213	1709	5586		1.09	Si
SLV 13	fin.	-2138.91	-7769	0.67	0	273	5313	4213	1709	5586		0.72	No
SLV 4	ini.	-1538.96	6111	0.67	0	273	5313	4213	1709	5586		0.91	No
SLV 4	fin.	603.56	1432	0.67	0	273	5313	4213	1709	5586		3.9	Si
SLD 16	ini.	750.85	-2255	0.67	0	273	5313	4213	1709	5586		2.48	Si
SLD 16	fin.	-1395.61	-5292	0.67	0	273	5313	4213	1709	5586		1.06	Si
SLV 14	ini.	1716.2	-5833	0.67	0	273	5313	4213	1709	5586		0.96	No
SLV 14	fin.	-2313.08	-8351	0.67	0	273	5313	4213	1709	5586		0.67	No
SLV 15	ini.	1574.19	-5229	0.67	0	273	5313	4213	1709	5586		1.07	Si
SLV 15	fin.	-2062.89	-7555	0.67	0	273	5313	4213	1709	5586		0.74	No
SLV 1	ini.	-1779.89	6905	0.67	0	273	5313	4213	1709	5586		0.81	No
SLV 1	fin.	701.73	1800	0.67	0	273	5313	4213	1709	5586		3.1	Si
SLV 3	ini.	-1730.43	6810	0.67	0	273	5313	4213	1709	5586		0.82	No
SLV 3	fin.	777.74	2014	0.67	0	273	5313	4213	1709	5586		2.77	Si
SLV 2	ini.	-1588.42	6206	0.67	0	273	5313	4213	1709	5586		0.9	No
SLV 2	fin.	527.55	1218	0.67	0	273	5313	4213	1709	5586		4.59	Si
SLD 14	ini.	729.69	-2215	0.67	0	273	5313	4213	1709	5586		2.52	Si
SLD 14	fin.	-1428.87	-5386	0.67	0	273	5313	4213	1709	5586		1.04	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.721	SLV 14	No
V_SLV	0.669	SLV 14	No
PF_SLU	1.429	SLU 84	Si
V_SLU	0.936	SLU 84	No

Trave di accoppiamento 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	1.99	2.89	0.9	-11.888	6.526	1.99	2.89	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1020.91	-4178	-0.0006476	0.0001872	0.0035	0.9		2959	2959	No	2.9	Si
SLU 77	fin.	345.36	-3175	-0.0001822	0.0001872	0.0035	0.9		2959	2959	No	8.57	Si
SLU 82	ini.	1046.04	-4236	-0.0006675	0.0001872	0.0035	0.9		2959	2959	No	2.83	Si
SLU 82	fin.	331.32	-3174	-0.0001742	0.0001872	0.0035	0.9		2959	2959	No	8.93	Si
SLU 83	ini.	1053.5	-4281	-0.0006734	0.0001872	0.0035	0.9		2959	2959	No	2.81	Si
SLU 83	fin.	342.75	-3226	-0.0001807	0.0001872	0.0035	0.9		2959	2959	No	8.63	Si
SLU 78	ini.	1021.53	-4180	-0.000648	0.0001872	0.0035	0.9		2959	2959	No	2.9	Si
SLU 78	fin.	345.32	-3176	-0.0001822	0.0001872	0.0035	0.9		2959	2959	No	8.57	Si
SLU 75	ini.	1013.45	-4133	-0.0006417	0.0001872	0.0035	0.9		2959	2959	No	2.92	Si
SLU 75	fin.	333.93	-3124	-0.0001757	0.0001872	0.0035	0.9		2959	2959	No	8.86	Si
SLU 84	ini.	1054.12	-4283	-0.0006739	0.0001872	0.0035	0.9		2959	2959	No	2.81	Si
SLU 84	fin.	342.71	-3227	-0.0001807	0.0001872	0.0035	0.9		2959	2959	No	8.63	Si
SLU 81	ini.	1045.42	-4234	-0.000667	0.0001872	0.0035	0.9		2959	2959	No	2.83	Si
SLU 81	fin.	331.36	-3173	-0.0001742	0.0001872	0.0035	0.9		2959	2959	No	8.93	Si
SLU 79	ini.	1009.05	-4138	-0.0006382	0.0001872	0.0035	0.9		2959	2959	No	2.93	Si
SLU 79	fin.	344.64	-3151	-0.0001818	0.0001872	0.0035	0.9		2959	2959	No	8.59	Si
SLU 74	ini.	1012.83	-4131	-0.0006412	0.0001872	0.0035	0.9		2959	2959	No	2.92	Si
SLU 74	fin.	333.97	-3123	-0.0001757	0.0001872	0.0035	0.9		2959	2959	No	8.86	Si
SLU 80	ini.	1009.67	-4140	-0.0006387	0.0001872	0.0035	0.9		2959	2959	No	2.93	Si
SLU 80	fin.	344.6	-3152	-0.0001818	0.0001872	0.0035	0.9		2959	2959	No	8.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1020.91	-2704	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 77	fin.	345.36	491	0.9	0	329	7137	3773	2295	6068	No	12.37	Si
SLU 81	ini.	1045.42	-2787	0.9	0	329	7137	3773	2295	6068	No	2.18	Si
SLU 81	fin.	331.36	444	0.9	0	329	7137	3773	2295	6068	No	13.67	Si
SLU 78	ini.	1021.53	-2705	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 78	fin.	345.32	490	0.9	0	329	7137	3773	2295	6068	No	12.39	Si
SLU 82	ini.	1046.04	-2788	0.9	0	329	7137	3773	2295	6068	No	2.18	Si
SLU 82	fin.	331.32	443	0.9	0	329	7137	3773	2295	6068	No	13.69	Si
SLU 74	ini.	1012.83	-2685	0.9	0	329	7137	3773	2295	6068	No	2.26	Si
SLU 74	fin.	333.97	460	0.9	0	329	7137	3773	2295	6068	No	13.2	Si
SLU 79	ini.	1009.05	-2668	0.9	0	329	7137	3773	2295	6068	No	2.27	Si
SLU 79	fin.	344.64	492	0.9	0	329	7137	3773	2295	6068	No	12.32	Si
SLU 83	ini.	1053.5	-2806	0.9	0	329	7137	3773	2295	6068	No	2.16	Si
SLU 83	fin.	342.75	475	0.9	0	329	7137	3773	2295	6068	No	12.78	Si
SLU 84	ini.	1054.12	-2807	0.9	0	329	7137	3773	2295	6068	No	2.16	Si
SLU 84	fin.	342.71	474	0.9	0	329	7137	3773	2295	6068	No	12.8	Si
SLU 80	ini.	1009.67	-2670	0.9	0	329	7137	3773	2295	6068	No	2.27	Si
SLU 80	fin.	344.6	492	0.9	0	329	7137	3773	2295	6068	No	12.34	Si
SLU 75	ini.	1013.45	-2686	0.9	0	329	7137	3773	2295	6068	No	2.26	Si
SLU 75	fin.	333.93	459	0.9	0	329	7137	3773	2295	6068	No	13.21	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	3144.24	-5948	-0.0035983	0.0002807	0.0035	0.9		2989.59	2989.59		0.95	No
SLV 15	fin.	-2256.29	1606	-0.0018051	0.0002807	0.0035	0.9		2995.37	2995.37		1.33	Si
SLV 3	ini.	-2055.29	1566	-0.0015514	0.0002807	0.0035	0.9		2995.37	2995.37		1.46	Si
SLV 3	fin.	3028.11	-6179	-0.0033248	0.0002807	0.0035	0.9		2989.59	2989.59		0.99	No
SLV 16	ini.	3394.3	-6305	-0.0041392	0.0002807	0.0035	0.9		2989.59	2989.59		0.88	No
SLV 16	fin.	-2512.91	1991	-0.0021999	0.0002807	0.0035	0.9		2995.37	2995.37		1.19	Si
SLD 14	ini.	1848.93	-4663	-0.0013282	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLD 14	fin.	-967.75	-395	-0.0005689	0.0002807	0.0035	0.9		2995.37	2995.37		3.1	Si
SLV 4	ini.	-1805.23	1208	-0.00128	0.0002807	0.0035	0.9		2995.37	2995.37		1.66	Si
SLV 4	fin.	2771.49	-5794	-0.0027132	0.0002807	0.0035	0.9		2989.59	2989.59		1.08	Si
SLV 2	ini.	-1784.82	352	-0.0012594	0.0002807	0.0035	0.9		2995.37	2995.37		1.68	Si
SLV 2	fin.	2714.34	-5861	-0.0025911	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 14	ini.	3414.71	-7161	-0.0041812	0.0002807	0.0035	0.9		2989.59	2989.59		0.88	No
SLV 14	fin.	-2570.06	1924	-0.0023011	0.0002807	0.0035	0.9		2995.37	2995.37		1.17	Si
SLV 1	ini.	-2034.87	710	-0.0015276	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 1	fin.	2970.96	-6247	-0.0031852	0.0002807	0.0035	0.9		2989.59	2989.59		1.01	Si
SLD 16	ini.	1839.7	-4295	-0.0013186	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLD 16	fin.	-943.11	-366	-0.0005514	0.0002807	0.0035	0.9		2995.37	2995.37		3.18	Si
SLV 13	ini.	3164.66	-6804	-0.0036447	0.0002807	0.0035	0.9		2989.59	2989.59		0.94	No
SLV 13	fin.	-2313.44	1539	-0.0018853	0.0002807	0.0035	0.9		2995.37	2995.37		1.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	3144.24	-9499	0.9	0	493	7137	5660	2295	7630		0.8	No
SLV 15	fin.	-2256.29	-7580	0.9	0	493	7137	5660	2295	7630		1.01	Si
SLV 13	ini.	3164.66	-10665	0.9	0	493	7137	5660	2295	7630		0.72	No
SLV 13	fin.	-2313.44	-8425	0.9	0	493	7137	5660	2295	7630		0.91	No
SLV 14	ini.	3414.71	-11503	0.9	0	493	7137	5660	2295	7630		0.66	No
SLV 14	fin.	-2570.06	-9273	0.9	0	493	7137	5660	2295	7630		0.82	No
SLV 1	ini.	-2034.87	6789	0.9	0	493	7137	5660	2295	7630		1.12	Si
SLV 1	fin.	2970.96	9031	0.9	0	493	7137	5660	2295	7630		0.84	No
SLV 2	ini.	-1784.82	5950	0.9	0	493	7137	5660	2295	7630		1.28	Si
SLV 2	fin.	2714.34	8183	0.9	0	493	7137	5660	2295	7630		0.93	No
SLV 16	ini.	3394.3	-10338	0.9	0	493	7137	5660	2295	7630		0.74	No
SLV 16	fin.	-2512.91	-8428	0.9	0	493	7137	5660	2295	7630		0.91	No
SLV 3	ini.	-2055.29	7954	0.9	0	493	7137	5660	2295	7630		0.96	No
SLV 3	fin.	3028.11	9876	0.9	0	493	7137	5660	2295	7630		0.77	No
SLV 10	ini.	1574.24	-6605	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 10	fin.	-741.57	-3999	0.9	0	493	7137	5660	2295	7630		1.91	Si
SLV 9	ini.	1413.09	-6064	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 9	fin.	-576.19	-3452	0.9	0	493	7137	5660	2295	7630		2.21	Si
SLV 4	ini.	-1805.23	7116	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 4	fin.	2771.49	9028	0.9	0	493	7137	5660	2295	7630		0.85	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.876	SLV 14	No
V_SLV	0.663	SLV 14	No
PF_SLU	2.807	SLU 84	Si
V_SLU	2.162	SLU 84	Si

Trave di accoppiamento 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	4.79	5.46	0.67	-11.888	6.526	4.79	5.46	0.67	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-444.74	-2038	-0.0004784	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.73	Si
SLU 82	fin.	-891.2	-3007	-0.0011581	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.86	Si
SLU 74	ini.	-438.62	-2003	-0.0004705	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.78	Si
SLU 74	fin.	-861.97	-2922	-0.0011066	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.92	Si
SLU 80	ini.	-445.2	-2022	-0.000479	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.72	Si
SLU 80	fin.	-859.79	-2923	-0.0011028	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.93	Si
SLU 75	ini.	-438.78	-2004	-0.0004707	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.78	Si
SLU 75	fin.	-862.6	-2924	-0.0011077	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.92	Si
SLU 84	ini.	-454.19	-2075	-0.0004908	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.65	Si
SLU 84	fin.	-898.44	-3039	-0.001171	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.84	Si
SLU 78	ini.	-448.24	-2040	-0.000483	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.7	Si
SLU 78	fin.	-869.84	-2956	-0.0011203	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.91	Si
SLU 83	ini.	-454.03	-2074	-0.0004906	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.65	Si
SLU 83	fin.	-897.8	-3037	-0.0011699	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.85	Si
SLU 81	ini.	-444.58	-2037	-0.0004782	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.73	Si
SLU 81	fin.	-890.56	-3005	-0.0011569	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.86	Si
SLU 79	ini.	-445.04	-2021	-0.0004788	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.72	Si
SLU 79	fin.	-859.15	-2921	-0.0011017	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.93	Si
SLU 77	ini.	-448.08	-2039	-0.0004828	0.0001872	0.0035	0.67		1657.26	1657.26	No	3.7	Si
SLU 77	fin.	-869.2	-2954	-0.0011192	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-438.78	2281	0.67	0	182	5313	2809	1709	4517	No	1.98	Si
SLU 75	fin.	-862.6	-3776	0.67	0	182	5313	2809	1709	4517	No	1.2	Si
SLU 74	ini.	-438.62	2280	0.67	0	182	5313	2809	1709	4517	No	1.98	Si
SLU 74	fin.	-861.97	-3774	0.67	0	182	5313	2809	1709	4517	No	1.2	Si
SLU 78	ini.	-448.24	2321	0.67	0	182	5313	2809	1709	4517	No	1.95	Si
SLU 78	fin.	-869.84	-3808	0.67	0	182	5313	2809	1709	4517	No	1.19	Si
SLU 77	ini.	-448.08	2320	0.67	0	182	5313	2809	1709	4517	No	1.95	Si
SLU 77	fin.	-869.2	-3806	0.67	0	182	5313	2809	1709	4517	No	1.19	Si
SLU 82	ini.	-444.74	2329	0.67	0	182	5313	2809	1709	4517	No	1.94	Si
SLU 82	fin.	-891.2	-3903	0.67	0	182	5313	2809	1709	4517	No	1.16	Si
SLU 79	ini.	-445.04	2302	0.67	0	182	5313	2809	1709	4517	No	1.96	Si
SLU 79	fin.	-859.15	-3764	0.67	0	182	5313	2809	1709	4517	No	1.2	Si
SLU 81	ini.	-444.58	2328	0.67	0	182	5313	2809	1709	4517	No	1.94	Si
SLU 81	fin.	-890.56	-3900	0.67	0	182	5313	2809	1709	4517	No	1.16	Si
SLU 84	ini.	-454.19	2368	0.67	0	182	5313	2809	1709	4517	No	1.91	Si
SLU 84	fin.	-898.44	-3935	0.67	0	182	5313	2809	1709	4517	No	1.15	Si
SLU 80	ini.	-445.2	2303	0.67	0	182	5313	2809	1709	4517	No	1.96	Si
SLU 80	fin.	-859.79	-3766	0.67	0	182	5313	2809	1709	4517	No	1.2	Si
SLU 83	ini.	-454.03	2367	0.67	0	182	5313	2809	1709	4517	No	1.91	Si
SLU 83	fin.	-897.8	-3933	0.67	0	182	5313	2809	1709	4517	No	1.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	585.73	587	-0.0006326	0.0002807	0.0035	0.67		1663.2	1663.2		2.84	Si
SLD 16	fin.	-1418.1	-3729	-0.0022617	0.0002807	0.0035	0.67		1667.53	1667.53		1.18	Si
SLV 13	ini.	1551.27	2564	-0.0027522	0.0002807	0.0035	0.67		1663.2	1663.2		1.07	Si
SLV 13	fin.	-2423.25	-5927	-0.0059292	0.0002807	0.0035	0.67		1667.53	1667.53		0.69	No
SLV 2	ini.	-2162.63	-5451	-0.0050839	0.0002807	0.0035	0.67		1667.53	1667.53		0.77	No
SLV 2	fin.	1204.98	1793	-0.0016919	0.0002807	0.0035	0.67		1663.2	1663.2		1.38	Si
SLD 14	ini.	577.02	504	-0.000621	0.0002807	0.0035	0.67		1663.2	1663.2		2.88	Si
SLD 14	fin.	-1446.81	-3825	-0.0023557	0.0002807	0.0035	0.67		1667.53	1667.53		1.15	Si
SLV 14	ini.	1745.81	2984	-0.0035863	0.0002807	0.0035	0.67		1663.2	1663.2		0.95	No
SLV 14	fin.	-2612.19	-6326	-0.0065248	0.0002807	0.0035	0.67		1667.53	1667.53		0.64	No
SLV 4	ini.	-2142.59	-5259	-0.0050168	0.0002807	0.0035	0.67		1667.53	1667.53		0.78	No
SLV 4	fin.	1270.72	2013	-0.0018504	0.0002807	0.0035	0.67		1663.2	1663.2		1.31	Si
SLV 3	ini.	-2337.13	-5680	-0.0056547	0.0002807	0.0035	0.67		1667.53	1667.53		0.71	No
SLV 3	fin.	1459.65	2412	-0.0024115	0.0002807	0.0035	0.67		1663.2	1663.2		1.14	Si
SLV 15	ini.	1571.31	2755	-0.0028338	0.0002807	0.0035	0.67		1663.2	1663.2		1.06	Si
SLV 15	fin.	-2357.52	-5707	-0.00572	0.0002807	0.0035	0.67		1667.53	1667.53		0.71	No
SLV 1	ini.	-2357.17	-5872	-0.0057189	0.0002807	0.0035	0.67		1667.53	1667.53		0.71	No
SLV 1	fin.	1393.91	2192	-0.0021964	0.0002807	0.0035	0.67		1663.2	1663.2		1.19	Si
SLV 16	ini.	1765.85	3176	-0.003668	0.0002807	0.0035	0.67		1663.2	1663.2		0.94	No
SLV 16	fin.	-2546.45	-6105	-0.006319	0.0002807	0.0035	0.67		1667.53	1667.53		0.65	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1571.31	-5027	0.67	0	273	5313	4213	1709	5586		1.11	Si
SLV 15	fin.	-2357.52	-8725	0.67	0	273	5313	4213	1709	5586		0.64	No
SLV 4	ini.	-2142.59	8006	0.67	0	273	5313	4213	1709	5586		0.7	No
SLV 4	fin.	1270.72	3883	0.67	0	273	5313	4213	1709	5586		1.44	Si
SLD 16	ini.	585.73	-1562	0.67	0	273	5313	4213	1709	5586		3.58	Si
SLD 16	fin.	-1418.1	-5453	0.67	0	273	5313	4213	1709	5586		1.02	Si
SLV 3	ini.	-2337.13	8685	0.67	0	273	5313	4213	1709	5586		0.64	No
SLV 3	fin.	1459.65	4539	0.67	0	273	5313	4213	1709	5586		1.23	Si
SLV 16	ini.	1765.85	-5706	0.67	0	273	5313	4213	1709	5586		0.98	No
SLV 16	fin.	-2546.45	-9380	0.67	0	273	5313	4213	1709	5586		0.6	No
SLD 14	ini.	577.02	-1525	0.67	0	273	5313	4213	1709	5586		3.66	Si
SLD 14	fin.	-1446.81	-5542	0.67	0	273	5313	4213	1709	5586		1.01	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-2357.17	8771	0.67	0	273	5313	4213	1709	5586		0.64	No
SLV 1	fin.	1393.91	4336	0.67	0	273	5313	4213	1709	5586		1.29	Si
SLV 14	ini.	1745.81	-5620	0.67	0	273	5313	4213	1709	5586		0.99	No
SLV 14	fin.	-2612.19	-9584	0.67	0	273	5313	4213	1709	5586		0.58	No
SLV 2	ini.	-2162.63	8092	0.67	0	273	5313	4213	1709	5586		0.69	No
SLV 2	fin.	1204.98	3680	0.67	0	273	5313	4213	1709	5586		1.52	Si
SLV 13	ini.	1551.27	-4941	0.67	0	273	5313	4213	1709	5586		1.13	Si
SLV 13	fin.	-2423.25	-8928	0.67	0	273	5313	4213	1709	5586		0.63	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.638	SLV 14	No
V_SLV	0.583	SLV 14	No
PF_SLU	1.845	SLU 84	Si
V_SLU	1.148	SLU 84	Si

Trave di accoppiamento 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	1.99	2.89	0.9	-7.008	6.526	1.99	2.89	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-271.63	-2009	-0.0001404	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.91	Si
SLU 82	fin.	1437.17	-4289	-0.0010034	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 80	ini.	-254.46	-2007	-0.000131	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.65	Si
SLU 80	fin.	1405.68	-4219	-0.0009744	0.0001872	0.0035	0.9		2959	2959	No	2.11	Si
SLU 75	ini.	-262.24	-1982	-0.0001353	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.31	Si
SLU 75	fin.	1406.22	-4207	-0.0009749	0.0001872	0.0035	0.9		2959	2959	No	2.1	Si
SLU 74	ini.	-262	-1980	-0.0001351	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.32	Si
SLU 74	fin.	1405.18	-4204	-0.0009739	0.0001872	0.0035	0.9		2959	2959	No	2.11	Si
SLU 81	ini.	-271.38	-2008	-0.0001403	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.92	Si
SLU 81	fin.	1436.13	-4286	-0.0010024	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 84	ini.	-263.95	-2054	-0.0001362	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.23	Si
SLU 84	fin.	1447.57	-4336	-0.001013	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 79	ini.	-254.21	-2005	-0.0001309	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.66	Si
SLU 79	fin.	1404.64	-4216	-0.0009734	0.0001872	0.0035	0.9		2959	2959	No	2.11	Si
SLU 83	ini.	-263.71	-2053	-0.0001361	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.24	Si
SLU 83	fin.	1446.53	-4333	-0.0010121	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 77	ini.	-254.32	-2026	-0.0001309	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.66	Si
SLU 77	fin.	1415.58	-4251	-0.0009835	0.0001872	0.0035	0.9		2959	2959	No	2.09	Si
SLU 78	ini.	-254.57	-2027	-0.0001311	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.65	Si
SLU 78	fin.	1416.62	-4254	-0.0009844	0.0001872	0.0035	0.9		2959	2959	No	2.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-254.46	1285	0.9	0	329	7137	3773	2295	6068	No	4.72	Si
SLU 80	fin.	1405.68	3909	0.9	0	329	7137	3773	2295	6068	No	1.55	Si
SLU 77	ini.	-254.32	1287	0.9	0	329	7137	3773	2295	6068	No	4.72	Si
SLU 77	fin.	1415.58	3938	0.9	0	329	7137	3773	2295	6068	No	1.54	Si
SLU 78	ini.	-254.57	1288	0.9	0	329	7137	3773	2295	6068	No	4.71	Si
SLU 78	fin.	1416.62	3941	0.9	0	329	7137	3773	2295	6068	No	1.54	Si
SLU 75	ini.	-262.24	1308	0.9	0	329	7137	3773	2295	6068	No	4.64	Si
SLU 75	fin.	1406.22	3916	0.9	0	329	7137	3773	2295	6068	No	1.55	Si
SLU 83	ini.	-263.71	1315	0.9	0	329	7137	3773	2295	6068	No	4.62	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	1446.53	4038	0.9	0	329	7137	3773	2295	6068	No	1.5	Si
SLU 74	ini.	-262	1306	0.9	0	329	7137	3773	2295	6068	No	4.65	Si
SLU 74	fin.	1405.18	3913	0.9	0	329	7137	3773	2295	6068	No	1.55	Si
SLU 79	ini.	-254.21	1283	0.9	0	329	7137	3773	2295	6068	No	4.73	Si
SLU 79	fin.	1404.64	3907	0.9	0	329	7137	3773	2295	6068	No	1.55	Si
SLU 81	ini.	-271.38	1335	0.9	0	329	7137	3773	2295	6068	No	4.55	Si
SLU 81	fin.	1436.13	4013	0.9	0	329	7137	3773	2295	6068	No	1.51	Si
SLU 84	ini.	-263.95	1316	0.9	0	329	7137	3773	2295	6068	No	4.61	Si
SLU 84	fin.	1447.57	4041	0.9	0	329	7137	3773	2295	6068	No	1.5	Si
SLU 82	ini.	-271.63	1336	0.9	0	329	7137	3773	2295	6068	No	4.54	Si
SLU 82	fin.	1437.17	4015	0.9	0	329	7137	3773	2295	6068	No	1.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-2836.02	3021	-0.0028467	0.0002807	0.0035	0.9		2995.37	2995.37		1.06	Si
SLV 3	fin.	3262.12	-5446	-0.00386	0.0002807	0.0035	0.9		2989.59	2989.59		0.92	No
SLD 1	ini.	-1290.74	357	-0.0008154	0.0002807	0.0035	0.9		2995.37	2995.37		2.32	Si
SLD 1	fin.	2013.26	-4241	-0.0015071	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLV 15	ini.	2065.68	-4830	-0.001568	0.0002807	0.0035	0.9		2989.59	2989.59		1.45	Si
SLV 15	fin.	-1185.74	-100	-0.0007319	0.0002807	0.0035	0.9		2995.37	2995.37		2.53	Si
SLV 4	ini.	-2569.29	2625	-0.0022997	0.0002807	0.0035	0.9		2995.37	2995.37		1.17	Si
SLV 4	fin.	3008.12	-5109	-0.0032762	0.0002807	0.0035	0.9		2989.59	2989.59		0.99	No
SLV 5	ini.	-875.57	-714	-0.0005041	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 5	fin.	1954.86	-4793	-0.0014415	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si
SLV 14	ini.	2423.52	-5650	-0.0020589	0.0002807	0.0035	0.9		2989.59	2989.59		1.23	Si
SLV 14	fin.	-1303.75	-353	-0.000826	0.0002807	0.0035	0.9		2995.37	2995.37		2.3	Si
SLV 13	ini.	2156.8	-5254	-0.0016795	0.0002807	0.0035	0.9		2989.59	2989.59		1.39	Si
SLV 13	fin.	-1049.75	-690	-0.0006287	0.0002807	0.0035	0.9		2995.37	2995.37		2.85	Si
SLV 1	ini.	-2744.89	2598	-0.0026449	0.0002807	0.0035	0.9		2995.37	2995.37		1.09	Si
SLV 1	fin.	3398.11	-6036	-0.0041471	0.0002807	0.0035	0.9		2989.59	2989.59		0.88	No
SLV 16	ini.	2332.4	-5227	-0.0019191	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLV 16	fin.	-1439.74	237	-0.0009398	0.0002807	0.0035	0.9		2995.37	2995.37		2.08	Si
SLV 2	ini.	-2478.17	2202	-0.002141	0.0002807	0.0035	0.9		2995.37	2995.37		1.21	Si
SLV 2	fin.	3144.11	-5699	-0.003598	0.0002807	0.0035	0.9		2989.59	2989.59		0.95	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	2332.4	-6563	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 16	fin.	-1439.74	-4667	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLV 13	ini.	2156.8	-6916	0.9	0	493	7137	5660	2295	7630		1.1	Si
SLV 13	fin.	-1049.75	-4967	0.9	0	493	7137	5660	2295	7630		1.54	Si
SLV 7	ini.	-1179.31	5602	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 7	fin.	1501.56	7163	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 14	ini.	2423.52	-7765	0.9	0	493	7137	5660	2295	7630		0.98	No
SLV 14	fin.	-1303.75	-5817	0.9	0	493	7137	5660	2295	7630		1.31	Si
SLV 1	ini.	-2744.89	8569	0.9	0	493	7137	5660	2295	7630		0.89	No
SLV 1	fin.	3398.11	10093	0.9	0	493	7137	5660	2295	7630		0.76	No
SLV 8	ini.	-1007.43	5056	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 8	fin.	1337.87	6615	0.9	0	493	7137	5660	2295	7630		1.15	Si
SLV 4	ini.	-2569.29	8923	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 4	fin.	3008.12	10393	0.9	0	493	7137	5660	2295	7630		0.73	No
SLD 3	ini.	-1330.02	4750	0.9	0	493	7137	5660	2295	7630		1.61	Si
SLD 3	fin.	1954.59	6358	0.9	0	493	7137	5660	2295	7630		1.2	Si
SLV 3	ini.	-2836.02	9771	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 3	fin.	3262.12	11243	0.9	0	493	7137	5660	2295	7630		0.68	No
SLV 2	ini.	-2478.17	7721	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 2	fin.	3144.11	9243	0.9	0	493	7137	5660	2295	7630		0.83	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.88	SLV 1	No
V_SLV	0.679	SLV 3	No
PF_SLU	2.044	SLU 84	Si
V_SLU	1.502	SLU 84	Si

Trave di accoppiamento 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	4.79	5.46	0.67	-7.008	6.526	4.79	5.46	0.67	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-1114.55	-3349	-0.0016015	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.49	Si
SLU 82	fin.	-84.58	-1096	-0.0000765	0.0001872	0.0035	0.67		1657.26	1657.26	No	19.59	Si
SLU 83	ini.	-1121.32	-3378	-0.0016167	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 83	fin.	-92.54	-1127	-0.0000839	0.0001872	0.0035	0.67		1657.26	1657.26	No	17.91	Si
SLU 78	ini.	-1093	-3304	-0.0015539	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.52	Si
SLU 78	fin.	-93.1	-1117	-0.0000844	0.0001872	0.0035	0.67		1657.26	1657.26	No	17.8	Si
SLU 79	ini.	-1083.19	-3272	-0.0015326	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.53	Si
SLU 79	fin.	-90.17	-1099	-0.0000817	0.0001872	0.0035	0.67		1657.26	1657.26	No	18.38	Si
SLU 84	ini.	-1122.26	-3381	-0.0016189	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.48	Si
SLU 84	fin.	-92.73	-1128	-0.0000841	0.0001872	0.0035	0.67		1657.26	1657.26	No	17.87	Si
SLU 75	ini.	-1085.29	-3272	-0.0015372	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.53	Si
SLU 75	fin.	-84.95	-1084	-0.0000768	0.0001872	0.0035	0.67		1657.26	1657.26	No	19.51	Si
SLU 81	ini.	-1113.61	-3346	-0.0015994	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.49	Si
SLU 81	fin.	-84.39	-1094	-0.0000763	0.0001872	0.0035	0.67		1657.26	1657.26	No	19.64	Si
SLU 77	ini.	-1092.06	-3301	-0.0015518	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.52	Si
SLU 77	fin.	-92.91	-1115	-0.0000843	0.0001872	0.0035	0.67		1657.26	1657.26	No	17.84	Si
SLU 74	ini.	-1084.35	-3269	-0.0015351	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.53	Si
SLU 74	fin.	-84.76	-1082	-0.0000766	0.0001872	0.0035	0.67		1657.26	1657.26	No	19.55	Si
SLU 80	ini.	-1084.13	-3275	-0.0015347	0.0001872	0.0035	0.67		1657.26	1657.26	No	1.53	Si
SLU 80	fin.	-90.37	-1101	-0.0000819	0.0001872	0.0035	0.67		1657.26	1657.26	No	18.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1113.61	4668	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 81	fin.	-84.39	-1001	0.67	0	182	5313	2809	1709	4517	No	4.51	Si
SLU 75	ini.	-1085.29	4540	0.67	0	182	5313	2809	1709	4517	No	0.99	No
SLU 75	fin.	-84.95	-977	0.67	0	182	5313	2809	1709	4517	No	4.62	Si
SLU 74	ini.	-1084.35	4536	0.67	0	182	5313	2809	1709	4517	No	1	No
SLU 74	fin.	-84.76	-976	0.67	0	182	5313	2809	1709	4517	No	4.63	Si
SLU 80	ini.	-1084.13	4536	0.67	0	182	5313	2809	1709	4517	No	1	No
SLU 80	fin.	-90.37	-995	0.67	0	182	5313	2809	1709	4517	No	4.54	Si
SLU 78	ini.	-1093	4574	0.67	0	182	5313	2809	1709	4517	No	0.99	No
SLU 78	fin.	-93.1	-1011	0.67	0	182	5313	2809	1709	4517	No	4.47	Si
SLU 82	ini.	-1114.55	4671	0.67	0	182	5313	2809	1709	4517	No	0.97	No
SLU 82	fin.	-84.58	-1003	0.67	0	182	5313	2809	1709	4517	No	4.51	Si
SLU 83	ini.	-1121.32	4702	0.67	0	182	5313	2809	1709	4517	No	0.96	No
SLU 83	fin.	-92.54	-1036	0.67	0	182	5313	2809	1709	4517	No	4.36	Si
SLU 77	ini.	-1092.06	4570	0.67	0	182	5313	2809	1709	4517	No	0.99	No
SLU 77	fin.	-92.91	-1010	0.67	0	182	5313	2809	1709	4517	No	4.47	Si
SLU 84	ini.	-1122.26	4705	0.67	0	182	5313	2809	1709	4517	No	0.96	No
SLU 84	fin.	-92.73	-1037	0.67	0	182	5313	2809	1709	4517	No	4.36	Si
SLU 79	ini.	-1083.19	4532	0.67	0	182	5313	2809	1709	4517	No	1	No
SLU 79	fin.	-90.17	-994	0.67	0	182	5313	2809	1709	4517	No	4.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1497.03	-3747	-0.0025311	0.0002807	0.0035	0.67		1667.53	1667.53		1.11	Si
SLD 3	fin.	790.1	1100	-0.0009256	0.0002807	0.0035	0.67		1663.2	1663.2		2.11	Si
SLD 1	ini.	-1514.2	-3853	-0.0025943	0.0002807	0.0035	0.67		1667.53	1667.53		1.1	Si
SLD 1	fin.	753.41	1000	-0.0008699	0.0002807	0.0035	0.67		1663.2	1663.2		2.21	Si
SLV 2	ini.	-2350.3	-5604	-0.0056969	0.0002807	0.0035	0.67		1667.53	1667.53		0.71	No
SLV 2	fin.	1619.23	2862	-0.0030389	0.0002807	0.0035	0.67		1663.2	1663.2		1.03	Si
SLV 3	ini.	-2502.82	-5770	-0.0061814	0.0002807	0.0035	0.67		1667.53	1667.53		0.67	No
SLV 3	fin.	1900.29	3503	-0.0041854	0.0002807	0.0035	0.67		1663.2	1663.2		0.88	No
SLV 15	ini.	856.35	1125	-0.0010301	0.0002807	0.0035	0.67		1663.2	1663.2		1.94	Si
SLV 15	fin.	-1696.18	-4249	-0.0033591	0.0002807	0.0035	0.67		1667.53	1667.53		0.98	No
SLV 14	ini.	1008.87	1290	-0.0012922	0.0002807	0.0035	0.67		1663.2	1663.2		1.65	Si
SLV 14	fin.	-1977.24	-4890	-0.0044466	0.0002807	0.0035	0.67		1667.53	1667.53		0.84	No
SLV 4	ini.	-2311.46	-5363	-0.0055721	0.0002807	0.0035	0.67		1667.53	1667.53		0.72	No
SLV 4	fin.	1704.5	3094	-0.0034127	0.0002807	0.0035	0.67		1663.2	1663.2		0.98	No
SLV 1	ini.	-2541.66	-6011	-0.0063039	0.0002807	0.0035	0.67		1667.53	1667.53		0.66	No
SLV 1	fin.	1815.02	3271	-0.0038628	0.0002807	0.0035	0.67		1663.2	1663.2		0.92	No
SLV 13	ini.	817.51	884	-0.0009682	0.0002807	0.0035	0.67		1663.2	1663.2		2.03	Si
SLV 13	fin.	-1781.45	-4480	-0.0037132	0.0002807	0.0035	0.67		1667.53	1667.53		0.94	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1047.71	1531	-0.0013647	0.0002807	0.0035	0.67		1663.2	1663.2		1.59	Si
SLV 16	fin.	-1891.98	-4658	-0.0041374	0.0002807	0.0035	0.67		1667.53	1667.53		0.88	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-2350.3	8647	0.67	0	273	5313	4213	1709	5586		0.65	No
SLV 2	fin.	1619.23	5266	0.67	0	273	5313	4213	1709	5586		1.06	Si
SLD 3	ini.	-1497.03	5654	0.67	0	273	5313	4213	1709	5586		0.99	No
SLD 3	fin.	790.1	2292	0.67	0	273	5313	4213	1709	5586		2.44	Si
SLV 4	ini.	-2311.46	8420	0.67	0	273	5313	4213	1709	5586		0.66	No
SLV 4	fin.	1704.5	5458	0.67	0	273	5313	4213	1709	5586		1.02	Si
SLV 1	ini.	-2541.66	9301	0.67	0	273	5313	4213	1709	5586		0.6	No
SLV 1	fin.	1815.02	5952	0.67	0	273	5313	4213	1709	5586		0.94	No
SLV 15	ini.	856.35	-2437	0.67	0	273	5313	4213	1709	5586		2.29	Si
SLV 15	fin.	-1696.18	-6435	0.67	0	273	5313	4213	1709	5586		0.87	No
SLV 3	ini.	-2502.82	9073	0.67	0	273	5313	4213	1709	5586		0.62	No
SLV 3	fin.	1900.29	6145	0.67	0	273	5313	4213	1709	5586		0.91	No
SLV 14	ini.	1008.87	-2863	0.67	0	273	5313	4213	1709	5586		1.95	Si
SLV 14	fin.	-1977.24	-7315	0.67	0	273	5313	4213	1709	5586		0.76	No
SLV 16	ini.	1047.71	-3090	0.67	0	273	5313	4213	1709	5586		1.81	Si
SLV 16	fin.	-1891.98	-7122	0.67	0	273	5313	4213	1709	5586		0.78	No
SLD 1	ini.	-1514.2	5755	0.67	0	273	5313	4213	1709	5586		0.97	No
SLD 1	fin.	753.41	2208	0.67	0	273	5313	4213	1709	5586		2.53	Si
SLV 13	ini.	817.51	-2209	0.67	0	273	5313	4213	1709	5586		2.53	Si
SLV 13	fin.	-1781.45	-6628	0.67	0	273	5313	4213	1709	5586		0.84	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.656	SLV 1	No
V_SLV	0.601	SLV 1	No
PF_SLU	1.477	SLU 84	Si
V_SLU	0.96	SLU 84	No

Trave di accoppiamento 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	4.49	5.46	0.97	-12.263	1.006	4.49	5.46	0.97	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1275.26	-5187	-0.0006875	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.76	Si
SLU 75	fin.	99.11	-3460	-0.0000423	0.0002246	0.0035	0.97		3518.05	3518.05	No	35.5	Si
SLU 78	ini.	-1291.34	-5258	-0.0006984	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.73	Si
SLU 78	fin.	104.47	-3503	-0.0000446	0.0002246	0.0035	0.97		3518.05	3518.05	No	33.67	Si
SLU 83	ini.	-1327.59	-5367	-0.0007232	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.65	Si
SLU 83	fin.	88.41	-3587	-0.0000377	0.0002246	0.0035	0.97		3518.05	3518.05	No	39.79	Si
SLU 82	ini.	-1314.22	-5303	-0.000714	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.68	Si
SLU 82	fin.	85.84	-3543	-0.0000366	0.0002246	0.0035	0.97		3518.05	3518.05	No	40.98	Si
SLU 84	ini.	-1330.3	-5374	-0.000725	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.65	Si
SLU 84	fin.	91.21	-3586	-0.0000389	0.0002246	0.0035	0.97		3518.05	3518.05	No	38.57	Si
SLU 74	ini.	-1272.55	-5181	-0.0006857	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.77	Si
SLU 74	fin.	96.3	-3461	-0.0000411	0.0002246	0.0035	0.97		3518.05	3518.05	No	36.53	Si
SLU 80	ini.	-1272.74	-5197	-0.0006858	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.77	Si
SLU 80	fin.	93.2	-3479	-0.0000398	0.0002246	0.0035	0.97		3518.05	3518.05	No	37.75	Si
SLU 81	ini.	-1311.51	-5296	-0.0007121	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.69	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	83.04	-3544	-0.0000354	0.0002246	0.0035	0.97		3518.05	3518.05	No	42.37	Si
SLU 77	ini.	-1288.63	-5252	-0.0006965	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.73	Si
SLU 77	fin.	101.67	-3504	-0.0000434	0.0002246	0.0035	0.97		3518.05	3518.05	No	34.6	Si
SLU 79	ini.	-1270.04	-5191	-0.000684	0.0002246	0.0035	0.97		3524.1	3524.1	No	2.77	Si
SLU 79	fin.	90.4	-3481	-0.0000385	0.0002246	0.0035	0.97		3518.05	3518.05	No	38.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1311.51	3368	0.97	0	341	7692	4880	2474	7354	No	2.18	Si
SLU 81	fin.	83.04	639	0.97	0	341	7692	4880	2474	7354	No	11.5	Si
SLU 77	ini.	-1288.63	3230	0.97	0	341	7692	4880	2474	7354	No	2.28	Si
SLU 77	fin.	101.67	766	0.97	0	341	7692	4880	2474	7354	No	9.61	Si
SLU 75	ini.	-1275.26	3207	0.97	0	341	7692	4880	2474	7354	No	2.29	Si
SLU 75	fin.	99.11	743	0.97	0	341	7692	4880	2474	7354	No	9.9	Si
SLU 84	ini.	-1330.3	3407	0.97	0	341	7692	4880	2474	7354	No	2.16	Si
SLU 84	fin.	91.21	679	0.97	0	341	7692	4880	2474	7354	No	10.83	Si
SLU 80	ini.	-1272.74	3195	0.97	0	341	7692	4880	2474	7354	No	2.3	Si
SLU 80	fin.	93.2	731	0.97	0	341	7692	4880	2474	7354	No	10.06	Si
SLU 83	ini.	-1327.59	3399	0.97	0	341	7692	4880	2474	7354	No	2.16	Si
SLU 83	fin.	88.41	670	0.97	0	341	7692	4880	2474	7354	No	10.97	Si
SLU 82	ini.	-1314.22	3376	0.97	0	341	7692	4880	2474	7354	No	2.18	Si
SLU 82	fin.	85.84	648	0.97	0	341	7692	4880	2474	7354	No	11.36	Si
SLU 78	ini.	-1291.34	3238	0.97	0	341	7692	4880	2474	7354	No	2.27	Si
SLU 78	fin.	104.47	774	0.97	0	341	7692	4880	2474	7354	No	9.5	Si
SLU 74	ini.	-1272.55	3198	0.97	0	341	7692	4880	2474	7354	No	2.3	Si
SLU 74	fin.	96.3	734	0.97	0	341	7692	4880	2474	7354	No	10.01	Si
SLU 79	ini.	-1270.04	3187	0.97	0	341	7692	4880	2474	7354	No	2.31	Si
SLU 79	fin.	90.4	723	0.97	0	341	7692	4880	2474	7354	No	10.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	5208.88	4661	-0.0059878	0.0003369	0.0035	0.97		3498.27	3498.27		0.67	No
SLV 3	fin.	-6536.39	-11648	-0.0078864	0.0003369	0.0035	0.97		3504.63	3504.63		0.54	No
SLV 4	ini.	5272.45	4747	-0.0060828	0.0003369	0.0035	0.97		3498.27	3498.27		0.66	No
SLV 4	fin.	-6603.42	-11740	-0.00798	0.0003369	0.0035	0.97		3504.63	3504.63		0.53	No
SLV 2	ini.	5120.01	4484	-0.0058547	0.0003369	0.0035	0.97		3498.27	3498.27		0.68	No
SLV 2	fin.	-6399.39	-11497	-0.0076942	0.0003369	0.0035	0.97		3504.63	3504.63		0.55	No
SLV 1	ini.	5056.44	4399	-0.0057598	0.0003369	0.0035	0.97		3498.27	3498.27		0.69	No
SLV 1	fin.	-6332.36	-11406	-0.0075999	0.0003369	0.0035	0.97		3504.63	3504.63		0.55	No
SLD 13	ini.	-3428.77	-6975	-0.0029696	0.0003369	0.0035	0.97		3504.63	3504.63		1.02	Si
SLD 13	fin.	2885.57	1623	-0.002069	0.0003369	0.0035	0.97		3498.27	3498.27		1.21	Si
SLD 14	ini.	-3401.47	-6938	-0.002915	0.0003369	0.0035	0.97		3504.63	3504.63		1.03	Si
SLD 14	fin.	2856.79	1584	-0.0020304	0.0003369	0.0035	0.97		3498.27	3498.27		1.22	Si
SLV 14	ini.	-6856.41	-11592	-0.008332	0.0003369	0.0035	0.97		3504.63	3504.63		0.51	No
SLV 14	fin.	6625.49	6893	-0.0080267	0.0003369	0.0035	0.97		3498.27	3498.27		0.53	No
SLV 13	ini.	-6919.99	-11677	-0.0084201	0.0003369	0.0035	0.97		3504.63	3504.63		0.51	No
SLV 13	fin.	6692.51	6985	-0.0081202	0.0003369	0.0035	0.97		3498.27	3498.27		0.52	No
SLV 15	ini.	-6767.54	-11415	-0.0082087	0.0003369	0.0035	0.97		3504.63	3504.63		0.52	No
SLV 15	fin.	6488.48	6742	-0.0078348	0.0003369	0.0035	0.97		3498.27	3498.27		0.54	No
SLV 16	ini.	-6703.97	-11329	-0.0081202	0.0003369	0.0035	0.97		3504.63	3504.63		0.52	No
SLV 16	fin.	6421.46	6651	-0.0077407	0.0003369	0.0035	0.97		3498.27	3498.27		0.54	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-3401.47	9970	0.97	0	511	7692	7320	2474	8203		0.82	No
SLD 14	fin.	2856.79	8557	0.97	0	511	7692	7320	2474	8203		0.96	No
SLV 4	ini.	5272.45	-16850	0.97	0	511	7692	7320	2474	8203		0.49	No
SLV 4	fin.	-6603.42	-18567	0.97	0	511	7692	7320	2474	8203		0.44	No
SLV 2	ini.	5120.01	-16540	0.97	0	511	7692	7320	2474	8203		0.5	No
SLV 2	fin.	-6399.39	-17746	0.97	0	511	7692	7320	2474	8203		0.46	No
SLV 13	ini.	-6919.99	20846	0.97	0	511	7692	7320	2474	8203		0.39	No
SLV 13	fin.	6692.51	19555	0.97	0	511	7692	7320	2474	8203		0.42	No
SLD 13	ini.	-3428.77	10053	0.97	0	511	7692	7320	2474	8203		0.82	No
SLD 13	fin.	2885.57	8640	0.97	0	511	7692	7320	2474	8203		0.95	No
SLV 16	ini.	-6703.97	20343	0.97	0	511	7692	7320	2474	8203		0.4	No
SLV 16	fin.	6421.46	18540	0.97	0	511	7692	7320	2474	8203		0.44	No
SLV 15	ini.	-6767.54	20536	0.97	0	511	7692	7320	2474	8203		0.4	No
SLV 15	fin.	6488.48	18734	0.97	0	511	7692	7320	2474	8203		0.44	No
SLV 1	ini.	5056.44	-16347	0.97	0	511	7692	7320	2474	8203		0.5	No
SLV 1	fin.	-6332.36	-17552	0.97	0	511	7692	7320	2474	8203		0.47	No
SLV 14	ini.	-6856.41	20653	0.97	0	511	7692	7320	2474	8203		0.4	No
SLV 14	fin.	6625.49	19361	0.97	0	511	7692	7320	2474	8203		0.42	No
SLV 3	ini.	5208.88	-16657	0.97	0	511	7692	7320	2474	8203		0.49	No
SLV 3	fin.	-6536.39	-18373	0.97	0	511	7692	7320	2474	8203		0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.506	SLV 13	No
V_SLV	0.394	SLV 13	No
PF_SLU	2.649	SLU 84	Si
V_SLU	2.158	SLU 84	Si

Trave di accoppiamento 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	4.09	5.46	1.37	-7.463	1.006	4.09	5.46	1.37	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-1364.73	-7857	-0.0003252	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.14	Si
SLU 80	fin.	-53.3	-6567	-0.0000113	0.0002246	0.0035	1.37		7018.49	7018.49	No	131.69	Si
SLU 81	ini.	-1462.95	-8055	-0.0003524	0.0002246	0.0035	1.37		7018.49	7018.49	No	4.8	Si
SLU 81	fin.	21.7	-6613	-0.0000046	0.0002246	0.0035	1.37		7009.94	7009.94	No	323.07	Si
SLU 79	ini.	-1368.2	-7858	-0.0003261	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.13	Si
SLU 79	fin.	-50.44	-6561	-0.0000107	0.0002246	0.0035	1.37		7018.49	7018.49	No	139.13	Si
SLU 78	ini.	-1376.94	-7930	-0.0003285	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.1	Si
SLU 78	fin.	-49.24	-6625	-0.0000104	0.0002246	0.0035	1.37		7018.49	7018.49	No	142.54	Si
SLU 83	ini.	-1472.26	-8150	-0.0003551	0.0002246	0.0035	1.37		7018.49	7018.49	No	4.77	Si
SLU 83	fin.	15.98	-6702	-0.0000034	0.0002246	0.0035	1.37		7009.94	7009.94	No	438.65	Si
SLU 75	ini.	-1367.63	-7836	-0.000326	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.13	Si
SLU 75	fin.	-43.52	-6536	-0.0000092	0.0002246	0.0035	1.37		7018.49	7018.49	No	161.26	Si
SLU 74	ini.	-1371.1	-7836	-0.0003269	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.12	Si
SLU 74	fin.	-40.67	-6530	-0.0000086	0.0002246	0.0035	1.37		7018.49	7018.49	No	172.57	Si
SLU 82	ini.	-1459.48	-8055	-0.0003515	0.0002246	0.0035	1.37		7018.49	7018.49	No	4.81	Si
SLU 82	fin.	18.85	-6619	-0.000004	0.0002246	0.0035	1.37		7009.94	7009.94	No	371.95	Si
SLU 77	ini.	-1380.41	-7930	-0.0003295	0.0002246	0.0035	1.37		7018.49	7018.49	No	5.08	Si
SLU 77	fin.	-46.39	-6619	-0.0000098	0.0002246	0.0035	1.37		7018.49	7018.49	No	151.3	Si
SLU 84	ini.	-1468.79	-8149	-0.0003541	0.0002246	0.0035	1.37		7018.49	7018.49	No	4.78	Si
SLU 84	fin.	13.13	-6708	-0.0000028	0.0002246	0.0035	1.37		7009.94	7009.94	No	533.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-1380.41	3768	1.37	0	556	7930	6893	3494	8486	No	2.25	Si
SLU 77	fin.	-46.39	640	1.37	0	556	7930	6893	3494	8486	No	13.26	Si
SLU 84	ini.	-1468.79	4153	1.37	0	556	7930	6893	3494	8486	No	2.04	Si
SLU 84	fin.	13.13	730	1.37	0	556	7930	6893	3494	8486	No	11.63	Si
SLU 39	ini.	-1283.57	3798	1.37	0	556	7930	6893	3494	8486	No	2.23	Si
SLU 39	fin.	66.88	640	1.37	0	556	7930	6893	3494	8486	No	13.25	Si
SLU 40	ini.	-1280.1	3788	1.37	0	556	7930	6893	3494	8486	No	2.24	Si
SLU 40	fin.	64.03	630	1.37	0	556	7930	6893	3494	8486	No	13.47	Si
SLU 74	ini.	-1371.1	3761	1.37	0	556	7930	6893	3494	8486	No	2.26	Si
SLU 74	fin.	-40.67	633	1.37	0	556	7930	6893	3494	8486	No	13.41	Si
SLU 41	ini.	-1292.88	3806	1.37	0	556	7930	6893	3494	8486	No	2.23	Si
SLU 41	fin.	61.17	647	1.37	0	556	7930	6893	3494	8486	No	13.11	Si
SLU 83	ini.	-1472.26	4163	1.37	0	556	7930	6893	3494	8486	No	2.04	Si
SLU 83	fin.	15.98	740	1.37	0	556	7930	6893	3494	8486	No	11.46	Si
SLU 81	ini.	-1462.95	4156	1.37	0	556	7930	6893	3494	8486	No	2.04	Si
SLU 81	fin.	21.7	733	1.37	0	556	7930	6893	3494	8486	No	11.58	Si
SLU 42	ini.	-1289.41	3795	1.37	0	556	7930	6893	3494	8486	No	2.24	Si
SLU 42	fin.	58.32	637	1.37	0	556	7930	6893	3494	8486	No	13.32	Si
SLU 82	ini.	-1459.48	4145	1.37	0	556	7930	6893	3494	8486	No	2.05	Si
SLU 82	fin.	18.85	723	1.37	0	556	7930	6893	3494	8486	No	11.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	4280.18	-1048	-0.0012822	0.0003369	0.0035	1.37		6805.8	6805.8		1.59	Si
SLV 1	fin.	-5477.26	-9386	-0.0018836	0.0003369	0.0035	1.37		6814.98	6814.98		1.24	Si
SLV 15	ini.	-6121.05	-9593	-0.0023282	0.0003369	0.0035	1.37		6814.98	6814.98		1.11	Si
SLV 15	fin.	5343.93	441	-0.0018081	0.0003369	0.0035	1.37		6805.8	6805.8		1.27	Si
SLV 16	ini.	-6037.54	-9515	-0.0022642	0.0003369	0.0035	1.37		6814.98	6814.98		1.13	Si
SLV 16	fin.	5277.15	387	-0.0017697	0.0003369	0.0035	1.37		6805.8	6805.8		1.29	Si
SLV 14	ini.	-5615.3	-9092	-0.00197	0.0003369	0.0035	1.37		6814.98	6814.98		1.21	Si
SLV 14	fin.	4957.01	168	-0.0015976	0.0003369	0.0035	1.37		6805.8	6805.8		1.37	Si
SLV 11	ini.	-3106.17	-7229	-0.0008311	0.0003369	0.0035	1.37		6814.98	6814.98		2.19	Si
SLV 11	fin.	2030.2	-2675	-0.0004932	0.0003369	0.0035	1.37		6805.8	6805.8		3.35	Si
SLV 2	ini.	4363.7	-969	-0.0013183	0.0003369	0.0035	1.37		6805.8	6805.8		1.56	Si
SLV 2	fin.	-5544.04	-9440	-0.0019249	0.0003369	0.0035	1.37		6814.98	6814.98		1.23	Si
SLV 4	ini.	3941.46	-1391	-0.001142	0.0003369	0.0035	1.37		6805.8	6805.8		1.73	Si
SLV 4	fin.	-5223.89	-9221	-0.0017363	0.0003369	0.0035	1.37		6814.98	6814.98		1.3	Si
SLD 15	ini.	-3119.35	-7124	-0.0008356	0.0003369	0.0035	1.37		6814.98	6814.98		2.18	Si
SLD 15	fin.	2226.39	-2388	-0.0005506	0.0003369	0.0035	1.37		6805.8	6805.8		3.06	Si
SLV 3	ini.	3857.95	-1470	-0.0011089	0.0003369	0.0035	1.37		6805.8	6805.8		1.76	Si
SLV 3	fin.	-5157.11	-9167	-0.0016996	0.0003369	0.0035	1.37		6814.98	6814.98		1.32	Si
SLV 13	ini.	-5698.81	-9171	-0.0020245	0.0003369	0.0035	1.37		6814.98	6814.98		1.2	Si
SLV 13	fin.	5023.79	222	-0.001632	0.0003369	0.0035	1.37		6805.8	6805.8		1.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	4280.18	-14479	1.37	0	834	7930	10339	3494	8764		0.61	No
SLV 1	fin.	-5477.26	-16483	1.37	0	834	7930	10339	3494	8764		0.53	No
SLD 16	ini.	-3083.49	9417	1.37	0	834	7930	10339	3494	8764		0.93	No
SLD 16	fin.	2197.72	7503	1.37	0	834	7930	10339	3494	8764		1.17	Si
SLV 3	ini.	3857.95	-13196	1.37	0	834	7930	10339	3494	8764		0.66	No
SLV 3	fin.	-5157.11	-15049	1.37	0	834	7930	10339	3494	8764		0.58	No
SLV 16	ini.	-6037.54	19004	1.37	0	834	7930	10339	3494	8764		0.46	No
SLV 16	fin.	5277.15	17127	1.37	0	834	7930	10339	3494	8764		0.51	No
SLV 13	ini.	-5698.81	17961	1.37	0	834	7930	10339	3494	8764		0.49	No
SLV 13	fin.	5023.79	15934	1.37	0	834	7930	10339	3494	8764		0.55	No
SLV 15	ini.	-6121.05	19245	1.37	0	834	7930	10339	3494	8764		0.46	No
SLV 15	fin.	5343.93	17368	1.37	0	834	7930	10339	3494	8764		0.5	No
SLV 14	ini.	-5615.3	17720	1.37	0	834	7930	10339	3494	8764		0.49	No
SLV 14	fin.	4957.01	15693	1.37	0	834	7930	10339	3494	8764		0.56	No
SLV 2	ini.	4363.7	-14721	1.37	0	834	7930	10339	3494	8764		0.6	No
SLV 2	fin.	-5544.04	-16724	1.37	0	834	7930	10339	3494	8764		0.52	No
SLD 15	ini.	-3119.35	9521	1.37	0	834	7930	10339	3494	8764		0.92	No
SLD 15	fin.	2226.39	7607	1.37	0	834	7930	10339	3494	8764		1.15	Si
SLV 4	ini.	3941.46	-13437	1.37	0	834	7930	10339	3494	8764		0.65	No
SLV 4	fin.	-5223.89	-15290	1.37	0	834	7930	10339	3494	8764		0.57	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.113	SLV 15	Si
V_SLV	0.455	SLV 15	No
PF_SLU	4.767	SLU 83	Si
V_SLU	2.038	SLU 83	Si

Trave di accoppiamento 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	4.09	5.46	1.37	-9.333	-3.314	4.09	5.46	1.37	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	-204.62	-3704	-0.0000438	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.53	Si
SLU 64	fin.	-487.4	-4045	-0.0001072	0.0001872	0.0035	1.37		6861.19	6861.19	No	14.08	Si
SLU 65	ini.	-203.24	-3731	-0.0000435	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.76	Si
SLU 65	fin.	-501.02	-4078	-0.0001103	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.69	Si
SLU 72	ini.	-204.77	-3875	-0.0000439	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.51	Si
SLU 72	fin.	-510.85	-4232	-0.0001126	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.43	Si
SLU 68	ini.	-203.73	-3808	-0.0000437	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.68	Si
SLU 68	fin.	-508.66	-4161	-0.0001121	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.49	Si
SLU 70	ini.	-203.75	-3912	-0.0000437	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.67	Si
SLU 70	fin.	-517.18	-4273	-0.000114	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.27	Si
SLU 71	ini.	-205.6	-3858	-0.0000441	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.37	Si
SLU 71	fin.	-502.68	-4212	-0.0001107	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.65	Si
SLU 67	ini.	-203.26	-3835	-0.0000435	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.76	Si
SLU 67	fin.	-509.54	-4190	-0.0001123	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.47	Si
SLU 66	ini.	-204.09	-3819	-0.0000437	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.62	Si
SLU 66	fin.	-501.36	-4171	-0.0001104	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.69	Si
SLU 78	ini.	-275.04	-4273	-0.0000593	0.0001872	0.0035	1.37		6861.19	6861.19	No	24.95	Si
SLU 78	fin.	-492.32	-4623	-0.0001083	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.94	Si
SLU 69	ini.	-204.58	-3896	-0.0000438	0.0001872	0.0035	1.37		6861.19	6861.19	No	33.54	Si
SLU 69	fin.	-509.01	-4254	-0.0001121	0.0001872	0.0035	1.37		6861.19	6861.19	No	13.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-203.75	80	1.37	0	556	7137	5743	3494	7693	No	96.04	Si
SLU 70	fin.	-517.18	-1328	1.37	0	556	7137	5743	3494	7693	No	5.79	Si
SLU 80	ini.	-276.06	342	1.37	0	556	7137	5743	3494	7693	No	22.5	Si
SLU 80	fin.	-485.99	-1336	1.37	0	556	7137	5743	3494	7693	No	5.76	Si
SLU 84	ini.	-306.13	462	1.37	0	556	7137	5743	3494	7693	No	16.64	Si
SLU 84	fin.	-467.69	-1332	1.37	0	556	7137	5743	3494	7693	No	5.78	Si
SLU 74	ini.	-275.38	356	1.37	0	556	7137	5743	3494	7693	No	21.62	Si
SLU 74	fin.	-476.5	-1322	1.37	0	556	7137	5743	3494	7693	No	5.82	Si
SLU 79	ini.	-276.89	354	1.37	0	556	7137	5743	3494	7693	No	21.72	Si
SLU 79	fin.	-477.81	-1324	1.37	0	556	7137	5743	3494	7693	No	5.81	Si
SLU 78	ini.	-275.04	331	1.37	0	556	7137	5743	3494	7693	No	23.26	Si
SLU 78	fin.	-492.32	-1347	1.37	0	556	7137	5743	3494	7693	No	5.71	Si
SLU 75	ini.	-274.55	344	1.37	0	556	7137	5743	3494	7693	No	22.39	Si
SLU 75	fin.	-484.68	-1335	1.37	0	556	7137	5743	3494	7693	No	5.76	Si
SLU 77	ini.	-275.87	343	1.37	0	556	7137	5743	3494	7693	No	22.43	Si
SLU 77	fin.	-484.14	-1335	1.37	0	556	7137	5743	3494	7693	No	5.76	Si
SLU 83	ini.	-306.95	474	1.37	0	556	7137	5743	3494	7693	No	16.21	Si
SLU 83	fin.	-459.52	-1320	1.37	0	556	7137	5743	3494	7693	No	5.83	Si
SLU 76	ini.	-275.02	347	1.37	0	556	7137	5743	3494	7693	No	22.19	Si
SLU 76	fin.	-483.8	-1332	1.37	0	556	7137	5743	3494	7693	No	5.78	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	1780.32	-2907	-0.000432	0.0002807	0.0035	1.37		6856.19	6856.19		3.85	Si
SLD 2	fin.	-2664.26	-5067	-0.0007039	0.0002807	0.0035	1.37		6865.42	6865.42		2.58	Si
SLV 15	ini.	-4793.53	-2755	-0.0015664	0.0002807	0.0035	1.37		6865.42	6865.42		1.43	Si
SLV 15	fin.	5101.71	1518	-0.0017348	0.0002807	0.0035	1.37		6856.19	6856.19		1.34	Si
SLV 16	ini.	-4395.07	-2855	-0.0013742	0.0002807	0.0035	1.37		6865.42	6865.42		1.56	Si
SLV 16	fin.	4625.86	1035	-0.0014858	0.0002807	0.0035	1.37		6856.19	6856.19		1.48	Si
SLV 3	ini.	3920.06	-3270	-0.0011698	0.0002807	0.0035	1.37		6856.19	6856.19		1.75	Si
SLV 3	fin.	-5347.88	-7874	-0.0018765	0.0002807	0.0035	1.37		6865.42	6865.42		1.28	Si
SLV 14	ini.	-4295.78	-2455	-0.0013293	0.0002807	0.0035	1.37		6865.42	6865.42		1.6	Si
SLV 14	fin.	4669.29	1681	-0.001507	0.0002807	0.0035	1.37		6856.19	6856.19		1.47	Si
SLD 4	ini.	1738.37	-3081	-0.0004201	0.0002807	0.0035	1.37		6856.19	6856.19		3.94	Si
SLD 4	fin.	-2684.01	-5347	-0.0007104	0.0002807	0.0035	1.37		6865.42	6865.42		2.56	Si
SLV 4	ini.	4318.52	-3370	-0.0013418	0.0002807	0.0035	1.37		6856.19	6856.19		1.59	Si
SLV 4	fin.	-5823.73	-8357	-0.0021994	0.0002807	0.0035	1.37		6865.42	6865.42		1.18	Si
SLV 13	ini.	-4694.24	-2355	-0.0015166	0.0002807	0.0035	1.37		6865.42	6865.42		1.46	Si
SLV 13	fin.	5145.14	2164	-0.0017595	0.0002807	0.0035	1.37		6856.19	6856.19		1.33	Si
SLV 2	ini.	4417.81	-2970	-0.0013871	0.0002807	0.0035	1.37		6856.19	6856.19		1.55	Si
SLV 2	fin.	-5780.3	-7711	-0.0021674	0.0002807	0.0035	1.37		6865.42	6865.42		1.19	Si
SLV 1	ini.	4019.35	-2870	-0.0012113	0.0002807	0.0035	1.37		6856.19	6856.19		1.71	Si
SLV 1	fin.	-5304.45	-7228	-0.0018499	0.0002807	0.0035	1.37		6865.42	6865.42		1.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-4694.24	14794	1.37	0	834	7137	8615	3494	7971		0.54	No
SLV 13	fin.	5145.14	13742	1.37	0	834	7137	8615	3494	7971		0.58	No
SLV 16	ini.	-4395.07	13566	1.37	0	834	7137	8615	3494	7971		0.59	No
SLV 16	fin.	4625.86	12450	1.37	0	834	7137	8615	3494	7971		0.64	No
SLV 14	ini.	-4295.78	13531	1.37	0	834	7137	8615	3494	7971		0.59	No
SLV 14	fin.	4669.29	12479	1.37	0	834	7137	8615	3494	7971		0.64	No
SLV 1	ini.	4019.35	-13150	1.37	0	834	7137	8615	3494	7971		0.61	No
SLV 1	fin.	-5304.45	-14250	1.37	0	834	7137	8615	3494	7971		0.56	No
SLV 4	ini.	4318.52	-14379	1.37	0	834	7137	8615	3494	7971		0.55	No
SLV 4	fin.	-5823.73	-15542	1.37	0	834	7137	8615	3494	7971		0.51	No
SLD 2	ini.	1780.32	-6040	1.37	0	834	7137	8615	3494	7971		1.32	Si
SLD 2	fin.	-2664.26	-7144	1.37	0	834	7137	8615	3494	7971		1.12	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4793.53	14828	1.37	0	834	7137	8615	3494	7971		0.54	No
SLV 15	fin.	5101.71	13712	1.37	0	834	7137	8615	3494	7971		0.58	No
SLV 2	ini.	4417.81	-14413	1.37	0	834	7137	8615	3494	7971		0.55	No
SLV 2	fin.	-5780.3	-15513	1.37	0	834	7137	8615	3494	7971		0.51	No
SLV 3	ini.	3920.06	-13116	1.37	0	834	7137	8615	3494	7971		0.61	No
SLV 3	fin.	-5347.88	-14280	1.37	0	834	7137	8615	3494	7971		0.56	No
SLD 4	ini.	1738.37	-6028	1.37	0	834	7137	8615	3494	7971		1.32	Si
SLD 4	fin.	-2684.01	-7160	1.37	0	834	7137	8615	3494	7971		1.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.179	SLV 4	Si
V_SLV	0.513	SLV 4	No
PF_SLU	13.267	SLU 70	Si
V_SLU	5.709	SLU 78	Si

Trave di accoppiamento 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	4.09	5.46	1.37	-6.268	0.706	4.09	5.46	1.37	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-327.03	-2893	-0.0000706	0.0002246	0.0035	1.37		7070.72	7070.72	No	21.62	Si
SLU 83	fin.	815.17	-2340	-0.0001836	0.0002246	0.0035	1.37		7062.19	7062.19	No	8.66	Si
SLU 76	ini.	-274.51	-2711	-0.000059	0.0002246	0.0035	1.37		7070.72	7070.72	No	25.76	Si
SLU 76	fin.	777.06	-2210	-0.0001744	0.0002246	0.0035	1.37		7062.19	7062.19	No	9.09	Si
SLU 75	ini.	-276.21	-2733	-0.0000594	0.0002246	0.0035	1.37		7070.72	7070.72	No	25.6	Si
SLU 75	fin.	782.72	-2227	-0.0001757	0.0002246	0.0035	1.37		7062.19	7062.19	No	9.02	Si
SLU 80	ini.	-253.1	-2714	-0.0000543	0.0002246	0.0035	1.37		7070.72	7070.72	No	27.94	Si
SLU 80	fin.	780.16	-2225	-0.0001751	0.0002246	0.0035	1.37		7062.19	7062.19	No	9.05	Si
SLU 74	ini.	-263.98	-2713	-0.0000567	0.0002246	0.0035	1.37		7070.72	7070.72	No	26.79	Si
SLU 74	fin.	777.57	-2217	-0.0001745	0.0002246	0.0035	1.37		7062.19	7062.19	No	9.08	Si
SLU 84	ini.	-339.26	-2913	-0.0000733	0.0002246	0.0035	1.37		7070.72	7070.72	No	20.84	Si
SLU 84	fin.	820.32	-2351	-0.0001848	0.0002246	0.0035	1.37		7062.19	7062.19	No	8.61	Si
SLU 77	ini.	-250.73	-2729	-0.0000538	0.0002246	0.0035	1.37		7070.72	7070.72	No	28.2	Si
SLU 77	fin.	784.11	-2238	-0.0001761	0.0002246	0.0035	1.37		7062.19	7062.19	No	9.01	Si
SLU 81	ini.	-340.27	-2877	-0.0000735	0.0002246	0.0035	1.37		7070.72	7070.72	No	20.78	Si
SLU 81	fin.	808.64	-2318	-0.000182	0.0002246	0.0035	1.37		7062.19	7062.19	No	8.73	Si
SLU 78	ini.	-262.97	-2749	-0.0000565	0.0002246	0.0035	1.37		7070.72	7070.72	No	26.89	Si
SLU 78	fin.	789.26	-2249	-0.0001773	0.0002246	0.0035	1.37		7062.19	7062.19	No	8.95	Si
SLU 82	ini.	-352.51	-2897	-0.0000762	0.0002246	0.0035	1.37		7070.72	7070.72	No	20.06	Si
SLU 82	fin.	813.79	-2329	-0.0001832	0.0002246	0.0035	1.37		7062.19	7062.19	No	8.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-404.85	1875	1.37	0	318	7137	3939	3494	7432	No	3.96	Si
SLU 40	fin.	719.13	1494	1.37	0	318	7137	3939	3494	7432	No	4.97	Si
SLU 42	ini.	-391.6	1863	1.37	0	318	7137	3939	3494	7432	No	3.99	Si
SLU 42	fin.	725.67	1482	1.37	0	318	7137	3939	3494	7432	No	5.01	Si
SLU 41	ini.	-379.37	1836	1.37	0	318	7137	3939	3494	7432	No	4.05	Si
SLU 41	fin.	720.52	1456	1.37	0	318	7137	3939	3494	7432	No	5.1	Si
SLU 81	ini.	-340.27	1950	1.37	0	318	7137	3939	3494	7432	No	3.81	Si
SLU 81	fin.	808.64	1471	1.37	0	318	7137	3939	3494	7432	No	5.05	Si
SLU 84	ini.	-339.26	1965	1.37	0	318	7137	3939	3494	7432	No	3.78	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	820.32	1486	1.37	0	318	7137	3939	3494	7432	No	5	Si
SLU 82	ini.	-352.51	1977	1.37	0	318	7137	3939	3494	7432	No	3.76	Si
SLU 82	fin.	813.79	1497	1.37	0	318	7137	3939	3494	7432	No	4.96	Si
SLU 73	ini.	-287.76	1811	1.37	0	318	7137	3939	3494	7432	No	4.11	Si
SLU 73	fin.	770.53	1331	1.37	0	318	7137	3939	3494	7432	No	5.58	Si
SLU 83	ini.	-327.03	1938	1.37	0	318	7137	3939	3494	7432	No	3.83	Si
SLU 83	fin.	815.17	1459	1.37	0	318	7137	3939	3494	7432	No	5.09	Si
SLU 75	ini.	-276.21	1810	1.37	0	318	7137	3939	3494	7432	No	4.11	Si
SLU 75	fin.	782.72	1331	1.37	0	318	7137	3939	3494	7432	No	5.58	Si
SLU 39	ini.	-392.62	1848	1.37	0	318	7137	3939	3494	7432	No	4.02	Si
SLU 39	fin.	713.98	1468	1.37	0	318	7137	3939	3494	7432	No	5.06	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-750.31	-2154	-0.000165	0.0003369	0.0035	1.37		7271.11	7271.11		9.69	Si
SLV 1	fin.	920.56	-1256	-0.000205	0.0003369	0.0035	1.37		7262.22	7262.22		7.89	Si
SLV 9	ini.	-1291.2	-3976	-0.0002946	0.0003369	0.0035	1.37		7271.11	7271.11		5.63	Si
SLV 9	fin.	768.02	-2706	-0.0001693	0.0003369	0.0035	1.37		7262.22	7262.22		9.46	Si
SLV 2	ini.	-890.96	-2363	-0.0001977	0.0003369	0.0035	1.37		7271.11	7271.11		8.16	Si
SLV 2	fin.	973.32	-1354	-0.0002175	0.0003369	0.0035	1.37		7262.22	7262.22		7.46	Si
SLV 6	ini.	-1578.12	-4031	-0.0003682	0.0003369	0.0035	1.37		7271.11	7271.11		4.61	Si
SLV 6	fin.	997.69	-2484	-0.0002233	0.0003369	0.0035	1.37		7262.22	7262.22		7.28	Si
SLV 11	ini.	1397.79	628	-0.0003219	0.0003369	0.0035	1.37		7262.22	7262.22		5.2	Si
SLV 11	fin.	19.37	-378	-0.0000041	0.0003369	0.0035	1.37		7262.22	7262.22		374.87	Si
SLV 5	ini.	-1487.48	-3896	-0.0003445	0.0003369	0.0035	1.37		7271.11	7271.11		4.89	Si
SLV 5	fin.	963.69	-2421	-0.0002152	0.0003369	0.0035	1.37		7262.22	7262.22		7.54	Si
SLV 7	ini.	1201.51	708	-0.0002727	0.0003369	0.0035	1.37		7262.22	7262.22		6.04	Si
SLV 7	fin.	215.04	-93	-0.0000459	0.0003369	0.0035	1.37		7262.22	7262.22		33.77	Si
SLV 12	ini.	1307.15	493	-0.000299	0.0003369	0.0035	1.37		7262.22	7262.22		5.56	Si
SLV 12	fin.	53.38	-441	-0.0000113	0.0003369	0.0035	1.37		7262.22	7262.22		136.05	Si
SLV 10	ini.	-1381.84	-4111	-0.0003175	0.0003369	0.0035	1.37		7271.11	7271.11		5.26	Si
SLV 10	fin.	802.02	-2769	-0.0001772	0.0003369	0.0035	1.37		7262.22	7262.22		9.05	Si
SLV 8	ini.	1110.88	573	-0.0002505	0.0003369	0.0035	1.37		7262.22	7262.22		6.54	Si
SLV 8	fin.	249.05	-156	-0.0000532	0.0003369	0.0035	1.37		7262.22	7262.22		29.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-1381.84	3580	1.37	0	477	7137	5908	3494	7613		2.13	Si
SLV 10	fin.	802.02	3097	1.37	0	477	7137	5908	3494	7613		2.46	Si
SLV 6	ini.	-1578.12	4112	1.37	0	477	7137	5908	3494	7613		1.85	Si
SLV 6	fin.	997.69	3644	1.37	0	477	7137	5908	3494	7613		2.09	Si
SLD 5	ini.	-704.13	2313	1.37	0	477	7137	5908	3494	7613		3.29	Si
SLD 5	fin.	706.81	1903	1.37	0	477	7137	5908	3494	7613		4	Si
SLD 10	ini.	-659.83	2170	1.37	0	477	7137	5908	3494	7613		3.51	Si
SLD 10	fin.	638.11	1753	1.37	0	477	7137	5908	3494	7613		4.34	Si
SLV 2	ini.	-890.96	2902	1.37	0	477	7137	5908	3494	7613		2.62	Si
SLV 2	fin.	973.32	2531	1.37	0	477	7137	5908	3494	7613		3.01	Si
SLV 1	ini.	-750.31	2602	1.37	0	477	7137	5908	3494	7613		2.93	Si
SLV 1	fin.	920.56	2231	1.37	0	477	7137	5908	3494	7613		3.41	Si
SLD 6	ini.	-743.72	2397	1.37	0	477	7137	5908	3494	7613		3.18	Si
SLD 6	fin.	721.67	1987	1.37	0	477	7137	5908	3494	7613		3.83	Si
SLV 5	ini.	-1487.48	3918	1.37	0	477	7137	5908	3494	7613		1.94	Si
SLV 5	fin.	963.69	3451	1.37	0	477	7137	5908	3494	7613		2.21	Si
SLV 11	ini.	1397.79	-1993	1.37	0	477	7137	5908	3494	7613		3.82	Si
SLV 11	fin.	19.37	-2253	1.37	0	477	7137	5908	3494	7613		3.38	Si
SLV 9	ini.	-1291.2	3387	1.37	0	477	7137	5908	3494	7613		2.25	Si
SLV 9	fin.	768.02	2904	1.37	0	477	7137	5908	3494	7613		2.62	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.607	SLV 6	Si
V_SLV	1.852	SLV 6	Si
PF_SLU	8.609	SLU 84	Si
V_SLU	3.76	SLU 82	Si

Trave di accoppiamento 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-24.633	1.266	7.56	8.98	1.42	-24.633	2.066	7.56	8.98	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-424.67	-3064	-0.0000861	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.33	Si
SLU 71	fin.	-59.41	-2490	-0.0000117	0.0001872	0.0035	1.42		7359.91	7359.91	No	123.88	Si
SLU 67	ini.	-418.65	-3024	-0.0000848	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.58	Si
SLU 67	fin.	-58.61	-2461	-0.0000115	0.0001872	0.0035	1.42		7359.91	7359.91	No	125.58	Si
SLU 48	ini.	-419.22	-2863	-0.0000849	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.56	Si
SLU 48	fin.	9.36	-2209	-0.0000018	0.0001872	0.0035	1.42		7350.79	7350.79	No	785.44	Si
SLU 70	ini.	-430.6	-3105	-0.0000873	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.09	Si
SLU 70	fin.	-56.89	-2522	-0.0000112	0.0001872	0.0035	1.42		7359.91	7359.91	No	129.36	Si
SLU 68	ini.	-418.72	-2993	-0.0000848	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.58	Si
SLU 68	fin.	-51.13	-2424	-0.0000101	0.0001872	0.0035	1.42		7359.91	7359.91	No	143.95	Si
SLU 51	ini.	-420.48	-2834	-0.0000852	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.5	Si
SLU 51	fin.	18.84	-2171	-0.0000037	0.0001872	0.0035	1.42		7350.79	7350.79	No	390.18	Si
SLU 69	ini.	-427	-3099	-0.0000866	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.24	Si
SLU 69	fin.	-62.89	-2524	-0.0000124	0.0001872	0.0035	1.42		7359.91	7359.91	No	117.03	Si
SLU 72	ini.	-428.27	-3070	-0.0000868	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.19	Si
SLU 72	fin.	-53.41	-2487	-0.0000105	0.0001872	0.0035	1.42		7359.91	7359.91	No	137.8	Si
SLU 50	ini.	-416.89	-2828	-0.0000844	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.65	Si
SLU 50	fin.	12.84	-2174	-0.0000025	0.0001872	0.0035	1.42		7350.79	7350.79	No	572.44	Si
SLU 49	ini.	-422.81	-2869	-0.0000857	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.41	Si
SLU 49	fin.	15.36	-2206	-0.000003	0.0001872	0.0035	1.42		7350.79	7350.79	No	478.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-413.81	4384	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 80	fin.	-154.05	-1602	1.42	0	576	6344	5953	3621	6920	No	4.32	Si
SLU 71	ini.	-424.67	4366	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 71	fin.	-59.41	-1189	1.42	0	576	6344	5953	3621	6920	No	5.82	Si
SLU 78	ini.	-416.14	4429	1.42	0	576	6344	5953	3621	6920	No	1.56	Si
SLU 78	fin.	-157.53	-1629	1.42	0	576	6344	5953	3621	6920	No	4.25	Si
SLU 75	ini.	-404.2	4315	1.42	0	576	6344	5953	3621	6920	No	1.6	Si
SLU 75	fin.	-159.25	-1618	1.42	0	576	6344	5953	3621	6920	No	4.28	Si
SLU 67	ini.	-418.65	4320	1.42	0	576	6344	5953	3621	6920	No	1.6	Si
SLU 67	fin.	-58.61	-1188	1.42	0	576	6344	5953	3621	6920	No	5.82	Si
SLU 72	ini.	-428.27	4389	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 72	fin.	-53.41	-1172	1.42	0	576	6344	5953	3621	6920	No	5.9	Si
SLU 79	ini.	-410.22	4361	1.42	0	576	6344	5953	3621	6920	No	1.59	Si
SLU 79	fin.	-160.05	-1619	1.42	0	576	6344	5953	3621	6920	No	4.27	Si
SLU 70	ini.	-430.6	4434	1.42	0	576	6344	5953	3621	6920	No	1.56	Si
SLU 70	fin.	-56.89	-1199	1.42	0	576	6344	5953	3621	6920	No	5.77	Si
SLU 69	ini.	-427	4412	1.42	0	576	6344	5953	3621	6920	No	1.57	Si
SLU 69	fin.	-62.89	-1216	1.42	0	576	6344	5953	3621	6920	No	5.69	Si
SLU 77	ini.	-412.55	4407	1.42	0	576	6344	5953	3621	6920	No	1.57	Si
SLU 77	fin.	-163.53	-1646	1.42	0	576	6344	5953	3621	6920	No	4.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-723.87	-3032	-0.0001482	0.0002807	0.0035	1.42		7346.34	7346.34		10.15	Si
SLV 5	fin.	326.1	-1886	-0.0000652	0.0002807	0.0035	1.42		7337.02	7337.02		22.5	Si
SLV 6	ini.	-593.92	-2776	-0.0001205	0.0002807	0.0035	1.42		7346.34	7346.34		12.37	Si
SLV 6	fin.	125.18	-2022	-0.0000247	0.0002807	0.0035	1.42		7337.02	7337.02		58.61	Si
SLV 7	ini.	55.82	-1792	-0.000011	0.0002807	0.0035	1.42		7337.02	7337.02		131.44	Si
SLV 7	fin.	-519.78	-2191	-0.000105	0.0002807	0.0035	1.42		7346.34	7346.34		14.13	Si
SLV 2	ini.	-207.22	-2408	-0.0000411	0.0002807	0.0035	1.42		7346.34	7346.34		35.45	Si
SLV 2	fin.	-543.86	-2791	-0.00011	0.0002807	0.0035	1.42		7346.34	7346.34		13.51	Si
SLV 8	ini.	185.77	-1536	-0.0000368	0.0002807	0.0035	1.42		7337.02	7337.02		39.5	Si
SLV 8	fin.	-720.7	-2327	-0.0001475	0.0002807	0.0035	1.42		7346.34	7346.34		10.19	Si
SLV 13	ini.	-631.61	-2415	-0.0001285	0.0002807	0.0035	1.42		7346.34	7346.34		11.63	Si
SLV 13	fin.	675.2	-796	-0.0001379	0.0002807	0.0035	1.42		7337.02	7337.02		10.87	Si
SLV 4	ini.	26.69	-2037	-0.0000052	0.0002807	0.0035	1.42		7337.02	7337.02		274.9	Si
SLV 4	fin.	-797.62	-2882	-0.0001641	0.0002807	0.0035	1.42		7346.34	7346.34		9.21	Si
SLD 9	ini.	-516.75	-2528	-0.0001044	0.0002807	0.0035	1.42		7346.34	7346.34		14.22	Si
SLD 9	fin.	226.65	-1628	-0.000045	0.0002807	0.0035	1.42		7337.02	7337.02		32.37	Si
SLV 9	ini.	-790.69	-2915	-0.0001626	0.0002807	0.0035	1.42		7346.34	7346.34		9.29	Si
SLV 9	fin.	598.28	-1351	-0.0001216	0.0002807	0.0035	1.42		7337.02	7337.02		12.26	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-660.74	-2659	-0.0001347	0.0002807	0.0035	1.42		7346.34	7346.34		11.12	Si
SLV 10	fin.	397.36	-1488	-0.0000798	0.0002807	0.0035	1.42		7337.02	7337.02		18.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 6	ini.	-431.38	3664	1.42	0	864	6344	8929	3621	7208		1.97	Si
SLD 6	fin.	22.46	-696	1.42	0	864	6344	8929	3621	7208		10.36	Si
SLD 9	ini.	-516.75	4009	1.42	0	864	6344	8929	3621	7208		1.8	Si
SLD 9	fin.	226.65	49	1.42	0	864	6344	8929	3621	7208		148.36	Si
SLV 1	ini.	-408.86	4173	1.42	0	864	6344	8929	3621	7208		1.73	Si
SLV 1	fin.	-232.07	-1534	1.42	0	864	6344	8929	3621	7208		4.7	Si
SLD 10	ini.	-459.99	3675	1.42	0	864	6344	8929	3621	7208		1.96	Si
SLD 10	fin.	138.9	-284	1.42	0	864	6344	8929	3621	7208		25.42	Si
SLV 9	ini.	-790.69	5117	1.42	0	864	6344	8929	3621	7208		1.41	Si
SLV 9	fin.	598.28	1339	1.42	0	864	6344	8929	3621	7208		5.38	Si
SLV 5	ini.	-723.87	5094	1.42	0	864	6344	8929	3621	7208		1.42	Si
SLV 5	fin.	326.1	377	1.42	0	864	6344	8929	3621	7208		19.13	Si
SLV 13	ini.	-631.61	4251	1.42	0	864	6344	8929	3621	7208		1.7	Si
SLV 13	fin.	675.2	1674	1.42	0	864	6344	8929	3621	7208		4.31	Si
SLV 6	ini.	-593.92	4329	1.42	0	864	6344	8929	3621	7208		1.67	Si
SLV 6	fin.	125.18	-384	1.42	0	864	6344	8929	3621	7208		18.79	Si
SLV 10	ini.	-660.74	4352	1.42	0	864	6344	8929	3621	7208		1.66	Si
SLV 10	fin.	397.36	579	1.42	0	864	6344	8929	3621	7208		12.46	Si
SLD 5	ini.	-488.14	3998	1.42	0	864	6344	8929	3621	7208		1.8	Si
SLD 5	fin.	110.21	-363	1.42	0	864	6344	8929	3621	7208		19.84	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.21	SLV 4	Si
V_SLV	1.409	SLV 9	Si
PF_SLU	17.092	SLU 70	Si
V_SLU	1.561	SLU 70	Si

Trave di accoppiamento 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	5.46	6.36	0.9	-18.263	-3.314	5.46	6.36	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	399.13	-1810	-0.0002137	0.0001872	0.0035	0.9		2959	2959	No	7.41	Si
SLU 61	fin.	21.76	-1171	-0.0000107	0.0001872	0.0035	0.9		2959	2959	No	135.99	Si
SLU 81	ini.	421.13	-1954	-0.0002269	0.0001872	0.0035	0.9		2959	2959	No	7.03	Si
SLU 81	fin.	36.87	-1329	-0.0000182	0.0001872	0.0035	0.9		2959	2959	No	80.25	Si
SLU 83	ini.	428.98	-1995	-0.0002317	0.0001872	0.0035	0.9		2959	2959	No	6.9	Si
SLU 83	fin.	40.23	-1367	-0.0000198	0.0001872	0.0035	0.9		2959	2959	No	73.55	Si
SLU 79	ini.	403.63	-1931	-0.0002164	0.0001872	0.0035	0.9		2959	2959	No	7.33	Si
SLU 79	fin.	57.11	-1420	-0.0000282	0.0001872	0.0035	0.9		2959	2959	No	51.81	Si
SLU 82	ini.	414.26	-1936	-0.0002228	0.0001872	0.0035	0.9		2959	2959	No	7.14	Si
SLU 82	fin.	39.04	-1334	-0.0000192	0.0001872	0.0035	0.9		2959	2959	No	75.8	Si
SLU 63	ini.	406.98	-1850	-0.0002184	0.0001872	0.0035	0.9		2959	2959	No	7.27	Si
SLU 63	fin.	25.12	-1209	-0.0000123	0.0001872	0.0035	0.9		2959	2959	No	117.8	Si
SLU 84	ini.	422.11	-1976	-0.0002275	0.0001872	0.0035	0.9		2959	2959	No	7.01	Si
SLU 84	fin.	42.4	-1371	-0.0000209	0.0001872	0.0035	0.9		2959	2959	No	69.79	Si
SLU 60	ini.	406.01	-1829	-0.0002178	0.0001872	0.0035	0.9		2959	2959	No	7.29	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	fin.	19.6	-1167	-0.0000096	0.0001872	0.0035	0.9		2959	2959	No	151	Si
SLU 77	ini.	397.7	-1928	-0.0002129	0.0001872	0.0035	0.9		2959	2959	No	7.44	Si
SLU 77	fin.	64.87	-1462	-0.0000321	0.0001872	0.0035	0.9		2959	2959	No	45.61	Si
SLU 62	ini.	413.86	-1869	-0.0002226	0.0001872	0.0035	0.9		2959	2959	No	7.15	Si
SLU 62	fin.	22.96	-1205	-0.0000113	0.0001872	0.0035	0.9		2959	2959	No	128.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	414.26	-2751	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 82	fin.	39.04	2534	0.9	0	365	7137	3773	2295	6068	No	2.39	Si
SLU 78	ini.	390.83	-2681	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 78	fin.	67.04	2743	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 84	ini.	422.11	-2809	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 84	fin.	42.4	2600	0.9	0	365	7137	3773	2295	6068	No	2.33	Si
SLU 77	ini.	397.7	-2705	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 77	fin.	64.87	2726	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 69	ini.	320.22	-2302	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 69	fin.	96.42	2739	0.9	0	365	7137	3773	2295	6068	No	2.22	Si
SLU 79	ini.	403.63	-2720	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 79	fin.	57.11	2656	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 83	ini.	428.98	-2834	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 83	fin.	40.23	2584	0.9	0	365	7137	3773	2295	6068	No	2.35	Si
SLU 81	ini.	421.13	-2775	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 81	fin.	36.87	2517	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 70	ini.	313.34	-2278	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 70	fin.	98.58	2755	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 80	ini.	396.75	-2695	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 80	fin.	59.28	2672	0.9	0	365	7137	3773	2295	6068	No	2.27	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	1024.31	-2952	-0.0006113	0.0002807	0.0035	0.9		2989.59	2989.59		2.92	Si
SLD 2	fin.	-501.39	1010	-0.0002657	0.0002807	0.0035	0.9		2995.37	2995.37		5.97	Si
SLV 1	ini.	1859.71	-4780	-0.0013394	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLV 1	fin.	-1099.65	3191	-0.0006659	0.0002807	0.0035	0.9		2995.37	2995.37		2.72	Si
SLV 15	ini.	-1535.34	2633	-0.0010236	0.0002807	0.0035	0.9		2995.37	2995.37		1.95	Si
SLV 15	fin.	1339.67	-5750	-0.0008575	0.0002807	0.0035	0.9		2989.59	2989.59		2.23	Si
SLV 4	ini.	2072.46	-5322	-0.0015761	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLV 4	fin.	-1166.1	3323	-0.0007167	0.0002807	0.0035	0.9		2995.37	2995.37		2.57	Si
SLV 14	ini.	-1366.37	2354	-0.0008776	0.0002807	0.0035	0.9		2995.37	2995.37		2.19	Si
SLV 14	fin.	1126.95	-4828	-0.0006882	0.0002807	0.0035	0.9		2989.59	2989.59		2.65	Si
SLV 2	ini.	2050.57	-5191	-0.0015502	0.0002807	0.0035	0.9		2989.59	2989.59		1.46	Si
SLV 2	fin.	-1239.24	3718	-0.0007741	0.0002807	0.0035	0.9		2995.37	2995.37		2.42	Si
SLV 13	ini.	-1557.23	2764	-0.0010433	0.0002807	0.0035	0.9		2995.37	2995.37		1.92	Si
SLV 13	fin.	1266.53	-5355	-0.0007978	0.0002807	0.0035	0.9		2989.59	2989.59		2.36	Si
SLV 16	ini.	-1344.48	2223	-0.0008594	0.0002807	0.0035	0.9		2995.37	2995.37		2.23	Si
SLV 16	fin.	1200.09	-5223	-0.0007449	0.0002807	0.0035	0.9		2989.59	2989.59		2.49	Si
SLD 4	ini.	1033.83	-3008	-0.0006183	0.0002807	0.0035	0.9		2989.59	2989.59		2.89	Si
SLD 4	fin.	-469.84	838	-0.0002475	0.0002807	0.0035	0.9		2995.37	2995.37		6.38	Si
SLV 3	ini.	1881.6	-4911	-0.0013624	0.0002807	0.0035	0.9		2989.59	2989.59		1.59	Si
SLV 3	fin.	-1026.51	2796	-0.0006116	0.0002807	0.0035	0.9		2995.37	2995.37		2.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1535.34	6427	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 15	fin.	1339.67	8624	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 16	ini.	-1344.48	5582	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLV 16	fin.	1200.09	7865	0.9	0	548	7137	5660	2295	7684		0.98	No
SLD 4	ini.	1033.83	-5302	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLD 4	fin.	-469.84	-722	0.9	0	548	7137	5660	2295	7684		10.65	Si
SLV 14	ini.	-1366.37	5625	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 14	fin.	1126.95	7229	0.9	0	548	7137	5660	2295	7684		1.06	Si
SLV 13	ini.	-1557.23	6469	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 13	fin.	1266.53	7988	0.9	0	548	7137	5660	2295	7684		0.96	No
SLD 2	ini.	1024.31	-5284	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLD 2	fin.	-501.39	-1000	0.9	0	548	7137	5660	2295	7684		7.68	Si
SLV 4	ini.	2072.46	-10022	0.9	0	548	7137	5660	2295	7684		0.77	No
SLV 4	fin.	-1166.1	-4218	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 1	ini.	1859.71	-9135	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 1	fin.	-1099.65	-4095	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 3	ini.	1881.6	-9177	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 3	fin.	-1026.51	-3459	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 2	ini.	2050.57	-9980	0.9	0	548	7137	5660	2295	7684		0.77	No
SLV 2	fin.	-1239.24	-4854	0.9	0	548	7137	5660	2295	7684		1.58	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.443	SLV 4	Si
V_SLV	0.767	SLV 4	No
PF_SLU	6.898	SLU 83	Si
V_SLU	2.141	SLU 83	Si

Trave di accoppiamento 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.16	8.98	0.82	-18.263	-3.314	8.16	8.98	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-63.38	-724	-0.0000378	0.0001872	0.0035	0.82		2460.51	2460.51	No	38.82	Si
SLU 80	fin.	-344.87	-2097	-0.000223	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.13	Si
SLU 81	ini.	-42.43	-664	-0.0000252	0.0001872	0.0035	0.82		2460.51	2460.51	No	58	Si
SLU 81	fin.	-358.71	-2159	-0.0002331	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.86	Si
SLU 78	ini.	-68.8	-744	-0.0000411	0.0001872	0.0035	0.82		2460.51	2460.51	No	35.77	Si
SLU 78	fin.	-343.06	-2094	-0.0002217	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.17	Si
SLU 77	ini.	-66.16	-741	-0.0000395	0.0001872	0.0035	0.82		2460.51	2460.51	No	37.19	Si
SLU 77	fin.	-348.33	-2111	-0.0002256	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.06	Si
SLU 74	ini.	-62.64	-716	-0.0000374	0.0001872	0.0035	0.82		2460.51	2460.51	No	39.28	Si
SLU 74	fin.	-340.13	-2066	-0.0002196	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.23	Si
SLU 62	ini.	-40.18	-627	-0.0000239	0.0001872	0.0035	0.82		2460.51	2460.51	No	61.23	Si
SLU 62	fin.	-343.38	-2033	-0.000222	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.17	Si
SLU 84	ini.	-48.58	-691	-0.0000289	0.0001872	0.0035	0.82		2460.51	2460.51	No	50.65	Si
SLU 84	fin.	-361.64	-2187	-0.0002353	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.8	Si
SLU 79	ini.	-60.74	-722	-0.0000362	0.0001872	0.0035	0.82		2460.51	2460.51	No	40.51	Si
SLU 79	fin.	-350.13	-2113	-0.0002269	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.03	Si
SLU 82	ini.	-45.06	-666	-0.0000268	0.0001872	0.0035	0.82		2460.51	2460.51	No	54.6	Si
SLU 82	fin.	-353.44	-2142	-0.0002293	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.96	Si
SLU 83	ini.	-45.95	-689	-0.0000273	0.0001872	0.0035	0.82		2460.51	2460.51	No	53.55	Si
SLU 83	fin.	-366.9	-2204	-0.0002391	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-45.06	1679	0.82	0	303	6502	3438	2091	5529	No	3.29	Si
SLU 82	fin.	-353.44	-4403	0.82	0	303	6502	3438	2091	5529	No	1.26	Si
SLU 74	ini.	-62.64	1750	0.82	0	303	6502	3438	2091	5529	No	3.16	Si
SLU 74	fin.	-340.13	-4278	0.82	0	303	6502	3438	2091	5529	No	1.29	Si
SLU 77	ini.	-66.16	1796	0.82	0	303	6502	3438	2091	5529	No	3.08	Si
SLU 77	fin.	-348.33	-4369	0.82	0	303	6502	3438	2091	5529	No	1.27	Si
SLU 79	ini.	-60.74	1753	0.82	0	303	6502	3438	2091	5529	No	3.15	Si
SLU 79	fin.	-350.13	-4354	0.82	0	303	6502	3438	2091	5529	No	1.27	Si
SLU 84	ini.	-48.58	1725	0.82	0	303	6502	3438	2091	5529	No	3.21	Si
SLU 84	fin.	-361.64	-4495	0.82	0	303	6502	3438	2091	5529	No	1.23	Si
SLU 83	ini.	-45.95	1714	0.82	0	303	6502	3438	2091	5529	No	3.23	Si
SLU 83	fin.	-366.9	-4522	0.82	0	303	6502	3438	2091	5529	No	1.22	Si
SLU 75	ini.	-65.28	1761	0.82	0	303	6502	3438	2091	5529	No	3.14	Si
SLU 75	fin.	-334.87	-4251	0.82	0	303	6502	3438	2091	5529	No	1.3	Si
SLU 78	ini.	-68.8	1807	0.82	0	303	6502	3438	2091	5529	No	3.06	Si
SLU 78	fin.	-343.06	-4342	0.82	0	303	6502	3438	2091	5529	No	1.27	Si
SLU 80	ini.	-63.38	1764	0.82	0	303	6502	3438	2091	5529	No	3.13	Si
SLU 80	fin.	-344.87	-4327	0.82	0	303	6502	3438	2091	5529	No	1.28	Si
SLU 81	ini.	-42.43	1668	0.82	0	303	6502	3438	2091	5529	No	3.31	Si
SLU 81	fin.	-358.71	-4430	0.82	0	303	6502	3438	2091	5529	No	1.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	249.71	166	-0.000154	0.0002807	0.0035	0.82		2482.11	2482.11		9.94	Si
SLD 2	fin.	-667.1	-3049	-0.0004551	0.0002807	0.0035	0.82		2487.45	2487.45		3.73	Si
SLV 3	ini.	544.52	667	-0.00036	0.0002807	0.0035	0.82		2482.11	2482.11		4.56	Si
SLV 3	fin.	-1168.98	-4994	-0.0009128	0.0002807	0.0035	0.82		2487.45	2487.45		2.13	Si
SLV 1	ini.	568.36	866	-0.0003782	0.0002807	0.0035	0.82		2482.11	2482.11		4.37	Si
SLV 1	fin.	-1148.55	-4887	-0.0008921	0.0002807	0.0035	0.82		2487.45	2487.45		2.17	Si
SLV 14	ini.	-650.05	-1692	-0.0004413	0.0002807	0.0035	0.82		2487.45	2487.45		3.83	Si
SLV 14	fin.	722.19	2263	-0.0005014	0.0002807	0.0035	0.82		2482.11	2482.11		3.44	Si
SLV 13	ini.	-736.32	-1900	-0.000512	0.0002807	0.0035	0.82		2487.45	2487.45		3.38	Si
SLV 13	fin.	834.45	2678	-0.0005975	0.0002807	0.0035	0.82		2482.11	2482.11		2.97	Si
SLV 2	ini.	654.62	1073	-0.0004461	0.0002807	0.0035	0.82		2482.11	2482.11		3.79	Si
SLV 2	fin.	-1260.82	-5302	-0.0010089	0.0002807	0.0035	0.82		2487.45	2487.45		1.97	Si
SLV 16	ini.	-673.89	-1890	-0.0004606	0.0002807	0.0035	0.82		2487.45	2487.45		3.69	Si
SLV 16	fin.	701.77	2156	-0.0004845	0.0002807	0.0035	0.82		2482.11	2482.11		3.54	Si
SLV 4	ini.	630.79	875	-0.000427	0.0002807	0.0035	0.82		2482.11	2482.11		3.93	Si
SLV 4	fin.	-1281.24	-5409	-0.0010308	0.0002807	0.0035	0.82		2487.45	2487.45		1.94	Si
SLD 4	ini.	239.66	81	-0.0001475	0.0002807	0.0035	0.82		2482.11	2482.11		10.36	Si
SLD 4	fin.	-675.81	-3095	-0.0004621	0.0002807	0.0035	0.82		2487.45	2487.45		3.68	Si
SLV 15	ini.	-760.15	-2098	-0.000532	0.0002807	0.0035	0.82		2487.45	2487.45		3.27	Si
SLV 15	fin.	814.03	2572	-0.0005796	0.0002807	0.0035	0.82		2482.11	2482.11		3.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	544.52	-1998	0.82	0	455	6502	5156	2091	6957		3.48	Si
SLV 3	fin.	-1168.98	-7757	0.82	0	455	6502	5156	2091	6957		0.9	No
SLD 3	ini.	202.62	-149	0.82	0	455	6502	5156	2091	6957		46.78	Si
SLD 3	fin.	-627.6	-4933	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 1	ini.	568.36	-2473	0.82	0	455	6502	5156	2091	6957		2.81	Si
SLV 1	fin.	-1148.55	-7440	0.82	0	455	6502	5156	2091	6957		0.94	No
SLV 15	ini.	-760.15	5400	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 15	fin.	814.03	2393	0.82	0	455	6502	5156	2091	6957		2.91	Si
SLV 8	ini.	131.01	757	0.82	0	455	6502	5156	2091	6957		9.18	Si
SLV 8	fin.	-591.06	-5063	0.82	0	455	6502	5156	2091	6957		1.37	Si
SLV 16	ini.	-673.89	4927	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 16	fin.	701.77	1799	0.82	0	455	6502	5156	2091	6957		3.87	Si
SLV 4	ini.	630.79	-2471	0.82	0	455	6502	5156	2091	6957		2.82	Si
SLV 4	fin.	-1281.24	-8351	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 2	ini.	654.62	-2946	0.82	0	455	6502	5156	2091	6957		2.36	Si
SLV 2	fin.	-1260.82	-8034	0.82	0	455	6502	5156	2091	6957		0.87	No
SLD 4	ini.	239.66	-352	0.82	0	455	6502	5156	2091	6957		19.78	Si
SLD 4	fin.	-675.81	-5188	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLD 2	ini.	249.71	-561	0.82	0	455	6502	5156	2091	6957		12.41	Si
SLD 2	fin.	-667.1	-5048	0.82	0	455	6502	5156	2091	6957		1.38	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.941	SLV 4	Si
V_SLV	0.833	SLV 4	No
PF_SLU	6.706	SLU 83	Si
V_SLU	1.223	SLU 83	Si

Trave di accoppiamento 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	7.56	8.98	1.42	-18.518	0.706	7.56	8.98	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	610.83	-309	-0.0001251	0.0002246	0.0035	1.42		7594.91	7594.91	No	12.43	Si
SLU 50	fin.	309.87	-579	-0.0000621	0.0002246	0.0035	1.42		7594.91	7594.91	No	24.51	Si
SLU 83	ini.	290.67	-1064	-0.0000582	0.0002246	0.0035	1.42		7594.91	7594.91	No	26.13	Si
SLU 83	fin.	524.67	-1060	-0.0001068	0.0002246	0.0035	1.42		7594.91	7594.91	No	14.48	Si
SLU 47	ini.	604.37	-283	-0.0001238	0.0002246	0.0035	1.42		7594.91	7594.91	No	12.57	Si
SLU 47	fin.	302.02	-556	-0.0000605	0.0002246	0.0035	1.42		7594.91	7594.91	No	25.15	Si
SLU 44	ini.	577.82	-287	-0.0001181	0.0002246	0.0035	1.42		7594.91	7594.91	No	13.14	Si
SLU 44	fin.	297.16	-545	-0.0000595	0.0002246	0.0035	1.42		7594.91	7594.91	No	25.56	Si
SLU 51	ini.	622.88	-291	-0.0001277	0.0002246	0.0035	1.42		7594.91	7594.91	No	12.19	Si
SLU 51	fin.	308.07	-572	-0.0000617	0.0002246	0.0035	1.42		7594.91	7594.91	No	24.65	Si
SLU 49	ini.	601.91	-340	-0.0001232	0.0002246	0.0035	1.42		7594.91	7594.91	No	12.62	Si
SLU 49	fin.	321.34	-602	-0.0000644	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.64	Si
SLU 48	ini.	589.86	-358	-0.0001206	0.0002246	0.0035	1.42		7594.91	7594.91	No	12.88	Si
SLU 48	fin.	323.13	-609	-0.0000648	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.5	Si
SLU 46	ini.	575.36	-344	-0.0001175	0.0002246	0.0035	1.42		7594.91	7594.91	No	13.2	Si
SLU 46	fin.	316.48	-590	-0.0000634	0.0002246	0.0035	1.42		7594.91	7594.91	No	24	Si
SLU 45	ini.	563.31	-362	-0.000115	0.0002246	0.0035	1.42		7594.91	7594.91	No	13.48	Si
SLU 45	fin.	318.27	-598	-0.0000638	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.86	Si
SLU 43	ini.	557.73	-317	-0.0001138	0.0002246	0.0035	1.42		7594.91	7594.91	No	13.62	Si
SLU 43	fin.	300.15	-557	-0.0000601	0.0002246	0.0035	1.42		7594.91	7594.91	No	25.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	601.91	-360	1.42	0	329	6344	4083	3621	6673	No	18.56	Si
SLU 49	fin.	321.34	-789	1.42	0	329	6344	4083	3621	6673	No	8.46	Si
SLU 39	ini.	104.23	732	1.42	0	329	6344	4083	3621	6673	No	9.11	Si
SLU 39	fin.	474.9	382	1.42	0	329	6344	4083	3621	6673	No	17.46	Si
SLU 48	ini.	589.86	-333	1.42	0	329	6344	4083	3621	6673	No	20.03	Si
SLU 48	fin.	323.13	-762	1.42	0	329	6344	4083	3621	6673	No	8.75	Si
SLU 50	ini.	610.83	-393	1.42	0	329	6344	4083	3621	6673	No	16.98	Si
SLU 50	fin.	309.87	-822	1.42	0	329	6344	4083	3621	6673	No	8.11	Si
SLU 46	ini.	575.36	-319	1.42	0	329	6344	4083	3621	6673	No	20.92	Si
SLU 46	fin.	316.48	-748	1.42	0	329	6344	4083	3621	6673	No	8.92	Si
SLU 51	ini.	622.88	-420	1.42	0	329	6344	4083	3621	6673	No	15.9	Si
SLU 51	fin.	308.07	-849	1.42	0	329	6344	4083	3621	6673	No	7.86	Si
SLU 43	ini.	557.73	-312	1.42	0	329	6344	4083	3621	6673	No	21.4	Si
SLU 43	fin.	300.15	-741	1.42	0	329	6344	4083	3621	6673	No	9	Si
SLU 44	ini.	577.82	-356	1.42	0	329	6344	4083	3621	6673	No	18.74	Si
SLU 44	fin.	297.16	-785	1.42	0	329	6344	4083	3621	6673	No	8.5	Si
SLU 47	ini.	604.37	-397	1.42	0	329	6344	4083	3621	6673	No	16.82	Si
SLU 47	fin.	302.02	-826	1.42	0	329	6344	4083	3621	6673	No	8.08	Si
SLU 45	ini.	563.31	-292	1.42	0	329	6344	4083	3621	6673	No	22.82	Si
SLU 45	fin.	318.27	-722	1.42	0	329	6344	4083	3621	6673	No	9.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-162.22	-1055	-0.000032	0.0003369	0.0035	1.42		7818.07	7818.07		48.2	Si
SLV 4	fin.	567.2	-795	-0.0001146	0.0003369	0.0035	1.42		7808.98	7808.98		13.77	Si
SLD 16	ini.	581.01	41	-0.0001175	0.0003369	0.0035	1.42		7808.98	7808.98		13.44	Si
SLD 16	fin.	234.66	-277	-0.0000466	0.0003369	0.0035	1.42		7808.98	7808.98		33.28	Si
SLV 3	ini.	-209.79	-1118	-0.0000415	0.0003369	0.0035	1.42		7818.07	7818.07		37.27	Si
SLV 3	fin.	584.72	-832	-0.0001182	0.0003369	0.0035	1.42		7808.98	7808.98		13.36	Si
SLV 16	ini.	929.8	777	-0.0001918	0.0003369	0.0035	1.42		7808.98	7808.98		8.4	Si
SLV 16	fin.	135.12	155	-0.0000267	0.0003369	0.0035	1.42		7808.98	7808.98		57.79	Si
SLD 15	ini.	560.59	14	-0.0001132	0.0003369	0.0035	1.42		7808.98	7808.98		13.93	Si
SLD 15	fin.	242.18	-293	-0.0000481	0.0003369	0.0035	1.42		7808.98	7808.98		32.24	Si
SLV 15	ini.	882.24	713	-0.0001815	0.0003369	0.0035	1.42		7808.98	7808.98		8.85	Si
SLV 15	fin.	152.64	118	-0.0000302	0.0003369	0.0035	1.42		7808.98	7808.98		51.16	Si
SLV 14	ini.	867.74	112	-0.0001784	0.0003369	0.0035	1.42		7808.98	7808.98		9	Si
SLV 14	fin.	29.45	-365	-0.0000058	0.0003369	0.0035	1.42		7808.98	7808.98		265.13	Si
SLV 12	ini.	611.55	900	-0.0001239	0.0003369	0.0035	1.42		7808.98	7808.98		12.77	Si
SLV 12	fin.	412.74	423	-0.0000827	0.0003369	0.0035	1.42		7808.98	7808.98		18.92	Si
SLV 13	ini.	820.17	48	-0.0001681	0.0003369	0.0035	1.42		7808.98	7808.98		9.52	Si
SLV 13	fin.	46.97	-403	-0.0000092	0.0003369	0.0035	1.42		7808.98	7808.98		166.25	Si
SLV 11	ini.	580.89	859	-0.0001174	0.0003369	0.0035	1.42		7808.98	7808.98		13.44	Si
SLV 11	fin.	424.03	399	-0.000085	0.0003369	0.0035	1.42		7808.98	7808.98		18.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-209.79	1724	1.42	0	494	6344	6124	3621	6838		3.97	Si
SLV 3	fin.	584.72	619	1.42	0	494	6344	6124	3621	6838		11.04	Si
SLV 16	ini.	929.8	-1142	1.42	0	494	6344	6124	3621	6838		5.99	Si
SLV 16	fin.	135.12	-1831	1.42	0	494	6344	6124	3621	6838		3.73	Si
SLV 14	ini.	867.74	-1600	1.42	0	494	6344	6124	3621	6838		4.27	Si
SLV 14	fin.	29.45	-1173	1.42	0	494	6344	6124	3621	6838		5.83	Si
SLV 13	ini.	820.17	-1495	1.42	0	494	6344	6124	3621	6838		4.57	Si
SLV 13	fin.	46.97	-1068	1.42	0	494	6344	6124	3621	6838		6.4	Si
SLV 1	ini.	-271.85	1266	1.42	0	494	6344	6124	3621	6838		5.4	Si
SLV 1	fin.	479.06	1278	1.42	0	494	6344	6124	3621	6838		5.35	Si
SLV 4	ini.	-162.22	1620	1.42	0	494	6344	6124	3621	6838		4.22	Si
SLV 4	fin.	567.2	514	1.42	0	494	6344	6124	3621	6838		13.29	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	580.89	445	1.42	0	494	6344	6124	3621	6838		15.36	Si
SLV 11	fin.	424.03	-1692	1.42	0	494	6344	6124	3621	6838		4.04	Si
SLV 12	ini.	611.55	378	1.42	0	494	6344	6124	3621	6838		18.1	Si
SLV 12	fin.	412.74	-1760	1.42	0	494	6344	6124	3621	6838		3.89	Si
SLV 15	ini.	882.24	-1037	1.42	0	494	6344	6124	3621	6838		6.59	Si
SLV 15	fin.	152.64	-1726	1.42	0	494	6344	6124	3621	6838		3.96	Si
SLV 7	ini.	253.29	1274	1.42	0	494	6344	6124	3621	6838		5.37	Si
SLV 7	fin.	553.66	-988	1.42	0	494	6344	6124	3621	6838		6.92	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.399	SLV 16	Si
V_SLV	3.734	SLV 16	Si
PF_SLU	12.193	SLU 51	Si
V_SLU	7.86	SLU 51	Si

Trave di accoppiamento 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	7.56	8.98	1.42	-16.333	-3.314	7.56	8.98	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-525.64	-2804	-0.0001075	0.0001872	0.0035	1.42		7359.91	7359.91	No	14	Si
SLU 72	fin.	285.87	-2325	-0.0000573	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.71	Si
SLU 67	ini.	-548.33	-2779	-0.0001124	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.42	Si
SLU 67	fin.	304.52	-2282	-0.0000612	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.14	Si
SLU 75	ini.	-537.03	-3002	-0.0001099	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.7	Si
SLU 75	fin.	302.24	-2457	-0.0000607	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.32	Si
SLU 69	ini.	-544.2	-2851	-0.0001115	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.52	Si
SLU 69	fin.	297.04	-2356	-0.0000596	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.75	Si
SLU 74	ini.	-530.29	-3000	-0.0001085	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.88	Si
SLU 74	fin.	292.86	-2462	-0.0000588	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.1	Si
SLU 77	ini.	-532.89	-3074	-0.0001091	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.81	Si
SLU 77	fin.	294.76	-2532	-0.0000592	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.94	Si
SLU 78	ini.	-539.63	-3076	-0.0001105	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.64	Si
SLU 78	fin.	304.13	-2527	-0.0000611	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.17	Si
SLU 68	ini.	-527.53	-2732	-0.0001079	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.95	Si
SLU 68	fin.	290.23	-2251	-0.0000582	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.33	Si
SLU 70	ini.	-550.94	-2853	-0.0001129	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.36	Si
SLU 70	fin.	306.41	-2352	-0.0000616	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.99	Si
SLU 66	ini.	-541.59	-2777	-0.0001109	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.59	Si
SLU 66	fin.	295.14	-2286	-0.0000592	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-497.54	2193	1.42	0	576	7137	5953	3621	7713	No	3.52	Si
SLU 81	fin.	269.45	350	1.42	0	576	7137	5953	3621	7713	No	22.03	Si
SLU 80	ini.	-514.33	2163	1.42	0	576	7137	5953	3621	7713	No	3.57	Si
SLU 80	fin.	283.59	439	1.42	0	576	7137	5953	3621	7713	No	17.58	Si
SLU 75	ini.	-537.03	2223	1.42	0	576	7137	5953	3621	7713	No	3.47	Si
SLU 75	fin.	302.24	498	1.42	0	576	7137	5953	3621	7713	No	15.48	Si
SLU 76	ini.	-516.22	2170	1.42	0	576	7137	5953	3621	7713	No	3.55	Si
SLU 76	fin.	287.95	446	1.42	0	576	7137	5953	3621	7713	No	17.3	Si
SLU 77	ini.	-532.89	2208	1.42	0	576	7137	5953	3621	7713	No	3.49	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	294.76	484	1.42	0	576	7137	5953	3621	7713	No	15.95	Si
SLU 74	ini.	-530.29	2200	1.42	0	576	7137	5953	3621	7713	No	3.51	Si
SLU 74	fin.	292.86	475	1.42	0	576	7137	5953	3621	7713	No	16.22	Si
SLU 82	ini.	-504.28	2216	1.42	0	576	7137	5953	3621	7713	No	3.48	Si
SLU 82	fin.	278.83	373	1.42	0	576	7137	5953	3621	7713	No	20.68	Si
SLU 83	ini.	-500.14	2201	1.42	0	576	7137	5953	3621	7713	No	3.5	Si
SLU 83	fin.	271.35	358	1.42	0	576	7137	5953	3621	7713	No	21.53	Si
SLU 84	ini.	-506.88	2224	1.42	0	576	7137	5953	3621	7713	No	3.47	Si
SLU 84	fin.	280.72	381	1.42	0	576	7137	5953	3621	7713	No	20.24	Si
SLU 78	ini.	-539.63	2231	1.42	0	576	7137	5953	3621	7713	No	3.46	Si
SLU 78	fin.	304.13	507	1.42	0	576	7137	5953	3621	7713	No	15.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3597.89	868	-0.0009446	0.0002807	0.0035	1.42		7337.02	7337.02		2.04	Si
SLV 4	fin.	-3548	-2031	-0.000926	0.0002807	0.0035	1.42		7346.34	7346.34		2.07	Si
SLV 15	ini.	-4596.49	-5589	-0.00132	0.0002807	0.0035	1.42		7346.34	7346.34		1.6	Si
SLV 15	fin.	4075.13	-1658	-0.0011166	0.0002807	0.0035	1.42		7337.02	7337.02		1.8	Si
SLV 16	ini.	-4197.65	-5249	-0.0011612	0.0002807	0.0035	1.42		7346.34	7346.34		1.75	Si
SLV 16	fin.	3706.67	-1626	-0.0009826	0.0002807	0.0035	1.42		7337.02	7337.02		1.98	Si
SLV 3	ini.	3199.05	528	-0.0008109	0.0002807	0.0035	1.42		7337.02	7337.02		2.29	Si
SLV 3	fin.	-3179.54	-2063	-0.0008033	0.0002807	0.0035	1.42		7346.34	7346.34		2.31	Si
SLV 2	ini.	3883.85	1539	-0.001046	0.0002807	0.0035	1.42		7337.02	7337.02		1.89	Si
SLV 2	fin.	-3714.77	-1717	-0.0009839	0.0002807	0.0035	1.42		7346.34	7346.34		1.98	Si
SLV 1	ini.	3485.01	1199	-0.0009059	0.0002807	0.0035	1.42		7337.02	7337.02		2.11	Si
SLV 1	fin.	-3346.31	-1749	-0.000858	0.0002807	0.0035	1.42		7346.34	7346.34		2.2	Si
SLV 14	ini.	-3911.69	-4577	-0.0010544	0.0002807	0.0035	1.42		7346.34	7346.34		1.88	Si
SLV 14	fin.	3539.9	-1311	-0.0009247	0.0002807	0.0035	1.42		7337.02	7337.02		2.07	Si
SLV 11	ini.	-2130.77	-4172	-0.0004899	0.0002807	0.0035	1.42		7346.34	7346.34		3.45	Si
SLV 11	fin.	1665.05	-2161	-0.0003673	0.0002807	0.0035	1.42		7337.02	7337.02		4.41	Si
SLV 13	ini.	-4310.53	-4917	-0.0012049	0.0002807	0.0035	1.42		7346.34	7346.34		1.7	Si
SLV 13	fin.	3908.36	-1344	-0.0010549	0.0002807	0.0035	1.42		7337.02	7337.02		1.88	Si
SLD 15	ini.	-2171.51	-3553	-0.0005011	0.0002807	0.0035	1.42		7346.34	7346.34		3.38	Si
SLD 15	fin.	1846.7	-1678	-0.0004142	0.0002807	0.0035	1.42		7337.02	7337.02		3.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3199.05	-8628	1.42	0	864	7137	8929	3621	8001		0.93	No
SLV 3	fin.	-3179.54	-9717	1.42	0	864	7137	8929	3621	8001		0.82	No
SLV 1	ini.	3485.01	-9190	1.42	0	864	7137	8929	3621	8001		0.87	No
SLV 1	fin.	-3346.31	-10346	1.42	0	864	7137	8929	3621	8001		0.77	No
SLV 15	ini.	-4596.49	13146	1.42	0	864	7137	8929	3621	8001		0.61	No
SLV 15	fin.	4075.13	12022	1.42	0	864	7137	8929	3621	8001		0.67	No
SLV 2	ini.	3883.85	-10285	1.42	0	864	7137	8929	3621	8001		0.78	No
SLV 2	fin.	-3714.77	-11441	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 4	ini.	3597.89	-9723	1.42	0	864	7137	8929	3621	8001		0.82	No
SLV 4	fin.	-3548	-10812	1.42	0	864	7137	8929	3621	8001		0.74	No
SLD 13	ini.	-2045.56	6197	1.42	0	864	7137	8929	3621	8001		1.29	Si
SLD 13	fin.	1773.68	5035	1.42	0	864	7137	8929	3621	8001		1.59	Si
SLV 14	ini.	-3911.69	11490	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 14	fin.	3539.9	10298	1.42	0	864	7137	8929	3621	8001		0.78	No
SLV 16	ini.	-4197.65	12051	1.42	0	864	7137	8929	3621	8001		0.66	No
SLV 16	fin.	3706.67	10927	1.42	0	864	7137	8929	3621	8001		0.73	No
SLV 13	ini.	-4310.53	12585	1.42	0	864	7137	8929	3621	8001		0.64	No
SLV 13	fin.	3908.36	11393	1.42	0	864	7137	8929	3621	8001		0.7	No
SLD 15	ini.	-2171.51	6446	1.42	0	864	7137	8929	3621	8001		1.24	Si
SLD 15	fin.	1846.7	5312	1.42	0	864	7137	8929	3621	8001		1.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.598	SLV 15	Si
V_SLV	0.609	SLV 15	No
PF_SLU	13.359	SLU 70	Si
V_SLU	3.457	SLU 78	Si

Trave di accoppiamento 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	7.56	8.98	1.42	-15.033	2.166	7.56	8.98	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	649.85	-1495	-0.0001335	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.69	Si
SLU 39	fin.	-775.92	-2240	-0.0001609	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.8	Si
SLU 42	ini.	647.41	-1500	-0.000133	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.73	Si
SLU 42	fin.	-737.69	-2222	-0.0001525	0.0002246	0.0035	1.42		7603.79	7603.79	No	10.31	Si
SLU 74	ini.	688.81	-1594	-0.000142	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.03	Si
SLU 74	fin.	-676.53	-2304	-0.0001392	0.0002246	0.0035	1.42		7603.79	7603.79	No	11.24	Si
SLU 60	ini.	644.05	-1476	-0.0001323	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.79	Si
SLU 60	fin.	-691.05	-2177	-0.0001423	0.0002246	0.0035	1.42		7603.79	7603.79	No	11	Si
SLU 82	ini.	729.59	-1679	-0.0001509	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.41	Si
SLU 82	fin.	-806.37	-2483	-0.0001676	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.43	Si
SLU 81	ini.	731.89	-1683	-0.0001514	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.38	Si
SLU 81	fin.	-810.97	-2489	-0.0001687	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.38	Si
SLU 40	ini.	647.56	-1491	-0.0001331	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.73	Si
SLU 40	fin.	-771.32	-2234	-0.0001599	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.86	Si
SLU 41	ini.	649.71	-1504	-0.0001335	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.69	Si
SLU 41	fin.	-742.29	-2228	-0.0001535	0.0002246	0.0035	1.42		7603.79	7603.79	No	10.24	Si
SLU 83	ini.	731.74	-1692	-0.0001514	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.38	Si
SLU 83	fin.	-777.34	-2477	-0.0001612	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.78	Si
SLU 84	ini.	729.44	-1688	-0.0001509	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.41	Si
SLU 84	fin.	-772.74	-2471	-0.0001602	0.0002246	0.0035	1.42		7603.79	7603.79	No	9.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	688.81	-2078	1.42	0	329	6344	4083	3621	6673	No	3.21	Si
SLU 74	fin.	-676.53	-2581	1.42	0	329	6344	4083	3621	6673	No	2.59	Si
SLU 39	ini.	649.85	-2241	1.42	0	329	6344	4083	3621	6673	No	2.98	Si
SLU 39	fin.	-775.92	-2637	1.42	0	329	6344	4083	3621	6673	No	2.53	Si
SLU 40	ini.	647.56	-2231	1.42	0	329	6344	4083	3621	6673	No	2.99	Si
SLU 40	fin.	-771.32	-2626	1.42	0	329	6344	4083	3621	6673	No	2.54	Si
SLU 84	ini.	729.44	-2314	1.42	0	329	6344	4083	3621	6673	No	2.88	Si
SLU 84	fin.	-772.74	-2818	1.42	0	329	6344	4083	3621	6673	No	2.37	Si
SLU 73	ini.	671.61	-2062	1.42	0	329	6344	4083	3621	6673	No	3.24	Si
SLU 73	fin.	-682.67	-2566	1.42	0	329	6344	4083	3621	6673	No	2.6	Si
SLU 75	ini.	686.51	-2067	1.42	0	329	6344	4083	3621	6673	No	3.23	Si
SLU 75	fin.	-671.93	-2571	1.42	0	329	6344	4083	3621	6673	No	2.6	Si
SLU 41	ini.	649.71	-2181	1.42	0	329	6344	4083	3621	6673	No	3.06	Si
SLU 41	fin.	-742.29	-2576	1.42	0	329	6344	4083	3621	6673	No	2.59	Si
SLU 82	ini.	729.59	-2375	1.42	0	329	6344	4083	3621	6673	No	2.81	Si
SLU 82	fin.	-806.37	-2878	1.42	0	329	6344	4083	3621	6673	No	2.32	Si
SLU 83	ini.	731.74	-2325	1.42	0	329	6344	4083	3621	6673	No	2.87	Si
SLU 83	fin.	-777.34	-2828	1.42	0	329	6344	4083	3621	6673	No	2.36	Si
SLU 81	ini.	731.89	-2385	1.42	0	329	6344	4083	3621	6673	No	2.8	Si
SLU 81	fin.	-810.97	-2889	1.42	0	329	6344	4083	3621	6673	No	2.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	51.57	-22	-0.0000101	0.0003369	0.0035	1.42		7808.98	7808.98		151.43	Si
SLV 1	fin.	1031.16	519	-0.0002141	0.0003369	0.0035	1.42		7808.98	7808.98		7.57	Si
SLV 13	ini.	894.59	-1443	-0.0001842	0.0003369	0.0035	1.42		7808.98	7808.98		8.73	Si
SLV 13	fin.	-1377.68	-2822	-0.0002921	0.0003369	0.0035	1.42		7818.07	7818.07		5.67	Si
SLV 15	ini.	797.96	-1945	-0.0001633	0.0003369	0.0035	1.42		7808.98	7808.98		9.79	Si
SLV 15	fin.	-1701.51	-3272	-0.0003694	0.0003369	0.0035	1.42		7818.07	7818.07		4.59	Si
SLV 12	ini.	409.6	-2073	-0.000082	0.0003369	0.0035	1.42		7808.98	7808.98		19.07	Si
SLV 12	fin.	-1291.15	-2705	-0.0002722	0.0003369	0.0035	1.42		7818.07	7818.07		6.06	Si
SLD 16	ini.	598.88	-1429	-0.0001212	0.0003369	0.0035	1.42		7808.98	7808.98		13.04	Si
SLD 16	fin.	-965.78	-2252	-0.0001994	0.0003369	0.0035	1.42		7818.07	7818.07		8.1	Si
SLD 15	ini.	588.73	-1408	-0.0001191	0.0003369	0.0035	1.42		7808.98	7808.98		13.26	Si
SLD 15	fin.	-937.11	-2211	-0.0001932	0.0003369	0.0035	1.42		7818.07	7818.07		8.34	Si
SLV 14	ini.	918.21	-1491	-0.0001893	0.0003369	0.0035	1.42		7808.98	7808.98		8.5	Si
SLV 14	fin.	-1444.46	-2917	-0.0003077	0.0003369	0.0035	1.42		7818.07	7818.07		5.41	Si
SLV 11	ini.	394.37	-2042	-0.0000789	0.0003369	0.0035	1.42		7808.98	7808.98		19.8	Si
SLV 11	fin.	-1248.11	-2644	-0.0002624	0.0003369	0.0035	1.42		7818.07	7818.07		6.26	Si
SLV 16	ini.	821.59	-1993	-0.0001684	0.0003369	0.0035	1.42		7808.98	7808.98		9.5	Si
SLV 16	fin.	-1768.3	-3367	-0.0003858	0.0003369	0.0035	1.42		7818.07	7818.07		4.42	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	75.19	-70	-0.0000148	0.0003369	0.0035	1.42		7808.98	7808.98		103.85	Si
SLV 2	fin.	964.37	424	-0.0001994	0.0003369	0.0035	1.42		7808.98	7808.98		8.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	629.89	-2253	1.42	0	494	6344	6124	3621	6838		3.03	Si
SLD 13	fin.	-794.49	-2659	1.42	0	494	6344	6124	3621	6838		2.57	Si
SLD 14	ini.	640.04	-2320	1.42	0	494	6344	6124	3621	6838		2.95	Si
SLD 14	fin.	-823.16	-2726	1.42	0	494	6344	6124	3621	6838		2.51	Si
SLV 15	ini.	797.96	-4153	1.42	0	494	6344	6124	3621	6838		1.65	Si
SLV 15	fin.	-1701.51	-4709	1.42	0	494	6344	6124	3621	6838		1.45	Si
SLV 13	ini.	894.59	-3720	1.42	0	494	6344	6124	3621	6838		1.84	Si
SLV 13	fin.	-1377.68	-4178	1.42	0	494	6344	6124	3621	6838		1.64	Si
SLV 12	ini.	409.6	-2800	1.42	0	494	6344	6124	3621	6838		2.44	Si
SLV 12	fin.	-1291.15	-3385	1.42	0	494	6344	6124	3621	6838		2.02	Si
SLD 16	ini.	598.88	-2507	1.42	0	494	6344	6124	3621	6838		2.73	Si
SLD 16	fin.	-965.78	-2961	1.42	0	494	6344	6124	3621	6838		2.31	Si
SLV 16	ini.	821.59	-4308	1.42	0	494	6344	6124	3621	6838		1.59	Si
SLV 16	fin.	-1768.3	-4864	1.42	0	494	6344	6124	3621	6838		1.41	Si
SLD 15	ini.	588.73	-2441	1.42	0	494	6344	6124	3621	6838		2.8	Si
SLD 15	fin.	-937.11	-2894	1.42	0	494	6344	6124	3621	6838		2.36	Si
SLV 11	ini.	394.37	-2701	1.42	0	494	6344	6124	3621	6838		2.53	Si
SLV 11	fin.	-1248.11	-3285	1.42	0	494	6344	6124	3621	6838		2.08	Si
SLV 14	ini.	918.21	-3874	1.42	0	494	6344	6124	3621	6838		1.76	Si
SLV 14	fin.	-1444.46	-4333	1.42	0	494	6344	6124	3621	6838		1.58	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.421	SLV 16	Si
V_SLV	1.406	SLV 16	Si
PF_SLU	9.376	SLU 81	Si
V_SLU	2.31	SLU 81	Si

Trave di accoppiamento 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	7.56	8.98	1.42	-13.778	0.706	7.56	8.98	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	948.19	123	-0.0002025	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.75	Si
SLU 63	fin.	384.52	-209	-0.0000778	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.12	Si
SLU 52	ini.	862.53	100	-0.0001825	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.52	Si
SLU 52	fin.	365.81	-194	-0.0000739	0.0001872	0.0035	1.42		7350.79	7350.79	No	20.09	Si
SLU 62	ini.	945.27	125	-0.0002018	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.78	Si
SLU 62	fin.	381.57	-207	-0.0000772	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.26	Si
SLU 57	ini.	871.35	56	-0.0001846	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.44	Si
SLU 57	fin.	375.89	-217	-0.000076	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.56	Si
SLU 58	ini.	913.43	115	-0.0001944	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.05	Si
SLU 58	fin.	383.3	-201	-0.0000775	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.18	Si
SLU 59	ini.	916.35	113	-0.000195	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.02	Si
SLU 59	fin.	386.25	-203	-0.0000781	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.03	Si
SLU 60	ini.	917.38	119	-0.0001953	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.01	Si
SLU 60	fin.	370.37	-202	-0.0000748	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.85	Si
SLU 56	ini.	868.43	58	-0.0001839	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.46	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	fin.	372.94	-215	-0.0000753	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.71	Si
SLU 61	ini.	920.31	117	-0.000196	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.99	Si
SLU 61	fin.	373.32	-204	-0.0000754	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.69	Si
SLU 55	ini.	890.42	106	-0.000189	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.26	Si
SLU 55	fin.	377.01	-199	-0.0000762	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 58	ini.	913.43	-289	1.42	0	576	7137	5953	3621	7713	No	26.72	Si
SLU 58	fin.	383.3	-1149	1.42	0	576	7137	5953	3621	7713	No	6.71	Si
SLU 55	ini.	890.42	-262	1.42	0	576	7137	5953	3621	7713	No	29.48	Si
SLU 55	fin.	377.01	-1122	1.42	0	576	7137	5953	3621	7713	No	6.87	Si
SLU 59	ini.	916.35	-289	1.42	0	576	7137	5953	3621	7713	No	26.71	Si
SLU 59	fin.	386.25	-1149	1.42	0	576	7137	5953	3621	7713	No	6.71	Si
SLU 62	ini.	945.27	-339	1.42	0	576	7137	5953	3621	7713	No	22.78	Si
SLU 62	fin.	381.57	-1199	1.42	0	576	7137	5953	3621	7713	No	6.43	Si
SLU 63	ini.	948.19	-339	1.42	0	576	7137	5953	3621	7713	No	22.77	Si
SLU 63	fin.	384.52	-1199	1.42	0	576	7137	5953	3621	7713	No	6.43	Si
SLU 56	ini.	868.43	-216	1.42	0	576	7137	5953	3621	7713	No	35.77	Si
SLU 56	fin.	372.94	-1076	1.42	0	576	7137	5953	3621	7713	No	7.17	Si
SLU 61	ini.	920.31	-311	1.42	0	576	7137	5953	3621	7713	No	24.77	Si
SLU 61	fin.	373.32	-1172	1.42	0	576	7137	5953	3621	7713	No	6.58	Si
SLU 57	ini.	871.35	-216	1.42	0	576	7137	5953	3621	7713	No	35.75	Si
SLU 57	fin.	375.89	-1076	1.42	0	576	7137	5953	3621	7713	No	7.17	Si
SLU 60	ini.	917.38	-311	1.42	0	576	7137	5953	3621	7713	No	24.78	Si
SLU 60	fin.	370.37	-1172	1.42	0	576	7137	5953	3621	7713	No	6.58	Si
SLU 52	ini.	862.53	-234	1.42	0	576	7137	5953	3621	7713	No	32.91	Si
SLU 52	fin.	365.81	-1095	1.42	0	576	7137	5953	3621	7713	No	7.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	871.13	424	-0.0001803	0.0002807	0.0035	1.42		7337.02	7337.02		8.42	Si
SLD 3	fin.	419.48	69	-0.0000843	0.0002807	0.0035	1.42		7337.02	7337.02		17.49	Si
SLD 4	ini.	865.66	420	-0.0001791	0.0002807	0.0035	1.42		7337.02	7337.02		8.48	Si
SLD 4	fin.	416.95	70	-0.0000838	0.0002807	0.0035	1.42		7337.02	7337.02		17.6	Si
SLV 7	ini.	812.32	1197	-0.0001675	0.0002807	0.0035	1.42		7337.02	7337.02		9.03	Si
SLV 7	fin.	710.77	831	-0.0001455	0.0002807	0.0035	1.42		7337.02	7337.02		10.32	Si
SLV 4	ini.	1332.46	1059	-0.0002856	0.0002807	0.0035	1.42		7337.02	7337.02		5.51	Si
SLV 4	fin.	644.59	389	-0.0001314	0.0002807	0.0035	1.42		7337.02	7337.02		11.38	Si
SLD 1	ini.	859.18	156	-0.0001777	0.0002807	0.0035	1.42		7337.02	7337.02		8.54	Si
SLD 1	fin.	323.17	-170	-0.0000646	0.0002807	0.0035	1.42		7337.02	7337.02		22.7	Si
SLV 3	ini.	1345.19	1067	-0.0002886	0.0002807	0.0035	1.42		7337.02	7337.02		5.45	Si
SLV 3	fin.	650.47	388	-0.0001327	0.0002807	0.0035	1.42		7337.02	7337.02		11.28	Si
SLD 2	ini.	853.71	153	-0.0001765	0.0002807	0.0035	1.42		7337.02	7337.02		8.59	Si
SLD 2	fin.	320.64	-169	-0.0000641	0.0002807	0.0035	1.42		7337.02	7337.02		22.88	Si
SLV 8	ini.	804.12	1192	-0.0001657	0.0002807	0.0035	1.42		7337.02	7337.02		9.12	Si
SLV 8	fin.	706.98	832	-0.0001447	0.0002807	0.0035	1.42		7337.02	7337.02		10.38	Si
SLV 2	ini.	1303.84	453	-0.0002788	0.0002807	0.0035	1.42		7337.02	7337.02		5.63	Si
SLV 2	fin.	419.45	-162	-0.0000843	0.0002807	0.0035	1.42		7337.02	7337.02		17.49	Si
SLV 1	ini.	1316.57	461	-0.0002818	0.0002807	0.0035	1.42		7337.02	7337.02		5.57	Si
SLV 1	fin.	425.33	-162	-0.0000855	0.0002807	0.0035	1.42		7337.02	7337.02		17.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-278.96	1659	1.42	0	864	7137	8929	3621	8001		4.82	Si
SLV 16	fin.	69.39	837	1.42	0	864	7137	8929	3621	8001		9.56	Si
SLV 14	ini.	-307.58	1320	1.42	0	864	7137	8929	3621	8001		6.06	Si
SLV 14	fin.	-155.75	416	1.42	0	864	7137	8929	3621	8001		19.23	Si
SLV 4	ini.	1332.46	-1225	1.42	0	864	7137	8929	3621	8001		6.53	Si
SLV 4	fin.	644.59	-1668	1.42	0	864	7137	8929	3621	8001		4.8	Si
SLV 2	ini.	1303.84	-1564	1.42	0	864	7137	8929	3621	8001		5.11	Si
SLV 2	fin.	419.45	-2089	1.42	0	864	7137	8929	3621	8001		3.83	Si
SLV 1	ini.	1316.57	-1579	1.42	0	864	7137	8929	3621	8001		5.07	Si
SLV 1	fin.	425.33	-2103	1.42	0	864	7137	8929	3621	8001		3.8	Si
SLV 3	ini.	1345.19	-1239	1.42	0	864	7137	8929	3621	8001		6.46	Si
SLV 3	fin.	650.47	-1682	1.42	0	864	7137	8929	3621	8001		4.76	Si
SLV 13	ini.	-294.85	1306	1.42	0	864	7137	8929	3621	8001		6.13	Si
SLV 13	fin.	-149.86	402	1.42	0	864	7137	8929	3621	8001		19.9	Si
SLV 15	ini.	-266.22	1645	1.42	0	864	7137	8929	3621	8001		4.86	Si
SLV 15	fin.	75.28	823	1.42	0	864	7137	8929	3621	8001		9.73	Si
SLV 6	ini.	708.71	-953	1.42	0	864	7137	8929	3621	8001		8.39	Si
SLV 6	fin.	-43.49	-1705	1.42	0	864	7137	8929	3621	8001		4.69	Si
SLV 5	ini.	716.92	-962	1.42	0	864	7137	8929	3621	8001		8.31	Si
SLV 5	fin.	-39.7	-1714	1.42	0	864	7137	8929	3621	8001		4.67	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.454	SLV 3	Si
V_SLV	3.805	SLV 1	Si
PF_SLU	7.752	SLU 63	Si
V_SLU	6.431	SLU 63	Si

Trave di accoppiamento 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	5.46	6.36	0.9	-16.818	6.526	5.46	6.36	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	696.45	-2758	-0.0004065	0.0001872	0.0035	0.9		2959	2959	No	4.25	Si
SLU 75	fin.	-37.57	-1905	-0.0000185	0.0001872	0.0035	0.9		2964.67	2964.67	No	78.91	Si
SLU 77	ini.	698.73	-2781	-0.0004081	0.0001872	0.0035	0.9		2959	2959	No	4.23	Si
SLU 77	fin.	-31.34	-1939	-0.0000154	0.0001872	0.0035	0.9		2964.67	2964.67	No	94.58	Si
SLU 80	ini.	693.46	-2748	-0.0004044	0.0001872	0.0035	0.9		2959	2959	No	4.27	Si
SLU 80	fin.	-36.43	-1903	-0.0000179	0.0001872	0.0035	0.9		2964.67	2964.67	No	81.39	Si
SLU 78	ini.	699.8	-2783	-0.0004088	0.0001872	0.0035	0.9		2959	2959	No	4.23	Si
SLU 78	fin.	-32.02	-1939	-0.0000157	0.0001872	0.0035	0.9		2964.67	2964.67	No	92.6	Si
SLU 74	ini.	695.39	-2755	-0.0004058	0.0001872	0.0035	0.9		2959	2959	No	4.26	Si
SLU 74	fin.	-36.9	-1905	-0.0000181	0.0001872	0.0035	0.9		2964.67	2964.67	No	80.35	Si
SLU 82	ini.	711.57	-2812	-0.0004171	0.0001872	0.0035	0.9		2959	2959	No	4.16	Si
SLU 82	fin.	-43.49	-1929	-0.0000214	0.0001872	0.0035	0.9		2964.67	2964.67	No	68.17	Si
SLU 79	ini.	692.4	-2746	-0.0004037	0.0001872	0.0035	0.9		2959	2959	No	4.27	Si
SLU 79	fin.	-35.75	-1903	-0.0000176	0.0001872	0.0035	0.9		2964.67	2964.67	No	82.92	Si
SLU 84	ini.	714.91	-2837	-0.0004194	0.0001872	0.0035	0.9		2959	2959	No	4.14	Si
SLU 84	fin.	-37.93	-1963	-0.0000187	0.0001872	0.0035	0.9		2964.67	2964.67	No	78.15	Si
SLU 81	ini.	710.5	-2809	-0.0004163	0.0001872	0.0035	0.9		2959	2959	No	4.16	Si
SLU 81	fin.	-42.82	-1929	-0.0000211	0.0001872	0.0035	0.9		2964.67	2964.67	No	69.24	Si
SLU 83	ini.	713.84	-2835	-0.0004187	0.0001872	0.0035	0.9		2959	2959	No	4.15	Si
SLU 83	fin.	-37.26	-1963	-0.0000183	0.0001872	0.0035	0.9		2964.67	2964.67	No	79.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	696.45	-2756	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 75	fin.	-37.57	380	0.9	0	365	7137	3773	2295	6068	No	15.97	Si
SLU 77	ini.	698.73	-2774	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 77	fin.	-31.34	418	0.9	0	365	7137	3773	2295	6068	No	14.51	Si
SLU 83	ini.	713.84	-2807	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 83	fin.	-37.26	377	0.9	0	365	7137	3773	2295	6068	No	16.1	Si
SLU 82	ini.	711.57	-2789	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 82	fin.	-43.49	339	0.9	0	365	7137	3773	2295	6068	No	17.93	Si
SLU 81	ini.	710.5	-2784	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 81	fin.	-42.82	340	0.9	0	365	7137	3773	2295	6068	No	17.84	Si
SLU 79	ini.	692.4	-2744	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 79	fin.	-35.75	391	0.9	0	365	7137	3773	2295	6068	No	15.5	Si
SLU 84	ini.	714.91	-2812	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 84	fin.	-37.93	375	0.9	0	365	7137	3773	2295	6068	No	16.17	Si
SLU 74	ini.	695.39	-2751	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 74	fin.	-36.9	381	0.9	0	365	7137	3773	2295	6068	No	15.91	Si
SLU 78	ini.	699.8	-2779	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 78	fin.	-32.02	417	0.9	0	365	7137	3773	2295	6068	No	14.56	Si
SLU 80	ini.	693.46	-2749	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 80	fin.	-36.43	390	0.9	0	365	7137	3773	2295	6068	No	15.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1098.32	-265	-0.0006649	0.0002807	0.0035	0.9		2995.37	2995.37		2.73	Si
SLV 2	fin.	1851.77	-5143	-0.0013311	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLV 4	ini.	-1157.24	-149	-0.0007099	0.0002807	0.0035	0.9		2995.37	2995.37		2.59	Si
SLV 4	fin.	1847.94	-4925	-0.0013271	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLV 13	ini.	2132.27	-3621	-0.0016488	0.0002807	0.0035	0.9		2989.59	2989.59		1.4	Si
SLV 13	fin.	-1936.65	2414	-0.0014177	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 15	ini.	2073.35	-3505	-0.0015771	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLV 15	fin.	-1940.49	2633	-0.0014218	0.0002807	0.0035	0.9		2995.37	2995.37		1.54	Si
SLV 16	ini.	2271.04	-3717	-0.0018312	0.0002807	0.0035	0.9		2989.59	2989.59		1.32	Si
SLV 16	fin.	-2170.44	3083	-0.0016918	0.0002807	0.0035	0.9		2995.37	2995.37		1.38	Si
SLV 3	ini.	-1354.93	63	-0.0008681	0.0002807	0.0035	0.9		2995.37	2995.37		2.21	Si
SLV 3	fin.	2077.89	-5375	-0.0015825	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLD 14	ini.	1275.62	-2719	-0.0008051	0.0002807	0.0035	0.9		2989.59	2989.59		2.34	Si
SLD 14	fin.	-951.84	506	-0.0005576	0.0002807	0.0035	0.9		2995.37	2995.37		3.15	Si
SLV 14	ini.	2329.96	-3833	-0.0019155	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLV 14	fin.	-2166.61	2865	-0.0016869	0.0002807	0.0035	0.9		2995.37	2995.37		1.38	Si
SLD 16	ini.	1249.88	-2668	-0.0007844	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLD 16	fin.	-953.4	600	-0.0005587	0.0002807	0.0035	0.9		2995.37	2995.37		3.14	Si
SLV 1	ini.	-1296.01	-53	-0.0008197	0.0002807	0.0035	0.9		2995.37	2995.37		2.31	Si
SLV 1	fin.	2081.72	-5594	-0.0015871	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	2132.27	-8020	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 13	fin.	-1936.65	-7075	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 2	ini.	-1098.32	3900	0.9	0	548	7137	5660	2295	7684		1.97	Si
SLV 2	fin.	1851.77	7484	0.9	0	548	7137	5660	2295	7684		1.03	Si
SLV 3	ini.	-1354.93	4884	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 3	fin.	2077.89	8325	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 16	ini.	2271.04	-8507	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 16	fin.	-2170.44	-7941	0.9	0	548	7137	5660	2295	7684		0.97	No
SLV 14	ini.	2329.96	-8756	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 14	fin.	-2166.61	-7929	0.9	0	548	7137	5660	2295	7684		0.97	No
SLD 14	ini.	1275.62	-4854	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLD 14	fin.	-951.84	-3278	0.9	0	548	7137	5660	2295	7684		2.34	Si
SLV 15	ini.	2073.35	-7771	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 15	fin.	-1940.49	-7088	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 1	ini.	-1296.01	4636	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 1	fin.	2081.72	8337	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 4	ini.	-1157.24	4148	0.9	0	548	7137	5660	2295	7684		1.85	Si
SLV 4	fin.	1847.94	7472	0.9	0	548	7137	5660	2295	7684		1.03	Si
SLD 16	ini.	1249.88	-4744	0.9	0	548	7137	5660	2295	7684		1.62	Si
SLD 16	fin.	-953.4	-3282	0.9	0	548	7137	5660	2295	7684		2.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.283	SLV 14	Si
V_SLV	0.878	SLV 14	No
PF_SLU	4.139	SLU 84	Si
V_SLU	2.158	SLU 84	Si

Trave di accoppiamento 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.16	8.98	0.82	-16.818	6.526	8.16	8.98	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-30.79	-695	-0.0000182	0.0001872	0.0035	0.82		2460.51	2460.51	No	79.92	Si
SLU 74	fin.	-802.08	-2323	-0.0006034	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.07	Si
SLU 84	ini.	-33.8	-725	-0.00002	0.0001872	0.0035	0.82		2460.51	2460.51	No	72.79	Si
SLU 84	fin.	-826	-2396	-0.0006258	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.98	Si
SLU 77	ini.	-35.24	-718	-0.0000209	0.0001872	0.0035	0.82		2460.51	2460.51	No	69.82	Si
SLU 77	fin.	-807.03	-2350	-0.000608	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.05	Si
SLU 75	ini.	-30.33	-694	-0.000018	0.0001872	0.0035	0.82		2460.51	2460.51	No	81.12	Si
SLU 75	fin.	-803.39	-2326	-0.0006046	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.06	Si
SLU 78	ini.	-34.79	-717	-0.0000206	0.0001872	0.0035	0.82		2460.51	2460.51	No	70.73	Si
SLU 78	fin.	-808.34	-2353	-0.0006093	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.04	Si
SLU 81	ini.	-29.8	-704	-0.0000176	0.0001872	0.0035	0.82		2460.51	2460.51	No	82.56	Si
SLU 81	fin.	-819.74	-2366	-0.0006199	0.0001872	0.0035	0.82		2460.51	2460.51	No	3	Si
SLU 83	ini.	-34.26	-727	-0.0000203	0.0001872	0.0035	0.82		2460.51	2460.51	No	71.82	Si
SLU 83	fin.	-824.69	-2393	-0.0006246	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.98	Si
SLU 82	ini.	-29.35	-703	-0.0000174	0.0001872	0.0035	0.82		2460.51	2460.51	No	83.84	Si
SLU 82	fin.	-821.05	-2369	-0.0006211	0.0001872	0.0035	0.82		2460.51	2460.51	No	3	Si
SLU 79	ini.	-31.55	-694	-0.0000187	0.0001872	0.0035	0.82		2460.51	2460.51	No	77.99	Si
SLU 79	fin.	-798.25	-2315	-0.0005999	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.08	Si
SLU 80	ini.	-31.09	-693	-0.0000184	0.0001872	0.0035	0.82		2460.51	2460.51	No	79.13	Si
SLU 80	fin.	-799.56	-2318	-0.0006011	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-29.35	1408	0.82	0	303	6502	3438	2091	5529	No	3.93	Si
SLU 82	fin.	-821.05	-3704	0.82	0	303	6502	3438	2091	5529	No	1.49	Si
SLU 83	ini.	-34.26	1446	0.82	0	303	6502	3438	2091	5529	No	3.82	Si
SLU 83	fin.	-824.69	-3727	0.82	0	303	6502	3438	2091	5529	No	1.48	Si
SLU 81	ini.	-29.8	1410	0.82	0	303	6502	3438	2091	5529	No	3.92	Si
SLU 81	fin.	-819.74	-3699	0.82	0	303	6502	3438	2091	5529	No	1.49	Si
SLU 74	ini.	-30.79	1378	0.82	0	303	6502	3438	2091	5529	No	4.01	Si
SLU 74	fin.	-802.08	-3619	0.82	0	303	6502	3438	2091	5529	No	1.53	Si
SLU 80	ini.	-31.09	1377	0.82	0	303	6502	3438	2091	5529	No	4.02	Si
SLU 80	fin.	-799.56	-3611	0.82	0	303	6502	3438	2091	5529	No	1.53	Si
SLU 75	ini.	-30.33	1377	0.82	0	303	6502	3438	2091	5529	No	4.02	Si
SLU 75	fin.	-803.39	-3624	0.82	0	303	6502	3438	2091	5529	No	1.53	Si
SLU 78	ini.	-34.79	1413	0.82	0	303	6502	3438	2091	5529	No	3.91	Si
SLU 78	fin.	-808.34	-3652	0.82	0	303	6502	3438	2091	5529	No	1.51	Si
SLU 79	ini.	-31.55	1378	0.82	0	303	6502	3438	2091	5529	No	4.01	Si
SLU 79	fin.	-798.25	-3606	0.82	0	303	6502	3438	2091	5529	No	1.53	Si
SLU 84	ini.	-33.8	1445	0.82	0	303	6502	3438	2091	5529	No	3.83	Si
SLU 84	fin.	-826	-3732	0.82	0	303	6502	3438	2091	5529	No	1.48	Si
SLU 77	ini.	-35.24	1415	0.82	0	303	6502	3438	2091	5529	No	3.91	Si
SLU 77	fin.	-807.03	-3647	0.82	0	303	6502	3438	2091	5529	No	1.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	1100.67	3406	-0.0008463	0.0002807	0.0035	0.82		2482.11	2482.11		2.26	Si
SLV 13	fin.	-2043.04	-3081	-0.0021127	0.0002807	0.0035	0.82		2487.45	2487.45		1.22	Si
SLV 14	ini.	1233.02	3869	-0.000982	0.0002807	0.0035	0.82		2482.11	2482.11		2.01	Si
SLV 14	fin.	-2222.4	-3267	-0.0025053	0.0002807	0.0035	0.82		2487.45	2487.45		1.12	Si
SLD 16	ini.	507.32	1430	-0.0003321	0.0002807	0.0035	0.82		2482.11	2482.11		4.89	Si
SLD 16	fin.	-1234.11	-2230	-0.0009805	0.0002807	0.0035	0.82		2487.45	2487.45		2.02	Si
SLV 16	ini.	1193.08	3884	-0.0009401	0.0002807	0.0035	0.82		2482.11	2482.11		2.08	Si
SLV 16	fin.	-2143.09	-3122	-0.0023222	0.0002807	0.0035	0.82		2487.45	2487.45		1.16	Si
SLV 3	ini.	-1242.19	-4676	-0.0009891	0.0002807	0.0035	0.82		2487.45	2487.45		2	Si
SLV 3	fin.	1110.68	135	-0.0008563	0.0002807	0.0035	0.82		2482.11	2482.11		2.23	Si
SLV 10	ini.	450.08	935	-0.0002903	0.0002807	0.0035	0.82		2482.11	2482.11		5.51	Si
SLV 10	fin.	-1207.01	-2328	-0.0009521	0.0002807	0.0035	0.82		2487.45	2487.45		2.06	Si
SLV 1	ini.	-1202.24	-4691	-0.0009471	0.0002807	0.0035	0.82		2487.45	2487.45		2.07	Si
SLV 1	fin.	1031.37	-10	-0.0007786	0.0002807	0.0035	0.82		2482.11	2482.11		2.41	Si
SLD 14	ini.	524.9	1423	-0.0003452	0.0002807	0.0035	0.82		2482.11	2482.11		4.73	Si
SLD 14	fin.	-1268.96	-2294	-0.0010176	0.0002807	0.0035	0.82		2487.45	2487.45		1.96	Si
SLD 13	ini.	468.07	1225	-0.0003033	0.0002807	0.0035	0.82		2482.11	2482.11		5.3	Si
SLD 13	fin.	-1191.95	-2215	-0.0009365	0.0002807	0.0035	0.82		2487.45	2487.45		2.09	Si
SLV 15	ini.	1060.72	3421	-0.000807	0.0002807	0.0035	0.82		2482.11	2482.11		2.34	Si
SLV 15	fin.	-1963.72	-2936	-0.0019621	0.0002807	0.0035	0.82		2487.45	2487.45		1.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1109.83	6647	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 4	fin.	931.32	2511	0.82	0	455	6502	5156	2091	6957		2.77	Si
SLV 2	ini.	-1069.89	6685	0.82	0	455	6502	5156	2091	6957		1.04	Si
SLV 2	fin.	852	2233	0.82	0	455	6502	5156	2091	6957		3.12	Si
SLV 1	ini.	-1202.24	7396	0.82	0	455	6502	5156	2091	6957		0.94	No
SLV 1	fin.	1031.37	2840	0.82	0	455	6502	5156	2091	6957		2.45	Si
SLV 14	ini.	1233.02	-5705	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 14	fin.	-2222.4	-8099	0.82	0	455	6502	5156	2091	6957		0.86	No
SLV 15	ini.	1060.72	-5032	0.82	0	455	6502	5156	2091	6957		1.38	Si
SLV 15	fin.	-1963.72	-7214	0.82	0	455	6502	5156	2091	6957		0.96	No
SLD 14	ini.	524.9	-1967	0.82	0	455	6502	5156	2091	6957		3.54	Si
SLD 14	fin.	-1268.96	-4891	0.82	0	455	6502	5156	2091	6957		1.42	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	507.32	-1983	0.82	0	455	6502	5156	2091	6957		3.51	Si
SLD 16	fin.	-1234.11	-4768	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 3	ini.	-1242.19	7358	0.82	0	455	6502	5156	2091	6957		0.95	No
SLV 3	fin.	1110.68	3118	0.82	0	455	6502	5156	2091	6957		2.23	Si
SLV 13	ini.	1100.67	-4994	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 13	fin.	-2043.04	-7492	0.82	0	455	6502	5156	2091	6957		0.93	No
SLV 16	ini.	1193.08	-5743	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 16	fin.	-2143.09	-7822	0.82	0	455	6502	5156	2091	6957		0.89	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.119	SLV 14	Si
V_SLV	0.859	SLV 14	No
PF_SLU	2.979	SLU 84	Si
V_SLU	1.482	SLU 84	Si

Trave di accoppiamento 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	5.46	6.36	0.9	-11.938	6.526	5.46	6.36	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	808.55	-3899	-0.0004864	0.0001872	0.0035	0.9		2959	2959	No	3.66	Si
SLU 84	fin.	301.55	-3238	-0.0001573	0.0001872	0.0035	0.9		2959	2959	No	9.81	Si
SLU 79	ini.	774.84	-3770	-0.000462	0.0001872	0.0035	0.9		2959	2959	No	3.82	Si
SLU 79	fin.	304.36	-3164	-0.0001589	0.0001872	0.0035	0.9		2959	2959	No	9.72	Si
SLU 80	ini.	775.55	-3774	-0.0004625	0.0001872	0.0035	0.9		2959	2959	No	3.82	Si
SLU 80	fin.	304.59	-3167	-0.000159	0.0001872	0.0035	0.9		2959	2959	No	9.71	Si
SLU 74	ini.	781.22	-3780	-0.0004666	0.0001872	0.0035	0.9		2959	2959	No	3.79	Si
SLU 74	fin.	298.02	-3153	-0.0001554	0.0001872	0.0035	0.9		2959	2959	No	9.93	Si
SLU 77	ini.	787.02	-3824	-0.0004707	0.0001872	0.0035	0.9		2959	2959	No	3.76	Si
SLU 77	fin.	307.79	-3205	-0.0001608	0.0001872	0.0035	0.9		2959	2959	No	9.61	Si
SLU 82	ini.	802.75	-3855	-0.0004821	0.0001872	0.0035	0.9		2959	2959	No	3.69	Si
SLU 82	fin.	291.78	-3186	-0.0001519	0.0001872	0.0035	0.9		2959	2959	No	10.14	Si
SLU 83	ini.	807.84	-3896	-0.0004859	0.0001872	0.0035	0.9		2959	2959	No	3.66	Si
SLU 83	fin.	301.31	-3236	-0.0001572	0.0001872	0.0035	0.9		2959	2959	No	9.82	Si
SLU 81	ini.	802.04	-3852	-0.0004816	0.0001872	0.0035	0.9		2959	2959	No	3.69	Si
SLU 81	fin.	291.55	-3184	-0.0001517	0.0001872	0.0035	0.9		2959	2959	No	10.15	Si
SLU 75	ini.	781.93	-3783	-0.0004671	0.0001872	0.0035	0.9		2959	2959	No	3.78	Si
SLU 75	fin.	298.25	-3155	-0.0001555	0.0001872	0.0035	0.9		2959	2959	No	9.92	Si
SLU 78	ini.	787.73	-3827	-0.0004713	0.0001872	0.0035	0.9		2959	2959	No	3.76	Si
SLU 78	fin.	308.02	-3208	-0.000161	0.0001872	0.0035	0.9		2959	2959	No	9.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	802.04	-2749	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 81	fin.	291.55	984	0.9	0	365	7137	3773	2295	6068	No	6.16	Si
SLU 82	ini.	802.75	-2752	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 82	fin.	291.78	985	0.9	0	365	7137	3773	2295	6068	No	6.16	Si
SLU 84	ini.	808.55	-2779	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 84	fin.	301.55	1030	0.9	0	365	7137	3773	2295	6068	No	5.89	Si
SLU 80	ini.	775.55	-2683	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 80	fin.	304.59	1065	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 78	ini.	787.73	-2729	0.9	0	365	7137	3773	2295	6068	No	2.22	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	308.02	1080	0.9	0	365	7137	3773	2295	6068	No	5.62	Si
SLU 77	ini.	787.02	-2726	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 77	fin.	307.79	1079	0.9	0	365	7137	3773	2295	6068	No	5.62	Si
SLU 75	ini.	781.93	-2701	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 75	fin.	298.25	1035	0.9	0	365	7137	3773	2295	6068	No	5.86	Si
SLU 79	ini.	774.84	-2681	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 79	fin.	304.36	1065	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 83	ini.	807.84	-2776	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 83	fin.	301.31	1029	0.9	0	365	7137	3773	2295	6068	No	5.9	Si
SLU 74	ini.	781.22	-2699	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 74	fin.	298.02	1035	0.9	0	365	7137	3773	2295	6068	No	5.87	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	3097.95	-6306	-0.0034913	0.0002807	0.0035	0.9		2989.59	2989.59		0.97	No
SLV 16	fin.	-2425.95	2274	-0.0020557	0.0002807	0.0035	0.9		2995.37	2995.37		1.23	Si
SLV 3	ini.	-2120.04	1471	-0.0016289	0.0002807	0.0035	0.9		2995.37	2995.37		1.41	Si
SLV 3	fin.	2825.48	-6306	-0.0028344	0.0002807	0.0035	0.9		2989.59	2989.59		1.06	Si
SLV 14	ini.	3171.53	-6584	-0.0036602	0.0002807	0.0035	0.9		2989.59	2989.59		0.94	No
SLV 14	fin.	-2416.25	2021	-0.0020404	0.0002807	0.0035	0.9		2995.37	2995.37		1.24	Si
SLV 13	ini.	2929.96	-6221	-0.0030844	0.0002807	0.0035	0.9		2989.59	2989.59		1.02	Si
SLV 13	fin.	-2173.88	1625	-0.0016962	0.0002807	0.0035	0.9		2995.37	2995.37		1.38	Si
SLV 4	ini.	-1878.47	1108	-0.0013555	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLV 4	fin.	2583.11	-5910	-0.0023336	0.0002807	0.0035	0.9		2989.59	2989.59		1.16	Si
SLV 15	ini.	2856.38	-5942	-0.0029064	0.0002807	0.0035	0.9		2989.59	2989.59		1.05	Si
SLV 15	fin.	-2183.58	1877	-0.0017086	0.0002807	0.0035	0.9		2995.37	2995.37		1.37	Si
SLD 14	ini.	1657.09	-4280	-0.0011382	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLD 14	fin.	-915.67	-363	-0.000532	0.0002807	0.0035	0.9		2995.37	2995.37		3.27	Si
SLV 1	ini.	-2046.46	1193	-0.0015411	0.0002807	0.0035	0.9		2995.37	2995.37		1.46	Si
SLV 1	fin.	2835.18	-6559	-0.0028568	0.0002807	0.0035	0.9		2989.59	2989.59		1.05	Si
SLV 2	ini.	-1804.89	829	-0.0012796	0.0002807	0.0035	0.9		2995.37	2995.37		1.66	Si
SLV 2	fin.	2592.81	-6162	-0.0023516	0.0002807	0.0035	0.9		2989.59	2989.59		1.15	Si
SLD 16	ini.	1624.99	-4158	-0.0011081	0.0002807	0.0035	0.9		2989.59	2989.59		1.84	Si
SLD 16	fin.	-919.86	-254	-0.0005349	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-2046.46	7779	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 1	fin.	2835.18	10676	0.9	0	548	7137	5660	2295	7684		0.72	No
SLD 14	ini.	1657.09	-6024	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLD 14	fin.	-915.67	-3518	0.9	0	548	7137	5660	2295	7684		2.18	Si
SLV 2	ini.	-1804.89	6883	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 2	fin.	2592.81	9758	0.9	0	548	7137	5660	2295	7684		0.79	No
SLV 16	ini.	3097.95	-11426	0.9	0	548	7137	5660	2295	7684		0.67	No
SLV 16	fin.	-2425.95	-9236	0.9	0	548	7137	5660	2295	7684		0.83	No
SLV 14	ini.	3171.53	-11646	0.9	0	548	7137	5660	2295	7684		0.66	No
SLV 14	fin.	-2416.25	-9194	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 3	ini.	-2120.04	7999	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 3	fin.	2825.48	10634	0.9	0	548	7137	5660	2295	7684		0.72	No
SLD 16	ini.	1624.99	-5927	0.9	0	548	7137	5660	2295	7684		1.3	Si
SLD 16	fin.	-919.86	-3536	0.9	0	548	7137	5660	2295	7684		2.17	Si
SLV 15	ini.	2856.38	-10530	0.9	0	548	7137	5660	2295	7684		0.73	No
SLV 15	fin.	-2183.58	-8318	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 13	ini.	2929.96	-10751	0.9	0	548	7137	5660	2295	7684		0.71	No
SLV 13	fin.	-2173.88	-8275	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 4	ini.	-1878.47	7104	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 4	fin.	2583.11	9715	0.9	0	548	7137	5660	2295	7684		0.79	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.943	SLV 14	No
V_SLV	0.66	SLV 14	No
PF_SLU	3.66	SLU 84	Si
V_SLU	2.184	SLU 84	Si

Trave di accoppiamento 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.16	8.98	0.82	-11.938	6.526	8.16	8.98	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-433.57	-2374	-0.0002893	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.68	Si
SLU 83	fin.	-693.32	-2998	-0.0005047	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 75	ini.	-423.01	-2311	-0.0002812	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.82	Si
SLU 75	fin.	-669.02	-2905	-0.0004834	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.68	Si
SLU 80	ini.	-427.46	-2324	-0.0002847	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.76	Si
SLU 80	fin.	-663.13	-2897	-0.0004782	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.71	Si
SLU 79	ini.	-427.18	-2322	-0.0002844	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.76	Si
SLU 79	fin.	-662.44	-2894	-0.0004776	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.71	Si
SLU 81	ini.	-423.18	-2326	-0.0002814	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.81	Si
SLU 81	fin.	-688.24	-2959	-0.0005003	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.58	Si
SLU 78	ini.	-433.39	-2359	-0.0002892	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.68	Si
SLU 78	fin.	-674.09	-2944	-0.0004878	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.65	Si
SLU 77	ini.	-433.11	-2357	-0.000289	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.68	Si
SLU 77	fin.	-673.41	-2941	-0.0004872	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.65	Si
SLU 84	ini.	-433.85	-2376	-0.0002896	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.67	Si
SLU 84	fin.	-694.01	-3001	-0.0005054	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 82	ini.	-423.46	-2327	-0.0002816	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.81	Si
SLU 82	fin.	-688.93	-2962	-0.0005009	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.57	Si
SLU 74	ini.	-422.73	-2309	-0.000281	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.82	Si
SLU 74	fin.	-668.33	-2902	-0.0004828	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-427.18	2853	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 79	fin.	-662.44	-3089	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 84	ini.	-433.85	2915	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 84	fin.	-694.01	-3225	0.82	0	303	6502	3438	2091	5529	No	1.71	Si
SLU 78	ini.	-433.39	2893	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 78	fin.	-674.09	-3139	0.82	0	303	6502	3438	2091	5529	No	1.76	Si
SLU 83	ini.	-433.57	2914	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 83	fin.	-693.32	-3222	0.82	0	303	6502	3438	2091	5529	No	1.72	Si
SLU 75	ini.	-423.01	2829	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 75	fin.	-669.02	-3110	0.82	0	303	6502	3438	2091	5529	No	1.78	Si
SLU 80	ini.	-427.46	2854	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 80	fin.	-663.13	-3092	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 81	ini.	-423.18	2849	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 81	fin.	-688.24	-3193	0.82	0	303	6502	3438	2091	5529	No	1.73	Si
SLU 82	ini.	-423.46	2851	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 82	fin.	-688.93	-3196	0.82	0	303	6502	3438	2091	5529	No	1.73	Si
SLU 77	ini.	-433.11	2892	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 77	fin.	-673.41	-3136	0.82	0	303	6502	3438	2091	5529	No	1.76	Si
SLU 74	ini.	-422.73	2827	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 74	fin.	-668.33	-3107	0.82	0	303	6502	3438	2091	5529	No	1.78	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1840.52	-6362	-0.0017525	0.0002807	0.0035	0.82		2487.45	2487.45		1.35	Si
SLV 2	fin.	1629.46	978	-0.0014508	0.0002807	0.0035	0.82		2482.11	2482.11		1.52	Si
SLV 1	ini.	-1996.37	-6840	-0.0020225	0.0002807	0.0035	0.82		2487.45	2487.45		1.25	Si
SLV 1	fin.	1842.16	1283	-0.001761	0.0002807	0.0035	0.82		2482.11	2482.11		1.35	Si
SLD 14	ini.	441.53	663	-0.0002842	0.0002807	0.0035	0.82		2482.11	2482.11		5.62	Si
SLD 14	fin.	-1453.45	-3395	-0.0012257	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLV 13	ini.	1255.53	3137	-0.0010059	0.0002807	0.0035	0.82		2482.11	2482.11		1.98	Si
SLV 13	fin.	-2590.21	-5046	-0.00353	0.0002807	0.0035	0.82		2487.45	2487.45		0.96	No
SLV 4	ini.	-1820.6	-6217	-0.001721	0.0002807	0.0035	0.82		2487.45	2487.45		1.37	Si
SLV 4	fin.	1699.68	1181	-0.0015471	0.0002807	0.0035	0.82		2482.11	2482.11		1.46	Si
SLV 16	ini.	1431.3	3760	-0.001203	0.0002807	0.0035	0.82		2482.11	2482.11		1.73	Si
SLV 16	fin.	-2732.69	-5148	-0.0039112	0.0002807	0.0035	0.82		2487.45	2487.45		0.91	No
SLD 16	ini.	450.1	726	-0.0002904	0.0002807	0.0035	0.82		2482.11	2482.11		5.51	Si
SLD 16	fin.	-1422.8	-3306	-0.0011897	0.0002807	0.0035	0.82		2487.45	2487.45		1.75	Si
SLV 14	ini.	1411.38	3615	-0.0011797	0.0002807	0.0035	0.82		2482.11	2482.11		1.76	Si
SLV 14	fin.	-2802.91	-5351	-0.0040895	0.0002807	0.0035	0.82		2487.45	2487.45		0.89	No
SLV 15	ini.	1275.45	3282	-0.0010274	0.0002807	0.0035	0.82		2482.11	2482.11		1.95	Si
SLV 15	fin.	-2519.99	-4844	-0.0033297	0.0002807	0.0035	0.82		2487.45	2487.45		0.99	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1976.45	-6695	-0.0019854	0.0002807	0.0035	0.82		2487.45	2487.45		1.26	Si
SLV 3	fin.	1912.38	1485	-0.001878	0.0002807	0.0035	0.82		2482.11	2482.11		1.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1275.45	-5874	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 15	fin.	-2519.99	-9504	0.82	0	455	6502	5156	2091	6957		0.73	No
SLD 14	ini.	441.53	-1731	0.82	0	455	6502	5156	2091	6957		4.02	Si
SLD 14	fin.	-1453.45	-5677	0.82	0	455	6502	5156	2091	6957		1.23	Si
SLV 13	ini.	1255.53	-5784	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 13	fin.	-2590.21	-9739	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 2	ini.	-1840.52	9630	0.82	0	455	6502	5156	2091	6957		0.72	No
SLV 2	fin.	1629.46	5358	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 1	ini.	-1996.37	10411	0.82	0	455	6502	5156	2091	6957		0.67	No
SLV 1	fin.	1842.16	6120	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 4	ini.	-1820.6	9539	0.82	0	455	6502	5156	2091	6957		0.73	No
SLV 4	fin.	1699.68	5593	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 14	ini.	1411.38	-6565	0.82	0	455	6502	5156	2091	6957		1.06	Si
SLV 14	fin.	-2802.91	-10501	0.82	0	455	6502	5156	2091	6957		0.66	No
SLV 16	ini.	1431.3	-6655	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 16	fin.	-2732.69	-10266	0.82	0	455	6502	5156	2091	6957		0.68	No
SLV 3	ini.	-1976.45	10320	0.82	0	455	6502	5156	2091	6957		0.67	No
SLV 3	fin.	1912.38	6354	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLD 16	ini.	450.1	-1770	0.82	0	455	6502	5156	2091	6957		3.93	Si
SLD 16	fin.	-1422.8	-5574	0.82	0	455	6502	5156	2091	6957		1.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.887	SLV 14	No
V_SLV	0.663	SLV 14	No
PF_SLU	3.545	SLU 84	Si
V_SLU	1.714	SLU 84	Si

Trave di accoppiamento 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	5.46	6.36	0.9	-7.058	6.526	5.46	6.36	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-38.04	-2025	-0.0000187	0.0001872	0.0035	0.9		2964.67	2964.67	No	77.93	Si
SLU 75	fin.	764.75	-2980	-0.0004547	0.0001872	0.0035	0.9		2959	2959	No	3.87	Si
SLU 76	ini.	-42.33	-1993	-0.0000208	0.0001872	0.0035	0.9		2964.67	2964.67	No	70.04	Si
SLU 76	fin.	759.34	-2950	-0.0004509	0.0001872	0.0035	0.9		2959	2959	No	3.9	Si
SLU 74	ini.	-37.63	-2023	-0.0000185	0.0001872	0.0035	0.9		2964.67	2964.67	No	78.79	Si
SLU 74	fin.	763.04	-2974	-0.0004535	0.0001872	0.0035	0.9		2959	2959	No	3.88	Si
SLU 81	ini.	-46.1	-2039	-0.0000227	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.31	Si
SLU 81	fin.	778.58	-3023	-0.0004647	0.0001872	0.0035	0.9		2959	2959	No	3.8	Si
SLU 77	ini.	-28.21	-2068	-0.0000138	0.0001872	0.0035	0.9		2964.67	2964.67	No	105.1	Si
SLU 77	fin.	765.39	-3005	-0.0004552	0.0001872	0.0035	0.9		2959	2959	No	3.87	Si
SLU 83	ini.	-36.68	-2084	-0.000018	0.0001872	0.0035	0.9		2964.67	2964.67	No	80.82	Si
SLU 83	fin.	780.93	-3053	-0.0004664	0.0001872	0.0035	0.9		2959	2959	No	3.79	Si
SLU 82	ini.	-46.52	-2041	-0.0000229	0.0001872	0.0035	0.9		2964.67	2964.67	No	63.73	Si
SLU 82	fin.	780.29	-3028	-0.0004659	0.0001872	0.0035	0.9		2959	2959	No	3.79	Si
SLU 80	ini.	-32.63	-2036	-0.000016	0.0001872	0.0035	0.9		2964.67	2964.67	No	90.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	760.55	-2976	-0.0004517	0.0001872	0.0035	0.9		2959	2959	No	3.89	Si
SLU 84	ini.	-37.09	-2086	-0.0000182	0.0001872	0.0035	0.9		2964.67	2964.67	No	79.92	Si
SLU 84	fin.	782.63	-3058	-0.0004676	0.0001872	0.0035	0.9		2959	2959	No	3.78	Si
SLU 78	ini.	-28.62	-2070	-0.0000141	0.0001872	0.0035	0.9		2964.67	2964.67	No	103.58	Si
SLU 78	fin.	767.1	-3010	-0.0004564	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-46.1	-223	0.9	0	365	7137	3773	2295	6068	No	27.18	Si
SLU 81	fin.	778.58	2941	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 77	ini.	-28.21	-323	0.9	0	365	7137	3773	2295	6068	No	18.81	Si
SLU 77	fin.	765.39	2927	0.9	0	365	7137	3773	2295	6068	No	2.07	Si
SLU 79	ini.	-32.21	-298	0.9	0	365	7137	3773	2295	6068	No	20.35	Si
SLU 79	fin.	758.85	2897	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 82	ini.	-46.52	-222	0.9	0	365	7137	3773	2295	6068	No	27.36	Si
SLU 82	fin.	780.29	2947	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 84	ini.	-37.09	-271	0.9	0	365	7137	3773	2295	6068	No	22.37	Si
SLU 84	fin.	782.63	2966	0.9	0	365	7137	3773	2295	6068	No	2.05	Si
SLU 80	ini.	-32.63	-297	0.9	0	365	7137	3773	2295	6068	No	20.46	Si
SLU 80	fin.	760.55	2904	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 75	ini.	-38.04	-272	0.9	0	365	7137	3773	2295	6068	No	22.35	Si
SLU 75	fin.	764.75	2914	0.9	0	365	7137	3773	2295	6068	No	2.08	Si
SLU 78	ini.	-28.62	-321	0.9	0	365	7137	3773	2295	6068	No	18.9	Si
SLU 78	fin.	767.1	2933	0.9	0	365	7137	3773	2295	6068	No	2.07	Si
SLU 74	ini.	-37.63	-273	0.9	0	365	7137	3773	2295	6068	No	22.23	Si
SLU 74	fin.	763.04	2908	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 83	ini.	-36.68	-273	0.9	0	365	7137	3773	2295	6068	No	22.24	Si
SLU 83	fin.	780.93	2960	0.9	0	365	7137	3773	2295	6068	No	2.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	2148.95	-5308	-0.0016696	0.0002807	0.0035	0.9		2989.59	2989.59		1.39	Si
SLV 13	fin.	-1514.61	580	-0.0010051	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 14	ini.	2397.59	-5738	-0.0020179	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si
SLV 14	fin.	-1749.94	909	-0.0012248	0.0002807	0.0035	0.9		2995.37	2995.37		1.71	Si
SLD 1	ini.	-1091.73	404	-0.00066	0.0002807	0.0035	0.9		2995.37	2995.37		2.74	Si
SLD 1	fin.	1546.52	-3547	-0.0010362	0.0002807	0.0035	0.9		2989.59	2989.59		1.93	Si
SLV 3	ini.	-2494.51	3066	-0.0021685	0.0002807	0.0035	0.9		2995.37	2995.37		1.2	Si
SLV 3	fin.	2830.24	-5013	-0.0028453	0.0002807	0.0035	0.9		2989.59	2989.59		1.06	Si
SLV 2	ini.	-2241.06	2309	-0.0017844	0.0002807	0.0035	0.9		2995.37	2995.37		1.34	Si
SLV 2	fin.	2659.13	-5215	-0.0024791	0.0002807	0.0035	0.9		2989.59	2989.59		1.12	Si
SLV 4	ini.	-2245.88	2636	-0.0017909	0.0002807	0.0035	0.9		2995.37	2995.37		1.33	Si
SLV 4	fin.	2594.91	-4684	-0.0023555	0.0002807	0.0035	0.9		2989.59	2989.59		1.15	Si
SLV 1	ini.	-2489.69	2738	-0.0021603	0.0002807	0.0035	0.9		2995.37	2995.37		1.2	Si
SLV 1	fin.	2894.46	-5544	-0.0029977	0.0002807	0.0035	0.9		2989.59	2989.59		1.03	Si
SLD 3	ini.	-1093.61	546	-0.0006614	0.0002807	0.0035	0.9		2995.37	2995.37		2.74	Si
SLD 3	fin.	1518.27	-3315	-0.0010109	0.0002807	0.0035	0.9		2989.59	2989.59		1.97	Si
SLV 15	ini.	2144.13	-4981	-0.0016636	0.0002807	0.0035	0.9		2989.59	2989.59		1.39	Si
SLV 15	fin.	-1578.82	1111	-0.0010628	0.0002807	0.0035	0.9		2995.37	2995.37		1.9	Si
SLV 16	ini.	2392.77	-5410	-0.0020104	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si
SLV 16	fin.	-1814.16	1440	-0.001289	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1093.61	3856	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLD 3	fin.	1518.27	5670	0.9	0	548	7137	5660	2295	7684		1.36	Si
SLV 1	ini.	-2489.69	9183	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 1	fin.	2894.46	10937	0.9	0	548	7137	5660	2295	7684		0.7	No
SLV 2	ini.	-2241.06	8259	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 2	fin.	2659.13	10048	0.9	0	548	7137	5660	2295	7684		0.76	No
SLV 15	ini.	2144.13	-8472	0.9	0	548	7137	5660	2295	7684		0.91	No
SLV 15	fin.	-1578.82	-5917	0.9	0	548	7137	5660	2295	7684		1.3	Si
SLV 4	ini.	-2245.88	8243	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 4	fin.	2594.91	9618	0.9	0	548	7137	5660	2295	7684		0.8	No
SLD 1	ini.	-1091.73	3864	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLD 1	fin.	1546.52	5859	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 14	ini.	2397.59	-9378	0.9	0	548	7137	5660	2295	7684		0.82	No
SLV 14	fin.	-1749.94	-6378	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 13	ini.	2148.95	-8455	0.9	0	548	7137	5660	2295	7684		0.91	No
SLV 13	fin.	-1514.61	-5488	0.9	0	548	7137	5660	2295	7684		1.4	Si
SLV 3	ini.	-2494.51	9166	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 3	fin.	2830.24	10508	0.9	0	548	7137	5660	2295	7684		0.73	No
SLV 16	ini.	2392.77	-9395	0.9	0	548	7137	5660	2295	7684		0.82	No
SLV 16	fin.	-1814.16	-6807	0.9	0	548	7137	5660	2295	7684		1.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.033	SLV 1	Si
V_SLV	0.703	SLV 1	No
PF_SLU	3.781	SLU 84	Si
V_SLU	2.046	SLU 84	Si

Trave di accoppiamento 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.16	8.98	0.82	-7.058	6.526	8.16	8.98	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-756.03	-3120	-0.000561	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.25	Si
SLU 83	fin.	-52.03	-1010	-0.000031	0.0001872	0.0035	0.82		2460.51	2460.51	No	47.29	Si
SLU 78	ini.	-742.87	-3075	-0.0005491	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.31	Si
SLU 78	fin.	-55.34	-1012	-0.000033	0.0001872	0.0035	0.82		2460.51	2460.51	No	44.46	Si
SLU 82	ini.	-752.66	-3091	-0.000558	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.27	Si
SLU 82	fin.	-42.51	-976	-0.0000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	57.88	Si
SLU 74	ini.	-736.42	-3034	-0.0005433	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.34	Si
SLU 74	fin.	-46.11	-974	-0.0000274	0.0001872	0.0035	0.82		2460.51	2460.51	No	53.36	Si
SLU 80	ini.	-734.84	-3035	-0.0005418	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.35	Si
SLU 80	fin.	-50.95	-988	-0.0000303	0.0001872	0.0035	0.82		2460.51	2460.51	No	48.29	Si
SLU 79	ini.	-733.3	-3029	-0.0005405	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.36	Si
SLU 79	fin.	-51.1	-986	-0.0000304	0.0001872	0.0035	0.82		2460.51	2460.51	No	48.16	Si
SLU 75	ini.	-737.96	-3040	-0.0005447	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.33	Si
SLU 75	fin.	-45.97	-976	-0.0000273	0.0001872	0.0035	0.82		2460.51	2460.51	No	53.53	Si
SLU 81	ini.	-751.12	-3085	-0.0005566	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.28	Si
SLU 81	fin.	-42.66	-975	-0.0000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	57.68	Si
SLU 84	ini.	-757.57	-3126	-0.0005624	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.25	Si
SLU 84	fin.	-51.89	-1012	-0.0000309	0.0001872	0.0035	0.82		2460.51	2460.51	No	47.42	Si
SLU 77	ini.	-741.33	-3069	-0.0005477	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.32	Si
SLU 77	fin.	-55.49	-1010	-0.0000331	0.0001872	0.0035	0.82		2460.51	2460.51	No	44.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-737.96	4716	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 75	fin.	-45.97	-824	0.82	0	303	6502	3438	2091	5529	No	6.71	Si
SLU 74	ini.	-736.42	4709	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 74	fin.	-46.11	-824	0.82	0	303	6502	3438	2091	5529	No	6.71	Si
SLU 77	ini.	-741.33	4751	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 77	fin.	-55.49	-867	0.82	0	303	6502	3438	2091	5529	No	6.38	Si
SLU 81	ini.	-751.12	4810	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 81	fin.	-42.66	-827	0.82	0	303	6502	3438	2091	5529	No	6.68	Si
SLU 84	ini.	-757.57	4858	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 84	fin.	-51.89	-870	0.82	0	303	6502	3438	2091	5529	No	6.36	Si
SLU 80	ini.	-734.84	4704	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 80	fin.	-50.95	-844	0.82	0	303	6502	3438	2091	5529	No	6.55	Si
SLU 83	ini.	-756.03	4851	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 83	fin.	-52.03	-870	0.82	0	303	6502	3438	2091	5529	No	6.35	Si
SLU 79	ini.	-733.3	4697	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 79	fin.	-51.1	-844	0.82	0	303	6502	3438	2091	5529	No	6.55	Si
SLU 82	ini.	-752.66	4817	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 82	fin.	-42.51	-827	0.82	0	303	6502	3438	2091	5529	No	6.69	Si
SLU 78	ini.	-742.87	4758	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 78	fin.	-55.34	-866	0.82	0	303	6502	3438	2091	5529	No	6.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1212.2	-3595	-0.0009575	0.0002807	0.0035	0.82		2487.45	2487.45		2.05	Si
SLD 3	fin.	831.15	1170	-0.0005946	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLV 15	ini.	1046.26	1553	-0.000793	0.0002807	0.0035	0.82		2482.11	2482.11		2.37	Si
SLV 15	fin.	-1741.84	-4073	-0.0016024	0.0002807	0.0035	0.82		2487.45	2487.45		1.43	Si
SLV 14	ini.	1131.63	1518	-0.0008773	0.0002807	0.0035	0.82		2482.11	2482.11		2.19	Si
SLV 14	fin.	-1969.69	-4750	-0.001973	0.0002807	0.0035	0.82		2487.45	2487.45		1.26	Si
SLV 2	ini.	-2068.13	-5686	-0.0021631	0.0002807	0.0035	0.82		2487.45	2487.45		1.2	Si
SLV 2	fin.	1727.18	2867	-0.0015863	0.0002807	0.0035	0.82		2482.11	2482.11		1.44	Si
SLD 1	ini.	-1250.41	-3779	-0.0009978	0.0002807	0.0035	0.82		2487.45	2487.45		1.99	Si
SLD 1	fin.	820.36	1060	-0.0005851	0.0002807	0.0035	0.82		2482.11	2482.11		3.03	Si
SLV 1	ini.	-2240.3	-6071	-0.0025488	0.0002807	0.0035	0.82		2487.45	2487.45		1.11	Si
SLV 1	fin.	1929.31	3288	-0.0019075	0.0002807	0.0035	0.82		2482.11	2482.11		1.29	Si
SLV 16	ini.	1218.44	1938	-0.0009666	0.0002807	0.0035	0.82		2482.11	2482.11		2.04	Si
SLV 16	fin.	-1943.97	-4494	-0.0019266	0.0002807	0.0035	0.82		2487.45	2487.45		1.28	Si
SLV 13	ini.	959.46	1133	-0.0007106	0.0002807	0.0035	0.82		2482.11	2482.11		2.59	Si
SLV 13	fin.	-1767.56	-4329	-0.0016402	0.0002807	0.0035	0.82		2487.45	2487.45		1.41	Si
SLV 3	ini.	-2153.5	-5650	-0.0023454	0.0002807	0.0035	0.82		2487.45	2487.45		1.16	Si
SLV 3	fin.	1955.03	3545	-0.0019535	0.0002807	0.0035	0.82		2482.11	2482.11		1.27	Si
SLV 4	ini.	-1981.33	-5265	-0.0019944	0.0002807	0.0035	0.82		2487.45	2487.45		1.26	Si
SLV 4	fin.	1752.9	3124	-0.0016237	0.0002807	0.0035	0.82		2482.11	2482.11		1.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-2153.5	10425	0.82	0	455	6502	5156	2091	6957		0.67	No
SLV 3	fin.	1955.03	7318	0.82	0	455	6502	5156	2091	6957		0.95	No
SLV 4	ini.	-1981.33	9655	0.82	0	455	6502	5156	2091	6957		0.72	No
SLV 4	fin.	1752.9	6518	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLV 15	ini.	1046.26	-3614	0.82	0	455	6502	5156	2091	6957		1.93	Si
SLV 15	fin.	-1741.84	-7407	0.82	0	455	6502	5156	2091	6957		0.94	No
SLD 3	ini.	-1212.2	6300	0.82	0	455	6502	5156	2091	6957		1.1	Si
SLD 3	fin.	831.15	2858	0.82	0	455	6502	5156	2091	6957		2.43	Si
SLV 1	ini.	-2240.3	10837	0.82	0	455	6502	5156	2091	6957		0.64	No
SLV 1	fin.	1929.31	7267	0.82	0	455	6502	5156	2091	6957		0.96	No
SLV 13	ini.	959.46	-3201	0.82	0	455	6502	5156	2091	6957		2.17	Si
SLV 13	fin.	-1767.56	-7457	0.82	0	455	6502	5156	2091	6957		0.93	No
SLV 14	ini.	1131.63	-3970	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 14	fin.	-1969.69	-8256	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 16	ini.	1218.44	-4383	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 16	fin.	-1943.97	-8206	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 2	ini.	-2068.13	10068	0.82	0	455	6502	5156	2091	6957		0.69	No
SLV 2	fin.	1727.18	6468	0.82	0	455	6502	5156	2091	6957		1.08	Si
SLD 1	ini.	-1250.41	6482	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLD 1	fin.	820.36	2837	0.82	0	455	6502	5156	2091	6957		2.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.11	SLV 1	Si
V_SLV	0.642	SLV 1	No
PF_SLU	3.248	SLU 84	Si
V_SLU	1.138	SLU 84	Si

Trave di accoppiamento 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	7.96	8.98	1.02	-12.263	1.006	7.96	8.98	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-857.72	-3767	-0.0003758	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.55	Si
SLU 74	fin.	-148.74	-2989	-0.0000576	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.22	Si
SLU 80	ini.	-838.9	-3731	-0.0003661	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.65	Si
SLU 80	fin.	-165.45	-2999	-0.0000642	0.0002246	0.0035	1.02		3900.37	3900.37	No	23.58	Si
SLU 83	ini.	-876.32	-3829	-0.0003854	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.45	Si
SLU 83	fin.	-180.84	-3075	-0.0000703	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.57	Si
SLU 81	ini.	-869.59	-3783	-0.0003819	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.49	Si
SLU 81	fin.	-180.73	-3034	-0.0000703	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.58	Si
SLU 75	ini.	-857.45	-3771	-0.0003756	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.55	Si
SLU 75	fin.	-149.65	-2994	-0.0000579	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.06	Si
SLU 79	ini.	-839.17	-3727	-0.0003663	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.65	Si
SLU 79	fin.	-164.54	-2994	-0.0000638	0.0002246	0.0035	1.02		3900.37	3900.37	No	23.7	Si
SLU 77	ini.	-864.45	-3814	-0.0003792	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.51	Si
SLU 77	fin.	-148.85	-3030	-0.0000576	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.2	Si
SLU 78	ini.	-864.18	-3818	-0.0003791	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.51	Si
SLU 78	fin.	-149.76	-3035	-0.000058	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.04	Si
SLU 82	ini.	-869.32	-3787	-0.0003817	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.49	Si
SLU 82	fin.	-181.63	-3039	-0.0000706	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.47	Si
SLU 84	ini.	-876.05	-3833	-0.0003852	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.45	Si
SLU 84	fin.	-181.74	-3080	-0.0000707	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-864.18	2266	1.02	0	377	8088	5132	2601	7733	No	3.41	Si
SLU 78	fin.	-149.76	-285	1.02	0	377	8088	5132	2601	7733	No	27.1	Si
SLU 75	ini.	-857.45	2257	1.02	0	377	8088	5132	2601	7733	No	3.43	Si
SLU 75	fin.	-149.65	-294	1.02	0	377	8088	5132	2601	7733	No	26.33	Si
SLU 83	ini.	-876.32	2374	1.02	0	377	8088	5132	2601	7733	No	3.26	Si
SLU 83	fin.	-180.84	-453	1.02	0	377	8088	5132	2601	7733	No	17.06	Si
SLU 74	ini.	-857.72	2259	1.02	0	377	8088	5132	2601	7733	No	3.42	Si
SLU 74	fin.	-148.74	-292	1.02	0	377	8088	5132	2601	7733	No	26.46	Si
SLU 84	ini.	-876.05	2372	1.02	0	377	8088	5132	2601	7733	No	3.26	Si
SLU 84	fin.	-181.74	-455	1.02	0	377	8088	5132	2601	7733	No	17.01	Si
SLU 42	ini.	-811.04	2247	1.02	0	377	8088	5132	2601	7733	No	3.44	Si
SLU 42	fin.	-133.07	-351	1.02	0	377	8088	5132	2601	7733	No	22.03	Si
SLU 82	ini.	-869.32	2364	1.02	0	377	8088	5132	2601	7733	No	3.27	Si
SLU 82	fin.	-181.63	-463	1.02	0	377	8088	5132	2601	7733	No	16.7	Si
SLU 41	ini.	-811.31	2249	1.02	0	377	8088	5132	2601	7733	No	3.44	Si
SLU 41	fin.	-132.17	-349	1.02	0	377	8088	5132	2601	7733	No	22.13	Si
SLU 81	ini.	-869.59	2365	1.02	0	377	8088	5132	2601	7733	No	3.27	Si
SLU 81	fin.	-180.73	-461	1.02	0	377	8088	5132	2601	7733	No	16.76	Si
SLU 77	ini.	-864.45	2267	1.02	0	377	8088	5132	2601	7733	No	3.41	Si
SLU 77	fin.	-148.85	-284	1.02	0	377	8088	5132	2601	7733	No	27.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3597.78	-1515	-0.0026294	0.0003369	0.0035	1.02		3845.03	3845.03		1.07	Si
SLV 16	fin.	5877.83	10647	-0.0061374	0.0003369	0.0035	1.02		3838.12	3838.12		0.65	No
SLV 4	ini.	2547.27	-3048	-0.0014204	0.0003369	0.0035	1.02		3838.12	3838.12		1.51	Si
SLV 4	fin.	-6091.86	-14227	-0.0064099	0.0003369	0.0035	1.02		3845.03	3845.03		0.63	No
SLV 2	ini.	2554.98	-3464	-0.0014268	0.0003369	0.0035	1.02		3838.12	3838.12		1.5	Si
SLV 2	fin.	-6181.13	-14854	-0.0065278	0.0003369	0.0035	1.02		3845.03	3845.03		0.62	No
SLV 1	ini.	2517.04	-3452	-0.0013955	0.0003369	0.0035	1.02		3838.12	3838.12		1.52	Si
SLV 1	fin.	-6111.01	-14704	-0.0064353	0.0003369	0.0035	1.02		3845.03	3845.03		0.63	No
SLD 1	ini.	766.26	-2900	-0.0003177	0.0003369	0.0035	1.02		3838.12	3838.12		5.01	Si
SLD 1	fin.	-2678.54	-7448	-0.0015291	0.0003369	0.0035	1.02		3845.03	3845.03		1.44	Si
SLV 14	ini.	-3590.07	-1931	-0.002617	0.0003369	0.0035	1.02		3845.03	3845.03		1.07	Si
SLV 14	fin.	5788.57	10020	-0.0060171	0.0003369	0.0035	1.02		3838.12	3838.12		0.66	No
SLV 15	ini.	-3635.73	-1503	-0.0026912	0.0003369	0.0035	1.02		3845.03	3845.03		1.06	Si
SLV 15	fin.	5947.95	10796	-0.0062313	0.0003369	0.0035	1.02		3838.12	3838.12		0.65	No
SLV 13	ini.	-3628.01	-1919	-0.0026785	0.0003369	0.0035	1.02		3845.03	3845.03		1.06	Si
SLV 13	fin.	5858.68	10169	-0.0061116	0.0003369	0.0035	1.02		3838.12	3838.12		0.66	No
SLV 3	ini.	2509.32	-3037	-0.0013892	0.0003369	0.0035	1.02		3838.12	3838.12		1.53	Si
SLV 3	fin.	-6021.75	-14078	-0.0063169	0.0003369	0.0035	1.02		3845.03	3845.03		0.64	No
SLD 2	ini.	782.56	-2905	-0.0003252	0.0003369	0.0035	1.02		3838.12	3838.12		4.9	Si
SLD 2	fin.	-2708.64	-7512	-0.0015559	0.0003369	0.0035	1.02		3845.03	3845.03		1.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2547.27	-11950	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 4	fin.	-6091.86	-13510	1.02	0	565	8088	7698	2601	8654		0.64	No
SLV 14	ini.	-3590.07	14512	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 14	fin.	5788.57	12959	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 13	ini.	-3628.01	14672	1.02	0	565	8088	7698	2601	8654		0.59	No
SLV 13	fin.	5858.68	13118	1.02	0	565	8088	7698	2601	8654		0.66	No
SLV 2	ini.	2554.98	-12260	1.02	0	565	8088	7698	2601	8654		0.71	No
SLV 2	fin.	-6181.13	-13803	1.02	0	565	8088	7698	2601	8654		0.63	No
SLD 15	ini.	-1863.3	7184	1.02	0	565	8088	7698	2601	8654		1.2	Si
SLD 15	fin.	2475.46	5620	1.02	0	565	8088	7698	2601	8654		1.54	Si
SLV 16	ini.	-3597.78	14822	1.02	0	565	8088	7698	2601	8654		0.58	No
SLV 16	fin.	5877.83	13252	1.02	0	565	8088	7698	2601	8654		0.65	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-1847.01	7116	1.02	0	565	8088	7698	2601	8654		1.22	Si
SLD 16	fin.	2445.36	5552	1.02	0	565	8088	7698	2601	8654		1.56	Si
SLV 15	ini.	-3635.73	14981	1.02	0	565	8088	7698	2601	8654		0.58	No
SLV 15	fin.	5947.95	13411	1.02	0	565	8088	7698	2601	8654		0.65	No
SLV 3	ini.	2509.32	-11791	1.02	0	565	8088	7698	2601	8654		0.73	No
SLV 3	fin.	-6021.75	-13351	1.02	0	565	8088	7698	2601	8654		0.65	No
SLV 1	ini.	2517.04	-12100	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 1	fin.	-6111.01	-13644	1.02	0	565	8088	7698	2601	8654		0.63	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.622	SLV 2	No
V_SLV	0.578	SLV 15	No
PF_SLU	4.451	SLU 83	Si
V_SLU	3.258	SLU 83	Si

Trave di accoppiamento 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	7.96	8.98	1.02	-10.478	1.006	7.96	8.98	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-94.88	-2674	-0.0000365	0.0002246	0.0035	1.02		3900.37	3900.37	No	41.11	Si
SLU 75	fin.	-646.12	-3369	-0.0002712	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.04	Si
SLU 80	ini.	-112.38	-2691	-0.0000433	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.71	Si
SLU 80	fin.	-627.99	-3339	-0.0002627	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.21	Si
SLU 77	ini.	-103.95	-2730	-0.00004	0.0002246	0.0035	1.02		3900.37	3900.37	No	37.52	Si
SLU 77	fin.	-646.64	-3413	-0.0002715	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.03	Si
SLU 84	ini.	-109.8	-2734	-0.0000423	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.52	Si
SLU 84	fin.	-658.97	-3429	-0.0002773	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.92	Si
SLU 78	ini.	-103.68	-2734	-0.0000399	0.0002246	0.0035	1.02		3900.37	3900.37	No	37.62	Si
SLU 78	fin.	-647.16	-3417	-0.0002717	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.03	Si
SLU 74	ini.	-95.15	-2671	-0.0000366	0.0002246	0.0035	1.02		3900.37	3900.37	No	40.99	Si
SLU 74	fin.	-645.6	-3365	-0.000271	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.04	Si
SLU 83	ini.	-110.07	-2731	-0.0000424	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.43	Si
SLU 83	fin.	-658.45	-3425	-0.0002771	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.92	Si
SLU 81	ini.	-101.27	-2671	-0.0000389	0.0002246	0.0035	1.02		3900.37	3900.37	No	38.51	Si
SLU 81	fin.	-657.41	-3377	-0.0002766	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.93	Si
SLU 82	ini.	-101	-2675	-0.0000388	0.0002246	0.0035	1.02		3900.37	3900.37	No	38.62	Si
SLU 82	fin.	-657.93	-3381	-0.0002768	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.93	Si
SLU 79	ini.	-112.66	-2688	-0.0000434	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.62	Si
SLU 79	fin.	-627.47	-3334	-0.0002624	0.0002246	0.0035	1.02		3900.37	3900.37	No	6.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-101	336	1.02	0	391	8088	5132	2601	7733	No	23.01	Si
SLU 82	fin.	-657.93	-2036	1.02	0	391	8088	5132	2601	7733	No	3.8	Si
SLU 81	ini.	-101.27	337	1.02	0	391	8088	5132	2601	7733	No	22.93	Si
SLU 81	fin.	-657.41	-2035	1.02	0	391	8088	5132	2601	7733	No	3.8	Si
SLU 42	ini.	-47.59	195	1.02	0	391	8088	5132	2601	7733	No	39.67	Si
SLU 42	fin.	-626.43	-1971	1.02	0	391	8088	5132	2601	7733	No	3.92	Si
SLU 83	ini.	-110.07	350	1.02	0	391	8088	5132	2601	7733	No	22.1	Si
SLU 83	fin.	-658.45	-2023	1.02	0	391	8088	5132	2601	7733	No	3.82	Si
SLU 41	ini.	-47.87	196	1.02	0	391	8088	5132	2601	7733	No	39.43	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	fin.	-625.91	-1970	1.02	0	391	8088	5132	2601	7733	No	3.92	Si
SLU 84	ini.	-109.8	349	1.02	0	391	8088	5132	2601	7733	No	22.18	Si
SLU 84	fin.	-658.97	-2024	1.02	0	391	8088	5132	2601	7733	No	3.82	Si
SLU 40	ini.	-38.79	182	1.02	0	391	8088	5132	2601	7733	No	42.41	Si
SLU 40	fin.	-625.39	-1984	1.02	0	391	8088	5132	2601	7733	No	3.9	Si
SLU 74	ini.	-95.15	253	1.02	0	391	8088	5132	2601	7733	No	30.62	Si
SLU 74	fin.	-645.6	-1929	1.02	0	391	8088	5132	2601	7733	No	4.01	Si
SLU 75	ini.	-94.88	251	1.02	0	391	8088	5132	2601	7733	No	30.76	Si
SLU 75	fin.	-646.12	-1930	1.02	0	391	8088	5132	2601	7733	No	4.01	Si
SLU 39	ini.	-39.07	184	1.02	0	391	8088	5132	2601	7733	No	42.13	Si
SLU 39	fin.	-624.87	-1983	1.02	0	391	8088	5132	2601	7733	No	3.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-3605.56	-10923	-0.0026419	0.0003369	0.0035	1.02		3845.03	3845.03		1.07	Si
SLV 13	fin.	378.59	-6448	-0.0001496	0.0003369	0.0035	1.02		3838.12	3838.12		10.14	Si
SLV 4	ini.	3434.59	7282	-0.0023891	0.0003369	0.0035	1.02		3838.12	3838.12		1.12	Si
SLV 4	fin.	-1184.46	2022	-0.0005226	0.0003369	0.0035	1.02		3845.03	3845.03		3.25	Si
SLV 15	ini.	-3523.93	-10603	-0.0025136	0.0003369	0.0035	1.02		3845.03	3845.03		1.09	Si
SLV 15	fin.	378.55	-6212	-0.0001496	0.0003369	0.0035	1.02		3838.12	3838.12		10.14	Si
SLV 2	ini.	3352.96	6963	-0.0022743	0.0003369	0.0035	1.02		3838.12	3838.12		1.14	Si
SLV 2	fin.	-1184.42	1786	-0.0005226	0.0003369	0.0035	1.02		3845.03	3845.03		3.25	Si
SLD 13	ini.	-1590.32	-5711	-0.00075	0.0003369	0.0035	1.02		3845.03	3845.03		2.42	Si
SLD 13	fin.	-68.58	-4023	-0.0000262	0.0003369	0.0035	1.02		3845.03	3845.03		56.07	Si
SLV 16	ini.	-3488.78	-10516	-0.0024605	0.0003369	0.0035	1.02		3845.03	3845.03		1.1	Si
SLV 16	fin.	371.5	-6170	-0.0001467	0.0003369	0.0035	1.02		3838.12	3838.12		10.33	Si
SLV 3	ini.	3399.44	7195	-0.0023389	0.0003369	0.0035	1.02		3838.12	3838.12		1.13	Si
SLV 3	fin.	-1177.41	1981	-0.0005189	0.0003369	0.0035	1.02		3845.03	3845.03		3.27	Si
SLV 14	ini.	-3570.41	-10835	-0.0025858	0.0003369	0.0035	1.02		3845.03	3845.03		1.08	Si
SLV 14	fin.	371.54	-6406	-0.0001467	0.0003369	0.0035	1.02		3838.12	3838.12		10.33	Si
SLV 1	ini.	3317.81	6875	-0.0022267	0.0003369	0.0035	1.02		3838.12	3838.12		1.16	Si
SLV 1	fin.	-1177.37	1745	-0.0005189	0.0003369	0.0035	1.02		3845.03	3845.03		3.27	Si
SLD 14	ini.	-1575.23	-5674	-0.000741	0.0003369	0.0035	1.02		3845.03	3845.03		2.44	Si
SLD 14	fin.	-71.6	-4005	-0.0000274	0.0003369	0.0035	1.02		3845.03	3845.03		53.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3570.41	6490	1.02	0	586	8088	7698	2601	8675		1.34	Si
SLV 14	fin.	371.54	5134	1.02	0	586	8088	7698	2601	8675		1.69	Si
SLD 4	ini.	1419.35	-2503	1.02	0	586	8088	7698	2601	8675		3.47	Si
SLD 4	fin.	-737.29	-3890	1.02	0	586	8088	7698	2601	8675		2.23	Si
SLD 3	ini.	1404.26	-2477	1.02	0	586	8088	7698	2601	8675		3.5	Si
SLD 3	fin.	-734.26	-3863	1.02	0	586	8088	7698	2601	8675		2.25	Si
SLV 16	ini.	-3488.78	6405	1.02	0	586	8088	7698	2601	8675		1.35	Si
SLV 16	fin.	371.5	4967	1.02	0	586	8088	7698	2601	8675		1.75	Si
SLV 4	ini.	3434.59	-6133	1.02	0	586	8088	7698	2601	8675		1.41	Si
SLV 4	fin.	-1184.46	-7530	1.02	0	586	8088	7698	2601	8675		1.15	Si
SLV 1	ini.	3317.81	-5988	1.02	0	586	8088	7698	2601	8675		1.45	Si
SLV 1	fin.	-1177.37	-7302	1.02	0	586	8088	7698	2601	8675		1.19	Si
SLV 3	ini.	3399.44	-6072	1.02	0	586	8088	7698	2601	8675		1.43	Si
SLV 3	fin.	-1177.41	-7470	1.02	0	586	8088	7698	2601	8675		1.16	Si
SLV 15	ini.	-3523.93	6466	1.02	0	586	8088	7698	2601	8675		1.34	Si
SLV 15	fin.	378.55	5027	1.02	0	586	8088	7698	2601	8675		1.73	Si
SLV 2	ini.	3352.96	-6048	1.02	0	586	8088	7698	2601	8675		1.43	Si
SLV 2	fin.	-1184.42	-7363	1.02	0	586	8088	7698	2601	8675		1.18	Si
SLV 13	ini.	-3605.56	6550	1.02	0	586	8088	7698	2601	8675		1.32	Si
SLV 13	fin.	378.59	5195	1.02	0	586	8088	7698	2601	8675		1.67	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.066	SLV 13	Si
V_SLV	1.152	SLV 4	Si
PF_SLU	5.919	SLU 84	Si
V_SLU	3.797	SLU 82	Si

Trave di accoppiamento 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	7.56	8.98	1.42	-7.463	1.006	7.56	8.98	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-254.88	-4547	-0.0000508	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.6	Si
SLU 67	fin.	-809.09	-4868	-0.0001682	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.33	Si
SLU 69	ini.	-253.91	-4624	-0.0000506	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.72	Si
SLU 69	fin.	-823.54	-4957	-0.0001715	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.16	Si
SLU 72	ini.	-241.62	-4551	-0.0000481	0.0002246	0.0035	1.42		7545.1	7545.1	No	31.23	Si
SLU 72	fin.	-831.06	-4902	-0.0001731	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.08	Si
SLU 66	ini.	-257.95	-4548	-0.0000514	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.25	Si
SLU 66	fin.	-806.52	-4864	-0.0001677	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.36	Si
SLU 50	ini.	-165.3	-4022	-0.0000327	0.0002246	0.0035	1.42		7545.1	7545.1	No	45.65	Si
SLU 50	fin.	-804.36	-4441	-0.0001672	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.38	Si
SLU 51	ini.	-162.23	-4022	-0.0000321	0.0002246	0.0035	1.42		7545.1	7545.1	No	46.51	Si
SLU 51	fin.	-806.93	-4445	-0.0001678	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.35	Si
SLU 71	ini.	-244.69	-4552	-0.0000487	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.84	Si
SLU 71	fin.	-828.49	-4898	-0.0001726	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.11	Si
SLU 70	ini.	-250.84	-4623	-0.00005	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.08	Si
SLU 70	fin.	-826.11	-4961	-0.000172	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.13	Si
SLU 68	ini.	-243.62	-4474	-0.0000485	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.97	Si
SLU 68	fin.	-815.76	-4812	-0.0001697	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.25	Si
SLU 49	ini.	-171.45	-4094	-0.000034	0.0002246	0.0035	1.42		7545.1	7545.1	No	44.01	Si
SLU 49	fin.	-801.98	-4504	-0.0001667	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-462.59	1235	1.42	0	576	7930	7144	3621	8506	No	6.89	Si
SLU 80	fin.	-730.01	-1935	1.42	0	576	7930	7144	3621	8506	No	4.4	Si
SLU 72	ini.	-241.62	367	1.42	0	576	7930	7144	3621	8506	No	23.15	Si
SLU 72	fin.	-831.06	-2114	1.42	0	576	7930	7144	3621	8506	No	4.02	Si
SLU 66	ini.	-257.95	433	1.42	0	576	7930	7144	3621	8506	No	19.63	Si
SLU 66	fin.	-806.52	-2048	1.42	0	576	7930	7144	3621	8506	No	4.15	Si
SLU 70	ini.	-250.84	391	1.42	0	576	7930	7144	3621	8506	No	21.74	Si
SLU 70	fin.	-826.11	-2090	1.42	0	576	7930	7144	3621	8506	No	4.07	Si
SLU 69	ini.	-253.91	400	1.42	0	576	7930	7144	3621	8506	No	21.25	Si
SLU 69	fin.	-823.54	-2081	1.42	0	576	7930	7144	3621	8506	No	4.09	Si
SLU 67	ini.	-254.88	424	1.42	0	576	7930	7144	3621	8506	No	20.05	Si
SLU 67	fin.	-809.09	-2057	1.42	0	576	7930	7144	3621	8506	No	4.13	Si
SLU 71	ini.	-244.69	376	1.42	0	576	7930	7144	3621	8506	No	22.59	Si
SLU 71	fin.	-828.49	-2105	1.42	0	576	7930	7144	3621	8506	No	4.04	Si
SLU 68	ini.	-243.62	394	1.42	0	576	7930	7144	3621	8506	No	21.58	Si
SLU 68	fin.	-815.76	-2087	1.42	0	576	7930	7144	3621	8506	No	4.08	Si
SLU 64	ini.	-252.78	442	1.42	0	576	7930	7144	3621	8506	No	19.23	Si
SLU 64	fin.	-794.46	-2039	1.42	0	576	7930	7144	3621	8506	No	4.17	Si
SLU 65	ini.	-247.66	427	1.42	0	576	7930	7144	3621	8506	No	19.91	Si
SLU 65	fin.	-798.74	-2054	1.42	0	576	7930	7144	3621	8506	No	4.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-3906.21	-7210	-0.0010206	0.0003369	0.0035	1.42		7279.66	7279.66		1.86	Si
SLV 13	fin.	2847.15	-2061	-0.0006804	0.0003369	0.0035	1.42		7270.13	7270.13		2.55	Si
SLV 15	ini.	-3996.2	-7264	-0.0010523	0.0003369	0.0035	1.42		7279.66	7279.66		1.82	Si
SLV 15	fin.	2941.91	-1984	-0.0007088	0.0003369	0.0035	1.42		7270.13	7270.13		2.47	Si
SLD 1	ini.	1338.16	-1857	-0.0002834	0.0003369	0.0035	1.42		7270.13	7270.13		5.43	Si
SLD 1	fin.	-2061.08	-4329	-0.0004604	0.0003369	0.0035	1.42		7279.66	7279.66		3.53	Si
SLV 4	ini.	3425.95	305	-0.0008602	0.0003369	0.0035	1.42		7270.13	7270.13		2.12	Si
SLV 4	fin.	-4001.05	-5195	-0.001054	0.0003369	0.0035	1.42		7279.66	7279.66		1.82	Si
SLV 14	ini.	-3842.54	-7132	-0.0009984	0.0003369	0.0035	1.42		7279.66	7279.66		1.89	Si
SLV 14	fin.	2801	-2065	-0.0006668	0.0003369	0.0035	1.42		7270.13	7270.13		2.6	Si
SLV 1	ini.	3452.27	280	-0.0008687	0.0003369	0.0035	1.42		7270.13	7270.13		2.11	Si
SLV 1	fin.	-4049.67	-5269	-0.0010714	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 3	ini.	3362.28	227	-0.0008396	0.0003369	0.0035	1.42		7270.13	7270.13		2.16	Si
SLV 3	fin.	-3954.91	-5191	-0.0010377	0.0003369	0.0035	1.42		7279.66	7279.66		1.84	Si
SLV 2	ini.	3515.93	358	-0.0008896	0.0003369	0.0035	1.42		7270.13	7270.13		2.07	Si
SLV 2	fin.	-4095.81	-5273	-0.001088	0.0003369	0.0035	1.42		7279.66	7279.66		1.78	Si
SLD 2	ini.	1365.5	-1824	-0.0002897	0.0003369	0.0035	1.42		7270.13	7270.13		5.32	Si
SLD 2	fin.	-2080.89	-4331	-0.0004656	0.0003369	0.0035	1.42		7279.66	7279.66		3.5	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3932.53	-7186	-0.0010298	0.0003369	0.0035	1.42		7279.66	7279.66		1.85	Si
SLV 16	fin.	2895.77	-1988	-0.0006949	0.0003369	0.0035	1.42		7270.13	7270.13		2.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3515.93	-10505	1.42	0	864	7930	10717	3621	8794		0.84	No
SLV 2	fin.	-4095.81	-12467	1.42	0	864	7930	10717	3621	8794		0.71	No
SLV 15	ini.	-3996.2	11501	1.42	0	864	7930	10717	3621	8794		0.76	No
SLV 15	fin.	2941.91	9517	1.42	0	864	7930	10717	3621	8794		0.92	No
SLV 13	ini.	-3906.21	11434	1.42	0	864	7930	10717	3621	8794		0.77	No
SLV 13	fin.	2847.15	9402	1.42	0	864	7930	10717	3621	8794		0.94	No
SLD 4	ini.	1326.64	-4176	1.42	0	864	7930	10717	3621	8794		2.11	Si
SLD 4	fin.	-2040.29	-6123	1.42	0	864	7930	10717	3621	8794		1.44	Si
SLV 16	ini.	-3932.53	11332	1.42	0	864	7930	10717	3621	8794		0.78	No
SLV 16	fin.	2895.77	9349	1.42	0	864	7930	10717	3621	8794		0.94	No
SLV 14	ini.	-3842.54	11265	1.42	0	864	7930	10717	3621	8794		0.78	No
SLV 14	fin.	2801	9234	1.42	0	864	7930	10717	3621	8794		0.95	No
SLV 1	ini.	3452.27	-10336	1.42	0	864	7930	10717	3621	8794		0.85	No
SLV 1	fin.	-4049.67	-12299	1.42	0	864	7930	10717	3621	8794		0.72	No
SLD 2	ini.	1365.5	-4205	1.42	0	864	7930	10717	3621	8794		2.09	Si
SLD 2	fin.	-2080.89	-6173	1.42	0	864	7930	10717	3621	8794		1.42	Si
SLV 3	ini.	3362.28	-10269	1.42	0	864	7930	10717	3621	8794		0.86	No
SLV 3	fin.	-3954.91	-12183	1.42	0	864	7930	10717	3621	8794		0.72	No
SLV 4	ini.	3425.95	-10438	1.42	0	864	7930	10717	3621	8794		0.84	No
SLV 4	fin.	-4001.05	-12352	1.42	0	864	7930	10717	3621	8794		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.777	SLV 2	Si
V_SLV	0.705	SLV 2	No
PF_SLU	9.079	SLU 72	Si
V_SLU	4.023	SLU 72	Si

Trave di accoppiamento 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	7.56	8.98	1.42	-9.333	-3.314	7.56	8.98	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	520.59	-2623	-0.0001065	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.12	Si
SLU 76	fin.	-932.8	-3385	-0.0001986	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.89	Si
SLU 75	ini.	522.92	-2659	-0.000107	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.06	Si
SLU 75	fin.	-940.32	-3426	-0.0002004	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.83	Si
SLU 83	ini.	506.84	-2704	-0.0001036	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.5	Si
SLU 83	fin.	-932.14	-3466	-0.0001985	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.9	Si
SLU 80	ini.	528.83	-2699	-0.0001083	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.9	Si
SLU 80	fin.	-945.8	-3475	-0.0002017	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.78	Si
SLU 77	ini.	527.75	-2737	-0.0001081	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.93	Si
SLU 77	fin.	-950.54	-3515	-0.0002028	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.74	Si
SLU 79	ini.	518.62	-2704	-0.0001061	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.17	Si
SLU 79	fin.	-937.47	-3472	-0.0001997	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.85	Si
SLU 74	ini.	512.71	-2665	-0.0001049	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.34	Si
SLU 74	fin.	-931.99	-3424	-0.0001985	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.9	Si
SLU 78	ini.	537.96	-2732	-0.0001103	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.66	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-958.88	-3517	-0.0002048	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.68	Si
SLU 84	ini.	517.05	-2699	-0.0001058	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.22	Si
SLU 84	fin.	-940.47	-3468	-0.0002005	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.83	Si
SLU 70	ini.	530.35	-2562	-0.0001086	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.86	Si
SLU 70	fin.	-928.02	-3319	-0.0001975	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	502.01	-1263	1.42	0	576	7137	5953	3621	7713	No	6.11	Si
SLU 82	fin.	-921.92	-3086	1.42	0	576	7137	5953	3621	7713	No	2.5	Si
SLU 78	ini.	537.96	-1430	1.42	0	576	7137	5953	3621	7713	No	5.39	Si
SLU 78	fin.	-958.88	-3137	1.42	0	576	7137	5953	3621	7713	No	2.46	Si
SLU 77	ini.	527.75	-1403	1.42	0	576	7137	5953	3621	7713	No	5.5	Si
SLU 77	fin.	-950.54	-3111	1.42	0	576	7137	5953	3621	7713	No	2.48	Si
SLU 84	ini.	517.05	-1315	1.42	0	576	7137	5953	3621	7713	No	5.87	Si
SLU 84	fin.	-940.47	-3139	1.42	0	576	7137	5953	3621	7713	No	2.46	Si
SLU 76	ini.	520.59	-1363	1.42	0	576	7137	5953	3621	7713	No	5.66	Si
SLU 76	fin.	-932.8	-3070	1.42	0	576	7137	5953	3621	7713	No	2.51	Si
SLU 81	ini.	491.8	-1236	1.42	0	576	7137	5953	3621	7713	No	6.24	Si
SLU 81	fin.	-913.58	-3060	1.42	0	576	7137	5953	3621	7713	No	2.52	Si
SLU 80	ini.	528.83	-1397	1.42	0	576	7137	5953	3621	7713	No	5.52	Si
SLU 80	fin.	-945.8	-3105	1.42	0	576	7137	5953	3621	7713	No	2.48	Si
SLU 75	ini.	522.92	-1377	1.42	0	576	7137	5953	3621	7713	No	5.6	Si
SLU 75	fin.	-940.32	-3085	1.42	0	576	7137	5953	3621	7713	No	2.5	Si
SLU 79	ini.	518.62	-1371	1.42	0	576	7137	5953	3621	7713	No	5.63	Si
SLU 79	fin.	-937.47	-3079	1.42	0	576	7137	5953	3621	7713	No	2.51	Si
SLU 83	ini.	506.84	-1289	1.42	0	576	7137	5953	3621	7713	No	5.98	Si
SLU 83	fin.	-932.14	-3112	1.42	0	576	7137	5953	3621	7713	No	2.48	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	4774.81	-2018	-0.0013977	0.0002807	0.0035	1.42		7337.02	7337.02		1.54	Si
SLV 4	fin.	-5626.66	-6639	-0.0018071	0.0002807	0.0035	1.42		7346.34	7346.34		1.31	Si
SLV 15	ini.	-4077.67	-2073	-0.0011157	0.0002807	0.0035	1.42		7346.34	7346.34		1.8	Si
SLV 15	fin.	4221.18	1408	-0.0011721	0.0002807	0.0035	1.42		7337.02	7337.02		1.74	Si
SLV 13	ini.	-4094.16	-1650	-0.0011219	0.0002807	0.0035	1.42		7346.34	7346.34		1.79	Si
SLV 13	fin.	4357.29	1951	-0.0012252	0.0002807	0.0035	1.42		7337.02	7337.02		1.68	Si
SLV 2	ini.	4758.32	-1594	-0.0013906	0.0002807	0.0035	1.42		7337.02	7337.02		1.54	Si
SLV 2	fin.	-5490.55	-6096	-0.001734	0.0002807	0.0035	1.42		7346.34	7346.34		1.34	Si
SLD 4	ini.	2236.33	-1915	-0.0005199	0.0002807	0.0035	1.42		7337.02	7337.02		3.28	Si
SLD 4	fin.	-2769.83	-4183	-0.0006748	0.0002807	0.0035	1.42		7346.34	7346.34		2.65	Si
SLV 14	ini.	-3713.36	-1692	-0.0009835	0.0002807	0.0035	1.42		7346.34	7346.34		1.98	Si
SLV 14	fin.	3936.16	1586	-0.001065	0.0002807	0.0035	1.42		7337.02	7337.02		1.86	Si
SLD 2	ini.	2228.9	-1729	-0.0005178	0.0002807	0.0035	1.42		7337.02	7337.02		3.29	Si
SLD 2	fin.	-2709.91	-3945	-0.0006567	0.0002807	0.0035	1.42		7346.34	7346.34		2.71	Si
SLV 1	ini.	4377.52	-1552	-0.0012333	0.0002807	0.0035	1.42		7337.02	7337.02		1.68	Si
SLV 1	fin.	-5069.43	-5731	-0.0015268	0.0002807	0.0035	1.42		7346.34	7346.34		1.45	Si
SLV 16	ini.	-3696.87	-2115	-0.0009777	0.0002807	0.0035	1.42		7346.34	7346.34		1.99	Si
SLV 16	fin.	3800.05	1043	-0.0010158	0.0002807	0.0035	1.42		7337.02	7337.02		1.93	Si
SLV 3	ini.	4394.01	-1976	-0.0012398	0.0002807	0.0035	1.42		7337.02	7337.02		1.67	Si
SLV 3	fin.	-5205.54	-6274	-0.001591	0.0002807	0.0035	1.42		7346.34	7346.34		1.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	4758.32	-14386	1.42	0	864	7137	8929	3621	8001		0.56	No
SLV 2	fin.	-5490.55	-15521	1.42	0	864	7137	8929	3621	8001		0.52	No
SLV 4	ini.	4774.81	-14473	1.42	0	864	7137	8929	3621	8001		0.55	No
SLV 4	fin.	-5626.66	-15629	1.42	0	864	7137	8929	3621	8001		0.51	No
SLV 15	ini.	-4077.67	12545	1.42	0	864	7137	8929	3621	8001		0.64	No
SLV 15	fin.	4221.18	11418	1.42	0	864	7137	8929	3621	8001		0.7	No
SLD 4	ini.	2236.33	-6716	1.42	0	864	7137	8929	3621	8001		1.19	Si
SLD 4	fin.	-2769.83	-7858	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLV 16	ini.	-3696.87	11399	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 16	fin.	3800.05	10272	1.42	0	864	7137	8929	3621	8001		0.78	No
SLV 3	ini.	4394.01	-13327	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 3	fin.	-5205.54	-14483	1.42	0	864	7137	8929	3621	8001		0.55	No
SLV 13	ini.	-4094.16	12631	1.42	0	864	7137	8929	3621	8001		0.63	No
SLV 13	fin.	4357.29	11526	1.42	0	864	7137	8929	3621	8001		0.69	No
SLD 2	ini.	2228.9	-6676	1.42	0	864	7137	8929	3621	8001		1.2	Si
SLD 2	fin.	-2709.91	-7808	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLV 1	ini.	4377.52	-13240	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 1	fin.	-5069.43	-14375	1.42	0	864	7137	8929	3621	8001		0.56	No
SLV 14	ini.	-3713.36	11486	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 14	fin.	3936.16	10381	1.42	0	864	7137	8929	3621	8001		0.77	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.306	SLV 4	Si
V_SLV	0.512	SLV 4	No
PF_SLU	7.676	SLU 78	Si
V_SLU	2.457	SLU 84	Si

Trave di accoppiamento 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	7.56	8.98	1.42	-6.268	0.706	7.56	8.98	1.42	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-362.92	-1885	-0.0000729	0.0002246	0.0035	1.42		7603.79	7603.79	No	20.95	Si
SLU 84	fin.	700.99	-1388	-0.0001446	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.83	Si
SLU 83	ini.	-371.32	-1897	-0.0000746	0.0002246	0.0035	1.42		7603.79	7603.79	No	20.48	Si
SLU 83	fin.	701.68	-1393	-0.0001448	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.82	Si
SLU 75	ini.	-297.05	-1751	-0.0000594	0.0002246	0.0035	1.42		7603.79	7603.79	No	25.6	Si
SLU 75	fin.	670.7	-1307	-0.0001381	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.32	Si
SLU 82	ini.	-391.23	-1893	-0.0000787	0.0002246	0.0035	1.42		7603.79	7603.79	No	19.44	Si
SLU 82	fin.	696.9	-1380	-0.0001438	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.9	Si
SLU 80	ini.	-248.66	-1696	-0.0000495	0.0002246	0.0035	1.42		7603.79	7603.79	No	30.58	Si
SLU 80	fin.	661.96	-1288	-0.0001362	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.47	Si
SLU 77	ini.	-277.14	-1755	-0.0000553	0.0002246	0.0035	1.42		7603.79	7603.79	No	27.44	Si
SLU 77	fin.	675.49	-1320	-0.0001391	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.24	Si
SLU 78	ini.	-268.74	-1743	-0.0000536	0.0002246	0.0035	1.42		7603.79	7603.79	No	28.29	Si
SLU 78	fin.	674.79	-1315	-0.0001389	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.26	Si
SLU 81	ini.	-399.62	-1906	-0.0000805	0.0002246	0.0035	1.42		7603.79	7603.79	No	19.03	Si
SLU 81	fin.	697.6	-1385	-0.0001439	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.89	Si
SLU 79	ini.	-257.06	-1709	-0.0000512	0.0002246	0.0035	1.42		7603.79	7603.79	No	29.58	Si
SLU 79	fin.	662.66	-1293	-0.0001363	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.46	Si
SLU 74	ini.	-305.45	-1764	-0.0000611	0.0002246	0.0035	1.42		7603.79	7603.79	No	24.89	Si
SLU 74	fin.	671.4	-1312	-0.0001382	0.0002246	0.0035	1.42		7594.91	7594.91	No	11.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-362.92	1831	1.42	0	329	7137	4083	3621	7466	No	4.08	Si
SLU 84	fin.	700.99	1335	1.42	0	329	7137	4083	3621	7466	No	5.59	Si
SLU 42	ini.	-426.86	1776	1.42	0	329	7137	4083	3621	7466	No	4.2	Si
SLU 42	fin.	627.05	1382	1.42	0	329	7137	4083	3621	7466	No	5.4	Si
SLU 40	ini.	-455.17	1816	1.42	0	329	7137	4083	3621	7466	No	4.11	Si
SLU 40	fin.	622.96	1422	1.42	0	329	7137	4083	3621	7466	No	5.25	Si
SLU 82	ini.	-391.23	1871	1.42	0	329	7137	4083	3621	7466	No	3.99	Si
SLU 82	fin.	696.9	1375	1.42	0	329	7137	4083	3621	7466	No	5.43	Si
SLU 39	ini.	-463.56	1832	1.42	0	329	7137	4083	3621	7466	No	4.07	Si
SLU 39	fin.	623.66	1439	1.42	0	329	7137	4083	3621	7466	No	5.19	Si
SLU 74	ini.	-305.45	1700	1.42	0	329	7137	4083	3621	7466	No	4.39	Si
SLU 74	fin.	671.4	1203	1.42	0	329	7137	4083	3621	7466	No	6.21	Si
SLU 41	ini.	-435.25	1792	1.42	0	329	7137	4083	3621	7466	No	4.17	Si
SLU 41	fin.	627.74	1399	1.42	0	329	7137	4083	3621	7466	No	5.34	Si
SLU 81	ini.	-399.62	1887	1.42	0	329	7137	4083	3621	7466	No	3.96	Si
SLU 81	fin.	697.6	1391	1.42	0	329	7137	4083	3621	7466	No	5.37	Si
SLU 83	ini.	-371.32	1847	1.42	0	329	7137	4083	3621	7466	No	4.04	Si
SLU 83	fin.	701.68	1351	1.42	0	329	7137	4083	3621	7466	No	5.53	Si
SLU 75	ini.	-297.05	1683	1.42	0	329	7137	4083	3621	7466	No	4.43	Si
SLU 75	fin.	670.7	1187	1.42	0	329	7137	4083	3621	7466	No	6.29	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-199.56	-1108	-0.0000395	0.0003369	0.0035	1.42		7818.07	7818.07		39.18	Si
SLD 1	fin.	536.22	-757	-0.0001082	0.0003369	0.0035	1.42		7808.98	7808.98		14.56	Si
SLD 3	ini.	-189.17	-892	-0.0000374	0.0003369	0.0035	1.42		7818.07	7818.07		41.33	Si
SLD 3	fin.	551.44	-596	-0.0001113	0.0003369	0.0035	1.42		7808.98	7808.98		14.16	Si
SLV 1	ini.	-329.07	-1198	-0.0000656	0.0003369	0.0035	1.42		7818.07	7818.07		23.76	Si
SLV 1	fin.	678.51	-687	-0.0001379	0.0003369	0.0035	1.42		7808.98	7808.98		11.51	Si
SLD 4	ini.	-221.19	-934	-0.0000438	0.0003369	0.0035	1.42		7818.07	7818.07		35.35	Si
SLD 4	fin.	564.08	-618	-0.0001139	0.0003369	0.0035	1.42		7808.98	7808.98		13.84	Si
SLV 4	ini.	-376.1	-799	-0.0000751	0.0003369	0.0035	1.42		7818.07	7818.07		20.79	Si
SLV 4	fin.	741.8	-367	-0.0001514	0.0003369	0.0035	1.42		7808.98	7808.98		10.53	Si
SLV 3	ini.	-301.52	-700	-0.00006	0.0003369	0.0035	1.42		7818.07	7818.07		25.93	Si
SLV 3	fin.	712.36	-318	-0.0001451	0.0003369	0.0035	1.42		7808.98	7808.98		10.96	Si
SLV 2	ini.	-403.65	-1297	-0.0000807	0.0003369	0.0035	1.42		7818.07	7818.07		19.37	Si
SLV 2	fin.	707.96	-737	-0.0001442	0.0003369	0.0035	1.42		7808.98	7808.98		11.03	Si
SLV 8	ini.	-156.89	-227	-0.000031	0.0003369	0.0035	1.42		7818.07	7818.07		49.83	Si
SLV 8	fin.	580.55	-123	-0.0001174	0.0003369	0.0035	1.42		7808.98	7808.98		13.45	Si
SLV 7	ini.	-108.84	-164	-0.0000214	0.0003369	0.0035	1.42		7818.07	7818.07		71.83	Si
SLV 7	fin.	561.58	-91	-0.0001134	0.0003369	0.0035	1.42		7808.98	7808.98		13.91	Si
SLD 2	ini.	-231.58	-1150	-0.0000459	0.0003369	0.0035	1.42		7818.07	7818.07		33.76	Si
SLD 2	fin.	548.86	-778	-0.0001108	0.0003369	0.0035	1.42		7808.98	7808.98		14.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-403.65	1535	1.42	0	494	7137	6124	3621	7631		4.97	Si
SLV 2	fin.	707.96	1666	1.42	0	494	7137	6124	3621	7631		4.58	Si
SLV 6	ini.	-248.73	722	1.42	0	494	7137	6124	3621	7631		10.58	Si
SLV 6	fin.	467.72	1671	1.42	0	494	7137	6124	3621	7631		4.57	Si
SLD 4	ini.	-221.19	1342	1.42	0	494	7137	6124	3621	7631		5.69	Si
SLD 4	fin.	564.08	846	1.42	0	494	7137	6124	3621	7631		9.02	Si
SLV 1	ini.	-329.07	1381	1.42	0	494	7137	6124	3621	7631		5.53	Si
SLV 1	fin.	678.51	1512	1.42	0	494	7137	6124	3621	7631		5.05	Si
SLV 3	ini.	-301.52	1675	1.42	0	494	7137	6124	3621	7631		4.56	Si
SLV 3	fin.	712.36	1032	1.42	0	494	7137	6124	3621	7631		7.39	Si
SLV 4	ini.	-376.1	1829	1.42	0	494	7137	6124	3621	7631		4.17	Si
SLV 4	fin.	741.8	1186	1.42	0	494	7137	6124	3621	7631		6.43	Si
SLV 12	ini.	-7.92	1323	1.42	0	494	7137	6124	3621	7631		5.77	Si
SLV 12	fin.	412.97	-380	1.42	0	494	7137	6124	3621	7631		20.07	Si
SLV 5	ini.	-200.67	622	1.42	0	494	7137	6124	3621	7631		12.26	Si
SLV 5	fin.	448.75	1572	1.42	0	494	7137	6124	3621	7631		4.86	Si
SLV 8	ini.	-156.89	1702	1.42	0	494	7137	6124	3621	7631		4.48	Si
SLV 8	fin.	580.55	72	1.42	0	494	7137	6124	3621	7631		106.14	Si
SLV 7	ini.	-108.84	1603	1.42	0	494	7137	6124	3621	7631		4.76	Si
SLV 7	fin.	561.58	-28	1.42	0	494	7137	6124	3621	7631		277.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.527	SLV 4	Si
V_SLV	4.172	SLV 4	Si
PF_SLU	10.824	SLU 83	Si
V_SLU	3.956	SLU 81	Si

Trave di accoppiamento 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	5.46	6.36	0.9	-7.413	-3.314	5.46	6.36	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	62.74	-1401	-0.0000311	0.0001872	0.0035	0.9		2959	2959	No	47.16	Si
SLU 82	fin.	292.87	-1641	-0.0001525	0.0001872	0.0035	0.9		2959	2959	No	10.1	Si
SLU 79	ini.	84.38	-1498	-0.000042	0.0001872	0.0035	0.9		2959	2959	No	35.07	Si
SLU 79	fin.	279.14	-1624	-0.0001448	0.0001872	0.0035	0.9		2959	2959	No	10.6	Si
SLU 60	ini.	43.46	-1235	-0.0000214	0.0001872	0.0035	0.9		2959	2959	No	68.08	Si
SLU 60	fin.	293.11	-1556	-0.0001526	0.0001872	0.0035	0.9		2959	2959	No	10.1	Si
SLU 84	ini.	67.72	-1444	-0.0000336	0.0001872	0.0035	0.9		2959	2959	No	43.69	Si
SLU 84	fin.	296.85	-1672	-0.0001547	0.0001872	0.0035	0.9		2959	2959	No	9.97	Si
SLU 81	ini.	60.5	-1396	-0.0000299	0.0001872	0.0035	0.9		2959	2959	No	48.91	Si
SLU 81	fin.	300.35	-1661	-0.0001567	0.0001872	0.0035	0.9		2959	2959	No	9.85	Si
SLU 83	ini.	65.48	-1439	-0.0000324	0.0001872	0.0035	0.9		2959	2959	No	45.19	Si
SLU 83	fin.	304.33	-1692	-0.0001589	0.0001872	0.0035	0.9		2959	2959	No	9.72	Si
SLU 61	ini.	45.71	-1240	-0.0000226	0.0001872	0.0035	0.9		2959	2959	No	64.73	Si
SLU 61	fin.	285.63	-1536	-0.0001484	0.0001872	0.0035	0.9		2959	2959	No	10.36	Si
SLU 63	ini.	50.69	-1283	-0.000025	0.0001872	0.0035	0.9		2959	2959	No	58.37	Si
SLU 63	fin.	289.61	-1567	-0.0001507	0.0001872	0.0035	0.9		2959	2959	No	10.22	Si
SLU 62	ini.	48.45	-1278	-0.0000239	0.0001872	0.0035	0.9		2959	2959	No	61.08	Si
SLU 62	fin.	297.09	-1587	-0.0001548	0.0001872	0.0035	0.9		2959	2959	No	9.96	Si
SLU 77	ini.	89.5	-1529	-0.0000445	0.0001872	0.0035	0.9		2959	2959	No	33.06	Si
SLU 77	fin.	277.28	-1629	-0.0001438	0.0001872	0.0035	0.9		2959	2959	No	10.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	84.38	-3093	0.9	0	365	7137	3773	2295	6068	No	1.96	Si
SLU 79	fin.	279.14	2410	0.9	0	365	7137	3773	2295	6068	No	2.52	Si
SLU 75	ini.	86.77	-3084	0.9	0	365	7137	3773	2295	6068	No	1.97	Si
SLU 75	fin.	265.82	2340	0.9	0	365	7137	3773	2295	6068	No	2.59	Si
SLU 71	ini.	116.86	-3080	0.9	0	365	7137	3773	2295	6068	No	1.97	Si
SLU 71	fin.	211.06	2014	0.9	0	365	7137	3773	2295	6068	No	3.01	Si
SLU 70	ini.	124.23	-3153	0.9	0	365	7137	3773	2295	6068	No	1.92	Si
SLU 70	fin.	201.72	1992	0.9	0	365	7137	3773	2295	6068	No	3.05	Si
SLU 67	ini.	119.24	-3071	0.9	0	365	7137	3773	2295	6068	No	1.98	Si
SLU 67	fin.	197.74	1945	0.9	0	365	7137	3773	2295	6068	No	3.12	Si
SLU 72	ini.	119.1	-3097	0.9	0	365	7137	3773	2295	6068	No	1.96	Si
SLU 72	fin.	203.58	1988	0.9	0	365	7137	3773	2295	6068	No	3.05	Si
SLU 77	ini.	89.5	-3149	0.9	0	365	7137	3773	2295	6068	No	1.93	Si
SLU 77	fin.	277.28	2414	0.9	0	365	7137	3773	2295	6068	No	2.51	Si
SLU 80	ini.	86.63	-3111	0.9	0	365	7137	3773	2295	6068	No	1.95	Si
SLU 80	fin.	271.66	2383	0.9	0	365	7137	3773	2295	6068	No	2.55	Si
SLU 78	ini.	91.75	-3166	0.9	0	365	7137	3773	2295	6068	No	1.92	Si
SLU 78	fin.	269.8	2388	0.9	0	365	7137	3773	2295	6068	No	2.54	Si
SLU 69	ini.	121.98	-3135	0.9	0	365	7137	3773	2295	6068	No	1.94	Si
SLU 69	fin.	209.2	2019	0.9	0	365	7137	3773	2295	6068	No	3.01	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1328.04	-5682	-0.0008479	0.0002807	0.0035	0.9		2989.59	2989.59		2.25	Si
SLV 3	fin.	-1665.7	3021	-0.0011435	0.0002807	0.0035	0.9		2995.37	2995.37		1.8	Si
SLV 2	ini.	1537.5	-6151	-0.0010281	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLV 2	fin.	-1926.92	3657	-0.0014071	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 13	ini.	-1330.79	4067	-0.0008481	0.0002807	0.0035	0.9		2995.37	2995.37		2.25	Si
SLV 13	fin.	2208.62	-5579	-0.0017465	0.0002807	0.0035	0.9		2989.59	2989.59		1.35	Si
SLV 4	ini.	1469.2	-6203	-0.0009676	0.0002807	0.0035	0.9		2989.59	2989.59		2.03	Si
SLV 4	fin.	-1860.45	3446	-0.0013366	0.0002807	0.0035	0.9		2995.37	2995.37		1.61	Si
SLV 15	ini.	-1399.09	4015	-0.0009051	0.0002807	0.0035	0.9		2995.37	2995.37		2.14	Si
SLV 15	fin.	2275.09	-5789	-0.0018368	0.0002807	0.0035	0.9		2989.59	2989.59		1.31	Si
SLV 14	ini.	-1189.63	3547	-0.000735	0.0002807	0.0035	0.9		2995.37	2995.37		2.52	Si
SLV 14	fin.	2013.88	-5153	-0.0015078	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLD 13	ini.	-529.2	1128	-0.000282	0.0002807	0.0035	0.9		2995.37	2995.37		5.66	Si
SLD 13	fin.	1043.57	-2994	-0.0006255	0.0002807	0.0035	0.9		2989.59	2989.59		2.86	Si
SLV 16	ini.	-1257.93	3495	-0.000789	0.0002807	0.0035	0.9		2995.37	2995.37		2.38	Si
SLV 16	fin.	2080.35	-5363	-0.0015855	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLD 15	ini.	-558.49	1105	-0.0002994	0.0002807	0.0035	0.9		2995.37	2995.37		5.36	Si
SLD 15	fin.	1072.63	-3087	-0.0006472	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 1	ini.	1396.34	-5630	-0.000905	0.0002807	0.0035	0.9		2989.59	2989.59		2.14	Si
SLV 1	fin.	-1732.17	3231	-0.0012074	0.0002807	0.0035	0.9		2995.37	2995.37		1.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-558.49	880	0.9	0	548	7137	5660	2295	7684		8.73	Si
SLD 15	fin.	1072.63	5661	0.9	0	548	7137	5660	2295	7684		1.36	Si
SLV 3	ini.	1328.04	-8956	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 3	fin.	-1665.7	-6857	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 14	ini.	-1189.63	4601	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLV 14	fin.	2013.88	9977	0.9	0	548	7137	5660	2295	7684		0.77	No
SLV 4	ini.	1469.2	-9710	0.9	0	548	7137	5660	2295	7684		0.79	No
SLV 4	fin.	-1860.45	-7721	0.9	0	548	7137	5660	2295	7684		1	No
SLV 15	ini.	-1399.09	4979	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 15	fin.	2275.09	11148	0.9	0	548	7137	5660	2295	7684		0.69	No
SLD 13	ini.	-529.2	1044	0.9	0	548	7137	5660	2295	7684		7.36	Si
SLD 13	fin.	1043.57	5526	0.9	0	548	7137	5660	2295	7684		1.39	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1396.34	-8581	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 1	fin.	-1732.17	-7164	0.9	0	548	7137	5660	2295	7684		1.07	Si
SLV 13	ini.	-1330.79	5355	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLV 13	fin.	2208.62	10841	0.9	0	548	7137	5660	2295	7684		0.71	No
SLV 16	ini.	-1257.93	4225	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 16	fin.	2080.35	10284	0.9	0	548	7137	5660	2295	7684		0.75	No
SLV 2	ini.	1537.5	-9335	0.9	0	548	7137	5660	2295	7684		0.82	No
SLV 2	fin.	-1926.92	-8028	0.9	0	548	7137	5660	2295	7684		0.96	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.314	SLV 15	Si
V_SLV	0.689	SLV 15	No
PF_SLU	9.723	SLU 83	Si
V_SLU	1.916	SLU 78	Si

Trave di accoppiamento 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.16	8.98	0.82	-7.413	-3.314	8.16	8.98	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-285.74	-1929	-0.0001812	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.61	Si
SLU 82	fin.	-109.67	-841	-0.0000662	0.0001872	0.0035	0.82		2460.51	2460.51	No	22.43	Si
SLU 62	ini.	-278.34	-1823	-0.0001761	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.84	Si
SLU 62	fin.	-100.73	-788	-0.0000607	0.0001872	0.0035	0.82		2460.51	2460.51	No	24.43	Si
SLU 80	ini.	-275.61	-1877	-0.0001742	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.93	Si
SLU 80	fin.	-126.05	-894	-0.0000764	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.52	Si
SLU 78	ini.	-276.01	-1885	-0.0001745	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.91	Si
SLU 78	fin.	-130.71	-914	-0.0000793	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.82	Si
SLU 79	ini.	-281.28	-1894	-0.0001781	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.75	Si
SLU 79	fin.	-123.16	-891	-0.0000746	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.98	Si
SLU 84	ini.	-292.39	-1969	-0.0001858	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.42	Si
SLU 84	fin.	-113.66	-866	-0.0000687	0.0001872	0.0035	0.82		2460.51	2460.51	No	21.65	Si
SLU 74	ini.	-275.03	-1863	-0.0001738	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.95	Si
SLU 74	fin.	-123.83	-885	-0.000075	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.87	Si
SLU 77	ini.	-281.68	-1902	-0.0001784	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.73	Si
SLU 77	fin.	-127.82	-911	-0.0000775	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.25	Si
SLU 81	ini.	-291.41	-1947	-0.0001851	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.44	Si
SLU 81	fin.	-106.78	-838	-0.0000644	0.0001872	0.0035	0.82		2460.51	2460.51	No	23.04	Si
SLU 83	ini.	-298.07	-1986	-0.0001898	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.25	Si
SLU 83	fin.	-110.77	-864	-0.0000669	0.0001872	0.0035	0.82		2460.51	2460.51	No	22.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-276.01	4092	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 78	fin.	-130.71	-2210	0.82	0	303	6502	3438	2091	5529	No	2.5	Si
SLU 80	ini.	-275.61	4067	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 80	fin.	-126.05	-2174	0.82	0	303	6502	3438	2091	5529	No	2.54	Si
SLU 81	ini.	-291.41	4169	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 81	fin.	-106.78	-2071	0.82	0	303	6502	3438	2091	5529	No	2.67	Si
SLU 84	ini.	-292.39	4231	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 84	fin.	-113.66	-2138	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 79	ini.	-281.28	4095	0.82	0	303	6502	3438	2091	5529	No	1.35	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-123.16	-2162	0.82	0	303	6502	3438	2091	5529	No	2.56	Si
SLU 83	ini.	-298.07	4259	0.82	0	303	6502	3438	2091	5529	No	1.3	Si
SLU 83	fin.	-110.77	-2126	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 75	ini.	-269.36	4002	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 75	fin.	-126.72	-2155	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 74	ini.	-275.03	4030	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 74	fin.	-123.83	-2143	0.82	0	303	6502	3438	2091	5529	No	2.58	Si
SLU 77	ini.	-281.68	4120	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 77	fin.	-127.82	-2198	0.82	0	303	6502	3438	2091	5529	No	2.52	Si
SLU 82	ini.	-285.74	4141	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 82	fin.	-109.67	-2083	0.82	0	303	6502	3438	2091	5529	No	2.65	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	946.38	3031	-0.0006984	0.0002807	0.0035	0.82		2482.11	2482.11		2.62	Si
SLV 1	fin.	-826.74	-2090	-0.0005893	0.0002807	0.0035	0.82		2487.45	2487.45		3.01	Si
SLV 13	ini.	-1361.74	-5677	-0.0011197	0.0002807	0.0035	0.82		2487.45	2487.45		1.83	Si
SLV 13	fin.	649.58	1114	-0.000442	0.0002807	0.0035	0.82		2482.11	2482.11		3.82	Si
SLV 2	ini.	1061.89	3446	-0.0008082	0.0002807	0.0035	0.82		2482.11	2482.11		2.34	Si
SLV 2	fin.	-913.11	-2300	-0.0006662	0.0002807	0.0035	0.82		2487.45	2487.45		2.72	Si
SLV 14	ini.	-1246.23	-5262	-0.0009933	0.0002807	0.0035	0.82		2487.45	2487.45		2	Si
SLV 14	fin.	563.22	904	-0.0003743	0.0002807	0.0035	0.82		2482.11	2482.11		4.41	Si
SLV 16	ini.	-1297.09	-5455	-0.001048	0.0002807	0.0035	0.82		2487.45	2487.45		1.92	Si
SLV 16	fin.	635.01	826	-0.0004304	0.0002807	0.0035	0.82		2482.11	2482.11		3.91	Si
SLV 15	ini.	-1412.61	-5870	-0.0011778	0.0002807	0.0035	0.82		2487.45	2487.45		1.76	Si
SLV 15	fin.	721.38	1036	-0.0005007	0.0002807	0.0035	0.82		2482.11	2482.11		3.44	Si
SLV 3	ini.	895.51	2838	-0.0006519	0.0002807	0.0035	0.82		2482.11	2482.11		2.77	Si
SLV 3	fin.	-754.95	-2168	-0.0005276	0.0002807	0.0035	0.82		2487.45	2487.45		3.29	Si
SLV 4	ini.	1011.03	3253	-0.0007591	0.0002807	0.0035	0.82		2482.11	2482.11		2.46	Si
SLV 4	fin.	-841.31	-2378	-0.000602	0.0002807	0.0035	0.82		2487.45	2487.45		2.96	Si
SLD 13	ini.	-682.41	-3120	-0.0004675	0.0002807	0.0035	0.82		2487.45	2487.45		3.65	Si
SLD 13	fin.	222.47	114	-0.0001365	0.0002807	0.0035	0.82		2482.11	2482.11		11.16	Si
SLD 15	ini.	-704.62	-3204	-0.0004857	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLD 15	fin.	253.92	81	-0.0001568	0.0002807	0.0035	0.82		2482.11	2482.11		9.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	895.51	-2537	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 3	fin.	-754.95	-5763	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 4	ini.	1011.03	-3133	0.82	0	455	6502	5156	2091	6957		2.22	Si
SLV 4	fin.	-841.31	-6240	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLD 15	ini.	-704.62	5321	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLD 15	fin.	253.92	364	0.82	0	455	6502	5156	2091	6957		19.1	Si
SLV 15	ini.	-1412.61	8913	0.82	0	455	6502	5156	2091	6957		0.78	No
SLV 15	fin.	721.38	2870	0.82	0	455	6502	5156	2091	6957		2.42	Si
SLV 11	ini.	-643.57	5402	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 11	fin.	273.07	-659	0.82	0	455	6502	5156	2091	6957		10.56	Si
SLV 14	ini.	-1246.23	7800	0.82	0	455	6502	5156	2091	6957		0.89	No
SLV 14	fin.	563.22	2755	0.82	0	455	6502	5156	2091	6957		2.53	Si
SLV 13	ini.	-1361.74	8396	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 13	fin.	649.58	3232	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 16	ini.	-1297.09	8317	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 16	fin.	635.01	2393	0.82	0	455	6502	5156	2091	6957		2.91	Si
SLV 2	ini.	1061.89	-3650	0.82	0	455	6502	5156	2091	6957		1.91	Si
SLV 2	fin.	-913.11	-5878	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 1	ini.	946.38	-3054	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLV 1	fin.	-826.74	-5401	0.82	0	455	6502	5156	2091	6957		1.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.761	SLV 15	Si
V_SLV	0.781	SLV 15	No
PF_SLU	8.255	SLU 83	Si
V_SLU	1.298	SLU 83	Si

Trave di accoppiamento 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-0.133	1.266	7.56	8.98	1.42	-0.133	2.066	7.56	8.98	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-408.17	-3003	-0.0000826	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.03	Si
SLU 69	fin.	-217.85	-2598	-0.0000434	0.0001872	0.0035	1.42		7359.91	7359.91	No	33.78	Si
SLU 71	ini.	-405.73	-2967	-0.0000821	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.14	Si
SLU 71	fin.	-212.7	-2560	-0.0000424	0.0001872	0.0035	1.42		7359.91	7359.91	No	34.6	Si
SLU 68	ini.	-399.87	-2897	-0.0000809	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.41	Si
SLU 68	fin.	-201.86	-2493	-0.0000402	0.0001872	0.0035	1.42		7359.91	7359.91	No	36.46	Si
SLU 48	ini.	-408.12	-2777	-0.0000826	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.03	Si
SLU 48	fin.	-131.6	-2255	-0.000026	0.0001872	0.0035	1.42		7359.91	7359.91	No	55.93	Si
SLU 50	ini.	-405.68	-2740	-0.0000821	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.14	Si
SLU 50	fin.	-126.45	-2217	-0.000025	0.0001872	0.0035	1.42		7359.91	7359.91	No	58.2	Si
SLU 51	ini.	-409.53	-2746	-0.0000829	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.97	Si
SLU 51	fin.	-120.89	-2213	-0.0000239	0.0001872	0.0035	1.42		7359.91	7359.91	No	60.88	Si
SLU 70	ini.	-412.01	-3009	-0.0000834	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.86	Si
SLU 70	fin.	-212.28	-2595	-0.0000423	0.0001872	0.0035	1.42		7359.91	7359.91	No	34.67	Si
SLU 49	ini.	-411.97	-2783	-0.0000834	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.87	Si
SLU 49	fin.	-126.03	-2251	-0.0000249	0.0001872	0.0035	1.42		7359.91	7359.91	No	58.4	Si
SLU 72	ini.	-409.58	-2973	-0.0000829	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.97	Si
SLU 72	fin.	-207.14	-2556	-0.0000412	0.0001872	0.0035	1.42		7359.91	7359.91	No	35.53	Si
SLU 47	ini.	-399.82	-2671	-0.0000809	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.41	Si
SLU 47	fin.	-115.61	-2150	-0.0000229	0.0001872	0.0035	1.42		7359.91	7359.91	No	63.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-408.17	3958	1.42	0	576	6344	5953	3621	6920	No	1.75	Si
SLU 69	fin.	-217.85	-2092	1.42	0	576	6344	5953	3621	6920	No	3.31	Si
SLU 78	ini.	-387.73	3910	1.42	0	576	6344	5953	3621	6920	No	1.77	Si
SLU 78	fin.	-322.49	-2610	1.42	0	576	6344	5953	3621	6920	No	2.65	Si
SLU 77	ini.	-383.89	3887	1.42	0	576	6344	5953	3621	6920	No	1.78	Si
SLU 77	fin.	-328.05	-2628	1.42	0	576	6344	5953	3621	6920	No	2.63	Si
SLU 49	ini.	-411.97	3872	1.42	0	576	6344	5953	3621	6920	No	1.79	Si
SLU 49	fin.	-126.03	-1627	1.42	0	576	6344	5953	3621	6920	No	4.25	Si
SLU 67	ini.	-399.74	3874	1.42	0	576	6344	5953	3621	6920	No	1.79	Si
SLU 67	fin.	-210.71	-2048	1.42	0	576	6344	5953	3621	6920	No	3.38	Si
SLU 71	ini.	-405.73	3915	1.42	0	576	6344	5953	3621	6920	No	1.77	Si
SLU 71	fin.	-212.7	-2053	1.42	0	576	6344	5953	3621	6920	No	3.37	Si
SLU 66	ini.	-395.89	3850	1.42	0	576	6344	5953	3621	6920	No	1.8	Si
SLU 66	fin.	-216.27	-2066	1.42	0	576	6344	5953	3621	6920	No	3.35	Si
SLU 70	ini.	-412.01	3981	1.42	0	576	6344	5953	3621	6920	No	1.74	Si
SLU 70	fin.	-212.28	-2075	1.42	0	576	6344	5953	3621	6920	No	3.34	Si
SLU 80	ini.	-385.3	3868	1.42	0	576	6344	5953	3621	6920	No	1.79	Si
SLU 80	fin.	-317.34	-2571	1.42	0	576	6344	5953	3621	6920	No	2.69	Si
SLU 72	ini.	-409.58	3939	1.42	0	576	6344	5953	3621	6920	No	1.76	Si
SLU 72	fin.	-207.14	-2035	1.42	0	576	6344	5953	3621	6920	No	3.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	73.06	-1899	-0.0000144	0.0002807	0.0035	1.42		7337.02	7337.02		100.43	Si
SLV 15	fin.	-892.44	-3147	-0.0001848	0.0002807	0.0035	1.42		7346.34	7346.34		8.23	Si
SLV 13	ini.	-163.67	-2274	-0.0000324	0.0002807	0.0035	1.42		7346.34	7346.34		44.89	Si
SLV 13	fin.	-672.92	-3026	-0.0001373	0.0002807	0.0035	1.42		7346.34	7346.34		10.92	Si
SLV 5	ini.	-658.52	-2622	-0.0001342	0.0002807	0.0035	1.42		7346.34	7346.34		11.16	Si
SLV 5	fin.	255.14	-1454	-0.0000508	0.0002807	0.0035	1.42		7337.02	7337.02		28.76	Si
SLV 11	ini.	215.05	-1444	-0.0000427	0.0002807	0.0035	1.42		7337.02	7337.02		34.12	Si
SLV 11	fin.	-765.93	-2498	-0.0001572	0.0002807	0.0035	1.42		7346.34	7346.34		9.59	Si
SLV 9	ini.	-574.03	-2694	-0.0001164	0.0002807	0.0035	1.42		7346.34	7346.34		12.8	Si
SLV 9	fin.	-34.2	-2094	-0.0000067	0.0002807	0.0035	1.42		7346.34	7346.34		214.83	Si
SLV 10	ini.	-703.09	-2932	-0.0001437	0.0002807	0.0035	1.42		7346.34	7346.34		10.45	Si
SLV 10	fin.	129.15	-1935	-0.0000255	0.0002807	0.0035	1.42		7337.02	7337.02		56.81	Si
SLV 16	ini.	-127.22	-2268	-0.0000251	0.0002807	0.0035	1.42		7346.34	7346.34		57.75	Si
SLV 16	fin.	-638.97	-2900	-0.0001301	0.0002807	0.0035	1.42		7346.34	7346.34		11.5	Si
SLV 2	ini.	-645.59	-2405	-0.0001315	0.0002807	0.0035	1.42		7346.34	7346.34		11.38	Si
SLV 2	fin.	544.99	-647	-0.0001104	0.0002807	0.0035	1.42		7337.02	7337.02		13.46	Si
SLV 12	ini.	85.99	-1681	-0.0000169	0.0002807	0.0035	1.42		7337.02	7337.02		85.33	Si
SLV 12	fin.	-602.59	-2339	-0.0001224	0.0002807	0.0035	1.42		7346.34	7346.34		12.19	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-787.58	-2860	-0.0001619	0.0002807	0.0035	1.42		7346.34	7346.34		9.33	Si
SLV 6	fin.	418.48	-1295	-0.0000841	0.0002807	0.0035	1.42		7337.02	7337.02		17.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-658.52	4149	1.42	0	864	6344	8929	3621	7208		1.74	Si
SLV 5	fin.	255.14	101	1.42	0	864	6344	8929	3621	7208		71.03	Si
SLD 10	ini.	-469.95	3566	1.42	0	864	6344	8929	3621	7208		2.02	Si
SLD 10	fin.	-39.13	-1062	1.42	0	864	6344	8929	3621	7208		6.78	Si
SLD 6	ini.	-506.13	3707	1.42	0	864	6344	8929	3621	7208		1.94	Si
SLD 6	fin.	84.69	-545	1.42	0	864	6344	8929	3621	7208		13.23	Si
SLV 6	ini.	-787.58	4870	1.42	0	864	6344	8929	3621	7208		1.48	Si
SLV 6	fin.	418.48	818	1.42	0	864	6344	8929	3621	7208		8.81	Si
SLV 2	ini.	-645.59	4370	1.42	0	864	6344	8929	3621	7208		1.65	Si
SLV 2	fin.	544.99	1411	1.42	0	864	6344	8929	3621	7208		5.11	Si
SLV 10	ini.	-703.09	4543	1.42	0	864	6344	8929	3621	7208		1.59	Si
SLV 10	fin.	129.15	-391	1.42	0	864	6344	8929	3621	7208		18.45	Si
SLV 13	ini.	-163.67	2161	1.42	0	864	6344	8929	3621	7208		3.34	Si
SLV 13	fin.	-672.92	-3728	1.42	0	864	6344	8929	3621	7208		1.93	Si
SLV 15	ini.	73.06	1234	1.42	0	864	6344	8929	3621	7208		5.84	Si
SLV 15	fin.	-892.44	-4597	1.42	0	864	6344	8929	3621	7208		1.57	Si
SLV 9	ini.	-574.03	3822	1.42	0	864	6344	8929	3621	7208		1.89	Si
SLV 9	fin.	-34.2	-1107	1.42	0	864	6344	8929	3621	7208		6.51	Si
SLV 11	ini.	215.05	734	1.42	0	864	6344	8929	3621	7208		9.82	Si
SLV 11	fin.	-765.93	-4004	1.42	0	864	6344	8929	3621	7208		1.8	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.232	SLV 15	Si
V_SLV	1.48	SLV 6	Si
PF_SLU	17.863	SLU 70	Si
V_SLU	1.738	SLU 70	Si

Trave di accoppiamento 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.98	9.88	0.9	-18.263	-3.314	8.98	9.88	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 58	ini.	206.94	-1103	-0.0001056	0.0001872	0.0035	0.9		2959	2959	No	14.3	Si
SLU 58	fin.	52.01	-945	-0.0000257	0.0001872	0.0035	0.9		2959	2959	No	56.89	Si
SLU 61	ini.	211.43	-1079	-0.000108	0.0001872	0.0035	0.9		2959	2959	No	13.99	Si
SLU 61	fin.	30.98	-824	-0.0000152	0.0001872	0.0035	0.9		2959	2959	No	95.51	Si
SLU 83	ini.	213.08	-1161	-0.0001089	0.0001872	0.0035	0.9		2959	2959	No	13.89	Si
SLU 83	fin.	53.1	-991	-0.0000262	0.0001872	0.0035	0.9		2959	2959	No	55.73	Si
SLU 63	ini.	218.42	-1118	-0.0001117	0.0001872	0.0035	0.9		2959	2959	No	13.55	Si
SLU 63	fin.	34.98	-866	-0.0000172	0.0001872	0.0035	0.9		2959	2959	No	84.59	Si
SLU 62	ini.	221.59	-1127	-0.0001134	0.0001872	0.0035	0.9		2959	2959	No	13.35	Si
SLU 62	fin.	34.04	-865	-0.0000168	0.0001872	0.0035	0.9		2959	2959	No	86.92	Si
SLU 84	ini.	209.9	-1151	-0.0001072	0.0001872	0.0035	0.9		2959	2959	No	14.1	Si
SLU 84	fin.	54.04	-992	-0.0000267	0.0001872	0.0035	0.9		2959	2959	No	54.76	Si
SLU 59	ini.	203.76	-1094	-0.0001039	0.0001872	0.0035	0.9		2959	2959	No	14.52	Si
SLU 59	fin.	52.95	-945	-0.0000262	0.0001872	0.0035	0.9		2959	2959	No	55.89	Si
SLU 81	ini.	206.09	-1122	-0.0001051	0.0001872	0.0035	0.9		2959	2959	No	14.36	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	49.1	-950	-0.0000242	0.0001872	0.0035	0.9		2959	2959	No	60.27	Si
SLU 82	ini.	202.91	-1112	-0.0001034	0.0001872	0.0035	0.9		2959	2959	No	14.58	Si
SLU 82	fin.	50.04	-950	-0.0000247	0.0001872	0.0035	0.9		2959	2959	No	59.14	Si
SLU 60	ini.	214.61	-1088	-0.0001097	0.0001872	0.0035	0.9		2959	2959	No	13.79	Si
SLU 60	fin.	30.04	-824	-0.0000148	0.0001872	0.0035	0.9		2959	2959	No	98.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	182.2	-1487	0.9	0	365	7137	3773	2295	6068	No	4.08	Si
SLU 74	fin.	76.58	1932	0.9	0	365	7137	3773	2295	6068	No	3.14	Si
SLU 69	ini.	138.7	-1291	0.9	0	365	7137	3773	2295	6068	No	4.7	Si
SLU 69	fin.	113.17	2123	0.9	0	365	7137	3773	2295	6068	No	2.86	Si
SLU 67	ini.	128.54	-1213	0.9	0	365	7137	3773	2295	6068	No	5	Si
SLU 67	fin.	110.11	2048	0.9	0	365	7137	3773	2295	6068	No	2.96	Si
SLU 71	ini.	147.93	-1318	0.9	0	365	7137	3773	2295	6068	No	4.6	Si
SLU 71	fin.	103.65	2039	0.9	0	365	7137	3773	2295	6068	No	2.98	Si
SLU 72	ini.	144.75	-1302	0.9	0	365	7137	3773	2295	6068	No	4.66	Si
SLU 72	fin.	104.59	2038	0.9	0	365	7137	3773	2295	6068	No	2.98	Si
SLU 66	ini.	131.71	-1229	0.9	0	365	7137	3773	2295	6068	No	4.94	Si
SLU 66	fin.	109.17	2048	0.9	0	365	7137	3773	2295	6068	No	2.96	Si
SLU 68	ini.	135.65	-1229	0.9	0	365	7137	3773	2295	6068	No	4.94	Si
SLU 68	fin.	101.21	1963	0.9	0	365	7137	3773	2295	6068	No	3.09	Si
SLU 78	ini.	186.01	-1534	0.9	0	365	7137	3773	2295	6068	No	3.96	Si
SLU 78	fin.	81.52	2007	0.9	0	365	7137	3773	2295	6068	No	3.02	Si
SLU 77	ini.	189.19	-1549	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 77	fin.	80.58	2008	0.9	0	365	7137	3773	2295	6068	No	3.02	Si
SLU 70	ini.	135.52	-1275	0.9	0	365	7137	3773	2295	6068	No	4.76	Si
SLU 70	fin.	114.11	2123	0.9	0	365	7137	3773	2295	6068	No	2.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1384.08	2495	-0.0008925	0.0002807	0.0035	0.9		2995.37	2995.37		2.16	Si
SLV 15	fin.	1094.4	-4629	-0.0006635	0.0002807	0.0035	0.9		2989.59	2989.59		2.73	Si
SLV 2	ini.	1622.77	-3967	-0.001106	0.0002807	0.0035	0.9		2989.59	2989.59		1.84	Si
SLV 2	fin.	-974.25	3080	-0.0005736	0.0002807	0.0035	0.9		2995.37	2995.37		3.07	Si
SLV 4	ini.	1405.69	-3679	-0.0009129	0.0002807	0.0035	0.9		2989.59	2989.59		2.13	Si
SLV 4	fin.	-833.8	2376	-0.0004754	0.0002807	0.0035	0.9		2995.37	2995.37		3.59	Si
SLV 13	ini.	-1167	2208	-0.0007174	0.0002807	0.0035	0.9		2995.37	2995.37		2.57	Si
SLV 13	fin.	953.95	-3926	-0.0005603	0.0002807	0.0035	0.9		2989.59	2989.59		3.13	Si
SLV 14	ini.	-1041.56	1933	-0.0006226	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si
SLV 14	fin.	863.25	-3598	-0.0004966	0.0002807	0.0035	0.9		2989.59	2989.59		3.46	Si
SLV 3	ini.	1280.25	-3405	-0.0008088	0.0002807	0.0035	0.9		2989.59	2989.59		2.34	Si
SLV 3	fin.	-743.1	2049	-0.000415	0.0002807	0.0035	0.9		2995.37	2995.37		4.03	Si
SLV 16	ini.	-1258.63	2220	-0.0007895	0.0002807	0.0035	0.9		2995.37	2995.37		2.38	Si
SLV 16	fin.	1003.7	-4302	-0.0005962	0.0002807	0.0035	0.9		2989.59	2989.59		2.98	Si
SLV 1	ini.	1497.32	-3692	-0.0009923	0.0002807	0.0035	0.9		2989.59	2989.59		2	Si
SLV 1	fin.	-883.55	2752	-0.0005096	0.0002807	0.0035	0.9		2995.37	2995.37		3.39	Si
SLV 5	ini.	840.37	-2011	-0.0004809	0.0002807	0.0035	0.9		2989.59	2989.59		3.56	Si
SLV 5	fin.	-420.41	1294	-0.0002194	0.0002807	0.0035	0.9		2995.37	2995.37		7.12	Si
SLV 6	ini.	921.21	-2188	-0.0005371	0.0002807	0.0035	0.9		2989.59	2989.59		3.25	Si
SLV 6	fin.	-478.86	1505	-0.0002527	0.0002807	0.0035	0.9		2995.37	2995.37		6.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1384.08	5612	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 15	fin.	1094.4	7034	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 16	ini.	-1258.63	5040	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLV 16	fin.	1003.7	6583	0.9	0	548	7137	5660	2295	7684		1.17	Si
SLV 11	ini.	-682.52	1778	0.9	0	548	7137	5660	2295	7684		4.32	Si
SLV 11	fin.	599.01	4940	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 12	ini.	-601.68	1409	0.9	0	548	7137	5660	2295	7684		5.46	Si
SLV 12	fin.	540.56	4650	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 13	ini.	-1167	5159	0.9	0	548	7137	5660	2295	7684		1.49	Si
SLV 13	fin.	953.95	5853	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 4	ini.	1405.69	-7138	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 4	fin.	-833.8	-3107	0.9	0	548	7137	5660	2295	7684		2.47	Si
SLV 14	ini.	-1041.56	4586	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 14	fin.	863.25	5401	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 1	ini.	1497.32	-7019	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 1	fin.	-883.55	-3836	0.9	0	548	7137	5660	2295	7684		2	Si
SLV 3	ini.	1280.25	-6565	0.9	0	548	7137	5660	2295	7684		1.17	Si
SLV 3	fin.	-743.1	-2655	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 2	ini.	1622.77	-7592	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 2	fin.	-974.25	-4288	0.9	0	548	7137	5660	2295	7684		1.79	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.842	SLV 2	Si
V_SLV	1.012	SLV 2	Si
PF_SLU	13.353	SLU 62	Si
V_SLU	2.858	SLU 69	Si

Trave di accoppiamento 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.68	12.5	0.82	-18.263	-3.314	11.68	12.5	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	38.43	-148	-0.0000229	0.0001872	0.0035	0.82		2455.37	2455.37	No	63.89	Si
SLU 84	fin.	-219.31	-1300	-0.0001363	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.22	Si
SLU 81	ini.	39.65	-134	-0.0000236	0.0001872	0.0035	0.82		2455.37	2455.37	No	61.93	Si
SLU 81	fin.	-211.83	-1255	-0.0001314	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.62	Si
SLU 83	ini.	38.79	-150	-0.0000231	0.0001872	0.0035	0.82		2455.37	2455.37	No	63.3	Si
SLU 83	fin.	-221.24	-1304	-0.0001376	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.12	Si
SLU 63	ini.	39.69	-129	-0.0000236	0.0001872	0.0035	0.82		2455.37	2455.37	No	61.86	Si
SLU 63	fin.	-213.76	-1235	-0.0001327	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.51	Si
SLU 82	ini.	39.29	-132	-0.0000234	0.0001872	0.0035	0.82		2455.37	2455.37	No	62.5	Si
SLU 82	fin.	-209.9	-1251	-0.0001301	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.72	Si
SLU 77	ini.	20.17	-211	-0.0000119	0.0001872	0.0035	0.82		2455.37	2455.37	No	121.76	Si
SLU 77	fin.	-211.87	-1264	-0.0001314	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.61	Si
SLU 79	ini.	24.42	-196	-0.0000145	0.0001872	0.0035	0.82		2455.37	2455.37	No	100.57	Si
SLU 79	fin.	-214.44	-1268	-0.0001331	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.47	Si
SLU 78	ini.	19.81	-209	-0.0000117	0.0001872	0.0035	0.82		2455.37	2455.37	No	123.97	Si
SLU 78	fin.	-209.94	-1260	-0.0001301	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.72	Si
SLU 62	ini.	40.05	-132	-0.0000238	0.0001872	0.0035	0.82		2455.37	2455.37	No	61.31	Si
SLU 62	fin.	-215.69	-1239	-0.0001339	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.41	Si
SLU 80	ini.	24.06	-194	-0.0000143	0.0001872	0.0035	0.82		2455.37	2455.37	No	102.07	Si
SLU 80	fin.	-212.51	-1264	-0.0001318	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	39.29	905	0.82	0	303	6502	3438	2091	5529	No	6.11	Si
SLU 82	fin.	-209.9	-2802	0.82	0	303	6502	3438	2091	5529	No	1.97	Si
SLU 74	ini.	21.02	1024	0.82	0	303	6502	3438	2091	5529	No	5.4	Si
SLU 74	fin.	-202.45	-2769	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 75	ini.	20.66	1023	0.82	0	303	6502	3438	2091	5529	No	5.4	Si
SLU 75	fin.	-200.52	-2760	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 84	ini.	38.43	949	0.82	0	303	6502	3438	2091	5529	No	5.82	Si
SLU 84	fin.	-219.31	-2909	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 80	ini.	24.06	1024	0.82	0	303	6502	3438	2091	5529	No	5.4	Si
SLU 80	fin.	-212.51	-2850	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 78	ini.	19.81	1067	0.82	0	303	6502	3438	2091	5529	No	5.18	Si
SLU 78	fin.	-209.94	-2867	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 83	ini.	38.79	950	0.82	0	303	6502	3438	2091	5529	No	5.82	Si
SLU 83	fin.	-221.24	-2918	0.82	0	303	6502	3438	2091	5529	No	1.89	Si
SLU 79	ini.	24.42	1024	0.82	0	303	6502	3438	2091	5529	No	5.4	Si
SLU 79	fin.	-214.44	-2859	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 81	ini.	39.65	906	0.82	0	303	6502	3438	2091	5529	No	6.1	Si
SLU 81	fin.	-211.83	-2811	0.82	0	303	6502	3438	2091	5529	No	1.97	Si
SLU 77	ini.	20.17	1068	0.82	0	303	6502	3438	2091	5529	No	5.17	Si
SLU 77	fin.	-211.87	-2876	0.82	0	303	6502	3438	2091	5529	No	1.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	388.33	929	-0.0002468	0.0002807	0.0035	0.82		2482.11	2482.11		6.39	Si
SLV 6	fin.	-500.99	-2364	-0.0003267	0.0002807	0.0035	0.82		2487.45	2487.45		4.97	Si
SLV 2	ini.	583.65	1119	-0.00039	0.0002807	0.0035	0.82		2482.11	2482.11		4.25	Si
SLV 2	fin.	-962.82	-3979	-0.0007119	0.0002807	0.0035	0.82		2487.45	2487.45		2.58	Si
SLV 15	ini.	-573.41	-1433	-0.0003812	0.0002807	0.0035	0.82		2487.45	2487.45		4.34	Si
SLV 15	fin.	700.92	2397	-0.0004838	0.0002807	0.0035	0.82		2482.11	2482.11		3.54	Si
SLV 14	ini.	-388.79	-862	-0.0002466	0.0002807	0.0035	0.82		2487.45	2487.45		6.4	Si
SLV 14	fin.	557.22	1757	-0.0003697	0.0002807	0.0035	0.82		2482.11	2482.11		4.45	Si
SLV 3	ini.	399.03	549	-0.0002543	0.0002807	0.0035	0.82		2482.11	2482.11		6.22	Si
SLV 3	fin.	-819.12	-3338	-0.0005826	0.0002807	0.0035	0.82		2487.45	2487.45		3.04	Si
SLV 1	ini.	531.32	999	-0.00035	0.0002807	0.0035	0.82		2482.11	2482.11		4.67	Si
SLV 1	fin.	-890.33	-3715	-0.0006456	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLD 2	ini.	253.48	392	-0.0001565	0.0002807	0.0035	0.82		2482.11	2482.11		9.79	Si
SLD 2	fin.	-487.35	-2157	-0.0003167	0.0002807	0.0035	0.82		2487.45	2487.45		5.1	Si
SLV 4	ini.	451.36	669	-0.0002913	0.0002807	0.0035	0.82		2482.11	2482.11		5.5	Si
SLV 4	fin.	-891.61	-3602	-0.0006468	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLV 16	ini.	-521.08	-1312	-0.0003416	0.0002807	0.0035	0.82		2487.45	2487.45		4.77	Si
SLV 16	fin.	628.43	2134	-0.0004251	0.0002807	0.0035	0.82		2482.11	2482.11		3.95	Si
SLV 13	ini.	-441.12	-983	-0.0002833	0.0002807	0.0035	0.82		2487.45	2487.45		5.64	Si
SLV 13	fin.	629.71	2020	-0.0004261	0.0002807	0.0035	0.82		2482.11	2482.11		3.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	399.03	-1614	0.82	0	455	6502	5156	2091	6957		4.31	Si
SLV 3	fin.	-819.12	-5201	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLD 1	ini.	231.01	-605	0.82	0	455	6502	5156	2091	6957		11.5	Si
SLD 1	fin.	-456.23	-3309	0.82	0	455	6502	5156	2091	6957		2.1	Si
SLD 2	ini.	253.48	-727	0.82	0	455	6502	5156	2091	6957		9.57	Si
SLD 2	fin.	-487.35	-3478	0.82	0	455	6502	5156	2091	6957		2	Si
SLV 2	ini.	583.65	-2655	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLV 2	fin.	-962.82	-5726	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLD 4	ini.	195.22	-393	0.82	0	455	6502	5156	2091	6957		17.69	Si
SLD 4	fin.	-455.95	-3418	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 4	ini.	451.36	-1898	0.82	0	455	6502	5156	2091	6957		3.67	Si
SLV 4	fin.	-891.61	-5593	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 16	ini.	-521.08	3818	0.82	0	455	6502	5156	2091	6957		1.82	Si
SLV 16	fin.	628.43	1748	0.82	0	455	6502	5156	2091	6957		3.98	Si
SLV 1	ini.	531.32	-2371	0.82	0	455	6502	5156	2091	6957		2.93	Si
SLV 1	fin.	-890.33	-5334	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 13	ini.	-441.12	3345	0.82	0	455	6502	5156	2091	6957		2.08	Si
SLV 13	fin.	629.71	2007	0.82	0	455	6502	5156	2091	6957		3.47	Si
SLV 15	ini.	-573.41	4102	0.82	0	455	6502	5156	2091	6957		1.7	Si
SLV 15	fin.	700.92	2140	0.82	0	455	6502	5156	2091	6957		3.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.584	SLV 2	Si
V_SLV	1.215	SLV 2	Si
PF_SLU	11.121	SLU 83	Si
V_SLU	1.895	SLU 83	Si

Trave di accoppiamento 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	11.08	12.5	1.42	-18.518	0.706	11.08	12.5	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	387	-150	-0.000078	0.0002246	0.0035	1.42		7594.91	7594.91	No	19.63	Si
SLU 48	fin.	180.15	-332	-0.0000358	0.0002246	0.0035	1.42		7594.91	7594.91	No	42.16	Si
SLU 43	ini.	342.7	-121	-0.0000688	0.0002246	0.0035	1.42		7594.91	7594.91	No	22.16	Si
SLU 43	fin.	159.14	-283	-0.0000316	0.0002246	0.0035	1.42		7594.91	7594.91	No	47.73	Si
SLU 45	ini.	343.45	-175	-0.000069	0.0002246	0.0035	1.42		7594.91	7594.91	No	22.11	Si
SLU 45	fin.	178.99	-329	-0.0000355	0.0002246	0.0035	1.42		7594.91	7594.91	No	42.43	Si
SLU 44	ini.	392.93	-50	-0.0000792	0.0002246	0.0035	1.42		7594.91	7594.91	No	19.33	Si
SLU 44	fin.	147.68	-251	-0.0000293	0.0002246	0.0035	1.42		7594.91	7594.91	No	51.43	Si
SLU 51	ini.	459.94	-30	-0.0000931	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.51	Si
SLU 51	fin.	154.58	-270	-0.0000306	0.0002246	0.0035	1.42		7594.91	7594.91	No	49.13	Si
SLU 50	ini.	429.8	-72	-0.0000869	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.67	Si
SLU 50	fin.	161.45	-290	-0.000032	0.0002246	0.0035	1.42		7594.91	7594.91	No	47.04	Si
SLU 47	ini.	436.48	-26	-0.0000882	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.4	Si
SLU 47	fin.	148.84	-254	-0.0000295	0.0002246	0.0035	1.42		7594.91	7594.91	No	51.03	Si
SLU 9	ini.	343.28	-75	-0.0000689	0.0002246	0.0035	1.42		7594.91	7594.91	No	22.12	Si
SLU 9	fin.	136.89	-249	-0.0000271	0.0002246	0.0035	1.42		7594.91	7594.91	No	55.48	Si
SLU 49	ini.	417.14	-107	-0.0000842	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.21	Si
SLU 49	fin.	173.28	-313	-0.0000344	0.0002246	0.0035	1.42		7594.91	7594.91	No	43.83	Si
SLU 46	ini.	373.59	-132	-0.0000752	0.0002246	0.0035	1.42		7594.91	7594.91	No	20.33	Si
SLU 46	fin.	172.12	-309	-0.0000342	0.0002246	0.0035	1.42		7594.91	7594.91	No	44.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	459.94	-372	1.42	0	329	6344	4083	3621	6673	No	17.92	Si
SLU 51	fin.	154.58	-802	1.42	0	329	6344	4083	3621	6673	No	8.32	Si
SLU 40	ini.	-102.27	813	1.42	0	329	6344	4083	3621	6673	No	8.21	Si
SLU 40	fin.	301.37	463	1.42	0	329	6344	4083	3621	6673	No	14.41	Si
SLU 50	ini.	429.8	-305	1.42	0	329	6344	4083	3621	6673	No	21.85	Si
SLU 50	fin.	161.45	-735	1.42	0	329	6344	4083	3621	6673	No	9.08	Si
SLU 39	ini.	-132.41	880	1.42	0	329	6344	4083	3621	6673	No	7.58	Si
SLU 39	fin.	308.25	530	1.42	0	329	6344	4083	3621	6673	No	12.59	Si
SLU 81	ini.	-15.75	748	1.42	0	329	6344	4083	3621	6673	No	8.92	Si
SLU 81	fin.	325.93	303	1.42	0	329	6344	4083	3621	6673	No	22.03	Si
SLU 47	ini.	436.48	-340	1.42	0	329	6344	4083	3621	6673	No	19.65	Si
SLU 47	fin.	148.84	-769	1.42	0	329	6344	4083	3621	6673	No	8.68	Si
SLU 32	ini.	-66.87	753	1.42	0	329	6344	4083	3621	6673	No	8.87	Si
SLU 32	fin.	299.72	403	1.42	0	329	6344	4083	3621	6673	No	16.58	Si
SLU 42	ini.	-58.72	736	1.42	0	329	6344	4083	3621	6673	No	9.07	Si
SLU 42	fin.	302.53	386	1.42	0	329	6344	4083	3621	6673	No	17.3	Si
SLU 49	ini.	417.14	-264	1.42	0	329	6344	4083	3621	6673	No	25.29	Si
SLU 49	fin.	173.28	-693	1.42	0	329	6344	4083	3621	6673	No	9.63	Si
SLU 41	ini.	-88.86	803	1.42	0	329	6344	4083	3621	6673	No	8.31	Si
SLU 41	fin.	309.4	453	1.42	0	329	6344	4083	3621	6673	No	14.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	1313.13	1241	-0.0002776	0.0003369	0.0035	1.42		7808.98	7808.98		5.95	Si
SLV 13	fin.	-299.52	160	-0.0000596	0.0003369	0.0035	1.42		7818.07	7818.07		26.1	Si
SLV 12	ini.	-1682.51	-2495	-0.0003647	0.0003369	0.0035	1.42		7818.07	7818.07		4.65	Si
SLV 12	fin.	915.01	-986	-0.0001886	0.0003369	0.0035	1.42		7808.98	7808.98		8.53	Si
SLV 5	ini.	1966.79	1852	-0.0004366	0.0003369	0.0035	1.42		7808.98	7808.98		3.97	Si
SLV 5	fin.	-553.02	276	-0.0001115	0.0003369	0.0035	1.42		7818.07	7818.07		14.14	Si
SLV 9	ini.	2294.3	2331	-0.0005233	0.0003369	0.0035	1.42		7808.98	7808.98		3.4	Si
SLV 9	fin.	-693.32	446	-0.0001409	0.0003369	0.0035	1.42		7818.07	7818.07		11.28	Si
SLV 10	ini.	2248.6	2267	-0.0005109	0.0003369	0.0035	1.42		7808.98	7808.98		3.47	Si
SLV 10	fin.	-684.62	422	-0.0001391	0.0003369	0.0035	1.42		7818.07	7818.07		11.42	Si
SLV 8	ini.	-2010.02	-2974	-0.0004471	0.0003369	0.0035	1.42		7818.07	7818.07		3.89	Si
SLV 8	fin.	1055.31	-1156	-0.0002194	0.0003369	0.0035	1.42		7808.98	7808.98		7.4	Si
SLV 11	ini.	-1636.8	-2431	-0.0003536	0.0003369	0.0035	1.42		7818.07	7818.07		4.78	Si
SLV 11	fin.	906.32	-961	-0.0001867	0.0003369	0.0035	1.42		7808.98	7808.98		8.62	Si
SLV 7	ini.	-1964.32	-2910	-0.0004353	0.0003369	0.0035	1.42		7818.07	7818.07		3.98	Si
SLV 7	fin.	1046.61	-1132	-0.0002175	0.0003369	0.0035	1.42		7808.98	7808.98		7.46	Si
SLV 14	ini.	1242.2	1141	-0.0002614	0.0003369	0.0035	1.42		7808.98	7808.98		6.29	Si
SLV 14	fin.	-286.03	122	-0.0000569	0.0003369	0.0035	1.42		7818.07	7818.07		27.33	Si
SLV 6	ini.	1921.08	1788	-0.0004248	0.0003369	0.0035	1.42		7808.98	7808.98		4.06	Si
SLV 6	fin.	-544.33	251	-0.0001097	0.0003369	0.0035	1.42		7818.07	7818.07		14.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1028.85	2993	1.42	0	494	6344	6124	3621	6838		2.28	Si
SLV 4	fin.	661.51	2677	1.42	0	494	6344	6124	3621	6838		2.55	Si
SLV 12	ini.	-1682.51	4684	1.42	0	494	6344	6124	3621	6838		1.46	Si
SLV 12	fin.	915.01	4338	1.42	0	494	6344	6124	3621	6838		1.58	Si
SLV 5	ini.	1966.79	-4297	1.42	0	494	6344	6124	3621	6838		1.59	Si
SLV 5	fin.	-553.02	-4629	1.42	0	494	6344	6124	3621	6838		1.48	Si
SLV 10	ini.	2248.6	-4958	1.42	0	494	6344	6124	3621	6838		1.38	Si
SLV 10	fin.	-684.62	-5304	1.42	0	494	6344	6124	3621	6838		1.29	Si
SLV 13	ini.	1313.13	-2606	1.42	0	494	6344	6124	3621	6838		2.62	Si
SLV 13	fin.	-299.52	-2969	1.42	0	494	6344	6124	3621	6838		2.3	Si
SLV 7	ini.	-1964.32	5345	1.42	0	494	6344	6124	3621	6838		1.28	Si
SLV 7	fin.	1046.61	5013	1.42	0	494	6344	6124	3621	6838		1.36	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	2294.3	-5061	1.42	0	494	6344	6124	3621	6838		1.35	Si
SLV 9	fin.	-693.32	-5407	1.42	0	494	6344	6124	3621	6838		1.26	Si
SLV 11	ini.	-1636.8	4581	1.42	0	494	6344	6124	3621	6838		1.49	Si
SLV 11	fin.	906.32	4235	1.42	0	494	6344	6124	3621	6838		1.61	Si
SLV 8	ini.	-2010.02	5448	1.42	0	494	6344	6124	3621	6838		1.26	Si
SLV 8	fin.	1055.31	5116	1.42	0	494	6344	6124	3621	6838		1.34	Si
SLV 6	ini.	1921.08	-4194	1.42	0	494	6344	6124	3621	6838		1.63	Si
SLV 6	fin.	-544.33	-4526	1.42	0	494	6344	6124	3621	6838		1.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.404	SLV 9	Si
V_SLV	1.255	SLV 8	Si
PF_SLU	16.513	SLU 51	Si
V_SLU	7.581	SLU 39	Si

Trave di accoppiamento 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	11.08	12.5	1.42	-16.333	-3.314	11.08	12.5	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-865.18	-2049	-0.0001829	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.51	Si
SLU 83	fin.	517.92	-1342	-0.000106	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.19	Si
SLU 69	ini.	-873.17	-2149	-0.0001847	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.43	Si
SLU 69	fin.	548.82	-1400	-0.0001126	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.39	Si
SLU 74	ini.	-891.73	-2097	-0.0001891	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.25	Si
SLU 74	fin.	548.1	-1356	-0.0001125	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.41	Si
SLU 70	ini.	-877.91	-2149	-0.0001858	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.38	Si
SLU 70	fin.	555.34	-1394	-0.000114	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.24	Si
SLU 80	ini.	-870.04	-2121	-0.000184	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.46	Si
SLU 80	fin.	531.17	-1396	-0.0001088	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.84	Si
SLU 78	ini.	-910.6	-2184	-0.0001934	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.08	Si
SLU 78	fin.	565.85	-1422	-0.0001163	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.99	Si
SLU 77	ini.	-905.86	-2184	-0.0001923	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.12	Si
SLU 77	fin.	559.33	-1427	-0.0001149	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.14	Si
SLU 75	ini.	-896.47	-2096	-0.0001902	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.21	Si
SLU 75	fin.	554.63	-1350	-0.0001139	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.25	Si
SLU 84	ini.	-869.92	-2049	-0.000184	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.46	Si
SLU 84	fin.	524.45	-1336	-0.0001074	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.02	Si
SLU 79	ini.	-865.3	-2122	-0.0001829	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.51	Si
SLU 79	fin.	524.64	-1402	-0.0001074	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-865.3	2973	1.42	0	576	7137	5953	3621	7713	No	2.59	Si
SLU 79	fin.	524.64	1248	1.42	0	576	7137	5953	3621	7713	No	6.18	Si
SLU 74	ini.	-891.73	3045	1.42	0	576	7137	5953	3621	7713	No	2.53	Si
SLU 74	fin.	548.1	1321	1.42	0	576	7137	5953	3621	7713	No	5.84	Si
SLU 84	ini.	-869.92	3031	1.42	0	576	7137	5953	3621	7713	No	2.54	Si
SLU 84	fin.	524.45	1189	1.42	0	576	7137	5953	3621	7713	No	6.49	Si
SLU 82	ini.	-855.79	2991	1.42	0	576	7137	5953	3621	7713	No	2.58	Si
SLU 82	fin.	513.22	1148	1.42	0	576	7137	5953	3621	7713	No	6.72	Si
SLU 81	ini.	-851.05	2974	1.42	0	576	7137	5953	3621	7713	No	2.59	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	506.7	1131	1.42	0	576	7137	5953	3621	7713	No	6.82	Si
SLU 83	ini.	-865.18	3015	1.42	0	576	7137	5953	3621	7713	No	2.56	Si
SLU 83	fin.	517.92	1172	1.42	0	576	7137	5953	3621	7713	No	6.58	Si
SLU 80	ini.	-870.04	2990	1.42	0	576	7137	5953	3621	7713	No	2.58	Si
SLU 80	fin.	531.17	1265	1.42	0	576	7137	5953	3621	7713	No	6.1	Si
SLU 75	ini.	-896.47	3062	1.42	0	576	7137	5953	3621	7713	No	2.52	Si
SLU 75	fin.	554.63	1337	1.42	0	576	7137	5953	3621	7713	No	5.77	Si
SLU 78	ini.	-910.6	3102	1.42	0	576	7137	5953	3621	7713	No	2.49	Si
SLU 78	fin.	565.85	1378	1.42	0	576	7137	5953	3621	7713	No	5.6	Si
SLU 77	ini.	-905.86	3086	1.42	0	576	7137	5953	3621	7713	No	2.5	Si
SLU 77	fin.	559.33	1361	1.42	0	576	7137	5953	3621	7713	No	5.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-1909.28	-2517	-0.0004301	0.0002807	0.0035	1.42		7346.34	7346.34		3.85	Si
SLD 15	fin.	1605.5	-947	-0.0003523	0.0002807	0.0035	1.42		7337.02	7337.02		4.57	Si
SLV 11	ini.	-2016.18	-3151	-0.0004587	0.0002807	0.0035	1.42		7346.34	7346.34		3.64	Si
SLV 11	fin.	1497.92	-1697	-0.0003256	0.0002807	0.0035	1.42		7337.02	7337.02		4.9	Si
SLV 15	ini.	-3674.62	-3975	-0.0009699	0.0002807	0.0035	1.42		7346.34	7346.34		2	Si
SLV 15	fin.	3284.66	-960	-0.0008389	0.0002807	0.0035	1.42		7337.02	7337.02		2.23	Si
SLV 14	ini.	-3127.6	-3176	-0.0007866	0.0002807	0.0035	1.42		7346.34	7346.34		2.35	Si
SLV 14	fin.	2896.61	-462	-0.0007148	0.0002807	0.0035	1.42		7337.02	7337.02		2.53	Si
SLV 4	ini.	2199.31	520	-0.0005095	0.0002807	0.0035	1.42		7337.02	7337.02		3.34	Si
SLV 4	fin.	-2437.95	-1402	-0.0005765	0.0002807	0.0035	1.42		7346.34	7346.34		3.01	Si
SLV 2	ini.	2504.23	1135	-0.0005966	0.0002807	0.0035	1.42		7337.02	7337.02		2.93	Si
SLV 2	fin.	-2588.13	-903	-0.0006204	0.0002807	0.0035	1.42		7346.34	7346.34		2.84	Si
SLV 3	ini.	1957.22	336	-0.0004435	0.0002807	0.0035	1.42		7337.02	7337.02		3.75	Si
SLV 3	fin.	-2200.08	-1401	-0.0005091	0.0002807	0.0035	1.42		7346.34	7346.34		3.34	Si
SLV 13	ini.	-3369.69	-3359	-0.0008658	0.0002807	0.0035	1.42		7346.34	7346.34		2.18	Si
SLV 13	fin.	3134.48	-460	-0.00079	0.0002807	0.0035	1.42		7337.02	7337.02		2.34	Si
SLV 16	ini.	-3432.53	-3791	-0.0008868	0.0002807	0.0035	1.42		7346.34	7346.34		2.14	Si
SLV 16	fin.	3046.79	-961	-0.000762	0.0002807	0.0035	1.42		7337.02	7337.02		2.41	Si
SLV 1	ini.	2262.14	951	-0.0005271	0.0002807	0.0035	1.42		7337.02	7337.02		3.24	Si
SLV 1	fin.	-2350.26	-901	-0.0005513	0.0002807	0.0035	1.42		7346.34	7346.34		3.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3127.6	9269	1.42	0	864	7137	8929	3621	8001		0.86	No
SLV 14	fin.	2896.61	8092	1.42	0	864	7137	8929	3621	8001		0.99	No
SLV 2	ini.	2504.23	-6574	1.42	0	864	7137	8929	3621	8001		1.22	Si
SLV 2	fin.	-2588.13	-7732	1.42	0	864	7137	8929	3621	8001		1.03	Si
SLV 1	ini.	2262.14	-5894	1.42	0	864	7137	8929	3621	8001		1.36	Si
SLV 1	fin.	-2350.26	-7052	1.42	0	864	7137	8929	3621	8001		1.13	Si
SLV 13	ini.	-3369.69	9949	1.42	0	864	7137	8929	3621	8001		0.8	No
SLV 13	fin.	3134.48	8771	1.42	0	864	7137	8929	3621	8001		0.91	No
SLV 16	ini.	-3432.53	9876	1.42	0	864	7137	8929	3621	8001		0.81	No
SLV 16	fin.	3046.79	8754	1.42	0	864	7137	8929	3621	8001		0.91	No
SLV 4	ini.	2199.31	-5966	1.42	0	864	7137	8929	3621	8001		1.34	Si
SLV 4	fin.	-2437.95	-7069	1.42	0	864	7137	8929	3621	8001		1.13	Si
SLV 11	ini.	-2016.18	5599	1.42	0	864	7137	8929	3621	8001		1.43	Si
SLV 11	fin.	1497.92	4548	1.42	0	864	7137	8929	3621	8001		1.76	Si
SLV 15	ini.	-3674.62	10556	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 15	fin.	3284.66	9434	1.42	0	864	7137	8929	3621	8001		0.85	No
SLD 15	ini.	-1909.28	5660	1.42	0	864	7137	8929	3621	8001		1.41	Si
SLD 15	fin.	1605.5	4528	1.42	0	864	7137	8929	3621	8001		1.77	Si
SLV 3	ini.	1957.22	-5287	1.42	0	864	7137	8929	3621	8001		1.51	Si
SLV 3	fin.	-2200.08	-6389	1.42	0	864	7137	8929	3621	8001		1.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.999	SLV 15	Si
V_SLV	0.758	SLV 15	No
PF_SLU	8.082	SLU 78	Si
V_SLU	2.486	SLU 78	Si

Trave di accoppiamento 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	11.08	12.5	1.42	-13.778	0.706	11.08	12.5	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 58	ini.	158.66	-220	-0.0000315	0.0001872	0.0035	1.42		7350.79	7350.79	No	46.33	Si
SLU 58	fin.	107.84	-153	-0.0000213	0.0001872	0.0035	1.42		7350.79	7350.79	No	68.16	Si
SLU 77	ini.	98.01	-450	-0.0000194	0.0001872	0.0035	1.42		7350.79	7350.79	No	75	Si
SLU 77	fin.	137.34	-299	-0.0000272	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.52	Si
SLU 51	ini.	142.24	-176	-0.0000282	0.0001872	0.0035	1.42		7350.79	7350.79	No	51.68	Si
SLU 51	fin.	108.04	-120	-0.0000214	0.0001872	0.0035	1.42		7350.79	7350.79	No	68.04	Si
SLU 70	ini.	81.59	-406	-0.0000161	0.0001872	0.0035	1.42		7350.79	7350.79	No	90.1	Si
SLU 70	fin.	137.53	-266	-0.0000273	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.45	Si
SLU 62	ini.	148.91	-238	-0.0000295	0.0001872	0.0035	1.42		7350.79	7350.79	No	49.37	Si
SLU 62	fin.	103.33	-164	-0.0000204	0.0001872	0.0035	1.42		7350.79	7350.79	No	71.14	Si
SLU 55	ini.	151.79	-207	-0.0000301	0.0001872	0.0035	1.42		7350.79	7350.79	No	48.43	Si
SLU 55	fin.	103.33	-144	-0.0000204	0.0001872	0.0035	1.42		7350.79	7350.79	No	71.14	Si
SLU 63	ini.	156.92	-228	-0.0000312	0.0001872	0.0035	1.42		7350.79	7350.79	No	46.84	Si
SLU 63	fin.	103.26	-159	-0.0000204	0.0001872	0.0035	1.42		7350.79	7350.79	No	71.19	Si
SLU 59	ini.	166.68	-210	-0.0000331	0.0001872	0.0035	1.42		7350.79	7350.79	No	44.1	Si
SLU 59	fin.	107.77	-148	-0.0000213	0.0001872	0.0035	1.42		7350.79	7350.79	No	68.21	Si
SLU 69	ini.	73.57	-416	-0.0000145	0.0001872	0.0035	1.42		7350.79	7350.79	No	99.91	Si
SLU 69	fin.	137.6	-271	-0.0000273	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.42	Si
SLU 57	ini.	144.26	-266	-0.0000286	0.0001872	0.0035	1.42		7350.79	7350.79	No	50.96	Si
SLU 57	fin.	114.39	-183	-0.0000226	0.0001872	0.0035	1.42		7350.79	7350.79	No	64.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	98.01	547	1.42	0	576	7137	5953	3621	7713	No	14.1	Si
SLU 77	fin.	137.34	-207	1.42	0	576	7137	5953	3621	7713	No	37.29	Si
SLU 74	ini.	77.78	568	1.42	0	576	7137	5953	3621	7713	No	13.59	Si
SLU 74	fin.	132.94	-186	1.42	0	576	7137	5953	3621	7713	No	41.44	Si
SLU 70	ini.	81.59	556	1.42	0	576	7137	5953	3621	7713	No	13.86	Si
SLU 70	fin.	137.53	-197	1.42	0	576	7137	5953	3621	7713	No	39.07	Si
SLU 67	ini.	61.36	577	1.42	0	576	7137	5953	3621	7713	No	13.37	Si
SLU 67	fin.	133.13	-177	1.42	0	576	7137	5953	3621	7713	No	43.66	Si
SLU 65	ini.	68.89	540	1.42	0	576	7137	5953	3621	7713	No	14.28	Si
SLU 65	fin.	122.07	-214	1.42	0	576	7137	5953	3621	7713	No	36.12	Si
SLU 78	ini.	106.03	534	1.42	0	576	7137	5953	3621	7713	No	14.45	Si
SLU 78	fin.	137.27	-220	1.42	0	576	7137	5953	3621	7713	No	35.06	Si
SLU 69	ini.	73.57	569	1.42	0	576	7137	5953	3621	7713	No	13.55	Si
SLU 69	fin.	137.6	-184	1.42	0	576	7137	5953	3621	7713	No	41.85	Si
SLU 64	ini.	55.53	562	1.42	0	576	7137	5953	3621	7713	No	13.72	Si
SLU 64	fin.	122.19	-192	1.42	0	576	7137	5953	3621	7713	No	40.24	Si
SLU 75	ini.	85.8	554	1.42	0	576	7137	5953	3621	7713	No	13.91	Si
SLU 75	fin.	132.87	-199	1.42	0	576	7137	5953	3621	7713	No	38.71	Si
SLU 66	ini.	53.34	590	1.42	0	576	7137	5953	3621	7713	No	13.07	Si
SLU 66	fin.	133.2	-164	1.42	0	576	7137	5953	3621	7713	No	47.17	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	143.47	-563	-0.0000284	0.0002807	0.0035	1.42		7337.02	7337.02		51.14	Si
SLV 6	fin.	-458.92	360	-0.0000924	0.0002807	0.0035	1.42		7346.34	7346.34		16.01	Si
SLV 9	ini.	2.58	-823	-0.0000005	0.0002807	0.0035	1.42		7337.02	7337.02		2847.54	Si
SLV 9	fin.	-538.41	76	-0.0001089	0.0002807	0.0035	1.42		7346.34	7346.34		13.64	Si
SLV 12	ini.	-36.18	42	-0.0000071	0.0002807	0.0035	1.42		7346.34	7346.34		203.07	Si
SLV 12	fin.	636.85	-695	-0.0001298	0.0002807	0.0035	1.42		7337.02	7337.02		11.52	Si
SLV 4	ini.	296.38	325	-0.0000591	0.0002807	0.0035	1.42		7337.02	7337.02		24.76	Si
SLV 4	fin.	397.5	200	-0.0000798	0.0002807	0.0035	1.42		7337.02	7337.02		18.46	Si
SLV 7	ini.	122.53	330	-0.0000242	0.0002807	0.0035	1.42		7337.02	7337.02		59.88	Si
SLV 7	fin.	716.02	-397	-0.0001467	0.0002807	0.0035	1.42		7337.02	7337.02		10.25	Si
SLV 3	ini.	310.2	347	-0.0000619	0.0002807	0.0035	1.42		7337.02	7337.02		23.65	Si
SLV 3	fin.	397.25	212	-0.0000797	0.0002807	0.0035	1.42		7337.02	7337.02		18.47	Si
SLV 5	ini.	152.38	-549	-0.0000301	0.0002807	0.0035	1.42		7337.02	7337.02		48.15	Si
SLV 5	fin.	-459.08	367	-0.0000924	0.0002807	0.0035	1.42		7346.34	7346.34		16	Si
SLV 10	ini.	-6.33	-837	-0.0000012	0.0002807	0.0035	1.42		7346.34	7346.34		1159.97	Si
SLV 10	fin.	-538.25	69	-0.0001089	0.0002807	0.0035	1.42		7346.34	7346.34		13.65	Si
SLV 8	ini.	113.62	316	-0.0000224	0.0002807	0.0035	1.42		7337.02	7337.02		64.57	Si
SLV 8	fin.	716.18	-405	-0.0001467	0.0002807	0.0035	1.42		7337.02	7337.02		10.24	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-27.27	56	-0.0000054	0.0002807	0.0035	1.42		7346.34	7346.34		269.44	Si
SLV 11	fin.	636.69	-688	-0.0001297	0.0002807	0.0035	1.42		7337.02	7337.02		11.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	122.53	1781	1.42	0	864	7137	8929	3621	8001		4.49	Si
SLV 7	fin.	716.02	1285	1.42	0	864	7137	8929	3621	8001		6.23	Si
SLV 16	ini.	-202.95	1363	1.42	0	864	7137	8929	3621	8001		5.87	Si
SLV 16	fin.	133.05	790	1.42	0	864	7137	8929	3621	8001		10.13	Si
SLV 5	ini.	152.38	-1297	1.42	0	864	7137	8929	3621	8001		6.17	Si
SLV 5	fin.	-459.08	-1938	1.42	0	864	7137	8929	3621	8001		4.13	Si
SLV 15	ini.	-189.13	1339	1.42	0	864	7137	8929	3621	8001		5.97	Si
SLV 15	fin.	132.8	766	1.42	0	864	7137	8929	3621	8001		10.45	Si
SLV 9	ini.	2.58	-1001	1.42	0	864	7137	8929	3621	8001		7.99	Si
SLV 9	fin.	-538.41	-1655	1.42	0	864	7137	8929	3621	8001		4.84	Si
SLV 6	ini.	143.47	-1281	1.42	0	864	7137	8929	3621	8001		6.24	Si
SLV 6	fin.	-458.92	-1922	1.42	0	864	7137	8929	3621	8001		4.16	Si
SLV 8	ini.	113.62	1796	1.42	0	864	7137	8929	3621	8001		4.45	Si
SLV 8	fin.	716.18	1300	1.42	0	864	7137	8929	3621	8001		6.15	Si
SLV 10	ini.	-6.33	-986	1.42	0	864	7137	8929	3621	8001		8.12	Si
SLV 10	fin.	-538.25	-1639	1.42	0	864	7137	8929	3621	8001		4.88	Si
SLV 11	ini.	-27.27	2076	1.42	0	864	7137	8929	3621	8001		3.85	Si
SLV 11	fin.	636.69	1568	1.42	0	864	7137	8929	3621	8001		5.1	Si
SLV 12	ini.	-36.18	2092	1.42	0	864	7137	8929	3621	8001		3.83	Si
SLV 12	fin.	636.85	1583	1.42	0	864	7137	8929	3621	8001		5.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.245	SLV 8	Si
V_SLV	3.825	SLV 12	Si
PF_SLU	44.102	SLU 59	Si
V_SLU	13.069	SLU 66	Si

Trave di accoppiamento 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.98	9.88	0.9	-16.818	6.526	8.98	9.88	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	380.29	-1930	-0.0002026	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si
SLU 83	fin.	36.4	-1399	-0.0000179	0.0001872	0.0035	0.9		2959	2959	No	81.29	Si
SLU 81	ini.	379.35	-1910	-0.000202	0.0001872	0.0035	0.9		2959	2959	No	7.8	Si
SLU 81	fin.	23.78	-1355	-0.0000117	0.0001872	0.0035	0.9		2959	2959	No	124.44	Si
SLU 74	ini.	375.81	-1912	-0.0001999	0.0001872	0.0035	0.9		2959	2959	No	7.87	Si
SLU 74	fin.	40.12	-1391	-0.0000198	0.0001872	0.0035	0.9		2959	2959	No	73.76	Si
SLU 84	ini.	381.32	-1934	-0.0002032	0.0001872	0.0035	0.9		2959	2959	No	7.76	Si
SLU 84	fin.	35.55	-1399	-0.0000175	0.0001872	0.0035	0.9		2959	2959	No	83.23	Si
SLU 76	ini.	371.41	-1882	-0.0001974	0.0001872	0.0035	0.9		2959	2959	No	7.97	Si
SLU 76	fin.	33.12	-1356	-0.0000163	0.0001872	0.0035	0.9		2959	2959	No	89.33	Si
SLU 75	ini.	376.84	-1916	-0.0002005	0.0001872	0.0035	0.9		2959	2959	No	7.85	Si
SLU 75	fin.	39.27	-1391	-0.0000194	0.0001872	0.0035	0.9		2959	2959	No	75.35	Si
SLU 77	ini.	376.76	-1933	-0.0002005	0.0001872	0.0035	0.9		2959	2959	No	7.85	Si
SLU 77	fin.	52.74	-1434	-0.0000261	0.0001872	0.0035	0.9		2959	2959	No	56.11	Si
SLU 82	ini.	380.38	-1914	-0.0002026	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	22.93	-1356	-0.0000113	0.0001872	0.0035	0.9		2959	2959	No	129.04	Si
SLU 78	ini.	377.79	-1936	-0.0002011	0.0001872	0.0035	0.9		2959	2959	No	7.83	Si
SLU 78	fin.	51.89	-1434	-0.0000256	0.0001872	0.0035	0.9		2959	2959	No	57.02	Si
SLU 80	ini.	371.67	-1900	-0.0001975	0.0001872	0.0035	0.9		2959	2959	No	7.96	Si
SLU 80	fin.	46.31	-1399	-0.0000229	0.0001872	0.0035	0.9		2959	2959	No	63.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	375.81	-2296	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 74	fin.	40.12	324	0.9	0	365	7137	3773	2295	6068	No	18.72	Si
SLU 81	ini.	379.35	-2283	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 81	fin.	23.78	252	0.9	0	365	7137	3773	2295	6068	No	24.07	Si
SLU 80	ini.	371.67	-2269	0.9	0	365	7137	3773	2295	6068	No	2.67	Si
SLU 80	fin.	46.31	343	0.9	0	365	7137	3773	2295	6068	No	17.67	Si
SLU 82	ini.	380.38	-2289	0.9	0	365	7137	3773	2295	6068	No	2.65	Si
SLU 82	fin.	22.93	250	0.9	0	365	7137	3773	2295	6068	No	24.3	Si
SLU 78	ini.	377.79	-2317	0.9	0	365	7137	3773	2295	6068	No	2.62	Si
SLU 78	fin.	51.89	372	0.9	0	365	7137	3773	2295	6068	No	16.31	Si
SLU 84	ini.	381.32	-2303	0.9	0	365	7137	3773	2295	6068	No	2.63	Si
SLU 84	fin.	35.55	300	0.9	0	365	7137	3773	2295	6068	No	20.23	Si
SLU 79	ini.	370.64	-2263	0.9	0	365	7137	3773	2295	6068	No	2.68	Si
SLU 79	fin.	47.16	346	0.9	0	365	7137	3773	2295	6068	No	17.54	Si
SLU 75	ini.	376.84	-2302	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 75	fin.	39.27	322	0.9	0	365	7137	3773	2295	6068	No	18.86	Si
SLU 83	ini.	380.29	-2297	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 83	fin.	36.4	302	0.9	0	365	7137	3773	2295	6068	No	20.07	Si
SLU 77	ini.	376.76	-2311	0.9	0	365	7137	3773	2295	6068	No	2.63	Si
SLU 77	fin.	52.74	374	0.9	0	365	7137	3773	2295	6068	No	16.21	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	679.61	-2505	-0.0003749	0.0002807	0.0035	0.9		2989.59	2989.59		4.4	Si
SLV 10	fin.	-566.42	-313	-0.0003042	0.0002807	0.0035	0.9		2995.37	2995.37		5.29	Si
SLV 3	ini.	-724.52	1227	-0.0004029	0.0002807	0.0035	0.9		2995.37	2995.37		4.13	Si
SLV 3	fin.	1563.8	-2951	-0.0010518	0.0002807	0.0035	0.9		2989.59	2989.59		1.91	Si
SLV 14	ini.	1257.87	-3897	-0.0007908	0.0002807	0.0035	0.9		2989.59	2989.59		2.38	Si
SLV 14	fin.	-1542.44	1093	-0.00103	0.0002807	0.0035	0.9		2995.37	2995.37		1.94	Si
SLV 16	ini.	1192.07	-3659	-0.0007386	0.0002807	0.0035	0.9		2989.59	2989.59		2.51	Si
SLV 16	fin.	-1485.22	1107	-0.0009793	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLD 14	ini.	690.98	-2432	-0.0003821	0.0002807	0.0035	0.9		2989.59	2989.59		4.33	Si
SLD 14	fin.	-653.91	-64	-0.0003579	0.0002807	0.0035	0.9		2995.37	2995.37		4.58	Si
SLV 1	ini.	-658.72	989	-0.0003609	0.0002807	0.0035	0.9		2995.37	2995.37		4.55	Si
SLV 1	fin.	1506.58	-2965	-0.0010005	0.0002807	0.0035	0.9		2989.59	2989.59		1.98	Si
SLV 4	ini.	-632.9	989	-0.0003448	0.0002807	0.0035	0.9		2995.37	2995.37		4.73	Si
SLV 4	fin.	1422.26	-2767	-0.0009271	0.0002807	0.0035	0.9		2989.59	2989.59		2.1	Si
SLV 15	ini.	1100.45	-3421	-0.0006681	0.0002807	0.0035	0.9		2989.59	2989.59		2.72	Si
SLV 15	fin.	-1343.67	924	-0.0008588	0.0002807	0.0035	0.9		2995.37	2995.37		2.23	Si
SLV 13	ini.	1166.25	-3658	-0.0007185	0.0002807	0.0035	0.9		2989.59	2989.59		2.56	Si
SLV 13	fin.	-1400.9	909	-0.0009067	0.0002807	0.0035	0.9		2995.37	2995.37		2.14	Si
SLV 2	ini.	-567.1	751	-0.0003046	0.0002807	0.0035	0.9		2995.37	2995.37		5.28	Si
SLV 2	fin.	1365.03	-2782	-0.0008786	0.0002807	0.0035	0.9		2989.59	2989.59		2.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	679.61	-3639	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 10	fin.	-566.42	-1731	0.9	0	548	7137	5660	2295	7684		4.44	Si
SLV 14	ini.	1257.87	-6118	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 14	fin.	-1542.44	-5390	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLV 4	ini.	-632.9	2448	0.9	0	548	7137	5660	2295	7684		3.14	Si
SLV 4	fin.	1422.26	5216	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 1	ini.	-658.72	2460	0.9	0	548	7137	5660	2295	7684		3.12	Si
SLV 1	fin.	1506.58	5627	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 16	ini.	1192.07	-5729	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 16	fin.	-1485.22	-5296	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 13	ini.	1166.25	-5717	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 13	fin.	-1400.9	-4885	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 2	ini.	-567.1	2059	0.9	0	548	7137	5660	2295	7684		3.73	Si
SLV 2	fin.	1365.03	5122	0.9	0	548	7137	5660	2295	7684		1.5	Si
SLV 3	ini.	-724.52	2849	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLV 3	fin.	1563.8	5721	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 15	ini.	1100.45	-5328	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLV 15	fin.	-1343.67	-4791	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLD 14	ini.	690.98	-3555	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLD 14	fin.	-653.91	-2212	0.9	0	548	7137	5660	2295	7684		3.47	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.912	SLV 3	Si
V_SLV	1.256	SLV 14	Si
PF_SLU	7.76	SLU 84	Si
V_SLU	2.619	SLU 78	Si

Trave di accoppiamento 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.68	12.5	0.82	-16.818	6.526	11.68	12.5	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-24.91	-738	-0.0000147	0.0001872	0.0035	0.82		2460.51	2460.51	No	98.79	Si
SLU 77	fin.	-418.34	-1552	-0.0002777	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.88	Si
SLU 76	ini.	-10.03	-669	-0.0000059	0.0001872	0.0035	0.82		2460.51	2460.51	No	245.4	Si
SLU 76	fin.	-409.78	-1502	-0.0002712	0.0001872	0.0035	0.82		2460.51	2460.51	No	6	Si
SLU 81	ini.	-3.79	-660	-0.0000022	0.0001872	0.0035	0.82		2460.51	2460.51	No	648.87	Si
SLU 81	fin.	-420.21	-1529	-0.0002791	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.86	Si
SLU 80	ini.	-20.7	-708	-0.0000122	0.0001872	0.0035	0.82		2460.51	2460.51	No	118.89	Si
SLU 80	fin.	-410.66	-1518	-0.0002718	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.99	Si
SLU 78	ini.	-24.09	-737	-0.0000142	0.0001872	0.0035	0.82		2460.51	2460.51	No	102.15	Si
SLU 78	fin.	-419.67	-1556	-0.0002787	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.86	Si
SLU 83	ini.	-13.91	-699	-0.0000082	0.0001872	0.0035	0.82		2460.51	2460.51	No	176.83	Si
SLU 83	fin.	-421.98	-1548	-0.0002805	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.83	Si
SLU 75	ini.	-13.96	-698	-0.0000082	0.0001872	0.0035	0.82		2460.51	2460.51	No	176.21	Si
SLU 75	fin.	-417.89	-1538	-0.0002773	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.89	Si
SLU 82	ini.	-2.97	-659	-0.0000017	0.0001872	0.0035	0.82		2460.51	2460.51	No	827.77	Si
SLU 82	fin.	-421.54	-1533	-0.0002801	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.84	Si
SLU 84	ini.	-13.1	-698	-0.0000077	0.0001872	0.0035	0.82		2460.51	2460.51	No	187.89	Si
SLU 84	fin.	-423.31	-1552	-0.0002815	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.81	Si
SLU 74	ini.	-14.78	-698	-0.0000087	0.0001872	0.0035	0.82		2460.51	2460.51	No	166.44	Si
SLU 74	fin.	-416.57	-1533	-0.0002763	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-21.52	880	0.82	0	303	6502	3438	2091	5529	No	6.28	Si
SLU 79	fin.	-409.33	-2436	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 81	ini.	-3.79	831	0.82	0	303	6502	3438	2091	5529	No	6.66	Si
SLU 81	fin.	-420.21	-2505	0.82	0	303	6502	3438	2091	5529	No	2.21	Si
SLU 82	ini.	-2.97	829	0.82	0	303	6502	3438	2091	5529	No	6.67	Si
SLU 82	fin.	-421.54	-2512	0.82	0	303	6502	3438	2091	5529	No	2.2	Si
SLU 83	ini.	-13.91	879	0.82	0	303	6502	3438	2091	5529	No	6.29	Si
SLU 83	fin.	-421.98	-2519	0.82	0	303	6502	3438	2091	5529	No	2.19	Si
SLU 74	ini.	-14.78	860	0.82	0	303	6502	3438	2091	5529	No	6.43	Si
SLU 74	fin.	-416.57	-2472	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 77	ini.	-24.91	908	0.82	0	303	6502	3438	2091	5529	No	6.09	Si
SLU 77	fin.	-418.34	-2486	0.82	0	303	6502	3438	2091	5529	No	2.22	Si
SLU 84	ini.	-13.1	877	0.82	0	303	6502	3438	2091	5529	No	6.31	Si
SLU 84	fin.	-423.31	-2526	0.82	0	303	6502	3438	2091	5529	No	2.19	Si
SLU 80	ini.	-20.7	878	0.82	0	303	6502	3438	2091	5529	No	6.3	Si
SLU 80	fin.	-410.66	-2442	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 75	ini.	-13.96	858	0.82	0	303	6502	3438	2091	5529	No	6.44	Si
SLU 75	fin.	-417.89	-2479	0.82	0	303	6502	3438	2091	5529	No	2.23	Si
SLU 78	ini.	-24.09	906	0.82	0	303	6502	3438	2091	5529	No	6.1	Si
SLU 78	fin.	-419.67	-2493	0.82	0	303	6502	3438	2091	5529	No	2.22	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-943.32	-2319	-0.0006938	0.0002807	0.0035	0.82		2487.45	2487.45		2.64	Si
SLV 3	fin.	584.54	1353	-0.0003907	0.0002807	0.0035	0.82		2482.11	2482.11		4.25	Si
SLV 4	ini.	-862.07	-2159	-0.0006204	0.0002807	0.0035	0.82		2487.45	2487.45		2.89	Si
SLV 4	fin.	508.94	1146	-0.0003333	0.0002807	0.0035	0.82		2482.11	2482.11		4.88	Si
SLD 14	ini.	411.59	379	-0.000263	0.0002807	0.0035	0.82		2482.11	2482.11		6.03	Si
SLD 14	fin.	-662.97	-2077	-0.0004517	0.0002807	0.0035	0.82		2487.45	2487.45		3.75	Si
SLV 2	ini.	-804	-2104	-0.0005695	0.0002807	0.0035	0.82		2487.45	2487.45		3.09	Si
SLV 2	fin.	421.45	879	-0.00027	0.0002807	0.0035	0.82		2482.11	2482.11		5.89	Si
SLV 14	ini.	954.11	1459	-0.0007056	0.0002807	0.0035	0.82		2482.11	2482.11		2.6	Si
SLV 14	fin.	-1162.26	-3450	-0.000906	0.0002807	0.0035	0.82		2487.45	2487.45		2.14	Si
SLV 15	ini.	814.79	1245	-0.0005803	0.0002807	0.0035	0.82		2482.11	2482.11		3.05	Si
SLV 15	fin.	-999.17	-2976	-0.0007459	0.0002807	0.0035	0.82		2487.45	2487.45		2.49	Si
SLV 13	ini.	872.86	1299	-0.0006315	0.0002807	0.0035	0.82		2482.11	2482.11		2.84	Si
SLV 13	fin.	-1086.66	-3243	-0.0008303	0.0002807	0.0035	0.82		2487.45	2487.45		2.29	Si
SLV 10	ini.	392.07	247	-0.0002494	0.0002807	0.0035	0.82		2482.11	2482.11		6.33	Si
SLV 10	fin.	-696.59	-2211	-0.0004791	0.0002807	0.0035	0.82		2487.45	2487.45		3.57	Si
SLV 1	ini.	-885.25	-2265	-0.000641	0.0002807	0.0035	0.82		2487.45	2487.45		2.81	Si
SLV 1	fin.	497.05	1086	-0.0003245	0.0002807	0.0035	0.82		2482.11	2482.11		4.99	Si
SLV 16	ini.	896.05	1405	-0.0006524	0.0002807	0.0035	0.82		2482.11	2482.11		2.77	Si
SLV 16	fin.	-1074.77	-3183	-0.0008186	0.0002807	0.0035	0.82		2487.45	2487.45		2.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	814.79	-2909	0.82	0	455	6502	5156	2091	6957		2.39	Si
SLV 15	fin.	-999.17	-4867	0.82	0	455	6502	5156	2091	6957		1.43	Si
SLV 1	ini.	-885.25	4283	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLV 1	fin.	497.05	1822	0.82	0	455	6502	5156	2091	6957		3.82	Si
SLV 9	ini.	339.71	-616	0.82	0	455	6502	5156	2091	6957		11.29	Si
SLV 9	fin.	-647.87	-3406	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 4	ini.	-862.07	4030	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 4	fin.	508.94	1929	0.82	0	455	6502	5156	2091	6957		3.61	Si
SLV 3	ini.	-943.32	4373	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 3	fin.	584.54	2273	0.82	0	455	6502	5156	2091	6957		3.06	Si
SLV 13	ini.	872.86	-2999	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLV 13	fin.	-1086.66	-5318	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 10	ini.	392.07	-837	0.82	0	455	6502	5156	2091	6957		8.31	Si
SLV 10	fin.	-696.59	-3628	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLV 16	ini.	896.05	-3252	0.82	0	455	6502	5156	2091	6957		2.14	Si
SLV 16	fin.	-1074.77	-5211	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 2	ini.	-804	3940	0.82	0	455	6502	5156	2091	6957		1.77	Si
SLV 2	fin.	421.45	1478	0.82	0	455	6502	5156	2091	6957		4.71	Si
SLV 14	ini.	954.11	-3342	0.82	0	455	6502	5156	2091	6957		2.08	Si
SLV 14	fin.	-1162.26	-5662	0.82	0	455	6502	5156	2091	6957		1.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.14	SLV 14	Si
V_SLV	1.229	SLV 14	Si
PF_SLU	5.813	SLU 84	Si
V_SLU	2.189	SLU 84	Si

Trave di accoppiamento 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.98	9.88	0.9	-11.938	6.526	8.98	9.88	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	470.18	-2399	-0.000257	0.0001872	0.0035	0.9		2959	2959	No	6.29	Si
SLU 79	fin.	188.26	-1880	-0.0000957	0.0001872	0.0035	0.9		2959	2959	No	15.72	Si
SLU 81	ini.	477.93	-2402	-0.0002619	0.0001872	0.0035	0.9		2959	2959	No	6.19	Si
SLU 81	fin.	164.77	-1826	-0.0000833	0.0001872	0.0035	0.9		2959	2959	No	17.96	Si
SLU 77	ini.	481.51	-2454	-0.0002641	0.0001872	0.0035	0.9		2959	2959	No	6.15	Si
SLU 77	fin.	192.12	-1920	-0.0000977	0.0001872	0.0035	0.9		2959	2959	No	15.4	Si
SLU 78	ini.	482.16	-2457	-0.0002645	0.0001872	0.0035	0.9		2959	2959	No	6.14	Si
SLU 78	fin.	192.22	-1922	-0.0000977	0.0001872	0.0035	0.9		2959	2959	No	15.39	Si
SLU 74	ini.	475.37	-2411	-0.0002603	0.0001872	0.0035	0.9		2959	2959	No	6.22	Si
SLU 74	fin.	181.17	-1869	-0.0000919	0.0001872	0.0035	0.9		2959	2959	No	16.33	Si
SLU 80	ini.	470.84	-2402	-0.0002574	0.0001872	0.0035	0.9		2959	2959	No	6.28	Si
SLU 80	fin.	188.36	-1882	-0.0000957	0.0001872	0.0035	0.9		2959	2959	No	15.71	Si
SLU 75	ini.	476.03	-2414	-0.0002607	0.0001872	0.0035	0.9		2959	2959	No	6.22	Si
SLU 75	fin.	181.27	-1871	-0.000092	0.0001872	0.0035	0.9		2959	2959	No	16.32	Si
SLU 82	ini.	478.59	-2405	-0.0002623	0.0001872	0.0035	0.9		2959	2959	No	6.18	Si
SLU 82	fin.	164.87	-1828	-0.0000833	0.0001872	0.0035	0.9		2959	2959	No	17.95	Si
SLU 84	ini.	484.72	-2447	-0.0002661	0.0001872	0.0035	0.9		2959	2959	No	6.1	Si
SLU 84	fin.	175.81	-1879	-0.0000891	0.0001872	0.0035	0.9		2959	2959	No	16.83	Si
SLU 83	ini.	484.07	-2444	-0.0002657	0.0001872	0.0035	0.9		2959	2959	No	6.11	Si
SLU 83	fin.	175.72	-1877	-0.000089	0.0001872	0.0035	0.9		2959	2959	No	16.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	481.51	-2762	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 77	fin.	192.12	890	0.9	0	365	7137	3773	2295	6068	No	6.82	Si
SLU 75	ini.	476.03	-2721	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 75	fin.	181.27	841	0.9	0	365	7137	3773	2295	6068	No	7.21	Si
SLU 80	ini.	470.84	-2700	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 80	fin.	188.36	870	0.9	0	365	7137	3773	2295	6068	No	6.97	Si
SLU 79	ini.	470.18	-2696	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 79	fin.	188.26	870	0.9	0	365	7137	3773	2295	6068	No	6.98	Si
SLU 78	ini.	482.16	-2766	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 78	fin.	192.22	891	0.9	0	365	7137	3773	2295	6068	No	6.81	Si
SLU 83	ini.	484.07	-2748	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 83	fin.	175.72	815	0.9	0	365	7137	3773	2295	6068	No	7.45	Si
SLU 74	ini.	475.37	-2717	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 74	fin.	181.17	841	0.9	0	365	7137	3773	2295	6068	No	7.22	Si
SLU 82	ini.	478.59	-2707	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 82	fin.	164.87	767	0.9	0	365	7137	3773	2295	6068	No	7.92	Si
SLU 84	ini.	484.72	-2751	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 84	fin.	175.81	816	0.9	0	365	7137	3773	2295	6068	No	7.44	Si
SLU 81	ini.	477.93	-2703	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 81	fin.	164.77	766	0.9	0	365	7137	3773	2295	6068	No	7.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1947.55	-5709	-0.0014335	0.0002807	0.0035	0.9		2989.59	2989.59		1.54	Si
SLV 14	fin.	-1988.25	1613	-0.0014746	0.0002807	0.0035	0.9		2995.37	2995.37		1.51	Si
SLV 4	ini.	-1178.66	2119	-0.0007264	0.0002807	0.0035	0.9		2995.37	2995.37		2.54	Si
SLV 4	fin.	2070.11	-3925	-0.0015733	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLV 2	ini.	-1118.49	1889	-0.0006802	0.0002807	0.0035	0.9		2995.37	2995.37		2.68	Si
SLV 2	fin.	2067.08	-4114	-0.0015697	0.0002807	0.0035	0.9		2989.59	2989.59		1.45	Si
SLD 3	ini.	-376.01	108	-0.0001947	0.0002807	0.0035	0.9		2995.37	2995.37		7.97	Si
SLD 3	fin.	1030.65	-2513	-0.000616	0.0002807	0.0035	0.9		2989.59	2989.59		2.9	Si
SLV 16	ini.	1887.38	-5478	-0.0013685	0.0002807	0.0035	0.9		2989.59	2989.59		1.58	Si
SLV 16	fin.	-1985.23	1802	-0.0014712	0.0002807	0.0035	0.9		2995.37	2995.37		1.51	Si
SLV 13	ini.	1818.94	-5389	-0.0012973	0.0002807	0.0035	0.9		2989.59	2989.59		1.64	Si
SLV 13	fin.	-1817.2	1370	-0.0012921	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLD 1	ini.	-349.64	7	-0.0001802	0.0002807	0.0035	0.9		2995.37	2995.37		8.57	Si
SLD 1	fin.	1029.26	-2595	-0.000615	0.0002807	0.0035	0.9		2989.59	2989.59		2.9	Si
SLV 1	ini.	-1247.1	2208	-0.0007803	0.0002807	0.0035	0.9		2995.37	2995.37		2.4	Si
SLV 1	fin.	2238.13	-4357	-0.001786	0.0002807	0.0035	0.9		2989.59	2989.59		1.34	Si
SLV 3	ini.	-1307.27	2439	-0.0008289	0.0002807	0.0035	0.9		2995.37	2995.37		2.29	Si
SLV 3	fin.	2241.16	-4168	-0.0017901	0.0002807	0.0035	0.9		2989.59	2989.59		1.33	Si
SLV 15	ini.	1758.77	-5158	-0.0012367	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLV 15	fin.	-1814.18	1559	-0.001289	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1887.38	-9224	0.9	0	548	7137	5660	2295	7684		0.83	No
SLV 16	fin.	-1985.23	-7095	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 15	ini.	1758.77	-8625	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 15	fin.	-1814.18	-6477	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 3	ini.	-1307.27	5842	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLV 3	fin.	2241.16	8276	0.9	0	548	7137	5660	2295	7684		0.93	No
SLD 14	ini.	1016.29	-5138	0.9	0	548	7137	5660	2295	7684		1.5	Si
SLD 14	fin.	-777.75	-2703	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLV 2	ini.	-1118.49	4929	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 2	fin.	2067.08	7648	0.9	0	548	7137	5660	2295	7684		1	Si
SLV 1	ini.	-1247.1	5528	0.9	0	548	7137	5660	2295	7684		1.39	Si
SLV 1	fin.	2238.13	8266	0.9	0	548	7137	5660	2295	7684		0.93	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	1818.94	-8939	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 13	fin.	-1817.2	-6487	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLD 16	ini.	989.91	-5000	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLD 16	fin.	-776.35	-2698	0.9	0	548	7137	5660	2295	7684		2.85	Si
SLV 14	ini.	1947.55	-9538	0.9	0	548	7137	5660	2295	7684		0.81	No
SLV 14	fin.	-1988.25	-7105	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 4	ini.	-1178.66	5243	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 4	fin.	2070.11	7658	0.9	0	548	7137	5660	2295	7684		1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.334	SLV 3	Si
V_SLV	0.806	SLV 14	No
PF_SLU	6.105	SLU 84	Si
V_SLU	2.194	SLU 78	Si

Trave di accoppiamento 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.68	12.5	0.82	-11.938	6.526	11.68	12.5	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-173.48	-1312	-0.0001065	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.18	Si
SLU 84	fin.	-402.15	-1575	-0.0002654	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.12	Si
SLU 83	ini.	-173.33	-1311	-0.0001064	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.2	Si
SLU 83	fin.	-401.54	-1572	-0.0002649	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.13	Si
SLU 82	ini.	-164.59	-1257	-0.0001008	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.95	Si
SLU 82	fin.	-398.58	-1535	-0.0002627	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.17	Si
SLU 78	ini.	-184.22	-1367	-0.0001134	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.36	Si
SLU 78	fin.	-395.68	-1595	-0.0002605	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.22	Si
SLU 80	ini.	-179.8	-1332	-0.0001105	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.68	Si
SLU 80	fin.	-384.85	-1551	-0.0002524	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.39	Si
SLU 81	ini.	-164.44	-1256	-0.0001007	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.96	Si
SLU 81	fin.	-397.97	-1533	-0.0002622	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.18	Si
SLU 77	ini.	-184.07	-1366	-0.0001133	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.37	Si
SLU 77	fin.	-395.07	-1593	-0.0002601	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.23	Si
SLU 75	ini.	-175.33	-1311	-0.0001077	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.03	Si
SLU 75	fin.	-392.11	-1556	-0.0002578	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.28	Si
SLU 74	ini.	-175.18	-1310	-0.0001076	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.05	Si
SLU 74	fin.	-391.5	-1553	-0.0002574	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.28	Si
SLU 79	ini.	-179.65	-1331	-0.0001104	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.7	Si
SLU 79	fin.	-384.23	-1549	-0.000252	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-175.18	2118	0.82	0	303	6502	3438	2091	5529	No	2.61	Si
SLU 74	fin.	-391.5	-1740	0.82	0	303	6502	3438	2091	5529	No	3.18	Si
SLU 78	ini.	-184.22	2203	0.82	0	303	6502	3438	2091	5529	No	2.51	Si
SLU 78	fin.	-395.68	-1765	0.82	0	303	6502	3438	2091	5529	No	3.13	Si
SLU 76	ini.	-171.01	2071	0.82	0	303	6502	3438	2091	5529	No	2.67	Si
SLU 76	fin.	-381.68	-1702	0.82	0	303	6502	3438	2091	5529	No	3.25	Si
SLU 82	ini.	-164.59	2057	0.82	0	303	6502	3438	2091	5529	No	2.69	Si
SLU 82	fin.	-398.58	-1764	0.82	0	303	6502	3438	2091	5529	No	3.13	Si
SLU 79	ini.	-179.65	2153	0.82	0	303	6502	3438	2091	5529	No	2.57	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-384.23	-1721	0.82	0	303	6502	3438	2091	5529	No	3.21	Si
SLU 80	ini.	-179.8	2154	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 80	fin.	-384.85	-1723	0.82	0	303	6502	3438	2091	5529	No	3.21	Si
SLU 84	ini.	-173.48	2141	0.82	0	303	6502	3438	2091	5529	No	2.58	Si
SLU 84	fin.	-402.15	-1787	0.82	0	303	6502	3438	2091	5529	No	3.09	Si
SLU 75	ini.	-175.33	2119	0.82	0	303	6502	3438	2091	5529	No	2.61	Si
SLU 75	fin.	-392.11	-1742	0.82	0	303	6502	3438	2091	5529	No	3.17	Si
SLU 83	ini.	-173.33	2140	0.82	0	303	6502	3438	2091	5529	No	2.58	Si
SLU 83	fin.	-401.54	-1785	0.82	0	303	6502	3438	2091	5529	No	3.1	Si
SLU 77	ini.	-184.07	2202	0.82	0	303	6502	3438	2091	5529	No	2.51	Si
SLU 77	fin.	-395.07	-1763	0.82	0	303	6502	3438	2091	5529	No	3.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1068.89	-4912	-0.0008129	0.0002807	0.0035	0.82		2487.45	2487.45		2.33	Si
SLV 4	fin.	1577.33	1037	-0.0013824	0.0002807	0.0035	0.82		2482.11	2482.11		1.57	Si
SLV 3	ini.	-1148.68	-5259	-0.0008922	0.0002807	0.0035	0.82		2487.45	2487.45		2.17	Si
SLV 3	fin.	1726.38	1202	-0.0015851	0.0002807	0.0035	0.82		2482.11	2482.11		1.44	Si
SLV 1	ini.	-1166.5	-5372	-0.0009103	0.0002807	0.0035	0.82		2487.45	2487.45		2.13	Si
SLV 1	fin.	1656.05	1045	-0.0014866	0.0002807	0.0035	0.82		2482.11	2482.11		1.5	Si
SLD 14	ini.	323.18	1009	-0.0002024	0.0002807	0.0035	0.82		2482.11	2482.11		7.68	Si
SLD 14	fin.	-1106.45	-1976	-0.0008499	0.0002807	0.0035	0.82		2487.45	2487.45		2.25	Si
SLV 13	ini.	833.57	3176	-0.0005967	0.0002807	0.0035	0.82		2482.11	2482.11		2.98	Si
SLV 13	fin.	-2092.67	-3083	-0.0022138	0.0002807	0.0035	0.82		2487.45	2487.45		1.19	Si
SLV 16	ini.	931.17	3636	-0.0006844	0.0002807	0.0035	0.82		2482.11	2482.11		2.67	Si
SLV 16	fin.	-2171.39	-3092	-0.0023858	0.0002807	0.0035	0.82		2487.45	2487.45		1.15	Si
SLV 14	ini.	913.36	3523	-0.0006681	0.0002807	0.0035	0.82		2482.11	2482.11		2.72	Si
SLV 14	fin.	-2241.72	-3248	-0.0025523	0.0002807	0.0035	0.82		2487.45	2487.45		1.11	Si
SLD 16	ini.	330.89	1058	-0.0002076	0.0002807	0.0035	0.82		2482.11	2482.11		7.5	Si
SLD 16	fin.	-1075.69	-1907	-0.0008195	0.0002807	0.0035	0.82		2487.45	2487.45		2.31	Si
SLV 2	ini.	-1086.71	-5025	-0.0008303	0.0002807	0.0035	0.82		2487.45	2487.45		2.29	Si
SLV 2	fin.	1507	880	-0.001294	0.0002807	0.0035	0.82		2482.11	2482.11		1.65	Si
SLV 15	ini.	851.38	3289	-0.0006124	0.0002807	0.0035	0.82		2482.11	2482.11		2.92	Si
SLV 15	fin.	-2022.34	-2927	-0.0020721	0.0002807	0.0035	0.82		2487.45	2487.45		1.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-566.22	4157	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLD 1	fin.	560.34	1492	0.82	0	455	6502	5156	2091	6957		4.66	Si
SLD 3	ini.	-558.51	4122	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLD 3	fin.	591.11	1583	0.82	0	455	6502	5156	2091	6957		4.4	Si
SLV 3	ini.	-1148.68	7777	0.82	0	455	6502	5156	2091	6957		0.89	No
SLV 3	fin.	1726.38	5239	0.82	0	455	6502	5156	2091	6957		1.33	Si
SLV 4	ini.	-1068.89	7265	0.82	0	455	6502	5156	2091	6957		0.96	No
SLV 4	fin.	1577.33	4757	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 14	ini.	913.36	-4991	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 14	fin.	-2241.72	-7541	0.82	0	455	6502	5156	2091	6957		0.92	No
SLV 13	ini.	833.57	-4480	0.82	0	455	6502	5156	2091	6957		1.55	Si
SLV 13	fin.	-2092.67	-7058	0.82	0	455	6502	5156	2091	6957		0.99	No
SLV 15	ini.	851.38	-4561	0.82	0	455	6502	5156	2091	6957		1.53	Si
SLV 15	fin.	-2022.34	-6852	0.82	0	455	6502	5156	2091	6957		1.02	Si
SLV 1	ini.	-1166.5	7858	0.82	0	455	6502	5156	2091	6957		0.89	No
SLV 1	fin.	1656.05	5033	0.82	0	455	6502	5156	2091	6957		1.38	Si
SLV 2	ini.	-1086.71	7346	0.82	0	455	6502	5156	2091	6957		0.95	No
SLV 2	fin.	1507	4550	0.82	0	455	6502	5156	2091	6957		1.53	Si
SLV 16	ini.	931.17	-5072	0.82	0	455	6502	5156	2091	6957		1.37	Si
SLV 16	fin.	-2171.39	-7334	0.82	0	455	6502	5156	2091	6957		0.95	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.11	SLV 14	Si
V_SLV	0.885	SLV 1	No
PF_SLU	6.118	SLU 84	Si
V_SLU	2.509	SLU 78	Si

Trave di accoppiamento 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.98	9.88	0.9	-7.058	6.526	8.98	9.88	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	93.99	-1285	-0.0000468	0.0001872	0.0035	0.9		2959	2959	No	31.48	Si
SLU 82	fin.	411.01	-1690	-0.0002208	0.0001872	0.0035	0.9		2959	2959	No	7.2	Si
SLU 83	ini.	106.96	-1339	-0.0000534	0.0001872	0.0035	0.9		2959	2959	No	27.66	Si
SLU 83	fin.	409.2	-1712	-0.0002198	0.0001872	0.0035	0.9		2959	2959	No	7.23	Si
SLU 78	ini.	118.46	-1382	-0.0000593	0.0001872	0.0035	0.9		2959	2959	No	24.98	Si
SLU 78	fin.	407.51	-1725	-0.0002187	0.0001872	0.0035	0.9		2959	2959	No	7.26	Si
SLU 84	ini.	106.2	-1339	-0.000053	0.0001872	0.0035	0.9		2959	2959	No	27.86	Si
SLU 84	fin.	411.13	-1717	-0.0002209	0.0001872	0.0035	0.9		2959	2959	No	7.2	Si
SLU 76	ini.	98.61	-1289	-0.0000492	0.0001872	0.0035	0.9		2959	2959	No	30.01	Si
SLU 76	fin.	404.97	-1673	-0.0002172	0.0001872	0.0035	0.9		2959	2959	No	7.31	Si
SLU 74	ini.	107	-1328	-0.0000534	0.0001872	0.0035	0.9		2959	2959	No	27.65	Si
SLU 74	fin.	405.45	-1694	-0.0002175	0.0001872	0.0035	0.9		2959	2959	No	7.3	Si
SLU 73	ini.	86.4	-1235	-0.000043	0.0001872	0.0035	0.9		2959	2959	No	34.25	Si
SLU 73	fin.	404.84	-1647	-0.0002171	0.0001872	0.0035	0.9		2959	2959	No	7.31	Si
SLU 77	ini.	119.22	-1382	-0.0000597	0.0001872	0.0035	0.9		2959	2959	No	24.82	Si
SLU 77	fin.	405.58	-1720	-0.0002176	0.0001872	0.0035	0.9		2959	2959	No	7.3	Si
SLU 81	ini.	94.75	-1285	-0.0000472	0.0001872	0.0035	0.9		2959	2959	No	31.23	Si
SLU 81	fin.	409.07	-1685	-0.0002197	0.0001872	0.0035	0.9		2959	2959	No	7.23	Si
SLU 75	ini.	106.24	-1328	-0.0000531	0.0001872	0.0035	0.9		2959	2959	No	27.85	Si
SLU 75	fin.	407.39	-1698	-0.0002187	0.0001872	0.0035	0.9		2959	2959	No	7.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	93.99	-1032	0.9	0	365	7137	3773	2295	6068	No	5.88	Si
SLU 82	fin.	411.01	1749	0.9	0	365	7137	3773	2295	6068	No	3.47	Si
SLU 75	ini.	106.24	-1117	0.9	0	365	7137	3773	2295	6068	No	5.43	Si
SLU 75	fin.	407.39	1757	0.9	0	365	7137	3773	2295	6068	No	3.45	Si
SLU 74	ini.	107	-1119	0.9	0	365	7137	3773	2295	6068	No	5.42	Si
SLU 74	fin.	405.45	1749	0.9	0	365	7137	3773	2295	6068	No	3.47	Si
SLU 80	ini.	111.33	-1140	0.9	0	365	7137	3773	2295	6068	No	5.32	Si
SLU 80	fin.	403.81	1743	0.9	0	365	7137	3773	2295	6068	No	3.48	Si
SLU 81	ini.	94.75	-1034	0.9	0	365	7137	3773	2295	6068	No	5.87	Si
SLU 81	fin.	409.07	1741	0.9	0	365	7137	3773	2295	6068	No	3.49	Si
SLU 76	ini.	98.61	-1065	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 76	fin.	404.97	1738	0.9	0	365	7137	3773	2295	6068	No	3.49	Si
SLU 84	ini.	106.2	-1106	0.9	0	365	7137	3773	2295	6068	No	5.49	Si
SLU 84	fin.	411.13	1759	0.9	0	365	7137	3773	2295	6068	No	3.45	Si
SLU 77	ini.	119.22	-1193	0.9	0	365	7137	3773	2295	6068	No	5.08	Si
SLU 77	fin.	405.58	1759	0.9	0	365	7137	3773	2295	6068	No	3.45	Si
SLU 83	ini.	106.96	-1108	0.9	0	365	7137	3773	2295	6068	No	5.48	Si
SLU 83	fin.	409.2	1751	0.9	0	365	7137	3773	2295	6068	No	3.47	Si
SLU 78	ini.	118.46	-1191	0.9	0	365	7137	3773	2295	6068	No	5.09	Si
SLU 78	fin.	407.51	1768	0.9	0	365	7137	3773	2295	6068	No	3.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1631.23	-4836	-0.0011139	0.0002807	0.0035	0.9		2989.59	2989.59		1.83	Si
SLV 14	fin.	-1400.53	956	-0.0009064	0.0002807	0.0035	0.9		2995.37	2995.37		2.14	Si
SLV 4	ini.	-1381.4	2766	-0.0008902	0.0002807	0.0035	0.9		2995.37	2995.37		2.17	Si
SLV 4	fin.	1837.76	-3119	-0.0013166	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLV 15	ini.	1483.12	-4256	-0.0009798	0.0002807	0.0035	0.9		2989.59	2989.59		2.02	Si
SLV 15	fin.	-1359.35	1025	-0.0008718	0.0002807	0.0035	0.9		2995.37	2995.37		2.2	Si
SLV 5	ini.	-430.26	-32	-0.0002249	0.0002807	0.0035	0.9		2995.37	2995.37		6.96	Si
SLV 5	fin.	1038.22	-2338	-0.0006216	0.0002807	0.0035	0.9		2989.59	2989.59		2.88	Si
SLD 1	ini.	-616.59	737	-0.0003347	0.0002807	0.0035	0.9		2995.37	2995.37		4.86	Si
SLD 1	fin.	1070.49	-2208	-0.0006456	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 13	ini.	1490.13	-4489	-0.000986	0.0002807	0.0035	0.9		2989.59	2989.59		2.01	Si
SLV 13	fin.	-1245.67	759	-0.0007792	0.0002807	0.0035	0.9		2995.37	2995.37		2.4	Si
SLV 16	ini.	1624.22	-4603	-0.0011073	0.0002807	0.0035	0.9		2989.59	2989.59		1.84	Si
SLV 16	fin.	-1514.21	1222	-0.0010048	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 1	ini.	-1515.49	2880	-0.0010059	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 1	fin.	2106.31	-3582	-0.0016168	0.0002807	0.0035	0.9		2989.59	2989.59		1.42	Si
SLV 2	ini.	-1374.39	2533	-0.0008843	0.0002807	0.0035	0.9		2995.37	2995.37		2.18	Si
SLV 2	fin.	1951.45	-3385	-0.0014377	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1522.5	3113	-0.0010121	0.0002807	0.0035	0.9		2995.37	2995.37		1.97	Si
SLV 3	fin.	1992.62	-3316	-0.0014836	0.0002807	0.0035	0.9		2989.59	2989.59		1.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-616.59	2341	0.9	0	548	7137	5660	2295	7684		3.28	Si
SLD 1	fin.	1070.49	4201	0.9	0	548	7137	5660	2295	7684		1.83	Si
SLV 2	ini.	-1374.39	5781	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 2	fin.	1951.45	7537	0.9	0	548	7137	5660	2295	7684		1.02	Si
SLV 5	ini.	-430.26	1593	0.9	0	548	7137	5660	2295	7684		4.82	Si
SLV 5	fin.	1038.22	4177	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 3	ini.	-1522.5	6363	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 3	fin.	1992.62	7626	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 13	ini.	1490.13	-7124	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 13	fin.	-1245.67	-4504	0.9	0	548	7137	5660	2295	7684		1.71	Si
SLV 4	ini.	-1381.4	5748	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 4	fin.	1837.76	7042	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 16	ini.	1624.22	-7772	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 16	fin.	-1514.21	-5584	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLV 1	ini.	-1515.49	6396	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 1	fin.	2106.31	8122	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 15	ini.	1483.12	-7157	0.9	0	548	7137	5660	2295	7684		1.07	Si
SLV 15	fin.	-1359.35	-5000	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 14	ini.	1631.23	-7739	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 14	fin.	-1400.53	-5089	0.9	0	548	7137	5660	2295	7684		1.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.419	SLV 1	Si
V_SLV	0.946	SLV 1	No
PF_SLU	7.197	SLU 84	Si
V_SLU	3.433	SLU 78	Si

Trave di accoppiamento 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.68	12.5	0.82	-7.058	6.526	11.68	12.5	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-467.93	-1374	-0.0003161	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.26	Si
SLU 78	fin.	-30.95	-448	-0.0000183	0.0001872	0.0035	0.82		2460.51	2460.51	No	79.51	Si
SLU 77	ini.	-465.91	-1369	-0.0003145	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.28	Si
SLU 77	fin.	-31.34	-448	-0.0000186	0.0001872	0.0035	0.82		2460.51	2460.51	No	78.51	Si
SLU 83	ini.	-470.01	-1350	-0.0003177	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.24	Si
SLU 83	fin.	-22.61	-407	-0.0000134	0.0001872	0.0035	0.82		2460.51	2460.51	No	108.81	Si
SLU 82	ini.	-471.17	-1327	-0.0003187	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.22	Si
SLU 82	fin.	-13.42	-364	-0.0000079	0.0001872	0.0035	0.82		2460.51	2460.51	No	183.35	Si
SLU 74	ini.	-465.05	-1341	-0.0003138	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.29	Si
SLU 74	fin.	-22.54	-404	-0.0000133	0.0001872	0.0035	0.82		2460.51	2460.51	No	109.17	Si
SLU 81	ini.	-469.15	-1322	-0.0003171	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.24	Si
SLU 81	fin.	-13.81	-363	-0.0000082	0.0001872	0.0035	0.82		2460.51	2460.51	No	178.14	Si
SLU 84	ini.	-472.03	-1355	-0.0003193	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.21	Si
SLU 84	fin.	-22.22	-407	-0.0000131	0.0001872	0.0035	0.82		2460.51	2460.51	No	110.73	Si
SLU 76	ini.	-462.11	-1320	-0.0003115	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.32	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	fin.	-17.98	-381	-0.0000106	0.0001872	0.0035	0.82		2460.51	2460.51	No	136.87	Si
SLU 80	ini.	-461.62	-1344	-0.0003111	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.33	Si
SLU 80	fin.	-27.04	-424	-0.000016	0.0001872	0.0035	0.82		2460.51	2460.51	No	91	Si
SLU 75	ini.	-467.07	-1346	-0.0003154	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.27	Si
SLU 75	fin.	-22.15	-404	-0.0000131	0.0001872	0.0035	0.82		2460.51	2460.51	No	111.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-471.17	2299	0.82	0	303	6502	3438	2091	5529	No	2.41	Si
SLU 82	fin.	-13.42	-1067	0.82	0	303	6502	3438	2091	5529	No	5.18	Si
SLU 83	ini.	-470.01	2305	0.82	0	303	6502	3438	2091	5529	No	2.4	Si
SLU 83	fin.	-22.61	-1131	0.82	0	303	6502	3438	2091	5529	No	4.89	Si
SLU 79	ini.	-459.6	2249	0.82	0	303	6502	3438	2091	5529	No	2.46	Si
SLU 79	fin.	-27.43	-1117	0.82	0	303	6502	3438	2091	5529	No	4.95	Si
SLU 84	ini.	-472.03	2312	0.82	0	303	6502	3438	2091	5529	No	2.39	Si
SLU 84	fin.	-22.22	-1129	0.82	0	303	6502	3438	2091	5529	No	4.9	Si
SLU 75	ini.	-467.07	2277	0.82	0	303	6502	3438	2091	5529	No	2.43	Si
SLU 75	fin.	-22.15	-1096	0.82	0	303	6502	3438	2091	5529	No	5.04	Si
SLU 77	ini.	-465.91	2283	0.82	0	303	6502	3438	2091	5529	No	2.42	Si
SLU 77	fin.	-31.34	-1160	0.82	0	303	6502	3438	2091	5529	No	4.77	Si
SLU 81	ini.	-469.15	2292	0.82	0	303	6502	3438	2091	5529	No	2.41	Si
SLU 81	fin.	-13.81	-1069	0.82	0	303	6502	3438	2091	5529	No	5.17	Si
SLU 74	ini.	-465.05	2270	0.82	0	303	6502	3438	2091	5529	No	2.44	Si
SLU 74	fin.	-22.54	-1098	0.82	0	303	6502	3438	2091	5529	No	5.04	Si
SLU 80	ini.	-461.62	2256	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 80	fin.	-27.04	-1116	0.82	0	303	6502	3438	2091	5529	No	4.96	Si
SLU 78	ini.	-467.93	2290	0.82	0	303	6502	3438	2091	5529	No	2.41	Si
SLU 78	fin.	-30.95	-1158	0.82	0	303	6502	3438	2091	5529	No	4.77	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1180.65	1340	-0.0009273	0.0002807	0.0035	0.82		2482.11	2482.11		2.1	Si
SLV 15	fin.	-829.82	-3073	-0.0005919	0.0002807	0.0035	0.82		2487.45	2487.45		3	Si
SLV 5	ini.	-1036.26	-2156	-0.0007813	0.0002807	0.0035	0.82		2487.45	2487.45		2.4	Si
SLV 5	fin.	248.28	523	-0.0001531	0.0002807	0.0035	0.82		2482.11	2482.11		10	Si
SLV 2	ini.	-1846.7	-3177	-0.0017623	0.0002807	0.0035	0.82		2487.45	2487.45		1.35	Si
SLV 2	fin.	829.76	2651	-0.0005933	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLV 4	ini.	-1725.02	-2867	-0.0015782	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 4	fin.	855.67	2824	-0.0006162	0.0002807	0.0035	0.82		2482.11	2482.11		2.9	Si
SLV 1	ini.	-1983.47	-3369	-0.0019984	0.0002807	0.0035	0.82		2487.45	2487.45		1.25	Si
SLV 1	fin.	911.65	2943	-0.0006666	0.0002807	0.0035	0.82		2482.11	2482.11		2.72	Si
SLV 14	ini.	1195.74	1222	-0.0009429	0.0002807	0.0035	0.82		2482.11	2482.11		2.08	Si
SLV 14	fin.	-937.62	-3539	-0.0006886	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLV 16	ini.	1317.42	1532	-0.0010732	0.0002807	0.0035	0.82		2482.11	2482.11		1.88	Si
SLV 16	fin.	-911.71	-3366	-0.0006649	0.0002807	0.0035	0.82		2487.45	2487.45		2.73	Si
SLV 13	ini.	1058.97	1030	-0.0008053	0.0002807	0.0035	0.82		2482.11	2482.11		2.34	Si
SLV 13	fin.	-855.73	-3246	-0.0006147	0.0002807	0.0035	0.82		2487.45	2487.45		2.91	Si
SLD 1	ini.	-1039.23	-1968	-0.0007841	0.0002807	0.0035	0.82		2487.45	2487.45		2.39	Si
SLD 1	fin.	389.57	1137	-0.0002477	0.0002807	0.0035	0.82		2482.11	2482.11		6.37	Si
SLV 3	ini.	-1861.79	-3059	-0.0017867	0.0002807	0.0035	0.82		2487.45	2487.45		1.34	Si
SLV 3	fin.	937.56	3117	-0.0006903	0.0002807	0.0035	0.82		2482.11	2482.11		2.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1846.7	6590	0.82	0	455	6502	5156	2091	6957		1.06	Si
SLV 2	fin.	829.76	4246	0.82	0	455	6502	5156	2091	6957		1.64	Si
SLV 13	ini.	1058.97	-3041	0.82	0	455	6502	5156	2091	6957		2.29	Si
SLV 13	fin.	-855.73	-5563	0.82	0	455	6502	5156	2091	6957		1.25	Si
SLV 16	ini.	1317.42	-3864	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 16	fin.	-911.71	-5996	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 3	ini.	-1861.79	6685	0.82	0	455	6502	5156	2091	6957		1.04	Si
SLV 3	fin.	937.56	4779	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 1	ini.	-1983.47	7049	0.82	0	455	6502	5156	2091	6957		0.99	No
SLV 1	fin.	911.65	4729	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 14	ini.	1195.74	-3500	0.82	0	455	6502	5156	2091	6957		1.99	Si
SLV 14	fin.	-937.62	-6046	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 15	ini.	1180.65	-3405	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 15	fin.	-829.82	-5513	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 5	ini.	-1036.26	3861	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 5	fin.	248.28	983	0.82	0	455	6502	5156	2091	6957		7.08	Si
SLV 4	ini.	-1725.02	6226	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 4	fin.	855.67	4296	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLD 1	ini.	-1039.23	3928	0.82	0	455	6502	5156	2091	6957		1.77	Si
SLD 1	fin.	389.57	1659	0.82	0	455	6502	5156	2091	6957		4.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.254	SLV 1	Si
V_SLV	0.987	SLV 1	No
PF_SLU	5.213	SLU 84	Si
V_SLU	2.391	SLU 84	Si

Trave di accoppiamento 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-19.813	1.006	11.08	12.5	1.42	-20.613	1.006	11.08	12.5	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1320.78	-3666	-0.0002882	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.71	Si
SLU 75	fin.	689.93	-2560	-0.0001422	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.92	Si
SLU 78	ini.	-1325.51	-3757	-0.0002894	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.69	Si
SLU 78	fin.	681.43	-2651	-0.0001404	0.0002246	0.0035	1.42		7536.27	7536.27	No	11.06	Si
SLU 81	ini.	-1326.03	-3574	-0.0002895	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.69	Si
SLU 81	fin.	698.71	-2464	-0.0001441	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.79	Si
SLU 77	ini.	-1320.15	-3753	-0.0002881	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.72	Si
SLU 77	fin.	677.8	-2653	-0.0001396	0.0002246	0.0035	1.42		7536.27	7536.27	No	11.12	Si
SLU 76	ini.	-1316.58	-3575	-0.0002872	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.73	Si
SLU 76	fin.	695.09	-2470	-0.0001434	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.84	Si
SLU 82	ini.	-1331.4	-3578	-0.0002909	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.67	Si
SLU 82	fin.	702.34	-2463	-0.0001449	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.73	Si
SLU 84	ini.	-1336.13	-3668	-0.000292	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.65	Si
SLU 84	fin.	693.84	-2554	-0.0001431	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.86	Si
SLU 74	ini.	-1315.41	-3662	-0.0002869	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.74	Si
SLU 74	fin.	686.3	-2561	-0.0001414	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.98	Si
SLU 83	ini.	-1330.77	-3664	-0.0002907	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.67	Si
SLU 83	fin.	690.21	-2555	-0.0001423	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.92	Si
SLU 80	ini.	-1317.74	-3663	-0.0002875	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.73	Si
SLU 80	fin.	684.17	-2562	-0.000141	0.0002246	0.0035	1.42		7536.27	7536.27	No	11.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1320.78	4441	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 75	fin.	689.93	2483	1.42	0	576	6344	7144	3621	6920	No	2.79	Si
SLU 76	ini.	-1316.58	4441	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 76	fin.	695.09	2483	1.42	0	576	6344	7144	3621	6920	No	2.79	Si
SLU 83	ini.	-1330.77	4539	1.42	0	576	6344	7144	3621	6920	No	1.52	Si
SLU 83	fin.	690.21	2416	1.42	0	576	6344	7144	3621	6920	No	2.86	Si
SLU 80	ini.	-1317.74	4425	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 80	fin.	684.17	2467	1.42	0	576	6344	7144	3621	6920	No	2.81	Si
SLU 74	ini.	-1315.41	4425	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 74	fin.	686.3	2467	1.42	0	576	6344	7144	3621	6920	No	2.81	Si
SLU 81	ini.	-1326.03	4545	1.42	0	576	6344	7144	3621	6920	No	1.52	Si
SLU 81	fin.	698.71	2422	1.42	0	576	6344	7144	3621	6920	No	2.86	Si
SLU 73	ini.	-1311.85	4447	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 73	fin.	703.59	2488	1.42	0	576	6344	7144	3621	6920	No	2.78	Si
SLU 84	ini.	-1336.13	4555	1.42	0	576	6344	7144	3621	6920	No	1.52	Si
SLU 84	fin.	693.84	2432	1.42	0	576	6344	7144	3621	6920	No	2.85	Si
SLU 82	ini.	-1331.4	4560	1.42	0	576	6344	7144	3621	6920	No	1.52	Si
SLU 82	fin.	702.34	2437	1.42	0	576	6344	7144	3621	6920	No	2.84	Si
SLU 78	ini.	-1325.51	4436	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 78	fin.	681.43	2477	1.42	0	576	6344	7144	3621	6920	No	2.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-1963.04	-2901	-0.000435	0.0003369	0.0035	1.42		7279.66	7279.66		3.71	Si
SLD 13	fin.	1546.91	-1016	-0.0003324	0.0003369	0.0035	1.42		7270.13	7270.13		4.7	Si
SLV 10	ini.	-2093.96	-3020	-0.000469	0.0003369	0.0035	1.42		7279.66	7279.66		3.48	Si
SLV 10	fin.	1638.98	-966	-0.0003546	0.0003369	0.0035	1.42		7270.13	7270.13		4.44	Si
SLV 15	ini.	-3009.17	-3274	-0.0007281	0.0003369	0.0035	1.42		7279.66	7279.66		2.42	Si
SLV 15	fin.	2637.36	-293	-0.0006192	0.0003369	0.0035	1.42		7270.13	7270.13		2.76	Si
SLV 14	ini.	-3279.62	-3424	-0.000812	0.0003369	0.0035	1.42		7279.66	7279.66		2.22	Si
SLV 14	fin.	2894.36	-133	-0.0006945	0.0003369	0.0035	1.42		7270.13	7270.13		2.51	Si
SLD 15	ini.	-1834.39	-2830	-0.0004023	0.0003369	0.0035	1.42		7279.66	7279.66		3.97	Si
SLD 15	fin.	1430.92	-1089	-0.0003049	0.0003369	0.0035	1.42		7270.13	7270.13		5.08	Si
SLV 9	ini.	-2107.81	-3027	-0.0004726	0.0003369	0.0035	1.42		7279.66	7279.66		3.45	Si
SLV 9	fin.	1643.36	-962	-0.0003556	0.0003369	0.0035	1.42		7270.13	7270.13		4.42	Si
SLV 13	ini.	-3301.11	-3435	-0.0008188	0.0003369	0.0035	1.42		7279.66	7279.66		2.21	Si
SLV 13	fin.	2901.16	-127	-0.0006965	0.0003369	0.0035	1.42		7270.13	7270.13		2.51	Si
SLV 4	ini.	1383.98	-1562	-0.000294	0.0003369	0.0035	1.42		7270.13	7270.13		5.25	Si
SLV 4	fin.	-1839.03	-3237	-0.0004035	0.0003369	0.0035	1.42		7279.66	7279.66		3.96	Si
SLD 14	ini.	-1953.81	-2896	-0.0004326	0.0003369	0.0035	1.42		7279.66	7279.66		3.73	Si
SLD 14	fin.	1543.99	-1018	-0.0003317	0.0003369	0.0035	1.42		7270.13	7270.13		4.71	Si
SLV 16	ini.	-2987.68	-3263	-0.0007216	0.0003369	0.0035	1.42		7279.66	7279.66		2.44	Si
SLV 16	fin.	2630.56	-299	-0.0006172	0.0003369	0.0035	1.42		7270.13	7270.13		2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-1825.16	6223	1.42	0	864	6344	10717	3621	7208		1.16	Si
SLD 16	fin.	1428	4903	1.42	0	864	6344	10717	3621	7208		1.47	Si
SLD 13	ini.	-1963.04	6533	1.42	0	864	6344	10717	3621	7208		1.1	Si
SLD 13	fin.	1546.91	5384	1.42	0	864	6344	10717	3621	7208		1.34	Si
SLV 9	ini.	-2107.81	6528	1.42	0	864	6344	10717	3621	7208		1.1	Si
SLV 9	fin.	1643.36	5943	1.42	0	864	6344	10717	3621	7208		1.21	Si
SLV 10	ini.	-2093.96	6495	1.42	0	864	6344	10717	3621	7208		1.11	Si
SLV 10	fin.	1638.98	5910	1.42	0	864	6344	10717	3621	7208		1.22	Si
SLD 15	ini.	-1834.39	6244	1.42	0	864	6344	10717	3621	7208		1.15	Si
SLD 15	fin.	1430.92	4925	1.42	0	864	6344	10717	3621	7208		1.46	Si
SLV 16	ini.	-2987.68	10295	1.42	0	864	6344	10717	3621	7208		0.7	No
SLV 16	fin.	2630.56	8881	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 14	ini.	-3279.62	10948	1.42	0	864	6344	10717	3621	7208		0.66	No
SLV 14	fin.	2894.36	9926	1.42	0	864	6344	10717	3621	7208		0.73	No
SLD 14	ini.	-1953.81	6511	1.42	0	864	6344	10717	3621	7208		1.11	Si
SLD 14	fin.	1543.99	5363	1.42	0	864	6344	10717	3621	7208		1.34	Si
SLV 15	ini.	-3009.17	10345	1.42	0	864	6344	10717	3621	7208		0.7	No
SLV 15	fin.	2637.36	8931	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 13	ini.	-3301.11	10998	1.42	0	864	6344	10717	3621	7208		0.66	No
SLV 13	fin.	2901.16	9976	1.42	0	864	6344	10717	3621	7208		0.72	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.205	SLV 13	Si
V_SLV	0.655	SLV 13	No
PF_SLU	5.647	SLU 84	Si
V_SLU	1.517	SLU 82	Si

Trave di accoppiamento 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	11.48	12.5	1.02	-12.263	1.006	11.48	12.5	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-732.6	-2283	-0.0003129	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.32	Si
SLU 82	fin.	-157.91	-1775	-0.0000612	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.7	Si
SLU 84	ini.	-730.2	-2313	-0.0003117	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.34	Si
SLU 84	fin.	-166.5	-1822	-0.0000646	0.0002246	0.0035	1.02		3900.37	3900.37	No	23.42	Si
SLU 75	ini.	-739.17	-2371	-0.0003161	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.28	Si
SLU 75	fin.	-117.44	-1804	-0.0000453	0.0002246	0.0035	1.02		3900.37	3900.37	No	33.21	Si
SLU 74	ini.	-746.52	-2378	-0.0003197	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.22	Si
SLU 74	fin.	-111.11	-1794	-0.0000428	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.1	Si
SLU 32	ini.	-694.08	-2091	-0.0002942	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.62	Si
SLU 32	fin.	-72.95	-1494	-0.000028	0.0002246	0.0035	1.02		3900.37	3900.37	No	53.46	Si
SLU 79	ini.	-700.46	-2298	-0.0002972	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.57	Si
SLU 79	fin.	-150.78	-1815	-0.0000584	0.0002246	0.0035	1.02		3900.37	3900.37	No	25.87	Si
SLU 77	ini.	-744.12	-2408	-0.0003186	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.24	Si
SLU 77	fin.	-119.7	-1841	-0.0000461	0.0002246	0.0035	1.02		3900.37	3900.37	No	32.58	Si
SLU 81	ini.	-739.95	-2291	-0.0003165	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.27	Si
SLU 81	fin.	-151.58	-1766	-0.0000587	0.0002246	0.0035	1.02		3900.37	3900.37	No	25.73	Si
SLU 78	ini.	-736.77	-2401	-0.0003149	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.29	Si
SLU 78	fin.	-126.03	-1850	-0.0000486	0.0002246	0.0035	1.02		3900.37	3900.37	No	30.95	Si
SLU 83	ini.	-737.55	-2321	-0.0003153	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.29	Si
SLU 83	fin.	-160.17	-1813	-0.0000621	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-730.2	2134	1.02	0	377	8088	5132	2601	7733	No	3.62	Si
SLU 84	fin.	-166.5	-665	1.02	0	377	8088	5132	2601	7733	No	11.62	Si
SLU 41	ini.	-685.11	2035	1.02	0	377	8088	5132	2601	7733	No	3.8	Si
SLU 41	fin.	-122.01	-544	1.02	0	377	8088	5132	2601	7733	No	14.22	Si
SLU 78	ini.	-736.77	2065	1.02	0	377	8088	5132	2601	7733	No	3.74	Si
SLU 78	fin.	-126.03	-458	1.02	0	377	8088	5132	2601	7733	No	16.87	Si
SLU 39	ini.	-687.51	2052	1.02	0	377	8088	5132	2601	7733	No	3.77	Si
SLU 39	fin.	-113.42	-526	1.02	0	377	8088	5132	2601	7733	No	14.69	Si
SLU 81	ini.	-739.95	2172	1.02	0	377	8088	5132	2601	7733	No	3.56	Si
SLU 81	fin.	-151.58	-628	1.02	0	377	8088	5132	2601	7733	No	12.32	Si
SLU 83	ini.	-737.55	2154	1.02	0	377	8088	5132	2601	7733	No	3.59	Si
SLU 83	fin.	-160.17	-645	1.02	0	377	8088	5132	2601	7733	No	11.98	Si
SLU 74	ini.	-746.52	2103	1.02	0	377	8088	5132	2601	7733	No	3.68	Si
SLU 74	fin.	-111.11	-421	1.02	0	377	8088	5132	2601	7733	No	18.38	Si
SLU 77	ini.	-744.12	2085	1.02	0	377	8088	5132	2601	7733	No	3.71	Si
SLU 77	fin.	-119.7	-438	1.02	0	377	8088	5132	2601	7733	No	17.64	Si
SLU 82	ini.	-732.6	2152	1.02	0	377	8088	5132	2601	7733	No	3.59	Si
SLU 82	fin.	-157.91	-648	1.02	0	377	8088	5132	2601	7733	No	11.94	Si
SLU 75	ini.	-739.17	2083	1.02	0	377	8088	5132	2601	7733	No	3.71	Si
SLU 75	fin.	-117.44	-441	1.02	0	377	8088	5132	2601	7733	No	17.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2551.62	296	-0.0014206	0.0003369	0.0035	1.02		3845.03	3845.03		1.51	Si
SLV 14	fin.	4665.32	9482	-0.0044399	0.0003369	0.0035	1.02		3838.12	3838.12		0.82	No
SLV 6	ini.	1188.14	-832	-0.0005255	0.0003369	0.0035	1.02		3838.12	3838.12		3.23	Si
SLV 6	fin.	-2352.52	-5503	-0.0012622	0.0003369	0.0035	1.02		3845.03	3845.03		1.63	Si
SLV 1	ini.	2180.04	-2726	-0.0011372	0.0003369	0.0035	1.02		3838.12	3838.12		1.76	Si
SLV 1	fin.	-5290.58	-12510	-0.0053271	0.0003369	0.0035	1.02		3845.03	3845.03		0.73	No
SLV 13	ini.	-2590.08	288	-0.0014528	0.0003369	0.0035	1.02		3845.03	3845.03		1.48	Si
SLV 13	fin.	4722.79	9596	-0.0045258	0.0003369	0.0035	1.02		3838.12	3838.12		0.81	No
SLV 2	ini.	2218.5	-2718	-0.001165	0.0003369	0.0035	1.02		3838.12	3838.12		1.73	Si
SLV 2	fin.	-5348.04	-12624	-0.0054065	0.0003369	0.0035	1.02		3845.03	3845.03		0.72	No
SLV 15	ini.	-3143.82	-426	-0.0020017	0.0003369	0.0035	1.02		3845.03	3845.03		1.22	Si
SLV 15	fin.	5167.96	10141	-0.0051679	0.0003369	0.0035	1.02		3838.12	3838.12		0.74	No
SLV 16	ini.	-3105.35	-418	-0.001957	0.0003369	0.0035	1.02		3845.03	3845.03		1.24	Si
SLV 16	fin.	5110.5	10027	-0.0050869	0.0003369	0.0035	1.02		3838.12	3838.12		0.75	No
SLV 3	ini.	1626.31	-3440	-0.0007731	0.0003369	0.0035	1.02		3838.12	3838.12		2.36	Si
SLV 3	fin.	-4845.4	-11964	-0.0046951	0.0003369	0.0035	1.02		3845.03	3845.03		0.79	No
SLD 2	ini.	687.05	-2057	-0.0002818	0.0003369	0.0035	1.02		3838.12	3838.12		5.59	Si
SLD 2	fin.	-2340.49	-6110	-0.0012531	0.0003369	0.0035	1.02		3845.03	3845.03		1.64	Si
SLV 4	ini.	1664.77	-3432	-0.0007964	0.0003369	0.0035	1.02		3838.12	3838.12		2.31	Si
SLV 4	fin.	-4902.87	-12078	-0.0047786	0.0003369	0.0035	1.02		3845.03	3845.03		0.78	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2180.04	-10232	1.02	0	565	8088	7698	2601	8654		0.85	No
SLV 1	fin.	-5290.58	-11815	1.02	0	565	8088	7698	2601	8654		0.73	No
SLV 4	ini.	1664.77	-8988	1.02	0	565	8088	7698	2601	8654		0.96	No
SLV 4	fin.	-4902.87	-10503	1.02	0	565	8088	7698	2601	8654		0.82	No
SLV 14	ini.	-2551.62	11361	1.02	0	565	8088	7698	2601	8654		0.76	No
SLV 14	fin.	4665.32	9805	1.02	0	565	8088	7698	2601	8654		0.88	No
SLV 12	ini.	-2088.67	6781	1.02	0	565	8088	7698	2601	8654		1.28	Si
SLV 12	fin.	2135.41	5364	1.02	0	565	8088	7698	2601	8654		1.61	Si
SLV 2	ini.	2218.5	-10374	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 2	fin.	-5348.04	-11957	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 13	ini.	-2590.08	11503	1.02	0	565	8088	7698	2601	8654		0.75	No
SLV 13	fin.	4722.79	9946	1.02	0	565	8088	7698	2601	8654		0.87	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3105.35	12747	1.02	0	565	8088	7698	2601	8654		0.68	No
SLV 16	fin.	5110.5	11259	1.02	0	565	8088	7698	2601	8654		0.77	No
SLV 15	ini.	-3143.82	12888	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 15	fin.	5167.96	11401	1.02	0	565	8088	7698	2601	8654		0.76	No
SLV 11	ini.	-2113.45	6872	1.02	0	565	8088	7698	2601	8654		1.26	Si
SLV 11	fin.	2172.44	5456	1.02	0	565	8088	7698	2601	8654		1.59	Si
SLV 3	ini.	1626.31	-8847	1.02	0	565	8088	7698	2601	8654		0.98	No
SLV 3	fin.	-4845.4	-10361	1.02	0	565	8088	7698	2601	8654		0.84	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.719	SLV 2	No
V_SLV	0.671	SLV 15	No
PF_SLU	5.225	SLU 74	Si
V_SLU	3.561	SLU 81	Si

Trave di accoppiamento 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	11.48	12.5	1.02	-10.478	1.006	11.48	12.5	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	49.44	-1291	-0.0000189	0.0002246	0.0035	1.02		3893.98	3893.98	No	78.77	Si
SLU 84	fin.	-712.99	-2207	-0.0003033	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.47	Si
SLU 75	ini.	67.64	-1315	-0.0000259	0.0002246	0.0035	1.02		3893.98	3893.98	No	57.57	Si
SLU 75	fin.	-716.04	-2255	-0.0003048	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.45	Si
SLU 79	ini.	46.44	-1324	-0.0000178	0.0002246	0.0035	1.02		3893.98	3893.98	No	83.86	Si
SLU 79	fin.	-689.66	-2205	-0.000292	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.66	Si
SLU 78	ini.	59.13	-1370	-0.0000227	0.0002246	0.0035	1.02		3893.98	3893.98	No	65.85	Si
SLU 78	fin.	-716.51	-2299	-0.000305	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.44	Si
SLU 82	ini.	57.94	-1236	-0.0000222	0.0002246	0.0035	1.02		3893.98	3893.98	No	67.21	Si
SLU 82	fin.	-712.51	-2163	-0.0003031	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.47	Si
SLU 81	ini.	61.97	-1231	-0.0000237	0.0002246	0.0035	1.02		3893.98	3893.98	No	62.84	Si
SLU 81	fin.	-718.34	-2170	-0.0003059	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.43	Si
SLU 80	ini.	42.41	-1328	-0.0000162	0.0002246	0.0035	1.02		3893.98	3893.98	No	91.82	Si
SLU 80	fin.	-683.84	-2198	-0.0002892	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.7	Si
SLU 74	ini.	71.66	-1310	-0.0000275	0.0002246	0.0035	1.02		3893.98	3893.98	No	54.34	Si
SLU 74	fin.	-721.86	-2262	-0.0003076	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.4	Si
SLU 77	ini.	63.16	-1365	-0.0000242	0.0002246	0.0035	1.02		3893.98	3893.98	No	61.65	Si
SLU 77	fin.	-722.34	-2306	-0.0003079	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.4	Si
SLU 83	ini.	53.46	-1286	-0.0000205	0.0002246	0.0035	1.02		3893.98	3893.98	No	72.83	Si
SLU 83	fin.	-718.82	-2214	-0.0003062	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	ini.	87.74	-55	1.02	0	391	8088	5132	2601	7733	No	140.64	Si
SLU 41	fin.	-671.2	-2221	1.02	0	391	8088	5132	2601	7733	No	3.48	Si
SLU 84	ini.	49.44	47	1.02	0	391	8088	5132	2601	7733	No	165.57	Si
SLU 84	fin.	-712.99	-2326	1.02	0	391	8088	5132	2601	7733	No	3.32	Si
SLU 74	ini.	71.66	-95	1.02	0	391	8088	5132	2601	7733	No	81.7	Si
SLU 74	fin.	-721.86	-2276	1.02	0	391	8088	5132	2601	7733	No	3.4	Si
SLU 83	ini.	53.46	32	1.02	0	391	8088	5132	2601	7733	No	243.08	Si
SLU 83	fin.	-718.82	-2341	1.02	0	391	8088	5132	2601	7733	No	3.3	Si
SLU 78	ini.	59.13	-67	1.02	0	391	8088	5132	2601	7733	No	115.25	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-716.51	-2249	1.02	0	391	8088	5132	2601	7733	No	3.44	Si
SLU 82	ini.	57.94	34	1.02	0	391	8088	5132	2601	7733	No	227.12	Si
SLU 82	fin.	-712.51	-2338	1.02	0	391	8088	5132	2601	7733	No	3.31	Si
SLU 81	ini.	61.97	19	1.02	0	391	8088	5132	2601	7733	No	403.71	Si
SLU 81	fin.	-718.34	-2353	1.02	0	391	8088	5132	2601	7733	No	3.29	Si
SLU 77	ini.	63.16	-82	1.02	0	391	8088	5132	2601	7733	No	94.31	Si
SLU 77	fin.	-722.34	-2264	1.02	0	391	8088	5132	2601	7733	No	3.42	Si
SLU 75	ini.	67.64	-80	1.02	0	391	8088	5132	2601	7733	No	96.96	Si
SLU 75	fin.	-716.04	-2261	1.02	0	391	8088	5132	2601	7733	No	3.42	Si
SLU 39	ini.	96.25	-68	1.02	0	391	8088	5132	2601	7733	No	114.32	Si
SLU 39	fin.	-670.72	-2234	1.02	0	391	8088	5132	2601	7733	No	3.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3177.58	-8956	-0.002042	0.0003369	0.0035	1.02		3845.03	3845.03		1.21	Si
SLV 16	fin.	347.36	-4781	-0.0001368	0.0003369	0.0035	1.02		3838.12	3838.12		11.05	Si
SLV 8	ini.	1610.26	2086	-0.0007634	0.0003369	0.0035	1.02		3838.12	3838.12		2.38	Si
SLV 8	fin.	-1561.83	-1763	-0.0007331	0.0003369	0.0035	1.02		3845.03	3845.03		2.46	Si
SLV 1	ini.	3234.33	7123	-0.0021184	0.0003369	0.0035	1.02		3838.12	3838.12		1.19	Si
SLV 1	fin.	-1255.3	1797	-0.0005603	0.0003369	0.0035	1.02		3845.03	3845.03		3.06	Si
SLV 14	ini.	-3513.51	-9265	-0.0024977	0.0003369	0.0035	1.02		3845.03	3845.03		1.09	Si
SLV 14	fin.	826.07	-4076	-0.0003454	0.0003369	0.0035	1.02		3838.12	3838.12		4.65	Si
SLV 15	ini.	-3198.44	-9021	-0.0020674	0.0003369	0.0035	1.02		3845.03	3845.03		1.2	Si
SLV 15	fin.	342.74	-4827	-0.0001349	0.0003369	0.0035	1.02		3838.12	3838.12		11.2	Si
SLV 3	ini.	3570.25	7431	-0.0025947	0.0003369	0.0035	1.02		3838.12	3838.12		1.08	Si
SLV 3	fin.	-1734	1093	-0.0008373	0.0003369	0.0035	1.02		3845.03	3845.03		2.22	Si
SLV 2	ini.	3255.18	7187	-0.0021449	0.0003369	0.0035	1.02		3838.12	3838.12		1.18	Si
SLV 2	fin.	-1250.67	1844	-0.0005578	0.0003369	0.0035	1.02		3845.03	3845.03		3.07	Si
SLV 13	ini.	-3534.36	-9329	-0.0025296	0.0003369	0.0035	1.02		3845.03	3845.03		1.09	Si
SLV 13	fin.	821.44	-4123	-0.0003432	0.0003369	0.0035	1.02		3838.12	3838.12		4.67	Si
SLV 4	ini.	3591.11	7495	-0.002628	0.0003369	0.0035	1.02		3838.12	3838.12		1.07	Si
SLV 4	fin.	-1729.38	1139	-0.0008344	0.0003369	0.0035	1.02		3845.03	3845.03		2.22	Si
SLV 7	ini.	1596.83	2045	-0.0007554	0.0003369	0.0035	1.02		3838.12	3838.12		2.4	Si
SLV 7	fin.	-1564.81	-1793	-0.0007348	0.0003369	0.0035	1.02		3845.03	3845.03		2.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3255.18	-5929	1.02	0	586	8088	7698	2601	8675		1.46	Si
SLV 2	fin.	-1250.67	-7332	1.02	0	586	8088	7698	2601	8675		1.18	Si
SLV 15	ini.	-3198.44	5868	1.02	0	586	8088	7698	2601	8675		1.48	Si
SLV 15	fin.	342.74	4518	1.02	0	586	8088	7698	2601	8675		1.92	Si
SLV 8	ini.	1610.26	-4018	1.02	0	586	8088	7698	2601	8675		2.16	Si
SLV 8	fin.	-1561.83	-5317	1.02	0	586	8088	7698	2601	8675		1.63	Si
SLV 16	ini.	-3177.58	5845	1.02	0	586	8088	7698	2601	8675		1.48	Si
SLV 16	fin.	347.36	4495	1.02	0	586	8088	7698	2601	8675		1.93	Si
SLV 14	ini.	-3513.51	7064	1.02	0	586	8088	7698	2601	8675		1.23	Si
SLV 14	fin.	826.07	5667	1.02	0	586	8088	7698	2601	8675		1.53	Si
SLV 7	ini.	1596.83	-4003	1.02	0	586	8088	7698	2601	8675		2.17	Si
SLV 7	fin.	-1564.81	-5302	1.02	0	586	8088	7698	2601	8675		1.64	Si
SLV 4	ini.	3591.11	-7148	1.02	0	586	8088	7698	2601	8675		1.21	Si
SLV 4	fin.	-1729.38	-8504	1.02	0	586	8088	7698	2601	8675		1.02	Si
SLV 3	ini.	3570.25	-7124	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 3	fin.	-1734	-8480	1.02	0	586	8088	7698	2601	8675		1.02	Si
SLV 13	ini.	-3534.36	7087	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 13	fin.	821.44	5690	1.02	0	586	8088	7698	2601	8675		1.52	Si
SLV 1	ini.	3234.33	-5905	1.02	0	586	8088	7698	2601	8675		1.47	Si
SLV 1	fin.	-1255.3	-7308	1.02	0	586	8088	7698	2601	8675		1.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.069	SLV 4	Si
V_SLV	1.02	SLV 4	Si
PF_SLU	5.4	SLU 77	Si
V_SLU	3.286	SLU 81	Si

Trave di accoppiamento 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	11.08	12.5	1.42	-7.463	1.006	11.08	12.5	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	13.86	-2243	-0.0000027	0.0002246	0.0035	1.42		7536.27	7536.27	No	543.82	Si
SLU 49	fin.	-587.68	-2623	-0.00012	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.84	Si
SLU 68	ini.	-39.74	-2328	-0.0000078	0.0002246	0.0035	1.42		7545.1	7545.1	No	189.86	Si
SLU 68	fin.	-574.26	-2629	-0.0001172	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.14	Si
SLU 48	ini.	13.7	-2240	-0.0000027	0.0002246	0.0035	1.42		7536.27	7536.27	No	550.29	Si
SLU 48	fin.	-586.28	-2618	-0.0001197	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.87	Si
SLU 43	ini.	12.98	-2038	-0.0000025	0.0002246	0.0035	1.42		7536.27	7536.27	No	580.76	Si
SLU 43	fin.	-574.68	-2412	-0.0001173	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.13	Si
SLU 72	ini.	-30.43	-2384	-0.000006	0.0002246	0.0035	1.42		7545.1	7545.1	No	247.97	Si
SLU 72	fin.	-588.46	-2702	-0.0001202	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.82	Si
SLU 44	ini.	13.25	-2043	-0.0000026	0.0002246	0.0035	1.42		7536.27	7536.27	No	568.85	Si
SLU 44	fin.	-577	-2420	-0.0001178	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.08	Si
SLU 71	ini.	-30.59	-2381	-0.000006	0.0002246	0.0035	1.42		7545.1	7545.1	No	246.65	Si
SLU 71	fin.	-587.07	-2697	-0.0001199	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.85	Si
SLU 51	ini.	31.98	-2156	-0.0000063	0.0002246	0.0035	1.42		7536.27	7536.27	No	235.62	Si
SLU 51	fin.	-606.34	-2570	-0.000124	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.44	Si
SLU 50	ini.	31.82	-2153	-0.0000063	0.0002246	0.0035	1.42		7536.27	7536.27	No	236.83	Si
SLU 50	fin.	-604.94	-2565	-0.0001237	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.47	Si
SLU 47	ini.	22.67	-2101	-0.0000045	0.0002246	0.0035	1.42		7536.27	7536.27	No	332.42	Si
SLU 47	fin.	-592.13	-2497	-0.000121	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 64	ini.	-49.43	501	1.42	0	576	7930	7144	3621	8506	No	16.98	Si
SLU 64	fin.	-556.81	-1981	1.42	0	576	7930	7144	3621	8506	No	4.29	Si
SLU 65	ini.	-49.16	496	1.42	0	576	7930	7144	3621	8506	No	17.15	Si
SLU 65	fin.	-559.13	-1986	1.42	0	576	7930	7144	3621	8506	No	4.28	Si
SLU 72	ini.	-30.43	422	1.42	0	576	7930	7144	3621	8506	No	20.15	Si
SLU 72	fin.	-588.46	-2060	1.42	0	576	7930	7144	3621	8506	No	4.13	Si
SLU 67	ini.	-57.98	521	1.42	0	576	7930	7144	3621	8506	No	16.33	Si
SLU 67	fin.	-554.67	-1961	1.42	0	576	7930	7144	3621	8506	No	4.34	Si
SLU 71	ini.	-30.59	425	1.42	0	576	7930	7144	3621	8506	No	20.01	Si
SLU 71	fin.	-587.07	-2057	1.42	0	576	7930	7144	3621	8506	No	4.14	Si
SLU 68	ini.	-39.74	458	1.42	0	576	7930	7144	3621	8506	No	18.57	Si
SLU 68	fin.	-574.26	-2024	1.42	0	576	7930	7144	3621	8506	No	4.2	Si
SLU 66	ini.	-58.14	524	1.42	0	576	7930	7144	3621	8506	No	16.24	Si
SLU 66	fin.	-553.28	-1958	1.42	0	576	7930	7144	3621	8506	No	4.34	Si
SLU 69	ini.	-48.72	486	1.42	0	576	7930	7144	3621	8506	No	17.51	Si
SLU 69	fin.	-568.41	-1996	1.42	0	576	7930	7144	3621	8506	No	4.26	Si
SLU 70	ini.	-48.55	483	1.42	0	576	7930	7144	3621	8506	No	17.62	Si
SLU 70	fin.	-569.8	-1999	1.42	0	576	7930	7144	3621	8506	No	4.26	Si
SLU 51	ini.	31.98	-29	1.42	0	576	7930	7144	3621	8506	No	289.03	Si
SLU 51	fin.	-606.34	-1907	1.42	0	576	7930	7144	3621	8506	No	4.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2568.41	-4765	-0.0005986	0.0003369	0.0035	1.42		7279.66	7279.66		2.83	Si
SLV 15	fin.	1564.07	-1804	-0.0003365	0.0003369	0.0035	1.42		7270.13	7270.13		4.65	Si
SLV 13	ini.	-2770.77	-5100	-0.000657	0.0003369	0.0035	1.42		7279.66	7279.66		2.63	Si
SLV 13	fin.	1706.6	-1865	-0.0003711	0.0003369	0.0035	1.42		7270.13	7270.13		4.26	Si
SLV 2	ini.	2404.95	1199	-0.0005536	0.0003369	0.0035	1.42		7270.13	7270.13		3.02	Si
SLV 2	fin.	-2347.67	-2061	-0.0005371	0.0003369	0.0035	1.42		7279.66	7279.66		3.1	Si
SLV 3	ini.	2583.26	1485	-0.0006037	0.0003369	0.0035	1.42		7270.13	7270.13		2.81	Si
SLV 3	fin.	-2483.7	-2026	-0.0005748	0.0003369	0.0035	1.42		7279.66	7279.66		2.93	Si
SLV 1	ini.	2380.9	1150	-0.000547	0.0003369	0.0035	1.42		7270.13	7270.13		3.05	Si
SLV 1	fin.	-2341.17	-2086	-0.0005353	0.0003369	0.0035	1.42		7279.66	7279.66		3.11	Si
SLV 4	ini.	2607.31	1534	-0.0006106	0.0003369	0.0035	1.42		7270.13	7270.13		2.79	Si
SLV 4	fin.	-2490.2	-2000	-0.0005766	0.0003369	0.0035	1.42		7279.66	7279.66		2.92	Si
SLV 14	ini.	-2746.72	-5051	-0.0006499	0.0003369	0.0035	1.42		7279.66	7279.66		2.65	Si
SLV 14	fin.	1700.1	-1840	-0.0003695	0.0003369	0.0035	1.42		7270.13	7270.13		4.28	Si
SLD 4	ini.	1069.34	-363	-0.0002225	0.0003369	0.0035	1.42		7270.13	7270.13		6.8	Si
SLD 4	fin.	-1289.9	-1961	-0.0002719	0.0003369	0.0035	1.42		7279.66	7279.66		5.64	Si
SLD 3	ini.	1059.01	-384	-0.0002202	0.0003369	0.0035	1.42		7270.13	7270.13		6.87	Si
SLD 3	fin.	-1287.11	-1972	-0.0002713	0.0003369	0.0035	1.42		7279.66	7279.66		5.66	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2544.36	-4716	-0.0005918	0.0003369	0.0035	1.42		7279.66	7279.66		2.86	Si
SLV 16	fin.	1557.57	-1779	-0.0003349	0.0003369	0.0035	1.42		7270.13	7270.13		4.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	1069.34	-2487	1.42	0	864	7930	10717	3621	8794		3.54	Si
SLD 4	fin.	-1289.9	-4406	1.42	0	864	7930	10717	3621	8794		2	Si
SLV 14	ini.	-2746.72	7574	1.42	0	864	7930	10717	3621	8794		1.16	Si
SLV 14	fin.	1700.1	5476	1.42	0	864	7930	10717	3621	8794		1.61	Si
SLV 13	ini.	-2770.77	7622	1.42	0	864	7930	10717	3621	8794		1.15	Si
SLV 13	fin.	1706.6	5523	1.42	0	864	7930	10717	3621	8794		1.59	Si
SLV 16	ini.	-2544.36	7102	1.42	0	864	7930	10717	3621	8794		1.24	Si
SLV 16	fin.	1557.57	5095	1.42	0	864	7930	10717	3621	8794		1.73	Si
SLV 15	ini.	-2568.41	7150	1.42	0	864	7930	10717	3621	8794		1.23	Si
SLV 15	fin.	1564.07	5143	1.42	0	864	7930	10717	3621	8794		1.71	Si
SLV 2	ini.	2404.95	-6063	1.42	0	864	7930	10717	3621	8794		1.45	Si
SLV 2	fin.	-2347.67	-8002	1.42	0	864	7930	10717	3621	8794		1.1	Si
SLV 1	ini.	2380.9	-6016	1.42	0	864	7930	10717	3621	8794		1.46	Si
SLV 1	fin.	-2341.17	-7955	1.42	0	864	7930	10717	3621	8794		1.11	Si
SLV 3	ini.	2583.26	-6488	1.42	0	864	7930	10717	3621	8794		1.36	Si
SLV 3	fin.	-2483.7	-8335	1.42	0	864	7930	10717	3621	8794		1.06	Si
SLD 3	ini.	1059.01	-2466	1.42	0	864	7930	10717	3621	8794		3.57	Si
SLD 3	fin.	-1287.11	-4385	1.42	0	864	7930	10717	3621	8794		2.01	Si
SLV 4	ini.	2607.31	-6535	1.42	0	864	7930	10717	3621	8794		1.35	Si
SLV 4	fin.	-2490.2	-8383	1.42	0	864	7930	10717	3621	8794		1.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.627	SLV 13	Si
V_SLV	1.049	SLV 4	Si
PF_SLU	12.444	SLU 51	Si
V_SLU	4.13	SLU 72	Si

Trave di accoppiamento 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	11.08	12.5	1.42	-4.913	1.006	11.08	12.5	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.01	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	775.01	-2029	-0.0000405	0.0002246	0.0035	1.42		14848.4	14848.4	No	19.16	Si
SLU 84	fin.	-1132.64	-3026	-0.0000601	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.12	Si
SLU 75	ini.	788.13	-1990	-0.0000412	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.84	Si
SLU 75	fin.	-1107.04	-2978	-0.0000587	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.43	Si
SLU 81	ini.	769.79	-1963	-0.0000402	0.0002246	0.0035	1.42		14848.4	14848.4	No	19.29	Si
SLU 81	fin.	-1122.81	-2950	-0.0000596	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.24	Si
SLU 82	ini.	771.02	-1965	-0.0000402	0.0002246	0.0035	1.42		14848.4	14848.4	No	19.26	Si
SLU 82	fin.	-1126.09	-2955	-0.0000597	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.2	Si
SLU 77	ini.	790.9	-2053	-0.0000413	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.77	Si
SLU 77	fin.	-1110.3	-3044	-0.0000589	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.39	Si
SLU 80	ini.	795.85	-1967	-0.0000416	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.66	Si
SLU 80	fin.	-1110.23	-2961	-0.0000589	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.39	Si
SLU 83	ini.	773.79	-2027	-0.0000404	0.0002246	0.0035	1.42		14848.4	14848.4	No	19.19	Si
SLU 83	fin.	-1129.35	-3021	-0.0000599	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.16	Si
SLU 76	ini.	792.67	-1904	-0.0000414	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.73	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	fin.	-1105.88	-2894	-0.0000586	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.44	Si
SLU 79	ini.	794.62	-1965	-0.0000415	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.69	Si
SLU 79	fin.	-1106.95	-2957	-0.0000587	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.43	Si
SLU 78	ini.	792.13	-2055	-0.0000414	0.0002246	0.0035	1.42		14848.4	14848.4	No	18.74	Si
SLU 78	fin.	-1113.59	-3049	-0.000059	0.0002246	0.0035	1.42		14865.58	14865.58	No	13.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	775.01	-2179	1.42	1460	576	18125	7144	3621	10765	No	4.94	Si
SLU 84	fin.	-1132.64	-4314	1.42	2106	576	18125	7144	3621	10765	No	2.5	Si
SLU 81	ini.	769.79	-2152	1.42	1450	576	18125	7144	3621	10765	No	5	Si
SLU 81	fin.	-1122.81	-4287	1.42	2088	576	18125	7144	3621	10765	No	2.51	Si
SLU 78	ini.	792.13	-2256	1.42	1491	576	18125	7144	3621	10765	No	4.77	Si
SLU 78	fin.	-1113.59	-4227	1.42	2072	576	18125	7144	3621	10765	No	2.55	Si
SLU 82	ini.	771.02	-2160	1.42	1452	576	18125	7144	3621	10765	No	4.98	Si
SLU 82	fin.	-1126.09	-4295	1.42	2094	576	18125	7144	3621	10765	No	2.51	Si
SLU 76	ini.	792.67	-2244	1.42	1492	576	18125	7144	3621	10765	No	4.8	Si
SLU 76	fin.	-1105.88	-4215	1.42	2058	576	18125	7144	3621	10765	No	2.55	Si
SLU 75	ini.	788.13	-2238	1.42	1484	576	18125	7144	3621	10765	No	4.81	Si
SLU 75	fin.	-1107.04	-4208	1.42	2060	576	18125	7144	3621	10765	No	2.56	Si
SLU 80	ini.	795.85	-2257	1.42	1498	576	18125	7144	3621	10765	No	4.77	Si
SLU 80	fin.	-1110.23	-4228	1.42	2066	576	18125	7144	3621	10765	No	2.55	Si
SLU 79	ini.	794.62	-2249	1.42	1496	576	18125	7144	3621	10765	No	4.79	Si
SLU 79	fin.	-1106.95	-4220	1.42	2060	576	18125	7144	3621	10765	No	2.55	Si
SLU 77	ini.	790.9	-2248	1.42	1489	576	18125	7144	3621	10765	No	4.79	Si
SLU 77	fin.	-1110.3	-4219	1.42	2066	576	18125	7144	3621	10765	No	2.55	Si
SLU 83	ini.	773.79	-2171	1.42	1457	576	18125	7144	3621	10765	No	4.96	Si
SLU 83	fin.	-1129.35	-4306	1.42	2100	576	18125	7144	3621	10765	No	2.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	1688.61	384	-0.0000897	0.0003369	0.0035	1.42		17777.68	17777.68		10.53	Si
SLD 3	fin.	-1272.79	-1134	-0.0000666	0.0003369	0.0035	1.42		17798.21	17798.21		13.98	Si
SLV 3	ini.	3119.09	2524	-0.0001751	0.0003369	0.0035	1.42		17777.68	17777.68		5.7	Si
SLV 3	fin.	-1918.63	-46	-0.0001026	0.0003369	0.0035	1.42		17798.21	17798.21		9.28	Si
SLV 16	ini.	-1876.81	-4764	-0.0001003	0.0003369	0.0035	1.42		17798.21	17798.21		9.48	Si
SLV 16	fin.	546.35	-3563	-0.000028	0.0003369	0.0035	1.42		17777.68	17777.68		32.54	Si
SLV 1	ini.	3115.27	2329	-0.0001748	0.0003369	0.0035	1.42		17777.68	17777.68		5.71	Si
SLV 1	fin.	-2130.07	-338	-0.0001148	0.0003369	0.0035	1.42		17798.21	17798.21		8.36	Si
SLV 4	ini.	3101.55	2520	-0.000174	0.0003369	0.0035	1.42		17777.68	17777.68		5.73	Si
SLV 4	fin.	-1913.16	-37	-0.0001023	0.0003369	0.0035	1.42		17798.21	17798.21		9.3	Si
SLV 14	ini.	-1880.63	-4958	-0.0001005	0.0003369	0.0035	1.42		17798.21	17798.21		9.46	Si
SLV 14	fin.	334.91	-3855	-0.0000171	0.0003369	0.0035	1.42		17777.68	17777.68		53.08	Si
SLD 1	ini.	1687.19	298	-0.0000896	0.0003369	0.0035	1.42		17777.68	17777.68		10.54	Si
SLD 1	fin.	-1366.01	-1263	-0.0000717	0.0003369	0.0035	1.42		17798.21	17798.21		13.03	Si
SLV 15	ini.	-1859.27	-4760	-0.0000993	0.0003369	0.0035	1.42		17798.21	17798.21		9.57	Si
SLV 15	fin.	540.89	-3571	-0.0000277	0.0003369	0.0035	1.42		17777.68	17777.68		32.87	Si
SLV 13	ini.	-1863.09	-4954	-0.0000995	0.0003369	0.0035	1.42		17798.21	17798.21		9.55	Si
SLV 13	fin.	329.45	-3864	-0.0000168	0.0003369	0.0035	1.42		17777.68	17777.68		53.96	Si
SLV 2	ini.	3097.73	2326	-0.0001737	0.0003369	0.0035	1.42		17777.68	17777.68		5.74	Si
SLV 2	fin.	-2124.6	-329	-0.0001145	0.0003369	0.0035	1.42		17798.21	17798.21		8.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3115.27	-8211	1.42	8393	864	18125	10717	3621	14338		1.75	Si
SLV 1	fin.	-2130.07	-9282	1.42	5880	864	18125	10717	3621	14338		1.54	Si
SLD 1	ini.	1687.19	-4529	1.42	4711	864	18125	10717	3621	14338		3.17	Si
SLD 1	fin.	-1366.01	-5705	1.42	3837	864	18125	10717	3621	14338		2.51	Si
SLV 2	ini.	3097.73	-8171	1.42	8350	864	18125	10717	3621	14338		1.75	Si
SLV 2	fin.	-2124.6	-9242	1.42	5865	864	18125	10717	3621	14338		1.55	Si
SLV 5	ini.	1365.27	-4433	1.42	3839	864	18125	10717	3621	14338		3.23	Si
SLV 5	fin.	-1514.94	-5404	1.42	4242	864	18125	10717	3621	14338		2.65	Si
SLV 6	ini.	1353.97	-4408	1.42	3809	864	18125	10717	3621	14338		3.25	Si
SLV 6	fin.	-1511.42	-5379	1.42	4232	864	18125	10717	3621	14338		2.67	Si
SLV 4	ini.	3101.55	-7693	1.42	8359	864	18125	10717	3621	14338		1.86	Si
SLV 4	fin.	-1913.16	-8915	1.42	5308	864	18125	10717	3621	14338		1.61	Si
SLD 4	ini.	1681.08	-4301	1.42	4694	864	18125	10717	3621	14338		3.33	Si
SLD 4	fin.	-1270.45	-5543	1.42	3576	864	18125	10717	3621	14338		2.59	Si
SLD 3	ini.	1688.61	-4319	1.42	4715	864	18125	10717	3621	14338		3.32	Si
SLD 3	fin.	-1272.79	-5560	1.42	3583	864	18125	10717	3621	14338		2.58	Si
SLD 2	ini.	1679.66	-4511	1.42	4691	864	18125	10717	3621	14338		3.18	Si
SLD 2	fin.	-1363.66	-5688	1.42	3831	864	18125	10717	3621	14338		2.52	Si
SLV 3	ini.	3119.09	-7733	1.42	8402	864	18125	10717	3621	14338		1.85	Si
SLV 3	fin.	-1918.63	-8955	1.42	5323	864	18125	10717	3621	14338		1.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.7	SLV 3	Si
V_SLV	1.545	SLV 1	Si
PF_SLU	13.125	SLU 84	Si
V_SLU	2.496	SLU 84	Si

Trave di accoppiamento 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	11.08	12.5	1.42	-9.333	-3.314	11.08	12.5	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	812.92	-1463	-0.0001711	0.0001872	0.0035	1.42		7350.79	7350.79	No	9.04	Si
SLU 75	fin.	-1245.28	-2543	-0.000275	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.91	Si
SLU 77	ini.	842.63	-1537	-0.0001779	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.72	Si
SLU 77	fin.	-1279.71	-2657	-0.0002837	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.75	Si
SLU 69	ini.	821.79	-1509	-0.0001732	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.94	Si
SLU 69	fin.	-1245.61	-2600	-0.0002751	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.91	Si
SLU 72	ini.	813.69	-1474	-0.0001713	0.0001872	0.0035	1.42		7350.79	7350.79	No	9.03	Si
SLU 72	fin.	-1232.25	-2555	-0.0002717	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.97	Si
SLU 78	ini.	850.53	-1532	-0.0001798	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.64	Si
SLU 78	fin.	-1287.46	-2659	-0.0002857	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.72	Si
SLU 79	ini.	826.62	-1507	-0.0001743	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.89	Si
SLU 79	fin.	-1258.59	-2609	-0.0002784	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.85	Si
SLU 70	ini.	829.7	-1503	-0.000175	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.86	Si
SLU 70	fin.	-1253.37	-2603	-0.000277	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.87	Si
SLU 74	ini.	805.02	-1469	-0.0001693	0.0001872	0.0035	1.42		7350.79	7350.79	No	9.13	Si
SLU 74	fin.	-1237.53	-2540	-0.000273	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.95	Si
SLU 80	ini.	834.53	-1502	-0.0001761	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.81	Si
SLU 80	fin.	-1266.34	-2611	-0.0002803	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.81	Si
SLU 84	ini.	805.84	-1446	-0.0001695	0.0001872	0.0035	1.42		7350.79	7350.79	No	9.12	Si
SLU 84	fin.	-1238.78	-2519	-0.0002733	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	802.18	-2270	1.42	0	576	7137	5953	3621	7713	No	3.4	Si
SLU 76	fin.	-1229.33	-3956	1.42	0	576	7137	5953	3621	7713	No	1.95	Si
SLU 80	ini.	834.53	-2381	1.42	0	576	7137	5953	3621	7713	No	3.24	Si
SLU 80	fin.	-1266.34	-4067	1.42	0	576	7137	5953	3621	7713	No	1.9	Si
SLU 78	ini.	850.53	-2437	1.42	0	576	7137	5953	3621	7713	No	3.17	Si
SLU 78	fin.	-1287.46	-4123	1.42	0	576	7137	5953	3621	7713	No	1.87	Si
SLU 83	ini.	797.94	-2208	1.42	0	576	7137	5953	3621	7713	No	3.49	Si
SLU 83	fin.	-1231.03	-4010	1.42	0	576	7137	5953	3621	7713	No	1.92	Si
SLU 84	ini.	805.84	-2232	1.42	0	576	7137	5953	3621	7713	No	3.46	Si
SLU 84	fin.	-1238.78	-4034	1.42	0	576	7137	5953	3621	7713	No	1.91	Si
SLU 74	ini.	805.02	-2286	1.42	0	576	7137	5953	3621	7713	No	3.37	Si
SLU 74	fin.	-1237.53	-3973	1.42	0	576	7137	5953	3621	7713	No	1.94	Si
SLU 82	ini.	768.23	-2105	1.42	0	576	7137	5953	3621	7713	No	3.66	Si
SLU 82	fin.	-1196.6	-3907	1.42	0	576	7137	5953	3621	7713	No	1.97	Si
SLU 77	ini.	842.63	-2413	1.42	0	576	7137	5953	3621	7713	No	3.2	Si
SLU 77	fin.	-1279.71	-4099	1.42	0	576	7137	5953	3621	7713	No	1.88	Si
SLU 79	ini.	826.62	-2357	1.42	0	576	7137	5953	3621	7713	No	3.27	Si
SLU 79	fin.	-1258.59	-4043	1.42	0	576	7137	5953	3621	7713	No	1.91	Si
SLU 75	ini.	812.92	-2310	1.42	0	576	7137	5953	3621	7713	No	3.34	Si
SLU 75	fin.	-1245.28	-3996	1.42	0	576	7137	5953	3621	7713	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3608.24	-1238	-0.0009482	0.0002807	0.0035	1.42		7337.02	7337.02		2.03	Si
SLV 3	fin.	-4342.51	-4972	-0.0012174	0.0002807	0.0035	1.42		7346.34	7346.34		1.69	Si
SLV 14	ini.	-2543.6	-789	-0.0006072	0.0002807	0.0035	1.42		7346.34	7346.34		2.89	Si
SLV 14	fin.	2665.46	1513	-0.0006443	0.0002807	0.0035	1.42		7337.02	7337.02		2.75	Si
SLV 16	ini.	-2561.24	-1389	-0.0006124	0.0002807	0.0035	1.42		7346.34	7346.34		2.87	Si
SLV 16	fin.	2512.18	907	-0.0005989	0.0002807	0.0035	1.42		7337.02	7337.02		2.92	Si
SLV 4	ini.	3850.22	-1244	-0.0010338	0.0002807	0.0035	1.42		7337.02	7337.02		1.91	Si
SLV 4	fin.	-4599.84	-5188	-0.0013213	0.0002807	0.0035	1.42		7346.34	7346.34		1.6	Si
SLV 2	ini.	3867.87	-644	-0.0010402	0.0002807	0.0035	1.42		7337.02	7337.02		1.9	Si
SLV 2	fin.	-4446.55	-4582	-0.0012588	0.0002807	0.0035	1.42		7346.34	7346.34		1.65	Si
SLV 13	ini.	-2785.58	-783	-0.0006796	0.0002807	0.0035	1.42		7346.34	7346.34		2.64	Si
SLV 13	fin.	2922.79	1728	-0.000723	0.0002807	0.0035	1.42		7337.02	7337.02		2.51	Si
SLV 1	ini.	3625.89	-638	-0.0009544	0.0002807	0.0035	1.42		7337.02	7337.02		2.02	Si
SLV 1	fin.	-4189.22	-4366	-0.001158	0.0002807	0.0035	1.42		7346.34	7346.34		1.75	Si
SLV 15	ini.	-2803.22	-1383	-0.000685	0.0002807	0.0035	1.42		7346.34	7346.34		2.62	Si
SLV 15	fin.	2769.51	1122	-0.0006758	0.0002807	0.0035	1.42		7337.02	7337.02		2.65	Si
SLD 2	ini.	1958.74	-852	-0.0004439	0.0002807	0.0035	1.42		7337.02	7337.02		3.75	Si
SLD 2	fin.	-2380.47	-2946	-0.00056	0.0002807	0.0035	1.42		7346.34	7346.34		3.09	Si
SLD 4	ini.	1951.39	-1116	-0.0004419	0.0002807	0.0035	1.42		7337.02	7337.02		3.76	Si
SLD 4	fin.	-2448.45	-3212	-0.0005795	0.0002807	0.0035	1.42		7346.34	7346.34		3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3867.87	-11637	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 2	fin.	-4446.55	-12747	1.42	0	864	7137	8929	3621	8001		0.63	No
SLV 4	ini.	3850.22	-11718	1.42	0	864	7137	8929	3621	8001		0.68	No
SLV 4	fin.	-4599.84	-12935	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 14	ini.	-2543.6	7913	1.42	0	864	7137	8929	3621	8001		1.01	Si
SLV 14	fin.	2665.46	6902	1.42	0	864	7137	8929	3621	8001		1.16	Si
SLV 16	ini.	-2561.24	7832	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLV 16	fin.	2512.18	6714	1.42	0	864	7137	8929	3621	8001		1.19	Si
SLD 4	ini.	1951.39	-5896	1.42	0	864	7137	8929	3621	8001		1.36	Si
SLD 4	fin.	-2448.45	-7054	1.42	0	864	7137	8929	3621	8001		1.13	Si
SLD 2	ini.	1958.74	-5858	1.42	0	864	7137	8929	3621	8001		1.37	Si
SLD 2	fin.	-2380.47	-6970	1.42	0	864	7137	8929	3621	8001		1.15	Si
SLV 13	ini.	-2785.58	8633	1.42	0	864	7137	8929	3621	8001		0.93	No
SLV 13	fin.	2922.79	7622	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 3	ini.	3608.24	-10997	1.42	0	864	7137	8929	3621	8001		0.73	No
SLV 3	fin.	-4342.51	-12215	1.42	0	864	7137	8929	3621	8001		0.66	No
SLV 15	ini.	-2803.22	8552	1.42	0	864	7137	8929	3621	8001		0.94	No
SLV 15	fin.	2769.51	7434	1.42	0	864	7137	8929	3621	8001		1.08	Si
SLV 1	ini.	3625.89	-10917	1.42	0	864	7137	8929	3621	8001		0.73	No
SLV 1	fin.	-4189.22	-12027	1.42	0	864	7137	8929	3621	8001		0.67	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.597	SLV 4	Si
V_SLV	0.619	SLV 4	No
PF_SLU	5.717	SLU 78	Si
V_SLU	1.871	SLU 78	Si

Trave di accoppiamento 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	11.08	12.5	1.42	-6.268	0.706	11.08	12.5	1.42	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-584.1	-1407	-0.0001193	0.0002246	0.0035	1.42		7603.79	7603.79	No	13.02	Si
SLU 40	fin.	414.39	-903	-0.0000836	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.33	Si
SLU 39	ini.	-610.81	-1446	-0.000125	0.0002246	0.0035	1.42		7603.79	7603.79	No	12.45	Si
SLU 39	fin.	421.02	-920	-0.000085	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.04	Si
SLU 84	ini.	-497.54	-1422	-0.0001009	0.0002246	0.0035	1.42		7603.79	7603.79	No	15.28	Si
SLU 84	fin.	453.28	-958	-0.0000918	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.76	Si
SLU 41	ini.	-560.89	-1410	-0.0001143	0.0002246	0.0035	1.42		7603.79	7603.79	No	13.56	Si
SLU 41	fin.	419.01	-917	-0.0000846	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.13	Si
SLU 32	ini.	-509.36	-1328	-0.0001034	0.0002246	0.0035	1.42		7603.79	7603.79	No	14.93	Si
SLU 32	fin.	406.16	-868	-0.0000819	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.7	Si
SLU 42	ini.	-534.18	-1372	-0.0001087	0.0002246	0.0035	1.42		7603.79	7603.79	No	14.23	Si
SLU 42	fin.	412.38	-900	-0.0000832	0.0002246	0.0035	1.42		7594.91	7594.91	No	18.42	Si
SLU 82	ini.	-547.46	-1457	-0.0001115	0.0002246	0.0035	1.42		7603.79	7603.79	No	13.89	Si
SLU 82	fin.	455.29	-960	-0.0000922	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.68	Si
SLU 83	ini.	-524.26	-1460	-0.0001066	0.0002246	0.0035	1.42		7603.79	7603.79	No	14.5	Si
SLU 83	fin.	459.91	-974	-0.0000931	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.51	Si
SLU 33	ini.	-482.64	-1290	-0.0000978	0.0002246	0.0035	1.42		7603.79	7603.79	No	15.75	Si
SLU 33	fin.	399.53	-851	-0.0000806	0.0002246	0.0035	1.42		7594.91	7594.91	No	19.01	Si
SLU 81	ini.	-574.18	-1495	-0.0001172	0.0002246	0.0035	1.42		7603.79	7603.79	No	13.24	Si
SLU 81	fin.	461.92	-977	-0.0000936	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-574.18	1818	1.42	0	329	7137	4083	3621	7466	No	4.11	Si
SLU 81	fin.	461.92	1321	1.42	0	329	7137	4083	3621	7466	No	5.65	Si
SLU 39	ini.	-610.81	1765	1.42	0	329	7137	4083	3621	7466	No	4.23	Si
SLU 39	fin.	421.02	1372	1.42	0	329	7137	4083	3621	7466	No	5.44	Si
SLU 32	ini.	-509.36	1585	1.42	0	329	7137	4083	3621	7466	No	4.71	Si
SLU 32	fin.	406.16	1191	1.42	0	329	7137	4083	3621	7466	No	6.27	Si
SLU 82	ini.	-547.46	1764	1.42	0	329	7137	4083	3621	7466	No	4.23	Si
SLU 82	fin.	455.29	1267	1.42	0	329	7137	4083	3621	7466	No	5.89	Si
SLU 40	ini.	-584.1	1712	1.42	0	329	7137	4083	3621	7466	No	4.36	Si
SLU 40	fin.	414.39	1318	1.42	0	329	7137	4083	3621	7466	No	5.67	Si
SLU 84	ini.	-497.54	1680	1.42	0	329	7137	4083	3621	7466	No	4.44	Si
SLU 84	fin.	453.28	1183	1.42	0	329	7137	4083	3621	7466	No	6.31	Si
SLU 42	ini.	-534.18	1628	1.42	0	329	7137	4083	3621	7466	No	4.59	Si
SLU 42	fin.	412.38	1234	1.42	0	329	7137	4083	3621	7466	No	6.05	Si
SLU 83	ini.	-524.26	1734	1.42	0	329	7137	4083	3621	7466	No	4.31	Si
SLU 83	fin.	459.91	1237	1.42	0	329	7137	4083	3621	7466	No	6.03	Si
SLU 74	ini.	-472.73	1637	1.42	0	329	7137	4083	3621	7466	No	4.56	Si
SLU 74	fin.	447.06	1140	1.42	0	329	7137	4083	3621	7466	No	6.55	Si
SLU 41	ini.	-560.89	1682	1.42	0	329	7137	4083	3621	7466	No	4.44	Si
SLU 41	fin.	419.01	1288	1.42	0	329	7137	4083	3621	7466	No	5.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-2098.85	-2917	-0.0004703	0.0003369	0.0035	1.42		7818.07	7818.07		3.72	Si
SLV 8	fin.	1080.23	-1144	-0.0002249	0.0003369	0.0035	1.42		7808.98	7808.98		7.23	Si
SLV 5	ini.	1554.97	1370	-0.0003343	0.0003369	0.0035	1.42		7808.98	7808.98		5.02	Si
SLV 5	fin.	-410.32	192	-0.0000821	0.0003369	0.0035	1.42		7818.07	7818.07		19.05	Si
SLV 10	ini.	1693.99	1423	-0.000368	0.0003369	0.0035	1.42		7808.98	7808.98		4.61	Si
SLV 10	fin.	-533.28	87	-0.0001074	0.0003369	0.0035	1.42		7818.07	7818.07		14.66	Si
SLV 9	ini.	1659.39	1374	-0.0003595	0.0003369	0.0035	1.42		7808.98	7808.98		4.71	Si
SLV 9	fin.	-526.61	70	-0.000106	0.0003369	0.0035	1.42		7818.07	7818.07		14.85	Si
SLD 8	ini.	-1048.66	-1719	-0.0002176	0.0003369	0.0035	1.42		7818.07	7818.07		7.46	Si
SLD 8	fin.	630.18	-807	-0.0001278	0.0003369	0.0035	1.42		7808.98	7808.98		12.39	Si
SLV 7	ini.	-2133.44	-2966	-0.0004794	0.0003369	0.0035	1.42		7818.07	7818.07		3.66	Si
SLV 7	fin.	1086.89	-1161	-0.0002264	0.0003369	0.0035	1.42		7808.98	7808.98		7.18	Si
SLV 12	ini.	-1994.42	-2913	-0.0004431	0.0003369	0.0035	1.42		7818.07	7818.07		3.92	Si
SLV 12	fin.	963.93	-1266	-0.0001993	0.0003369	0.0035	1.42		7808.98	7808.98		8.1	Si
SLV 11	ini.	-2029.02	-2962	-0.000452	0.0003369	0.0035	1.42		7818.07	7818.07		3.85	Si
SLV 11	fin.	970.6	-1284	-0.0002007	0.0003369	0.0035	1.42		7808.98	7808.98		8.05	Si
SLV 6	ini.	1589.57	1419	-0.0003426	0.0003369	0.0035	1.42		7808.98	7808.98		4.91	Si
SLV 6	fin.	-416.98	210	-0.0000835	0.0003369	0.0035	1.42		7818.07	7818.07		18.75	Si
SLD 7	ini.	-1063.77	-1740	-0.000221	0.0003369	0.0035	1.42		7818.07	7818.07		7.35	Si
SLD 7	fin.	633.09	-815	-0.0001284	0.0003369	0.0035	1.42		7808.98	7808.98		12.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-2098.85	5029	1.42	0	494	7137	6124	3621	7631		1.52	Si
SLV 8	fin.	1080.23	4756	1.42	0	494	7137	6124	3621	7631		1.6	Si
SLD 8	ini.	-1048.66	2741	1.42	0	494	7137	6124	3621	7631		2.78	Si
SLD 8	fin.	630.18	2409	1.42	0	494	7137	6124	3621	7631		3.17	Si
SLD 7	ini.	-1063.77	2772	1.42	0	494	7137	6124	3621	7631		2.75	Si
SLD 7	fin.	633.09	2440	1.42	0	494	7137	6124	3621	7631		3.13	Si
SLV 12	ini.	-1994.42	4949	1.42	0	494	7137	6124	3621	7631		1.54	Si
SLV 12	fin.	963.93	4547	1.42	0	494	7137	6124	3621	7631		1.68	Si
SLV 11	ini.	-2029.02	5019	1.42	0	494	7137	6124	3621	7631		1.52	Si
SLV 11	fin.	970.6	4618	1.42	0	494	7137	6124	3621	7631		1.65	Si
SLV 9	ini.	1659.39	-3165	1.42	0	494	7137	6124	3621	7631		2.41	Si
SLV 9	fin.	-526.61	-3645	1.42	0	494	7137	6124	3621	7631		2.09	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	1693.99	-3236	1.42	0	494	7137	6124	3621	7631		2.36	Si
SLV 10	fin.	-533.28	-3716	1.42	0	494	7137	6124	3621	7631		2.05	Si
SLV 7	ini.	-2133.44	5100	1.42	0	494	7137	6124	3621	7631		1.5	Si
SLV 7	fin.	1086.89	4827	1.42	0	494	7137	6124	3621	7631		1.58	Si
SLV 6	ini.	1589.57	-3155	1.42	0	494	7137	6124	3621	7631		2.42	Si
SLV 6	fin.	-416.98	-3507	1.42	0	494	7137	6124	3621	7631		2.18	Si
SLV 5	ini.	1554.97	-3084	1.42	0	494	7137	6124	3621	7631		2.47	Si
SLV 5	fin.	-410.32	-3436	1.42	0	494	7137	6124	3621	7631		2.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.665	SLV 7	Si
V_SLV	1.496	SLV 7	Si
PF_SLU	12.449	SLU 39	Si
V_SLU	4.108	SLU 81	Si

Trave di accoppiamento 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	8.98	10.98	2	-5.093	6.506	8.98	10.98	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-294.58	-108	-0.0000294	0.0001872	0.0035	2		14357.01	14357.01	No	48.74	Si
SLU 83	fin.	79.94	66	-0.0000079	0.0001872	0.0035	2		14344.28	14344.28	No	179.44	Si
SLU 81	ini.	-288.59	-106	-0.0000288	0.0001872	0.0035	2		14357.01	14357.01	No	49.75	Si
SLU 81	fin.	79.38	64	-0.0000079	0.0001872	0.0035	2		14344.28	14344.28	No	180.7	Si
SLU 84	ini.	-293.07	-113	-0.0000293	0.0001872	0.0035	2		14357.01	14357.01	No	48.99	Si
SLU 84	fin.	79.61	66	-0.0000079	0.0001872	0.0035	2		14344.28	14344.28	No	180.17	Si
SLU 78	ini.	-291.84	-120	-0.0000292	0.0001872	0.0035	2		14357.01	14357.01	No	49.2	Si
SLU 78	fin.	78.28	67	-0.0000078	0.0001872	0.0035	2		14344.28	14344.28	No	183.23	Si
SLU 82	ini.	-287.08	-111	-0.0000287	0.0001872	0.0035	2		14357.01	14357.01	No	50.01	Si
SLU 82	fin.	79.06	65	-0.0000078	0.0001872	0.0035	2		14344.28	14344.28	No	181.45	Si
SLU 80	ini.	-284.63	-124	-0.0000284	0.0001872	0.0035	2		14357.01	14357.01	No	50.44	Si
SLU 80	fin.	77.57	66	-0.0000077	0.0001872	0.0035	2		14344.28	14344.28	No	184.93	Si
SLU 77	ini.	-293.35	-115	-0.0000293	0.0001872	0.0035	2		14357.01	14357.01	No	48.94	Si
SLU 77	fin.	78.61	66	-0.0000078	0.0001872	0.0035	2		14344.28	14344.28	No	182.47	Si
SLU 79	ini.	-286.15	-119	-0.0000286	0.0001872	0.0035	2		14357.01	14357.01	No	50.17	Si
SLU 79	fin.	77.89	65	-0.0000077	0.0001872	0.0035	2		14344.28	14344.28	No	184.15	Si
SLU 74	ini.	-287.36	-112	-0.0000287	0.0001872	0.0035	2		14357.01	14357.01	No	49.96	Si
SLU 74	fin.	78.05	64	-0.0000077	0.0001872	0.0035	2		14344.28	14344.28	No	183.77	Si
SLU 75	ini.	-285.85	-117	-0.0000286	0.0001872	0.0035	2		14357.01	14357.01	No	50.23	Si
SLU 75	fin.	77.73	65	-0.0000077	0.0001872	0.0035	2		14344.28	14344.28	No	184.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-286.15	-1471	2	0	812	3965	8384	5100	4776	No	3.25	Si
SLU 79	fin.	77.89	1224	2	0	812	3965	8384	5100	4776	No	3.9	Si
SLU 72	ini.	-250.99	-1488	2	0	812	3965	8384	5100	4776	No	3.21	Si
SLU 72	fin.	71.49	1070	2	0	812	3965	8384	5100	4776	No	4.46	Si
SLU 78	ini.	-291.84	-1522	2	0	812	3965	8384	5100	4776	No	3.14	Si
SLU 78	fin.	78.28	1260	2	0	812	3965	8384	5100	4776	No	3.79	Si
SLU 75	ini.	-285.85	-1473	2	0	812	3965	8384	5100	4776	No	3.24	Si
SLU 75	fin.	77.73	1223	2	0	812	3965	8384	5100	4776	No	3.9	Si
SLU 77	ini.	-293.35	-1491	2	0	812	3965	8384	5100	4776	No	3.2	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	78.61	1263	2	0	812	3965	8384	5100	4776	No	3.78	Si
SLU 70	ini.	-258.19	-1508	2	0	812	3965	8384	5100	4776	No	3.17	Si
SLU 70	fin.	72.21	1109	2	0	812	3965	8384	5100	4776	No	4.31	Si
SLU 69	ini.	-259.7	-1477	2	0	812	3965	8384	5100	4776	No	3.23	Si
SLU 69	fin.	72.54	1112	2	0	812	3965	8384	5100	4776	No	4.3	Si
SLU 57	ini.	-254.53	-1467	2	0	812	3965	8384	5100	4776	No	3.25	Si
SLU 57	fin.	72.26	1086	2	0	812	3965	8384	5100	4776	No	4.4	Si
SLU 80	ini.	-284.63	-1501	2	0	812	3965	8384	5100	4776	No	3.18	Si
SLU 80	fin.	77.57	1221	2	0	812	3965	8384	5100	4776	No	3.91	Si
SLU 76	ini.	-277.64	-1473	2	0	812	3965	8384	5100	4776	No	3.24	Si
SLU 76	fin.	76.79	1183	2	0	812	3965	8384	5100	4776	No	4.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1484.04	-1179	-0.0001536	0.0002807	0.0035	2		14202.07	14202.07		9.57	Si
SLV 2	fin.	-134.65	147	-0.0000134	0.0002807	0.0035	2		14215.41	14215.41		105.57	Si
SLV 14	ini.	-1728.17	686	-0.0001803	0.0002807	0.0035	2		14215.41	14215.41		8.23	Si
SLV 14	fin.	211.62	-161	-0.0000211	0.0002807	0.0035	2		14202.07	14202.07		67.11	Si
SLV 3	ini.	1355.3	-883	-0.0001397	0.0002807	0.0035	2		14202.07	14202.07		10.48	Si
SLV 3	fin.	-102.03	249	-0.0000101	0.0002807	0.0035	2		14215.41	14215.41		139.33	Si
SLV 11	ini.	-954.84	821	-0.0000971	0.0002807	0.0035	2		14215.41	14215.41		14.89	Si
SLV 11	fin.	159.42	160	-0.0000158	0.0002807	0.0035	2		14202.07	14202.07		89.09	Si
SLV 15	ini.	-1856.91	983	-0.0001946	0.0002807	0.0035	2		14215.41	14215.41		7.66	Si
SLV 15	fin.	244.24	-59	-0.0000243	0.0002807	0.0035	2		14202.07	14202.07		58.15	Si
SLV 13	ini.	-1674.6	579	-0.0001743	0.0002807	0.0035	2		14215.41	14215.41		8.49	Si
SLV 13	fin.	212.88	-155	-0.0000212	0.0002807	0.0035	2		14202.07	14202.07		66.71	Si
SLV 4	ini.	1301.74	-775	-0.0001339	0.0002807	0.0035	2		14202.07	14202.07		10.91	Si
SLV 4	fin.	-103.29	243	-0.0000102	0.0002807	0.0035	2		14215.41	14215.41		137.63	Si
SLV 1	ini.	1537.61	-1287	-0.0001595	0.0002807	0.0035	2		14202.07	14202.07		9.24	Si
SLV 1	fin.	-133.39	154	-0.0000132	0.0002807	0.0035	2		14215.41	14215.41		106.57	Si
SLV 12	ini.	-989.36	890	-0.0001007	0.0002807	0.0035	2		14215.41	14215.41		14.37	Si
SLV 12	fin.	158.6	155	-0.0000158	0.0002807	0.0035	2		14202.07	14202.07		89.54	Si
SLV 16	ini.	-1910.47	1091	-0.0002006	0.0002807	0.0035	2		14215.41	14215.41		7.44	Si
SLV 16	fin.	242.98	-65	-0.0000242	0.0002807	0.0035	2		14202.07	14202.07		58.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1301.74	-3963	2	0	1217	3965	12577	5100	5182		1.31	Si
SLV 4	fin.	-103.29	-2589	2	0	1217	3965	12577	5100	5182		2	Si
SLV 14	ini.	-1728.17	2065	2	0	1217	3965	12577	5100	5182		2.51	Si
SLV 14	fin.	211.62	4418	2	0	1217	3965	12577	5100	5182		1.17	Si
SLV 6	ini.	581.98	-5267	2	0	1217	3965	12577	5100	5182		0.98	No
SLV 6	fin.	-49.82	-402	2	0	1217	3965	12577	5100	5182		12.9	Si
SLV 5	ini.	616.5	-5381	2	0	1217	3965	12577	5100	5182		0.96	No
SLV 5	fin.	-49.01	-584	2	0	1217	3965	12577	5100	5182		8.87	Si
SLV 16	ini.	-1910.47	3927	2	0	1217	3965	12577	5100	5182		1.32	Si
SLV 16	fin.	242.98	4536	2	0	1217	3965	12577	5100	5182		1.14	Si
SLV 1	ini.	1537.61	-6001	2	0	1217	3965	12577	5100	5182		0.86	No
SLV 1	fin.	-133.39	-2990	2	0	1217	3965	12577	5100	5182		1.73	Si
SLV 3	ini.	1355.3	-4140	2	0	1217	3965	12577	5100	5182		1.25	Si
SLV 3	fin.	-102.03	-2872	2	0	1217	3965	12577	5100	5182		1.8	Si
SLV 13	ini.	-1674.6	1888	2	0	1217	3965	12577	5100	5182		2.74	Si
SLV 13	fin.	212.88	4135	2	0	1217	3965	12577	5100	5182		1.25	Si
SLV 15	ini.	-1856.91	3750	2	0	1217	3965	12577	5100	5182		1.38	Si
SLV 15	fin.	244.24	4253	2	0	1217	3965	12577	5100	5182		1.22	Si
SLV 2	ini.	1484.04	-5824	2	0	1217	3965	12577	5100	5182		0.89	No
SLV 2	fin.	-134.65	-2707	2	0	1217	3965	12577	5100	5182		1.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.441	SLV 16	Si
V_SLV	0.864	SLV 1	No
PF_SLU	48.737	SLU 83	Si
V_SLU	3.139	SLU 78	Si

Trave di accoppiamento 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.78	12.5	0.72	-5.093	6.506	11.78	12.5	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-22.28	-331	-0.0000171	0.0001872	0.0035	0.72		1901.86	1901.86	No	85.36	Si
SLU 84	fin.	152.13	-237	-0.000122	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.47	Si
SLU 74	ini.	-21.45	-326	-0.0000165	0.0001872	0.0035	0.72		1901.86	1901.86	No	88.65	Si
SLU 74	fin.	149.54	-236	-0.0001199	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.69	Si
SLU 80	ini.	-15.27	-313	-0.0000117	0.0001872	0.0035	0.72		1901.86	1901.86	No	124.53	Si
SLU 80	fin.	146.54	-226	-0.0001173	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.95	Si
SLU 81	ini.	-26.19	-332	-0.0000201	0.0001872	0.0035	0.72		1901.86	1901.86	No	72.61	Si
SLU 81	fin.	149.97	-237	-0.0001202	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.65	Si
SLU 79	ini.	-17.16	-318	-0.0000131	0.0001872	0.0035	0.72		1901.86	1901.86	No	110.86	Si
SLU 79	fin.	147.65	-228	-0.0001183	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.85	Si
SLU 82	ini.	-24.31	-327	-0.0000187	0.0001872	0.0035	0.72		1901.86	1901.86	No	78.24	Si
SLU 82	fin.	148.86	-235	-0.0001193	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.75	Si
SLU 83	ini.	-24.16	-336	-0.0000185	0.0001872	0.0035	0.72		1901.86	1901.86	No	78.7	Si
SLU 83	fin.	153.25	-239	-0.000123	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.38	Si
SLU 77	ini.	-19.43	-330	-0.0000149	0.0001872	0.0035	0.72		1901.86	1901.86	No	97.9	Si
SLU 77	fin.	152.81	-238	-0.0001226	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.42	Si
SLU 78	ini.	-17.54	-325	-0.0000134	0.0001872	0.0035	0.72		1901.86	1901.86	No	108.41	Si
SLU 78	fin.	151.7	-235	-0.0001217	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.51	Si
SLU 75	ini.	-19.57	-321	-0.000015	0.0001872	0.0035	0.72		1901.86	1901.86	No	97.18	Si
SLU 75	fin.	148.42	-234	-0.0001189	0.0001872	0.0035	0.72		1897.3	1897.3	No	12.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-19.57	1566	0.72	0	292	3965	3018	1836	4257	No	2.72	Si
SLU 75	fin.	148.42	18	0.72	0	292	3965	3018	1836	4257	No	238.04	Si
SLU 74	ini.	-21.45	1566	0.72	0	292	3965	3018	1836	4257	No	2.72	Si
SLU 74	fin.	149.54	28	0.72	0	292	3965	3018	1836	4257	No	150.08	Si
SLU 79	ini.	-17.16	1597	0.72	0	292	3965	3018	1836	4257	No	2.67	Si
SLU 79	fin.	147.65	5	0.72	0	292	3965	3018	1836	4257	No	945.58	Si
SLU 77	ini.	-19.43	1633	0.72	0	292	3965	3018	1836	4257	No	2.61	Si
SLU 77	fin.	152.81	16	0.72	0	292	3965	3018	1836	4257	No	258.85	Si
SLU 78	ini.	-17.54	1634	0.72	0	292	3965	3018	1836	4257	No	2.61	Si
SLU 78	fin.	151.7	6	0.72	0	292	3965	3018	1836	4257	No	713.75	Si
SLU 82	ini.	-24.31	1521	0.72	0	292	3965	3018	1836	4257	No	2.8	Si
SLU 82	fin.	148.86	46	0.72	0	292	3965	3018	1836	4257	No	91.86	Si
SLU 76	ini.	-16.04	1530	0.72	0	292	3965	3018	1836	4257	No	2.78	Si
SLU 76	fin.	142.52	-1	0.72	0	292	3965	3018	1836	4257	No	4062.2	Si
SLU 84	ini.	-22.28	1588	0.72	0	292	3965	3018	1836	4257	No	2.68	Si
SLU 84	fin.	152.13	34	0.72	0	292	3965	3018	1836	4257	No	123.66	Si
SLU 80	ini.	-15.27	1597	0.72	0	292	3965	3018	1836	4257	No	2.67	Si
SLU 80	fin.	146.54	-6	0.72	0	292	3965	3018	1836	4257	No	711.95	Si
SLU 83	ini.	-24.16	1588	0.72	0	292	3965	3018	1836	4257	No	2.68	Si
SLU 83	fin.	153.25	45	0.72	0	292	3965	3018	1836	4257	No	94.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-407.13	-1313	-0.0003464	0.0002807	0.0035	0.72		1917.1	1917.1		4.71	Si
SLV 12	fin.	379	-495	-0.0003202	0.0002807	0.0035	0.72		1912.43	1912.43		5.05	Si
SLV 2	ini.	511.72	1455	-0.000453	0.0002807	0.0035	0.72		1912.43	1912.43		3.74	Si
SLV 2	fin.	-288.17	182	-0.000236	0.0002807	0.0035	0.72		1917.1	1917.1		6.65	Si
SLV 13	ini.	-377.09	-1475	-0.0003176	0.0002807	0.0035	0.72		1917.1	1917.1		5.08	Si
SLV 13	fin.	372.61	-337	-0.0003141	0.0002807	0.0035	0.72		1912.43	1912.43		5.13	Si
SLV 5	ini.	389.92	912	-0.0003306	0.0002807	0.0035	0.72		1912.43	1912.43		4.9	Si
SLV 5	fin.	-191.63	192	-0.0001528	0.0002807	0.0035	0.72		1917.1	1917.1		10	Si
SLV 3	ini.	385.58	1157	-0.0003265	0.0002807	0.0035	0.72		1912.43	1912.43		4.96	Si
SLV 3	fin.	-216.24	74	-0.0001735	0.0002807	0.0035	0.72		1917.1	1917.1		8.87	Si
SLV 16	ini.	-554.63	-1939	-0.0004972	0.0002807	0.0035	0.72		1917.1	1917.1		3.46	Si
SLV 16	fin.	506.55	-526	-0.0004476	0.0002807	0.0035	0.72		1912.43	1912.43		3.78	Si
SLV 14	ini.	-402.79	-1558	-0.0003422	0.0002807	0.0035	0.72		1917.1	1917.1		4.76	Si
SLV 14	fin.	403.62	-377	-0.0003439	0.0002807	0.0035	0.72		1912.43	1912.43		4.74	Si
SLV 11	ini.	-390.57	-1260	-0.0003304	0.0002807	0.0035	0.72		1917.1	1917.1		4.91	Si
SLV 11	fin.	359.02	-470	-0.0003013	0.0002807	0.0035	0.72		1912.43	1912.43		5.33	Si
SLV 15	ini.	-528.93	-1856	-0.0004698	0.0002807	0.0035	0.72		1917.1	1917.1		3.62	Si
SLV 15	fin.	475.55	-486	-0.0004155	0.0002807	0.0035	0.72		1912.43	1912.43		4.02	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	537.42	1537	-0.0004801	0.0002807	0.0035	0.72		1912.43	1912.43		3.56	Si
SLV 1	fin.	-319.18	223	-0.0002638	0.0002807	0.0035	0.72		1917.1	1917.1		6.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-528.93	3060	0.72	0	438	3965	4528	1836	4403		1.44	Si
SLV 15	fin.	475.55	1030	0.72	0	438	3965	4528	1836	4403		4.27	Si
SLD 15	ini.	-230.54	1880	0.72	0	438	3965	4528	1836	4403		2.34	Si
SLD 15	fin.	256.22	428	0.72	0	438	3965	4528	1836	4403		10.29	Si
SLD 14	ini.	-174.96	1888	0.72	0	438	3965	4528	1836	4403		2.33	Si
SLD 14	fin.	224.4	122	0.72	0	438	3965	4528	1836	4403		36.09	Si
SLD 13	ini.	-163.93	1810	0.72	0	438	3965	4528	1836	4403		2.43	Si
SLD 13	fin.	211.09	66	0.72	0	438	3965	4528	1836	4403		66.83	Si
SLD 16	ini.	-241.58	1959	0.72	0	438	3965	4528	1836	4403		2.25	Si
SLD 16	fin.	269.53	484	0.72	0	438	3965	4528	1836	4403		9.1	Si
SLV 14	ini.	-402.79	3082	0.72	0	438	3965	4528	1836	4403		1.43	Si
SLV 14	fin.	403.62	340	0.72	0	438	3965	4528	1836	4403		12.97	Si
SLV 16	ini.	-554.63	3242	0.72	0	438	3965	4528	1836	4403		1.36	Si
SLV 16	fin.	506.55	1161	0.72	0	438	3965	4528	1836	4403		3.79	Si
SLV 12	ini.	-407.13	1960	0.72	0	438	3965	4528	1836	4403		2.25	Si
SLV 12	fin.	379	1602	0.72	0	438	3965	4528	1836	4403		2.75	Si
SLV 11	ini.	-390.57	1843	0.72	0	438	3965	4528	1836	4403		2.39	Si
SLV 11	fin.	359.02	1518	0.72	0	438	3965	4528	1836	4403		2.9	Si
SLV 13	ini.	-377.09	2899	0.72	0	438	3965	4528	1836	4403		1.52	Si
SLV 13	fin.	372.61	209	0.72	0	438	3965	4528	1836	4403		21.09	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.457	SLV 16	Si
V_SLV	1.358	SLV 16	Si
PF_SLU	12.381	SLU 83	Si
V_SLU	2.606	SLU 78	Si

Trave di accoppiamento 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.98	9.88	0.9	-7.413	-3.314	8.98	9.88	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	209.42	-1548	-0.0001069	0.0001872	0.0035	0.9		2959	2959	No	14.13	Si
SLU 72	fin.	-5.23	-647	-0.0000026	0.0001872	0.0035	0.9		2964.67	2964.67	No	566.7	Si
SLU 70	ini.	216.25	-1587	-0.0001106	0.0001872	0.0035	0.9		2959	2959	No	13.68	Si
SLU 70	fin.	-9.19	-648	-0.0000045	0.0001872	0.0035	0.9		2964.67	2964.67	No	322.52	Si
SLU 69	ini.	215.02	-1585	-0.0001099	0.0001872	0.0035	0.9		2959	2959	No	13.76	Si
SLU 69	fin.	-5.42	-659	-0.0000026	0.0001872	0.0035	0.9		2964.67	2964.67	No	547.37	Si
SLU 78	ini.	190.04	-1525	-0.0000966	0.0001872	0.0035	0.9		2959	2959	No	15.57	Si
SLU 78	fin.	38.38	-777	-0.0000189	0.0001872	0.0035	0.9		2959	2959	No	77.09	Si
SLU 64	ini.	195.42	-1448	-0.0000994	0.0001872	0.0035	0.9		2959	2959	No	15.14	Si
SLU 64	fin.	-4.96	-604	-0.0000024	0.0001872	0.0035	0.9		2964.67	2964.67	No	597.84	Si
SLU 67	ini.	209.86	-1537	-0.0001071	0.0001872	0.0035	0.9		2959	2959	No	14.1	Si
SLU 67	fin.	-10.94	-621	-0.0000054	0.0001872	0.0035	0.9		2964.67	2964.67	No	270.89	Si
SLU 68	ini.	203.85	-1500	-0.0001039	0.0001872	0.0035	0.9		2959	2959	No	14.52	Si
SLU 68	fin.	-9.5	-612	-0.0000046	0.0001872	0.0035	0.9		2964.67	2964.67	No	312.05	Si
SLU 66	ini.	208.63	-1536	-0.0001065	0.0001872	0.0035	0.9		2959	2959	No	14.18	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	fin.	-7.17	-632	-0.0000035	0.0001872	0.0035	0.9		2964.67	2964.67	No	413.59	Si
SLU 65	ini.	197.46	-1450	-0.0001005	0.0001872	0.0035	0.9		2959	2959	No	14.99	Si
SLU 65	fin.	-11.25	-585	-0.0000055	0.0001872	0.0035	0.9		2964.67	2964.67	No	263.47	Si
SLU 71	ini.	208.2	-1547	-0.0001063	0.0001872	0.0035	0.9		2959	2959	No	14.21	Si
SLU 71	fin.	-1.46	-658	-0.0000007	0.0001872	0.0035	0.9		2964.67	2964.67	No	2037.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	208.2	-2748	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 71	fin.	-1.46	750	0.9	0	365	7137	3773	2295	6068	No	8.09	Si
SLU 69	ini.	215.02	-2814	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 69	fin.	-5.42	746	0.9	0	365	7137	3773	2295	6068	No	8.14	Si
SLU 79	ini.	181.99	-2680	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 79	fin.	46.12	984	0.9	0	365	7137	3773	2295	6068	No	6.17	Si
SLU 80	ini.	183.21	-2683	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 80	fin.	42.34	965	0.9	0	365	7137	3773	2295	6068	No	6.29	Si
SLU 67	ini.	209.86	-2720	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 67	fin.	-10.94	679	0.9	0	365	7137	3773	2295	6068	No	8.94	Si
SLU 66	ini.	208.63	-2717	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 66	fin.	-7.17	697	0.9	0	365	7137	3773	2295	6068	No	8.7	Si
SLU 78	ini.	190.04	-2748	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 78	fin.	38.38	961	0.9	0	365	7137	3773	2295	6068	No	6.32	Si
SLU 77	ini.	188.81	-2745	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 77	fin.	42.16	979	0.9	0	365	7137	3773	2295	6068	No	6.2	Si
SLU 70	ini.	216.25	-2817	0.9	0	365	7137	3773	2295	6068	No	2.15	Si
SLU 70	fin.	-9.19	727	0.9	0	365	7137	3773	2295	6068	No	8.35	Si
SLU 72	ini.	209.42	-2751	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 72	fin.	-5.23	731	0.9	0	365	7137	3773	2295	6068	No	8.3	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1276.14	-5253	-0.0008055	0.0002807	0.0035	0.9		2989.59	2989.59		2.34	Si
SLV 3	fin.	-1495.13	2764	-0.0009879	0.0002807	0.0035	0.9		2995.37	2995.37		2	Si
SLD 15	ini.	-344.13	629	-0.0001772	0.0002807	0.0035	0.9		2995.37	2995.37		8.7	Si
SLD 15	fin.	728.88	-2107	-0.0004066	0.0002807	0.0035	0.9		2989.59	2989.59		4.1	Si
SLD 13	ini.	-391.01	877	-0.000203	0.0002807	0.0035	0.9		2995.37	2995.37		7.66	Si
SLD 13	fin.	713.73	-2013	-0.0003968	0.0002807	0.0035	0.9		2989.59	2989.59		4.19	Si
SLV 2	ini.	1263.72	-5024	-0.0007955	0.0002807	0.0035	0.9		2989.59	2989.59		2.37	Si
SLV 2	fin.	-1658.94	3263	-0.0011371	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLV 4	ini.	1370.28	-5588	-0.000883	0.0002807	0.0035	0.9		2989.59	2989.59		2.18	Si
SLV 4	fin.	-1624.26	3048	-0.0011046	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 16	ini.	-895.58	2566	-0.0005179	0.0002807	0.0035	0.9		2995.37	2995.37		3.34	Si
SLV 16	fin.	1556.76	-3974	-0.0010454	0.0002807	0.0035	0.9		2989.59	2989.59		1.92	Si
SLV 13	ini.	-1096.29	3464	-0.0006634	0.0002807	0.0035	0.9		2995.37	2995.37		2.73	Si
SLV 13	fin.	1651.2	-4043	-0.0011326	0.0002807	0.0035	0.9		2989.59	2989.59		1.81	Si
SLV 15	ini.	-989.73	2901	-0.0005848	0.0002807	0.0035	0.9		2995.37	2995.37		3.03	Si
SLV 15	fin.	1685.88	-4258	-0.0011656	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 14	ini.	-1002.15	3130	-0.0005938	0.0002807	0.0035	0.9		2995.37	2995.37		2.99	Si
SLV 14	fin.	1522.07	-3759	-0.0010143	0.0002807	0.0035	0.9		2989.59	2989.59		1.96	Si
SLV 1	ini.	1169.57	-4690	-0.0007211	0.0002807	0.0035	0.9		2989.59	2989.59		2.56	Si
SLV 1	fin.	-1529.82	2979	-0.0010187	0.0002807	0.0035	0.9		2995.37	2995.37		1.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-989.73	3857	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLV 15	fin.	1685.88	8191	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 4	ini.	1370.28	-8572	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 4	fin.	-1624.26	-7006	0.9	0	548	7137	5660	2295	7684		1.1	Si
SLV 16	ini.	-895.58	3386	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 16	fin.	1556.76	7601	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 1	ini.	1169.57	-7160	0.9	0	548	7137	5660	2295	7684		1.07	Si
SLV 1	fin.	-1529.82	-6454	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 2	ini.	1263.72	-7631	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 2	fin.	-1658.94	-7044	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 14	ini.	-1002.15	4328	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 14	fin.	1522.07	7564	0.9	0	548	7137	5660	2295	7684		1.02	Si
SLV 13	ini.	-1096.29	4798	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 13	fin.	1651.2	8153	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 3	ini.	1276.14	-8102	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 3	fin.	-1495.13	-6417	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 7	ini.	624.15	-5099	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 7	fin.	-364.27	-1365	0.9	0	548	7137	5660	2295	7684		5.63	Si
SLV 8	ini.	684.82	-5402	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 8	fin.	-447.48	-1745	0.9	0	548	7137	5660	2295	7684		4.4	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.773	SLV 15	Si
V_SLV	0.896	SLV 4	No
PF_SLU	13.684	SLU 70	Si
V_SLU	2.154	SLU 70	Si

Trave di accoppiamento 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.68	12.5	0.82	-7.413	-3.314	11.68	12.5	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-126.45	-891	-0.0000767	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.46	Si
SLU 63	fin.	-46.86	-378	-0.0000279	0.0001872	0.0035	0.82		2460.51	2460.51	No	52.51	Si
SLU 60	ini.	-120.79	-855	-0.0000731	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.37	Si
SLU 60	fin.	-47.44	-372	-0.0000282	0.0001872	0.0035	0.82		2460.51	2460.51	No	51.87	Si
SLU 77	ini.	-123.05	-918	-0.0000745	0.0001872	0.0035	0.82		2460.51	2460.51	No	20	Si
SLU 77	fin.	-66.64	-463	-0.0000398	0.0001872	0.0035	0.82		2460.51	2460.51	No	36.92	Si
SLU 81	ini.	-121.49	-904	-0.0000736	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.25	Si
SLU 81	fin.	-54.57	-408	-0.0000325	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.09	Si
SLU 62	ini.	-128.86	-897	-0.0000782	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.1	Si
SLU 62	fin.	-46.39	-380	-0.0000276	0.0001872	0.0035	0.82		2460.51	2460.51	No	53.04	Si
SLU 56	ini.	-122.36	-869	-0.0000741	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.11	Si
SLU 56	fin.	-59.51	-426	-0.0000355	0.0001872	0.0035	0.82		2460.51	2460.51	No	41.35	Si
SLU 84	ini.	-127.15	-940	-0.0000771	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.35	Si
SLU 84	fin.	-53.99	-415	-0.0000322	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.57	Si
SLU 83	ini.	-129.55	-946	-0.0000786	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.99	Si
SLU 83	fin.	-53.52	-417	-0.0000319	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.97	Si
SLU 79	ini.	-122.96	-910	-0.0000745	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.01	Si
SLU 79	fin.	-62.63	-446	-0.0000374	0.0001872	0.0035	0.82		2460.51	2460.51	No	39.29	Si
SLU 58	ini.	-122.26	-862	-0.000074	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.12	Si
SLU 58	fin.	-55.5	-409	-0.0000331	0.0001872	0.0035	0.82		2460.51	2460.51	No	44.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-123.05	2431	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 77	fin.	-66.64	-1608	0.82	0	303	6502	3438	2091	5529	No	3.44	Si
SLU 75	ini.	-112.58	2307	0.82	0	303	6502	3438	2091	5529	No	2.4	Si
SLU 75	fin.	-68.16	-1556	0.82	0	303	6502	3438	2091	5529	No	3.55	Si
SLU 74	ini.	-114.99	2317	0.82	0	303	6502	3438	2091	5529	No	2.39	Si
SLU 74	fin.	-67.69	-1556	0.82	0	303	6502	3438	2091	5529	No	3.55	Si
SLU 83	ini.	-129.55	2448	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 83	fin.	-53.52	-1507	0.82	0	303	6502	3438	2091	5529	No	3.67	Si
SLU 80	ini.	-120.55	2396	0.82	0	303	6502	3438	2091	5529	No	2.31	Si
SLU 80	fin.	-63.1	-1573	0.82	0	303	6502	3438	2091	5529	No	3.51	Si
SLU 82	ini.	-119.08	2323	0.82	0	303	6502	3438	2091	5529	No	2.38	Si
SLU 82	fin.	-55.04	-1455	0.82	0	303	6502	3438	2091	5529	No	3.8	Si
SLU 81	ini.	-121.49	2334	0.82	0	303	6502	3438	2091	5529	No	2.37	Si
SLU 81	fin.	-54.57	-1454	0.82	0	303	6502	3438	2091	5529	No	3.8	Si
SLU 84	ini.	-127.15	2437	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 84	fin.	-53.99	-1507	0.82	0	303	6502	3438	2091	5529	No	3.67	Si
SLU 78	ini.	-120.65	2420	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 78	fin.	-67.11	-1609	0.82	0	303	6502	3438	2091	5529	No	3.44	Si
SLU 79	ini.	-122.96	2407	0.82	0	303	6502	3438	2091	5529	No	2.3	Si
SLU 79	fin.	-62.63	-1573	0.82	0	303	6502	3438	2091	5529	No	3.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	847.19	2942	-0.0006087	0.0002807	0.0035	0.82		2482.11	2482.11		2.93	Si
SLV 3	fin.	-704.39	-1760	-0.0004855	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLV 13	ini.	-1054.58	-4290	-0.000799	0.0002807	0.0035	0.82		2487.45	2487.45		2.36	Si
SLV 13	fin.	639.19	1194	-0.0004337	0.0002807	0.0035	0.82		2482.11	2482.11		3.88	Si
SLV 15	ini.	-1016.34	-4081	-0.0007622	0.0002807	0.0035	0.82		2487.45	2487.45		2.45	Si
SLV 15	fin.	518.94	739	-0.0003408	0.0002807	0.0035	0.82		2482.11	2482.11		4.78	Si
SLD 15	ini.	-472.01	-2052	-0.0003055	0.0002807	0.0035	0.82		2487.45	2487.45		5.27	Si
SLD 15	fin.	187.06	116	-0.000114	0.0002807	0.0035	0.82		2482.11	2482.11		13.27	Si
SLD 13	ini.	-488.78	-2144	-0.0003177	0.0002807	0.0035	0.82		2487.45	2487.45		5.09	Si
SLD 13	fin.	239.97	316	-0.0001477	0.0002807	0.0035	0.82		2482.11	2482.11		10.34	Si
SLV 4	ini.	923.6	3214	-0.0006775	0.0002807	0.0035	0.82		2482.11	2482.11		2.69	Si
SLV 4	fin.	-758.58	-1882	-0.0005307	0.0002807	0.0035	0.82		2487.45	2487.45		3.28	Si
SLV 16	ini.	-939.93	-3809	-0.0006907	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLV 16	fin.	464.75	617	-0.0003009	0.0002807	0.0035	0.82		2482.11	2482.11		5.34	Si
SLV 1	ini.	808.95	2733	-0.0005752	0.0002807	0.0035	0.82		2482.11	2482.11		3.07	Si
SLV 1	fin.	-584.14	-1306	-0.0003895	0.0002807	0.0035	0.82		2487.45	2487.45		4.26	Si
SLV 2	ini.	885.37	3005	-0.0006427	0.0002807	0.0035	0.82		2482.11	2482.11		2.8	Si
SLV 2	fin.	-638.34	-1427	-0.000432	0.0002807	0.0035	0.82		2487.45	2487.45		3.9	Si
SLV 14	ini.	-978.17	-4018	-0.0007262	0.0002807	0.0035	0.82		2487.45	2487.45		2.54	Si
SLV 14	fin.	584.99	1072	-0.000391	0.0002807	0.0035	0.82		2482.11	2482.11		4.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-488.78	3450	0.82	0	455	6502	5156	2091	6957		2.02	Si
SLD 13	fin.	239.97	628	0.82	0	455	6502	5156	2091	6957		11.08	Si
SLD 15	ini.	-472.01	3432	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLD 15	fin.	187.06	337	0.82	0	455	6502	5156	2091	6957		20.64	Si
SLV 16	ini.	-939.93	5681	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 16	fin.	464.75	1979	0.82	0	455	6502	5156	2091	6957		3.52	Si
SLV 4	ini.	923.6	-3214	0.82	0	455	6502	5156	2091	6957		2.16	Si
SLV 4	fin.	-758.58	-5146	0.82	0	455	6502	5156	2091	6957		1.35	Si
SLV 15	ini.	-1016.34	6081	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 15	fin.	518.94	2275	0.82	0	455	6502	5156	2091	6957		3.06	Si
SLV 2	ini.	885.37	-3175	0.82	0	455	6502	5156	2091	6957		2.19	Si
SLV 2	fin.	-638.34	-4484	0.82	0	455	6502	5156	2091	6957		1.55	Si
SLV 1	ini.	808.95	-2774	0.82	0	455	6502	5156	2091	6957		2.51	Si
SLV 1	fin.	-584.14	-4188	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 13	ini.	-1054.58	6120	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 13	fin.	639.19	2937	0.82	0	455	6502	5156	2091	6957		2.37	Si
SLV 14	ini.	-978.17	5720	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 14	fin.	584.99	2640	0.82	0	455	6502	5156	2091	6957		2.63	Si
SLV 3	ini.	847.19	-2813	0.82	0	455	6502	5156	2091	6957		2.47	Si
SLV 3	fin.	-704.39	-4849	0.82	0	455	6502	5156	2091	6957		1.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.359	SLV 13	Si
V_SLV	1.137	SLV 13	Si
PF_SLU	18.992	SLU 83	Si
V_SLU	2.259	SLU 83	Si

Trave di accoppiamento 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	12.5	13.4	0.9	-22.713	5.826	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 52	ini.	-67.18	65	-0.0000332	0.0001872	0.0035	0.9		2964.67	2964.67	No	44.13	Si
SLU 52	fin.	215.99	-652	-0.0001104	0.0001872	0.0035	0.9		2959	2959	No	13.7	Si
SLU 46	ini.	-63.88	70	-0.0000316	0.0001872	0.0035	0.9		2964.67	2964.67	No	46.41	Si
SLU 46	fin.	205.2	-618	-0.0001046	0.0001872	0.0035	0.9		2959	2959	No	14.42	Si
SLU 45	ini.	-62.03	66	-0.0000306	0.0001872	0.0035	0.9		2964.67	2964.67	No	47.79	Si
SLU 45	fin.	201.1	-607	-0.0001025	0.0001872	0.0035	0.9		2959	2959	No	14.71	Si
SLU 61	ini.	-57.86	34	-0.0000286	0.0001872	0.0035	0.9		2964.67	2964.67	No	51.24	Si
SLU 61	fin.	206.43	-638	-0.0001053	0.0001872	0.0035	0.9		2959	2959	No	14.33	Si
SLU 44	ini.	-86.06	131	-0.0000427	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.45	Si
SLU 44	fin.	231.93	-667	-0.000119	0.0001872	0.0035	0.9		2959	2959	No	12.76	Si
SLU 47	ini.	-67.31	78	-0.0000333	0.0001872	0.0035	0.9		2964.67	2964.67	No	44.04	Si
SLU 47	fin.	209.31	-625	-0.0001068	0.0001872	0.0035	0.9		2959	2959	No	14.14	Si
SLU 43	ini.	-82.98	125	-0.0000412	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.73	Si
SLU 43	fin.	225.11	-649	-0.0001153	0.0001872	0.0035	0.9		2959	2959	No	13.14	Si
SLU 64	ini.	-50.63	20	-0.000025	0.0001872	0.0035	0.9		2964.67	2964.67	No	58.55	Si
SLU 64	fin.	193.4	-606	-0.0000984	0.0001872	0.0035	0.9		2959	2959	No	15.3	Si
SLU 65	ini.	-53.71	26	-0.0000265	0.0001872	0.0035	0.9		2964.67	2964.67	No	55.19	Si
SLU 65	fin.	200.22	-624	-0.000102	0.0001872	0.0035	0.9		2959	2959	No	14.78	Si
SLU 60	ini.	-56.02	31	-0.0000276	0.0001872	0.0035	0.9		2964.67	2964.67	No	52.93	Si
SLU 60	fin.	202.33	-627	-0.0001031	0.0001872	0.0035	0.9		2959	2959	No	14.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	-63.88	30	0.9	0	365	7137	3773	2295	6068	No	202.38	Si
SLU 46	fin.	205.2	968	0.9	0	365	7137	3773	2295	6068	No	6.27	Si
SLU 49	ini.	-45.13	-129	0.9	0	365	7137	3773	2295	6068	No	47.12	Si
SLU 49	fin.	182.58	926	0.9	0	365	7137	3773	2295	6068	No	6.56	Si
SLU 51	ini.	-47.33	-96	0.9	0	365	7137	3773	2295	6068	No	63.34	Si
SLU 51	fin.	183.96	910	0.9	0	365	7137	3773	2295	6068	No	6.67	Si
SLU 43	ini.	-82.98	215	0.9	0	365	7137	3773	2295	6068	No	28.26	Si
SLU 43	fin.	225.11	974	0.9	0	365	7137	3773	2295	6068	No	6.23	Si
SLU 45	ini.	-62.03	23	0.9	0	365	7137	3773	2295	6068	No	264.07	Si
SLU 45	fin.	201.1	948	0.9	0	365	7137	3773	2295	6068	No	6.4	Si
SLU 50	ini.	-45.48	-103	0.9	0	365	7137	3773	2295	6068	No	59.03	Si
SLU 50	fin.	179.87	890	0.9	0	365	7137	3773	2295	6068	No	6.82	Si
SLU 48	ini.	-43.28	-136	0.9	0	365	7137	3773	2295	6068	No	44.69	Si
SLU 48	fin.	178.48	906	0.9	0	365	7137	3773	2295	6068	No	6.7	Si
SLU 47	ini.	-67.31	68	0.9	0	365	7137	3773	2295	6068	No	89.74	Si
SLU 47	fin.	209.31	966	0.9	0	365	7137	3773	2295	6068	No	6.28	Si
SLU 52	ini.	-67.18	225	0.9	0	365	7137	3773	2295	6068	No	27.02	Si
SLU 52	fin.	215.99	860	0.9	0	365	7137	3773	2295	6068	No	7.06	Si
SLU 44	ini.	-86.06	226	0.9	0	365	7137	3773	2295	6068	No	26.81	Si
SLU 44	fin.	231.93	1008	0.9	0	365	7137	3773	2295	6068	No	6.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 10	ini.	-173.76	365	-0.000087	0.0002807	0.0035	0.9		2995.37	2995.37		17.24	Si
SLD 10	fin.	370.9	-985	-0.0001922	0.0002807	0.0035	0.9		2989.59	2989.59		8.06	Si
SLV 7	ini.	263.54	-771	-0.0001341	0.0002807	0.0035	0.9		2989.59	2989.59		11.34	Si
SLV 7	fin.	-349.79	699	-0.0001802	0.0002807	0.0035	0.9		2995.37	2995.37		8.56	Si
SLV 9	ini.	-320.24	723	-0.0001642	0.0002807	0.0035	0.9		2995.37	2995.37		9.35	Si
SLV 9	fin.	634.33	-1633	-0.0003464	0.0002807	0.0035	0.9		2989.59	2989.59		4.71	Si
SLV 16	ini.	-240.22	727	-0.0001215	0.0002807	0.0035	0.9		2995.37	2995.37		12.47	Si
SLV 16	fin.	346.02	-743	-0.0001785	0.0002807	0.0035	0.9		2989.59	2989.59		8.64	Si
SLV 13	ini.	-332.88	895	-0.000171	0.0002807	0.0035	0.9		2995.37	2995.37		9	Si
SLV 13	fin.	559.33	-1328	-0.0003005	0.0002807	0.0035	0.9		2989.59	2989.59		5.34	Si
SLV 14	ini.	-371.09	1032	-0.0001919	0.0002807	0.0035	0.9		2995.37	2995.37		8.07	Si
SLV 14	fin.	586.99	-1341	-0.0003173	0.0002807	0.0035	0.9		2989.59	2989.59		5.09	Si
SLD 9	ini.	-163.01	327	-0.0000815	0.0002807	0.0035	0.9		2995.37	2995.37		18.38	Si
SLD 9	fin.	363.11	-982	-0.0001879	0.0002807	0.0035	0.9		2989.59	2989.59		8.23	Si
SLV 6	ini.	-197.34	336	-0.0000992	0.0002807	0.0035	0.9		2995.37	2995.37		15.18	Si
SLV 6	fin.	471.26	-1303	-0.0002488	0.0002807	0.0035	0.9		2989.59	2989.59		6.34	Si
SLV 5	ini.	-172.71	248	-0.0000865	0.0002807	0.0035	0.9		2995.37	2995.37		17.34	Si
SLV 5	fin.	453.44	-1294	-0.0002386	0.0002807	0.0035	0.9		2989.59	2989.59		6.59	Si
SLV 10	ini.	-344.87	811	-0.0001776	0.0002807	0.0035	0.9		2995.37	2995.37		8.69	Si
SLV 10	fin.	652.16	-1642	-0.0003575	0.0002807	0.0035	0.9		2989.59	2989.59		4.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	238.91	-1046	0.9	0	548	7137	5660	2295	7684		7.34	Si
SLV 8	fin.	-331.97	-1679	0.9	0	548	7137	5660	2295	7684		4.58	Si
SLV 7	ini.	263.54	-1167	0.9	0	548	7137	5660	2295	7684		6.59	Si
SLV 7	fin.	-349.79	-1738	0.9	0	548	7137	5660	2295	7684		4.42	Si
SLV 6	ini.	-197.34	573	0.9	0	548	7137	5660	2295	7684		13.4	Si
SLV 6	fin.	471.26	2204	0.9	0	548	7137	5660	2295	7684		3.49	Si
SLV 5	ini.	-172.71	453	0.9	0	548	7137	5660	2295	7684		16.97	Si
SLV 5	fin.	453.44	2144	0.9	0	548	7137	5660	2295	7684		3.58	Si
SLV 14	ini.	-371.09	1727	0.9	0	548	7137	5660	2295	7684		4.45	Si
SLV 14	fin.	586.99	2533	0.9	0	548	7137	5660	2295	7684		3.03	Si
SLV 10	ini.	-344.87	1352	0.9	0	548	7137	5660	2295	7684		5.68	Si
SLV 10	fin.	652.16	2975	0.9	0	548	7137	5660	2295	7684		2.58	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-320.24	1231	0.9	0	548	7137	5660	2295	7684		6.24	Si
SLV 9	fin.	634.33	2916	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLV 13	ini.	-332.88	1540	0.9	0	548	7137	5660	2295	7684		4.99	Si
SLV 13	fin.	559.33	2441	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLD 9	ini.	-163.01	590	0.9	0	548	7137	5660	2295	7684		13.03	Si
SLD 9	fin.	363.11	1628	0.9	0	548	7137	5660	2295	7684		4.72	Si
SLD 10	ini.	-173.76	642	0.9	0	548	7137	5660	2295	7684		11.97	Si
SLD 10	fin.	370.9	1654	0.9	0	548	7137	5660	2295	7684		4.65	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.584	SLV 10	Si
V_SLV	2.583	SLV 10	Si
PF_SLU	12.758	SLU 44	Si
V_SLU	6.021	SLU 44	Si

Trave di accoppiamento 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	15.2	15.66	0.46	-22.713	5.826	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-180.17	-77	-0.0003992	0.0001872	0.0035	0.46		780.23	780.23	No	4.33	Si
SLU 48	fin.	-6.18	266	-0.0000116	0.0001872	0.0035	0.46		780.23	780.23	No	126.31	Si
SLU 51	ini.	-182.3	-82	-0.0004049	0.0001872	0.0035	0.46		780.23	780.23	No	4.28	Si
SLU 51	fin.	-0.87	277	-0.0000016	0.0001872	0.0035	0.46		780.23	780.23	No	895.04	Si
SLU 47	ini.	-174.53	-106	-0.0003844	0.0001872	0.0035	0.46		780.23	780.23	No	4.47	Si
SLU 47	fin.	19.75	276	-0.0000374	0.0001872	0.0035	0.46		777.36	777.36	No	39.37	Si
SLU 72	ini.	-174.82	-58	-0.0003852	0.0001872	0.0035	0.46		780.23	780.23	No	4.46	Si
SLU 72	fin.	-27.15	236	-0.0000516	0.0001872	0.0035	0.46		780.23	780.23	No	28.73	Si
SLU 70	ini.	-175.04	-57	-0.0003858	0.0001872	0.0035	0.46		780.23	780.23	No	4.46	Si
SLU 70	fin.	-30.89	230	-0.0000589	0.0001872	0.0035	0.46		780.23	780.23	No	25.26	Si
SLU 69	ini.	-172.68	-54	-0.0003796	0.0001872	0.0035	0.46		780.23	780.23	No	4.52	Si
SLU 69	fin.	-32.46	225	-0.0000619	0.0001872	0.0035	0.46		780.23	780.23	No	24.04	Si
SLU 71	ini.	-172.46	-55	-0.000379	0.0001872	0.0035	0.46		780.23	780.23	No	4.52	Si
SLU 71	fin.	-28.72	231	-0.0000546	0.0001872	0.0035	0.46		780.23	780.23	No	27.17	Si
SLU 49	ini.	-182.52	-81	-0.0004055	0.0001872	0.0035	0.46		780.23	780.23	No	4.27	Si
SLU 49	fin.	-4.61	271	-0.0000086	0.0001872	0.0035	0.46		780.23	780.23	No	169.28	Si
SLU 46	ini.	-173.18	-103	-0.0003809	0.0001872	0.0035	0.46		780.23	780.23	No	4.51	Si
SLU 46	fin.	14.96	267	-0.0000283	0.0001872	0.0035	0.46		777.36	777.36	No	51.95	Si
SLU 50	ini.	-179.94	-79	-0.0003987	0.0001872	0.0035	0.46		780.23	780.23	No	4.34	Si
SLU 50	fin.	-2.44	272	-0.0000046	0.0001872	0.0035	0.46		780.23	780.23	No	319.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-174.82	768	0.46	0	124	3648	1928	1173	3101	No	4.04	Si
SLU 72	fin.	-27.15	-564	0.46	0	124	3648	1928	1173	3101	No	5.5	Si
SLU 57	ini.	-169.23	736	0.46	0	124	3648	1928	1173	3101	No	4.22	Si
SLU 57	fin.	-16.9	-490	0.46	0	124	3648	1928	1173	3101	No	6.33	Si
SLU 71	ini.	-172.46	762	0.46	0	124	3648	1928	1173	3101	No	4.07	Si
SLU 71	fin.	-28.72	-569	0.46	0	124	3648	1928	1173	3101	No	5.45	Si
SLU 78	ini.	-161.74	733	0.46	0	124	3648	1928	1173	3101	No	4.23	Si
SLU 78	fin.	-43.18	-627	0.46	0	124	3648	1928	1173	3101	No	4.95	Si
SLU 49	ini.	-182.52	777	0.46	0	124	3648	1928	1173	3101	No	3.99	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	-4.61	-451	0.46	0	124	3648	1928	1173	3101	No	6.87	Si
SLU 51	ini.	-182.3	771	0.46	0	124	3648	1928	1173	3101	No	4.02	Si
SLU 51	fin.	-0.87	-427	0.46	0	124	3648	1928	1173	3101	No	7.27	Si
SLU 48	ini.	-180.17	770	0.46	0	124	3648	1928	1173	3101	No	4.03	Si
SLU 48	fin.	-6.18	-456	0.46	0	124	3648	1928	1173	3101	No	6.79	Si
SLU 50	ini.	-179.94	764	0.46	0	124	3648	1928	1173	3101	No	4.06	Si
SLU 50	fin.	-2.44	-432	0.46	0	124	3648	1928	1173	3101	No	7.18	Si
SLU 69	ini.	-172.68	767	0.46	0	124	3648	1928	1173	3101	No	4.04	Si
SLU 69	fin.	-32.46	-593	0.46	0	124	3648	1928	1173	3101	No	5.23	Si
SLU 70	ini.	-175.04	774	0.46	0	124	3648	1928	1173	3101	No	4.01	Si
SLU 70	fin.	-30.89	-588	0.46	0	124	3648	1928	1173	3101	No	5.27	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-187.03	-1188	-0.0003958	0.0002807	0.0035	0.46		788.4	788.4		4.22	Si
SLV 2	fin.	29.51	19	-0.0000561	0.0002807	0.0035	0.46		785.44	785.44		26.61	Si
SLV 14	ini.	-190.25	835	-0.0004037	0.0002807	0.0035	0.46		788.4	788.4		4.14	Si
SLV 14	fin.	110.31	641	-0.0002205	0.0002807	0.0035	0.46		785.44	785.44		7.12	Si
SLV 10	ini.	-340.9	-83	-0.0008233	0.0002807	0.0035	0.46		788.4	788.4		2.31	Si
SLV 10	fin.	203.86	747	-0.0004396	0.0002807	0.0035	0.46		785.44	785.44		3.85	Si
SLV 9	ini.	-332.57	-74	-0.0007975	0.0002807	0.0035	0.46		788.4	788.4		2.37	Si
SLV 9	fin.	195.56	724	-0.0004186	0.0002807	0.0035	0.46		785.44	785.44		4.02	Si
SLV 6	ini.	-339.94	-689	-0.0008203	0.0002807	0.0035	0.46		788.4	788.4		2.32	Si
SLV 6	fin.	179.62	561	-0.0003792	0.0002807	0.0035	0.46		785.44	785.44		4.37	Si
SLD 9	ini.	-211.64	-80	-0.0004576	0.0002807	0.0035	0.46		788.4	788.4		3.73	Si
SLD 9	fin.	91.91	413	-0.0001814	0.0002807	0.0035	0.46		785.44	785.44		8.55	Si
SLV 5	ini.	-331.6	-681	-0.0007946	0.0002807	0.0035	0.46		788.4	788.4		2.38	Si
SLV 5	fin.	171.32	537	-0.0003591	0.0002807	0.0035	0.46		785.44	785.44		4.58	Si
SLD 5	ini.	-211.2	-341	-0.0004564	0.0002807	0.0035	0.46		788.4	788.4		3.73	Si
SLD 5	fin.	81.48	333	-0.0001597	0.0002807	0.0035	0.46		785.44	785.44		9.64	Si
SLD 6	ini.	-214.84	-345	-0.0004658	0.0002807	0.0035	0.46		788.4	788.4		3.67	Si
SLD 6	fin.	85.11	343	-0.0001672	0.0002807	0.0035	0.46		785.44	785.44		9.23	Si
SLD 10	ini.	-215.28	-84	-0.0004669	0.0002807	0.0035	0.46		788.4	788.4		3.66	Si
SLD 10	fin.	95.54	423	-0.000189	0.0002807	0.0035	0.46		785.44	785.44		8.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-190.25	1082	0.46	0	187	3648	2893	1173	3834		3.54	Si
SLV 14	fin.	110.31	-39	0.46	0	187	3648	2893	1173	3834		99.26	Si
SLD 10	ini.	-215.28	819	0.46	0	187	3648	2893	1173	3834		4.68	Si
SLD 10	fin.	95.54	68	0.46	0	187	3648	2893	1173	3834		56.09	Si
SLV 11	ini.	107.67	-39	0.46	0	187	3648	2893	1173	3834		97.07	Si
SLV 11	fin.	-159.05	-855	0.46	0	187	3648	2893	1173	3834		4.48	Si
SLV 9	ini.	-332.57	1221	0.46	0	187	3648	2893	1173	3834		3.14	Si
SLV 9	fin.	195.56	386	0.46	0	187	3648	2893	1173	3834		9.93	Si
SLV 12	ini.	99.33	-16	0.46	0	187	3648	2893	1173	3834		243.5	Si
SLV 12	fin.	-150.75	-825	0.46	0	187	3648	2893	1173	3834		4.65	Si
SLV 5	ini.	-331.6	988	0.46	0	187	3648	2893	1173	3834		3.88	Si
SLV 5	fin.	171.32	411	0.46	0	187	3648	2893	1173	3834		9.33	Si
SLV 7	ini.	108.63	-272	0.46	0	187	3648	2893	1173	3834		14.07	Si
SLV 7	fin.	-183.29	-830	0.46	0	187	3648	2893	1173	3834		4.62	Si
SLV 13	ini.	-177.31	1045	0.46	0	187	3648	2893	1173	3834		3.67	Si
SLV 13	fin.	97.43	-86	0.46	0	187	3648	2893	1173	3834		44.65	Si
SLV 10	ini.	-340.9	1244	0.46	0	187	3648	2893	1173	3834		3.08	Si
SLV 10	fin.	203.86	417	0.46	0	187	3648	2893	1173	3834		9.2	Si
SLV 6	ini.	-339.94	1011	0.46	0	187	3648	2893	1173	3834		3.79	Si
SLV 6	fin.	179.62	442	0.46	0	187	3648	2893	1173	3834		8.68	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.313	SLV 10	Si
V_SLV	3.081	SLV 10	Si
PF_SLU	4.275	SLU 49	Si
V_SLU	3.993	SLU 49	Si

Trave di accoppiamento 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	12.5	13.4	0.9	-22.493	-3.314	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 35	ini.	147.06	-684	-0.0000741	0.0001872	0.0035	0.9		2959	2959	No	20.12	Si
SLU 35	fin.	-25.91	-287	-0.0000127	0.0001872	0.0035	0.9		2964.67	2964.67	No	114.43	Si
SLU 77	ini.	161.27	-787	-0.0000815	0.0001872	0.0035	0.9		2959	2959	No	18.35	Si
SLU 77	fin.	-2.88	-402	-0.0000014	0.0001872	0.0035	0.9		2964.67	2964.67	No	1031.13	Si
SLU 36	ini.	150.28	-689	-0.0000757	0.0001872	0.0035	0.9		2959	2959	No	19.69	Si
SLU 36	fin.	-33.23	-269	-0.0000163	0.0001872	0.0035	0.9		2964.67	2964.67	No	89.21	Si
SLU 80	ini.	160.79	-768	-0.0000812	0.0001872	0.0035	0.9		2959	2959	No	18.4	Si
SLU 80	fin.	-14.3	-364	-0.000007	0.0001872	0.0035	0.9		2964.67	2964.67	No	207.31	Si
SLU 84	ini.	154.53	-738	-0.0000779	0.0001872	0.0035	0.9		2959	2959	No	19.15	Si
SLU 84	fin.	-9.09	-371	-0.0000044	0.0001872	0.0035	0.9		2964.67	2964.67	No	326.17	Si
SLU 83	ini.	151.31	-733	-0.0000763	0.0001872	0.0035	0.9		2959	2959	No	19.56	Si
SLU 83	fin.	-1.76	-388	-0.0000009	0.0001872	0.0035	0.9		2964.67	2964.67	No	1680.59	Si
SLU 75	ini.	148.5	-737	-0.0000748	0.0001872	0.0035	0.9		2959	2959	No	19.93	Si
SLU 75	fin.	8.67	-412	-0.0000042	0.0001872	0.0035	0.9		2959	2959	No	341.33	Si
SLU 79	ini.	157.57	-763	-0.0000795	0.0001872	0.0035	0.9		2959	2959	No	18.78	Si
SLU 79	fin.	-6.98	-382	-0.0000034	0.0001872	0.0035	0.9		2964.67	2964.67	No	425.02	Si
SLU 78	ini.	164.49	-792	-0.0000831	0.0001872	0.0035	0.9		2959	2959	No	17.99	Si
SLU 78	fin.	-10.2	-385	-0.000005	0.0001872	0.0035	0.9		2964.67	2964.67	No	290.64	Si
SLU 76	ini.	146.94	-717	-0.000074	0.0001872	0.0035	0.9		2959	2959	No	20.14	Si
SLU 76	fin.	-0.31	-380	-0.0000002	0.0001872	0.0035	0.9		2964.67	2964.67	No	9424.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	138.55	-923	0.9	0	365	7137	3773	2295	6068	No	6.57	Si
SLU 69	fin.	28.99	90	0.9	0	365	7137	3773	2295	6068	No	67.7	Si
SLU 70	ini.	141.77	-938	0.9	0	365	7137	3773	2295	6068	No	6.47	Si
SLU 70	fin.	21.67	60	0.9	0	365	7137	3773	2295	6068	No	101.42	Si
SLU 79	ini.	157.57	-947	0.9	0	365	7137	3773	2295	6068	No	6.41	Si
SLU 79	fin.	-6.98	-91	0.9	0	365	7137	3773	2295	6068	No	66.58	Si
SLU 72	ini.	138.07	-905	0.9	0	365	7137	3773	2295	6068	No	6.71	Si
SLU 72	fin.	17.57	37	0.9	0	365	7137	3773	2295	6068	No	163.95	Si
SLU 36	ini.	150.28	-895	0.9	0	365	7137	3773	2295	6068	No	6.78	Si
SLU 36	fin.	-33.23	-170	0.9	0	365	7137	3773	2295	6068	No	35.78	Si
SLU 77	ini.	161.27	-980	0.9	0	365	7137	3773	2295	6068	No	6.19	Si
SLU 77	fin.	-2.88	-68	0.9	0	365	7137	3773	2295	6068	No	88.81	Si
SLU 56	ini.	142	-895	0.9	0	365	7137	3773	2295	6068	No	6.78	Si
SLU 56	fin.	14.47	10	0.9	0	365	7137	3773	2295	6068	No	637.62	Si
SLU 57	ini.	145.22	-910	0.9	0	365	7137	3773	2295	6068	No	6.67	Si
SLU 57	fin.	7.15	-20	0.9	0	365	7137	3773	2295	6068	No	299.14	Si
SLU 80	ini.	160.79	-962	0.9	0	365	7137	3773	2295	6068	No	6.31	Si
SLU 80	fin.	-14.3	-121	0.9	0	365	7137	3773	2295	6068	No	50.17	Si
SLU 78	ini.	164.49	-995	0.9	0	365	7137	3773	2295	6068	No	6.1	Si
SLU 78	fin.	-10.2	-98	0.9	0	365	7137	3773	2295	6068	No	61.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-193.26	106	-0.0000971	0.0002807	0.0035	0.9		2995.37	2995.37		15.5	Si
SLV 12	fin.	588.42	-1587	-0.0003181	0.0002807	0.0035	0.9		2989.59	2989.59		5.08	Si
SLV 5	ini.	356.02	-1024	-0.000184	0.0002807	0.0035	0.9		2989.59	2989.59		8.4	Si
SLV 5	fin.	-502.65	866	-0.0002664	0.0002807	0.0035	0.9		2995.37	2995.37		5.96	Si
SLV 11	ini.	-215.19	176	-0.0001085	0.0002807	0.0035	0.9		2995.37	2995.37		13.92	Si
SLV 11	fin.	610.7	-1611	-0.0003318	0.0002807	0.0035	0.9		2989.59	2989.59		4.9	Si
SLV 7	ini.	-45.42	-310	-0.0000223	0.0002807	0.0035	0.9		2995.37	2995.37		65.95	Si
SLV 7	fin.	362.52	-1148	-0.0001876	0.0002807	0.0035	0.9		2989.59	2989.59		8.25	Si
SLV 16	ini.	-244.78	404	-0.0001239	0.0002807	0.0035	0.9		2995.37	2995.37		12.24	Si
SLV 16	fin.	569.01	-1416	-0.0003064	0.0002807	0.0035	0.9		2989.59	2989.59		5.25	Si
SLV 6	ini.	377.95	-1094	-0.0001961	0.0002807	0.0035	0.9		2989.59	2989.59		7.91	Si
SLV 6	fin.	-524.93	890	-0.0002795	0.0002807	0.0035	0.9		2995.37	2995.37		5.71	Si
SLV 13	ini.	-158.38	298	-0.0000791	0.0002807	0.0035	0.9		2995.37	2995.37		18.91	Si
SLV 13	fin.	344.02	-849	-0.0001774	0.0002807	0.0035	0.9		2989.59	2989.59		8.69	Si
SLV 2	ini.	441.57	-1430	-0.0002318	0.0002807	0.0035	0.9		2989.59	2989.59		6.77	Si
SLV 2	fin.	-517.8	732	-0.0002753	0.0002807	0.0035	0.9		2995.37	2995.37		5.78	Si
SLV 15	ini.	-278.81	512	-0.000142	0.0002807	0.0035	0.9		2995.37	2995.37		10.74	Si
SLV 15	fin.	603.58	-1453	-0.0003274	0.0002807	0.0035	0.9		2989.59	2989.59		4.95	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	407.54	-1322	-0.0002126	0.0002807	0.0035	0.9		2989.59	2989.59		7.34	Si
SLV 1	fin.	-483.23	695	-0.0002552	0.0002807	0.0035	0.9		2995.37	2995.37		6.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-278.81	1497	0.9	0	548	7137	5660	2295	7684		5.13	Si
SLV 15	fin.	603.58	2588	0.9	0	548	7137	5660	2295	7684		2.97	Si
SLV 5	ini.	356.02	-1723	0.9	0	548	7137	5660	2295	7684		4.46	Si
SLV 5	fin.	-502.65	-2296	0.9	0	548	7137	5660	2295	7684		3.35	Si
SLV 12	ini.	-193.26	785	0.9	0	548	7137	5660	2295	7684		9.79	Si
SLV 12	fin.	588.42	2460	0.9	0	548	7137	5660	2295	7684		3.12	Si
SLV 11	ini.	-215.19	902	0.9	0	548	7137	5660	2295	7684		8.52	Si
SLV 11	fin.	610.7	2530	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 6	ini.	377.95	-1840	0.9	0	548	7137	5660	2295	7684		4.18	Si
SLV 6	fin.	-524.93	-2366	0.9	0	548	7137	5660	2295	7684		3.25	Si
SLV 4	ini.	321.14	-1941	0.9	0	548	7137	5660	2295	7684		3.96	Si
SLV 4	fin.	-258.25	-1319	0.9	0	548	7137	5660	2295	7684		5.83	Si
SLV 1	ini.	407.54	-2254	0.9	0	548	7137	5660	2295	7684		3.41	Si
SLV 1	fin.	-483.23	-2315	0.9	0	548	7137	5660	2295	7684		3.32	Si
SLV 2	ini.	441.57	-2435	0.9	0	548	7137	5660	2295	7684		3.16	Si
SLV 2	fin.	-517.8	-2424	0.9	0	548	7137	5660	2295	7684		3.17	Si
SLV 3	ini.	287.11	-1760	0.9	0	548	7137	5660	2295	7684		4.37	Si
SLV 3	fin.	-223.68	-1209	0.9	0	548	7137	5660	2295	7684		6.36	Si
SLV 16	ini.	-244.78	1316	0.9	0	548	7137	5660	2295	7684		5.84	Si
SLV 16	fin.	569.01	2479	0.9	0	548	7137	5660	2295	7684		3.1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.895	SLV 11	Si
V_SLV	2.969	SLV 15	Si
PF_SLU	17.989	SLU 78	Si
V_SLU	6.1	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	15.2	15.66	0.46	-22.493	-3.314	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-100.25	-136	-0.0002034	0.0001872	0.0035	0.46		780.23	780.23	No	7.78	Si
SLU 71	fin.	-58.06	-324	-0.0001132	0.0001872	0.0035	0.46		780.23	780.23	No	13.44	Si
SLU 72	ini.	-97.98	-128	-0.0001983	0.0001872	0.0035	0.46		780.23	780.23	No	7.96	Si
SLU 72	fin.	-59.35	-334	-0.0001158	0.0001872	0.0035	0.46		780.23	780.23	No	13.15	Si
SLU 50	ini.	-97.96	-144	-0.0001983	0.0001872	0.0035	0.46		780.23	780.23	No	7.97	Si
SLU 50	fin.	-47.87	-254	-0.0000925	0.0001872	0.0035	0.46		780.23	780.23	No	16.3	Si
SLU 48	ini.	-104.1	-161	-0.0002121	0.0001872	0.0035	0.46		780.23	780.23	No	7.5	Si
SLU 48	fin.	-50.55	-264	-0.0000979	0.0001872	0.0035	0.46		780.23	780.23	No	15.44	Si
SLU 67	ini.	-98.16	-154	-0.0001987	0.0001872	0.0035	0.46		780.23	780.23	No	7.95	Si
SLU 67	fin.	-52.86	-285	-0.0001026	0.0001872	0.0035	0.46		780.23	780.23	No	14.76	Si
SLU 45	ini.	-98.14	-171	-0.0001987	0.0001872	0.0035	0.46		780.23	780.23	No	7.95	Si
SLU 45	fin.	-41.38	-206	-0.0000795	0.0001872	0.0035	0.46		780.23	780.23	No	18.86	Si
SLU 70	ini.	-104.12	-144	-0.0002121	0.0001872	0.0035	0.46		780.23	780.23	No	7.49	Si
SLU 70	fin.	-62.03	-344	-0.0001213	0.0001872	0.0035	0.46		780.23	780.23	No	12.58	Si
SLU 66	ini.	-100.43	-162	-0.0002038	0.0001872	0.0035	0.46		780.23	780.23	No	7.77	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	fin.	-51.57	-275	-0.0000999	0.0001872	0.0035	0.46		780.23	780.23	No	15.13	Si
SLU 69	ini.	-106.39	-152	-0.0002173	0.0001872	0.0035	0.46		780.23	780.23	No	7.33	Si
SLU 69	fin.	-60.74	-334	-0.0001186	0.0001872	0.0035	0.46		780.23	780.23	No	12.85	Si
SLU 49	ini.	-101.83	-152	-0.000207	0.0001872	0.0035	0.46		780.23	780.23	No	7.66	Si
SLU 49	fin.	-51.84	-274	-0.0001005	0.0001872	0.0035	0.46		780.23	780.23	No	15.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-86.42	673	0.46	0	124	3648	1928	1173	3101	No	4.61	Si
SLU 78	fin.	-73.58	-1495	0.46	0	124	3648	1928	1173	3101	No	2.07	Si
SLU 71	ini.	-100.25	716	0.46	0	124	3648	1928	1173	3101	No	4.33	Si
SLU 71	fin.	-58.06	-1362	0.46	0	124	3648	1928	1173	3101	No	2.28	Si
SLU 77	ini.	-88.69	681	0.46	0	124	3648	1928	1173	3101	No	4.55	Si
SLU 77	fin.	-72.29	-1482	0.46	0	124	3648	1928	1173	3101	No	2.09	Si
SLU 79	ini.	-82.54	648	0.46	0	124	3648	1928	1173	3101	No	4.79	Si
SLU 79	fin.	-69.62	-1445	0.46	0	124	3648	1928	1173	3101	No	2.15	Si
SLU 72	ini.	-97.98	708	0.46	0	124	3648	1928	1173	3101	No	4.38	Si
SLU 72	fin.	-59.35	-1375	0.46	0	124	3648	1928	1173	3101	No	2.26	Si
SLU 70	ini.	-104.12	741	0.46	0	124	3648	1928	1173	3101	No	4.18	Si
SLU 70	fin.	-62.03	-1411	0.46	0	124	3648	1928	1173	3101	No	2.2	Si
SLU 36	ini.	-67.17	553	0.46	0	124	3648	1928	1173	3101	No	5.61	Si
SLU 36	fin.	-69.45	-1372	0.46	0	124	3648	1928	1173	3101	No	2.26	Si
SLU 69	ini.	-106.39	749	0.46	0	124	3648	1928	1173	3101	No	4.14	Si
SLU 69	fin.	-60.74	-1398	0.46	0	124	3648	1928	1173	3101	No	2.22	Si
SLU 35	ini.	-69.44	561	0.46	0	124	3648	1928	1173	3101	No	5.53	Si
SLU 35	fin.	-68.16	-1359	0.46	0	124	3648	1928	1173	3101	No	2.28	Si
SLU 80	ini.	-80.27	640	0.46	0	124	3648	1928	1173	3101	No	4.84	Si
SLU 80	fin.	-70.91	-1458	0.46	0	124	3648	1928	1173	3101	No	2.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-229.35	-549	-0.0005036	0.0002807	0.0035	0.46		788.4	788.4		3.44	Si
SLV 13	fin.	61.41	533	-0.0001188	0.0002807	0.0035	0.46		785.44	785.44		12.79	Si
SLV 16	ini.	-328.13	-866	-0.000784	0.0002807	0.0035	0.46		788.4	788.4		2.4	Si
SLV 16	fin.	117.39	1002	-0.0002358	0.0002807	0.0035	0.46		785.44	785.44		6.69	Si
SLV 15	ini.	-344.29	-913	-0.0008338	0.0002807	0.0035	0.46		788.4	788.4		2.29	Si
SLV 15	fin.	128.16	1077	-0.0002595	0.0002807	0.0035	0.46		785.44	785.44		6.13	Si
SLV 7	ini.	-194.26	-550	-0.0004136	0.0002807	0.0035	0.46		788.4	788.4		4.06	Si
SLV 7	fin.	46.81	481	-0.0000898	0.0002807	0.0035	0.46		785.44	785.44		16.78	Si
SLV 2	ini.	219.53	699	-0.0004799	0.0002807	0.0035	0.46		785.44	785.44		3.58	Si
SLV 2	fin.	-191.41	-1417	-0.0004066	0.0002807	0.0035	0.46		788.4	788.4		4.12	Si
SLV 6	ini.	199.31	695	-0.0004281	0.0002807	0.0035	0.46		785.44	785.44		3.94	Si
SLV 6	fin.	-182.66	-1383	-0.0003851	0.0002807	0.0035	0.46		788.4	788.4		4.32	Si
SLV 14	ini.	-213.19	-501	-0.0004615	0.0002807	0.0035	0.46		788.4	788.4		3.7	Si
SLV 14	fin.	50.63	458	-0.0000974	0.0002807	0.0035	0.46		785.44	785.44		15.51	Si
SLV 1	ini.	203.37	651	-0.0004383	0.0002807	0.0035	0.46		785.44	785.44		3.86	Si
SLV 1	fin.	-180.63	-1342	-0.0003801	0.0002807	0.0035	0.46		788.4	788.4		4.36	Si
SLV 11	ini.	-324.07	-910	-0.0007717	0.0002807	0.0035	0.46		788.4	788.4		2.43	Si
SLV 11	fin.	119.42	1043	-0.0002402	0.0002807	0.0035	0.46		785.44	785.44		6.58	Si
SLV 12	ini.	-313.66	-879	-0.0007403	0.0002807	0.0035	0.46		788.4	788.4		2.51	Si
SLV 12	fin.	112.48	995	-0.0002251	0.0002807	0.0035	0.46		785.44	785.44		6.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	188.89	-520	0.46	0	187	3648	2893	1173	3834		7.37	Si
SLV 5	fin.	-175.72	-1715	0.46	0	187	3648	2893	1173	3834		2.24	Si
SLV 16	ini.	-328.13	1476	0.46	0	187	3648	2893	1173	3834		2.6	Si
SLV 16	fin.	117.39	110	0.46	0	187	3648	2893	1173	3834		34.82	Si
SLV 6	ini.	199.31	-560	0.46	0	187	3648	2893	1173	3834		6.85	Si
SLV 6	fin.	-182.66	-1763	0.46	0	187	3648	2893	1173	3834		2.17	Si
SLV 10	ini.	69.49	-43	0.46	0	187	3648	2893	1173	3834		88.55	Si
SLV 10	fin.	-110.05	-1421	0.46	0	187	3648	2893	1173	3834		2.7	Si
SLV 2	ini.	219.53	-675	0.46	0	187	3648	2893	1173	3834		5.68	Si
SLV 2	fin.	-191.41	-1559	0.46	0	187	3648	2893	1173	3834		2.46	Si
SLV 11	ini.	-324.07	1423	0.46	0	187	3648	2893	1173	3834		2.69	Si
SLV 11	fin.	119.42	389	0.46	0	187	3648	2893	1173	3834		9.85	Si
SLV 9	ini.	59.08	-3	0.46	0	187	3648	2893	1173	3834		1114.04	Si
SLV 9	fin.	-103.11	-1373	0.46	0	187	3648	2893	1173	3834		2.79	Si
SLV 12	ini.	-313.66	1383	0.46	0	187	3648	2893	1173	3834		2.77	Si
SLV 12	fin.	112.48	341	0.46	0	187	3648	2893	1173	3834		11.24	Si
SLV 15	ini.	-344.29	1537	0.46	0	187	3648	2893	1173	3834		2.49	Si
SLV 15	fin.	128.16	184	0.46	0	187	3648	2893	1173	3834		20.79	Si
SLV 1	ini.	203.37	-613	0.46	0	187	3648	2893	1173	3834		6.26	Si
SLV 1	fin.	-180.63	-1484	0.46	0	187	3648	2893	1173	3834		2.58	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.29	SLV 15	Si
V_SLV	2.174	SLV 6	Si
PF_SLU	7.334	SLU 69	Si
V_SLU	2.075	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	15.3	15.66	0.36	-19.313	-3.314	15.3	15.66	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	-60.44	-415	-0.0001992	0.0001872	0.0035	0.36		482.14	482.14	No	7.98	Si
SLU 56	fin.	-8.93	-219	-0.0000274	0.0001872	0.0035	0.36		482.14	482.14	No	54	Si
SLU 69	ini.	-61.89	-394	-0.0002045	0.0001872	0.0035	0.36		482.14	482.14	No	7.79	Si
SLU 69	fin.	-7.53	-185	-0.000023	0.0001872	0.0035	0.36		482.14	482.14	No	64.01	Si
SLU 70	ini.	-62.79	-399	-0.0002078	0.0001872	0.0035	0.36		482.14	482.14	No	7.68	Si
SLU 70	fin.	-6.4	-182	-0.0000195	0.0001872	0.0035	0.36		482.14	482.14	No	75.34	Si
SLU 78	ini.	-64.32	-421	-0.0002134	0.0001872	0.0035	0.36		482.14	482.14	No	7.5	Si
SLU 78	fin.	-7.18	-203	-0.000022	0.0001872	0.0035	0.36		482.14	482.14	No	67.15	Si
SLU 57	ini.	-61.34	-419	-0.0002025	0.0001872	0.0035	0.36		482.14	482.14	No	7.86	Si
SLU 57	fin.	-7.79	-216	-0.0000238	0.0001872	0.0035	0.36		482.14	482.14	No	61.85	Si
SLU 80	ini.	-61.99	-414	-0.0002048	0.0001872	0.0035	0.36		482.14	482.14	No	7.78	Si
SLU 80	fin.	-6.93	-203	-0.0000212	0.0001872	0.0035	0.36		482.14	482.14	No	69.56	Si
SLU 77	ini.	-63.42	-417	-0.0002101	0.0001872	0.0035	0.36		482.14	482.14	No	7.6	Si
SLU 77	fin.	-8.31	-206	-0.0000254	0.0001872	0.0035	0.36		482.14	482.14	No	58	Si
SLU 79	ini.	-61.08	-409	-0.0002015	0.0001872	0.0035	0.36		482.14	482.14	No	7.89	Si
SLU 79	fin.	-8.06	-206	-0.0000247	0.0001872	0.0035	0.36		482.14	482.14	No	59.79	Si
SLU 72	ini.	-60.45	-391	-0.0001993	0.0001872	0.0035	0.36		482.14	482.14	No	7.98	Si
SLU 72	fin.	-6.15	-183	-0.0000188	0.0001872	0.0035	0.36		482.14	482.14	No	78.39	Si
SLU 75	ini.	-60.3	-387	-0.0001987	0.0001872	0.0035	0.36		482.14	482.14	No	7.99	Si
SLU 75	fin.	-2.97	-168	-0.000009	0.0001872	0.0035	0.36		482.14	482.14	No	162.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-61.08	453	0.36	0	105	2855	1509	918	2427	No	5.36	Si
SLU 79	fin.	-8.06	-41	0.36	0	105	2855	1509	918	2427	No	58.5	Si
SLU 77	ini.	-63.42	477	0.36	0	105	2855	1509	918	2427	No	5.09	Si
SLU 77	fin.	-8.31	-47	0.36	0	105	2855	1509	918	2427	No	51.9	Si
SLU 75	ini.	-60.3	459	0.36	0	105	2855	1509	918	2427	No	5.29	Si
SLU 75	fin.	-2.97	-22	0.36	0	105	2855	1509	918	2427	No	109.43	Si
SLU 70	ini.	-62.79	483	0.36	0	105	2855	1509	918	2427	No	5.03	Si
SLU 70	fin.	-6.4	-44	0.36	0	105	2855	1509	918	2427	No	55.71	Si
SLU 74	ini.	-59.4	453	0.36	0	105	2855	1509	918	2427	No	5.36	Si
SLU 74	fin.	-4.1	-29	0.36	0	105	2855	1509	918	2427	No	84.13	Si
SLU 78	ini.	-64.32	484	0.36	0	105	2855	1509	918	2427	No	5.02	Si
SLU 78	fin.	-7.18	-40	0.36	0	105	2855	1509	918	2427	No	60.53	Si
SLU 69	ini.	-61.89	477	0.36	0	105	2855	1509	918	2427	No	5.09	Si
SLU 69	fin.	-7.53	-50	0.36	0	105	2855	1509	918	2427	No	48.32	Si
SLU 67	ini.	-58.77	458	0.36	0	105	2855	1509	918	2427	No	5.29	Si
SLU 67	fin.	-2.19	-26	0.36	0	105	2855	1509	918	2427	No	94.65	Si
SLU 80	ini.	-61.99	459	0.36	0	105	2855	1509	918	2427	No	5.29	Si
SLU 80	fin.	-6.93	-35	0.36	0	105	2855	1509	918	2427	No	69.7	Si
SLU 72	ini.	-60.45	459	0.36	0	105	2855	1509	918	2427	No	5.29	Si
SLU 72	fin.	-6.15	-38	0.36	0	105	2855	1509	918	2427	No	63.39	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-107.91	-718	-0.000368	0.0002807	0.0035	0.36		485.29	485.29		4.5	Si
SLV 9	fin.	76.7	2	-0.0002524	0.0002807	0.0035	0.36		482.94	482.94		6.3	Si
SLV 10	ini.	-104.77	-725	-0.0003557	0.0002807	0.0035	0.36		485.29	485.29		4.63	Si
SLV 10	fin.	68.35	-50	-0.0002227	0.0002807	0.0035	0.36		482.94	482.94		7.07	Si
SLV 14	ini.	-43.99	49	-0.0001389	0.0002807	0.0035	0.36		485.29	485.29		11.03	Si
SLV 14	fin.	78.8	553	-0.0002599	0.0002807	0.0035	0.36		482.94	482.94		6.13	Si
SLV 6	ini.	-113.38	-1018	-0.0003896	0.0002807	0.0035	0.36		485.29	485.29		4.28	Si
SLV 6	fin.	26.7	-491	-0.0000833	0.0002807	0.0035	0.36		482.94	482.94		18.09	Si
SLV 5	ini.	-116.52	-1011	-0.0004022	0.0002807	0.0035	0.36		485.29	485.29		4.16	Si
SLV 5	fin.	35.06	-439	-0.0001103	0.0002807	0.0035	0.36		482.94	482.94		13.78	Si
SLV 1	ini.	-77.56	-919	-0.0002542	0.0002807	0.0035	0.36		485.29	485.29		6.26	Si
SLV 1	fin.	-47.06	-836	-0.0001491	0.0002807	0.0035	0.36		485.29	485.29		10.31	Si
SLV 13	ini.	-48.87	60	-0.0001551	0.0002807	0.0035	0.36		485.29	485.29		9.93	Si
SLV 13	fin.	91.77	633	-0.0003077	0.0002807	0.0035	0.36		482.94	482.94		5.26	Si
SLV 8	ini.	29.1	218	-0.000091	0.0002807	0.0035	0.36		482.94	482.94		16.6	Si
SLV 8	fin.	-75.68	-197	-0.0002475	0.0002807	0.0035	0.36		485.29	485.29		6.41	Si
SLV 4	ini.	-29.94	-559	-0.0000933	0.0002807	0.0035	0.36		485.29	485.29		16.21	Si
SLV 4	fin.	-90.74	-828	-0.0003023	0.0002807	0.0035	0.36		485.29	485.29		5.35	Si
SLV 3	ini.	-34.82	-549	-0.000109	0.0002807	0.0035	0.36		485.29	485.29		13.94	Si
SLV 3	fin.	-77.77	-748	-0.0002549	0.0002807	0.0035	0.36		485.29	485.29		6.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 9	ini.	-69.7	490	0.36	0	158	2855	2264	918	3012		6.14	Si
SLD 9	fin.	33.72	192	0.36	0	158	2855	2264	918	3012		15.72	Si
SLV 9	ini.	-107.91	730	0.36	0	158	2855	2264	918	3012		4.13	Si
SLV 9	fin.	76.7	442	0.36	0	158	2855	2264	918	3012		6.81	Si
SLV 13	ini.	-48.87	662	0.36	0	158	2855	2264	918	3012		4.55	Si
SLV 13	fin.	91.77	321	0.36	0	158	2855	2264	918	3012		9.4	Si
SLD 10	ini.	-68.33	474	0.36	0	158	2855	2264	918	3012		6.36	Si
SLD 10	fin.	30.07	176	0.36	0	158	2855	2264	918	3012		17.13	Si
SLV 14	ini.	-43.99	603	0.36	0	158	2855	2264	918	3012		5	Si
SLV 14	fin.	78.8	264	0.36	0	158	2855	2264	918	3012		11.4	Si
SLV 10	ini.	-104.77	692	0.36	0	158	2855	2264	918	3012		4.36	Si
SLV 10	fin.	68.35	406	0.36	0	158	2855	2264	918	3012		7.42	Si
SLV 6	ini.	-113.38	555	0.36	0	158	2855	2264	918	3012		5.43	Si
SLV 6	fin.	26.7	295	0.36	0	158	2855	2264	918	3012		10.21	Si
SLV 5	ini.	-116.52	593	0.36	0	158	2855	2264	918	3012		5.08	Si
SLV 5	fin.	35.06	331	0.36	0	158	2855	2264	918	3012		9.09	Si
SLV 15	ini.	-6.12	459	0.36	0	158	2855	2264	918	3012		6.57	Si
SLV 15	fin.	61.05	96	0.36	0	158	2855	2264	918	3012		31.28	Si
SLD 13	ini.	-43.78	458	0.36	0	158	2855	2264	918	3012		6.57	Si
SLD 13	fin.	39.8	136	0.36	0	158	2855	2264	918	3012		22.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.165	SLV 5	Si
V_SLV	4.126	SLV 9	Si
PF_SLU	7.495	SLU 78	Si
V_SLU	5.02	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	12.5	13.4	0.9	-18.263	-3.314	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 17	ini.	96.22	-514	-0.000048	0.0001872	0.0035	0.9		2959	2959	No	30.75	Si
SLU 17	fin.	1.77	-306	-0.0000009	0.0001872	0.0035	0.9		2959	2959	No	1675.46	Si
SLU 60	ini.	96.31	-509	-0.000048	0.0001872	0.0035	0.9		2959	2959	No	30.72	Si
SLU 60	fin.	-19.6	-219	-0.0000096	0.0001872	0.0035	0.9		2964.67	2964.67	No	151.29	Si
SLU 56	ini.	107.95	-620	-0.0000539	0.0001872	0.0035	0.9		2959	2959	No	27.41	Si
SLU 56	fin.	13.26	-439	-0.0000065	0.0001872	0.0035	0.9		2959	2959	No	223.19	Si
SLU 58	ini.	115.86	-624	-0.000058	0.0001872	0.0035	0.9		2959	2959	No	25.54	Si
SLU 58	fin.	2.85	-385	-0.0000014	0.0001872	0.0035	0.9		2959	2959	No	1039.41	Si
SLU 62	ini.	111.54	-577	-0.0000558	0.0001872	0.0035	0.9		2959	2959	No	26.53	Si
SLU 62	fin.	-15.29	-271	-0.0000075	0.0001872	0.0035	0.9		2964.67	2964.67	No	193.95	Si
SLU 63	ini.	111.2	-575	-0.0000556	0.0001872	0.0035	0.9		2959	2959	No	26.61	Si
SLU 63	fin.	-15.59	-269	-0.0000076	0.0001872	0.0035	0.9		2964.67	2964.67	No	190.19	Si
SLU 55	ini.	100.07	-552	-0.0000499	0.0001872	0.0035	0.9		2959	2959	No	29.57	Si
SLU 55	fin.	-1.97	-331	-0.000001	0.0001872	0.0035	0.9		2964.67	2964.67	No	1506.58	Si
SLU 16	ini.	96.56	-516	-0.0000481	0.0001872	0.0035	0.9		2959	2959	No	30.65	Si
SLU 16	fin.	2.07	-308	-0.000001	0.0001872	0.0035	0.9		2959	2959	No	1430.44	Si
SLU 57	ini.	107.61	-618	-0.0000538	0.0001872	0.0035	0.9		2959	2959	No	27.5	Si
SLU 57	fin.	12.96	-437	-0.0000064	0.0001872	0.0035	0.9		2959	2959	No	228.4	Si
SLU 59	ini.	115.52	-622	-0.0000578	0.0001872	0.0035	0.9		2959	2959	No	25.61	Si
SLU 59	fin.	2.54	-383	-0.0000012	0.0001872	0.0035	0.9		2959	2959	No	1162.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	61.41	-511	0.9	0	365	7137	3773	2295	6068	No	11.88	Si
SLU 70	fin.	65.42	975	0.9	0	365	7137	3773	2295	6068	No	6.22	Si
SLU 71	ini.	69.66	-537	0.9	0	365	7137	3773	2295	6068	No	11.3	Si
SLU 71	fin.	55.32	898	0.9	0	365	7137	3773	2295	6068	No	6.76	Si
SLU 69	ini.	61.75	-515	0.9	0	365	7137	3773	2295	6068	No	11.77	Si
SLU 69	fin.	65.73	980	0.9	0	365	7137	3773	2295	6068	No	6.19	Si
SLU 27	ini.	42.44	-372	0.9	0	365	7137	3773	2295	6068	No	16.31	Si
SLU 27	fin.	64.95	846	0.9	0	365	7137	3773	2295	6068	No	7.17	Si
SLU 66	ini.	46.52	-426	0.9	0	365	7137	3773	2295	6068	No	14.24	Si
SLU 66	fin.	61.42	918	0.9	0	365	7137	3773	2295	6068	No	6.61	Si
SLU 28	ini.	42.1	-368	0.9	0	365	7137	3773	2295	6068	No	16.51	Si
SLU 28	fin.	64.65	841	0.9	0	365	7137	3773	2295	6068	No	7.21	Si
SLU 72	ini.	69.32	-532	0.9	0	365	7137	3773	2295	6068	No	11.4	Si
SLU 72	fin.	55.01	892	0.9	0	365	7137	3773	2295	6068	No	6.8	Si
SLU 67	ini.	46.18	-422	0.9	0	365	7137	3773	2295	6068	No	14.39	Si
SLU 67	fin.	61.11	913	0.9	0	365	7137	3773	2295	6068	No	6.65	Si
SLU 49	ini.	82.16	-633	0.9	0	365	7137	3773	2295	6068	No	9.58	Si
SLU 49	fin.	45.21	885	0.9	0	365	7137	3773	2295	6068	No	6.86	Si
SLU 48	ini.	82.5	-638	0.9	0	365	7137	3773	2295	6068	No	9.51	Si
SLU 48	fin.	45.51	890	0.9	0	365	7137	3773	2295	6068	No	6.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-823.74	1483	-0.0004686	0.0002807	0.0035	0.9		2995.37	2995.37		3.64	Si
SLV 16	fin.	733.31	-3046	-0.0004095	0.0002807	0.0035	0.9		2989.59	2989.59		4.08	Si
SLV 13	ini.	-667.2	1163	-0.0003663	0.0002807	0.0035	0.9		2995.37	2995.37		4.49	Si
SLV 13	fin.	588.26	-2340	-0.000318	0.0002807	0.0035	0.9		2989.59	2989.59		5.08	Si
SLV 15	ini.	-880.82	1608	-0.0005077	0.0002807	0.0035	0.9		2995.37	2995.37		3.4	Si
SLV 15	fin.	778.41	-3197	-0.0004392	0.0002807	0.0035	0.9		2989.59	2989.59		3.84	Si
SLV 3	ini.	694.1	-1715	-0.0003841	0.0002807	0.0035	0.9		2989.59	2989.59		4.31	Si
SLV 3	fin.	-498.64	1518	-0.0002641	0.0002807	0.0035	0.9		2995.37	2995.37		6.01	Si
SLV 6	ini.	652.64	-1617	-0.0003579	0.0002807	0.0035	0.9		2989.59	2989.59		4.58	Si
SLV 6	fin.	-500.75	1851	-0.0002653	0.0002807	0.0035	0.9		2995.37	2995.37		5.98	Si
SLV 14	ini.	-610.12	1039	-0.0003307	0.0002807	0.0035	0.9		2995.37	2995.37		4.91	Si
SLV 14	fin.	543.16	-2188	-0.0002909	0.0002807	0.0035	0.9		2989.59	2989.59		5.5	Si
SLV 5	ini.	615.86	-1537	-0.0003349	0.0002807	0.0035	0.9		2989.59	2989.59		4.85	Si
SLV 5	fin.	-471.68	1753	-0.0002485	0.0002807	0.0035	0.9		2995.37	2995.37		6.35	Si
SLV 4	ini.	751.18	-1840	-0.0004212	0.0002807	0.0035	0.9		2989.59	2989.59		3.98	Si
SLV 4	fin.	-543.74	1669	-0.0002906	0.0002807	0.0035	0.9		2995.37	2995.37		5.51	Si
SLV 1	ini.	907.71	-2160	-0.0005276	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 1	fin.	-688.79	2375	-0.0003799	0.0002807	0.0035	0.9		2995.37	2995.37		4.35	Si
SLV 2	ini.	964.79	-2284	-0.0005681	0.0002807	0.0035	0.9		2989.59	2989.59		3.1	Si
SLV 2	fin.	-733.89	2527	-0.000409	0.0002807	0.0035	0.9		2995.37	2995.37		4.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	751.18	-3916	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLV 4	fin.	-543.74	-2103	0.9	0	548	7137	5660	2295	7684		3.65	Si
SLV 13	ini.	-667.2	3266	0.9	0	548	7137	5660	2295	7684		2.35	Si
SLV 13	fin.	588.26	3117	0.9	0	548	7137	5660	2295	7684		2.47	Si
SLV 1	ini.	907.71	-4445	0.9	0	548	7137	5660	2295	7684		1.73	Si
SLV 1	fin.	-688.79	-3138	0.9	0	548	7137	5660	2295	7684		2.45	Si
SLV 2	ini.	964.79	-4726	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 2	fin.	-733.89	-3311	0.9	0	548	7137	5660	2295	7684		2.32	Si
SLV 15	ini.	-880.82	4076	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 15	fin.	778.41	4325	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 16	ini.	-823.74	3795	0.9	0	548	7137	5660	2295	7684		2.02	Si
SLV 16	fin.	733.31	4152	0.9	0	548	7137	5660	2295	7684		1.85	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-568.67	2272	0.9	0	548	7137	5660	2295	7684		3.38	Si
SLV 11	fin.	545.27	3514	0.9	0	548	7137	5660	2295	7684		2.19	Si
SLV 14	ini.	-610.12	2985	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 14	fin.	543.16	2944	0.9	0	548	7137	5660	2295	7684		2.61	Si
SLV 3	ini.	694.1	-3635	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 3	fin.	-498.64	-1930	0.9	0	548	7137	5660	2295	7684		3.98	Si
SLV 12	ini.	-531.89	2091	0.9	0	548	7137	5660	2295	7684		3.67	Si
SLV 12	fin.	516.2	3402	0.9	0	548	7137	5660	2295	7684		2.26	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.099	SLV 2	Si
V_SLV	1.626	SLV 2	Si
PF_SLU	25.539	SLU 58	Si
V_SLU	6.19	SLU 69	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	15.2	15.66	0.46	-18.263	-3.314	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	56.18	262	-0.0001097	0.0001872	0.0035	0.46		777.36	777.36	No	13.84	Si
SLU 50	fin.	-77.04	-605	-0.0001527	0.0001872	0.0035	0.46		780.23	780.23	No	10.13	Si
SLU 79	ini.	58.93	302	-0.0001154	0.0001872	0.0035	0.46		777.36	777.36	No	13.19	Si
SLU 79	fin.	-78.42	-632	-0.0001557	0.0001872	0.0035	0.46		780.23	780.23	No	9.95	Si
SLU 77	ini.	52.42	297	-0.000102	0.0001872	0.0035	0.46		777.36	777.36	No	14.83	Si
SLU 77	fin.	-78.19	-637	-0.0001552	0.0001872	0.0035	0.46		780.23	780.23	No	9.98	Si
SLU 80	ini.	59.15	302	-0.0001158	0.0001872	0.0035	0.46		777.36	777.36	No	13.14	Si
SLU 80	fin.	-78.33	-634	-0.0001555	0.0001872	0.0035	0.46		780.23	780.23	No	9.96	Si
SLU 56	ini.	60.69	299	-0.000119	0.0001872	0.0035	0.46		777.36	777.36	No	12.81	Si
SLU 56	fin.	-83.07	-660	-0.0001657	0.0001872	0.0035	0.46		780.23	780.23	No	9.39	Si
SLU 57	ini.	60.92	299	-0.0001195	0.0001872	0.0035	0.46		777.36	777.36	No	12.76	Si
SLU 57	fin.	-82.98	-662	-0.0001654	0.0001872	0.0035	0.46		780.23	780.23	No	9.4	Si
SLU 59	ini.	67.42	305	-0.000133	0.0001872	0.0035	0.46		777.36	777.36	No	11.53	Si
SLU 59	fin.	-83.21	-657	-0.000166	0.0001872	0.0035	0.46		780.23	780.23	No	9.38	Si
SLU 78	ini.	52.64	297	-0.0001025	0.0001872	0.0035	0.46		777.36	777.36	No	14.77	Si
SLU 78	fin.	-78.09	-639	-0.000155	0.0001872	0.0035	0.46		780.23	780.23	No	9.99	Si
SLU 51	ini.	56.4	262	-0.0001102	0.0001872	0.0035	0.46		777.36	777.36	No	13.78	Si
SLU 51	fin.	-76.94	-606	-0.0001525	0.0001872	0.0035	0.46		780.23	780.23	No	10.14	Si
SLU 58	ini.	67.2	305	-0.0001325	0.0001872	0.0035	0.46		777.36	777.36	No	11.57	Si
SLU 58	fin.	-83.31	-655	-0.0001662	0.0001872	0.0035	0.46		780.23	780.23	No	9.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	58.93	-6	0.46	0	124	3648	1928	1173	3101	No	543.34	Si
SLU 79	fin.	-78.42	-1196	0.46	0	124	3648	1928	1173	3101	No	2.59	Si
SLU 58	ini.	67.2	-41	0.46	0	124	3648	1928	1173	3101	No	75.63	Si
SLU 58	fin.	-83.31	-1173	0.46	0	124	3648	1928	1173	3101	No	2.64	Si
SLU 59	ini.	67.42	-43	0.46	0	124	3648	1928	1173	3101	No	72.86	Si
SLU 59	fin.	-83.21	-1171	0.46	0	124	3648	1928	1173	3101	No	2.65	Si
SLU 78	ini.	52.64	25	0.46	0	124	3648	1928	1173	3101	No	125.28	Si
SLU 78	fin.	-78.09	-1240	0.46	0	124	3648	1928	1173	3101	No	2.5	Si
SLU 57	ini.	60.92	-11	0.46	0	124	3648	1928	1173	3101	No	294.18	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	fin.	-82.98	-1217	0.46	0	124	3648	1928	1173	3101	No	2.55	Si
SLU 56	ini.	60.69	-9	0.46	0	124	3648	1928	1173	3101	No	345.21	Si
SLU 56	fin.	-83.07	-1219	0.46	0	124	3648	1928	1173	3101	No	2.54	Si
SLU 70	ini.	41.62	67	0.46	0	124	3648	1928	1173	3101	No	46.03	Si
SLU 70	fin.	-71.82	-1179	0.46	0	124	3648	1928	1173	3101	No	2.63	Si
SLU 80	ini.	59.15	-7	0.46	0	124	3648	1928	1173	3101	No	426.81	Si
SLU 80	fin.	-78.33	-1194	0.46	0	124	3648	1928	1173	3101	No	2.6	Si
SLU 69	ini.	41.39	69	0.46	0	124	3648	1928	1173	3101	No	44.99	Si
SLU 69	fin.	-71.92	-1181	0.46	0	124	3648	1928	1173	3101	No	2.63	Si
SLU 77	ini.	52.42	26	0.46	0	124	3648	1928	1173	3101	No	117.86	Si
SLU 77	fin.	-78.19	-1242	0.46	0	124	3648	1928	1173	3101	No	2.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	321.48	925	-0.0007673	0.0002807	0.0035	0.46		785.44	785.44		2.44	Si
SLV 5	fin.	-219.35	-1666	-0.0004774	0.0002807	0.0035	0.46		788.4	788.4		3.59	Si
SLV 6	ini.	334.16	962	-0.0008061	0.0002807	0.0035	0.46		785.44	785.44		2.35	Si
SLV 6	fin.	-231.4	-1737	-0.000509	0.0002807	0.0035	0.46		788.4	788.4		3.41	Si
SLV 11	ini.	-263.73	-553	-0.0005966	0.0002807	0.0035	0.46		788.4	788.4		2.99	Si
SLV 11	fin.	145.54	1017	-0.0002986	0.0002807	0.0035	0.46		785.44	785.44		5.4	Si
SLV 16	ini.	-336.13	-679	-0.0008085	0.0002807	0.0035	0.46		788.4	788.4		2.35	Si
SLV 16	fin.	201.8	1287	-0.0004344	0.0002807	0.0035	0.46		785.44	785.44		3.89	Si
SLV 2	ini.	426.23	1146	-0.0011116	0.0002807	0.0035	0.46		785.44	785.44		1.84	Si
SLV 2	fin.	-306.37	-2117	-0.0007187	0.0002807	0.0035	0.46		788.4	788.4		2.57	Si
SLV 15	ini.	-355.8	-737	-0.0008701	0.0002807	0.0035	0.46		788.4	788.4		2.22	Si
SLV 15	fin.	220.5	1397	-0.0004825	0.0002807	0.0035	0.46		785.44	785.44		3.56	Si
SLV 1	ini.	406.56	1087	-0.0010425	0.0002807	0.0035	0.46		785.44	785.44		1.93	Si
SLV 1	fin.	-287.66	-2007	-0.0006642	0.0002807	0.0035	0.46		788.4	788.4		2.74	Si
SLV 4	ini.	308.7	839	-0.0007289	0.0002807	0.0035	0.46		785.44	785.44		2.54	Si
SLV 4	fin.	-236.33	-1569	-0.0005221	0.0002807	0.0035	0.46		788.4	788.4		3.34	Si
SLV 3	ini.	289.03	781	-0.0006711	0.0002807	0.0035	0.46		785.44	785.44		2.72	Si
SLV 3	fin.	-217.63	-1459	-0.000473	0.0002807	0.0035	0.46		788.4	788.4		3.62	Si
SLV 12	ini.	-251.06	-516	-0.0005618	0.0002807	0.0035	0.46		788.4	788.4		3.14	Si
SLV 12	fin.	133.49	946	-0.0002713	0.0002807	0.0035	0.46		785.44	785.44		5.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	289.03	-986	0.46	0	187	3648	2893	1173	3834		3.89	Si
SLV 3	fin.	-217.63	-1704	0.46	0	187	3648	2893	1173	3834		2.25	Si
SLV 15	ini.	-355.8	1491	0.46	0	187	3648	2893	1173	3834		2.57	Si
SLV 15	fin.	220.5	905	0.46	0	187	3648	2893	1173	3834		4.24	Si
SLD 1	ini.	194.81	-585	0.46	0	187	3648	2893	1173	3834		6.56	Si
SLD 1	fin.	-148.12	-1361	0.46	0	187	3648	2893	1173	3834		2.82	Si
SLV 5	ini.	321.48	-1000	0.46	0	187	3648	2893	1173	3834		3.83	Si
SLV 5	fin.	-219.35	-1908	0.46	0	187	3648	2893	1173	3834		2.01	Si
SLV 16	ini.	-336.13	1428	0.46	0	187	3648	2893	1173	3834		2.69	Si
SLV 16	fin.	201.8	764	0.46	0	187	3648	2893	1173	3834		5.02	Si
SLD 2	ini.	203.25	-612	0.46	0	187	3648	2893	1173	3834		6.27	Si
SLD 2	fin.	-156.15	-1422	0.46	0	187	3648	2893	1173	3834		2.7	Si
SLV 6	ini.	334.16	-1041	0.46	0	187	3648	2893	1173	3834		3.68	Si
SLV 6	fin.	-231.4	-1998	0.46	0	187	3648	2893	1173	3834		1.92	Si
SLV 1	ini.	406.56	-1387	0.46	0	187	3648	2893	1173	3834		2.76	Si
SLV 1	fin.	-287.66	-2208	0.46	0	187	3648	2893	1173	3834		1.74	Si
SLV 4	ini.	308.7	-1049	0.46	0	187	3648	2893	1173	3834		3.65	Si
SLV 4	fin.	-236.33	-1845	0.46	0	187	3648	2893	1173	3834		2.08	Si
SLV 2	ini.	426.23	-1451	0.46	0	187	3648	2893	1173	3834		2.64	Si
SLV 2	fin.	-306.37	-2349	0.46	0	187	3648	2893	1173	3834		1.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.843	SLV 2	Si
V_SLV	1.632	SLV 2	Si
PF_SLU	9.366	SLU 58	Si
V_SLU	2.497	SLU 77	Si

Trave di accoppiamento 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	14.6	15.66	1.06	-18.518	0.706	14.6	15.66	1.06	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	ini.	209.35	337	-0.0000757	0.0002246	0.0035	1.06		4231.66	4231.66	No	20.21	Si
SLU 51	fin.	8.43	-9	-0.000003	0.0002246	0.0035	1.06		4231.66	4231.66	No	502.17	Si
SLU 47	ini.	176.24	297	-0.0000635	0.0002246	0.0035	1.06		4231.66	4231.66	No	24.01	Si
SLU 47	fin.	9.99	-11	-0.0000035	0.0002246	0.0035	1.06		4231.66	4231.66	No	423.41	Si
SLU 5	ini.	142.86	232	-0.0000512	0.0002246	0.0035	1.06		4231.66	4231.66	No	29.62	Si
SLU 5	fin.	8.63	-9	-0.000003	0.0002246	0.0035	1.06		4231.66	4231.66	No	490.59	Si
SLU 50	ini.	187.57	282	-0.0000677	0.0002246	0.0035	1.06		4231.66	4231.66	No	22.56	Si
SLU 50	fin.	6.85	-17	-0.0000024	0.0002246	0.0035	1.06		4231.66	4231.66	No	617.38	Si
SLU 72	ini.	163.57	203	-0.0000588	0.0002246	0.0035	1.06		4231.66	4231.66	No	25.87	Si
SLU 72	fin.	10.14	-26	-0.0000036	0.0002246	0.0035	1.06		4231.66	4231.66	No	417.17	Si
SLU 59	ini.	154.23	208	-0.0000554	0.0002246	0.0035	1.06		4231.66	4231.66	No	27.44	Si
SLU 59	fin.	12.59	-19	-0.0000044	0.0002246	0.0035	1.06		4231.66	4231.66	No	336.24	Si
SLU 9	ini.	175.97	271	-0.0000634	0.0002246	0.0035	1.06		4231.66	4231.66	No	24.05	Si
SLU 9	fin.	7.06	-6	-0.0000025	0.0002246	0.0035	1.06		4231.66	4231.66	No	599.54	Si
SLU 71	ini.	141.79	149	-0.0000509	0.0002246	0.0035	1.06		4231.66	4231.66	No	29.85	Si
SLU 71	fin.	8.57	-34	-0.000003	0.0002246	0.0035	1.06		4231.66	4231.66	No	493.7	Si
SLU 8	ini.	154.19	217	-0.0000554	0.0002246	0.0035	1.06		4231.66	4231.66	No	27.44	Si
SLU 8	fin.	5.49	-14	-0.0000019	0.0002246	0.0035	1.06		4231.66	4231.66	No	771.4	Si
SLU 49	ini.	161.98	215	-0.0000582	0.0002246	0.0035	1.06		4231.66	4231.66	No	26.12	Si
SLU 49	fin.	3.23	-37	-0.0000011	0.0002246	0.0035	1.06		4231.66	4231.66	No	1311.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	128.61	-112	1.06	0	246	6344	3048	2703	5751	No	51.4	Si
SLU 44	fin.	10.51	-447	1.06	0	246	6344	3048	2703	5751	No	12.87	Si
SLU 47	ini.	176.24	-217	1.06	0	246	6344	3048	2703	5751	No	26.47	Si
SLU 47	fin.	9.99	-552	1.06	0	246	6344	3048	2703	5751	No	10.42	Si
SLU 9	ini.	175.97	-244	1.06	0	246	6344	3048	2703	5751	No	23.6	Si
SLU 9	fin.	7.06	-505	1.06	0	246	6344	3048	2703	5751	No	11.4	Si
SLU 48	ini.	140.2	-114	1.06	0	246	6344	3048	2703	5751	No	50.25	Si
SLU 48	fin.	1.65	-449	1.06	0	246	6344	3048	2703	5751	No	12.8	Si
SLU 50	ini.	187.57	-229	1.06	0	246	6344	3048	2703	5751	No	25.11	Si
SLU 50	fin.	6.85	-564	1.06	0	246	6344	3048	2703	5751	No	10.2	Si
SLU 59	ini.	154.23	-133	1.06	0	246	6344	3048	2703	5751	No	43.39	Si
SLU 59	fin.	12.59	-467	1.06	0	246	6344	3048	2703	5751	No	12.31	Si
SLU 8	ini.	154.19	-188	1.06	0	246	6344	3048	2703	5751	No	30.67	Si
SLU 8	fin.	5.49	-448	1.06	0	246	6344	3048	2703	5751	No	12.82	Si
SLU 72	ini.	163.57	-144	1.06	0	246	6344	3048	2703	5751	No	40	Si
SLU 72	fin.	10.14	-492	1.06	0	246	6344	3048	2703	5751	No	11.7	Si
SLU 51	ini.	209.35	-285	1.06	0	246	6344	3048	2703	5751	No	20.16	Si
SLU 51	fin.	8.43	-620	1.06	0	246	6344	3048	2703	5751	No	9.28	Si
SLU 49	ini.	161.98	-171	1.06	0	246	6344	3048	2703	5751	No	33.71	Si
SLU 49	fin.	3.23	-505	1.06	0	246	6344	3048	2703	5751	No	11.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1377.36	-3391	-0.0005722	0.0003369	0.0035	1.06		4350.23	4350.23		3.16	Si
SLV 12	fin.	93.07	-134	-0.0000331	0.0003369	0.0035	1.06		4343.51	4343.51		46.67	Si
SLV 8	ini.	-1534.61	-3769	-0.000653	0.0003369	0.0035	1.06		4350.23	4350.23		2.83	Si
SLV 8	fin.	117.97	-110	-0.000042	0.0003369	0.0035	1.06		4343.51	4343.51		36.82	Si
SLV 13	ini.	773.14	1779	-0.0002953	0.0003369	0.0035	1.06		4343.51	4343.51		5.62	Si
SLV 13	fin.	-60.38	-38	-0.0000214	0.0003369	0.0035	1.06		4350.23	4350.23		72.05	Si
SLD 9	ini.	719.27	1647	-0.0002729	0.0003369	0.0035	1.06		4343.51	4343.51		6.04	Si
SLD 9	fin.	-38.17	0	-0.0000135	0.0003369	0.0035	1.06		4350.23	4350.23		113.97	Si
SLV 6	ini.	1381.43	3232	-0.0005753	0.0003369	0.0035	1.06		4343.51	4343.51		3.14	Si
SLV 6	fin.	-80.03	40	-0.0000284	0.0003369	0.0035	1.06		4350.23	4350.23		54.35	Si
SLV 11	ini.	-1321.22	-3251	-0.0005442	0.0003369	0.0035	1.06		4350.23	4350.23		3.29	Si
SLV 11	fin.	96.44	-114	-0.0000343	0.0003369	0.0035	1.06		4343.51	4343.51		45.04	Si
SLV 9	ini.	1594.81	3749	-0.0006862	0.0003369	0.0035	1.06		4343.51	4343.51		2.72	Si
SLV 9	fin.	-101.56	37	-0.0000361	0.0003369	0.0035	1.06		4350.23	4350.23		42.83	Si
SLV 7	ini.	-1478.47	-3628	-0.0006237	0.0003369	0.0035	1.06		4350.23	4350.23		2.94	Si
SLV 7	fin.	121.34	-91	-0.0000433	0.0003369	0.0035	1.06		4343.51	4343.51		35.8	Si
SLV 10	ini.	1538.68	3609	-0.0006564	0.0003369	0.0035	1.06		4343.51	4343.51		2.82	Si
SLV 10	fin.	-104.93	17	-0.0000373	0.0003369	0.0035	1.06		4350.23	4350.23		41.46	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1437.56	3372	-0.0006038	0.0003369	0.0035	1.06		4343.51	4343.51		3.02	Si
SLV 5	fin.	-76.67	60	-0.0000272	0.0003369	0.0035	1.06		4350.23	4350.23		56.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	1594.81	-4203	1.06	0	369	6344	4571	2703	6712		1.6	Si
SLV 9	fin.	-101.56	-4482	1.06	0	369	6344	4571	2703	6712		1.5	Si
SLV 13	ini.	773.14	-1911	1.06	0	369	6344	4571	2703	6712		3.51	Si
SLV 13	fin.	-60.38	-2195	1.06	0	369	6344	4571	2703	6712		3.06	Si
SLV 8	ini.	-1534.61	4417	1.06	0	369	6344	4571	2703	6712		1.52	Si
SLV 8	fin.	117.97	4167	1.06	0	369	6344	4571	2703	6712		1.61	Si
SLV 6	ini.	1381.43	-3639	1.06	0	369	6344	4571	2703	6712		1.84	Si
SLV 6	fin.	-80.03	-3909	1.06	0	369	6344	4571	2703	6712		1.72	Si
SLV 4	ini.	-712.94	2125	1.06	0	369	6344	4571	2703	6712		3.16	Si
SLV 4	fin.	76.79	1880	1.06	0	369	6344	4571	2703	6712		3.57	Si
SLV 10	ini.	1538.68	-4057	1.06	0	369	6344	4571	2703	6712		1.65	Si
SLV 10	fin.	-104.93	-4336	1.06	0	369	6344	4571	2703	6712		1.55	Si
SLV 11	ini.	-1321.22	3853	1.06	0	369	6344	4571	2703	6712		1.74	Si
SLV 11	fin.	96.44	3594	1.06	0	369	6344	4571	2703	6712		1.87	Si
SLV 5	ini.	1437.56	-3785	1.06	0	369	6344	4571	2703	6712		1.77	Si
SLV 5	fin.	-76.67	-4054	1.06	0	369	6344	4571	2703	6712		1.66	Si
SLV 7	ini.	-1478.47	4271	1.06	0	369	6344	4571	2703	6712		1.57	Si
SLV 7	fin.	121.34	4022	1.06	0	369	6344	4571	2703	6712		1.67	Si
SLV 12	ini.	-1377.36	3999	1.06	0	369	6344	4571	2703	6712		1.68	Si
SLV 12	fin.	93.07	3740	1.06	0	369	6344	4571	2703	6712		1.79	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.724	SLV 9	Si
V_SLV	1.498	SLV 9	Si
PF_SLU	20.213	SLU 51	Si
V_SLU	9.275	SLU 51	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	14.6	15.66	1.06	-15.033	2.166	14.6	15.66	1.06	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-94.08	-130	-0.0000335	0.0002246	0.0035	1.06		4238.3	4238.3	No	45.05	Si
SLU 84	fin.	-655.21	-2375	-0.0002532	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.47	Si
SLU 81	ini.	-87.14	-118	-0.000031	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.64	Si
SLU 81	fin.	-661.02	-2380	-0.0002557	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.41	Si
SLU 73	ini.	-85.54	-121	-0.0000304	0.0002246	0.0035	1.06		4238.3	4238.3	No	49.55	Si
SLU 73	fin.	-623.6	-2250	-0.0002396	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.8	Si
SLU 82	ini.	-88.13	-119	-0.0000313	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.09	Si
SLU 82	fin.	-669.65	-2410	-0.0002594	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.33	Si
SLU 83	ini.	-93.09	-129	-0.0000331	0.0002246	0.0035	1.06		4238.3	4238.3	No	45.53	Si
SLU 83	fin.	-646.58	-2344	-0.0002495	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.55	Si
SLU 74	ini.	-98.92	-146	-0.0000352	0.0002246	0.0035	1.06		4238.3	4238.3	No	42.84	Si
SLU 74	fin.	-638.12	-2314	-0.0002458	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.64	Si
SLU 75	ini.	-99.91	-147	-0.0000356	0.0002246	0.0035	1.06		4238.3	4238.3	No	42.42	Si
SLU 75	fin.	-646.76	-2345	-0.0002495	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.55	Si
SLU 77	ini.	-104.87	-157	-0.0000374	0.0002246	0.0035	1.06		4238.3	4238.3	No	40.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-623.68	-2279	-0.0002397	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.8	Si
SLU 76	ini.	-91.49	-132	-0.0000326	0.0002246	0.0035	1.06		4238.3	4238.3	No	46.33	Si
SLU 76	fin.	-609.16	-2214	-0.0002335	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.96	Si
SLU 78	ini.	-105.86	-158	-0.0000377	0.0002246	0.0035	1.06		4238.3	4238.3	No	40.04	Si
SLU 78	fin.	-632.31	-2309	-0.0002433	0.0002246	0.0035	1.06		4238.3	4238.3	No	6.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-94.08	-2015	1.06	0	246	6344	3048	2703	5751	No	2.85	Si
SLU 84	fin.	-655.21	-2357	1.06	0	246	6344	3048	2703	5751	No	2.44	Si
SLU 75	ini.	-99.91	-1966	1.06	0	246	6344	3048	2703	5751	No	2.93	Si
SLU 75	fin.	-646.76	-2308	1.06	0	246	6344	3048	2703	5751	No	2.49	Si
SLU 76	ini.	-91.49	-1853	1.06	0	246	6344	3048	2703	5751	No	3.1	Si
SLU 76	fin.	-609.16	-2195	1.06	0	246	6344	3048	2703	5751	No	2.62	Si
SLU 74	ini.	-98.92	-1937	1.06	0	246	6344	3048	2703	5751	No	2.97	Si
SLU 74	fin.	-638.12	-2279	1.06	0	246	6344	3048	2703	5751	No	2.52	Si
SLU 78	ini.	-105.86	-1909	1.06	0	246	6344	3048	2703	5751	No	3.01	Si
SLU 78	fin.	-632.31	-2251	1.06	0	246	6344	3048	2703	5751	No	2.55	Si
SLU 81	ini.	-87.14	-2042	1.06	0	246	6344	3048	2703	5751	No	2.82	Si
SLU 81	fin.	-661.02	-2384	1.06	0	246	6344	3048	2703	5751	No	2.41	Si
SLU 82	ini.	-88.13	-2071	1.06	0	246	6344	3048	2703	5751	No	2.78	Si
SLU 82	fin.	-669.65	-2413	1.06	0	246	6344	3048	2703	5751	No	2.38	Si
SLU 73	ini.	-85.54	-1909	1.06	0	246	6344	3048	2703	5751	No	3.01	Si
SLU 73	fin.	-623.6	-2251	1.06	0	246	6344	3048	2703	5751	No	2.55	Si
SLU 83	ini.	-93.09	-1986	1.06	0	246	6344	3048	2703	5751	No	2.9	Si
SLU 83	fin.	-646.58	-2328	1.06	0	246	6344	3048	2703	5751	No	2.47	Si
SLU 77	ini.	-104.87	-1880	1.06	0	246	6344	3048	2703	5751	No	3.06	Si
SLU 77	fin.	-623.68	-2222	1.06	0	246	6344	3048	2703	5751	No	2.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	17.17	114	-0.0000061	0.0003369	0.0035	1.06		4343.51	4343.51		253.04	Si
SLV 6	fin.	-1053.34	-3748	-0.000417	0.0003369	0.0035	1.06		4350.23	4350.23		4.13	Si
SLV 13	ini.	-54.93	10	-0.0000194	0.0003369	0.0035	1.06		4350.23	4350.23		79.2	Si
SLV 13	fin.	-1013.89	-3585	-0.0003991	0.0003369	0.0035	1.06		4350.23	4350.23		4.29	Si
SLD 6	ini.	-26.44	-3	-0.0000093	0.0003369	0.0035	1.06		4350.23	4350.23		164.53	Si
SLD 6	fin.	-687.26	-2460	-0.0002593	0.0003369	0.0035	1.06		4350.23	4350.23		6.33	Si
SLV 9	ini.	6.11	135	-0.0000022	0.0003369	0.0035	1.06		4343.51	4343.51		711.29	Si
SLV 9	fin.	-1288.48	-4563	-0.0005281	0.0003369	0.0035	1.06		4350.23	4350.23		3.38	Si
SLV 10	ini.	7.48	137	-0.0000026	0.0003369	0.0035	1.06		4343.51	4343.51		581.03	Si
SLV 10	fin.	-1282.16	-4538	-0.000525	0.0003369	0.0035	1.06		4350.23	4350.23		3.39	Si
SLV 14	ini.	-52.8	13	-0.0000187	0.0003369	0.0035	1.06		4350.23	4350.23		82.38	Si
SLV 14	fin.	-1004.08	-3547	-0.0003947	0.0003369	0.0035	1.06		4350.23	4350.23		4.33	Si
SLD 10	ini.	-30.53	6	-0.0000108	0.0003369	0.0035	1.06		4350.23	4350.23		142.48	Si
SLD 10	fin.	-784.66	-2797	-0.0002996	0.0003369	0.0035	1.06		4350.23	4350.23		5.54	Si
SLD 9	ini.	-31.13	5	-0.000011	0.0003369	0.0035	1.06		4350.23	4350.23		139.74	Si
SLD 9	fin.	-787.42	-2807	-0.0003008	0.0003369	0.0035	1.06		4350.23	4350.23		5.52	Si
SLV 5	ini.	15.8	112	-0.0000056	0.0003369	0.0035	1.06		4343.51	4343.51		274.97	Si
SLV 5	fin.	-1059.66	-3772	-0.0004199	0.0003369	0.0035	1.06		4350.23	4350.23		4.11	Si
SLD 5	ini.	-27.04	-4	-0.0000095	0.0003369	0.0035	1.06		4350.23	4350.23		160.89	Si
SLD 5	fin.	-690.02	-2471	-0.0002605	0.0003369	0.0035	1.06		4350.23	4350.23		6.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-52.8	-3387	1.06	0	369	6344	4571	2703	6712		1.98	Si
SLV 14	fin.	-1004.08	-3633	1.06	0	369	6344	4571	2703	6712		1.85	Si
SLD 9	ini.	-31.13	-2675	1.06	0	369	6344	4571	2703	6712		2.51	Si
SLD 9	fin.	-787.42	-2927	1.06	0	369	6344	4571	2703	6712		2.29	Si
SLV 10	ini.	7.48	-4572	1.06	0	369	6344	4571	2703	6712		1.47	Si
SLV 10	fin.	-1282.16	-4814	1.06	0	369	6344	4571	2703	6712		1.39	Si
SLV 9	ini.	6.11	-4593	1.06	0	369	6344	4571	2703	6712		1.46	Si
SLV 9	fin.	-1288.48	-4835	1.06	0	369	6344	4571	2703	6712		1.39	Si
SLD 5	ini.	-27.04	-2337	1.06	0	369	6344	4571	2703	6712		2.87	Si
SLD 5	fin.	-690.02	-2591	1.06	0	369	6344	4571	2703	6712		2.59	Si
SLD 10	ini.	-30.53	-2666	1.06	0	369	6344	4571	2703	6712		2.52	Si
SLD 10	fin.	-784.66	-2918	1.06	0	369	6344	4571	2703	6712		2.3	Si
SLV 6	ini.	17.17	-3777	1.06	0	369	6344	4571	2703	6712		1.78	Si
SLV 6	fin.	-1053.34	-4024	1.06	0	369	6344	4571	2703	6712		1.67	Si
SLV 13	ini.	-54.93	-3420	1.06	0	369	6344	4571	2703	6712		1.96	Si
SLV 13	fin.	-1013.89	-3666	1.06	0	369	6344	4571	2703	6712		1.83	Si
SLV 5	ini.	15.8	-3798	1.06	0	369	6344	4571	2703	6712		1.77	Si
SLV 5	fin.	-1059.66	-4045	1.06	0	369	6344	4571	2703	6712		1.66	Si
SLD 6	ini.	-26.44	-2328	1.06	0	369	6344	4571	2703	6712		2.88	Si
SLD 6	fin.	-687.26	-2582	1.06	0	369	6344	4571	2703	6712		2.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.376	SLV 9	Si
V_SLV	1.388	SLV 9	Si
PF_SLU	6.329	SLU 82	Si
V_SLU	2.383	SLU 82	Si

Trave di accoppiamento 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	14.6	15.66	1.06	-13.778	0.706	14.6	15.66	1.06	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	48.34	63	-0.0000172	0.0001872	0.0035	1.06		4105.5	4105.5	No	84.94	Si
SLU 50	fin.	-5.88	-2	-0.0000021	0.0001872	0.0035	1.06		4112.11	4112.11	No	699	Si
SLU 30	ini.	44.34	52	-0.0000157	0.0001872	0.0035	1.06		4105.5	4105.5	No	92.6	Si
SLU 30	fin.	-9.72	-1	-0.0000034	0.0001872	0.0035	1.06		4112.11	4112.11	No	423.15	Si
SLU 49	ini.	47.91	72	-0.000017	0.0001872	0.0035	1.06		4105.5	4105.5	No	85.68	Si
SLU 49	fin.	-8.13	-2	-0.0000029	0.0001872	0.0035	1.06		4112.11	4112.11	No	505.64	Si
SLU 51	ini.	52.58	72	-0.0000187	0.0001872	0.0035	1.06		4105.5	4105.5	No	78.09	Si
SLU 51	fin.	-5.61	-2	-0.000002	0.0001872	0.0035	1.06		4112.11	4112.11	No	733.64	Si
SLU 59	ini.	46.35	55	-0.0000164	0.0001872	0.0035	1.06		4105.5	4105.5	No	88.58	Si
SLU 59	fin.	-5.6	0	-0.000002	0.0001872	0.0035	1.06		4112.11	4112.11	No	733.8	Si
SLU 9	ini.	49.21	66	-0.0000175	0.0001872	0.0035	1.06		4105.5	4105.5	No	83.43	Si
SLU 9	fin.	-5.47	-2	-0.0000019	0.0001872	0.0035	1.06		4112.11	4112.11	No	751.59	Si
SLU 72	ini.	47.71	58	-0.0000169	0.0001872	0.0035	1.06		4105.5	4105.5	No	86.06	Si
SLU 72	fin.	-9.85	-2	-0.0000035	0.0001872	0.0035	1.06		4112.11	4112.11	No	417.4	Si
SLU 48	ini.	43.67	62	-0.0000155	0.0001872	0.0035	1.06		4105.5	4105.5	No	94.01	Si
SLU 48	fin.	-8.41	-2	-0.000003	0.0001872	0.0035	1.06		4112.11	4112.11	No	488.94	Si
SLU 7	ini.	44.55	66	-0.0000158	0.0001872	0.0035	1.06		4105.5	4105.5	No	92.16	Si
SLU 7	fin.	-8	-2	-0.0000028	0.0001872	0.0035	1.06		4112.11	4112.11	No	514.1	Si
SLU 8	ini.	44.97	56	-0.000016	0.0001872	0.0035	1.06		4105.5	4105.5	No	91.3	Si
SLU 8	fin.	-5.75	-2	-0.000002	0.0001872	0.0035	1.06		4112.11	4112.11	No	715.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	52.58	215	1.06	0	430	7137	4444	2703	7147	No	33.31	Si
SLU 51	fin.	-5.61	-404	1.06	0	430	7137	4444	2703	7147	No	17.69	Si
SLU 48	ini.	43.67	227	1.06	0	430	7137	4444	2703	7147	No	31.45	Si
SLU 48	fin.	-8.41	-391	1.06	0	430	7137	4444	2703	7147	No	18.27	Si
SLU 59	ini.	46.35	233	1.06	0	430	7137	4444	2703	7147	No	30.7	Si
SLU 59	fin.	-5.6	-386	1.06	0	430	7137	4444	2703	7147	No	18.53	Si
SLU 72	ini.	47.71	231	1.06	0	430	7137	4444	2703	7147	No	30.87	Si
SLU 72	fin.	-9.85	-404	1.06	0	430	7137	4444	2703	7147	No	17.68	Si
SLU 71	ini.	43.46	241	1.06	0	430	7137	4444	2703	7147	No	29.6	Si
SLU 71	fin.	-10.13	-394	1.06	0	430	7137	4444	2703	7147	No	18.13	Si
SLU 49	ini.	47.91	217	1.06	0	430	7137	4444	2703	7147	No	32.89	Si
SLU 49	fin.	-8.13	-401	1.06	0	430	7137	4444	2703	7147	No	17.81	Si
SLU 69	ini.	38.8	244	1.06	0	430	7137	4444	2703	7147	No	29.27	Si
SLU 69	fin.	-12.66	-392	1.06	0	430	7137	4444	2703	7147	No	18.25	Si
SLU 70	ini.	43.04	234	1.06	0	430	7137	4444	2703	7147	No	30.52	Si
SLU 70	fin.	-12.38	-402	1.06	0	430	7137	4444	2703	7147	No	17.8	Si
SLU 80	ini.	41.47	250	1.06	0	430	7137	4444	2703	7147	No	28.62	Si
SLU 80	fin.	-9.85	-386	1.06	0	430	7137	4444	2703	7147	No	18.52	Si
SLU 50	ini.	48.34	225	1.06	0	430	7137	4444	2703	7147	No	31.83	Si
SLU 50	fin.	-5.88	-394	1.06	0	430	7137	4444	2703	7147	No	18.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	224.65	450	-0.0000811	0.0002807	0.0035	1.06		4162.81	4162.81		18.53	Si
SLV 1	fin.	47.69	130	-0.0000169	0.0002807	0.0035	1.06		4162.81	4162.81		87.29	Si
SLV 9	ini.	340.79	567	-0.0001246	0.0002807	0.0035	1.06		4162.81	4162.81		12.22	Si
SLV 9	fin.	-229.96	-655	-0.0000829	0.0002807	0.0035	1.06		4169.53	4169.53		18.13	Si
SLV 5	ini.	405.38	719	-0.0001494	0.0002807	0.0035	1.06		4162.81	4162.81		10.27	Si
SLV 5	fin.	-163.37	-476	-0.0000585	0.0002807	0.0035	1.06		4169.53	4169.53		25.52	Si
SLV 16	ini.	-219.67	-459	-0.0000791	0.0002807	0.0035	1.06		4169.53	4169.53		18.98	Si
SLV 16	fin.	-60.71	-129	-0.0000215	0.0002807	0.0035	1.06		4169.53	4169.53		68.68	Si
SLV 11	ini.	-395.08	-716	-0.0001452	0.0002807	0.0035	1.06		4169.53	4169.53		10.55	Si
SLV 11	fin.	150.78	476	-0.000054	0.0002807	0.0035	1.06		4162.81	4162.81		27.61	Si
SLV 7	ini.	-330.49	-564	-0.0001205	0.0002807	0.0035	1.06		4169.53	4169.53		12.62	Si
SLV 7	fin.	217.37	656	-0.0000784	0.0002807	0.0035	1.06		4162.81	4162.81		19.15	Si
SLV 12	ini.	-400.41	-727	-0.0001472	0.0002807	0.0035	1.06		4169.53	4169.53		10.41	Si
SLV 12	fin.	150.35	476	-0.0000538	0.0002807	0.0035	1.06		4162.81	4162.81		27.69	Si
SLV 6	ini.	400.05	708	-0.0001473	0.0002807	0.0035	1.06		4162.81	4162.81		10.41	Si
SLV 6	fin.	-163.81	-476	-0.0000586	0.0002807	0.0035	1.06		4169.53	4169.53		25.45	Si
SLV 8	ini.	-335.82	-575	-0.0001225	0.0002807	0.0035	1.06		4169.53	4169.53		12.42	Si
SLV 8	fin.	216.93	656	-0.0000782	0.0002807	0.0035	1.06		4162.81	4162.81		19.19	Si
SLV 10	ini.	335.47	556	-0.0001226	0.0002807	0.0035	1.06		4162.81	4162.81		12.41	Si
SLV 10	fin.	-230.39	-655	-0.0000831	0.0002807	0.0035	1.06		4169.53	4169.53		18.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	400.05	-932	1.06	0	645	7137	6666	2703	7782		8.35	Si
SLV 6	fin.	-163.81	-1259	1.06	0	645	7137	6666	2703	7782		6.18	Si
SLV 10	ini.	335.47	-825	1.06	0	645	7137	6666	2703	7782		9.43	Si
SLV 10	fin.	-230.39	-1161	1.06	0	645	7137	6666	2703	7782		6.7	Si
SLV 11	ini.	-395.08	1422	1.06	0	645	7137	6666	2703	7782		5.47	Si
SLV 11	fin.	150.78	780	1.06	0	645	7137	6666	2703	7782		9.98	Si
SLV 8	ini.	-335.82	1328	1.06	0	645	7137	6666	2703	7782		5.86	Si
SLV 8	fin.	216.93	693	1.06	0	645	7137	6666	2703	7782		11.22	Si
SLV 5	ini.	405.38	-944	1.06	0	645	7137	6666	2703	7782		8.25	Si
SLV 5	fin.	-163.37	-1271	1.06	0	645	7137	6666	2703	7782		6.12	Si
SLV 16	ini.	-219.67	771	1.06	0	645	7137	6666	2703	7782		10.09	Si
SLV 16	fin.	-60.71	226	1.06	0	645	7137	6666	2703	7782		34.38	Si
SLV 7	ini.	-330.49	1316	1.06	0	645	7137	6666	2703	7782		5.91	Si
SLV 7	fin.	217.37	681	1.06	0	645	7137	6666	2703	7782		11.42	Si
SLV 12	ini.	-400.41	1434	1.06	0	645	7137	6666	2703	7782		5.43	Si
SLV 12	fin.	150.35	792	1.06	0	645	7137	6666	2703	7782		9.83	Si
SLV 9	ini.	340.79	-837	1.06	0	645	7137	6666	2703	7782		9.29	Si
SLV 9	fin.	-229.96	-1173	1.06	0	645	7137	6666	2703	7782		6.63	Si
SLD 12	ini.	-174.97	769	1.06	0	645	7137	6666	2703	7782		10.12	Si
SLD 12	fin.	60.1	214	1.06	0	645	7137	6666	2703	7782		36.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.269	SLV 5	Si
V_SLV	5.425	SLV 12	Si
PF_SLU	78.085	SLU 51	Si
V_SLU	17.68	SLU 72	Si

Trave di accoppiamento 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	12.5	13.4	0.9	-16.818	6.526	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	173.92	-730	-0.0000881	0.0001872	0.0035	0.9		2959	2959	No	17.01	Si
SLU 61	fin.	-8.61	-391	-0.0000042	0.0001872	0.0035	0.9		2964.67	2964.67	No	344.37	Si
SLU 73	ini.	166.59	-727	-0.0000842	0.0001872	0.0035	0.9		2959	2959	No	17.76	Si
SLU 73	fin.	2.15	-431	-0.0000011	0.0001872	0.0035	0.9		2959	2959	No	1377.43	Si
SLU 43	ini.	171.1	-730	-0.0000866	0.0001872	0.0035	0.9		2959	2959	No	17.29	Si
SLU 43	fin.	6.2	-428	-0.000003	0.0001872	0.0035	0.9		2959	2959	No	476.89	Si
SLU 52	ini.	175.43	-737	-0.0000889	0.0001872	0.0035	0.9		2959	2959	No	16.87	Si
SLU 52	fin.	-4.74	-403	-0.0000023	0.0001872	0.0035	0.9		2964.67	2964.67	No	625.09	Si
SLU 65	ini.	166.32	-733	-0.0000841	0.0001872	0.0035	0.9		2959	2959	No	17.79	Si
SLU 65	fin.	12.1	-457	-0.0000059	0.0001872	0.0035	0.9		2959	2959	No	244.56	Si
SLU 46	ini.	165.26	-745	-0.0000835	0.0001872	0.0035	0.9		2959	2959	No	17.91	Si
SLU 46	fin.	27.46	-508	-0.0000135	0.0001872	0.0035	0.9		2959	2959	No	107.75	Si
SLU 44	ini.	175.16	-743	-0.0000887	0.0001872	0.0035	0.9		2959	2959	No	16.89	Si
SLU 44	fin.	5.21	-430	-0.0000026	0.0001872	0.0035	0.9		2959	2959	No	568.12	Si
SLU 54	ini.	165.53	-740	-0.0000837	0.0001872	0.0035	0.9		2959	2959	No	17.88	Si
SLU 54	fin.	17.51	-481	-0.0000086	0.0001872	0.0035	0.9		2959	2959	No	168.98	Si
SLU 82	ini.	165.08	-720	-0.0000835	0.0001872	0.0035	0.9		2959	2959	No	17.92	Si
SLU 82	fin.	-1.72	-418	-0.0000008	0.0001872	0.0035	0.9		2964.67	2964.67	No	1725.65	Si
SLU 60	ini.	171.48	-722	-0.0000868	0.0001872	0.0035	0.9		2959	2959	No	17.26	Si
SLU 60	fin.	-8.01	-390	-0.0000039	0.0001872	0.0035	0.9		2964.67	2964.67	No	370.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	151.78	-687	0.9	0	365	7137	3773	2295	6068	No	8.83	Si
SLU 48	fin.	44.85	297	0.9	0	365	7137	3773	2295	6068	No	20.45	Si
SLU 43	ini.	171.1	-720	0.9	0	365	7137	3773	2295	6068	No	8.43	Si
SLU 43	fin.	6.2	60	0.9	0	365	7137	3773	2295	6068	No	101.31	Si
SLU 45	ini.	162.82	-720	0.9	0	365	7137	3773	2295	6068	No	8.43	Si
SLU 45	fin.	28.06	202	0.9	0	365	7137	3773	2295	6068	No	30.1	Si
SLU 65	ini.	166.32	-674	0.9	0	365	7137	3773	2295	6068	No	9	Si
SLU 65	fin.	12.1	64	0.9	0	365	7137	3773	2295	6068	No	95.06	Si
SLU 46	ini.	165.26	-729	0.9	0	365	7137	3773	2295	6068	No	8.33	Si
SLU 46	fin.	27.46	197	0.9	0	365	7137	3773	2295	6068	No	30.76	Si
SLU 49	ini.	154.22	-696	0.9	0	365	7137	3773	2295	6068	No	8.72	Si
SLU 49	fin.	44.25	292	0.9	0	365	7137	3773	2295	6068	No	20.75	Si
SLU 52	ini.	175.43	-687	0.9	0	365	7137	3773	2295	6068	No	8.83	Si
SLU 52	fin.	-4.74	-42	0.9	0	365	7137	3773	2295	6068	No	143.47	Si
SLU 44	ini.	175.16	-735	0.9	0	365	7137	3773	2295	6068	No	8.26	Si
SLU 44	fin.	5.21	53	0.9	0	365	7137	3773	2295	6068	No	115.03	Si
SLU 54	ini.	165.53	-681	0.9	0	365	7137	3773	2295	6068	No	8.91	Si
SLU 54	fin.	17.51	102	0.9	0	365	7137	3773	2295	6068	No	59.35	Si
SLU 47	ini.	164.12	-702	0.9	0	365	7137	3773	2295	6068	No	8.64	Si
SLU 47	fin.	22	148	0.9	0	365	7137	3773	2295	6068	No	41.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-588.48	1111	-0.0003175	0.0002807	0.0035	0.9		2995.37	2995.37		5.09	Si
SLV 1	fin.	564.59	-1346	-0.0003037	0.0002807	0.0035	0.9		2989.59	2989.59		5.3	Si
SLV 14	ini.	1002.24	-2728	-0.0005952	0.0002807	0.0035	0.9		2989.59	2989.59		2.98	Si
SLV 14	fin.	-598.74	599	-0.0003238	0.0002807	0.0035	0.9		2995.37	2995.37		5	Si
SLV 2	ini.	-535.33	974	-0.0002856	0.0002807	0.0035	0.9		2995.37	2995.37		5.6	Si
SLV 2	fin.	530.01	-1297	-0.0002831	0.0002807	0.0035	0.9		2989.59	2989.59		5.64	Si
SLV 10	ini.	641.42	-2001	-0.0003508	0.0002807	0.0035	0.9		2989.59	2989.59		4.66	Si
SLV 10	fin.	-250.71	-160	-0.0001271	0.0002807	0.0035	0.9		2995.37	2995.37		11.95	Si
SLV 4	ini.	-695.43	1482	-0.0003842	0.0002807	0.0035	0.9		2995.37	2995.37		4.31	Si
SLV 4	fin.	575.59	-1223	-0.0003103	0.0002807	0.0035	0.9		2989.59	2989.59		5.19	Si
SLV 15	ini.	789	-2082	-0.0004463	0.0002807	0.0035	0.9		2989.59	2989.59		3.79	Si
SLV 15	fin.	-518.58	623	-0.0002758	0.0002807	0.0035	0.9		2995.37	2995.37		5.78	Si
SLV 9	ini.	607.17	-1912	-0.0003296	0.0002807	0.0035	0.9		2989.59	2989.59		4.92	Si
SLV 9	fin.	-228.42	-191	-0.0001154	0.0002807	0.0035	0.9		2995.37	2995.37		13.11	Si
SLV 13	ini.	949.09	-2591	-0.0005569	0.0002807	0.0035	0.9		2989.59	2989.59		3.15	Si
SLV 13	fin.	-564.16	549	-0.0003028	0.0002807	0.0035	0.9		2995.37	2995.37		5.31	Si
SLV 3	ini.	-748.58	1619	-0.0004186	0.0002807	0.0035	0.9		2995.37	2995.37		4	Si
SLV 3	fin.	610.18	-1272	-0.0003314	0.0002807	0.0035	0.9		2989.59	2989.59		4.9	Si
SLV 16	ini.	842.15	-2220	-0.0004822	0.0002807	0.0035	0.9		2989.59	2989.59		3.55	Si
SLV 16	fin.	-553.16	673	-0.0002962	0.0002807	0.0035	0.9		2995.37	2995.37		5.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-588.48	2211	0.9	0	548	7137	5660	2295	7684		3.48	Si
SLV 1	fin.	564.59	2936	0.9	0	548	7137	5660	2295	7684		2.62	Si
SLV 16	ini.	842.15	-3224	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLV 16	fin.	-553.16	-2886	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLV 4	ini.	-695.43	2613	0.9	0	548	7137	5660	2295	7684		2.94	Si
SLV 4	fin.	575.59	3034	0.9	0	548	7137	5660	2295	7684		2.53	Si
SLV 13	ini.	949.09	-3627	0.9	0	548	7137	5660	2295	7684		2.12	Si
SLV 13	fin.	-564.16	-2984	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 14	ini.	1002.24	-3816	0.9	0	548	7137	5660	2295	7684		2.01	Si
SLV 14	fin.	-598.74	-3173	0.9	0	548	7137	5660	2295	7684		2.42	Si
SLV 10	ini.	641.42	-2430	0.9	0	548	7137	5660	2295	7684		3.16	Si
SLV 10	fin.	-250.71	-1402	0.9	0	548	7137	5660	2295	7684		5.48	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-535.33	2021	0.9	0	548	7137	5660	2295	7684		3.8	Si
SLV 2	fin.	530.01	2747	0.9	0	548	7137	5660	2295	7684		2.8	Si
SLV 3	ini.	-748.58	2803	0.9	0	548	7137	5660	2295	7684		2.74	Si
SLV 3	fin.	610.18	3223	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLV 9	ini.	607.17	-2308	0.9	0	548	7137	5660	2295	7684		3.33	Si
SLV 9	fin.	-228.42	-1281	0.9	0	548	7137	5660	2295	7684		6	Si
SLV 15	ini.	789	-3034	0.9	0	548	7137	5660	2295	7684		2.53	Si
SLV 15	fin.	-518.58	-2697	0.9	0	548	7137	5660	2295	7684		2.85	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.983	SLV 14	Si
V_SLV	2.014	SLV 14	Si
PF_SLU	16.867	SLU 52	Si
V_SLU	8.258	SLU 44	Si

Trave di accoppiamento 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	15.2	15.66	0.46	-16.818	6.526	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	6.49	214	-0.0000122	0.0001872	0.0035	0.46		777.36	777.36	No	119.73	Si
SLU 56	fin.	-121.01	-407	-0.0002512	0.0001872	0.0035	0.46		780.23	780.23	No	6.45	Si
SLU 66	ini.	6.52	214	-0.0000122	0.0001872	0.0035	0.46		777.36	777.36	No	119.24	Si
SLU 66	fin.	-121.73	-409	-0.0002529	0.0001872	0.0035	0.46		780.23	780.23	No	6.41	Si
SLU 77	ini.	3.23	223	-0.0000061	0.0001872	0.0035	0.46		777.36	777.36	No	240.31	Si
SLU 77	fin.	-124.57	-406	-0.0002596	0.0001872	0.0035	0.46		780.23	780.23	No	6.26	Si
SLU 78	ini.	3.4	222	-0.0000064	0.0001872	0.0035	0.46		777.36	777.36	No	228.78	Si
SLU 78	fin.	-125.11	-410	-0.0002609	0.0001872	0.0035	0.46		780.23	780.23	No	6.24	Si
SLU 70	ini.	-0.87	206	-0.0000016	0.0001872	0.0035	0.46		780.23	780.23	No	898.44	Si
SLU 70	fin.	-123.97	-405	-0.0002582	0.0001872	0.0035	0.46		780.23	780.23	No	6.29	Si
SLU 75	ini.	10.95	230	-0.0000206	0.0001872	0.0035	0.46		777.36	777.36	No	71	Si
SLU 75	fin.	-123.41	-417	-0.0002569	0.0001872	0.0035	0.46		780.23	780.23	No	6.32	Si
SLU 69	ini.	-1.03	207	-0.0000019	0.0001872	0.0035	0.46		780.23	780.23	No	756.44	Si
SLU 69	fin.	-123.43	-401	-0.0002569	0.0001872	0.0035	0.46		780.23	780.23	No	6.32	Si
SLU 74	ini.	10.79	231	-0.0000203	0.0001872	0.0035	0.46		777.36	777.36	No	72.07	Si
SLU 74	fin.	-122.87	-413	-0.0002556	0.0001872	0.0035	0.46		780.23	780.23	No	6.35	Si
SLU 67	ini.	6.68	214	-0.0000126	0.0001872	0.0035	0.46		777.36	777.36	No	116.33	Si
SLU 67	fin.	-122.27	-413	-0.0002542	0.0001872	0.0035	0.46		780.23	780.23	No	6.38	Si
SLU 57	ini.	6.66	213	-0.0000125	0.0001872	0.0035	0.46		777.36	777.36	No	116.8	Si
SLU 57	fin.	-121.55	-410	-0.0002525	0.0001872	0.0035	0.46		780.23	780.23	No	6.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 56	ini.	6.49	159	0.46	0	124	3648	1928	1173	3101	No	19.52	Si
SLU 56	fin.	-121.01	-849	0.46	0	124	3648	1928	1173	3101	No	3.65	Si
SLU 70	ini.	-0.87	200	0.46	0	124	3648	1928	1173	3101	No	15.51	Si
SLU 70	fin.	-123.97	-879	0.46	0	124	3648	1928	1173	3101	No	3.53	Si
SLU 75	ini.	10.95	141	0.46	0	124	3648	1928	1173	3101	No	21.99	Si
SLU 75	fin.	-123.41	-862	0.46	0	124	3648	1928	1173	3101	No	3.6	Si
SLU 69	ini.	-1.03	201	0.46	0	124	3648	1928	1173	3101	No	15.42	Si
SLU 69	fin.	-123.43	-877	0.46	0	124	3648	1928	1173	3101	No	3.54	Si
SLU 77	ini.	3.23	184	0.46	0	124	3648	1928	1173	3101	No	16.85	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-124.57	-883	0.46	0	124	3648	1928	1173	3101	No	3.51	Si
SLU 66	ini.	6.52	159	0.46	0	124	3648	1928	1173	3101	No	19.46	Si
SLU 66	fin.	-121.73	-855	0.46	0	124	3648	1928	1173	3101	No	3.63	Si
SLU 78	ini.	3.4	183	0.46	0	124	3648	1928	1173	3101	No	16.96	Si
SLU 78	fin.	-125.11	-885	0.46	0	124	3648	1928	1173	3101	No	3.5	Si
SLU 57	ini.	6.66	158	0.46	0	124	3648	1928	1173	3101	No	19.68	Si
SLU 57	fin.	-121.55	-851	0.46	0	124	3648	1928	1173	3101	No	3.65	Si
SLU 74	ini.	10.79	142	0.46	0	124	3648	1928	1173	3101	No	21.8	Si
SLU 74	fin.	-122.87	-860	0.46	0	124	3648	1928	1173	3101	No	3.61	Si
SLU 67	ini.	6.68	158	0.46	0	124	3648	1928	1173	3101	No	19.61	Si
SLU 67	fin.	-122.27	-857	0.46	0	124	3648	1928	1173	3101	No	3.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-174.96	-401	-0.0003664	0.0002807	0.0035	0.46		788.4	788.4		4.51	Si
SLV 1	fin.	120.32	836	-0.0002422	0.0002807	0.0035	0.46		785.44	785.44		6.53	Si
SLV 16	ini.	205.22	738	-0.000443	0.0002807	0.0035	0.46		785.44	785.44		3.83	Si
SLV 16	fin.	-292.78	-1452	-0.000679	0.0002807	0.0035	0.46		788.4	788.4		2.69	Si
SLD 14	ini.	98.97	379	-0.0001962	0.0002807	0.0035	0.46		785.44	785.44		7.94	Si
SLD 14	fin.	-189.93	-907	-0.0004029	0.0002807	0.0035	0.46		788.4	788.4		4.15	Si
SLV 15	ini.	193.79	718	-0.0004142	0.0002807	0.0035	0.46		785.44	785.44		4.05	Si
SLV 15	fin.	-280.69	-1375	-0.0006443	0.0002807	0.0035	0.46		788.4	788.4		2.81	Si
SLV 9	ini.	77.06	188	-0.0001506	0.0002807	0.0035	0.46		785.44	785.44		10.19	Si
SLV 9	fin.	-206.46	-1073	-0.0004443	0.0002807	0.0035	0.46		788.4	788.4		3.82	Si
SLV 13	ini.	199.46	640	-0.0004284	0.0002807	0.0035	0.46		785.44	785.44		3.94	Si
SLV 13	fin.	-315.9	-1627	-0.0007471	0.0002807	0.0035	0.46		788.4	788.4		2.5	Si
SLD 13	ini.	94.06	370	-0.0001859	0.0002807	0.0035	0.46		785.44	785.44		8.35	Si
SLD 13	fin.	-184.73	-874	-0.0003901	0.0002807	0.0035	0.46		788.4	788.4		4.27	Si
SLV 14	ini.	210.89	660	-0.0004576	0.0002807	0.0035	0.46		785.44	785.44		3.72	Si
SLV 14	fin.	-328	-1704	-0.0007836	0.0002807	0.0035	0.46		788.4	788.4		2.4	Si
SLV 3	ini.	-180.63	-323	-0.0003801	0.0002807	0.0035	0.46		788.4	788.4		4.36	Si
SLV 3	fin.	155.53	1089	-0.0003217	0.0002807	0.0035	0.46		785.44	785.44		5.05	Si
SLV 10	ini.	84.42	201	-0.0001658	0.0002807	0.0035	0.46		785.44	785.44		9.3	Si
SLV 10	fin.	-214.25	-1123	-0.0004643	0.0002807	0.0035	0.46		788.4	788.4		3.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	94.06	-287	0.46	0	187	3648	2893	1173	3834		13.35	Si
SLD 13	fin.	-184.73	-1058	0.46	0	187	3648	2893	1173	3834		3.62	Si
SLV 10	ini.	84.42	-342	0.46	0	187	3648	2893	1173	3834		11.21	Si
SLV 10	fin.	-214.25	-1147	0.46	0	187	3648	2893	1173	3834		3.34	Si
SLV 13	ini.	199.46	-751	0.46	0	187	3648	2893	1173	3834		5.1	Si
SLV 13	fin.	-315.9	-1682	0.46	0	187	3648	2893	1173	3834		2.28	Si
SLV 16	ini.	205.22	-719	0.46	0	187	3648	2893	1173	3834		5.33	Si
SLV 16	fin.	-292.78	-1597	0.46	0	187	3648	2893	1173	3834		2.4	Si
SLD 15	ini.	91.53	-249	0.46	0	187	3648	2893	1173	3834		15.42	Si
SLD 15	fin.	-169.24	-999	0.46	0	187	3648	2893	1173	3834		3.84	Si
SLD 16	ini.	96.44	-272	0.46	0	187	3648	2893	1173	3834		14.07	Si
SLD 16	fin.	-174.43	-1020	0.46	0	187	3648	2893	1173	3834		3.76	Si
SLD 14	ini.	98.97	-311	0.46	0	187	3648	2893	1173	3834		12.33	Si
SLD 14	fin.	-189.93	-1080	0.46	0	187	3648	2893	1173	3834		3.55	Si
SLV 9	ini.	77.06	-306	0.46	0	187	3648	2893	1173	3834		12.52	Si
SLV 9	fin.	-206.46	-1114	0.46	0	187	3648	2893	1173	3834		3.44	Si
SLV 15	ini.	193.79	-664	0.46	0	187	3648	2893	1173	3834		5.78	Si
SLV 15	fin.	-280.69	-1546	0.46	0	187	3648	2893	1173	3834		2.48	Si
SLV 14	ini.	210.89	-807	0.46	0	187	3648	2893	1173	3834		4.75	Si
SLV 14	fin.	-328	-1732	0.46	0	187	3648	2893	1173	3834		2.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.404	SLV 14	Si
V_SLV	2.214	SLV 14	Si
PF_SLU	6.236	SLU 78	Si
V_SLU	3.505	SLU 78	Si

Trave di accoppiamento 166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	12.5	13.4	0.9	-11.938	6.526	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	200.34	-1134	-0.0001021	0.0001872	0.0035	0.9		2959	2959	No	14.77	Si
SLU 77	fin.	-45.82	-615	-0.0000226	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.7	Si
SLU 83	ini.	192.71	-1055	-0.000098	0.0001872	0.0035	0.9		2959	2959	No	15.35	Si
SLU 83	fin.	-74	-516	-0.0000366	0.0001872	0.0035	0.9		2964.67	2964.67	No	40.06	Si
SLU 79	ini.	189.91	-1074	-0.0000965	0.0001872	0.0035	0.9		2959	2959	No	15.58	Si
SLU 79	fin.	-46.68	-581	-0.000023	0.0001872	0.0035	0.9		2964.67	2964.67	No	63.5	Si
SLU 75	ini.	197.85	-1106	-0.0001007	0.0001872	0.0035	0.9		2959	2959	No	14.96	Si
SLU 75	fin.	-56.63	-576	-0.000028	0.0001872	0.0035	0.9		2964.67	2964.67	No	52.35	Si
SLU 80	ini.	190.32	-1076	-0.0000967	0.0001872	0.0035	0.9		2959	2959	No	15.55	Si
SLU 80	fin.	-46.6	-583	-0.000023	0.0001872	0.0035	0.9		2964.67	2964.67	No	63.61	Si
SLU 81	ini.	189.81	-1026	-0.0000965	0.0001872	0.0035	0.9		2959	2959	No	15.59	Si
SLU 81	fin.	-84.89	-475	-0.0000421	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.92	Si
SLU 84	ini.	193.12	-1058	-0.0000982	0.0001872	0.0035	0.9		2959	2959	No	15.32	Si
SLU 84	fin.	-73.92	-517	-0.0000366	0.0001872	0.0035	0.9		2964.67	2964.67	No	40.11	Si
SLU 82	ini.	190.22	-1028	-0.0000967	0.0001872	0.0035	0.9		2959	2959	No	15.56	Si
SLU 82	fin.	-84.81	-477	-0.0000421	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.96	Si
SLU 74	ini.	197.43	-1104	-0.0001005	0.0001872	0.0035	0.9		2959	2959	No	14.99	Si
SLU 74	fin.	-56.71	-575	-0.000028	0.0001872	0.0035	0.9		2964.67	2964.67	No	52.27	Si
SLU 78	ini.	200.75	-1136	-0.0001023	0.0001872	0.0035	0.9		2959	2959	No	14.74	Si
SLU 78	fin.	-45.74	-617	-0.0000225	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	197.43	-1555	0.9	0	365	7137	3773	2295	6068	No	3.9	Si
SLU 74	fin.	-56.71	-220	0.9	0	365	7137	3773	2295	6068	No	27.55	Si
SLU 78	ini.	200.75	-1615	0.9	0	365	7137	3773	2295	6068	No	3.76	Si
SLU 78	fin.	-45.74	-170	0.9	0	365	7137	3773	2295	6068	No	35.75	Si
SLU 67	ini.	184.53	-1531	0.9	0	365	7137	3773	2295	6068	No	3.96	Si
SLU 67	fin.	-18.31	-81	0.9	0	365	7137	3773	2295	6068	No	75.15	Si
SLU 70	ini.	187.44	-1588	0.9	0	365	7137	3773	2295	6068	No	3.82	Si
SLU 70	fin.	-7.42	-31	0.9	0	365	7137	3773	2295	6068	No	198.74	Si
SLU 80	ini.	190.32	-1531	0.9	0	365	7137	3773	2295	6068	No	3.96	Si
SLU 80	fin.	-46.6	-177	0.9	0	365	7137	3773	2295	6068	No	34.37	Si
SLU 75	ini.	197.85	-1558	0.9	0	365	7137	3773	2295	6068	No	3.9	Si
SLU 75	fin.	-56.63	-220	0.9	0	365	7137	3773	2295	6068	No	27.59	Si
SLU 57	ini.	187.9	-1549	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 57	fin.	-29.66	-116	0.9	0	365	7137	3773	2295	6068	No	52.51	Si
SLU 77	ini.	200.34	-1612	0.9	0	365	7137	3773	2295	6068	No	3.77	Si
SLU 77	fin.	-45.82	-170	0.9	0	365	7137	3773	2295	6068	No	35.69	Si
SLU 69	ini.	187.02	-1585	0.9	0	365	7137	3773	2295	6068	No	3.83	Si
SLU 69	fin.	-7.5	-31	0.9	0	365	7137	3773	2295	6068	No	196.89	Si
SLU 56	ini.	187.49	-1546	0.9	0	365	7137	3773	2295	6068	No	3.93	Si
SLU 56	fin.	-29.74	-116	0.9	0	365	7137	3773	2295	6068	No	52.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1011.85	-3903	-0.0006022	0.0002807	0.0035	0.9		2989.59	2989.59		2.95	Si
SLV 14	fin.	-1581.01	1058	-0.0010648	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si
SLD 16	ini.	489.43	-2007	-0.0002593	0.0002807	0.0035	0.9		2989.59	2989.59		6.11	Si
SLD 16	fin.	-689.97	303	-0.0003807	0.0002807	0.0035	0.9		2995.37	2995.37		4.34	Si
SLV 1	ini.	-703.07	2172	-0.0003891	0.0002807	0.0035	0.9		2995.37	2995.37		4.26	Si
SLV 1	fin.	1511.1	-2082	-0.0010045	0.0002807	0.0035	0.9		2989.59	2989.59		1.98	Si
SLV 16	ini.	967.78	-3684	-0.0005702	0.0002807	0.0035	0.9		2989.59	2989.59		3.09	Si
SLV 16	fin.	-1572.3	1258	-0.0010569	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si
SLV 15	ini.	921.94	-3526	-0.0005376	0.0002807	0.0035	0.9		2989.59	2989.59		3.24	Si
SLV 15	fin.	-1489.31	1174	-0.0009828	0.0002807	0.0035	0.9		2995.37	2995.37		2.01	Si
SLD 14	ini.	508.76	-2103	-0.0002706	0.0002807	0.0035	0.9		2989.59	2989.59		5.88	Si
SLD 14	fin.	-693.8	216	-0.0003831	0.0002807	0.0035	0.9		2995.37	2995.37		4.32	Si
SLV 3	ini.	-747.15	2391	-0.0004176	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLV 3	fin.	1519.81	-1882	-0.0010122	0.0002807	0.0035	0.9		2989.59	2989.59		1.97	Si
SLV 4	ini.	-701.31	2233	-0.000388	0.0002807	0.0035	0.9		2995.37	2995.37		4.27	Si
SLV 4	fin.	1436.82	-1798	-0.0009396	0.0002807	0.0035	0.9		2989.59	2989.59		2.08	Si
SLV 2	ini.	-657.23	2014	-0.00036	0.0002807	0.0035	0.9		2995.37	2995.37		4.56	Si
SLV 2	fin.	1428.11	-1998	-0.0009321	0.0002807	0.0035	0.9		2989.59	2989.59		2.09	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	966.01	-3745	-0.000569	0.0002807	0.0035	0.9		2989.59	2989.59		3.09	Si
SLV 13	fin.	-1498.02	974	-0.0009905	0.0002807	0.0035	0.9		2995.37	2995.37		2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-747.15	4001	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLV 3	fin.	1519.81	4937	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 2	ini.	-657.23	3473	0.9	0	548	7137	5660	2295	7684		2.21	Si
SLV 2	fin.	1428.11	4645	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 15	ini.	921.94	-5594	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 15	fin.	-1489.31	-4913	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 14	ini.	1011.85	-6122	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 14	fin.	-1581.01	-5205	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 13	ini.	966.01	-5882	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 13	fin.	-1498.02	-4936	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 1	ini.	-703.07	3713	0.9	0	548	7137	5660	2295	7684		2.07	Si
SLV 1	fin.	1511.1	4914	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 16	ini.	967.78	-5834	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLV 16	fin.	-1572.3	-5182	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLD 14	ini.	508.76	-3227	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLD 14	fin.	-693.8	-2303	0.9	0	548	7137	5660	2295	7684		3.34	Si
SLD 13	ini.	489.07	-3124	0.9	0	548	7137	5660	2295	7684		2.46	Si
SLD 13	fin.	-658.17	-2188	0.9	0	548	7137	5660	2295	7684		3.51	Si
SLV 4	ini.	-701.31	3761	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 4	fin.	1436.82	4668	0.9	0	548	7137	5660	2295	7684		1.65	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.895	SLV 14	Si
V_SLV	1.255	SLV 14	Si
PF_SLU	14.74	SLU 78	Si
V_SLU	3.758	SLU 78	Si

Trave di accoppiamento 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	15.2	15.66	0.46	-11.938	6.526	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-49.43	67	-0.0000956	0.0001872	0.0035	0.46		780.23	780.23	No	15.78	Si
SLU 79	fin.	-153.18	-250	-0.0003296	0.0001872	0.0035	0.46		780.23	780.23	No	5.09	Si
SLU 77	ini.	-52.66	62	-0.0001022	0.0001872	0.0035	0.46		780.23	780.23	No	14.82	Si
SLU 77	fin.	-161.03	-272	-0.0003495	0.0001872	0.0035	0.46		780.23	780.23	No	4.85	Si
SLU 83	ini.	-34.06	112	-0.0000651	0.0001872	0.0035	0.46		780.23	780.23	No	22.9	Si
SLU 83	fin.	-146.34	-261	-0.0003126	0.0001872	0.0035	0.46		780.23	780.23	No	5.33	Si
SLU 74	ini.	-41.55	82	-0.0000799	0.0001872	0.0035	0.46		780.23	780.23	No	18.78	Si
SLU 74	fin.	-150.06	-271	-0.0003218	0.0001872	0.0035	0.46		780.23	780.23	No	5.2	Si
SLU 75	ini.	-41.58	82	-0.0000799	0.0001872	0.0035	0.46		780.23	780.23	No	18.77	Si
SLU 75	fin.	-150.21	-272	-0.0003222	0.0001872	0.0035	0.46		780.23	780.23	No	5.19	Si
SLU 80	ini.	-49.46	67	-0.0000957	0.0001872	0.0035	0.46		780.23	780.23	No	15.78	Si
SLU 80	fin.	-153.32	-251	-0.00033	0.0001872	0.0035	0.46		780.23	780.23	No	5.09	Si
SLU 70	ini.	-62.63	5	-0.0001225	0.0001872	0.0035	0.46		780.23	780.23	No	12.46	Si
SLU 70	fin.	-151.53	-246	-0.0003255	0.0001872	0.0035	0.46		780.23	780.23	No	5.15	Si
SLU 69	ini.	-62.61	5	-0.0001225	0.0001872	0.0035	0.46		780.23	780.23	No	12.46	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	fin.	-151.38	-245	-0.0003251	0.0001872	0.0035	0.46		780.23	780.23	No	5.15	Si
SLU 84	ini.	-34.09	111	-0.0000651	0.0001872	0.0035	0.46		780.23	780.23	No	22.89	Si
SLU 84	fin.	-146.49	-262	-0.0003129	0.0001872	0.0035	0.46		780.23	780.23	No	5.33	Si
SLU 78	ini.	-52.69	62	-0.0001022	0.0001872	0.0035	0.46		780.23	780.23	No	14.81	Si
SLU 78	fin.	-161.17	-273	-0.0003499	0.0001872	0.0035	0.46		780.23	780.23	No	4.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-52.66	595	0.46	0	124	3648	1928	1173	3101	No	5.21	Si
SLU 77	fin.	-161.03	-958	0.46	0	124	3648	1928	1173	3101	No	3.24	Si
SLU 79	ini.	-49.43	566	0.46	0	124	3648	1928	1173	3101	No	5.48	Si
SLU 79	fin.	-153.18	-917	0.46	0	124	3648	1928	1173	3101	No	3.38	Si
SLU 70	ini.	-62.63	639	0.46	0	124	3648	1928	1173	3101	No	4.85	Si
SLU 70	fin.	-151.53	-914	0.46	0	124	3648	1928	1173	3101	No	3.39	Si
SLU 74	ini.	-41.55	510	0.46	0	124	3648	1928	1173	3101	No	6.09	Si
SLU 74	fin.	-150.06	-885	0.46	0	124	3648	1928	1173	3101	No	3.5	Si
SLU 72	ini.	-59.4	610	0.46	0	124	3648	1928	1173	3101	No	5.08	Si
SLU 72	fin.	-143.68	-873	0.46	0	124	3648	1928	1173	3101	No	3.55	Si
SLU 78	ini.	-52.69	595	0.46	0	124	3648	1928	1173	3101	No	5.21	Si
SLU 78	fin.	-161.17	-959	0.46	0	124	3648	1928	1173	3101	No	3.23	Si
SLU 75	ini.	-41.58	510	0.46	0	124	3648	1928	1173	3101	No	6.09	Si
SLU 75	fin.	-150.21	-886	0.46	0	124	3648	1928	1173	3101	No	3.5	Si
SLU 71	ini.	-59.38	610	0.46	0	124	3648	1928	1173	3101	No	5.08	Si
SLU 71	fin.	-143.53	-872	0.46	0	124	3648	1928	1173	3101	No	3.56	Si
SLU 69	ini.	-62.61	639	0.46	0	124	3648	1928	1173	3101	No	4.85	Si
SLU 69	fin.	-151.38	-913	0.46	0	124	3648	1928	1173	3101	No	3.4	Si
SLU 80	ini.	-49.46	566	0.46	0	124	3648	1928	1173	3101	No	5.48	Si
SLU 80	fin.	-153.32	-918	0.46	0	124	3648	1928	1173	3101	No	3.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-444.35	-2029	-0.0011714	0.0002807	0.0035	0.46		788.4	788.4		1.77	Si
SLV 1	fin.	396.27	1656	-0.0010073	0.0002807	0.0035	0.46		785.44	785.44		1.98	Si
SLV 14	ini.	407.83	2164	-0.0010469	0.0002807	0.0035	0.46		785.44	785.44		1.93	Si
SLV 14	fin.	-599.49	-2106	-0.0018475	0.0002807	0.0035	0.46		788.4	788.4		1.32	Si
SLV 3	ini.	-458.27	-2063	-0.001223	0.0002807	0.0035	0.46		788.4	788.4		1.72	Si
SLV 3	fin.	413.58	1758	-0.0010669	0.0002807	0.0035	0.46		785.44	785.44		1.9	Si
SLV 2	ini.	-422.33	-1921	-0.0010924	0.0002807	0.0035	0.46		788.4	788.4		1.87	Si
SLV 2	fin.	370.52	1560	-0.0009216	0.0002807	0.0035	0.46		785.44	785.44		2.12	Si
SLV 4	ini.	-436.25	-1955	-0.001142	0.0002807	0.0035	0.46		788.4	788.4		1.81	Si
SLV 4	fin.	387.83	1662	-0.0009788	0.0002807	0.0035	0.46		785.44	785.44		2.03	Si
SLV 16	ini.	393.9	2131	-0.0009993	0.0002807	0.0035	0.46		785.44	785.44		1.99	Si
SLV 16	fin.	-582.18	-2004	-0.0017573	0.0002807	0.0035	0.46		788.4	788.4		1.35	Si
SLD 16	ini.	154	940	-0.0003182	0.0002807	0.0035	0.46		785.44	785.44		5.1	Si
SLD 16	fin.	-302.13	-956	-0.0007062	0.0002807	0.0035	0.46		788.4	788.4		2.61	Si
SLV 13	ini.	385.8	2057	-0.0009721	0.0002807	0.0035	0.46		785.44	785.44		2.04	Si
SLV 13	fin.	-573.73	-2009	-0.0017151	0.0002807	0.0035	0.46		788.4	788.4		1.37	Si
SLV 15	ini.	371.88	2023	-0.000926	0.0002807	0.0035	0.46		785.44	785.44		2.11	Si
SLV 15	fin.	-556.43	-1907	-0.001632	0.0002807	0.0035	0.46		788.4	788.4		1.42	Si
SLD 14	ini.	160.07	955	-0.0003324	0.0002807	0.0035	0.46		785.44	785.44		4.91	Si
SLD 14	fin.	-309.69	-1001	-0.0007285	0.0002807	0.0035	0.46		788.4	788.4		2.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	371.88	-1660	0.46	0	187	3648	2893	1173	3834		2.31	Si
SLV 15	fin.	-556.43	-2491	0.46	0	187	3648	2893	1173	3834		1.54	Si
SLV 16	ini.	393.9	-1770	0.46	0	187	3648	2893	1173	3834		2.17	Si
SLV 16	fin.	-582.18	-2599	0.46	0	187	3648	2893	1173	3834		1.48	Si
SLV 4	ini.	-436.25	2368	0.46	0	187	3648	2893	1173	3834		1.62	Si
SLV 4	fin.	387.83	1452	0.46	0	187	3648	2893	1173	3834		2.64	Si
SLV 2	ini.	-422.33	2294	0.46	0	187	3648	2893	1173	3834		1.67	Si
SLV 2	fin.	370.52	1386	0.46	0	187	3648	2893	1173	3834		2.77	Si
SLD 16	ini.	154	-575	0.46	0	187	3648	2893	1173	3834		6.66	Si
SLD 16	fin.	-302.13	-1427	0.46	0	187	3648	2893	1173	3834		2.69	Si
SLD 14	ini.	160.07	-608	0.46	0	187	3648	2893	1173	3834		6.31	Si
SLD 14	fin.	-309.69	-1456	0.46	0	187	3648	2893	1173	3834		2.63	Si
SLV 14	ini.	407.83	-1844	0.46	0	187	3648	2893	1173	3834		2.08	Si
SLV 14	fin.	-599.49	-2665	0.46	0	187	3648	2893	1173	3834		1.44	Si
SLV 13	ini.	385.8	-1734	0.46	0	187	3648	2893	1173	3834		2.21	Si
SLV 13	fin.	-573.73	-2557	0.46	0	187	3648	2893	1173	3834		1.5	Si
SLV 1	ini.	-444.35	2404	0.46	0	187	3648	2893	1173	3834		1.59	Si
SLV 1	fin.	396.27	1494	0.46	0	187	3648	2893	1173	3834		2.57	Si
SLV 3	ini.	-458.27	2478	0.46	0	187	3648	2893	1173	3834		1.55	Si
SLV 3	fin.	413.58	1560	0.46	0	187	3648	2893	1173	3834		2.46	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.315	SLV 14	Si
V_SLV	1.439	SLV 14	Si
PF_SLU	4.841	SLU 78	Si
V_SLU	3.235	SLU 78	Si

Trave di accoppiamento 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	12.5	13.4	0.9	-7.058	6.526	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	-95.99	-356	-0.0000477	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.88	Si
SLU 61	fin.	186.54	-873	-0.0000947	0.0001872	0.0035	0.9		2959	2959	No	15.86	Si
SLU 75	ini.	-61.23	-467	-0.0000302	0.0001872	0.0035	0.9		2964.67	2964.67	No	48.42	Si
SLU 75	fin.	184.08	-905	-0.0000934	0.0001872	0.0035	0.9		2959	2959	No	16.07	Si
SLU 73	ini.	-87.8	-393	-0.0000436	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.77	Si
SLU 73	fin.	187.94	-891	-0.0000955	0.0001872	0.0035	0.9		2959	2959	No	15.74	Si
SLU 82	ini.	-90.71	-388	-0.0000451	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.68	Si
SLU 82	fin.	187.41	-887	-0.0000952	0.0001872	0.0035	0.9		2959	2959	No	15.79	Si
SLU 65	ini.	-78.53	-405	-0.0000389	0.0001872	0.0035	0.9		2964.67	2964.67	No	37.75	Si
SLU 65	fin.	186.66	-892	-0.0000948	0.0001872	0.0035	0.9		2959	2959	No	15.85	Si
SLU 64	ini.	-75.87	-406	-0.0000376	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.08	Si
SLU 64	fin.	183.97	-882	-0.0000934	0.0001872	0.0035	0.9		2959	2959	No	16.08	Si
SLU 81	ini.	-89.11	-389	-0.0000443	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.27	Si
SLU 81	fin.	185.8	-881	-0.0000944	0.0001872	0.0035	0.9		2959	2959	No	15.93	Si
SLU 52	ini.	-93.09	-360	-0.0000463	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.85	Si
SLU 52	fin.	187.07	-877	-0.000095	0.0001872	0.0035	0.9		2959	2959	No	15.82	Si
SLU 44	ini.	-83.81	-372	-0.0000416	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.37	Si
SLU 44	fin.	185.79	-878	-0.0000943	0.0001872	0.0035	0.9		2959	2959	No	15.93	Si
SLU 60	ini.	-94.39	-357	-0.0000469	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.41	Si
SLU 60	fin.	184.92	-867	-0.0000939	0.0001872	0.0035	0.9		2959	2959	No	16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 45	ini.	-55.65	163	0.9	0	365	7137	3773	2295	6068	No	37.17	Si
SLU 45	fin.	180.31	1206	0.9	0	365	7137	3773	2295	6068	No	5.03	Si
SLU 43	ini.	-81.15	280	0.9	0	365	7137	3773	2295	6068	No	21.64	Si
SLU 43	fin.	183.1	1171	0.9	0	365	7137	3773	2295	6068	No	5.18	Si
SLU 47	ini.	-65.67	212	0.9	0	365	7137	3773	2295	6068	No	28.62	Si
SLU 47	fin.	181.46	1186	0.9	0	365	7137	3773	2295	6068	No	5.12	Si
SLU 67	ini.	-51.96	170	0.9	0	365	7137	3773	2295	6068	No	35.71	Si
SLU 67	fin.	182.8	1178	0.9	0	365	7137	3773	2295	6068	No	5.15	Si
SLU 48	ini.	-37.5	86	0.9	0	365	7137	3773	2295	6068	No	70.33	Si
SLU 48	fin.	175.98	1204	0.9	0	365	7137	3773	2295	6068	No	5.04	Si
SLU 49	ini.	-39.1	91	0.9	0	365	7137	3773	2295	6068	No	66.39	Si
SLU 49	fin.	177.6	1214	0.9	0	365	7137	3773	2295	6068	No	5	Si
SLU 44	ini.	-83.81	289	0.9	0	365	7137	3773	2295	6068	No	21	Si
SLU 44	fin.	185.79	1187	0.9	0	365	7137	3773	2295	6068	No	5.11	Si
SLU 70	ini.	-33.82	93	0.9	0	365	7137	3773	2295	6068	No	65.27	Si
SLU 70	fin.	178.47	1177	0.9	0	365	7137	3773	2295	6068	No	5.16	Si
SLU 51	ini.	-46.46	132	0.9	0	365	7137	3773	2295	6068	No	46.09	Si
SLU 51	fin.	176.06	1178	0.9	0	365	7137	3773	2295	6068	No	5.15	Si
SLU 46	ini.	-57.24	168	0.9	0	365	7137	3773	2295	6068	No	36.04	Si
SLU 46	fin.	181.92	1216	0.9	0	365	7137	3773	2295	6068	No	4.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1214.18	1082	-0.0007542	0.0002807	0.0035	0.9		2995.37	2995.37		2.47	Si
SLV 2	fin.	908.36	-3107	-0.000528	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 4	ini.	-1125.16	1033	-0.0006853	0.0002807	0.0035	0.9		2995.37	2995.37		2.66	Si
SLV 4	fin.	815.67	-2774	-0.0004642	0.0002807	0.0035	0.9		2989.59	2989.59		3.67	Si
SLD 1	ini.	-588.02	331	-0.0003172	0.0002807	0.0035	0.9		2995.37	2995.37		5.09	Si
SLD 1	fin.	491.06	-1783	-0.0002602	0.0002807	0.0035	0.9		2989.59	2989.59		6.09	Si
SLV 1	ini.	-1291.05	1178	-0.0008157	0.0002807	0.0035	0.9		2995.37	2995.37		2.32	Si
SLV 1	fin.	957.89	-3264	-0.0005631	0.0002807	0.0035	0.9		2989.59	2989.59		3.12	Si
SLV 5	ini.	-579.1	233	-0.0003118	0.0002807	0.0035	0.9		2995.37	2995.37		5.17	Si
SLV 5	fin.	535.66	-1984	-0.0002864	0.0002807	0.0035	0.9		2989.59	2989.59		5.58	Si
SLV 15	ini.	1089.85	-1686	-0.0006601	0.0002807	0.0035	0.9		2989.59	2989.59		2.74	Si
SLV 15	fin.	-624.98	1757	-0.0003399	0.0002807	0.0035	0.9		2995.37	2995.37		4.79	Si
SLV 16	ini.	1166.72	-1781	-0.0007189	0.0002807	0.0035	0.9		2989.59	2989.59		2.56	Si
SLV 16	fin.	-674.51	1913	-0.0003709	0.0002807	0.0035	0.9		2995.37	2995.37		4.44	Si
SLV 13	ini.	1000.82	-1637	-0.0005941	0.0002807	0.0035	0.9		2989.59	2989.59		2.99	Si
SLV 13	fin.	-532.29	1424	-0.0002838	0.0002807	0.0035	0.9		2995.37	2995.37		5.63	Si
SLV 14	ini.	1077.69	-1732	-0.000651	0.0002807	0.0035	0.9		2989.59	2989.59		2.77	Si
SLV 14	fin.	-581.82	1580	-0.0003135	0.0002807	0.0035	0.9		2995.37	2995.37		5.15	Si
SLV 3	ini.	-1202.03	1129	-0.0007447	0.0002807	0.0035	0.9		2995.37	2995.37		2.49	Si
SLV 3	fin.	865.2	-2930	-0.000498	0.0002807	0.0035	0.9		2989.59	2989.59		3.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1089.85	-3775	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 15	fin.	-624.98	-3242	0.9	0	548	7137	5660	2295	7684		2.37	Si
SLV 2	ini.	-1214.18	4249	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 2	fin.	908.36	4962	0.9	0	548	7137	5660	2295	7684		1.55	Si
SLV 5	ini.	-579.1	1847	0.9	0	548	7137	5660	2295	7684		4.16	Si
SLV 5	fin.	535.66	3080	0.9	0	548	7137	5660	2295	7684		2.5	Si
SLV 3	ini.	-1202.03	4336	0.9	0	548	7137	5660	2295	7684		1.77	Si
SLV 3	fin.	865.2	4634	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 6	ini.	-529.56	1673	0.9	0	548	7137	5660	2295	7684		4.59	Si
SLV 6	fin.	503.74	2921	0.9	0	548	7137	5660	2295	7684		2.63	Si
SLV 13	ini.	1000.82	-3591	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 13	fin.	-532.29	-2666	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLV 14	ini.	1077.69	-3862	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLV 14	fin.	-581.82	-2913	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLV 16	ini.	1166.72	-4046	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLV 16	fin.	-674.51	-3489	0.9	0	548	7137	5660	2295	7684		2.2	Si
SLV 4	ini.	-1125.16	4065	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 4	fin.	815.67	4387	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLV 1	ini.	-1291.05	4520	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 1	fin.	957.89	5209	0.9	0	548	7137	5660	2295	7684		1.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.32	SLV 1	Si
V_SLV	1.475	SLV 1	Si
PF_SLU	15.744	SLU 73	Si
V_SLU	4.991	SLU 46	Si

Trave di accoppiamento 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	15.2	15.66	0.46	-7.058	6.526	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-112.6	-571	-0.0002316	0.0001872	0.0035	0.46		780.23	780.23	No	6.93	Si
SLU 70	fin.	-1.09	161	-0.000002	0.0001872	0.0035	0.46		780.23	780.23	No	715.22	Si
SLU 77	ini.	-110.2	-554	-0.000226	0.0001872	0.0035	0.46		780.23	780.23	No	7.08	Si
SLU 77	fin.	-0.75	164	-0.0000014	0.0001872	0.0035	0.46		780.23	780.23	No	1044.94	Si
SLU 66	ini.	-110.7	-566	-0.0002272	0.0001872	0.0035	0.46		780.23	780.23	No	7.05	Si
SLU 66	fin.	6.56	178	-0.0000123	0.0001872	0.0035	0.46		777.36	777.36	No	118.54	Si
SLU 75	ini.	-109.7	-558	-0.0002249	0.0001872	0.0035	0.46		780.23	780.23	No	7.11	Si
SLU 75	fin.	7.85	185	-0.0000148	0.0001872	0.0035	0.46		777.36	777.36	No	98.98	Si
SLU 48	ini.	-109.9	-563	-0.0002253	0.0001872	0.0035	0.46		780.23	780.23	No	7.1	Si
SLU 48	fin.	3.49	166	-0.0000065	0.0001872	0.0035	0.46		777.36	777.36	No	222.97	Si
SLU 67	ini.	-111.4	-570	-0.0002288	0.0001872	0.0035	0.46		780.23	780.23	No	7	Si
SLU 67	fin.	7.03	180	-0.0000132	0.0001872	0.0035	0.46		777.36	777.36	No	110.52	Si
SLU 49	ini.	-110.59	-567	-0.0002269	0.0001872	0.0035	0.46		780.23	780.23	No	7.05	Si
SLU 49	fin.	3.96	168	-0.0000074	0.0001872	0.0035	0.46		777.36	777.36	No	196.18	Si
SLU 69	ini.	-111.9	-567	-0.0002299	0.0001872	0.0035	0.46		780.23	780.23	No	6.97	Si
SLU 69	fin.	-1.57	159	-0.0000029	0.0001872	0.0035	0.46		780.23	780.23	No	497.93	Si
SLU 46	ini.	-109.39	-566	-0.0002242	0.0001872	0.0035	0.46		780.23	780.23	No	7.13	Si
SLU 46	fin.	12.09	187	-0.0000228	0.0001872	0.0035	0.46		777.36	777.36	No	64.31	Si
SLU 78	ini.	-110.9	-559	-0.0002276	0.0001872	0.0035	0.46		780.23	780.23	No	7.04	Si
SLU 78	fin.	-0.27	166	-0.0000005	0.0001872	0.0035	0.46		780.23	780.23	No	2883.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-111.4	1162	0.46	0	124	3648	1928	1173	3101	No	2.67	Si
SLU 67	fin.	7.03	-274	0.46	0	124	3648	1928	1173	3101	No	11.33	Si
SLU 70	ini.	-112.6	1211	0.46	0	124	3648	1928	1173	3101	No	2.56	Si
SLU 70	fin.	-1.09	-338	0.46	0	124	3648	1928	1173	3101	No	9.16	Si
SLU 57	ini.	-108.89	1150	0.46	0	124	3648	1928	1173	3101	No	2.7	Si
SLU 57	fin.	4.78	-286	0.46	0	124	3648	1928	1173	3101	No	10.83	Si
SLU 66	ini.	-110.7	1159	0.46	0	124	3648	1928	1173	3101	No	2.68	Si
SLU 66	fin.	6.56	-276	0.46	0	124	3648	1928	1173	3101	No	11.23	Si
SLU 48	ini.	-109.9	1157	0.46	0	124	3648	1928	1173	3101	No	2.68	Si
SLU 48	fin.	3.49	-293	0.46	0	124	3648	1928	1173	3101	No	10.58	Si
SLU 69	ini.	-111.9	1207	0.46	0	124	3648	1928	1173	3101	No	2.57	Si
SLU 69	fin.	-1.57	-341	0.46	0	124	3648	1928	1173	3101	No	9.1	Si
SLU 75	ini.	-109.7	1151	0.46	0	124	3648	1928	1173	3101	No	2.69	Si
SLU 75	fin.	7.85	-269	0.46	0	124	3648	1928	1173	3101	No	11.51	Si
SLU 77	ini.	-110.2	1196	0.46	0	124	3648	1928	1173	3101	No	2.59	Si
SLU 77	fin.	-0.75	-337	0.46	0	124	3648	1928	1173	3101	No	9.21	Si
SLU 78	ini.	-110.9	1200	0.46	0	124	3648	1928	1173	3101	No	2.59	Si
SLU 78	fin.	-0.27	-334	0.46	0	124	3648	1928	1173	3101	No	9.28	Si
SLU 49	ini.	-110.59	1161	0.46	0	124	3648	1928	1173	3101	No	2.67	Si
SLU 49	fin.	3.96	-291	0.46	0	124	3648	1928	1173	3101	No	10.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-234.57	-1323	-0.0005174	0.0002807	0.0035	0.46		788.4	788.4		3.36	Si
SLV 6	fin.	142.62	656	-0.000292	0.0002807	0.0035	0.46		785.44	785.44		5.51	Si
SLV 13	ini.	206.82	1219	-0.0004471	0.0002807	0.0035	0.46		785.44	785.44		3.8	Si
SLV 13	fin.	-255.51	-1031	-0.0005739	0.0002807	0.0035	0.46		788.4	788.4		3.09	Si
SLV 4	ini.	-365.04	-2040	-0.0008996	0.0002807	0.0035	0.46		788.4	788.4		2.16	Si
SLV 4	fin.	285.67	1345	-0.0006614	0.0002807	0.0035	0.46		785.44	785.44		2.75	Si
SLV 15	ini.	247.07	1463	-0.0005533	0.0002807	0.0035	0.46		785.44	785.44		3.18	Si
SLV 15	fin.	-283.05	-1117	-0.000651	0.0002807	0.0035	0.46		788.4	788.4		2.79	Si
SLV 2	ini.	-405.28	-2284	-0.0010332	0.0002807	0.0035	0.46		788.4	788.4		1.95	Si
SLV 2	fin.	313.2	1432	-0.0007423	0.0002807	0.0035	0.46		785.44	785.44		2.51	Si
SLV 5	ini.	-247.41	-1398	-0.0005518	0.0002807	0.0035	0.46		788.4	788.4		3.19	Si
SLV 5	fin.	156.31	711	-0.0003235	0.0002807	0.0035	0.46		785.44	785.44		5.02	Si
SLV 1	ini.	-425.2	-2400	-0.0011025	0.0002807	0.0035	0.46		788.4	788.4		1.85	Si
SLV 1	fin.	334.44	1517	-0.000807	0.0002807	0.0035	0.46		785.44	785.44		2.35	Si
SLV 14	ini.	226.74	1335	-0.0004988	0.0002807	0.0035	0.46		785.44	785.44		3.46	Si
SLV 14	fin.	-276.75	-1116	-0.0006331	0.0002807	0.0035	0.46		788.4	788.4		2.85	Si
SLV 16	ini.	266.99	1579	-0.0006083	0.0002807	0.0035	0.46		785.44	785.44		2.94	Si
SLV 16	fin.	-304.28	-1202	-0.0007126	0.0002807	0.0035	0.46		788.4	788.4		2.59	Si
SLV 3	ini.	-384.95	-2156	-0.0009646	0.0002807	0.0035	0.46		788.4	788.4		2.05	Si
SLV 3	fin.	306.9	1431	-0.0007235	0.0002807	0.0035	0.46		785.44	785.44		2.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-209.58	1554	0.46	0	187	3648	2893	1173	3834		2.47	Si
SLD 3	fin.	139.63	460	0.46	0	187	3648	2893	1173	3834		8.33	Si
SLV 5	ini.	-247.41	1737	0.46	0	187	3648	2893	1173	3834		2.21	Si
SLV 5	fin.	156.31	578	0.46	0	187	3648	2893	1173	3834		6.64	Si
SLV 2	ini.	-405.28	2696	0.46	0	187	3648	2893	1173	3834		1.42	Si
SLV 2	fin.	313.2	1283	0.46	0	187	3648	2893	1173	3834		2.99	Si
SLV 4	ini.	-365.04	2479	0.46	0	187	3648	2893	1173	3834		1.55	Si
SLV 4	fin.	285.67	1134	0.46	0	187	3648	2893	1173	3834		3.38	Si
SLD 2	ini.	-218.77	1603	0.46	0	187	3648	2893	1173	3834		2.39	Si
SLD 2	fin.	142.66	480	0.46	0	187	3648	2893	1173	3834		8	Si
SLD 1	ini.	-227.32	1649	0.46	0	187	3648	2893	1173	3834		2.32	Si
SLD 1	fin.	151.78	526	0.46	0	187	3648	2893	1173	3834		7.29	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	266.99	-1235	0.46	0	187	3648	2893	1173	3834		3.11	Si
SLV 16	fin.	-304.28	-1634	0.46	0	187	3648	2893	1173	3834		2.35	Si
SLV 6	ini.	-234.57	1668	0.46	0	187	3648	2893	1173	3834		2.3	Si
SLV 6	fin.	142.62	508	0.46	0	187	3648	2893	1173	3834		7.55	Si
SLV 3	ini.	-384.95	2587	0.46	0	187	3648	2893	1173	3834		1.48	Si
SLV 3	fin.	306.9	1242	0.46	0	187	3648	2893	1173	3834		3.09	Si
SLV 1	ini.	-425.2	2804	0.46	0	187	3648	2893	1173	3834		1.37	Si
SLV 1	fin.	334.44	1391	0.46	0	187	3648	2893	1173	3834		2.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.854	SLV 1	Si
V_SLV	1.368	SLV 1	Si
PF_SLU	6.929	SLU 70	Si
V_SLU	2.562	SLU 70	Si

Trave di accoppiamento 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-19.813	1.006	14.6	15.66	1.06	-20.613	1.006	14.6	15.66	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-498.62	-1642	-0.0001877	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.45	Si
SLU 75	fin.	193.18	-302	-0.0000697	0.0002246	0.0035	1.06		4204.29	4204.29	No	21.76	Si
SLU 74	ini.	-495.41	-1635	-0.0001864	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.5	Si
SLU 74	fin.	190.65	-308	-0.0000688	0.0002246	0.0035	1.06		4204.29	4204.29	No	22.05	Si
SLU 69	ini.	-504.01	-1708	-0.0001899	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.35	Si
SLU 69	fin.	167.69	-413	-0.0000603	0.0002246	0.0035	1.06		4204.29	4204.29	No	25.07	Si
SLU 78	ini.	-497.69	-1685	-0.0001873	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.46	Si
SLU 78	fin.	171.15	-396	-0.0000616	0.0002246	0.0035	1.06		4204.29	4204.29	No	24.56	Si
SLU 49	ini.	-495.83	-1653	-0.0001865	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.49	Si
SLU 49	fin.	172.95	-358	-0.0000623	0.0002246	0.0035	1.06		4204.29	4204.29	No	24.31	Si
SLU 67	ini.	-508.15	-1672	-0.0001916	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.29	Si
SLU 67	fin.	192.24	-313	-0.0000694	0.0002246	0.0035	1.06		4204.29	4204.29	No	21.87	Si
SLU 46	ini.	-496.77	-1610	-0.0001869	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.48	Si
SLU 46	fin.	194.98	-263	-0.0000704	0.0002246	0.0035	1.06		4204.29	4204.29	No	21.56	Si
SLU 66	ini.	-504.94	-1665	-0.0001902	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.34	Si
SLU 66	fin.	189.71	-319	-0.0000685	0.0002246	0.0035	1.06		4204.29	4204.29	No	22.16	Si
SLU 77	ini.	-494.48	-1677	-0.000186	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.52	Si
SLU 77	fin.	168.63	-402	-0.0000607	0.0002246	0.0035	1.06		4204.29	4204.29	No	24.93	Si
SLU 70	ini.	-507.22	-1715	-0.0001912	0.0002246	0.0035	1.06		4210.93	4210.93	No	8.3	Si
SLU 70	fin.	170.22	-407	-0.0000613	0.0002246	0.0035	1.06		4204.29	4204.29	No	24.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-495.83	3009	1.06	0	430	6344	5333	2703	6774	No	2.25	Si
SLU 49	fin.	172.95	292	1.06	0	430	6344	5333	2703	6774	No	23.21	Si
SLU 66	ini.	-504.94	3080	1.06	0	430	6344	5333	2703	6774	No	2.2	Si
SLU 66	fin.	189.71	322	1.06	0	430	6344	5333	2703	6774	No	21.05	Si
SLU 70	ini.	-507.22	3082	1.06	0	430	6344	5333	2703	6774	No	2.2	Si
SLU 70	fin.	170.22	257	1.06	0	430	6344	5333	2703	6774	No	26.39	Si
SLU 75	ini.	-498.62	3032	1.06	0	430	6344	5333	2703	6774	No	2.23	Si
SLU 75	fin.	193.18	329	1.06	0	430	6344	5333	2703	6774	No	20.59	Si
SLU 74	ini.	-495.41	3024	1.06	0	430	6344	5333	2703	6774	No	2.24	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	190.65	310	1.06	0	430	6344	5333	2703	6774	No	21.82	Si
SLU 77	ini.	-494.48	3017	1.06	0	430	6344	5333	2703	6774	No	2.25	Si
SLU 77	fin.	168.63	227	1.06	0	430	6344	5333	2703	6774	No	29.89	Si
SLU 78	ini.	-497.69	3026	1.06	0	430	6344	5333	2703	6774	No	2.24	Si
SLU 78	fin.	171.15	245	1.06	0	430	6344	5333	2703	6774	No	27.63	Si
SLU 67	ini.	-508.15	3089	1.06	0	430	6344	5333	2703	6774	No	2.19	Si
SLU 67	fin.	192.24	340	1.06	0	430	6344	5333	2703	6774	No	19.9	Si
SLU 46	ini.	-496.77	3016	1.06	0	430	6344	5333	2703	6774	No	2.25	Si
SLU 46	fin.	194.98	376	1.06	0	430	6344	5333	2703	6774	No	18.03	Si
SLU 69	ini.	-504.01	3073	1.06	0	430	6344	5333	2703	6774	No	2.2	Si
SLU 69	fin.	167.69	238	1.06	0	430	6344	5333	2703	6774	No	28.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-599.39	-1616	-0.0002239	0.0003369	0.0035	1.06		4170.47	4170.47		6.96	Si
SLD 13	fin.	415.95	376	-0.0001526	0.0003369	0.0035	1.06		4163.27	4163.27		10.01	Si
SLD 9	ini.	-545.09	-1500	-0.0002024	0.0003369	0.0035	1.06		4170.47	4170.47		7.65	Si
SLD 9	fin.	336.64	224	-0.0001225	0.0003369	0.0035	1.06		4163.27	4163.27		12.37	Si
SLV 16	ini.	-732.86	-1896	-0.000278	0.0003369	0.0035	1.06		4170.47	4170.47		5.69	Si
SLV 16	fin.	595.23	723	-0.0002226	0.0003369	0.0035	1.06		4163.27	4163.27		6.99	Si
SLV 13	ini.	-908.17	-2248	-0.0003523	0.0003369	0.0035	1.06		4170.47	4170.47		4.59	Si
SLV 13	fin.	751.42	1028	-0.0002862	0.0003369	0.0035	1.06		4163.27	4163.27		5.54	Si
SLV 14	ini.	-894.61	-2218	-0.0003464	0.0003369	0.0035	1.06		4170.47	4170.47		4.66	Si
SLV 14	fin.	740.49	1009	-0.0002817	0.0003369	0.0035	1.06		4163.27	4163.27		5.62	Si
SLV 9	ini.	-776.27	-1965	-0.0002961	0.0003369	0.0035	1.06		4170.47	4170.47		5.37	Si
SLV 9	fin.	561.54	665	-0.0002092	0.0003369	0.0035	1.06		4163.27	4163.27		7.41	Si
SLD 10	ini.	-541.27	-1491	-0.0002009	0.0003369	0.0035	1.06		4170.47	4170.47		7.7	Si
SLD 10	fin.	333.57	219	-0.0001213	0.0003369	0.0035	1.06		4163.27	4163.27		12.48	Si
SLV 10	ini.	-767.53	-1945	-0.0002924	0.0003369	0.0035	1.06		4170.47	4170.47		5.43	Si
SLV 10	fin.	554.5	653	-0.0002064	0.0003369	0.0035	1.06		4163.27	4163.27		7.51	Si
SLD 14	ini.	-593.57	-1603	-0.0002216	0.0003369	0.0035	1.06		4170.47	4170.47		7.03	Si
SLD 14	fin.	411.26	368	-0.0001508	0.0003369	0.0035	1.06		4163.27	4163.27		10.12	Si
SLV 15	ini.	-746.42	-1926	-0.0002837	0.0003369	0.0035	1.06		4170.47	4170.47		5.59	Si
SLV 15	fin.	606.16	742	-0.000227	0.0003369	0.0035	1.06		4163.27	4163.27		6.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 10	ini.	-541.27	3142	1.06	0	645	6344	8000	2703	6989		2.22	Si
SLD 10	fin.	333.57	1225	1.06	0	645	6344	8000	2703	6989		5.7	Si
SLV 15	ini.	-746.42	4384	1.06	0	645	6344	8000	2703	6989		1.59	Si
SLV 15	fin.	606.16	2348	1.06	0	645	6344	8000	2703	6989		2.98	Si
SLV 9	ini.	-776.27	4393	1.06	0	645	6344	8000	2703	6989		1.59	Si
SLV 9	fin.	561.54	2372	1.06	0	645	6344	8000	2703	6989		2.95	Si
SLV 13	ini.	-908.17	5221	1.06	0	645	6344	8000	2703	6989		1.34	Si
SLV 13	fin.	751.42	3119	1.06	0	645	6344	8000	2703	6989		2.24	Si
SLD 13	ini.	-599.39	3505	1.06	0	645	6344	8000	2703	6989		1.99	Si
SLD 13	fin.	415.95	1551	1.06	0	645	6344	8000	2703	6989		4.5	Si
SLD 14	ini.	-593.57	3474	1.06	0	645	6344	8000	2703	6989		2.01	Si
SLD 14	fin.	411.26	1526	1.06	0	645	6344	8000	2703	6989		4.58	Si
SLD 9	ini.	-545.09	3162	1.06	0	645	6344	8000	2703	6989		2.21	Si
SLD 9	fin.	336.64	1242	1.06	0	645	6344	8000	2703	6989		5.63	Si
SLV 14	ini.	-894.61	5149	1.06	0	645	6344	8000	2703	6989		1.36	Si
SLV 14	fin.	740.49	3060	1.06	0	645	6344	8000	2703	6989		2.28	Si
SLV 16	ini.	-732.86	4312	1.06	0	645	6344	8000	2703	6989		1.62	Si
SLV 16	fin.	595.23	2289	1.06	0	645	6344	8000	2703	6989		3.05	Si
SLV 10	ini.	-767.53	4347	1.06	0	645	6344	8000	2703	6989		1.61	Si
SLV 10	fin.	554.5	2334	1.06	0	645	6344	8000	2703	6989		2.99	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.592	SLV 13	Si
V_SLV	1.339	SLV 13	Si
PF_SLU	8.287	SLU 67	Si
V_SLU	2.193	SLU 67	Si

Trave di accoppiamento 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	15	15.66	0.66	-12.263	1.006	15	15.66	0.66	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-539.35	-1776	-0.0006146	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.03	Si
SLU 78	fin.	52.09	355	-0.0000482	0.0002246	0.0035	0.66		1630.36	1630.36	No	31.3	Si
SLU 35	ini.	-484.61	-1653	-0.0005389	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.37	Si
SLU 35	fin.	83.54	334	-0.0000781	0.0002246	0.0035	0.66		1630.36	1630.36	No	19.52	Si
SLU 74	ini.	-537.55	-1744	-0.000612	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.04	Si
SLU 74	fin.	68.89	431	-0.0000641	0.0002246	0.0035	0.66		1630.36	1630.36	No	23.67	Si
SLU 70	ini.	-524.56	-1718	-0.0005938	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.12	Si
SLU 70	fin.	26.9	295	-0.0000247	0.0002246	0.0035	0.66		1630.36	1630.36	No	60.61	Si
SLU 79	ini.	-484.86	-1633	-0.0005392	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.37	Si
SLU 79	fin.	45.82	270	-0.0000423	0.0002246	0.0035	0.66		1630.36	1630.36	No	35.58	Si
SLU 75	ini.	-532.17	-1721	-0.0006045	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.07	Si
SLU 75	fin.	62.63	421	-0.0000581	0.0002246	0.0035	0.66		1630.36	1630.36	No	26.03	Si
SLU 66	ini.	-522.76	-1685	-0.0005913	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.13	Si
SLU 66	fin.	43.7	372	-0.0000403	0.0002246	0.0035	0.66		1630.36	1630.36	No	37.31	Si
SLU 67	ini.	-517.38	-1663	-0.0005838	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.16	Si
SLU 67	fin.	37.44	362	-0.0000345	0.0002246	0.0035	0.66		1630.36	1630.36	No	43.55	Si
SLU 77	ini.	-544.73	-1799	-0.0006222	0.0002246	0.0035	0.66		1634.45	1634.45	No	3	Si
SLU 77	fin.	58.35	365	-0.0000541	0.0002246	0.0035	0.66		1630.36	1630.36	No	27.94	Si
SLU 69	ini.	-529.94	-1741	-0.0006013	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.08	Si
SLU 69	fin.	33.16	306	-0.0000305	0.0002246	0.0035	0.66		1630.36	1630.36	No	49.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-539.35	3210	0.66	0	179	5234	3321	1683	5004	No	1.56	Si
SLU 78	fin.	52.09	-471	0.66	0	179	5234	3321	1683	5004	No	10.62	Si
SLU 70	ini.	-524.56	3140	0.66	0	179	5234	3321	1683	5004	No	1.59	Si
SLU 70	fin.	26.9	-541	0.66	0	179	5234	3321	1683	5004	No	9.24	Si
SLU 74	ini.	-537.55	3237	0.66	0	179	5234	3321	1683	5004	No	1.55	Si
SLU 74	fin.	68.89	-445	0.66	0	179	5234	3321	1683	5004	No	11.25	Si
SLU 81	ini.	-476.84	2876	0.66	0	179	5234	3321	1683	5004	No	1.74	Si
SLU 81	fin.	77.7	-351	0.66	0	179	5234	3321	1683	5004	No	14.26	Si
SLU 66	ini.	-522.76	3166	0.66	0	179	5234	3321	1683	5004	No	1.58	Si
SLU 66	fin.	43.7	-515	0.66	0	179	5234	3321	1683	5004	No	9.72	Si
SLU 77	ini.	-544.73	3231	0.66	0	179	5234	3321	1683	5004	No	1.55	Si
SLU 77	fin.	58.35	-451	0.66	0	179	5234	3321	1683	5004	No	11.1	Si
SLU 75	ini.	-532.17	3217	0.66	0	179	5234	3321	1683	5004	No	1.56	Si
SLU 75	fin.	62.63	-465	0.66	0	179	5234	3321	1683	5004	No	10.77	Si
SLU 67	ini.	-517.38	3146	0.66	0	179	5234	3321	1683	5004	No	1.59	Si
SLU 67	fin.	37.44	-535	0.66	0	179	5234	3321	1683	5004	No	9.35	Si
SLU 69	ini.	-529.94	3160	0.66	0	179	5234	3321	1683	5004	No	1.58	Si
SLU 69	fin.	33.16	-521	0.66	0	179	5234	3321	1683	5004	No	9.6	Si
SLU 83	ini.	-484.02	2869	0.66	0	179	5234	3321	1683	5004	No	1.74	Si
SLU 83	fin.	67.16	-357	0.66	0	179	5234	3321	1683	5004	No	14.01	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1210.44	-4129	-0.0017324	0.0003369	0.0035	0.66		1614.71	1614.71		1.33	Si
SLV 12	fin.	1351.8	3299	-0.0021212	0.0003369	0.0035	0.66		1610.37	1610.37		1.19	Si
SLV 2	ini.	658.46	835	-0.0007433	0.0003369	0.0035	0.66		1610.37	1610.37		2.45	Si
SLV 2	fin.	-2280.75	-6721	-0.0055545	0.0003369	0.0035	0.66		1614.71	1614.71		0.71	No
SLV 16	ini.	-1309.3	-2894	-0.0019879	0.0003369	0.0035	0.66		1614.71	1614.71		1.23	Si
SLV 16	fin.	2297.15	7161	-0.0056267	0.0003369	0.0035	0.66		1610.37	1610.37		0.7	No
SLV 13	ini.	-941.23	-1281	-0.0011866	0.0003369	0.0035	0.66		1614.71	1614.71		1.72	Si
SLV 13	fin.	1898.9	6592	-0.0042594	0.0003369	0.0035	0.66		1610.37	1610.37		0.85	No
SLV 14	ini.	-922.57	-1225	-0.001154	0.0003369	0.0035	0.66		1614.71	1614.71		1.75	Si
SLV 14	fin.	1867.68	6512	-0.0041437	0.0003369	0.0035	0.66		1610.37	1610.37		0.86	No
SLV 15	ini.	-1327.96	-2950	-0.002041	0.0003369	0.0035	0.66		1614.71	1614.71		1.22	Si
SLV 15	fin.	2328.37	7240	-0.0057282	0.0003369	0.0035	0.66		1610.37	1610.37		0.69	No
SLV 11	ini.	-1222.47	-4165	-0.0017614	0.0003369	0.0035	0.66		1614.71	1614.71		1.32	Si
SLV 11	fin.	1371.92	3350	-0.0021831	0.0003369	0.0035	0.66		1610.37	1610.37		1.17	Si
SLV 4	ini.	271.73	-834	-0.0002656	0.0003369	0.0035	0.66		1610.37	1610.37		5.93	Si
SLV 4	fin.	-1851.28	-6073	-0.0040647	0.0003369	0.0035	0.66		1614.71	1614.71		0.87	No
SLV 3	ini.	253.07	-889	-0.000246	0.0003369	0.0035	0.66		1610.37	1610.37		6.36	Si
SLV 3	fin.	-1820.06	-5994	-0.0039459	0.0003369	0.0035	0.66		1614.71	1614.71		0.89	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	639.8	779	-0.0007169	0.0003369	0.0035	0.66		1610.37	1610.37		2.52	Si
SLV 1	fin.	-2249.53	-6642	-0.0054522	0.0003369	0.0035	0.66		1614.71	1614.71		0.72	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1327.96	7732	0.66	0	268	5234	4981	1683	5501		0.71	No
SLV 15	fin.	2328.37	5211	0.66	0	268	5234	4981	1683	5501		1.06	Si
SLV 4	ini.	271.73	-2173	0.66	0	268	5234	4981	1683	5501		2.53	Si
SLV 4	fin.	-1851.28	-4559	0.66	0	268	5234	4981	1683	5501		1.21	Si
SLV 1	ini.	639.8	-3504	0.66	0	268	5234	4981	1683	5501		1.57	Si
SLV 1	fin.	-2249.53	-5876	0.66	0	268	5234	4981	1683	5501		0.94	No
SLV 14	ini.	-922.57	6232	0.66	0	268	5234	4981	1683	5501		0.88	No
SLV 14	fin.	1867.68	3725	0.66	0	268	5234	4981	1683	5501		1.48	Si
SLV 11	ini.	-1222.47	5931	0.66	0	268	5234	4981	1683	5501		0.93	No
SLV 11	fin.	1371.92	3441	0.66	0	268	5234	4981	1683	5501		1.6	Si
SLD 15	ini.	-761.88	4501	0.66	0	268	5234	4981	1683	5501		1.22	Si
SLD 15	fin.	1011.86	2022	0.66	0	268	5234	4981	1683	5501		2.72	Si
SLV 13	ini.	-941.23	6316	0.66	0	268	5234	4981	1683	5501		0.87	No
SLV 13	fin.	1898.9	3809	0.66	0	268	5234	4981	1683	5501		1.44	Si
SLV 12	ini.	-1210.44	5877	0.66	0	268	5234	4981	1683	5501		0.94	No
SLV 12	fin.	1351.8	3386	0.66	0	268	5234	4981	1683	5501		1.62	Si
SLV 2	ini.	658.46	-3589	0.66	0	268	5234	4981	1683	5501		1.53	Si
SLV 2	fin.	-2280.75	-5960	0.66	0	268	5234	4981	1683	5501		0.92	No
SLV 16	ini.	-1309.3	7648	0.66	0	268	5234	4981	1683	5501		0.72	No
SLV 16	fin.	2297.15	5126	0.66	0	268	5234	4981	1683	5501		1.07	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.692	SLV 15	No
V_SLV	0.712	SLV 15	No
PF_SLU	3	SLU 77	Si
V_SLU	1.546	SLU 74	Si

Trave di accoppiamento 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	15	15.66	0.66	-10.478	1.006	15	15.66	0.66	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-56.25	-81	-0.000052	0.0002246	0.0035	0.66		1634.45	1634.45	No	29.06	Si
SLU 70	fin.	-522.44	-1499	-0.0005909	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.13	Si
SLU 67	ini.	-47.08	-164	-0.0000434	0.0002246	0.0035	0.66		1634.45	1634.45	No	34.72	Si
SLU 67	fin.	-504.56	-1533	-0.0005661	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.24	Si
SLU 66	ini.	-43.11	-158	-0.0000397	0.0002246	0.0035	0.66		1634.45	1634.45	No	37.92	Si
SLU 66	fin.	-509.84	-1549	-0.0005734	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.21	Si
SLU 74	ini.	-15.14	-96	-0.0000138	0.0002246	0.0035	0.66		1634.45	1634.45	No	107.97	Si
SLU 74	fin.	-525.47	-1610	-0.0005951	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.11	Si
SLU 69	ini.	-52.28	-76	-0.0000482	0.0002246	0.0035	0.66		1634.45	1634.45	No	31.27	Si
SLU 69	fin.	-527.72	-1515	-0.0005982	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.1	Si
SLU 78	ini.	-28.28	-19	-0.0000259	0.0002246	0.0035	0.66		1634.45	1634.45	No	57.8	Si
SLU 78	fin.	-538.07	-1560	-0.0006128	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.04	Si
SLU 79	ini.	-25.73	61	-0.0000236	0.0002246	0.0035	0.66		1634.45	1634.45	No	63.51	Si
SLU 79	fin.	-500	-1384	-0.0005598	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.27	Si
SLU 77	ini.	-24.31	-14	-0.0000222	0.0002246	0.0035	0.66		1634.45	1634.45	No	67.24	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-543.36	-1576	-0.0006202	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.01	Si
SLU 75	ini.	-19.11	-102	-0.0000175	0.0002246	0.0035	0.66		1634.45	1634.45	No	85.54	Si
SLU 75	fin.	-520.19	-1593	-0.0005877	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.14	Si
SLU 35	ini.	20.88	111	-0.0000191	0.0002246	0.0035	0.66		1630.36	1630.36	No	78.09	Si
SLU 35	fin.	-495.18	-1407	-0.0005533	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-15.14	87	0.66	0	179	5234	3321	1683	5004	No	57.22	Si
SLU 74	fin.	-525.47	-2061	0.66	0	179	5234	3321	1683	5004	No	2.43	Si
SLU 66	ini.	-43.11	231	0.66	0	179	5234	3321	1683	5004	No	21.71	Si
SLU 66	fin.	-509.84	-2037	0.66	0	179	5234	3321	1683	5004	No	2.46	Si
SLU 70	ini.	-56.25	377	0.66	0	179	5234	3321	1683	5004	No	13.26	Si
SLU 70	fin.	-522.44	-2160	0.66	0	179	5234	3321	1683	5004	No	2.32	Si
SLU 79	ini.	-25.73	267	0.66	0	179	5234	3321	1683	5004	No	18.74	Si
SLU 79	fin.	-500	-2078	0.66	0	179	5234	3321	1683	5004	No	2.41	Si
SLU 69	ini.	-52.28	364	0.66	0	179	5234	3321	1683	5004	No	13.76	Si
SLU 69	fin.	-527.72	-2179	0.66	0	179	5234	3321	1683	5004	No	2.3	Si
SLU 77	ini.	-24.31	220	0.66	0	179	5234	3321	1683	5004	No	22.69	Si
SLU 77	fin.	-543.36	-2202	0.66	0	179	5234	3321	1683	5004	No	2.27	Si
SLU 71	ini.	-53.7	410	0.66	0	179	5234	3321	1683	5004	No	12.2	Si
SLU 71	fin.	-484.36	-2054	0.66	0	179	5234	3321	1683	5004	No	2.44	Si
SLU 80	ini.	-29.7	281	0.66	0	179	5234	3321	1683	5004	No	17.82	Si
SLU 80	fin.	-494.71	-2059	0.66	0	179	5234	3321	1683	5004	No	2.43	Si
SLU 78	ini.	-28.28	234	0.66	0	179	5234	3321	1683	5004	No	21.35	Si
SLU 78	fin.	-538.07	-2184	0.66	0	179	5234	3321	1683	5004	No	2.29	Si
SLU 75	ini.	-19.11	101	0.66	0	179	5234	3321	1683	5004	No	49.39	Si
SLU 75	fin.	-520.19	-2043	0.66	0	179	5234	3321	1683	5004	No	2.45	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	805.54	1979	-0.000964	0.0003369	0.0035	0.66		1610.37	1610.37		2	Si
SLV 7	fin.	-1026.84	-2397	-0.0013432	0.0003369	0.0035	0.66		1614.71	1614.71		1.57	Si
SLV 15	ini.	-997.32	-4739	-0.0012878	0.0003369	0.0035	0.66		1614.71	1614.71		1.62	Si
SLV 15	fin.	-363.96	-3774	-0.0003657	0.0003369	0.0035	0.66		1614.71	1614.71		4.44	Si
SLV 11	ini.	138.42	-890	-0.0001303	0.0003369	0.0035	0.66		1610.37	1610.37		11.63	Si
SLV 11	fin.	-930.9	-3674	-0.0011685	0.0003369	0.0035	0.66		1614.71	1614.71		1.73	Si
SLV 4	ini.	1231.57	4866	-0.0017913	0.0003369	0.0035	0.66		1610.37	1610.37		1.31	Si
SLV 4	fin.	-676.97	534	-0.0007673	0.0003369	0.0035	0.66		1614.71	1614.71		2.39	Si
SLV 13	ini.	-1302.9	-5164	-0.0019701	0.0003369	0.0035	0.66		1614.71	1614.71		1.24	Si
SLV 13	fin.	27.08	-2573	-0.0000248	0.0003369	0.0035	0.66		1610.37	1610.37		59.46	Si
SLV 8	ini.	808.86	2006	-0.0009693	0.0003369	0.0035	0.66		1610.37	1610.37		1.99	Si
SLV 8	fin.	-1022.46	-2366	-0.0013349	0.0003369	0.0035	0.66		1614.71	1614.71		1.58	Si
SLV 2	ini.	925.98	4442	-0.001164	0.0003369	0.0035	0.66		1610.37	1610.37		1.74	Si
SLV 2	fin.	-285.92	1734	-0.00028	0.0003369	0.0035	0.66		1614.71	1614.71		5.65	Si
SLV 14	ini.	-1297.75	-5121	-0.0019559	0.0003369	0.0035	0.66		1614.71	1614.71		1.24	Si
SLV 14	fin.	33.87	-2526	-0.0000311	0.0003369	0.0035	0.66		1610.37	1610.37		47.55	Si
SLV 16	ini.	-992.16	-4697	-0.0012782	0.0003369	0.0035	0.66		1614.71	1614.71		1.63	Si
SLV 16	fin.	-357.17	-3726	-0.0003581	0.0003369	0.0035	0.66		1614.71	1614.71		4.52	Si
SLV 3	ini.	1226.42	4823	-0.0017785	0.0003369	0.0035	0.66		1610.37	1610.37		1.31	Si
SLV 3	fin.	-683.75	486	-0.0007771	0.0003369	0.0035	0.66		1614.71	1614.71		2.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1231.57	-2256	0.66	0	268	5234	4981	1683	5501		2.44	Si
SLV 4	fin.	-676.97	-4184	0.66	0	268	5234	4981	1683	5501		1.32	Si
SLV 11	ini.	138.42	-957	0.66	0	268	5234	4981	1683	5501		5.75	Si
SLV 11	fin.	-930.9	-2855	0.66	0	268	5234	4981	1683	5501		1.93	Si
SLV 3	ini.	1226.42	-2260	0.66	0	268	5234	4981	1683	5501		2.43	Si
SLV 3	fin.	-683.75	-4194	0.66	0	268	5234	4981	1683	5501		1.31	Si
SLV 8	ini.	808.86	-2087	0.66	0	268	5234	4981	1683	5501		2.64	Si
SLV 8	fin.	-1022.46	-4189	0.66	0	268	5234	4981	1683	5501		1.31	Si
SLV 1	ini.	920.83	-1273	0.66	0	268	5234	4981	1683	5501		4.32	Si
SLV 1	fin.	-292.71	-2850	0.66	0	268	5234	4981	1683	5501		1.93	Si
SLD 7	ini.	331	-846	0.66	0	268	5234	4981	1683	5501		6.51	Si
SLD 7	fin.	-634.1	-2559	0.66	0	268	5234	4981	1683	5501		2.15	Si
SLV 2	ini.	925.98	-1269	0.66	0	268	5234	4981	1683	5501		4.34	Si
SLV 2	fin.	-285.92	-2839	0.66	0	268	5234	4981	1683	5501		1.94	Si
SLV 12	ini.	141.74	-954	0.66	0	268	5234	4981	1683	5501		5.76	Si
SLV 12	fin.	-926.53	-2848	0.66	0	268	5234	4981	1683	5501		1.93	Si
SLD 8	ini.	332.45	-844	0.66	0	268	5234	4981	1683	5501		6.52	Si
SLD 8	fin.	-632.19	-2556	0.66	0	268	5234	4981	1683	5501		2.15	Si
SLV 7	ini.	805.54	-2090	0.66	0	268	5234	4981	1683	5501		2.63	Si
SLV 7	fin.	-1026.84	-4196	0.66	0	268	5234	4981	1683	5501		1.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.239	SLV 13	Si
V_SLV	1.311	SLV 7	Si
PF_SLU	3.008	SLU 77	Si
V_SLU	2.272	SLU 77	Si

Trave di accoppiamento 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	14.6	15.66	1.06	-7.463	1.006	14.6	15.66	1.06	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	-39.83	-707	-0.0000141	0.0002246	0.0035	1.06		4210.93	4210.93	No	105.73	Si
SLU 68	fin.	-256.54	-949	-0.0000932	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.41	Si
SLU 71	ini.	-39.92	-750	-0.0000141	0.0002246	0.0035	1.06		4210.93	4210.93	No	105.48	Si
SLU 71	fin.	-286.87	-1057	-0.0001047	0.0002246	0.0035	1.06		4210.93	4210.93	No	14.68	Si
SLU 69	ini.	-61.77	-852	-0.0000219	0.0002246	0.0035	1.06		4210.93	4210.93	No	68.18	Si
SLU 69	fin.	-271.39	-1056	-0.0000988	0.0002246	0.0035	1.06		4210.93	4210.93	No	15.52	Si
SLU 72	ini.	-40.83	-753	-0.0000144	0.0002246	0.0035	1.06		4210.93	4210.93	No	103.15	Si
SLU 72	fin.	-287.72	-1061	-0.000105	0.0002246	0.0035	1.06		4210.93	4210.93	No	14.64	Si
SLU 51	ini.	-33.9	-714	-0.000012	0.0002246	0.0035	1.06		4210.93	4210.93	No	124.2	Si
SLU 51	fin.	-302.65	-1119	-0.0001107	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.91	Si
SLU 70	ini.	-62.67	-855	-0.0000222	0.0002246	0.0035	1.06		4210.93	4210.93	No	67.19	Si
SLU 70	fin.	-272.24	-1061	-0.0000991	0.0002246	0.0035	1.06		4210.93	4210.93	No	15.47	Si
SLU 49	ini.	-55.75	-816	-0.0000198	0.0002246	0.0035	1.06		4210.93	4210.93	No	75.53	Si
SLU 49	fin.	-287.17	-1119	-0.0001048	0.0002246	0.0035	1.06		4210.93	4210.93	No	14.66	Si
SLU 50	ini.	-33	-711	-0.0000117	0.0002246	0.0035	1.06		4210.93	4210.93	No	127.61	Si
SLU 50	fin.	-301.8	-1115	-0.0001104	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.95	Si
SLU 47	ini.	-32.91	-668	-0.0000116	0.0002246	0.0035	1.06		4210.93	4210.93	No	127.97	Si
SLU 47	fin.	-271.46	-1007	-0.0000989	0.0002246	0.0035	1.06		4210.93	4210.93	No	15.51	Si
SLU 48	ini.	-54.85	-813	-0.0000194	0.0002246	0.0035	1.06		4210.93	4210.93	No	76.78	Si
SLU 48	fin.	-286.32	-1114	-0.0001045	0.0002246	0.0035	1.06		4210.93	4210.93	No	14.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-54.85	1168	1.06	0	430	7930	5333	2703	8036	No	6.88	Si
SLU 48	fin.	-286.32	-2077	1.06	0	430	7930	5333	2703	8036	No	3.87	Si
SLU 45	ini.	-53.24	1234	1.06	0	430	7930	5333	2703	8036	No	6.51	Si
SLU 45	fin.	-254.57	-2011	1.06	0	430	7930	5333	2703	8036	No	4	Si
SLU 51	ini.	-33.9	883	1.06	0	430	7930	5333	2703	8036	No	9.1	Si
SLU 51	fin.	-302.65	-1979	1.06	0	430	7930	5333	2703	8036	No	4.06	Si
SLU 50	ini.	-33	884	1.06	0	430	7930	5333	2703	8036	No	9.09	Si
SLU 50	fin.	-301.8	-1978	1.06	0	430	7930	5333	2703	8036	No	4.06	Si
SLU 66	ini.	-60.16	1381	1.06	0	430	7930	5333	2703	8036	No	5.82	Si
SLU 66	fin.	-239.65	-2010	1.06	0	430	7930	5333	2703	8036	No	4	Si
SLU 69	ini.	-61.77	1315	1.06	0	430	7930	5333	2703	8036	No	6.11	Si
SLU 69	fin.	-271.39	-2076	1.06	0	430	7930	5333	2703	8036	No	3.87	Si
SLU 70	ini.	-62.67	1314	1.06	0	430	7930	5333	2703	8036	No	6.11	Si
SLU 70	fin.	-272.24	-2077	1.06	0	430	7930	5333	2703	8036	No	3.87	Si
SLU 67	ini.	-61.07	1380	1.06	0	430	7930	5333	2703	8036	No	5.82	Si
SLU 67	fin.	-240.49	-2011	1.06	0	430	7930	5333	2703	8036	No	4	Si
SLU 49	ini.	-55.75	1168	1.06	0	430	7930	5333	2703	8036	No	6.88	Si
SLU 49	fin.	-287.17	-2078	1.06	0	430	7930	5333	2703	8036	No	3.87	Si
SLU 46	ini.	-54.15	1234	1.06	0	430	7930	5333	2703	8036	No	6.51	Si
SLU 46	fin.	-255.42	-2012	1.06	0	430	7930	5333	2703	8036	No	3.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-490.04	-1717	-0.0001809	0.0003369	0.0035	1.06		4170.47	4170.47		8.51	Si
SLV 9	fin.	130.25	-421	-0.0000465	0.0003369	0.0035	1.06		4163.27	4163.27		31.96	Si
SLV 3	ini.	713.01	1256	-0.0002703	0.0003369	0.0035	1.06		4163.27	4163.27		5.84	Si
SLV 3	fin.	-803.77	-1457	-0.0003076	0.0003369	0.0035	1.06		4170.47	4170.47		5.19	Si
SLV 15	ini.	-653.16	-1883	-0.0002455	0.0003369	0.0035	1.06		4170.47	4170.47		6.39	Si
SLV 15	fin.	448.4	371	-0.000165	0.0003369	0.0035	1.06		4163.27	4163.27		9.28	Si
SLV 16	ini.	-651.17	-1876	-0.0002447	0.0003369	0.0035	1.06		4170.47	4170.47		6.4	Si
SLV 16	fin.	446.6	367	-0.0001643	0.0003369	0.0035	1.06		4163.27	4163.27		9.32	Si
SLV 4	ini.	715	1263	-0.0002712	0.0003369	0.0035	1.06		4163.27	4163.27		5.82	Si
SLV 4	fin.	-805.58	-1461	-0.0003084	0.0003369	0.0035	1.06		4170.47	4170.47		5.18	Si
SLV 1	ini.	567.45	825	-0.0002116	0.0003369	0.0035	1.06		4163.27	4163.27		7.34	Si
SLV 1	fin.	-748.19	-1527	-0.0002844	0.0003369	0.0035	1.06		4170.47	4170.47		5.57	Si
SLV 10	ini.	-488.75	-1713	-0.0001804	0.0003369	0.0035	1.06		4170.47	4170.47		8.53	Si
SLV 10	fin.	129.08	-423	-0.000046	0.0003369	0.0035	1.06		4163.27	4163.27		32.25	Si
SLV 13	ini.	-798.73	-2314	-0.0003055	0.0003369	0.0035	1.06		4170.47	4170.47		5.22	Si
SLV 13	fin.	503.99	301	-0.0001866	0.0003369	0.0035	1.06		4163.27	4163.27		8.26	Si
SLV 2	ini.	569.44	832	-0.0002123	0.0003369	0.0035	1.06		4163.27	4163.27		7.31	Si
SLV 2	fin.	-750	-1531	-0.0002851	0.0003369	0.0035	1.06		4170.47	4170.47		5.56	Si
SLV 14	ini.	-796.73	-2307	-0.0003047	0.0003369	0.0035	1.06		4170.47	4170.47		5.23	Si
SLV 14	fin.	502.18	297	-0.0001859	0.0003369	0.0035	1.06		4163.27	4163.27		8.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-653.16	3269	1.06	0	645	7930	8000	2703	8575		2.62	Si
SLV 15	fin.	448.4	991	1.06	0	645	7930	8000	2703	8575		8.65	Si
SLV 7	ini.	405.03	-479	1.06	0	645	7930	8000	2703	8575		17.89	Si
SLV 7	fin.	-430.68	-2752	1.06	0	645	7930	8000	2703	8575		3.12	Si
SLV 4	ini.	715	-1770	1.06	0	645	7930	8000	2703	8575		4.84	Si
SLV 4	fin.	-805.58	-4051	1.06	0	645	7930	8000	2703	8575		2.12	Si
SLV 16	ini.	-651.17	3259	1.06	0	645	7930	8000	2703	8575		2.63	Si
SLV 16	fin.	446.6	982	1.06	0	645	7930	8000	2703	8575		8.73	Si
SLV 1	ini.	567.45	-1351	1.06	0	645	7930	8000	2703	8575		6.35	Si
SLV 1	fin.	-748.19	-3637	1.06	0	645	7930	8000	2703	8575		2.36	Si
SLV 2	ini.	569.44	-1361	1.06	0	645	7930	8000	2703	8575		6.3	Si
SLV 2	fin.	-750	-3647	1.06	0	645	7930	8000	2703	8575		2.35	Si
SLV 8	ini.	406.32	-486	1.06	0	645	7930	8000	2703	8575		17.66	Si
SLV 8	fin.	-431.84	-2758	1.06	0	645	7930	8000	2703	8575		3.11	Si
SLV 14	ini.	-796.73	3669	1.06	0	645	7930	8000	2703	8575		2.34	Si
SLV 14	fin.	502.18	1385	1.06	0	645	7930	8000	2703	8575		6.19	Si
SLV 3	ini.	713.01	-1761	1.06	0	645	7930	8000	2703	8575		4.87	Si
SLV 3	fin.	-803.77	-4041	1.06	0	645	7930	8000	2703	8575		2.12	Si
SLV 13	ini.	-798.73	3678	1.06	0	645	7930	8000	2703	8575		2.33	Si
SLV 13	fin.	503.99	1395	1.06	0	645	7930	8000	2703	8575		6.15	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.177	SLV 4	Si
V_SLV	2.117	SLV 4	Si
PF_SLU	13.914	SLU 51	Si
V_SLU	3.867	SLU 49	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	14.6	15.66	1.06	-4.913	1.006	14.6	15.66	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	230.09	-336	-0.0000835	0.0002246	0.0035	1.06		4204.29	4204.29	No	18.27	Si
SLU 77	fin.	-354.34	-1484	-0.0001305	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.88	Si
SLU 69	ini.	249.54	-281	-0.0000908	0.0002246	0.0035	1.06		4204.29	4204.29	No	16.85	Si
SLU 69	fin.	-352.6	-1440	-0.0001299	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.94	Si
SLU 53	ini.	246.54	-227	-0.0000896	0.0002246	0.0035	1.06		4204.29	4204.29	No	17.05	Si
SLU 53	fin.	-345.56	-1385	-0.0001271	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.19	Si
SLU 78	ini.	231.44	-335	-0.000084	0.0002246	0.0035	1.06		4204.29	4204.29	No	18.17	Si
SLU 78	fin.	-355.53	-1488	-0.000131	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.84	Si
SLU 74	ini.	244.79	-273	-0.000089	0.0002246	0.0035	1.06		4204.29	4204.29	No	17.18	Si
SLU 74	fin.	-356.5	-1455	-0.0001314	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.81	Si
SLU 67	ini.	265.59	-217	-0.0000968	0.0002246	0.0035	1.06		4204.29	4204.29	No	15.83	Si
SLU 67	fin.	-355.94	-1416	-0.0001311	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.83	Si
SLU 75	ini.	246.14	-272	-0.0000895	0.0002246	0.0035	1.06		4204.29	4204.29	No	17.08	Si
SLU 75	fin.	-357.69	-1459	-0.0001318	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.77	Si
SLU 70	ini.	250.89	-280	-0.0000913	0.0002246	0.0035	1.06		4204.29	4204.29	No	16.76	Si
SLU 70	fin.	-353.79	-1444	-0.0001303	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.9	Si
SLU 54	ini.	247.89	-226	-0.0000901	0.0002246	0.0035	1.06		4204.29	4204.29	No	16.96	Si
SLU 54	fin.	-346.75	-1389	-0.0001276	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.14	Si
SLU 66	ini.	264.24	-218	-0.0000963	0.0002246	0.0035	1.06		4204.29	4204.29	No	15.91	Si
SLU 66	fin.	-354.75	-1412	-0.0001307	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	252.64	-385	1.06	0	430	6344	5333	2703	6774	No	17.58	Si
SLU 49	fin.	-342.85	-2922	1.06	0	430	6344	5333	2703	6774	No	2.32	Si
SLU 45	ini.	265.99	-425	1.06	0	430	6344	5333	2703	6774	No	15.94	Si
SLU 45	fin.	-343.81	-2949	1.06	0	430	6344	5333	2703	6774	No	2.3	Si
SLU 74	ini.	244.79	-392	1.06	0	430	6344	5333	2703	6774	No	17.29	Si
SLU 74	fin.	-356.5	-2955	1.06	0	430	6344	5333	2703	6774	No	2.29	Si
SLU 78	ini.	231.44	-352	1.06	0	430	6344	5333	2703	6774	No	19.24	Si
SLU 78	fin.	-355.53	-2928	1.06	0	430	6344	5333	2703	6774	No	2.31	Si
SLU 75	ini.	246.14	-398	1.06	0	430	6344	5333	2703	6774	No	17.04	Si
SLU 75	fin.	-357.69	-2965	1.06	0	430	6344	5333	2703	6774	No	2.28	Si
SLU 69	ini.	249.54	-371	1.06	0	430	6344	5333	2703	6774	No	18.27	Si
SLU 69	fin.	-352.6	-2970	1.06	0	430	6344	5333	2703	6774	No	2.28	Si
SLU 46	ini.	267.34	-431	1.06	0	430	6344	5333	2703	6774	No	15.73	Si
SLU 46	fin.	-345	-2959	1.06	0	430	6344	5333	2703	6774	No	2.29	Si
SLU 70	ini.	250.89	-377	1.06	0	430	6344	5333	2703	6774	No	17.99	Si
SLU 70	fin.	-353.79	-2980	1.06	0	430	6344	5333	2703	6774	No	2.27	Si
SLU 66	ini.	264.24	-416	1.06	0	430	6344	5333	2703	6774	No	16.28	Si
SLU 66	fin.	-354.75	-3008	1.06	0	430	6344	5333	2703	6774	No	2.25	Si
SLU 67	ini.	265.59	-422	1.06	0	430	6344	5333	2703	6774	No	16.06	Si
SLU 67	fin.	-355.94	-3017	1.06	0	430	6344	5333	2703	6774	No	2.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	521.73	363	-0.0001935	0.0003369	0.0035	1.06		4163.27	4163.27		7.98	Si
SLV 6	fin.	-454.04	-1414	-0.0001669	0.0003369	0.0035	1.06		4170.47	4170.47		9.19	Si
SLV 1	ini.	938.73	1428	-0.0003663	0.0003369	0.0035	1.06		4163.27	4163.27		4.43	Si
SLV 1	fin.	-479.02	-822	-0.0001766	0.0003369	0.0035	1.06		4170.47	4170.47		8.71	Si
SLV 2	ini.	936.69	1420	-0.0003654	0.0003369	0.0035	1.06		4163.27	4163.27		4.44	Si
SLV 2	fin.	-480.02	-831	-0.000177	0.0003369	0.0035	1.06		4170.47	4170.47		8.69	Si
SLV 16	ini.	-509.03	-1551	-0.0001883	0.0003369	0.0035	1.06		4170.47	4170.47		8.19	Si
SLV 16	fin.	-37.65	-1105	-0.0000133	0.0003369	0.0035	1.06		4170.47	4170.47		110.76	Si
SLV 3	ini.	878.95	1441	-0.0003403	0.0003369	0.0035	1.06		4163.27	4163.27		4.74	Si
SLV 3	fin.	-393.95	-500	-0.0001439	0.0003369	0.0035	1.06		4170.47	4170.47		10.59	Si
SLV 15	ini.	-506.99	-1543	-0.0001875	0.0003369	0.0035	1.06		4170.47	4170.47		8.23	Si
SLV 15	fin.	-36.66	-1096	-0.0000129	0.0003369	0.0035	1.06		4170.47	4170.47		113.77	Si
SLD 1	ini.	525.22	576	-0.0001949	0.0003369	0.0035	1.06		4163.27	4163.27		7.93	Si
SLD 1	fin.	-353.52	-905	-0.0001286	0.0003369	0.0035	1.06		4170.47	4170.47		11.8	Si
SLV 4	ini.	876.91	1433	-0.0003394	0.0003369	0.0035	1.06		4163.27	4163.27		4.75	Si
SLV 4	fin.	-394.94	-509	-0.0001443	0.0003369	0.0035	1.06		4170.47	4170.47		10.56	Si
SLD 2	ini.	524.34	573	-0.0001946	0.0003369	0.0035	1.06		4163.27	4163.27		7.94	Si
SLD 2	fin.	-353.95	-909	-0.0001288	0.0003369	0.0035	1.06		4170.47	4170.47		11.78	Si
SLV 5	ini.	523.04	368	-0.0001941	0.0003369	0.0035	1.06		4163.27	4163.27		7.96	Si
SLV 5	fin.	-453.4	-1408	-0.0001667	0.0003369	0.0035	1.06		4170.47	4170.47		9.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	938.73	-2473	1.06	0	645	6344	8000	2703	6989		2.83	Si
SLV 1	fin.	-479.02	-4573	1.06	0	645	6344	8000	2703	6989		1.53	Si
SLD 2	ini.	524.34	-1291	1.06	0	645	6344	8000	2703	6989		5.41	Si
SLD 2	fin.	-353.95	-3203	1.06	0	645	6344	8000	2703	6989		2.18	Si
SLV 2	ini.	936.69	-2475	1.06	0	645	6344	8000	2703	6989		2.82	Si
SLV 2	fin.	-480.02	-4564	1.06	0	645	6344	8000	2703	6989		1.53	Si
SLD 1	ini.	525.22	-1291	1.06	0	645	6344	8000	2703	6989		5.41	Si
SLD 1	fin.	-353.52	-3207	1.06	0	645	6344	8000	2703	6989		2.18	Si
SLV 5	ini.	523.04	-1580	1.06	0	645	6344	8000	2703	6989		4.42	Si
SLV 5	fin.	-453.4	-3658	1.06	0	645	6344	8000	2703	6989		1.91	Si
SLV 6	ini.	521.73	-1581	1.06	0	645	6344	8000	2703	6989		4.42	Si
SLV 6	fin.	-454.04	-3652	1.06	0	645	6344	8000	2703	6989		1.91	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	876.91	-2106	1.06	0	645	6344	8000	2703	6989		3.32	Si
SLV 4	fin.	-394.94	-4063	1.06	0	645	6344	8000	2703	6989		1.72	Si
SLV 3	ini.	878.95	-2105	1.06	0	645	6344	8000	2703	6989		3.32	Si
SLV 3	fin.	-393.95	-4072	1.06	0	645	6344	8000	2703	6989		1.72	Si
SLD 3	ini.	498.86	-1128	1.06	0	645	6344	8000	2703	6989		6.2	Si
SLD 3	fin.	-315.95	-2987	1.06	0	645	6344	8000	2703	6989		2.34	Si
SLD 4	ini.	497.99	-1129	1.06	0	645	6344	8000	2703	6989		6.19	Si
SLD 4	fin.	-316.38	-2983	1.06	0	645	6344	8000	2703	6989		2.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.435	SLV 1	Si
V_SLV	1.528	SLV 1	Si
PF_SLU	11.773	SLU 75	Si
V_SLU	2.245	SLU 67	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	14.6	15.66	1.06	-6.268	0.706	14.6	15.66	1.06	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	-294.33	-717	-0.0001075	0.0002246	0.0035	1.06		4238.3	4238.3	No	14.4	Si
SLU 39	fin.	2.75	-121	-0.000001	0.0002246	0.0035	1.06		4231.66	4231.66	No	1540.02	Si
SLU 40	ini.	-272.67	-670	-0.0000993	0.0002246	0.0035	1.06		4238.3	4238.3	No	15.54	Si
SLU 40	fin.	3.77	-115	-0.0000013	0.0002246	0.0035	1.06		4231.66	4231.66	No	1122.89	Si
SLU 32	ini.	-256.46	-685	-0.0000932	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.53	Si
SLU 32	fin.	-5.96	-133	-0.0000021	0.0002246	0.0035	1.06		4238.3	4238.3	No	710.92	Si
SLU 81	ini.	-303.31	-749	-0.0001109	0.0002246	0.0035	1.06		4238.3	4238.3	No	13.97	Si
SLU 81	fin.	2.34	-134	-0.0000008	0.0002246	0.0035	1.06		4231.66	4231.66	No	1807.29	Si
SLU 60	ini.	-236.43	-585	-0.0000857	0.0002246	0.0035	1.06		4238.3	4238.3	No	17.93	Si
SLU 60	fin.	0.79	-114	-0.0000003	0.0002246	0.0035	1.06		4231.66	4231.66	No	5325.24	Si
SLU 74	ini.	-265.44	-717	-0.0000966	0.0002246	0.0035	1.06		4238.3	4238.3	No	15.97	Si
SLU 74	fin.	-6.37	-147	-0.0000022	0.0002246	0.0035	1.06		4238.3	4238.3	No	665.56	Si
SLU 75	ini.	-243.78	-670	-0.0000884	0.0002246	0.0035	1.06		4238.3	4238.3	No	17.39	Si
SLU 75	fin.	-5.35	-140	-0.0000019	0.0002246	0.0035	1.06		4238.3	4238.3	No	792.61	Si
SLU 83	ini.	-244.76	-660	-0.0000888	0.0002246	0.0035	1.06		4238.3	4238.3	No	17.32	Si
SLU 83	fin.	1.91	-123	-0.0000007	0.0002246	0.0035	1.06		4231.66	4231.66	No	2220.81	Si
SLU 82	ini.	-281.65	-702	-0.0001027	0.0002246	0.0035	1.06		4238.3	4238.3	No	15.05	Si
SLU 82	fin.	3.36	-128	-0.0000012	0.0002246	0.0035	1.06		4231.66	4231.66	No	1258.6	Si
SLU 41	ini.	-235.78	-628	-0.0000855	0.0002246	0.0035	1.06		4238.3	4238.3	No	17.98	Si
SLU 41	fin.	2.31	-110	-0.0000008	0.0002246	0.0035	1.06		4231.66	4231.66	No	1830.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-244.76	784	1.06	0	246	7137	3048	2703	5751	No	7.33	Si
SLU 83	fin.	1.91	421	1.06	0	246	7137	3048	2703	5751	No	13.65	Si
SLU 75	ini.	-243.78	771	1.06	0	246	7137	3048	2703	5751	No	7.46	Si
SLU 75	fin.	-5.35	408	1.06	0	246	7137	3048	2703	5751	No	14.1	Si
SLU 73	ini.	-230.9	736	1.06	0	246	7137	3048	2703	5751	No	7.81	Si
SLU 73	fin.	3.81	374	1.06	0	246	7137	3048	2703	5751	No	15.39	Si
SLU 84	ini.	-223.1	737	1.06	0	246	7137	3048	2703	5751	No	7.8	Si
SLU 84	fin.	2.93	374	1.06	0	246	7137	3048	2703	5751	No	15.36	Si
SLU 81	ini.	-303.31	895	1.06	0	246	7137	3048	2703	5751	No	6.42	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	2.34	533	1.06	0	246	7137	3048	2703	5751	No	10.79	Si
SLU 40	ini.	-272.67	786	1.06	0	246	7137	3048	2703	5751	No	7.32	Si
SLU 40	fin.	3.77	500	1.06	0	246	7137	3048	2703	5751	No	11.5	Si
SLU 74	ini.	-265.44	817	1.06	0	246	7137	3048	2703	5751	No	7.03	Si
SLU 74	fin.	-6.37	455	1.06	0	246	7137	3048	2703	5751	No	12.64	Si
SLU 39	ini.	-294.33	832	1.06	0	246	7137	3048	2703	5751	No	6.91	Si
SLU 39	fin.	2.75	547	1.06	0	246	7137	3048	2703	5751	No	10.51	Si
SLU 32	ini.	-256.46	755	1.06	0	246	7137	3048	2703	5751	No	7.62	Si
SLU 32	fin.	-5.96	469	1.06	0	246	7137	3048	2703	5751	No	12.26	Si
SLU 82	ini.	-281.65	848	1.06	0	246	7137	3048	2703	5751	No	6.78	Si
SLU 82	fin.	3.36	486	1.06	0	246	7137	3048	2703	5751	No	11.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-1670.17	-3542	-0.0007255	0.0003369	0.0035	1.06		4350.23	4350.23		2.6	Si
SLV 11	fin.	49.7	-178	-0.0000176	0.0003369	0.0035	1.06		4343.51	4343.51		87.4	Si
SLD 11	ini.	-821.15	-1783	-0.000315	0.0003369	0.0035	1.06		4350.23	4350.23		5.3	Si
SLD 11	fin.	22.43	-124	-0.0000079	0.0003369	0.0035	1.06		4343.51	4343.51		193.64	Si
SLV 12	ini.	-1615.22	-3423	-0.0006958	0.0003369	0.0035	1.06		4350.23	4350.23		2.69	Si
SLV 12	fin.	51.47	-163	-0.0000182	0.0003369	0.0035	1.06		4343.51	4343.51		84.38	Si
SLV 6	ini.	1370.76	2759	-0.00057	0.0003369	0.0035	1.06		4343.51	4343.51		3.17	Si
SLV 6	fin.	-47.67	19	-0.0000169	0.0003369	0.0035	1.06		4350.23	4350.23		91.26	Si
SLD 7	ini.	-841.49	-1797	-0.0003236	0.0003369	0.0035	1.06		4350.23	4350.23		5.17	Si
SLD 7	fin.	45.42	-89	-0.0000161	0.0003369	0.0035	1.06		4343.51	4343.51		95.62	Si
SLV 10	ini.	1418.63	2794	-0.0005942	0.0003369	0.0035	1.06		4343.51	4343.51		3.06	Si
SLV 10	fin.	-102.07	-66	-0.0000363	0.0003369	0.0035	1.06		4350.23	4350.23		42.62	Si
SLV 5	ini.	1315.81	2641	-0.0005426	0.0003369	0.0035	1.06		4343.51	4343.51		3.3	Si
SLV 5	fin.	-49.45	4	-0.0000175	0.0003369	0.0035	1.06		4350.23	4350.23		87.97	Si
SLV 8	ini.	-1663.09	-3457	-0.0007216	0.0003369	0.0035	1.06		4350.23	4350.23		2.62	Si
SLV 8	fin.	105.88	-77	-0.0000377	0.0003369	0.0035	1.06		4343.51	4343.51		41.02	Si
SLV 7	ini.	-1718.04	-3576	-0.0007518	0.0003369	0.0035	1.06		4350.23	4350.23		2.53	Si
SLV 7	fin.	104.1	-92	-0.000037	0.0003369	0.0035	1.06		4343.51	4343.51		41.73	Si
SLV 9	ini.	1363.67	2675	-0.0005664	0.0003369	0.0035	1.06		4343.51	4343.51		3.19	Si
SLV 9	fin.	-103.85	-82	-0.0000369	0.0003369	0.0035	1.06		4350.23	4350.23		41.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 7	ini.	-841.49	2101	1.06	0	369	7137	4571	2703	7274		3.46	Si
SLD 7	fin.	45.42	1820	1.06	0	369	7137	4571	2703	7274		4	Si
SLV 8	ini.	-1663.09	4012	1.06	0	369	7137	4571	2703	7274		1.81	Si
SLV 8	fin.	105.88	3724	1.06	0	369	7137	4571	2703	7274		1.95	Si
SLV 7	ini.	-1718.04	4132	1.06	0	369	7137	4571	2703	7274		1.76	Si
SLV 7	fin.	104.1	3844	1.06	0	369	7137	4571	2703	7274		1.89	Si
SLV 6	ini.	1370.76	-2988	1.06	0	369	7137	4571	2703	7274		2.43	Si
SLV 6	fin.	-47.67	-3280	1.06	0	369	7137	4571	2703	7274		2.22	Si
SLV 5	ini.	1315.81	-2868	1.06	0	369	7137	4571	2703	7274		2.54	Si
SLV 5	fin.	-49.45	-3159	1.06	0	369	7137	4571	2703	7274		2.3	Si
SLV 9	ini.	1363.67	-3013	1.06	0	369	7137	4571	2703	7274		2.41	Si
SLV 9	fin.	-103.85	-3278	1.06	0	369	7137	4571	2703	7274		2.22	Si
SLV 12	ini.	-1615.22	3867	1.06	0	369	7137	4571	2703	7274		1.88	Si
SLV 12	fin.	51.47	3606	1.06	0	369	7137	4571	2703	7274		2.02	Si
SLV 11	ini.	-1670.17	3987	1.06	0	369	7137	4571	2703	7274		1.82	Si
SLV 11	fin.	49.7	3726	1.06	0	369	7137	4571	2703	7274		1.95	Si
SLV 10	ini.	1418.63	-3134	1.06	0	369	7137	4571	2703	7274		2.32	Si
SLV 10	fin.	-102.07	-3398	1.06	0	369	7137	4571	2703	7274		2.14	Si
SLD 8	ini.	-817.49	2049	1.06	0	369	7137	4571	2703	7274		3.55	Si
SLD 8	fin.	46.2	1768	1.06	0	369	7137	4571	2703	7274		4.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.532	SLV 7	Si
V_SLV	1.761	SLV 7	Si
PF_SLU	13.973	SLU 81	Si
V_SLU	6.423	SLU 81	Si

Trave di accoppiamento 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	12.5	14.5	2	-5.093	6.506	12.5	14.5	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	0.69	-159	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	20909.44	Si
SLU 69	fin.	-114.62	-140	-0.0000114	0.0001872	0.0035	2		14357.01	14357.01	No	125.25	Si
SLU 72	ini.	6.34	-179	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2260.81	Si
SLU 72	fin.	-126.7	-153	-0.0000126	0.0001872	0.0035	2		14357.01	14357.01	No	113.31	Si
SLU 48	ini.	-0.99	-165	-0.0000001	0.0001872	0.0035	2		14357.01	14357.01	No	14512.51	Si
SLU 48	fin.	-120.97	-146	-0.000012	0.0001872	0.0035	2		14357.01	14357.01	No	118.68	Si
SLU 51	ini.	4.67	-185	-0.0000005	0.0001872	0.0035	2		14344.28	14344.28	No	3071.95	Si
SLU 51	fin.	-133.05	-158	-0.0000132	0.0001872	0.0035	2		14357.01	14357.01	No	107.9	Si
SLU 47	ini.	-8.99	-163	-0.0000009	0.0001872	0.0035	2		14357.01	14357.01	No	1596.7	Si
SLU 47	fin.	-116.7	-141	-0.0000116	0.0001872	0.0035	2		14357.01	14357.01	No	123.02	Si
SLU 70	ini.	2.36	-170	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	6081.19	Si
SLU 70	fin.	-121.18	-147	-0.000012	0.0001872	0.0035	2		14357.01	14357.01	No	118.48	Si
SLU 50	ini.	3	-174	-0.0000003	0.0001872	0.0035	2		14344.28	14344.28	No	4786.76	Si
SLU 50	fin.	-126.5	-151	-0.0000126	0.0001872	0.0035	2		14357.01	14357.01	No	113.49	Si
SLU 9	ini.	11.24	-157	-0.0000011	0.0001872	0.0035	2		14344.28	14344.28	No	1276.23	Si
SLU 9	fin.	-111.75	-132	-0.0000111	0.0001872	0.0035	2		14357.01	14357.01	No	128.48	Si
SLU 71	ini.	4.67	-167	-0.0000005	0.0001872	0.0035	2		14344.28	14344.28	No	3070.29	Si
SLU 71	fin.	-120.15	-146	-0.0000119	0.0001872	0.0035	2		14357.01	14357.01	No	119.49	Si
SLU 49	ini.	0.68	-177	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	20986.78	Si
SLU 49	fin.	-127.52	-153	-0.0000127	0.0001872	0.0035	2		14357.01	14357.01	No	112.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	0.69	-1047	2	0	812	3965	8384	5100	4776	No	4.56	Si
SLU 69	fin.	-114.62	-272	2	0	812	3965	8384	5100	4776	No	17.58	Si
SLU 79	ini.	-1.74	-1038	2	0	812	3965	8384	5100	4776	No	4.6	Si
SLU 79	fin.	-96.79	-217	2	0	812	3965	8384	5100	4776	No	21.97	Si
SLU 51	ini.	4.67	-1009	2	0	812	3965	8384	5100	4776	No	4.73	Si
SLU 51	fin.	-133.05	-353	2	0	812	3965	8384	5100	4776	No	13.52	Si
SLU 80	ini.	-0.06	-1072	2	0	812	3965	8384	5100	4776	No	4.46	Si
SLU 80	fin.	-103.35	-240	2	0	812	3965	8384	5100	4776	No	19.88	Si
SLU 71	ini.	4.67	-1052	2	0	812	3965	8384	5100	4776	No	4.54	Si
SLU 71	fin.	-120.15	-301	2	0	812	3965	8384	5100	4776	No	15.85	Si
SLU 72	ini.	6.34	-1086	2	0	812	3965	8384	5100	4776	No	4.4	Si
SLU 72	fin.	-126.7	-324	2	0	812	3965	8384	5100	4776	No	14.74	Si
SLU 78	ini.	-4.05	-1066	2	0	812	3965	8384	5100	4776	No	4.48	Si
SLU 78	fin.	-97.82	-211	2	0	812	3965	8384	5100	4776	No	22.66	Si
SLU 70	ini.	2.36	-1081	2	0	812	3965	8384	5100	4776	No	4.42	Si
SLU 70	fin.	-121.18	-295	2	0	812	3965	8384	5100	4776	No	16.21	Si
SLU 77	ini.	-5.72	-1033	2	0	812	3965	8384	5100	4776	No	4.63	Si
SLU 77	fin.	-91.26	-188	2	0	812	3965	8384	5100	4776	No	25.42	Si
SLU 49	ini.	0.68	-1004	2	0	812	3965	8384	5100	4776	No	4.76	Si
SLU 49	fin.	-127.52	-324	2	0	812	3965	8384	5100	4776	No	14.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1026.12	-2344	-0.0001046	0.0002807	0.0035	2		14202.07	14202.07		13.84	Si
SLV 4	fin.	-1055.71	-1074	-0.0001077	0.0002807	0.0035	2		14215.41	14215.41		13.47	Si
SLV 13	ini.	-1068.8	2189	-0.0001091	0.0002807	0.0035	2		14215.41	14215.41		13.3	Si
SLV 13	fin.	945.17	928	-0.0000961	0.0002807	0.0035	2		14202.07	14202.07		15.03	Si
SLV 2	ini.	1126.36	-3153	-0.0001152	0.0002807	0.0035	2		14202.07	14202.07		12.61	Si
SLV 2	fin.	-1434.07	-1519	-0.0001481	0.0002807	0.0035	2		14215.41	14215.41		9.91	Si
SLV 1	ini.	1132	-3177	-0.0001158	0.0002807	0.0035	2		14202.07	14202.07		12.55	Si
SLV 1	fin.	-1459.24	-1544	-0.0001508	0.0002807	0.0035	2		14215.41	14215.41		9.74	Si
SLV 14	ini.	-1074.45	2212	-0.0001097	0.0002807	0.0035	2		14215.41	14215.41		13.23	Si
SLV 14	fin.	970.34	953	-0.0000988	0.0002807	0.0035	2		14202.07	14202.07		14.64	Si
SLV 6	ini.	474.02	-2224	-0.0000475	0.0002807	0.0035	2		14202.07	14202.07		29.96	Si
SLV 6	fin.	-1038.41	-1178	-0.0001059	0.0002807	0.0035	2		14215.41	14215.41		13.69	Si
SLV 16	ini.	-1174.68	3022	-0.0001203	0.0002807	0.0035	2		14215.41	14215.41		12.1	Si
SLV 16	fin.	1348.69	1398	-0.000139	0.0002807	0.0035	2		14202.07	14202.07		10.53	Si
SLV 5	ini.	477.66	-2239	-0.0000479	0.0002807	0.0035	2		14202.07	14202.07		29.73	Si
SLV 5	fin.	-1054.63	-1194	-0.0001076	0.0002807	0.0035	2		14215.41	14215.41		13.48	Si
SLV 15	ini.	-1169.03	2999	-0.0001197	0.0002807	0.0035	2		14215.41	14215.41		12.16	Si
SLV 15	fin.	1323.52	1374	-0.0001363	0.0002807	0.0035	2		14202.07	14202.07		10.73	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1031.77	-2367	-0.0001052	0.0002807	0.0035	2		14202.07	14202.07		13.76	Si
SLV 3	fin.	-1080.89	-1098	-0.0001103	0.0002807	0.0035	2		14215.41	14215.41		13.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1126.36	-4186	2	0	1217	3965	12577	5100	5182		1.24	Si
SLV 2	fin.	-1434.07	-4235	2	0	1217	3965	12577	5100	5182		1.22	Si
SLV 6	ini.	474.02	-4556	2	0	1217	3965	12577	5100	5182		1.14	Si
SLV 6	fin.	-1038.41	-3399	2	0	1217	3965	12577	5100	5182		1.52	Si
SLV 9	ini.	-182.58	-2963	2	0	1217	3965	12577	5100	5182		1.75	Si
SLV 9	fin.	-333.31	-1356	2	0	1217	3965	12577	5100	5182		3.82	Si
SLV 10	ini.	-186.22	-2951	2	0	1217	3965	12577	5100	5182		1.76	Si
SLV 10	fin.	-317.09	-1310	2	0	1217	3965	12577	5100	5182		3.96	Si
SLV 12	ini.	-520.34	3448	2	0	1217	3965	12577	5100	5182		1.5	Si
SLV 12	fin.	944.08	3230	2	0	1217	3965	12577	5100	5182		1.6	Si
SLV 15	ini.	-1169.03	3065	2	0	1217	3965	12577	5100	5182		1.69	Si
SLV 15	fin.	1323.52	4020	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 1	ini.	1132	-4206	2	0	1217	3965	12577	5100	5182		1.23	Si
SLV 1	fin.	-1459.24	-4307	2	0	1217	3965	12577	5100	5182		1.2	Si
SLV 11	ini.	-516.7	3436	2	0	1217	3965	12577	5100	5182		1.51	Si
SLV 11	fin.	927.86	3183	2	0	1217	3965	12577	5100	5182		1.63	Si
SLV 5	ini.	477.66	-4569	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 5	fin.	-1054.63	-3445	2	0	1217	3965	12577	5100	5182		1.5	Si
SLV 16	ini.	-1174.68	3085	2	0	1217	3965	12577	5100	5182		1.68	Si
SLV 16	fin.	1348.69	4091	2	0	1217	3965	12577	5100	5182		1.27	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.742	SLV 1	Si
V_SLV	1.134	SLV 5	Si
PF_SLU	107.904	SLU 51	Si
V_SLU	4.397	SLU 72	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	15.3	15.66	0.36	-5.093	6.506	15.3	15.66	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	27.23	24	-0.0000858	0.0001872	0.0035	0.36		479.9	479.9	No	17.62	Si
SLU 68	fin.	-12.12	19	-0.0000373	0.0001872	0.0035	0.36		482.14	482.14	No	39.78	Si
SLU 71	ini.	27.77	34	-0.0000875	0.0001872	0.0035	0.36		479.9	479.9	No	17.28	Si
SLU 71	fin.	-16.01	36	-0.0000495	0.0001872	0.0035	0.36		482.14	482.14	No	30.12	Si
SLU 72	ini.	29.66	42	-0.0000937	0.0001872	0.0035	0.36		479.9	479.9	No	16.18	Si
SLU 72	fin.	-16.27	38	-0.0000503	0.0001872	0.0035	0.36		482.14	482.14	No	29.64	Si
SLU 59	ini.	27.38	28	-0.0000863	0.0001872	0.0035	0.36		479.9	479.9	No	17.53	Si
SLU 59	fin.	-13.56	26	-0.0000418	0.0001872	0.0035	0.36		482.14	482.14	No	35.54	Si
SLU 49	ini.	28.78	38	-0.0000908	0.0001872	0.0035	0.36		479.9	479.9	No	16.68	Si
SLU 49	fin.	-14.25	31	-0.0000439	0.0001872	0.0035	0.36		482.14	482.14	No	33.83	Si
SLU 50	ini.	27.86	41	-0.0000878	0.0001872	0.0035	0.36		479.9	479.9	No	17.23	Si
SLU 50	fin.	-13.68	34	-0.0000422	0.0001872	0.0035	0.36		482.14	482.14	No	35.24	Si
SLU 47	ini.	27.32	32	-0.0000861	0.0001872	0.0035	0.36		479.9	479.9	No	17.56	Si
SLU 47	fin.	-9.79	17	-0.00003	0.0001872	0.0035	0.36		482.14	482.14	No	49.24	Si
SLU 51	ini.	29.75	49	-0.000094	0.0001872	0.0035	0.36		479.9	479.9	No	16.13	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	fin.	-13.94	36	-0.000043	0.0001872	0.0035	0.36		482.14	482.14	No	34.59	Si
SLU 70	ini.	28.69	30	-0.0000906	0.0001872	0.0035	0.36		479.9	479.9	No	16.73	Si
SLU 70	fin.	-16.58	33	-0.0000513	0.0001872	0.0035	0.36		482.14	482.14	No	29.08	Si
SLU 80	ini.	27.29	21	-0.000086	0.0001872	0.0035	0.36		479.9	479.9	No	17.59	Si
SLU 80	fin.	-15.89	29	-0.0000491	0.0001872	0.0035	0.36		482.14	482.14	No	30.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	24.43	110	0.36	0	105	2855	1509	918	2427	No	22	Si
SLU 77	fin.	-15.94	-420	0.36	0	105	2855	1509	918	2427	No	5.78	Si
SLU 76	ini.	24.86	102	0.36	0	105	2855	1509	918	2427	No	23.91	Si
SLU 76	fin.	-11.74	-395	0.36	0	105	2855	1509	918	2427	No	6.14	Si
SLU 82	ini.	18.9	156	0.36	0	105	2855	1509	918	2427	No	15.52	Si
SLU 82	fin.	-7.09	-427	0.36	0	105	2855	1509	918	2427	No	5.69	Si
SLU 84	ini.	22.58	125	0.36	0	105	2855	1509	918	2427	No	19.4	Si
SLU 84	fin.	-11.41	-416	0.36	0	105	2855	1509	918	2427	No	5.83	Si
SLU 78	ini.	26.32	99	0.36	0	105	2855	1509	918	2427	No	24.54	Si
SLU 78	fin.	-16.21	-416	0.36	0	105	2855	1509	918	2427	No	5.83	Si
SLU 81	ini.	17	168	0.36	0	105	2855	1509	918	2427	No	14.47	Si
SLU 81	fin.	-6.83	-431	0.36	0	105	2855	1509	918	2427	No	5.64	Si
SLU 83	ini.	20.69	136	0.36	0	105	2855	1509	918	2427	No	17.78	Si
SLU 83	fin.	-11.15	-420	0.36	0	105	2855	1509	918	2427	No	5.78	Si
SLU 73	ini.	21.17	133	0.36	0	105	2855	1509	918	2427	No	18.28	Si
SLU 73	fin.	-7.42	-406	0.36	0	105	2855	1509	918	2427	No	5.98	Si
SLU 74	ini.	20.74	142	0.36	0	105	2855	1509	918	2427	No	17.14	Si
SLU 74	fin.	-11.62	-431	0.36	0	105	2855	1509	918	2427	No	5.63	Si
SLU 75	ini.	22.63	130	0.36	0	105	2855	1509	918	2427	No	18.64	Si
SLU 75	fin.	-11.88	-427	0.36	0	105	2855	1509	918	2427	No	5.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-239.54	-1254	-0.000981	0.0002807	0.0035	0.36		485.29	485.29		2.03	Si
SLV 11	fin.	58.72	-233	-0.0001893	0.0002807	0.0035	0.36		482.94	482.94		8.22	Si
SLV 1	ini.	287.31	1564	-0.0012665	0.0002807	0.0035	0.36		482.94	482.94		1.68	Si
SLV 1	fin.	-70.72	312	-0.0002299	0.0002807	0.0035	0.36		485.29	485.29		6.86	Si
SLV 2	ini.	280.12	1535	-0.0012219	0.0002807	0.0035	0.36		482.94	482.94		1.72	Si
SLV 2	fin.	-69.85	300	-0.0002269	0.0002807	0.0035	0.36		485.29	485.29		6.95	Si
SLV 6	ini.	269.6	1226	-0.0011584	0.0002807	0.0035	0.36		482.94	482.94		1.79	Si
SLV 6	fin.	-68.81	221	-0.0002232	0.0002807	0.0035	0.36		485.29	485.29		7.05	Si
SLV 12	ini.	-244.17	-1272	-0.0010063	0.0002807	0.0035	0.36		485.29	485.29		1.99	Si
SLV 12	fin.	59.28	-241	-0.0001912	0.0002807	0.0035	0.36		482.94	482.94		8.15	Si
SLV 5	ini.	274.23	1244	-0.0011861	0.0002807	0.0035	0.36		482.94	482.94		1.76	Si
SLV 5	fin.	-69.37	229	-0.0002252	0.0002807	0.0035	0.36		485.29	485.29		7	Si
SLV 4	ini.	163.89	1021	-0.0006084	0.0002807	0.0035	0.36		482.94	482.94		2.95	Si
SLV 4	fin.	-40.53	209	-0.0001275	0.0002807	0.0035	0.36		485.29	485.29		11.97	Si
SLV 3	ini.	171.08	1050	-0.0006415	0.0002807	0.0035	0.36		482.94	482.94		2.82	Si
SLV 3	fin.	-41.39	222	-0.0001304	0.0002807	0.0035	0.36		485.29	485.29		11.72	Si
SLV 15	ini.	-250.07	-1564	-0.001039	0.0002807	0.0035	0.36		485.29	485.29		1.94	Si
SLV 15	fin.	59.76	-312	-0.0001928	0.0002807	0.0035	0.36		482.94	482.94		8.08	Si
SLV 16	ini.	-257.25	-1592	-0.0010796	0.0002807	0.0035	0.36		485.29	485.29		1.89	Si
SLV 16	fin.	60.63	-325	-0.0001958	0.0002807	0.0035	0.36		482.94	482.94		7.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-133.84	1265	0.36	0	158	2855	2264	918	3012		2.38	Si
SLV 13	fin.	30.44	-703	0.36	0	158	2855	2264	918	3012		4.29	Si
SLV 6	ini.	269.6	-1511	0.36	0	158	2855	2264	918	3012		1.99	Si
SLV 6	fin.	-68.81	419	0.36	0	158	2855	2264	918	3012		7.19	Si
SLV 15	ini.	-250.07	1960	0.36	0	158	2855	2264	918	3012		1.54	Si
SLV 15	fin.	59.76	-1026	0.36	0	158	2855	2264	918	3012		2.94	Si
SLV 14	ini.	-141.03	1311	0.36	0	158	2855	2264	918	3012		2.3	Si
SLV 14	fin.	31.3	-726	0.36	0	158	2855	2264	918	3012		4.15	Si
SLV 5	ini.	274.23	-1540	0.36	0	158	2855	2264	918	3012		1.96	Si
SLV 5	fin.	-69.37	434	0.36	0	158	2855	2264	918	3012		6.94	Si
SLV 12	ini.	-244.17	1729	0.36	0	158	2855	2264	918	3012		1.74	Si
SLV 12	fin.	59.28	-1010	0.36	0	158	2855	2264	918	3012		2.98	Si
SLV 11	ini.	-239.54	1700	0.36	0	158	2855	2264	918	3012		1.77	Si
SLV 11	fin.	58.72	-995	0.36	0	158	2855	2264	918	3012		3.03	Si
SLV 16	ini.	-257.25	2005	0.36	0	158	2855	2264	918	3012		1.5	Si
SLV 16	fin.	60.63	-1049	0.36	0	158	2855	2264	918	3012		2.87	Si
SLV 1	ini.	287.31	-1816	0.36	0	158	2855	2264	918	3012		1.66	Si
SLV 1	fin.	-70.72	474	0.36	0	158	2855	2264	918	3012		6.36	Si
SLV 2	ini.	280.12	-1771	0.36	0	158	2855	2264	918	3012		1.7	Si
SLV 2	fin.	-69.85	450	0.36	0	158	2855	2264	918	3012		6.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.681	SLV 1	Si
V_SLV	1.502	SLV 16	Si
PF_SLU	16.13	SLU 51	Si
V_SLU	5.634	SLU 74	Si

Trave di accoppiamento 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	12.5	13.4	0.9	-2.963	5.826	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	119.22	-486	-0.0000597	0.0001872	0.0035	0.9		2959	2959	No	24.82	Si
SLU 44	fin.	-133.2	-17	-0.0000668	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.26	Si
SLU 52	ini.	102.92	-429	-0.0000514	0.0001872	0.0035	0.9		2959	2959	No	28.75	Si
SLU 52	fin.	-104.74	-71	-0.0000522	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.3	Si
SLU 2	ini.	85.57	-353	-0.0000426	0.0001872	0.0035	0.9		2959	2959	No	34.58	Si
SLU 2	fin.	-94.08	-27	-0.0000468	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.51	Si
SLU 45	ini.	88.23	-372	-0.0000439	0.0001872	0.0035	0.9		2959	2959	No	33.54	Si
SLU 45	fin.	-103.79	-40	-0.0000517	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.56	Si
SLU 51	ini.	69.59	-297	-0.0000345	0.0001872	0.0035	0.9		2959	2959	No	42.52	Si
SLU 51	fin.	-97.36	-21	-0.0000484	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.45	Si
SLU 50	ini.	66.1	-283	-0.0000327	0.0001872	0.0035	0.9		2959	2959	No	44.77	Si
SLU 50	fin.	-93.99	-23	-0.0000467	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.54	Si
SLU 43	ini.	113.39	-462	-0.0000567	0.0001872	0.0035	0.9		2959	2959	No	26.09	Si
SLU 43	fin.	-127.59	-20	-0.0000639	0.0001872	0.0035	0.9		2964.67	2964.67	No	23.24	Si
SLU 46	ini.	91.72	-386	-0.0000457	0.0001872	0.0035	0.9		2959	2959	No	32.26	Si
SLU 46	fin.	-107.16	-38	-0.0000534	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.67	Si
SLU 65	ini.	90.85	-387	-0.0000452	0.0001872	0.0035	0.9		2959	2959	No	32.57	Si
SLU 65	fin.	-96.52	-73	-0.000048	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.72	Si
SLU 47	ini.	95.57	-396	-0.0000476	0.0001872	0.0035	0.9		2959	2959	No	30.96	Si
SLU 47	fin.	-116.4	-19	-0.0000581	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	69.59	-970	0.9	0	365	7137	3773	2295	6068	No	6.26	Si
SLU 51	fin.	-97.36	-76	0.9	0	365	7137	3773	2295	6068	No	79.35	Si
SLU 47	ini.	95.57	-1022	0.9	0	365	7137	3773	2295	6068	No	5.93	Si
SLU 47	fin.	-116.4	-208	0.9	0	365	7137	3773	2295	6068	No	29.12	Si
SLU 50	ini.	66.1	-947	0.9	0	365	7137	3773	2295	6068	No	6.41	Si
SLU 50	fin.	-93.99	-65	0.9	0	365	7137	3773	2295	6068	No	93.51	Si
SLU 45	ini.	88.23	-998	0.9	0	365	7137	3773	2295	6068	No	6.08	Si
SLU 45	fin.	-103.79	-151	0.9	0	365	7137	3773	2295	6068	No	40.29	Si
SLU 46	ini.	91.72	-1021	0.9	0	365	7137	3773	2295	6068	No	5.94	Si
SLU 46	fin.	-107.16	-162	0.9	0	365	7137	3773	2295	6068	No	37.41	Si
SLU 43	ini.	113.39	-1022	0.9	0	365	7137	3773	2295	6068	No	5.94	Si
SLU 43	fin.	-127.59	-313	0.9	0	365	7137	3773	2295	6068	No	19.37	Si
SLU 44	ini.	119.22	-1060	0.9	0	365	7137	3773	2295	6068	No	5.73	Si
SLU 44	fin.	-133.2	-333	0.9	0	365	7137	3773	2295	6068	No	18.24	Si
SLU 48	ini.	64.58	-961	0.9	0	365	7137	3773	2295	6068	No	6.32	Si
SLU 48	fin.	-87	-26	0.9	0	365	7137	3773	2295	6068	No	229.9	Si
SLU 49	ini.	68.07	-984	0.9	0	365	7137	3773	2295	6068	No	6.17	Si
SLU 49	fin.	-90.36	-38	0.9	0	365	7137	3773	2295	6068	No	159.78	Si
SLU 65	ini.	90.85	-890	0.9	0	365	7137	3773	2295	6068	No	6.82	Si
SLU 65	fin.	-96.52	-197	0.9	0	365	7137	3773	2295	6068	No	30.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-319.06	1263	-0.0001635	0.0002807	0.0035	0.9		2995.37	2995.37		9.39	Si
SLV 11	fin.	362.41	-410	-0.0001875	0.0002807	0.0035	0.9		2989.59	2989.59		8.25	Si
SLV 3	ini.	176.11	-497	-0.0000884	0.0002807	0.0035	0.9		2989.59	2989.59		16.98	Si
SLV 3	fin.	-483.41	889	-0.0002553	0.0002807	0.0035	0.9		2995.37	2995.37		6.2	Si
SLV 5	ini.	462.21	-1837	-0.0002436	0.0002807	0.0035	0.9		2989.59	2989.59		6.47	Si
SLV 5	fin.	-541.24	381	-0.0002891	0.0002807	0.0035	0.9		2995.37	2995.37		5.53	Si
SLV 6	ini.	453.02	-1833	-0.0002383	0.0002807	0.0035	0.9		2989.59	2989.59		6.6	Si
SLV 6	fin.	-502.13	288	-0.0002661	0.0002807	0.0035	0.9		2995.37	2995.37		5.97	Si
SLV 16	ini.	-240.33	746	-0.0001216	0.0002807	0.0035	0.9		2995.37	2995.37		12.46	Si
SLV 16	fin.	529.12	-1084	-0.0002825	0.0002807	0.0035	0.9		2989.59	2989.59		5.65	Si
SLV 12	ini.	-328.25	1267	-0.0001685	0.0002807	0.0035	0.9		2995.37	2995.37		9.13	Si
SLV 12	fin.	401.52	-503	-0.0002092	0.0002807	0.0035	0.9		2989.59	2989.59		7.45	Si
SLV 4	ini.	161.85	-492	-0.0000811	0.0002807	0.0035	0.9		2989.59	2989.59		18.47	Si
SLV 4	fin.	-422.71	745	-0.0002207	0.0002807	0.0035	0.9		2995.37	2995.37		7.09	Si
SLV 2	ini.	360.04	-1310	-0.0001862	0.0002807	0.0035	0.9		2989.59	2989.59		8.3	Si
SLV 2	fin.	-608.15	818	-0.0003295	0.0002807	0.0035	0.9		2995.37	2995.37		4.93	Si
SLV 1	ini.	374.29	-1316	-0.0001941	0.0002807	0.0035	0.9		2989.59	2989.59		7.99	Si
SLV 1	fin.	-668.84	962	-0.0003673	0.0002807	0.0035	0.9		2995.37	2995.37		4.48	Si
SLV 15	ini.	-226.08	740	-0.0001141	0.0002807	0.0035	0.9		2995.37	2995.37		13.25	Si
SLV 15	fin.	468.42	-940	-0.0002471	0.0002807	0.0035	0.9		2989.59	2989.59		6.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	374.29	-2709	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLV 1	fin.	-668.84	-2247	0.9	0	548	7137	5660	2295	7684		3.42	Si
SLV 11	ini.	-319.06	1919	0.9	0	548	7137	5660	2295	7684		4	Si
SLV 11	fin.	362.41	1358	0.9	0	548	7137	5660	2295	7684		5.66	Si
SLV 2	ini.	360.04	-2641	0.9	0	548	7137	5660	2295	7684		2.91	Si
SLV 2	fin.	-608.15	-2055	0.9	0	548	7137	5660	2295	7684		3.74	Si
SLV 10	ini.	332.37	-2366	0.9	0	548	7137	5660	2295	7684		3.25	Si
SLV 10	fin.	-216.58	-651	0.9	0	548	7137	5660	2295	7684		11.8	Si
SLV 9	ini.	341.56	-2410	0.9	0	548	7137	5660	2295	7684		3.19	Si
SLV 9	fin.	-255.69	-775	0.9	0	548	7137	5660	2295	7684		9.92	Si
SLV 16	ini.	-240.33	1430	0.9	0	548	7137	5660	2295	7684		5.37	Si
SLV 16	fin.	529.12	1946	0.9	0	548	7137	5660	2295	7684		3.95	Si
SLV 5	ini.	462.21	-3242	0.9	0	548	7137	5660	2295	7684		2.37	Si
SLV 5	fin.	-541.24	-1783	0.9	0	548	7137	5660	2295	7684		4.31	Si
SLV 6	ini.	453.02	-3198	0.9	0	548	7137	5660	2295	7684		2.4	Si
SLV 6	fin.	-502.13	-1659	0.9	0	548	7137	5660	2295	7684		4.63	Si
SLV 12	ini.	-328.25	1963	0.9	0	548	7137	5660	2295	7684		3.91	Si
SLV 12	fin.	401.52	1481	0.9	0	548	7137	5660	2295	7684		5.19	Si
SLD 5	ini.	240.49	-1782	0.9	0	548	7137	5660	2295	7684		4.31	Si
SLD 5	fin.	-275.81	-864	0.9	0	548	7137	5660	2295	7684		8.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.478	SLV 1	Si
V_SLV	2.37	SLV 5	Si
PF_SLU	22.258	SLU 44	Si
V_SLU	5.725	SLU 44	Si

Trave di accoppiamento 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	15.2	15.66	0.46	-2.963	5.826	15.2	15.66	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 36	ini.	-100.15	-376	-0.0002032	0.0001872	0.0035	0.46		780.23	780.23	No	7.79	Si
SLU 36	fin.	-23.83	177	-0.0000452	0.0001872	0.0035	0.46		780.23	780.23	No	32.75	Si
SLU 77	ini.	-101.24	-349	-0.0002056	0.0001872	0.0035	0.46		780.23	780.23	No	7.71	Si
SLU 77	fin.	-40.08	155	-0.0000769	0.0001872	0.0035	0.46		780.23	780.23	No	19.47	Si
SLU 69	ini.	-88.84	-265	-0.0001782	0.0001872	0.0035	0.46		780.23	780.23	No	8.78	Si
SLU 69	fin.	-54.91	107	-0.0001067	0.0001872	0.0035	0.46		780.23	780.23	No	14.21	Si
SLU 78	ini.	-99.83	-340	-0.0002025	0.0001872	0.0035	0.46		780.23	780.23	No	7.82	Si
SLU 78	fin.	-42.2	148	-0.0000812	0.0001872	0.0035	0.46		780.23	780.23	No	18.49	Si
SLU 37	ini.	-95.53	-358	-0.0001929	0.0001872	0.0035	0.46		780.23	780.23	No	8.17	Si
SLU 37	fin.	-20.02	185	-0.0000378	0.0001872	0.0035	0.46		780.23	780.23	No	38.97	Si
SLU 79	ini.	-95.2	-323	-0.0001922	0.0001872	0.0035	0.46		780.23	780.23	No	8.2	Si
SLU 79	fin.	-38.4	155	-0.0000736	0.0001872	0.0035	0.46		780.23	780.23	No	20.32	Si
SLU 80	ini.	-93.79	-313	-0.000189	0.0001872	0.0035	0.46		780.23	780.23	No	8.32	Si
SLU 80	fin.	-40.52	147	-0.0000778	0.0001872	0.0035	0.46		780.23	780.23	No	19.26	Si
SLU 27	ini.	-89.17	-300	-0.0001789	0.0001872	0.0035	0.46		780.23	780.23	No	8.75	Si
SLU 27	fin.	-36.54	137	-0.0000699	0.0001872	0.0035	0.46		780.23	780.23	No	21.35	Si
SLU 38	ini.	-94.12	-349	-0.0001898	0.0001872	0.0035	0.46		780.23	780.23	No	8.29	Si
SLU 38	fin.	-22.15	177	-0.0000419	0.0001872	0.0035	0.46		780.23	780.23	No	35.23	Si
SLU 35	ini.	-101.56	-385	-0.0002064	0.0001872	0.0035	0.46		780.23	780.23	No	7.68	Si
SLU 35	fin.	-21.7	185	-0.0000411	0.0001872	0.0035	0.46		780.23	780.23	No	35.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-88.84	1401	0.46	0	124	3648	1928	1173	3101	No	2.21	Si
SLU 69	fin.	-54.91	-774	0.46	0	124	3648	1928	1173	3101	No	4.01	Si
SLU 71	ini.	-82.8	1345	0.46	0	124	3648	1928	1173	3101	No	2.31	Si
SLU 71	fin.	-53.23	-753	0.46	0	124	3648	1928	1173	3101	No	4.12	Si
SLU 72	ini.	-81.39	1336	0.46	0	124	3648	1928	1173	3101	No	2.32	Si
SLU 72	fin.	-55.36	-762	0.46	0	124	3648	1928	1173	3101	No	4.07	Si
SLU 35	ini.	-101.56	1384	0.46	0	124	3648	1928	1173	3101	No	2.24	Si
SLU 35	fin.	-21.7	-559	0.46	0	124	3648	1928	1173	3101	No	5.54	Si
SLU 79	ini.	-95.2	1415	0.46	0	124	3648	1928	1173	3101	No	2.19	Si
SLU 79	fin.	-38.4	-686	0.46	0	124	3648	1928	1173	3101	No	4.52	Si
SLU 70	ini.	-87.43	1392	0.46	0	124	3648	1928	1173	3101	No	2.23	Si
SLU 70	fin.	-57.04	-783	0.46	0	124	3648	1928	1173	3101	No	3.96	Si
SLU 77	ini.	-101.24	1471	0.46	0	124	3648	1928	1173	3101	No	2.11	Si
SLU 77	fin.	-40.08	-707	0.46	0	124	3648	1928	1173	3101	No	4.39	Si
SLU 80	ini.	-93.79	1406	0.46	0	124	3648	1928	1173	3101	No	2.21	Si
SLU 80	fin.	-40.52	-695	0.46	0	124	3648	1928	1173	3101	No	4.46	Si
SLU 36	ini.	-100.15	1376	0.46	0	124	3648	1928	1173	3101	No	2.25	Si
SLU 36	fin.	-23.83	-568	0.46	0	124	3648	1928	1173	3101	No	5.46	Si
SLU 78	ini.	-99.83	1462	0.46	0	124	3648	1928	1173	3101	No	2.12	Si
SLU 78	fin.	-42.2	-716	0.46	0	124	3648	1928	1173	3101	No	4.33	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	77.65	741	-0.0001518	0.0002807	0.0035	0.46		785.44	785.44		10.12	Si
SLV 10	fin.	-248.44	-876	-0.0005546	0.0002807	0.0035	0.46		788.4	788.4		3.17	Si
SLV 15	ini.	-148.68	-648	-0.0003046	0.0002807	0.0035	0.46		788.4	788.4		5.3	Si
SLV 15	fin.	7.74	-134	-0.0000145	0.0002807	0.0035	0.46		785.44	785.44		101.51	Si
SLV 9	ini.	82.85	773	-0.0001625	0.0002807	0.0035	0.46		785.44	785.44		9.48	Si
SLV 9	fin.	-249.15	-870	-0.0005566	0.0002807	0.0035	0.46		788.4	788.4		3.16	Si
SLV 11	ini.	-194.6	-1089	-0.0004145	0.0002807	0.0035	0.46		788.4	788.4		4.05	Si
SLV 11	fin.	160.75	672	-0.000334	0.0002807	0.0035	0.46		785.44	785.44		4.89	Si
SLV 5	ini.	127.95	961	-0.000259	0.0002807	0.0035	0.46		785.44	785.44		6.14	Si
SLV 5	fin.	-241.13	-640	-0.0005349	0.0002807	0.0035	0.46		788.4	788.4		3.27	Si
SLV 7	ini.	-149.49	-901	-0.0003065	0.0002807	0.0035	0.46		788.4	788.4		5.27	Si
SLV 7	fin.	168.76	902	-0.000353	0.0002807	0.0035	0.46		785.44	785.44		4.65	Si
SLV 8	ini.	-154.69	-932	-0.0003185	0.0002807	0.0035	0.46		788.4	788.4		5.1	Si
SLV 8	fin.	169.47	896	-0.0003547	0.0002807	0.0035	0.46		785.44	785.44		4.63	Si
SLV 12	ini.	-199.8	-1120	-0.0004275	0.0002807	0.0035	0.46		788.4	788.4		3.95	Si
SLV 12	fin.	161.45	666	-0.0003356	0.0002807	0.0035	0.46		785.44	785.44		4.86	Si
SLV 6	ini.	122.75	929	-0.0002475	0.0002807	0.0035	0.46		785.44	785.44		6.4	Si
SLV 6	fin.	-240.43	-647	-0.000533	0.0002807	0.0035	0.46		788.4	788.4		3.28	Si
SLV 16	ini.	-156.75	-697	-0.0003233	0.0002807	0.0035	0.46		788.4	788.4		5.03	Si
SLV 16	fin.	8.83	-144	-0.0000166	0.0002807	0.0035	0.46		785.44	785.44		88.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-156.75	1115	0.46	0	187	3648	2893	1173	3834		3.44	Si
SLV 16	fin.	8.83	29	0.46	0	187	3648	2893	1173	3834		132.73	Si
SLV 8	ini.	-154.69	1499	0.46	0	187	3648	2893	1173	3834		2.56	Si
SLV 8	fin.	169.47	325	0.46	0	187	3648	2893	1173	3834		11.79	Si
SLV 15	ini.	-148.68	1075	0.46	0	187	3648	2893	1173	3834		3.57	Si
SLV 15	fin.	7.74	16	0.46	0	187	3648	2893	1173	3834		234.92	Si
SLV 10	ini.	77.65	-196	0.46	0	187	3648	2893	1173	3834		19.57	Si
SLV 10	fin.	-248.44	-1243	0.46	0	187	3648	2893	1173	3834		3.09	Si
SLV 9	ini.	82.85	-221	0.46	0	187	3648	2893	1173	3834		17.32	Si
SLV 9	fin.	-249.15	-1251	0.46	0	187	3648	2893	1173	3834		3.07	Si
SLV 12	ini.	-199.8	1610	0.46	0	187	3648	2893	1173	3834		2.38	Si
SLV 12	fin.	161.45	463	0.46	0	187	3648	2893	1173	3834		8.28	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-149.49	1473	0.46	0	187	3648	2893	1173	3834		2.6	Si
SLV 7	fin.	168.76	317	0.46	0	187	3648	2893	1173	3834		12.09	Si
SLV 6	ini.	122.75	-307	0.46	0	187	3648	2893	1173	3834		12.49	Si
SLV 6	fin.	-240.43	-1381	0.46	0	187	3648	2893	1173	3834		2.78	Si
SLV 5	ini.	127.95	-333	0.46	0	187	3648	2893	1173	3834		11.53	Si
SLV 5	fin.	-241.13	-1389	0.46	0	187	3648	2893	1173	3834		2.76	Si
SLV 11	ini.	-194.6	1584	0.46	0	187	3648	2893	1173	3834		2.42	Si
SLV 11	fin.	160.75	455	0.46	0	187	3648	2893	1173	3834		8.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.164	SLV 9	Si
V_SLV	2.382	SLV 12	Si
PF_SLU	7.682	SLU 35	Si
V_SLU	2.109	SLU 77	Si

Trave di accoppiamento 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	14.6	15.723	1.123	-16.333	-3.314	14.6	15.724	1.124	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-473.26	-1086	-0.0001582	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.78	Si
SLU 67	fin.	316.45	190	-0.0001034	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.6	Si
SLU 77	ini.	-498.95	-1161	-0.0001675	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.28	Si
SLU 77	fin.	323.42	208	-0.0001058	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.29	Si
SLU 75	ini.	-487.31	-1110	-0.0001633	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.5	Si
SLU 75	fin.	320.49	227	-0.0001048	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.42	Si
SLU 66	ini.	-472.44	-1086	-0.0001579	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.8	Si
SLU 66	fin.	314.13	184	-0.0001026	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.71	Si
SLU 79	ini.	-476.45	-1111	-0.0001594	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.72	Si
SLU 79	fin.	302.93	197	-0.0000988	0.0001872	0.0035	1.1238		4621.23	4621.23	No	15.26	Si
SLU 80	ini.	-477.27	-1111	-0.0001597	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.7	Si
SLU 80	fin.	305.24	203	-0.0000996	0.0001872	0.0035	1.1238		4621.23	4621.23	No	15.14	Si
SLU 78	ini.	-499.77	-1161	-0.0001678	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.26	Si
SLU 78	fin.	325.73	214	-0.0001066	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.19	Si
SLU 69	ini.	-484.9	-1137	-0.0001624	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.55	Si
SLU 69	fin.	319.38	171	-0.0001044	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.47	Si
SLU 74	ini.	-486.49	-1110	-0.000163	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.52	Si
SLU 74	fin.	318.17	221	-0.000104	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.52	Si
SLU 70	ini.	-485.72	-1137	-0.0001627	0.0001872	0.0035	1.123		4629.75	4629.75	No	9.53	Si
SLU 70	fin.	321.69	177	-0.0001052	0.0001872	0.0035	1.1238		4621.23	4621.23	No	14.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-498.95	3416	1.123	0	456	7137	4708	2864	7571	No	2.22	Si
SLU 77	fin.	323.42	677	1.1238	0	456	7137	4711	2866	7577	No	11.2	Si
SLU 71	ini.	-462.4	3210	1.123	0	456	7137	4708	2864	7571	No	2.36	Si
SLU 71	fin.	298.89	596	1.1238	0	456	7137	4711	2866	7577	No	12.71	Si
SLU 74	ini.	-486.49	3182	1.123	0	456	7137	4708	2864	7571	No	2.38	Si
SLU 74	fin.	318.17	697	1.1238	0	456	7137	4711	2866	7577	No	10.87	Si
SLU 80	ini.	-477.27	3291	1.123	0	456	7137	4708	2864	7571	No	2.3	Si
SLU 80	fin.	305.24	658	1.1238	0	456	7137	4711	2866	7577	No	11.51	Si
SLU 69	ini.	-484.9	3343	1.123	0	456	7137	4708	2864	7571	No	2.27	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	fin.	319.38	622	1.1238	0	456	7137	4711	2866	7577	No	12.19	Si
SLU 79	ini.	-476.45	3283	1.123	0	456	7137	4708	2864	7571	No	2.31	Si
SLU 79	fin.	302.93	651	1.1238	0	456	7137	4711	2866	7577	No	11.64	Si
SLU 78	ini.	-499.77	3424	1.123	0	456	7137	4708	2864	7571	No	2.21	Si
SLU 78	fin.	325.73	683	1.1238	0	456	7137	4711	2866	7577	No	11.09	Si
SLU 75	ini.	-487.31	3191	1.123	0	456	7137	4708	2864	7571	No	2.37	Si
SLU 75	fin.	320.49	704	1.1238	0	456	7137	4711	2866	7577	No	10.77	Si
SLU 72	ini.	-463.22	3218	1.123	0	456	7137	4708	2864	7571	No	2.35	Si
SLU 72	fin.	301.2	603	1.1238	0	456	7137	4711	2866	7577	No	12.57	Si
SLU 70	ini.	-485.72	3351	1.123	0	456	7137	4708	2864	7571	No	2.26	Si
SLU 70	fin.	321.69	628	1.1238	0	456	7137	4711	2866	7577	No	12.06	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-706.03	-1315	-0.0002379	0.0002807	0.0035	1.123		4662.08	4662.08		6.6	Si
SLD 15	fin.	648.4	477	-0.0002171	0.0002807	0.0035	1.1238		4674.7	4674.7		7.21	Si
SLV 14	ini.	-1022.38	-1767	-0.0003593	0.0002807	0.0035	1.123		4662.08	4662.08		4.56	Si
SLV 14	fin.	990.44	842	-0.0003468	0.0002807	0.0035	1.1238		4674.7	4674.7		4.72	Si
SLV 2	ini.	576.91	657	-0.0001918	0.0002807	0.0035	1.123		4654.6	4654.6		8.07	Si
SLV 2	fin.	-826.4	-660	-0.0002825	0.0002807	0.0035	1.1238		4682.2	4682.2		5.67	Si
SLD 16	ini.	-681.85	-1278	-0.0002291	0.0002807	0.0035	1.123		4662.08	4662.08		6.84	Si
SLD 16	fin.	618.27	444	-0.0002063	0.0002807	0.0035	1.1238		4674.7	4674.7		7.56	Si
SLV 16	ini.	-1162.3	-2016	-0.0004168	0.0002807	0.0035	1.123		4662.08	4662.08		4.01	Si
SLV 16	fin.	1167.43	855	-0.0004193	0.0002807	0.0035	1.1238		4674.7	4674.7		4	Si
SLV 13	ini.	-1078.69	-1854	-0.0003821	0.0002807	0.0035	1.123		4662.08	4662.08		4.32	Si
SLV 13	fin.	1060.61	920	-0.0003751	0.0002807	0.0035	1.1238		4674.7	4674.7		4.41	Si
SLV 11	ini.	-812.09	-1530	-0.0002773	0.0002807	0.0035	1.123		4662.08	4662.08		5.74	Si
SLV 11	fin.	795.71	407	-0.0002713	0.0002807	0.0035	1.1238		4674.7	4674.7		5.87	Si
SLV 12	ini.	-775.8	-1474	-0.0002637	0.0002807	0.0035	1.123		4662.08	4662.08		6.01	Si
SLV 12	fin.	750.49	358	-0.0002544	0.0002807	0.0035	1.1238		4674.7	4674.7		6.23	Si
SLV 15	ini.	-1218.61	-2103	-0.0004406	0.0002807	0.0035	1.123		4662.08	4662.08		3.83	Si
SLV 15	fin.	1237.6	932	-0.0004492	0.0002807	0.0035	1.1238		4674.7	4674.7		3.78	Si
SLV 1	ini.	520.6	570	-0.000172	0.0002807	0.0035	1.123		4654.6	4654.6		8.94	Si
SLV 1	fin.	-756.23	-583	-0.0002562	0.0002807	0.0035	1.1238		4682.2	4682.2		6.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1022.38	4759	1.123	0	684	7137	7062	2864	7820		1.64	Si
SLV 14	fin.	990.44	3034	1.1238	0	684	7137	7067	2866	7821		2.58	Si
SLD 14	ini.	-620.09	3188	1.123	0	684	7137	7062	2864	7820		2.45	Si
SLD 14	fin.	540.33	1548	1.1238	0	684	7137	7067	2866	7821		5.05	Si
SLV 11	ini.	-812.09	3953	1.123	0	684	7137	7062	2864	7820		1.98	Si
SLV 11	fin.	795.71	2261	1.1238	0	684	7137	7067	2866	7821		3.46	Si
SLV 13	ini.	-1078.69	5019	1.123	0	684	7137	7062	2864	7820		1.56	Si
SLV 13	fin.	1060.61	3273	1.1238	0	684	7137	7067	2866	7821		2.39	Si
SLD 16	ini.	-681.85	3428	1.123	0	684	7137	7062	2864	7820		2.28	Si
SLD 16	fin.	618.27	1774	1.1238	0	684	7137	7067	2866	7821		4.41	Si
SLV 15	ini.	-1218.61	5563	1.123	0	684	7137	7062	2864	7820		1.41	Si
SLV 15	fin.	1237.6	3784	1.1238	0	684	7137	7067	2866	7821		2.07	Si
SLD 15	ini.	-706.03	3539	1.123	0	684	7137	7062	2864	7820		2.21	Si
SLD 15	fin.	648.4	1876	1.1238	0	684	7137	7067	2866	7821		4.17	Si
SLV 16	ini.	-1162.3	5303	1.123	0	684	7137	7062	2864	7820		1.47	Si
SLV 16	fin.	1167.43	3545	1.1238	0	684	7137	7067	2866	7821		2.21	Si
SLV 12	ini.	-775.8	3785	1.123	0	684	7137	7062	2864	7820		2.07	Si
SLV 12	fin.	750.49	2107	1.1238	0	684	7137	7067	2866	7821		3.71	Si
SLD 13	ini.	-644.27	3300	1.123	0	684	7137	7062	2864	7820		2.37	Si
SLD 13	fin.	570.46	1651	1.1238	0	684	7137	7067	2866	7821		4.74	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.777	SLV 15	Si
V_SLV	1.406	SLV 15	Si
PF_SLU	9.264	SLU 78	Si
V_SLU	2.211	SLU 78	Si

Trave di accoppiamento 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	14.6	15.717	1.117	-9.333	-3.314	14.6	15.718	1.118	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	327.06	491	-0.0001083	0.0001872	0.0035	1.1171		4568.53	4568.53	No	13.97	Si
SLU 72	fin.	-895.19	-1126	-0.0003259	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.14	Si
SLU 78	ini.	332.49	522	-0.0001102	0.0001872	0.0035	1.1171		4568.53	4568.53	No	13.74	Si
SLU 78	fin.	-918.62	-1157	-0.000336	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.01	Si
SLU 75	ini.	323.66	490	-0.0001072	0.0001872	0.0035	1.1171		4568.53	4568.53	No	14.12	Si
SLU 75	fin.	-859.29	-1089	-0.0003108	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.36	Si
SLU 80	ini.	321.18	521	-0.0001063	0.0001872	0.0035	1.1171		4568.53	4568.53	No	14.22	Si
SLU 80	fin.	-904.44	-1135	-0.0003299	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.09	Si
SLU 70	ini.	338.37	493	-0.0001123	0.0001872	0.0035	1.1171		4568.53	4568.53	No	13.5	Si
SLU 70	fin.	-909.38	-1149	-0.000332	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.06	Si
SLU 69	ini.	335.67	485	-0.0001113	0.0001872	0.0035	1.1171		4568.53	4568.53	No	13.61	Si
SLU 69	fin.	-906.24	-1148	-0.0003307	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.08	Si
SLU 74	ini.	320.96	482	-0.0001062	0.0001872	0.0035	1.1171		4568.53	4568.53	No	14.23	Si
SLU 74	fin.	-856.15	-1088	-0.0003094	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.38	Si
SLU 79	ini.	318.48	513	-0.0001054	0.0001872	0.0035	1.1171		4568.53	4568.53	No	14.34	Si
SLU 79	fin.	-901.29	-1133	-0.0003285	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.11	Si
SLU 77	ini.	329.79	515	-0.0001093	0.0001872	0.0035	1.1171		4568.53	4568.53	No	13.85	Si
SLU 77	fin.	-915.48	-1156	-0.0003346	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.03	Si
SLU 71	ini.	324.36	483	-0.0001074	0.0001872	0.0035	1.1171		4568.53	4568.53	No	14.08	Si
SLU 71	fin.	-892.05	-1125	-0.0003246	0.0001872	0.0035	1.1179		4605.28	4605.28	No	5.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	318.48	-1109	1.1171	0	453	7137	4683	2849	7532	No	6.79	Si
SLU 79	fin.	-901.29	-3580	1.1179	0	454	7137	4687	2851	7537	No	2.11	Si
SLU 77	ini.	329.79	-1076	1.1171	0	453	7137	4683	2849	7532	No	7	Si
SLU 77	fin.	-915.48	-3646	1.1179	0	454	7137	4687	2851	7537	No	2.07	Si
SLU 75	ini.	323.66	-1060	1.1171	0	453	7137	4683	2849	7532	No	7.1	Si
SLU 75	fin.	-859.29	-3369	1.1179	0	454	7137	4687	2851	7537	No	2.24	Si
SLU 71	ini.	324.36	-1084	1.1171	0	453	7137	4683	2849	7532	No	6.95	Si
SLU 71	fin.	-892.05	-3549	1.1179	0	454	7137	4687	2851	7537	No	2.12	Si
SLU 69	ini.	335.67	-1051	1.1171	0	453	7137	4683	2849	7532	No	7.16	Si
SLU 69	fin.	-906.24	-3615	1.1179	0	454	7137	4687	2851	7537	No	2.09	Si
SLU 80	ini.	321.18	-1120	1.1171	0	453	7137	4683	2849	7532	No	6.72	Si
SLU 80	fin.	-904.44	-3592	1.1179	0	454	7137	4687	2851	7537	No	2.1	Si
SLU 70	ini.	338.37	-1063	1.1171	0	453	7137	4683	2849	7532	No	7.08	Si
SLU 70	fin.	-909.38	-3627	1.1179	0	454	7137	4687	2851	7537	No	2.08	Si
SLU 74	ini.	320.96	-1048	1.1171	0	453	7137	4683	2849	7532	No	7.18	Si
SLU 74	fin.	-856.15	-3357	1.1179	0	454	7137	4687	2851	7537	No	2.25	Si
SLU 78	ini.	332.49	-1087	1.1171	0	453	7137	4683	2849	7532	No	6.93	Si
SLU 78	fin.	-918.62	-3658	1.1179	0	454	7137	4687	2851	7537	No	2.06	Si
SLU 72	ini.	327.06	-1096	1.1171	0	453	7137	4683	2849	7532	No	6.87	Si
SLU 72	fin.	-895.19	-3561	1.1179	0	454	7137	4687	2851	7537	No	2.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	675.78	916	-0.0002299	0.0002807	0.0035	1.1171		4616.67	4616.67		6.83	Si
SLD 1	fin.	-1159.1	-1236	-0.0004191	0.0002807	0.0035	1.1179		4603.77	4603.77		3.97	Si
SLV 8	ini.	569.21	592	-0.0001912	0.0002807	0.0035	1.1171		4616.67	4616.67		8.11	Si
SLV 8	fin.	-1156.86	-1636	-0.0004181	0.0002807	0.0035	1.1179		4603.77	4603.77		3.98	Si
SLV 2	ini.	1349.63	1830	-0.000505	0.0002807	0.0035	1.1171		4616.67	4616.67		3.42	Si
SLV 2	fin.	-2041.91	-1998	-0.0008393	0.0002807	0.0035	1.1179		4603.77	4603.77		2.25	Si
SLV 3	ini.	1282.9	1631	-0.0004753	0.0002807	0.0035	1.1171		4616.67	4616.67		3.6	Si
SLV 3	fin.	-2023.41	-2197	-0.0008295	0.0002807	0.0035	1.1179		4603.77	4603.77		2.28	Si
SLD 4	ini.	703.42	912	-0.0002401	0.0002807	0.0035	1.1171		4616.67	4616.67		6.56	Si
SLD 4	fin.	-1229.78	-1394	-0.0004493	0.0002807	0.0035	1.1179		4603.77	4603.77		3.74	Si
SLV 7	ini.	526.86	530	-0.0001762	0.0002807	0.0035	1.1171		4616.67	4616.67		8.76	Si
SLV 7	fin.	-1098.43	-1583	-0.0003936	0.0002807	0.0035	1.1179		4603.77	4603.77		4.19	Si
SLV 1	ini.	1283.92	1733	-0.0004757	0.0002807	0.0035	1.1171		4616.67	4616.67		3.6	Si
SLV 1	fin.	-1951.23	-1915	-0.0007917	0.0002807	0.0035	1.1179		4603.77	4603.77		2.36	Si
SLD 2	ini.	703.99	957	-0.0002404	0.0002807	0.0035	1.1171		4616.67	4616.67		6.56	Si
SLD 2	fin.	-1198.03	-1271	-0.0004356	0.0002807	0.0035	1.1179		4603.77	4603.77		3.84	Si
SLD 3	ini.	675.2	871	-0.0002297	0.0002807	0.0035	1.1171		4616.67	4616.67		6.84	Si
SLD 3	fin.	-1190.84	-1359	-0.0004326	0.0002807	0.0035	1.1179		4603.77	4603.77		3.87	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1348.61	1728	-0.0005045	0.0002807	0.0035	1.1171		4616.67	4616.67		3.42	Si
SLV 4	fin.	-2114.09	-2279	-0.0008779	0.0002807	0.0035	1.1179		4603.77	4603.77		2.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	572.61	-1849	1.1171	0	680	7137	7025	2849	7817		4.23	Si
SLV 6	fin.	-916.27	-3886	1.1179	0	680	7137	7030	2851	7817		2.01	Si
SLV 2	ini.	1349.63	-5138	1.1171	0	680	7137	7025	2849	7817		1.52	Si
SLV 2	fin.	-2041.91	-7006	1.1179	0	680	7137	7030	2851	7817		1.12	Si
SLD 2	ini.	703.99	-2619	1.1171	0	680	7137	7025	2849	7817		2.98	Si
SLD 2	fin.	-1198.03	-4247	1.1179	0	680	7137	7030	2851	7817		1.84	Si
SLV 3	ini.	1282.9	-5028	1.1171	0	680	7137	7025	2849	7817		1.55	Si
SLV 3	fin.	-2023.41	-6575	1.1179	0	680	7137	7030	2851	7817		1.19	Si
SLD 3	ini.	675.2	-2574	1.1171	0	680	7137	7025	2849	7817		3.04	Si
SLD 3	fin.	-1190.84	-4062	1.1179	0	680	7137	7030	2851	7817		1.92	Si
SLV 4	ini.	1348.61	-5307	1.1171	0	680	7137	7025	2849	7817		1.47	Si
SLV 4	fin.	-2114.09	-6871	1.1179	0	680	7137	7030	2851	7817		1.14	Si
SLD 4	ini.	703.42	-2694	1.1171	0	680	7137	7025	2849	7817		2.9	Si
SLD 4	fin.	-1229.78	-4189	1.1179	0	680	7137	7030	2851	7817		1.87	Si
SLV 1	ini.	1283.92	-4859	1.1171	0	680	7137	7025	2849	7817		1.61	Si
SLV 1	fin.	-1951.23	-6710	1.1179	0	680	7137	7030	2851	7817		1.17	Si
SLV 13	ini.	-906.16	3830	1.1171	0	680	7137	7025	2849	7817		2.04	Si
SLV 13	fin.	978.22	2502	1.1179	0	680	7137	7030	2851	7817		3.12	Si
SLD 1	ini.	675.78	-2500	1.1171	0	680	7137	7025	2849	7817		3.13	Si
SLD 1	fin.	-1159.1	-4120	1.1179	0	680	7137	7030	2851	7817		1.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.178	SLV 4	Si
V_SLV	1.116	SLV 2	Si
PF_SLU	5.013	SLU 78	Si
V_SLU	2.06	SLU 78	Si

Trave di accoppiamento 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	12.5	13.4	0.9	-7.413	-3.314	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	174.39	-1078	-0.0000883	0.0001872	0.0035	0.9		2959	2959	No	16.97	Si
SLU 69	fin.	-84.56	-232	-0.000042	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.06	Si
SLU 70	ini.	174.51	-1077	-0.0000884	0.0001872	0.0035	0.9		2959	2959	No	16.96	Si
SLU 70	fin.	-85.79	-227	-0.0000426	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.56	Si
SLU 66	ini.	169.62	-1026	-0.0000858	0.0001872	0.0035	0.9		2959	2959	No	17.45	Si
SLU 66	fin.	-93.76	-177	-0.0000466	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.62	Si
SLU 68	ini.	163.14	-986	-0.0000824	0.0001872	0.0035	0.9		2959	2959	No	18.14	Si
SLU 68	fin.	-93.74	-162	-0.0000466	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.63	Si
SLU 67	ini.	169.74	-1025	-0.0000859	0.0001872	0.0035	0.9		2959	2959	No	17.43	Si
SLU 67	fin.	-94.99	-172	-0.0000472	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.21	Si
SLU 71	ini.	167.7	-1039	-0.0000848	0.0001872	0.0035	0.9		2959	2959	No	17.64	Si
SLU 71	fin.	-82.48	-224	-0.0000409	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.94	Si
SLU 65	ini.	158.36	-934	-0.0000799	0.0001872	0.0035	0.9		2959	2959	No	18.68	Si
SLU 65	fin.	-102.94	-106	-0.0000513	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.8	Si
SLU 72	ini.	167.82	-1038	-0.0000849	0.0001872	0.0035	0.9		2959	2959	No	17.63	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	fin.	-83.72	-220	-0.0000415	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.41	Si
SLU 64	ini.	158.15	-936	-0.0000798	0.0001872	0.0035	0.9		2959	2959	No	18.71	Si
SLU 64	fin.	-100.89	-114	-0.0000502	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.39	Si
SLU 28	ini.	150.41	-913	-0.0000758	0.0001872	0.0035	0.9		2959	2959	No	19.67	Si
SLU 28	fin.	-75.44	-184	-0.0000374	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	174.39	-1656	0.9	0	365	7137	3773	2295	6068	No	3.66	Si
SLU 69	fin.	-84.56	-66	0.9	0	365	7137	3773	2295	6068	No	92.21	Si
SLU 72	ini.	167.82	-1596	0.9	0	365	7137	3773	2295	6068	No	3.8	Si
SLU 72	fin.	-83.72	-76	0.9	0	365	7137	3773	2295	6068	No	80.35	Si
SLU 71	ini.	167.7	-1598	0.9	0	365	7137	3773	2295	6068	No	3.8	Si
SLU 71	fin.	-82.48	-68	0.9	0	365	7137	3773	2295	6068	No	89.73	Si
SLU 48	ini.	149.32	-1530	0.9	0	365	7137	3773	2295	6068	No	3.97	Si
SLU 48	fin.	-58.41	69	0.9	0	365	7137	3773	2295	6068	No	87.49	Si
SLU 68	ini.	163.14	-1513	0.9	0	365	7137	3773	2295	6068	No	4.01	Si
SLU 68	fin.	-93.74	-165	0.9	0	365	7137	3773	2295	6068	No	36.73	Si
SLU 49	ini.	149.45	-1527	0.9	0	365	7137	3773	2295	6068	No	3.97	Si
SLU 49	fin.	-59.65	61	0.9	0	365	7137	3773	2295	6068	No	98.72	Si
SLU 66	ini.	169.62	-1574	0.9	0	365	7137	3773	2295	6068	No	3.85	Si
SLU 66	fin.	-93.76	-150	0.9	0	365	7137	3773	2295	6068	No	40.38	Si
SLU 67	ini.	169.74	-1572	0.9	0	365	7137	3773	2295	6068	No	3.86	Si
SLU 67	fin.	-94.99	-158	0.9	0	365	7137	3773	2295	6068	No	38.37	Si
SLU 70	ini.	174.51	-1654	0.9	0	365	7137	3773	2295	6068	No	3.67	Si
SLU 70	fin.	-85.79	-74	0.9	0	365	7137	3773	2295	6068	No	82.33	Si
SLU 50	ini.	142.63	-1472	0.9	0	365	7137	3773	2295	6068	No	4.12	Si
SLU 50	fin.	-56.34	68	0.9	0	365	7137	3773	2295	6068	No	89.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1007.73	-3987	-0.0005992	0.0002807	0.0035	0.9		2989.59	2989.59		2.97	Si
SLV 3	fin.	-1151.44	2190	-0.0007054	0.0002807	0.0035	0.9		2995.37	2995.37		2.6	Si
SLV 14	ini.	-791.37	2665	-0.0004469	0.0002807	0.0035	0.9		2995.37	2995.37		3.79	Si
SLV 14	fin.	1021.61	-2405	-0.0006093	0.0002807	0.0035	0.9		2989.59	2989.59		2.93	Si
SLV 7	ini.	601.64	-2689	-0.0003262	0.0002807	0.0035	0.9		2989.59	2989.59		4.97	Si
SLV 7	fin.	-591.89	973	-0.0003196	0.0002807	0.0035	0.9		2995.37	2995.37		5.06	Si
SLV 13	ini.	-841.82	2832	-0.0004809	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 13	fin.	1085.21	-2544	-0.0006566	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLV 4	ini.	1058.18	-4154	-0.0006364	0.0002807	0.0035	0.9		2989.59	2989.59		2.83	Si
SLV 4	fin.	-1215.04	2328	-0.0007549	0.0002807	0.0035	0.9		2995.37	2995.37		2.47	Si
SLV 1	ini.	854.59	-3289	-0.0004907	0.0002807	0.0035	0.9		2989.59	2989.59		3.5	Si
SLV 1	fin.	-1011.68	1916	-0.0006007	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLV 16	ini.	-638.22	1967	-0.0003481	0.0002807	0.0035	0.9		2995.37	2995.37		4.69	Si
SLV 16	fin.	881.84	-2131	-0.0005095	0.0002807	0.0035	0.9		2989.59	2989.59		3.39	Si
SLV 2	ini.	905.03	-3457	-0.0005257	0.0002807	0.0035	0.9		2989.59	2989.59		3.3	Si
SLV 2	fin.	-1075.28	2054	-0.0006477	0.0002807	0.0035	0.9		2995.37	2995.37		2.79	Si
SLV 15	ini.	-688.67	2134	-0.0003799	0.0002807	0.0035	0.9		2995.37	2995.37		4.35	Si
SLV 15	fin.	945.45	-2270	-0.0005543	0.0002807	0.0035	0.9		2989.59	2989.59		3.16	Si
SLV 8	ini.	634.15	-2796	-0.0003463	0.0002807	0.0035	0.9		2989.59	2989.59		4.71	Si
SLV 8	fin.	-632.88	1062	-0.0003448	0.0002807	0.0035	0.9		2995.37	2995.37		4.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	854.59	-4620	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 1	fin.	-1011.68	-4778	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 4	ini.	1058.18	-5829	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLV 4	fin.	-1215.04	-5601	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 3	ini.	1007.73	-5625	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 3	fin.	-1151.44	-5293	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 14	ini.	-791.37	3592	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 14	fin.	1021.61	5025	0.9	0	548	7137	5660	2295	7684		1.53	Si
SLV 7	ini.	601.64	-3887	0.9	0	548	7137	5660	2295	7684		1.98	Si
SLV 7	fin.	-591.89	-2409	0.9	0	548	7137	5660	2295	7684		3.19	Si
SLV 16	ini.	-638.22	2588	0.9	0	548	7137	5660	2295	7684		2.97	Si
SLV 16	fin.	881.84	4511	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 15	ini.	-688.67	2792	0.9	0	548	7137	5660	2295	7684		2.75	Si
SLV 15	fin.	945.45	4819	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLV 2	ini.	905.03	-4824	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLV 2	fin.	-1075.28	-5086	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 13	ini.	-841.82	3796	0.9	0	548	7137	5660	2295	7684		2.02	Si
SLV 13	fin.	1085.21	5333	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLV 8	ini.	634.15	-4018	0.9	0	548	7137	5660	2295	7684		1.91	Si
SLV 8	fin.	-632.88	-2607	0.9	0	548	7137	5660	2295	7684		2.95	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.465	SLV 4	Si
V_SLV	1.318	SLV 4	Si
PF_SLU	16.956	SLU 70	Si
V_SLU	3.664	SLU 69	Si

Trave di accoppiamento 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	15.2	15.715	0.515	-7.413	-3.314	15.2	15.716	0.516	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	-100.33	-148	-0.0001593	0.0001872	0.0035	0.5154		975.69	975.69	No	9.72	Si
SLU 56	fin.	10.66	240	-0.0000159	0.0001872	0.0035	0.5162		985.7	985.7	No	92.43	Si
SLU 77	ini.	-94.93	-115	-0.0001501	0.0001872	0.0035	0.5154		975.69	975.69	No	10.28	Si
SLU 77	fin.	4.54	221	-0.0000067	0.0001872	0.0035	0.5162		985.7	985.7	No	217.17	Si
SLU 59	ini.	-97.6	-141	-0.0001546	0.0001872	0.0035	0.5154		975.69	975.69	No	10	Si
SLU 59	fin.	14.55	257	-0.0000217	0.0001872	0.0035	0.5162		985.7	985.7	No	67.75	Si
SLU 49	ini.	-91.4	-123	-0.0001441	0.0001872	0.0035	0.5154		975.69	975.69	No	10.67	Si
SLU 49	fin.	3.04	199	-0.0000045	0.0001872	0.0035	0.5162		985.7	985.7	No	324.77	Si
SLU 79	ini.	-92.53	-109	-0.000146	0.0001872	0.0035	0.5154		975.69	975.69	No	10.54	Si
SLU 79	fin.	8.3	237	-0.0000123	0.0001872	0.0035	0.5162		985.7	985.7	No	118.82	Si
SLU 80	ini.	-92.2	-108	-0.0001455	0.0001872	0.0035	0.5154		975.69	975.69	No	10.58	Si
SLU 80	fin.	8.42	238	-0.0000125	0.0001872	0.0035	0.5162		985.7	985.7	No	117	Si
SLU 58	ini.	-97.93	-142	-0.0001552	0.0001872	0.0035	0.5154		975.69	975.69	No	9.96	Si
SLU 58	fin.	14.42	256	-0.0000215	0.0001872	0.0035	0.5162		985.7	985.7	No	68.35	Si
SLU 48	ini.	-91.73	-124	-0.0001447	0.0001872	0.0035	0.5154		975.69	975.69	No	10.64	Si
SLU 48	fin.	2.91	199	-0.0000043	0.0001872	0.0035	0.5162		985.7	985.7	No	339.19	Si
SLU 78	ini.	-94.61	-114	-0.0001495	0.0001872	0.0035	0.5154		975.69	975.69	No	10.31	Si
SLU 78	fin.	4.67	222	-0.0000069	0.0001872	0.0035	0.5162		985.7	985.7	No	211.17	Si
SLU 57	ini.	-100.01	-147	-0.0001587	0.0001872	0.0035	0.5154		975.69	975.69	No	9.76	Si
SLU 57	fin.	10.79	241	-0.0000161	0.0001872	0.0035	0.5162		985.7	985.7	No	91.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 56	ini.	-100.33	752	0.5154	0	139	4090	2161	1314	3475	No	4.62	Si
SLU 56	fin.	10.66	-497	0.5162	0	140	4090	2164	1316	3480	No	7	Si
SLU 78	ini.	-94.61	756	0.5154	0	139	4090	2161	1314	3475	No	4.6	Si
SLU 78	fin.	4.67	-563	0.5162	0	140	4090	2164	1316	3480	No	6.18	Si
SLU 80	ini.	-92.2	733	0.5154	0	139	4090	2161	1314	3475	No	4.74	Si
SLU 80	fin.	8.42	-533	0.5162	0	140	4090	2164	1316	3480	No	6.53	Si
SLU 58	ini.	-97.93	729	0.5154	0	139	4090	2161	1314	3475	No	4.76	Si
SLU 58	fin.	14.42	-467	0.5162	0	140	4090	2164	1316	3480	No	7.46	Si
SLU 70	ini.	-86	717	0.5154	0	139	4090	2161	1314	3475	No	4.84	Si
SLU 70	fin.	-3.09	-630	0.5162	0	140	4090	2164	1316	3480	No	5.52	Si
SLU 59	ini.	-97.6	728	0.5154	0	139	4090	2161	1314	3475	No	4.77	Si
SLU 59	fin.	14.55	-465	0.5162	0	140	4090	2164	1316	3480	No	7.48	Si
SLU 69	ini.	-86.33	718	0.5154	0	139	4090	2161	1314	3475	No	4.84	Si
SLU 69	fin.	-3.22	-631	0.5162	0	140	4090	2164	1316	3480	No	5.51	Si
SLU 57	ini.	-100.01	751	0.5154	0	139	4090	2161	1314	3475	No	4.63	Si
SLU 57	fin.	10.79	-496	0.5162	0	140	4090	2164	1316	3480	No	7.02	Si
SLU 77	ini.	-94.93	757	0.5154	0	139	4090	2161	1314	3475	No	4.59	Si
SLU 77	fin.	4.54	-565	0.5162	0	140	4090	2164	1316	3480	No	6.16	Si
SLU 79	ini.	-92.53	734	0.5154	0	139	4090	2161	1314	3475	No	4.73	Si
SLU 79	fin.	8.3	-534	0.5162	0	140	4090	2164	1316	3480	No	6.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	485.57	1789	-0.0009778	0.0002807	0.0035	0.5154		983.87	983.87		2.03	Si
SLV 4	fin.	-310.11	-1503	-0.0005472	0.0002807	0.0035	0.5162		992.88	992.88		3.2	Si
SLV 14	ini.	-526.38	-1715	-0.0010851	0.0002807	0.0035	0.5154		987.2	987.2		1.88	Si
SLV 14	fin.	284.35	1598	-0.0004948	0.0002807	0.0035	0.5162		989.52	989.52		3.48	Si
SLV 3	ini.	454.23	1702	-0.0008957	0.0002807	0.0035	0.5154		983.87	983.87		2.17	Si
SLV 3	fin.	-293.56	-1411	-0.0005121	0.0002807	0.0035	0.5162		992.88	992.88		3.38	Si
SLV 16	ini.	-433.32	-1444	-0.000839	0.0002807	0.0035	0.5154		987.2	987.2		2.28	Si
SLV 16	fin.	217.4	1151	-0.0003612	0.0002807	0.0035	0.5162		989.52	989.52		4.55	Si
SLV 1	ini.	361.17	1431	-0.0006689	0.0002807	0.0035	0.5154		983.87	983.87		2.72	Si
SLV 1	fin.	-226.62	-964	-0.0003774	0.0002807	0.0035	0.5162		992.88	992.88		4.38	Si
SLV 13	ini.	-557.72	-1803	-0.0011748	0.0002807	0.0035	0.5154		987.2	987.2		1.77	Si
SLV 13	fin.	300.9	1690	-0.0005296	0.0002807	0.0035	0.5162		989.52	989.52		3.29	Si
SLV 9	ini.	-339.11	-971	-0.0006162	0.0002807	0.0035	0.5154		987.2	987.2		2.91	Si
SLV 9	fin.	191.43	1266	-0.0003126	0.0002807	0.0035	0.5162		989.52	989.52		5.17	Si
SLV 10	ini.	-318.91	-915	-0.0005715	0.0002807	0.0035	0.5154		987.2	987.2		3.1	Si
SLV 10	fin.	180.76	1207	-0.0002932	0.0002807	0.0035	0.5162		989.52	989.52		5.47	Si
SLV 15	ini.	-464.66	-1532	-0.0009188	0.0002807	0.0035	0.5154		987.2	987.2		2.12	Si
SLV 15	fin.	233.95	1243	-0.0003931	0.0002807	0.0035	0.5162		989.52	989.52		4.23	Si
SLV 2	ini.	392.51	1518	-0.0007425	0.0002807	0.0035	0.5154		983.87	983.87		2.51	Si
SLV 2	fin.	-243.17	-1056	-0.0004096	0.0002807	0.0035	0.5162		992.88	992.88		4.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	392.51	-1151	0.5154	0	209	4090	3241	1314	4299		3.73	Si
SLV 2	fin.	-243.17	-2017	0.5162	0	209	4090	3246	1316	4300		2.13	Si
SLV 8	ini.	266.96	-820	0.5154	0	209	4090	3241	1314	4299		5.24	Si
SLV 8	fin.	-200.64	-1540	0.5162	0	209	4090	3246	1316	4300		2.79	Si
SLV 15	ini.	-464.66	1907	0.5154	0	209	4090	3241	1314	4299		2.26	Si
SLV 15	fin.	233.95	1291	0.5162	0	209	4090	3246	1316	4300		3.33	Si
SLV 14	ini.	-526.38	2171	0.5154	0	209	4090	3241	1314	4299		1.98	Si
SLV 14	fin.	284.35	1575	0.5162	0	209	4090	3246	1316	4300		2.73	Si
SLV 13	ini.	-557.72	2301	0.5154	0	209	4090	3241	1314	4299		1.87	Si
SLV 13	fin.	300.9	1658	0.5162	0	209	4090	3246	1316	4300		2.59	Si
SLV 9	ini.	-339.11	1575	0.5154	0	209	4090	3241	1314	4299		2.73	Si
SLV 9	fin.	191.43	814	0.5162	0	209	4090	3246	1316	4300		5.28	Si
SLV 16	ini.	-433.32	1776	0.5154	0	209	4090	3241	1314	4299		2.42	Si
SLV 16	fin.	217.4	1208	0.5162	0	209	4090	3246	1316	4300		3.56	Si
SLV 1	ini.	361.17	-1021	0.5154	0	209	4090	3241	1314	4299		4.21	Si
SLV 1	fin.	-226.62	-1934	0.5162	0	209	4090	3246	1316	4300		2.22	Si
SLV 3	ini.	454.23	-1415	0.5154	0	209	4090	3241	1314	4299		3.04	Si
SLV 3	fin.	-293.56	-2301	0.5162	0	209	4090	3246	1316	4300		1.87	Si
SLV 4	ini.	485.57	-1546	0.5154	0	209	4090	3241	1314	4299		2.78	Si
SLV 4	fin.	-310.11	-2384	0.5162	0	209	4090	3246	1316	4300		1.8	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.77	SLV 13	Si
V_SLV	1.803	SLV 4	Si
PF_SLU	9.725	SLU 56	Si
V_SLU	4.588	SLU 77	Si

Trave di accoppiamento 189

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	15.3	15.714	0.414	-5.963	-3.314	15.3	15.715	0.415	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1.53	-40	-0.0000035	0.0001872	0.0035	0.4145		637.25	637.25	No	415.89	Si
SLU 75	fin.	-67.57	-275	-0.0001654	0.0001872	0.0035	0.4149		636.41	636.41	No	9.42	Si
SLU 77	ini.	-11.43	-103	-0.0000264	0.0001872	0.0035	0.4145		637.25	637.25	No	55.73	Si
SLU 77	fin.	-68.44	-336	-0.0001677	0.0001872	0.0035	0.4149		636.41	636.41	No	9.3	Si
SLU 79	ini.	-10.27	-92	-0.0000237	0.0001872	0.0035	0.4145		637.25	637.25	No	62.04	Si
SLU 79	fin.	-67.37	-325	-0.0001649	0.0001872	0.0035	0.4149		636.41	636.41	No	9.45	Si
SLU 70	ini.	-8.4	-85	-0.0000194	0.0001872	0.0035	0.4145		637.25	637.25	No	75.83	Si
SLU 70	fin.	-68.21	-318	-0.0001671	0.0001872	0.0035	0.4149		636.41	636.41	No	9.33	Si
SLU 78	ini.	-10.62	-97	-0.0000246	0.0001872	0.0035	0.4145		637.25	637.25	No	59.98	Si
SLU 78	fin.	-69.85	-336	-0.0001715	0.0001872	0.0035	0.4149		636.41	636.41	No	9.11	Si
SLU 72	ini.	-7.24	-75	-0.0000167	0.0001872	0.0035	0.4145		637.25	637.25	No	88	Si
SLU 72	fin.	-67.15	-307	-0.0001643	0.0001872	0.0035	0.4149		636.41	636.41	No	9.48	Si
SLU 80	ini.	-9.46	-87	-0.0000218	0.0001872	0.0035	0.4145		637.25	637.25	No	67.36	Si
SLU 80	fin.	-68.79	-326	-0.0001686	0.0001872	0.0035	0.4149		636.41	636.41	No	9.25	Si
SLU 84	ini.	-1.32	-35	-0.000003	0.0001872	0.0035	0.4145		637.25	637.25	No	482.58	Si
SLU 84	fin.	-67.21	-272	-0.0001645	0.0001872	0.0035	0.4149		636.41	636.41	No	9.47	Si
SLU 76	ini.	0.17	-26	-0.0000004	0.0001872	0.0035	0.4145		634.65	634.65	No	3710.85	Si
SLU 76	fin.	-67.45	-265	-0.0001651	0.0001872	0.0035	0.4149		636.41	636.41	No	9.44	Si
SLU 69	ini.	-9.21	-91	-0.0000213	0.0001872	0.0035	0.4145		637.25	637.25	No	69.16	Si
SLU 69	fin.	-66.8	-317	-0.0001634	0.0001872	0.0035	0.4149		636.41	636.41	No	9.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1.53	277	0.4145	0	139	3288	1738	1057	2794	No	10.07	Si
SLU 75	fin.	-67.57	-449	0.4149	0	140	3288	1739	1058	2797	No	6.22	Si
SLU 76	ini.	0.17	234	0.4145	0	139	3288	1738	1057	2794	No	11.93	Si
SLU 76	fin.	-67.45	-441	0.4149	0	140	3288	1739	1058	2797	No	6.35	Si
SLU 70	ini.	-8.4	336	0.4145	0	139	3288	1738	1057	2794	No	8.32	Si
SLU 70	fin.	-68.21	-452	0.4149	0	140	3288	1739	1058	2797	No	6.18	Si
SLU 74	ini.	-2.34	286	0.4145	0	139	3288	1738	1057	2794	No	9.76	Si
SLU 74	fin.	-66.16	-443	0.4149	0	140	3288	1739	1058	2797	No	6.31	Si
SLU 69	ini.	-9.21	345	0.4145	0	139	3288	1738	1057	2794	No	8.11	Si
SLU 69	fin.	-66.8	-446	0.4149	0	140	3288	1739	1058	2797	No	6.27	Si
SLU 80	ini.	-9.46	299	0.4145	0	139	3288	1738	1057	2794	No	9.36	Si
SLU 80	fin.	-68.79	-442	0.4149	0	140	3288	1739	1058	2797	No	6.34	Si
SLU 77	ini.	-11.43	345	0.4145	0	139	3288	1738	1057	2794	No	8.1	Si
SLU 77	fin.	-68.44	-448	0.4149	0	140	3288	1739	1058	2797	No	6.24	Si
SLU 67	ini.	0.69	277	0.4145	0	139	3288	1738	1057	2794	No	10.08	Si
SLU 67	fin.	-65.93	-447	0.4149	0	140	3288	1739	1058	2797	No	6.26	Si
SLU 66	ini.	-0.12	286	0.4145	0	139	3288	1738	1057	2794	No	9.76	Si
SLU 66	fin.	-64.52	-441	0.4149	0	140	3288	1739	1058	2797	No	6.35	Si
SLU 78	ini.	-10.62	336	0.4145	0	139	3288	1738	1057	2794	No	8.32	Si
SLU 78	fin.	-69.85	-455	0.4149	0	140	3288	1739	1058	2797	No	6.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-61.63	-282	-0.0001474	0.0002807	0.0035	0.4145		641.69	641.69		10.41	Si
SLV 9	fin.	-156.96	-874	-0.0004098	0.0002807	0.0035	0.4149		641.84	641.84		4.09	Si
SLV 15	ini.	-176.36	-1000	-0.0004707	0.0002807	0.0035	0.4145		641.69	641.69		3.64	Si
SLV 15	fin.	-23.2	-1129	-0.0000539	0.0002807	0.0035	0.4149		641.84	641.84		27.66	Si
SLV 3	ini.	177.6	918	-0.0004769	0.0002807	0.0035	0.4145		638.93	638.93		3.6	Si
SLV 3	fin.	7.4	1009	-0.0000171	0.0002807	0.0035	0.4149		639.15	639.15		86.36	Si
SLV 4	ini.	195.36	1027	-0.0005348	0.0002807	0.0035	0.4145		638.93	638.93		3.27	Si
SLV 4	fin.	-4.64	1068	-0.0000106	0.0002807	0.0035	0.4149		641.84	641.84		138.34	Si
SLV 13	ini.	-182.04	-988	-0.0004889	0.0002807	0.0035	0.4145		641.69	641.69		3.52	Si
SLV 13	fin.	-88.89	-1361	-0.0002171	0.0002807	0.0035	0.4149		641.84	641.84		7.22	Si
SLV 16	ini.	-158.6	-892	-0.0004153	0.0002807	0.0035	0.4145		641.69	641.69		4.05	Si
SLV 16	fin.	-35.24	-1070	-0.0000825	0.0002807	0.0035	0.4149		641.84	641.84		18.21	Si
SLV 14	ini.	-164.28	-879	-0.0004329	0.0002807	0.0035	0.4145		641.69	641.69		3.91	Si
SLV 14	fin.	-100.93	-1302	-0.0002491	0.0002807	0.0035	0.4149		641.84	641.84		6.36	Si
SLV 2	ini.	189.67	1040	-0.000516	0.0002807	0.0035	0.4145		638.93	638.93		3.37	Si
SLV 2	fin.	-70.33	835	-0.0001691	0.0002807	0.0035	0.4149		641.84	641.84		9.13	Si
SLV 10	ini.	-50.19	-212	-0.000119	0.0002807	0.0035	0.4145		641.69	641.69		12.79	Si
SLV 10	fin.	-164.72	-836	-0.0004336	0.0002807	0.0035	0.4149		641.84	641.84		3.9	Si
SLV 1	ini.	171.92	931	-0.0004588	0.0002807	0.0035	0.4145		638.93	638.93		3.72	Si
SLV 1	fin.	-58.29	776	-0.0001389	0.0002807	0.0035	0.4149		641.84	641.84		11.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-50.19	-226	0.4145	0	209	3288	2606	1057	3498		15.5	Si
SLV 10	fin.	-164.72	-633	0.4149	0	210	3288	2609	1058	3498		5.53	Si
SLV 16	ini.	-158.6	585	0.4145	0	209	3288	2606	1057	3498		5.98	Si
SLV 16	fin.	-35.24	35	0.4149	0	210	3288	2609	1058	3498		99.42	Si
SLV 15	ini.	-176.36	670	0.4145	0	209	3288	2606	1057	3498		5.22	Si
SLV 15	fin.	-23.2	111	0.4149	0	210	3288	2609	1058	3498		31.53	Si
SLV 1	ini.	171.92	-306	0.4145	0	209	3288	2606	1057	3498		11.43	Si
SLV 1	fin.	-58.29	-673	0.4149	0	210	3288	2609	1058	3498		5.2	Si
SLV 2	ini.	189.67	-391	0.4145	0	209	3288	2606	1057	3498		8.94	Si
SLV 2	fin.	-70.33	-749	0.4149	0	210	3288	2609	1058	3498		4.67	Si
SLV 6	ini.	56	-439	0.4145	0	209	3288	2606	1057	3498		7.98	Si
SLV 6	fin.	-155.53	-801	0.4149	0	210	3288	2609	1058	3498		4.37	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-61.63	-171	0.4145	0	209	3288	2606	1057	3498		20.47	Si
SLV 9	fin.	-156.96	-584	0.4149	0	210	3288	2609	1058	3498		5.99	Si
SLV 5	ini.	44.56	-384	0.4145	0	209	3288	2606	1057	3498		9.12	Si
SLV 5	fin.	-147.77	-752	0.4149	0	210	3288	2609	1058	3498		4.65	Si
SLV 12	ini.	-31.24	663	0.4145	0	209	3288	2606	1057	3498		5.28	Si
SLV 12	fin.	54.25	114	0.4149	0	210	3288	2609	1058	3498		30.7	Si
SLV 11	ini.	-42.68	718	0.4145	0	209	3288	2606	1057	3498		4.87	Si
SLV 11	fin.	62.01	163	0.4149	0	210	3288	2609	1058	3498		21.49	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.271	SLV 4	Si
V_SLV	4.369	SLV 6	Si
PF_SLU	9.111	SLU 78	Si
V_SLU	6.153	SLU 78	Si

Trave di accoppiamento 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	12.5	13.4	0.9	-3.183	-3.314	12.5	13.4	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 65	ini.	153.15	-656	-0.0000772	0.0001872	0.0035	0.9		2959	2959	No	19.32	Si
SLU 65	fin.	31.67	-457	-0.0000156	0.0001872	0.0035	0.9		2959	2959	No	93.43	Si
SLU 64	ini.	163.35	-682	-0.0000825	0.0001872	0.0035	0.9		2959	2959	No	18.12	Si
SLU 64	fin.	27.43	-452	-0.0000135	0.0001872	0.0035	0.9		2959	2959	No	107.88	Si
SLU 45	ini.	155.91	-667	-0.0000787	0.0001872	0.0035	0.9		2959	2959	No	18.98	Si
SLU 45	fin.	34.28	-481	-0.0000169	0.0001872	0.0035	0.9		2959	2959	No	86.31	Si
SLU 47	ini.	146.41	-630	-0.0000737	0.0001872	0.0035	0.9		2959	2959	No	20.21	Si
SLU 47	fin.	32.48	-456	-0.000016	0.0001872	0.0035	0.9		2959	2959	No	91.11	Si
SLU 66	ini.	148.98	-679	-0.0000751	0.0001872	0.0035	0.9		2959	2959	No	19.86	Si
SLU 66	fin.	47.03	-537	-0.0000232	0.0001872	0.0035	0.9		2959	2959	No	62.92	Si
SLU 44	ini.	160.08	-644	-0.0000808	0.0001872	0.0035	0.9		2959	2959	No	18.48	Si
SLU 44	fin.	18.93	-401	-0.0000093	0.0001872	0.0035	0.9		2959	2959	No	156.35	Si
SLU 46	ini.	149.79	-651	-0.0000755	0.0001872	0.0035	0.9		2959	2959	No	19.75	Si
SLU 46	fin.	36.83	-484	-0.0000181	0.0001872	0.0035	0.9		2959	2959	No	80.35	Si
SLU 43	ini.	170.28	-669	-0.0000862	0.0001872	0.0035	0.9		2959	2959	No	17.38	Si
SLU 43	fin.	14.68	-397	-0.0000072	0.0001872	0.0035	0.9		2959	2959	No	201.51	Si
SLU 67	ini.	142.86	-664	-0.0000719	0.0001872	0.0035	0.9		2959	2959	No	20.71	Si
SLU 67	fin.	49.57	-540	-0.0000245	0.0001872	0.0035	0.9		2959	2959	No	59.69	Si
SLU 50	ini.	142.93	-642	-0.0000719	0.0001872	0.0035	0.9		2959	2959	No	20.7	Si
SLU 50	fin.	41.79	-506	-0.0000206	0.0001872	0.0035	0.9		2959	2959	No	70.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 43	ini.	170.28	-568	0.9	0	365	7137	3773	2295	6068	No	10.69	Si
SLU 43	fin.	14.68	148	0.9	0	365	7137	3773	2295	6068	No	41.04	Si
SLU 50	ini.	142.93	-527	0.9	0	365	7137	3773	2295	6068	No	11.51	Si
SLU 50	fin.	41.79	401	0.9	0	365	7137	3773	2295	6068	No	15.14	Si
SLU 45	ini.	155.91	-554	0.9	0	365	7137	3773	2295	6068	No	10.96	Si
SLU 45	fin.	34.28	324	0.9	0	365	7137	3773	2295	6068	No	18.75	Si
SLU 35	ini.	65	-204	0.9	0	365	7137	3773	2295	6068	No	29.81	Si
SLU 35	fin.	82.12	534	0.9	0	365	7137	3773	2295	6068	No	11.37	Si
SLU 78	ini.	100	-319	0.9	0	365	7137	3773	2295	6068	No	19	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	84.69	564	0.9	0	365	7137	3773	2295	6068	No	10.76	Si
SLU 48	ini.	142.24	-533	0.9	0	365	7137	3773	2295	6068	No	11.37	Si
SLU 48	fin.	47.83	450	0.9	0	365	7137	3773	2295	6068	No	13.48	Si
SLU 77	ini.	106.12	-345	0.9	0	365	7137	3773	2295	6068	No	17.59	Si
SLU 77	fin.	82.15	554	0.9	0	365	7137	3773	2295	6068	No	10.96	Si
SLU 64	ini.	163.35	-528	0.9	0	365	7137	3773	2295	6068	No	11.49	Si
SLU 64	fin.	27.43	201	0.9	0	365	7137	3773	2295	6068	No	30.18	Si
SLU 36	ini.	58.88	-178	0.9	0	365	7137	3773	2295	6068	No	34.1	Si
SLU 36	fin.	84.66	544	0.9	0	365	7137	3773	2295	6068	No	11.16	Si
SLU 46	ini.	149.79	-528	0.9	0	365	7137	3773	2295	6068	No	11.49	Si
SLU 46	fin.	36.83	333	0.9	0	365	7137	3773	2295	6068	No	18.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	730.64	-1772	-0.0004077	0.0002807	0.0035	0.9		2989.59	2989.59		4.09	Si
SLV 3	fin.	-336.8	526	-0.0001732	0.0002807	0.0035	0.9		2995.37	2995.37		8.89	Si
SLV 4	ini.	765.55	-1810	-0.0004307	0.0002807	0.0035	0.9		2989.59	2989.59		3.91	Si
SLV 4	fin.	-370.96	633	-0.0001919	0.0002807	0.0035	0.9		2995.37	2995.37		8.07	Si
SLV 10	ini.	-442.53	755	-0.0002319	0.0002807	0.0035	0.9		2995.37	2995.37		6.77	Si
SLV 10	fin.	326.76	-930	-0.000168	0.0002807	0.0035	0.9		2989.59	2989.59		9.15	Si
SLV 13	ini.	-527.87	792	-0.0002812	0.0002807	0.0035	0.9		2995.37	2995.37		5.67	Si
SLV 13	fin.	419.88	-1335	-0.0002195	0.0002807	0.0035	0.9		2989.59	2989.59		7.12	Si
SLV 7	ini.	680.21	-1773	-0.0003753	0.0002807	0.0035	0.9		2989.59	2989.59		4.4	Si
SLV 7	fin.	-277.83	227	-0.0001414	0.0002807	0.0035	0.9		2995.37	2995.37		10.78	Si
SLV 1	ini.	477.55	-1184	-0.0002524	0.0002807	0.0035	0.9		2989.59	2989.59		6.26	Si
SLV 1	fin.	-205.06	306	-0.0001032	0.0002807	0.0035	0.9		2995.37	2995.37		14.61	Si
SLV 9	ini.	-465.03	779	-0.0002447	0.0002807	0.0035	0.9		2995.37	2995.37		6.44	Si
SLV 9	fin.	348.77	-999	-0.00018	0.0002807	0.0035	0.9		2989.59	2989.59		8.57	Si
SLV 8	ini.	702.7	-1797	-0.0003897	0.0002807	0.0035	0.9		2989.59	2989.59		4.25	Si
SLV 8	fin.	-299.85	296	-0.0001532	0.0002807	0.0035	0.9		2995.37	2995.37		9.99	Si
SLV 14	ini.	-492.96	754	-0.0002608	0.0002807	0.0035	0.9		2995.37	2995.37		6.08	Si
SLV 14	fin.	385.72	-1228	-0.0002004	0.0002807	0.0035	0.9		2989.59	2989.59		7.75	Si
SLV 2	ini.	512.46	-1222	-0.0002727	0.0002807	0.0035	0.9		2989.59	2989.59		5.83	Si
SLV 2	fin.	-239.22	413	-0.000121	0.0002807	0.0035	0.9		2995.37	2995.37		12.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-274.79	1171	0.9	0	548	7137	5660	2295	7684		6.56	Si
SLV 15	fin.	288.14	1974	0.9	0	548	7137	5660	2295	7684		3.89	Si
SLV 3	ini.	730.64	-2903	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 3	fin.	-336.8	-2004	0.9	0	548	7137	5660	2295	7684		3.83	Si
SLV 4	ini.	765.55	-3012	0.9	0	548	7137	5660	2295	7684		2.55	Si
SLV 4	fin.	-370.96	-2190	0.9	0	548	7137	5660	2295	7684		3.51	Si
SLV 10	ini.	-442.53	2031	0.9	0	548	7137	5660	2295	7684		3.78	Si
SLV 10	fin.	326.76	1578	0.9	0	548	7137	5660	2295	7684		4.87	Si
SLV 2	ini.	512.46	-1916	0.9	0	548	7137	5660	2295	7684		4.01	Si
SLV 2	fin.	-239.22	-1659	0.9	0	548	7137	5660	2295	7684		4.63	Si
SLV 7	ini.	680.21	-2775	0.9	0	548	7137	5660	2295	7684		2.77	Si
SLV 7	fin.	-277.83	-1264	0.9	0	548	7137	5660	2295	7684		6.08	Si
SLV 14	ini.	-492.96	2159	0.9	0	548	7137	5660	2295	7684		3.56	Si
SLV 14	fin.	385.72	2319	0.9	0	548	7137	5660	2295	7684		3.31	Si
SLV 8	ini.	702.7	-2845	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLV 8	fin.	-299.85	-1384	0.9	0	548	7137	5660	2295	7684		5.55	Si
SLV 13	ini.	-527.87	2267	0.9	0	548	7137	5660	2295	7684		3.39	Si
SLV 13	fin.	419.88	2505	0.9	0	548	7137	5660	2295	7684		3.07	Si
SLV 9	ini.	-465.03	2100	0.9	0	548	7137	5660	2295	7684		3.66	Si
SLV 9	fin.	348.77	1698	0.9	0	548	7137	5660	2295	7684		4.52	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.905	SLV 4	Si
V_SLV	2.551	SLV 4	Si
PF_SLU	17.377	SLU 43	Si
V_SLU	10.69	SLU 43	Si

Trave di accoppiamento 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	15.2	15.712	0.512	-3.183	-3.314	15.2	15.712	0.512	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-15.93	37	-0.0000242	0.0001872	0.0035	0.5116		963.49	963.49	No	60.47	Si
SLU 49	fin.	-83.69	-586	-0.0001329	0.0001872	0.0035	0.5124		963.77	963.77	No	11.52	Si
SLU 50	ini.	-8.92	53	-0.0000135	0.0001872	0.0035	0.5116		963.49	963.49	No	107.96	Si
SLU 50	fin.	-82.61	-580	-0.0001311	0.0001872	0.0035	0.5124		963.77	963.77	No	11.67	Si
SLU 71	ini.	-20.03	31	-0.0000306	0.0001872	0.0035	0.5116		963.49	963.49	No	48.1	Si
SLU 71	fin.	-84.79	-598	-0.0001348	0.0001872	0.0035	0.5124		963.77	963.77	No	11.37	Si
SLU 48	ini.	-13.98	40	-0.0000212	0.0001872	0.0035	0.5116		963.49	963.49	No	68.93	Si
SLU 48	fin.	-85.24	-596	-0.0001355	0.0001872	0.0035	0.5124		963.77	963.77	No	11.31	Si
SLU 45	ini.	-2.37	54	-0.0000036	0.0001872	0.0035	0.5116		963.49	963.49	No	406.22	Si
SLU 45	fin.	-83.77	-582	-0.0001331	0.0001872	0.0035	0.5124		963.77	963.77	No	11.5	Si
SLU 70	ini.	-27.04	14	-0.0000414	0.0001872	0.0035	0.5116		963.49	963.49	No	35.63	Si
SLU 70	fin.	-85.87	-604	-0.0001366	0.0001872	0.0035	0.5124		963.77	963.77	No	11.22	Si
SLU 69	ini.	-25.08	18	-0.0000384	0.0001872	0.0035	0.5116		963.49	963.49	No	38.41	Si
SLU 69	fin.	-87.42	-614	-0.0001392	0.0001872	0.0035	0.5124		963.77	963.77	No	11.02	Si
SLU 72	ini.	-21.98	27	-0.0000336	0.0001872	0.0035	0.5116		963.49	963.49	No	43.82	Si
SLU 72	fin.	-83.24	-588	-0.0001322	0.0001872	0.0035	0.5124		963.77	963.77	No	11.58	Si
SLU 67	ini.	-15.43	28	-0.0000235	0.0001872	0.0035	0.5116		963.49	963.49	No	62.43	Si
SLU 67	fin.	-84.41	-590	-0.0001341	0.0001872	0.0035	0.5124		963.77	963.77	No	11.42	Si
SLU 66	ini.	-13.48	31	-0.0000205	0.0001872	0.0035	0.5116		963.49	963.49	No	71.49	Si
SLU 66	fin.	-85.95	-600	-0.0001367	0.0001872	0.0035	0.5124		963.77	963.77	No	11.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-44.63	534	0.5116	0	138	4060	2145	1305	3450	No	6.46	Si
SLU 77	fin.	-76.43	-1372	0.5124	0	139	4060	2148	1307	3455	No	2.52	Si
SLU 78	ini.	-46.58	542	0.5116	0	138	4060	2145	1305	3450	No	6.36	Si
SLU 78	fin.	-74.88	-1364	0.5124	0	139	4060	2148	1307	3455	No	2.53	Si
SLU 80	ini.	-41.53	512	0.5116	0	138	4060	2145	1305	3450	No	6.73	Si
SLU 80	fin.	-72.25	-1321	0.5124	0	139	4060	2148	1307	3455	No	2.62	Si
SLU 48	ini.	-13.98	394	0.5116	0	138	4060	2145	1305	3450	No	8.76	Si
SLU 48	fin.	-85.24	-1349	0.5124	0	139	4060	2148	1307	3455	No	2.56	Si
SLU 69	ini.	-25.08	462	0.5116	0	138	4060	2145	1305	3450	No	7.47	Si
SLU 69	fin.	-87.42	-1448	0.5124	0	139	4060	2148	1307	3455	No	2.39	Si
SLU 49	ini.	-15.93	402	0.5116	0	138	4060	2145	1305	3450	No	8.58	Si
SLU 49	fin.	-83.69	-1340	0.5124	0	139	4060	2148	1307	3455	No	2.58	Si
SLU 79	ini.	-39.57	504	0.5116	0	138	4060	2145	1305	3450	No	6.84	Si
SLU 79	fin.	-73.8	-1330	0.5124	0	139	4060	2148	1307	3455	No	2.6	Si
SLU 72	ini.	-21.98	440	0.5116	0	138	4060	2145	1305	3450	No	7.84	Si
SLU 72	fin.	-83.24	-1397	0.5124	0	139	4060	2148	1307	3455	No	2.47	Si
SLU 71	ini.	-20.03	432	0.5116	0	138	4060	2145	1305	3450	No	7.99	Si
SLU 71	fin.	-84.79	-1405	0.5124	0	139	4060	2148	1307	3455	No	2.46	Si
SLU 70	ini.	-27.04	470	0.5116	0	138	4060	2145	1305	3450	No	7.34	Si
SLU 70	fin.	-85.87	-1439	0.5124	0	139	4060	2148	1307	3455	No	2.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-272.41	-637	-0.0004803	0.0002807	0.0035	0.5116		973.5	973.5		3.57	Si
SLV 13	fin.	128.57	868	-0.0002066	0.0002807	0.0035	0.5124		971.98	971.98		7.56	Si
SLV 8	ini.	273.68	703	-0.0004849	0.0002807	0.0035	0.5116		970.11	970.11		3.54	Si
SLV 8	fin.	-240.01	-1612	-0.0004128	0.0002807	0.0035	0.5124		975.28	975.28		4.06	Si
SLV 10	ini.	-264.19	-606	-0.0004631	0.0002807	0.0035	0.5116		973.5	973.5		3.68	Si
SLV 10	fin.	114.81	738	-0.0001831	0.0002807	0.0035	0.5124		971.98	971.98		8.47	Si
SLV 3	ini.	254.12	661	-0.000444	0.0002807	0.0035	0.5116		970.11	970.11		3.82	Si
SLV 3	fin.	-237.17	-1623	-0.0004071	0.0002807	0.0035	0.5124		975.28	975.28		4.11	Si
SLV 4	ini.	271.02	705	-0.0004792	0.0002807	0.0035	0.5116		970.11	970.11		3.58	Si
SLV 4	fin.	-247.26	-1695	-0.0004275	0.0002807	0.0035	0.5124		975.28	975.28		3.94	Si
SLV 14	ini.	-255.51	-593	-0.0004452	0.0002807	0.0035	0.5116		973.5	973.5		3.81	Si
SLV 14	fin.	118.47	795	-0.0001893	0.0002807	0.0035	0.5124		971.98	971.98		8.2	Si
SLV 7	ini.	262.8	674	-0.000462	0.0002807	0.0035	0.5116		970.11	970.11		3.69	Si
SLV 7	fin.	-233.5	-1566	-0.0003998	0.0002807	0.0035	0.5124		975.28	975.28		4.18	Si
SLV 2	ini.	145.77	402	-0.000237	0.0002807	0.0035	0.5116		970.11	970.11		6.65	Si
SLV 2	fin.	-166.46	-1167	-0.0002726	0.0002807	0.0035	0.5124		975.28	975.28		5.86	Si
SLV 1	ini.	128.88	358	-0.0002075	0.0002807	0.0035	0.5116		970.11	970.11		7.53	Si
SLV 1	fin.	-156.37	-1095	-0.0002545	0.0002807	0.0035	0.5124		975.28	975.28		6.24	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-275.07	-635	-0.0004859	0.0002807	0.0035	0.5116		973.5	973.5		3.54	Si
SLV 9	fin.	121.31	785	-0.0001942	0.0002807	0.0035	0.5124		971.98	971.98		8.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	128.88	-254	0.5116	0	208	4060	3217	1305	4268		16.82	Si
SLV 1	fin.	-156.37	-1585	0.5124	0	208	4060	3222	1307	4268		2.69	Si
SLD 8	ini.	119.64	-248	0.5116	0	208	4060	3217	1305	4268		17.18	Si
SLD 8	fin.	-138.51	-1357	0.5124	0	208	4060	3222	1307	4268		3.14	Si
SLV 7	ini.	262.8	-796	0.5116	0	208	4060	3217	1305	4268		5.36	Si
SLV 7	fin.	-233.5	-1983	0.5124	0	208	4060	3222	1307	4268		2.15	Si
SLV 2	ini.	145.77	-317	0.5116	0	208	4060	3217	1305	4268		13.45	Si
SLV 2	fin.	-166.46	-1657	0.5124	0	208	4060	3222	1307	4268		2.58	Si
SLD 3	ini.	109.38	-199	0.5116	0	208	4060	3217	1305	4268		21.5	Si
SLD 3	fin.	-136.09	-1380	0.5124	0	208	4060	3222	1307	4268		3.09	Si
SLV 8	ini.	273.68	-837	0.5116	0	208	4060	3217	1305	4268		5.1	Si
SLV 8	fin.	-240.01	-2029	0.5124	0	208	4060	3222	1307	4268		2.1	Si
SLV 12	ini.	153.3	-394	0.5116	0	208	4060	3217	1305	4268		10.84	Si
SLV 12	fin.	-154.53	-1403	0.5124	0	208	4060	3222	1307	4268		3.04	Si
SLV 3	ini.	254.12	-738	0.5116	0	208	4060	3217	1305	4268		5.79	Si
SLV 3	fin.	-237.17	-2100	0.5124	0	208	4060	3222	1307	4268		2.03	Si
SLD 4	ini.	116.64	-226	0.5116	0	208	4060	3217	1305	4268		18.9	Si
SLD 4	fin.	-140.43	-1411	0.5124	0	208	4060	3222	1307	4268		3.02	Si
SLV 4	ini.	271.02	-801	0.5116	0	208	4060	3217	1305	4268		5.33	Si
SLV 4	fin.	-247.26	-2173	0.5124	0	208	4060	3222	1307	4268		1.96	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.539	SLV 9	Si
V_SLV	1.965	SLV 4	Si
PF_SLU	11.025	SLU 69	Si
V_SLU	2.386	SLU 69	Si

Trave di accoppiamento 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	13.67	14.888	1.218	-11.933	-4.824	13.67	14.887	1.217	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	58.31	181	-0.0000156	0.0001872	0.0035	1.2178		5371.64	5371.64	No	92.13	Si
SLU 56	fin.	-232.04	-87	-0.0000634	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.23	Si
SLU 83	ini.	78.95	299	-0.0000212	0.0001872	0.0035	1.2178		5371.64	5371.64	No	68.04	Si
SLU 83	fin.	-233.03	-2	-0.0000636	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.13	Si
SLU 62	ini.	72.07	267	-0.0000194	0.0001872	0.0035	1.2178		5371.64	5371.64	No	74.53	Si
SLU 62	fin.	-234.98	-28	-0.0000642	0.0001872	0.0035	1.2169		5389.58	5389.58	No	22.94	Si
SLU 84	ini.	80.51	303	-0.0000216	0.0001872	0.0035	1.2178		5371.64	5371.64	No	66.72	Si
SLU 84	fin.	-233.16	1	-0.0000637	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.12	Si
SLU 57	ini.	59.87	185	-0.0000161	0.0001872	0.0035	1.2178		5371.64	5371.64	No	89.72	Si
SLU 57	fin.	-232.18	-84	-0.0000634	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.21	Si
SLU 80	ini.	70.23	226	-0.0000189	0.0001872	0.0035	1.2178		5371.64	5371.64	No	76.48	Si
SLU 80	fin.	-232.63	-52	-0.0000635	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.17	Si
SLU 79	ini.	68.67	222	-0.0000184	0.0001872	0.0035	1.2178		5371.64	5371.64	No	78.23	Si
SLU 79	fin.	-232.49	-55	-0.0000635	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.18	Si
SLU 63	ini.	73.64	271	-0.0000198	0.0001872	0.0035	1.2178		5371.64	5371.64	No	72.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	fin.	-235.11	-25	-0.0000642	0.0001872	0.0035	1.2169		5389.58	5389.58	No	22.92	Si
SLU 59	ini.	63.36	194	-0.000017	0.0001872	0.0035	1.2178		5371.64	5371.64	No	84.78	Si
SLU 59	fin.	-234.57	-78	-0.0000641	0.0001872	0.0035	1.2169		5389.58	5389.58	No	22.98	Si
SLU 58	ini.	61.8	189	-0.0000166	0.0001872	0.0035	1.2178		5371.64	5371.64	No	86.93	Si
SLU 58	fin.	-234.44	-82	-0.000064	0.0001872	0.0035	1.2169		5389.58	5389.58	No	22.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	44.71	731	1.2178	0	529	7930	5470	3105	8459	No	11.57	Si
SLU 72	fin.	-219.25	-1435	1.2169	0	529	7930	5466	3103	8459	No	5.89	Si
SLU 59	ini.	63.36	573	1.2178	0	529	7930	5470	3105	8459	No	14.75	Si
SLU 59	fin.	-234.57	-1409	1.2169	0	529	7930	5466	3103	8459	No	6	Si
SLU 69	ini.	39.65	714	1.2178	0	529	7930	5470	3105	8459	No	11.85	Si
SLU 69	fin.	-216.72	-1400	1.2169	0	529	7930	5466	3103	8459	No	6.04	Si
SLU 80	ini.	70.23	669	1.2178	0	529	7930	5470	3105	8459	No	12.64	Si
SLU 80	fin.	-232.63	-1506	1.2169	0	529	7930	5466	3103	8459	No	5.62	Si
SLU 78	ini.	66.74	651	1.2178	0	529	7930	5470	3105	8459	No	13	Si
SLU 78	fin.	-230.23	-1474	1.2169	0	529	7930	5466	3103	8459	No	5.74	Si
SLU 71	ini.	43.14	732	1.2178	0	529	7930	5470	3105	8459	No	11.56	Si
SLU 71	fin.	-219.12	-1431	1.2169	0	529	7930	5466	3103	8459	No	5.91	Si
SLU 79	ini.	68.67	670	1.2178	0	529	7930	5470	3105	8459	No	12.63	Si
SLU 79	fin.	-232.49	-1501	1.2169	0	529	7930	5466	3103	8459	No	5.63	Si
SLU 58	ini.	61.8	574	1.2178	0	529	7930	5470	3105	8459	No	14.74	Si
SLU 58	fin.	-234.44	-1405	1.2169	0	529	7930	5466	3103	8459	No	6.02	Si
SLU 77	ini.	65.18	651	1.2178	0	529	7930	5470	3105	8459	No	12.99	Si
SLU 77	fin.	-230.09	-1470	1.2169	0	529	7930	5466	3103	8459	No	5.75	Si
SLU 70	ini.	41.22	713	1.2178	0	529	7930	5470	3105	8459	No	11.86	Si
SLU 70	fin.	-216.85	-1404	1.2169	0	529	7930	5466	3103	8459	No	6.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1506.4	1981	-0.0004677	0.0002807	0.0035	1.2178		5432.34	5432.34		3.61	Si
SLV 15	fin.	-2031.18	-1776	-0.0006724	0.0002807	0.0035	1.2169		5401.76	5401.76		2.66	Si
SLV 2	ini.	-1430.5	-1622	-0.0004392	0.0002807	0.0035	1.2178		5440.59	5440.59		3.8	Si
SLV 2	fin.	1701.57	1749	-0.0005418	0.0002807	0.0035	1.2169		5393.51	5393.51		3.17	Si
SLV 13	ini.	1587.89	2246	-0.000498	0.0002807	0.0035	1.2178		5432.34	5432.34		3.42	Si
SLV 13	fin.	-2049.44	-1581	-0.0006799	0.0002807	0.0035	1.2169		5401.76	5401.76		2.64	Si
SLV 16	ini.	1449.16	1907	-0.0004467	0.0002807	0.0035	1.2178		5432.34	5432.34		3.75	Si
SLV 16	fin.	-1957.96	-1712	-0.0006424	0.0002807	0.0035	1.2169		5401.76	5401.76		2.76	Si
SLD 13	ini.	701.33	1065	-0.0001984	0.0002807	0.0035	1.2178		5432.34	5432.34		7.75	Si
SLD 13	fin.	-971.08	-683	-0.0002824	0.0002807	0.0035	1.2169		5401.76	5401.76		5.56	Si
SLD 15	ini.	665.5	948	-0.0001877	0.0002807	0.0035	1.2178		5432.34	5432.34		8.16	Si
SLD 15	fin.	-962.78	-769	-0.0002797	0.0002807	0.0035	1.2169		5401.76	5401.76		5.61	Si
SLV 1	ini.	-1373.26	-1548	-0.0004187	0.0002807	0.0035	1.2178		5440.59	5440.59		3.96	Si
SLV 1	fin.	1628.34	1685	-0.0005138	0.0002807	0.0035	1.2169		5393.51	5393.51		3.31	Si
SLV 3	ini.	-1454.76	-1814	-0.000448	0.0002807	0.0035	1.2178		5440.59	5440.59		3.74	Si
SLV 3	fin.	1646.6	1490	-0.0005207	0.0002807	0.0035	1.2169		5393.51	5393.51		3.28	Si
SLV 4	ini.	-1511.99	-1887	-0.000469	0.0002807	0.0035	1.2178		5440.59	5440.59		3.6	Si
SLV 4	fin.	1719.82	1554	-0.0005489	0.0002807	0.0035	1.2169		5393.51	5393.51		3.14	Si
SLV 14	ini.	1530.66	2172	-0.0004767	0.0002807	0.0035	1.2178		5432.34	5432.34		3.55	Si
SLV 14	fin.	-1976.21	-1517	-0.0006498	0.0002807	0.0035	1.2169		5401.76	5401.76		2.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1373.26	5314	1.2178	0	794	7930	8205	3105	8724		1.64	Si
SLV 1	fin.	1628.34	4223	1.2169	0	794	7930	8199	3103	8723		2.07	Si
SLV 4	ini.	-1511.99	5708	1.2178	0	794	7930	8205	3105	8724		1.53	Si
SLV 4	fin.	1719.82	4554	1.2169	0	794	7930	8199	3103	8723		1.92	Si
SLD 13	ini.	701.33	-2045	1.2178	0	794	7930	8205	3105	8724		4.27	Si
SLD 13	fin.	-971.08	-3197	1.2169	0	794	7930	8199	3103	8723		2.73	Si
SLV 2	ini.	-1430.5	5523	1.2178	0	794	7930	8205	3105	8724		1.58	Si
SLV 2	fin.	1701.57	4434	1.2169	0	794	7930	8199	3103	8723		1.97	Si
SLV 3	ini.	-1454.76	5499	1.2178	0	794	7930	8205	3105	8724		1.59	Si
SLV 3	fin.	1646.6	4343	1.2169	0	794	7930	8199	3103	8723		2.01	Si
SLV 13	ini.	1587.89	-5152	1.2178	0	794	7930	8205	3105	8724		1.69	Si
SLV 13	fin.	-2049.44	-6303	1.2169	0	794	7930	8199	3103	8723		1.38	Si
SLV 14	ini.	1530.66	-4943	1.2178	0	794	7930	8205	3105	8724		1.76	Si
SLV 14	fin.	-1976.21	-6092	1.2169	0	794	7930	8199	3103	8723		1.43	Si
SLV 15	ini.	1506.4	-4967	1.2178	0	794	7930	8205	3105	8724		1.76	Si
SLV 15	fin.	-2031.18	-6183	1.2169	0	794	7930	8199	3103	8723		1.41	Si
SLV 16	ini.	1449.16	-4758	1.2178	0	794	7930	8205	3105	8724		1.83	Si
SLV 16	fin.	-1957.96	-5972	1.2169	0	794	7930	8199	3103	8723		1.46	Si
SLD 15	ini.	665.5	-1964	1.2178	0	794	7930	8205	3105	8724		4.44	Si
SLD 15	fin.	-962.78	-3144	1.2169	0	794	7930	8199	3103	8723		2.77	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.636	SLV 13	Si
V_SLV	1.384	SLV 13	Si
PF_SLU	22.924	SLU 63	Si
V_SLU	5.618	SLU 80	Si

Trave di accoppiamento 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	3.12	4.71	1.59	-11.933	-4.824	3.12	4.71	1.59	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	2059.68	-2032	-0.0003806	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.4	Si
SLU 81	fin.	-192.66	-2032	-0.0000305	0.0001872	0.0035	1.59		9079.69	9079.69	No	47.13	Si
SLU 78	ini.	2010.86	-2001	-0.0003699	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.51	Si
SLU 78	fin.	-184.08	-2001	-0.0000291	0.0001872	0.0035	1.59		9079.69	9079.69	No	49.32	Si
SLU 84	ini.	2086.12	-2074	-0.0003864	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.35	Si
SLU 84	fin.	-203.68	-2074	-0.0000322	0.0001872	0.0035	1.59		9079.69	9079.69	No	44.58	Si
SLU 75	ini.	1985.43	-1974	-0.0003644	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.57	Si
SLU 75	fin.	-177.04	-1974	-0.000028	0.0001872	0.0035	1.59		9079.69	9079.69	No	51.29	Si
SLU 83	ini.	2085.12	-2059	-0.0003861	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.35	Si
SLU 83	fin.	-199.71	-2059	-0.0000316	0.0001872	0.0035	1.59		9079.69	9079.69	No	45.47	Si
SLU 77	ini.	2009.86	-1986	-0.0003697	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.51	Si
SLU 77	fin.	-180.11	-1986	-0.0000285	0.0001872	0.0035	1.59		9079.69	9079.69	No	50.41	Si
SLU 76	ini.	1985.85	-1973	-0.0003645	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.57	Si
SLU 76	fin.	-188.2	-1973	-0.0000298	0.0001872	0.0035	1.59		9079.69	9079.69	No	48.24	Si
SLU 80	ini.	2010.62	-1990	-0.0003698	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.51	Si
SLU 80	fin.	-192.6	-1990	-0.0000305	0.0001872	0.0035	1.59		9079.69	9079.69	No	47.14	Si
SLU 79	ini.	2009.61	-1975	-0.0003696	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.51	Si
SLU 79	fin.	-188.62	-1975	-0.0000298	0.0001872	0.0035	1.59		9079.69	9079.69	No	48.14	Si
SLU 82	ini.	2060.69	-2047	-0.0003808	0.0001872	0.0035	1.59		9069.67	9069.67	No	4.4	Si
SLU 82	fin.	-196.64	-2047	-0.0000311	0.0001872	0.0035	1.59		9079.69	9079.69	No	46.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	1985.43	-1427	1.59	0	691	7930	7142	4055	8621	No	6.04	Si
SLU 75	fin.	-177.04	-2895	1.59	0	691	7930	7142	4055	8621	No	2.98	Si
SLU 83	ini.	2085.12	-1549	1.59	0	691	7930	7142	4055	8621	No	5.57	Si
SLU 83	fin.	-199.71	-3018	1.59	0	691	7930	7142	4055	8621	No	2.86	Si
SLU 79	ini.	2009.61	-1462	1.59	0	691	7930	7142	4055	8621	No	5.89	Si
SLU 79	fin.	-188.62	-2931	1.59	0	691	7930	7142	4055	8621	No	2.94	Si
SLU 78	ini.	2010.86	-1459	1.59	0	691	7930	7142	4055	8621	No	5.91	Si
SLU 78	fin.	-184.08	-2928	1.59	0	691	7930	7142	4055	8621	No	2.94	Si
SLU 80	ini.	2010.62	-1467	1.59	0	691	7930	7142	4055	8621	No	5.87	Si
SLU 80	fin.	-192.6	-2936	1.59	0	691	7930	7142	4055	8621	No	2.94	Si
SLU 81	ini.	2059.68	-1517	1.59	0	691	7930	7142	4055	8621	No	5.68	Si
SLU 81	fin.	-192.66	-2985	1.59	0	691	7930	7142	4055	8621	No	2.89	Si
SLU 82	ini.	2060.69	-1522	1.59	0	691	7930	7142	4055	8621	No	5.67	Si
SLU 82	fin.	-196.64	-2990	1.59	0	691	7930	7142	4055	8621	No	2.88	Si
SLU 76	ini.	1985.85	-1438	1.59	0	691	7930	7142	4055	8621	No	5.99	Si
SLU 76	fin.	-188.2	-2907	1.59	0	691	7930	7142	4055	8621	No	2.97	Si
SLU 84	ini.	2086.12	-1554	1.59	0	691	7930	7142	4055	8621	No	5.55	Si
SLU 84	fin.	-203.68	-3023	1.59	0	691	7930	7142	4055	8621	No	2.85	Si
SLU 77	ini.	2009.86	-1454	1.59	0	691	7930	7142	4055	8621	No	5.93	Si
SLU 77	fin.	-180.11	-2923	1.59	0	691	7930	7142	4055	8621	No	2.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-4786.93	-1291	-0.0010211	0.0002807	0.0035	1.59		9067.24	9067.24		1.89	Si
SLV 4	fin.	8338.74	-1102	-0.0024959	0.0002807	0.0035	1.59		9056.68	9056.68		1.09	Si
SLV 1	ini.	-4336.93	-1036	-0.0008962	0.0002807	0.0035	1.59		9067.24	9067.24		2.09	Si
SLV 1	fin.	7160.29	-1002	-0.0018587	0.0002807	0.0035	1.59		9056.68	9056.68		1.26	Si
SLV 15	ini.	7639.64	-1575	-0.0020919	0.0002807	0.0035	1.59		9056.68	9056.68		1.19	Si
SLV 15	fin.	-8175.41	-1610	-0.002389	0.0002807	0.0035	1.59		9067.24	9067.24		1.11	Si
SLD 15	ini.	4041.12	-1418	-0.000819	0.0002807	0.0035	1.59		9056.68	9056.68		2.24	Si
SLD 15	fin.	-3559.78	-1432	-0.0006964	0.0002807	0.0035	1.59		9067.24	9067.24		2.55	Si
SLV 3	ini.	-4190.09	-1306	-0.000857	0.0002807	0.0035	1.59		9067.24	9067.24		2.16	Si
SLV 3	fin.	7559.19	-1117	-0.0020505	0.0002807	0.0035	1.59		9056.68	9056.68		1.2	Si
SLV 13	ini.	7492.8	-1306	-0.002017	0.0002807	0.0035	1.59		9056.68	9056.68		1.21	Si
SLV 13	fin.	-8574.31	-1494	-0.0026454	0.0002807	0.0035	1.59		9067.24	9067.24		1.06	Si
SLD 13	ini.	3976.25	-1300	-0.0008022	0.0002807	0.0035	1.59		9056.68	9056.68		2.28	Si
SLD 13	fin.	-3734.29	-1381	-0.0007396	0.0002807	0.0035	1.59		9067.24	9067.24		2.43	Si
SLV 2	ini.	-4933.77	-1021	-0.0010635	0.0002807	0.0035	1.59		9067.24	9067.24		1.84	Si
SLV 2	fin.	7939.84	-987	-0.0022555	0.0002807	0.0035	1.59		9056.68	9056.68		1.14	Si
SLV 14	ini.	6895.96	-1291	-0.0017431	0.0002807	0.0035	1.59		9056.68	9056.68		1.31	Si
SLV 14	fin.	-7794.75	-1479	-0.0021703	0.0002807	0.0035	1.59		9067.24	9067.24		1.16	Si
SLV 16	ini.	7042.8	-1561	-0.0018063	0.0002807	0.0035	1.59		9056.68	9056.68		1.29	Si
SLV 16	fin.	-7395.86	-1595	-0.0019656	0.0002807	0.0035	1.59		9067.24	9067.24		1.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	7492.8	-15460	1.59	0	1037	7930	10713	4055	8967		0.58	No
SLV 13	fin.	-8574.31	-16602	1.59	0	1037	7930	10713	4055	8967		0.54	No
SLV 3	ini.	-4190.09	12272	1.59	0	1037	7930	10713	4055	8967		0.73	No
SLV 3	fin.	7559.19	11160	1.59	0	1037	7930	10713	4055	8967		0.8	No
SLV 4	ini.	-4786.93	13648	1.59	0	1037	7930	10713	4055	8967		0.66	No
SLV 4	fin.	8338.74	12536	1.59	0	1037	7930	10713	4055	8967		0.72	No
SLD 13	ini.	3976.25	-7128	1.59	0	1037	7930	10713	4055	8967		1.26	Si
SLD 13	fin.	-3734.29	-8262	1.59	0	1037	7930	10713	4055	8967		1.09	Si
SLV 15	ini.	7639.64	-15351	1.59	0	1037	7930	10713	4055	8967		0.58	No
SLV 15	fin.	-8175.41	-16509	1.59	0	1037	7930	10713	4055	8967		0.54	No
SLV 1	ini.	-4336.93	12162	1.59	0	1037	7930	10713	4055	8967		0.74	No
SLV 1	fin.	7160.29	11067	1.59	0	1037	7930	10713	4055	8967		0.81	No
SLV 2	ini.	-4933.77	13539	1.59	0	1037	7930	10713	4055	8967		0.66	No
SLV 2	fin.	7939.84	12443	1.59	0	1037	7930	10713	4055	8967		0.72	No
SLV 14	ini.	6895.96	-14084	1.59	0	1037	7930	10713	4055	8967		0.64	No
SLV 14	fin.	-7794.75	-15226	1.59	0	1037	7930	10713	4055	8967		0.59	No
SLD 15	ini.	4041.12	-7079	1.59	0	1037	7930	10713	4055	8967		1.27	Si
SLD 15	fin.	-3559.78	-8220	1.59	0	1037	7930	10713	4055	8967		1.09	Si
SLV 16	ini.	7042.8	-13974	1.59	0	1037	7930	10713	4055	8967		0.64	No
SLV 16	fin.	-7395.86	-15133	1.59	0	1037	7930	10713	4055	8967		0.59	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.057	SLV 13	Si
V_SLV	0.54	SLV 13	No
PF_SLU	4.348	SLU 84	Si
V_SLU	2.852	SLU 84	Si

Trave di accoppiamento 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	6.71	8.15	1.44	-11.933	-4.824	6.71	8.15	1.44	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	953.8	-1101	-0.0001978	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.81	Si
SLU 83	fin.	-657.54	-1248	-0.0001322	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.34	Si
SLU 84	ini.	951.34	-1116	-0.0001972	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.83	Si
SLU 84	fin.	-664.33	-1263	-0.0001337	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.23	Si
SLU 76	ini.	905.77	-1083	-0.0001869	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.23	Si
SLU 76	fin.	-623.65	-1223	-0.000125	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.96	Si
SLU 74	ini.	900.9	-1061	-0.0001858	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.27	Si
SLU 74	fin.	-606.47	-1200	-0.0001214	0.0001872	0.0035	1.44		7459.72	7459.72	No	12.3	Si
SLU 81	ini.	939.58	-1086	-0.0001945	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.93	Si
SLU 81	fin.	-644.39	-1231	-0.0001294	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.58	Si
SLU 82	ini.	937.12	-1102	-0.000194	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.95	Si
SLU 82	fin.	-651.18	-1247	-0.0001309	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.46	Si
SLU 79	ini.	924.08	-1072	-0.000191	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.06	Si
SLU 79	fin.	-625.49	-1213	-0.0001254	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.93	Si
SLU 80	ini.	921.62	-1087	-0.0001905	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.08	Si
SLU 80	fin.	-632.28	-1229	-0.0001269	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.8	Si
SLU 78	ini.	912.65	-1090	-0.0001884	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.16	Si
SLU 78	fin.	-626.42	-1232	-0.0001256	0.0001872	0.0035	1.44		7459.72	7459.72	No	11.91	Si
SLU 77	ini.	915.11	-1075	-0.000189	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.14	Si
SLU 77	fin.	-619.63	-1217	-0.0001242	0.0001872	0.0035	1.44		7459.72	7459.72	No	12.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	915.11	-601	1.44	0	626	7930	6468	3672	8556	No	14.24	Si
SLU 77	fin.	-619.63	-2129	1.44	0	626	7930	6468	3672	8556	No	4.02	Si
SLU 63	ini.	896.15	-630	1.44	0	626	7930	6468	3672	8556	No	13.58	Si
SLU 63	fin.	-630.14	-2111	1.44	0	626	7930	6468	3672	8556	No	4.05	Si
SLU 76	ini.	905.77	-609	1.44	0	626	7930	6468	3672	8556	No	14.04	Si
SLU 76	fin.	-623.65	-2122	1.44	0	626	7930	6468	3672	8556	No	4.03	Si
SLU 78	ini.	912.65	-606	1.44	0	626	7930	6468	3672	8556	No	14.11	Si
SLU 78	fin.	-626.42	-2133	1.44	0	626	7930	6468	3672	8556	No	4.01	Si
SLU 84	ini.	951.34	-676	1.44	0	626	7930	6468	3672	8556	No	12.65	Si
SLU 84	fin.	-664.33	-2213	1.44	0	626	7930	6468	3672	8556	No	3.87	Si
SLU 80	ini.	921.62	-622	1.44	0	626	7930	6468	3672	8556	No	13.75	Si
SLU 80	fin.	-632.28	-2148	1.44	0	626	7930	6468	3672	8556	No	3.98	Si
SLU 81	ini.	939.58	-655	1.44	0	626	7930	6468	3672	8556	No	13.07	Si
SLU 81	fin.	-644.39	-2180	1.44	0	626	7930	6468	3672	8556	No	3.93	Si
SLU 79	ini.	924.08	-617	1.44	0	626	7930	6468	3672	8556	No	13.87	Si
SLU 79	fin.	-625.49	-2144	1.44	0	626	7930	6468	3672	8556	No	3.99	Si
SLU 83	ini.	953.8	-671	1.44	0	626	7930	6468	3672	8556	No	12.75	Si
SLU 83	fin.	-657.54	-2208	1.44	0	626	7930	6468	3672	8556	No	3.87	Si
SLU 82	ini.	937.12	-660	1.44	0	626	7930	6468	3672	8556	No	12.97	Si
SLU 82	fin.	-651.18	-2184	1.44	0	626	7930	6468	3672	8556	No	3.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-4468.49	-1236	-0.0012195	0.0002807	0.0035	1.44		7543.76	7543.76		1.69	Si
SLV 1	fin.	5656.81	-804	-0.0017443	0.0002807	0.0035	1.44		7533.98	7533.98		1.33	Si
SLD 13	ini.	3053.52	-316	-0.000738	0.0002807	0.0035	1.44		7533.98	7533.98		2.47	Si
SLD 13	fin.	-3289.55	-648	-0.0008102	0.0002807	0.0035	1.44		7543.76	7543.76		2.29	Si
SLV 4	ini.	-5047.13	-1685	-0.0014548	0.0002807	0.0035	1.44		7543.76	7543.76		1.49	Si
SLV 4	fin.	6349.79	-1224	-0.0021471	0.0002807	0.0035	1.44		7533.98	7533.98		1.19	Si
SLV 2	ini.	-4973.78	-1302	-0.0014233	0.0002807	0.0035	1.44		7543.76	7543.76		1.52	Si
SLV 2	fin.	6262.81	-833	-0.002091	0.0002807	0.0035	1.44		7533.98	7533.98		1.2	Si
SLV 15	ini.	6228.34	-153	-0.0020692	0.0002807	0.0035	1.44		7533.98	7533.98		1.21	Si
SLV 15	fin.	-7067.59	-810	-0.0026756	0.0002807	0.0035	1.44		7543.76	7543.76		1.07	Si
SLV 16	ini.	5723.04	-219	-0.0017788	0.0002807	0.0035	1.44		7533.98	7533.98		1.32	Si
SLV 16	fin.	-6461.59	-839	-0.0022168	0.0002807	0.0035	1.44		7543.76	7543.76		1.17	Si
SLV 3	ini.	-4541.83	-1619	-0.0012478	0.0002807	0.0035	1.44		7543.76	7543.76		1.66	Si
SLV 3	fin.	5743.79	-1195	-0.0017897	0.0002807	0.0035	1.44		7533.98	7533.98		1.31	Si
SLV 13	ini.	6301.68	230	-0.0021159	0.0002807	0.0035	1.44		7533.98	7533.98		1.2	Si
SLV 13	fin.	-7154.56	-420	-0.0027499	0.0002807	0.0035	1.44		7543.76	7543.76		1.05	Si
SLD 15	ini.	3021.07	-484	-0.0007281	0.0002807	0.0035	1.44		7533.98	7533.98		2.49	Si
SLD 15	fin.	-3250.98	-819	-0.000798	0.0002807	0.0035	1.44		7543.76	7543.76		2.32	Si
SLV 14	ini.	5796.39	164	-0.0018178	0.0002807	0.0035	1.44		7533.98	7533.98		1.3	Si
SLV 14	fin.	-6548.56	-449	-0.0022768	0.0002807	0.0035	1.44		7543.76	7543.76		1.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-4973.78	11252	1.44	0	939	7930	9702	3672	8869		0.79	No
SLV 2	fin.	6262.81	11076	1.44	0	939	7930	9702	3672	8869		0.8	No
SLV 4	ini.	-5047.13	11542	1.44	0	939	7930	9702	3672	8869		0.77	No
SLV 4	fin.	6349.79	11250	1.44	0	939	7930	9702	3672	8869		0.79	No
SLD 15	ini.	3021.07	-5321	1.44	0	939	7930	9702	3672	8869		1.67	Si
SLD 15	fin.	-3250.98	-6842	1.44	0	939	7930	9702	3672	8869		1.3	Si
SLV 14	ini.	5796.39	-11204	1.44	0	939	7930	9702	3672	8869		0.79	No
SLV 14	fin.	-6548.56	-13071	1.44	0	939	7930	9702	3672	8869		0.68	No
SLV 1	ini.	-4468.49	10196	1.44	0	939	7930	9702	3672	8869		0.87	No
SLV 1	fin.	5656.81	9944	1.44	0	939	7930	9702	3672	8869		0.89	No
SLV 13	ini.	6301.68	-12260	1.44	0	939	7930	9702	3672	8869		0.72	No
SLV 13	fin.	-7154.56	-14203	1.44	0	939	7930	9702	3672	8869		0.62	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	5723.04	-10914	1.44	0	939	7930	9702	3672	8869		0.81	No
SLV 16	fin.	-6461.59	-12897	1.44	0	939	7930	9702	3672	8869		0.69	No
SLV 3	ini.	-4541.83	10486	1.44	0	939	7930	9702	3672	8869		0.85	No
SLV 3	fin.	5743.79	10118	1.44	0	939	7930	9702	3672	8869		0.88	No
SLV 15	ini.	6228.34	-11971	1.44	0	939	7930	9702	3672	8869		0.74	No
SLV 15	fin.	-7067.59	-14030	1.44	0	939	7930	9702	3672	8869		0.63	No
SLD 13	ini.	3053.52	-5449	1.44	0	939	7930	9702	3672	8869		1.63	Si
SLD 13	fin.	-3289.55	-6919	1.44	0	939	7930	9702	3672	8869		1.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.054	SLV 13	Si
V_SLV	0.624	SLV 13	No
PF_SLU	7.811	SLU 83	Si
V_SLU	3.867	SLU 84	Si

Trave di accoppiamento 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	10.15	11.67	1.52	-11.933	-4.824	10.15	11.67	1.52	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	849.72	-990	-0.0001551	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.76	Si
SLU 78	fin.	-478.95	-990	-0.0000847	0.0001872	0.0035	1.52		8306.86	8306.86	No	17.34	Si
SLU 79	ini.	863.01	-969	-0.0001577	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.61	Si
SLU 79	fin.	-477.31	-969	-0.0000844	0.0001872	0.0035	1.52		8306.86	8306.86	No	17.4	Si
SLU 82	ini.	867.02	-1012	-0.0001585	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.57	Si
SLU 82	fin.	-503.99	-1012	-0.0000893	0.0001872	0.0035	1.52		8306.86	8306.86	No	16.48	Si
SLU 81	ini.	865.7	-995	-0.0001582	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.58	Si
SLU 81	fin.	-499.5	-995	-0.0000885	0.0001872	0.0035	1.52		8306.86	8306.86	No	16.63	Si
SLU 80	ini.	864.33	-986	-0.0001579	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.6	Si
SLU 80	fin.	-481.8	-986	-0.0000853	0.0001872	0.0035	1.52		8306.86	8306.86	No	17.24	Si
SLU 63	ini.	845.39	-899	-0.0001542	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.81	Si
SLU 63	fin.	-490.68	-899	-0.0000869	0.0001872	0.0035	1.52		8306.86	8306.86	No	16.93	Si
SLU 84	ini.	882.96	-1024	-0.0001616	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.4	Si
SLU 84	fin.	-513.73	-1024	-0.0000911	0.0001872	0.0035	1.52		8306.86	8306.86	No	16.17	Si
SLU 83	ini.	881.64	-1007	-0.0001614	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.41	Si
SLU 83	fin.	-509.24	-1007	-0.0000903	0.0001872	0.0035	1.52		8306.86	8306.86	No	16.31	Si
SLU 77	ini.	848.4	-973	-0.0001548	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.78	Si
SLU 77	fin.	-474.45	-973	-0.0000839	0.0001872	0.0035	1.52		8306.86	8306.86	No	17.51	Si
SLU 76	ini.	849.27	-986	-0.000155	0.0001872	0.0035	1.52		8297.04	8297.04	No	9.77	Si
SLU 76	fin.	-475.06	-986	-0.000084	0.0001872	0.0035	1.52		8306.86	8306.86	No	17.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 63	ini.	845.39	-701	1.52	0	661	7930	6827	3876	8590	No	12.25	Si
SLU 63	fin.	-490.68	-1880	1.52	0	661	7930	6827	3876	8590	No	4.57	Si
SLU 76	ini.	849.27	-685	1.52	0	661	7930	6827	3876	8590	No	12.55	Si
SLU 76	fin.	-475.06	-1872	1.52	0	661	7930	6827	3876	8590	No	4.59	Si
SLU 82	ini.	867.02	-731	1.52	0	661	7930	6827	3876	8590	No	11.74	Si
SLU 82	fin.	-503.99	-1919	1.52	0	661	7930	6827	3876	8590	No	4.48	Si
SLU 84	ini.	882.96	-757	1.52	0	661	7930	6827	3876	8590	No	11.35	Si
SLU 84	fin.	-513.73	-1945	1.52	0	661	7930	6827	3876	8590	No	4.42	Si
SLU 81	ini.	865.7	-726	1.52	0	661	7930	6827	3876	8590	No	11.84	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-499.5	-1913	1.52	0	661	7930	6827	3876	8590	No	4.49	Si
SLU 62	ini.	844.07	-695	1.52	0	661	7930	6827	3876	8590	No	12.35	Si
SLU 62	fin.	-486.19	-1874	1.52	0	661	7930	6827	3876	8590	No	4.58	Si
SLU 78	ini.	849.72	-689	1.52	0	661	7930	6827	3876	8590	No	12.47	Si
SLU 78	fin.	-478.95	-1877	1.52	0	661	7930	6827	3876	8590	No	4.58	Si
SLU 79	ini.	863.01	-701	1.52	0	661	7930	6827	3876	8590	No	12.26	Si
SLU 79	fin.	-477.31	-1888	1.52	0	661	7930	6827	3876	8590	No	4.55	Si
SLU 83	ini.	881.64	-751	1.52	0	661	7930	6827	3876	8590	No	11.43	Si
SLU 83	fin.	-509.24	-1939	1.52	0	661	7930	6827	3876	8590	No	4.43	Si
SLU 80	ini.	864.33	-707	1.52	0	661	7930	6827	3876	8590	No	12.16	Si
SLU 80	fin.	-481.8	-1894	1.52	0	661	7930	6827	3876	8590	No	4.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	2548.64	-411	-0.0005169	0.0002807	0.0035	1.52		8347.35	8347.35		3.28	Si
SLD 15	fin.	-2623.49	-444	-0.0005345	0.0002807	0.0035	1.52		8357.44	8357.44		3.19	Si
SLV 14	ini.	4972.78	306	-0.0012193	0.0002807	0.0035	1.52		8347.35	8347.35		1.68	Si
SLV 14	fin.	-5339.51	14	-0.0013476	0.0002807	0.0035	1.52		8357.44	8357.44		1.57	Si
SLV 15	ini.	5170.44	-92	-0.0012886	0.0002807	0.0035	1.52		8347.35	8347.35		1.61	Si
SLV 15	fin.	-5734.17	-172	-0.0014983	0.0002807	0.0035	1.52		8357.44	8357.44		1.46	Si
SLV 2	ini.	-3986.31	-1195	-0.0009032	0.0002807	0.0035	1.52		8357.44	8357.44		2.1	Si
SLV 2	fin.	5133.96	-1115	-0.0012756	0.0002807	0.0035	1.52		8347.35	8347.35		1.63	Si
SLD 13	ini.	2612.28	-210	-0.0005325	0.0002807	0.0035	1.52		8347.35	8347.35		3.2	Si
SLD 13	fin.	-2628.4	-336	-0.0005357	0.0002807	0.0035	1.52		8357.44	8357.44		3.18	Si
SLV 4	ini.	-4130.5	-1652	-0.0009464	0.0002807	0.0035	1.52		8357.44	8357.44		2.02	Si
SLV 4	fin.	5145.49	-1360	-0.0012797	0.0002807	0.0035	1.52		8347.35	8347.35		1.62	Si
SLV 16	ini.	4828.59	-151	-0.0011703	0.0002807	0.0035	1.52		8347.35	8347.35		1.73	Si
SLV 16	fin.	-5327.98	-231	-0.0013434	0.0002807	0.0035	1.52		8357.44	8357.44		1.57	Si
SLV 13	ini.	5314.64	364	-0.0013407	0.0002807	0.0035	1.52		8347.35	8347.35		1.57	Si
SLV 13	fin.	-5745.69	73	-0.0015029	0.0002807	0.0035	1.52		8357.44	8357.44		1.45	Si
SLV 3	ini.	-3788.64	-1593	-0.0008455	0.0002807	0.0035	1.52		8357.44	8357.44		2.21	Si
SLV 3	fin.	4739.3	-1302	-0.0011405	0.0002807	0.0035	1.52		8347.35	8347.35		1.76	Si
SLV 1	ini.	-3644.45	-1137	-0.0008043	0.0002807	0.0035	1.52		8357.44	8357.44		2.29	Si
SLV 1	fin.	4727.78	-1057	-0.0011366	0.0002807	0.0035	1.52		8347.35	8347.35		1.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	4972.78	-9902	1.52	0	991	7930	10241	3876	8921		0.9	No
SLV 14	fin.	-5339.51	-10808	1.52	0	991	7930	10241	3876	8921		0.83	No
SLV 13	ini.	5314.64	-10651	1.52	0	991	7930	10241	3876	8921		0.84	No
SLV 13	fin.	-5745.69	-11556	1.52	0	991	7930	10241	3876	8921		0.77	No
SLV 4	ini.	-4130.5	9848	1.52	0	991	7930	10241	3876	8921		0.91	No
SLV 4	fin.	5145.49	8930	1.52	0	991	7930	10241	3876	8921		1	No
SLV 15	ini.	5170.44	-10348	1.52	0	991	7930	10241	3876	8921		0.86	No
SLV 15	fin.	-5734.17	-11254	1.52	0	991	7930	10241	3876	8921		0.79	No
SLD 13	ini.	2612.28	-4785	1.52	0	991	7930	10241	3876	8921		1.86	Si
SLD 13	fin.	-2628.4	-5694	1.52	0	991	7930	10241	3876	8921		1.57	Si
SLV 3	ini.	-3788.64	9100	1.52	0	991	7930	10241	3876	8921		0.98	No
SLV 3	fin.	4739.3	8182	1.52	0	991	7930	10241	3876	8921		1.09	Si
SLV 2	ini.	-3986.31	9545	1.52	0	991	7930	10241	3876	8921		0.93	No
SLV 2	fin.	5133.96	8629	1.52	0	991	7930	10241	3876	8921		1.03	Si
SLV 1	ini.	-3644.45	8797	1.52	0	991	7930	10241	3876	8921		1.01	Si
SLV 1	fin.	4727.78	7881	1.52	0	991	7930	10241	3876	8921		1.13	Si
SLV 16	ini.	4828.59	-9600	1.52	0	991	7930	10241	3876	8921		0.93	No
SLV 16	fin.	-5327.98	-10506	1.52	0	991	7930	10241	3876	8921		0.85	No
SLD 15	ini.	2548.64	-4652	1.52	0	991	7930	10241	3876	8921		1.92	Si
SLD 15	fin.	-2623.49	-5561	1.52	0	991	7930	10241	3876	8921		1.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.455	SLV 13	Si
V_SLV	0.772	SLV 13	No
PF_SLU	9.397	SLU 84	Si
V_SLU	4.417	SLU 84	Si